CALL NO. ###

CONTRACT ID. 204202

MARSHALL COUNTY

FED/STATE PROJECT NUMBER HSIP 5028(001)

DESCRIPTION US HIGHWAY 62 (US 62)

WORK TYPE ASPHALT SURFACE WITH GRADE & DRAIN

PRIMARY COMPLETION DATE 10/31/2020

LETTING DATE: MMMM DD, YYYY

Sealed Bids will be received electronically through the Bid Express bidding service until ##:## XM TIMEZONE MMMM DD, YYYY. Bids will be publicly announced at ##:## XM TIMEZONE.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - N%

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

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PART I

SCOPE OF WORK

ASPHALT MIXTURE

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

FUEL AND ASPHALT PAY ADJUSTMENT

The Department has included the Contract items Asphalt Adjustment and Fuel Adjustment for possible future payments at an established Contract unit price of $1.00. The Department will calculate actual adjustment quantities after work is completed. If existing Contract amount is insufficient to pay all items on the contract with the adjustments, the Department will establish additional monies with a change order.

OPTION B

Be advised that the Department will control and accept compaction of asphalt mixtures furnished on this project under OPTION B in accordance with Sections 402 and 403.

Special Notes Applicable to Project – General Notes & Description of Work

CAUTION

The information in this proposal and the type of work listed herein are approximate only and are not to be taken as an exact evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions when developing the Unit Bid Prices for each bid item. As such, if the conditions encountered are not in accordance with the information shown, the Department does not guarantee any changes to the Unit Bid Prices nor extension of the contract will be considered. The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

STATIONING

The contractor is advised that the planned locations of work were established from a beginning station number of STA 0+00 at the Marshall/McCracken County Line, which is also MP 0.0 of US 62. NOTE: The existing mile marker signs may not correspond to the proposed work locations.

LIDAR

All survey information was obtained from available KYTC Aerial LIDAR data and should be field verified as appropriate during construction and prior to incorporating the various project work items. Refer to the Special Note for Staking concerning staking operations required to control and construct the work.

ON-SITE INSPECTION

Before submitting a bid for the work, make a thorough inspection of the site and determine existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid to be evidence of this inspection having been made. The Department will not honor any claims for money or time extension resulting from site conditions.

RIGHT OF WAY LIMITS

The Department has not established the exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured by the Contractor at no additional cost to the Department. In the event that private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

UTILITY COORDINATION

Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of pipe replacement and pipe extension operations at no additional cost to the Department. NOTIFY THE ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay caused by the

Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.

CONTROL

Perform all work under the absolute control of the Department of Highways. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his/her decision shall be final and binding upon the Contractor.

DESCRIPTION OF WORK

Except as specified herein, perform all work in accordance with the Department's Standard Specifications, Supplemental Specifications, applicable Special Notes and Special Provisions, and applicable Standard and Sepia Drawings, current editions. Furnish all materials, labor, equipment, and incidentals for the following work:

Two-Way Left Turn Lane along a portion of US 62. A major component of this project is to construct a Two-Way Left Turn Lane (TWLTL) along US 62 between the two Calvert City Circle intersections. This will be accomplished by widening US 62 on both sides of the road from Station 139+85 to Station 166+10. This work will include earthwork, drainage improvements, placement of rock roadbed, crushed stone base, and asphalt base, milling & texturing, placement of an asphalt surface course, installation of rumble strips, and application of pavement markings.

Reconfiguration of the US 62 & Calvert City Circle western intersection. The western intersection of US 62 & Calvert City Circle is proposed to be reconfigured so that westbound traffic along Calvert City Circle is lined up 90° to US 62 when sitting at the new stop bar. Right turning traffic from eastbound US 62 onto eastbound Calvert City Circle will continue to utilize the current configuration that exists today. The intersection reconfiguration work will include earthwork, placement of rock roadbed, crushed stone base, asphalt base, and an asphalt surface course, and application of pavement markings. Additionally, as part of the reconfiguration, a portion of the westbound lane along Calvert City Circle is to be removed. Refer to the Typical Sections and Detail Sheets for more information on the layout of the proposed reconfiguration.

Turn Lanes at the intersection of US 62 & KY 1523. An Eastbound Left Turn Lane and a Westbound Right Turn Lane are proposed along US 62 at the intersection of US 62 & KY 1523. This will be accomplished by widening US 62 on both sides of the road from Station 267+20 to Station 283+75 and by widening a small length of KY 1523 on both sides to accommodate the proposed turning radii. This work will include earthwork, drainage improvements (including an extension of a 4 x 4 RCBC), placement of rock roadbed, crushed stone base, and asphalt base, milling & texturing, placement of an asphalt surface course, installation of rumble strips, and application of pavement markings.

Improvements at the intersection of US 62 & KY 95. Turn lane improvements along KY 95, radius improvements, and better delineation of access are proposed at the intersection of US 62 & KY 95. This will

be accomplished by widening KY 95 from KY 95 Station 210+90 to KY 95 Station 220+80, as well as reconstructing a portion of all four radii. This work will include earthwork, placement of rock roadbed, crushed stone base, and asphalt base, and placement of a concrete island along radius in the southeast corner of the intersection. Additionally, the entire intersection will be resurfaced from US 62 Station 374+50 to US 62 Station 383+20 and KY 95 Station 210+90 to KY 95 Station 220+80, and rumble strips and pavement markings will be installed.

Entrance Pipe Replacement & Driveway Surfacing. Due to areas of existing ditch line being re-shaped and relocated further from the edge of pavement, there are a few locations within the above noted areas where the existing entrance pipe will have to be removed and replaced to line up with the new ditch line. These locations are noted in the Detail Sheets. Refer to the Special Note for Pipe Replacements / Extensions for more information on this item of work.

Drainage Improvements. There are locations throughout the project where culvert pipes are being added, replaced and/or extended. The locations are noted on the Pipe Drainage Summary. Refer to the Special Note for Pipe Replacements / Extensions for more information on this item of work.

Erosion Control Blanket. A quantity of 2,699 square yards of Erosion Control Blanket has been included in the contract for potential use along ditch lines, fills slopes and/or back slopes, inlets and outlets of pipes, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Erosion Control Blanket throughout this project. The Engineer will make the final determination as to the quantities and placement of Erosion Control Blanket.

Guardrail Replacement. Certain locations of existing guardrail within the project will be replaced. Refer to the Detail Sheets and Guardrail Summary Sheet for the approximate locations for guardrail replacement. See the Special Note for Guardrail for more information on this work.

Removal of Existing Signs and Installation of Proposed Signing. Estimated quantities of "Remove Sign" are included within the General Summary. This bid item is for the removal of the certain existing sign, as indicated on the Detail Sheets. The District Traffic Engineer may determine that there are other sheet signs, in addition to the signs indicated on the Detail Sheets, that also need to be removed. These signs will be determined during construction. There are locations along the project where new signing is proposed. Refer to the Proposed Signing Summaries for US 62, KY 1523, and KY 95 for the approximate locations and approximate quantities. The District Traffic Engineer will make the final determination as to the placement of all signs. Refer to the Special Note for Staking, Special Note for Signing, and Special Note for Signage for additional information.

Trim & Remove Trees, Stumps, and Brush. There are multiple locations along the project where Trees, Stumps, and Brush are to be cleared. Tree clearing areas are noted on the Detail Sheets and approximate quantities are included in the General Summary. Refer to the Special Note for Tree Removal and the Special Note for Tree, Stump, and Brush Removal for more information on this item of work.

SPECIAL NOTE FOR EROSION CONTROL

I. DESCRIPTION

Perform all erosion and water pollution control work in accordance with any other notes in the Proposal, the Department's Standard and Interim Supplemental Specifications, the Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions, or as directed by the Engineer. Section references are to the Standard Specifications. This work shall consist of:

(1) Developing and preparing a Best Management Practices Plan (BMP) tailored to suit the specific construction phasing for each site within the project; (2) Preparing the project site for construction, including locating, furnishing, installing, and maintaining temporary and/or permanent erosion and water pollution control measures as required by the BMP prior to beginning any earth disturbing activity on the project site; (3) Clearing and grubbing and removal of all obstructions as required for construction; (4) Removing all erosion control devices when no longer needed; (5) Restoring all disturbed areas as nearly as possible to their original condition; (6) Preparing seedbeds and permanently seeding all disturbed areas; (7) Providing a Kentucky Erosion Prevention and Sediment Control Program (KEPSC) qualified inspector; and (8) Performing any other work to prevent erosion and/or water pollution as specified by this contract, required by the BMP, or as directed by the Engineer.

II. MATERIALS

Furnish materials in accordance with these notes, the Standard Specifications and Interim Supplemental Specifications, applicable Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions. Provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual. Unless directed otherwise by the Engineer, make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

III. CONSTRUCTION

Be advised, these Erosion Control Notes do not constitute a BMP plan for the project. Jointly with the Engineer, prepare a site specific BMP plan for each drainage area within the project in accordance with Section 213. Provide a unique BMP at each project site using good engineering practices taking into account existing site conditions, the type of work to be performed, the construction phasing, methods, and the techniques to be utilized to complete the work. Be responsible for all erosion prevention, sediment control, and water pollution prevention measures required by the BMP for each site. Represent and warrant compliance with the Clean Water Act (33 USC Section 1251 et seq.), the 404 Permit, the 401 Water Quality Certification, and applicable state and local government agency laws, regulations, rules, specifications, and permits. Contrary to Section 105.05, in case of discrepancy between these notes, the Standard Specifications, Interim Supplemental Specifications, Special Provisions and Special Notes, Standard and Sepia Drawings, and such state and local government agency requirements, adhere to the most restrictive requirement.

Conduct operations in such a manner as to minimize the amount of disturbed ground during each phase of the construction and limit the haul roads to the minimum required to perform the work. Preserve existing vegetation not required to be removed by the work or the contract. Seed and/or mulch disturbed areas at the earliest opportunity. Use silt fence, silt traps, temporary ditches, brush barriers, erosion control blankets, sodding, channel lining, and other erosion control measures in a timely manner as required by the BMP and as directed or approved by the Engineer. Prevent sediment laden water from leaving the project, entering an existing drainage structure, or entering a steam.

Provide for erosion control measures to be in place and functioning prior to any earth disturbance within a drainage area. Compute the volume and size of silt control devices necessary to control sediment during each phase of construction. All silt control devices shall be sized to retain a volume of 3,600 cubic feet per disturbed contributing acre. Remove sediment from silt traps before they become a maximum of ½ full. Maintain silt fence by removing accumulated trappings and/or replacing the geotextile fabric when it becomes clogged, damaged, or deteriorated, or when directed by the Engineer. Properly dispose of all materials trapped by erosion control devices at approved sites off the right of way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

As work progresses, add or remove erosion control measures as required by the BMP, applicable to the Contractor's project phasing, construction methods, and techniques. Update the volume calculations and modify the BMP as necessary throughout the duration of the project. Ensure that an updated BMP is kept on site and available for public inspection throughout the life of the project.

The required volume at each Silt Trap shall be computed based on the Up Gradient Contributing Areas that are disturbed and/or stabilized to the satisfaction of the Engineer. The required volume calculation for each Silt Trap shall be determined by the Contractor and verified by the Engineer. The required volume at each Silt Trap may be reduced by the following amounts:

- Up Gradient Areas not disturbed (acres)
- Up Gradient Areas that have been reclaimed and protected by Erosion Control Blanket or other ground protection material such as Temporary Mulch (acres)
- Up Gradient Areas that have been protected by Silt Fence (acres) – Areas protected by Silt Fence shall be computed at a maximum rate of 100 square feet per linear foot of Silt Fence
- Up Gradient Areas that have been protected by Silt Traps (acres)

The use of Temporary Mulch is encouraged.

Silt Trap Type B shall always be placed at the collection point prior to discharging into a Blue Line Stream or onto an adjacent Property Owner. Where overland flow exists, a Silt Fence or other filter devices may be used.

After all construction is complete, restore all disturbed areas in accordance with Section 212. Completely remove all temporary erosion control devices not required as part of the permanent erosion control from the construction site. Prior to removal, obtain the Engineer's concurrence of items to be removed. Grade the remaining exposed earth (both on and off the Right of-Way) as nearly

as possible to its original condition, or as directed by the Engineer. Prepare the seed bed areas and sow all exposed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

IV. MEASUREMENT

The Department will measure the various erosion control items according to Section 212.04 and Section 213.04, as applicable.

V. BASIS OF PAYMENT

The Department will make payment for the various erosion control items according to Section 212.04 and Section 213.04, as applicable.

SPECIAL NOTE FOR STAKING

Perform Contractor Staking according to Section 201; except, in addition to the requirements of Section 201, perform the following:

1. Contrary to Section 201, perform items 1-3 usually performed by the Engineer.
2. Verify the dimensions, type, and quantities of the culvert pipes, entrance pipes, and/or box culverts as listed and detailed in the proposal, and determine flow line elevations and slopes necessary to provide positive drainage. Revise as necessary to accommodate the existing site conditions; to provide proper alignment of the drainage structures with existing and/or proposed ditches, stream channels, swales, and the roadway lines and grades; and to ensure positive drainage upon completion of the work.
3. Using stakes, paint marks on the pavement, mag nails, and/or any other means approved by the Engineer, the Contractor shall mark and/or stake the proposed sign locations in the field. NOTE: The proposed signs are listed in the proposal by approximate location and are NOT to be taken as the exact location for the signs. During staking operations the Contractor shall review the signing layout and existing field conditions and look for potential conflicts, including but not limited to utilities, driveways, visual obstructions, etc. When conflicts are found, adjust the staked location of signs to mitigate conflicts. Because the sign locations in the proposal are approximate and the location of some signs may need to be adjusted due to conflicts, during staking operations the Contractor shall refer to and utilize the information in the Manual on Uniform on Traffic Control Devices (MUTCD), current edition. The MUTCD cover items such as: appropriate sign location, advance placement distances, and spacing requirements for signing. The intent is for the proposed signs to be consistent with, and meet the requirements of, the MUTCD. Once the proposed sign locations have been staked, notify and coordinate with the District Traffic Engineer, and perform a review of the staked locations. Adjust the staked locations, as directed by the District Traffic Engineer and obtain approval of the final staked locations. This review will also be used to determine if there are any existing signs that require removal and/or relocation. Provide the District Traffic Engineer with 2 weeks of notice when a route will be ready for a review of the staked locations. NOTE: The District Traffic Engineer may determine that the proposed signing, including sign types and messages, needs to be adjusted and/or modified from what is shown in the proposal. Therefore, the Contractor shall not order any sign material for a route until the route has been staked and final sign location approval has been given by the District Traffic Engineer.
4. Produce and furnish to the Engineer "As Built" information for the drainage improvements. As built information will consist of a final record of the actual types, sizes, and locations of the drainage structures (i.e. box inlets, headwalls, junction boxes, etc.), culvert pipes, and/or box culverts constructed. Final elevation data of the drainage improvements is not necessary.

5. Using paint marks on the pavement, and/or any other means approved by the Engineer, the Contractor shall layout and pre-mark the proposed striping, pavement markings, etc. Adjust as necessary to accommodate the existing site conditions and to provide proper alignment of the proposed thru and turning lanes. Obtain approval of the pre-marked layout from the Engineer and/or District Traffic Engineer prior to installing the striping and/or pavement markings.
6. Prior to incorporating into the work, obtain the Engineers approval of all revisions determined by the Contractor.
7. Perform any and all other staking operations required to control and construct the work.

SPECIAL NOTE FOR BOX CULVERT EXTENSIONS

I. DESCRIPTION.

Except as provided herein, perform all work in accordance with the Department's Standard Specifications, interim Supplemental Specifications, Standard and Sepia Drawings, and Special Notes and Special Provisions, current editions. Section references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Contractor staking; (2) Site preparation; (3) Foundation preparation and construction of reinforced concrete box culvert extensions and headwalls; (4) Maintain and Control Traffic; and (5) all other work specified as part of this contract.

II. MATERIALS.

Provide for sampling and testing of all materials in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Foundation Preparation. Furnish materials according to Section 603, the drawings, and as directed by the Engineer.

D. Reinforced Concrete Box Culvert Extensions. Furnish Class A Concrete and deformed Steel Reinforcement according to Sections 601 and 602. Contrary to Section 602.03.03, field bending bars will be allowed; however, obtain the Engineers approval of proposed field bending methods prior to bending. Furnish additional reinforcement to provide adequate splice lengths with existing box culvert steel as determined by the Engineer.

E. Steel Reinforcement. See Section 811.

III. CONSTRUCTION.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Site Preparation. Be responsible for all Site Preparation, including but not limited to Clearing and Grubbing; Removing pavement; Tree and Stump removal; Temporary Fencing; Roadway Excavation and Structure Excavation; Embankment and Embankment in Place; removal of obstructions or any other items; Grading, Reshaping, and Compacting; Ditching and Shouldering, obtaining borrow and waste sites, and disposal of materials, waste, and debris; cleaning inlet and outlet ditches; and restoration, cleanup and final dressing.

Clear and Grub only the minimum area required for construction and/or as directed by the Engineer. Limit clearing and grubbing to the absolute minimum required to construct the box culvert extensions. Obtain the Engineer's approval before removing trees and stumps from the cleared areas. Phase construction such that the potential for erosion is as minimal as possible.

Excavate as needed to remove any portion of the existing structure necessary for construction of the box culvert extension. Perform any ditching or grading as directed by the Engineer. Stockpile suitable materials for incorporation into the work as approved by the Engineer.

Be responsible for all excavation (common, roadway, structure, solid rock, and unclassified) required for foundation preparation, toe walls, and all other excavation required for the box culvert extensions. Excavate rock in channel as required to allow for construction of foundation and construction of box culvert extensions.

Be responsible for all embankment, embankment in place, and borrow required for backfilling the box culvert extension, constructing widened roadway and shoulder transitions, and all other embankment required to complete the work.

Provide positive drainage of slopes and ditches at all times during and upon completion of construction. Waste all removed materials not incorporated into the work at sites off the right of way obtained by the Contractor at no additional cost to the Department (see the Special Provision for Waste and Borrow Sites). Perform all excavation and removal of obstructions only as approved or directed by the Engineer

D. Remove Headwall. Remove the existing headwall(s) and wingwalls at the existing box culvert end(s) to sound concrete masonry, or as directed by the Engineer. Before removing any concrete masonry saw around the perimeter of the removal area on the interior and exterior to a depth of 1 inch. When sawing, take care not to cut into the existing steel reinforcement. Do not kink or unnecessarily bend exposed existing steel reinforcement. Remove structure excavation to solid rock or as directed by the Engineer, and prepare foundation. Existing steel reinforcement shall be thoroughly cleaned of concrete and straightened for use to bond the new concrete and reinforcement with a minimum overlap of 1'-9", unless otherwise shown in the drawings. As an alternative, if the existing headwall is sound, the Engineer may approve leaving the existing headwall in place. If the Engineer approves leaving the existing headwall in place, center 3'-0" long, #6 dowel bars at 12" spacing into the existing slabs and walls,

embedded 1'-6" deep into the existing box culvert concrete, and set with an adhesive anchorage system to provide a pullout strength of equal or greater capacity than the corresponding reinforcing steel.

E. Box Culvert Extensions. Construct the box culvert extension(s) according to the notes and details in the drawings, and Sections 601, 602, 603, 610, and/or any other applicable Standard Specifications. Class A Concrete shall be used throughout. Bond the proposed plastic concrete to the existing hardened concrete in all locations using a Type V Epoxy Resin or other approved structural adhesive, as prescribed in Section 826. Follow the manufacturer's application instructions. All exposed concrete edges shall be beveled ¾", unless otherwise noted. Reinforcement shall have a 2" clear distance to the proposed face of concrete, unless otherwise noted. Obtain the Engineer's approval of the final centerline, flow line, length, skew, and revised dimensions and/or steel pattern, if any, of each box culvert extension prior to placing concrete.

The Contractor is required to complete the box culvert extension(s) in accordance with the plans and all applicable specifications. The cost of any and all labor, materials, equipment, and/or any other items necessary to construct the box culvert extension(s) shall be incidental to the most appropriate bid items. Incidental items may include, but are not limited to, cofferdams, shoring, excavation, backfilling, and phased construction.

F. Remove Concrete Masonry. If the Engineer approves leaving the existing headwall(s) in place, a portion of the existing parapet(s) may need to be removed in order to construct a shoulder of suitable depth from the edge of pavement to the proposed headwall. Any necessary removal of a portion of the existing parapet shall be considered Site Preparation and shall be incidental to the box culvert bid items. Also, if the existing headwall(s) are left in place, one or both of the existing wingwalls, or a portion of either wingwall may need to be removed in order to construct the proposed box culvert extension(s) and/or headwall(s). In this situation, any necessary removal of the existing wingwall(s), or any portion thereof, shall be considered Site Preparation and shall be incidental to the box culvert bid items.

G. Embankments. Backfill box culvert extensions and construct embankments, slopes, roadway shoulders, and ditches as shown on the drawings, or as directed by the Engineer. Warp and tie the embankment slopes into the adjacent existing roadway to match the existing slopes and ditches. Provide positive drainage of slopes and ditches at all times during and upon completion of construction.

H. Ditching, Shouldering. Construct ditches and shoulders to provide positive drainage. Transition the ditches and shoulders between the existing typical section and the reconstructed roadway at the box culvert extension site(s). Clean all new and existing cross drainage and entrance structures within the limits of the ditching areas according to Section 209.03.B.

I. Clean Culvert. Remove all deleterious material and objects not native to the box culvert

barrel, such as, but not limited to debris and silt. The Contractor may choose to clean the box culvert prior to, or after, the proposed box culvert extension work. If the Contractor chooses to clean the box culvert prior to the proposed box culvert extension work, and additional debris, silt, etc. builds up during the box culvert extension operations, the Contractor shall remove the additional debris, silt, etc. at no additional cost to the Department, after the box culvert extension operations are complete.

NOTE: The proposal lists the existing box culverts that are to receive the Clean Culvert bid item. These identified box culverts are those that had existing debris, silt, etc. at the time the proposal was developed. The Engineer and the Contractor are encouraged to review the proposed box culvert extension site(s) prior to the Contractor beginning the box culvert extension work and determine if the Clean Culvert bid item applies. The Engineer shall determine the final approved quantities. If an existing box culvert location has a buildup of debris, silt, etc., but the Clean Culvert bid item is NOT listed in the proposal for that box culvert, the Contractor shall notify the Engineer prior to beginning box culvert extension operations, so that the Engineer can confirm that the existing box culvert has a buildup of debris, silt, etc. If the contactor does not notify the Engineer of this situation prior to beginning the box culvert extension operations, the Engineer will assume the buildup was a result of the Contractor's operations, and the cost of cleaning the box culvert shall be at no additional cost to the Department.

J. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Restore damaged roadway features and private property at no additional cost to the Department.

K. On-Site Inspection. Before submitting a bid for the work, make a thorough inspection of the site and determine existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid to be evidence of this inspection having been made. The Department does not warrant or give any guarantee as to the accuracy of the data and information shown and no claims for money or time extensions will be considered if the conditions encountered, items used or omitted, and final quantities required are not in accordance with the information shown.

L. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require utilities to be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of the Contractor's operations at no additional cost to the Department.

M. Right of Way Limits. The Department has not established the exact limits of the Right-

of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements, and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

N. Control. Perform all work under the absolute control of the Department. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor.

O. Clean Up, Disposal of Waste. Dispose of all removed concrete, debris, and other waste and debris off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

P. Final Dressing, Seeding and Protection. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

IV. MEASUREMENT.

Quantities shown on the summaries and drawings are approximate only. The Department will measure for payment only the bid items listed and the actual quantities incorporated in the work. All other items required to complete the construction shall be incidental to the listed bid items.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See the Special Note for Erosion Control.

C. Site Preparation. Other than the bid items listed, the Department will not measure Site Preparation for separate payment, but shall be incidental to the applicable project bid items.

D. Remove Headwall. The Department will measure the removal of existing headwalls as Each. If the Engineer allows a proposed box culvert extension to be constructed without removing the existing headwall, the Remove Headwall bid item shall not be measured for payment.

E. Foundation Preparation. The Department will measure Foundation Preparation of box culvert extensions as Lump Sum. The Lump Sum unit price shall include all extensions at each identified box culvert, and shall not be measured as individual units per inlet or outlet. Except for the Foundation Preparation bid items listed, the Department will NOT measure Foundation Preparation for any other items of work and shall consider it incidental to the other items of work, as applicable.

F. Concrete-Class A. See Section 601.04.

G. Steel Reinforcement. See Section 602.04.

H. Clean Culvert. The Department will measure each box culvert cleaned as Lump Sum. The bid item Clean Culvert will not be measured when a box culvert must be cleaned due to buildup of debris, silt, etc. that occurs during the Contractor's construction operations.

V. PAYMENT.

The Department will make payment only for the bid items listed. All other items required to complete the construction shall be incidental to the listed bid items.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See the Special Note for Erosion Control.

C. Foundation Preparation. Payment at the Lump Sum unit price shall be full compensation for furnishing all labor, materials, and equipment necessary for Foundation Preparation of all extensions at each identified box culvert.

D. Concrete-Class A. See Section 601.05.

E. Steel Reinforcement. See Section 602.05.

F. Clean Culvert. The Department will make payment for the completed and accepted quantities of each box culvert cleaned, as approved by the Engineer. Payment at the Lump Sum unit price shall be full compensation for furnishing all labor, materials, and equipment necessary to clean each box culvert measured for payment. Any box culverts that require cleaning, but are not approved by the Engineer for measurement of payment, shall be incidental to the box culvert bid items.

SPECIAL NOTES FOR PIPE REPLACEMENTS / EXTENSIONS

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard Specifications, interim Supplemental Specifications, Standard and Sepia Drawings, and Special Notes and Special Provisions, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Constructing pipe replacements and/or pipe extensions; (3) Embankment and/or Excavation; (4) Erosion Control; and (6) Any other work as specified by this contract.

II. MATERIALS

Provide for sampling and testing of all materials in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Culvert Pipe. Furnish pipe meeting the requirements of Section 810. Select pipe for pH range Medium and minimum fill cover height according to the applicable Standard or Sepia Drawings, current editions. Verify maximum and minimum fill cover height required for new pipe prior to construction and obtain the Engineer’s approval of the class or gauge of pipe and type of coating prior to delivering pipe to project. Furnish approved connecting bands or pipe anchors and toe walls.

C. Flowable Fill. Furnish Flowable Fill for Pipe Backfill per Section 601.03.03(B).

D. Erosion Control. See Special Note for Erosion Control.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Site Preparation. Be responsible for all site preparation including, but not limited to, saw cutting and removing pavement; clearing and grubbing; staking; incidental excavation and backfilling; common and solid rock excavation; embankment in place; removal of obstructions, or any other items; restoration of pavements, slopes, and all disturbed areas; final dressing and cleanup; and disposal of materials. Limit clearing and grubbing to the absolute minimum required to construct the drainage features. Perform all site preparation only as approved or directed by the Engineer.

D. Removing Headwalls, Pipe, and Excavation. Remove existing headwalls and lengths of culvert and/or entrance pipes at the approximate locations noted on the summary. The Engineer will determine the exact locations and lengths of pipe to be removed at the time of construction. When removing pipe, or any portion of pipe under the roadway, saw cut the existing asphalt pavement and base to a neat edge prior to excavation and removal of the existing pipe. NOTE: Saw cutting the pavement shall be incidental. Obtain the Engineer's approval of trench width and/or saw cutting limits prior to saw cutting the pavement. Excavate the trench and remove the pipe as directed, or approved, by the Engineer without disturbing existing underground utilities.

E. Constructing Pipe, Headwalls, and Drainage Boxes. Construct culvert and/or entrance pipes, pipe extensions, headwalls, drainage boxes, and other drainage structures at the locations shown in the proposal or as designated by the Engineer. The contractor will establish, with the approval of the Engineer, the final centerlines, flow lines, and skews to obtain the best fit with the existing and/or proposed ditches and other proposed improvements. (See the Special Note for Staking.) Construct pipe bedding according to Section 701 and the applicable Standard or Sepia Drawings, current editions. Use approved connecting bands or concrete anchors as required. Prior to backfilling pipe, obtain the Engineer's approval of the pipe installation. Provide Positive drainage upon completion of pipe installation.

F. Pipe Backfill. Backfill entrance pipes according to Section 701.03.06. Contrary to Section 701.03.06, backfill culvert pipes with flowable fill for the width of the roadway and as shown on the Pipe Replacement Detail. Steel plates will likely be required to maintain traffic while the flowable fill cures. Once the flowable fill has sufficiently cured, place the Asphalt Base in lifts with thicknesses of 3-4 inches, up to the surface of the existing pavement. Seal with Leveling & Wedging. Allow the asphalt base and leveling & wedging to be exposed to traffic for a minimum of 14 days to allow for settlement. During the waiting period, level & wedge any settlement as directed by the Engineer. After the waiting period has been met for the last pipe replacement constructed, the final milling and/or surfacing operations can begin, unless directed otherwise by the Engineer.

G. Embankments. Backfill pipe and culvert extensions, and construct shoulder embankments as directed by the Engineer. The contractor shall bench into the existing slope and apply proper compaction according to Section 206. For more information and details on benching, refer to Note 2 on the detail sheet titled: DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS, found elsewhere in the Proposal. Provide positive drainage of ditches, shoulders, and slopes at all times during, and upon completion of construction.

H. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Repair or replace damaged roadway features in like kind materials and design, as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.

I. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of pipe replacement and pipe extension operations at no additional cost to the Department. NOTIFY THE ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.

J. Right-of-Way Limits. The Department has not established exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured by the Contractor at no additional cost to the Department. In the event that private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

K. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed concrete, pipe, pavement, debris, excess and unsuitable excavation, and all other waste at approved sites off the Right of Way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

L. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

M. Erosion Control. See the Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See the Traffic Control Plan.

B. Site Preparation. Other than the bid items listed, site preparation will NOT be measured for payment, but shall be incidental to culvert and/or entrance pipe bid items, as applicable.

C. Remove Headwall. The Department will measure the removal of existing headwalls as Each. Any excavation, including rock excavation, necessary to remove existing headwalls will NOT be measured for payment, but shall be incidental to the bid item "Remove Headwall".

D. Remove Pipe. Removal of existing culvert and entrance pipe shall be measured according to Section 701.04.14. Any excavation, including rock excavation, necessary to remove existing pipe will NOT be measured for payment, but shall be incidental to the bid item "Remove Pipe".

E. Culvert and Entrance Pipe. The Department will measure the quantities according to Section 701.04. Any excavation, including rock excavation, necessary to install culvert or entrance pipe shall be incidental to the corresponding pipe bid items.

F. Headwalls, Drainage Boxes. The Department will measure according to Section 710. Any excavation, including rock excavation, necessary to construct headwalls and/or drainage boxes will NOT be measured for payment, but shall be incidental to the applicable bid item.

G. Excavation, Pipe Backfill, Embankments. The Department will NOT measure for payment the following items: any excavation, including rock excavation, necessary to remove the existing pipe and/or install the proposed culvert or entrance pipe, pipe backfill material, flowable fill, and re-constructing shoulder embankments, but shall considered these items incidental to the bid items for culvert and entrance pipe.

H. Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental to the project bid items. Seeding and Protection shall be measured according to Section 212.

I. Erosion Control. See the Special Note for Erosion Control.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See the Traffic Control Plan.

B. Remove Headwall. The Department will make payment for the completed and accepted quantities of Each headwall removed. Payment at the Contract unit price per Each shall be full compensation for furnishing all labor, materials, equipment, and incidentals for removing the existing headwall.

C. Remove Pipe. The Department will make payment according to Section 701.05. Payment at the Contract unit price per linear foot shall be full compensation for furnishing all labor, materials, equipment, and incidentals for removing the existing pipe.

D. Culvert and Entrance Pipe. The Department will make payment according to Section

701.05. Payment at the Contract unit price per linear foot shall be full compensation for furnishing all labor, materials, equipment, and incidentals necessary for installing and backfilling new culvert and entrance pipe.

E. Headwalls, Drainage Boxes. The Department will make payment according to Section 710.

F. Erosion Control. See the Special Note for Erosion Control.

SPECIAL NOTE

For Tree Removal

Marshall County
PERFORM LOW COST SAFETY IMPROVEMENTS ALONG US 62 BETWEEN MP 0.000 AND MP 7.200
Item No. 01-9009

NO CLEARING OF TREES 5 INCHES OR GREATER (DIAMETER BREAST HEIGHT) FROM **JUNE 1 THROUGH JULY 31.**

If there are any questions regarding this note, please contact Danny Peake, Director, Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601, Phone: (502) 564-7250.

SPECIAL NOTE FOR TREE, STUMP, AND BRUSH REMOVAL

I. DESCRIPTION

All work shall be performed in accordance with the Department's current Standard Specifications for Road and Bridge Construction and applicable Special Provisions, except as hereafter specified. Article references are to the Standard Specifications.

This work shall consist furnishing all equipment, labor, materials, and incidentals for the following: (1) Site Preparation; (2) Maintaining and controlling traffic; (3) Temporary erosion control and temporary pollution control; (4) Cutting, trimming, and/or removing trees, stumps, and/or brush as specified or directed by the Project Engineer; (5) Treating all cut stumps required by Project Engineer to prevent re-sprouting; (5) Clean up and disposal of waste; (6) Final dressing and seeding and protection; and (7) all other work specified in the Contract.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

A. Maintain and Control Traffic. The Contractor shall maintain and control traffic in accordance with the Traffic Control Plan.

B. Seeding and Protection. Use applicable Seed Mixture as specified per Section 212.03.03.

C. Erosion Control. See the Special Note for Erosion Control.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. The Contractor shall maintain and control traffic in accordance with the Traffic Control Plan.

B. Cutting, Trimming, and/or Removing Trees, Stumps, and/or Brush. The Contractor shall cut, trim, and/or remove trees within the clearing dimensions as shown on the Plan Sheets, but not to extend beyond the obvious Right-of-Way limits, or as directed by the Engineer. Cut trees and/or bushes as close to the ground as possible; three inches (3”) or less from ground line. All tree stumps within the mowing zone shall be removed via mechanical grinding, or other methods approved by the Engineer, to a minimum depth of four (4) inches below the surrounding grade line. For trees that are cut, but will not be required to have their stump removed, treat the stump, within one hour of cutting, with the herbicide solution specified below.

Replace and level any and all soil disturbed during the tree, stump, and/or brush removal and/or tree trimming operations. Leave the soil in a condition suitable for seeding that is level with the surrounding soil grade, with no holes or indentions to catch water or present unsafe mowing conditions. This work will be incidental to the bid items "Trim and Remove Trees and Brush."

NOTE: Tree cutting restrictions apply. See the Special Note for Tree Removal for details on the restrictions.

C. Removal of Tree, Stump, and Brush Debris. The Contractor will remove all debris and biomass from the trimming and/or removal of trees, stumps, and/or brush from the work site and dispose of such off the right-of-way in accordance with local, state, and federal solid waste laws and regulations. Cleanup and remove all existing down trees and brush located within the designated areas. At the discretion of the Project Engineer, the contractor may be permitted to chip and blow biomass onto non-mowing zones. Chips shall not be blown onto areas that would potentially restrict the flow of water in drainage ditches. All un-chipped biomass must be removed from roadway right-of-ways.

The Contractor shall keep the work zone free of accumulated waste material and debris at all times. Remove and dispose of all tree, stump, and brush chips off the right-of-way. Remove and dispose of all debris and waste material off the right-of-way as work is completed and at the end of each workday. Remove desirable wood pieces from the right-of-way at the end of each workday. Stockpile trees and brush off the right-of-way. At the discretion of the Project Engineer, the Contractor may be permitted to stockpile trees and brush at approved locations along the right-of-way.

The Contractor shall immediately correct any disturbance to all drainage features and structures caused by the Contractor's work.

D. Stump Treatment. Within one hour of cutting, the Contractor shall apply a stump treatment mix consisting of fifty percent (50%) Glyphosate (EPA Reg. No. 524-579) with water and add twelve (12) ounces of Imazapyr (EPA Reg. No. 241-431), as specified, per gallon of solution. The addition of a non-ionic surfactant 5% (v/v) shall be added to the solution to increase uptake of the herbicide solution into the root system. Generic formulations are not acceptable. Mix the herbicide solution in the presence of the Inspector. Include a color indicator in the herbicide solution to mark the treated stumps. Spray or paint the herbicide solution onto all cut stumps within one hour after cutting. Apply the herbicide solution in a manner to avoid drift onto surrounding vegetative ground cover. Stumps in the mowing zone, designated for mechanical grinding treatment, need not receive the herbicide treatment.

Provide herbicide material for the treatment of cut stumps meeting the following criteria:

a. Glyphosate

Active ingredient: (**Glyphosate**)
*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt 48.7%
Inert ingredients 51.3%
Total 100.0%
* Contains 660 grams per liter or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per liter or 4.5 pounds per U.S. gallon of the acid, glyphosate.
EPA Reg. No. 524-579

b. Imazapyr

Active ingredient: (**Imazapyr**)
*Isopropylamine salt of Imazapyr 2-[4,5-dihydro-4-methyl-4-(1methylethyl)-5oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid) 26.7%
Inert ingredients 73.3%
Total 100%
* Equivalent to 21.8 percent 2-[4,5-dihydro-4-methyl-4-(1methylethyl)-5oxo-1H-imidazolyl]-3-pyridinecarboxylic acid or 2 pounds acid per gallon.
EPA Reg. No. 241-431

KRS 217B requires that any individual who applies pesticides to Kentucky Highway Right-of-Way areas must be certified as a Pesticide Applicator under Category 6 guidelines. Comply with all current laws and regulations established by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and by KRS 217B that regulate the handling, use, and application of pesticides.

E. Property Damage. The Contractor will be responsible for all damage to public and/or private property resulting from his work.

F. Coordination with Utility Companies. NOTICE: Utility locations shown in the plans are approximate and have not been specifically located by the Department. Locate all underground, above ground and overhead utilities prior to beginning construction. The Contractor shall have the responsibility for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Utility Owner while they relocate their facilities. The Contractor shall be responsible for repairing all utility damage that occurs as a result of his operations.

G. Right-of-Way Limits. The exact limits of the Right-of-Way have not been established by the Department. The Contractor shall limit his activities to obvious Right-of-Way, permanent or temporary easements, and any work areas secured by consent and release of the adjacent property owners. The Contractor shall be responsible for all encroachments onto private lands.

H. Clean Up, Disposal of Waste. Clean up and dispose of all removed debris by the end of each work day, and other waste as per Section 204.03.08. The Department will incur no cost to obtain the disposal sites. The Department will NOT make direct payment for clean up or disposal of waste and debris from the project. See the Special Provision for Waste and Borrow Sites.

I. Final Dressing, Seeding and Protection. Apply final dressing, class A to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the appropriate Seed Mixture as specified in Section 212.03.03.

J. Erosion Control. See the Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See the Traffic Control Plan.

B. Site preparation. Other than the bid items listed, site preparation will NOT be measured for payment, but shall be incidental to the project bid items.

C. Trim & Remove Trees & Brush. The Department will measure the quantity by Acre. Trees, stumps, and brush to be removed and/or trimmed under this bid item are those areas shown on the Plans or listed in the Proposal, or as directed by the Engineer.

D. Stump Treatment. The Department will NOT measure for payment the operation of Stump Treatment. This activity, when required, shall be incidental to the bid item “Trim & Remove Trees & Brush”.

E. Clean Up, Disposal of Waste. The Department will NOT measure for payment the operations of Clean Up and Disposal of Waste. These activities shall be incidental to the project bid items.

F. Final Dressing, Seeding and Protection. The Department will NOT measure for payment the operations of Final Dressing. Seeding and Protection will be measured according to Section 212.

G. Erosion Control. See the Special Note for Erosion Control.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See the Traffic Control Plan.

B. Trim & Remove Trees & Brush. The Department will make payment for the completed and accepted quantities per Acre. The Department will consider payment at the contract unit price as full compensation for furnishing all materials, equipment, labor, other expenses, and all incidentals necessary to complete the work of trimming and removing the trees and/or brush.

C. Erosion Control. See the Special Note for Erosion Control.

SPECIAL NOTE FOR NON-TRACKING TACK COAT

1. DESCRIPTION AND USEAGE. This specification covers the requirements and practices for applying a non-tracking tack asphalt coating. Place this material on the existing pavement course, prior to placement of a new asphalt pavement layer. Use when expedited paving is necessary or when asphalt tracking would negatively impact the surrounding area. This material is not suitable for other uses. Ensure material can "break" within 15 minutes under conditions listed in 3.2.

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Non-Tracking Tack. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide a tack conforming to the following material requirements:

Property	Specification	Test Procedure
Viscosity, SFS, 77 ˚ F	20 – 100	AASHTO T 72
Sieve, %	0.3 max.	AASHTO T 59
Asphalt Residue[1], %	50 min.	AASHTO T 59
Oil Distillate, %	1.0 max.	AASHTO T 59
Residue Penetration, 77 ˚ F	20 max.	AASHTO T 49
Original Dynamic Shear (G*/sin δ), 82 ˚ C	1.0 min.	AASHTO T 315
Softening Point, ˚ F	149 min.	AASHTO T 53
Solubility, %	97.5 min.	AASHTO T 44

[1] Bring sample to 212 ˚F over a 10-15 minute period. Maintain 212 ˚F for 15-20 minutes or until 30-40 mL of water has distilled. Continue distillation as specified in T59.

2.2. Equipment. Provide a distributor truck capable of heating, circulating, and spraying the tack between 170 ˚F and 180 ˚F. Do not exceed 180 ˚F. Circulate the material while heating. As required by the manufacturer, ensure the spray bar is equipped with #1 or #2 ¼" V-slot Etnyre nozzles. Other nozzles are not acceptable. Arrange the nozzles in the following patterns from left to right:

Nozzle number(s)	Activity	Orientation
1	On	Vertical
2	Off	-
3	On	Horizontal
4 & 5	Off	-
6	On	Horizontal
Continue 2 off and 1 on pattern through rest of spray bar system.		

Ensure the bar can be raised to between 14 and 18" from the roadway.

2.3 Personnel. Ensure the tack supplier has provided training to the contractor on the installation procedures for this product. Make a technical representative from the supplier available at the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the non-tracking tack, ensure the pavement surface is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the surface by scraping, sweeping, and the use of compressed air. Ensure this preparation process occurs shortly before application to prevent the return of debris pavement. If rain is expected within one hour after application, do not apply material. Apply material only when the surface is dry, and no precipitation is expected.

3.2 Non-tracking Tack Application. Ensure the roadway temperature is a minimum of 40 ˚F and rising during the application of the tack. This material is not suitable for use in colder temperatures. Prior to applying the tack, demonstrate competence in applying the tack according to this note to the satisfaction of the Engineer. Heat the tack in the distributor to between 170 – 180 ˚F. After initial heating to between 170 – 180 ˚F, the material may be sprayed between 165 ˚F and 180 ˚F. Do not apply outside this temperature range. Apply material at a rate of 0.50 pounds (0.06 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. If full coverage is not achieved, material application rate may be increased to ensure full coverage. Do not heat material more than twice in one day.

3.3 Non-tracking Tack Certification. Furnish the tacks certification to the Engineer stating the material conforms to all requirements herein prior to use.

3.4 Sampling and Testing. The Department will require a sample of non-tracking tack be taken from the distributor at a rate of one sample per 15,000 tons of mix. Take two 1 gallon samples of the heated material and forward the sample to the Division of Materials for testing within 7 days. Ensure the product temperature is between 170 and 180 °F at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of non-tracking tack in tons. The Department will not measure for payment any extra materials, labor, methods, equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of non-tracking tack, the cleaning of the pavement surface, or furnishing and placing the adhesive. The Department will consider all such items incidental to the non-tracking tack.

5. PAYMENT. The Department will pay for the non-tracking tack at the Contract unit bid price and apply an adjustment for each manufacturer’s lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

Non-Tracking Tack Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Viscosity, SFS, 77 ˚ F	20 – 100	19 - 102	17 - 18 103 - 105	15 - 16 106 - 107	14 108 - 109	≤13 ≥ 110
Sieve, %	0.30 max.	≤ 0.40	0.41 - 0.50	0.51 - 0.60	0.61 - 0.70	≥ 0.71
Asphalt Residue, %	50 min.	≥49.0	48.5 – 48.9	48.0 – 48.4	47.5-47.9	≤ 47.4
Oil Distillate, %	1.0 max.	≤1.0	1.1-1.5	1.6 - 1.7	1.8-1.9	>2.0
Residue Penetration, 77 ° F	20 max.	≤ 21	22 - 23	24 - 25	26 - 27	≥ 28
Original Dynamic Shear (G*/sin δ), 82 ˚ C	1.0 min.	≥0.95	0.92 – 0.94	0.90 – 0.91	0.85 - 0.89	≤ 0.84
Softening Point, ° F	149 min.	≥145	142 - 144	140 - 141	138 - 139	≤ 137
Solubility, %	97.5 min.	≥ 97.0	96.8 – 96.9	96.6 – 96.7	96.4 – 96.5	≤ 96.3

Code	Pay Item	Pay Unit
24970EC	Asphalt Material for Tack Non-Tracking	Ton

April 30, 2018

SPECIAL NOTE FOR SIGNAGE

All sign sheeting shall be from the Cabinet's List of Approved Materials.

The following signs and sign components shall be fabricated using Type IX sheeting:

- White sign legends on panel signs
- STOP (R1-1) signs
- ALL WAY (R1-3P) signs
- YIELD (R1-2) signs
- DO NOT ENTER (R5-1) signs
- WRONG WAY (R5-1a) signs

The following signs and sign components shall be fabricated using Type IX fluorescent yellow sheeting:

- Horizontal Alignment Signs and Plaques, including signs shown in Figure 2C-1 of the MUTCD
- All Advisory Speed (W13-1P) plaques

The following signs shall be fabricated using Type IX fluorescent yellow-green sheeting:

- School and school bus warning signs, including the fluorescent yellow-green signs shown in Figures 7B-1 and 7B-6 of the MUTCD and other school-related warning signs that are not included in the MUTCD.
- Bicycle Warning (W11-1) signs and SHARE THE ROAD (W16-1P) plaques or diagonal downward point arrow (W16-7P) plaques that supplement Bicycle Warning signs.
- In-Street Pedestrian Crossing (R1-6) signs and Overhead pedestrian Crossing (R1-9) signs
- Supplemental plaques to any of the previously listed signs

All other permanent signs shall be fabricated using Type III or Type IV sheeting.

SPECIAL NOTE FOR SIGNING

I. DESCRIPTION

Except as provided herein, this work shall be performed in accordance with the current edition of the Manual on Uniform Traffic Control Devices (MUTCD), the Department's current Standard Specifications and Interim Supplemental Specifications, applicable Standard and Sepia Drawings, and applicable Special Provisions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Furnish, Fabricate, and Erect Signs; and (3) All other work specified in the Contract.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Be responsible for all site preparation including, but not limited to: clearing and grubbing, staking, excavation, backfill, and removal of obstructions or any other material not covered by other items. Perform all site preparation only as approved, or directed, by the Engineer.

C. Staking. See Special Note for Staking.

D. Signs and Posts. Before beginning installation, the Contractor shall furnish to the Engineer drawings, descriptions, manufacturer’s cuts, etc. covering all material to be used. Mill test reports for beams, steel panels, and each different gauge of aluminum or steel sheeting used must be submitted to the Division of Construction and approved prior to erection.

Fabricate sheet signs from .080 or .125 gauge aluminum alloy 5052-H38 or 6061-T6, in accordance with ASTM B-209, and to the size and shape specified. Prepare the side of

the sheet to be used as the sign face to receive the retroreflective background material according to the recommendations of the sheeting and retroreflective material manufacturer(s). Sheeting used as background material for sign faces is to be the color specified and visually in accordance with the standard requirements of ASTM D-4956, and meet the requirements of Section 830 of the Standard Specifications. Contrary to Section 830.02.06, only the types and colors of sheeting as specified in the proposal will be accepted. All retroreflective material shall be fabricated and assembled in accordance with the specifications and/or recommendations of the manufacturer(s).

All hardware for the erection of sheeting signs shall be rust resistant: stainless steel, zinc coated, aluminum, or an Engineer approved material. All beams and posts shall be of sufficient lengths to extend from the top of the sign to the required embedment in the anchor. Splicing of the sign post shall NOT be allowed. For installations in soil, Type I steel posts shall be mounted on either a standard anchor, with soil stabilizer plate, or on a Type D breakaway sign support. Refer to Sheeting Sign Detail Sheet 1 of 2 for installation details for a standard anchor with soil stabilizer plate. When installing a standard anchor with soil stabilizer plate, if solid rock is encountered, the Contractor shall drill a hole to the required depth into the rock, install the anchor into the hole, and backfill the anchor post with concrete, or other method approved by the Engineer. The cost shall be incidental to Type I steel post, and a soil stabilizer plate will not be required. Refer to Standard Drawing RGX-065, current edition, for installation details of Type D breakaway sign supports. Approved manufacturers for Type D breakaway sign supports have been placed on the list of approved materials. For installations on existing concrete, such as a sidewalk, concrete median, etc., Type I steel posts shall be mounted on a Type D surface mount. For Type D surface mounts use only Kleen Break Model 425 for Surface Mount Concrete Installations by Xcessories Squared of Auburn, IL. Prior to installation, the Contractor shall submit to the Engineer shop drawings of the Type D surface mount(s). Install the Type D surface mount(s) according to all the applicable requirements of the manufacturer (see shop drawings). All steel post shall meet the requirements of Section 832. All hardware including, but not limited to, sign post anchors, soil stabilizer plates, nuts, bolts, washers, fasteners, fittings, and bracing, or any other incidentals necessary to erect the signs shall be furnished by the Contractor and will be incidental to the work.

New concrete bases, posts, support anchors, signs, etc. are to be installed prior to dismantling any existing sign(s). The removal of existing signs, posts, and support anchors is to be performed concurrently with the installation of new signs, posts, and support anchors, under the same lane closure during the same work shift. Completely remove existing sign support anchors or remove them to a minimum depth of six (6) inches below existing ground line and backfill the disturbed area to the existing ground line.

When listed in the summaries, Reflective Sign Post Panels shall be 2” wide x 60” tall (or 84” tall for urban installations) and shall have three 3/8” holes (one hole in the top 3”,

one hole near the center, and one hole in the bottom 3") that align with the holes on the Type I steel post. Sheeting for the Reflective Sign Post Panels shall be the same Type and color as the sign installed on the post. Examples include:

- Red, fluorescent yellow, and fluorescent yellow-green (Type IX Sheeting)
- White and yellow (Type III and/or IV Sheeting).

All manufactured sheeting signs shall be free of visual defects including, but not limited to: cracks, tears, ridges, humps, discoloration, etc., and defective signs shall be replaced at no additional cost to the Department.

All sign blanks shall be hole punched by the manufacturer for either horizontal or vertical installation. Attach all aluminum sheeting signs to square post with 3/8" all steel rivets and nylon washers.

Post will be attached to the anchor with 5/16" corner bolts and 5/16" flanged nuts, and all post and anchor cuts shall be treated with a Cold Galvanizing Compound spray.

Sign posts shall be erected vertically by using a bubble level. The tolerance shall be a two (2) degree angle in any direction. For locations where there are more than one sign is mounted beside each other, the posts shall be spaced to provide approximately six inches (6") of spacing between sings.

E. Property Damage. The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor's activities. Repair or replace damaged roadway features in like kind materials and design as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.

F. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs due to the Contractor's operations at no additional cost to the Department. NOTIFY THE ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay

caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.

G. Caution. The information in this proposal and the type of work listed herein are approximate only and are not to be taken as an exact evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions when developing the Unit Bid Prices for each bid item. As such, if the conditions encountered are not in accordance with the information shown, the Department does not guarantee any changes to the Unit Bid Prices nor extension of the contract will be considered. The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

H. Control. Perform all work under the absolute control of the Department. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces, and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties.

Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and the Engineer's decision shall be final and binding upon the Contractor.

I. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed concrete, debris, and other waste as per Section 204.03.08. The Department will incur no cost to obtain the disposal sites. The Department will NOT make direct payment for disposal of waste and debris from the project. Existing anchors, signs, posts, and any other hardware or material removed from the site are to become the property of the Contractor. See Special Provision for Waste and Borrow Sites.

J. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

K. Erosion Control. See Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Other than the bid items listed, the Department will NOT measure Site Preparation for payment, but shall be incidental to the project bid items.

C. Signs. The Department will measure the finished in-place area of signs in Square Feet.

D. Sign Posts. The Department will measure the finished in-place length of sign posts in Linear Feet, from the top of the anchor, or top of the sign support, to the top of the sign post. Laps, cutoffs, excess, and waste will NOT be measured for payment.

E. Type D Breakaway Sign Supports. The Department will measure Type D sign supports as Each support installed.

F. Type D Surface Mounts. The Department will measure Type D Surface Mounts as Each surface mount installed.

G. Class A Concrete for Signs. The Department will measure the Class A Concrete used in conjunction with Type D breakaway sign support installations in Cubic Yards. Any concrete that is required as backfill due to hitting rock during a standard installation shall be incidental to the bid item STEEL POST TYPE I, and soil stabilizers will not be required.

H. Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental. Seeding and Protection shall be measured according to Section 212.

I. Erosion Control. See Special Note for Erosion Control.

J. Remove Sign. The Department will consider all signs attached to one or more connected posts as a single sign. The Department will measure as Each sign assembly removed and NOT each individual sign removed.

K. Items Provided by KYTC. The Department will NOT measure for payment the installation of signs and/or surface mounts provided by KYTC. These activities shall be incidental to the bid item STEEL POST TYPE I.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Signs. The Department will make payment for the completed and accepted quantities under the bid item SBM ALUM SHEET SIGNS .125 IN or .080 IN. The Department will consider payment full compensation for all work and incidentals necessary to install the signs, as required by these notes and the details found elsewhere in the proposal, at the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.

C. Sign Posts. The Department will make payment for the completed and accepted quantities under the bid item STEEL POST TYPE I. The Department will consider payment full compensation for all work and incidentals necessary to install the sign posts as required by these notes and the details found elsewhere in the proposal.

D. Type D Breakaway Sign Supports. The Department will make payment for the completed and accepted quantities under the bid item GMSS TYPE D. The Department will consider payment full compensation for all work and incidentals necessary to install the Type D breakaway sign supports as required by Standard Drawing RGX-065, current edition.

E. Type D Surface Mounts. The Department will make payment for the completed and accepted quantities under the bid item GMSS TYPE D Surface Mount. The Department will consider payment full compensation for all work and incidentals necessary to install the Type D surface mounts according to all applicable manufacturer requirements.
NOTE: There are two permissible Type D Surface Mount alternatives: Kleen Break Model 425 for Surface Mount Concrete Installations by Xcessories Squared of Auburn, IL

F. Class A Concrete for Signs. The Department will make payment for the completed and accepted quantities, used in conjunction with Type D breakaway sign support installations, under the bid item CLASS A CONCRETE FOR SIGNS. The Department will consider payment full compensation for all work and incidentals necessary to install the concrete as required by Standard Drawing RGX-065, current edition.

G. Remove Sign. The Department will make payment for the completed and accepted quantities under the bid item REMOVE SIGN. The Department will consider payment full compensation for all work and incidentals necessary to remove the existing signs, posts, anchors, and any other sign material or hardware, from the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.

H. Erosion Control. See Special Note for Erosion Control.

SPECIAL NOTE FOR SPRAY APPLIED THERMOPLASTIC PAVEMENT MARKING MATERIALS

I. DESCRIPTION

Except as provided herein, all work shall be performed in accordance with the Department's Standard Specifications, Interim Supplemental Specifications, applicable Standard and Sepia Drawings, applicable Special Provisions and Special Notes, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials and incidentals for the following:

(1) Spray applied thermoplastic pavement marking materials with reflectorized glass beads for permanent applications

II. MATERIALS

A. DROP ON BEADS. Use beads that will ensure the pavement marking material will meet retroreflectivity requirements. The Department will evaluate the beads as part of the marking system through retroreflectivity readings.

B. APPROVAL. Select materials that conform to the composition and physical characteristic requirements below when evaluated in accordance with AASHTO T-250 or other test methods as cited. The Department will sample and evaluate for approval each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. Do not allow the installation of thermoplastic material until it has been approved by the Division of Materials. Allow the Department a minimum of 10 working days to evaluate and approve thermoplastic material from the date sampled.

C. Composition. Use a maleic-modified glycerol ester resin (alkyd binder) to formulate the thermoplastic material. Ensure the pigment, pre-mix beads, and filler are uniformly dispersed in the resin. Use material that is free from all dirt and foreign material. Provide independent analysis data and certification for each formulation stating the total concentration of each heavy metal present, the test method used for each determination, and compliance to 40 CFR 261 for leachable heavy metals content.

COMPOSITION
(Percentage by Weight)

Component	White	Yellow
Binder, [(1)]	26.0 min.	26.0 min.
Glass Beads (Premixed)	30 - 40	30 - 40
Titanium Dioxide (Rutile, Type II)	10.0 min.	—
Calcium Carbonate & Inert Fillers [(2)]	42.0 max.	50.0 max.
Heavy Metals Content	Comply with 40 CFR 261	Comply with 40 CFR 261

[(1)]Use a binder that consists of a mixture of synthetic resins, at least one being solid at room temperature, and high boiling point plasticizers. Ensure that at least one-third of the binder composition is solid maleic-modified glycerol ester resin and is not less than 8 percent by weight of the entire material formulation. Do not use alkyd binder that contains petroleum based hydrocarbon resins.

[(2)]The manufacturer may choose the amount of calcium carbonate and inert fillers, providing all other requirements of this section are met.

D. Physical Characteristics. For thermoplastic material heated for 4 hours at 425ºF under agitation, conform to the following requirements.

a) Color. As determined with a spectrophotometer using D65 illuminant with a 45 degree entrance angle and 0 degree observation angle geometry.

CIELAB Color Coordinates		
	Yellow	White
Daytime Color (CIELAB) Spectrophotometer using illuminant D65 at 45º illumination and 0º viewing with a 2º observer	L* 81.76 a* 19.79 b* 89.89 Maximum allowable variation 6.0ΔE*	L* 93.51 a* -1.01 b* 0.70 Maximum allowable variation 6.0ΔE*
Nighttime Color (CIELAB) Spectrophotometer using illuminant A at 45º illumination and 0º viewing with a 2º observer	L* 86.90 a* 24.80 b* 95.45 Maximum allowable variation 6.0ΔE*	L* 93.45 a* -0.79 b* 0.43 Maximum allowable variation 6.0ΔE*

b) Set Time. Use material that, when applied at a temperature range of 375 ± 25 ºF and thickness of 60 ± 10 mils, sets to bear traffic in not more than 2 minutes when the air and road surface temperature is approximately ≥ 50 ± 3 ºF, and not more than 10 minutes when the air and road surface temperature is approximately < 50 ± 3 ºF.

c) Softening Point. Ensure that the thermoplastic material has a softening point of 180 ± 15 ºF.

d) Bond Strength. Ensure that the bond strength of the thermoplastic material to concrete exceeds 180 psi.

e) Cracking Resistance at Low Temperature. Ensure that the thermoplastic material shows no cracks when observed from a distance exceeding one foot.

f) Impact Resistance. Ensure the impact resistance of the thermoplastic material is a minimum of 50 inch-pounds.

g) Flash Point. Use thermoplastic material that has a flash point not less than 475 °F.

E. PACKAGING. Package thermoplastic material in suitable 50 pound containers to which the material shall not adhere during shipment or storage. Include a label stating that the thermoplastic material is to be maintained with a temperature range of 350 – 400ºF during application. Provide the thermoplastic material in granular form.

F. SHELF LIFE. Ensure that the thermoplastic material conforms to this section for a period of one year. Replace any thermoplastic material not conforming to the above requirements.

G. MANUFACTURER'S TESTING. Perform testing in accordance with AASHTO T-250 on a minimum of one composite sample per 10,000 pounds, or portion thereof, per lot of thermoplastic produced.

H. CERTIFICATION. Submit manufacturer's certification stating conformance to the requirements of this section for each lot of extruded thermoplastic delivered for use on projects. Clearly state the manufacture, formulation identification, product name, color, date of manufacturer, total quantity of lot produced, actual quantity of thermoplastic material represented, sampling method utilized to obtain the samples, and required manufacturer's testing data for each composite sample tested to represent each lot produced.

III. CONSTRUCTION METHODS

A. SURFACE PREPARATION. The contractor will be required to sweep all pavement surfaces prior to striping and maintain the cleaning operation far enough in advance of the striping operation to prevent any dust from the cleaning operation from mixing with the paint. The sweeper must maintain contact with the roadway. When the Engineer determines abnormal amounts of debris or other material have accumulated beyond the capability of the required sweeping unit which will require shoveling or other means to remove, the Engineer will make arrangements, prior to painting, to have the material removed by the Department.

B. INSTALLATION. Install thermoplastic materials in accordance with Section 714, Durable Pavement Striping, and the following exceptions:

- Install the thermoplastic materials at a minimum thickness of 60 mils.
- Ensure the material temperature is maintained between 350 and 400°F.
- Do not allow the material temperature to exceed 400°F.
- Removal of existing stripe on asphalt surfaces is not required.

C. RETROREFLECTIVITY. The Department will evaluate installed markings in accordance with Section 714.03.06, Proving Period for Durable Markings.

IV. METHOD OF MEASUREMENT

A. ACCEPTANCE AND PAYMENT. The Department will accept spray applied thermoplastic materials based on compliance of the manufacturer's certification and conformance of test results obtained by the Department to the requirements of this special note.

Contrary to Section 714.03.08, Acceptance of Non-Specification Thermoplastic Markings, the Department will not accept non-specification compliant markings. Remove non-specification compliant markings by water blasting. The Department will perform random thickness tests on applied markings to determine compliance to thickness requirements

IV. BASIS OF PAYMENT

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

Code	Pay Item	Pay Unit
24995EC	PAVE STRIPING-SPRAY THERMO-6 IN W	LF
24996EC	PAVE STRIPING-SPRAY THERMO-6 IN Y	LF

The Department will consider payment as full compensation for furnishing all labor, materials, equipment, and incidentals required to construct spray applied thermoplastic pavement markings.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

Obtain U.S. Army Corps of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". The Corps of Engineers defines "Waters of the United States" as perennial or intermittent streams, ponds or wetlands. The Corps of Engineers also considers ephemeral streams, typically dry except during rainfall but having a defined drainage channel, to be jurisdictional waters. Direct questions concerning any potential impacts to "Waters of the United States" to the attention of the appropriate District Office for the Corps of Engineers for a determination prior to disturbance. Be responsible for any fees associated with obtaining approval for waste and borrow sites from the U.S. Army Corps of Engineer or other appropriate regulatory agencies.

1-296 Waste & Borrow Sites
01/02/2012

COORDINATION OF WORK WITH OTHER CONTRACTS

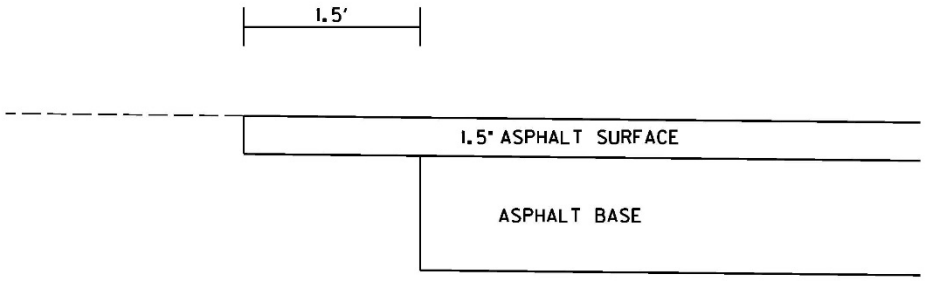
Be advised, there may be an active project(s) adjacent to or within this project. The Engineer will coordinate the work of the Contractors. See Section 105.06.

1-3193 Coordination Contracts
01/02/2012

SPECIAL NOTE FOR EDGE KEY

Construct Edge Keys at the beginning of project, end of project, at railroad crossings, and at ramps, as applicable. Unless specified in the Contract or directed by the Engineer, do not construct edge keys at intersecting streets, roads, alleys, or entrances. Cut out the existing asphalt surface to the required depth and width shown on the drawing and heel the new surface into the existing surface. The Department will make payment for this work at the Contract unit price per ton for Asphalt Pavement Milling and Texturing, which shall be full compensation for all labor, materials, equipment, and incidentals for removal and disposal of the existing asphalt surface required to construct the edge key.

EDGE KEY



Thickness = 1.5 Inches

L = 1.5 LF

L= Length of Edge Key

SPECIAL NOTES FOR GUARDRAIL

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's Standard and Supplemental Specifications, Special Notes and Special Provisions, and the Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications.

Furnish all equipment, labor, materials, and incidentals for the following work items:

(1) Site preparation; (2) Remove existing guardrail systems; (3) Construct Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable; (4) Delineators for guardrail; (5) Maintain and Control Traffic; and (6) all other work specified as part of this contract.

II. MATERIALS

Except as specified herein, provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual and make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Guardrail. Furnish guardrail system components according to Section 814 and the Standard and Sepia Drawings; except use steel posts only, no alternates.

C. Delineators for Guardrail. Furnish white and/or yellow Delineators for Guardrail according to Standard Drawing RBR-055 – Delineators for Guardrail, current edition.

D. Erosion Control. See the Special Note for Erosion Control.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Remove existing guardrail system, including the guardrail end treatments, Bridge End connectors and all other elements of the existing guardrail system as per Section 719, except that the Contractor will take possession of all concrete posts and all concrete associated with the existing bridge and/or guardrail end treatments. Locate all disposal areas off the Right of Way. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all obstructions or any other items; regrading, reshaping, adding and compacting of suitable materials on the existing shoulders to provide proper template or foundation for the guardrail;

filling voids left as the result of removing existing guardrail and guard posts with dry sand; temporary pollution and erosion control; disposal of excess, waste materials, and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the engineer.

C. Guardrail. Except as specified herein, construct guardrail system according to Section 719 and the Standard and Sepia Drawings, current editions. Locations listed on the summary and/or shown on the drawings are approximate only. The Engineer will determine the exact termini for individual guardrail installations at the time of construction. Unless directed otherwise by the Engineer, provide a minimum two (2) foot shoulder width. Construct radii at entrances and road intersections as directed by the Engineer.

Erect guardrail to the lines and grades shown on the current Standard and Sepia Drawings, or as directed by the Engineer by any method approved by the Engineer which allows construction of the guardrail to the true grade without apparent sags.

When removing existing guardrail and installing new guardrail, do not leave the blunt end exposed where it would be hazardous to the public. When it is not practical to complete the construction of the guardrail and the permanent end treatments and terminal sections first, provide a temporary end by connecting at least 25 feet of rail to the last post, and by slightly flaring, and burying the end of the rail completely into the existing shoulder. If left overnight, place a drum with bridge panel in advance of the guardrail end and maintain during use.

D. Delineators for Guardrail. Construct Delineators for Guardrail according to Standard Drawing RBR-055 – Delineators for Guardrail, current edition.

E. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Restore damaged roadway features and private property at no additional cost to the Department.

F. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require utilities to be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of guardrail operations at no additional cost to the Department.

G. Right of Way Limits. The Department has not established the exact limits of the Right-of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements, and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

H. Clean Up, Disposal of Waste. Dispose of all removed concrete, debris, and other waste and debris off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

I. Final Dressing, Seeding and Protection. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

J. Erosion Control. See the Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site preparation. Other than the bid items listed, the Department will not measure Site Preparation for separate payment but shall be incidental to the Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable.

C. Guardrail, End Treatments, Bridge End Connectors, Terminal Sections, and Remove Guardrail. The Department will measure according to Section 719.04.

D. Delineators for Guardrail. See Standard Drawing RBR-055 – Delineators for Guardrail.

E. Clean Up, Disposal of Waste, Final Dressing, and Seeding and Protection. The Department will NOT measure for payment the operations of: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental. Seeding and Protection will be measured according to Section 212.

F. Erosion Control. See the Special Note for Erosion Control.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Guardrail, End Treatments, Bridge End Connectors, Terminal Sections, and Remove Guardrail. The Department will make payment according to Section 719.05.

C. Delineators for Guardrail. See Standard Drawing RBR-055 – Delineators for Guardrail.

D. Erosion Control. See the Special Note for Erosion Control.

SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING

Begin paving operations within **48 hours** of commencement of the milling operation. Continue paving operations continuously until completed. If paving operations are not begun within this time period, the Department will assess liquidated damages at the rate prescribed by Section 108.09 until such time as paving operations are begun.

Take possession of the millings and recycle the millings or dispose of the millings off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.

1-3520 48 hours Contractor keeps millings
01/2/2012

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

Consider the dimensions shown on the typical sections for pavement and shoulder widths and thickness' to be nominal or typical dimensions. The Engineer may direct or approve varying the actual dimensions to be constructed to fit existing conditions. Do not widen existing pavement or shoulders unless specified elsewhere in this proposal or directed by the engineer.

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the current editions of the Manual on Uniform Traffic Control Devices (MUTCD), Standard Specifications, and the Standard and Sepia Drawings. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic".

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like new condition, at the beginning of the work and maintained in like new condition until completion of the work. Any temporary traffic control items, devices, materials, and incidentals shall remain the property of the contractor unless otherwise addressed, when no longer needed.

PROJECT PHASING & CONSTRUCTION PROCEDURES

Project maintenance of traffic and construction phasing are illustrated in the plans. In general, construction operations shall proceeded as follows:

US 62 Two-Way Left Turn Lane
Phase 1: Complete widening of westbound US 62;
Phase 2: Complete widening of eastbound US 62

US 62/KY 1523 Turn Lanes
Phase 1: Complete widening of eastbound US 62;
Phase 2: Complete widening of westbound US 62 and KY 1523 intersection

US 62/KY 95 Intersection
Phase 1: Complete widening of southbound KY 95;
Phase 2: Complete widening of northbound KY 95;
Phase 3: Complete overlay of US 62 and KY 95

For all construction activities, maintain one 12 ft. lane of traffic on US 62 in each direction at all times. This may require part-width construction of certain elements. If approved by the Engineer, steel plates may be used to span trenches while flowable fill cures.

If traffic should be stopped due to construction operations, and a school bus or emergency vehicle on an official run arrives on the scene, make provisions for the passage of the school bus or emergency vehicle as quickly as possible.

LANE CLOSURES

Contrary to the Standard Specifications, long-term lane closures will not be measured for payment, but will be incidental to the Bid Item for Maintain and Control Traffic.

No lane closures will be allowed on the following dates:

Memorial Day Weekend	Friday, May 22, 2020 – Monday, May 25, 2020
Independence Day	Saturday, July 4, 2020
Labor Day Weekend	Friday, September 4, 2020 – Monday, September 7, 2020

At the discretion of the Engineer, additional days and hours may be specified when lane closures will not be allowed.

ROAD CLOSURES

When changing from one temporary traffic pattern to another, traffic may be halted for up to 15 minutes. Prior approval by the Engineer will be required for all road closures. It is the intent that all road closures be kept to a minimum time. The contractor is to schedule operations involving road closures so that all work proceeds in an expeditious manner. Liquidated Damages will be assessed at $1,000 per hour (or prorated portion thereof), for each occurrence, of road closures exceeding 15 minutes.

SIGNS

Sign posts and splices shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. Signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, only long-term signs (signs intended to be continuously in place for more than 3 days) will be measured for payment. Short-term signs (signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic. **A quantity of 500 sq. ft. of Temporary Signs has been included for bidding purposes.**

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs at locations determined by the Engineer. The Engineer may vary the designated locations as the work progresses. The Engineer will determine the messages to be displayed. In the event of damage or mechanical/electrical failure, repair or replace the Changeable Message Sign within 24 hours. The Department will measure for payment the maximum number of Changeable Message Signs in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Changeable Message Signs only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Changeable Message Signs or for signs the Engineer directs be replaced due to poor condition or readability. Retain possession of the Changeable Message Signs upon completion of the work. **A quantity of 6 (each) Portable Changeable Message Signs has been included for bidding purposes.**

BARRICADES

The Department will not measure barricades used in lieu of barrels and cones for channelization or delineation, but shall be incidental to Maintain and Control Traffic according to Section 112.04.01.

TEMPORARY ENTRANCES

The Engineer will not require the Contractor to provide continuous access to farms, single family, duplex, or triplex residential properties during working hours; however, provide reasonable egress and ingress to each such property when actual operations are not in progress at that location. Limit the time during which a farm or residential entrance is blocked to the minimum length of time required for actual operations, not extended for the Contractor's convenience, and in no case exceeding six (6) hours. Notify all residents twenty-four hours in advance of any driveway or entrance closings and make any accommodations necessary to meet the access needs of disabled residents.

Except as allowed by the Phasing as specified in the plans, maintain direct access to all side streets and roads, schools, churches, commercial properties, and apartments or apartment complexes of four or more units at all times. Access to fire hydrants must also be maintained at all times

The Department will measure asphalt materials required to construct and maintain any temporary entrances which may be necessary to provide temporary access; however, the Department will not measure aggregates, excavation, and/or embankment, but shall be incidental to Maintain and Control Traffic. The Engineer will determine the type of surfacing material, asphalt or aggregate, to be used at each entrance.

PAVEMENT MARKINGS

If there is to be a deviation from the existing striping plan and/or the proposed striping plan, the Engineer will furnish the Contractor an updated striping plan prior to placement of the final surface course. Install Temporary Striping according to Section 112 with the following exception:

> If the Contractor’s operations or phasing requires temporary markings that must subsequently be removed from the final surface course, use an approved removable lane tape; however, the Department will not measure removable lane tape for separate payment, but will measure and pay for removable lane tape as temporary striping.

A quantity of 31,529 LF of Temporary Striping (4 in) and 31,529 LF of Water Blasting have been included for bidding purposes. The Contractor and Engineer should work together to determine any locations throughout the project requiring temporary pavement markings. The Engineer will make the final determination as to the quantities and placement of temporary pavement striping.

PAVEMENT EDGE DROP-OFFS

Do not allow a pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation with an elevation difference greater than 1½". Place Warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual post the signs on both sides of the traveled way. Wedge all transverse transitions between resurfaced and un-resurfaced areas which traffic may cross with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course.

Protect pavement edges that traffic is not expected to cross, except accidentally, as follows:

Less than 2" - No protection required.

2" to 4" - Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in lieu of plastic drums, panels, and barricades. Wedge the drop-off with DGA or asphalt mixture for leveling and wedging with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.

Greater than 4" - Protect drop-offs greater than 4 inches within 10 feet of traffic by placing drums, vertical panels, or barricades every 25 feet. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades for drop-offs greater than 4". Place Type III Barricades directly in front of the drop-off facing oncoming traffic in both directions of travel. Provide warning signs as shown on the Standard Drawings or as directed by the Engineer.

Pedestrians & Bicycles - Protect pedestrian and bicycle traffic as directed by the Engineer.

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

The following policy is based upon current Changeable Message Signs (CMS) standards and practice from many sources, including the Federal Highway Administration (FHWA), other State Departments of Transportation, and Traffic Safety Associations. It is understood that each CMS installation or use requires individual consideration due to the specific location or purpose. However, there will be elements that are constant in nearly all applications. Accordingly these recommended guidelines bring a level of uniformity, while still being open to regional experience and engineering judgment.

Application

The primary purpose of CMS is to advise the driver of unexpected traffic and routing situations. Examples of applications where CMS can be effective include:

- Closures (road, lane, bridge, ramp, shoulder, interstate)
- Changes in alignment or surface conditions
- Significant delays, congestion
- Construction/maintenance activities (delays, future activities)
- Detours/alternative routes
- Special events with traffic and safety implications
- Crash/incidents
- Vehicle restrictions (width, height, weight, flammable)
- Advance notice of new traffic control devices
- Real-time traffic conditions (must be kept up to date)
- Weather /driving conditions, environmental conditions, Roadway Weather Information Systems
- Emergency Situations
- Referral to Highway Advisory Radio (if available)
- Messages as approved by the County Engineer's Office

CMS should not be used for:

- Replacement of static signs (e.g. road work ahead), regulatory signage (e.g. speed limits), pavement markings, standard traffic control devices, conventional warning or guide signs.
- Replacement of lighted arrow board
- Advertising (Don't advertise the event unless clarifying "action" to be taken by driver – e.g. Speedway traffic next exit)
- Generic messages
- Test messages (portable signs only)
- Describe recurrent congestion (e.g. rush hour)
- Public service announcements (not traffic related)

Messages

Basic principles that are important to providing proper messages and insuring the proper operation of a CMS are:

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed
- No more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

Placement of the CMS is important to insure that the sign is visible to the driver and provides ample time to take any necessary action. Some of the following principles may only be applicable to controlled access roadways. The basic principles of placement for a CMS are:

- When 2 signs are needed, place on same side of roadway and at least 1,000 feet apart
- Place behind semi-rigid/rigid protection (guardrail, barrier) or outside of the clear zone
- Place 1,000 feet in advance of work zone; at least one mile ahead of decision point
- Normally place on right side of roadway; but should be placed closest to the affected lane so that either side is acceptable
- Signs should not be dual mounted (one on each side of roadway facing same direction)
- Point trailer hitch downstream
- Secure to immovable object to prevent theft (if necessary)
- Do not place in sags or just beyond crest
- Check for reflection of sun to prevent the blinding of motorist
- Should be turned ~3 degrees outward from perpendicular to the edge of pavement
- Bottom of sign should be 7 feet above the elevation of edge of roadway
- Should be removed when not in use

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Standard Abbreviations

The following is a list of standard abbreviations to be used on CMS:

Word	Abbrev	Example
Access	ACCS	ACCIDENT AHEAD/ USE ACCS RD NEXT RIGHT
Alternate	ALT	ACCIDENT AHEAD/ USE ALT RTE NEXT RIGHT
Avenue	AVE	FIFTH AVE CLOSED/ DETOUR NEXT LEFT
Blocked	BLKD	FIFTH AVE BLKD/ MERGE LEFT
Boulevard	BLVD	MAIN BLVD CLOSED/ USE ALT RTE
Bridge	BRDG	SMITH BRDG CLOSED/ USE ALT RTE
Cardinal Directions	N, S, E, W	N I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/ MERGE LEFT
Commercial	COMM	OVRSZ COMM VEH/ USE I275
Condition	COND	ICY COND POSSIBLE
Congested	CONG	HVY CONG NEXT 3 MI
Construction	CONST	CONST WORK AHEAD/ EXPECT DELAYS
Downtown	DWNTN	DWNTN TRAF USE EX 40
Eastbound	E-BND	E-BND I64 CLOSED/ DETOUR EXIT 20
Emergency	EMER	EMER VEH AHEAD/ PREPARE TO STOP
Entrance, Enter	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/ DETOUR EXIT 10
Freeway	FRWY, FWY	GN SYNDR FWY CLOSED/ DETOUR EXIT 15
Hazardous Materials	HAZMAT	HAZMAT IN ROADWAY/ ALL TRAF EXIT 25
Highway	HWY	ACCIDENT ON AA HWY/ EXPECT DELAYS
Hour	HR	ACCIDENT ON AA HWY/ 2 HR DELAY
Information	INFO	TRAF INFO TUNE TO 1240 AM
Interstate	I	E-BND I64 CLOSED/ DETOUR EXIT 20
Lane	LN	LN CLOSED MERGE LEFT
Left	LFT	LANE CLOSED MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/ SLOW
Major	MAJ	MAJ DELAYS I75/ USE ALT RTE
Mile	MI	ACCIDENT 3 MI AHEAD/ USE ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY
Minutes	MIN	ACCIDENT 3 MI/ 30 MIN DELAY
Northbound	N-BND	N-BND I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/ USE I275 NEXT RIGHT
Parking	PKING	EVENT PKING NEXT RGT
Parkway	PKWY	CUM PKWAY TRAF/ DETOUR EXIT 60
Prepare	PREP	ACCIDENT 3 MI/ PREP TO STOP
Right	RGT	EVENT PKING NEXT RGT
Road	RD	HAZMAT IN RD/ ALL TRAF EXIT 25
Roadwork	RDWK	RDWK NEXT 4 MI/ POSSIBLE DELAYS
Route	RTE	MAJ DELAYS I75/ USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/ SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/ DETOUR EXIT 50
Speed	SPD	SLIP COND POSSIBLE/ SLOW SPD

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Standard Abbreviations (cont)

Word	Abbrev	Example
Street	ST	MAIN ST CLOSED/ USE ALT RTE
Traffic	TRAF	CUM PKWAY TRAF/ DETOUR EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/ USE I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/ DETOUR EXIT 50
Work	WRK	CONST WRK 2MI/ POSSIBLE DELAYS

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. DO NO USE THESE ABBREVIATIONS:

Abbrev	Intended Word	Word Erroneously Given
ACC	Accident	Access (Road)
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (merge)
LOC	Local	Location
LT	Light (traffic)	Left
PARK	Parking	Park
POLL	Pollution (index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard
TEMP	Temporary	Temperature
WRNG	Warning	Wrong

Typical Messages

The following is a list of typical messages used on CMS. The list consists of the reason or problem that you want the driver to be aware of and the action that you want the driver to take.

Reason/Problem	Action
ACCIDENT	ALL TRAFFIC EXIT RT
ACCIDENT/XX MILES	AVOID DELAY USE XX
XX ROAD CLOSED	CONSIDER ALT ROUTE
XX EXIT CLOSED	DETOUR
BRIDGE CLOSED	DETOUR XX MILES
BRIDGE/(SLIPPERY, ICE, ETC.)	DO NOT PASS
CENTER/LANE/CLOSED	EXPECT DELAYS
DELAY(S), MAJOR/DELAYS	FOLLOW ALT ROUTE
DEBRIS AHEAD	KEEP LEFT
DENSE FOG	KEEP RIGHT
DISABLED/VEHICLE	MERGE XX MILES
EMER/VEHICLES/ONLY	MERGE LEFT
EVENT PARKING	MERGE RIGHT
EXIT XX CLOSED	ONE-WAY TRAFFIC
FLAGGER XX MILES	PASS TO LEFT
FOG XX MILES	PASS TO RIGHT

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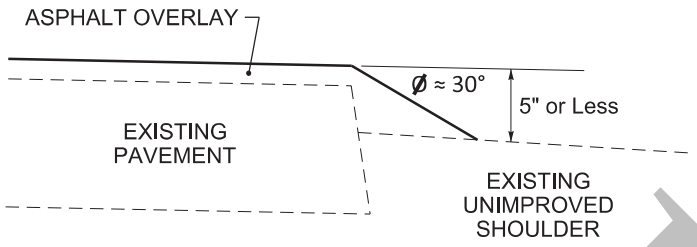
Typical Messages (cont)

Reason/Problem	**Action**
FREEWAY CLOSED	PREPARE TO STOP
FRESH OIL	REDUCE SPEED
HAZMAT SPILL	SLOW
ICE	SLOW DOWN
INCIDENT AHEAD	STAY IN LANE
LANES (NARROW, SHIFT, MERGE, ETC.)	STOP AHEAD
LEFT LANE CLOSED	STOP XX MILES
LEFT LANE NARROWS	TUNE RADIO 1610 AM
LEFT 2 LANES CLOSED	USE NN ROAD
LEFT SHOULDER CLOSED	USE CENTER LANE
LOOSE GRAVEL	USE DETOUR ROUTE
MEDIAN WORK XX MILES	USE LEFT TURN LANE
MOVING WORK ZONE, WORKERS IN ROADWAY	USE NEXT EXIT
NEXT EXIT CLOSED	USE RIGHT LANE
NO OVERSIZED LOADS	WATCH FOR FLAGGER
NO PASSING	
NO SHOULDER	
ONE LANE BRIDGE	
PEOPLE CROSSING	
RAMP CLOSED	
RAMP (SLIPPERY, ICE, ETC.)	
RIGHT LANE CLOSED	
RIGHT LANE NARROWS	
RIGHT SHOULDER CLOSED	
ROAD CLOSED	
ROAD CLOSED XX MILES	
ROAD (SLIPPERY, ICE, ETC.)	
ROAD WORK	
ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)	
ROAD WORK XX MILES	
SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.)	
NEW SIGNAL XX MILES	
SLOW 1 (OR 2) - WAY TRAFFIC	
SOFT SHOULDER	
STALLED VEHICLES AHEAD	
TRAFFIC BACKUP	
TRAFFIC SLOWS	
TRUCK CROSSING	
TRUCKS ENTERING	
TOW TRUCK AHEAD	
UNEVEN LANES	
WATER ON ROAD	
WET PAINT	
WORK ZONE XX MILES	
WORKERS AHEAD	

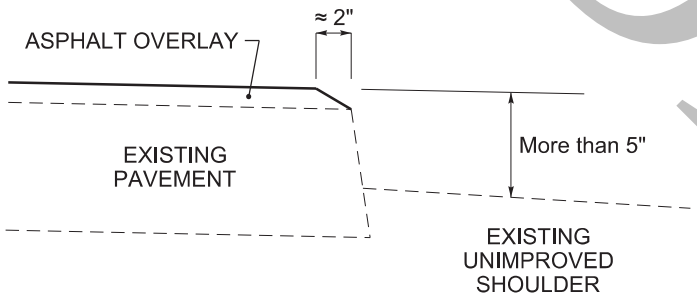
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to low shoulder with dropoff of 5 inches or less)



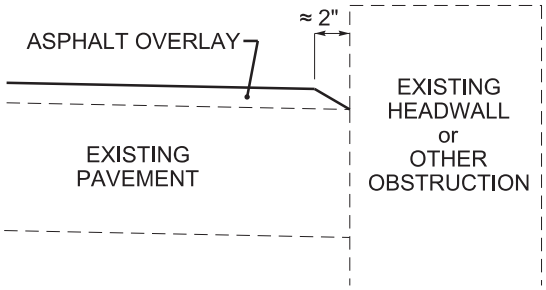
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to low shoulder with dropoff of more than 5 inches)



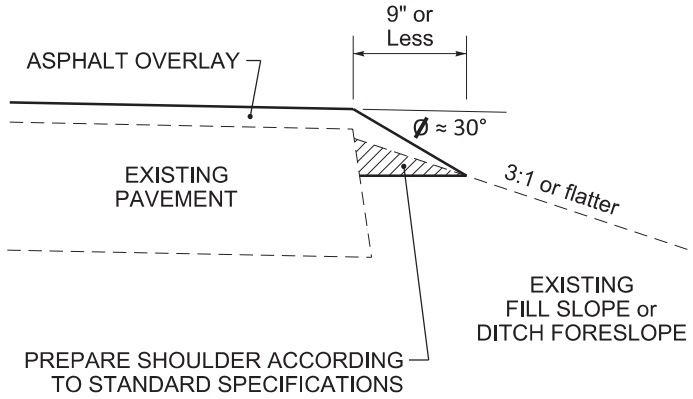
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to an obstruction, such as an existing headwall)



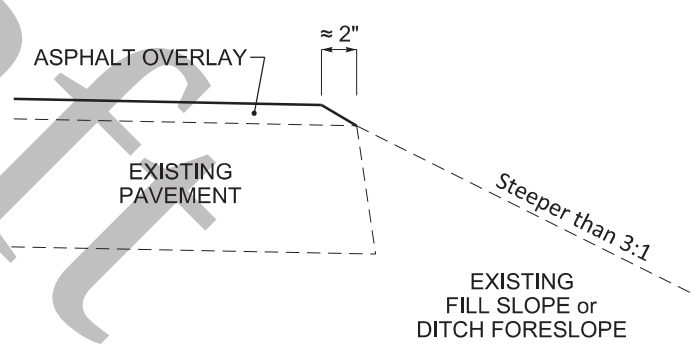
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to fill slope or ditch foreslope that is 3:1 or less)



DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to fill slope or ditch foreslope that is steeper than 3:1)



NOTES

1. DETAILS DO NOT APPLY TO OVERLAYS LESS THAN 1 INCH THICK.
2. THE DURABLE PAVEMENT EDGE DEVICE MAY BE DISENGAGED AT DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT, AS APROVED BY THE ENGINEER.

DRAWING NOT TO SCALE

DURABLE PAVEMENT EDGE DETAILS

SPECIAL NOTE FOR TRAFFIC SIGNAL LOOP DETECTORS

1.0 DESCRIPTION. Be advised that there are existing traffic signal loop detectors within the construction limits of this project. Except as specified herein, perform traffic signal loop replacement in accordance with the Department's Standard/Supplemental Specifications, Special Provisions, Special Notes, and Standard/Sepia Drawings, current editions and as directed by the Engineer. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for replacement of traffic signal loop installation(s) and all other work specified as part of this contract.

1.1 Pre-bid Requirements. Conform to Subsection 723.03.17

2.0 MATERIALS. Except as specified herein, furnish materials in accordance with Subsection 732.02 and Section 835. Provide for materials to be sampled and tested in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in this Special Note.

2.1 Maintain and Control Traffic. See Traffic Control Plan.

2.2 Sand. Furnish natural sand meeting the requirements of Subsection 804.04.01.

2.3 Seeding. Furnish Seed Mix Type I.

2.4 Loop Saw Slot and Fill. Furnish loop sealant, backer rod, and non-shrink grout according to the Saw Slot Detail.

2.5 Junction Boxes. Furnish junction box type B, #57 aggregate, and geotextile filter type IV according to junction box detail.

2.6 Cable No. 14/1 Pair (Lead-in). Furnish cable that is specified in Section 835. Cable shall be ran splice free. This shall include splice kits to connect to the loop wire.

2.7 Conduit. Furnish and install appropriate conduit from transitions to the roadway, junction boxes and poles. See details below.

3.0 CONSTRUCTION. Except as specified herein, install and test Traffic Signal Loop Detectors in accordance with Section 723 and the drawings.

3.1 Testing. Conform to Subsection 723.03.17 (A)

3.2 Coordination. Conform to Subsection723.03.17 (B)

3.3 Connection. Conform to Subsection 723.03.17 (C)

3.4 Maintain and Control Traffic. See Traffic Control Plan.

3.5 Milling. Conform to Subsection 723.03.17 (F)

3.6 Loop Saw Slot and Fill. Conform to Subsection 723.03.13 (A).

3.7 Backfilling and Disturbed Areas. Conform to Subsection 723.03.11.

3.8 Removal. Conform to Subsection 723.03.16.

3.9 Property/Roadway Damage. Conform to Subsection 723.03.17 (J).

3.10 Right-of-Way Limits. Conform to Subsection 723.03.17 (K).

3.11 Utility Clearance. Conform to Subsection 716.03.01.

3.12 Control. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to permit other contractors, state forces, public utility companies, and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with each other's work will be reduced to a minimum. The Contractor agrees to make no claims against the Department for additional compensation due to delays or other conditions created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to ensure the completion of the work in general harmony and in a satisfactory manner, and the Engineer's decision shall be final and binding upon the Contractor.

3.13 Bore and Jack. Conform to Subsection 723.03.06 (I).

3.14 Open Cut Roadway. Conform to Subsection 723.03.06 (I).

4.0 MEASUREMENT. See Subsection 723.04 for bid item notes. Additional bid items include the following:

4.1 Loop Test. The Department will measure the quantity as each individual unit loop tested. The Department will not measure disconnection, reconnection, traffic control, re-splicing per specifications, before and after testing per note above, and any associated hardware for payment and will consider them incidental to this item of work.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities of listed items according to Subsection 723.05 in addition to the following:

Code	Pay Item	Pay Unit
Conduit 1"	4792	Linear Foot
PVC Conduit – 1 ¼ inch – sch 80	24900EC	Linear Foot
PVC Conduit – 2 inch – sch 80	24901EC	Linear Foot
Conduit 2"	4795	Linear Foot
Electrical Junction Box type B	4811	Each
Loop Test	24963ED	Each
Trenching and Backfilling	4820	Linear Foot
Loop Wire	4830	Linear Foot

Traffic Signal Loop Detectors
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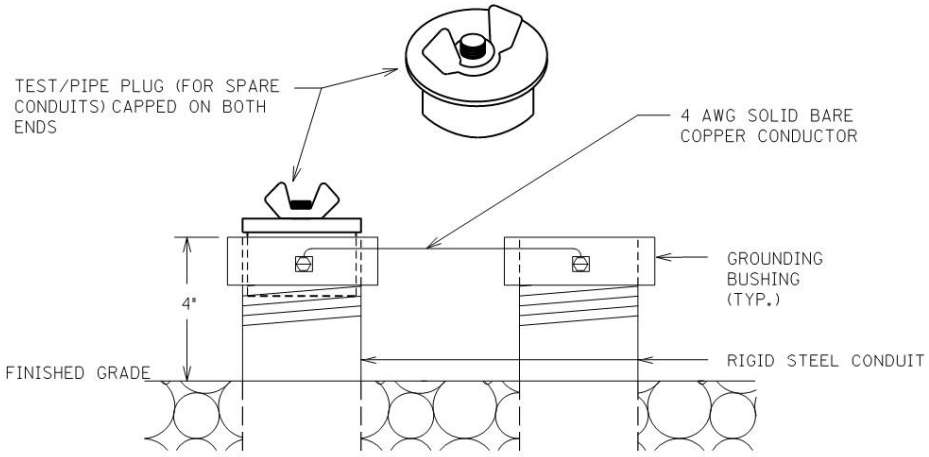
Cable-No. 14/1 Pair	4850	Linear Foot[1]
Loop Saw Slot and Fill	4895	Linear Foot[1]
Bore and Jack Conduit	21543EN	Linear Foot[3]
Open Cut Roadway	4821	Linear Foot[3]

The Department will consider payment as full compensation for all work required under these notes and the Standard Specifications.

Revised: 10/17/2019



TEST/PIPE PLUG(FOR SPARE CONDUITS) AND GROUNDING DETAIL

Traffic Signal Loop Detectors
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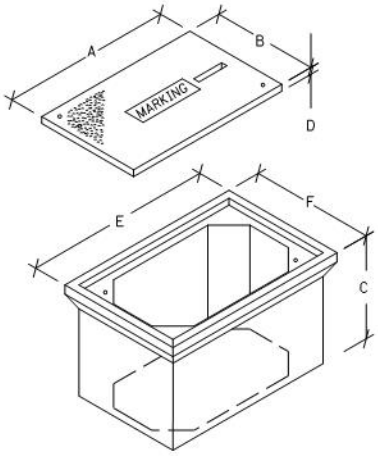
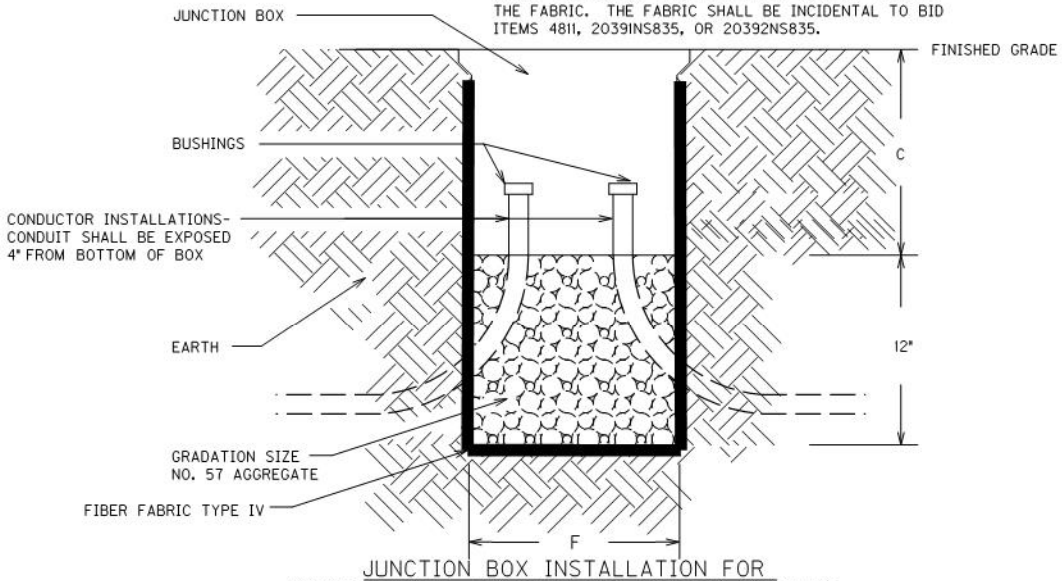


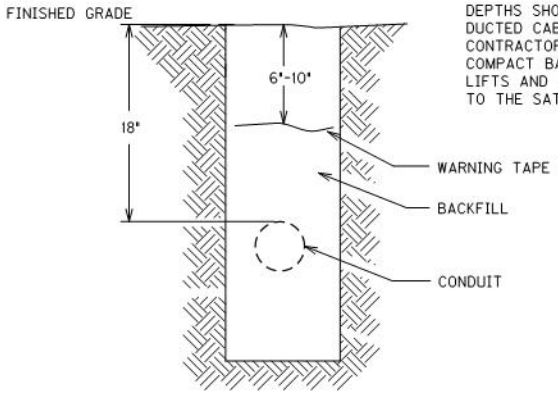
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D	E	F
TYPE A	23"	14"	27"	2"	25"	15"
TYPE B	18"	11"	12"	1¾" *	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
NOTE: STACKABLE BOXES ARE PERMITTED

BEFORE THE INSTALLATION OF THE #57 AGGREGATE AND JUNCTION BOX, THE CONTRACTOR SHALL INSTALL GEOTEXTILE FILTER FABRIC TYPE IV IN THE HOLE. THE FABRIC SHALL EXTEND TO JUST BELOW THE LIP OF THE JUNCTION BOX AND SHALL BE CONTINUOUSLY ADHERED TO THE EXTERIOR OF THE BOX WITH ADHESIVE. ANY LOCATIONS WHERE CONDUITS ENTER THE BOX, THE FABRIC SHALL BE 'X CUT' ONLY AS MUCH AS NECESSARY TO ALLOW PASSAGE OF EACH INDIVIDUAL CONDUIT THROUGH THE FABRIC. THE FABRIC SHALL BE INCIDENTAL TO BID ITEMS 4811, 2039INS835, OR 20392NS835.



JUNCTION BOX INSTALLATION FOR
CONVENTIONAL LIGHTING OR TRAFFIC SIGNALS



DEPTHS SHOWN FOR CONDUIT AND DUCTED CABLE ARE MINIMUMS. CONTRACTOR SHALL PLACE AND COMPACT BACKFILL IN 9" MAXIMUM LIFTS AND RETORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER.

CONDUIT AND WARNING TAPE TRENCH

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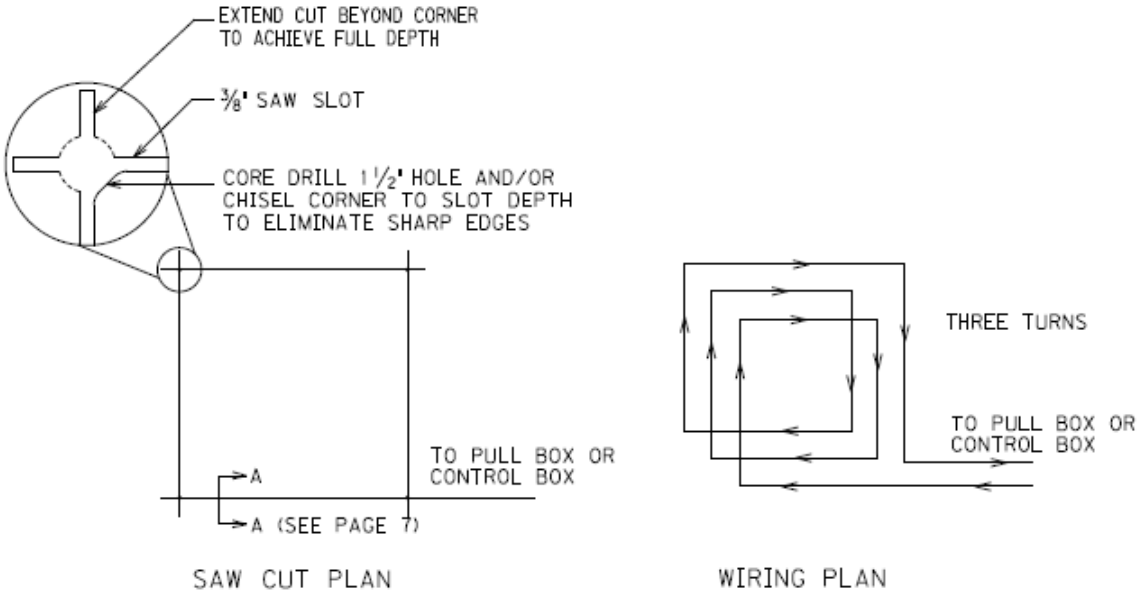
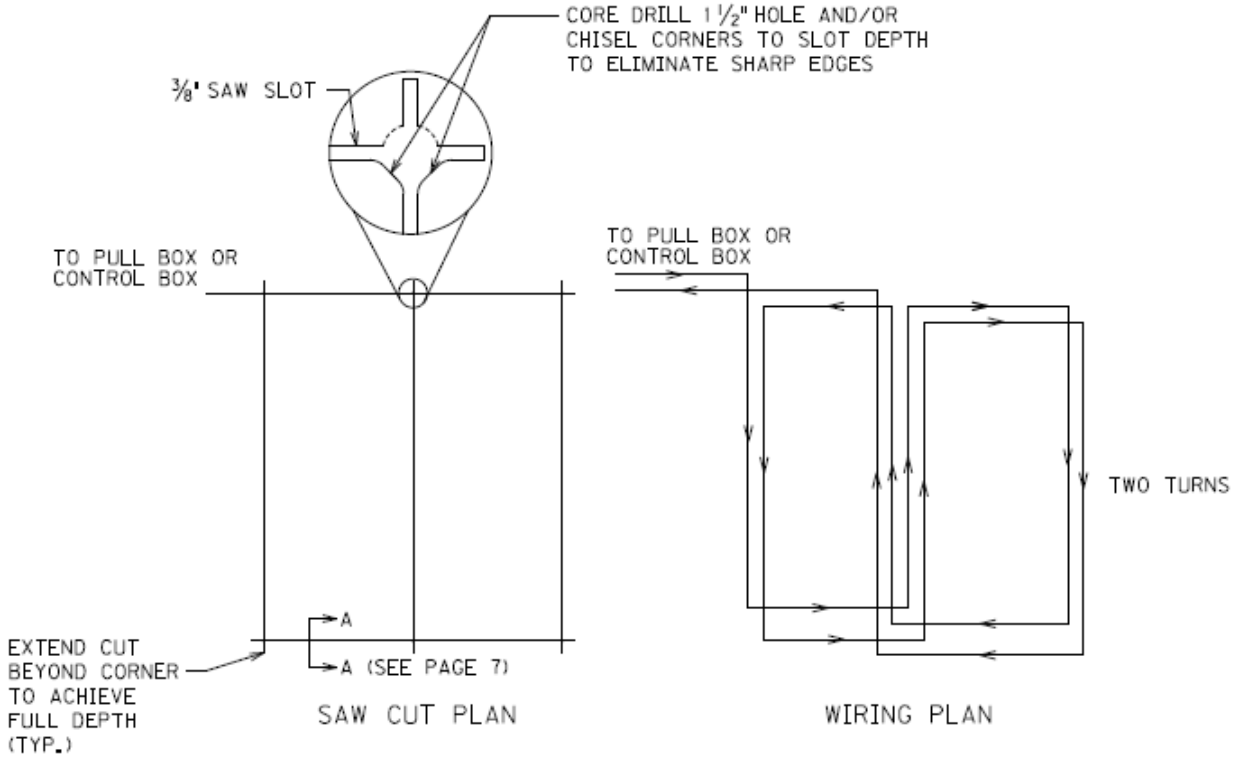


6'X6' LOOP



6'X30' QUADRAPOLE LOOP

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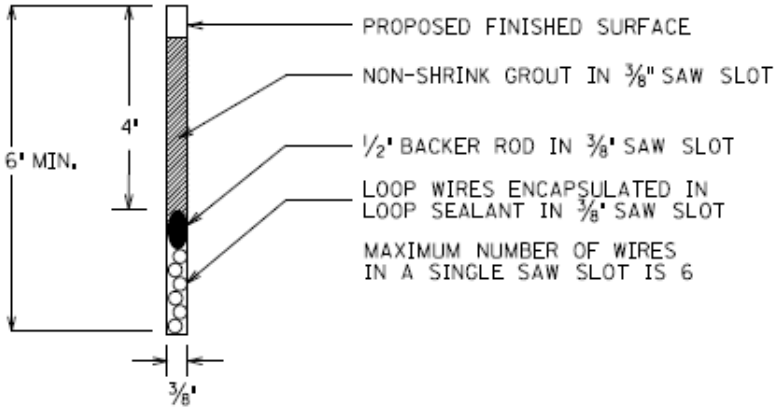
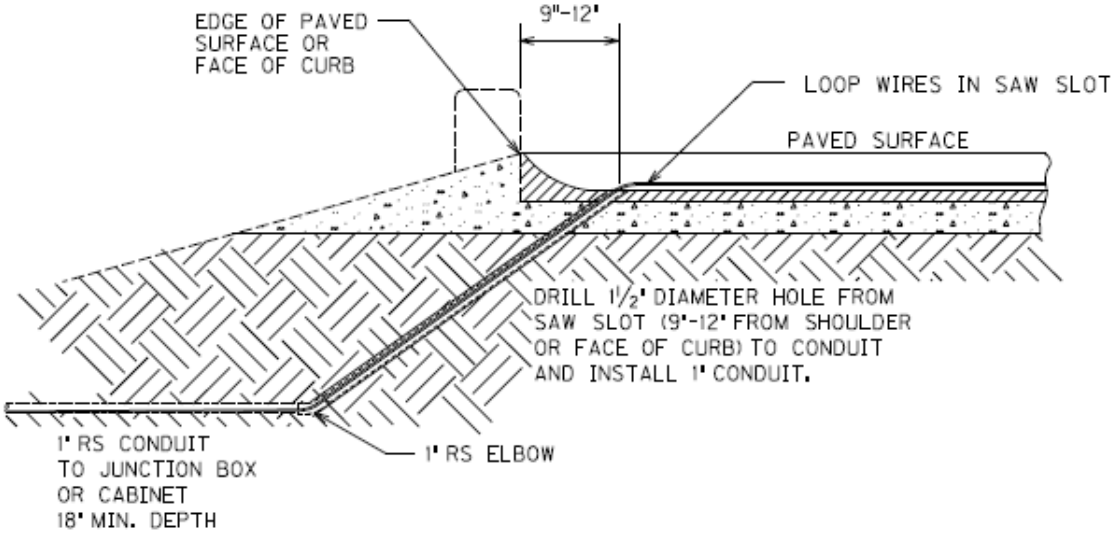
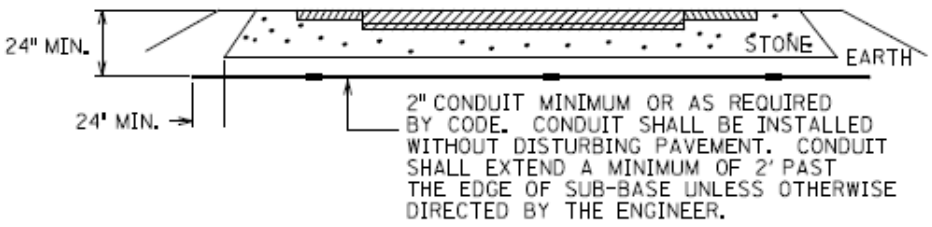


SECTION A-A (SAW SLOT DETAIL)



SAW SLOT EDGE OF PAVEMENT TRANSITION



CONDUIT UNDER EXISTING PAVEMENT DETAIL

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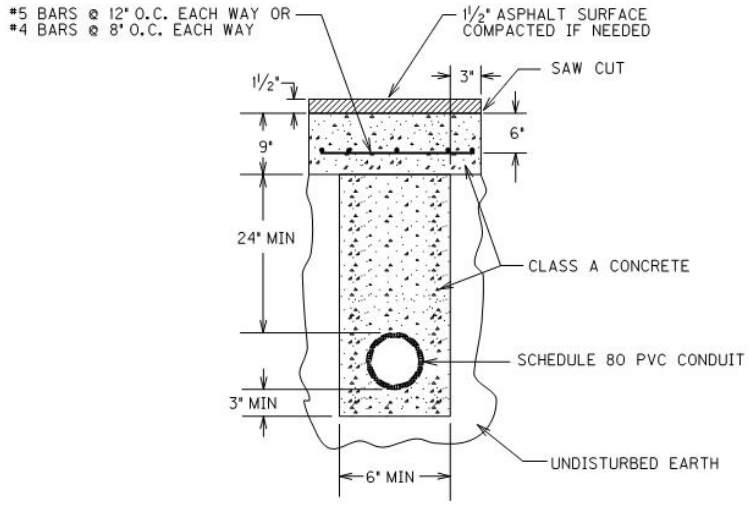
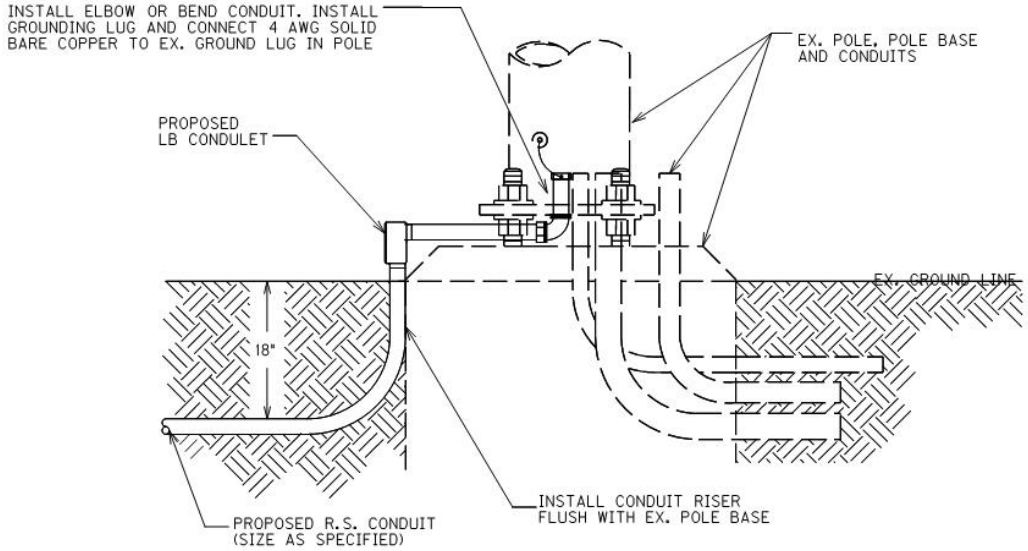
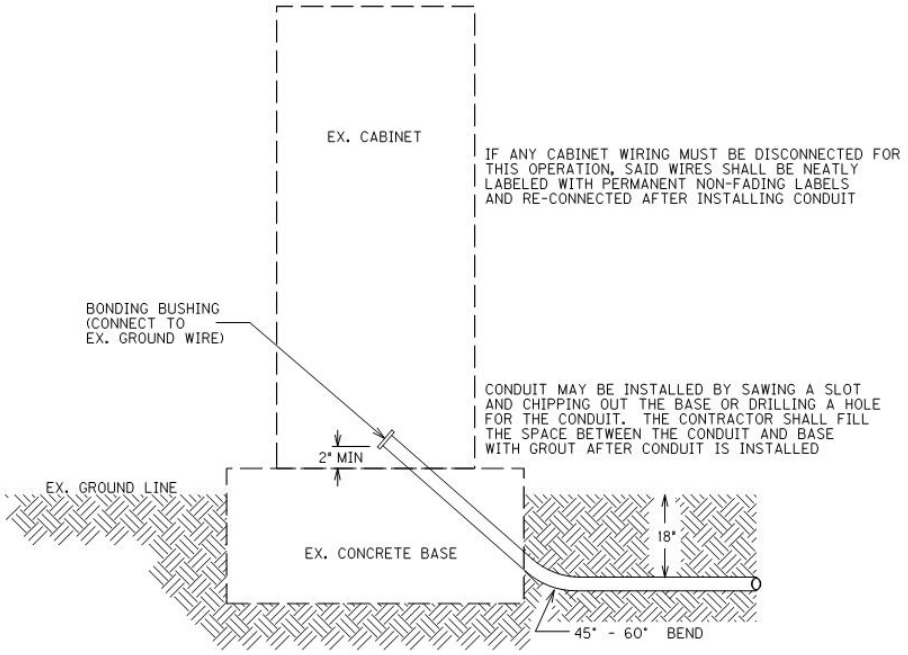


OPEN CUT PAVEMENT DETAIL



CONDUIT INSTALLATION IN EX. POLE BASE

Traffic Signal Loop Detectors
Page 8 of 8



CONDUIT INSTALLATION IN EX. CABINET BASE

KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF RIGHT OF WAY & UTILITIES

TC 62-226
Rev. 01/2016
Page 1 of 1

RIGHT OF WAY CERTIFICATION

☒ **Original** ☐ **Re-Certification** — **RIGHT OF WAY CERTIFICATION**

ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
1-9009.00	Marshall	FD52 079 0062 000-008	HSIP 5028 (001)

PROJECT DESCRIPTION

Peform Low Cost Safety Improvements along US 62 Between MP 0.00 and MP 7.20 in Marshall County, KY

☒ **No Additional Right of Way Required**

Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.

☐ **Condition # 1 (Additional Right of Way Required and Cleared)**

All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.

☐ **Condition # 2 (Additional Right of Way Required with Exception)**

The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract

☐ **Condition # 3 (Additional Right of Way Required with Exception)**

The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.

Total Number of Parcels on Project	0	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed			
Condemnation			
Signed ROE			

Notes/ Comments (Use Additional Sheet if necessary)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	
Signature		Signature	Greg L. Morgan Digitally signed by Greg L. Morgan Date: 2020.03.02 08:21:20 -06'00'
Date		Date	

Right of Way Director		FHWA	
Printed Name		Printed Name	
Signature	2020.03.02 16:37:09 -06'00'	Signature	No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

MARSHALL COUNTY, HSIP 5028 (001)
FD52 079 0062 000-008
Safety Improvements along US 62 from MP 0.00 – 7.20
ITEM NUMBER 1-9009.00

Utility coordination efforts conducted by the project sponsor have determined that no significant utility relocation work is required to complete the project.

Water facilities appear to exist on the north and south sides (sometimes simultaneously), with multiple crossings throughout the project corridor. However, there appears to be an area between approximate station 240+00 and approximate station 266+00, that does not have water facility along the roadway corridor.

Electric Distribution extends throughout the project corridor, with multiple crossings.

Electric Transmission routes cross the project corridor in several locations. Facilities have been identified at approximate stations 38+00 to 39+00, approximate station 270+00, approximate station 185+00 to 195+00, and approximate station 258+00 to approximate station 261+00.

Telecommunications facilities, both aerial and underground, are located throughout the project.

Sanitary sewer facilities have been identified as having a crossing at approximate station 315+00; however, no adjacent facilities have been identified, but this does not eliminate the possibility of their existence.

A Gas Transmission crossing has been identified at approximate station 340+00 to 341+00. Additionally, a 12-inch steel gas facility has been identified along the southern right-of-way from approximate station 190+00, through the end of the project corridor.

Gas distribution has been identified as being located along the south side of US-62 from approximately Keith Culp Road to Monroe Road, then south, along the west side of Monroe Road.

THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ **No Rail Involved** ☐ **Minimal Rail Involved (See Below)** ☐ **Rail Involved (See Below)**

UTILITIES AND RAIL CERTIFICATION NOTE

MARSHALL COUNTY, HSIP 5028 (001)
FD52 079 0062 000-008
Safety Improvements along US 62 from MP 0.00 – 7.20
ITEM NUMBER 1-9009.00

UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation.

The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The

Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

UTILITIES AND RAIL CERTIFICATION NOTE

MARSHALL COUNTY, HSIP 5028 (001)
FD52 079 0062 000-008
Safety Improvements along US 62 from MP 0.00 – 7.20
ITEM NUMBER 1-9009.00

AREA UTILITIES CONTACT LIST AS PROVIDED BY KY 811

Utility Company/Agency	Contact Name	Contact Information
AT & T – Kentucky	**Amanda Berkley**	**810 Kentucky Avenue Paducah, KY 42003 270-444-5047**
ATMOS Energy	**Pat Mattingly**	**3034 Parker Street Paducah, KY 42003 270-970-2521**
Comcast Cable of Paducah		**5183 Hinkleville Road Paducah, KY 42001 800-934-6489**
Mediacom Comm.	**Brien Ramey**	**90 North Main Princeton, KY 42445 270-703-4363**
Muninet Fiber Agency		**1500 Broadway Street Paducah, KY 42001 270-575-4000**
Paducah Water	**Jason Petersen**	**1800 North 8th Street Paducah, KY 42002 270-443-9627**
Paducah Power System*	**Rick Windhorst**	**1500 Broadway Paducah, KY 42002 270-575-4000**
Calvert City Municipal Water System*	**Roger Colburn**	**P.O. Box 36 Calvert City, KY 42029 270-395-7138**

***These Utility companies were not listed in the KY811 notification; however, they are known to have facilities in the project area. Please note that this may not be a complete listing of the utility companies with facilities in the project area.**

N O T I C E

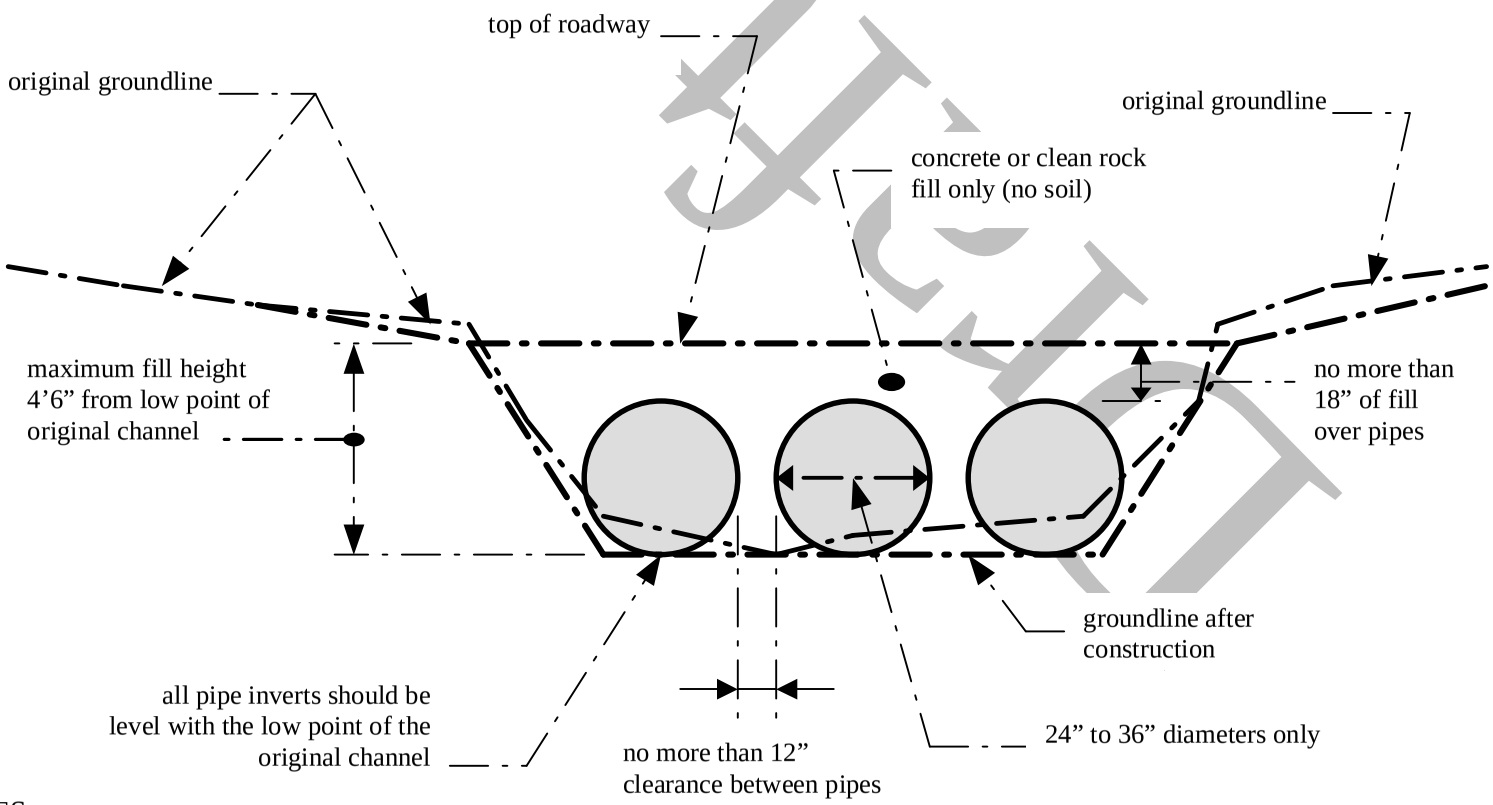
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
(NATIONWIDE PERMIT & GENERAL WQC AUTHORIZATION)

PROJECT: Marshall County, Item No. 1-9009.00
US 62 HSIP

The Section 404 & 401 activities for this project have been previously permitted under the authority of the Department of the Army Nationwide Permit No. 14 "Linear Transportation Projects" & Division of Water General Water Quality Certification. . If there is need to cross the stream channel with heavy equipment or conduct work from within the stream channel a working platform or temporary crossing is authorized. This should be constructed with clean rock and sufficient pipe to allow stream flow to continue unimpeded (see attached typical drawing). In order for these authorizations to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Permit & General WQC in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

To more readily expedite construction, the contractor may elect to alter the design or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the contractor shall obtain **written** permission from the Division of Construction and the Corps of Engineers. A copy of any request to the Corps of Engineers to alter this proposal and subsequent responses shall be forwarded to the Division of Environmental Analysis, DA Permit Coordinator, for office records and for informational purposes.

ATTACHMENT 1



NOTES:

1. This is a conceptual drawing. The number and size of pipes and other details will vary depending on specific site conditions.
2. The pipes and backfill must be contained within the stream channel as shown above. During the construction of the approaches and access roadway across the floodplain, unstable and unconsolidated materials unsuitable for roadways may be excavated and replaced with riprap, crushed stone, or other stable road construction materials. This may only be done, however, with the following provisions: (1) the disposal of excess, unconsolidated materials thus excavated must be outside of the floodplain and (2) the finished surface of the completed road may be no more than three inches (3") above the pre-construction surface of the floodplain at any point beyond the top of banks.

LOW-WATER CROSSING

STANDARD DRAWING
Not to Scale

MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

R. BRUCE SCOTT
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

General Certification--Nationwide Permit # 14
Linear Transportation Projects

This General Certification is issued March 19, 2017, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C. §1341), as well as Kentucky Statute KRS 224.16-050.

For this and all nationwide permits, the definition of surface water is as per 401 KAR 10:001 Chapter 10, Section 1(80): Surface Waters means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the commonwealth.

Agricultural operations, as defined by KRS 224.71-100(1) conducting activities pursuant to KRS 224.71-100 (3), (4), (5), (6), or 10 are deemed to have certification if they are implementing an Agriculture Water Quality Plan pursuant to KRS 224.71-145.

For all other operations, the Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 304, 306 and 307 of the CWA, will not be violated for the activity covered under NATIONWIDE PERMIT 14, namely Linear Transportation Projects, provided that the following conditions are met:

1. The activity will not occur within surface waters of the Commonwealth identified by the Kentucky Division of Water as Outstanding State or National Resource Water, Cold Water Aquatic Habitat, or Exceptional Waters.

2. The activity will not occur within surface waters of the Commonwealth identified as perpetually-protected (e.g. deed restriction, conservation easement) mitigation sites.

3. The activity will impact less than 1/2 acre of wetland/marsh.

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 2

4. The activity will impact less than 300 linear feet of surface waters of the Commonwealth. Stream realignment greater than 100 feet and in-stream stormwater detention/retention basins are not covered under this general water quality certification.

5. For complete linear transportation projects, all impacts shall not exceed a cumulative length of 500 linear feet within each Hydrologic Unit Code (HUC) 14.

6. Any crossings must be constructed in a manner that does not impede natural water flow.

7. Stream impacts covered under this General Water Quality Certification and undertaken by those persons defined as an agricultural operation under the Agricultural Water Quality Act must be completed in compliance with the Kentucky Agricultural Water Quality Plan (KWQP).

8. The Kentucky Division of Water may require submission of a formal application for an individual certification for any project if the project has been determined to likely have a significant adverse effect upon water quality or degrade the waters of the Commonwealth so that existing uses of the water body or downstream waters are precluded.

9. Activities that do not meet the conditions of this General Water Quality Certification require an Individual Section 401 Water Quality Certification.

10. Activities qualifying for coverage under this General Water Quality Certification are subject to the following conditions:

    - Projects requiring in-stream stormwater detention/retention basins shall require individual water quality certifications.
    - Erosion and sedimentation pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur (401 KAR 10:031 Section 2 and KRS 224.70-100).
    - Sediment and erosion control measures, such as check-dams constructed of any material, silt fencing, hay bales, etc., shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in such a manner that may result in instability of streams that are adjacent to,

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 3

upstream, or downstream of the structures. All sediment and erosion control devices shall be removed and the natural grade restored within the completion timeline of the activities.

- Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.
- Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access.
- To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions.
- Heavy equipment, e.g. bulldozers, backhoes, draglines, etc., if required for this project, should not be used or operated within the stream channel. In those instances in which such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize turbidity and disturbance to substrates and bank or riparian vegetation.
- Any fill shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If rip-rap is utilized, it should be of such weight and size that bank stress or slump conditions will not be created because of its placement.
- If there are water supply intakes located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when such work will be done.
- Should evidence of stream pollution or jurisdictional wetland impairment and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the KDOW shall be notified immediately by calling (800) 928-2380.

Non-compliance with the conditions of this general certification or violation of Kentucky state water quality standards may result in civil penalties.

Terms for Nationwide Permit No. 14
Linear Transportation Projects

Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, “District Engineer’s Decision.” The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Kentucky Transportation Cabinet

Highway District 1

And

_____(2), Construction

Kentucky Pollutant Discharge Elimination System Permit KYR10 Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

Highway Safety Improvement Project on US 62 in Marshall County

Project: CID 20-4202

Revised 3/4/2016

KYTC BMP Plan for Project CID **20-4202**

Project information

Note – (1) = Design (2) = Construction (3) = Contractor

1. Owner – Kentucky Transportation Cabinet, District 1
2. Resident Engineer: (2)
3. Contractor name: (2)
   Address: (2)

   Phone number: (2)
   Contact: (2)
   Contractors agent responsible for compliance with the KPDES permit requirements (3):
4. Project Control Number: (2)
5. Route (Address): US 62
6. Latitude/Longitude (project mid-point): 37° 00’ 20”, -88° 25’ 06”
7. County (project mid-point): Marshall
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KYTC BMP Plan for Project CID **20-4202**

A. Site description:

1. Nature of Construction Activity (from letting project description): Asphalt Surface with Grade & Drain

2. Order of major soil disturbing activities: (2) and (3)

3. Projected volume of material to be moved: 7,167 CY (Cut) & 7,989 CY (Fill)

4. Estimate of total project area (acres): 11.7

5. Estimate of area to be disturbed (acres): 8.5

6. Post construction runoff coefficient will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.

7. Data describing existing soil condition: (1) & (2)

8. Data describing existing discharge water quality (if any): (1) & (2)

9. Receiving water name: Little Cypress Creek

10. TMDLs and Pollutants of Concern in Receiving Waters: *No TDML's were involved on this project.*

11. Site map – Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.

12. Potential sources of pollutants:

The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris. (3)

B. Sediment and Erosion Control Measures:

1. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

   Projects that do not have DDAs annotated on the erosion control sheets will employ the same concepts for development and managing BMP plans.

2. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as "Do Not Disturb" until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMP's shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA's as the work progresses. <u>All DDA's will have adequate BMP's in place before being disturbed.</u>

3. As DDAs are prepared for construction, the following will be addressed for the project as a whole or for each DDA as appropriate:

   - Construction Access – This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.
   - At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.
   - Clearing and Grubbing – The following BMP's will be considered and used where appropriate.

- Leaving areas undisturbed when possible.
- Silt basins to provide silt volume for large areas.
- Silt Traps Type A for small areas.
- Silt Traps Type C in front of existing pipes and drop inlets which are to be saved
- Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
- Brush and/or other barriers to slow and/or divert runoff.
- Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.
- Temporary Mulch for areas which are not feasible for the fore mentioned types of protections.
- Non-standard or innovative methods.

➢ Cut & Fill and placement of drainage structures - The BMP Plan will be modified to show additional BMP's such as:

- Silt Traps Type B in ditches and/or drainways as they are completed
- Silt Traps Type C in front of pipes and drop inlets after they are placed
- Channel Lining
- Erosion Control Blanket
- Temporary mulch and/or seeding for areas where construction activities will be ceased for 21 days or more.
- Non-standard or innovative methods

➢ Profile and X-Section in place – The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probably changes include:

- Silt Trap Type A, Brush and/or other barriers, Temporary Mulch, and any other BMP which had to be removed for final grading to take place.
- Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
- Additional Channel Lining and/or Erosion Control Blanket.
- Temporary Mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
- Special BMP's such as Karst Policy

➢ Finish Work (Paving, Seeding, Protect, etc.) – A final BMP Plan will result from modifications during this phase of construction. Probable changes include:

- Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket or Permanent Seeding and Protection on moderate grades.
- Permanent Seeding and Protection

- Placing Sod
- Planting trees and/or shrubs where they are included in the project

➢ BMP's including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMP's to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are: *This project does not include storm water BMPs or flow controls for post-construction use.*

C. Other Control Measures

1. No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.

2. Waste Materials

All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.

3. Hazardous Waste

All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Section Engineer if there any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.

4. Spill Prevention

The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.

➢ **Good Housekeeping:**

The following good housekeeping practices will be followed onsite during the construction project.

- An effort will be made to store only enough product required to do the job
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure
- Products will be kept in their original containers with the original manufacturer's label
- Substances will not be mixed with one another unless recommended by the manufacturer
- Whenever possible, all of the product will be used up before disposing of the container
- Manufacturers' recommendations for proper use and disposal will be followed
- The site contractor will inspect daily to ensure proper use and disposal of materials onsite

➢ **Hazardous Products:**

These practices will be used to reduce the risks associated with any and all hazardous materials.

- Products will be kept in original containers unless they are not resealable
- Original labels and material safety data sheets (MSDS) will be reviewed and retained
- Contractor will follow procedures recommended by the manufacturer when handling hazardous materials
- If surplus product must be disposed of, manufacturers' or state/local recommended methods for proper disposal will be followed

The following product-specific practices will be followed onsite:

➢ **Petroleum Products:**

Vehicles and equipment that are fueled and maintained on site will be monitored for leaks, and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products onsite will be stored in tightly sealed containers, which are clearly labeled and will be protected from exposure to weather.

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

This project (will / will not) (3) have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

- **Fertilizers:**

Fertilizers will be applied at rates prescribed by the contract, standard specifications or as directed by the resident engineer. Once applied, fertilizer will be covered with mulch or blankets or worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

- **Paints:**

All containers will be tightly sealed and stored indoors or under roof when not being used. Excess paint or paint wash water will not be discharged to the drainage or storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

- **Concrete Truck Washout:**

Concrete truck mixers and chutes will not be washed on pavement, near storm drain inlets, or within 75 feet of any ditch, stream, wetland, lake, or sinkhole. Where possible, excess concrete and wash water will be discharged to areas prepared for pouring new concrete, flat areas to be paved that are away from ditches or drainage system features, or other locations that will not drain off site. Where this approach is not possible, a shallow earthen wash basin will be excavated away from ditches to receive the wash water

- **Spill Control Practices**

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup**:**

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.

- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill cleanup will be disposed in accordance with appropriate regulations.

D. Other State and Local Plans

This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials. *There are no other local (MS4) requirements that are expected to be necessary for this project.*

E. Maintenance

1. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.

- Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.

- Post Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. The project manager shall identify any BMPs that will be for the purpose of post construction storm water management with specific guidance for any non-routine maintenance. *There are no such BMP's for this project.*

F. Inspections

Inspection and maintenance practices that will be used to maintain erosion and sediment controls:

- All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.
- Inspections will be conducted by individuals that have successfully completed the KEPSC-RI course as required by Section 213.02.02 of the Standard Specifications for Road and Bridge Construction, current edition.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 50 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
- Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

G. Non – Storm Water discharges

It is expected that non-storm water discharges may occur from the site during the construction period. Examples of non-storm water discharges include:

- Water from water line flushings.
- Water form cleaning concrete trucks and equipment.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).

- Uncontaminated groundwater and rain water (from dewatering during excavation).

All non-storm water discharges will be directed to the sediment basin or to a filter fence enclosure in a flat vegetated infiltration area or be filtered via another approved commercial product.

H. Groundwater Protection Plan (3)

This plan serves as the groundwater protection plan as required by 401 KAR 5:037.

- Contractors statement: (3)

The following activities, as enumerated by 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan, will or may be may be conducted as part of this construction project:

_____ 2. (e) land treatment or land disposal of a pollutant;

_____ 2. (f) Storing, …, or related handling of hazardous waste, solid waste or special waste, …, in tanks, drums, or other containers, or in piles, (This does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site);

_____ 2. (g) …. Handling of materials in bulk quantities (equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container) that, if released to the environment, would be a pollutant;

_____ 2. (j) Storing or related handling of road oils, dust suppressants, …., at a central location;

_____ 2. (k) Application or related handling of road oils, dust suppressants or deicing materials, (does not include use of chloride-based deicing materials applied to roads or parking lots);

_____ 2. (m) Installation, construction, operation, or abandonment of wells, bore holes, or core holes, (this does not include bore holes for the purpose of explosive demolition);

Or, check the following only if there are no qualifying activities

_____ There are no activities for this project as listed in 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan.

KYTC BMP Plan for Project CID **20-4202**

The contractor is responsible for the preparation of a plan that addresses the

401 KAR 5:037 Section 3. (3) Elements of site specific groundwater protection plan:

(a) General information about this project is covered in the Project information;
(b) Activities that require a groundwater protection plan have been identified above;
(c) Practices that will protect groundwater from pollution are addressed in section C. Other control measures.
(d) Implementation schedule – all practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;
(e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provide to the resident engineer.
(f) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections
(g) Certification (see signature page.)

KYTC BMP Plan for Project CID **20-4202**

Contractor and Resident Engineer Plan certification

The contractor that is responsible for implementing this BMP plan is identified in the Project Information section of this plan.

The following certification applies to all parties that are signatory to this BMP plan:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Further, this plan complies with the requirements of 401 KAR 5:037. By this certification, the undersigned state that the individuals signing the plan have reviewed the terms of the plan and will implement its provisions as they pertain to ground water protection.

Resident Engineer and Contractor Certification:

(2) Resident Engineer signature

Signed _____title_____, _____
Typed or printed name[2] signature

(3) Signed _____title_____, _____
Typed or printed name[1] signature

1. Contractors Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

2. KyTC note: to be signed by the Chief District Engineer or a person designated to have the authority to sign reports by such a person (usually the resident engineer) in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601 Reference the Project Control Number (PCN) and KPDES number when one has been issued.

KYTC BMP Plan for Project CID **20-4202**

Sub-Contractor Certification

The following sub-contractor shall be made aware of the BMP plan and responsible for implementation of BMPs identified in this plan as follows:

Subcontractor

Name:
Address:
Address:

Phone:

The part of BMP plan this subcontractor is responsible to implement is:

I certify under penalty of law that I understand the terms and conditions of the general Kentucky Pollutant Discharge Elimination System permit that authorizes the storm water discharges, the BMP plan that has been developed to manage the quality of water to be discharged as a result of storm events associated with the construction site activity and management of non-storm water pollutant sources identified as part of this certification.

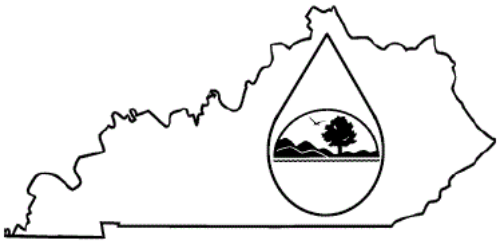
Signed _____title_____, _____
Typed or printed name[1] signature

1. Sub Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

CID 20-4202
Marshall County
Highway Safety Improvement Project along US 62
from MP 0.000 – 7.200
Item No.: 1-9009.00

An electronic Notice of Intent (eNOI) for obtaining coverage under the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Stormwater Discharges Associated with Construction Activities (KYR10) has been drafted, a copy of which is attached. Upon award, the Contractor will be identified in Section III of the form as the "Building Contractor" and the eNOI will be submitted for approval to the Kentucky Division of Water. The Contractor shall be responsible for advancing the work within this contract in a manner that is compliant with all applicable and appropriate KYTC specifications for sediment and erosion control, as well as meeting the requirements of the KYR10 permit and the KDOW.

eForm Submittal ID: 182349



KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM (KPDES)

Notice of Intent (NOI) for coverage of Storm Water Discharge Associated with Construction Activities Under the KPDES Storm Water General Permit KYR100000

Click here for Instructions (Controls/KPDES_FormKYR10_Instructions.htm)

Click here to obtain information and a copy of the KPDES General Permit. (http://dep.ky.gov/formslibrary/Documents/KYR10PermitPage.pdf)

(*) indicates a required field; (✓) indicates a field may be required based on user input or is an optionally required field

Reason for Submittal:(*)	Agency Interest ID:	Permit Number:(✓)
Application for New Permit Coverage	Agency Interest ID	KPDES Permit Number

If change to existing permit coverage is requested, describe the changes for which modification of coverage is being sought:(✓)

ELIGIBILITY:
Stormwater discharges associated with construction activities disturbing individually one (1) acre or more, including, in the case of a common plan of development, contiguous construction activities that cumulatively equal one (1) acre or more of disturbance.

EXCLUSIONS:
The following are excluded from coverage under this general permit:
1) Are conducted at or on properties that have obtained an individual KPDES permit for the discharge of other wastewaters which requires the development and implementation of a Best Management Practices (BMP) plan;
2) Any operation that the DOW determines an individual permit would better address the discharges from that operation;
3) Any project that discharges to an Impaired Water listed in the most recent Integrated Report, §305(b) as impaired for sediment and for which an approved TMDL has been developed.

SECTION I -- FACILITY OPERATOR INFORMATION (PERMITTEE)

Company Name:(✓)	First Name:(✓)	M.I.:	Last Name:(✓)
Kentucky Transportation Cabinet, District 1	Kyle	MI	Poat

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
5501 Kentucky Dam Road	Paducah	Kentucky	42003

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
Kyle.Poat@ky.gov	270-898-2431	Phone

SECTION II -- GENERAL SITE LOCATION INFORMATION

Project Name:(*)	Status of Owner/Operator(*)	SIC Code(*)
KYTC Project: CID 20-4202	State Government	1611 Highway and Street Const

Company Name:(✓)	First Name:(✓)	M.I.:	Last Name:(✓)
Company Name	First Name	MI	Last Name

Site Physical Address:(*)
US 62

City:(*)	State:(*)	Zip:(*)
Calvert City	Kentucky	42029

County:(*)	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal)	Longitude(decimal degrees)(*)
Marshall	37.005601	-88.418316

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION

Project Description:(*)
Highway Safety Improvement Project consisting of asphalt paving, roadway widening, replacement and/or extension of various pipes, box culvert extension(s), ditching, si

a. For single projects provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
11.7	8.5
Anticipated Start Date:(✓)	Anticipated Completion Date:(✓)

b. For common plans of development provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
# Acre(s)	# Acre(s)
Number of individual lots in development, if applicable:(✓)	Number of lots in development:(✓)
# lot(s)	# lot(s)
Total acreage of lots intended to be developed:(✓)	Number of acres intended to be disturbed at any one time:(✓)
Project Acres	Disturbed Acres
Anticipated Start Date:(✓)	Anticipated Completion Date:(✓)

List Building Contractor(s) at the time of Application:(*)

	Company Name	
+		

SECTION IV -- IF THE PERMITTED SITE DISCHARGES TO A WATER BODY THE FOLLOWING INFORMATION IS REQUIRED

Discharge Point(s):

	Unnamed Tributary?	Latitude	Longitude	Receiving Water Name	
1	Yes	37.005099	-88.388656	Little Cypress Creek	Delete
2	Yes	37.005127	-88.389957	Little Cypress Creek	Delete
3	Yes	37.006222	-88.440946	Little Cypress Creek	Delete
4	Yes	37.006529	-88.428580	Little Cypress Creek	Delete
5	Yes	37.006556	-88.429621	Little Cypress Creek	Delete
6	Yes	37.006599	-88.430283	Little Cypress Creek	Delete
7	Yes	37.006645	-88.433783	Little Cypress Creek	Delete
8	Yes	37.006668	-88.431831	Little Cypress Creek	Delete
+					

SECTION V -- IF THE PERMITTED SITE DISCHARGES TO A MS4 THE FOLLOWING INFORMATION IS REQUIRED

Name of MS4:

Date of application/notification to the MS4 for construction site permit coverage:	Discharge Point(s):(*)
Date	

	Latitude	Longitude	
+			

SECTION VI -- WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE?

Will the project require construction activities in a water body or the riparian zone?: (*)	No
If Yes, describe scope of activity: (✓)	describe scope of activity
Is a Clean Water Act 404 permit required?:(*)	No

Is a Clean Water Act 401 Water Quality Certification required?:(*)	No

SECTION VII -- NOI PREPARER INFORMATION

First Name:(*)	M.I.:	Last Name:(*)	Company Name:(*)
First Name	MI	Last Name	Company Name

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
Mailing Address	City		Zip

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
eMail Address	Phone	Phone

SECTION VIII -- ATTACHMENTS

Facility Location Map:(*)	Upload file
Supplemental Information:	Upload file

SECTION IX -- CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

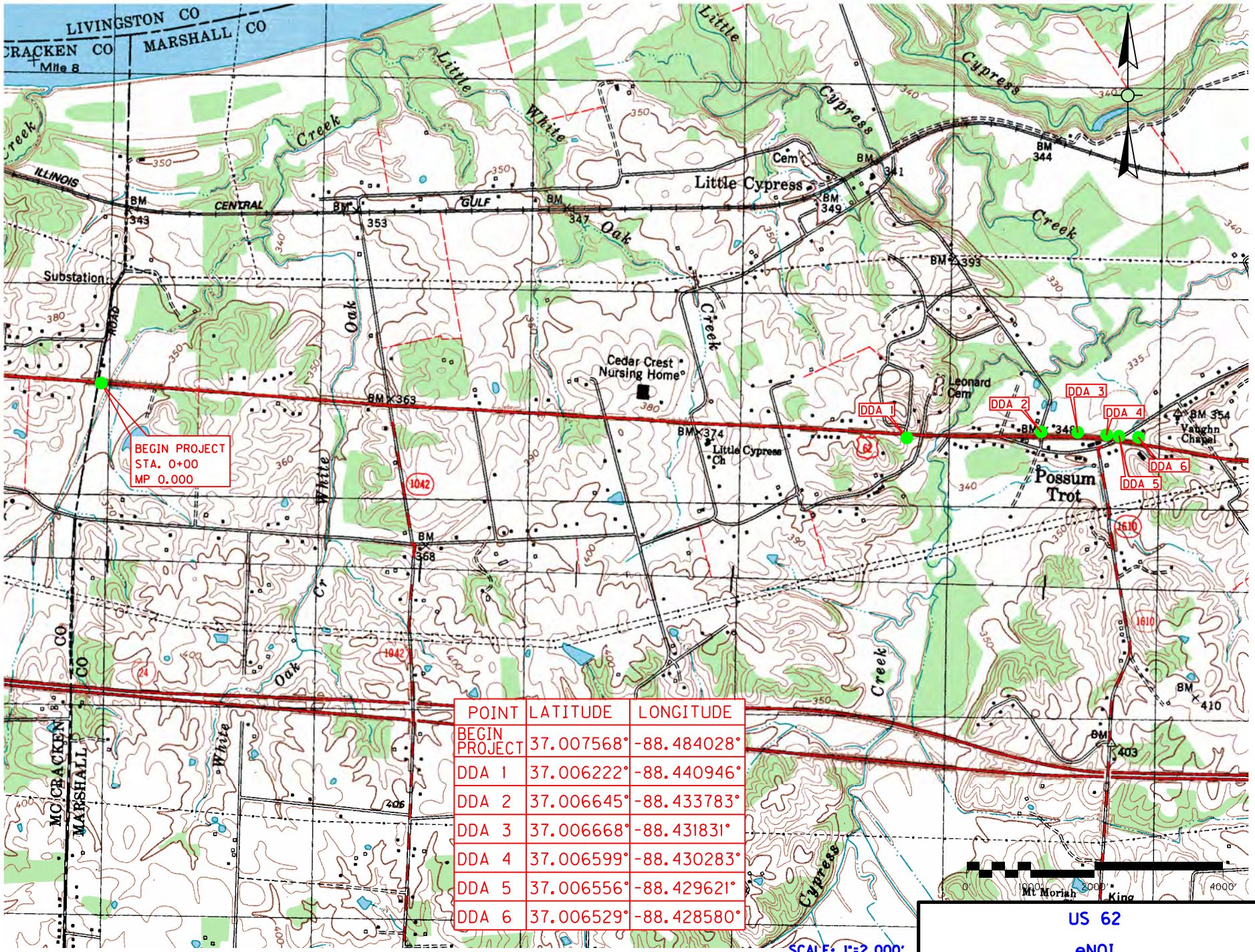
Signature:(*)	Title:(*)
Signature	Title

First Name:(*)	M.I.:	Last Name:(*)
First Name	MI	Last Name

eMail Address:(*)	Business Phone:(*)	Alternate Phone:	Signature Date:(*)
eMail Address	Phone	Phone	Date

Click to Save Values for Future Retrieval | Click to Submit to EEC

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

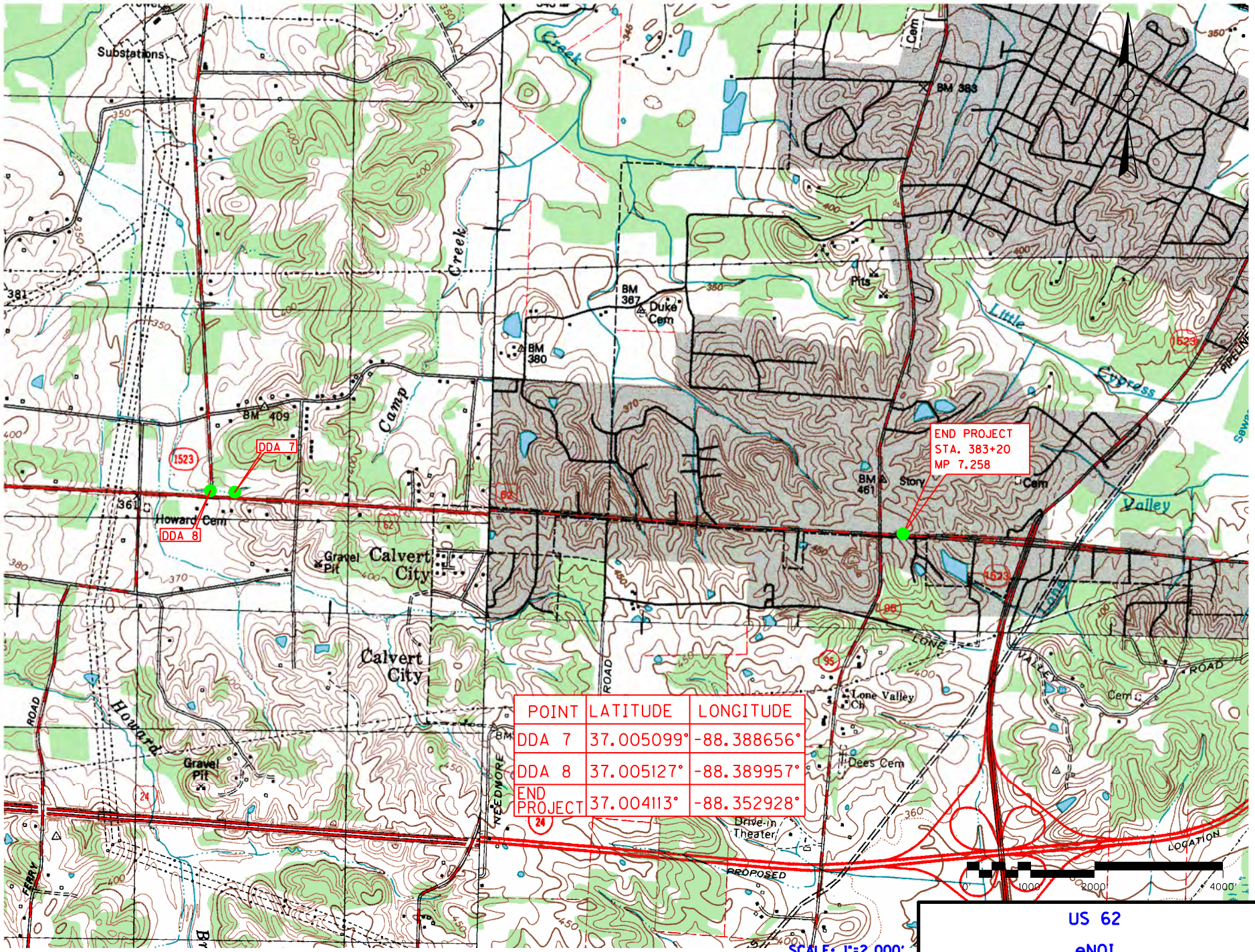


POINT	LATITUDE	LONGITUDE
BEGIN PROJECT	37.007568°	-88.484028°
DDA 1	37.006222°	-88.440946°
DDA 2	37.006645°	-88.433783°
DDA 3	37.006668°	-88.431831°
DDA 4	37.006599°	-88.430283°
DDA 5	37.006556°	-88.429621°
DDA 6	37.006529°	-88.428580°

US 62

eNOI

COUNTY OF	ITEM NO.
MARSHALL	I-9009.00



POINT	LATITUDE	LONGITUDE
DDA 7	37.005099°	-88.388656°
DDA 8	37.005127°	-88.389957°
END PROJECT	37.004113°	-88.352928°

SCALE: 1"=2,000'

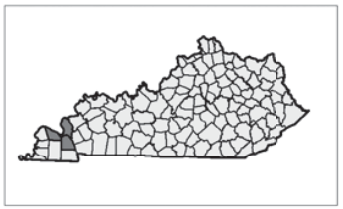
US 62

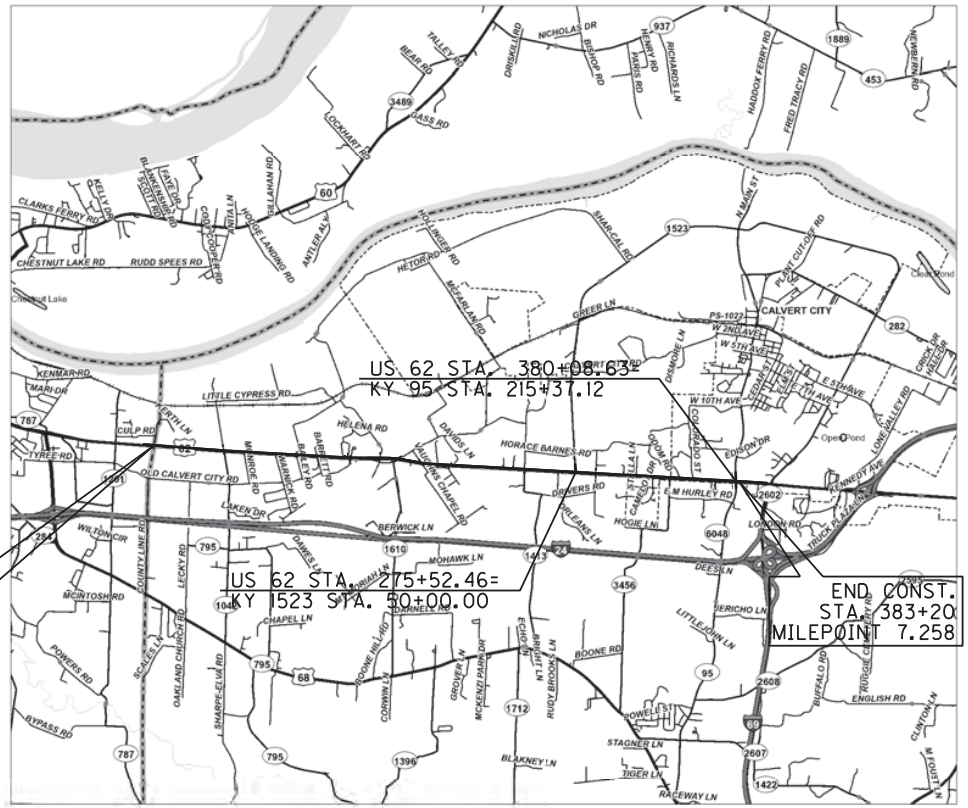
eNOI

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
MARSHALL COUNTY

US 62
1-9009.00





BEGIN CONST.
STA. 0+00
MILEPOINT 0

END CONST.
STA. 383+20
MILEPOINT 7.258

1 3
0.5 2 6
SCALE IN MILES

LAYOUT SHEET

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	US 62 CORRIDOR	TWLTL WIDENING	KY 1523 TURN LANE WIDENING	KY 95 INT. IMPROVEMENT	TOTAL PROJECT
1987	DELINEATOR FOR GUARDRAIL B/W	EACH	44		31	9	84
2159	TEMP DITCH	LF		1,313	872	930	3,115
2160	CLEAN TEMP DITCH	LF		656	436	465	1,557
2230	EMBANKMENT IN PLACE ⑤ ⑦	CY	150	6,122	4,747	132	11,151
2242	WATER FOR DUST CONTROL ③	MGAL		25	17	18	60
2351	GUARDRAIL-STEEL W BEAM-SINGLE FACE	LF	2,058.75		1,345	418.75	3,822.5
2360	GUARDRAIL TERMINAL SECTION NO. 1	EACH	2				2
2363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH			4		4
2367	GUARDRAIL END TREATMENT TYPE 1	EACH	7		7	1	15
2371	GUARDRAIL END TREATMENT TYPE 7	EACH	1				1
2377	GUARDRAIL CONNECTOR TO BRIDGE END TY C	EACH	1				1
2381	REMOVE GUARDRAIL	LF	2,450		1612.5	137.5	4,200
2545	CLEARING AND GRUBBING ④	LS	1				1
2562	TEMPORARY SIGNS	SQFT	500				500
2569	DEMOBILIZATION	LS	1				1
2598	GEOTEXTILE FABRIC TYPE 3	SQYD		5,947	3,240	1,040	10,227
2600	GEOTEXTILE FABRIC TYPE 4 FOR PIPE	SQYD	128	1,233	401		1,762
2650	MAINTAIN AND CONTROL TRAFFIC	LS	1				1
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH		2	2	2	6
2690	SAFELOADING	CY		7	3.6		10.6
2697	EDGELINE RUMBLE STRIPS	LF		5,250	3,310	3,720	12,280
2701	TEMP SILT FENCE	LF		1,313	872	930	3,115
2703	SILT TRAP TYPE A	EACH		5	3	1	9
2704	SILT TRAP TYPE B	EACH		5	3	1	9
2705	SILT TRAP TYPE C	EACH		5	3	1	9
2706	CLEAN SILT TRAP A	EACH		5	3	1	9
2707	CLEAN SILT TRAP B	EACH		5	3	1	9
2708	CLEAN SILT TRAP C	EACH		5	3	1	9
2726	STAKING	LS	1				1
5950	EROSION CONTROL BLANKET	SQYD		1,514	1,067	44	2,625
5952	TEMP MULCH	SQYD		15,047	8,885	3,535	27,467
5953	TEMP SEEDING AND PROTECTION	SQYD		11,229	6,631	2,638	20,498
5963	INITIAL FERTILIZER	TON		0.7	0.4	0.2	1.3
5964	MAINTENANCE FERTILIZER	TON		1.2	0.7	0.3	2.2
5985	SEEDING AND PROTECTION	SQYD		22,458	13,262	5,276	40,996
5992	AGRICULTURAL LIMESTONE	TON		13.9	8.2	3.3	25.4
6406	SBM ALUM SHEET SIGNS .080 IN	SQFT	431.13				431.13
6407	SBM ALUM SHEET SIGNS .125 IN	SQFT	58.04				58.04
6410	STEEL POST TYPE 1	LF	1,054				1,054
6510	PAVE STRIPING - TEMP PAINT - 4 IN	LF		13,293	9,168	9,068	31,529
6568	PAVE MARKING-THERMO STOP BAR-24 IN	LF	345	113	56	130	644
6569	PAVE MARKING-THERMO CROSS-HATCH	SQFT		442	665	686	1,793
6573	PAVE MARKING-THERMO STRAIGHT ARROW	EACH				6	6
6574	PAVE MARKING-THERMO CURV ARROW	EACH		16	8	13	37
6576	PAVE MARKING-THERMO ONLY	EACH			6		6
10020NS	FUEL ADJUSTMENT	DOLL	10,723				10,723
10030NS	ASPHALT ADJUSTMENT	DOLL	26,933				26,933
21289ED	LONGITUDINAL EDGE KEY	LF		5,250	3,486	3,720	12,456
21373ND	REMOVE SIGNS	EACH	39				39
22664EN	WATER BLASTING EXISTING STRIPE	LF		13,293	9,168	9,068	31,529
23020EN	TRIM & REMOVE TREES & BRUSH	ACRE	0.14				0.14
24631EC	BARCODE SIGN INVENTORY	EACH	95				95
24651ED	CONCRETE ISLAND	SQYD		427		238	665
24995EC	PAVE STRIPING-SPRAY THERMO 6 IN - W	LF	66,400	6,118	3,684	4,710	80,912
24996EC	PAVE STRIPING-SPRAY THERMO 6 IN - Y	LF	39,832	7,175	5,484	4,358	56,849
25090EC	SINUSOIDAL RUMBLE STRIPS	LF	30,680				30,680

PAVING SUMMARY

ITEM	DESCRIPTION	UNIT	US 62 CORRIDOR	TWLTL WIDENING	KY 1523 TURN LANE WIDENING	KY 95 INT. IMPROVEMENTS	TOTAL PROJECT
3	CRUSHED STONE BASE ① ⑧	TON	100	2,344	1,118	414	3,976
214	CL3 ASPH BASE 1.00D PG 64-22	TON	0	3,001	1,557	643	5,201
324	CL3 ASPH SURF 0.50B PG 64-22	TON	0	1,246	660	771	2,677
2677	ASPHALT PAVE MILLING & TEXTURING	TON	0	507	337	2	846
20071EC	JOINT ADHESIVE	LF	0	5,250	3,486	3,720	12,456
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING ②	TON	0	4.6	2.5	1.0	8.1
24728EX	ROCK ROADBED ⑥	CUYD	0	1,982	1,080	347	3,409

PAVING AREAS

DESCRIPTION	UNIT	US 62 CORRIDOR	TWLTL WIDENING	KY 1523 TURN LANE WIDENING	KY 95 INT. IMPROVEMENTS	TOTAL PROJECT
1.5" CL3 ASPH SURF 0.50B PG 64-22	SQYD	0	15,109	7,994	9,347	32,450
4" CL3 ASPH BASE 1.00D PG 64-22	SQYD	0	7,091	3,596	1,929	12,616
4.5" CL3 ASPH BASE 1.00D PG 64-22	SQYD	0	5,821	3,095	885	9,801
6" CRUSHED STONE BASE	SQYD	0	5,821	3,240	1,040	10,101
10.5" CRUSHED STONE BASE	SQYD	0	395	0	0	395
12" ROCK ROADBED	SQYD	0	6,216	3,240	1,040	10,496
4" CRUSHED STONE BASE (CONCRETE ISLANDS)	SQYD	0	427	0	238	665
ASPHALT MATERIAL FOR TACK NON-TRACKING	SQYD	0	18,321	9,931	3,854	32,106
1.5" ASPHALT PAVE MILLING & TEXTURING	SQYD	0	6,125	4,067	0	10,192

NOTES

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

① ESTIMATED AT 115 LBS/SQYD/IN

② ESTIMATED AT 0.50 LBS/SQYD

③ FOR DUST CONTROL CAUSED BY TRAFFIC. ESTIMATED AT 50 MGAL/MILE

④ APPROXIMATELY 8.47 ACRES

⑤ QUANTITY INCLUDES 150 CUYD FROM PIPE DRAINAGE SUMMARY

⑥ ROCK ROADBED CONSISTS OF #2 STONE WRAPPED IN GEOTEXTILE FABRIC.

⑦ QUANTITY INCLUDES 3,142 CUYD FOR EMBANKMENT BENCHING

⑧ QUANTITY INCLUDES 100 TONS FOR MAINTENANCE OF TRAFFIC OPERATIONS

EARTHWORK VOLUMES
4,123 CU YD COMMON (TWLTL)
2,727 CU YD COMMON (KY 1523)
597 CU YD COMMON (KY 95)
7,447 CU YD TOTAL EXC
4,072 CU YD EMBANKMENT (TWLTL)
3,655 CU YD EMBANKMENT (KY 1523)
132 CU YD EMBANKMENT (KY 95)
7,859 CU YD TOTAL EMB
2,050 CU YD EMB BENCH (TWLTL)
1,092 CU YD EMB BENCH (KY 1523)
3,142 CU YD TOTAL EMB BENCH

ASSUMPTIONS FOR SHRINKAGE AND SWELL FACTORS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

SUMMARY SHEET

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

PIPE DRAINAGE SUMMARY

SHEET NO.	SKEW	DESIGN pH LEVEL	ENTRANCE PIPE 15 IN	ENTRANCE PIPE 18 IN	ENTRANCE PIPE 30 IN	CULVERT PIPE 18 IN	18 IN RCP	24 IN RCP	42 IN RCP	REMOVE PIPE	JUNCTION BOX	SLOPED BOX OUTLET TY. 1 18 IN	45° SKEW HEADWALL 42 IN	18" S&F HEADWALL	DROP BOX INLET TY. 1	REMOVE HEADWALL	EMBANKMENT (1) IN PLACE	BORE AND JACK PIPE - 18 INCH	REMARKS
ITEM CODE			440	441	445	462	462	464	469	1310	1650	1433	1214	1204	1490	2625	2230	23126EN	
UNIT TO BID			LF	LF	LF	LF	LF	LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	CY	LF	
US 62																			
125+61	30° LT	M						8		4					1	1	150		
146+74	0°	M				14	10			8	1	2				2			J.B. NO. 3
152+51	0°	M				17	23			16	1			2		2			J.B. NO. 3
157+00	0°	M				105								1	1			85	BORE AND JACK UNDER U.S. 62
158+92	0°	M					23			8		2				2			
162+59	45° LT	M							27	4			1			1			
278+81	0°	M				16	17			8	1	1		1					J.B. NO. 3
TWLTL WIDENING ENTRANCES			81	96															
KY 1523 WIDENING ENTRANCES				69	46														
PROJECT TOTAL			81	165	46	152	73	8	27	48	3	5	1	4	2	8	150	85	

(1) CARRIED FORWARD TO THE GENERAL SUMMARY

SHEET NO.	SKEW	DESIGN pH LEVEL	FOUNDATION PREPARATION	CONCRETE CLASS A	STEEL REINFORCEMENT	REMOVE HEADWALL (4'X4' RCBC EXT.)	REMARKS
ITEM CODE			8003	8100	8150	2625	
UNIT TO BID			LS	CY	LB	EACH	
KY 1523							
49+30	0°	M	1	20.6	1,736	2	SEE STRUCTURAL PLANS
PROJECT TOTAL			1	20.6	1,736	2	

PIPE DRAINAGE SUMMARY

Guardrail Summary — Marshall County — US 62

Notes: Begin/End Milepoints are estimated to include the entire length of the Rail AND the End Treatments. The Engineer may adjust the proposed guardrail termini to ensure proper installation of the guardrail system.

Proposed Guardrail to be Constructed										Existing Guardrail to be Removed					
Side of Road	Proposed BEGINNING Treatment	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Proposed ENDING Treatment	Proposed Length (LF)	Number of Radius Rail	Remarks	Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Existing Length (LF)
Guardrail Along US 60															
RT	Type 1	46+33	0.877	51+20	0.970	Type 1	387.50			RT	46+33	0.877	51+20	0.970	487.50
RT	Connect to Existing	128+19	2.428	130+30	2.468	Connector Type C	202.50	4	At Beginning, connect to existing rail along Old Calvert City Rd at the back of radius.	RT	128+19	2.428	130+30	2.468	212.50
RT	Type 1	233+73	4.427	238+22	4.512	Terminal Section 1	400.00			RT	233+73	4.427	238+22	4.512	450.00
LT	Type 1	267+77	5.071	268+89	5.093	Connector Type A	62.50			LT	267+77	5.071	268+82	5.091	112.50
RT	Type 1	267+77	5.071	268+89	5.093	Connector Type A	62.50			RT	267+77	5.071	268+82	5.091	112.50
LT	Connector Type A	269+14	5.097	270+26	5.119	Type 1	62.50			LT	269+21	5.099	270+26	5.119	112.50
RT	Connector Type A	269+14	5.097	270+26	5.119	Type 1	62.50			RT	269+21	5.099	270+26	5.119	112.50
LT	Type 1	274+00	5.189	*48+54*	0.919	Type 1	135.00	6	***End Station is along KY 1523***. Refer to Detailed Plan Sheets for KY 1523 Turn Lane Widening.	LT	273+60	5.182	48+54	0.919	262.50
LT	Type 1	*48+62*	0.921	283+75	5.374	Connect to Existing	960.00	6	***Begin Station is along KY 1523***. Refer to the Detailed Plan Sheets for KY 1523 Turn Lane Widening.	LT	48+62	0.921	283+75	5.374	900.00
RT	Type 1	317+30	6.009	321+30	6.085	Terminal Section 1	357.50	2		RT	317+30	6.009	321+30	6.085	400.00
LT	Type 1	339+30	6.426	343+55	6.507	Type 7	423.75	3	Type 7 along Riley Circle	LT	339+30	6.426	343+55	6.507	512.50
RT	Type 1	339+65	6.433	343+47	6.505	Type 1	287.50			RT	339+65	6.433	343+47	6.505	387.50
Guardrail Along KY 95															
LT	Type 1	211+00	3.996	215+09	4.074	Connect to Existing	418.75	5	At Ending, connect to existing rail along EB US 60 at the back of radius.	LT	214+09	4.055	215+09	4.074	137.50

Summary of Items

Guardrail-Steel W Beam-S Face	3,822.50	LF
Remove Guardrail	4,200.00	LF
End Treatment Type 1	15	EACH
End Treatment Type 7	1	EACH
Terminal Section No. 1	2	EACH

Delineator for Guardrail B/W	84	EACH
GR Connector to Bridge End Type A	4	EACH
GR Connector to Bridge End Type C	1	EACH

Sign Summary MARSHALL County US 62

SIGN LOCATION						MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING			SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2" Post (ft)	Estimated Length of 2-1/2" Post (ft)	2-1/4'' Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Assembly ID	Side of Road	Approx Offset (ft)	Approx Station	Approx. Mile Point	Facing Traffic Traveling					Text/ Symbol Color	Background Color	Sheeting Type										
1	RT	14	34+20	0.648	WEST	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	III or IV		5.56	Stnd w/ Soil Plate		1	15			15	1
2	LT	14	34+60	0.655	EAST	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	III or IV		5.56	Stnd w/ Soil Plate		1	15			15	1
3	RT	14	41+15	0.779	EAST	M2-1	Junction	JCT	21 x 15	Black	White	III or IV	2.19		Stnd w/ Soil Plate		1	15			15	2
						M1-5A	State Route Sign (3 or 4 digit)	1042	30 x 24	Black	White	III or IV	5.00									
4	RT	14	44+75	0.848	EAST	M3-3	South	SOUTH	24 x 12	Black	White	III or IV	2.00		Stnd w/ Soil Plate		1	17			17	3
						M1-5A	State Route Sign (3 or 4 digit)	1042	30 x 24	Black	White	III or IV	5.00									
						M6-1R	Right Arrow		21 x 15	Black	White	III or IV	2.19									
5	RT	14	45+85	0.868	NORTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
6	LT	14	49+60	0.939	WEST	M2-1	Junction	JCT	21 x 15	Black	White	III or IV	2.19		Stnd w/ Soil Plate		1	15			15	2
						M1-5A	State Route Sign (3 or 4 digit)	1042	30 x 24	Black	White	III or IV	5.00									
7	RT	14	58+85	1.115	NORTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
8	LT	14	72+50	1.373	EAST	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	III or IV		5.56	Stnd w/ Soil Plate		1	15			15	1
9	RT	14	92+95	1.760	NORTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
10	LT	14	105+80	2.004	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
11	RT	14	106+55	2.018	NORTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
12	RT	14	140+35	2.658	EAST	W11-8	Emergency Vehicle	FIRETRUCK	30 x 30	Black	Yellow	III or IV	6.25		Stnd w/ Soil Plate		1	15			15	1
13	RT	14	141+75	2.685	EAST	R3-1	No Right Turn		24 x 24	Red & Black	White	III or IV	4.00				1	13			13	1
14	RT	14	141+90	2.688	SOUTH	R5-1	Do Not Enter		30 x 30	White	Red	IX	6.25		Stnd w/ Soil Plate		1	14			14	1
15	LT	14	142+35	2.696	WEST	R3-2	No Left Turn		24 x 24	Red & Black	White	III or IV	4.00		Stnd w/ Soil Plate		1	13			13	1
16	RT	14	142+30	2.695	NORTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
17	LT	14	146+80	2.780	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	16			16	2
						W4-4P	Cross Traffic Does Not Stop		24 x 12	Black	Yellow	III or IV	2.00									
18	RT	14	147+30	2.790	NORTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	16			16	2
						W4-4P	Cross Traffic Does Not Stop		24 x 12	Black	Yellow	III or IV	2.00									
19	RT	14	149+25	2.827	EAST	R3-9B	Two-Way Left Turn ONLY		24 x 36	Black	White	III or IV	6.00		Stnd w/ Soil Plate		1	14			14	1
20	RT	14	152+65	2.891	EAST	M2-1	Junction	JCT	21 x 15	Black	White	III or IV	2.19		Stnd w/ Soil Plate		1	15			15	2
						M1-5A	State Route Sign (3 or 4 digit)	1042	30 x 24	Black	White	III or IV	5.00									
21	LT	14	156+55	2.965	WEST	R3-9B	Two-Way Left Turn ONLY		24 x 36	Black	White	III or IV	6.00		Stnd w/ Soil Plate		1	14			14	1
22	LT	20	156+55	2.965	WEST	M3-4	West	WEST	24 x 12	Black	White	III or IV	2.00		Stnd w/ Soil Plate		1	15			15	2
						M1-4	US Route Sign (1 or 2 digit)	62	24 x 24	Black	White	III or IV	4.00									
23	RT	14	157+50	2.983	BOTH	D10-1	Mile Marker (1 digit)	3	10 x 18	White	Green	III or IV	1.25		Stnd w/ Soil Plate		1	11			11	2
						D10-1	Mile Marker (1 digit)	3	10 x 18	White	Green	III or IV	1.25									
24	RT	14	157+70	2.987	EAST	M1-5A	State Route Sign (3 or 4 digit)	1042	30 x 24	Black	White	III or IV	5.00		Stnd w/ Soil Plate		1	15			15	2
						M6-1R	Right Arrow		21 x 15	Black	White	III or IV	2.19									
25	LT	14	157+70	2.987	WEST	W11-8	Emergency Vehicle	FIRETRUCK	30 x 30	Black	Yellow	III or IV	6.25		Stnd w/ Soil Plate		1	15			15	1
26	RT	14	158+55	3.003	NORTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
27	LT	14	159+10	3.013	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
28	LT	14	160+15	3.033	WEST	M1-5A	State Route Sign (3 or 4 digit)	1610	30 x 24	Black	White	III or IV	5.00		Stnd w/ Soil Plate		1	15			15	2
						M6-1R	Right Arrow		21 x 15	Black	White	III or IV	2.19									
29	RT	14	160+15	3.033	EAST	M3-2	East	EAST	24 x 12	Black	White	III or IV	2.00		Stnd w/ Soil Plate		1	15			15	2
						M1-4	US Route Sign (1 or 2 digit)	62	24 x 24	Black	White	III or IV	4.00									
30	RT	14	162+80	3.083	EAST	R2-1	Speed Limit XX	55 MPH	24 x 30	Black	White	III or IV	5.00		Stnd w/ Soil Plate		1	14			14	1
31	LT	14	165+75	3.139	WEST	M2-1	Junction	JCT	21 x 15	Black	White	III or IV	2.19		Stnd w/ Soil Plate		1	15			15	2
						M1-5A	State Route Sign (3 or 4 digit)	1610	30 x 24	Black	White	III or IV	5.00									
32	RT	14	167+55	3.173	NORTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
33	LT	14	173+85	3.293	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
34	LT	14	184+80	3.500	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
35	LT	14	191+10	3.619	EAST	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	III or IV		5.56	Stnd w/ Soil Plate		1	15			15	1
36	RT	14	192+55	3.647	NORTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
37	LT	14	193+45	3.664	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
38	RT	14	207+15	3.923	WEST	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	III or IV		5.56	Stnd w/ Soil Plate		1	15			15	1
39	LT	14	227+60	4.311	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
40	LT	14	231+45	4.384	EAST	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	III or IV		5.56	Stnd w/ Soil Plate		1	15			15	1
41	LT	14	234+25	4.437	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1

Sign Summary MARSHALL County US 62

SIGN LOCATION						MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING			SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2'' Post (ft)	Estimated Length of 2-1/2'' Post (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Assembly ID	Side of Road	Approx Offset (ft)	Approx Station	Approx. Mile Point	Facing Traffic Traveling					Text/ Symbol Color	Background Color	Sheeting Type										
42	RT	14	237+00	4.489	EAST	M2-1	Junction	JCT	21 x 15	Black	White	III or IV	2.19		Stnd w/ Soil Plate		1	15			15	2
						M1-5A	State Route Sign (3 or 4 digit)	1413	30 x 24	Black	White	III or IV	5.00									
43	LT	14	240+20	4.549	WEST	M3-4	West	On Exist. Post	24 x 12	Black	White	III or IV	2.00				0	0			0	1
44	LT	14	241+20	4.568	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
45	LT	14	246+60	4.670	WEST	M2-1	Junction	JCT	21 x 15	Black	White	III or IV	2.19		Stnd w/ Soil Plate		1	15			15	2
						M1-5A	State Route Sign (3 or 4 digit)	1413	30 x 24	Black	White	III or IV	5.00									
46	LT	14	264+85	5.016	EAST	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	III or IV		5.56	Stnd w/ Soil Plate		1	15			15	1
47	RT	14	265+30	5.025	EAST	W2-2L	Side Road Left		30 x 30	Black	Yellow	III or IV	6.25		Stnd w/ Soil Plate		2	20			40	2
						W4-5L	Entering Roadway Merge (on Left)	TRUCKS ENTERING HIGWAY	36 x 36	Black	Yellow	III or IV	9.00									
48	RT	14	269+30	5.100	EAST	M2-1	Junction	JCT	21 x 15	Black	White	III or IV	2.19		Stnd w/ Soil Plate		1	15			15	2
						M1-5A	State Route Sign (3 or 4 digit)	1523	30 x 24	Black	White	III or IV	5.00									
49	LT	14	272+90	5.169	WEST	R2-1	Speed Limit XX	55 MPH	24 x 30	Black	White	III or IV	5.00		Stnd w/ Soil Plate		1	14			14	1
50	RT	14	273+05	5.171	EAST	D1-2	Destination (2 lines)	CLOUD CROSSING	Var x 30	White	Green	III or IV	Custom	Custom	Stnd w/ Soil Plate		2	14			28	1
51	LT	14	273+75	5.185	WEST	M3-4	West	WEST	24 x 12	Black	White	III or IV	2.00		Stnd w/ Soil Plate		1	15			15	2
						M1-4	US Route Sign (1 or 2 digit)	62	24 x 24	Black	White	III or IV	4.00									
52	RT	14	274+75	5.204	EAST	M3-1	North	NORTH	24 x 12	Black	White	III or IV	2.00		Stnd w/ Soil Plate		1	16			16	3
						M1-5A	State Route Sign (3 or 4 digit)	1523	30 x 24	Black	White	III or IV	5.00									
						M6-1L	Left Arrow		21 x 15	Black	White	III or IV	2.19									
53	RT	14	275+45	5.217	SOUTH	W1-7	Two-Direction Large Arrow		48 x 24	Black	Yellow	III or IV		8.00	Stnd w/ Soil Plate		2	16			32	3
						OM4-3	Object Marker Type 4		18 x 18	n/a	Red	III or IV	2.25									
						OM4-3	Object Marker Type 4		18 x 18	n/a	Red	III or IV	2.25									
54	LT	14	276+20	5.231	WEST	M3-1	North	NORTH	24 x 12	Black	White	III or IV	2.00		Stnd w/ Soil Plate		1	16			16	3
						M1-5A	State Route Sign (3 or 4 digit)	1523	30 x 24	Black	White	III or IV	5.00									
						M6-1R	Right Arrow		21 x 15	Black	White	III or IV	2.19									
55	RT	14	277+20	5.250	EAST	M3-2	East	EAST	24 x 12	Black	White	III or IV	2.00		Stnd w/ Soil Plate		1	15			15	2
						M1-4	US Route Sign (1 or 2 digit)	62	24 x 24	Black	White	III or IV	4.00									
56	LT	14	277+70	5.259	WEST	D1-2	Destination (2 lines)	CLOUD CROSSING	Var x 30	White	Green	III or IV	Custom	Custom	Stnd w/ Soil Plate		2	14			28	1
57	RT	14	277+70	5.259	EAST	R2-1	Speed Limit XX	55 MPH	24 x 30	Black	White	III or IV	5.00		Stnd w/ Soil Plate		1	14			14	1
58	LT	14	280+50	5.313	WEST	M2-1	Junction	JCT	21 x 15	Black	White	III or IV	2.19		Stnd w/ Soil Plate		1	15			15	2
						M1-5A	State Route Sign (3 or 4 digit)	1523	30 x 24	Black	White	III or IV	5.00									
59	LT	14	285+00	5.398	WEST	W2-2R	Side Road Right		30 x 30	Black	Yellow	III or IV	6.25		Stnd w/ Soil Plate		2	20			40	2
						W4-5R	Entering Roadway Merge (on Right)	TRUCKS ENTERING HIGWAY	36 x 36	Black	Yellow	III or IV	9.00									
60	LT	14	288+50	5.464	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
61	LT	14	343+50	6.506	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
62	RT	14	347+75	6.586	WEST	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	III or IV		5.56	Stnd w/ Soil Plate		1	15			15	1
63	LT	14	353+85	6.702	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1
64	LT	14	358+60	6.792	EAST	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	III or IV		5.56	Stnd w/ Soil Plate		1	15			15	1

Summary of Items		
SBM Alum Sheet Signs 0.080 INCH	409.69	SQ FT
SBM Alum Sheet Signs 0.125 INCH	58.04	SQ FT
Barcode Sign Inventory	91	EACH

Summary of Items		
Steel Post - Type 1	1011	LF
GMSS Type D	0	EACH
GMSS Type D (Surface Mount)	0	EACH
Class A Concrete for Signs	0	CU YD

Sign Summary MARSHALL County KY 1523

SIGN LOCATION						MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING			SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2'' Post (ft)	Estimated Length of 2-1/2'' Post (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Assembly ID	Side of Road	Approx Offset (ft)	Approx Station	Approx. Mile Point	Facing Traffic Traveling					Text/ Symbol Color	Background Color	Sheeting Type										
1	RT	14	46+75	0.885	SOUTH	W3-1	Stop Ahead		30 x 30	Red & Black	Yellow	III or IV	6.25		Stnd w/ Soil Plate		1	14			14	1
2	RT	14	49+45	0.937	SOUTH	R1-1	Stop		36 x 36	White	Red	IX	9.00		Stnd w/ Soil Plate		1	14			14	1

Summary of Items		
SBM Alum Sheet Signs 0.080 INCH	15.25	SQ FT
SBM Alum Sheet Signs 0.125 INCH	0.00	SQ FT
Barcode Sign Inventory	2	EACH

Summary of Items		
Steel Post - Type 1	28	LF
GMSS Type D	0	EACH
GMSS Type D (Surface Mount)	0	EACH
Class A Concrete for Signs	0	CU YD

Sign Summary MARSHALL County KY95

SIGN LOCATION						MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING			SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2" Post (ft)	Estimated Length of 2-1/2" Post (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Assembly ID	Side of Road	Approx Offset (ft)	Approx Station	Approx. Mile Point	Facing Traffic Traveling					Text/ Symbol Color	Background Color	Sheeting Type										
1	LT	14	216+60	4.102	SOUTH	M1-4	US Route Sign (1 or 2 digit)	62	24 x 24	Black	White	III or IV	4.00		Stnd w/ Soil Plate		1	15			15	2
						M6-4	Horizontal Double Arrow		21 x 15	Black	White	III or IV	2.19									

Summary of Items		
SBM Alum Sheet Signs 0.080 INCH	6.19	SQ FT
SBM Alum Sheet Signs 0.125 INCH	0.00	SQ FT
Barcode Sign Inventory	2	EACH

Summary of Items		
Steel Post - Type 1	15	LF
GMSS Type D	0	EACH
GMSS Type D (Surface Mount)	0	EACH
Class A Concrete for Signs	0	CU YD

PROPOSED PAVEMENT MARKINGS - CENTERLINE

Begin MP	Begin Station	End MP	End Station	Description	6" Striping (LF)
0.000	000+00	0.204	010+75	Broken Single Yellow	269
0.204	010+75	0.369	019+50	Solid Right, Broken Left Yellow	1,094
0.369	019+50	0.502	026+50	Solid Double Yellow	1,400
0.502	026+50	0.653	034+50	Solid Left, Broken Right Yellow	1,000
0.653	034+50	0.814	043+00	Solid Right, Broken Left Yellow	1,063
0.814	043+00	0.852	045+00	Solid Double Yellow	400
0.871	046+00	1.056	055+75	Solid Double Yellow	1,950
1.056	055+75	1.103	058+25	Solid Left, Broken Right Yellow	313
1.117	059+00	1.207	063+75	Solid Left, Broken Right Yellow	594
1.207	063+75	1.373	072+50	Broken Single Yellow	219
1.373	072+50	1.487	078+50	Solid Right, Broken Left Yellow	750
1.506	079+50	1.534	081+00	Solid Right, Broken Left Yellow	188
1.534	081+00	1.747	092+25	Solid Double Yellow	2,250
1.761	093+00	2.003	105+75	Solid Double Yellow	2,550
2.022	106+75	2.377	125+50	Solid Double Yellow	3,750
2.396	126+50	2.424	128+00	Solid Double Yellow	300
2.443	129+00	2.571	135+75	Solid Double Yellow	1,350
2.590	136+75	2.652	140+00	Solid Double Yellow	650
3.149	166+25	3.168	167+25	Solid Double Yellow	200
3.177	167+75	3.291	173+75	Solid Double Yellow	1,200
3.291	173+75	3.329	175+75	Broken Single Yellow	50
3.329	175+75	3.371	178+00	Solid Double Yellow	450
3.371	178+00	3.499	184+75	Solid Left, Broken Right Yellow	844
3.513	185+50	3.542	187+00	Solid Left, Broken Right Yellow	188
3.542	187+00	3.617	191+00	Broken Single Yellow	100
3.617	191+00	3.636	192+00	Solid Right, Broken Left Yellow	125
3.646	192+50	3.660	193+25	Solid Right, Broken Left Yellow	94
3.670	193+75	3.774	199+25	Solid Right, Broken Left Yellow	688
3.774	199+25	3.925	207+25	Solid Left, Broken Right Yellow	1,000
3.925	207+25	4.384	231+50	Broken Single Yellow	606
4.384	231+50	4.432	234+00	Solid Right, Broken Left Yellow	313
4.446	234+75	4.536	239+50	Solid Right, Broken Left Yellow	594
4.536	239+50	4.569	241+25	Solid Double Yellow	350
4.583	242+00	4.692	247+75	Solid Double Yellow	1,150
4.692	247+75	4.848	256+00	Solid Left, Broken Right Yellow	1,031
4.848	256+00	5.014	264+75	Broken Single Yellow	219
5.014	264+75	5.062	267+25	Solid Right, Broken Left Yellow	313
5.369	283+50	5.459	288+25	Solid Double Yellow	950
5.478	289+25	5.535	292+25	Solid Double Yellow	600
5.535	292+25	5.696	300+75	Solid Left, Broken Right Yellow	1,063
5.696	300+75	6.023	318+00	Broken Single Yellow	431
6.023	318+00	6.165	325+50	Solid Right, Broken Left Yellow	938
6.184	326+50	6.373	336+50	Solid Double Yellow	2,000
6.392	337+50	6.435	339+75	Solid Double Yellow	450
6.435	339+75	6.501	343+25	Solid Left, Broken Right Yellow	438
6.515	344+00	6.586	347+75	Solid Left, Broken Right Yellow	469
6.586	347+75	6.790	358+50	Broken Single Yellow	269
6.790	358+50	6.937	366+25	Solid Right, Broken Left Yellow	969
6.937	366+25	7.093	374+50	Solid Double Yellow	1,650
				TOTAL	**39,832**

PROPOSED PAVEMENT MARKINGS - EDGELINE

Begin MP	Begin Station	End MP	End Station	Description	6" Striping (LF)	
					Left	Right
0.000	000+00	2.652	140+00	Solid Single White	14,000	14,000
3.144	166+00	5.062	267+25	Solid Single White	10,125	10,125
5.374	283+75	7.093	374+50	Solid Single White	9,075	9,075
				TOTAL	**33,200**	**33,200**

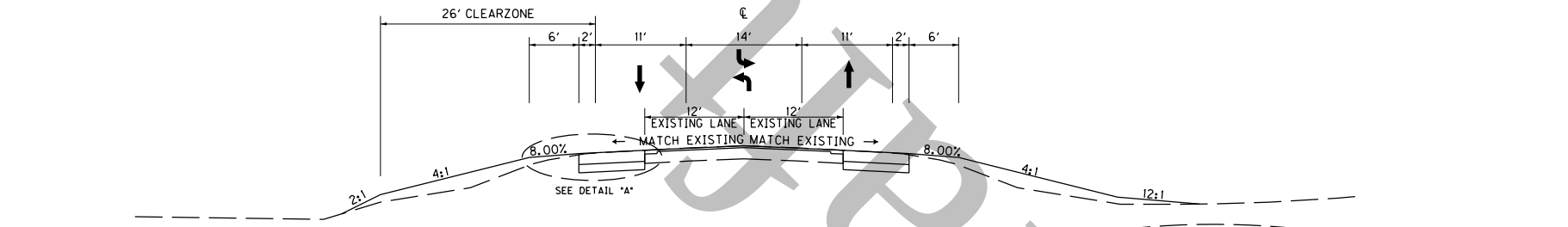
Item	Description	Unit	Quantity
24995EC	Pave Striping-Spray Thermo 6 in -W	LF	66,400
24996ED	Pave Striping-Spray Thermo 6 in -Y	LF	39,832

NOTES

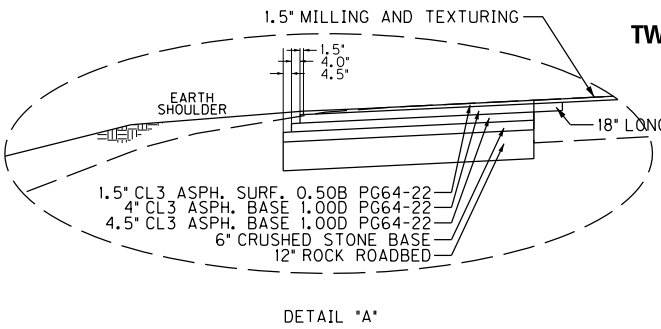
1. Quantities carried over to the General Summary.
2. No deductions have been made for approach road gaps.
3. Locations and quantities are approximate.
4. Final locations will be determined by the Engineer in the field.

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

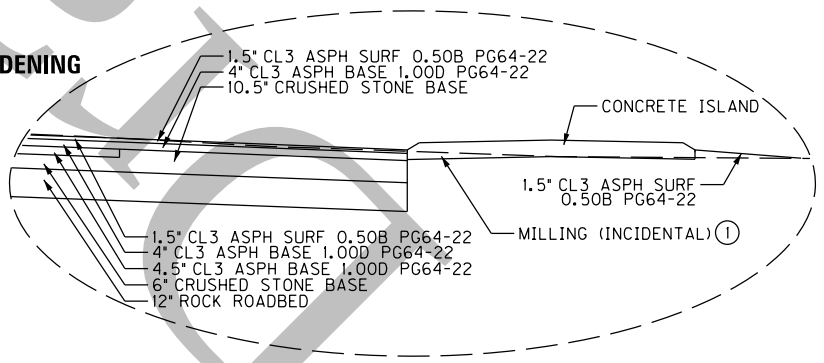
TYPICAL SECTIONS



US 62
TWO WAY LEFT TURN LANE WIDENING
NORMAL SECTION



DETAIL "A"



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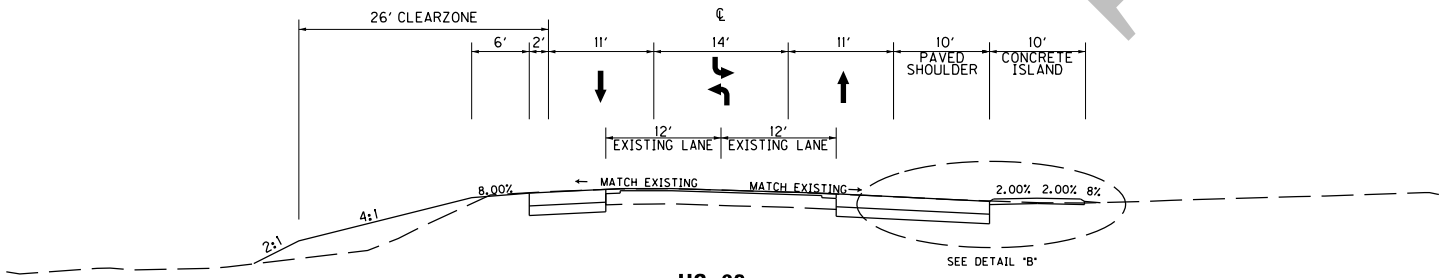
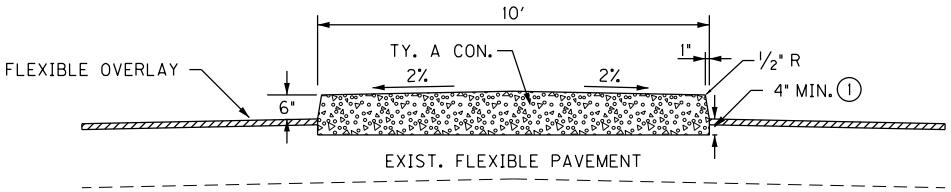


US 62
TWO WAY LEFT TURN LANE WIDENING
NORMAL CURB AND GUTTER SECTION



CONCRETE ISLAND DETAIL

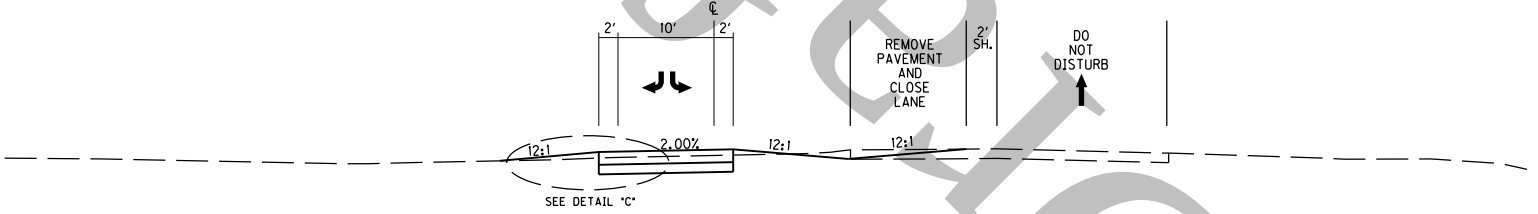
① MILLING FOR EMBEDMENT SHALL BE INCIDENTAL TO THE BID ITEM FOR CONCRETE ISLAND

N.T.S.

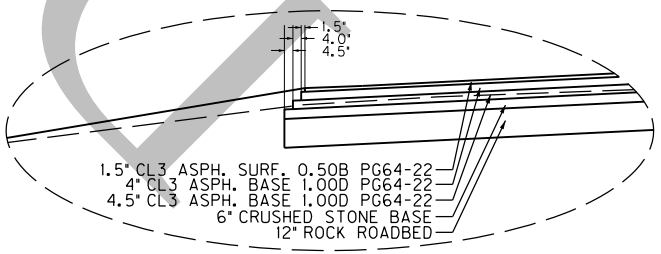
TYPICAL SECTIONS

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

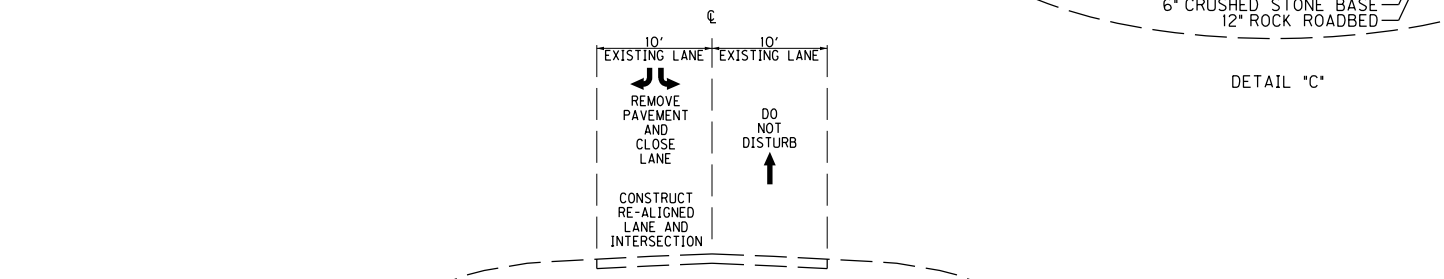
TYPICAL SECTIONS
APPROACHES



CALVERT CITY CIRCLE
NORMAL SECTION



DETAIL "C"



CALVERT CITY CIRCLE
NORMAL SECTION

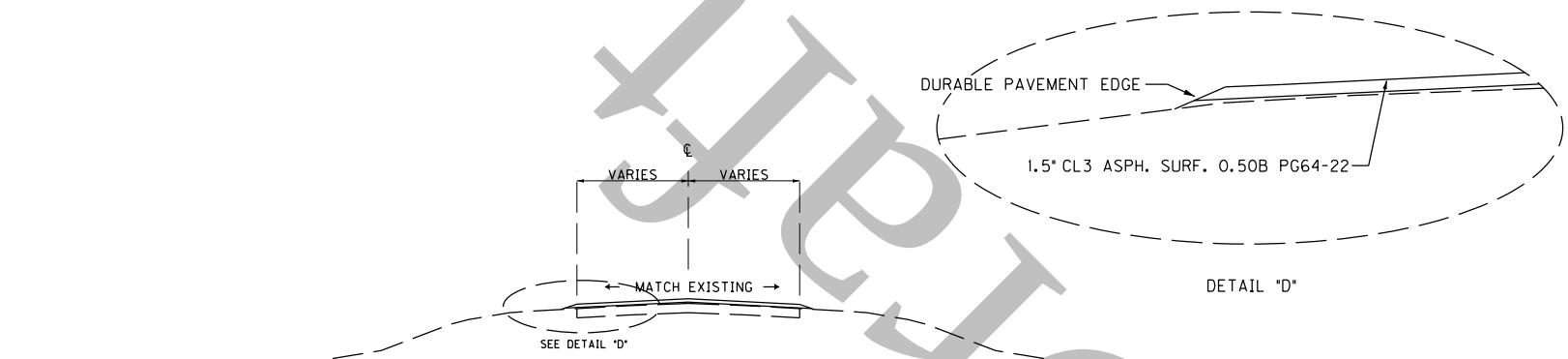
FOR INFORMATION ONLY

N.T.S.

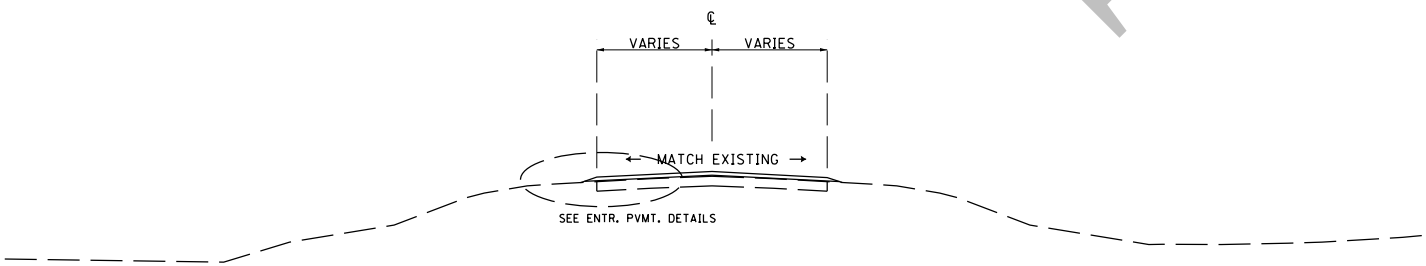
TYPICAL SECTIONS

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

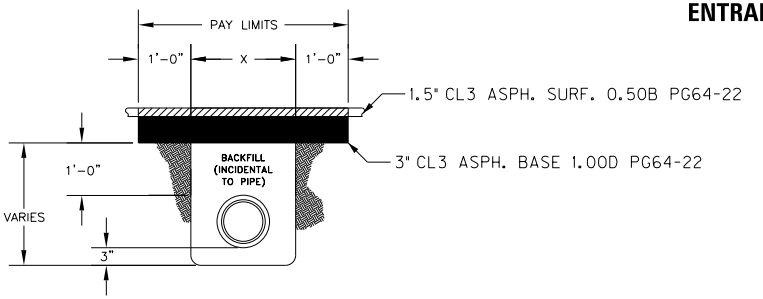
TYPICAL SECTIONS APPROACHES & ENTRANCES



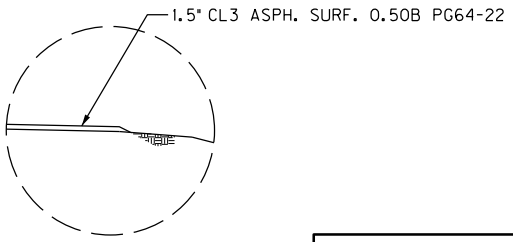
MINOR APPROACH ROADS



ENTRANCES



FULL DEPTH ASPH. FOR ENTRANCE PIPE REPLACEMENT (PROFILE VIEW)



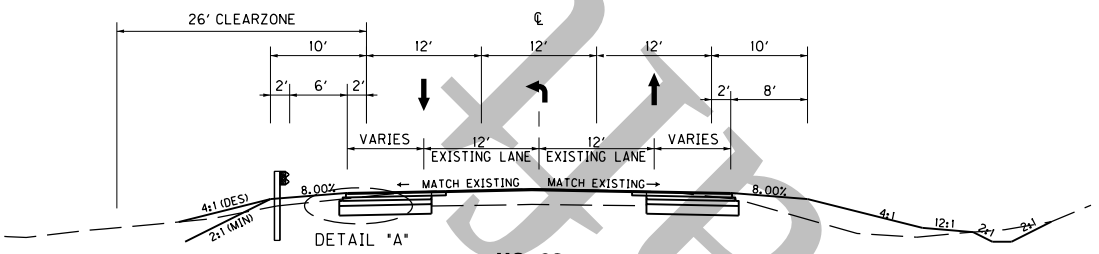
ASPHALT OVERLAY DETAIL

N.T.S.

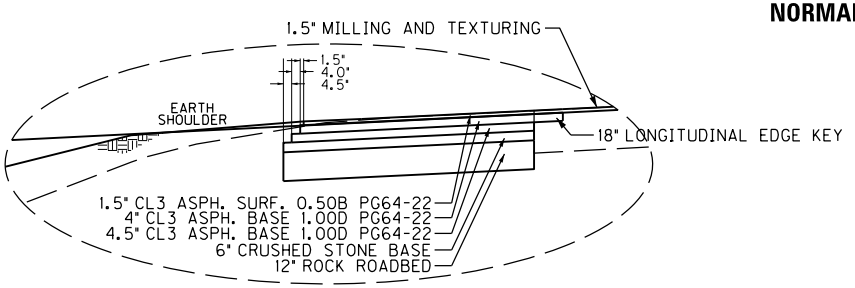
TYPICAL SECTIONS

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

TYPICAL SECTIONS



US 62
KY 1523 TURN LANE WIDENING
NORMAL SECTION



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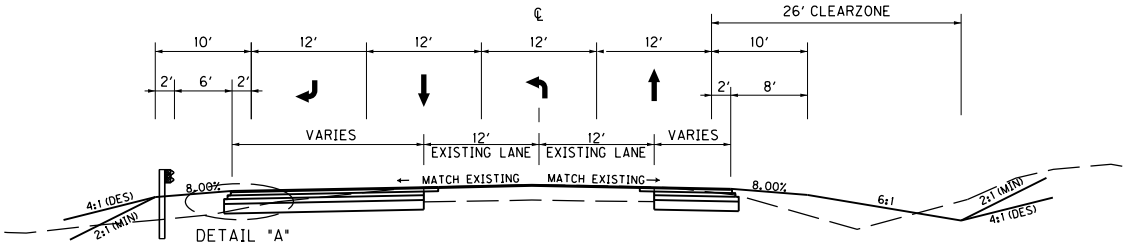


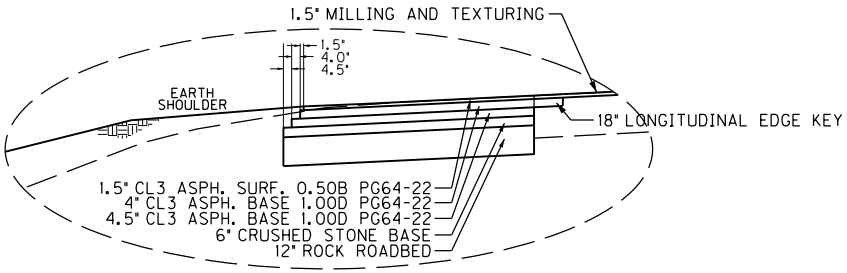
US 62
KY 1523 TURN LANE WIDENING
NORMAL SECTION

N.T.S.

TYPICAL SECTIONS

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

TYPICAL SECTIONS
APPROACHES



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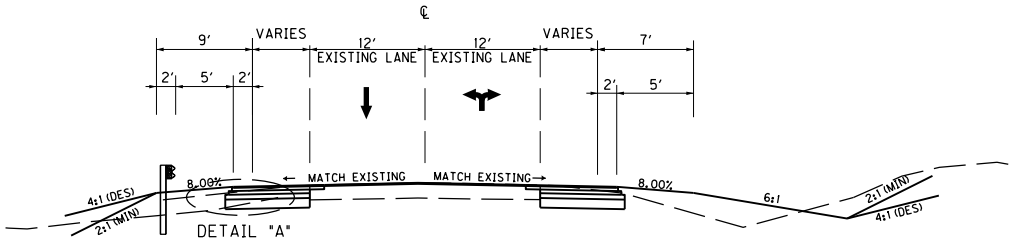


DETAIL "A"

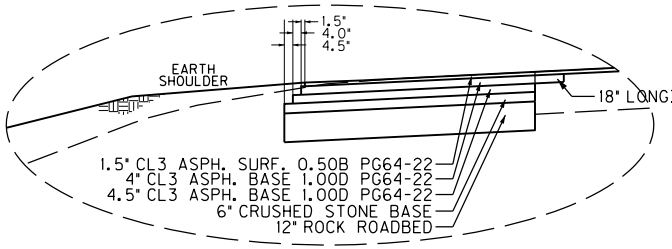
KY 1523
NORMAL SECTION

N.T.S.

TYPICAL SECTIONS

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

TYPICAL SECTIONS



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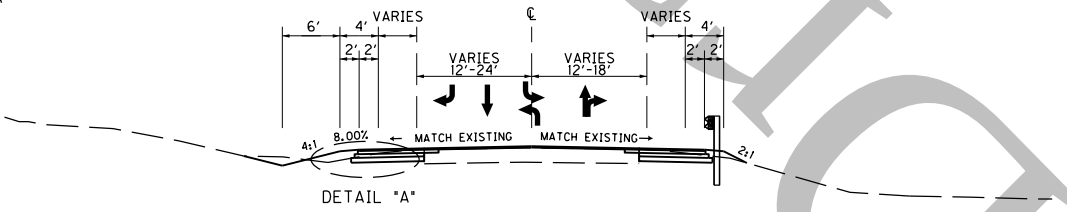
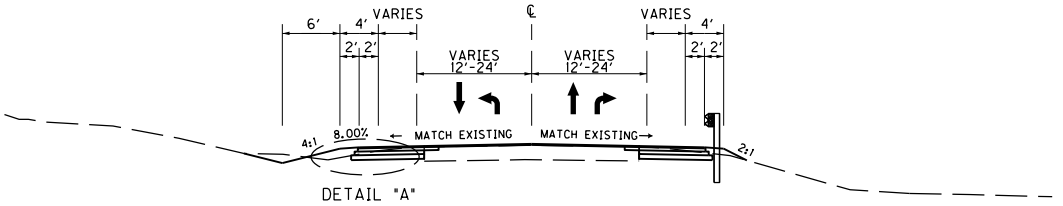


DETAIL "A"

KY 95
WIDENING
KY 95 INTERSECTION IMPROVEMENTS



DETAIL "A"

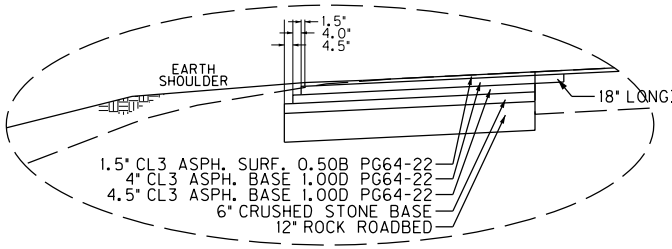
US 62
OVERLAY AND RADIUS WIDENING
KY 95 INTERSECTION IMPROVEMENTS

N.T.S.

KY 95 @ US 62
TYPICAL SECTIONS

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

TYPICAL SECTIONS



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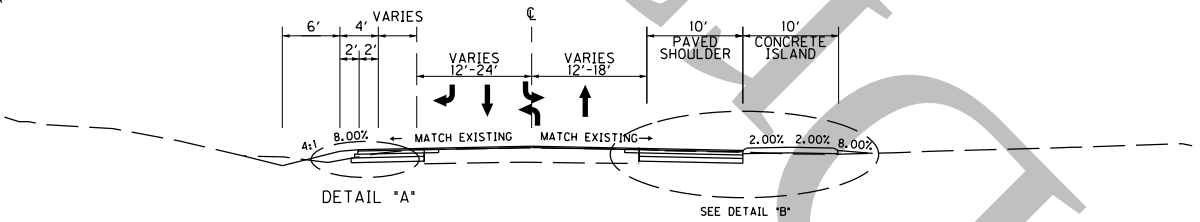
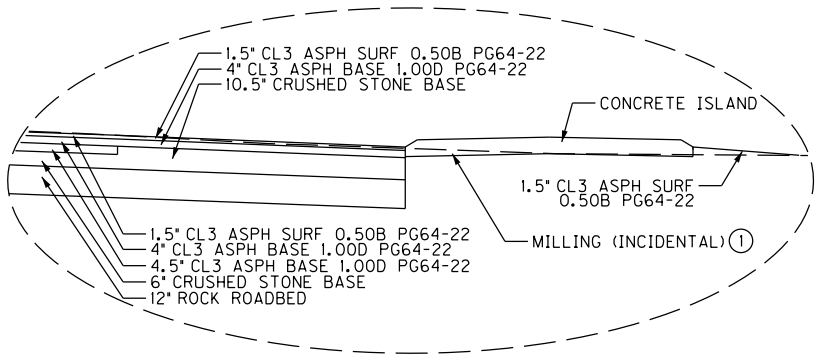


US 62
OVERLAY AND RADIUS WIDENING
KY 95 INTERSECTION IMPROVEMENTS



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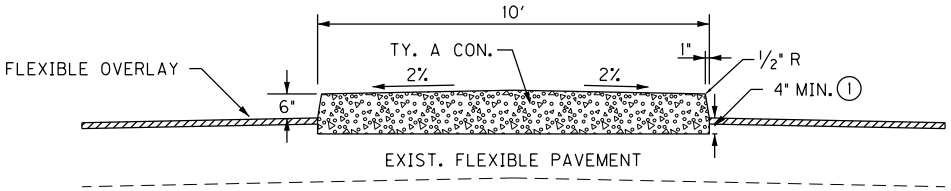
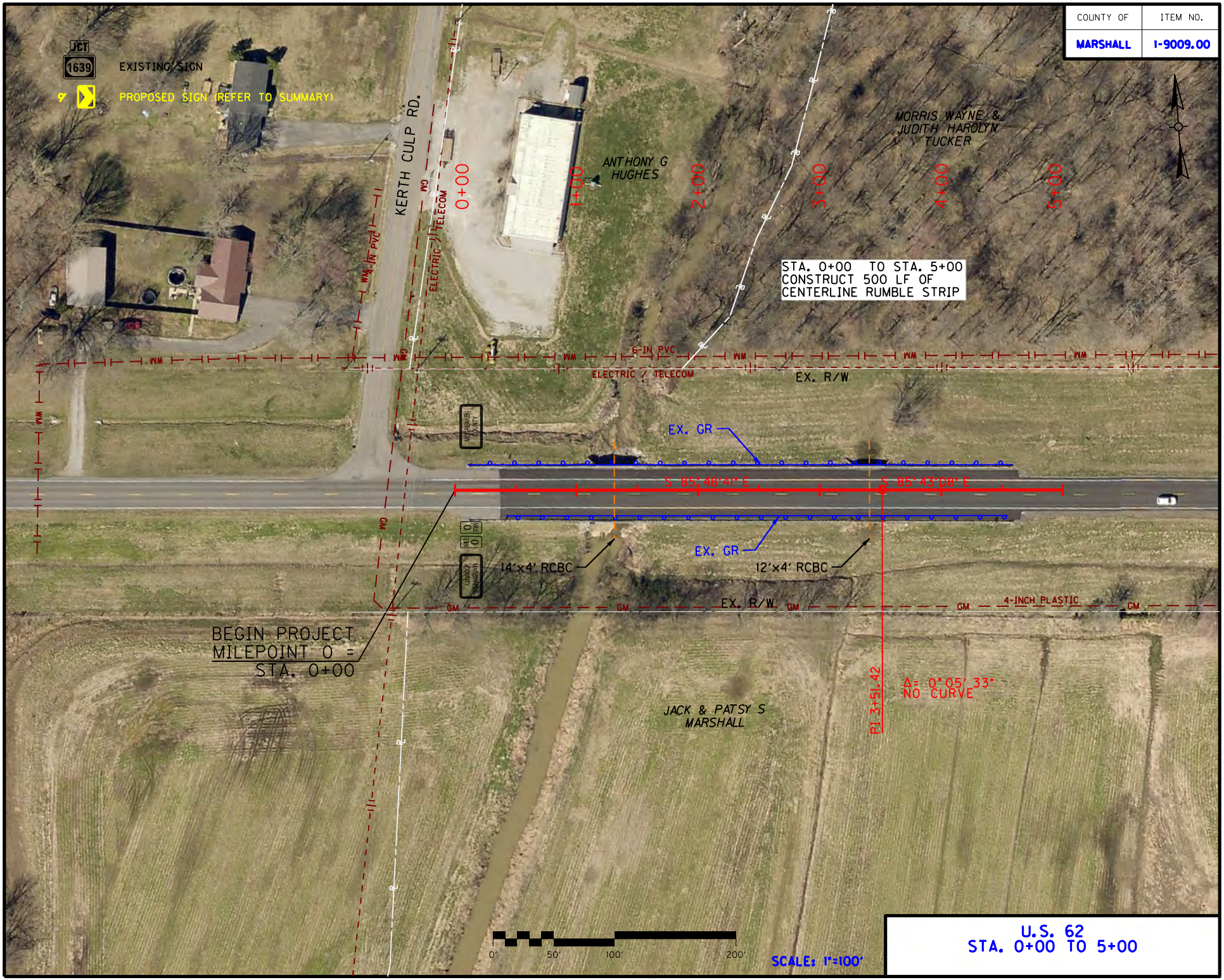


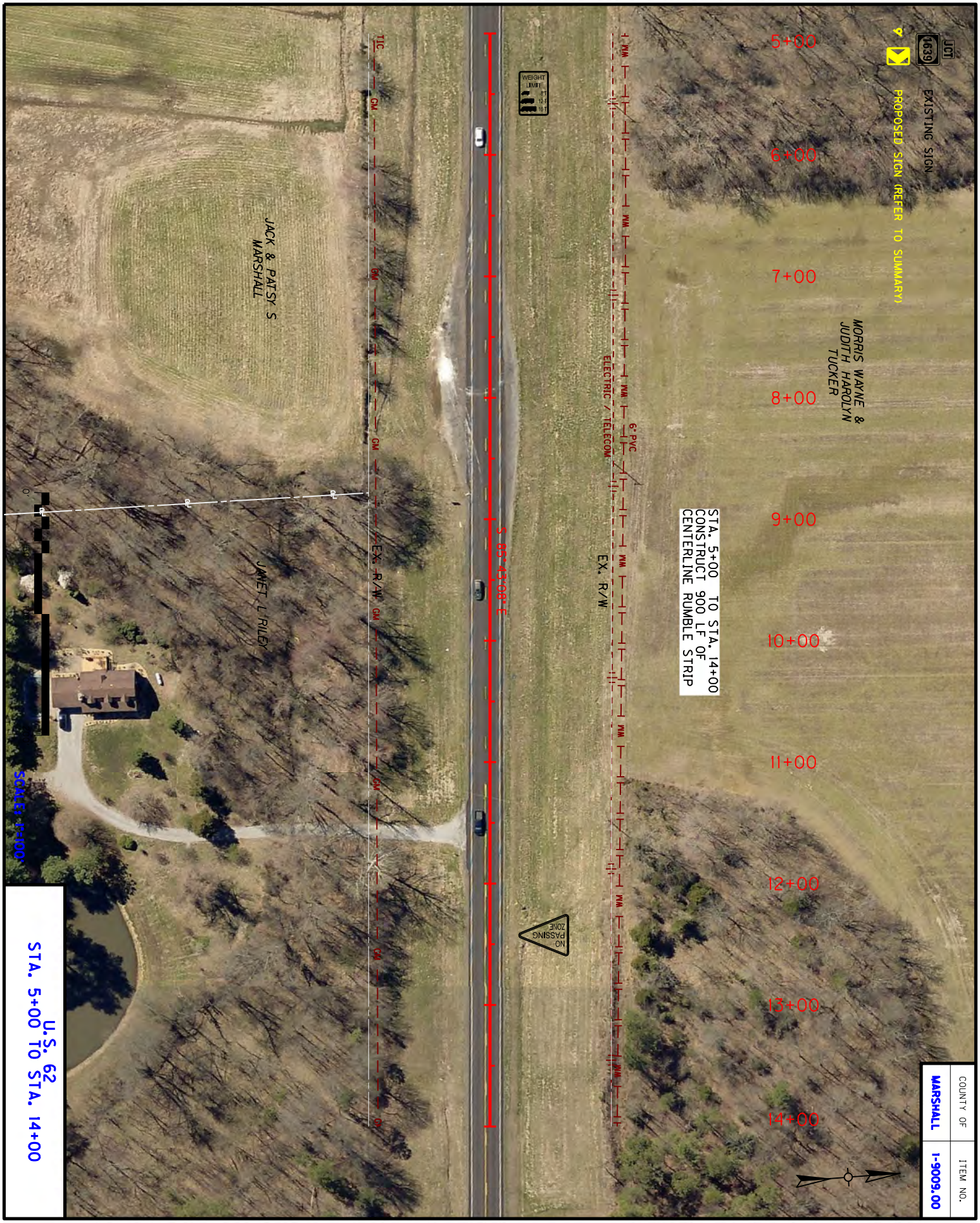
CONCRETE ISLAND DETAIL

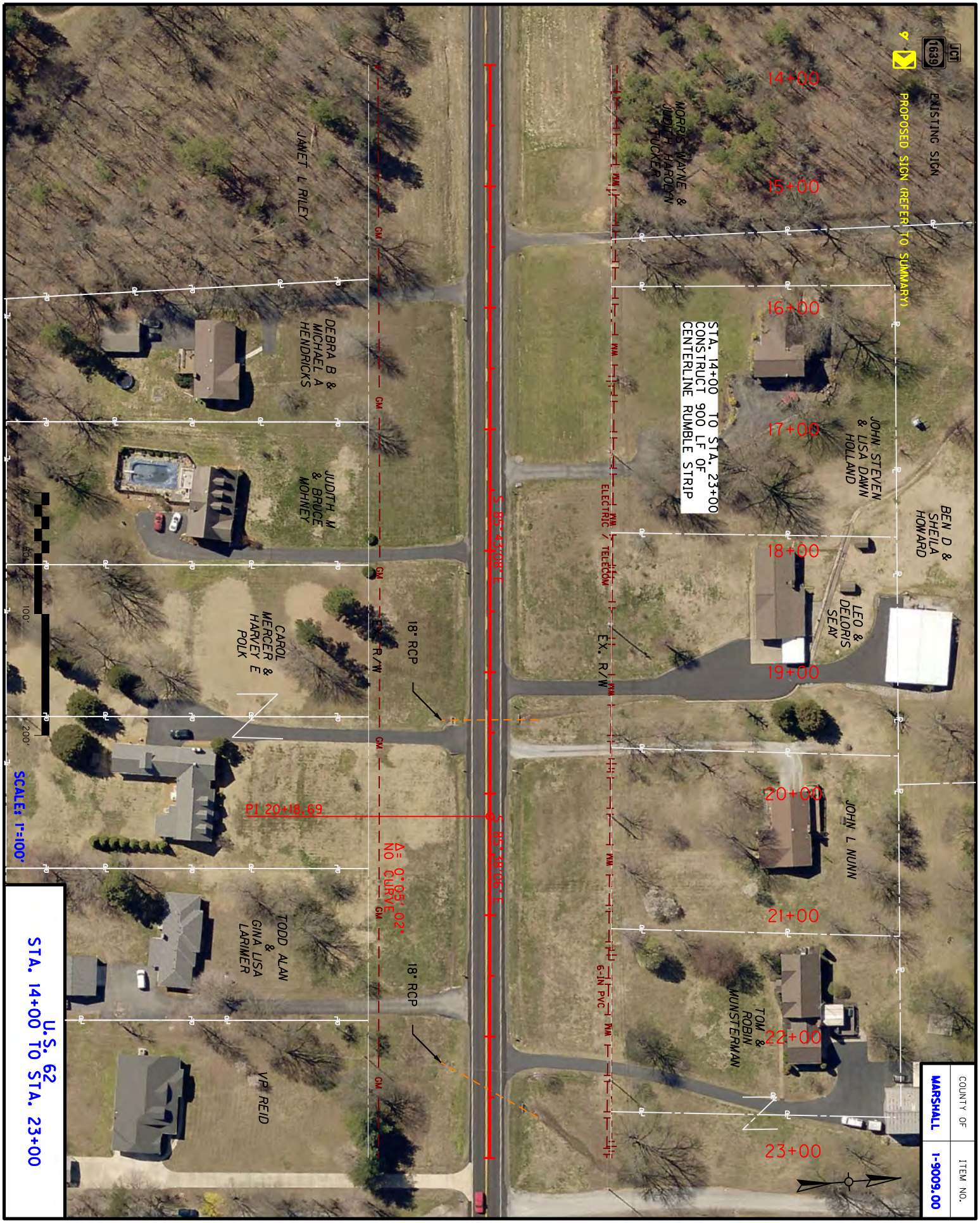
① MILLING FOR EMBEDMENT SHALL BE INCIDENTAL TO THE BID ITEM FOR CONCRETE ISLAND

N.T.S.

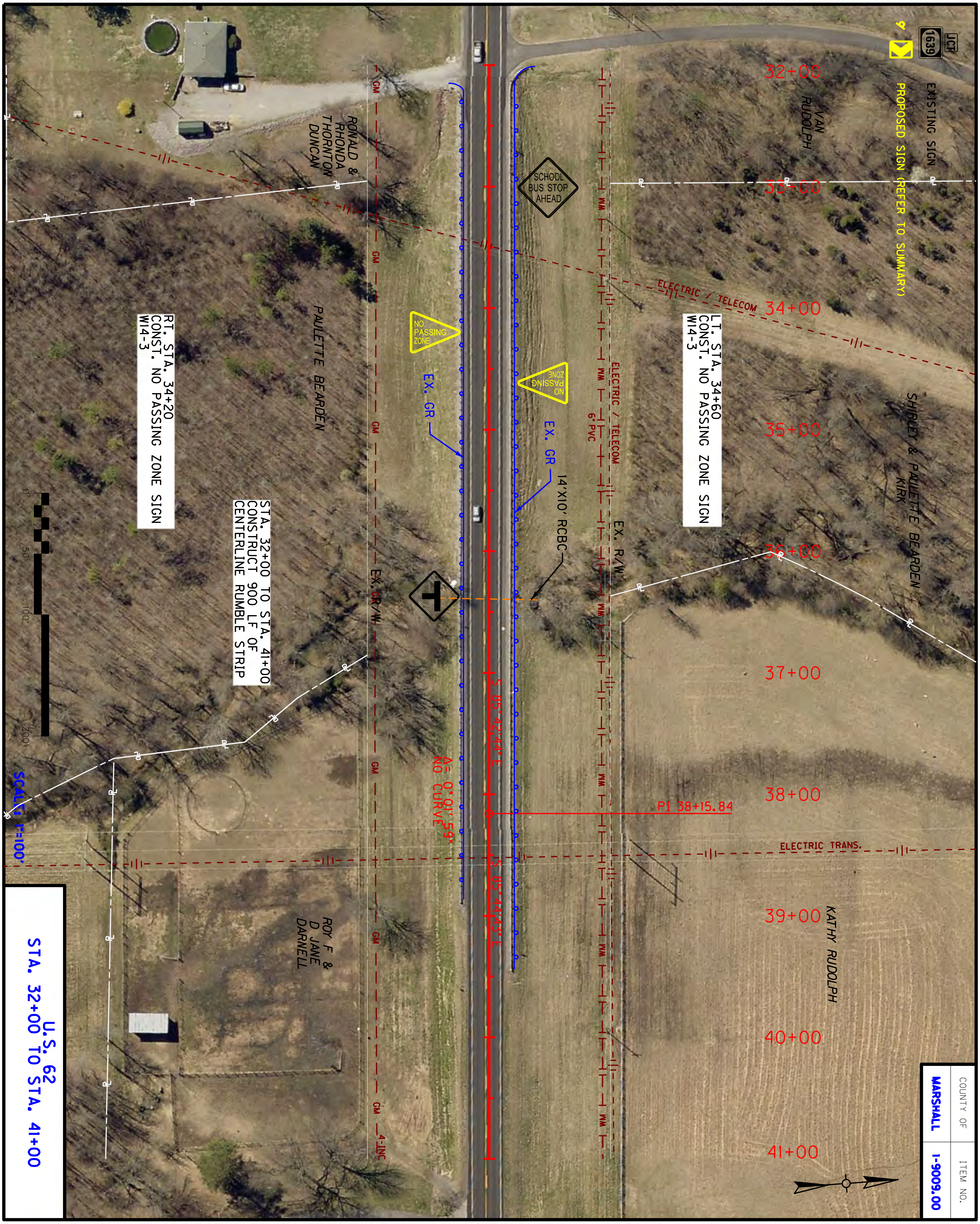
KY 95 @ US 62
TYPICAL SECTIONS

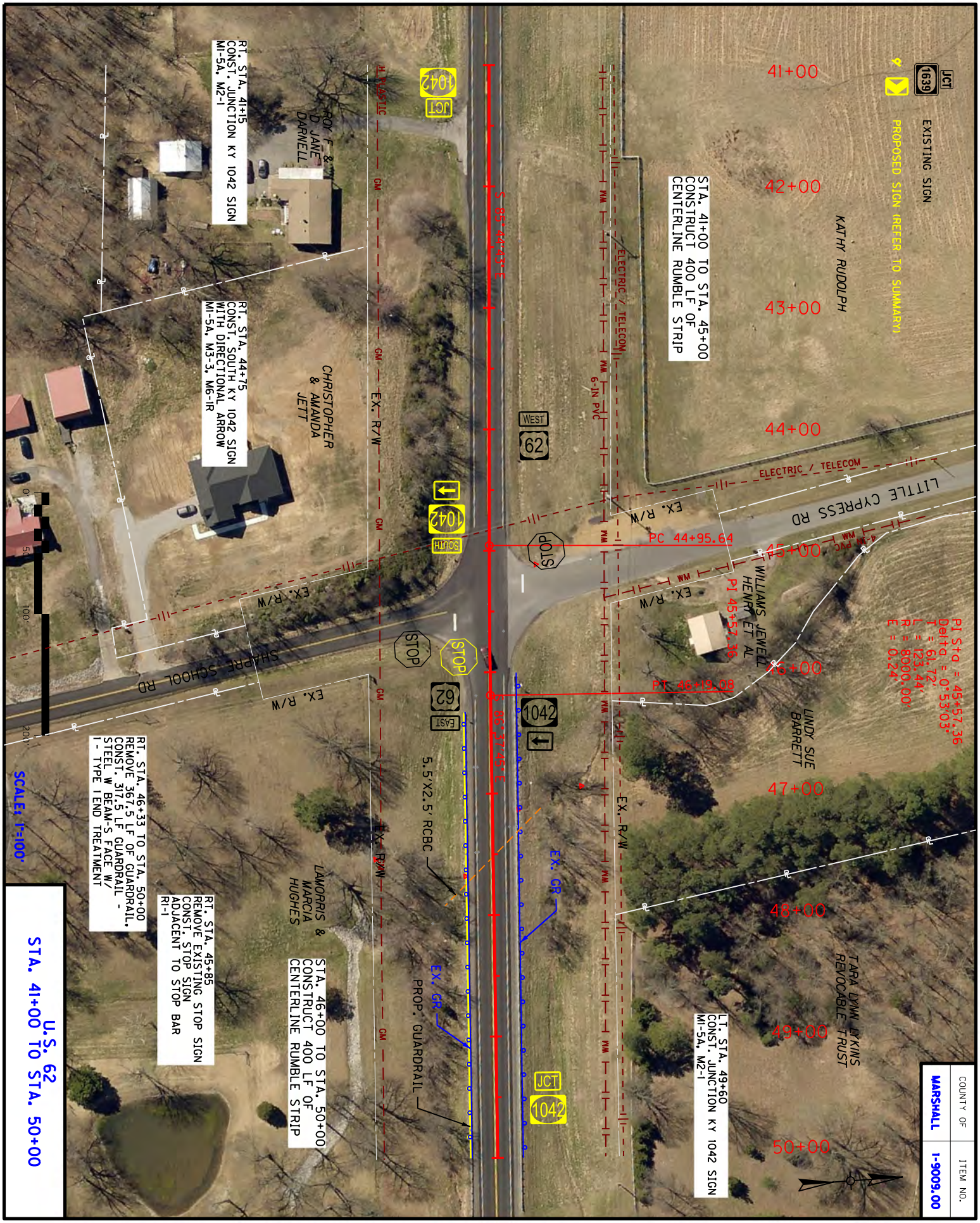

COUNTY OF
MARSHALL
ITEM NO.
I-9009.00
JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
KERTH CULP RD.
ANTHONY G HUGHES
MORRIS WAYNE & JUDITH HAROLYN TUCKER
0+00
1+00
2+00
3+00
4+00
5+00
STA. 0+00 TO STA. 5+00
CONSTRUCT 500 LF OF
CENTERLINE RUMBLE STRIP
WM
6-IN PVC
ELECTRIC / TELECOM
EX. R/W
EX. GR
S 85°49'41" E
S 85°43'08" E
14'x4' RCBC
12'x4' RCBC
GM
4-INCH PLASTIC
BEGIN PROJECT
MILEPOINT 0 =
STA. 0+00
PI 3+51.42
Δ= 0°05'33"
NO CURVE
JACK & PATSY S MARSHALL
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 0+00 TO 5+00

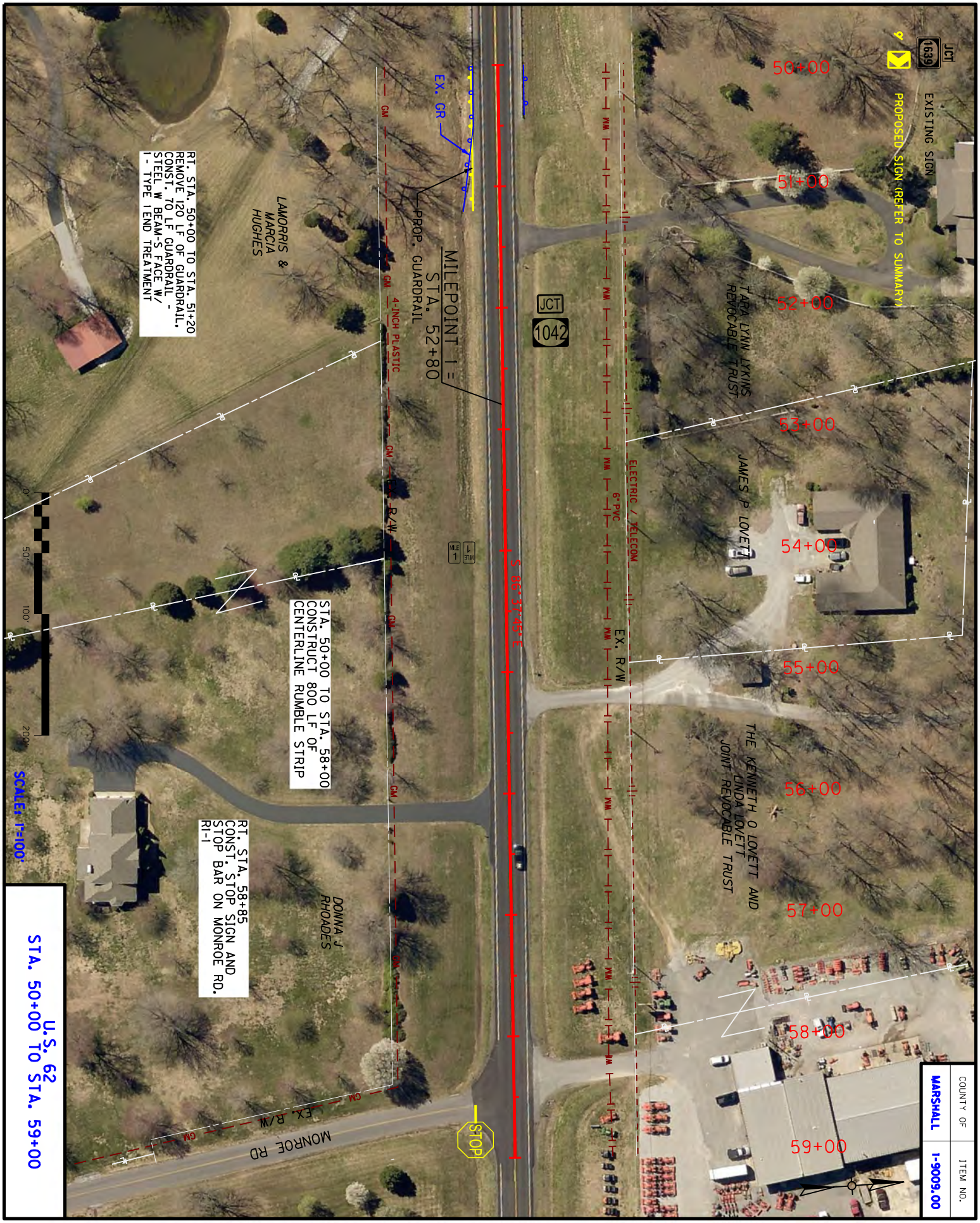

JCT
1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
5+00
6+00
7+00
8+00
9+00
10+00
11+00
12+00
13+00
14+00
MORRIS WAYNE &
JUDITH HAROLYN
TUCKER
STA. 5+00 TO STA. 14+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
6" PVC
ELECTRIC / TELECOM
EX. R/W
S 85°45'08" E
WEIGHT
LIMIT
NO
PASSING
ZONE
JACK & PATSY S.
MARSHALL
JANET L. RILEY
EX. R/W
TIC
GM
SCALE: 1"=100'
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
U.S. 62
STA. 5+00 TO STA. 14+00

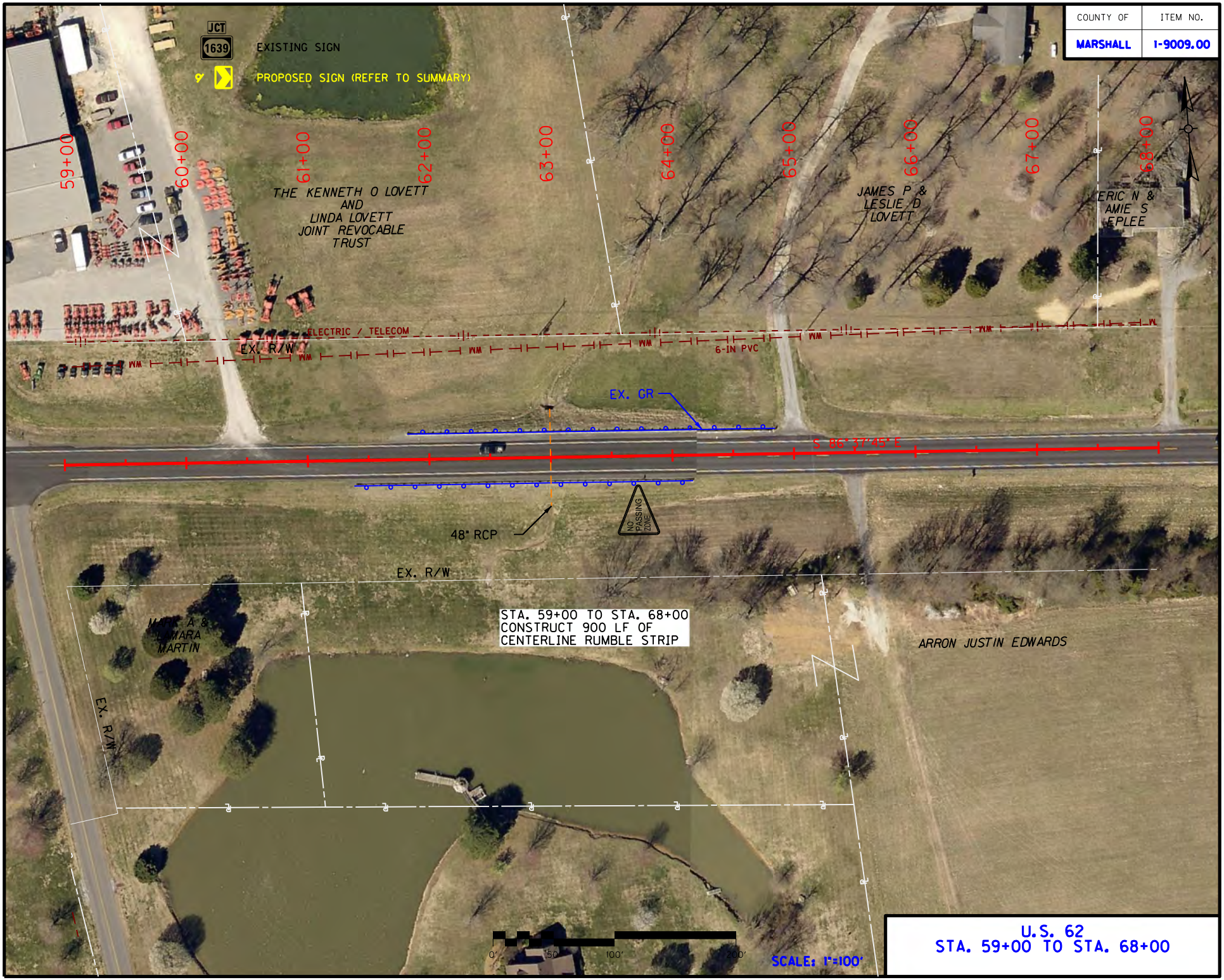

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
14+00
15+00
16+00
17+00
18+00
19+00
20+00
21+00
22+00
23+00
STA. 14+00 TO STA. 23+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
MORRIS WAYNE &
JUDITH HAROLYN
TUCKER
JANET L RILEY
DEBRA B &
MICHAEL A
HENDRICKS
JUDITH M
& BRUCE
MOHNEY
CAROL
MERCER &
HARVEY E
POLK
TODD ALAN
&
GINA LISA
LARIMER
V.R. REID
JOHN STEVEN
& LISA DAWN
HOLLAND
BEN D &
SHEILA
HOWARD
LEO &
DELORIS
SEAY
JOHN L NUNN
TOM &
ROBIN
MUNSTERMAN
ELECTRIC / TELECOM
EX. R/W
18" RCP
6-IN PVC
S 85°40'05" E
PI 20+18.69
Δ= 0°05'02"
NO CURVE
SCALE: 1"=100'
100'
200'
U.S. 62
STA. 14+00 TO STA. 23+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

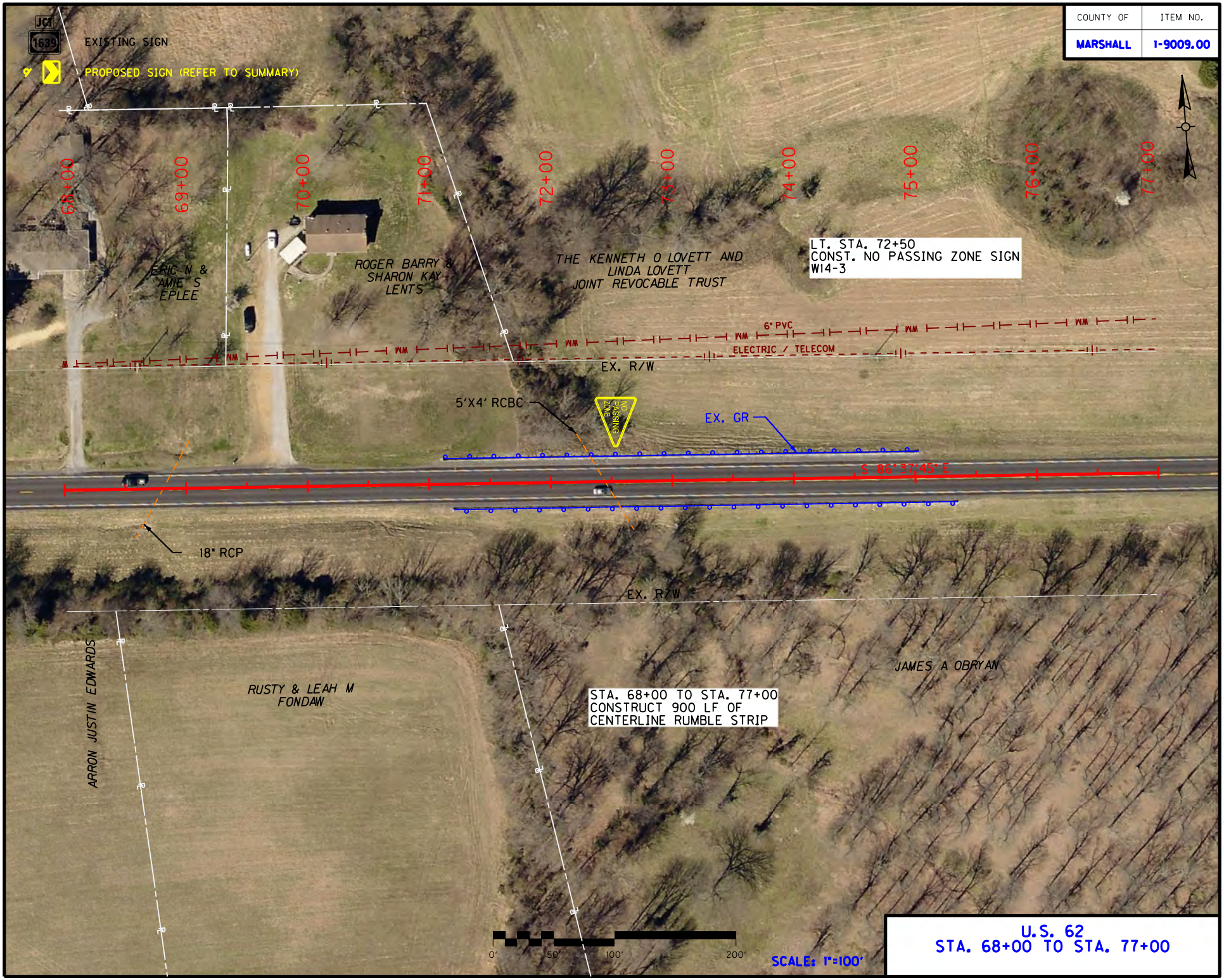

JCT
1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
23+00
24+00
25+00
26+00
27+00
28+00
29+00
30+00
31+00
32+00
TOM & ROBIN MUNSTERMAN
LINDA PHELPS
ADAM EDWARDS
NANCY WILLIAMS
DARRELL E & WILMA L HOPKINS
PATRICK & TAMERA WILLCUTT
CHRISTOPHER H WARD
VP REID
GOLDIE TAYLOR
PAMELA & ROY HOPPER
MICHELLE A KOCH
STEVEN POWELL SMITH ET AL
RONALD & RHONDA THORNTON DUNCAN
ELECTRIC / TELECOM
6" PVC
GM
WM
EX. R/W
S 85°38'06" E
S 85°42'48" E
PI 28+57.60
Δ= 0°04'38"
NO CURVE
STA. 23+00 TO STA. 32+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 23+00 TO STA. 32+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


U.S. 62
STA. 32+00 TO STA. 41+00
SCALE: 1"=100'
0'
50'
100'
200'
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
JCT
1639
32+00
33+00
34+00
35+00
36+00
37+00
38+00
39+00
40+00
41+00
VAN RUDOLPH
SHIRLEY & PAULETTE KIRK BEARDEN
KATHY RUDOLPH
RONALD & RHONDA THORNTON DUNCAN
PAULETTE BEARDEN
ROY F & D JANE DARNELL
SCHOOL BUS STOP AHEAD
NO PASSING ZONE
NO PASSING ZONE
EX. GR
EX. GR
14'X10' RCBC
6" PVC
EX. R/W
EX. R/W
ELECTRIC / TELECOM
ELECTRIC / TELECOM
ELECTRIC TRANS.
PI 38+15.84
S 85°42'44" E
S 85°44'43" E
Δ= 0°01'59"
NO CURVE
LT. STA. 34+60
CONST. NO PASSING ZONE SIGN
W14-3
RT. STA. 34+20
CONST. NO PASSING ZONE SIGN
W14-3
STA. 32+00 TO STA. 41+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
4-INC

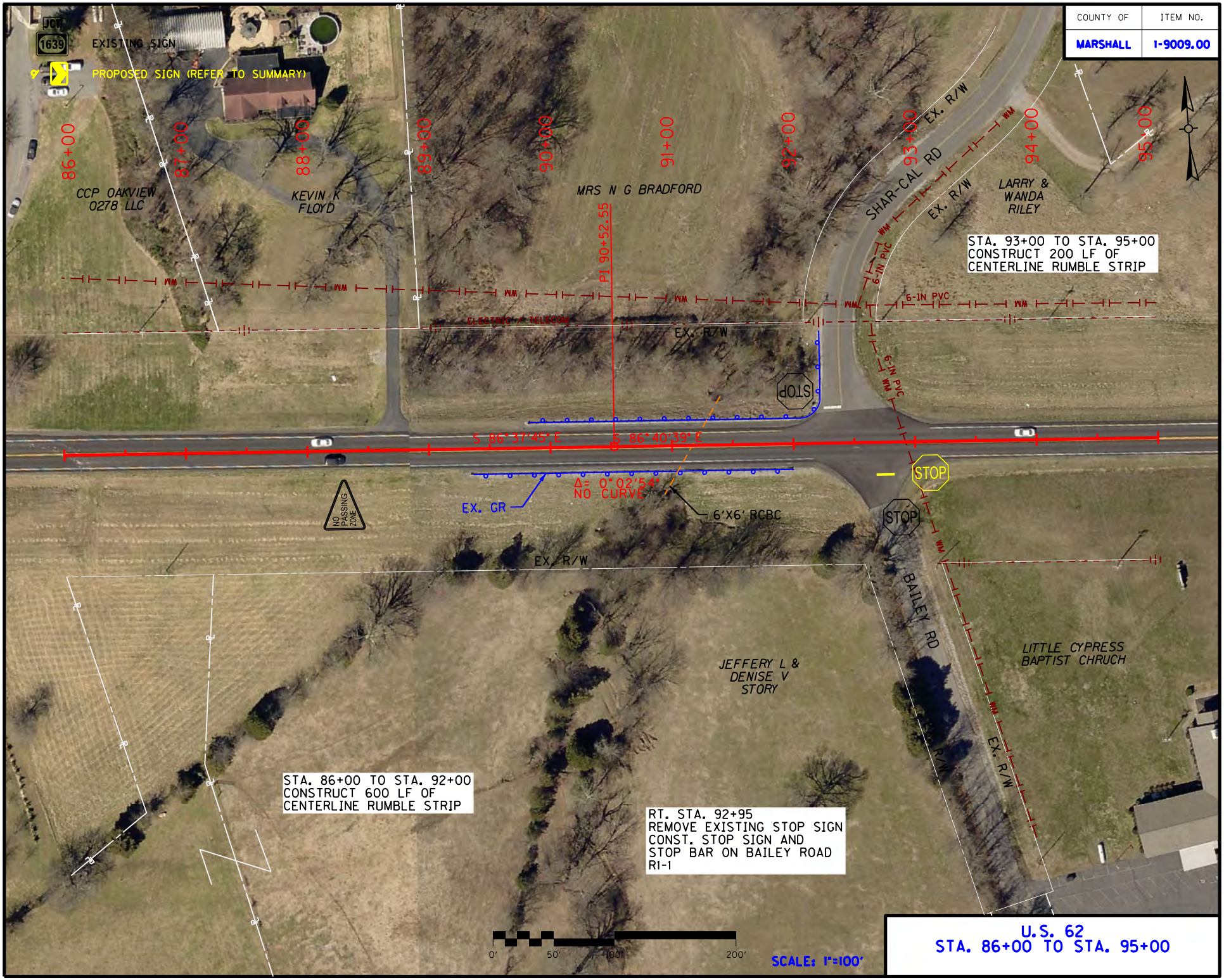

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
41+00
42+00
43+00
44+00
45+00
46+00
47+00
48+00
49+00
50+00
KATHY RUDOLPH
STA. 41+00 TO STA. 45+00
CONSTRUCT 400 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 41+15
CONST. JUNCTION KY 1042 SIGN
M1-5A, M2-1
ROY F. & D. JANE DARNELL
RT. STA. 44+75
CONST. SOUTH KY 1042 SIGN
WITH DIRECTIONAL ARROW
M1-5A, M3-3, M6-1R
CHRISTOPHER & AMANDA JETT
EX. R/W
ELECTRIC / TELECOM
6-IN PVC
WEST
62
1042
JCT
SOUTH
STOP
PC 44+95.64
PI 45+52.36
PT 46+19.08
PI Sta = 45+57.36
Delta = 0°53'03"
T = 61.72'
L = 123.44'
R = 8000.00'
E = 0.24'
WILLIAMS JEWELL HENRY ET AL
LITTLE CYPRESS RD
LINDY SUE BARRETT
TARA LYNN LYKINS REVOCABLE TRUST
SHARPE SCHOOL RD
EAST
80°37'45" E
5.5'X2.5' RCBC
EX. GR
PROP. GUARDRAIL
LT. STA. 49+60
CONST. JUNCTION KY 1042 SIGN
M1-5A, M2-1
RT. STA. 46+33 TO STA. 50+00
REMOVE 367.5 LF OF GUARDRAIL.
CONST. 317.5 LF GUARDRAIL -
STEEL W BEAM-S FACE W/
1 - TYPE I END TREATMENT
RT. STA. 45+85
REMOVE EXISTING STOP SIGN
CONST. STOP SIGN
ADJACENT TO STOP BAR
RI-1
LAMORRIS & MARCIA HUGHES
STA. 46+00 TO STA. 50+00
CONSTRUCT 400 LF OF
CENTERLINE RUMBLE STRIP
SCALE: 1"=100'
U.S. 62
STA. 41+00 TO STA. 50+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

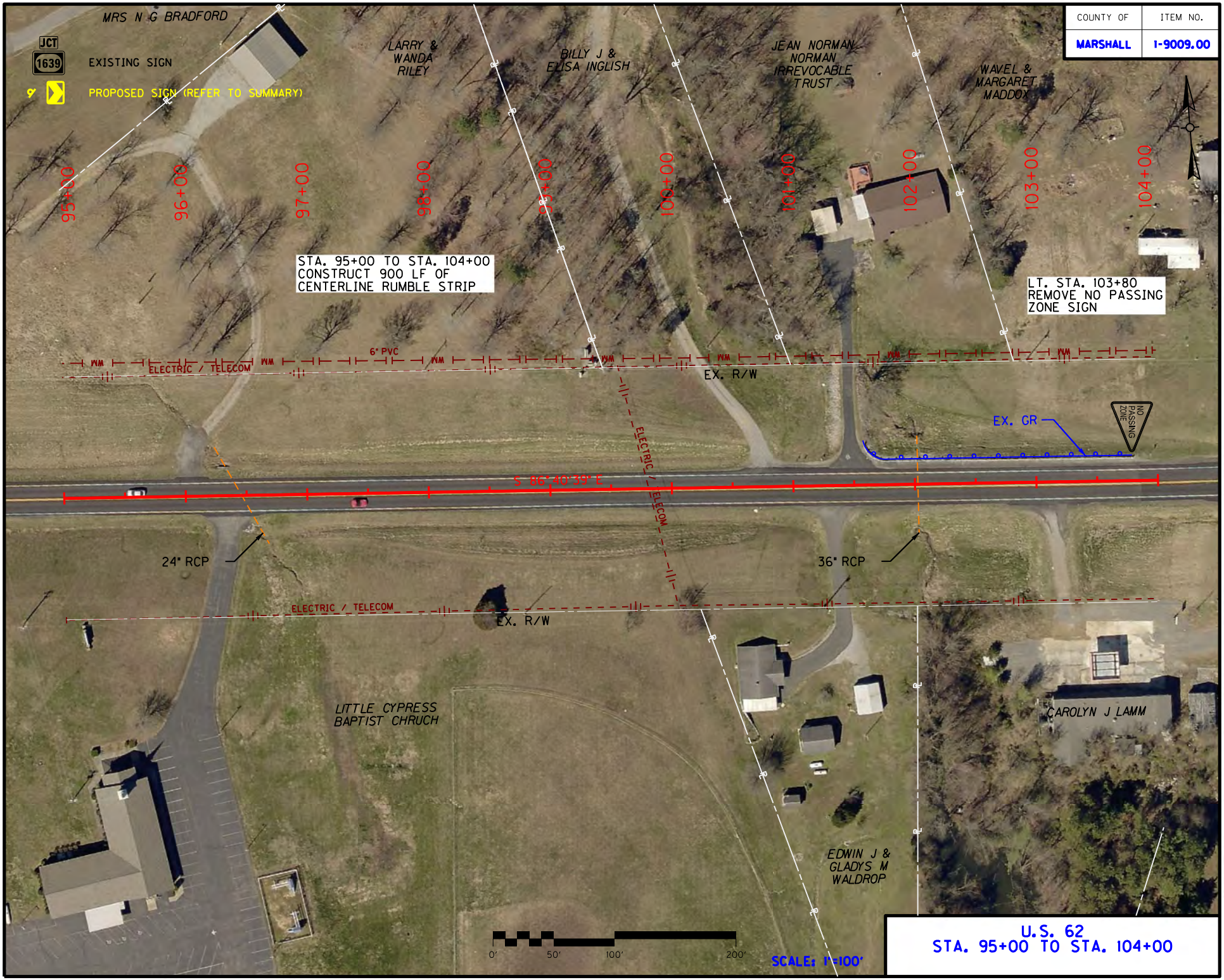

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
50+00
51+00
52+00
53+00
54+00
55+00
56+00
57+00
58+00
59+00
TARA LYNN LYKINS REVOCABLE TRUST
JAMES P LOVETT
THE KENNETH O LOVETT AND LINDA LOVETT JOINT REVOCABLE TRUST
JCT 1042
ELECTRIC / TELECOM
6"PVC
EX. R/W
S 66°37'45"E
MILEPOINT 1 = STA. 52+80
EX. GR
PROP. GUARDRAIL
4-INCH PLASTIC
GM
R/W
LAMORRIS & MARCIA HUGHES
DONNA J RHOADES
MONROE RD
EX. R/W
STOP
RT. STA. 50+00 TO STA. 51+20
REMOVE 120 LF OF GUARDRAIL.
CONST. 70 LF GUARDRAIL -
STEEL W BEAM-S FACE W/
1 - TYPE 1 END TREATMENT
STA. 50+00 TO STA. 58+00
CONSTRUCT 800 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 58+85
CONST. STOP SIGN AND
STOP BAR ON MONROE RD.
R1-1
0
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 50+00 TO STA. 59+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

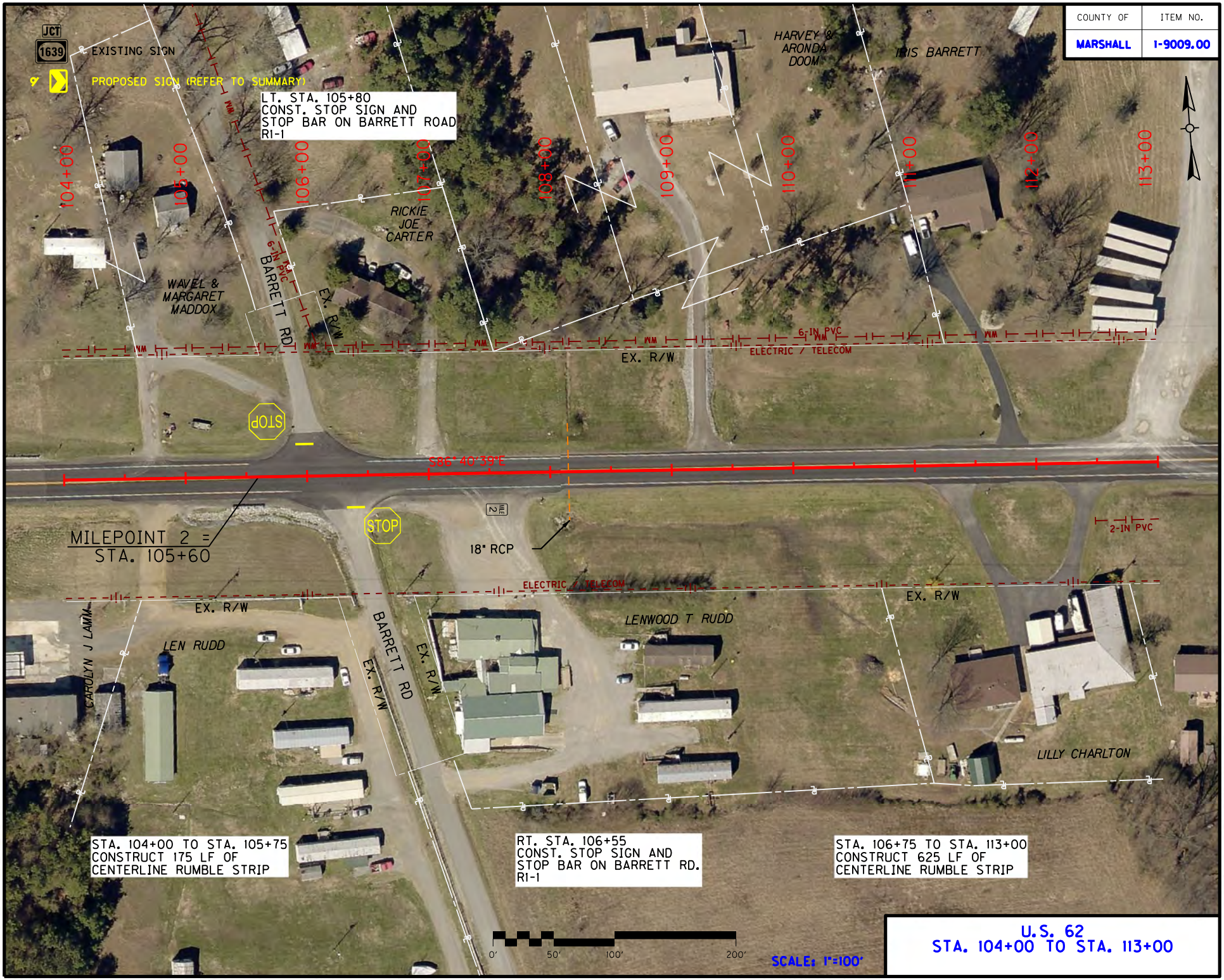

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
JCT
1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
59+00
60+00
61+00
62+00
63+00
64+00
65+00
66+00
67+00
68+00
THE KENNETH O LOVETT AND LINDA LOVETT JOINT REVOCABLE TRUST
JAMES P & LESLIE D LOVETT
ERIC N & AMIE S EPLEE
ELECTRIC / TELECOM
EX. R/W
WM
6-IN PVC
EX. CR
S 85°17'45" E
48" RCP
NO PASSING ZONE
EX. R/W
STA. 59+00 TO STA. 68+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
MARK A & LAMARA MARTIN
ARRON JUSTIN EDWARDS
EX. R/W
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 59+00 TO STA. 68+00


JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
68+00
69+00
70+00
71+00
72+00
73+00
74+00
75+00
76+00
77+00
ERIC N & AMIE S EPLEE
ROGER BARRY & SHARON KAY LENTS
THE KENNETH O LOVETT AND LINDA LOVETT JOINT REVOCABLE TRUST
LT. STA. 72+50
CONST. NO PASSING ZONE SIGN
W14-3
6" PVC
WM
ELECTRIC / TELECOM
EX. R/W
5'X4' RCBC
NO PASSING ZONE
EX. GR
S 86°37'45" E
18" RCP
EX. R/W
ARRON JUSTIN EDWARDS
RUSTY & LEAH M FONDAW
JAMES A OBRYAN
STA. 68+00 TO STA. 77+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 68+00 TO STA. 77+00

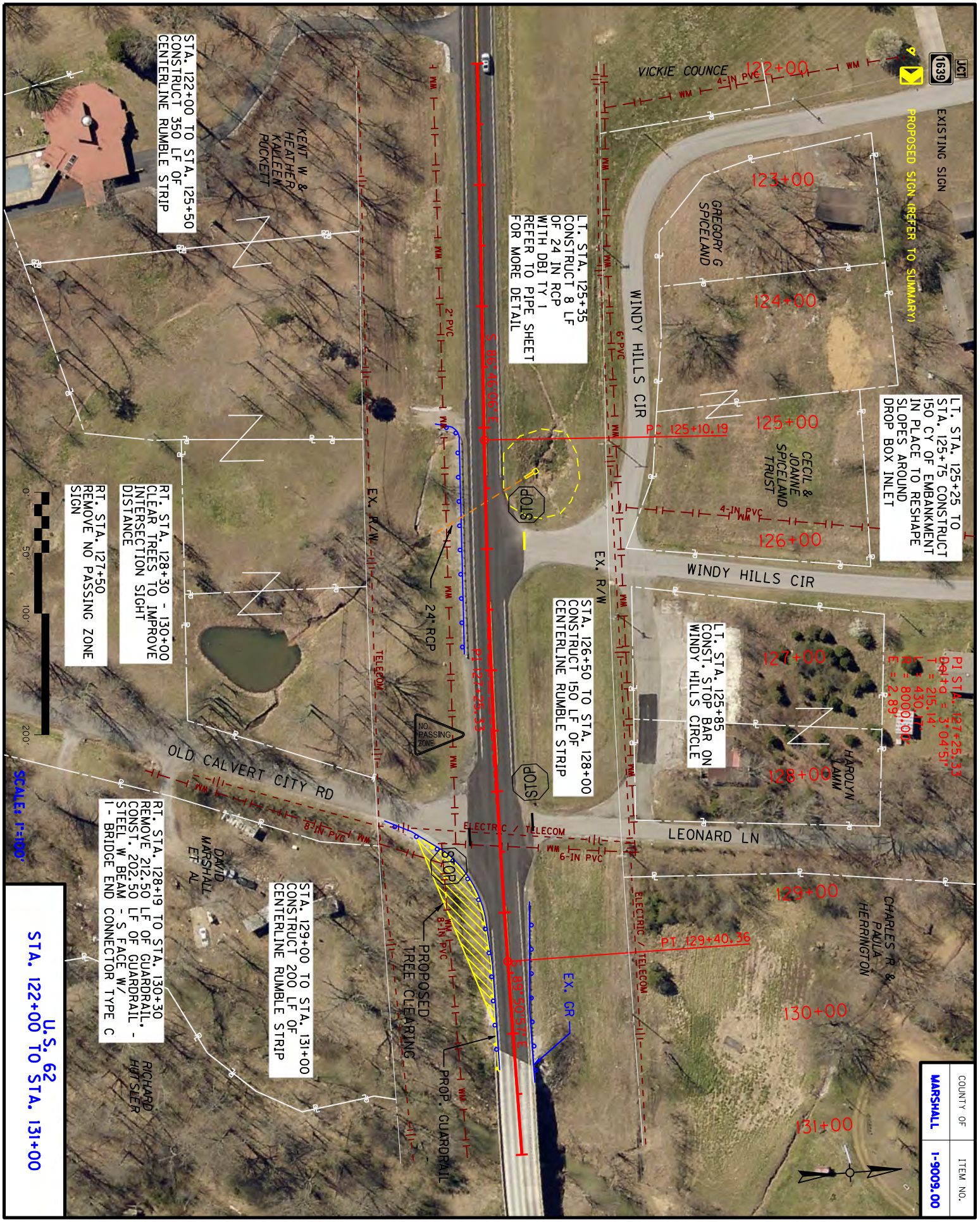

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
77+00
78+00
79+00
80+00
81+00
82+00
83+00
84+00
85+00
86+00
THE KENNETH O LOVETT AND LINDA LOVETT JOINT REVOCABLE TRUST
LDS CHURCH TAX DIVISION
CCP OAKVIEW 0278 LLC
EX. R/W
WM
6-IN PVC
ELECTRIC / TELECOM
18" RCP
S 86°37'45" E
STOP
JAMES A OBRYAN
WARNICK RD
STA. 77+00 TO STA. 78+25
CONSTRUCT 125 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 79+00
CONST. STOP BAR ON
WARNICK ROAD
STA. 79+25 TO STA. 86+00
CONSTRUCT 675 LF OF
CENTERLINE RUMBLE STRIP
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 77+00 TO STA. 86+00

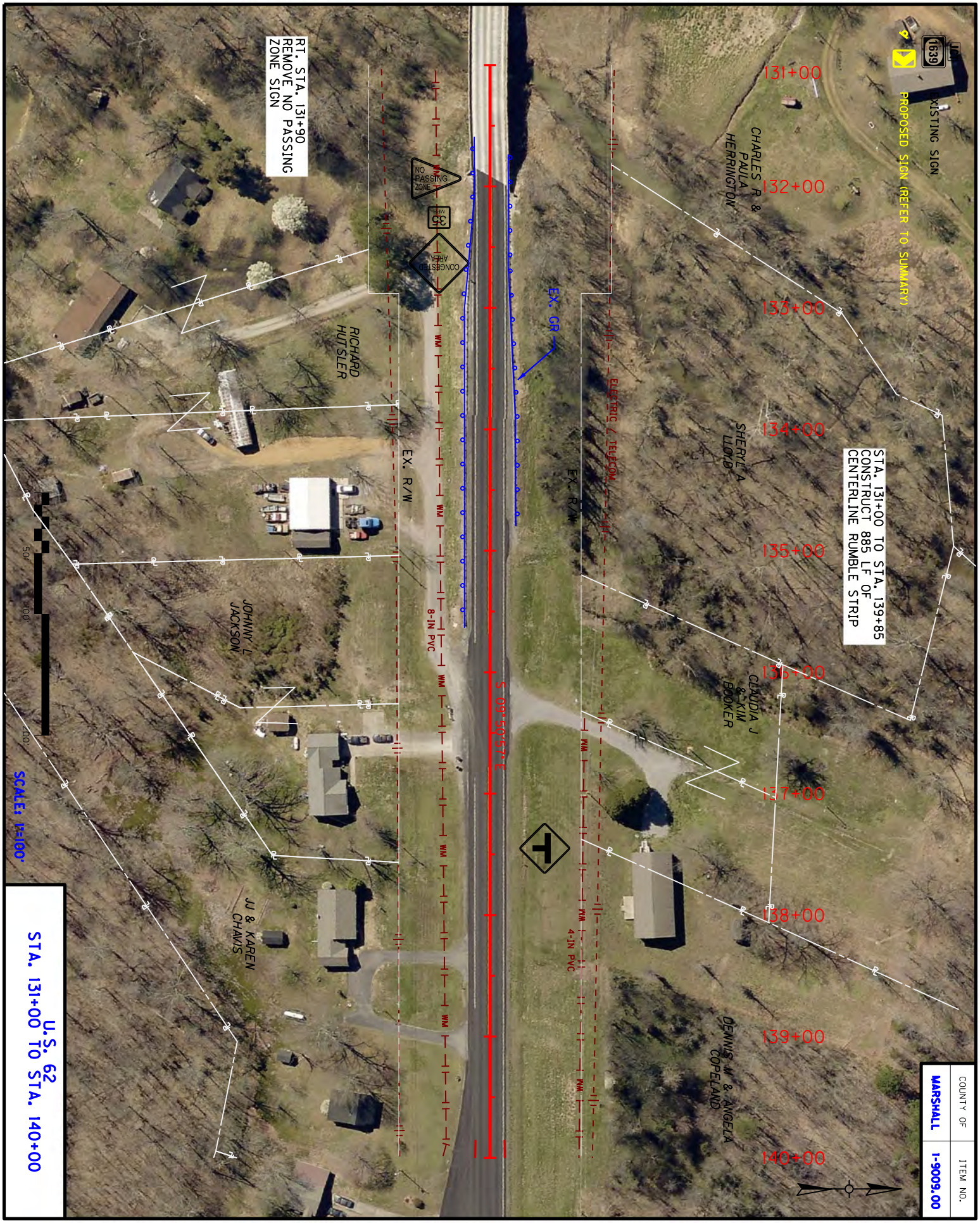

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
86+00
87+00
88+00
89+69
90+06
91+00
92+00
93+00
94+00
95+00
CCP OAKVIEW 0278 LLC
KEVIN K FLOYD
MRS N G BRADFORD
SHAR-CAL RD
EX. R/W
LARRY & WANDA RILEY
STA. 93+00 TO STA. 95+00
CONSTRUCT 200 LF OF
CENTERLINE RUMBLE STRIP
6-IN PVC
WM
PI 90+52.55
EX. R/W
STOP
S 86°37'45" E
S 86°40'39" E
Δ= 0°02'54"
NO CURVE
EX. GR
6'X6' RCBC
NO PASSING ZONE
STOP
STOP
EX. R/W
BAILEY RD
JEFFERY L & DENISE V STORY
LITTLE CYPRESS BAPTIST CHRUCH
EX. R/W
EX. R/W
STA. 86+00 TO STA. 92+00
CONSTRUCT 600 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 92+95
REMOVE EXISTING STOP SIGN
CONST. STOP SIGN AND
STOP BAR ON BAILEY ROAD
R1-1
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 86+00 TO STA. 95+00

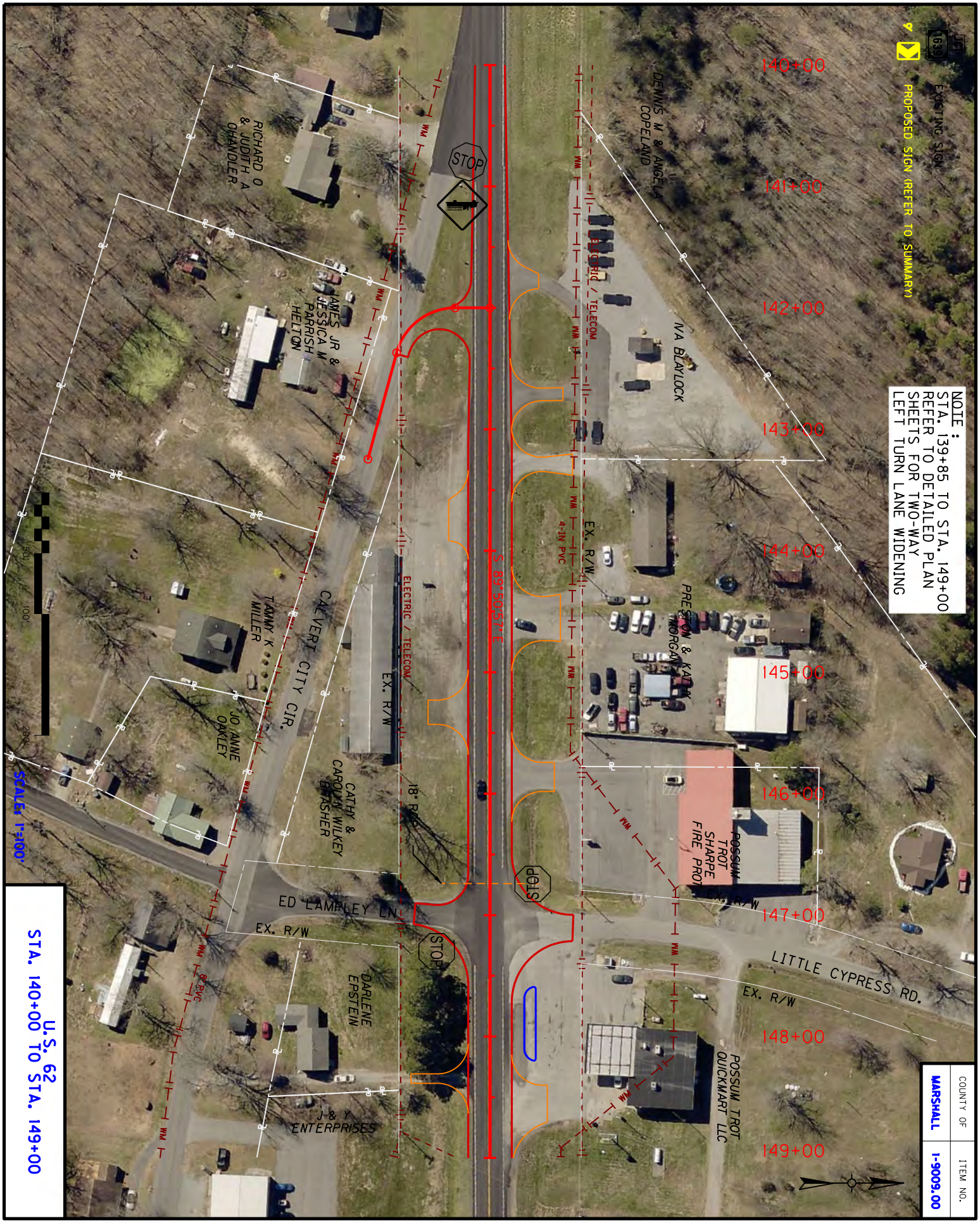

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
MRS N G BRADFORD
LARRY & WANDA RILEY
BILLY J & ELISA INGLISH
JEAN NORMAN NORMAN IRREVOCABLE TRUST
WAVEL & MARGARET MADDOX
95+00
96+00
97+00
98+00
99+00
100+00
101+00
102+00
103+00
104+00
STA. 95+00 TO STA. 104+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
LT. STA. 103+80
REMOVE NO PASSING
ZONE SIGN
6" PVC
ELECTRIC / TELECOM
EX. R/W
EX. GR
NO PASSING ZONE
S 86°40'39" E
ELECTRIC / TELECOM
24" RCP
36" RCP
ELECTRIC / TELECOM
EX. R/W
LITTLE CYPRESS BAPTIST CHRUCH
CAROLYN J LAMM
EDWIN J & GLADYS M WALDROP
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 95+00 TO STA. 104+00

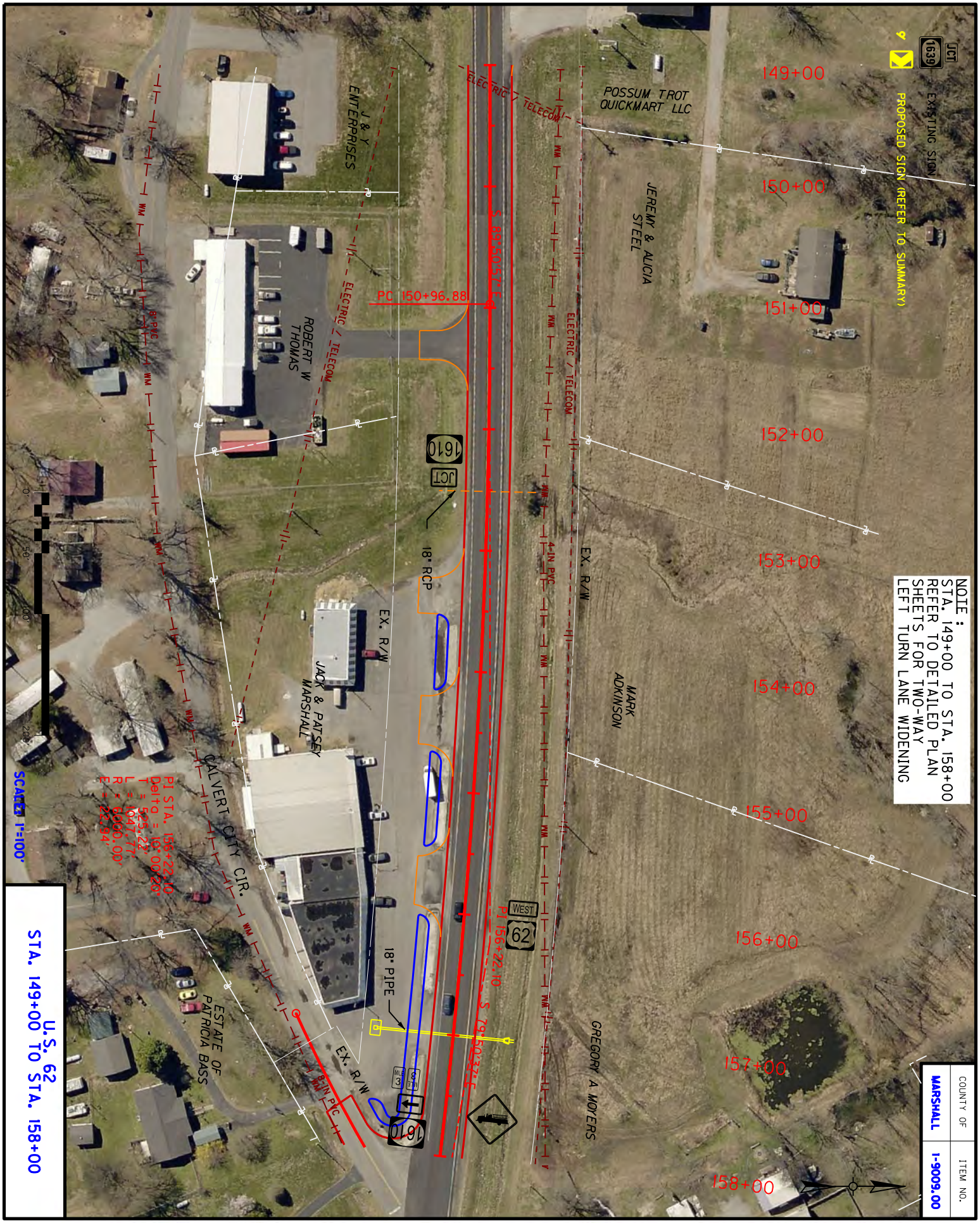

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
JCT
1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
LT. STA. 105+80
CONST. STOP SIGN AND
STOP BAR ON BARRETT ROAD
R1-1
HARVEY & ARONDA DOOM
IRIS BARRETT
RICKIE JOE CARTER
WAVEL & MARGARET MADDOX
BARRETT RD
EX. R/W
6-IN PVC
WM
ELECTRIC / TELECOM
104+00
105+00
106+00
107+00
108+00
109+00
110+00
111+00
112+00
113+00
STOP
S86° 40' 39"E
MILEPOINT 2 =
STA. 105+60
18" RCP
2-IN PVC
LENWOOD T RUDD
LEN RUDD
CAROLYN J LAMM
LILLY CHARLTON
STA. 104+00 TO STA. 105+75
CONSTRUCT 175 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 106+55
CONST. STOP SIGN AND
STOP BAR ON BARRETT RD.
R1-1
STA. 106+75 TO STA. 113+00
CONSTRUCT 625 LF OF
CENTERLINE RUMBLE STRIP
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 104+00 TO STA. 113+00

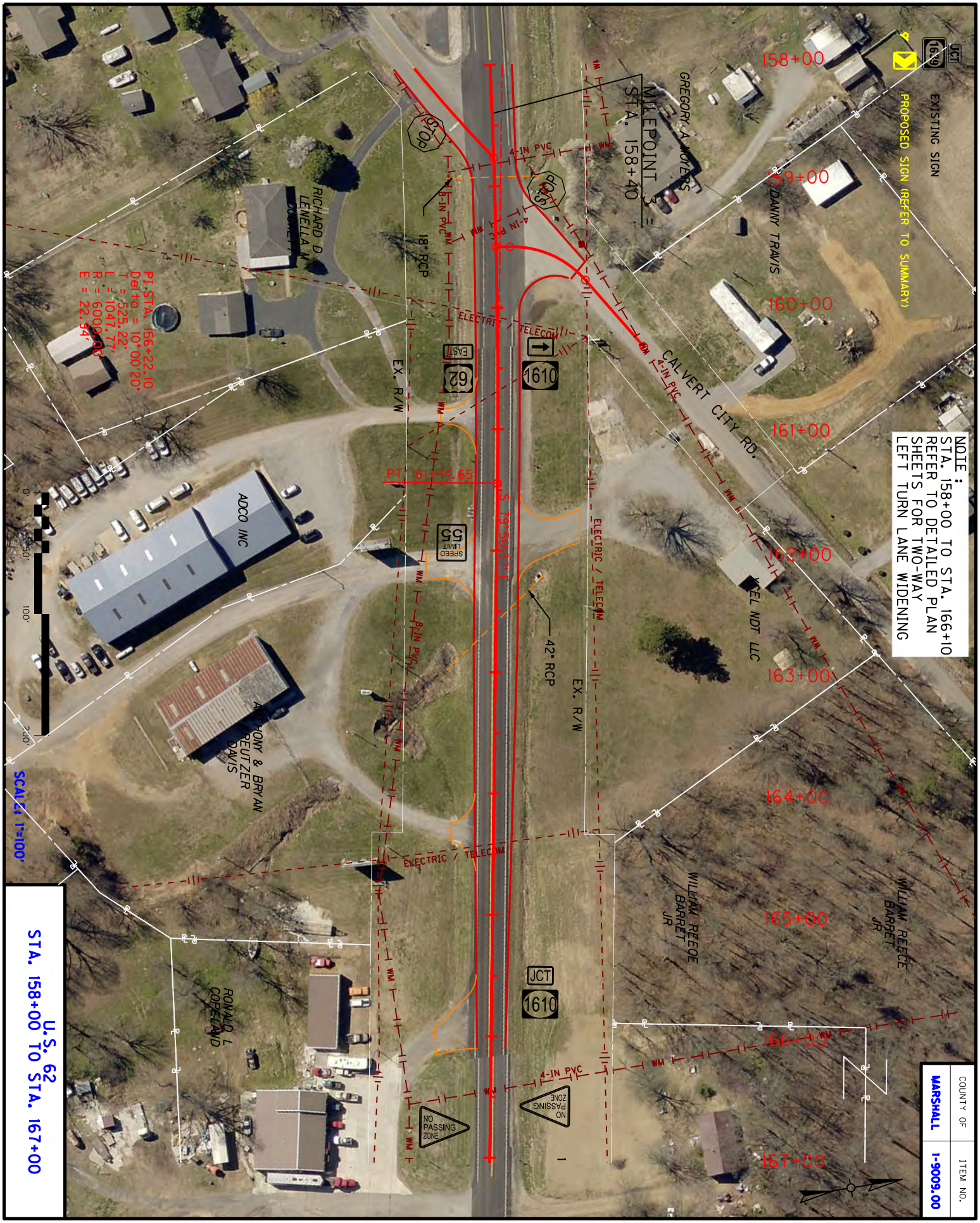

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
LARUEN NICOLE NICHOLSON
VICKIE COUNCE
JENNIFER COSBY
ICE DELIVERY SERVICE
113+00
114+00
115+00
116+00
117+00
118+00
119+00
120+00
121+00
122+00
PI 113+20.48
6" PVC
ELECTRIC / TELECOM
EX. R/W
WM
2-IN PVC
Δ= 0°05'27"
NO CURVE
BILLY & HEATHER SUMNER
CONNIE RILEY
LINDA MARIE HAINES
DEBORAH L & MICHAEL CASTEEL LAMPLEY
WM MICHAEL & MARIE D WARD
KENT W & HEATHER KALLEEN PUCKETT
STA. 113+00 TO STA. 122+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 113+00 TO STA. 122+00

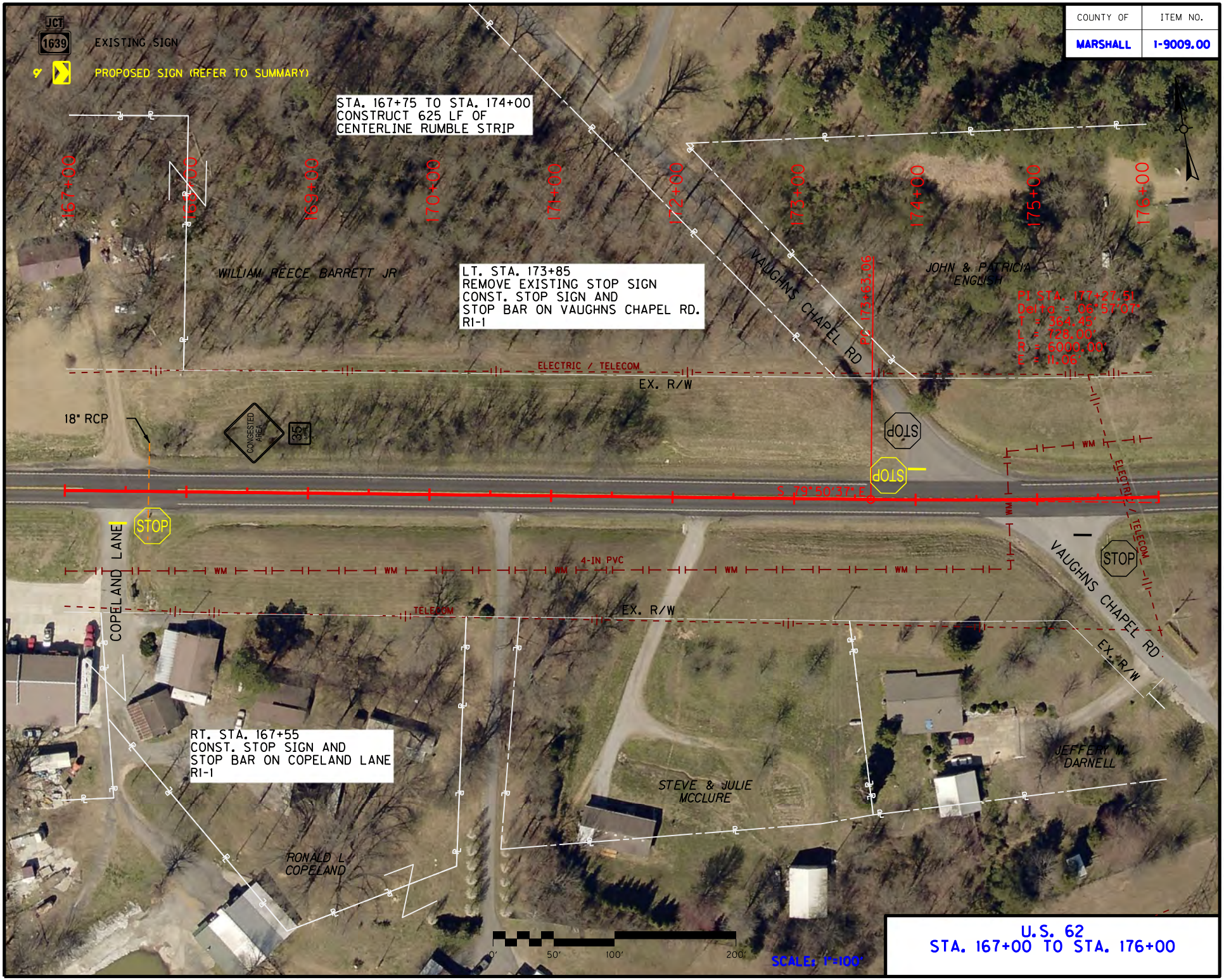

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
VICKIE COUNCE
122+00
4-IN PVC
WM
123+00
GREGORY G SPICELAND
124+00
WINDY HILLS CIR
LT. STA. 125+25 TO STA. 125+75 CONSTRUCT 150 CY OF EMBANKMENT IN PLACE TO RESHAPE SLOPES AROUND DROP BOX INLET
125+00
PC 125+10.19
CECIL & JOANNE SPICELAND TRUST
126+00
WINDY HILLS CIR
PI STA. 127+25.33
Δ = 3°04'51"
T = 215.14'
R = 8000.00'
L = 430.17'
E = 2.89'
127+00
HAROLYN LAMM
128+00
LEONARD LN
129+00
CHARLES R & PAULA HERRINGTON
PT 129+40.36
130+00
131+00
KENT W & HEATHER KALLEN ROCKETT
STA. 122+00 TO STA. 125+50 CONSTRUCT 350 LF OF CENTERLINE RUMBLE STRIP
LT. STA. 125+35 CONSTRUCT 8 LF OF 24 IN RCP WITH DBI TY I REFER TO PIPE SHEET FOR MORE DETAIL
6" PVC
2" PVC
S 85°41'05" E
EX. R/W
STOP
24" RCP
PI 121+26.33
LT. STA. 125+85 CONST. STOP BAR ON WINDY HILLS CIRCLE
STA. 126+50 TO STA. 128+00 CONSTRUCT 150 LF OF CENTERLINE RUMBLE STRIP
RT. STA. 128+30 - 130+00 CLEAR TREES TO IMPROVE INTERSECTION SIGHT DISTANCE
RT. STA. 127+50 REMOVE NO PASSING ZONE SIGN
NO PASSING ZONE
TELECOM
ELECTRIC / TELECOM
6-IN PVC
8-IN PVC
OLD CALVERT CITY RD
DAVID MARSHALL ET AL
RT. STA. 128+19 TO STA. 130+30 REMOVE 212.50 LF OF GUARDRAIL, CONST. 202.50 LF OF GUARDRAIL - STEEL W BEAM - S FACE W/ I - BRIDGE END CONNECTOR TYPE C
STA. 129+00 TO STA. 131+00 CONSTRUCT 200 LF OF CENTERLINE RUMBLE STRIP
S 89°50'51" E
EX. GR
PROPOSED TREE CLEARING
PROP. GUARDRAIL
RICHARD HUTSLER
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 122+00 TO STA. 131+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
1639
131+00
132+00
133+00
134+00
135+00
136+00
137+00
138+00
139+00
140+00
STA. 131+00 TO STA. 139+85
CONSTRUCT 885 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 131+90
REMOVE NO PASSING
ZONE SIGN
NO PASSING ZONE
CONGESTED AREA
EX. GR
EX. R/W
ELECTRIC / TELECOM
WM
8-IN PVC
4-IN PVC
S 09°30'57" E
CHARLES R & PAULA HERRINGTON
SHERYL A LLOYD
CLAUDIA J & KIM BOOKER
DENNIS W & ANGELA COPELAND
RICHARD HUTSLER
JOHNNY L JACKSON
JJ & KAREN CHAVIS
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 131+00 TO STA. 140+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

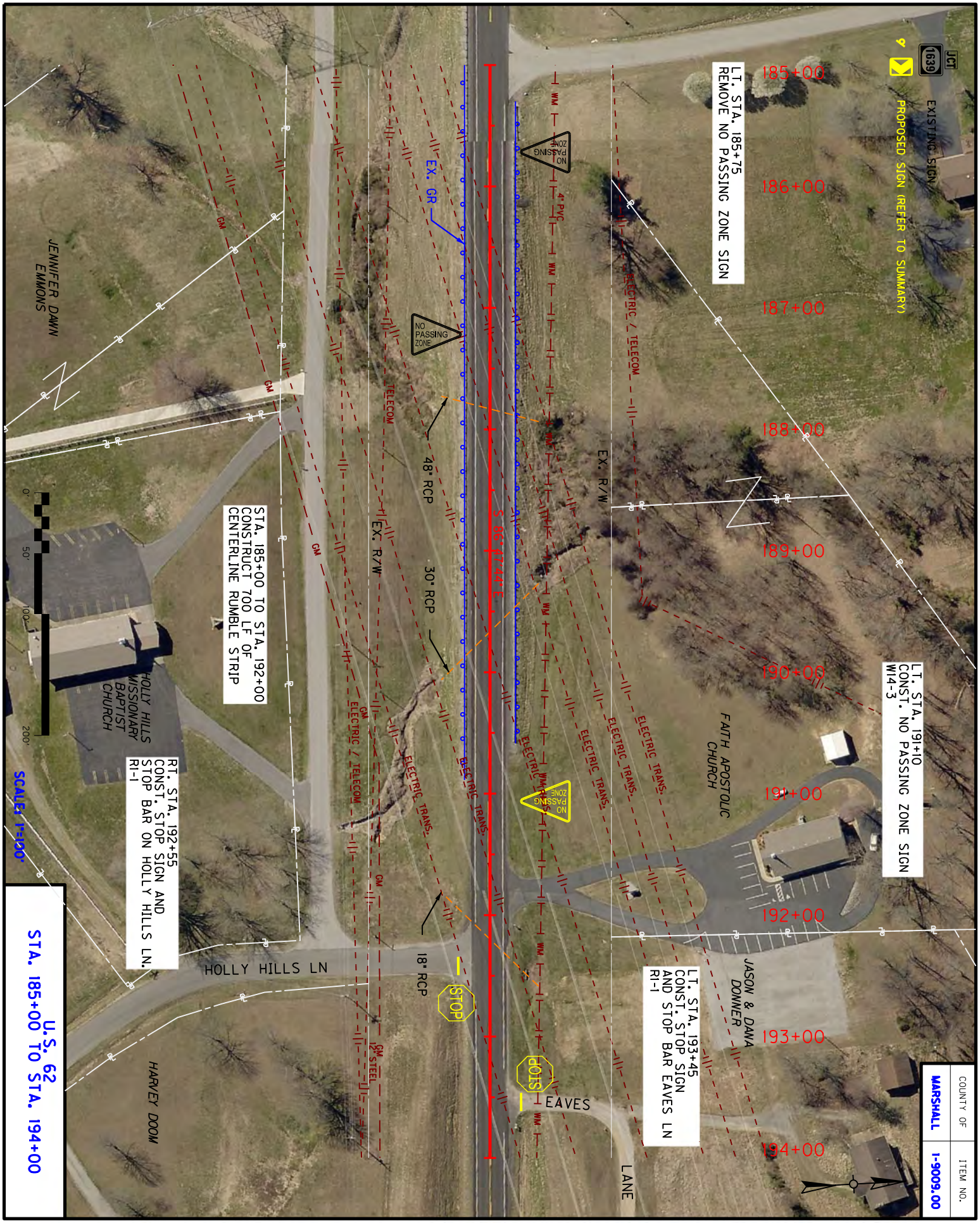

NOTE:
STA. 139+85 TO STA. 149+00
REFER TO DETAILED PLAN
SHEETS FOR TWO-WAY
LEFT TURN LANE WIDENING
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
140+00
141+00
142+00
143+00
144+00
145+00
146+00
147+00
148+00
149+00
DENNIS M & ANGELA COPELAND
IVA BLAYLOCK
PRESTON & KATLYN MORGAN
POSSUM TROT SHARPE FIRE PROT
POSSUM TROT QUICKMART LLC
RICHARD O & JUDITH A CHANDLER
JAMES JR & JESSICA M PARRISH HELTON
TAMMY K MILLER
JO ANNE OAKLEY
CALVERT CITY CIR.
CATHY & CAROLYN WILKEY BASHER
ED LAMPLEY LN.
DARLENE EPSTEIN
J & Y ENTERPRISES
LITTLE CYPRESS RD.
EX. R/W
ELECTRIC / TELECOM
4-IN PVC
8" PVC
18" RCP
S 89°50'57" E
STOP
0
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 140+00 TO STA. 149+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

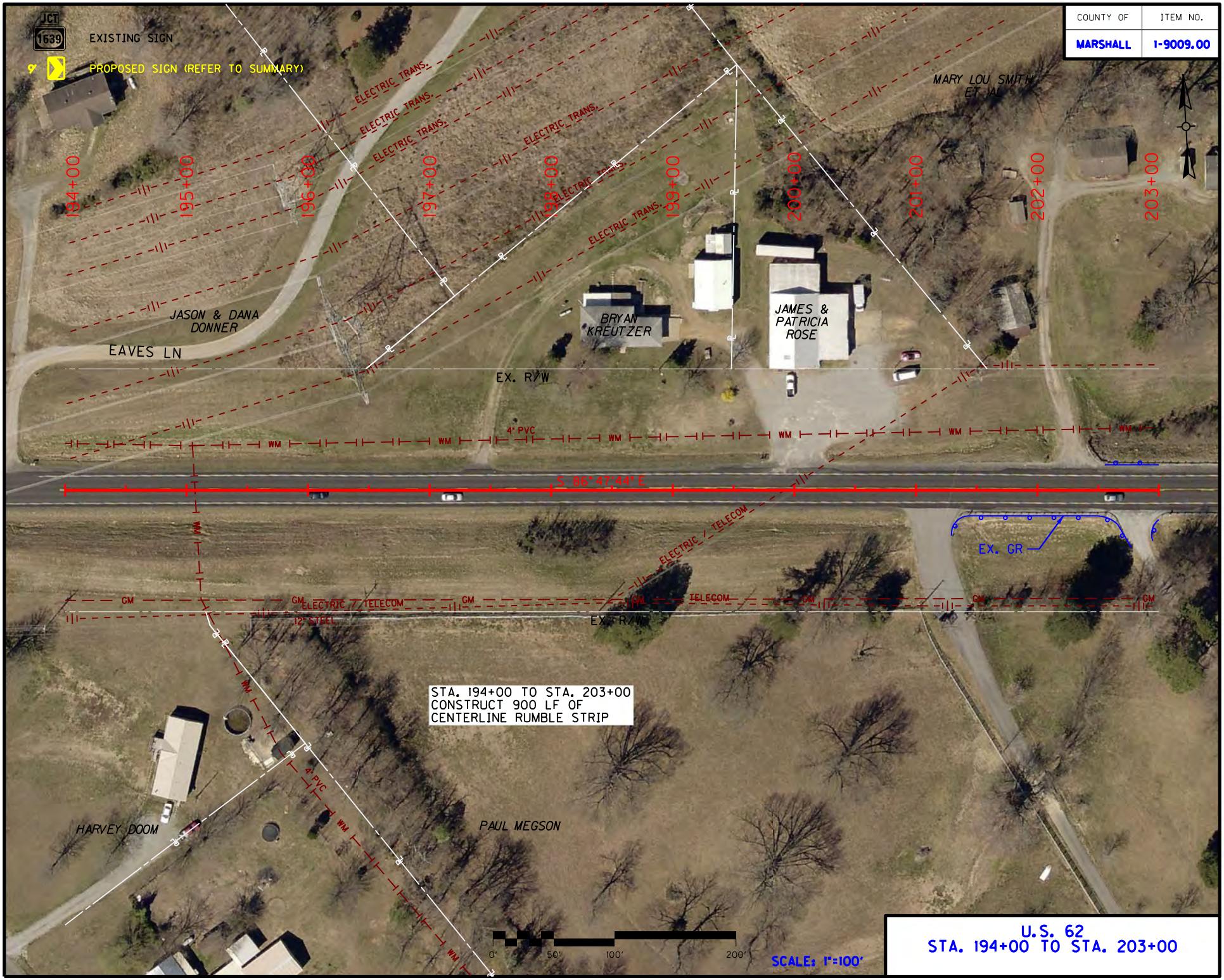

149+00
150+00
151+00
152+00
153+00
154+00
155+00
156+00
157+00
158+00
JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
POSSUM TROT QUICKMART LLC
JEREMY & ALICIA STEEL
MARK ADKINSON
GREGORY A MOYERS
J & Y ENTERPRISES
ROBERT W THOMAS
JACK & PATSEY MARSHALL
ESTATE OF PATRICIA BASS
CALVERT CITY CIR.
ELECTRIC / TELECOM
8" PVC
4-IN PVC
18" RCP
18" PIPE
EX. R/W
PC 150+96.88
PI 156+22.10
S 79°52'47" E
PI STA. 155+22.10
Delta = 15°00'20"
T = 525.22'
L = 1047.77'
R = 4000.00'
E = 22.94'
1610
JCT
WEST
62
SCALE: 1"=100'
0'
50'
100'
200'
NOTE :
STA. 149+00 TO STA. 158+00
REFER TO DETAILED PLAN
SHEETS FOR TWO-WAY
LEFT TURN LANE WIDENING
U.S. 62
STA. 149+00 TO STA. 158+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

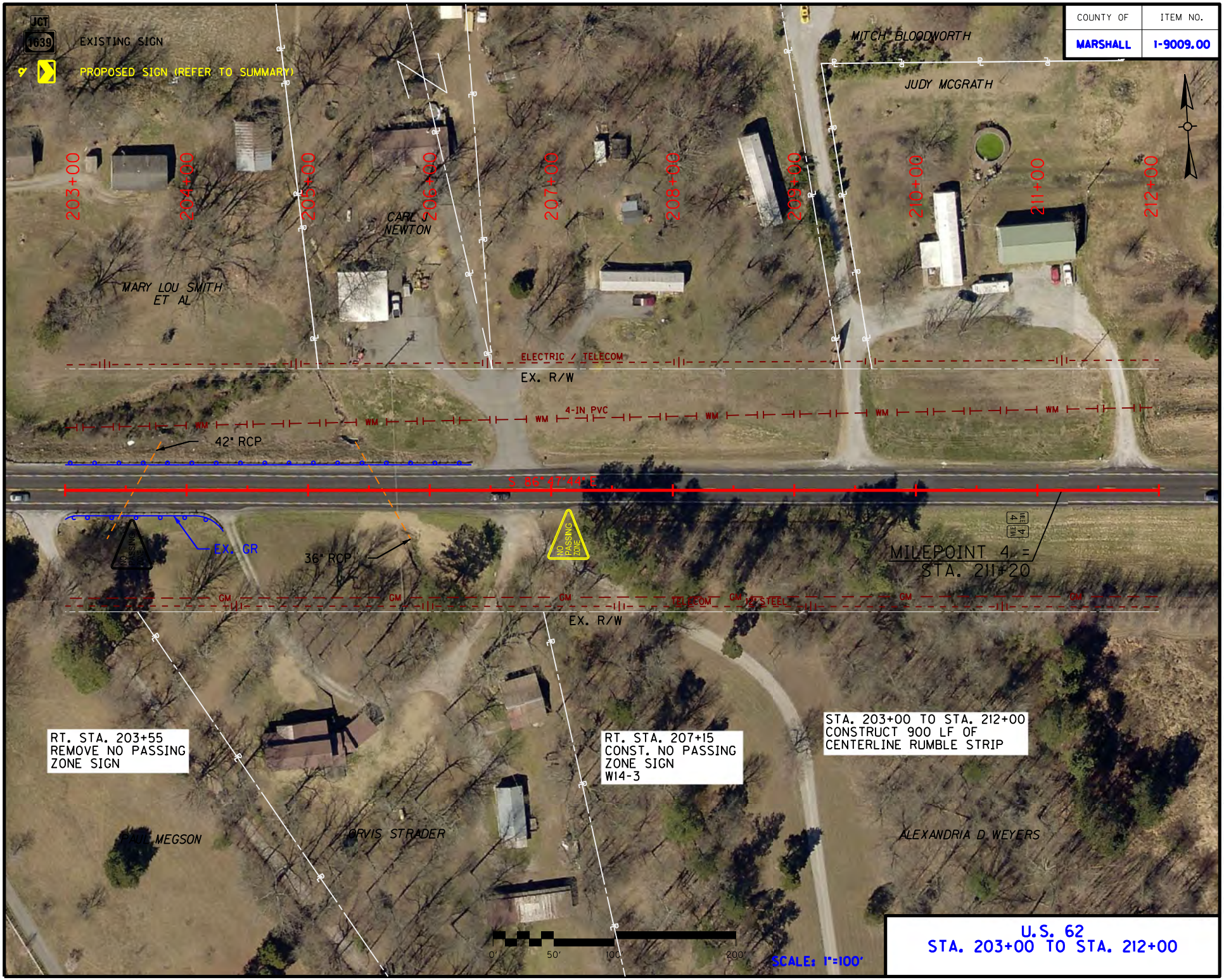

NOTE:
STA. 158+00 TO STA. 166+10
REFER TO DETAILED PLAN
SHEETS FOR TWO-WAY
LEFT TURN LANE WIDENING
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
MILEPOINT 3 = STA. 158+40
158+00
159+00
160+00
161+00
162+00
163+00
164+00
165+00
166+00
167+00
CALVERT CITY RD.
GREGORY A MOYERS
DANNY TRAVIS
YCEL NDT LLC
WILLIAM REECE BARRET JR
RICHARD D & LENELLA W
ADCO INC
ANTHONY & BRYAN KREUTZER DAVIS
RONALD L COPELAND
PT 161+44.65
PI STA. 156+22.10
Delta = 10°00'20"
T = 525.22'
L = 1047.77'
R = 6009.00'
E = 22.94'
18" RCP
42" RCP
4-IN PVC
8-IN PVC
ELECTRIC
TELECOM
EX. R/W
SPEED LIMIT 55
NO PASSING ZONE
JCT 1610
SCALE: 1"=100'
U.S. 62
STA. 158+00 TO STA. 167+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

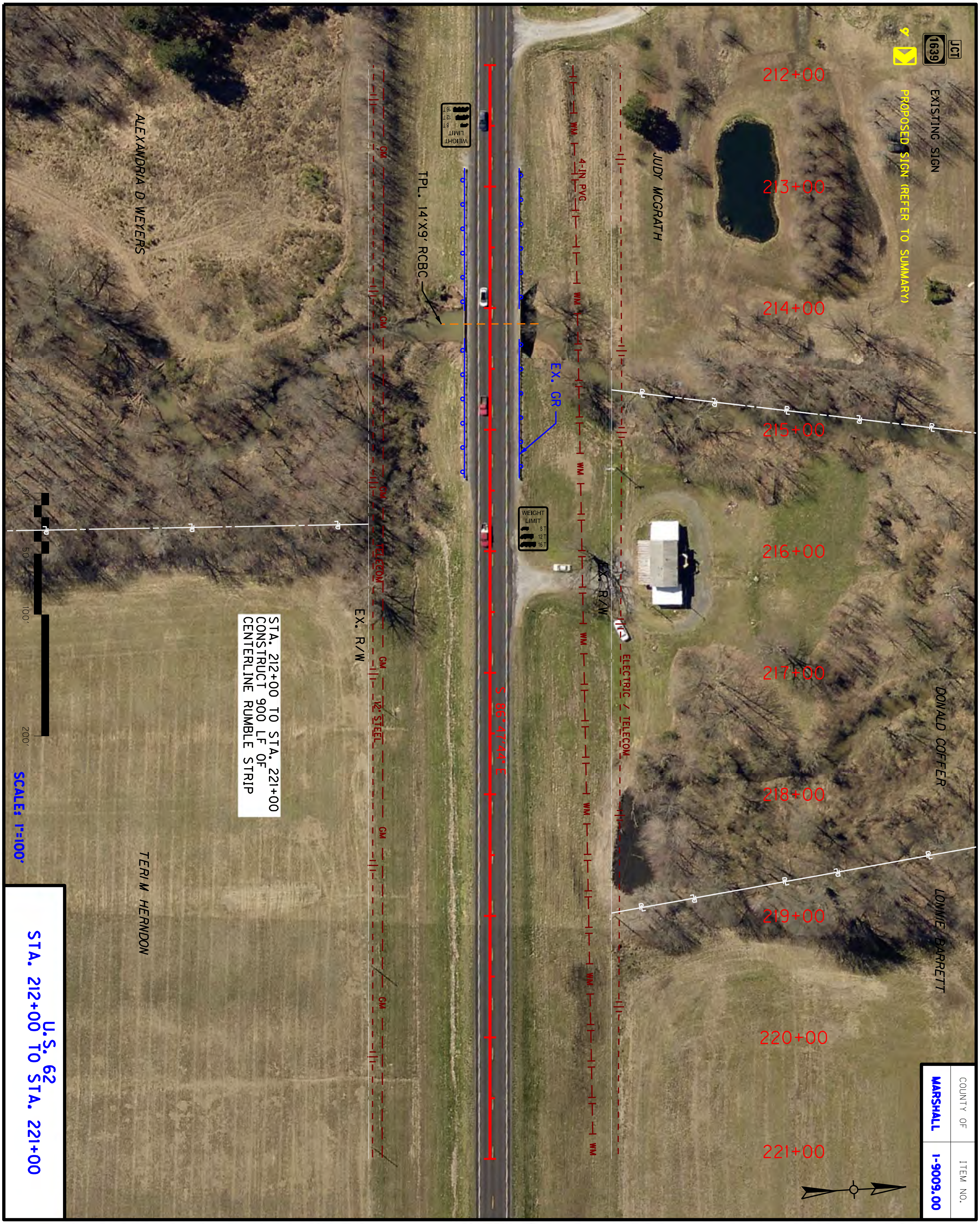

JCT 1639
EXISTING SIGN
9' PROPOSED SIGN (REFER TO SUMMARY)
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
STA. 167+75 TO STA. 174+00
CONSTRUCT 625 LF OF
CENTERLINE RUMBLE STRIP
167+00
168+00
169+00
170+00
171+00
172+00
173+00
174+00
175+00
176+00
WILLIAM REECE BARRETT JR
LT. STA. 173+85
REMOVE EXISTING STOP SIGN
CONST. STOP SIGN AND
STOP BAR ON VAUGHNS CHAPEL RD.
RI-1
VAUGHNS CHAPEL RD
PC 173+63.06
JOHN & PATRICIA ENGLISH
PI STA. 177+27.51
Delta = 06°57'07"
T = 364.45
L = 728.00'
R = 6000.00'
E = 11.06'
ELECTRIC / TELECOM
EX. R/W
18" RCP
CONGESTED AREA
35 MPH
STOP
S 79°50'37" E
WM
4-IN PVC
COPELAND LANE
TELECOM
EX. R/W
VAUGHNS CHAPEL RD
RT. STA. 167+55
CONST. STOP SIGN AND
STOP BAR ON COPELAND LANE
RI-1
STEVE & JULIE MCCLURE
JEFFERY M. DARNELL
RONALD L. COPELAND
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 167+00 TO STA. 176+00

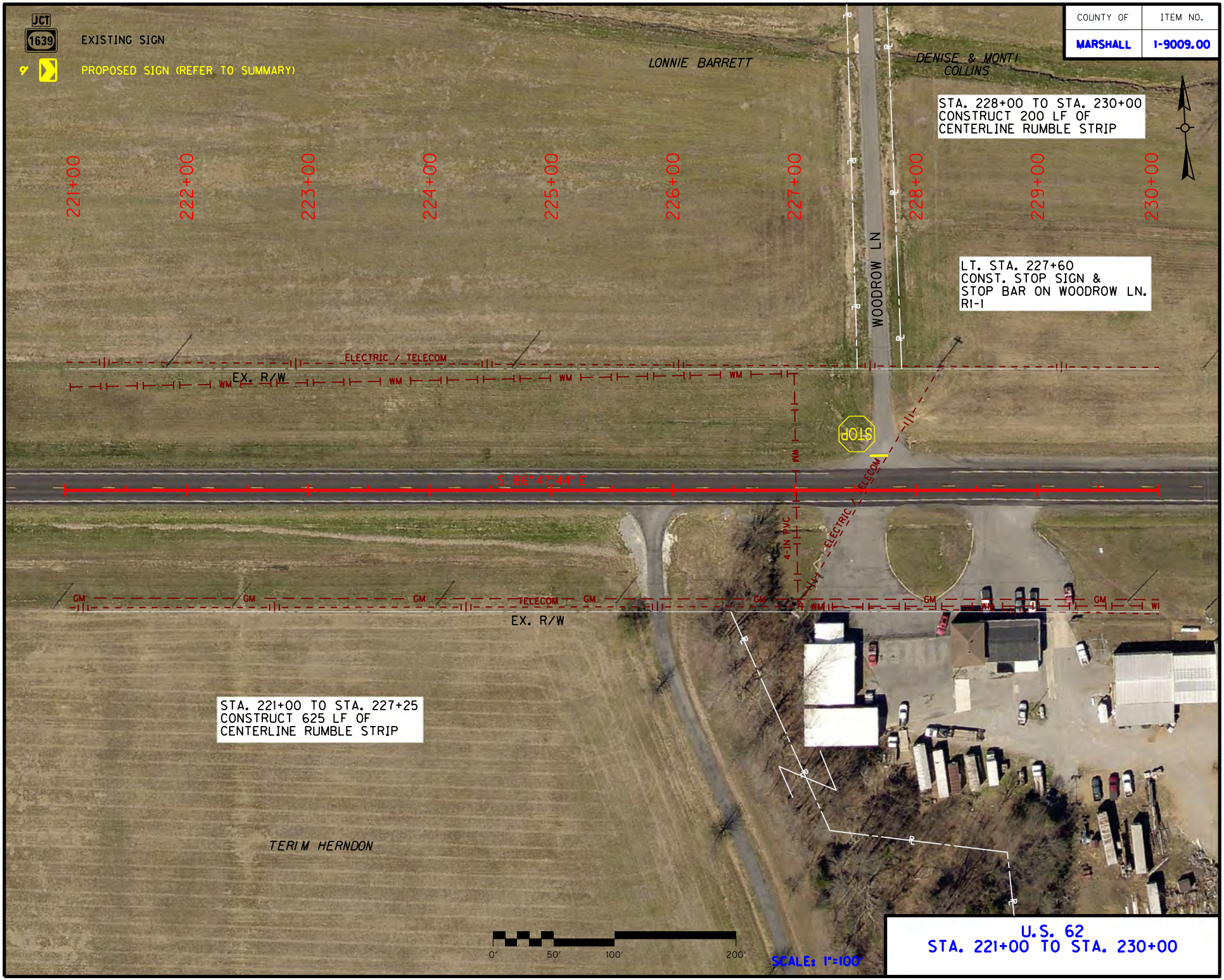

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
PI STA. 177+27.51
Delta = 6°57'07"
T = 414.45
L = 828.00
R = 6900.00'
E = 11.06
176+00
177+00
178+00
179+00
180+00
181+00
182+00
183+00
184+00
185+00
JOHN & PATRICIA ENGLISH
JAMES P CRAWFORD
EARNIE R EARLEY
ESTATE OF RAY JOHNSON
VICTORIA SOTO
STA. 176+00 TO STA. 184+50
CONSTRUCT 850 LF OF
CENTERLINE RUMBLE STRIP
PT 180+81.06
LT. STA. 184+80
REMOVE EXISTING STOP SIGN
CONST. STOP SIGN & STOP BAR
ON P B CLOUD LN.
R1-1
VAUGHNS CHAPEL RD
GURVEY L & SUZANNE JONES
EX. R/W
ELECTRIC / TELECOM
ELECTRIC TRANS.
12" STEEL GAS LINE
4-IN PVC
18" RCP
EX. GR
STOP
P B CLOUD LN
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 176+00 TO STA. 185+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

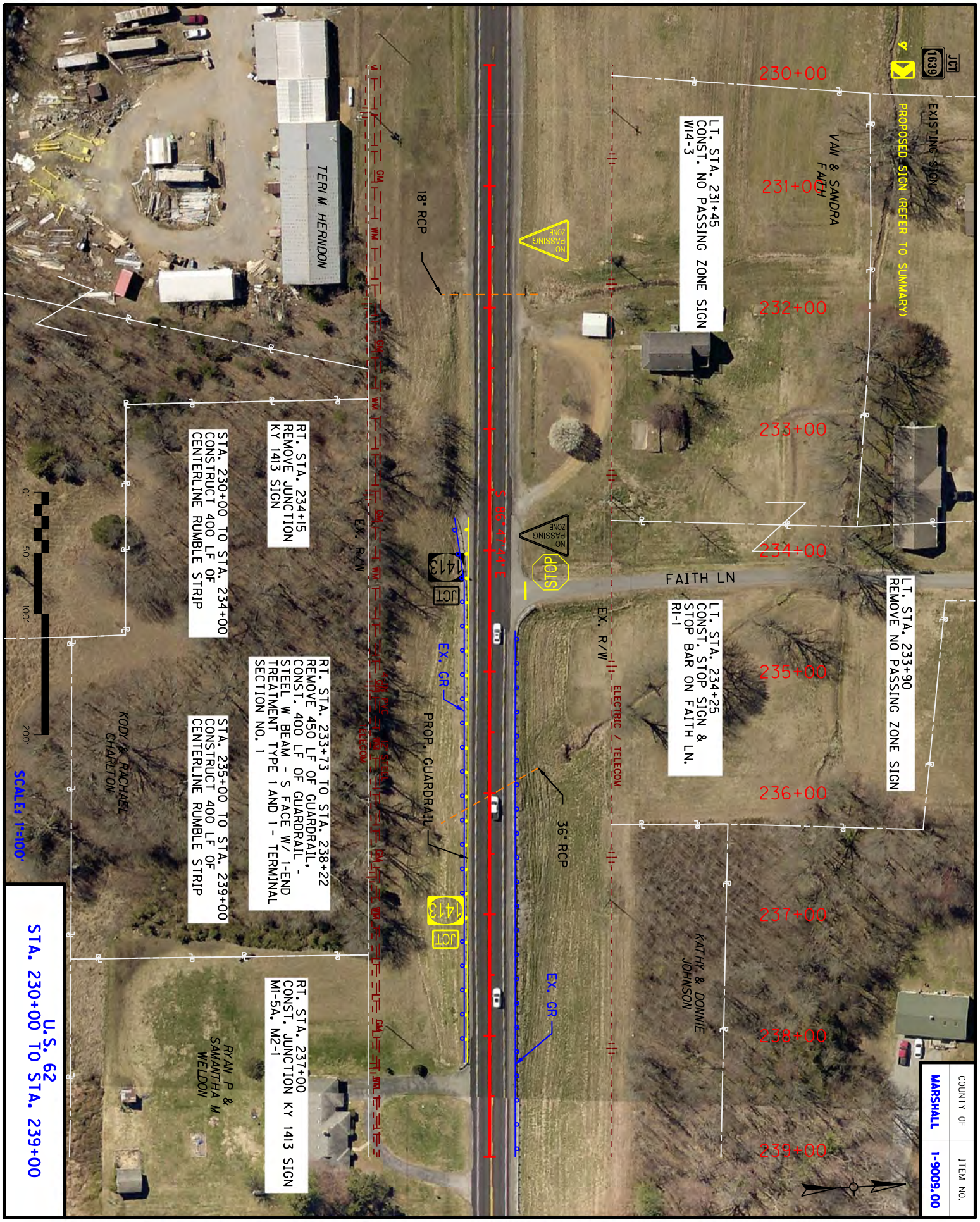

JCT
1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
LT. STA. 185+75
REMOVE NO PASSING ZONE SIGN
185+00
186+00
187+00
188+00
189+00
190+00
191+00
192+00
193+00
194+00
LT. STA. 191+10
CONST. NO PASSING ZONE SIGN
W14-3
LT. STA. 193+45
CONST. STOP SIGN
AND STOP BAR EAVES LN
R1-1
RT. STA. 192+55
CONST. STOP SIGN AND
STOP BAR ON HOLLY HILLS LN.
R1-1
STA. 185+00 TO STA. 192+00
CONSTRUCT 700 LF OF
CENTERLINE RUMBLE STRIP
NO PASSING ZONE
4" PVC
EX. GR
48" RCP
30" RCP
18" RCP
EX. R/W
ELECTRIC / TELECOM
ELECTRIC TRANS.
GM
GM STEEL
WM
STOP
HOLLY HILLS LN
EAVES LANE
FAITH APOSTOLIC CHURCH
HOLLY HILLS MISSIONARY BAPTIST CHURCH
JENNIFER DAWN EMMONS
JASON & DAWA DONNER
HARVEY DOOM
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 185+00 TO STA. 194+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

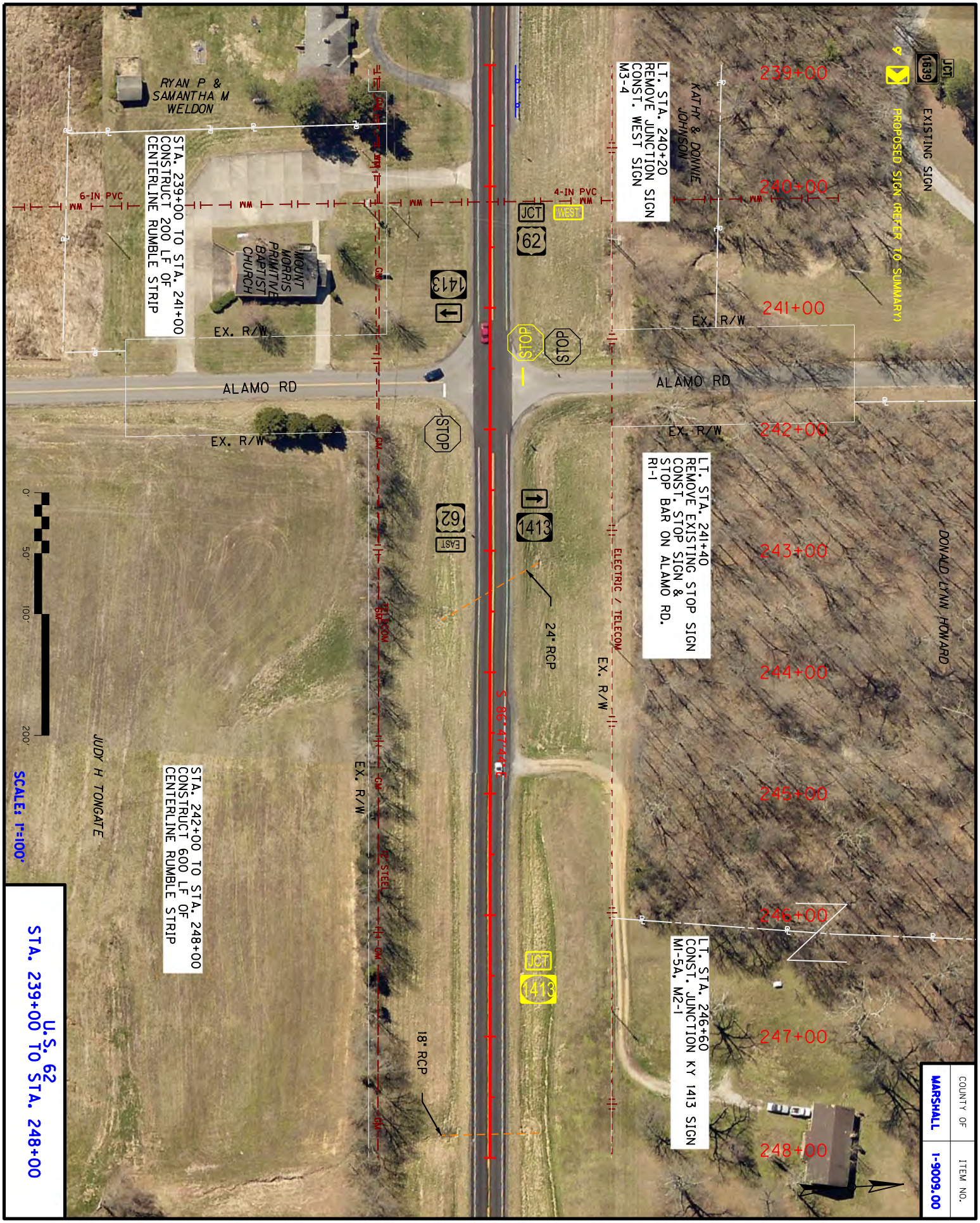

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
MARY LOU SMITH ET AL
194+00
195+00
196+00
197+00
198+00
199+00
200+00
201+00
202+00
203+00
ELECTRIC TRANS.
JASON & DANA DONNER
EAVES LN
EX. R/W
BRYAN KREUTZER
JAMES & PATRICIA ROSE
4" PVC
WM
S 86° 47' 41" E
ELECTRIC
TELECOM
EX. GR
GM
12" STEEL
STA. 194+00 TO STA. 203+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
HARVEY DOOM
PAUL MEGSON
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 194+00 TO STA. 203+00

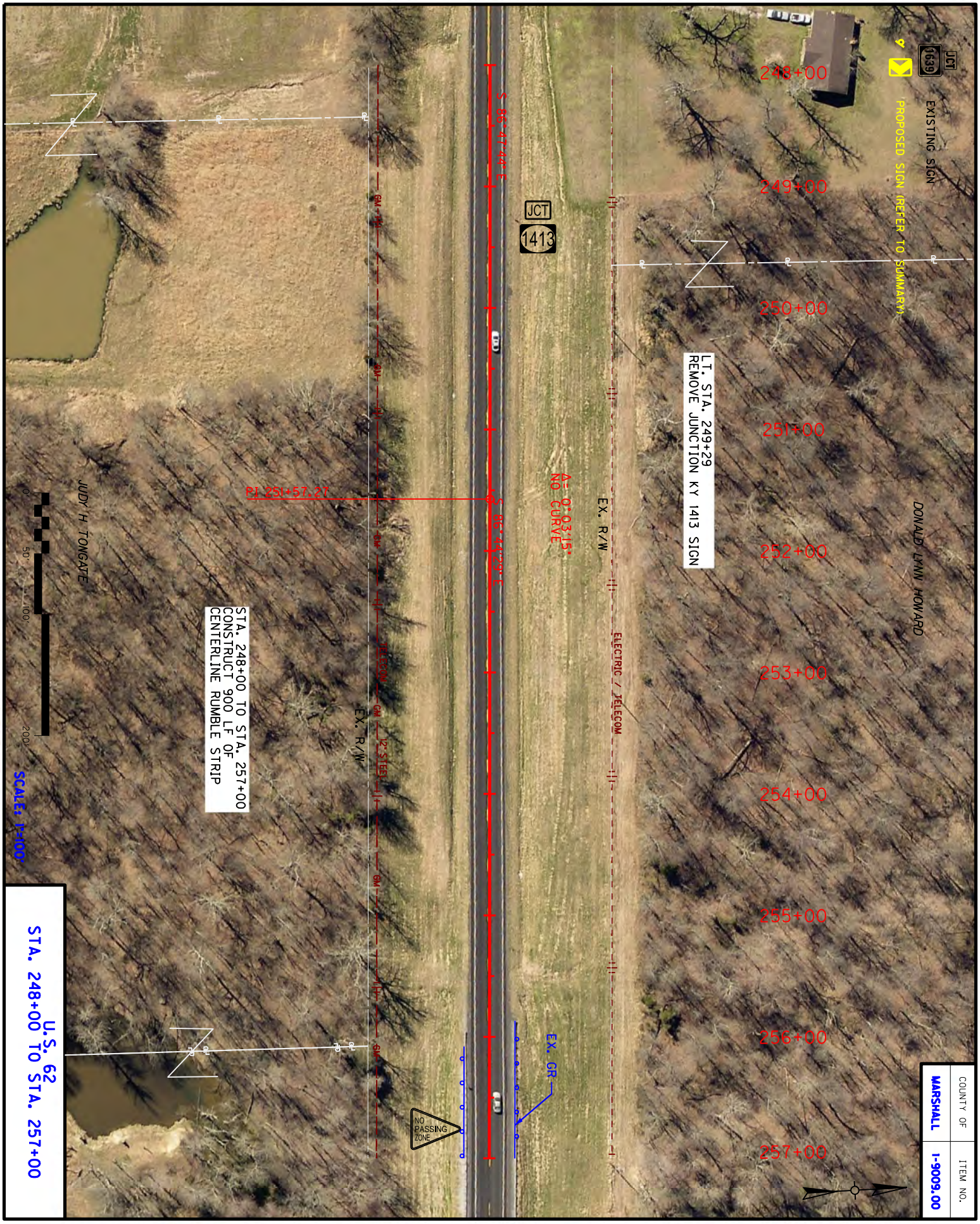

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
MITCH BLOODWORTH
JUDY MCGRATH
CARL J NEWTON
MARY LOU SMITH ET AL
203+00
204+00
205+00
206+00
207+00
208+00
209+00
210+00
211+00
212+00
ELECTRIC / TELECOM
EX. R/W
4-IN PVC
WM
42" RCP
S 86° 47' 44" E
EX. GR
36" RCP
NO PASSING ZONE
MILEPOINT 4 = STA. 211+20
GM
TELECOM
GAS/STEEL
EX. R/W
RT. STA. 203+55
REMOVE NO PASSING ZONE SIGN
RT. STA. 207+15
CONST. NO PASSING ZONE SIGN W14-3
STA. 203+00 TO STA. 212+00
CONSTRUCT 900 LF OF CENTERLINE RUMBLE STRIP
PAUL MEGSON
ORVIS STRADER
ALEXANDRIA D WEYERS
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 203+00 TO STA. 212+00

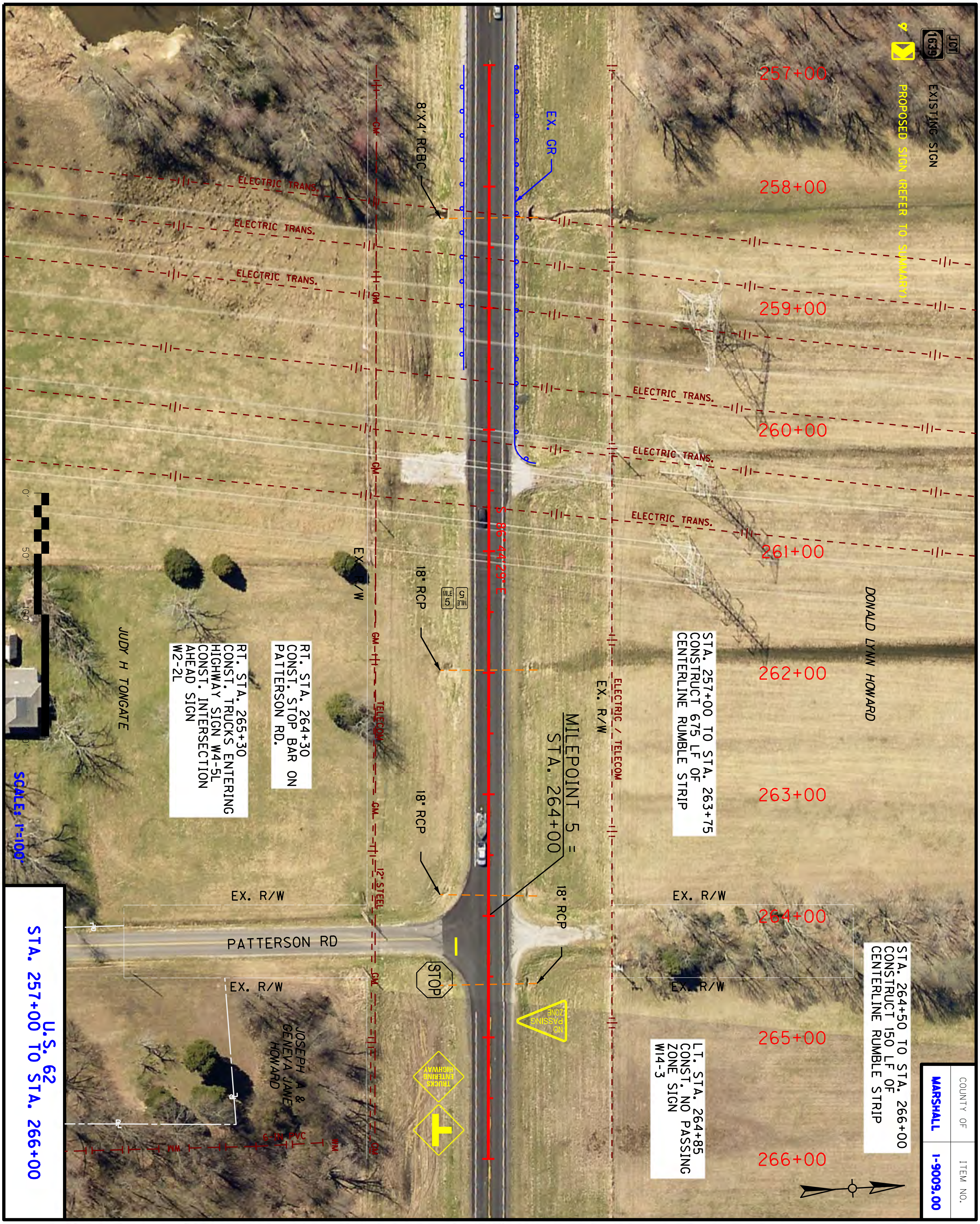

EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
JCT
1639
212+00
213+00
214+00
215+00
216+00
217+00
218+00
219+00
220+00
221+00
JUDY MCGRATH
ALEXANDRIA D WEYERS
DONALD COFFER
LONNIE BARRETT
TERI M HERNDON
WEIGHT LIMIT 8 T 12 T 16 T
TPL. 14'X9' RCBC
EX. GR
EX. R/W
4-IN PVC
WM
GM
TELECOM
12" STEEL
ELECTRIC / TELECOM
S 86°47'44" E
STA. 212+00 TO STA. 221+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 212+00 TO STA. 221+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

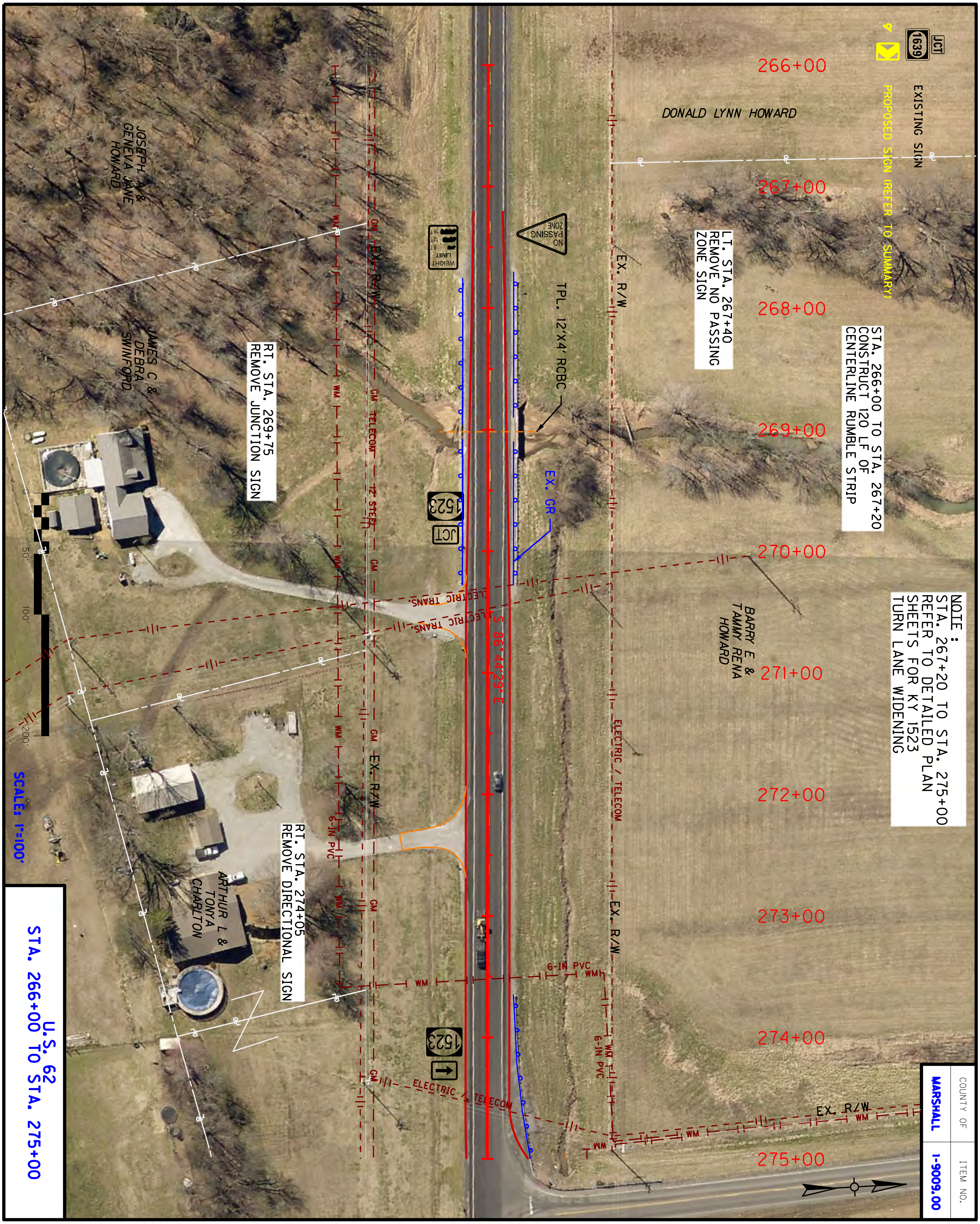

JCT
1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
LONNIE BARRETT
DENISE & MONTI COLLINS
STA. 228+00 TO STA. 230+00
CONSTRUCT 200 LF OF
CENTERLINE RUMBLE STRIP
221+00
222+00
223+00
224+00
225+00
226+00
227+00
228+00
229+00
230+00
WOODROW LN
LT. STA. 227+60
CONST. STOP SIGN &
STOP BAR ON WOODROW LN.
R1-1
ELECTRIC / TELECOM
EX. R/W
WM
STOP
S 86°47'44" E
TELECOM
ELECTRIC
4-IN PVC
GM
TELECOM
EX. R/W
STA. 221+00 TO STA. 227+25
CONSTRUCT 625 LF OF
CENTERLINE RUMBLE STRIP
TERI M HERNDON
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 221+00 TO STA. 230+00


JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
230+00
231+00
232+00
233+00
234+00
235+00
236+00
237+00
238+00
239+00
VAN & SANDRA FAITH
KATHY & DONNIE JOHNSON
TERI M. HERNDON
KODY & RACHAEL CHARLTON
RYAN P & SAMANTHA M WELDON
FAITH LN
LT. STA. 231+45
CONST. NO PASSING ZONE SIGN
W14-3
LT. STA. 233+90
REMOVE NO PASSING ZONE SIGN
LT. STA. 234+25
CONST. STOP SIGN &
STOP BAR ON FAITH LN.
R1-1
RT. STA. 234+15
REMOVE JUNCTION
KY 1413 SIGN
STA. 230+00 TO STA. 234+00
CONSTRUCT 400 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 233+73 TO STA. 238+22
REMOVE 450 LF OF GUARDRAIL,
CONST. 400 LF OF GUARDRAIL -
STEEL W BEAM - S FACE W/ I-END
TREATMENT TYPE 1 AND 1 - TERMINAL
SECTION NO. 1
STA. 235+00 TO STA. 239+00
CONSTRUCT 400 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 237+00
CONST. JUNCTION KY 1413 SIGN
M1-5A, M2-1
18" RCP
36" RCP
EX. R/W
EX. GR
PROP. GUARDRAIL
ELECTRIC / TELECOM
S 86°47'44" E
NO PASSING ZONE
STOP
JCT 1413
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 230+00 TO STA. 239+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
239+00
240+00
241+00
242+00
243+00
244+00
245+00
246+00
247+00
248+00
KATHY & DONNIE JOHNSON
RYAN P & SAMANTHA M WELDON
DONALD LYNN HOWARD
JUDY H TONGATE
MOUNT MORRIS PRIMITIVE BAPTIST CHURCH
ALAMO RD
EX. R/W
LT. STA. 240+20
REMOVE JUNCTION SIGN
CONST. WEST SIGN
M3-4
LT. STA. 241+40
REMOVE EXISTING STOP SIGN
CONST. STOP SIGN &
STOP BAR ON ALAMO RD.
R1-1
LT. STA. 246+60
CONST. JUNCTION KY 1413 SIGN
M1-5A, M2-1
STA. 239+00 TO STA. 241+00
CONSTRUCT 200 LF OF
CENTERLINE RUMBLE STRIP
STA. 242+00 TO STA. 248+00
CONSTRUCT 600 LF OF
CENTERLINE RUMBLE STRIP
JCT 62 WEST
JCT 62 EAST
JCT 1413
1413
STOP
6-IN PVC WM
4-IN PVC WM
24" RCP
18" RCP
ELECTRIC / TELECOM
S 86°47'44" E
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 239+00 TO STA. 248+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
248+00
249+00
250+00
251+00
252+00
253+00
254+00
255+00
256+00
257+00
JCT 1413
LT. STA. 249+29
REMOVE JUNCTION KY 1413 SIGN
EX. R/W
ELECTRIC / TELECOM
DONALD LYNN HOWARD
S 86°47'48" E
Δ= 0°03'15"
NO CURVE
PI 251+57.27
JUDY H TONGATE
EX. R/W
STA. 248+00 TO STA. 257+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
NO PASSING ZONE
EX. GR
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 248+00 TO STA. 257+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
257+00
258+00
259+00
260+00
261+00
262+00
263+00
264+00
265+00
266+00
EX. GR
8'X4' RCBC
ELECTRIC TRANS.
ELECTRIC / TELECOM
EX. R/W
18" RCP
12" STEEL
6" IN PVC
TELECOM
S 86°44'29" E
MILEPOINT 5 =
STA. 264+00
DONALD LYNN HOWARD
JUDY H TONGATE
JOSEPH A & GENEVA JANE HOWARD
STA. 257+00 TO STA. 263+75
CONSTRUCT 675 LF OF
CENTERLINE RUMBLE STRIP
STA. 264+50 TO STA. 266+00
CONSTRUCT 150 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 264+30
CONST. STOP BAR ON
PATTERSON RD.
RT. STA. 265+30
CONST. TRUCKS ENTERING
HIGHWAY SIGN W4-5L
CONST. INTERSECTION
AHEAD SIGN
W2-2L
LT. STA. 264+85
CONST. NO PASSING
ZONE SIGN
W14-3
PATTERSON RD
STOP
NO PASSING ZONE
TRUCKS ENTERING HIGHWAY
SCALE: 1"=100'
U.S. 62
STA. 257+00 TO STA. 266+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
DONALD LYNN HOWARD
266+00
267+00
268+00
269+00
270+00
271+00
272+00
273+00
274+00
275+00
STA. 266+00 TO STA. 267+20
CONSTRUCT 120 LF OF
CENTERLINE RUMBLE STRIP
LT. STA. 267+40
REMOVE NO PASSING
ZONE SIGN
NO PASSING ZONE
WEIGHT LIMIT
TPL. 12'X4' RCBC
EX. GR
EX. R/W
NOTE:
STA. 267+20 TO STA. 275+00
REFER TO DETAILED PLAN
SHEETS FOR KY 1523
TURN LANE WIDENING
BARRY E &
TAMMY RENA
HOWARD
ELECTRIC / TELECOM
ELECTRIC TRANS
S 86°44'29" E
JCT
1523
1639
RT. STA. 269+75
REMOVE JUNCTION SIGN
JOSEPH A &
GENEVA JANE
HOWARD
JAMES C &
DEBRA
SWINFORD
12" STEEL
TELECOM
6-IN PVC
WM
GM
RT. STA. 274+05
REMOVE DIRECTIONAL SIGN
ARTHUR L &
TONYA
CHARLTON
SCALE: 1"=100'
0
50'
100'
200'
U.S. 62
STA. 266+00 TO STA. 275+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

NOTE :
STA. 275+00 TO STA. 283+75
REFER TO DETAILED PLAN
SHEETS FOR KY 1523
TURN LANE WIDENING

JCT 1639 EXISTING SIGN

PROPOSED SIGN (REFER TO SUMMARY)

(KY 1523) INDUSTRY PKWY

EX. R/W

BARRY E & TAMMY RENA HOWARD

KATHERINE ROSE

275+00 276+00 277+00 278+00 279+00 280+00 281+00 282+00 283+00 284+00

46+00 47+00 48+00 49+00

LT. STA. 276+50
REMOVE DIRECTIONAL SIGN

LT. STA. 280+70
REMOVE JUNCTION SIGN

LT. STA. 283+50
REMOVE NO PASSING ZONE SIGN

4'X4' RCBC

6-IN PVC WM

ELECTRIC / TELECOM

EX. R/W

18" RCP

EX. GR

STOP

1523

JCT 1523

NO PASSING ZONE

S 86° 44' 29" E

62 EAST

GM

ELECTRIC / TELECOM

12" STEEL

ARTHUR L & TONYA CHARLTON

RT. STA. 276+75
REMOVE DIRECTIONAL SIGN

MYLON T & WENDY F SMITH

JAMES P & DEBBIE JONES

LT. STA. 283+80
REMOVE NO PASSING ZONE SIGN

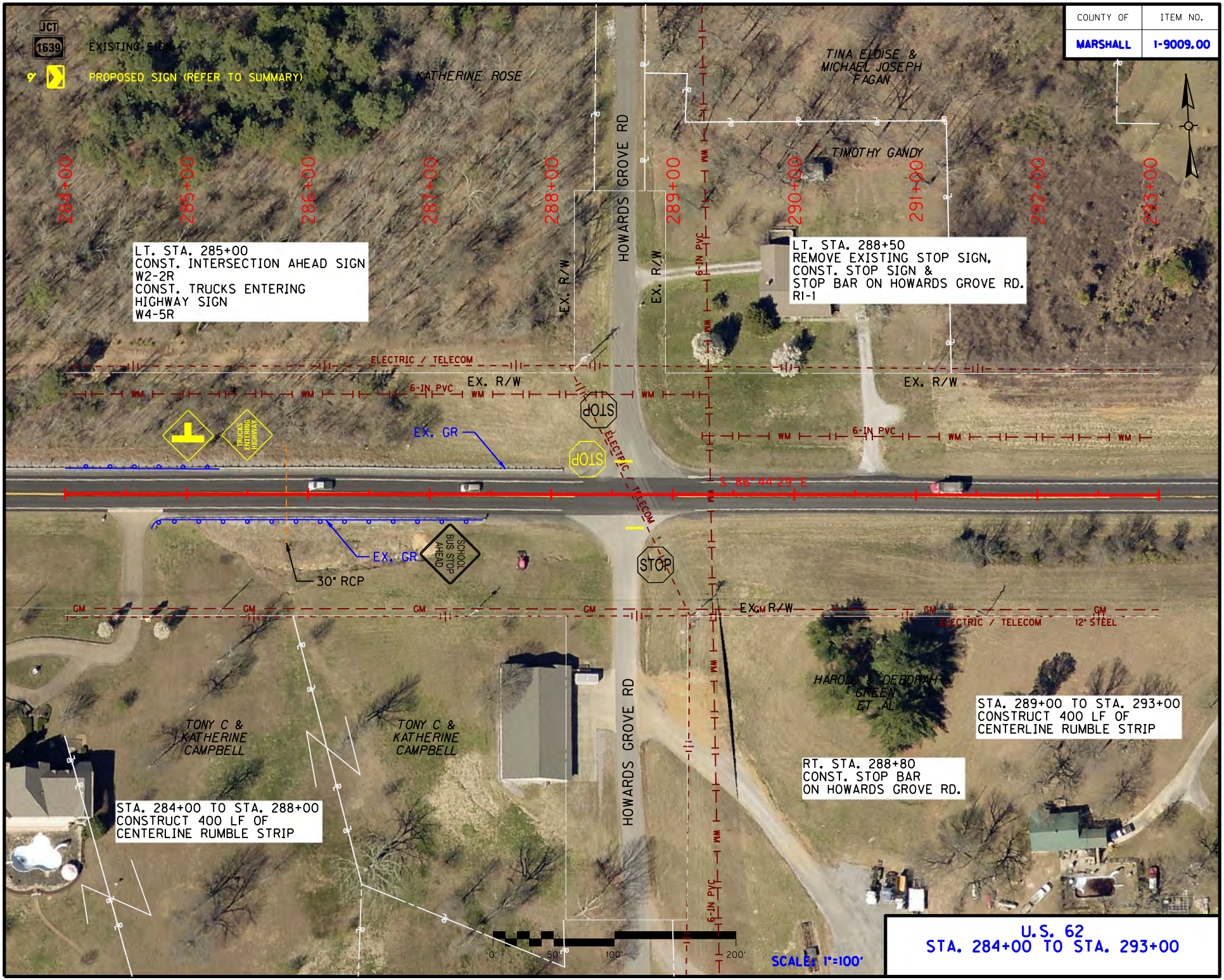
TONY C & KATHERINE CAMPBELL

0' 50' 100' 200'

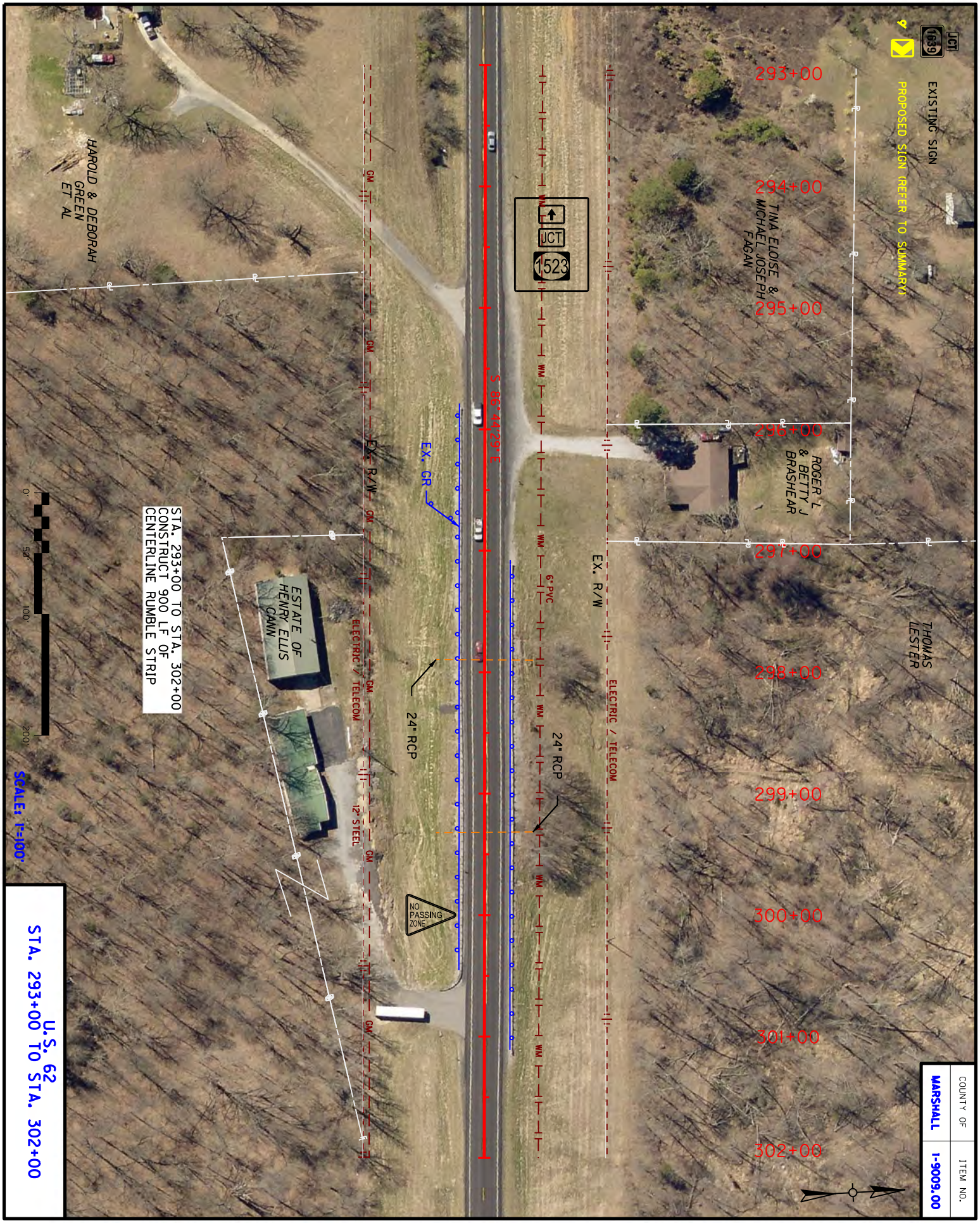
SCALE: 1"=100'

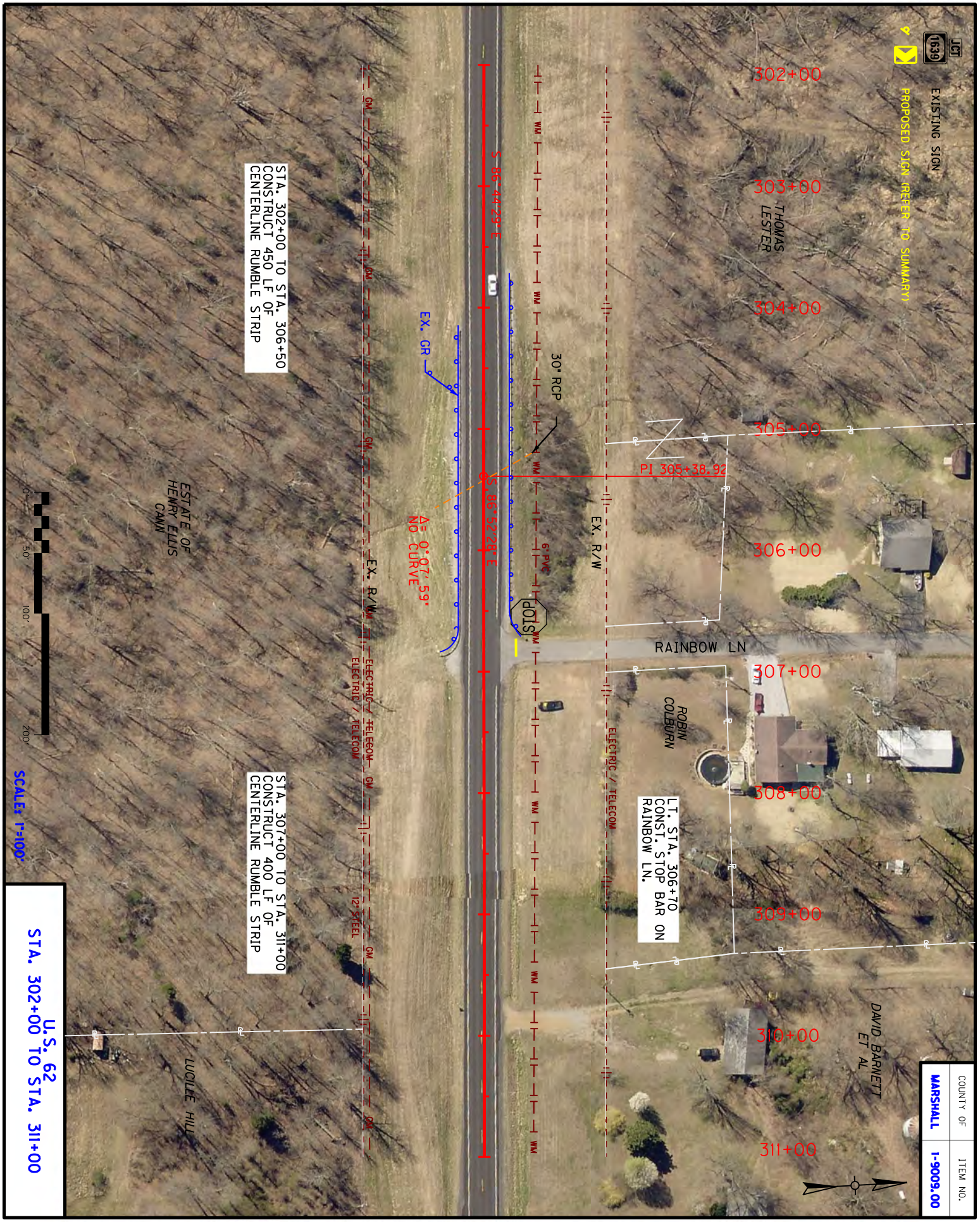
U.S. 62
STA. 275+00 TO STA. 284+00

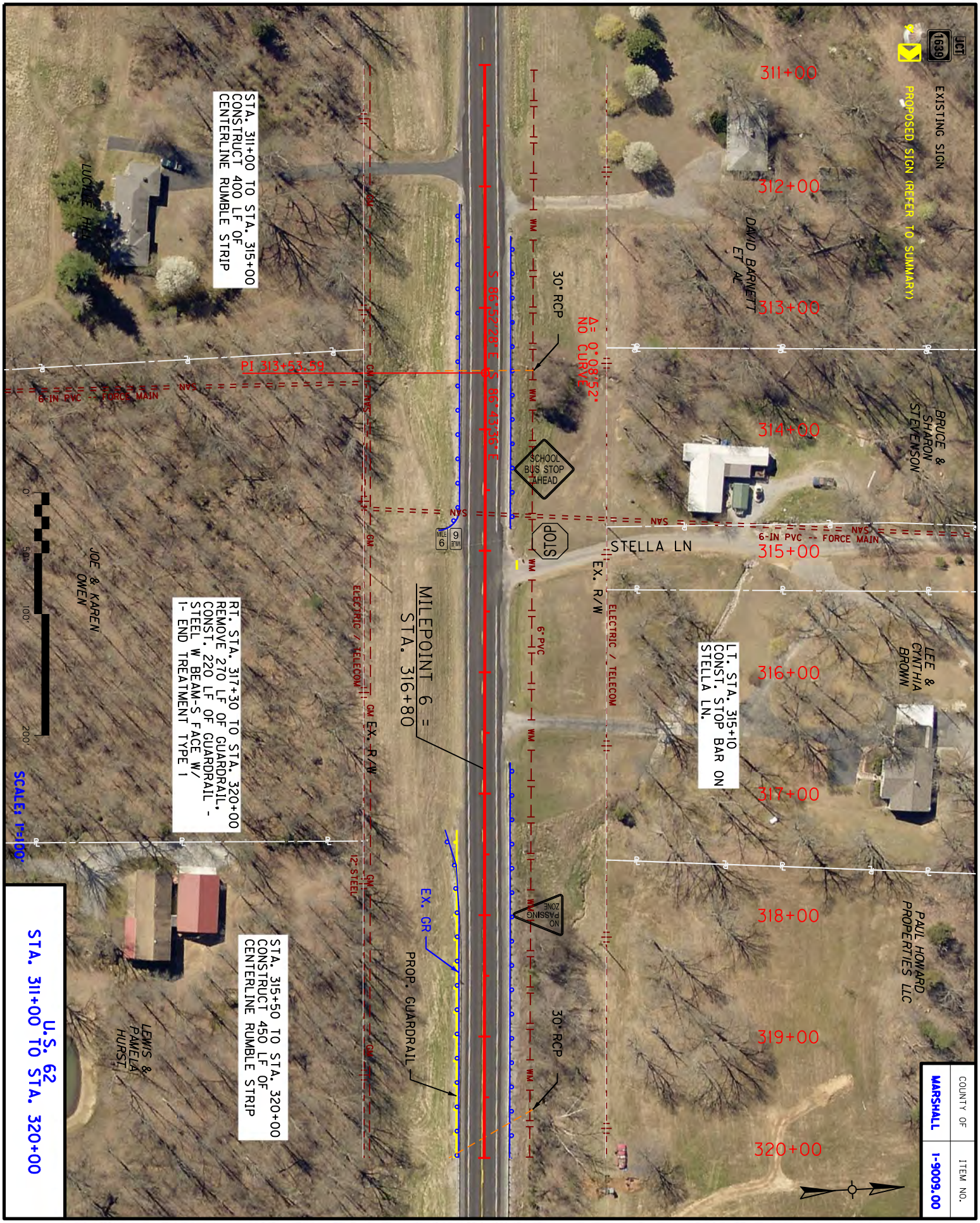
COUNTY OF	ITEM NO.
MARSHALL	I-9009.00

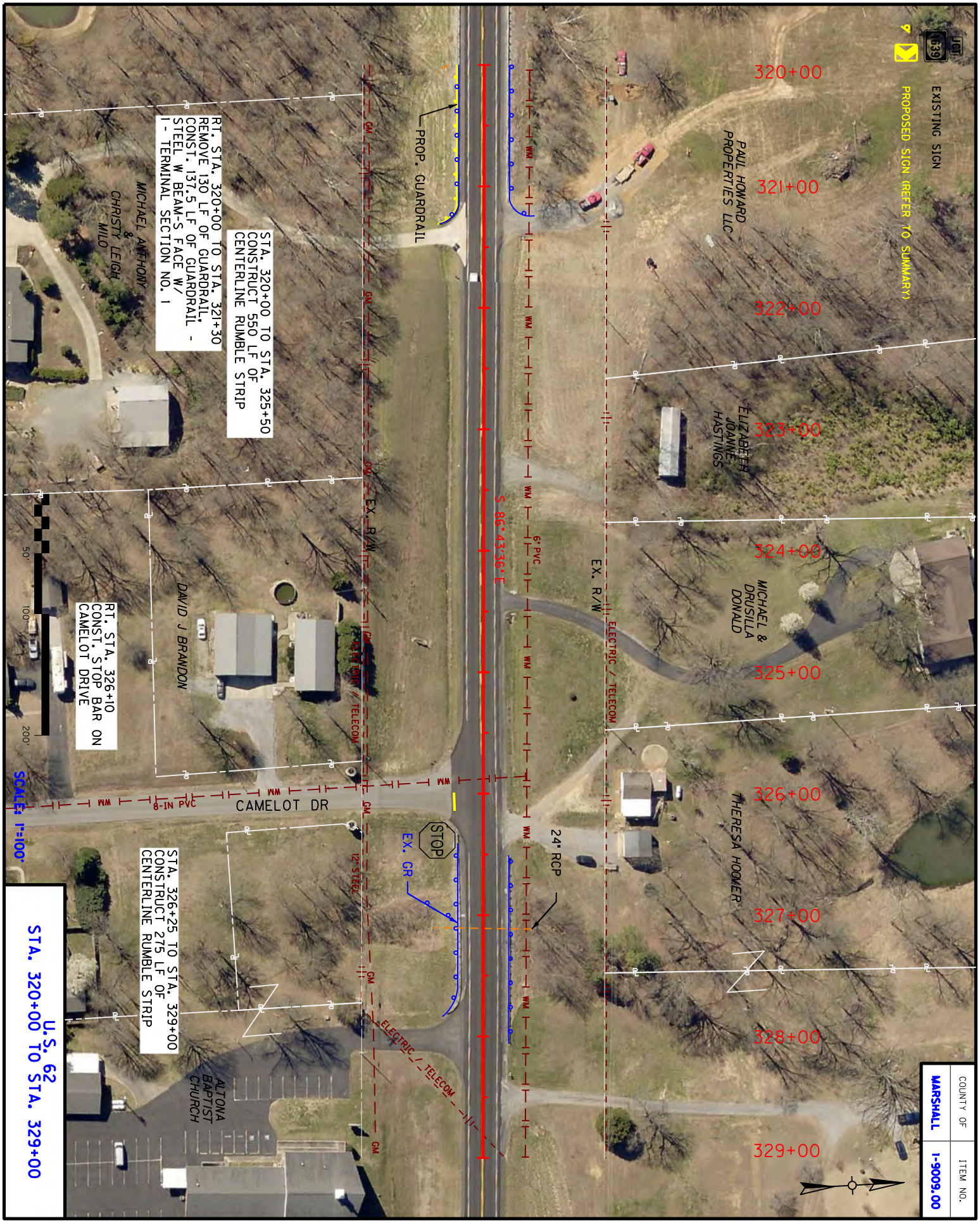


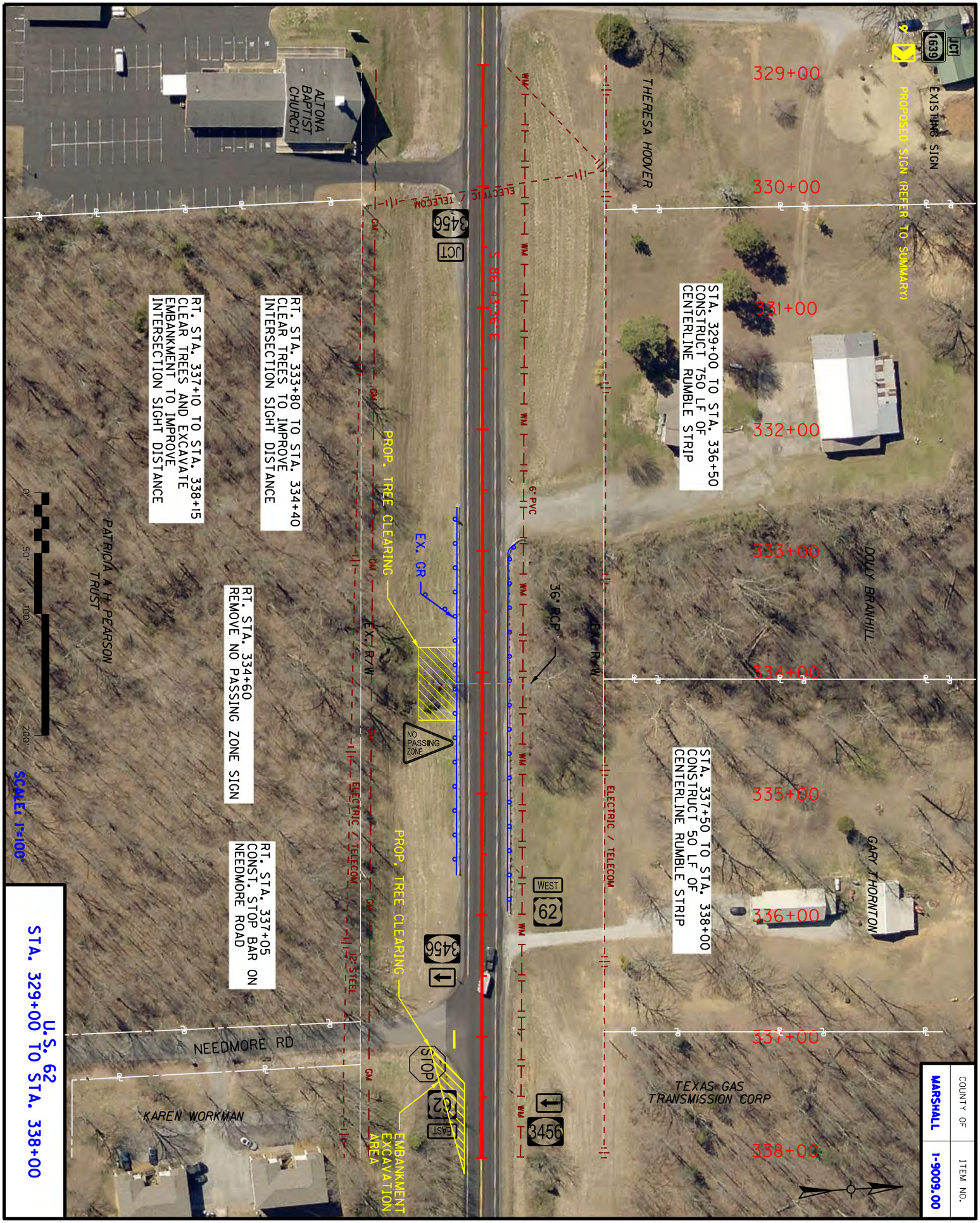
U.S. 62
STA. 284+00 TO STA. 293+00

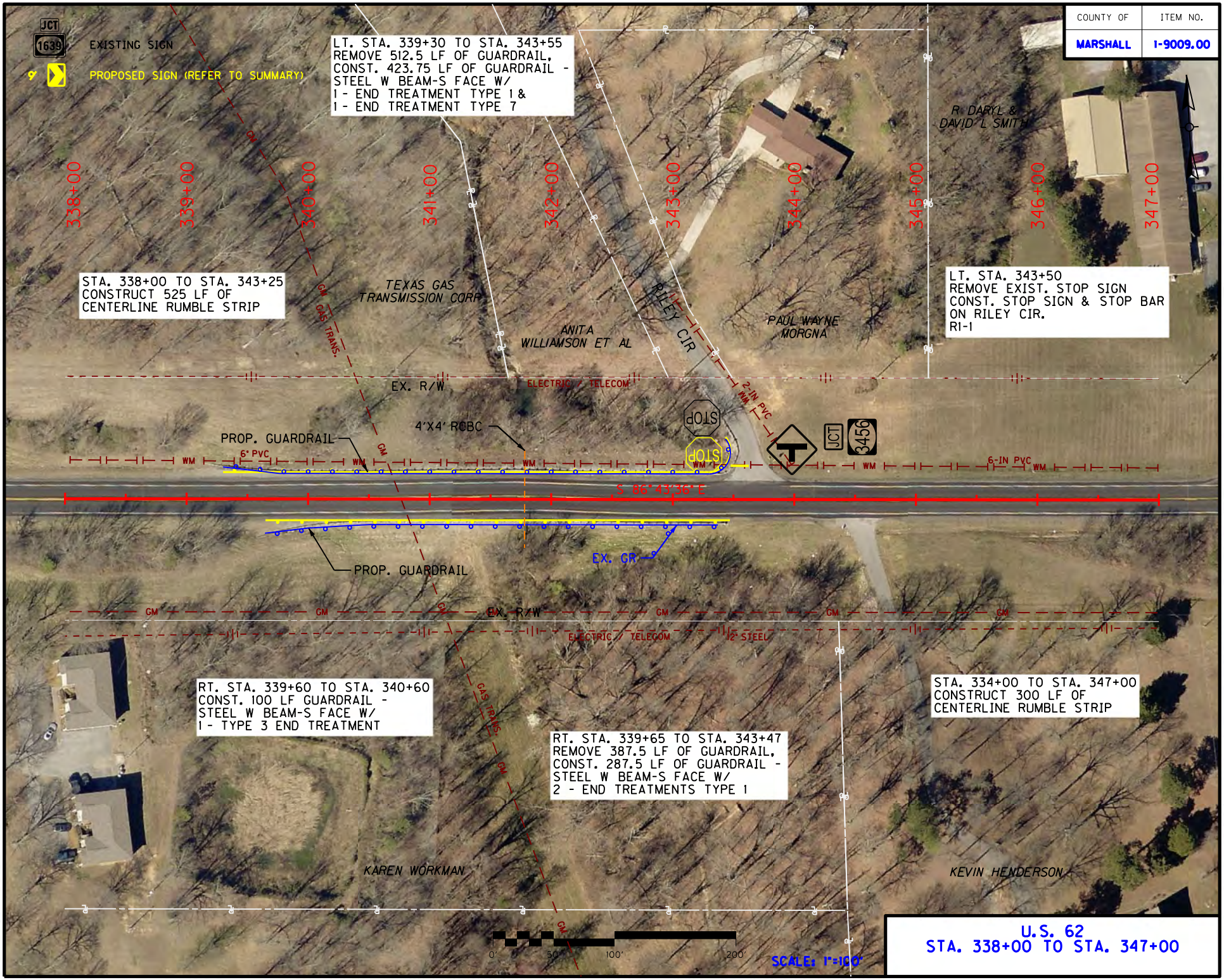

EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
JCT 1639
JCT 1523
293+00
294+00
295+00
296+00
297+00
298+00
299+00
300+00
301+00
302+00
TINA ELOISE & MICHAEL JOSEPH FAGAN
ROGER L & BETTY J BRASHEAR
THOMAS LESTER
HAROLD & DEBORAH GREEN ET AL
ESTATE OF HENRY ELLIS CANN
EX. R/W
ELECTRIC / TELECOM
GM
WM
6" PVC
24" RCP
12" STEEL
EX. GR
S 86°44'29" E
NO PASSING ZONE
STA. 293+00 TO STA. 302+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
0'
50'
100'
200'
SCALE: 1"=100'
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
U.S. 62
STA. 293+00 TO STA. 302+00

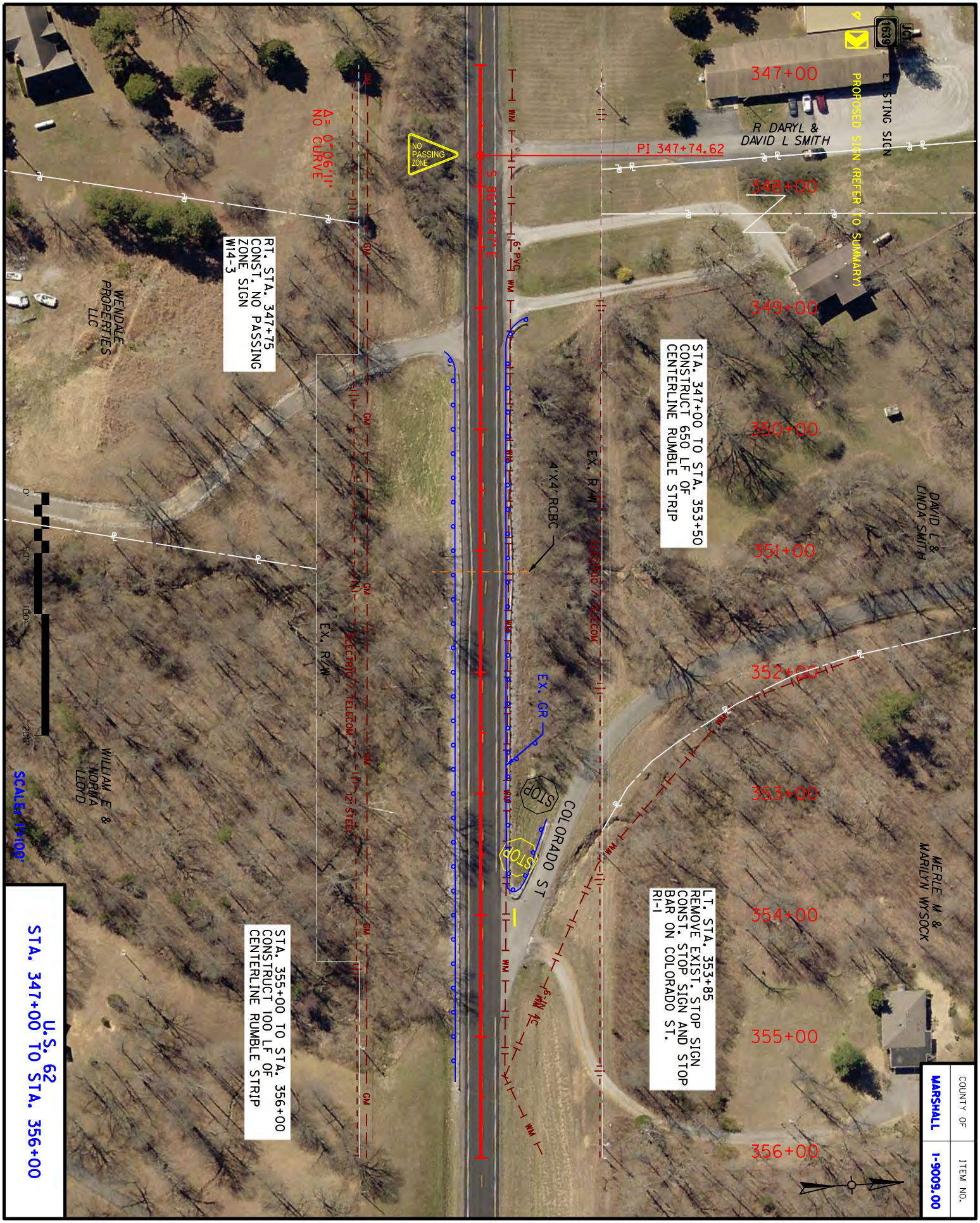

EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
302+00
303+00
304+00
305+00
306+00
307+00
308+00
309+00
310+00
311+00
THOMAS LESTER
DAVID BARNETT ET AL
ROBIN COLBURN
ESTATE OF HENRY ELLIS CANN
LUCILLE HILL
RAINBOW LN
EX. R/W
30" RCP
6" PVC
STOP
EX. GR
PI 305+38.92
S 86°44'29" E
S 86°52'28" E
Δ= 0°07'59"
NO CURVE
STA. 302+00 TO STA. 306+50
CONSTRUCT 450 LF OF
CENTERLINE RUMBLE STRIP
LT. STA. 306+70
CONST. STOP BAR ON
RAINBOW LN.
STA. 307+00 TO STA. 311+00
CONSTRUCT 400 LF OF
CENTERLINE RUMBLE STRIP
12" STEEL
ELECTRIC / TELECOM
GM
WM
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 302+00 TO STA. 311+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

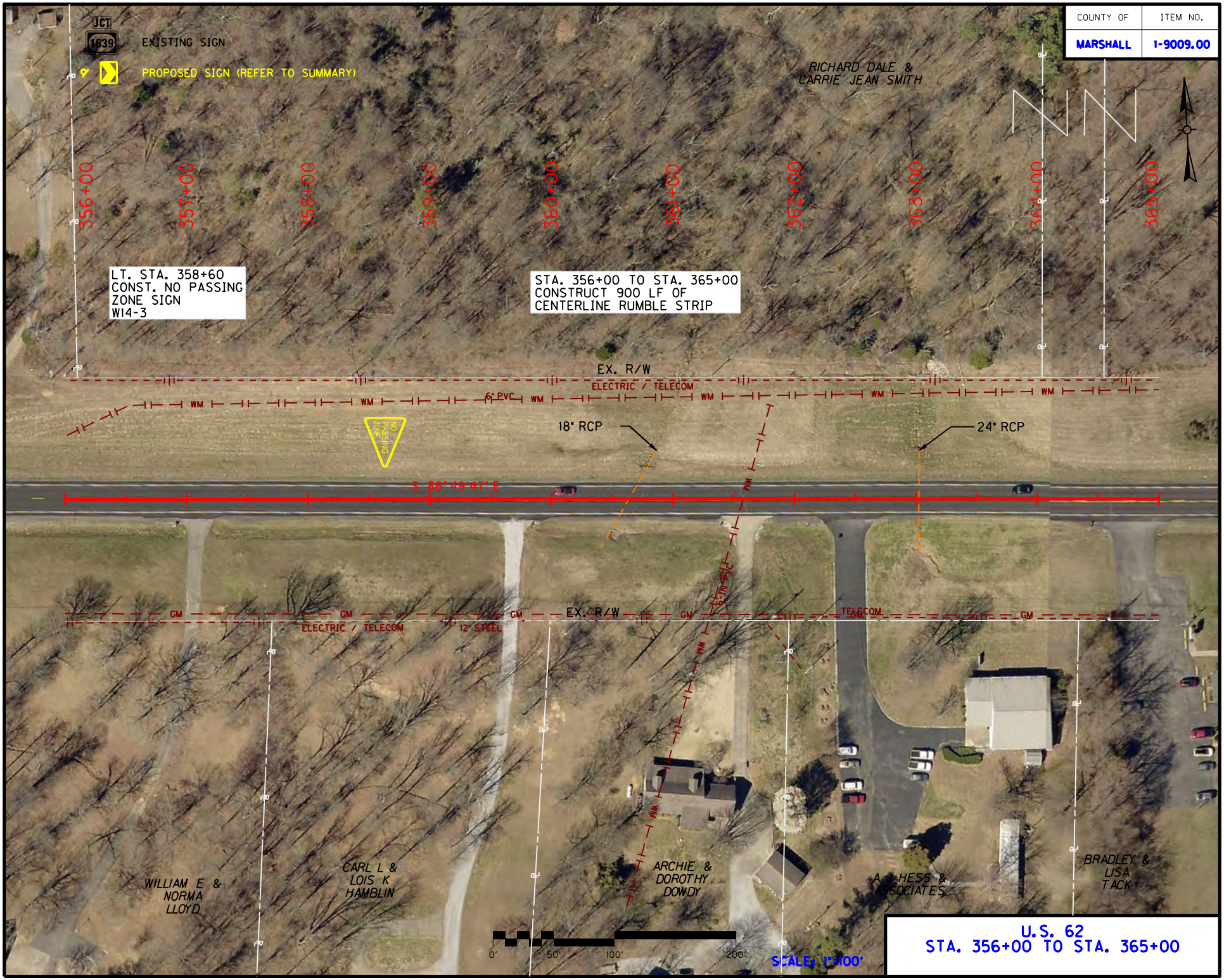

EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
311+00
312+00
313+00
314+00
315+00
316+00
317+00
318+00
319+00
320+00
DAVID BARNETT ET AL
BRUCE & SHARON STEVENSON
LEE & CYNTHIA BROWN
PAUL HOWARD PROPERTIES LLC
JOE & KAREN OWEN
LEWIS & PAMELA HURST
LUCILLE HILL
30" RCP
Δ= 0°08'52"
NO CURVE
S 86°52'26" E
S 86°43'36" E
PI 313+53.59
SCHOOL BUS STOP AHEAD
STOP
STELLA LN
EX. R/W
MILEPOINT 6 = STA. 316+80
6-IN PVC -- FORCE MAIN
6" PVC
12" STEEL
ELECTRIC / TELECOM
GM
WM
SAN
EX. GR
PROP. GUARDRAIL
NO PASSING ZONE
STA. 311+00 TO STA. 315+00
CONSTRUCT 400 LF OF
CENTERLINE RUMBLE STRIP
LT. STA. 315+10
CONST. STOP BAR ON
STELLA LN.
RT. STA. 317+30 TO STA. 320+00
REMOVE 270 LF OF GUARDRAIL.
CONST. 220 LF OF GUARDRAIL -
STEEL W BEAM-S FACE W/
1- END TREATMENT TYPE 1
STA. 315+50 TO STA. 320+00
CONSTRUCT 450 LF OF
CENTERLINE RUMBLE STRIP
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 311+00 TO STA. 320+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
320+00
321+00
322+00
323+00
324+00
325+00
326+00
327+00
328+00
329+00
PAUL HOWARD PROPERTIES LLC
ELIZABETH JOANNE HASTINGS
MICHAEL & DRUSILLA DOWALD
THERESA HOOMER
DAVID J BRANDON
MICHAEL ANTHONY & CHRISTY LEIGH MILO
ALTONA BAPTIST CHURCH
PROP. GUARDRAIL
EX. R/W
S 86°43'36" E
6" PVC
24" RCP
12" STEEL
8-IN PVC
CAMELOT DR
STOP
EX. GR
ELECTRIC / TELECOM
WM
GM
STA. 320+00 TO STA. 325+50
CONSTRUCT 550 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 320+00 TO STA. 321+30
REMOVE 130 LF OF GUARDRAIL,
CONST. 137.5 LF OF GUARDRAIL -
STEEL W BEAM-S FACE W/
1 - TERMINAL SECTION NO. 1
RT. STA. 326+10
CONST. STOP BAR ON
CAMELOT DRIVE
STA. 326+25 TO STA. 329+00
CONSTRUCT 275 LF OF
CENTERLINE RUMBLE STRIP
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 320+00 TO STA. 329+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

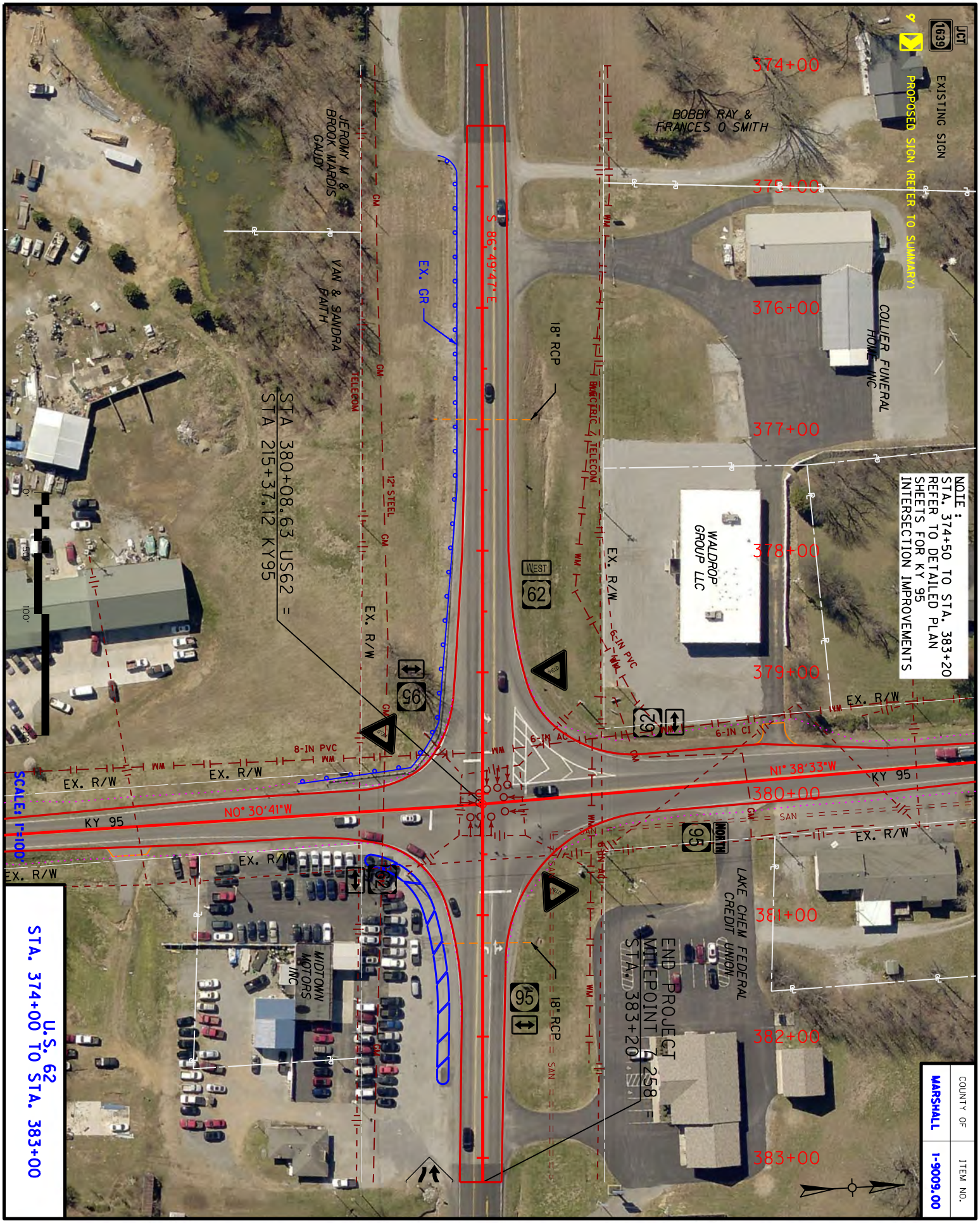

JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
329+00
330+00
331+00
332+00
333+00
334+00
335+00
336+00
337+00
338+00
THERESA HOOVER
DOLLY BRANHILL
GARY THORNTON
TEXAS GAS TRANSMISSION CORP
ALTONA BAPTIST CHURCH
PATRICIA A H PEARSON TRUST
KAREN WORKMAN
NEEDMORE RD
STA. 329+00 TO STA. 336+50
CONSTRUCT 750 LF OF
CENTERLINE RUMBLE STRIP
STA. 337+50 TO STA. 338+00
CONSTRUCT 50 LF OF
CENTERLINE RUMBLE STRIP
RT. STA. 333+80 TO STA. 334+40
CLEAR TREES TO IMPROVE
INTERSECTION SIGHT DISTANCE
RT. STA. 337+10 TO STA. 338+15
CLEAR TREES AND EXCAVATE
EMBANKMENT TO IMPROVE
INTERSECTION SIGHT DISTANCE
RT. STA. 334+60
REMOVE NO PASSING ZONE SIGN
RT. STA. 337+05
CONST. STOP BAR ON
NEEDMORE ROAD
S 86° 43' 36" E
6" PVC
36" RCP
EX. R/W
EX. GR
PROP. TREE CLEARING
NO PASSING ZONE
STOP
EMBANKMENT EXCAVATION AREA
ELECTRIC / TELECOM
12" STEEL
WEST 62
EAST 62
3456
JCT
0'
50'
100'
200'
SCALE: 1"=100'
COUNTY OF MARSHALL
ITEM NO. 1-9009.00
U.S. 62
STA. 329+00 TO STA. 338+00


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
LT. STA. 339+30 TO STA. 343+55
REMOVE 512.5 LF OF GUARDRAIL,
CONST. 423.75 LF OF GUARDRAIL -
STEEL W BEAM-S FACE W/
1 - END TREATMENT TYPE 1 &
1 - END TREATMENT TYPE 7
R DARYL &
DAVID L SMITH
338+00
339+00
340+00
341+00
342+00
343+00
344+00
345+00
346+00
347+00
STA. 338+00 TO STA. 343+25
CONSTRUCT 525 LF OF
CENTERLINE RUMBLE STRIP
TEXAS GAS
TRANSMISSION CORP.
ANITA
WILLIAMSON ET AL
RILEY CIR
PAUL WAYNE
MORGNA
LT. STA. 343+50
REMOVE EXIST. STOP SIGN
CONST. STOP SIGN & STOP BAR
ON RILEY CIR.
RI-1
EX. R/W
ELECTRIC / TELECOM
2-IN PVC
STOP
4'X4' RCBC
PROP. GUARDRAIL
6" PVC
JCT 3456
6-IN PVC
S 86°43'36" E
EX. GR
PROP. GUARDRAIL
GM
WM
GAS TRANS.
EX. R/W
ELECTRIC / TELECOM
2" STEEL
RT. STA. 339+60 TO STA. 340+60
CONST. 100 LF GUARDRAIL -
STEEL W BEAM-S FACE W/
1 - TYPE 3 END TREATMENT
RT. STA. 339+65 TO STA. 343+47
REMOVE 387.5 LF OF GUARDRAIL,
CONST. 287.5 LF OF GUARDRAIL -
STEEL W BEAM-S FACE W/
2 - END TREATMENTS TYPE 1
STA. 334+00 TO STA. 347+00
CONSTRUCT 300 LF OF
CENTERLINE RUMBLE STRIP
KAREN WORKMAN
KEVIN HENDERSON
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 338+00 TO STA. 347+00


JCT
1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
347+00
348+00
349+00
350+00
351+00
352+00
353+00
354+00
355+00
356+00
R DARYL & DAVID L SMITH
PI 347+74.62
S 86°48'47"E
6" PVC WM
NO PASSING ZONE
Δ= 0°06'11"
NO CURVE
RT. STA. 347+75
CONST. NO PASSING ZONE SIGN W14-3
WENDALE PROPERTIES LLC
STA. 347+00 TO STA. 353+50
CONSTRUCT 650 LF OF CENTERLINE RUMBLE STRIP
EX. R/W
ELECTRIC / TELECOM
4'X4' RCBC
EX. GR
STOP
COLORADO ST
LT. STA. 353+85
REMOVE EXIST. STOP SIGN
CONST. STOP SIGN AND STOP BAR ON COLORADO ST.
R1-1
DAVID L & LINDA SMITH
MERLE M & MARILYN WYSOCK
WILLIAM F & NORMA LLOYD
STA. 355+00 TO STA. 356+00
CONSTRUCT 100 LF OF CENTERLINE RUMBLE STRIP
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 347+00 TO STA. 356+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
JCT 1639
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
RICHARD DALE & CARRIE JEAN SMITH
356+00
357+00
358+00
359+00
360+00
361+00
362+00
363+00
364+00
365+00
LT. STA. 358+60
CONST. NO PASSING ZONE SIGN
W14-3
STA. 356+00 TO STA. 365+00
CONSTRUCT 900 LF OF CENTERLINE RUMBLE STRIP
EX. R/W
ELECTRIC / TELECOM
6" PVC
WM
NO PASSING ZONE
18" RCP
24" RCP
S 86°49'47" E
GM
12" STEEL
TELECOM
WILLIAM E & NORMA LLOYD
CARL L & LOIS K HAMBLIN
ARCHIE & DOROTHY DOWDY
A L HESS & ASSOCIATES
BRADLEY & LISA TACK
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62
STA. 356+00 TO STA. 365+00


EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
365+00
366+00
367+00
368+00
369+00
370+00
371+00
372+00
373+00
374+00
STEVENSON TRAILER PARK RD
BRADLEY & LISA TACK
MARGARET DAVIDSON
PAIGEBROOKE PROPERTIES LLC
JEROMY M & BROOK MARDIS GAUDY
RICHARD DALE & CARRIE JEAN SMITH
BOBBY RAY & FRANCES O SMITH
ELECTRIC / TELECOM
EX. R/W
MILEPOINT 7 = STA. 369+60
18" RCP
6-IN PVC
12" STEEL
TELECOM
GM
WM
SPEED LIMIT 55
45 SPEED LIMIT
SLOWER TRAFFIC KEEP RIGHT
JCT
95
MILE 7
STA. 365+00 TO STA. 374+00
CONSTRUCT 900 LF OF
CENTERLINE RUMBLE STRIP
SCALE: 1"=100'
0'
100'
200'
U.S. 62
STA. 365+00 TO STA. 374+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


1639
JCT
EXISTING SIGN
PROPOSED SIGN (REFER TO SUMMARY)
374+00
375+00
376+00
377+00
378+00
379+00
380+00
381+00
382+00
383+00
BOBBY RAY & FRANCES O SMITH
COLLIER FUNERAL HOME INC
WALDROP GROUP LLC
LAKE CHEM FEDERAL CREDIT UNION
MIDTOWN MOTORS INC
JEROMY M & BROOK MARDIS GAUDY
VAN & SANDRA FAITH
NOTE :
STA. 374+50 TO STA. 383+20
REFER TO DETAILED PLAN
SHEETS FOR KY 95
INTERSECTION IMPROVEMENTS
S 86°49'47" E
N 1°38'33" W
N 0°30'41" W
KY 95
EX. R/W
EX. GR
18" RCP
12" STEEL
8-IN PVC
6-IN PVC
6-IN CI
6-IN AC
TELECOM
WM
GM
SAN
WEST
NORTH
62
95
STA 380+08.63 US62 =
STA 215+37.12 KY95
END PROJECT
MILEPOINT 6.258 =
STA. 383+20
SCALE: 1"=100'
U.S. 62
STA. 374+00 TO STA. 383+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

COUNTY OF	ITEM NO.
MARSHALL	I-9009.00

US 62 LT DITCH CONSTRUCTION

STA. TO STA.	DESCRIPTION	CHANNEL LINING TYPE	CHANNEL LINING DEPTH	CHANNEL LINING QUANTITY
144+85 - 145+69	SPEC. "V"	ECB	1'	76 SQYD
146+06 - 146+80	SPEC. "V"	ECB	1'	66 SQYD
148+00 - 148+75	SWALE	N/A	N/A	N/A

DESCRIPTION	NORTH (Y)	EAST (X)	ELEVATION
CONTROL POINT 2 (IPC)	3537174.333	4137149.442	349.34
CONTROL POINT 3 (IPC)	3537192.063	4137724.643	348.67

STA. 147+59 - 148+20
CONSTUCT CONC. ISLAND
WITH 12" CURB CUT ON
25 FT SPACING

ENTRANCE PAVEMENT CONSTRUCTION LT OF ℄

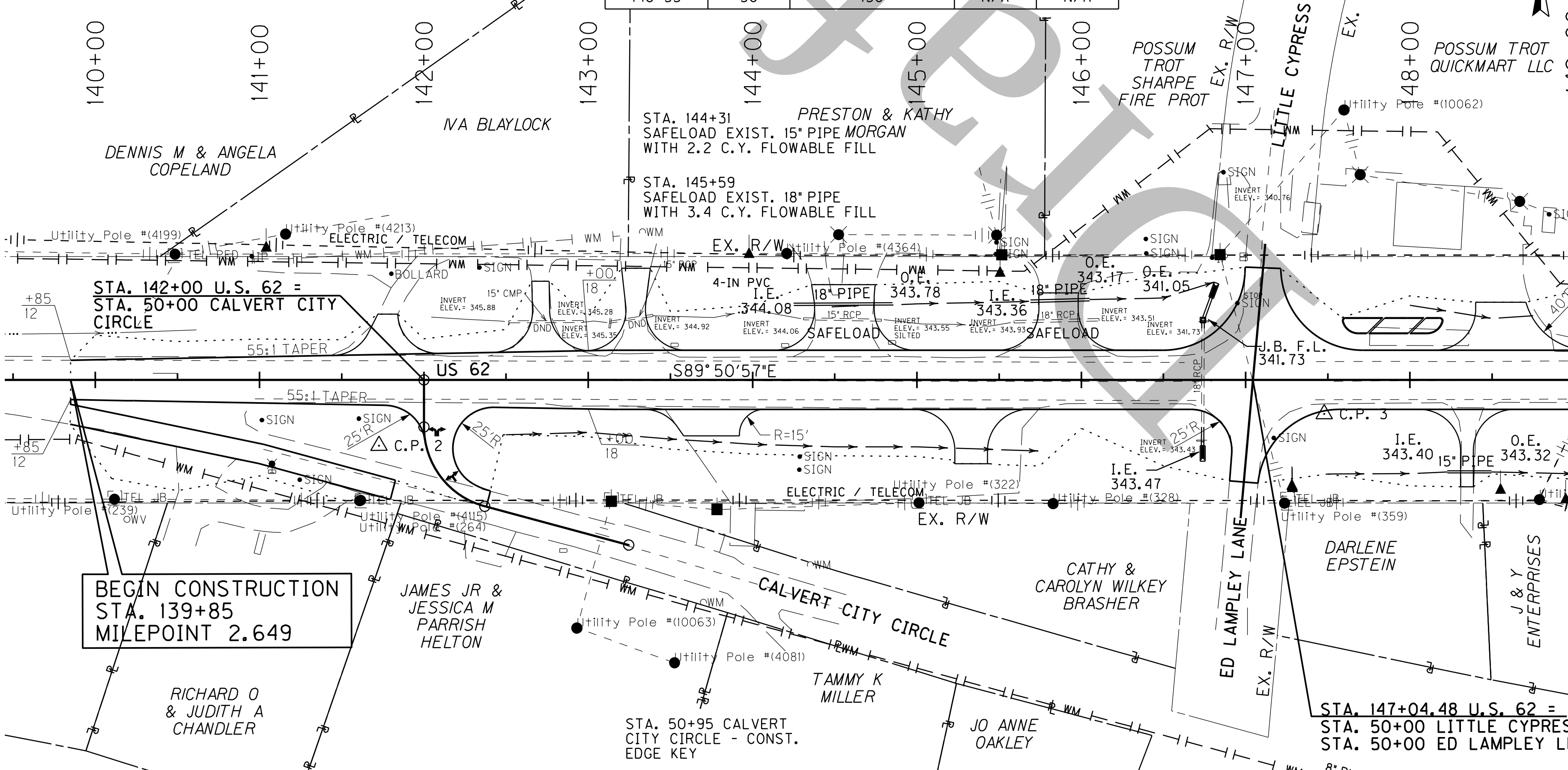
STATION	WIDTH (FT)	ASPHALT (SY)	ENTRANCE PIPE SIZE	ENTRANCE PIPE LF
141+77	12	59	N/A	N/A
142+72	10	69	15"	DND
143+29	12	92	15"	DND
144+55	38	177	18"	60
145+86	24	110	18"	36
148+55	30	130	N/A	N/A

NOTE:
ALL ENTRANCE RADII ARE
25' UNLESS NOTED OTHERWISE

NOTE:
ALL APPROACH RADII ARE
50' UNLESS NOTED OTHERWISE

STA. 139+85
CONST. EDGE KEY

STA. 49+31
LITTLE CYPRESS ROAD
CONST. EDGE KEY



US 62 RT DITCH CONSTRUCTION

STA. TO STA.	DESCRIPTION	CHANNEL LINING TYPE	CHANNEL LINING DEPTH	CHANNEL LINING QUANTITY
142+50 - 145+75	SWALE	ECB	0.33'	288 SQYD
147+50 - 148+22	SWALE	ECB	0.33'	64 SQYD
148+50 - 149+00	SWALE	ECB	0.33'	44 SQYD

ENTRANCE PAVEMENT CONSTRUCTION RT OF ℄

STATION	WIDTH (FT)	ASPHALT (SY)	ENTRANCE PIPE SIZE	ENTRANCE PIPE LF
143+72	34	65	N/A	N/A
145+33	20	91	N/A	N/A
148+36	8	61	15"	27'

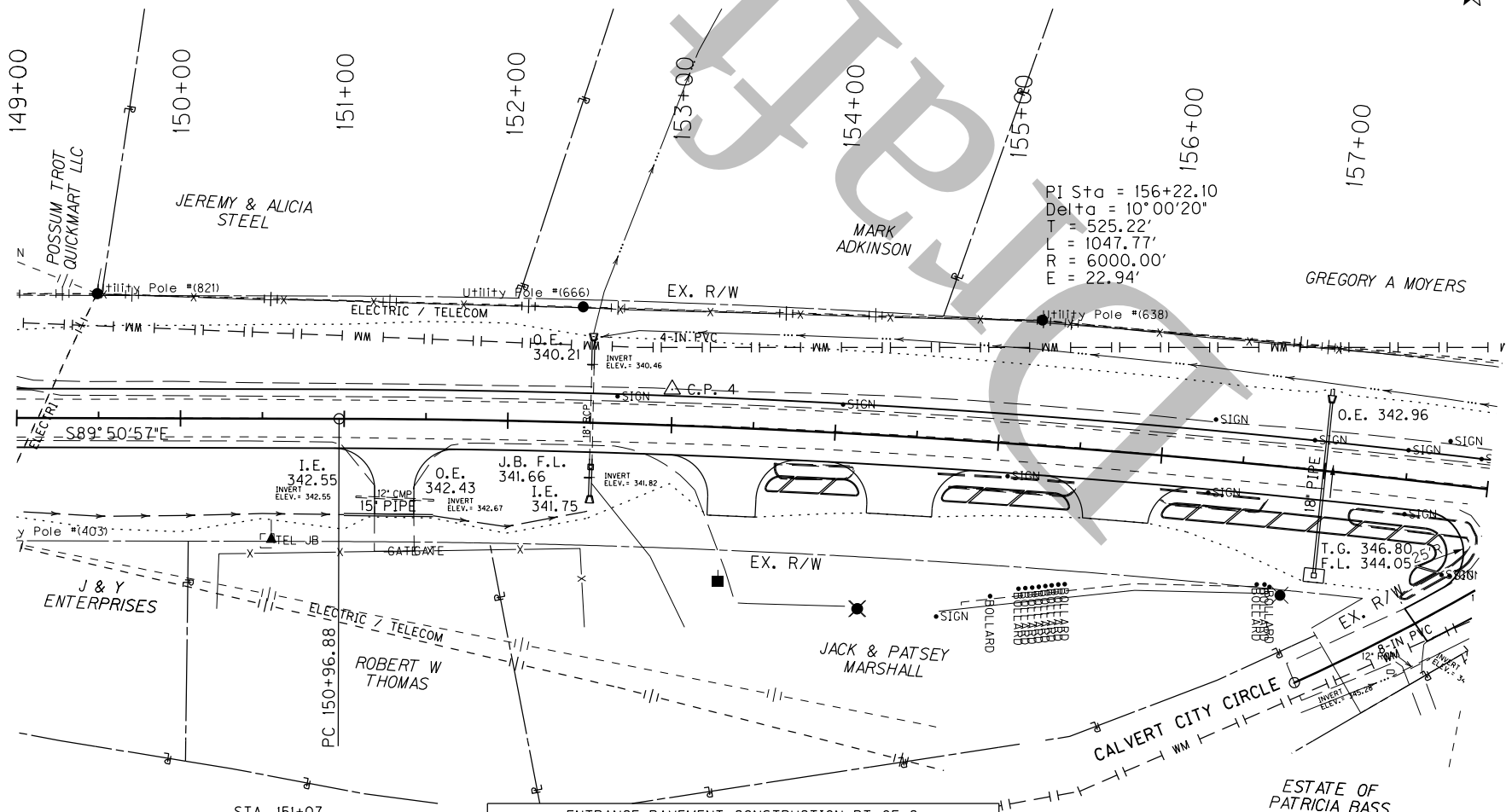
STA. 50+62 ED LAMPLEY LANE
CONST. EDGE KEY

SCALE: 1"=100'

U.S. 62
TWO WAY LEFT TURN LANE WIDENING
STA. 139+85 TO STA. 149+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

DESCRIPTION	NORTH (Y)	EAST (X)	ELEVATION
CONTROL POINT 4 (IPC)	3537229.851	4138277.295	349.27



STA. 151+07
SAFELOAD EXIST. 12 PIPE
WITH 1.4 C.Y. FLOWABLE FILL

US 62 RT DITCH CONSTRUCTION				
STA. TO STA.	DESCRIPTION	CHANNEL LINING		
		TYPE	DEPTH	QUANTITY
149+00 - 157+07	SPEC. "V"	ECB	0.33'	184 SQYD
151+55 - 152+50	SPEC. "V"	ECB	0.33'	84 SQYD

ENTRANCE PAVEMENT CONSTRUCTION RT OF ℄				
STATION	WIDTH (FT)	ASPHALT (SY)	ENTRANCE PIPE	
			SIZE	LF
151+31	24	123	15"	54'
153+39	30	133	N/A	N/A
154+42	40	146	N/A	N/A
155+75	40	120	N/A	N/A

STA. 153+54 - 154+16
CONSTUCT CONC. ISLAND
WITH 12" CURB CUT ON
25' SPACING

STA. 154+67 - 155+46
CONSTUCT CONC. ISLAND
WITH 12" CURB CUT ON
25' SPACING

STA. 156+03 - 157+79
CONSTUCT CONC. ISLAND
WITH 12" CURB CUT ON
25' SPACING

STA. 50+82
CALVERT CITY CIRCLE
CONST. EDGE KEY

0' 50' 100' 200'

SCALE: 1"=100'

U.S. 62
TWO WAY LEFT TURN LANE WIDENING
STA. 149+00 TO STA. 158+00

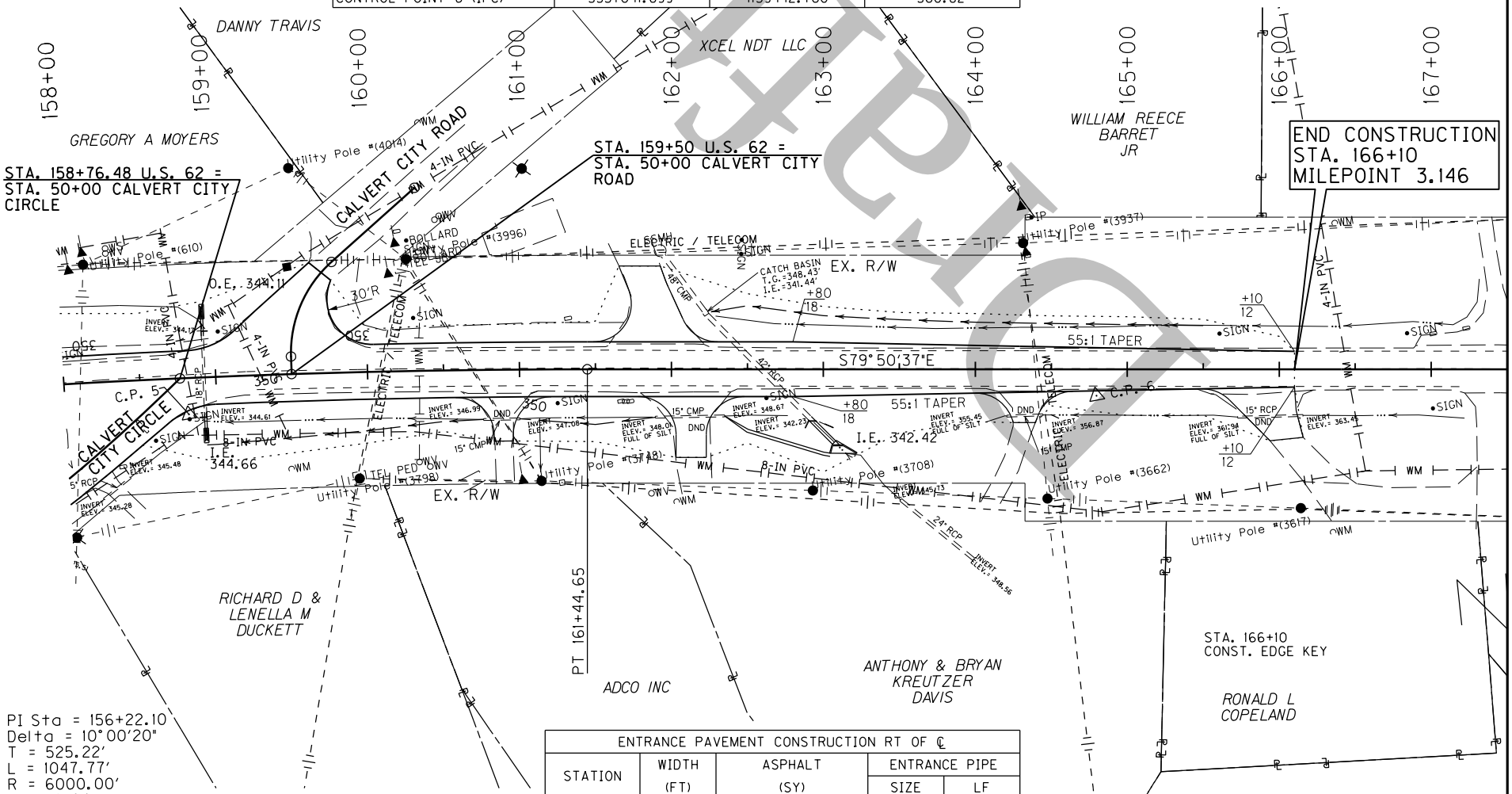
COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

US 62 LT DITCH CONSTRUCTION				
STA. TO STA.	DESCRIPTION	CHANNEL LINING		
		TYPE	DEPTH	QUANTITY
162+22 - 165+50	SPEC. "V"	ECB	1'	364 SQYD

ENTRANCE PAVEMENT CONSTRUCTION LT OF ℄				
STATION	WIDTH (FT)	ASPHALT (SY)	ENTRANCE PIPE	
			SIZE	LF
161+87	24	178	N/A	N/A

DESCRIPTION	NORTH (Y)	EAST (X)	ELEVATION
CONTROL POINT 5 (IPC)	3537134.908	4138852.695	348.82
CONTROL POINT 6 (IPC)	3537041.699	4139442.760	360.82

STA. 49+17 CALVERT CITY ROAD
CONST. EDGE KEY



PI Sta = 156+22.10
Delta = 10°00'20"
T = 525.22'
L = 1047.77'
R = 6000.00'
E = 22.94'

ENTRANCE PAVEMENT CONSTRUCTION RT OF ℄				
STATION	WIDTH (FT)	ASPHALT (SY)	ENTRANCE PIPE	
			SIZE	LF
160+89	12	59	15"	DND
162+13	20	106	15"	DND
164+32	14	49	15"	DND
165+89	20	125	15"	DND

US 62 RT DITCH CONSTRUCTION				
STA. TO STA.	DESCRIPTION	CHANNEL LINING		
		TYPE	DEPTH	QUANTITY
158+92 - 160+76	SPEC. "V"	ECB	1'	205 SQYD
161+00 - 161+89	SPEC. "V"	ECB	1'	99 SQYD
162+50 - 163+10	2' F.B. SPEC.	ECB	1'	40 SQYD

0' 50' 100' 200'

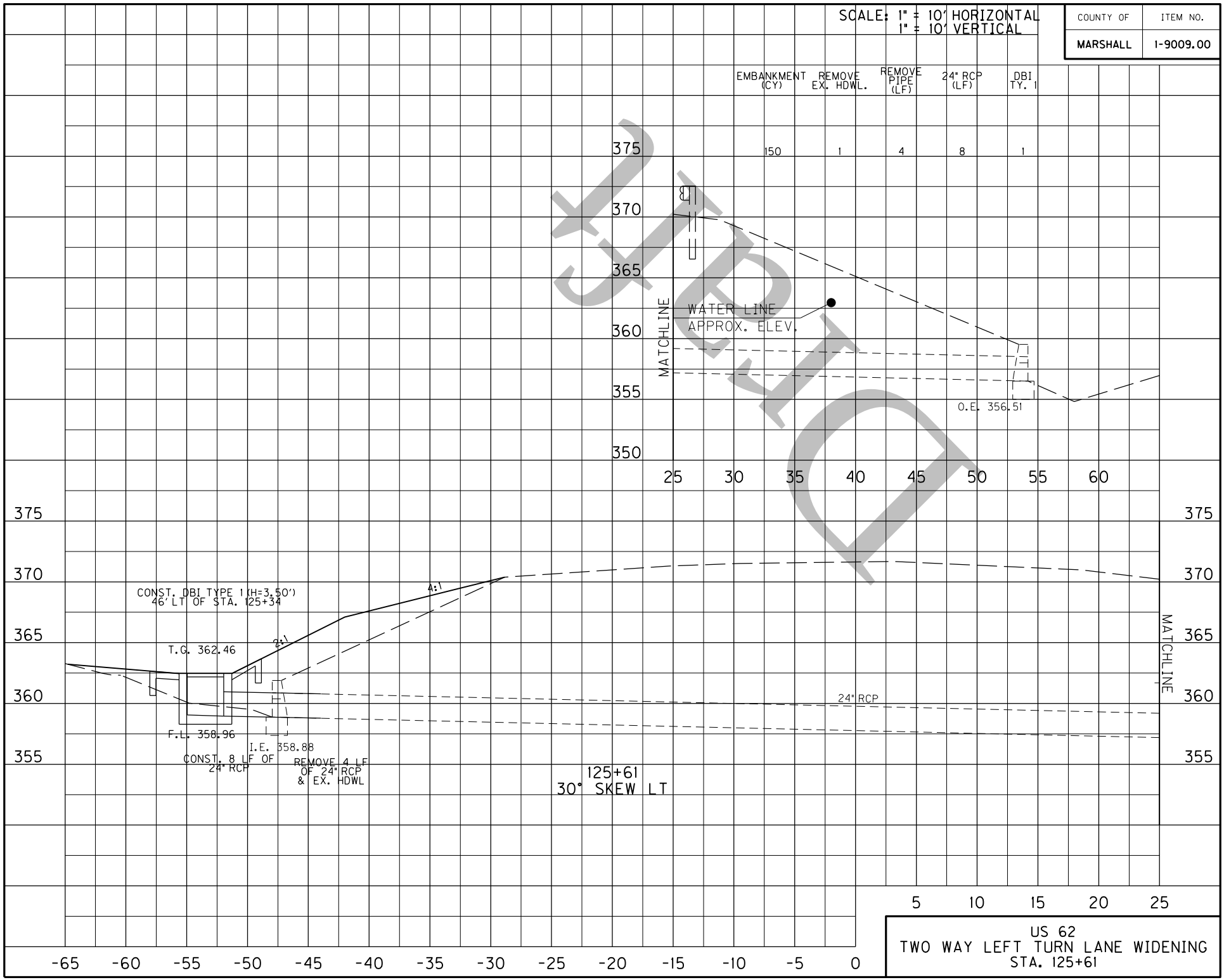
SCALE: 1"=100'

U.S. 62
TWO WAY LEFT TURN LANE WIDENING
STA. 158+00 TO STA. 166+10

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

EMBANKMENT (CY)	REMOVE EX. HDWL.	REMOVE PIPE (LF)	24" RCP (LF)	DBI TY. 1
150	1	4	8	1

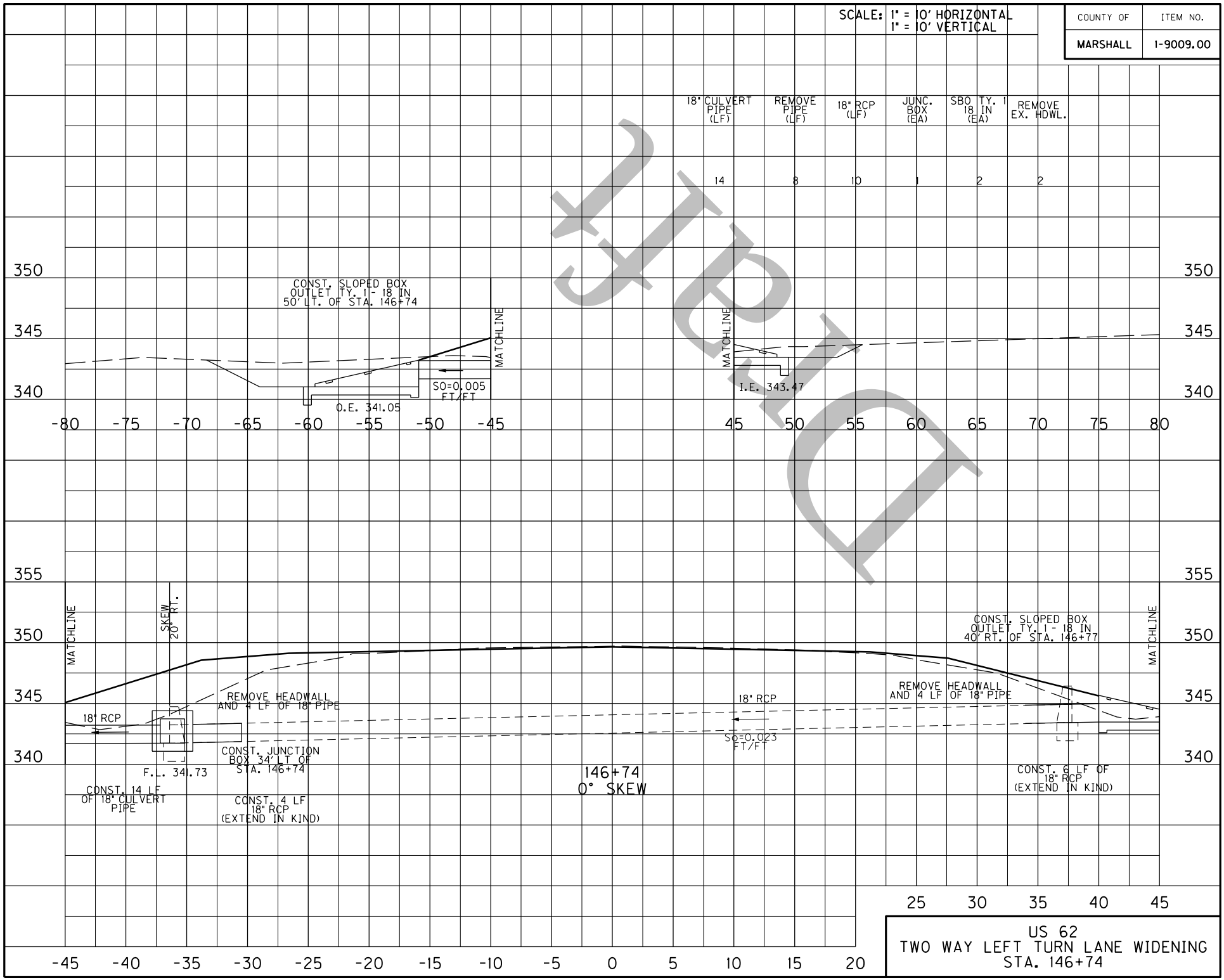


US 62
TWO WAY LEFT TURN LANE WIDENING
STA. 125+61

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

18" CULVERT PIPE (LF)	REMOVE PIPE (LF)	18" RCP (LF)	JUNC. BOX (EA)	SBO TY. 1 18 IN (EA)	REMOVE EX. HDWL.
14	8	10	1	2	2

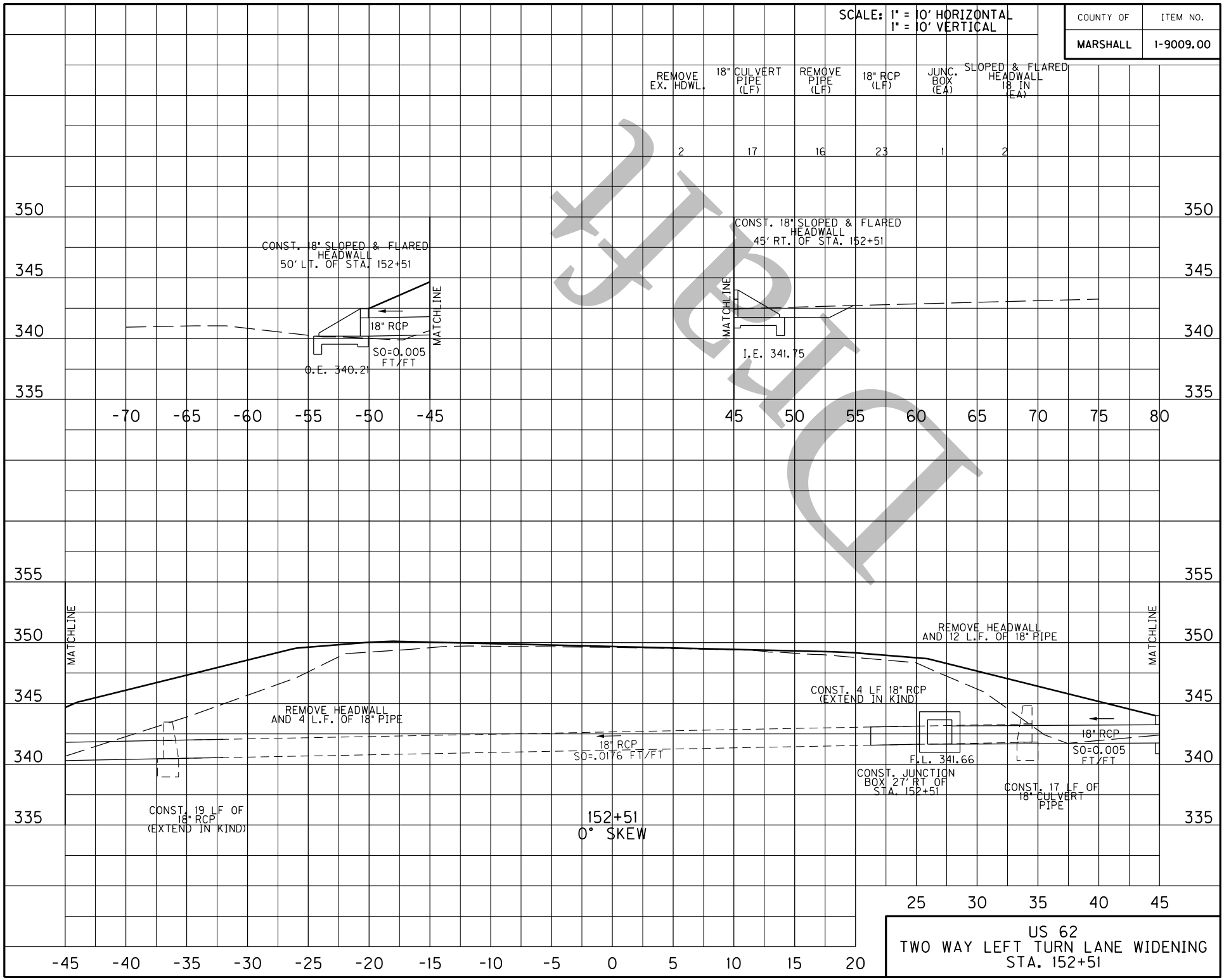


US 62
TWO WAY LEFT TURN LANE WIDENING
STA. 146+74

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

REMOVE EX. HDWL.	18" CULVERT PIPE (LF)	REMOVE PIPE (LF)	18" RCP (LF)	JUNC. BOX (EA)	SLOPED & FLARED HEADWALL 18 IN (EA)
2	17	16	23	1	2

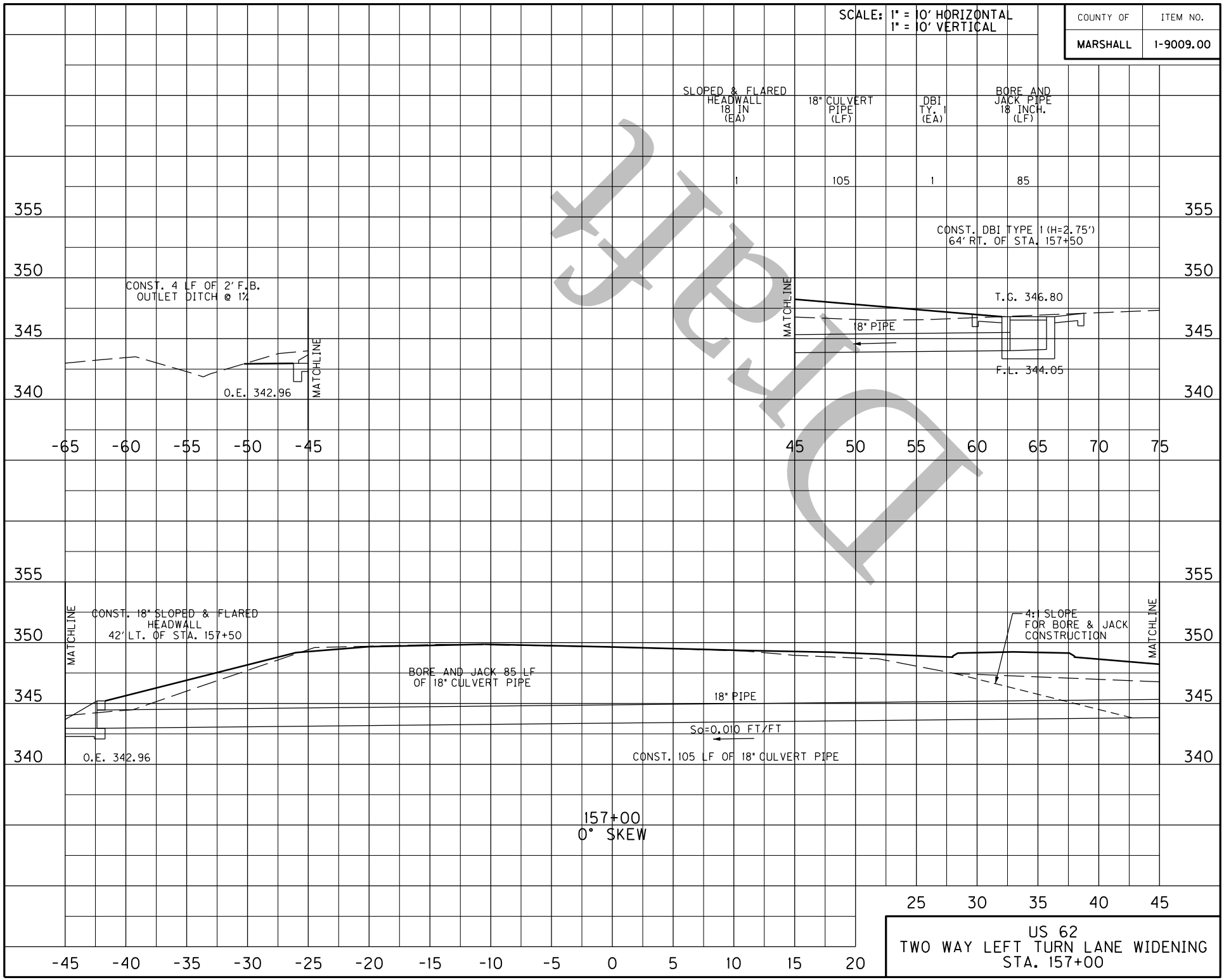


US 62
TWO WAY LEFT TURN LANE WIDENING
STA. 152+51

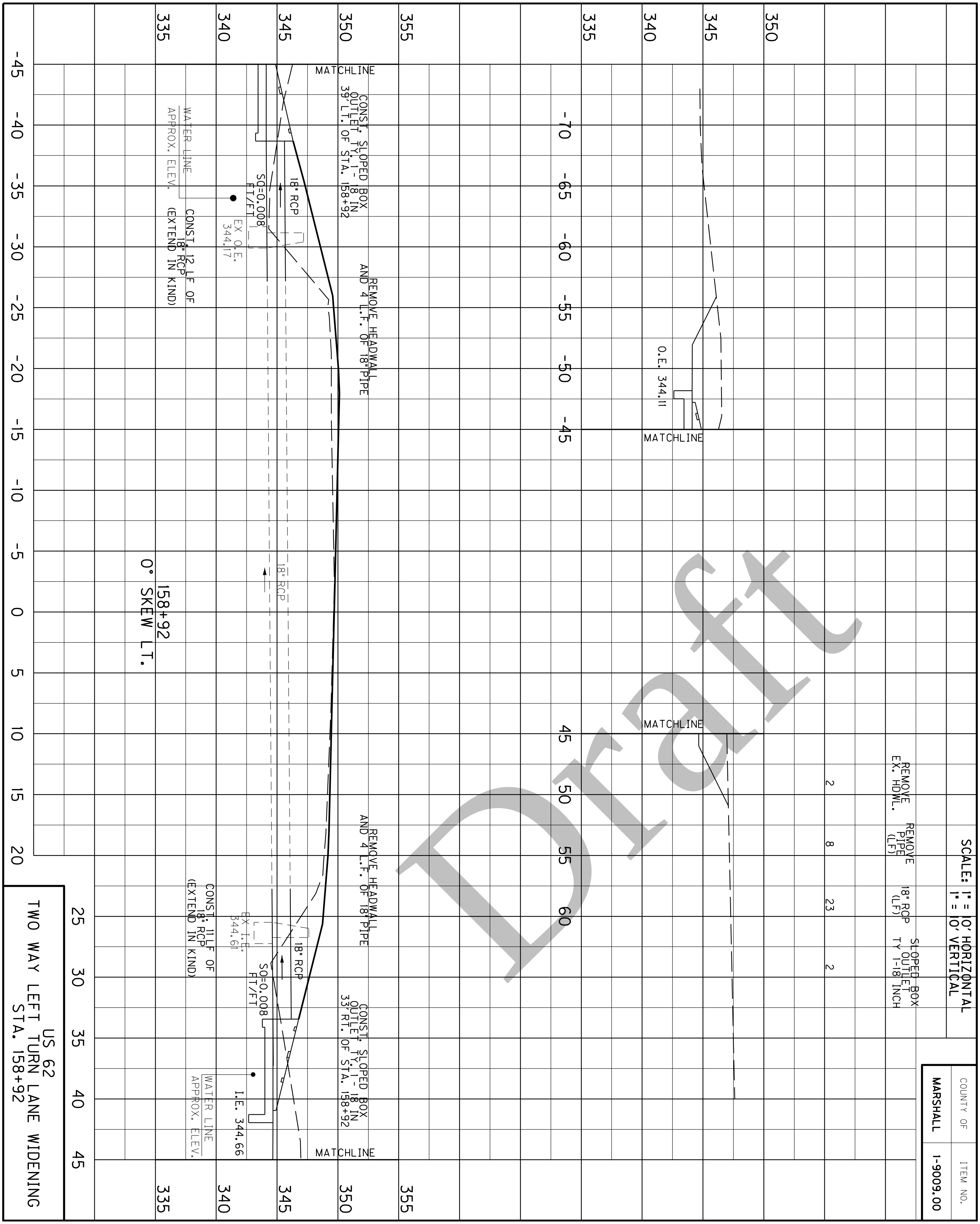
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

SLOPED & FLARED HEADWALL 18 IN (EA)	18" CULVERT PIPE (LF)	DBI TY. 1 (EA)	BORE AND JACK PIPE 18 INCH. (LF)
1	105	1	85



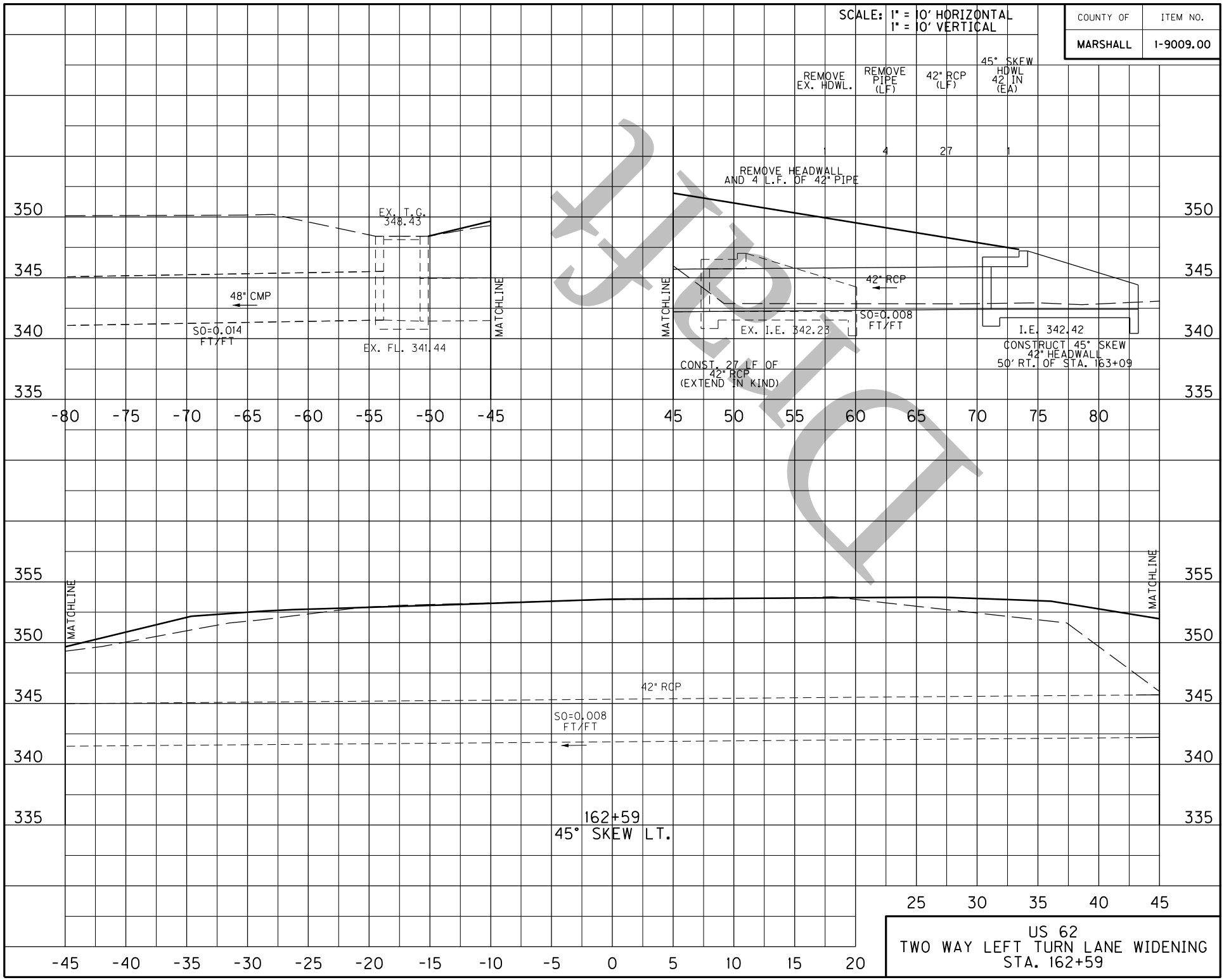
US 62
TWO WAY LEFT TURN LANE WIDENING
STA. 157+00


US 62
TWO WAY LEFT TURN LANE WIDENING
STA. 158+92
158+92
0° SKEW LT.
MATCHLINE
CONST. SLOPED BOX OUTLET TY. 1- 18 IN 39' LT. OF STA. 158+92
CONST. SLOPED BOX OUTLET TY. 1- 18 IN 33' RT. OF STA. 158+92
REMOVE HEADWALL AND 4 L.F. OF 18" PIPE
CONST. 12 LF OF 18" RCP (EXTEND IN KIND)
CONST. 11 LF OF 18" RCP (EXTEND IN KIND)
18" RCP
SO=0.008 FT/FT
EX O.E. 344.17
EX I.E. 344.61
I.E. 344.66
O.E. 344.11
WATER LINE APPROX. ELEV.
REMOVE EX. HDWL.
REMOVE PIPE (LF)
18" RCP (LF)
SLOPED BOX OUTLET TY 1-18 INCH
2
8
23
2
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
Draft

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

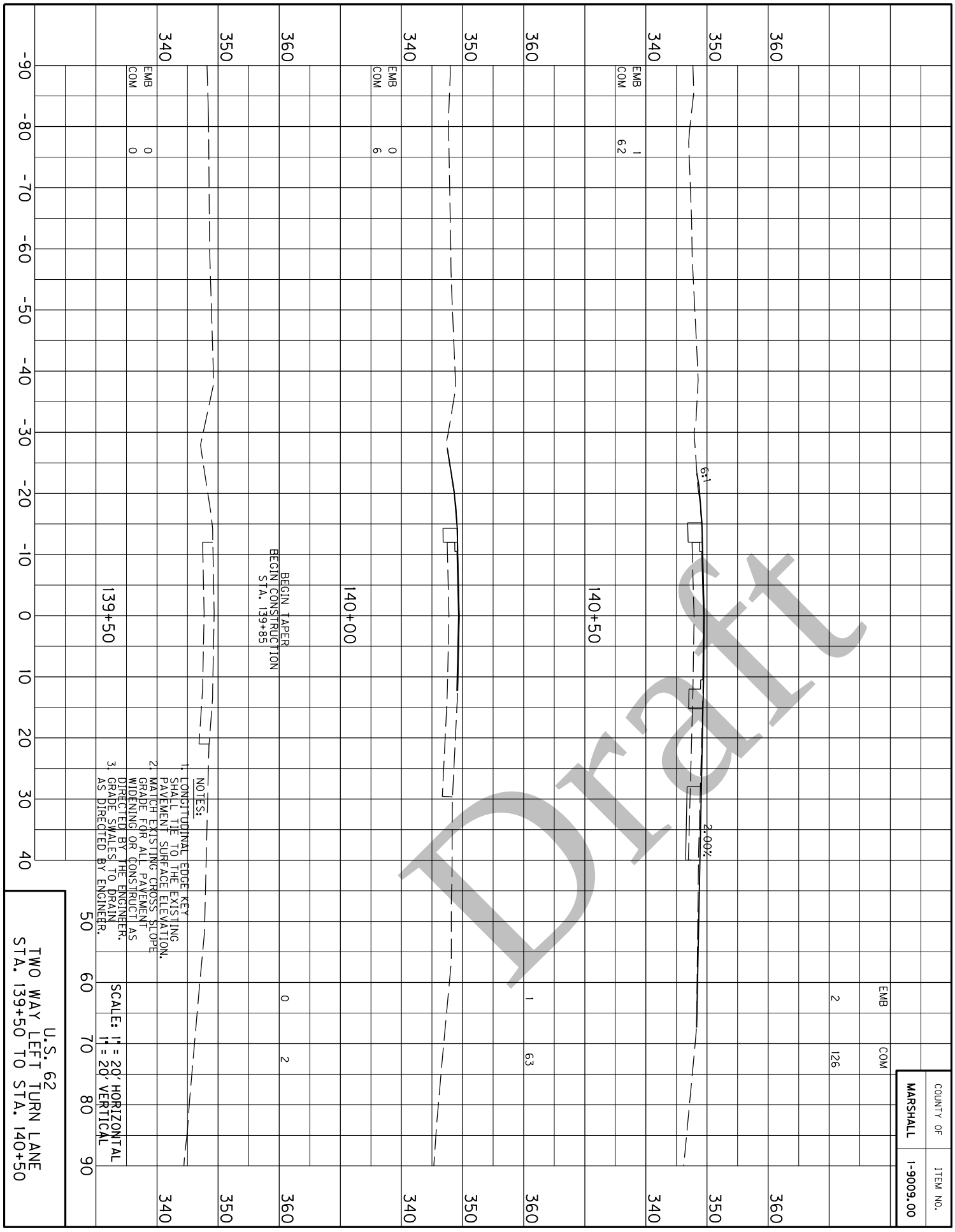
COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

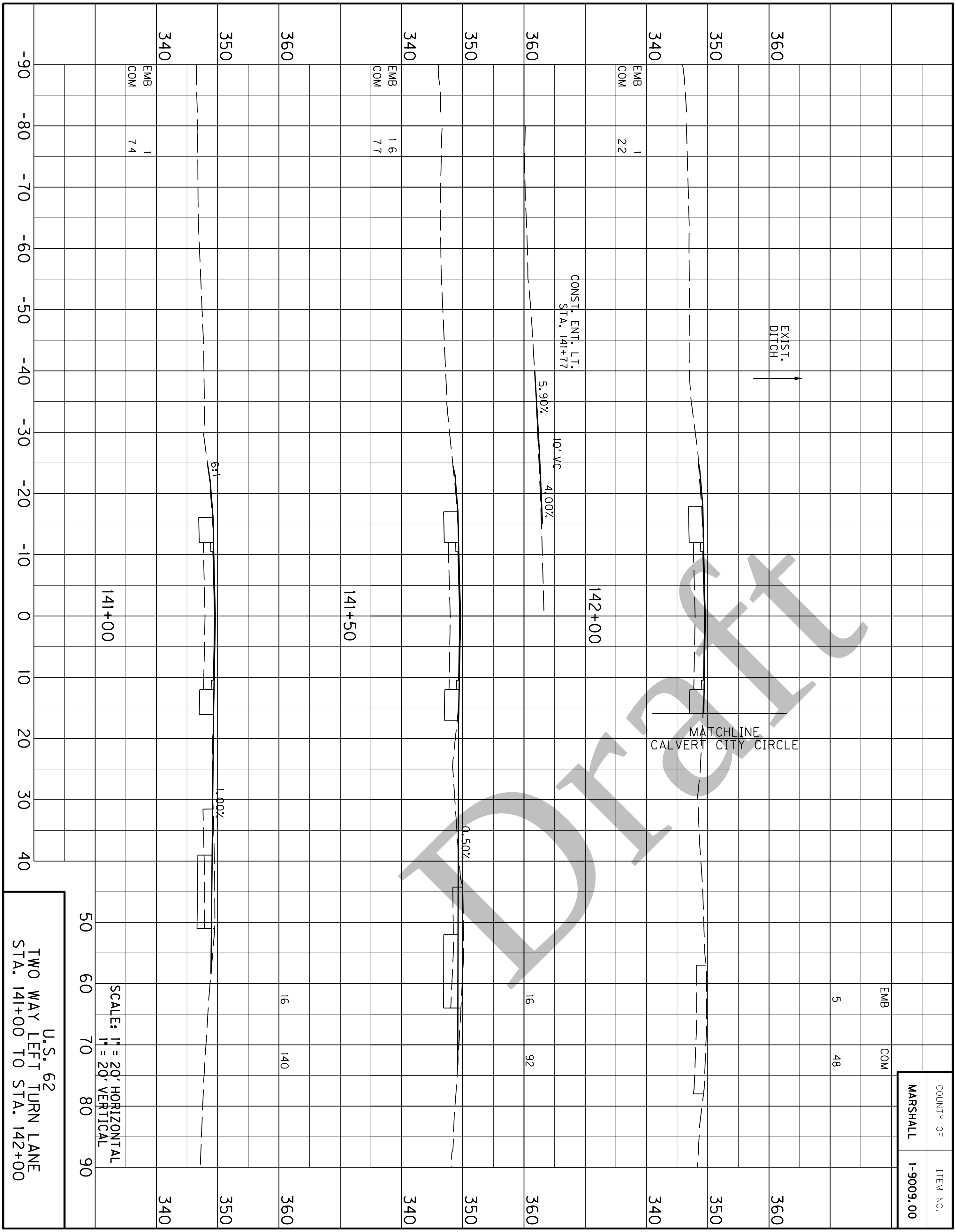
	REMOVE EX. HDWL.	REMOVE PIPE (LF)	42" RCP (LF)	45° SKEW HDWL 42 IN (EA)
	1	4	27	1

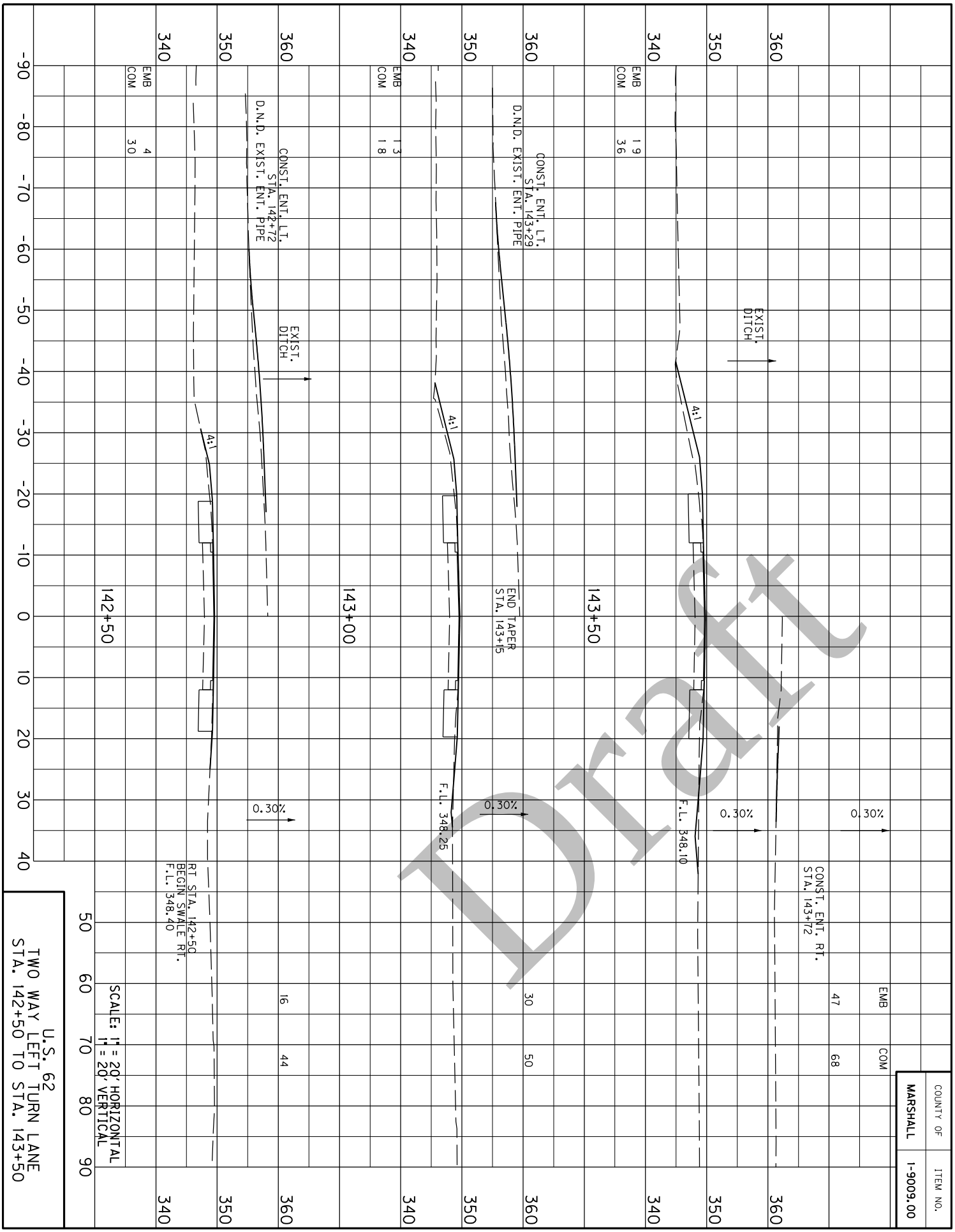


162+59
45° SKEW LT.

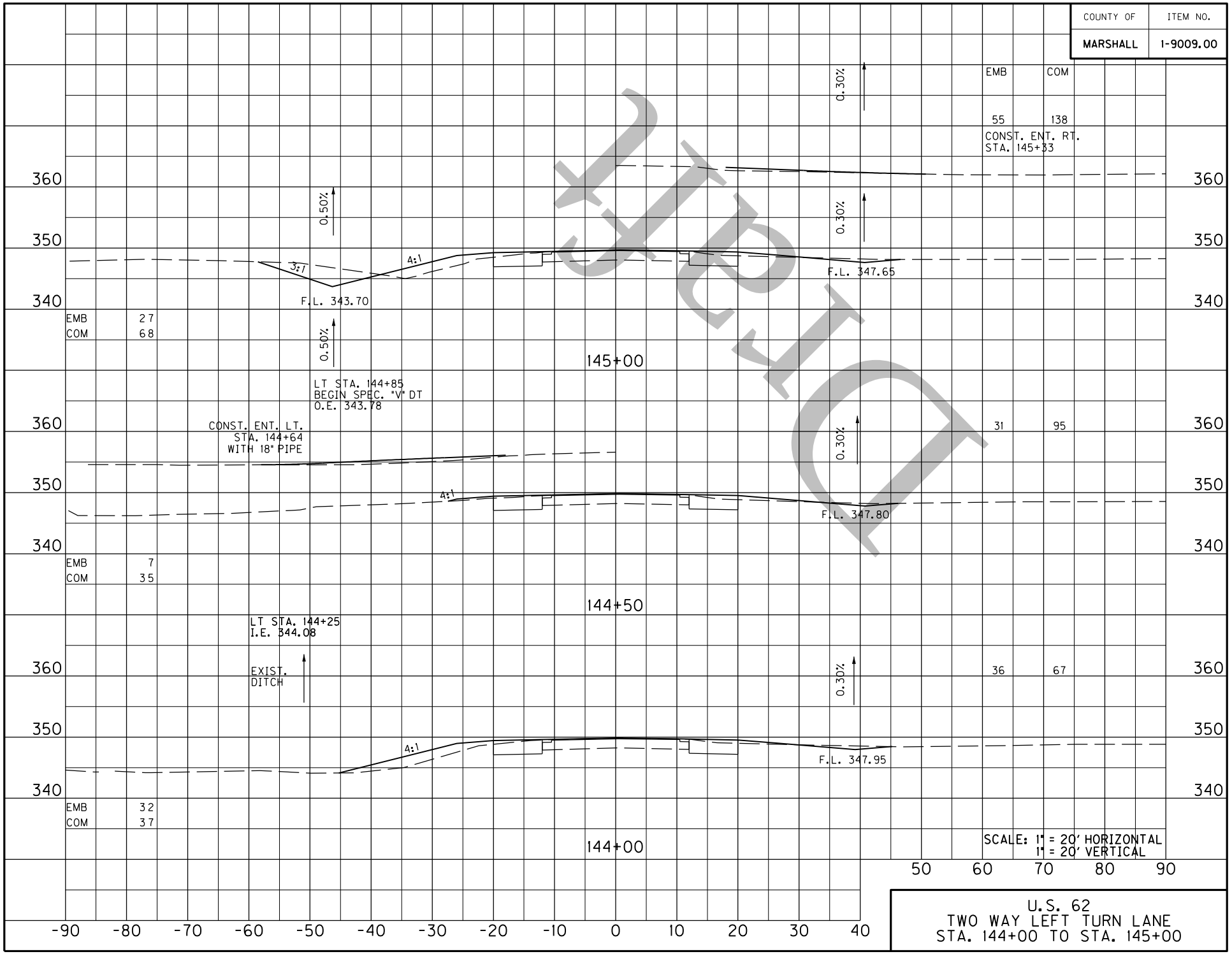
US 62
TWO WAY LEFT TURN LANE WIDENING
STA. 162+59


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
2
126
1
63
0
2
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
6:1
2.00%
140+50
140+00
139+50
BEGIN TAPER
BEGIN CONSTRUCTION
STA. 139+85
NOTES:
1. LONGITUDINAL EDGE KEY SHALL TIE TO THE EXISTING PAVEMENT SURFACE ELEVATION.
2. MATCH EXISTING CROSS SLOPE GRADE FOR ALL PAVEMENT WIDENING OR CONSTRUCT AS DIRECTED BY THE ENGINEER.
3. GRADE SWALES TO DRAIN AS DIRECTED BY ENGINEER.
U.S. 62
TWO WAY LEFT TURN LANE
STA. 139+50 TO STA. 140+50
Draft

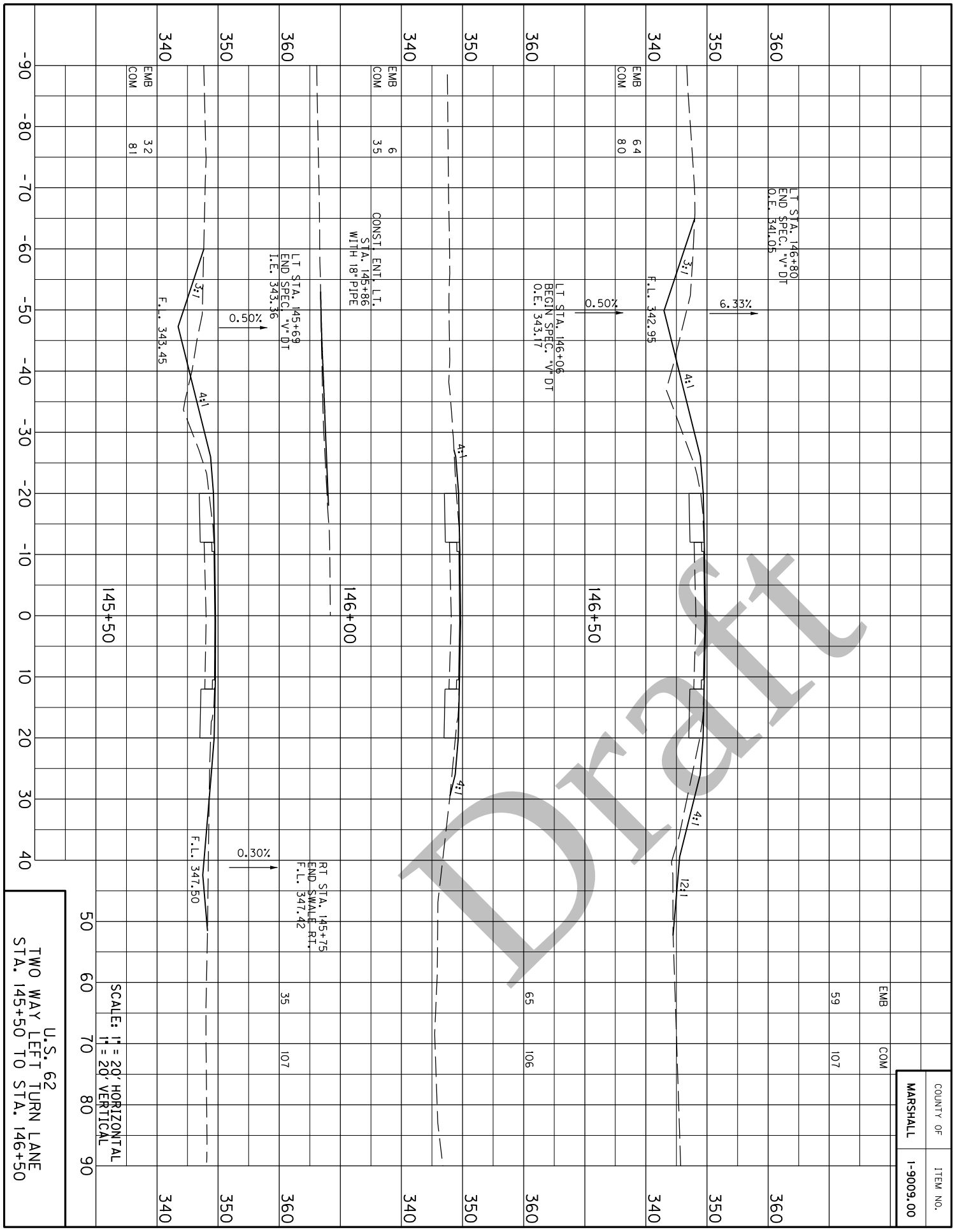

U.S. 62
TWO WAY LEFT TURN LANE
STA. 141+00 TO STA. 142+00
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
141+00
141+50
142+00
CONST. ENT. LT.
STA. 141+77
5.90%
10' VC
4.00%
6:1
1.00%
0.50%
EXIST.
DITCH
MATCHLINE
CALVERT CITY CIRCLE
EMB
COM
340
350
360
-90
-80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
80
90
COUNTY OF
MARSHALL
ITEM NO.
I-9009.00
Draft

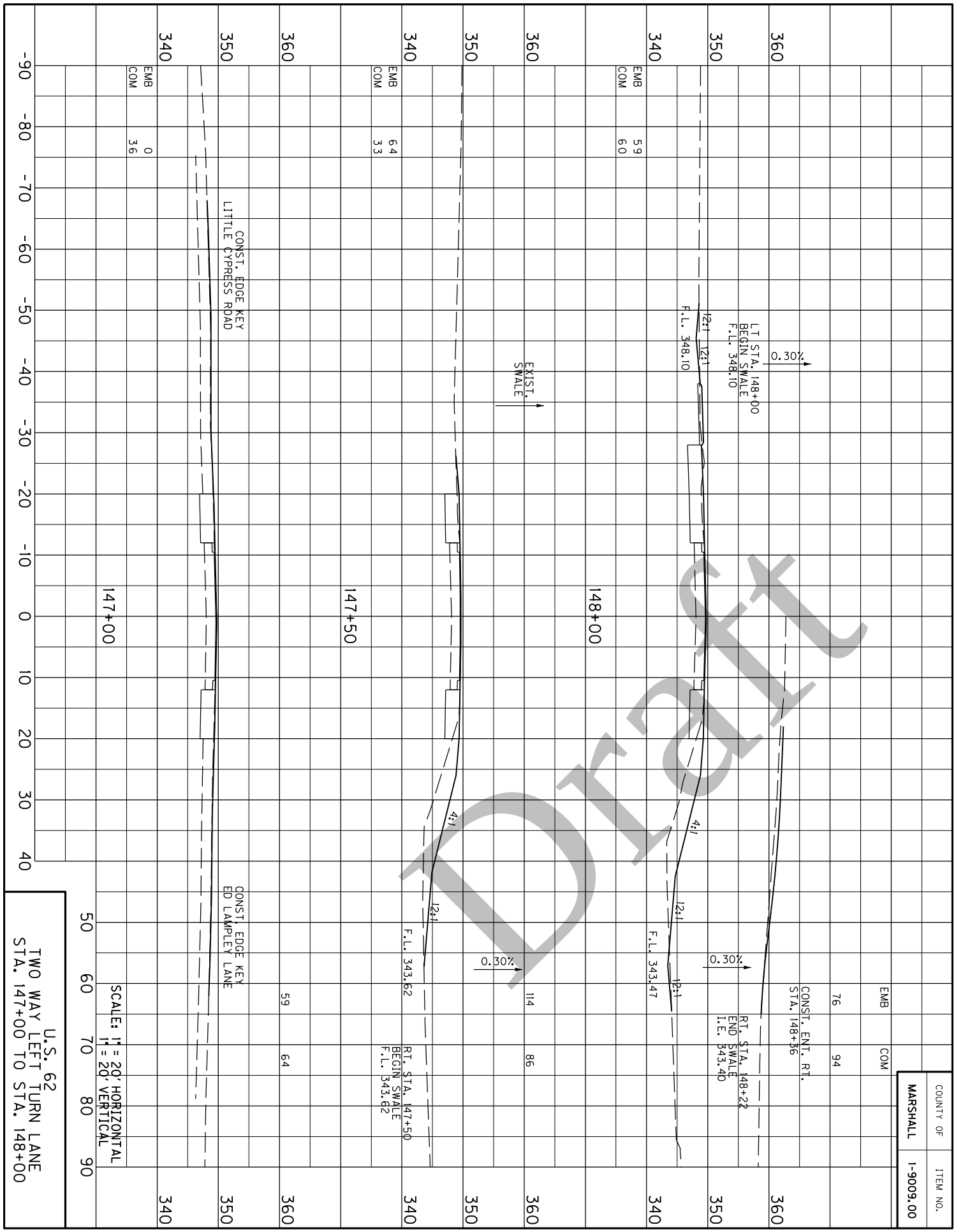

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
47
68
30
50
16
44
CONST. ENT. RT.
STA. 143+72
EXIST.
DITCH
0.30%
F.L. 348.10
4:1
143+50
CONST. ENT. LT.
STA. 143+29
D.N.D. EXIST. ENT. PIPE
END TAPER
STA. 143+15
F.L. 348.25
143+00
CONST. ENT. LT.
STA. 142+72
D.N.D. EXIST. ENT. PIPE
RT STA. 142+50
BEGIN SWALE RT.
F.L. 348.40
142+50
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
TWO WAY LEFT TURN LANE
STA. 142+50 TO STA. 143+50

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

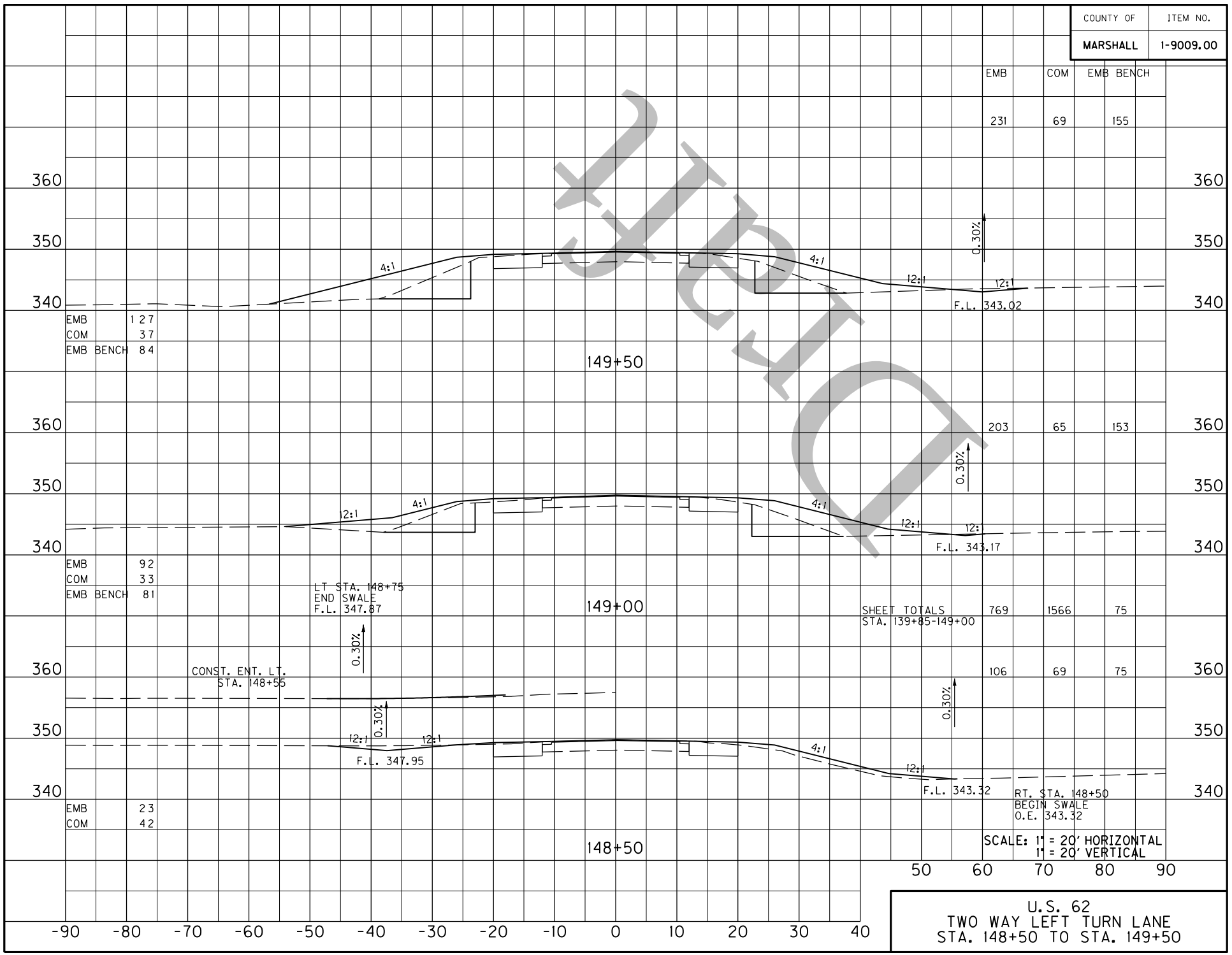


U.S. 62
TWO WAY LEFT TURN LANE
STA. 144+00 TO STA. 145+00


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
59
107
65
106
35
107
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
LT STA. 146+80
END SPEC. "V" DT
O.E. 341.05
3:1
4:1
F.L. 342.95
6.33%
0.50%
LT STA. 146+06
BEGIN SPEC. "V" DT
O.E. 343.17
146+50
EMB
COM
64
80
CONST. ENT. LT.
STA. 145+86
WITH 18" PIPE
146+00
EMB
COM
6
35
LT STA. 145+69
END SPEC. "V" DT
I.E. 343.36
0.50%
F.L. 343.45
145+50
EMB
COM
32
81
RT STA. 145+75
END SWALE RT.
F.L. 347.42
0.30%
F.L. 347.50
12:1
U.S. 62
TWO WAY LEFT TURN LANE
STA. 145+50 TO STA. 146+50

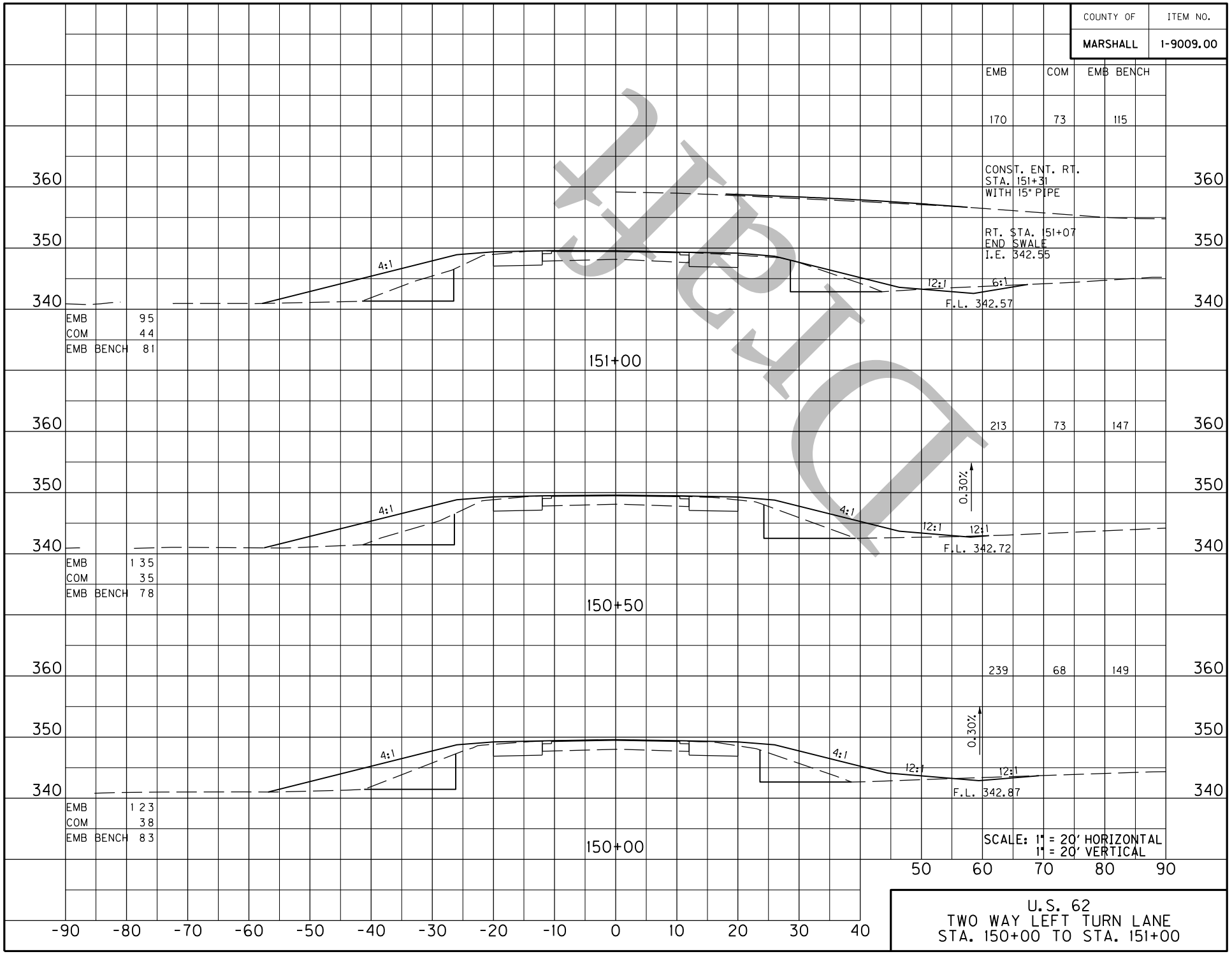

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
CONST. ENT. RT.
STA. 148+36
RT. STA. 148+22
END SWALE
I.E. 343.40
LT STA. 148+00
BEGIN SWALE
F.L. 348.10
EXIST.
SWALE
CONST. EDGE KEY
LITTLE CYPRESS ROAD
CONST. EDGE KEY
ED LAMPLEY LANE
RT. STA. 147+50
BEGIN SWALE
F.L. 343.62
0.30%
12:1
4:1
F.L. 348.10
F.L. 343.47
F.L. 343.62
148+00
147+50
147+00
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
TWO WAY LEFT TURN LANE
STA. 147+00 TO STA. 148+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

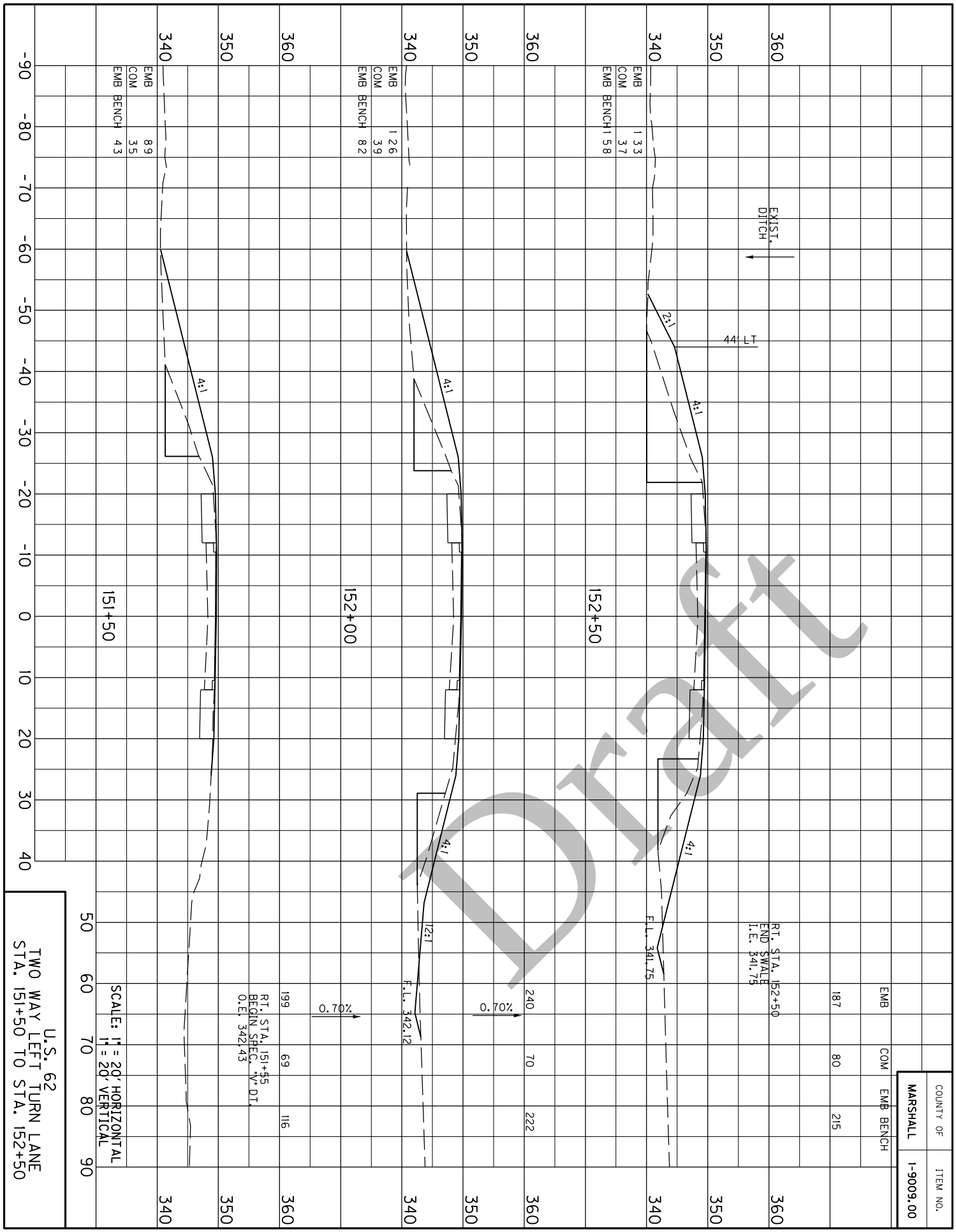


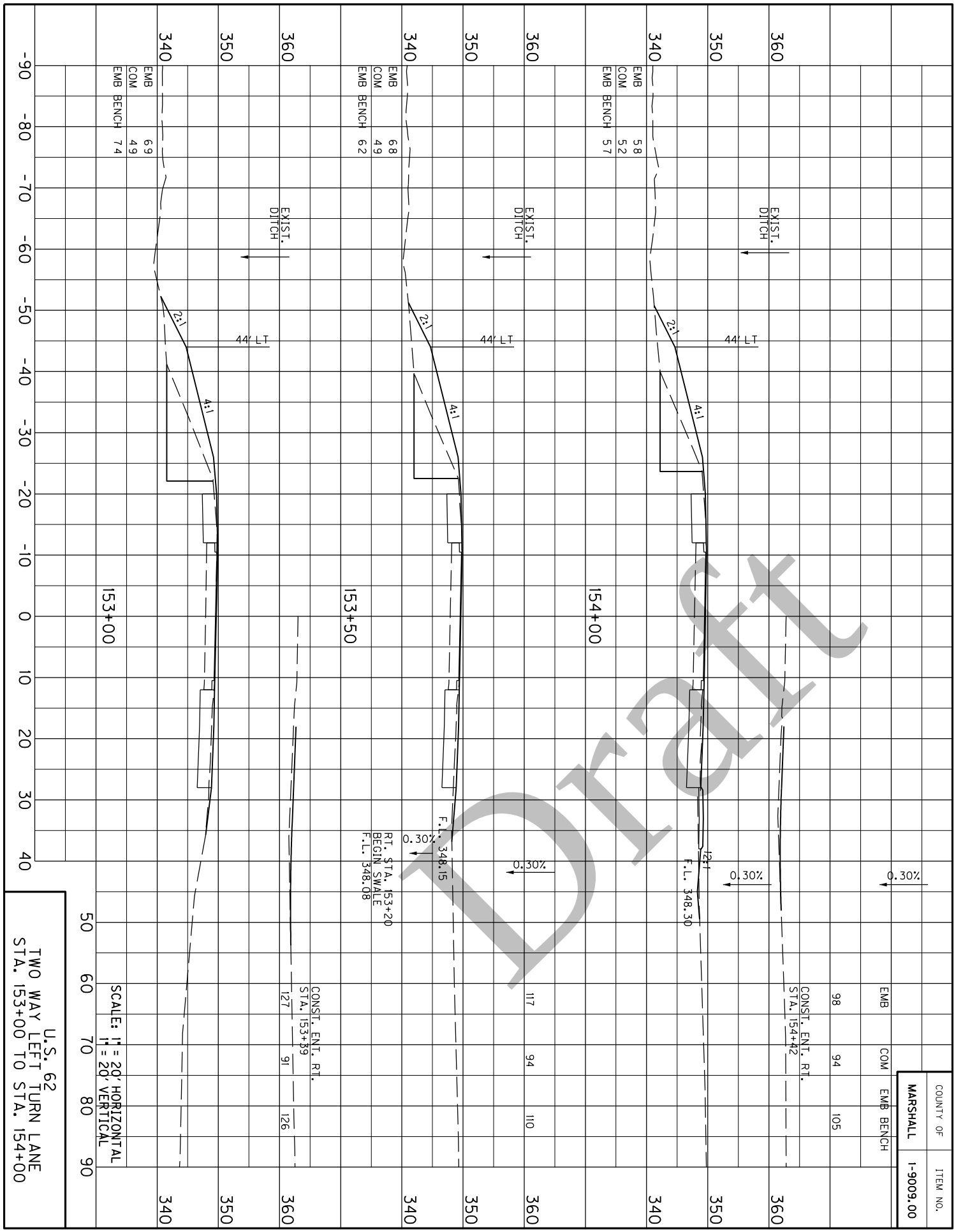
U.S. 62
TWO WAY LEFT TURN LANE
STA. 148+50 TO STA. 149+50

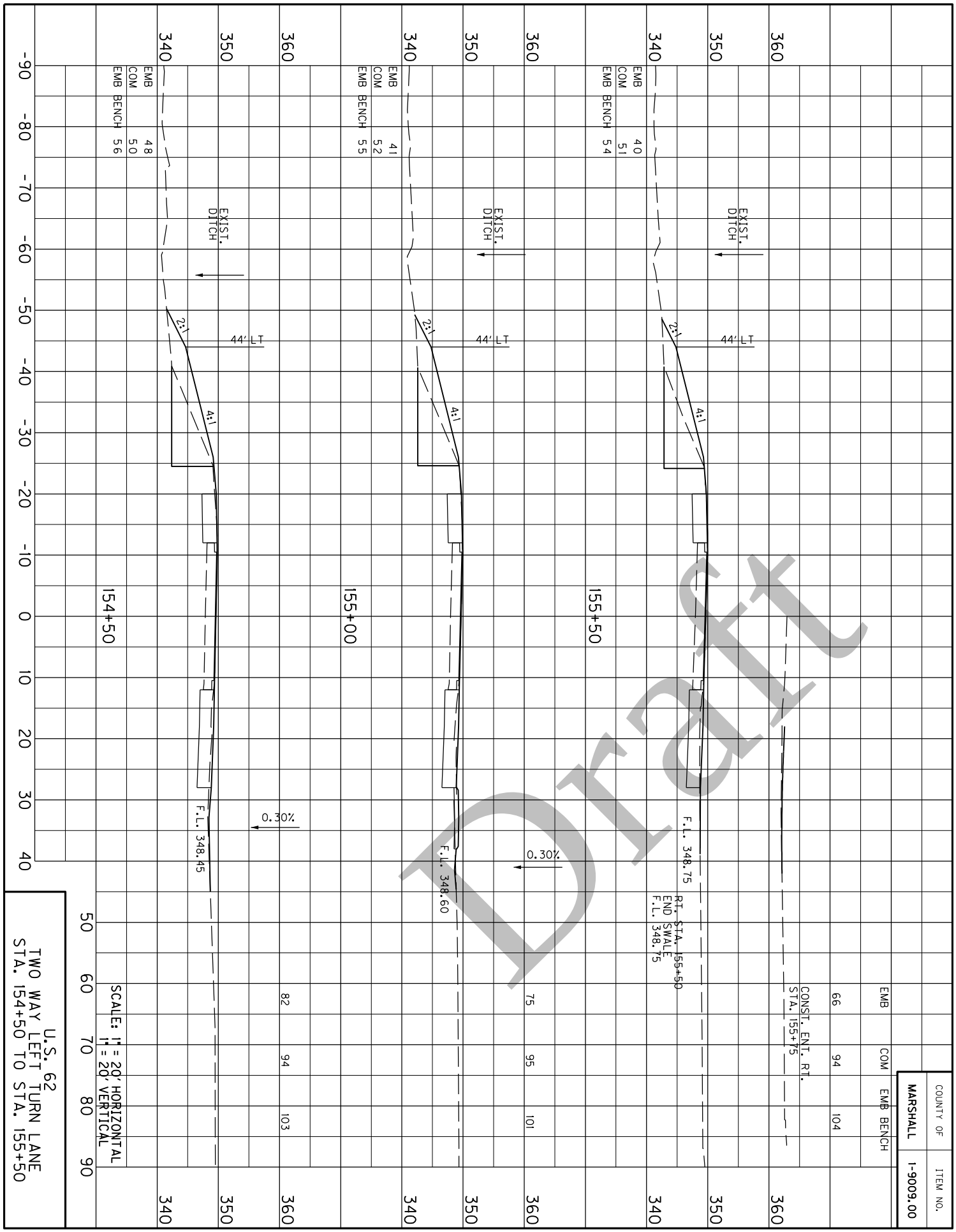
COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

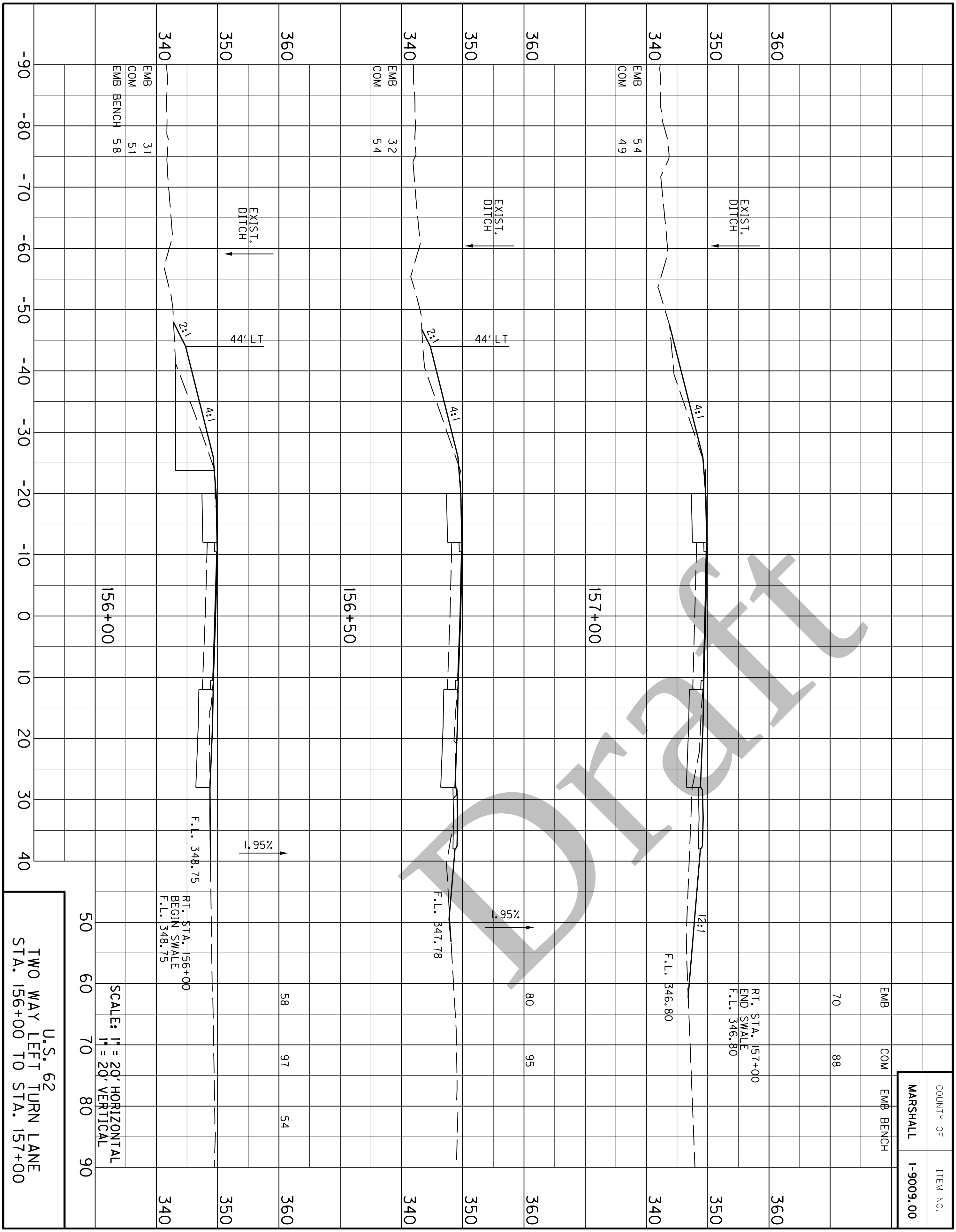


U.S. 62
TWO WAY LEFT TURN LANE
STA. 150+00 TO STA. 151+00

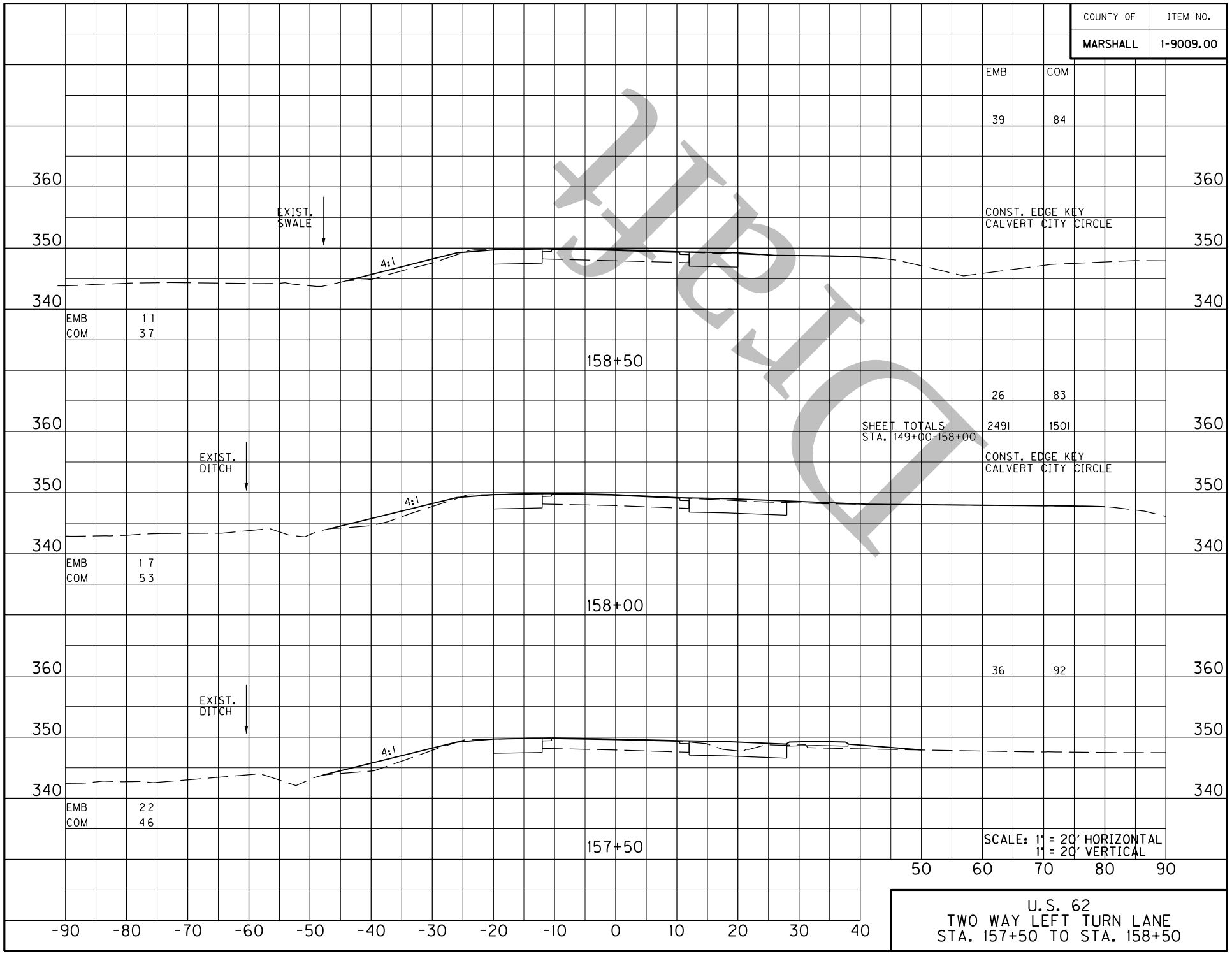

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
EMB BENCH
187
80
215
240
70
222
199
69
116
EXIST. DITCH
2:1
4:1
44' LT
RT. STA. 152+50
END SWALE
I.E. 341.75
F.L. 341.75
12:1
F.L. 342.12
0.70%
RT. STA. 151+55
BEGIN SPEC. "V" DT.
O.E. 342.43
EMB 133
COM 37
EMB BENCH 158
EMB 126
COM 39
EMB BENCH 82
EMB 89
COM 35
EMB BENCH 43
151+50
152+00
152+50
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
TWO WAY LEFT TURN LANE
STA. 151+50 TO STA. 152+50


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
EMB BENCH
98
94
105
117
94
110
127
91
126
CONST. ENT. RT.
STA. 154+42
CONST. ENT. RT.
STA. 153+39
RT. STA. 153+20
BEGIN SWALE
F.L. 348.08
F.L. 348.15
F.L. 348.30
0.30%
12:1
2:1
4:1
44' LT
EXIST.
DITCH
154+00
153+50
153+00
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
TWO WAY LEFT TURN LANE
STA. 153+00 TO STA. 154+00

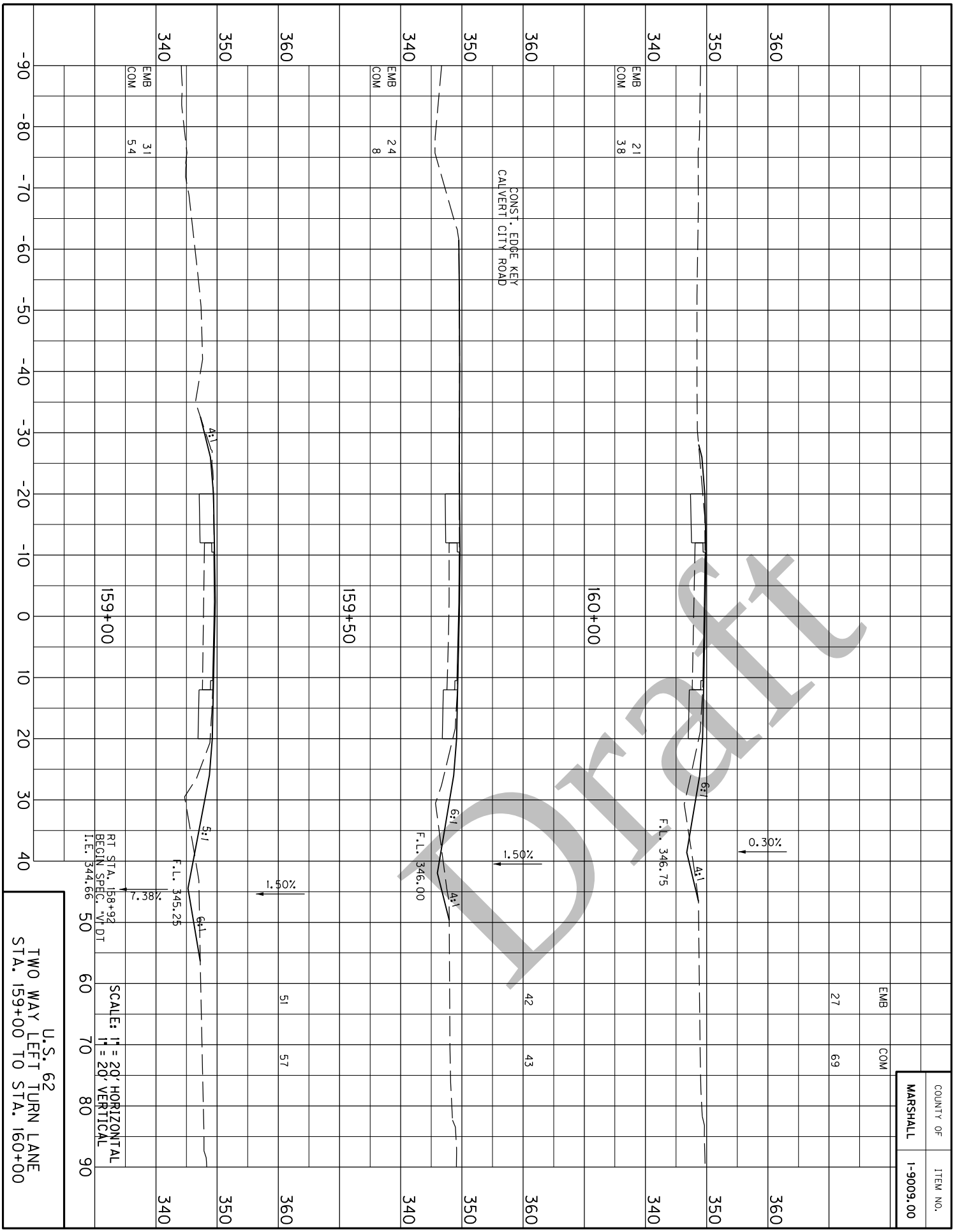

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
EMB BENCH
66
94
104
75
95
101
82
94
103
CONST. ENT. RT.
STA. 155+75
RT. STA. 155+50
END SWALE
F.L. 348.75
F.L. 348.75
F.L. 348.60
F.L. 348.45
0.30%
0.30%
EXIST. DITCH
EXIST. DITCH
EXIST. DITCH
44' LT
44' LT
44' LT
2:1
4:1
EMB
COM
EMB BENCH
40
51
54
41
52
55
48
50
56
154+50
155+00
155+50
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
TWO WAY LEFT TURN LANE
STA. 154+50 TO STA. 155+50


U.S. 62
TWO WAY LEFT TURN LANE
STA. 156+00 TO STA. 157+00
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
156+00
156+50
157+00
EXIST. DITCH
44' LT
2:1
4:1
12:1
1.95%
F.L. 348.75
RT. STA. 156+00
BEGIN SWALE
F.L. 348.75
F.L. 347.78
F.L. 346.80
RT. STA. 157+00
END SWALE
F.L. 346.80
EMB
COM
EMB BENCH
COUNTY OF
MARSHALL
ITEM NO.
I-9009.00
Draft

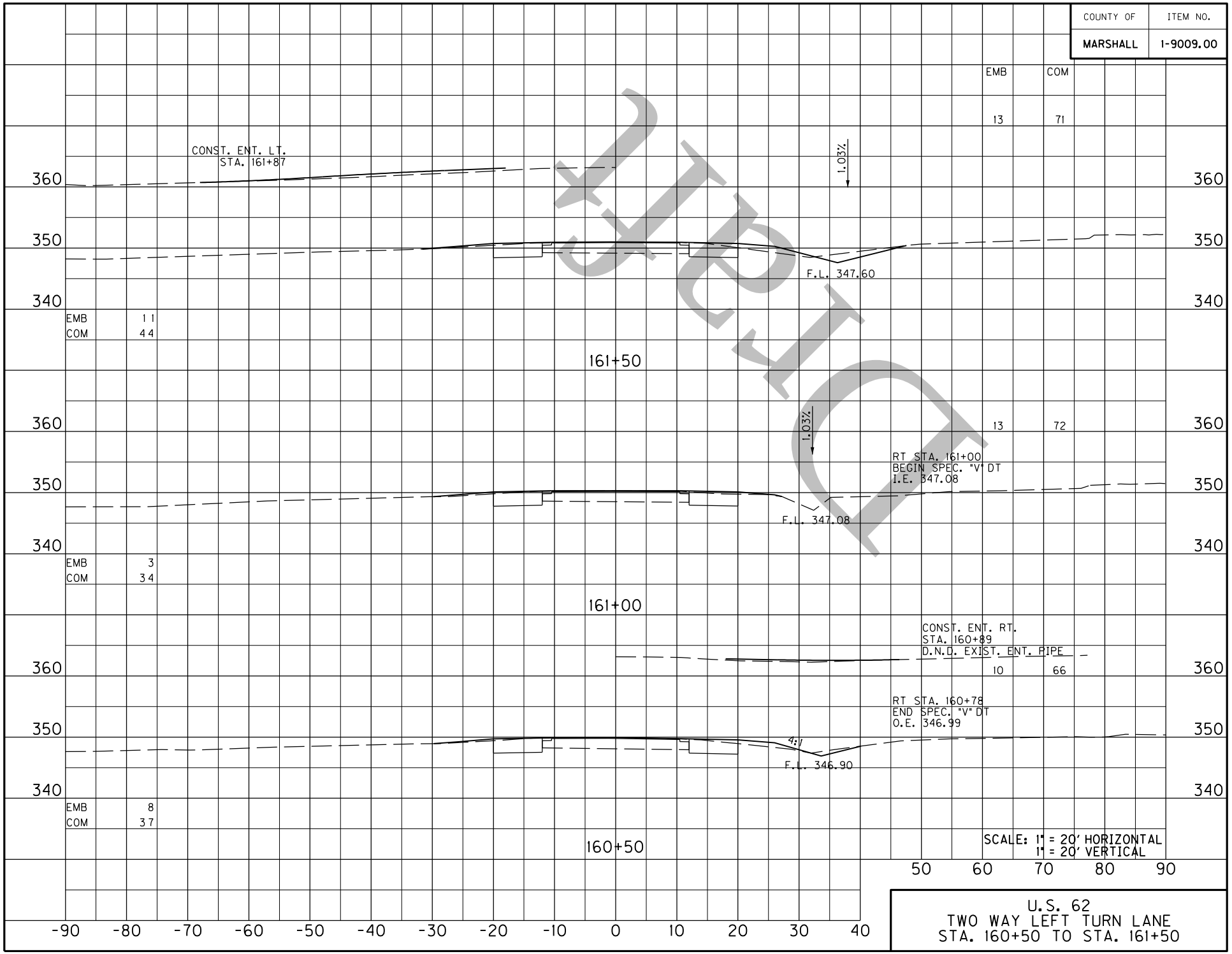
COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



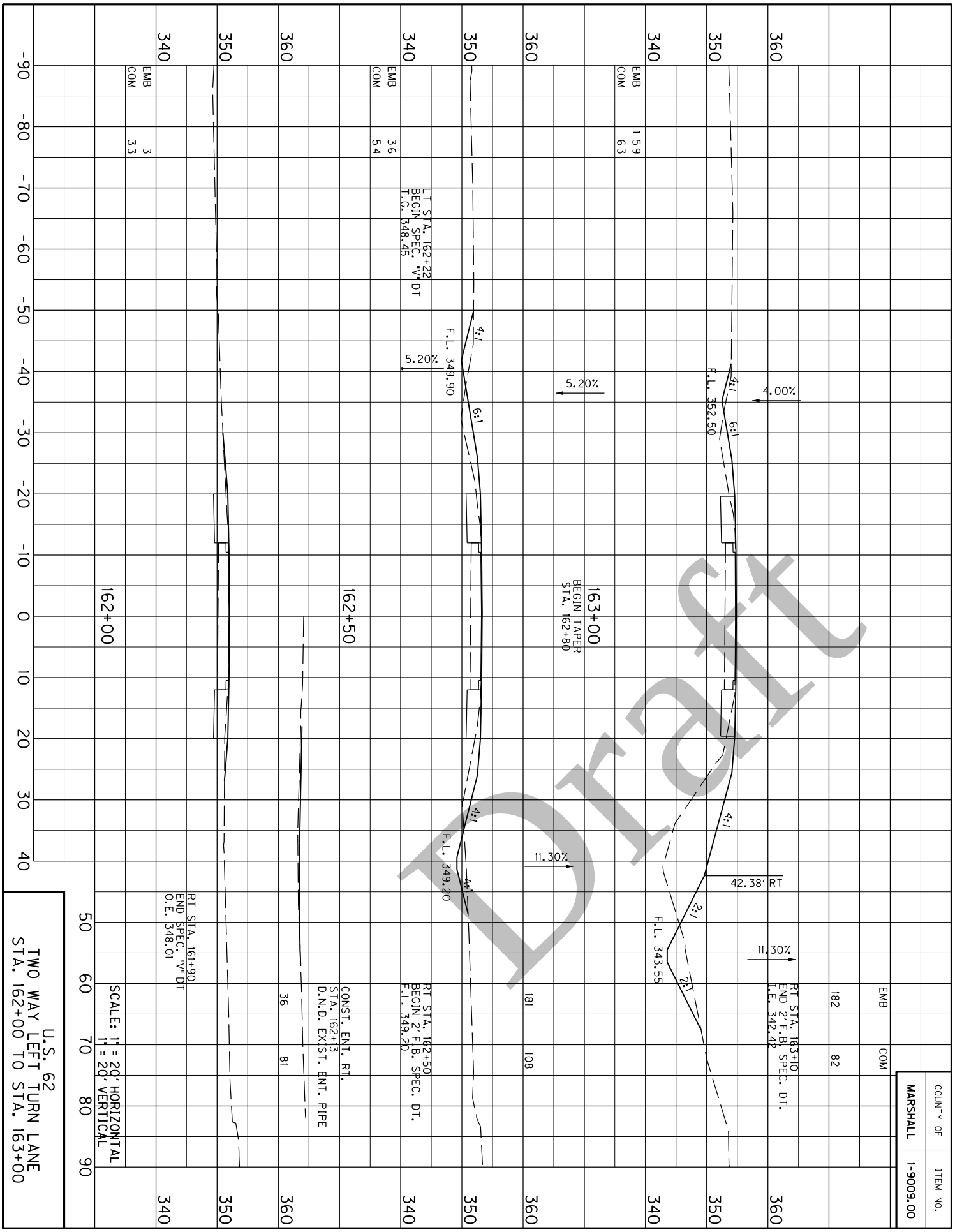
U.S. 62
TWO WAY LEFT TURN LANE
STA. 157+50 TO STA. 158+50

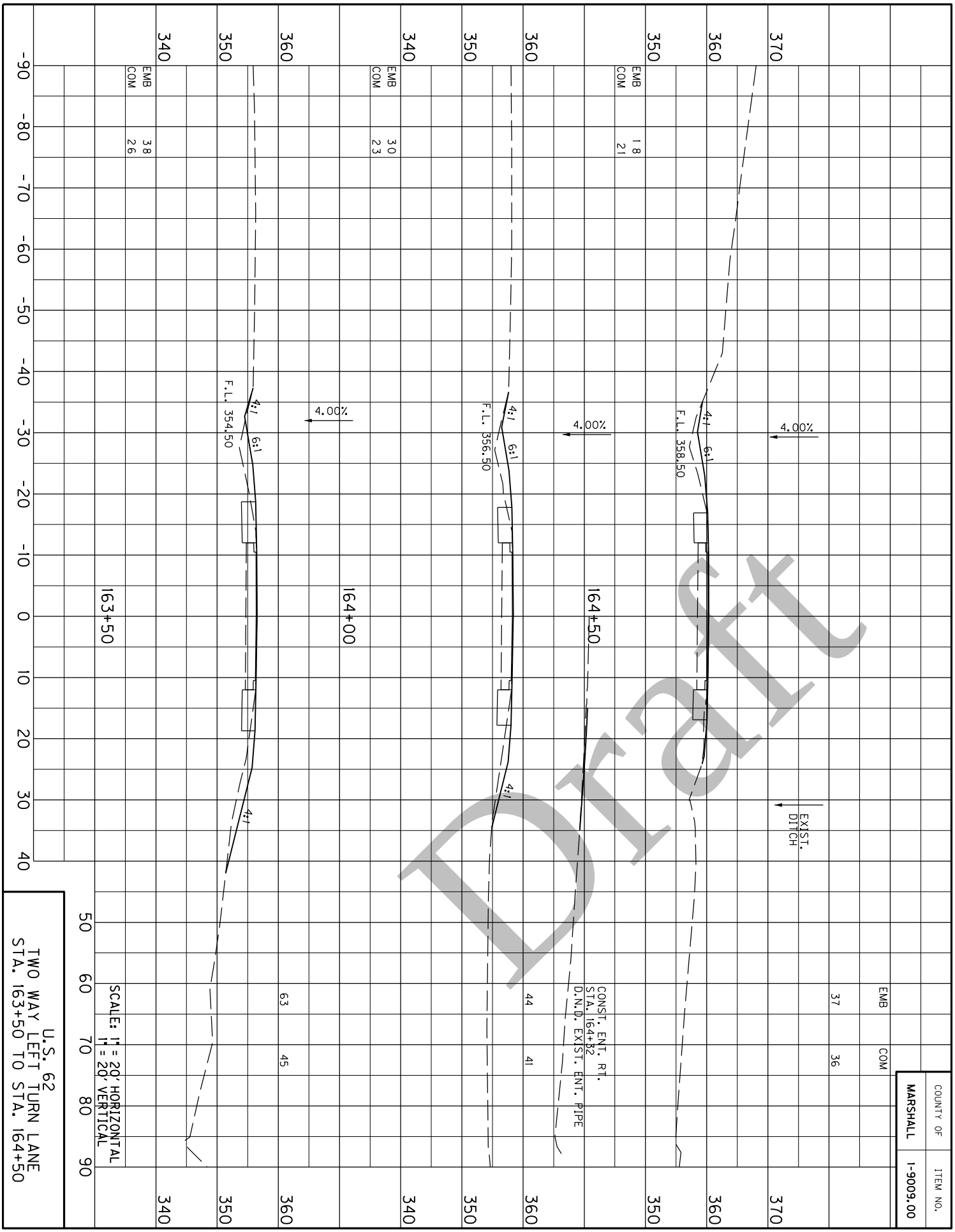

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
27
69
42
43
51
57
EMB
COM
21
38
EMB
COM
24
8
EMB
COM
31
54
CONST. EDGE KEY
CALVERT CITY ROAD
160+00
159+50
159+00
F.L. 346.75
F.L. 346.00
F.L. 345.25
0.30%
1.50%
1.50%
7.38%
6:1
4:1
6:1
4:1
5:1
6:1
4:1
RT STA. 158+92
BEGIN SPEC. "V" DT
I.E. 344.66
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
TWO WAY LEFT TURN LANE
STA. 159+00 TO STA. 160+00

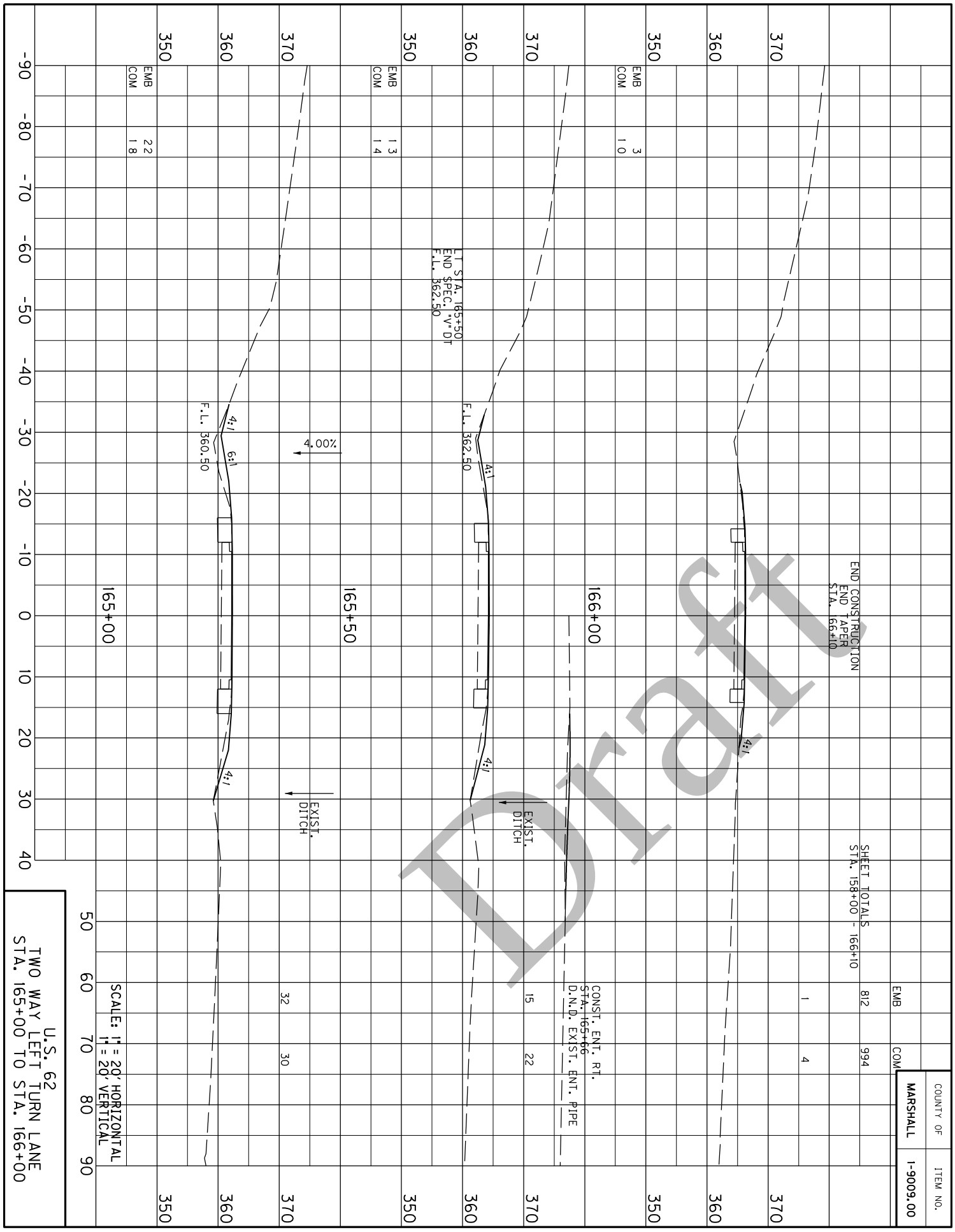
COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

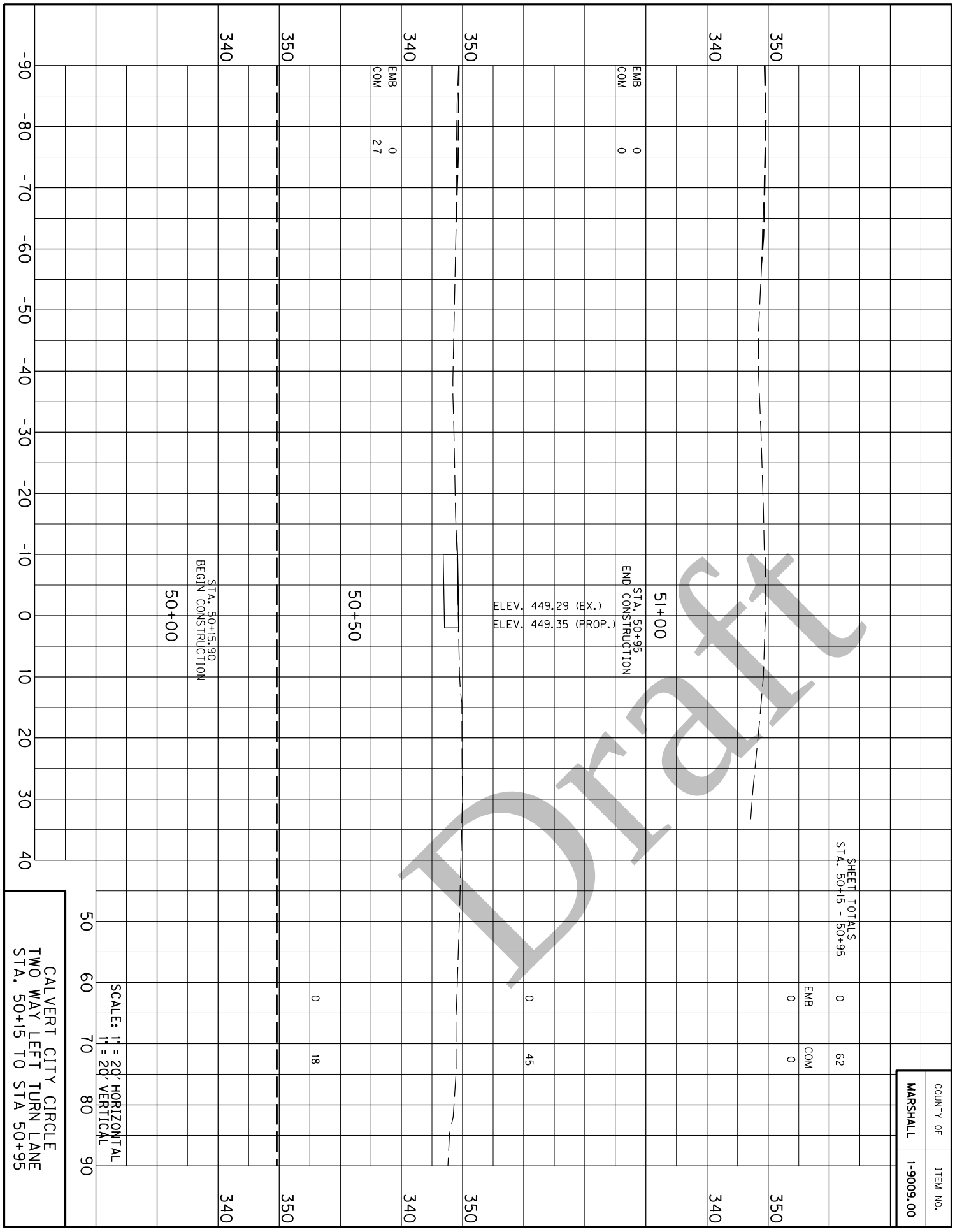


U.S. 62
TWO WAY LEFT TURN LANE
STA. 160+50 TO STA. 161+50


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
182
82
RT STA. 163+10
END 2' F.B. SPEC. DT.
I.E. 342.42
4:1
6:1
4.00%
F.L. 352.50
2:1
11.30%
42.38' RT
F.L. 343.55
181
108
RT STA. 162+50
BEGIN 2' F.B. SPEC. DT.
F.L. 349.20
CONST. ENT. RT.
STA. 162+13
D.N.D. EXIST. ENT. PIPE
36
81
RT STA. 161+90
END SPEC. "V" DT
O.E. 348.01
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
TWO WAY LEFT TURN LANE
STA. 162+00 TO STA. 163+00
163+00
BEGIN TAPER
STA. 162+80
5.20%
EMB
COM
159
63
36
54
3
33
LT STA. 162+22
BEGIN SPEC. "V" DT
T.G. 348.45
F.L. 349.90
162+50
162+00
340
350
360
-90
-80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
80
90


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
37
36
EXIST. DITCH
4.00%
4:1
6:1
F.L. 358.50
EMB
COM
18
21
164+50
CONST. ENT. RT.
STA. 164+32
D.N.D. EXIST. ENT. PIPE
44
41
4.00%
4:1
6:1
F.L. 356.50
EMB
COM
30
23
164+00
63
45
4.00%
4:1
6:1
F.L. 354.50
EMB
COM
38
26
163+50
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
TWO WAY LEFT TURN LANE
STA. 163+50 TO STA. 164+50

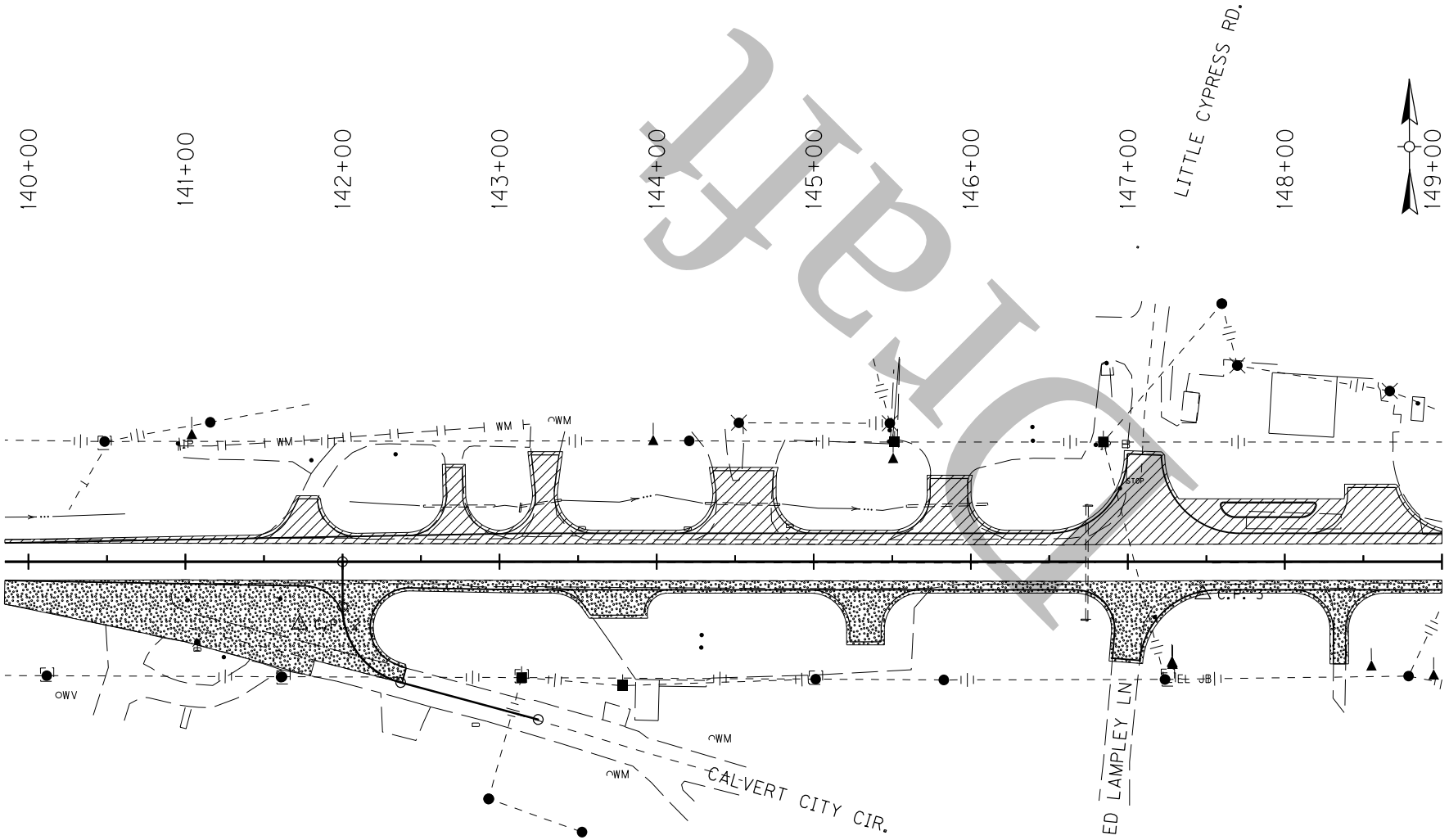

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
812
994
1
4
SHEET TOTALS
STA. 158+00 - 166+10
END CONSTRUCTION
END TAPER
STA. 166+10
166+00
CONST. ENT. RT.
STA. 165+66
D.N.D. EXIST. ENT. PIPE
15
22
EXIST.
DITCH
165+50
4.00%
32
30
EXIST.
DITCH
165+00
EMB
COM
22
18
EMB
COM
13
14
L.T. STA. 185+50
END SPEC. "V" DT
F.L. 362.50
F.L. 362.50
F.L. 360.50
4:1
6:1
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
TWO WAY LEFT TURN LANE
STA. 165+00 TO STA. 166+00


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
SHEET TOTALS
STA. 50+15 - 50+95
0
62
EMB
COM
0
0
0
0
51+00
STA. 50+95
END CONSTRUCTION
EMB
COM
0
0
0
27
50+50
ELEV. 449.29 (EX.)
ELEV. 449.35 (PROP.)
0
45
0
18
50+00
STA. 50+15.90
BEGIN CONSTRUCTION
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
CALVERT CITY CIRCLE
TWO WAY LEFT TURN LANE
STA. 50+15 TO STA 50+95
Draft

COUNTY OF	ITEM NO.
MARSHALL	I-9009.00

PHASE 1

PHASE 2



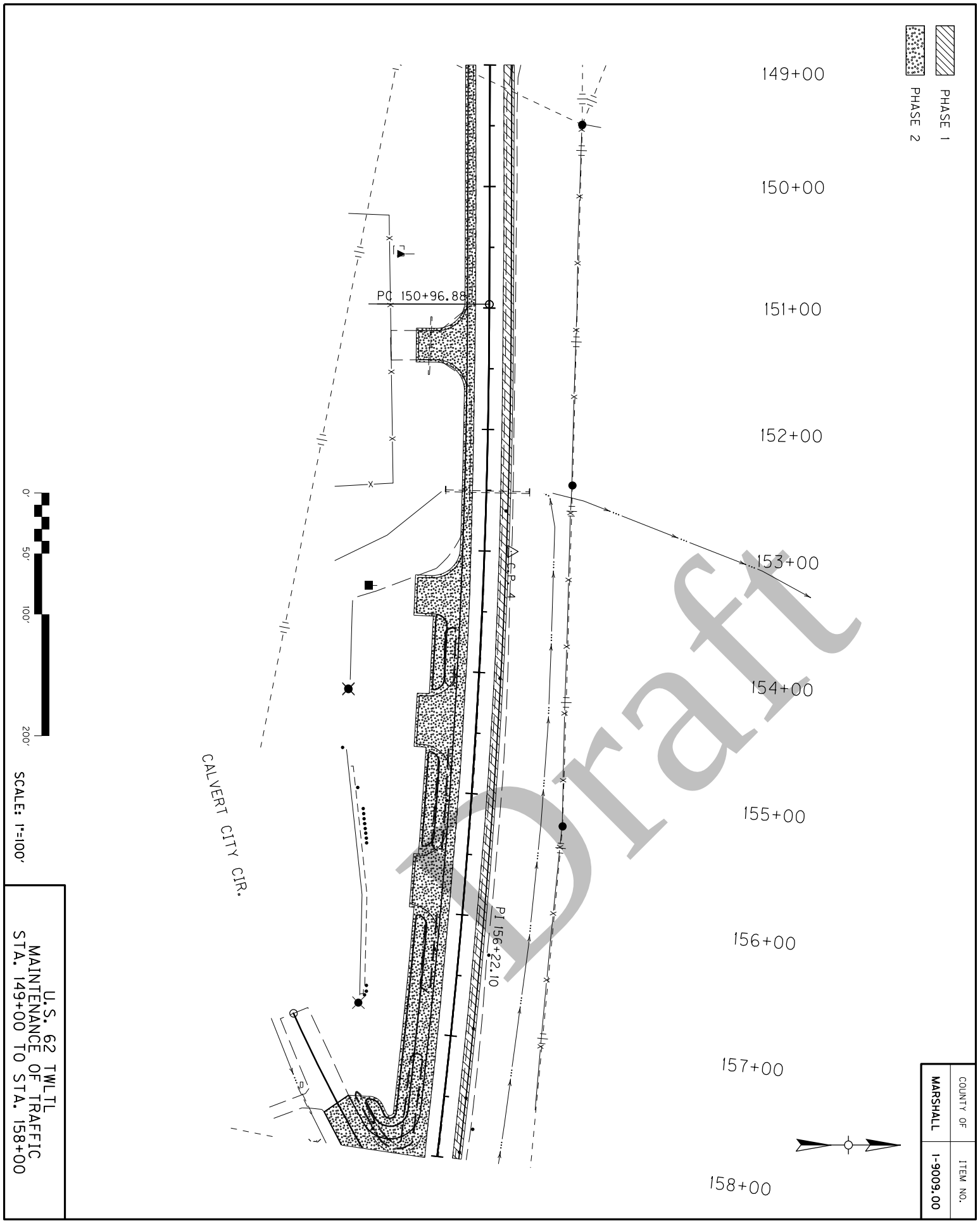
PHASE I
COMPLETE WIDENING OF WESTBOUND U.S. 62

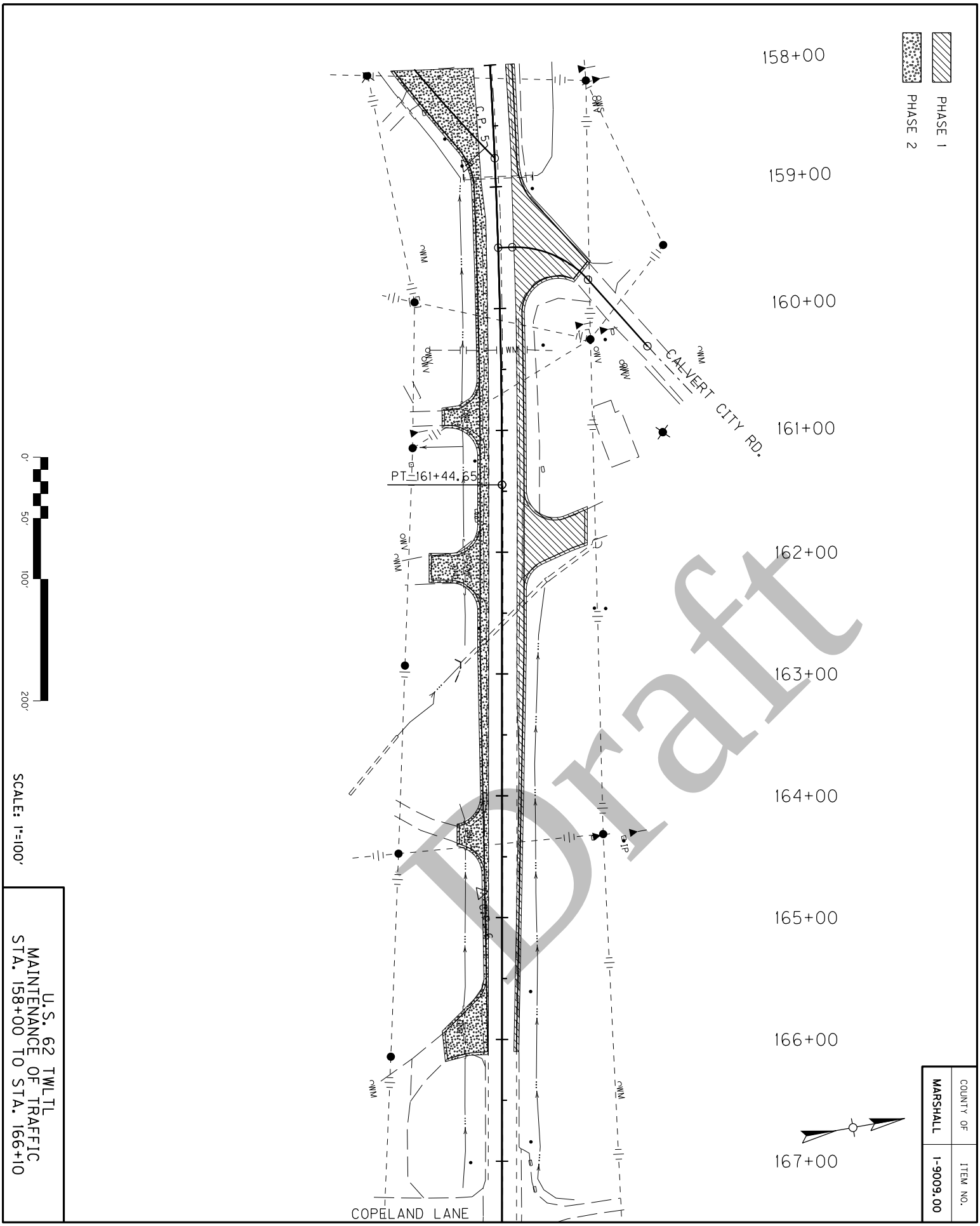
PHASE II
COMPLETE WIDENING OF EASTBOUND U.S. 62

0′ 50′ 100′ 200′

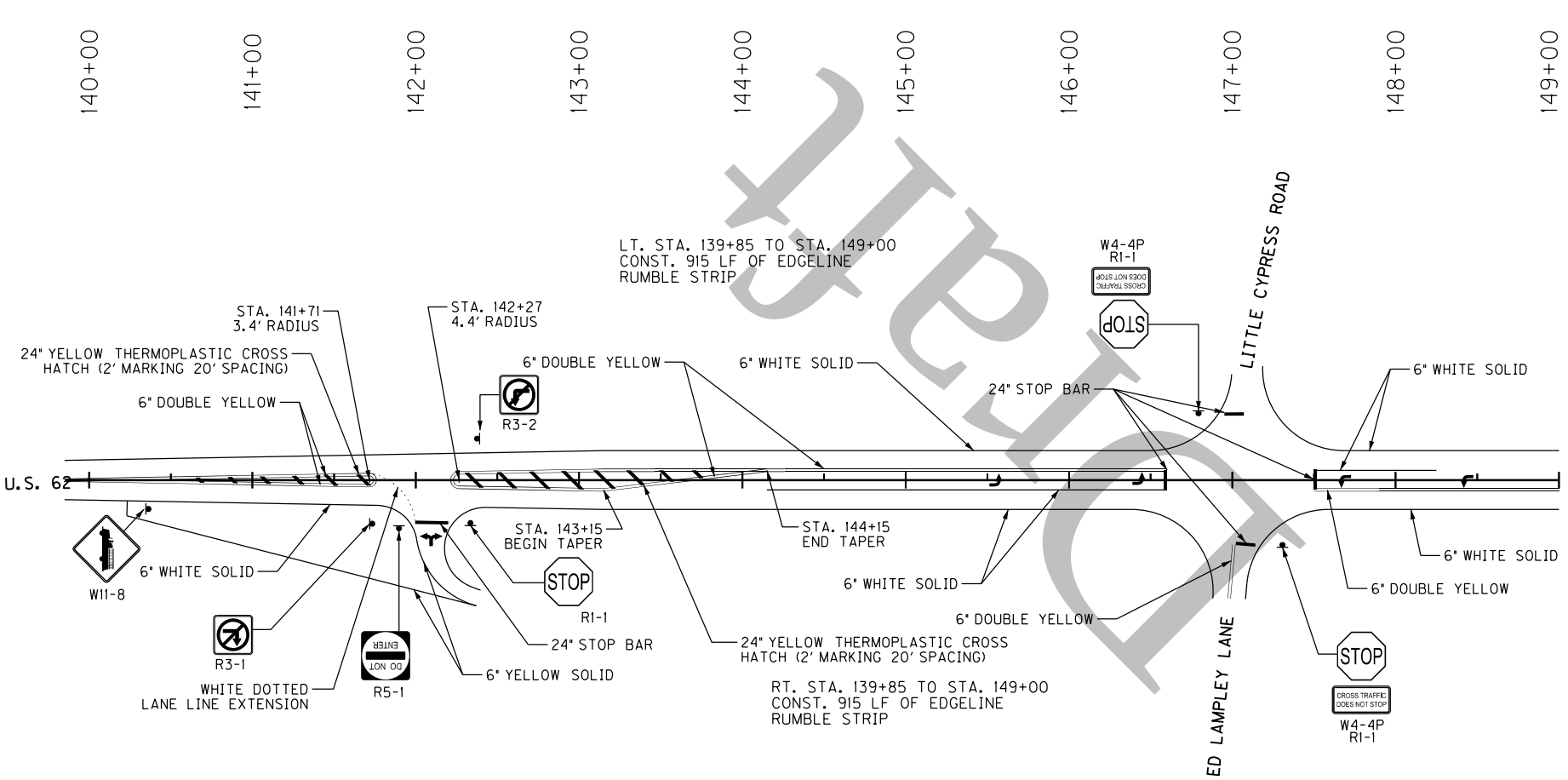
SCALE: 1"=100′

U.S. 62 TWLTL
MAINTENANCE OF TRAFFIC
STA. 139+85 TO STA. 149+00


PHASE 1
PHASE 2
149+00
150+00
151+00
152+00
153+00
154+00
155+00
156+00
157+00
158+00
PC 150+96.88
C.P. 4
PI 156+22.10
CALVERT CITY CIR.
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62 TWLTL
MAINTENANCE OF TRAFFIC
STA. 149+00 TO STA. 158+00
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00


PHASE 1
PHASE 2
158+00
159+00
160+00
161+00
162+00
163+00
164+00
165+00
166+00
167+00
C.P. 5
CALVERT CITY RD.
PT 161+44.65
COPELAND LANE
0'
50'
100'
200'
SCALE: 1"=100'
U.S. 62 TWLTL
MAINTENANCE OF TRAFFIC
STA. 158+00 TO STA. 166+10
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	322
6" YELLOW DOUBLE	1205
6" WHITE SOLID	2242
6" WHITE DOTTED	43
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	----
24" YELLOW CROSS HATCH	205
CURVE ARROW	6
"ONLY" MARKING	----
24" STOP BAR	68
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----
6" YELLOW SOLID / DASH	----

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

SIGNING QUANTITY SUMMARY		
FIRE STATION	W11-8	140+35, RT.
NO RIGHT TURN	R3-1	141+75, RT.
DO NOT ENTER	R5-1	141+90, RT.
NO LEFT TURN	R3-2	142+35, LT.
STOP	R1-1	142+30, RT.
STOP	R1-1	146+80, LT.
STOP	R1-1	147+30, RT.
CROSS TRAFFIC	W4-4P	146+80, LT.
CROSS TRAFFIC	W4-4P	147+30, RT.

QUANTITIES CARRIED OVER TO SIGNING SUMMARY

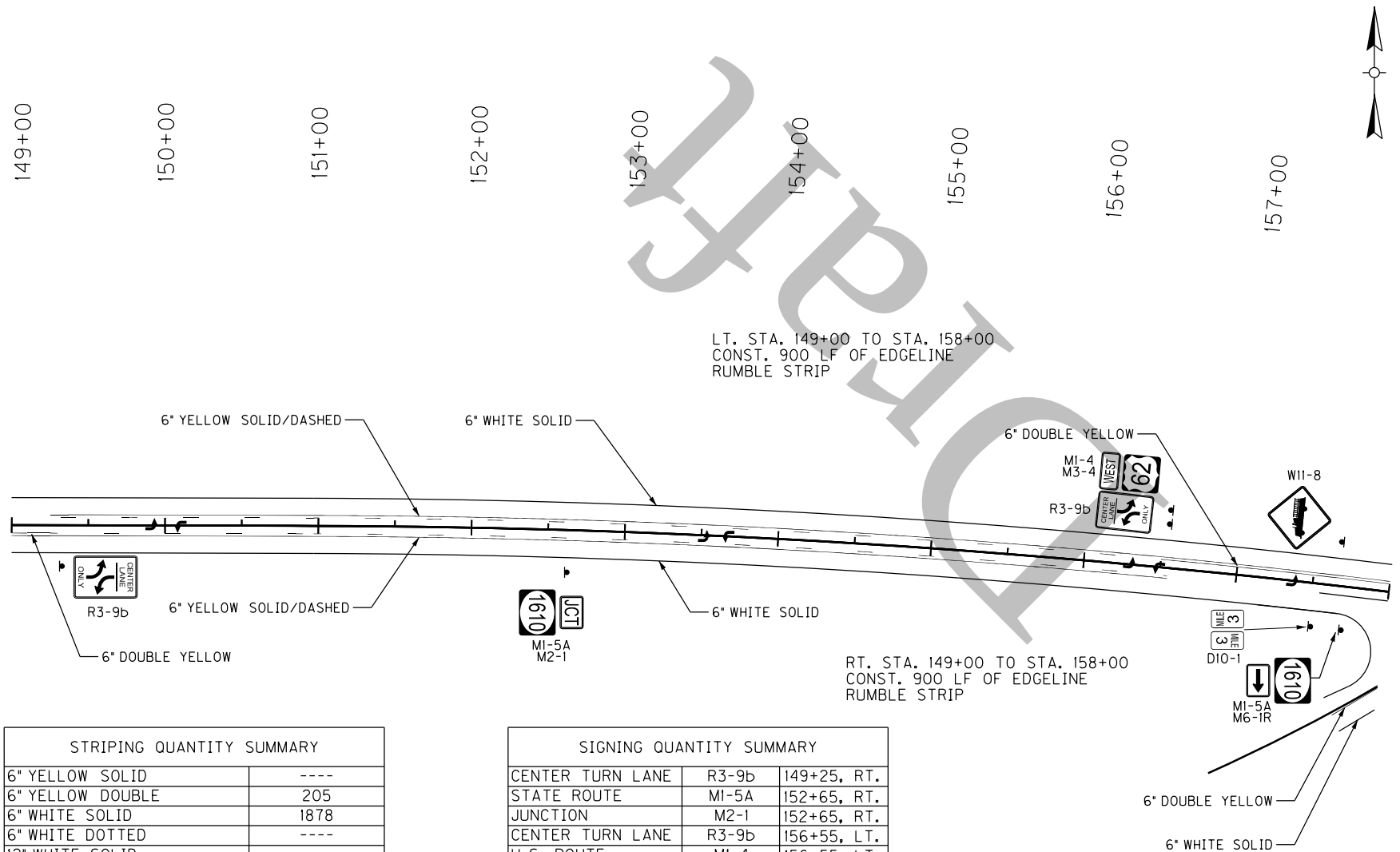
STOP BAR LOCATIONS
STA. 142+10, RT.
STA. 146+60, ℄
STA. 147+00, LT.
STA. 147+10, RT.
STA. 147+50, ℄

0' 50' 100' 200'

SCALE: 1"=100'

U.S. 62 TWLTL
SIGNING & STRIPING PLAN
STA. 139+85 TO STA. 149+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

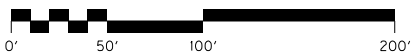


STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	----
6" YELLOW DOUBLE	205
6" WHITE SOLID	1878
6" WHITE DOTTED	----
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	----
24" YELLOW CROSS HATCH	----
CURVE ARROW	7
"ONLY" MARKING	----
24" STOP BAR	----
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----
6" YELLOW SOLID / DASH	1449

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

SIGNING QUANTITY SUMMARY		
CENTER TURN LANE	R3-9b	149+25, RT.
STATE ROUTE	M1-5A	152+65, RT.
JUNCTION	M2-1	152+65, RT.
CENTER TURN LANE	R3-9b	156+55, LT.
U.S. ROUTE	M1-4	156+55, LT.
WEST	M3-4	156+55, LT.
MILE MARKER	D10-1	157+50, RT.
STATE ROUTE	M1-5A	157+70, RT.
DIRECTIONAL ARROW	M6-1R	157+70, RT.
FIRE STATION	W11-8	157+70, LT.

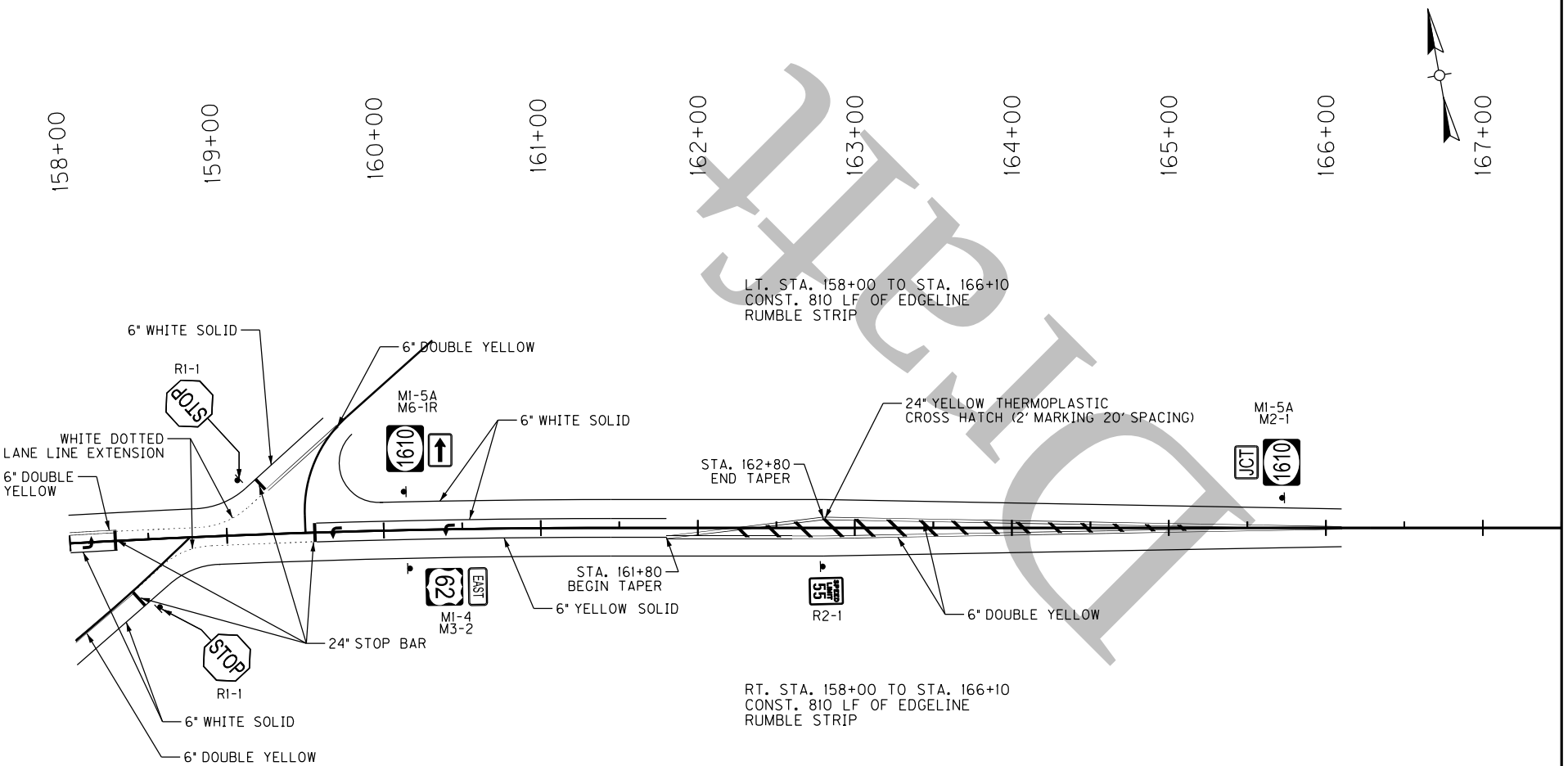
QUANTITIES CARRIED OVER TO SIGNING SUMMARY



SCALE: 1"=100'

U.S. 62 TWLTL
SIGNING & STRIPING PLAN
STA. 149+00 TO STA. 158+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	222
6" YELLOW DOUBLE	1000
6" WHITE SOLID	1938
6" WHITE DOTTED	228
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	----
24" YELLOW CROSS HATCH	237
CURVE ARROW	3
"ONLY" MARKING	----
24" STOP BAR	45
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----
6" YELLOW SOLID / DASH	----

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

SIGNING QUANTITY SUMMARY		
STOP	R1-1	158+55, RT.
STOP	R1-1	159+10, LT.
STATE ROUTE	M1-5A	160+15, LT.
DIRECTIONAL ARROW	M6-1R	160+15, LT.
U.S. ROUTE	M1-4	160+15, RT.
EAST	M3-2	160+15, RT.
SPEED LIMIT	R2-2	162+80, RT.
STATE ROUTE	M1-5A	165+75 LT.
JUNCTION	M2-1	165+75, LT.

QUANTITIES CARRIED OVER TO SIGNING SUMMARY

STOP BAR LOCATIONS
STA. 158+30, ℄
STA. 158+40, RT.
STA. 159+20, LT.
STA. 159+55, ℄

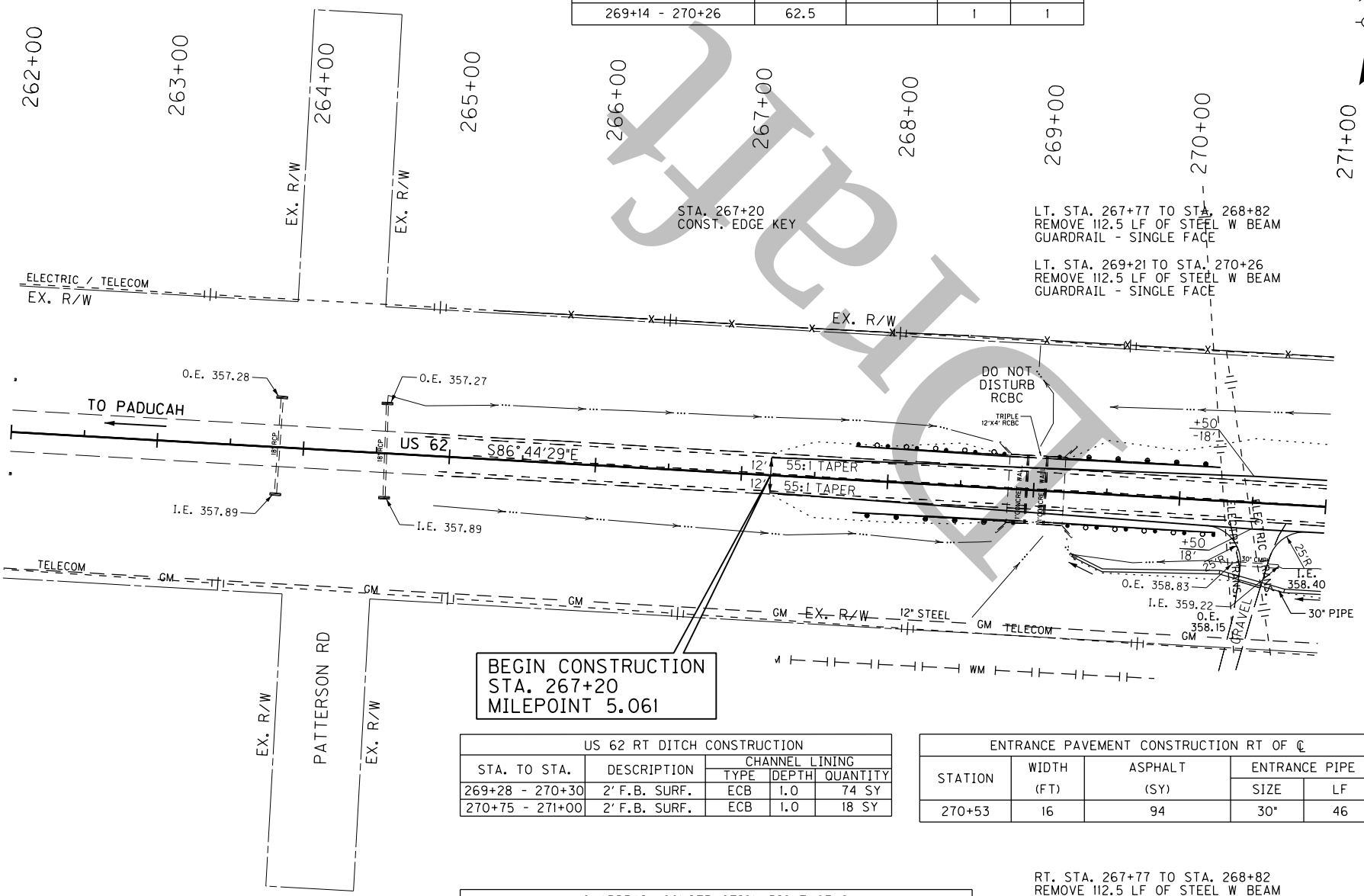
0' 50' 100' 200'

SCALE: 1"=100'

U.S. 62 TWLTL
SIGNING & STRIPING PLAN
STA. 158+00 TO STA. 166+10

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

GUARDRAIL CONSTRUCTION LEFT OF ℄				
STA. TO STA.	STEEL "W" BEAM (LF)		END TREATMENT (EA)	
	SINGLE FACE		TY. 1	BR TY-A
267+77 - 268+89	62.5		1	1
269+14 - 270+26	62.5		1	1



US 62 RT DITCH CONSTRUCTION				
STA. TO STA.	DESCRIPTION	CHANNEL LINING		
		TYPE	DEPTH	QUANTITY
269+28 - 270+30	2' F.B. SURF.	ECB	1.0	74 SY
270+75 - 271+00	2' F.B. SURF.	ECB	1.0	18 SY

ENTRANCE PAVEMENT CONSTRUCTION RT OF ℄				
STATION	WIDTH	ASPHALT	ENTRANCE PIPE	
	(FT)	(SY)	SIZE	LF
270+53	16	94	30"	46

GUARDRAIL CONSTRUCTION RIGHT OF ℄				
STA. TO STA.	STEEL "W" BEAM (LF)		END TREATMENT (EA)	
	SINGLE FACE		TY. 1	BR TY-A
267+77 - 268+89	62.5		1	1
269+14 - 270+26	62.5		1	1

RT. STA. 267+77 TO STA. 268+82
REMOVE 112.5 LF OF STEEL W BEAM
GUARDRAIL - SINGLE FACE

RT. STA. 269+21 TO STA. 270+26
REMOVE 112.5 LF OF STEEL W BEAM
GUARDRAIL - SINGLE FACE

0' 50' 100' 200'

SCALE: 1"=100'

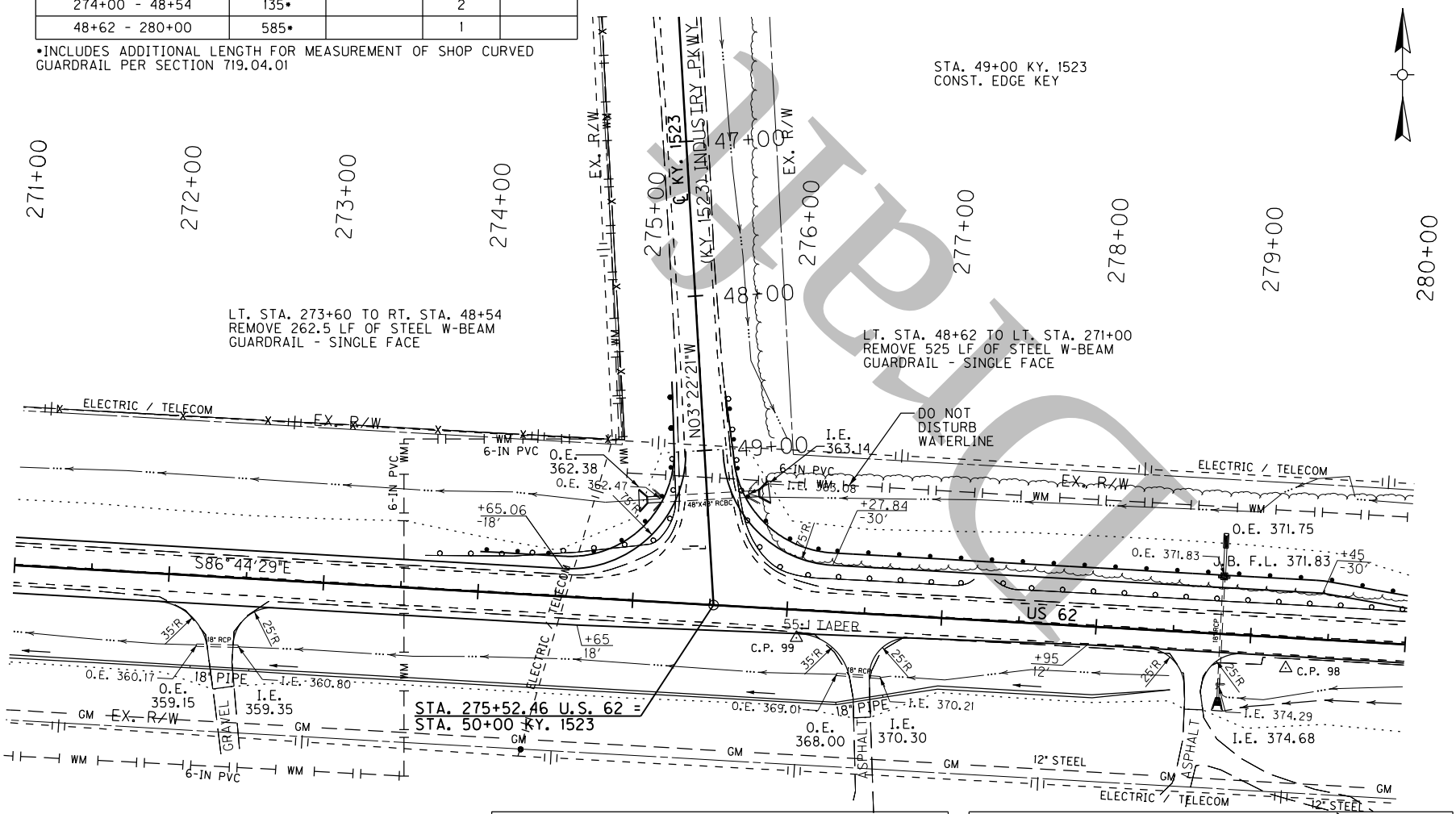
U.S. 62
KY 1523 TURN LANE WIDENING
STA. 262+00 TO STA. 271+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

GUARDRAIL CONSTRUCTION LEFT OF ℄				
STA. TO STA.	STEEL "W" BEAM (LF)		END TREATMENT (EA)	
	SINGLE FACE		TY. 1	
274+00 - 48+54	135•		2	
48+62 - 280+00	585•		1	

•INCLUDES ADDITIONAL LENGTH FOR MEASUREMENT OF SHOP CURVED GUARDRAIL PER SECTION 719.04.01

NOTE:
SEE STRUCTURAL PLANS FOR DESIGN DETAILS OF 4'X4' RCBC EXTENTIONS



US 62 RT DITCH CONSTRUCTION				
STA. TO STA.	DESCRIPTION	CHANNEL LINING		
		TYPE	DEPTH	QUANTITY
271+00 - 272+17	2' F.B. SURF.	ECB	1	85 SY
272+55 - 276+35	2' F.B. SURF.	ECB	1	274 SY
276+65 - 278+50	2' F.B. SURF.	ECB	1	134 SY
278+81 - 280+00	SPEC. "V"	ECB	1	93 SY

ENTRANCE PAVEMENT CONSTRUCTION RT OF ℄				
STATION	WIDTH (FT)	ASPHALT (SY)	ENTRANCE PIPE	
			SIZE	LF
272+35	14	121	18"	38'
276+47	11	99	18"	31'
278+61	12	65	N/A	N/A

STA. 272+20
SAFELOAD EXIST. 18" PIPE
WITH 1.8 C.Y. FLOWABLE FILL

STA. 276+34
SAFELOAD EXIST. 18" PIPE
WITH 1.8 C.Y. FLOWABLE FILL

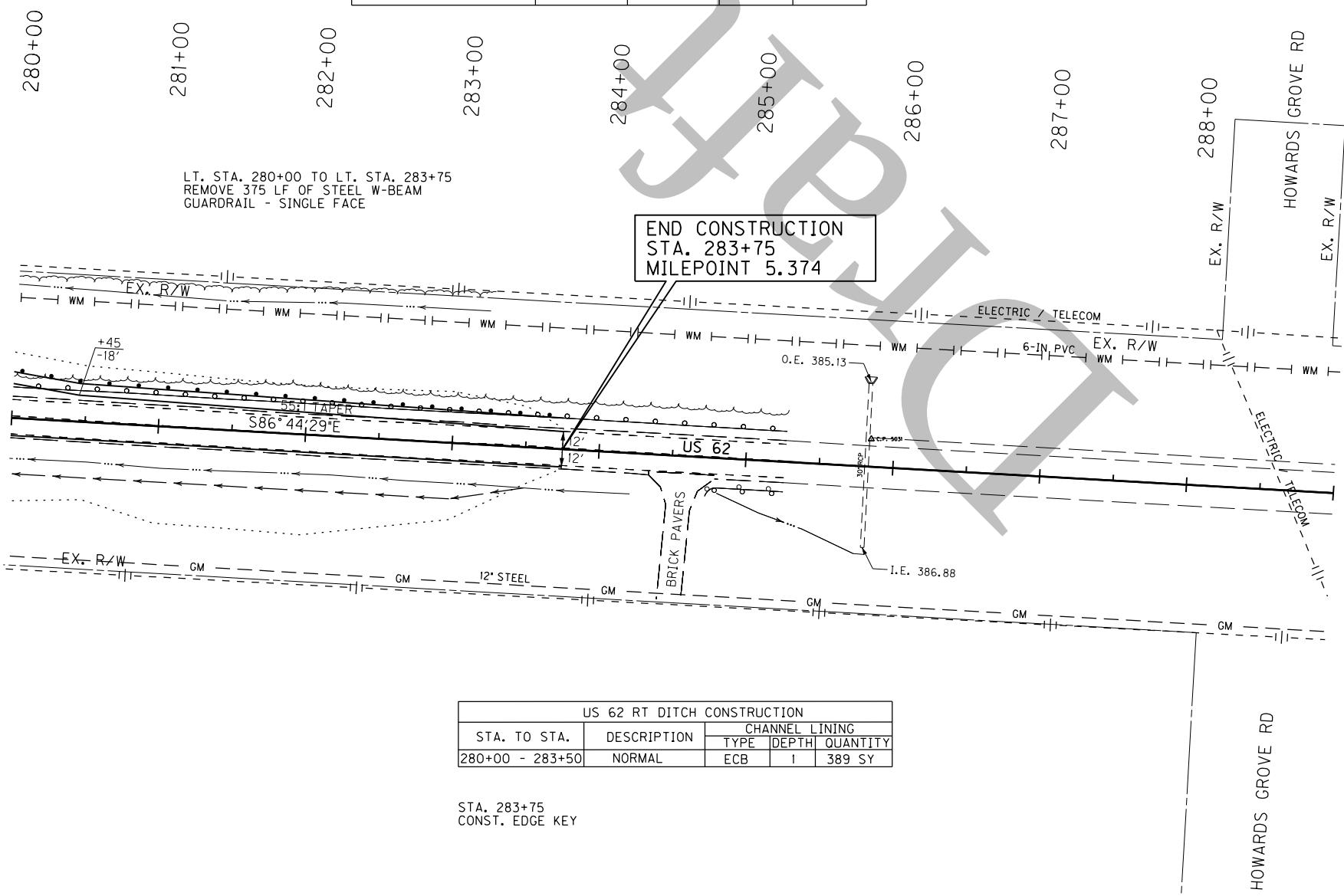
DESCRIPTION	NORTH (Y)	EAST (X)	ELEVATION
CONTROL POINT 98 (IPC)	3536246.448	4150854.002	382.52
CONTROL POINT 99 (IPC)	3536266.074	4150537.900	374.77

0' 50' 100' 200'
SCALE: 1"=100'

U.S. 62
KY 1523 TURN LANE WIDENING
STA. 271+00 TO STA. 280+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

GUARDRAIL CONSTRUCTION LEFT OF ℄				
STA. TO STA.	STEEL "W" BEAM (LF)		END TREATMENT (EA)	
	SINGLE FACE			
280+00 - 283+75	375			



US 62 RT DITCH CONSTRUCTION				
STA. TO STA.	DESCRIPTION	CHANNEL LINING		
		TYPE	DEPTH	QUANTITY
280+00 - 283+50	NORMAL	ECB	1	389 SY

STA. 283+75
CONST. EDGE KEY

0' 50' 100' 200'

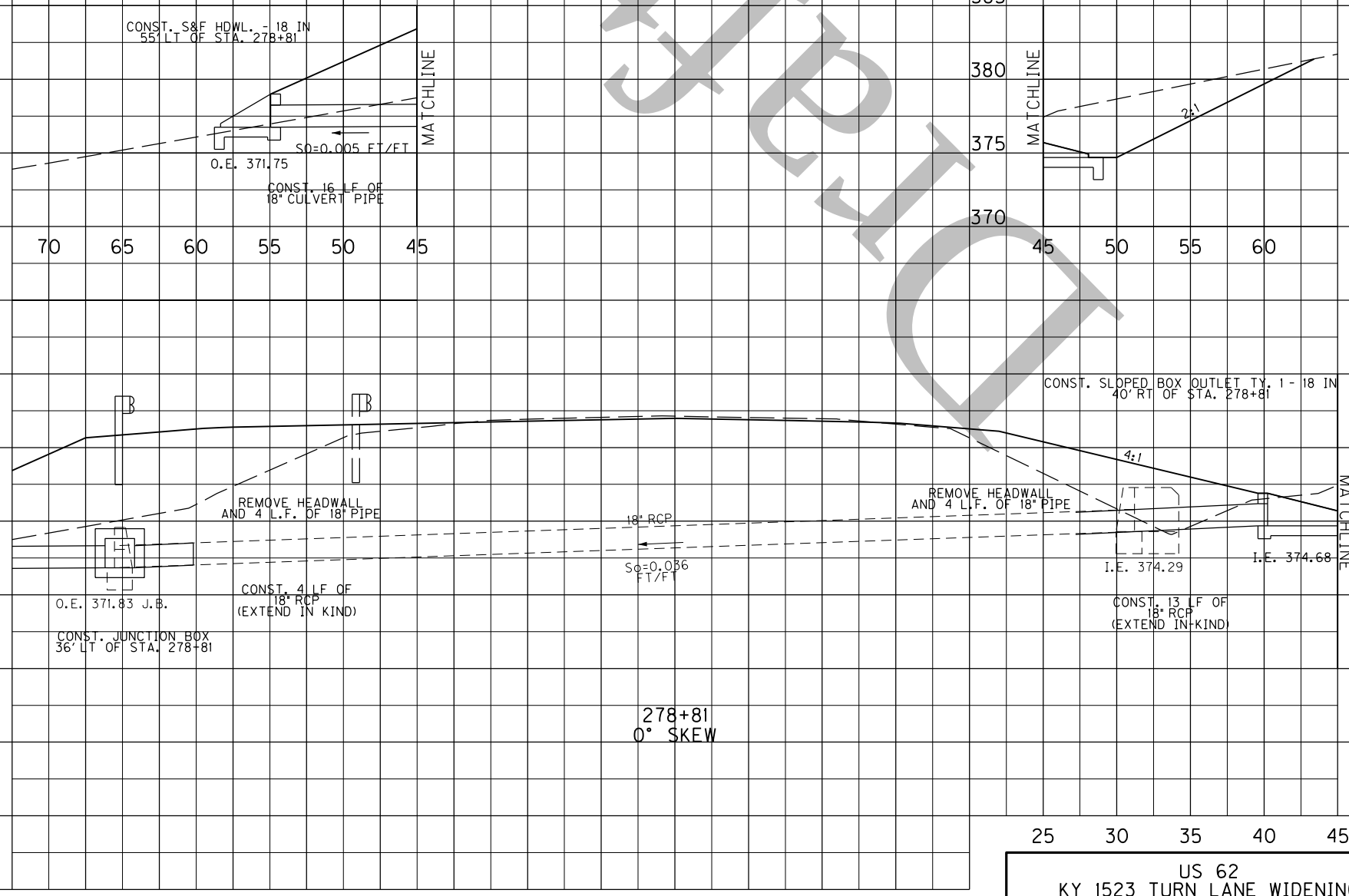
SCALE: 1"=100'

U.S. 62
KY 1523 TURN LANE WIDENING
STA. 280+00 TO STA. 289+00

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

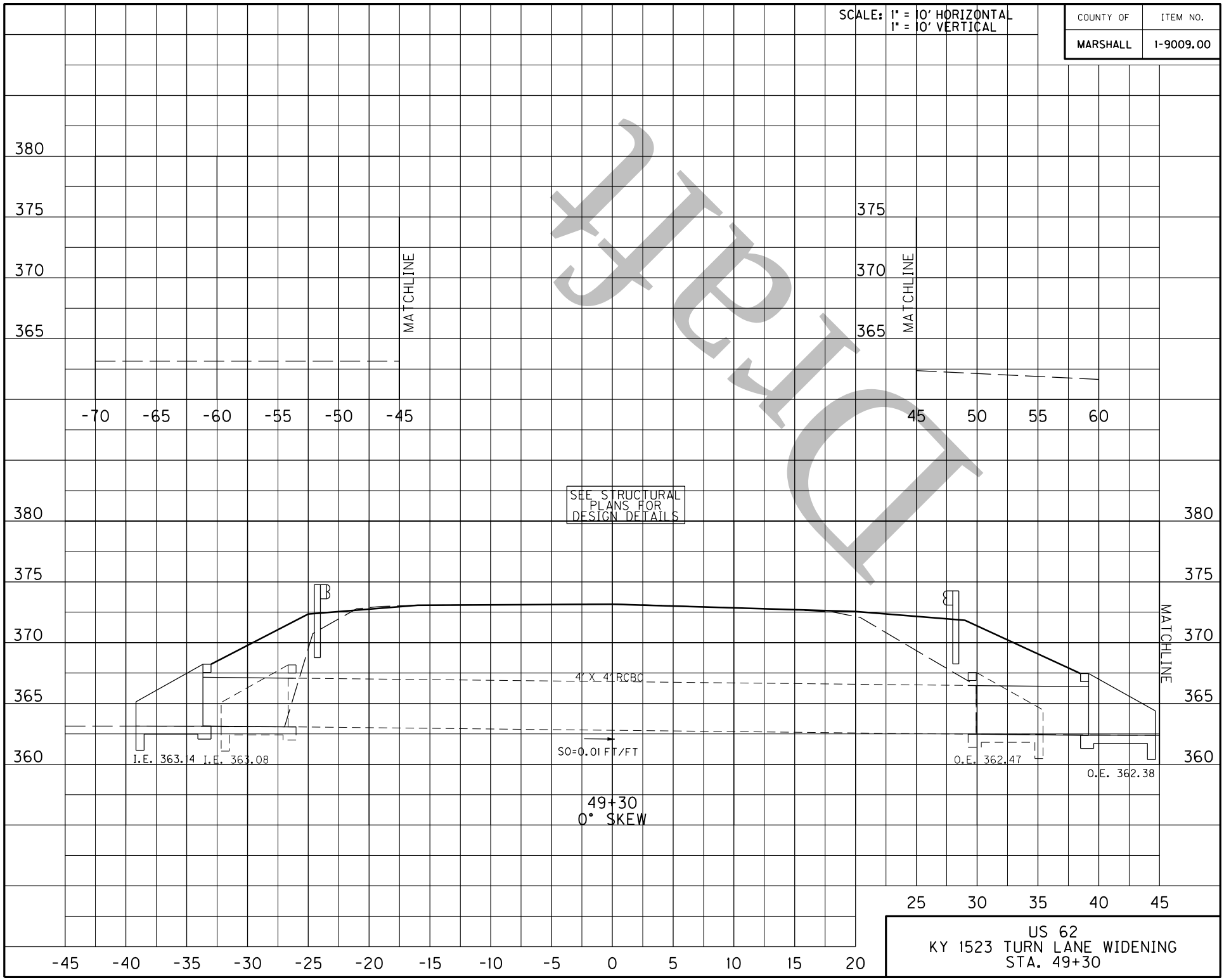
REMOVE EX. HDWL.	18" CULVERT PIPE	REMOVE PIPE (LF)	18" RCP (LF)	JUNCTION BOX	SBO TY. 1 18 IN (EA)	S&F HDWL. 18 IN (EA)
2	16	8	17	1	1	1



US 62
KY 1523 TURN LANE WIDENING
STA. 278+81

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



US 62
KY 1523 TURN LANE WIDENING
STA. 49+30

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

GENERAL NOTES

SPECIFICATIONS: References to the Specifications are to the 2012 edition of Kentucky Department of Highways Standard Specifications For Road and Bridge Construction including any current Supplemental Specifications. All references to the AASHTO Specifications are to the eigth edition of the AASHTO LRFD Bridge Design Specifications.

DESIGN LOAD: This structure is designed for KY HL-93 live load. The KY HL-93 live load is arrived at by increasing the standard design truck and lane loads by 25%.

CONCRETE: Use Concrete, Class "A" throughout.

DESIGN STESSES:
FOR CLASS "A" CONCRETE: F'C = 3500 PSI
FOR STEEL REINFORCEMENT: FY = 60000 PSI

WEIGHT OF FILL MATERIAL: The assumed weight of fill material is 120 PSF.
BEVELED EDGES: Bevel all exposed edges ¾", unless otherwise noted.

SAWCUTTING EXISTING CONCRETE: Prior to the removal of the existing concrete masonry, cut the surface with a concrete saw to a depth of one inch to facilitate a neat line. The cost of cutting concrete shall be included in the unit price bid for Remove Concrete Masonry. Any reinforcement which is to remain (ie: vertical bars in the existing parapets) shall be cut flush with the face of concrete and painted with zinc dust zinc oxide paint conforming to Federal Specification TT-P-641.

REINFORCEMENT: Dimensions shown from the face of concrete to bars are to center of bars, unless otherwise shown. Spacing of bars is from center to center of bars. Clear distance to face of concrete is 2", unless otherwise noted.

DIMENSIONS: Dimensions are for a normal temperature of 60 degrees Fahrenheit. Layout dimensions are horizontal dimensions.

BEFORE YOU DIG: The contractor can call 1-800-752-6007 toll free a minimum of 2 business days prior to excavation for information on the location of existing utilities. Also, see utility plans.

TEMPORARY SHORING: Temporary sheeting, shoring, cofferdams, and/or a dewatering method may be required for installation of the culvert and footings.

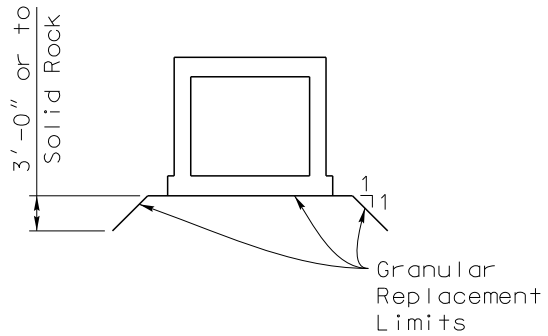
CONSTRUCTION JOINTS: If construction joints are required, locate the construction joint in the field. Place the joint perpendicular to the barrel using either couplers, mechanical splices, or lap splices for the E Bars. Ensure couplers or mechanical splices are capable of transferring 125% of the design yield strength of the bar. No construction joint in the barrel is to be located within 6 ft. of the end the culvert.

FLOWLINE REINFORCEMENT: Construct the 6-inch paved flowline using #4 steel reinforcement at 18-inch centers in each direction or 6"x6"-D7xD7 deformed welded wire steel fabric. Extend the bars a minumum of 12 inches into wing footings and/or bottom slab.

BONDING TO EXISTING CONCRETE USING STRUCTURAL ADHESIVES: Bond proposed plastic concrete to existing hardened concrete in all locations using a Type V Epoxy Resin or other approved Structural Adhesive as prescribed in section 826 of the specifications. Follow the manufacturer's recommended application instructions.

GRANULAR EMBANKMENT: Excavate and replace soil with Granular Embankment within 3 feet below the bottom of the culvert slab unless solid rock is encountered before this depth. Granular replacement material shall consist of "Granular Embankment," non-erodible only, meeting the material requirements of Section 805 of the Standard Specifications. The maximum size limit for "Granular Embankment" is 4 inches. The excavation for the granular replacement shall extend a minimum width beyond the edges of the footings equal to the replacement depth. The granular replacement shall be placed on a 1H:1V slope or flatter beginning 12" from the base of the footing to the bottom of the excavation. Place Geotextile Fabrics Type IV as a separator between the soil and the granular replacement. The Geotextile Fabric shall be in accordance with Section 214 and 843 of the Standard Specifications for Road and Bridge Construction, current edition.

COMPLETION OF THE STRUCTURE: The Contractor is required to complete the structure in accordance with the plans and specifications. This may include cofferdams, shoring, excavations, backfilling, removal of all or parts of existing structures, phase construction, incidental materials, labor or anything else required to complete the structure.



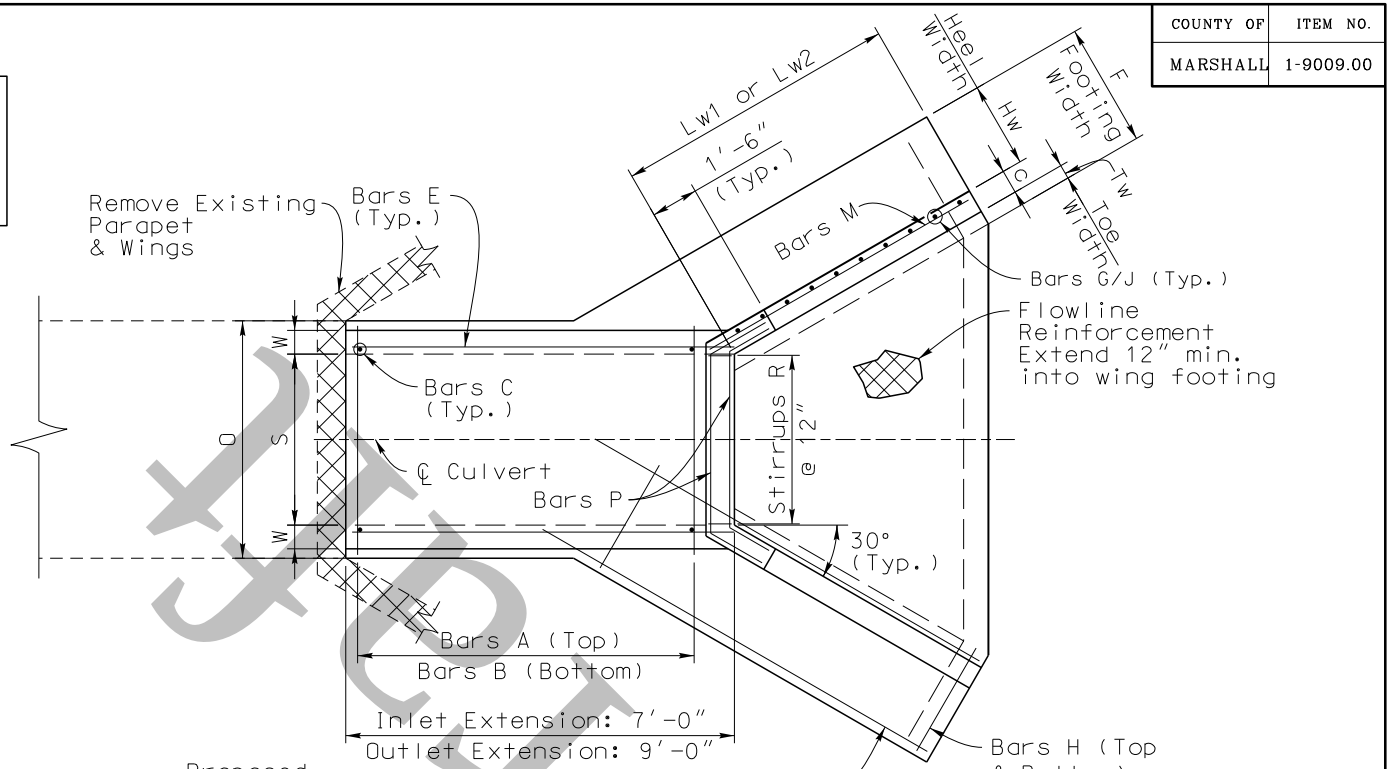
SECTION THROUGH BARREL

Showing Granular Replacement Limits

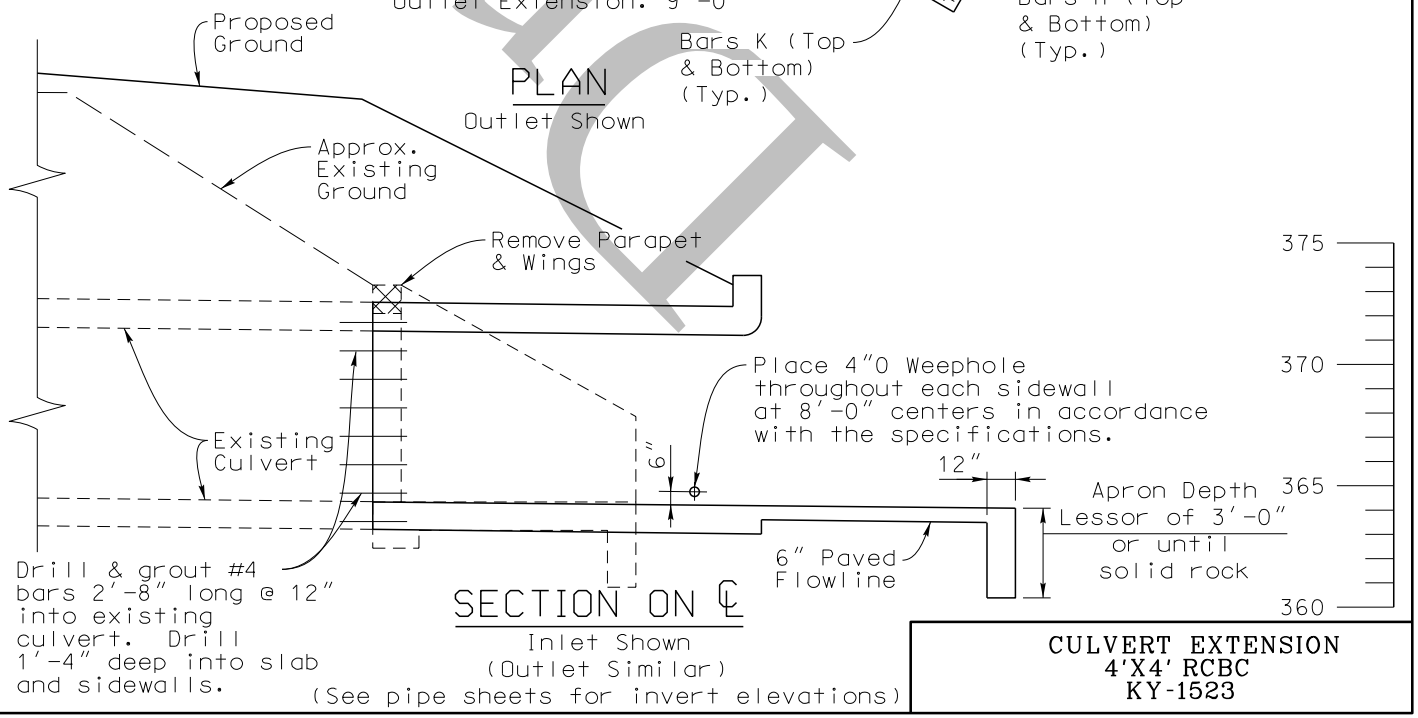
CULVERT EXTENSION
4'X4' RCBC
KY-1523

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

NOTE:
SEE ROADWAY PLANS
FOR UTILITY LOCATIONS
AND/OR RELOCATION
REQUIREMENTS.



PLAN
Outlet Shown

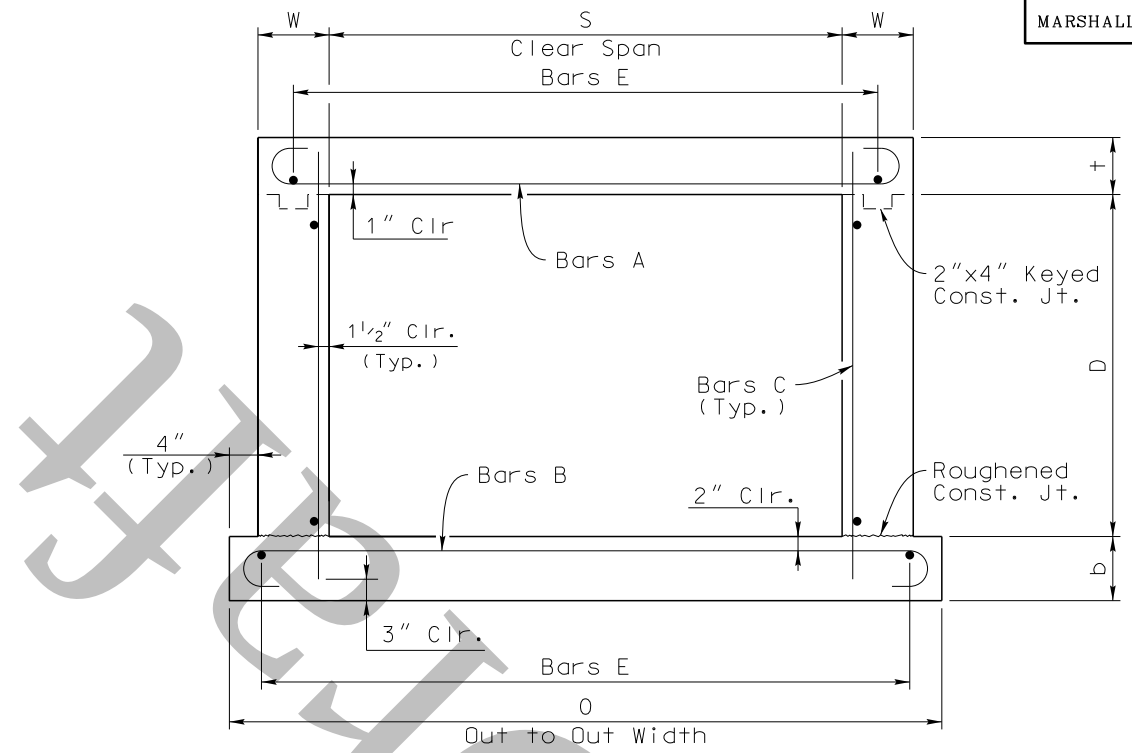


SECTION ON ℄
Inlet Shown
(Outlet Similar)
(See pipe sheets for invert elevations)

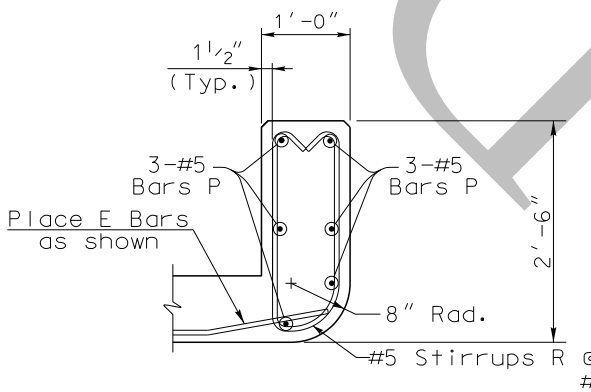
CULVERT EXTENSION
4'X4' RCBC
KY-1523

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

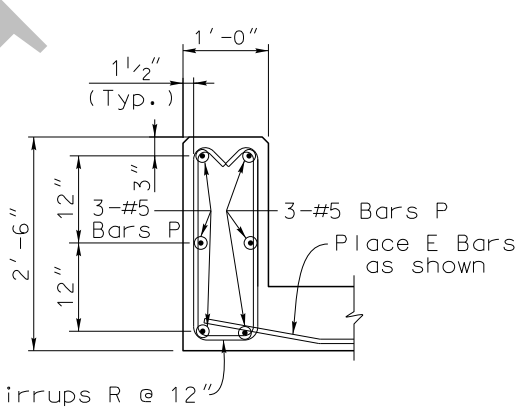
	KY-1523	
	INLET	OUTLET
S	4′-0″	4′-0″
D	4′-0″	4′-0″
O	6′-4″	6′-4″
t	8″	8″
b	9″	9″
W	10″	10″
BARS		
A	#5 @ 12″	#5 @ 12″
B	#5 @ 12″	#5 @ 12″
C	#5 @ 12″	#5 @ 12″
E	#4 @ 12″	#4 @ 12″



SECTION THRU BARREL



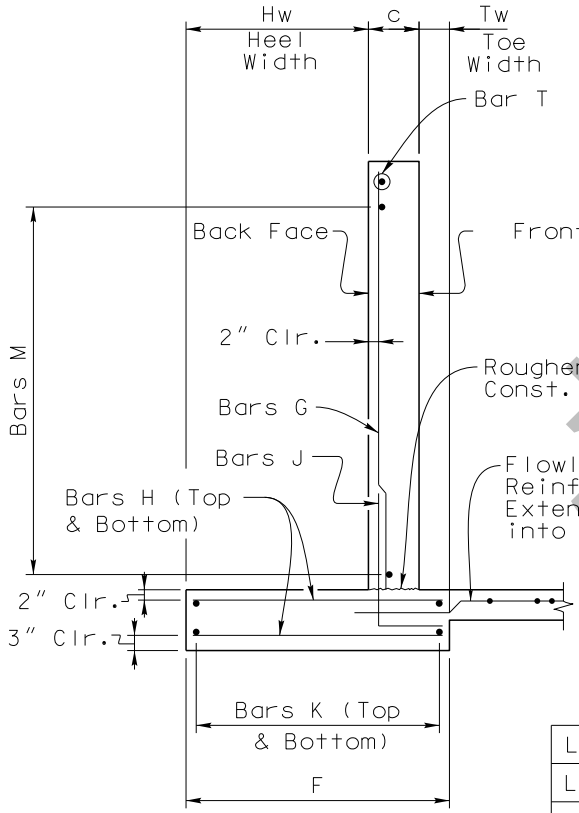
INLET PARAPET DETAIL
(normal to parapet)



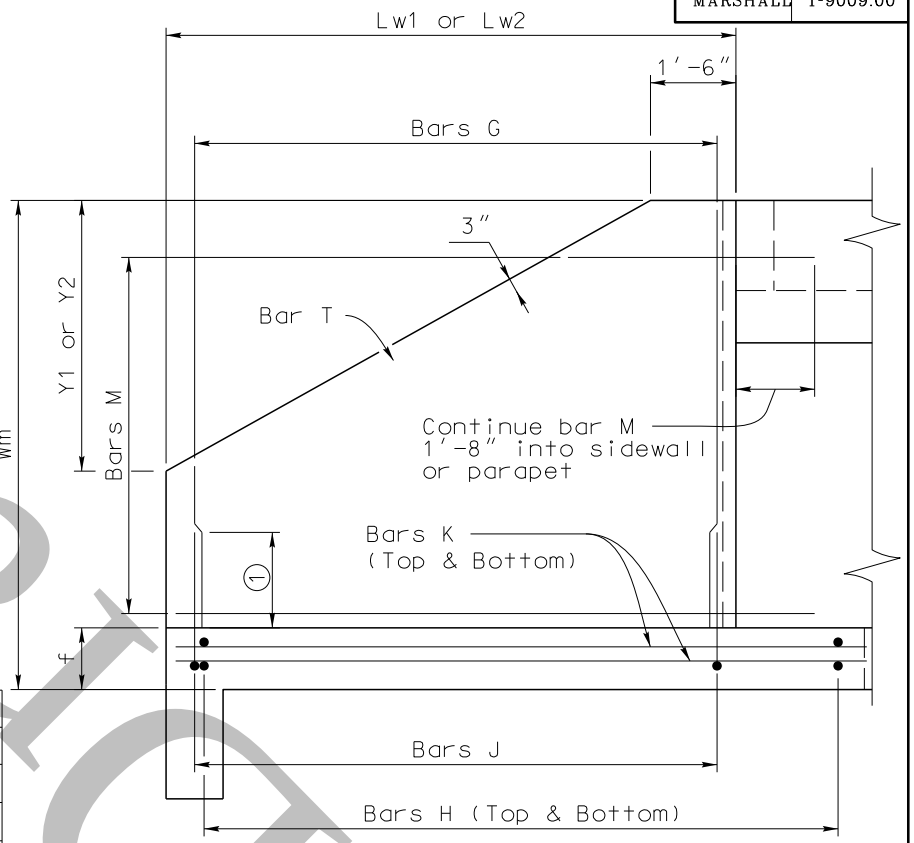
OUTLET PARAPET DETAIL
(normal to parapet)

CULVERT EXTENSION
4′X4′ RCBC
KY-1523

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



SECTION THRU WING



WING ELEVATION

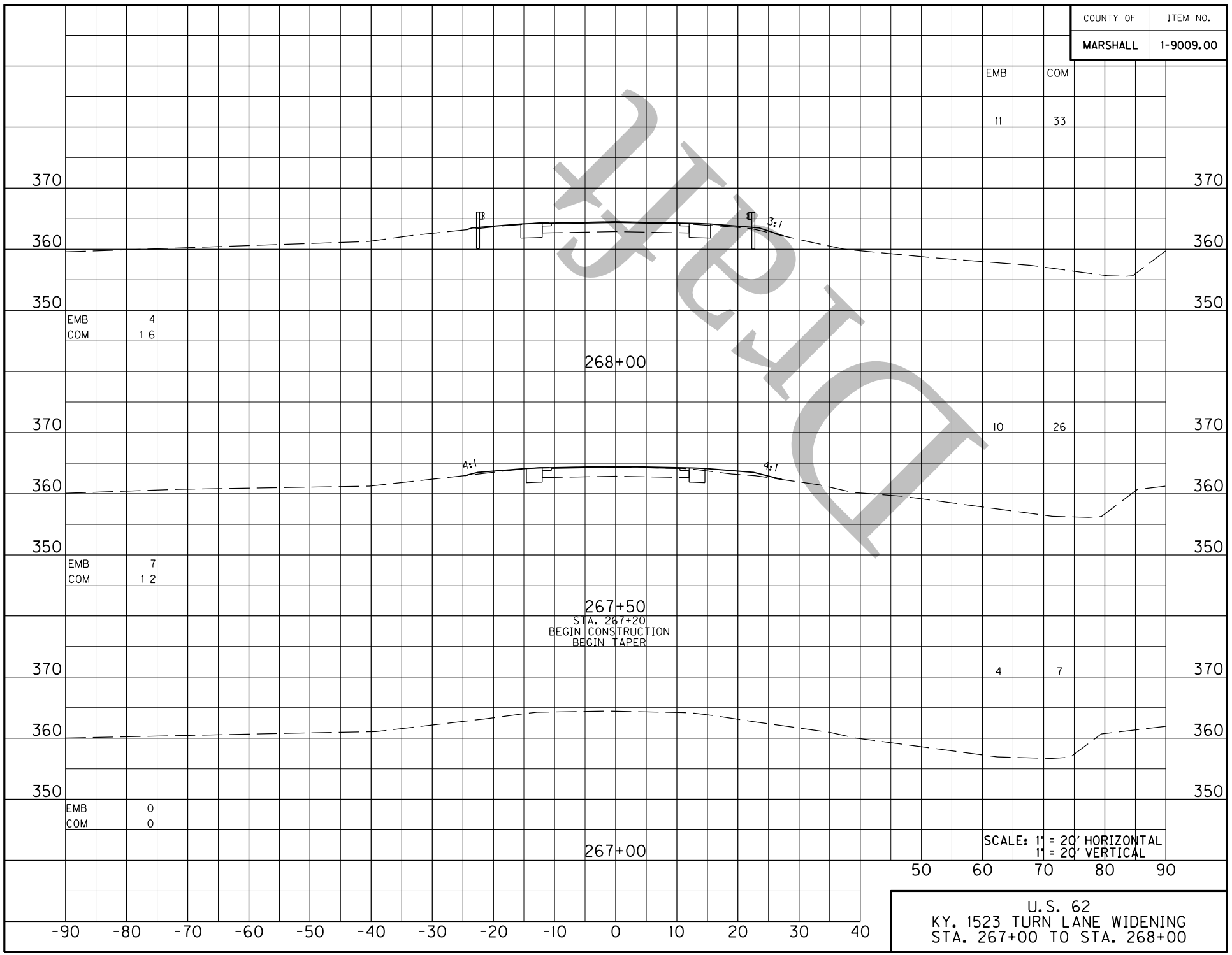
① = 2'-0" Splice for Bars G & J. As an alternative Bars J may be omitted by extending Bars G into footing with a 90° hook to take the place of Bars J.

NOTE:
Where culvert is not perpendicular to roadway, Lw1/Y1 and Lw2/Y2 refer to dimensions of "Long" and "Short" wings, respectively. The "Long" wing is that which is flared at the least angle with respect to the roadway centerline.

	KY-1523	
	INLET	OUTLET
Lw1	6'-6"	6'-6"
Lw2	6'-6"	6'-6"
Y1	4'-0"	4'-0"
Y2	4'-0"	4'-0"
c	10"	10"
F	3'-9"	3'-9"
Tw	6"	6"
Hw	2'-5"	2'-5"
G	#5 @ 12"	#5 @ 12"
H	#5 @ 12"	#5 @ 12"
J	#5 @ 12"	#5 @ 12"
K	#5 @ 12"	#5 @ 12"
M	#5 @ 12"	#5 @ 12"
T	1-#7 Bar	1-#7 Bar
f	1'-0"	1'-0"
Wm	6'-6"	6'-6"

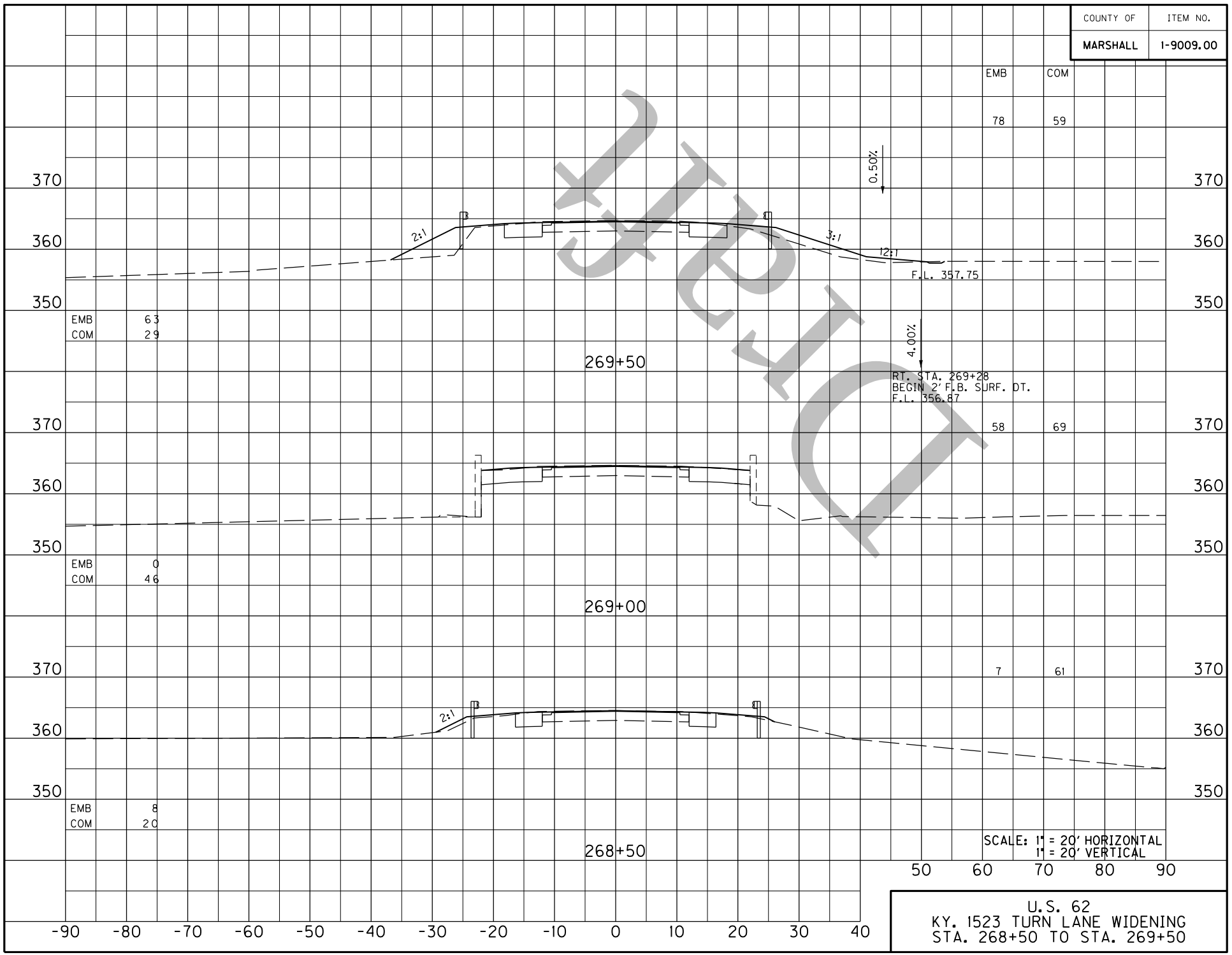
CULVERT EXTENSION
4'X4' RCBC
KY-1523

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

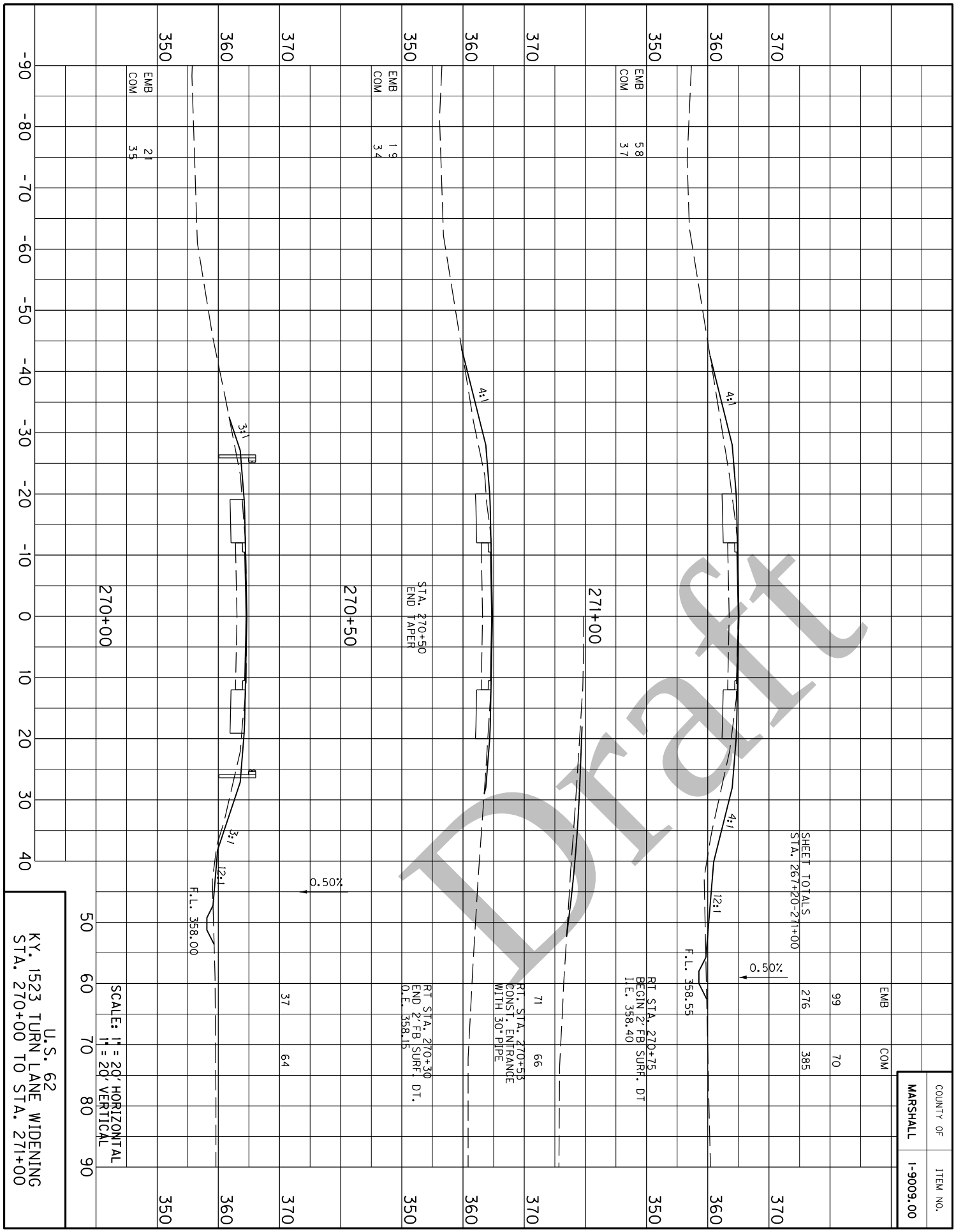


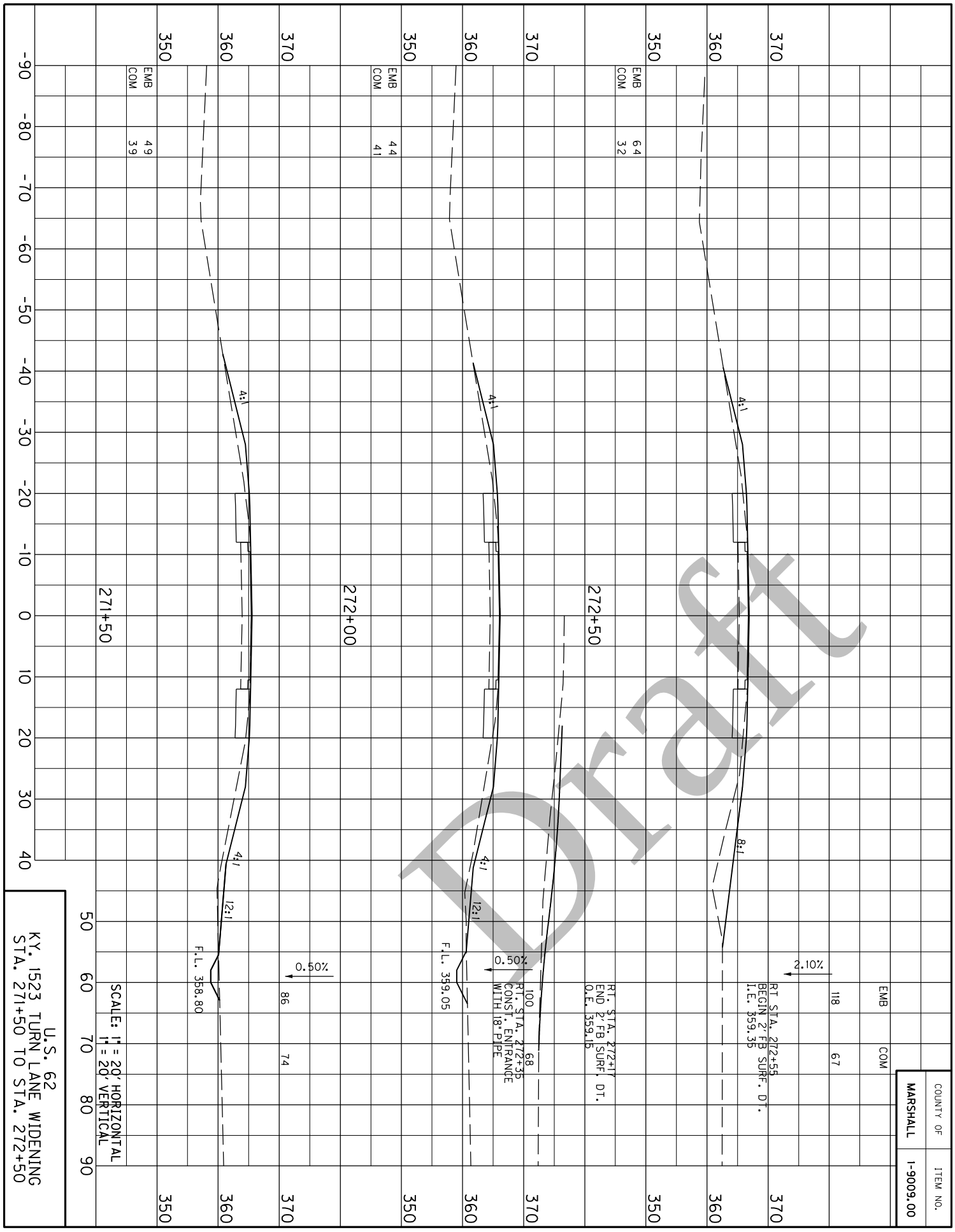
U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 267+00 TO STA. 268+00

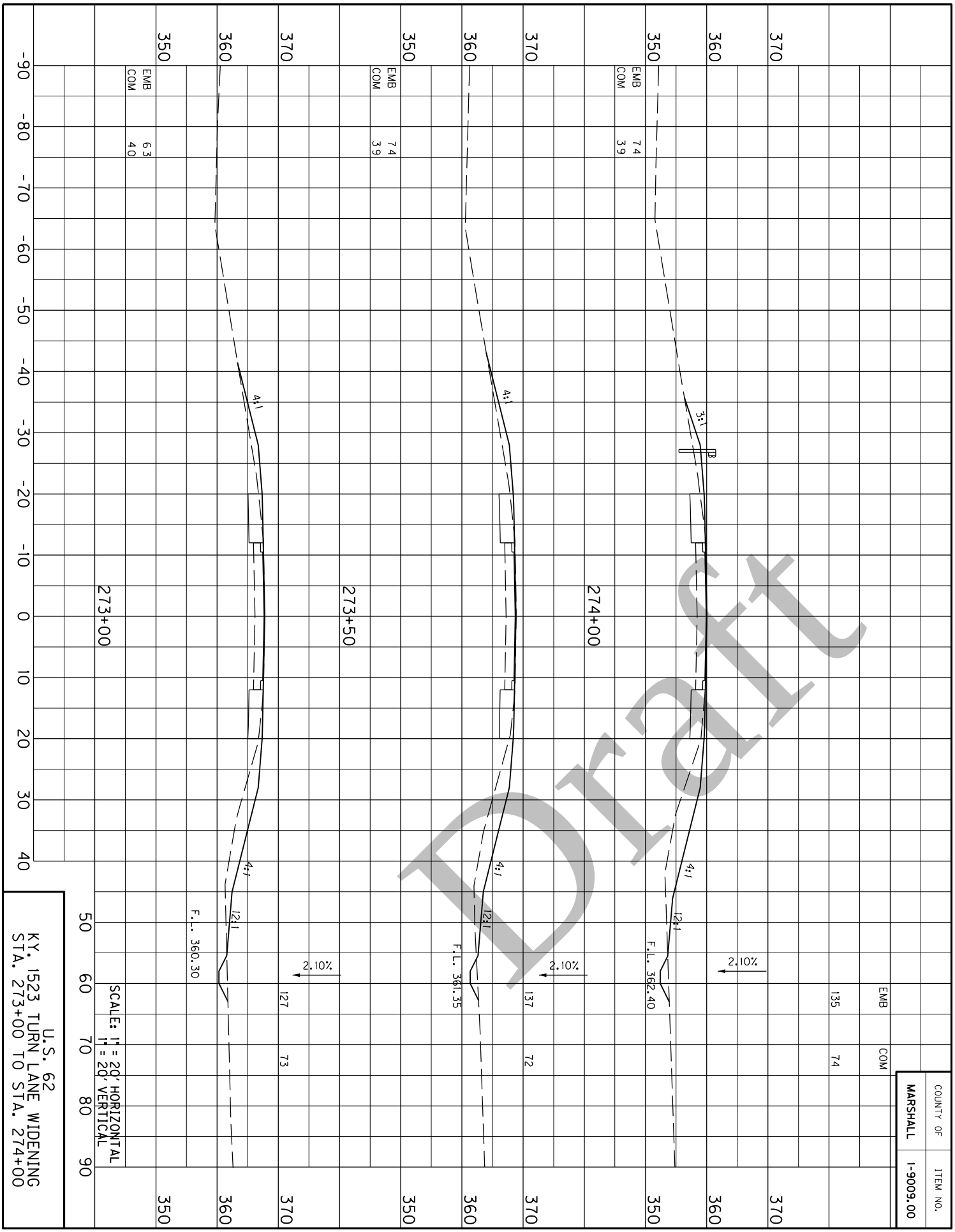
COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

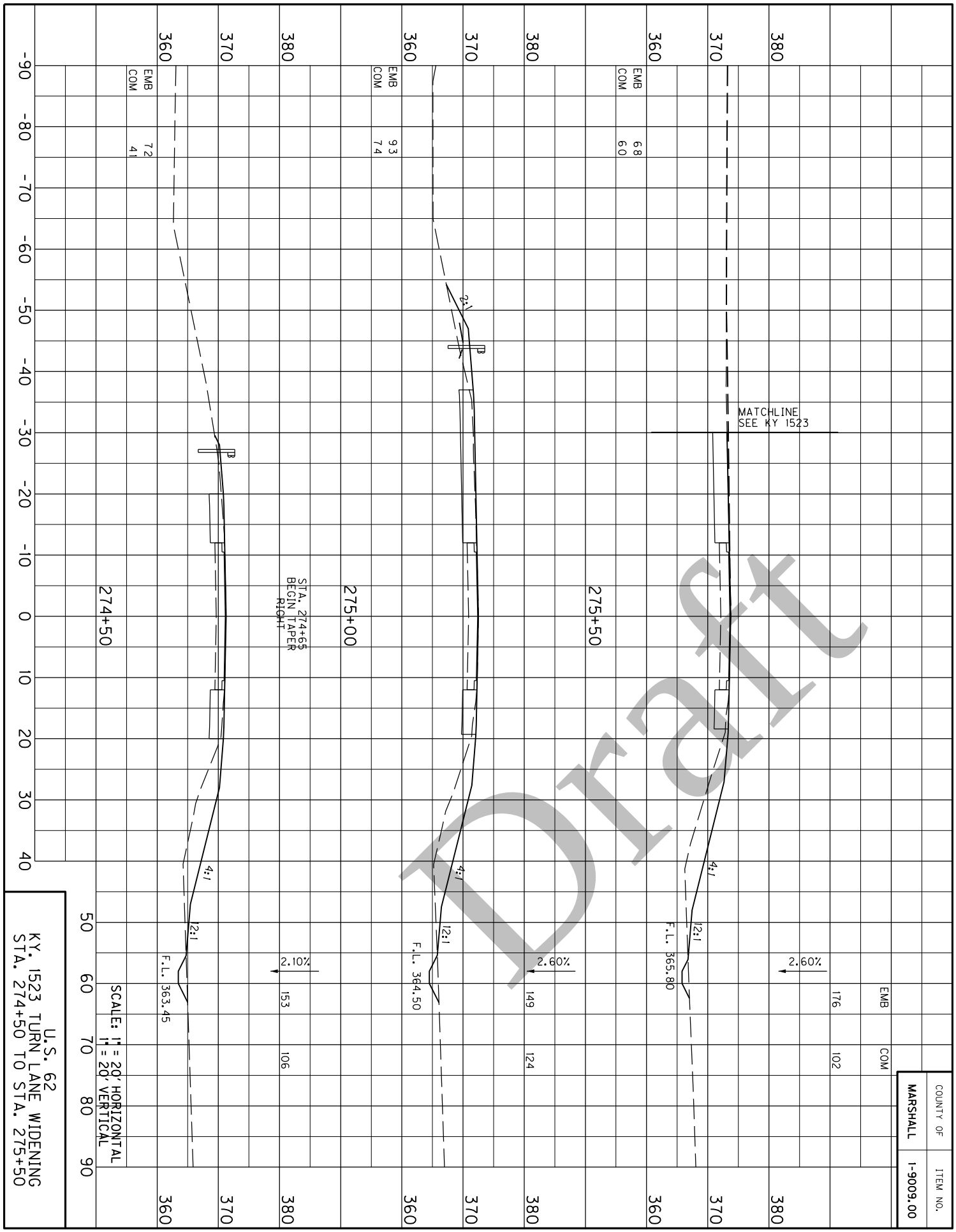


U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 268+50 TO STA. 269+50


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
SHEET TOTALS
STA. 267+20-271+00
276
385
99
70
4:1
12:1
0.50%
F.L. 358.55
RT STA. 270+75
BEGIN 2' FB SURF. DT
I.E. 358.40
271+00
71
66
RT. STA. 270+53
CONST. ENTRANCE
WITH 30" PIPE
37
64
RT STA. 270+30
END 2' FB SURF. DT.
O.E. 358.15
STA. 270+50
END TAPER
270+50
58
37
19
34
21
35
3:1
F.L. 358.00
270+00
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 270+00 TO STA. 271+00

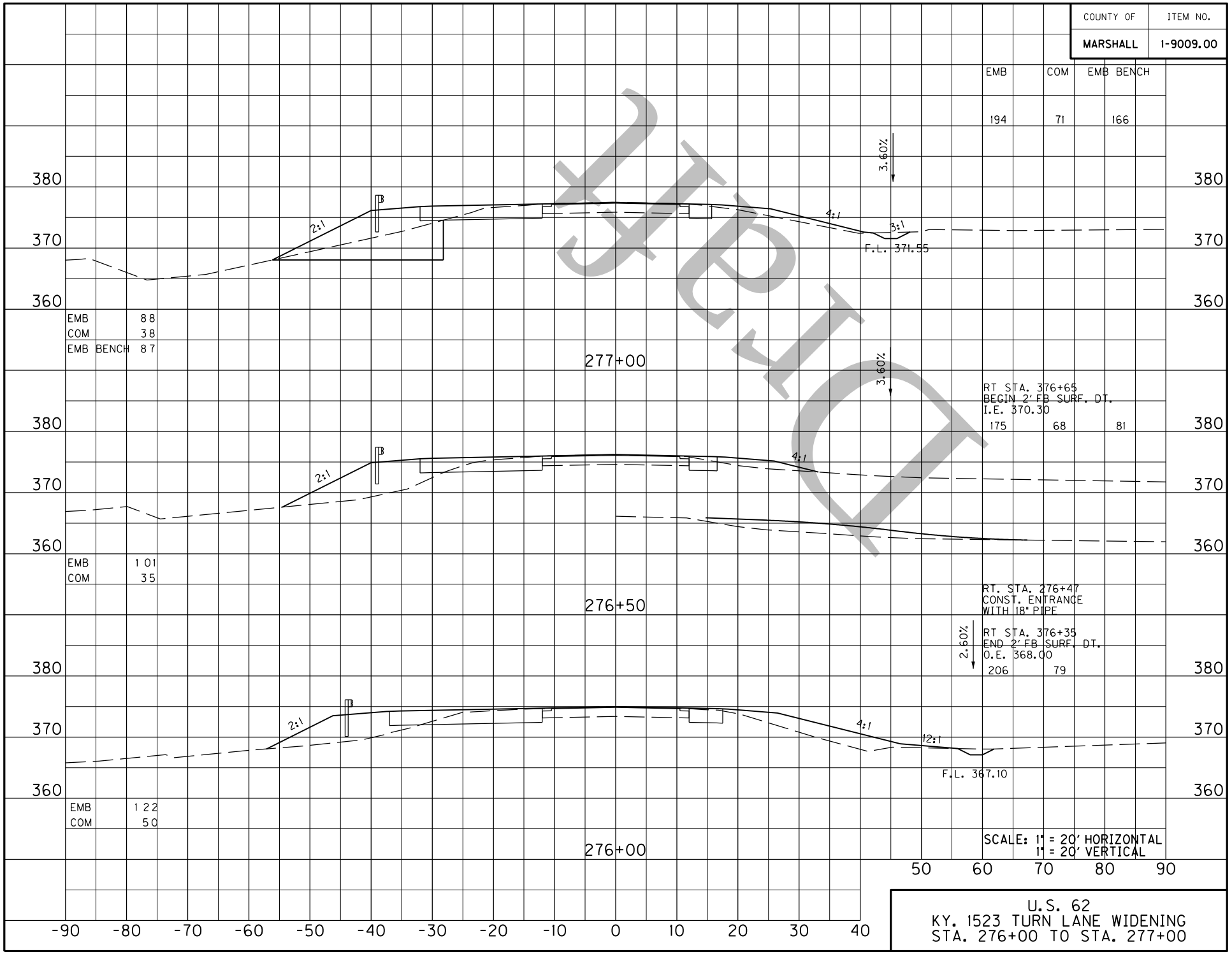

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
118
67
2.10%
RT STA. 272+55
BEGIN 2' FB SURF. DT.
I.E. 359.35
8:1
272+50
RT. STA. 272+17
END 2' FB SURF. DT.
O.E. 359.15
100
68
RT. STA. 272+35
CONST. ENTRANCE
WITH 18" PIPE
0.50%
F.L. 359.05
4:1
12:1
272+00
EMB
COM
64
32
44
41
49
39
271+50
0.50%
86
74
F.L. 358.80
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 271+50 TO STA. 272+50
Draft


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
135
74
137
72
127
73
F.L. 362.40
F.L. 361.35
F.L. 360.30
2.10%
3:1
4:1
12:1
B
274+00
273+50
273+00
-90
-80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
80
90
350
360
370
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 273+00 TO STA. 274+00

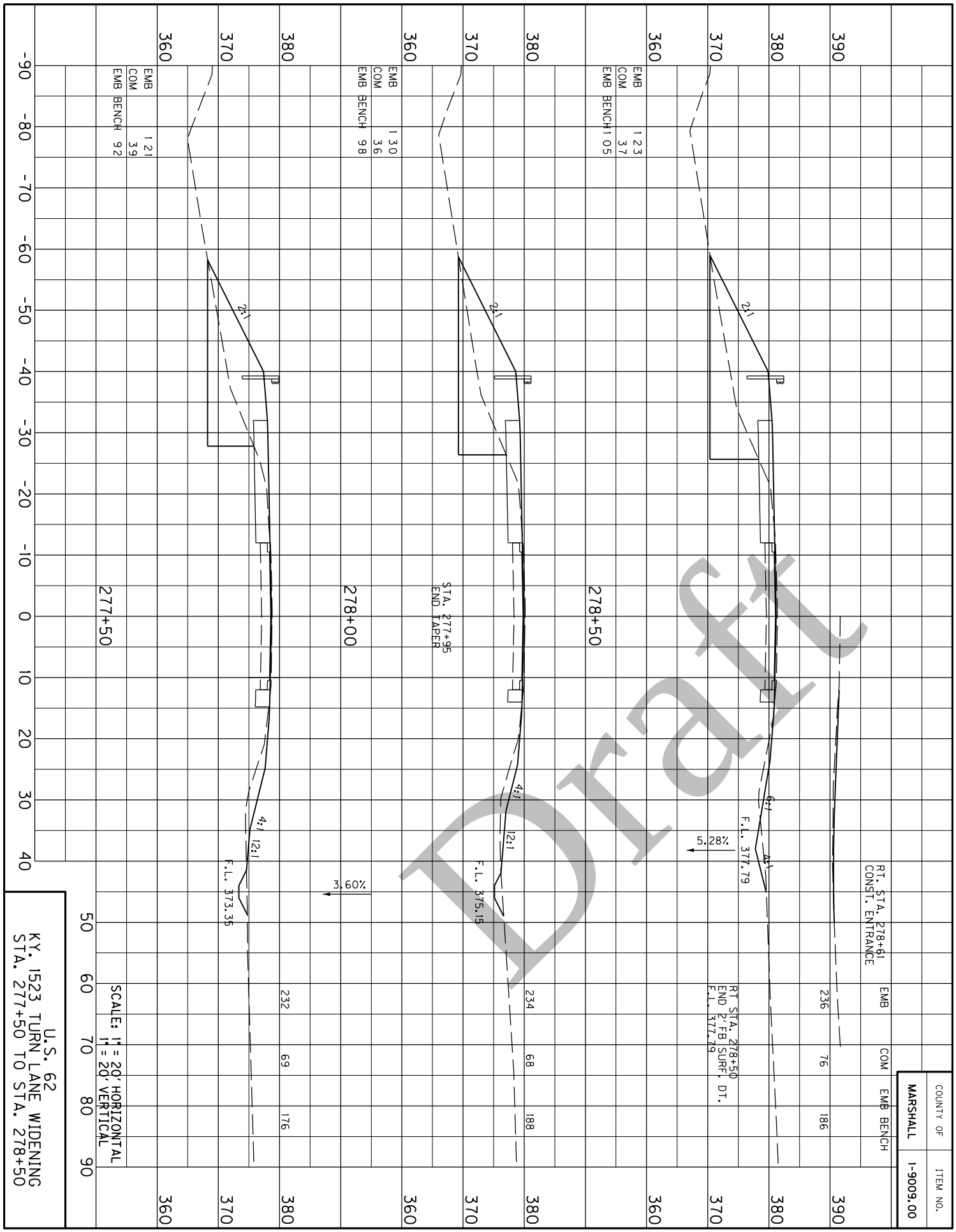


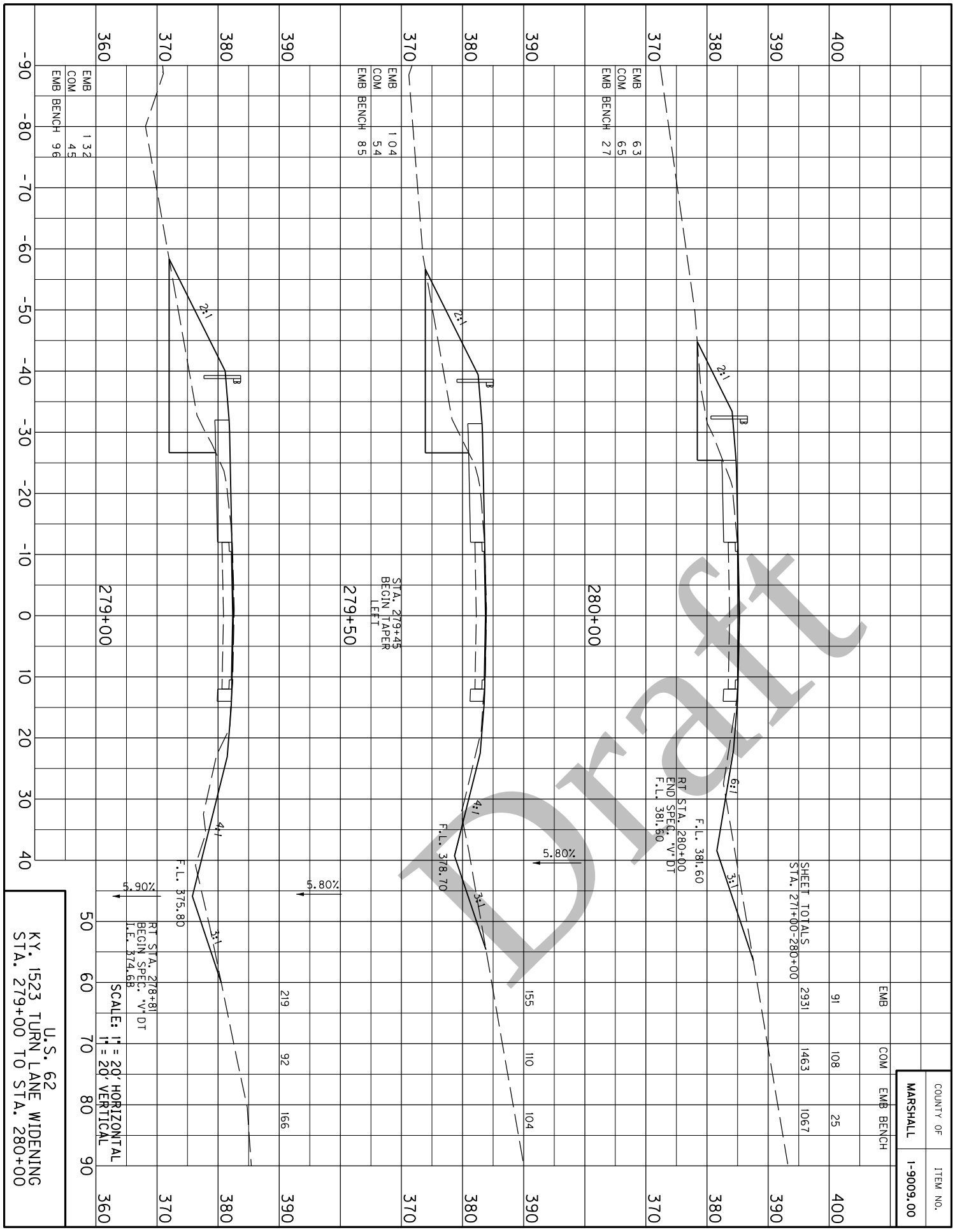
U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 274+50 TO STA. 275+50

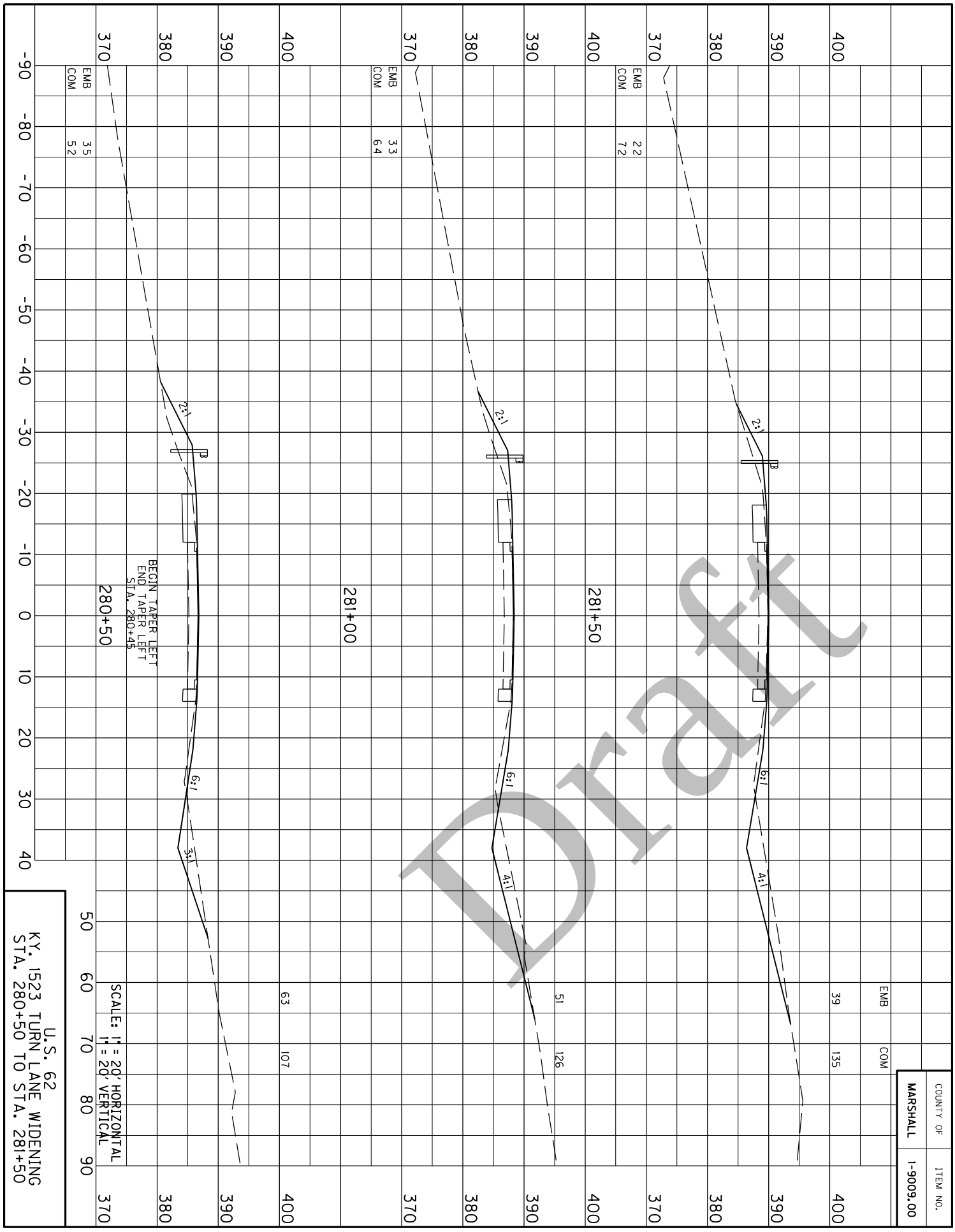
COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

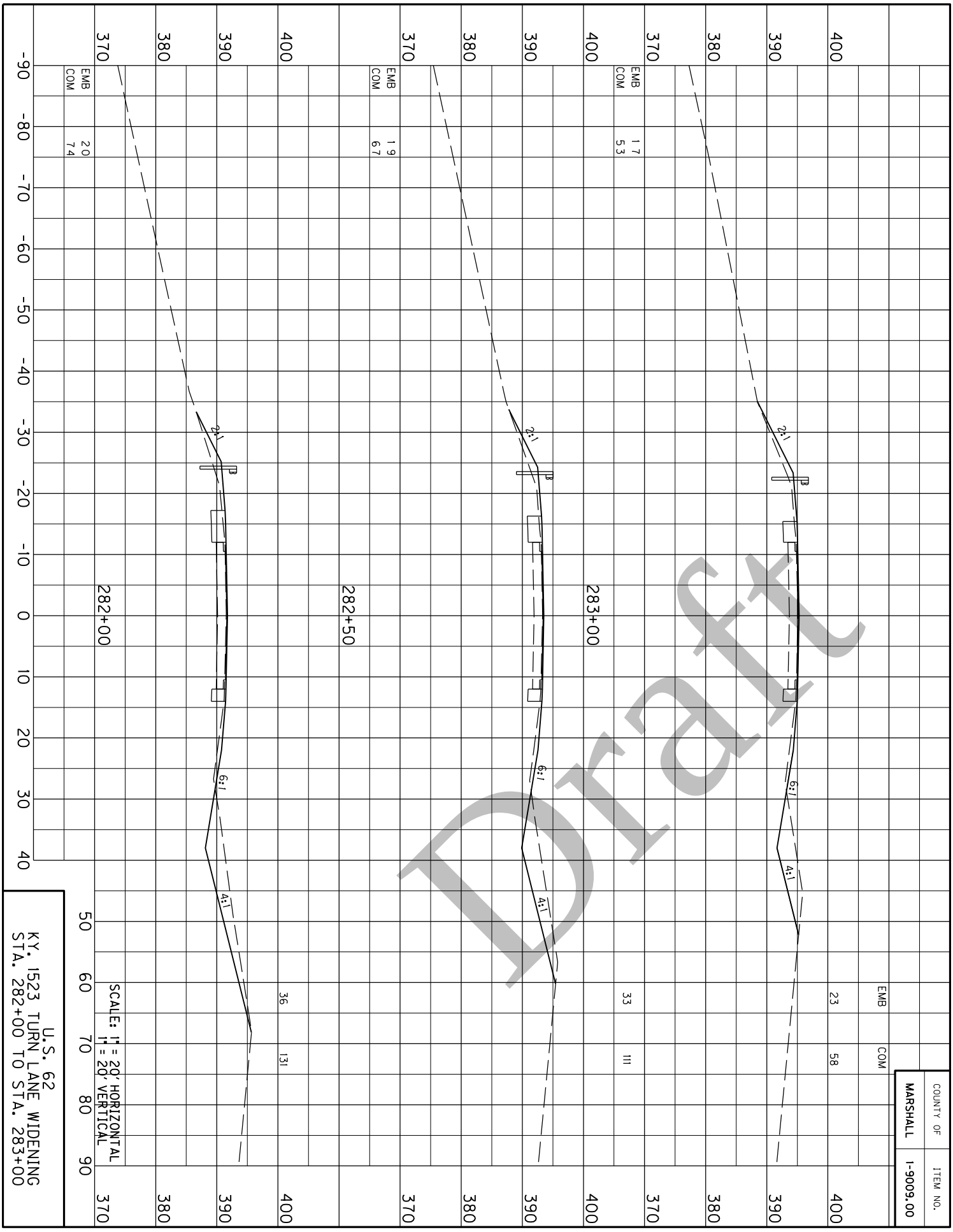


U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 276+00 TO STA. 277+00

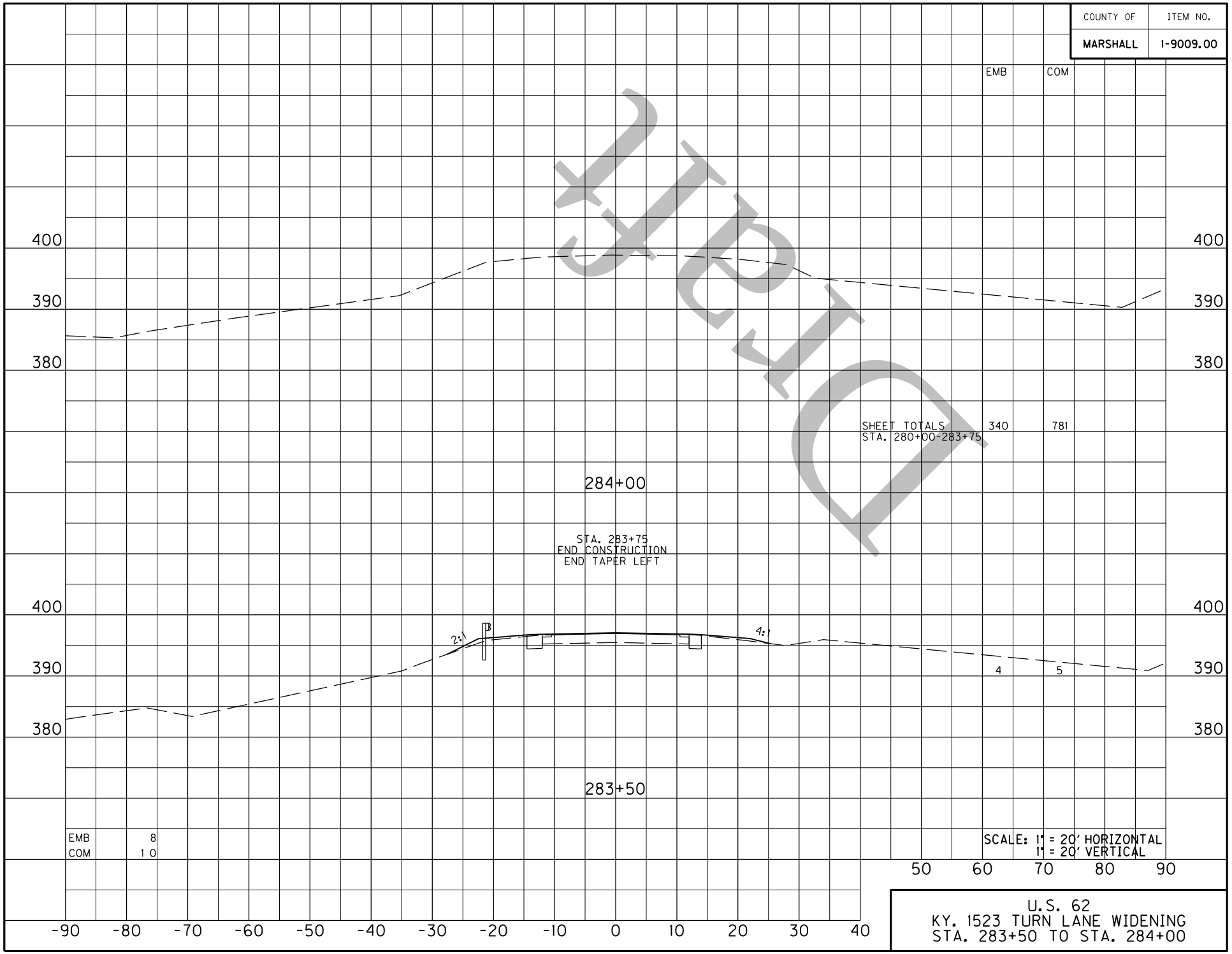

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
EMB BENCH
RT. STA. 278+61
CONST. ENTRANCE
236
76
186
F.L. 377.79
6:1
4:1
5.28%
RT. STA. 278+50
END 2' FB SURF. DT.
F.L. 377.79
234
68
188
2:1
278+50
EMB 123
COM 37
EMB BENCH 105
STA. 277+95
END TAPER
12:1
F.L. 375.15
232
69
176
278+00
EMB 130
COM 36
EMB BENCH 98
3.60%
277+50
EMB 121
COM 39
EMB BENCH 92
4:1
12:1
F.L. 373.35
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 277+50 TO STA. 278+50


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
EMB BENCH
SHEET TOTALS
STA. 271+00-280+00
2931
1463
1067
91
108
25
F.L. 381.60
RT STA. 280+00
END SPEC. "V" DT
F.L. 381.60
280+00
6:1
3:1
2:1
5.80%
F.L. 378.70
279+50
STA. 279+45
BEGIN TAPER
LEFT
155
110
104
4:1
3:1
2:1
5.80%
F.L. 375.80
279+00
219
92
166
5.90%
RT STA. 278+81
BEGIN SPEC. "V" DT
I.E. 374.68
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
EMB
COM
EMB BENCH
63
65
27
EMB
COM
EMB BENCH
104
54
85
EMB
COM
EMB BENCH
132
45
96
U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 279+00 TO STA. 280+00

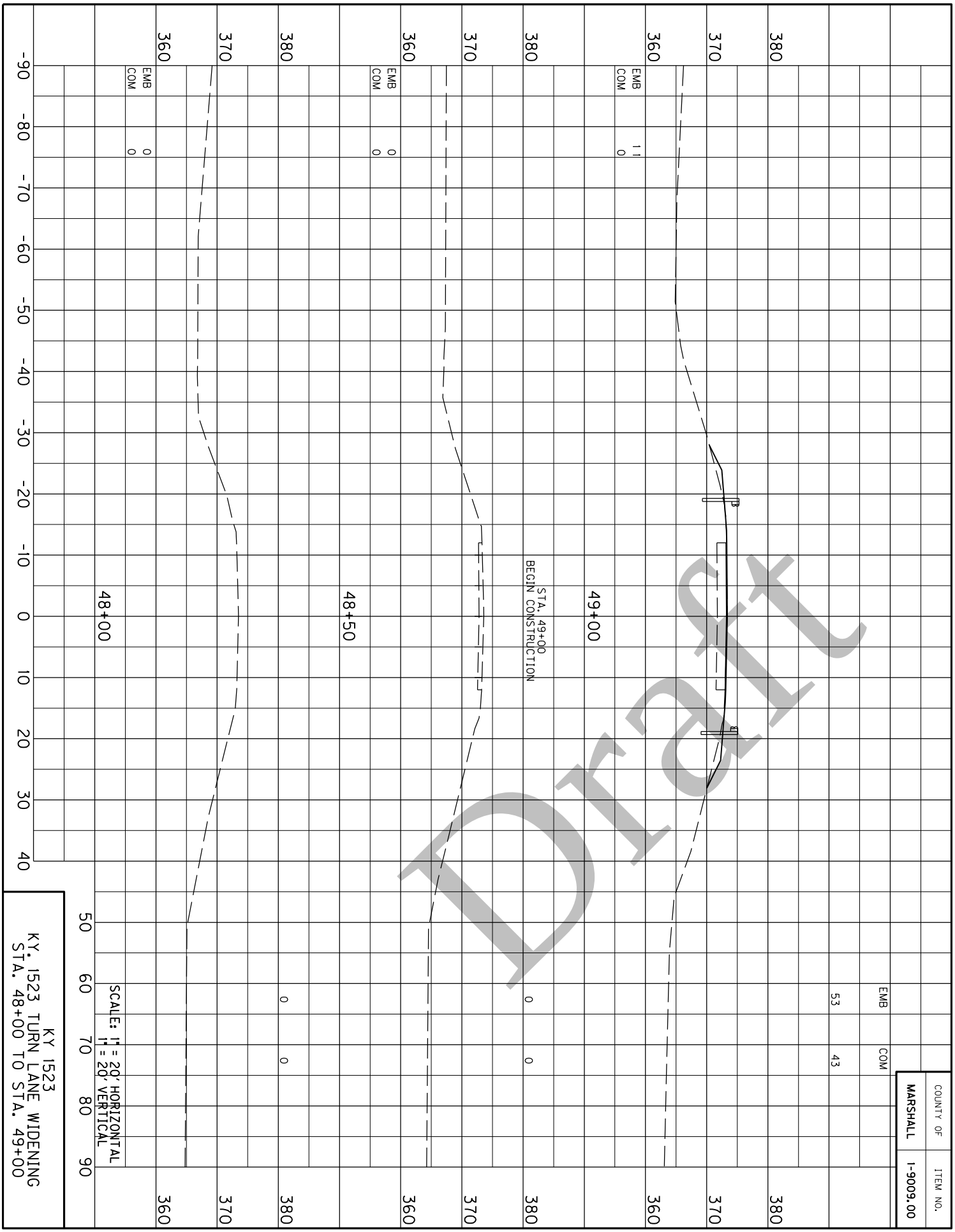

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
39
135
51
126
63
107
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 280+50 TO STA. 281+50
280+50
281+00
281+50
BEGIN TAPER LEFT
END TAPER LEFT
STA. 280+45
2:1
6:1
4:1
3:1
EMB
COM
22
72
33
64
35
52
Draft


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
23
58
33
111
36
131
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 282+00 TO STA. 283+00
282+00
282+50
283+00
EMB
COM
17
53
19
67
20
74
2:1
6:1
4:1
B
Draft

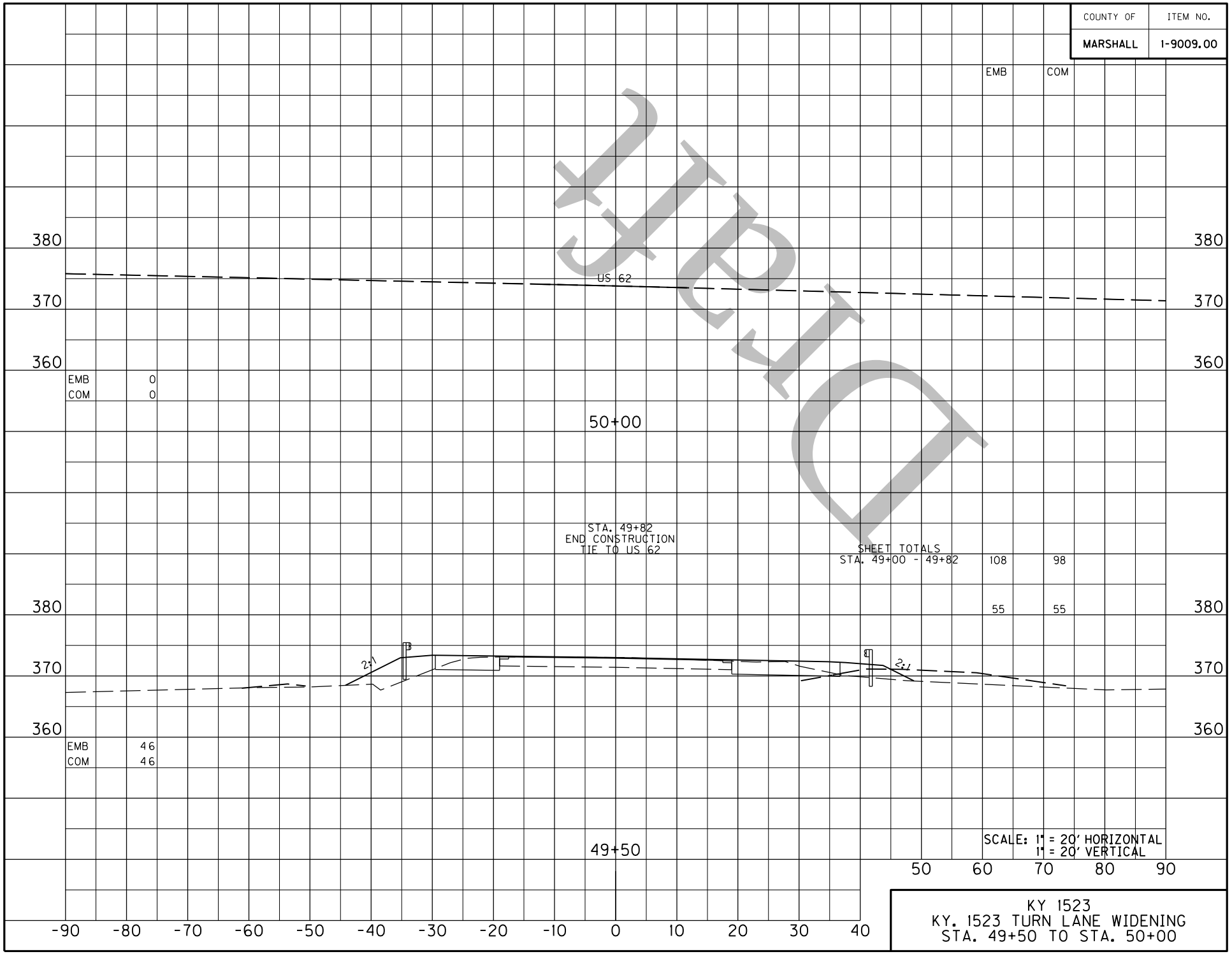
COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



U.S. 62
KY. 1523 TURN LANE WIDENING
STA. 283+50 TO STA. 284+00


COUNTY OF
MARSHALL
ITEM NO.
I-9009.00
EMB
COM
53
43
EMB
COM
11
0
EMB
COM
0
0
EMB
COM
0
0
STA. 49+00
BEGIN CONSTRUCTION
49+00
48+50
48+00
0
0
0
0
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
KY 1523 TURN LANE WIDENING
STA. 48+00 TO STA. 49+00
Draft

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

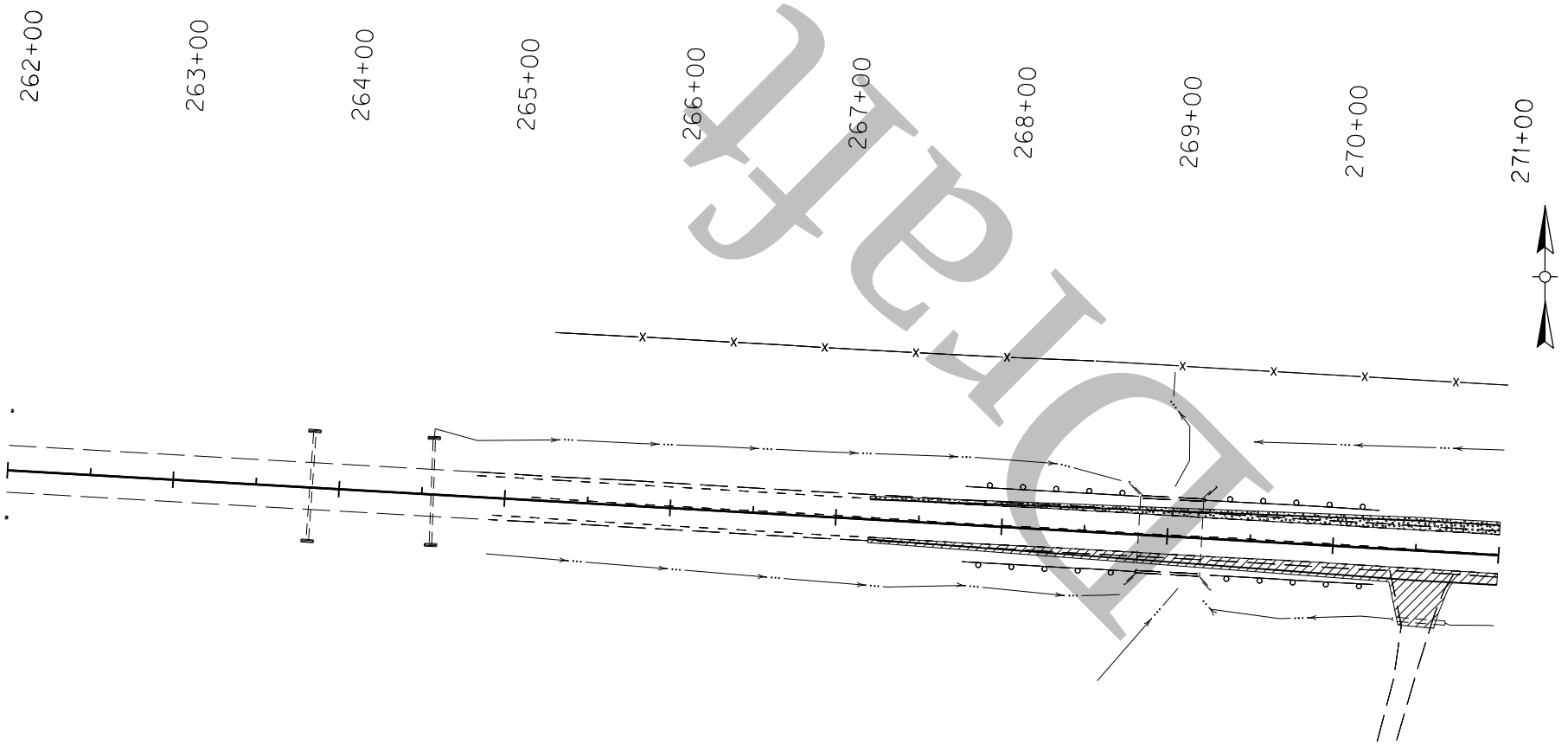


KY 1523
KY. 1523 TURN LANE WIDENING
STA. 49+50 TO STA. 50+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

PHASE 1

PHASE 2



PHASE I

COMPLETE WIDENING OF EASTBOUND U.S. 62

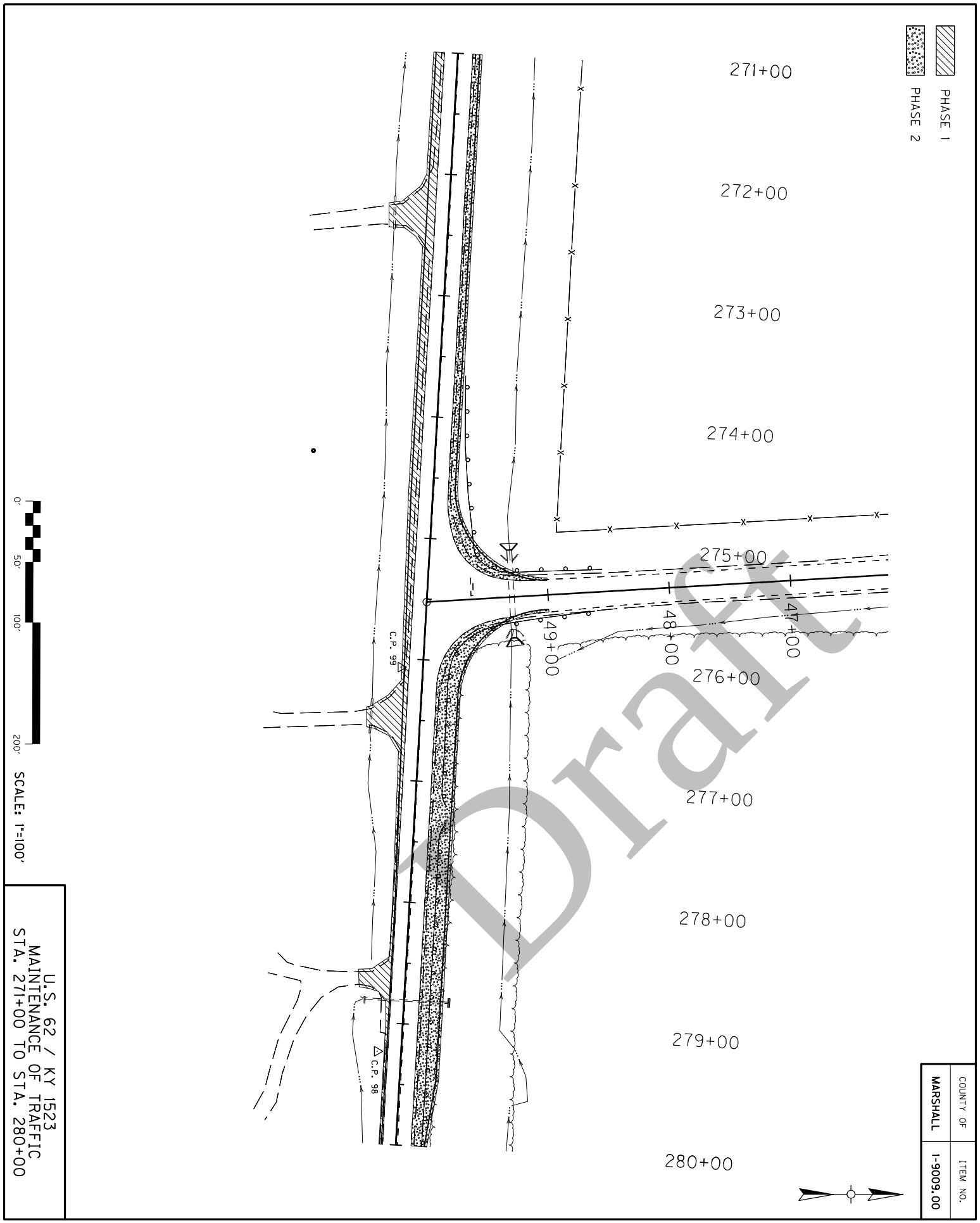
PHASE II

COMPLETE WIDENING OF WESTBOUND U.S. 62
COMPLETE KY 1523 INTERSECTION

0' 50' 100' 200'

SCALE: 1"=100'

U.S. 62 / KY 1523
MAINTENANCE OF TRAFFIC
STA. 262+00 TO STA. 271+00



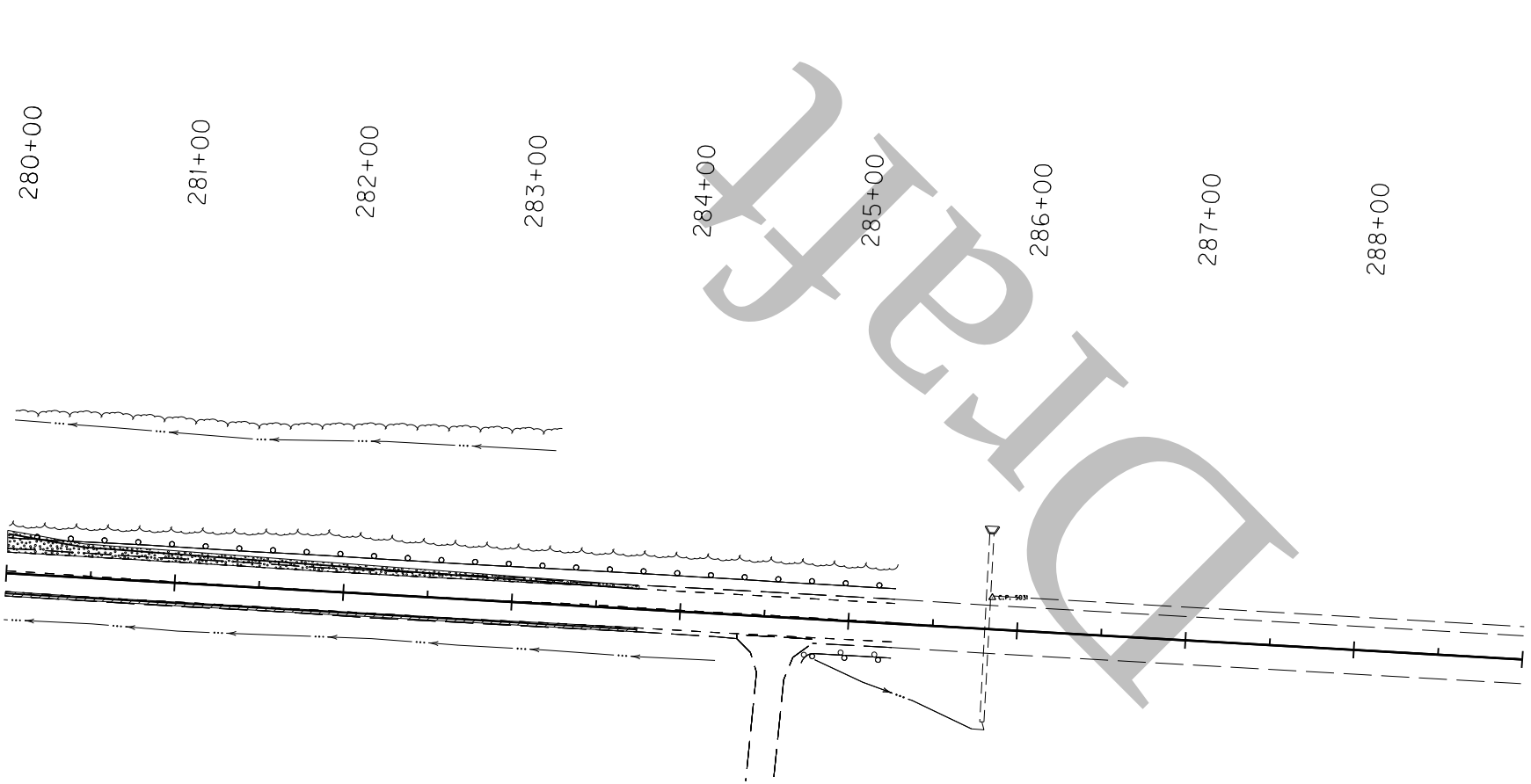
U.S. 62 / KY 1523
MAINTENANCE OF TRAFFIC
STA. 271+00 TO STA. 280+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

PHASE 1

PHASE 2

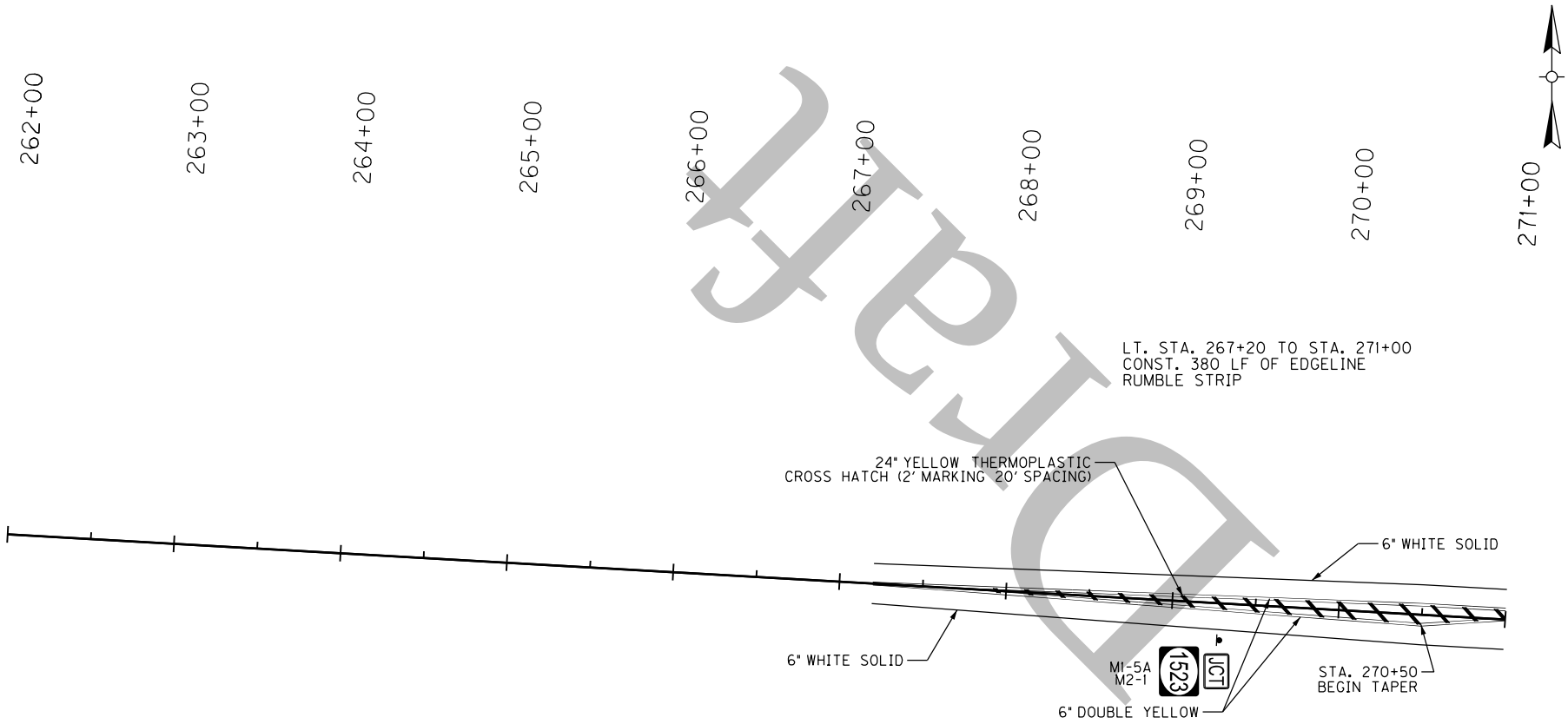


0′ 50′ 100′ 200′

SCALE: 1"=100′

U.S. 62 / KY 1523
MAINTENANCE OF TRAFFIC
STA. 280+00 TO STA. 289+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	----
6" YELLOW DOUBLE	760
6" WHITE SOLID	760
6" WHITE DOTTED	----
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	----
24" YELLOW CROSS HATCH	267
CURVE ARROW	----
"ONLY" MARKING	----
24" STOP BAR	----
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

SIGNING QUANTITY SUMMARY		
STATE ROUTE	M1-5A	269+30, RT.
JUNCTION	M2-1	269+30, RT.

QUANTITIES CARRIED OVER TO SIGNING SUMMARY

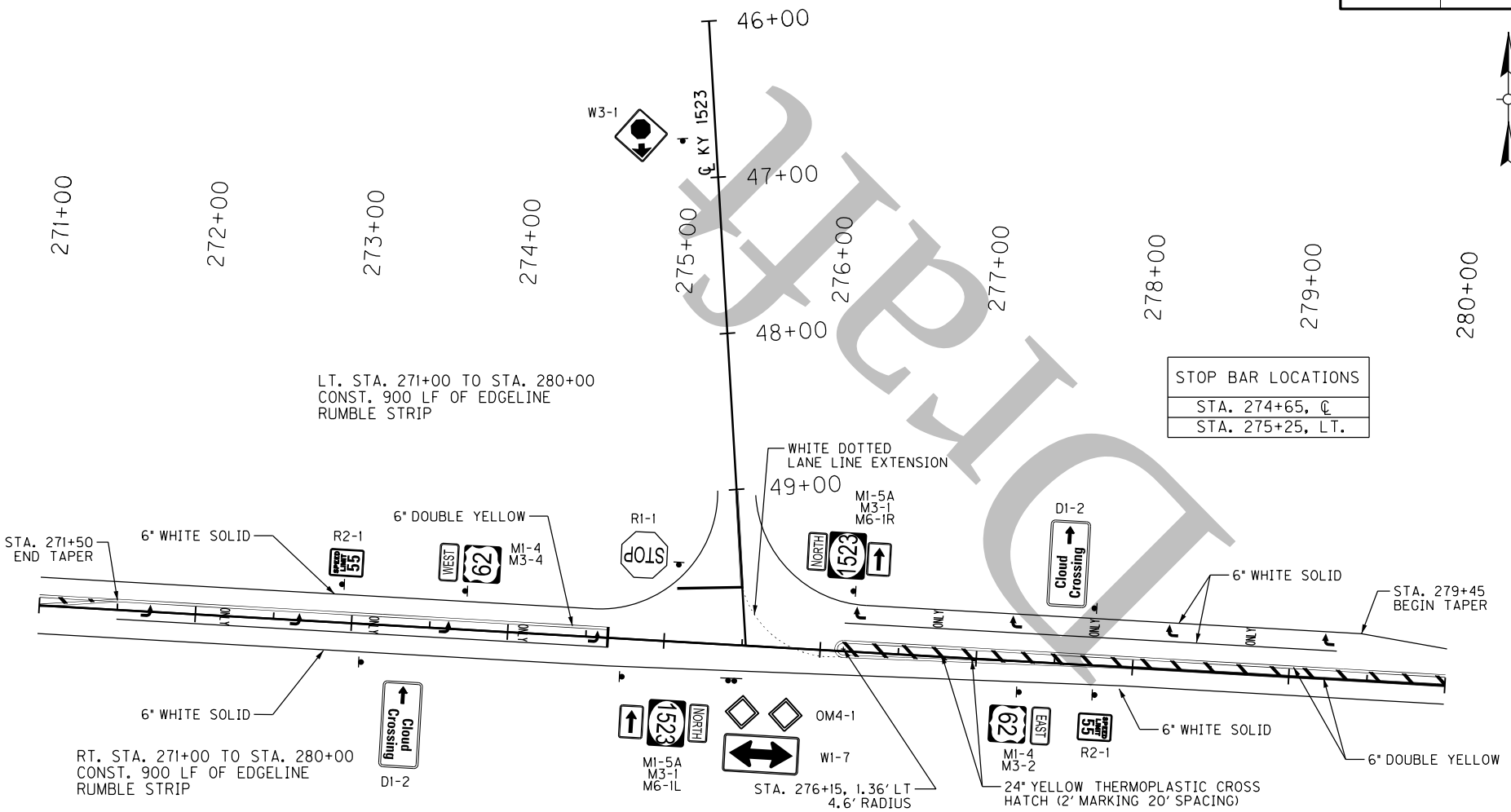
RT. STA. 267+20 TO STA. 271+00
CONST. 380 LF OF EDGELINE
RUMBLE STRIP

0' 50' 100' 200'

SCALE: 1"=100'

U.S. 62 / KY 1523
SIGNING & STRIPING PLAN
STA. 262+00 TO STA. 271+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	----
6" YELLOW DOUBLE	1262
6" WHITE SOLID	2174
6" WHITE DOTTED	85
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	----
24" YELLOW CROSS HATCH	303
CURVE ARROW	8
"ONLY" MARKING	6
24" STOP BAR	56
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

SIGNING QUANTITY SUMMARY		
DESTINATION	D1-2	273+05, RT.
SPEED LIMIT	R2-1	272+90, LT.
U.S. ROUTE	M1-4	273+75, LT.
WEST	M3-4	273+75, LT.
STOP	R1-1	49+45, RT
STATE ROUTE	M1-5A	274+75, RT.
DIRECTIONAL ARROW	M6-1L	274+75, RT.
NORTH	M3-1	274+75, RT.
DIRECTIONAL ARROW	W1-7	275+45, RT.
OBJECT MARKER	OM4-1	275+45, RT.
NORTH	M3-1	276+20, LT.

QUANTITIES CARRIED OVER TO SIGNING SUMMARY

SIGNING QUANTITY SUMMARY		
STATE ROUTE	M1-5A	276+20, LT.
DIRECTIONAL ARROW	M6-1R	276+20, LT.
U.S. ROUTE	M1-4	277+20, RT.
EAST	M3-2	277+20, RT.
SPEED LIMIT	R2-1	277+70, RT.
DESTINATION	D1-2	277+70, LT.
STOP AHEAD	W3-1	46+75, RT.

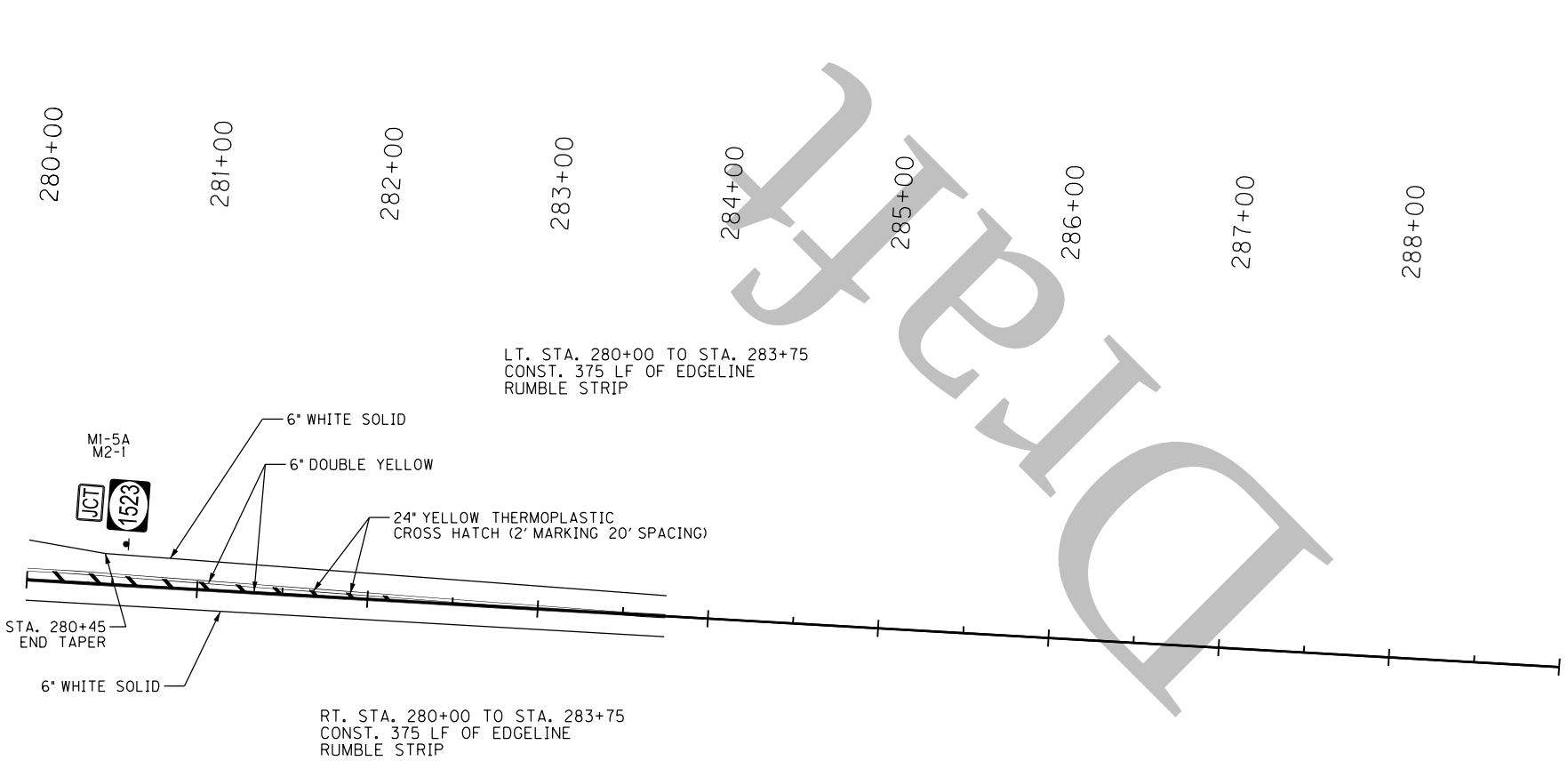
QUANTITIES CARRIED OVER TO SIGNING SUMMARY

0' 50' 100' 200'

SCALE: 1"=100'

U.S. 62 / KY 1523
SIGNING & STRIPING PLAN
STA. 271+00 TO STA. 280+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	----
6" YELLOW DOUBLE	720
6" WHITE SOLID	750
6" WHITE DOTTED	----
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	----
24" YELLOW CROSS HATCH	95
CURVE ARROW	----
"ONLY" MARKING	----
24" STOP BAR	----
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

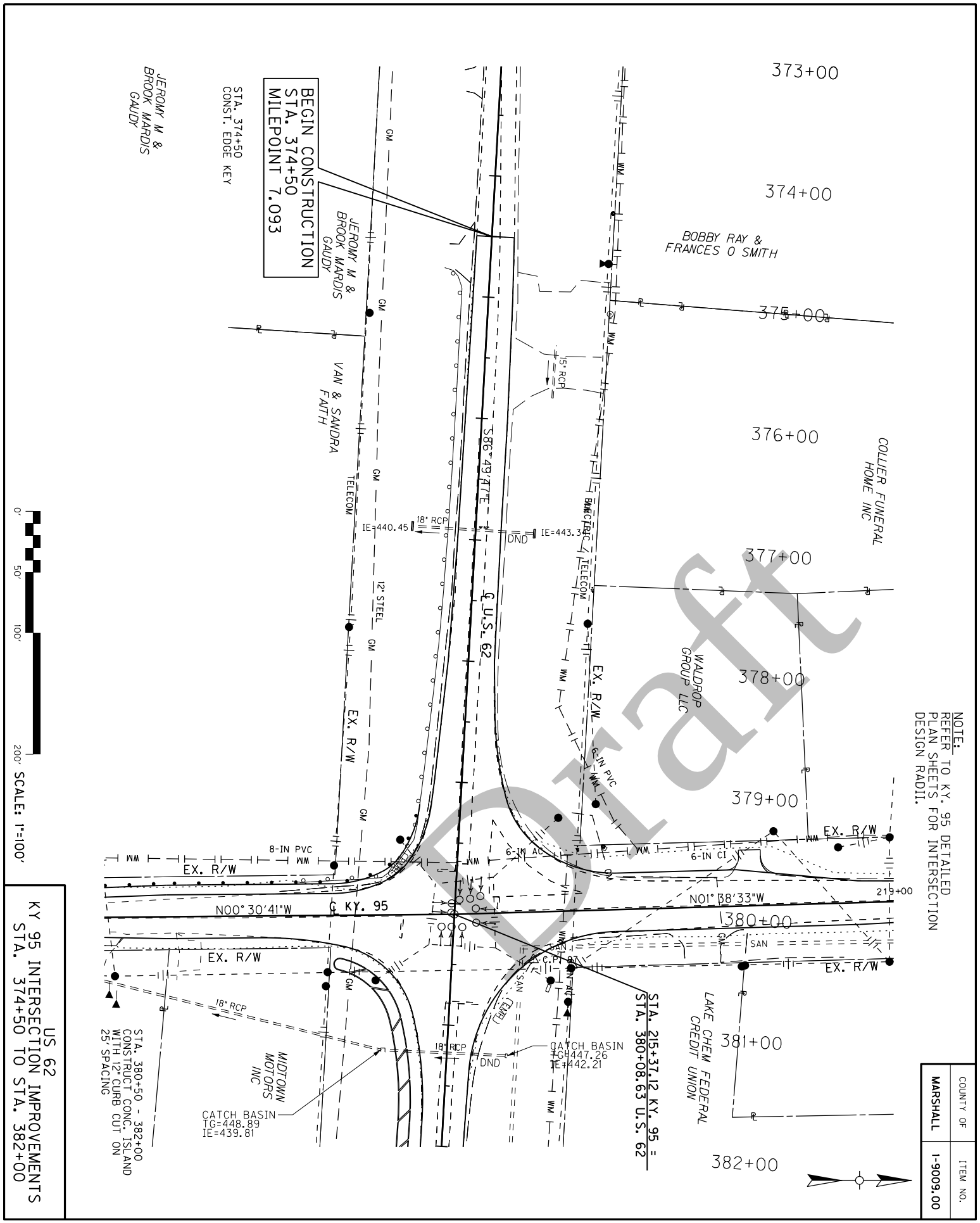
SIGNING QUANTITY SUMMARY		
STATE ROUTE	M1-5A	280+50, LT.
JUNCTION	M2-1	280+50, LT.

QUANTITIES CARRIED OVER TO SIGNING SUMMARY

0' 50' 100' 200'

SCALE: 1"=100'

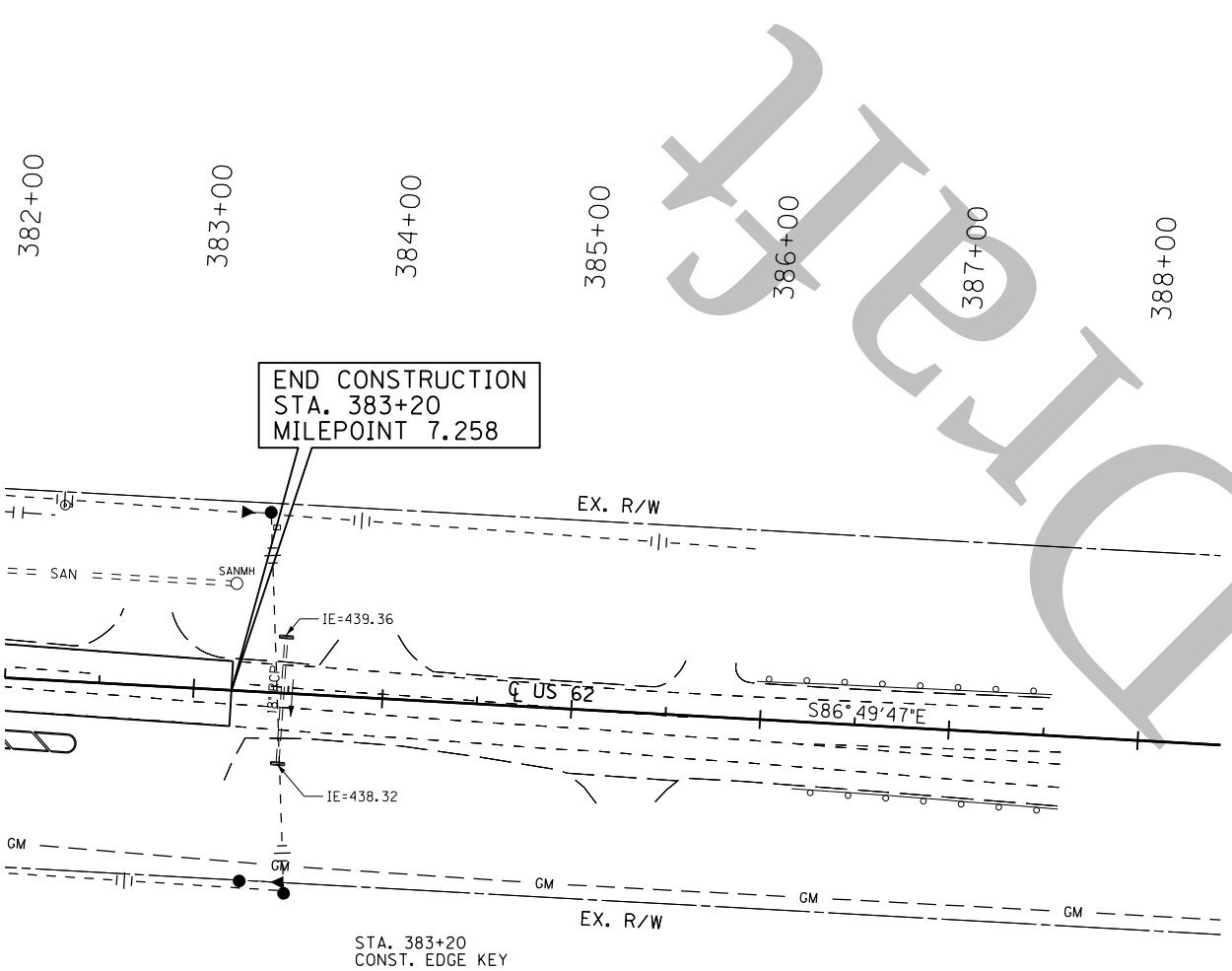
U.S. 62 / KY 1523
SIGNING & STRIPING PLAN
STA. 280+00 TO STA. 289+00



US 62
KY 95 INTERSECTION IMPROVEMENTS
STA. 374+50 TO STA. 382+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



0' 50' 100' 200'

SCALE: 1"=100'

U.S. 62
KY 95 INTERSECTION IMPROVEMENTS
STA. 382+00 TO STA. 383+20

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

GUARDRAIL CONSTRUCTION LEFT OF ℄				
STA. TO STA.	STEEL "W" BEAM (LF)		END TREATMENT (EA)	
	SINGLE FACE		TY. 1	
211+00 - 215+09	418.75'•		1	

•INCLUDES ADDITIONAL LENGTH FOR MEASUREMENT OF SHOP CURVED GUARDRAIL PER SECTION 719.04.01

LT. STA. 211+00 TO LT. STA. 215+09
REMOVE 137.5 LF OF STEEL W-BEAM GUARDRAIL - SINGLE FACE

STA. 215+37.12 KY. 95 =
STA. 380+08.63 U.S. 62

BEGIN CONSTRUCTION
STA. 210+90
MILEPOINT 3.994

STA. 210+90
CONST. EDGE KEY

VAN & SANDRA FAITH

MIDTOWN MOTORS INC

ENTRANCE PAVEMENT CONSTRUCTION RT OF ℄				
STATION	WIDTH (FT)	ASPHALT (SY)	ENTRANCE PIPE	
			SIZE	LF
212+46	28	17	--	--

DESCRIPTION	NORTH (Y)	EAST (X)	ELEVATION
CONTROL POINT 97 (IPC)	3535763.952	4160961.298	451.95

0' 50' 100' 200'

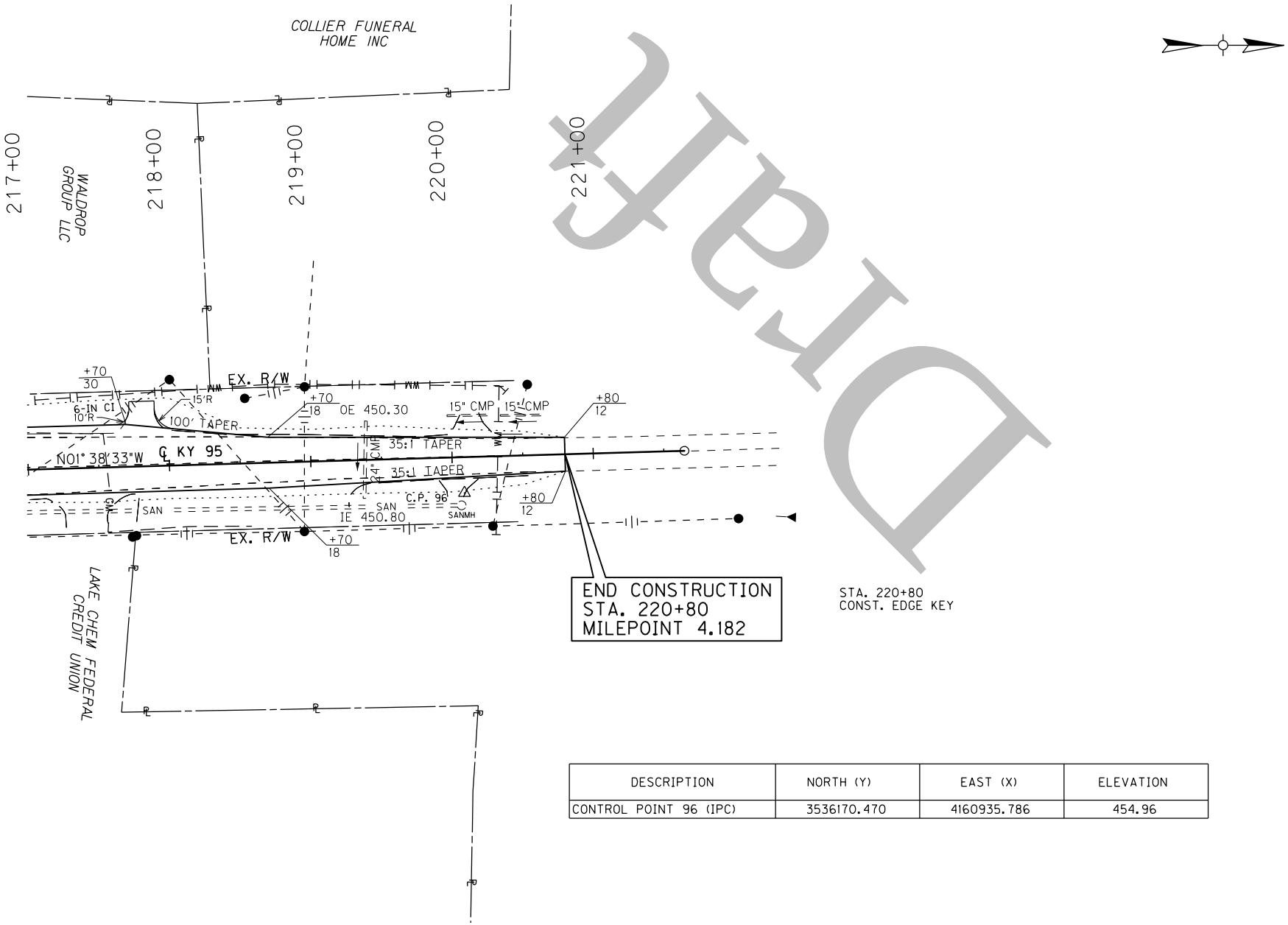
SCALE: 1"=100'

KY 95
KY 95 INTERSECTION IMPROVEMENTS
STA. 210+90 TO STA. 217+00

ENTRANCE PAVEMENT CONSTRUCTION LT OF ℄				
STATION	WIDTH (FT)	ASPHALT (SY)	ENTRANCE PIPE SIZE	ENTRANCE PIPE LF
217+83	18	34	--	--

KY. 95 LT. DITCH CONSTRUCTION				
STA. TO STA.	DESCRIPTION	CHANNEL LINING TYPE	DEPTH	QUANTITY
217+00 TO 217+50	NORMAL	ECB	1'	44 SY

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



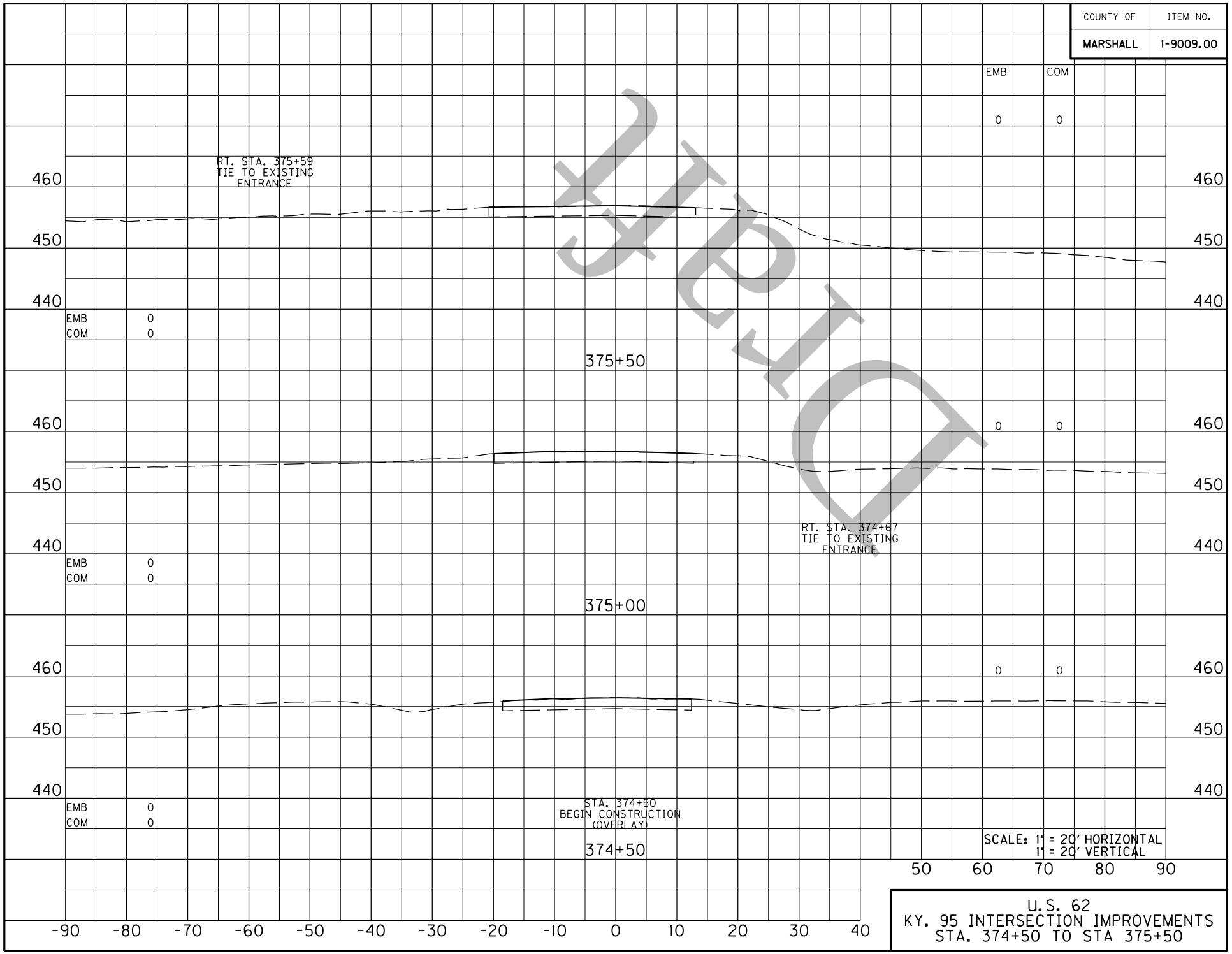
DESCRIPTION	NORTH (Y)	EAST (X)	ELEVATION
CONTROL POINT 96 (IPC)	3536170.470	4160935.786	454.96

0' 50' 100' 200'

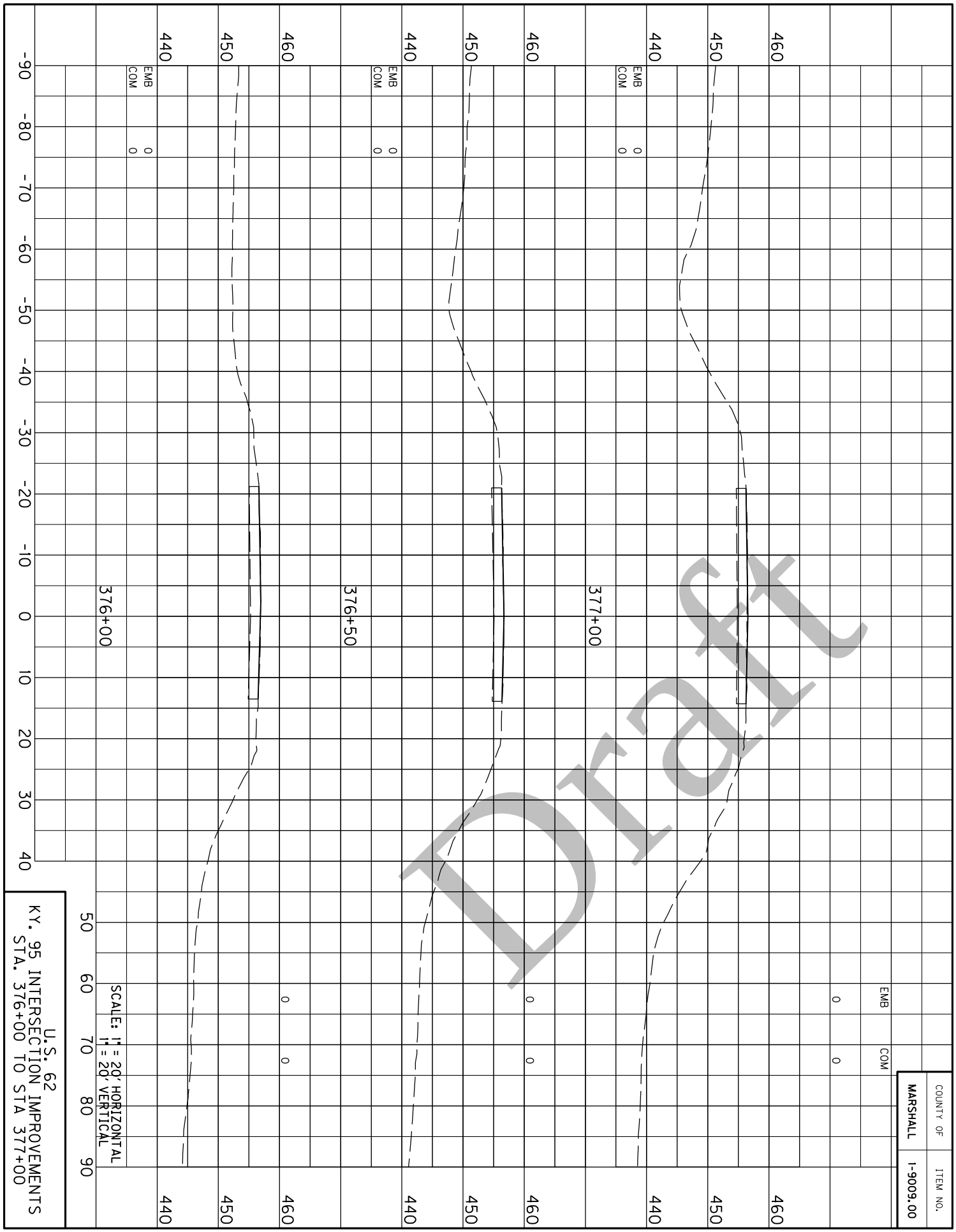
SCALE: 1"=100'

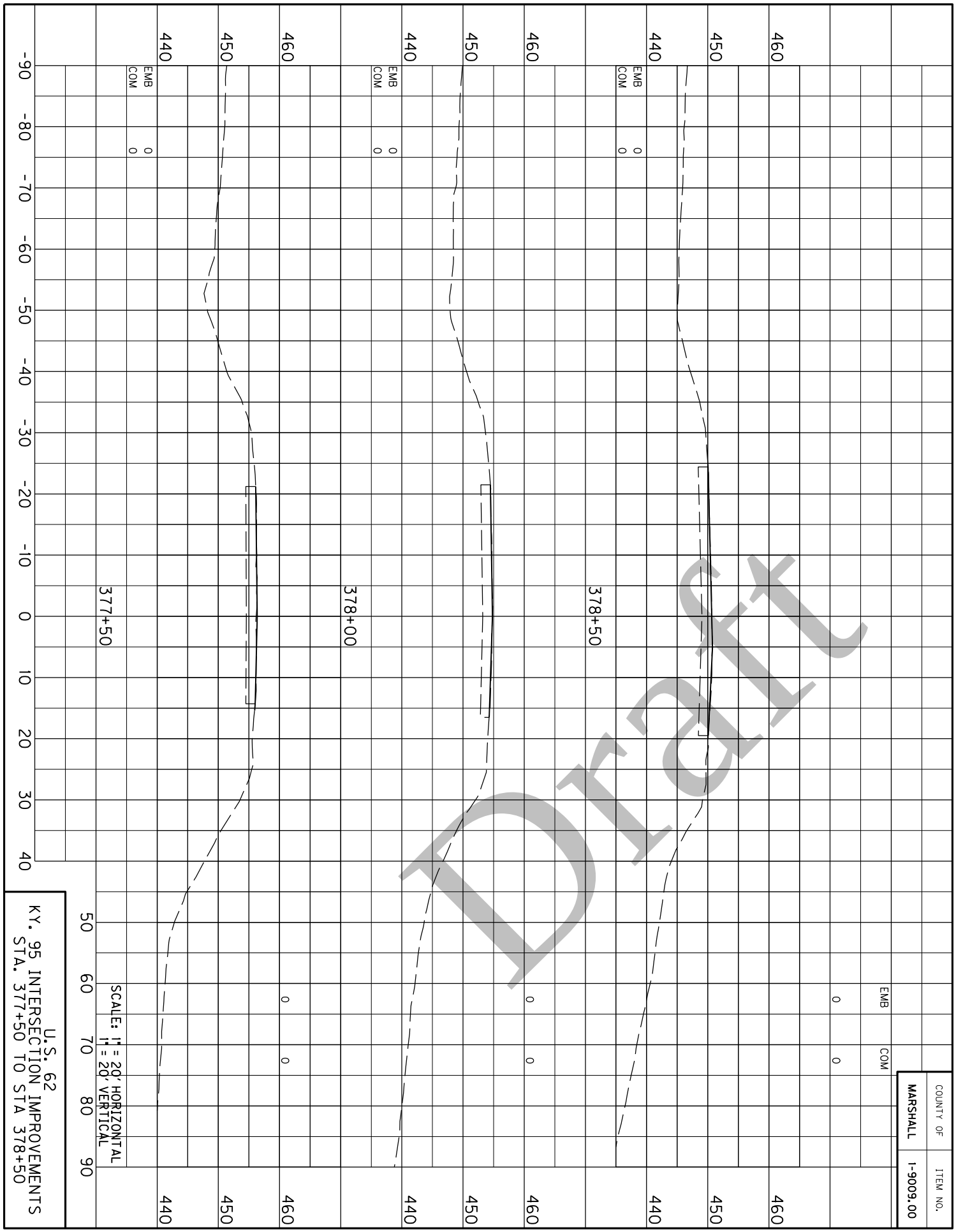
KY 95
KY 95 INTERSECTION IMPROVEMENTS
STA. 217+00 TO STA. 220+80

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

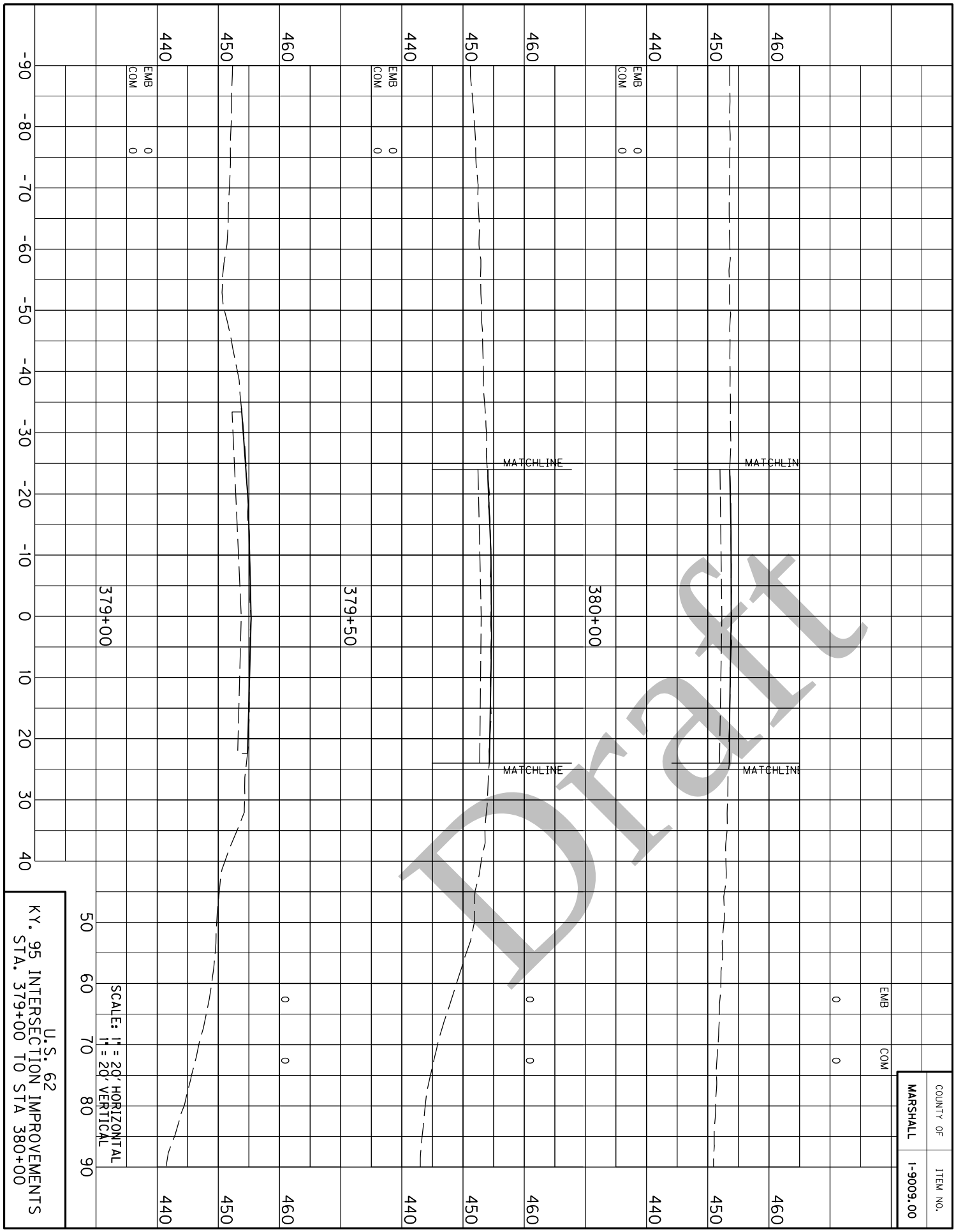


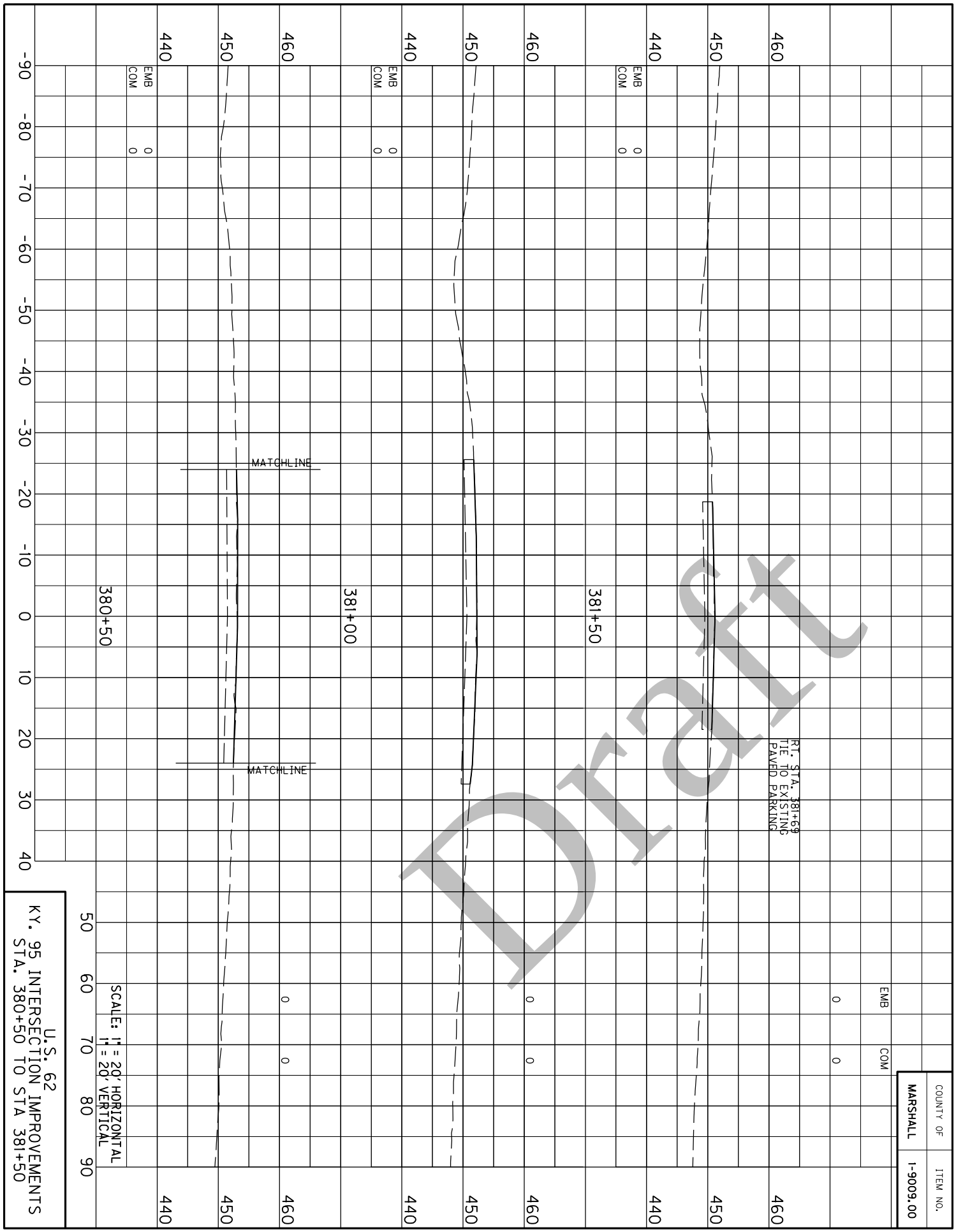
U.S. 62
KY. 95 INTERSECTION IMPROVEMENTS
STA. 374+50 TO STA 375+50

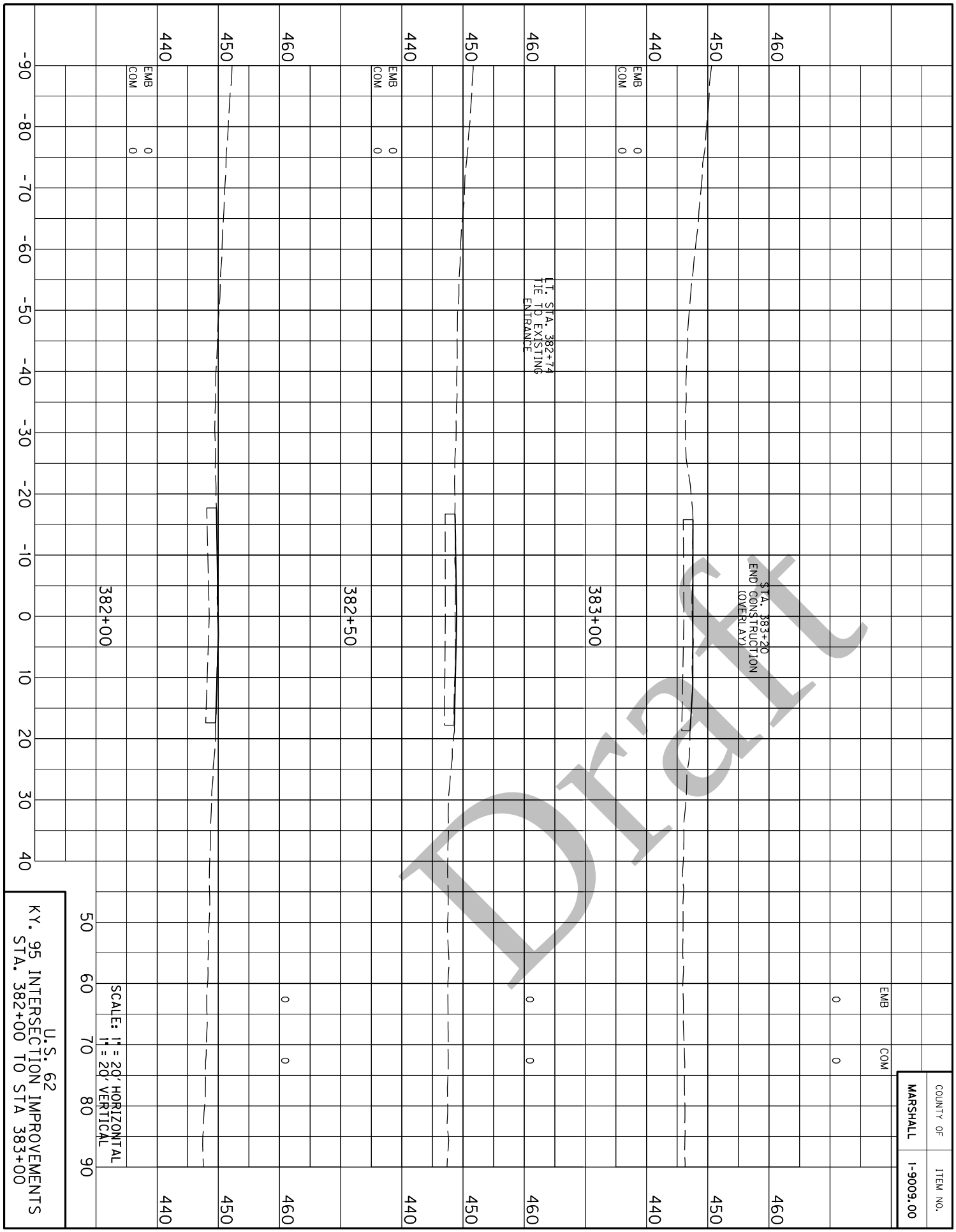

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 95 INTERSECTION IMPROVEMENTS
STA. 376+00 TO STA 377+00
376+00
376+50
377+00
Draft

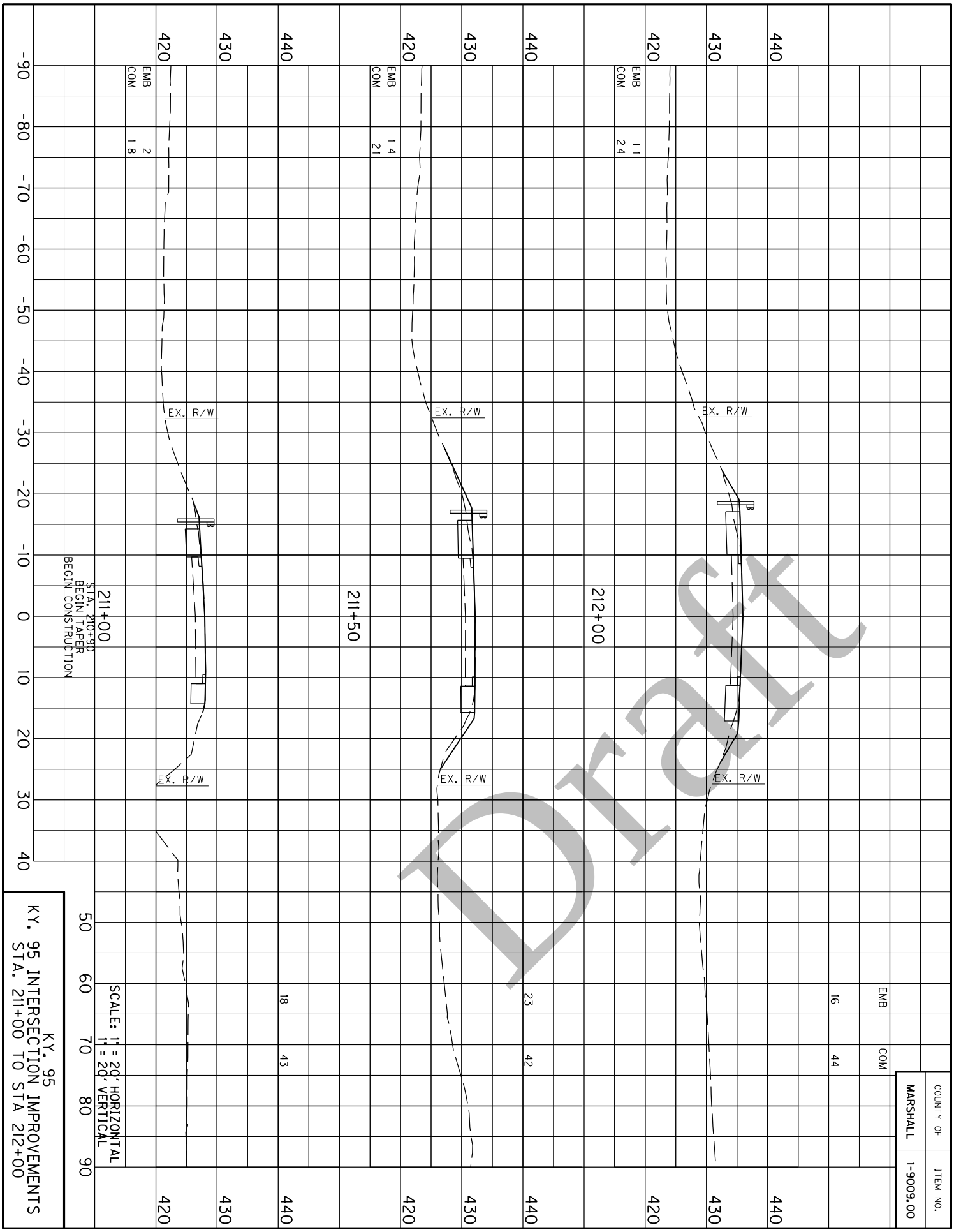


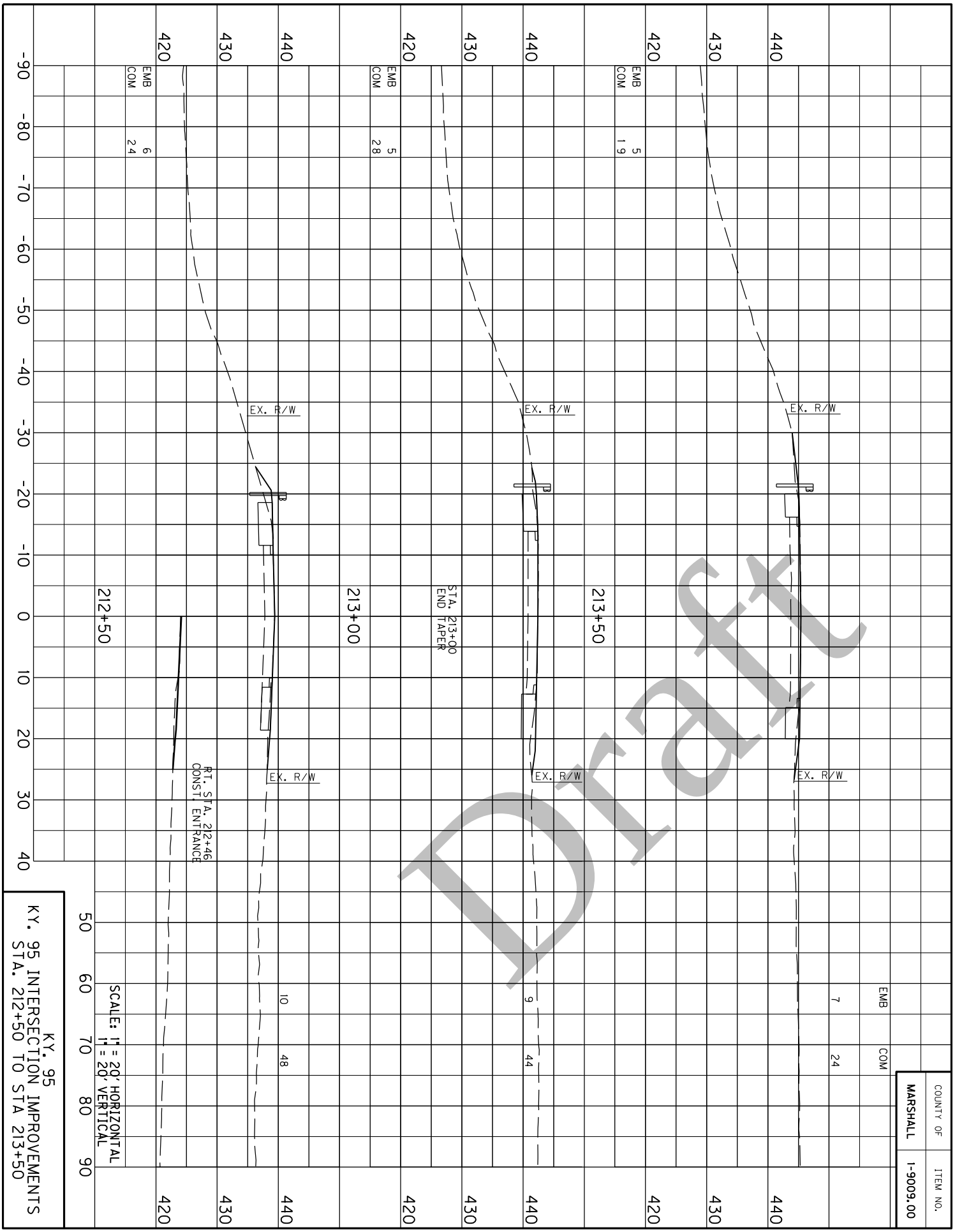
U.S. 62
KY. 95 INTERSECTION IMPROVEMENTS
STA. 377+50 TO STA 378+50

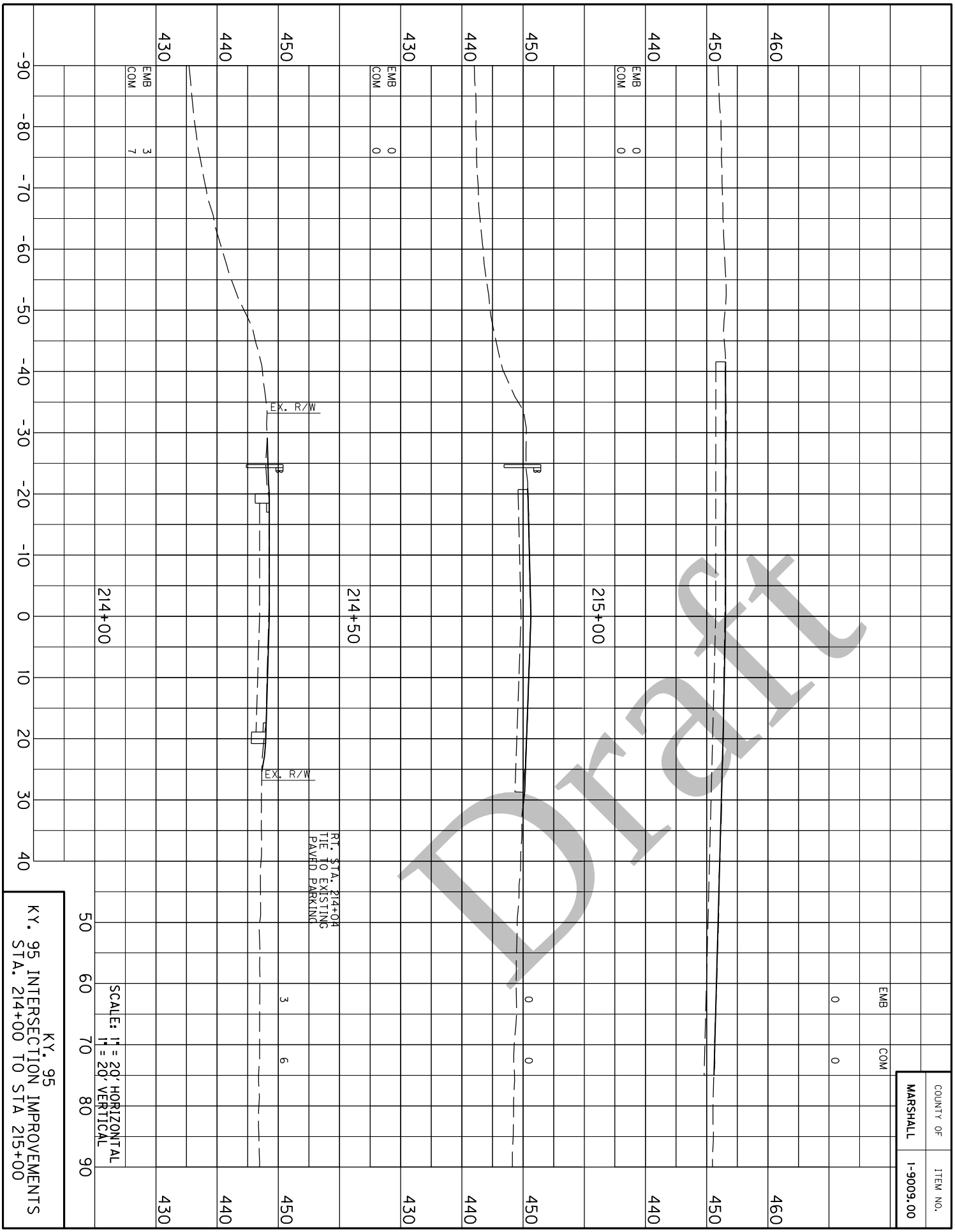

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
MATCHLINE
MATCHLINE
MATCHLINE
MATCHLINE
379+00
379+50
380+00
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 95 INTERSECTION IMPROVEMENTS
STA. 379+00 TO STA 380+00

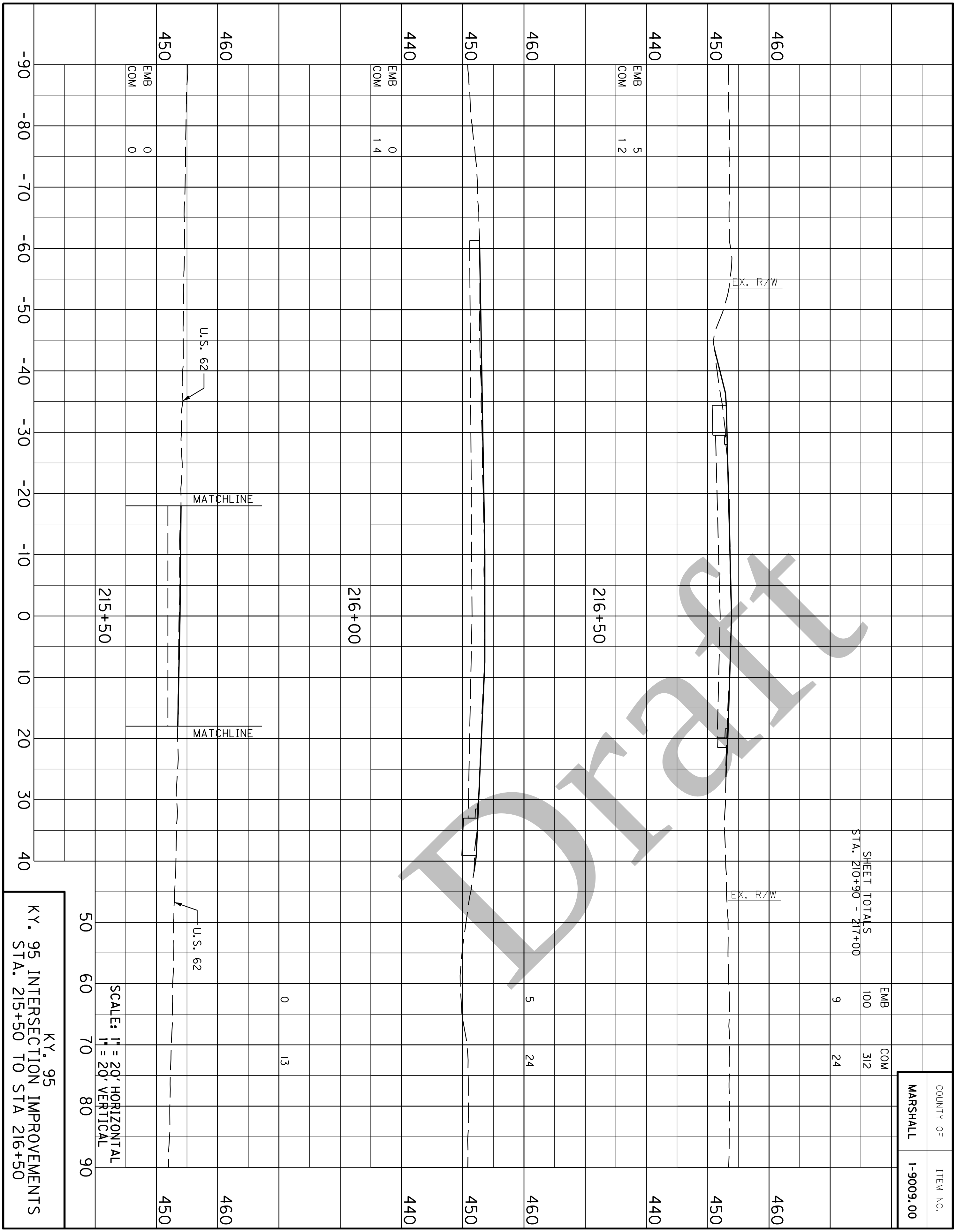

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
0
0
RT. STA. 381+69
TIE TO EXISTING
PAVED PARKING
381+50
381+00
380+50
MATCHLINE
MATCHLINE
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 95 INTERSECTION IMPROVEMENTS
STA. 380+50 TO STA 381+50

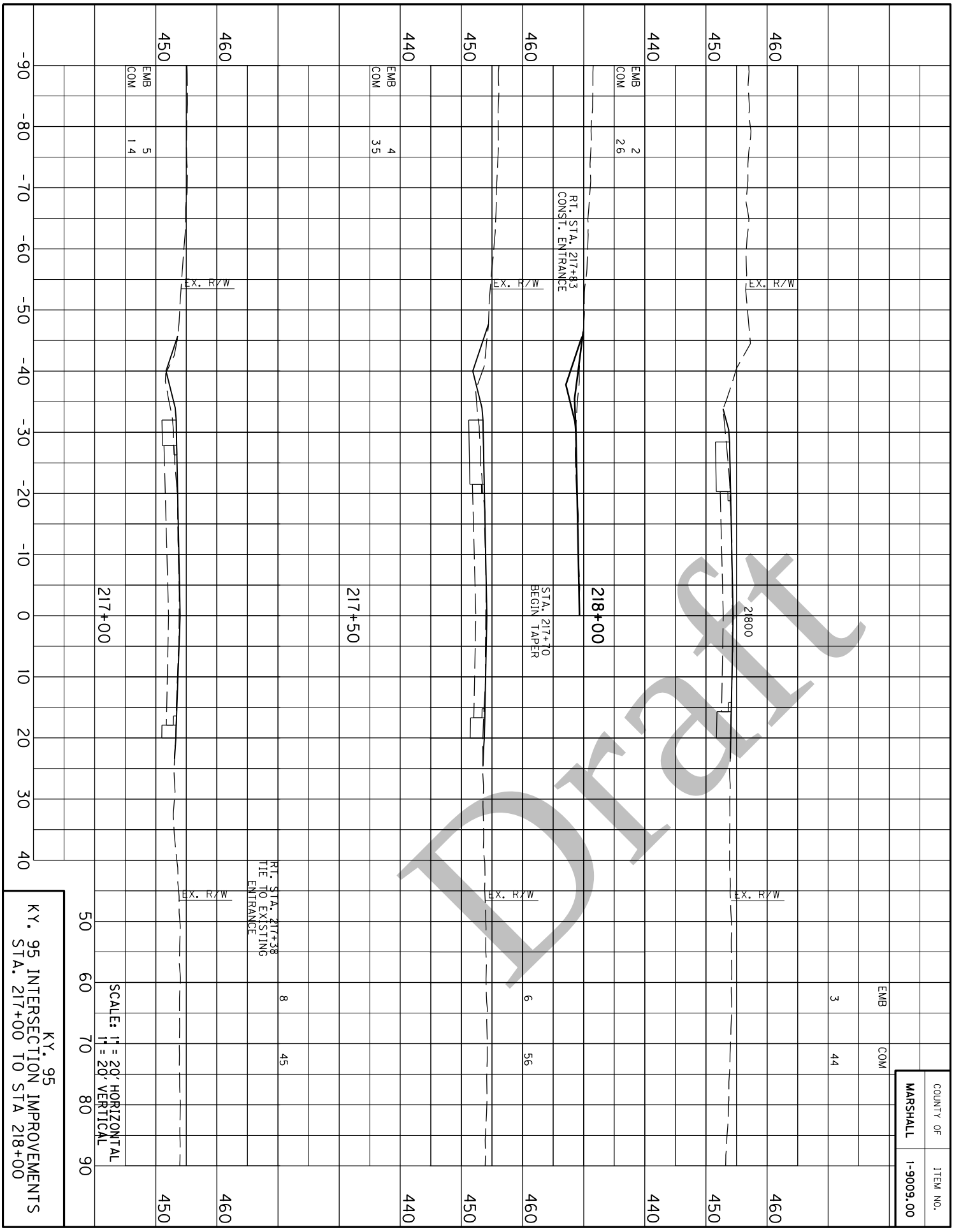

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
0
0
STA. 383+20
END CONSTRUCTION
(OVERLAY)
383+00
382+50
382+00
LT. STA. 382+74
TIE TO EXISTING
ENTRANCE
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
U.S. 62
KY. 95 INTERSECTION IMPROVEMENTS
STA. 382+00 TO STA 383+00


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
16
44
23
42
18
43
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
EMB
COM
11
24
EMB
COM
14
21
EMB
COM
2
18
EX. R/W
EX. R/W
EX. R/W
EX. R/W
EX. R/W
EX. R/W
212+00
211+50
211+00
STA. 210+90
BEGIN TAPER
BEGIN CONSTRUCTION
KY. 95
KY. 95 INTERSECTION IMPROVEMENTS
STA. 211+00 TO STA 212+00

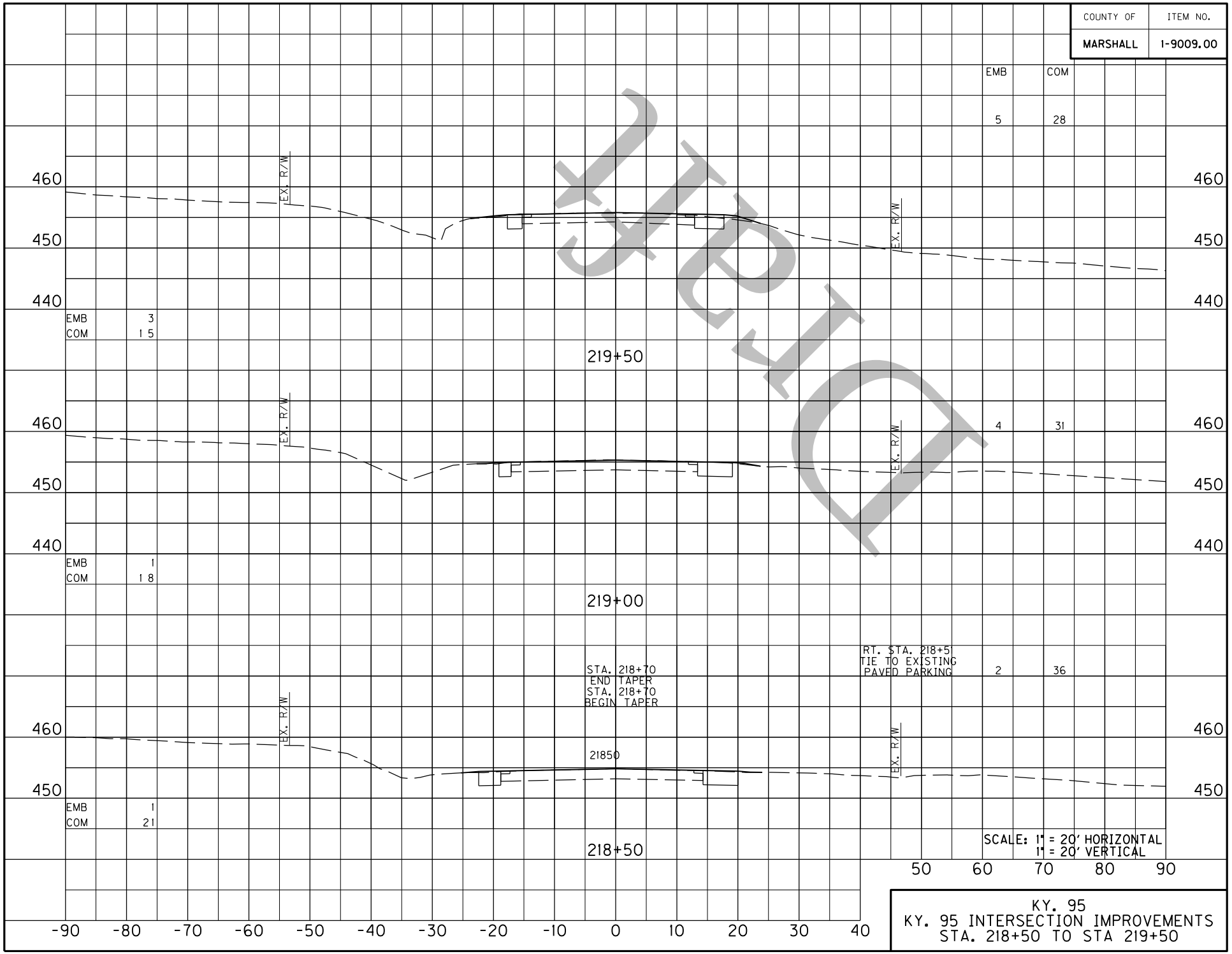

COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
KY. 95 INTERSECTION IMPROVEMENTS
STA. 212+50 TO STA 213+50
EX. R/W
RT. STA. 212+46
CONST. ENTRANCE
STA. 213+00
END TAPER
212+50
213+00
213+50
EMB
COM
EMB
COM
EMB
COM
-90
-80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
80
90
420
430
440


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
0
0
0
0
EMB
COM
0
0
EMB
COM
3
7
EX. R/W
EX. R/W
RT. STA. 214+04
TIE TO EXISTING
PAVED PARKING
214+00
214+50
215+00
-90
-80
-70
-60
-50
-40
-30
-20
-10
0
10
20
30
40
50
60
70
80
90
430
440
450
460
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
KY. 95 INTERSECTION IMPROVEMENTS
STA. 214+00 TO STA 215+00
KY. 95


KY. 95
INTERSECTION IMPROVEMENTS
STA. 215+50 TO STA 216+50
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
215+50
216+00
216+50
MATCHLINE
MATCHLINE
U.S. 62
U.S. 62
EX. R/W
EX. R/W
EMB
COM
SHEET TOTALS
STA. 210+90 - 217+00
EMB 100
COM 312
COUNTY OF
MARSHALL
ITEM NO.
I-9009.00


COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
EMB
COM
3
44
EX. R/W
2800
218+00
RT. STA. 217+83
CONST. ENTRANCE
EMB
COM
2
26
STA. 217+70
BEGIN
TAPER
217+50
EMB
COM
4
35
RT. STA. 217+38
TIE TO EXISTING
ENTRANCE
8
6
45
56
217+00
EMB
COM
5
14
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
KY. 95
KY. 95 INTERSECTION IMPROVEMENTS
STA. 217+00 TO STA 218+00

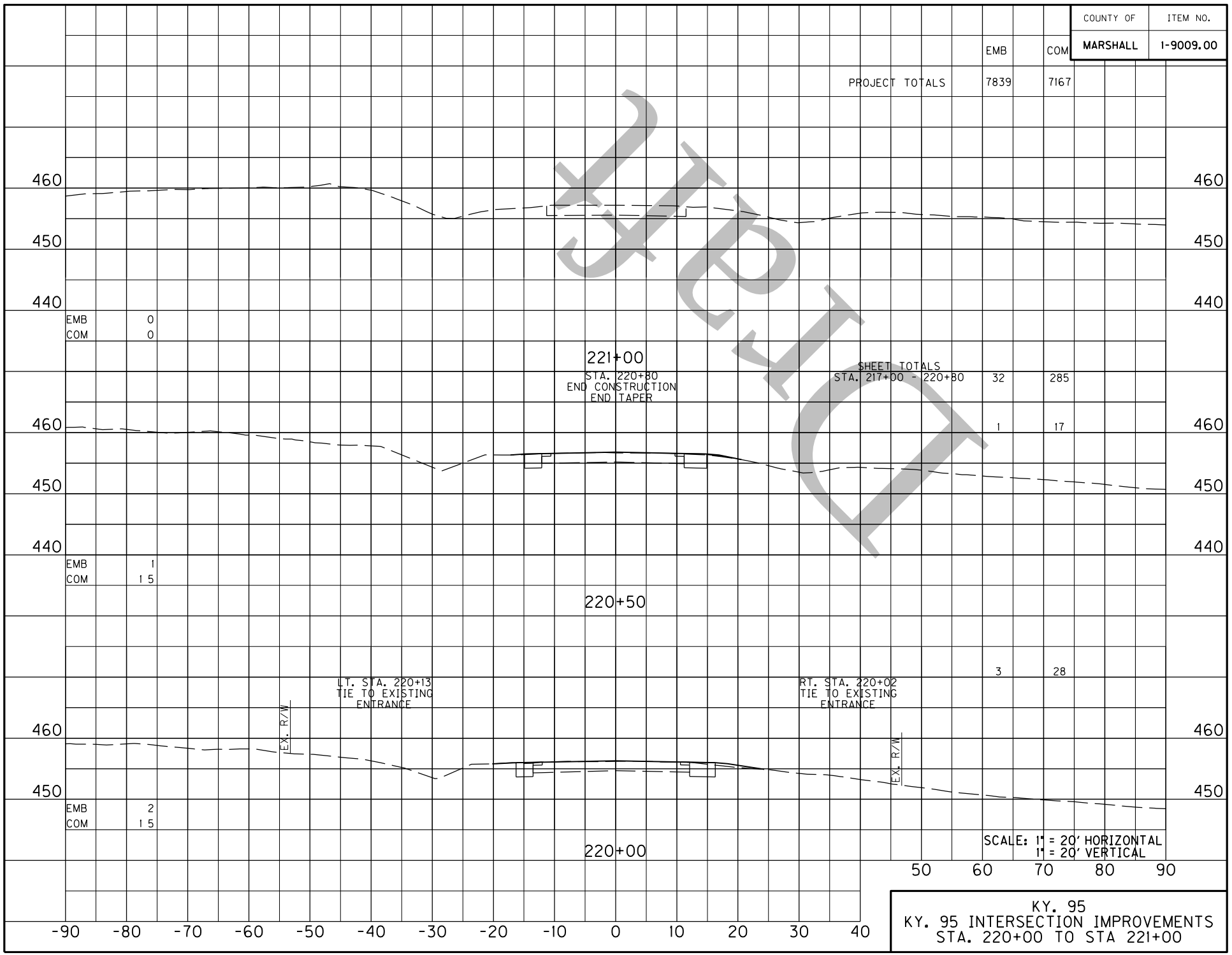
COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



KY. 95
KY. 95 INTERSECTION IMPROVEMENTS
STA. 218+50 TO STA 219+50

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

	EMB	COM
PROJECT TOTALS	7839	7167
SHEET TOTALS STA. 217+00 - 220+80	32	285
	1	17
	3	28

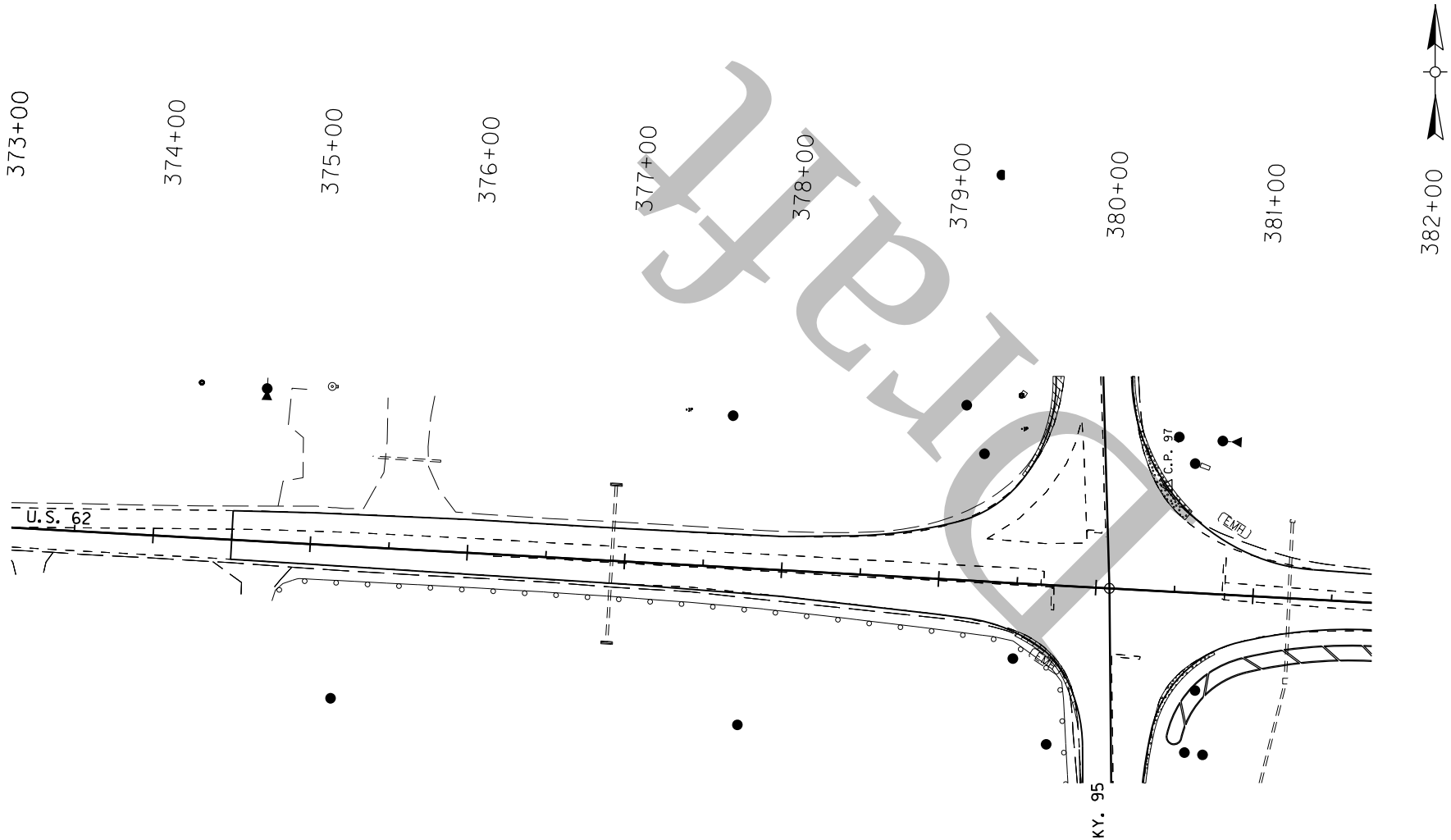


KY. 95
KY. 95 INTERSECTION IMPROVEMENTS
STA. 220+00 TO STA 221+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

PHASE 1

PHASE 2



PHASE I
COMPLETE WIDENING OF SOUTHBOUND KY 95

PHASE II
COMPLETE WIDENING OF NORTHBOUND KY 95

PHASE III
COMPLETE OVERLAY OF U.S. 62 AND KY 95

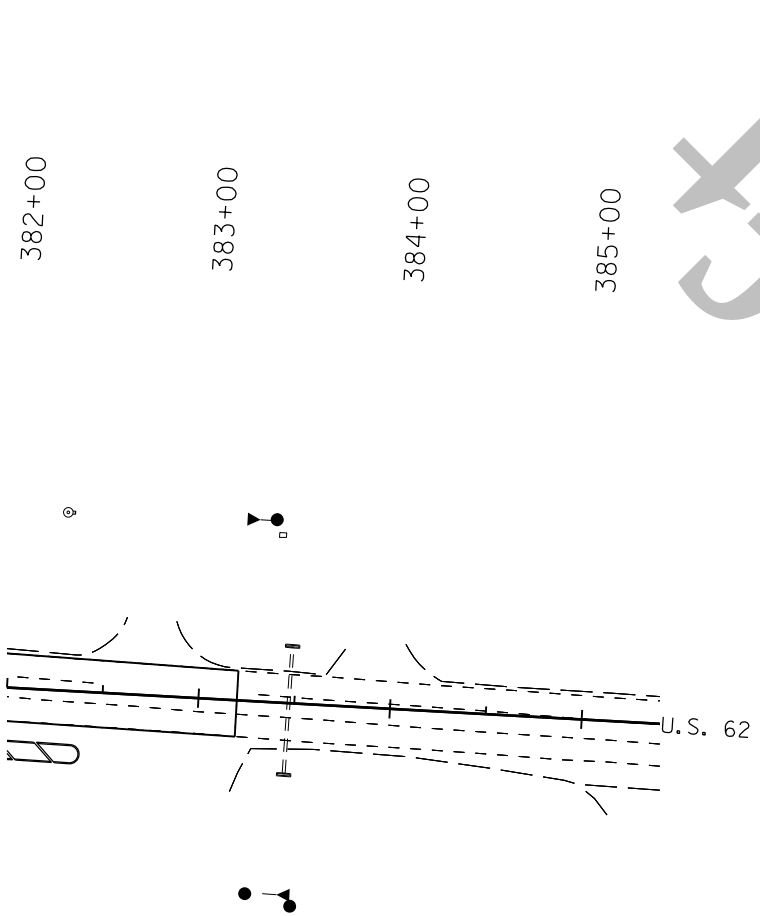
0' 50' 100' 200' SCALE: 1"=100'

U.S. 62 / KY 95
MAINTENANCE OF TRAFFIC
STA. 374+50 TO STA. 382+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

PHASE 1

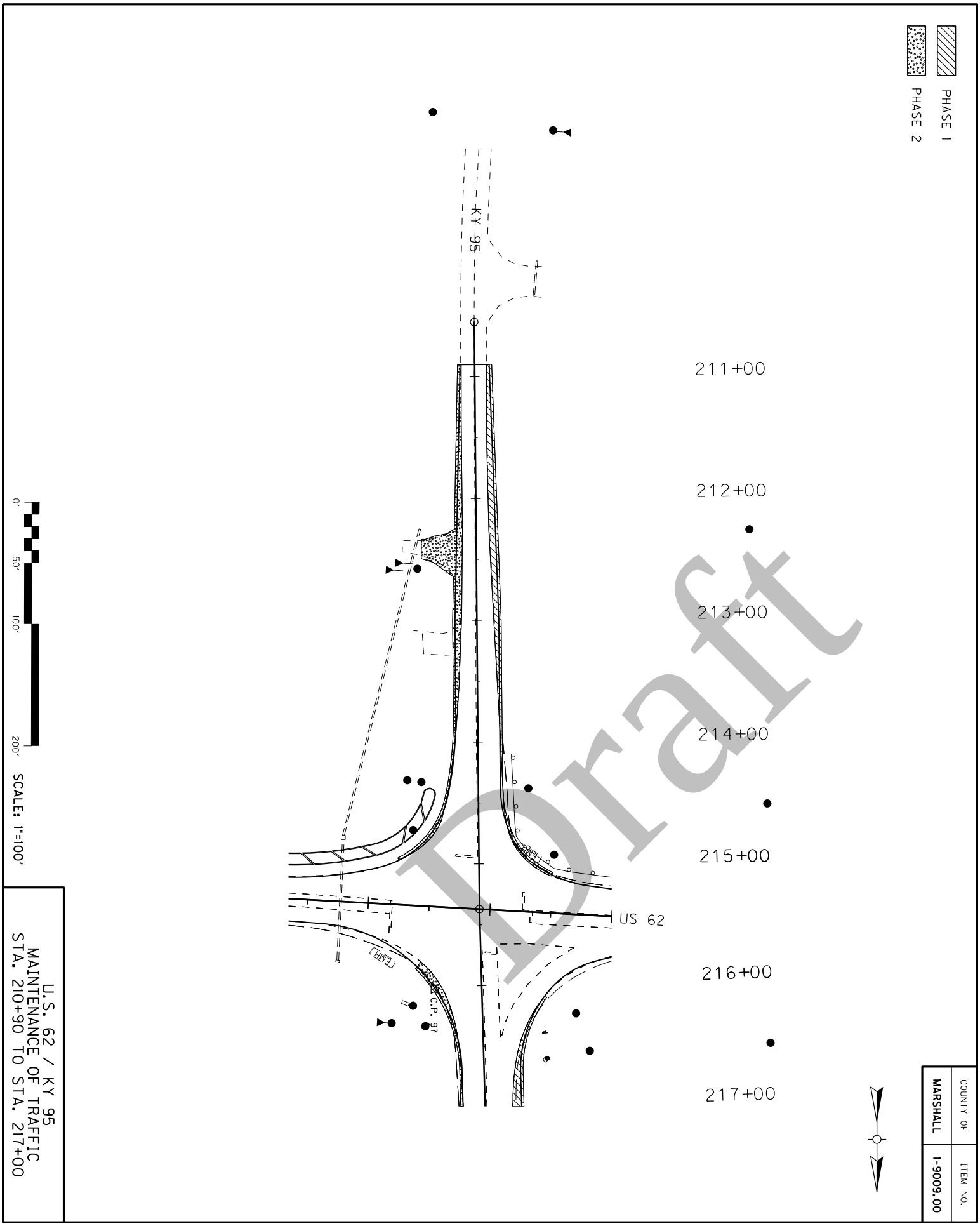
PHASE 2



0′ 50′ 100′ 200′

SCALE: 1"=100′

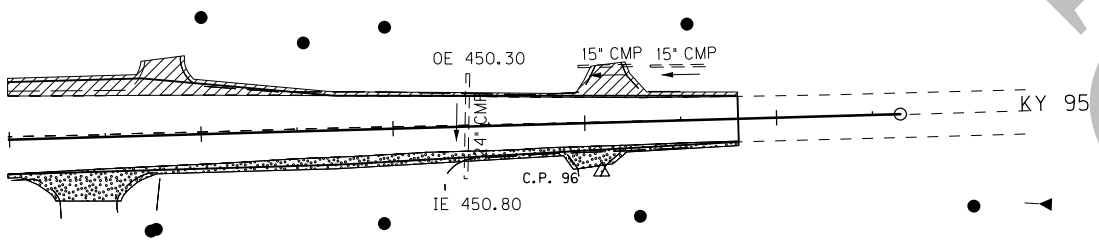
U.S. 62 / KY 95
MAINTENANCE OF TRAFFIC
STA. 382+00 TO STA. 383+20


PHASE 1
PHASE 2
KY 95
US 62
C.P. 97
211+00
212+00
213+00
214+00
215+00
216+00
217+00
0'
50'
100'
200'
SCALE: 1"=100'
COUNTY OF
MARSHALL
ITEM NO.
1-9009.00
U.S. 62 / KY 95
MAINTENANCE OF TRAFFIC
STA. 210+90 TO STA. 217+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

PHASE 1

PHASE 2

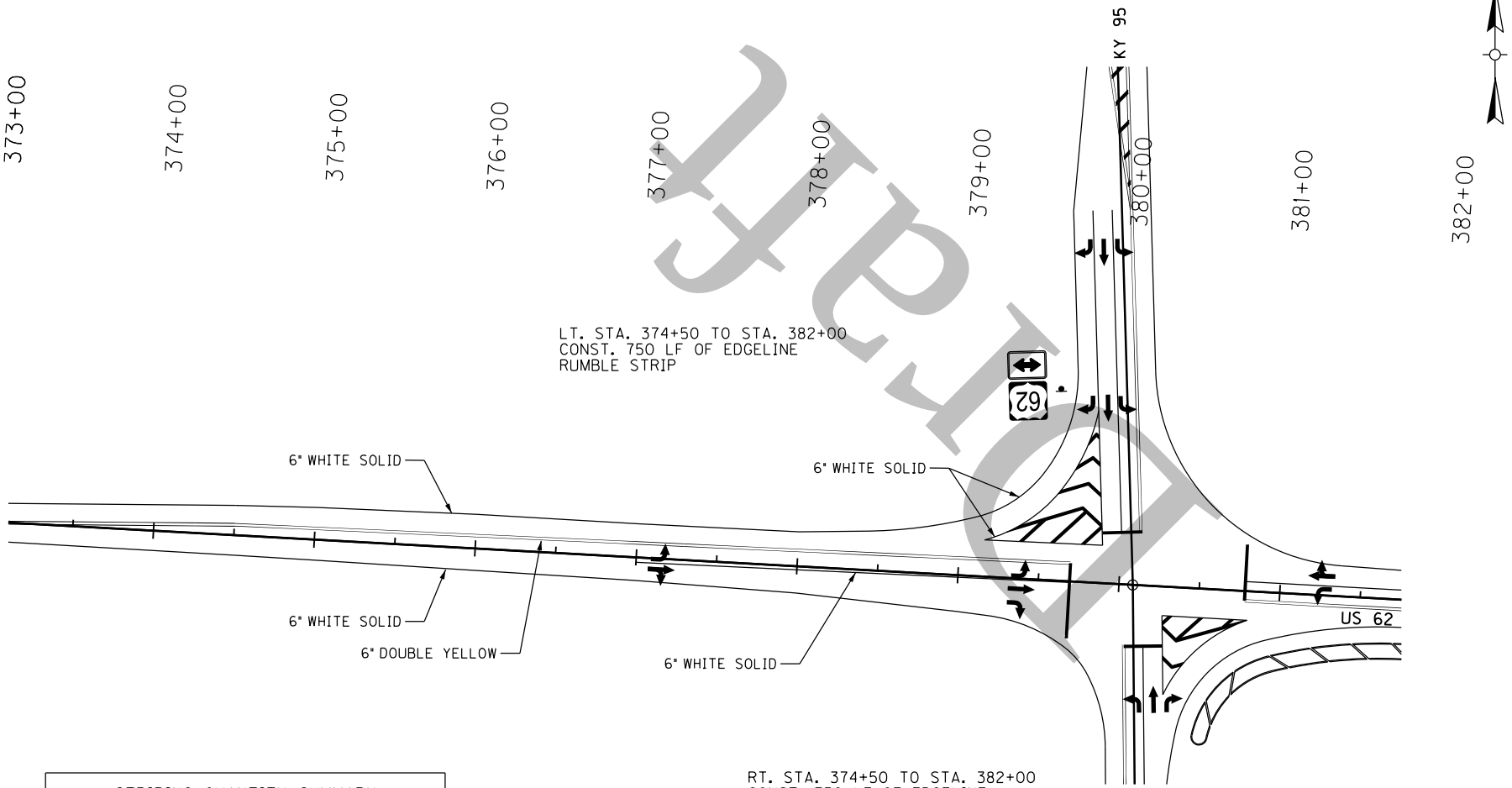


0' 50' 100' 200'

SCALE: 1"=100'

U.S. 62 / KY 95
MAINTENANCE OF TRAFFIC
STA. 217+00 TO STA. 220+80

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	----
6" YELLOW DOUBLE	616
6" WHITE SOLID	1926
6" WHITE DOTTED	----
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	----
24" YELLOW CROSS HATCH	----
CURVE ARROW	6
"ONLY" MARKING	----
24" STOP BAR	82
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----
STRAIGHT ARROW	3

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

STOP BAR LOCATIONS
STA. 379+70, ℄
STA. 380+80, ℄

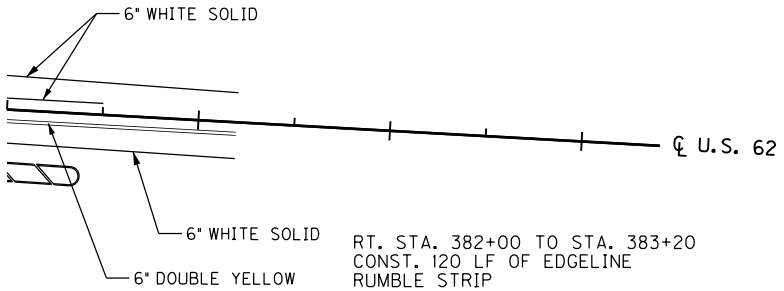
0' 50' 100' 200' SCALE: 1"=100'

U.S. 62 / KY 95
SIGNING & STRIPING PLAN
STA. 374+50 TO STA. 382+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

382+00 383+00 384+00 385+00

LT. STA. 382+00 TO STA. 383+20
CONST. 120 LF OF EDGELINE
RUMBLE STRIP



RT. STA. 382+00 TO STA. 383+20
CONST. 120 LF OF EDGELINE
RUMBLE STRIP

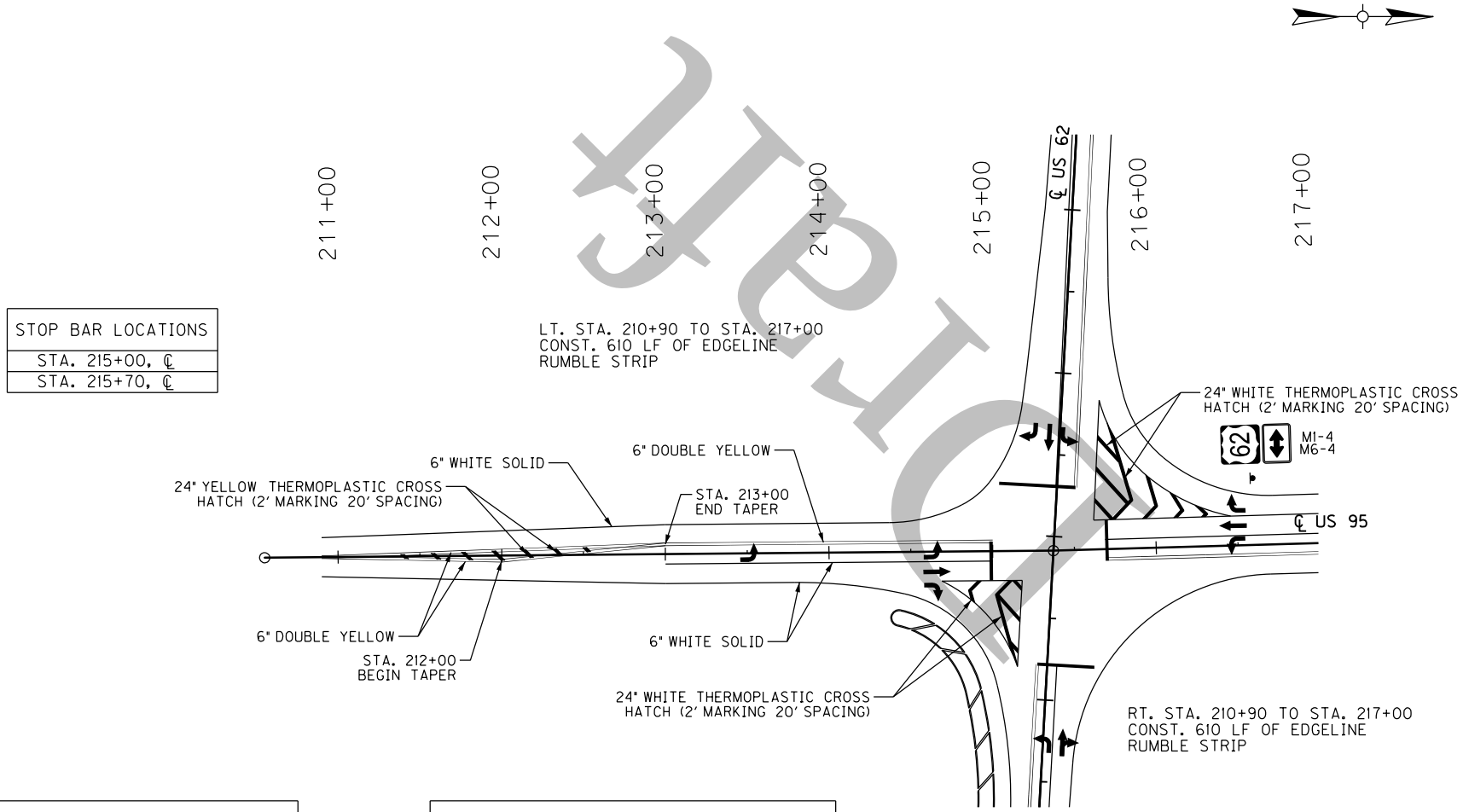
STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	----
6" YELLOW DOUBLE	120
6" WHITE SOLID	290
6" WHITE DOTTED	----
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	----
24" YELLOW CROSS HATCH	----
CURVE ARROW	----
"ONLY" MARKING	----
24" STOP BAR	----
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

0′ 50′ 100′ 200′ SCALE: 1"=100′

U.S. 62 / KY 95
SIGNING & STRIPING PLAN
STA. 382+00 TO STA. 383+20

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00



STOP BAR LOCATIONS
STA. 215+00, ℄
STA. 215+70, ℄

STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	----
6" YELLOW DOUBLE	750
6" WHITE SOLID	1589
6" WHITE DOTTED	----
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	423
24" YELLOW CROSS HATCH	63
CURVE ARROW	5
"ONLY" MARKING	----
24" STOP BAR	48
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----
STRAIGHT ARROW	2

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

SIGNING QUANTITY SUMMARY		
U.S. ROUTE	M1-4	216+60 LT.
DIRECTIONAL ARROW	M6-4	216+60, LT.

QUANTITIES CARRIED OVER TO SIGNING SUMMARY

DND EXIST SIGNS
REPLACE SIGNS AS SHOWN

0' 50' 100' 200'

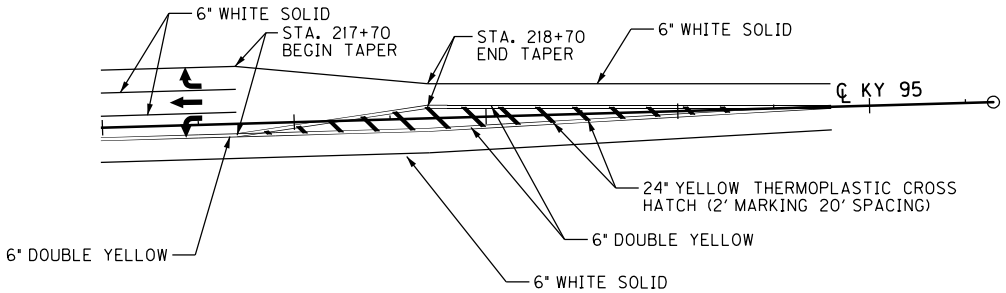
SCALE: 1"=100'

US 62 / KY 95
SIGNING & STRIPING PLAN
STA. 210+90 TO STA. 217+00

COUNTY OF	ITEM NO.
MARSHALL	1-9009.00

217+00 218+00 219+00 220+00 221+00

LT. STA. 217+00 TO STA. 220+80
CONST. 380 LF OF EDGELINE
RUMBLE STRIP



RT. STA. 217+00 TO STA. 220+80
CONST. 380 LF OF EDGELINE
RUMBLE STRIP

STRIPING QUANTITY SUMMARY	
6" YELLOW SOLID	----
6" YELLOW DOUBLE	693
6" WHITE SOLID	905
6" WHITE DOTTED	----
12" WHITE SOLID	----
12" WHITE DASHED	----
24" WHITE CROSS HATCH	----
24" YELLOW CROSS HATCH	200
CURVE ARROW	2
"ONLY" MARKING	----
24" STOP BAR	----
INLAID PAVEMENT MARKERS	----
REMOVE PAVEMENT MARKERS	----
STRAIGHT ARROW	1

QUANTITIES CARRIED OVER TO GENERAL SUMMARY

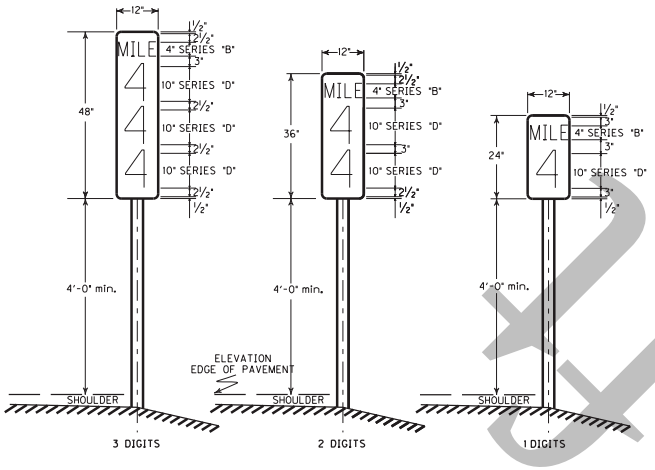
0' 50' 100' 200'

SCALE: 1"=100'

U.S. 62 / KY 95
SIGNING & STRIPING PLAN
STA. 217+00 TO STA. 220+80

COUNTY OF	ITEM NO.	SHEET NO.

MILEPOST MARKERS



TYPICAL SIGN PANEL DIMENSIONS AND MILEPOST LOCATIONS

MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

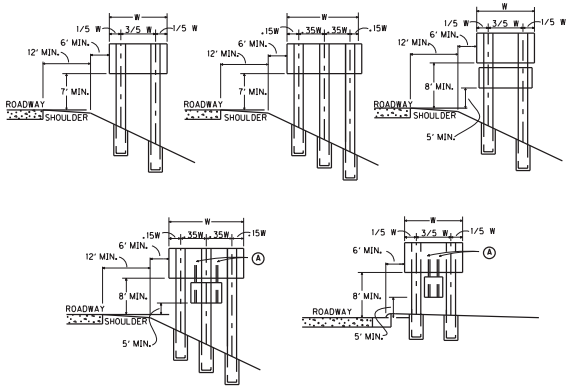
MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

NOTE: STATION NUMBERS ARE GIVEN FOR NOTED DIRECTION OF TRAVEL ONLY. CORRESPONDING MILEPOST MARKERS FOR OTHER DIRECTION SHOULD BE PLACED DIRECTLY OPPOSITE THOSE FOR WHICH STATION NUMBERS ARE GIVEN.

IN JEFFERSON COUNTY, FINAL LOCATION OF MILEPOST MARKERS SHALL BE VERIFIED BY TRIMARC. NOTIFY TRIMARC AT LEAST TWO WEEKS PRIOR TO BEGINNING WORK ON THIS ITEM:

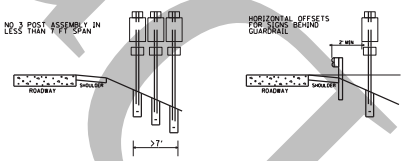
901 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6624
270-307-7456

PANEL SIGNS

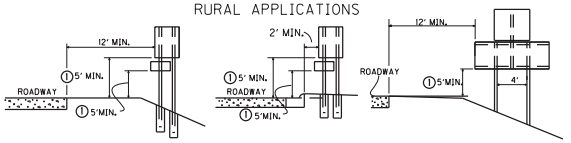


Ⓐ ATTACHMENT OF SECONDARY SIGN TO MAJOR SIGN IS TO BE MADE WITH TWO (2) 3" X 3" X 3/16" ANGLES OF SUFFICIENT LENGTH TO EXTEND FROM THE LOWER EDGE OF THE SECONDARY SIGN TO AT LEAST THREE FEET UP THE BACK OF THE MAJOR SIGN. A MINIMUM OF ONE POST CLIP PER FOOT SHALL BE USED IN ATTACHING EXTRUSIONS TO EACH ANGLE.

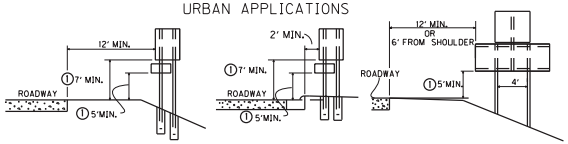
SHEETING SIGNS



RURAL APPLICATIONS



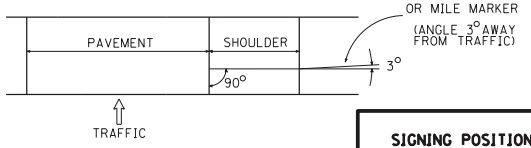
URBAN APPLICATIONS



NOTE: SHOULD A SIGN BE LOCATED AT A POINT WHERE GUARDRAIL IS CALLED FOR OR EXISTING, ALL SIGN SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL AND LATERAL OFFSET SHALL BE MEASURED FROM THE GUARDRAIL.

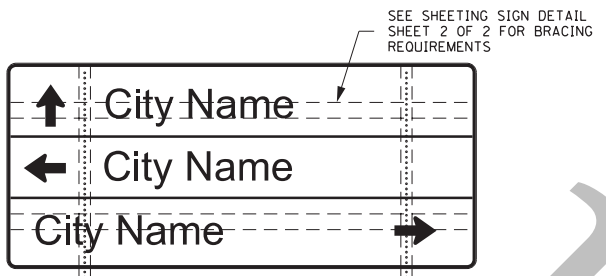
① NOT TO EXCEED 8' IN URBAN AREAS AND 6' IN RURAL AREAS UNLESS SPECIFIED BY THE ENGINEER

ORIENTATION ANGLE

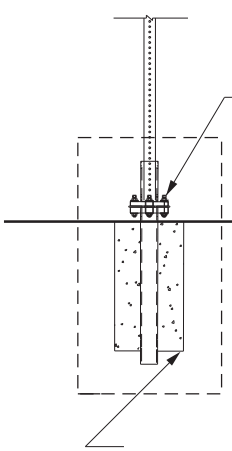


SIGNING POSITIONING DETAIL SHEET

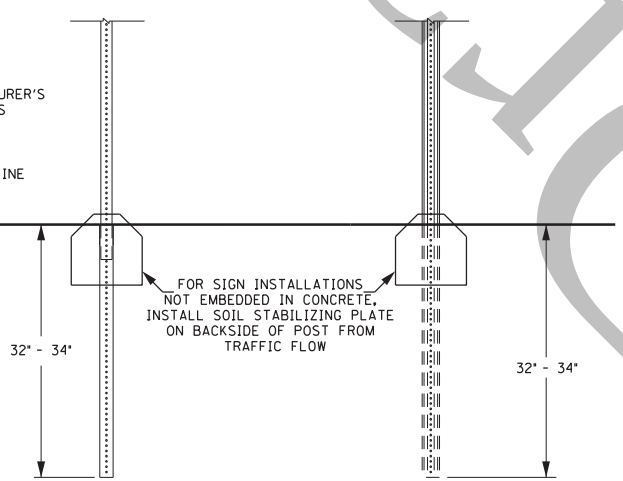
COUNTY OF	ITEM NO.	SHEET NO.



PLAN VIEW
NOT TO SCALE

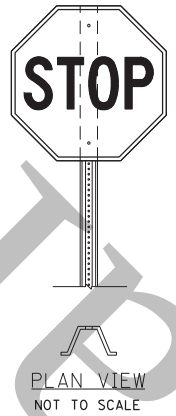


TYPE I
SQUARE TUBING POST
WITH TYPE "D" SUPPORT



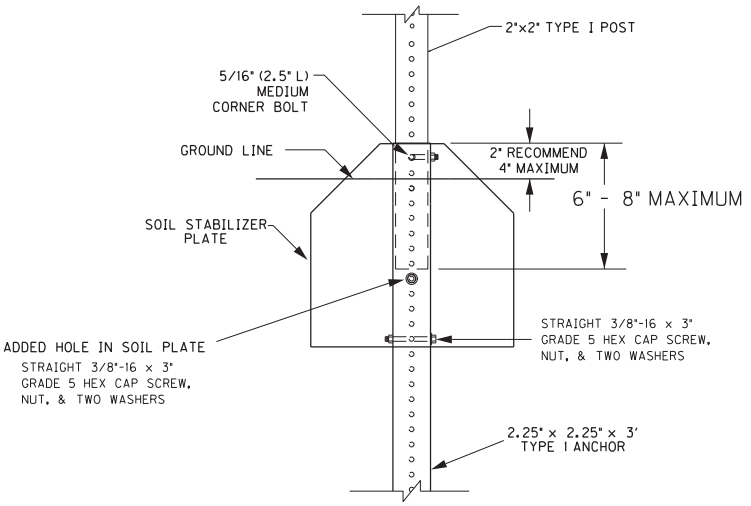
PLAN VIEW
NOT TO SCALE

TYPE I
SQUARE TUBING POST
WITH SOIL STABILIZER

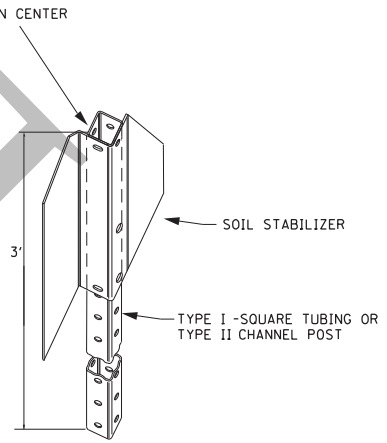


PLAN VIEW
NOT TO SCALE

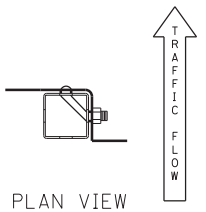
TYPE II
CHANNEL POST
WITH SOIL STABILIZER



SOIL STABILIZER DETAIL
FOR TYPE I POST



SOIL STABILIZER DETAIL



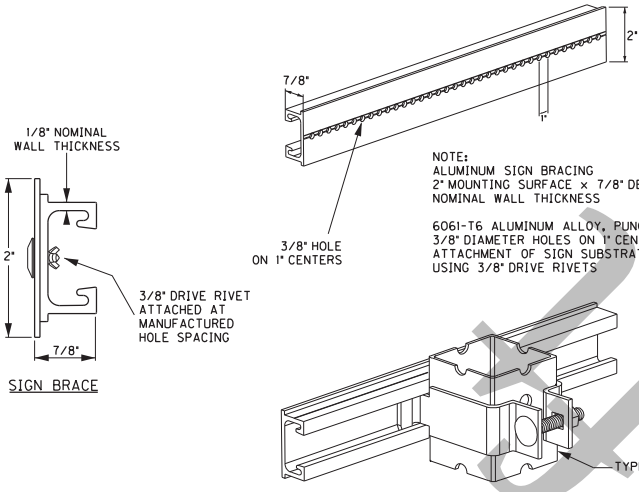
PLAN VIEW
NOT TO SCALE

NOT TO SCALE

SHEETING SIGN DETAIL
SHEET 1 OF 2

COUNTY OF	ITEM NO.	SHEET NO.

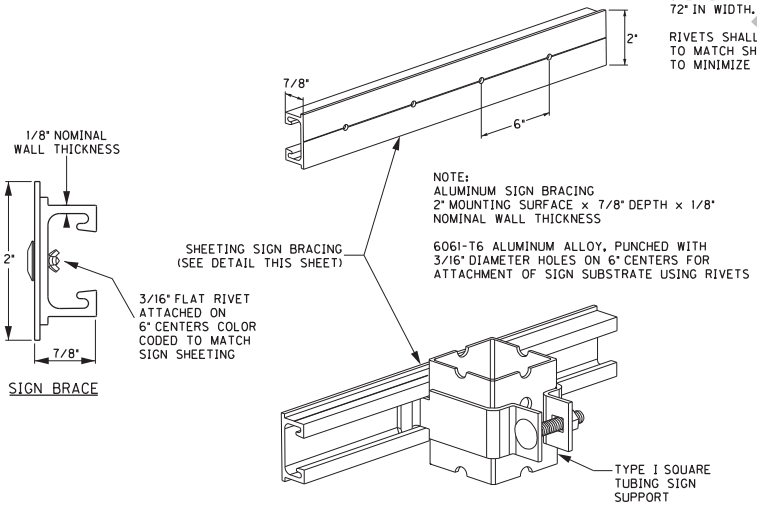
FOR ATTACHMENT OF SIGNS LESS THAN 72" IN WIDTH USING MANUFACTURED 3/8" HOLES ACCORDING TO 2004 STANDARD HIGHWAY SIGNS BLANK STANDARDS PGS 7-1 THRU 7-6



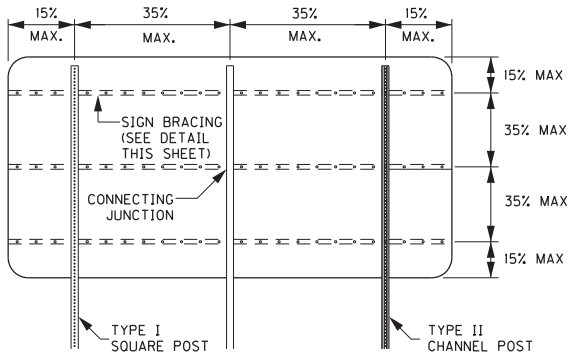
SQUARE POST CLAMP & BRACE

FOR ATTACHMENT OF SIGNS GREATER THAN, OR EQUAL TO, 72" IN WIDTH.

RIVETS SHALL BE COLOR CODED TO MATCH SHEETING IN ORDER TO MINIMIZE GLARE FROM RIVETS



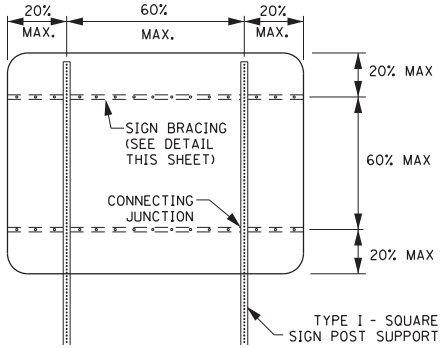
SQUARE POST CLAMP & BRACE



3 POST - BRACING DIAGRAM

NOTE:
1. MAXIMUM AREA PER CONNECTING JUNCTION = 16 SQ. FT.

2. BRACING SHOULD NOT BE SPLICED WITHIN 6" OF A BRACE TO POST JUNCTION.



2 POST - BRACING DIAGRAM

NOTE:
USE OF SIGN BRACING NOT SHOWN ON THIS SHEET MAY BE PERMITTED BY PROJECT ENGINEER AND/OR DISTRICT TRAFFIC ENGINEER.

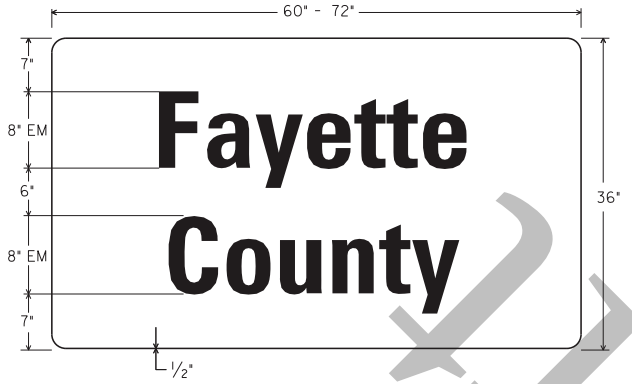
NOT TO SCALE

SHEETING SIGN DETAIL

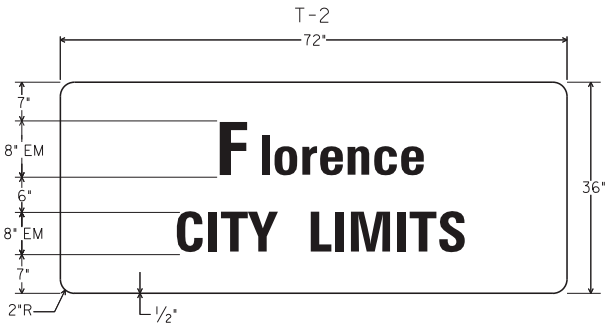
SHEET 2 OF 2

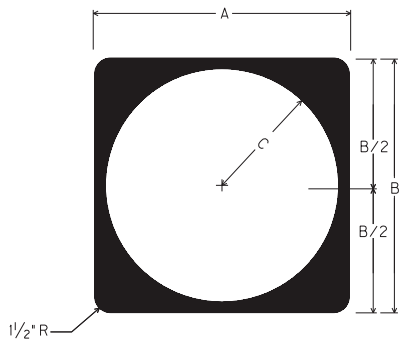
COUNTY OF	ITEM NO.	SHEET NO.

T-1

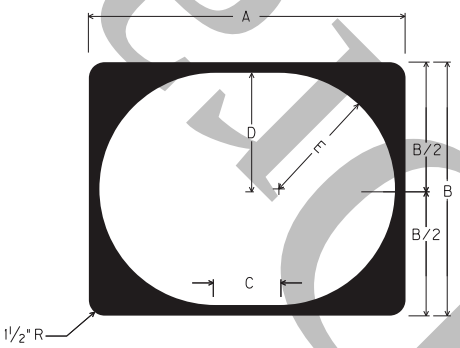


T-2





M1-5 (1 OR 2 DIGIT)



M1-5 (3 OR 4 DIGIT)

	A	B	C	FONT
CONVENTIONAL	24"	24"	11"	12D
EXPRESSWAY/ FREEWAY	36"	36"	17"	18D

	A	B	C	D	E	FONT	
						3 DIGIT	4 DIGIT
CONVENTIONAL	30"	24"	6"	11"	11"	12D	12B
EXPRESSWAY/ FREEWAY	45"	36"	9"	16.5"	16.5"	18D	18B

NOTE: FOR ROUTE MARKERS, IF NECESSARY, ADJUSTMENTS TO THE DIGIT LAYOUT AND/OR FONT TYPE MAY BE MADE TO ENSURE VISUAL ACUITY

NOTE: EXPRESSWAY/FREEWAY DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL OR FULL CONTROL OF ACCESS

S-1

NOT TO SCALE

TYPICAL SIGNS

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____ **Contractor: _____**

Section Engineer: _____ **District & County: _____**

DESCRIPTION	UNIT	QTY LEAVING PROJECT	QTY RECEIVED@BB YARD
GUARDRAIL (Includes End treatments & crash cushions)	LF	_____	_____
STEEL POSTS	EACH	_____	_____
STEEL BLOCKS	EACH	_____	_____
WOOD OFFSET BLOCKS	EACH	_____	_____
BACK UP PLATES	EACH	_____	_____
CRASH CUSHION	EACH	_____	_____
NUTS, BOLTS, WASHERS	BAG/BCKT	_____	_____
DAMAGED RAIL TO MAINT. FACILITY	LF	_____	_____
DAMAGED POSTS TO MAINT. FACILITY	EACH	_____	_____

*__***Required Signatures before Leaving Project Site***__

Printed Section Engineer's Representative_____ & Date_____

Signature Section Engineer's Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

__***Required Signatures after Arrival at Bailey Bridge Yard (All material on truck must be counted & the quantity received column completed before signatures)***__

Printed Bailey Bridge Yard Representative_____ & Date_____

Signature Bailey Bridge Yard Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

**Payment for the bid item remove guardrail will be based upon the quantities shown in the Bailey Bridge Yard received column. Payment will not be made for guardrail removal until the guardrail verification sheets are electronically submitted to the Section Engineer by the Bailey Bridge Yard Representative.

Completed Form Submitted to Section Engineer Date: _____ By: _____

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIAL NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

1.0 DESCRIPTION. Install barcode label on sheeting signs. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction, current edition.

2.0 MATERIALS. The Department will provide the Contractor with a 2 inch x 1 inch foil barcode label for each permanent sheeting sign. A unique number will be assigned to each barcode label.

The Contractor shall contact the Operations and Pavement Management Branch in the Division of Maintenance at (502) 564-4556 to obtain the barcode labels.

3.0 CONSTRUCTION. Apply foil barcode label in the lower right quadrant of the sign back. Signs where the bottom edge is not parallel to the ground, the lowest corner of the sign shall serve as the location to place the barcode label. The barcode label shall be placed no less than one-inch and no more than three inches from any edge of the sign. The barcode must be placed so that the sign post does not cover the barcode label.

Barcodes shall be applied in an indoor setting with a minimum air temperature of 50°F or higher. Prior to application of the barcode label, the back of the sign must be clean and free of dust, oil, etc. If the sign is not clean, an alcohol swab shall be used to clean the area. The area must be allowed to dry prior to placement of the barcode label.

Data for each sign shall include the barcode number, MUTCD reference number, sheeting manufacturer, sheeting type, manufacture date, color of primary reflective surface, installation date, latitude and longitude using the North American Datum of 1983 (NAD83) or the State Plane Coordinates using an x and y ordinate of the installed location.

Data should be provided electronically on the TC 71-229 Sign Details Information and TC 71-230 Sign Assembly Information forms. The Contractor may choose to present the data in a different format provided that the information submitted to the Department is equivalent to the information required on the Department TC forms. The forms must be submitted in electronic format regardless of which type of form is used. The Department will not accept PDF or handwritten forms. These completed forms must be submitted to the Department prior to final inspection of the signs. The Department will not issue formal acceptance for the project until the TC 71-229 and TC-230 electronic forms are completed for all signs and sign assemblies on the project.

4.0 MEASUREMENT. The Department will measure all work required for the installation of the barcode label and all work associated with completion and submission of the sign inventory data (TC 71-229 and TC 71-230).

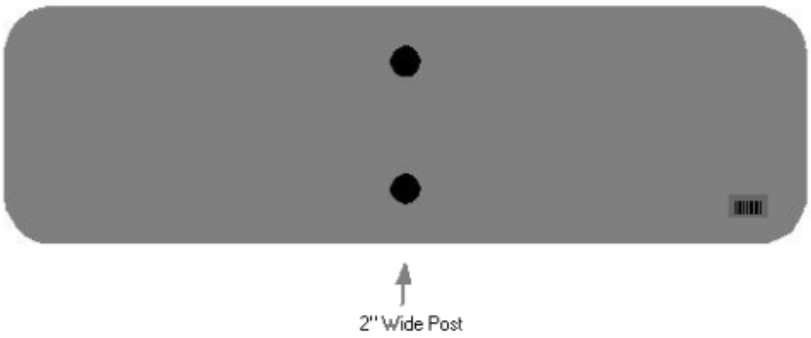
The installation of the permanent sign will be measured in accordance to Section 715.

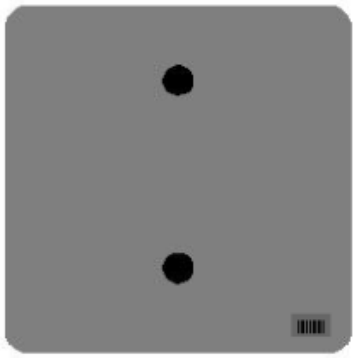
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

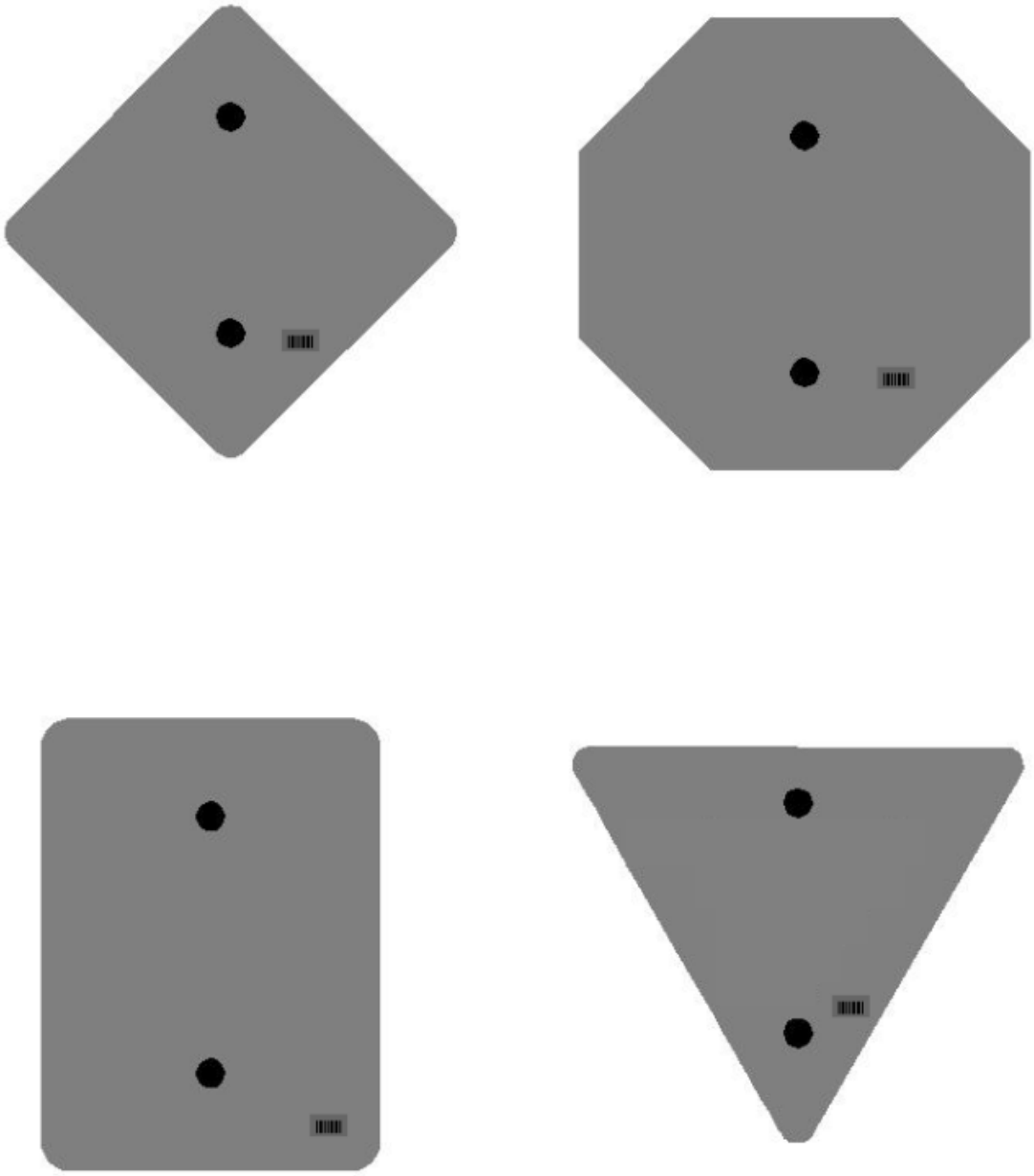
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment as full compensation for all work required under this special note.

One Sign Post





One Sign Post



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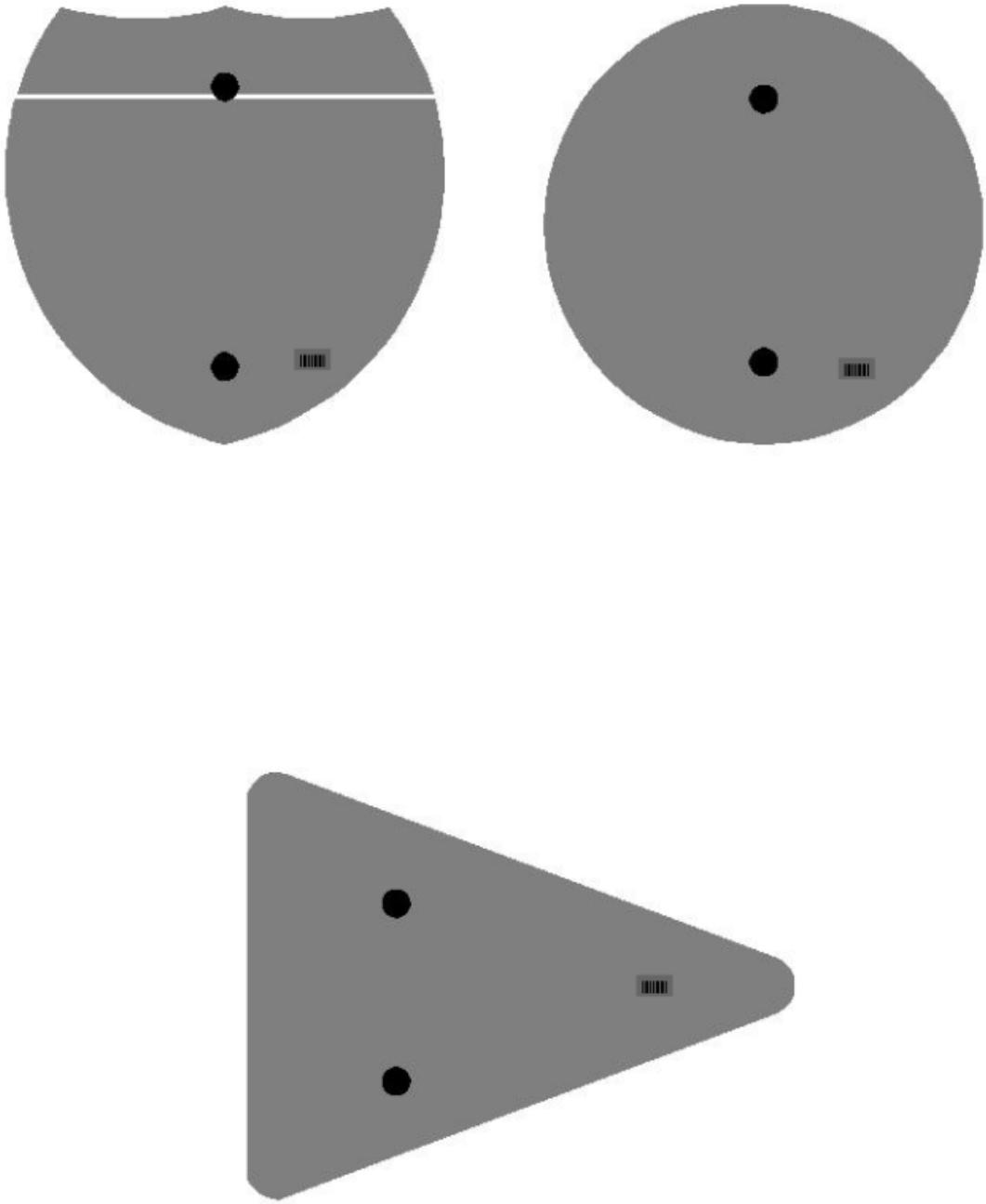
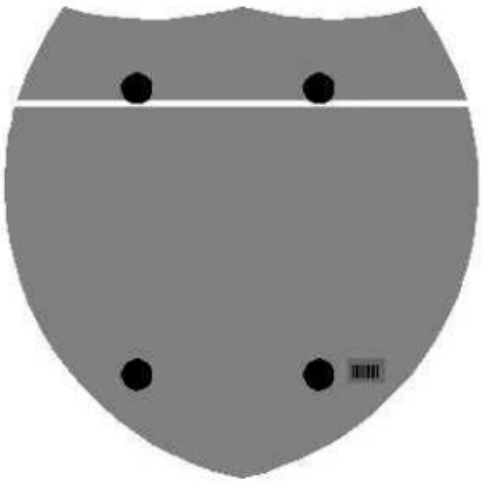
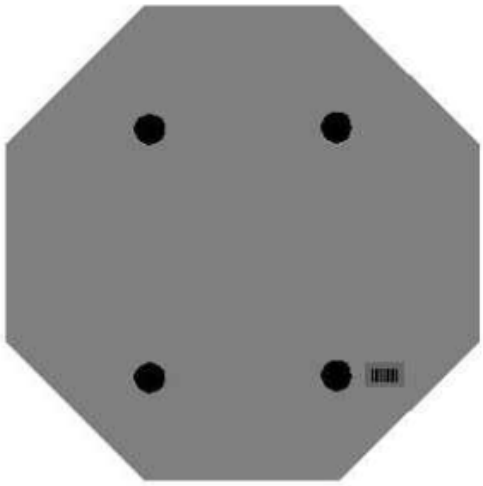


Double Sign Post

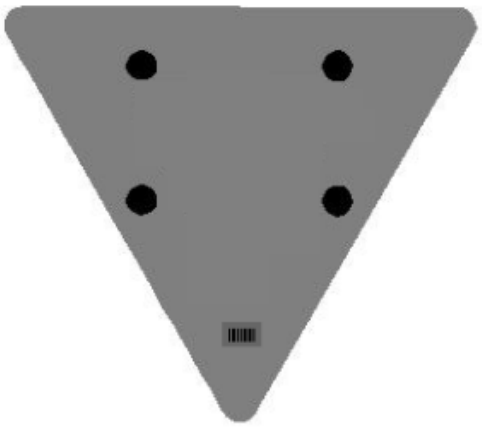


Interstate
Shield



48" Stop

2 Post Signs



11N

SPECIAL NOTE FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE

1. DESCRIPTION. This specification covers the requirements and practices for applying an asphalt adhesive material to the longitudinal joint of the surface course of an asphalt pavement. Apply the adhesive to the face of longitudinal joint between driving lanes for the first lane paved. Then, place and compact the adjacent lane against the treated face to produce a strong, durable, waterproof longitudinal joint.

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Joint Adhesive. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide an adhesive conforming to the following requirements:

Property	Specification	Test Procedure
Viscosity, 400 ° F (Pa·s)	4.0 – 10.0	ASTM D 4402
Cone Penetration, 77 ° F	60 – 100	ASTM D 5329
Flow, 140 ° F (mm)	5.0 max.	ASTM D 5329
Resilience, 77 ° F (%)	30 min.	ASTM D 5329
Ductility, 77 ° F (cm)	30.0 min.	ASTM D 113
Ductility, 39 ° F (cm)	30.0 min.	ASTM D 113
Tensile Adhesion, 77 ° F (%)	500 min.	ASTM D 5329, Type II
Softening Point, ° F	171 min.	AASHTO T 53
Asphalt Compatibility	Pass	ASTM D 5329

Ensure the temperature of the pavement joint adhesive is between 380 and 410 °F when the material is extruded in a 0.125-inch-thick band over the entire face of the longitudinal joint.

2.2. Equipment.

2.2.1 Melter Kettle. Provide an oil-jacketed, double-boiler, melter kettle equipped with any needed agitation and recirculating systems.

2.2.2 Applicator System. Provide a pressure-feed-wand applicator system with an applicator shoe attached.

2.3 Personnel. Ensure a technical representative from the manufacturer of the pavement joint adhesive is present during the initial construction activities and available upon the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the pavement joint adhesive, ensure the face of the longitudinal joint is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the joint face by the use of compressed air.

Ensure this preparation process occurs shortly before application to prevent the return of debris on the joint face.

3.2 Pavement Joint Adhesive Application. Ensure the ambient temperature is a minimum of 40 ^{o} F during the application of the pavement joint adhesive. Prior to applying the adhesive, demonstrate competence in applying the adhesive according to this note to the satisfaction of the Engineer. Heat the adhesive in the melter kettle to the specified temperature range. Pump the adhesive from the melter kettle through the wand onto the vertical face of the cold joint. Apply the adhesive in a continuous band over the entire face of the longitudinal joint. Do not use excessive material in either thickness or location. Ensure the edge of the extruded adhesive material is flush with the surface of the pavement. Then, place and compact the adjacent lane against the joint face. Remove any excessive material extruded from the joint after compaction (a small line of material may remain).

3.3 Pavement Joint Adhesive Certification. Furnish the joint adhesive's certification to the Engineer stating the material conforms to all requirements herein prior to use.

3.4 Sampling and Testing. The Department will require a random sample of pavement joint adhesive from each manufacturer's lot of material. Extrude two 5 lb. samples of the heated material and forward the sample to the Division of Materials for testing. Reynolds oven bags, turkey size, placed inside small cardboard boxes or cement cylinder molds have been found suitable. Ensure the product temperature is 400°F or below at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of Pavement Joint Adhesive in linear feet. The Department will not measure for payment any extra materials, labor, methods, equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of Pavement Joint Adhesive, the cleaning of the joint face, or furnishing and placing the adhesive. The Department will consider all such items incidental to the Pavement Joint Adhesive.

5. PAYMENT. The Department will pay for the Pavement Joint Adhesive at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

11N

Pavement Joint Adhesive Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Joint Adhesive Referenced in Subsection 2.1.1						
Viscosity, 400 ° F (Pa•s)			3.0-3.4	2.5-2.9	2.0-2.4	≤1.9
ASTM D 3236	4.0-10.0	3.5-10.5	10.6-11.0	11.1-11.5	11.6-12.0	≥ 12.1
Cone Penetration, 77 ° F			54-56	51-53	48-50	≤ 47
ASTM D 5329	60-100	57-103	104-106	107-109	110-112	≥ 113
Flow, 140 ° F (mm) ASTM D 5329	≤ 5.0	≤ 5.5	5.6-6.0	6.1-6.5	6.6-7.0	≥ 7.1
Resilience, 77 ° F (%) ASTM D 5329	≥ 30	≥ 28	26-27	24-25	22-23	≤ 21
Tensile Adhesion, 77 ° F (%) ASTM D 5329	≥ 500	≥ 490	480-489	470-479	460-469	≤ 459
Softening Point, ° F AASHTO T 53	≥ 171	≥ 169	166-168	163-165	160-162	≤ 159
Ductility, 77 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9
Ductility, 39 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9

Code	Pay Item	Pay Unit
20071EC	Joint Adhesive	Linear Foot

May 7, 2014

2016 STANDARD DRAWINGS THAT APPLY

ROADWAY

~ *ROADWAY BARRIERS* ~

GUARDRAIL

GUARDRAIL CONNECTOR TO BRIDGE END TYPE A COMPONENTS RBC-002-03
TYPICAL GUARDRAIL INSTALLATIONS RBI-002-07
GUARDRAIL COMPONENTS RBR-005-11
GUARDRAIL TERMINAL SECTIONS RBR-010-06
GUARDRAIL END TREATMENT TYPE 3 ..... RBR-030-05
GUARDRAIL END TREATMENT TYPE 3 PIPE DRAINAGE DETAIL RBR-031-01
GUARDRAIL END TREATMENT TYPE 3 ALTERNATE ANCHOR RBR-032
DELINEATORS AT NARROW SHOULDER BRIDGES RBR-060

~ *DRAINAGE* ~

BOX INLETS AND OUTLETS

DROP BOXES

DROP BOX INLET TYPE 1 ..... RDB-001-12

SLOPED BOXES

SLOPED BOX OUTLET TYPE 1 ..... RDB-100-05
GRATES FOR SLOPED BOX OUTLET TYPE 1 ..... RDB-101-05

HEADWALLS

SLOPED & FLARED HEADWALLS FOR 12" TO 27" PIPE RDH-020-03
PIPE CULVERT HEADWALLS 15° - 30° & 45° SKEW RDH-120-02
DIMENTSIONS & QUANTITIES 30"-108" H-WALL CIRCULAR PIPE 45° RDH-216-02
BILL OF REINFORCEMENT 30" TO 66" DIAMETER CIRCULAR PIPE HEADWALLS 45° SKEW RDH-340-05

TYPICAL DRAINAGE INSTALLATIONS

CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (12" – 24" PIPE) RDI-001-10
CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (27" – 42" PIPE) RDI-002-05
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER PIPE RDI-020-09
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER, REINFORCED CONC. PIPE RDI-021-01
PIPE BEDDING, TRENCH CONDITION RDI-025-05
PIPE BEDDING, TRENCH CONDITION, REINFORCED CONC. PIPE RDI-026-01
EROSION CONTROL BLANKET SLOPE INSTALLATION RDI-040-01
EROSION CONTROL BLANKET CHANNEL INSTALLATION RDI-041-01

MISCELLANEOUS DRAINAGE

JUNCTION BOX RDX-001-06
JUNCTION BOX (DIMENSIONS & QUANTITIES) RDX-002-04
SECURITY DEVICES FOR FRAMES, GRATES AND LIDS RDX-160-06
TEMPORARY SILT FENCE RDX-210-03
TEMPORARY SILT FENCE WITH WOVEN WIRE FENCE FABRIC RDX-215-01
SILT TRAP - TYPE A RDX-220-05
SILT TRAP - TYPE B RDX-225-01
SILT TRAP - TYPE C RDX-230-01

Standard Drawings That Apply
Page 2 of 2

~ *GENERAL* ~

MISCELLANEOUS STANDARDS

MISCELLANEOUS STANDARDS PART 1 ..... RGX-001-06
TYPICAL EMBANKMENT FOUNDATION BENCHES RGX-010-04

~ *PAVEMENT* ~

MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.

APPROACHES, ENTRANCES AND MAILBOX TURNOUT RPM-110-07
CONCRETE ISLAND CURB CONSTRUCTION DETAILS (RIGID & FLEXIBLE PAVEMENT) RPM-120-07

TRAFFIC

~ *TEMPORARY* ~

TRAFFIC CONTROL

LANE CLOSURE TWO-LANE HIGHWAY TTC-100-04
SHOULDER CLOSURE TTC-135-02

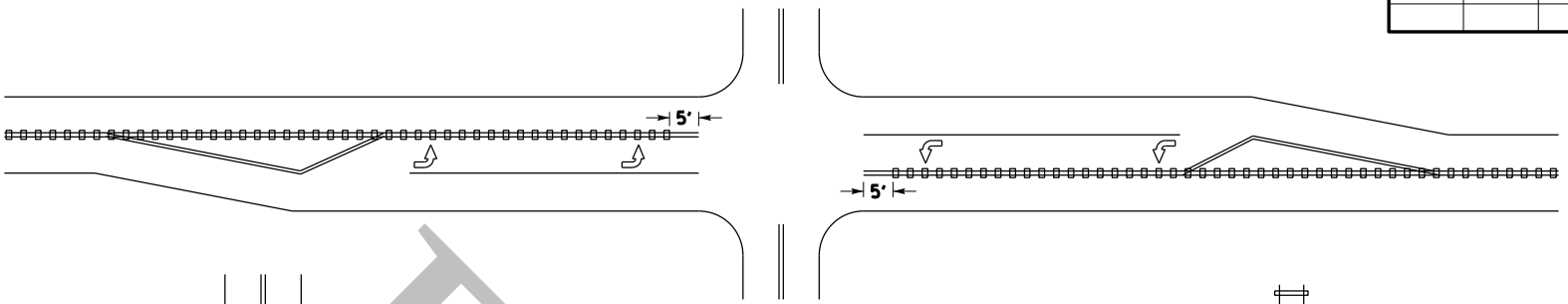
DEVICES

PAVEMENT CONDITION WARNING SIGNS TTD-125-02

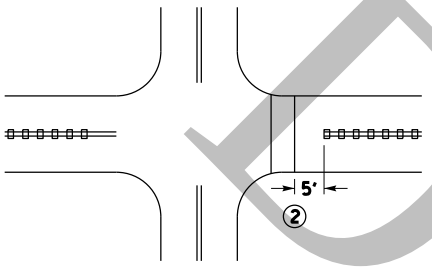
STRIPING OPERATIONS

MOBILE OPERATION FOR PAINT STRIPING CASE I TTS-100-02
MOBILE OPERATION FOR PAINT STRIPING CASE II TTS-105-02
MOBILE OPERATION FOR DURABLE STRIPING CASE III TTS-130-02
MOBILE OPERATION FOR DURABLE STRIPING CASE IV TTS-135-02

COUNTY OF	ITEM NO.	SHEET NO.



INTERSECTIONS WITH LEFT-TURN LANES ①



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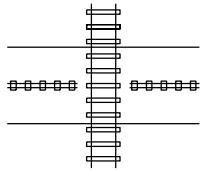
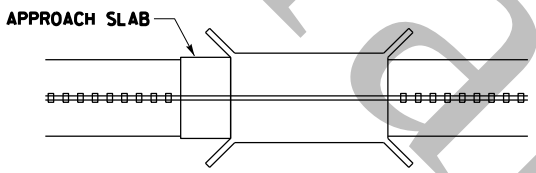
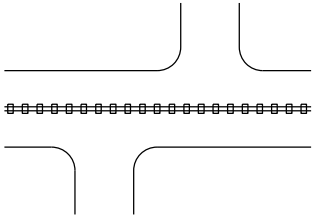


HIGHWAY-RAIL GRADE CROSSINGS ③



BRIDGE DECK/APPROACH SLAB ④



DRIVEWAYS/MINOR
COMMERCIAL ENTRANCES ⑤

~ NOTES ~

① CENTERLINE RUMBLE STRIPS SHALL BE OMITTED THROUGH MAJOR INTERSECTIONS WITH, OR WITHOUT, LEFT-TURN LANES. OMIT THE CENTERLINE RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF THE AREA WHERE THE CENTERLINE PAVEMENT MARKINGS HAVE BEEN OMITTED (NORMALLY WHERE SIDE STREET RADIUS INTERSECTS MAINLINE).

② CENTERLINE RUMBLE STRIPS SHALL NOT BE INSTALLED THROUGH MARKED CROSSWALKS. OMIT THE CENTERLINE RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF MARKED CROSSWALKS.

③ CENTERLINE RUMBLE STRIPS SHALL NOT BE INSTALLED ACROSS HIGHWAY-RAIL GRADE CROSSINGS.

④ CENTERLINE RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS OR APPROACH SLABS.

⑤ CENTERLINE RUMBLE STRIPS SHALL BE INSTALLED THROUGH DRIVEWAYS & MINOR COMMERCIAL ENTRANCES.

6. CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS, OR WHERE LANE WIDTHS ARE LESS THAN 11 FT.

BID ITEM AND UNIT TO BID
CENTERLINE RUMBLE STRIPS LF

DRAWING NOT TO SCALE

USE WITH CUR. STD. DWGS.
TPM-155 AND TPM-160

KENTUCKY
DEPARTMENT OF HIGHWAYS

CENTERLINE
RUMBLE STRIPS

SUBMITTED B. Jeffrey Wolfe 11-23-16
DATE

002

MicroStation v8.11.7.443 | E-SHEET NAME: — | USER: jeffjull DATE PLOTTED: December 2, 2016 | FILE NAME: C:\USERS\JEFF.LAU\DESKTOP\SEPIA 002 - TPM150 - CENTERLINE RUMBLE STRIPS.DGN

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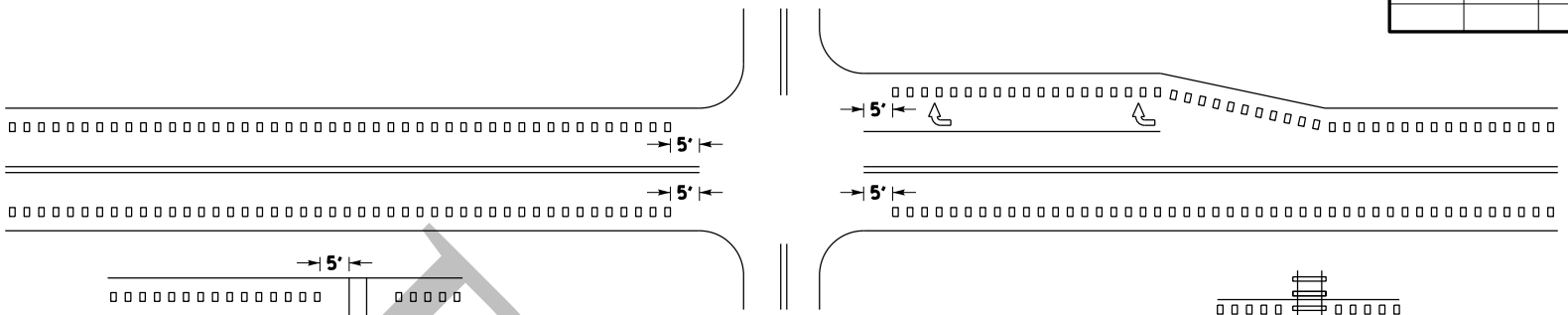
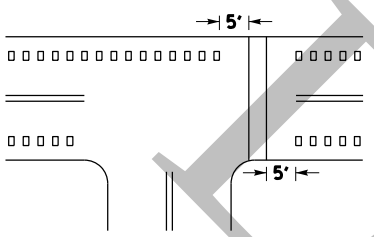
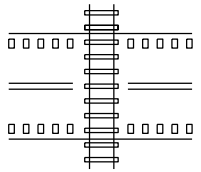


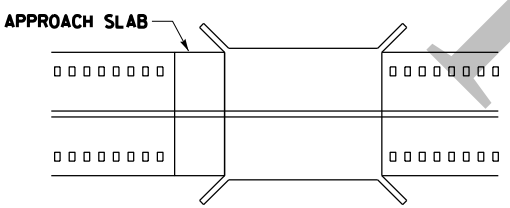
INTERSECTIONS WITH OR WITHOUT ① RIGHT TURN LANES



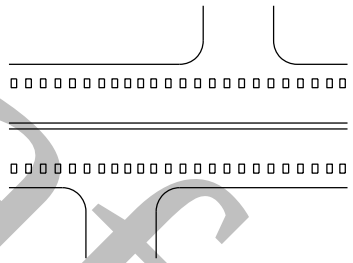
MARKED CROSSWALK ②



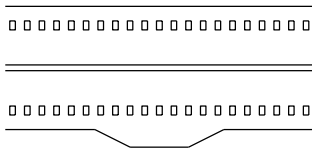
HIGHWAY-RAIL GRADE CROSSINGS ③



BRIDGE DECK/APPROACH SLAB ④



DRIVEWAYS/MINOR COMMERCIAL ENTRANCES ⑤



MAILBOX TURNOUTS ⑥

~ NOTES ~

① RUMBLE STRIPS SHALL BE OMITTED THROUGH MAJOR INTERSECTIONS WITH, OR WITHOUT, RIGHT-TURN LANES. OMIT RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF THE AREA WHERE EDGELINE PAVEMENT MARKINGS HAVE BEEN OMITTED (NORMALLY WHERE SIDE STREET RADIUS INTERSECTS MAINLINE).

② RUMBLE STRIPS SHALL NOT BE INSTALLED THROUGH MARKED CROSSWALKS. OMIT RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF MARKED CROSSWALKS.

③ RUMBLE STRIPS SHALL NOT BE INSTALLED ACROSS HIGHWAY-RAIL GRADE CROSSINGS.

④ RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS OR APPROACH SLABS.

⑤ RUMBLE STRIPS SHALL BE INSTALLED THROUGH DRIVEWAYS & MINOR COMMERCIAL ENTRANCES.

⑥ RUMBLE STRIPS SHALL BE INSTALLED THROUGH MAILBOX TURNOUTS.

7. RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEMS AND UNIT TO BID

EDGELINE RUMBLE STRIPS	LF
SHOULDER RUMBLE STRIPS	LF

DRAWING NOT TO SCALE

USE WITH SEPIA 006, 007, AND 008

KENTUCKY
DEPARTMENT OF HIGHWAYS

SHOULDER & EDGELINE RUMBLE STRIP DETAILS

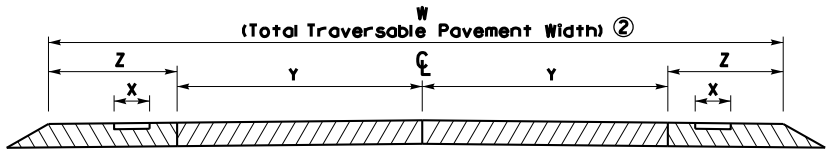
SUBMITTED B. Jeffrey Wolfe 11-23-16 DATE

005

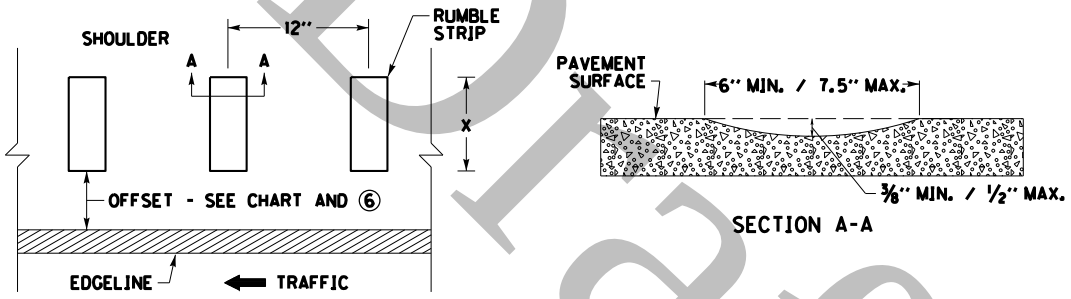
MicroStation v8.11.7.443
E-SHEET NAME: ——
USER: jeff.tull
DATE PLOTTED: December 2, 2016
FILE NAME: C:\USERS\JEFF.LAU\DESKTOP\SEPIA 005 - TPM16S - SHOULDER & EDGELINE RUMBLE STRIP DETAILS.DGN

COUNTY OF	ITEM NO.	SHEET NO.

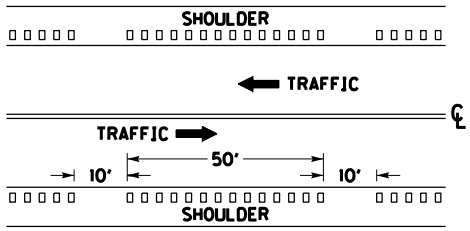
PAVEMENT WIDTH (W) ②	RUMBLE LENGTH (X) ⑥	OFFSET ⑥	CLRS & SRS	
			LANE WIDTH (Y) ③	SHOULDER WIDTH (Z) ④
34'	8"	6"	12'	5'
35'	8"	6"	12'	5.5'
36'	8"	6"	12'	6'
37'	12"	12"	12'	6.5'
38'	12"	12"	12'	7'
39'	12"	12"	12'	7.5'
>=40'	16"	12"	12'	>=8'



PAVEMENT CROSS-SECTION



SECTION A-A



BICYCLE GAPS ⑦

~ NOTES ~

1. SHOULDER RUMBLE STRIPS SHOULD BE INSTALLED ACCORDING TO THE DIMENSIONS PROPOSED ABOVE UNLESS THERE IS AN ENGINEERING BASIS THAT SUPPORTS A CHANGE IN DIMENSION. FOR EXAMPLE, IF THE EXISTING LANE WIDTH IS NARROWER THAN THE LANE WIDTH PROPOSED IN THIS DRAWING AND THE EXISTING SHOULDER PAVEMENT DEPTH IS NOT SUITABLE TO BE CONVERTED INTO A PORTION OF THE PROPOSED LANE WIDTH, THEN THE EXISTING LANE WIDTH SHOULD BE USED INSTEAD OF THE WIDTH PROPOSED IN THIS DRAWING.

② PAVEMENT WIDTH (W) IS THE TOTAL WIDTH OF TRAVERSABLE PAVEMENT. DO NOT INCLUDE THE WIDTH OF ANY NON-TRAVERSABLE PAVEMENT, SUCH AS PAVEMENT WEDGES, WHEN MEASURING THE PAVEMENT WIDTH (W).

③ LANE WIDTH (Y) TO BE MEASURED FROM CENTER OF ROAD TO CENTER OF EDGELINE STRIPE.

④ PAVED SHOULDER WIDTH (Z) TO BE MEASURED FROM CENTER OF EDGELINE STRIPE TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT.

5. DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE. IF THE TYPICAL SECTION SHOWS A LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) THAT DIFFERS FROM THE WIDTHS LISTED IN THIS DRAWING, THE ENGINEER SHALL DETERMINE THE LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) AT THE TIME OF CONSTRUCTION.
NOTE: CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED WHEN THE LANE WIDTH (Y) IS LESS THAN 11 FT.

⑥ RUMBLE LENGTH (X) AND/OR OFFSET DISTANCE MAY BE MODIFIED AS THE ENGINEER DIRECTS, IF THE SHOULDER WIDTH (Z) IS EQUAL TO OR LESS THAN THE COMBINED WIDTH OF THE PROPOSED RUMBLE LENGTH (X) AND OFFSET DISTANCE.

⑦ ALL SHOULDER RUMBLE STRIPS ALONG SHOULDERS THAT ARE 5' OR WIDER SHOULD INCLUDE BICYCLE GAPS AS DETAILED.

8. SHOULDER RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEM AND UNIT TO BID
SHOULDER RUMBLE STRIPS LF

DRAWING NOT TO SCALE

USE WITH SEPIA 005

KENTUCKY
DEPARTMENT OF HIGHWAYS

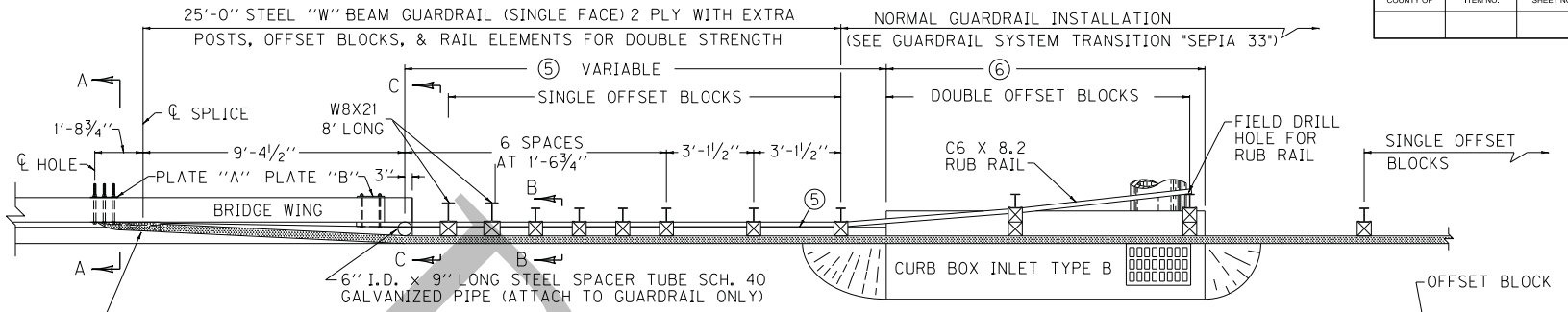
SHOULDER RUMBLE STRIP DETAILS TWO LANE ROADWAYS

SUBMITTED B. Jeffrey Wolfe 11-23-16
DATE

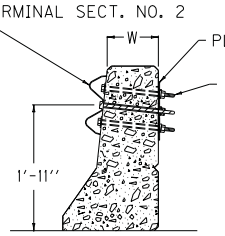
007

FILE NAME: C:\USERS\JEFF.LAU\DESKTOP\SEPIA 007 - SHOULDER RUMBLE STRIP DETAILS TWO LANE ROADWAYS.DGN
USER: jeff.lau
DATE PLOTTED: November 30, 2016
E-SHEET NAME: ——
MicroStation v8.11.7.443

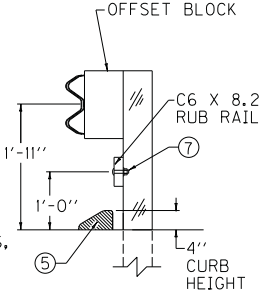
COUNTY OF	ITEM NO.	SHEET NO.



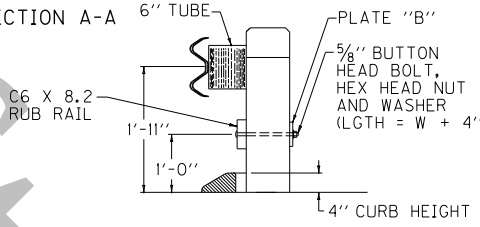
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

~ NOTES ~

1. GENERAL
   a. SEE CUR. STD. DWGS. IN THE RBB, RBI, RBR, AND RPM-SERIES FOR OTHER RELATED GUARDRAIL DETAILS AND BRIDGE PLANS FOR BRIDGE WING DETAIL.
   b. SEE CUR. STD. DWG. RDB-SERIES FOR CURB BOX INLET TYPE B.
   c. GUARDRAIL CONNECTOR TO BRIDGE END TYPE A IS FOR USE ON BOTH BRIDGE ENDS OF AN UNDIVIDED HIGHWAY AND ON THE APPROACH BRIDGE ENDS OF A DIVIDED HIGHWAY.
2. MATERIAL REQUIREMENTS
   ALL HARDWARE SHALL BE GALVANIZED. (AASHTO M-232)
   ⅝" STEEL PLATE "A" AND "B" (AASHTO M-270)
   ⅞" HEX HEAD BOLTS OR STEEL THREADED RODS (LENGTH AS SHOWN)
   ⅞" HEAVY HEX NUTS (⅞" THICK) (AASHTO M-291)
   ⅞" FLAT WASHERS (3/16" THICK) (AASHTO M-293)
   ⅞" BEVELED WASHERS (5/16" MEAN THICKNESS) (AASHTO M-293)
   BOTH THE BOLT AND THREADED ROD SHALL HAVE A MINIMUM OF 50,000 LBS. TENSILE STRENGTH AT THE NARROWEST POINT.
3. CONSTRUCTION METHODS
   a. ELIMINATE EXTRA OFFSET BLOCKS WHEN CURB BOX INLET TYPE B IS NOT REQUIRED.
   b. HOLES TO BE FORMED THROUGH BRIDGE WING WITH 1" I.D. PLASTIC PIPE FOR ⅞" BOLTS AND ¾" I.D. PLASTIC PIPE FOR ⅝" BOLTS, PIPE SHALL REMAIN IN PLACE.
4. METHOD OF MEASUREMENT AND BASIS OF PAYMENT
   a. GUARDRAIL CONNECTOR TO BRIDGE END TYPE A SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND INCLUDES: TERMINAL SECTION NO. 2; ALL ITEMS WHICH ARE IN ADDITION TO THE NORMAL INSTALLATION OF STEEL BEAM GUARDRAIL (EXTRA POSTS, OFFSET BLOCKS, RAIL ELEMENTS, SPACER TUBE, HARDWARE, RUB RAIL, ETC.), AND OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION AS DETAILED. STEEL "W" BEAM GUARDRAIL (SINGLE FACE) AND ISLAND HEADER CURB ARE SEPARATE BID ITEMS WHICH ARE ALWAYS REQUIRED. CURB BOX INLET TYPE B IS A SEPARATE BID ITEM THAT WILL BE USED WHEN REQUIRED FOR BRIDGE END DRAINAGE.

BID ITEMS AND UNIT TO BID	
GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH
GUARDRAIL-STEEL "W" BEAM-S FACE	LF
ISLAND HEADER CURB TYPE 1 OR 2	LF
CURB BOX INLET TYPE B (AS REQUIRED)	EACH

   b. THE PLASTIC PIPE AND COST OF FORMING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR BRIDGE SUPERSTRUCTURE CONCRETE.

⑤ ISLAND HEADER CURB. TRANSITION FROM ISLAND CURB SHAPE TO SHAPE ON BRIDGE WING WITHIN 7'-3". LENGTH OF CURB VARIABLE (22'-3" WHEN L=5'-0") (17'-3" WHEN L=10'-0") (12'-3" WHEN L=15'-0") (7'-3" WHEN L=20'-0"). ON APPROACH END CONSTRUCT 25'-0" OF ISLAND HEADER CURB EVEN WHEN CURB BOX INLET TYPE B IS NOT REQUIRED.

⑥ 6'-4" WHEN L=5'-0"
11'-4" WHEN L=10'-0" ☆
16'-4" WHEN L=15'-0"
21'-4" WHEN L=20'-0"

⑦ ⅝" X 3½" BUTTON HEAD BOLT, HEX HEAD NUT.

8. CURB BOX NOT REQUIRED UNLESS NEEDED FOR DRAINAGE.

☆ 10'-0" LENGTH IS REQUIRED UNLESS OTHERWISE NOTED.

L EQUALS THROAT LENGTH OF BOX.

USE WITH CUR. STD. DWGS.
BHS-008, RBC-002, RBC-003
RBR-010

KENTUCKY DEPARTMENT OF HIGHWAYS

GUARDRAIL CONNECTOR TO BRIDGE END TYPE A

SUBMITTED William S. Ballard DIRECTOR DIVISION OF DESIGN 4-04-18 DATE

015

COUNTY OF	ITEM NO.	SHEET NO.
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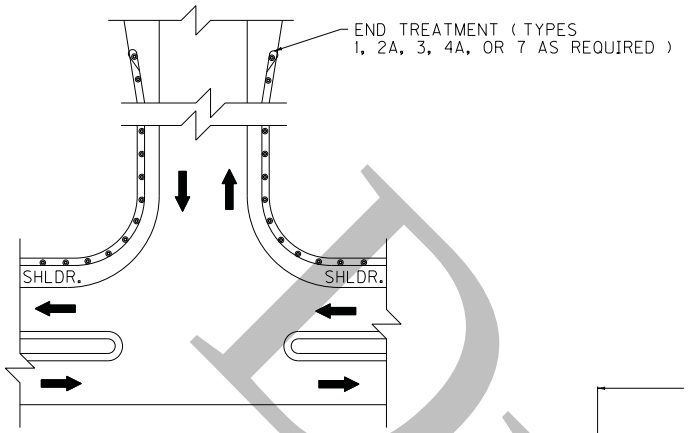
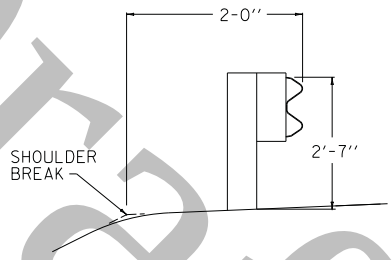


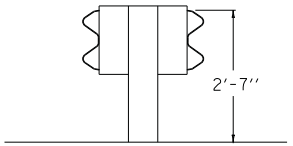
APPROACH ROADS

~ NOTES ~

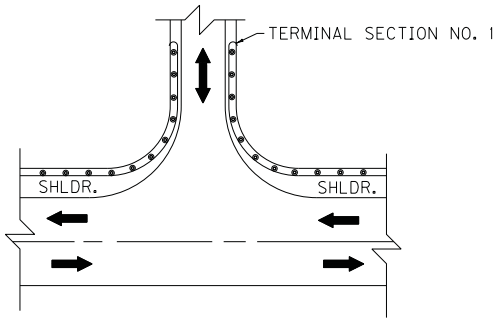
1. FOR END TREATMENT TYPE 4A USE CUR. STD. DWG. RBR-035 FOR OFFSETS.
2. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET: (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).



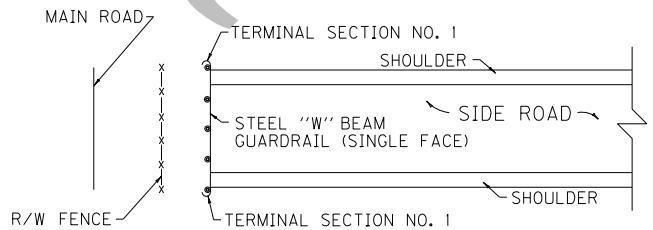
NORMAL GUARDRAIL INSTALLATION



TYPICAL DOUBLE FACE
GUARDRAIL INSTALLATION



ENTRANCES



GUARDRAIL USED AS A BARRICADE

USE WITH CUR. STD. DWG.
RBI-002, RBR-035

KENTUCKY
DEPARTMENT OF HIGHWAYS

TYPICAL GUARDRAIL
INSTALLATIONS

SUBMITTED William S. Ballard 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

024

COUNTY OF	ITEM NO.	SHEET NO.
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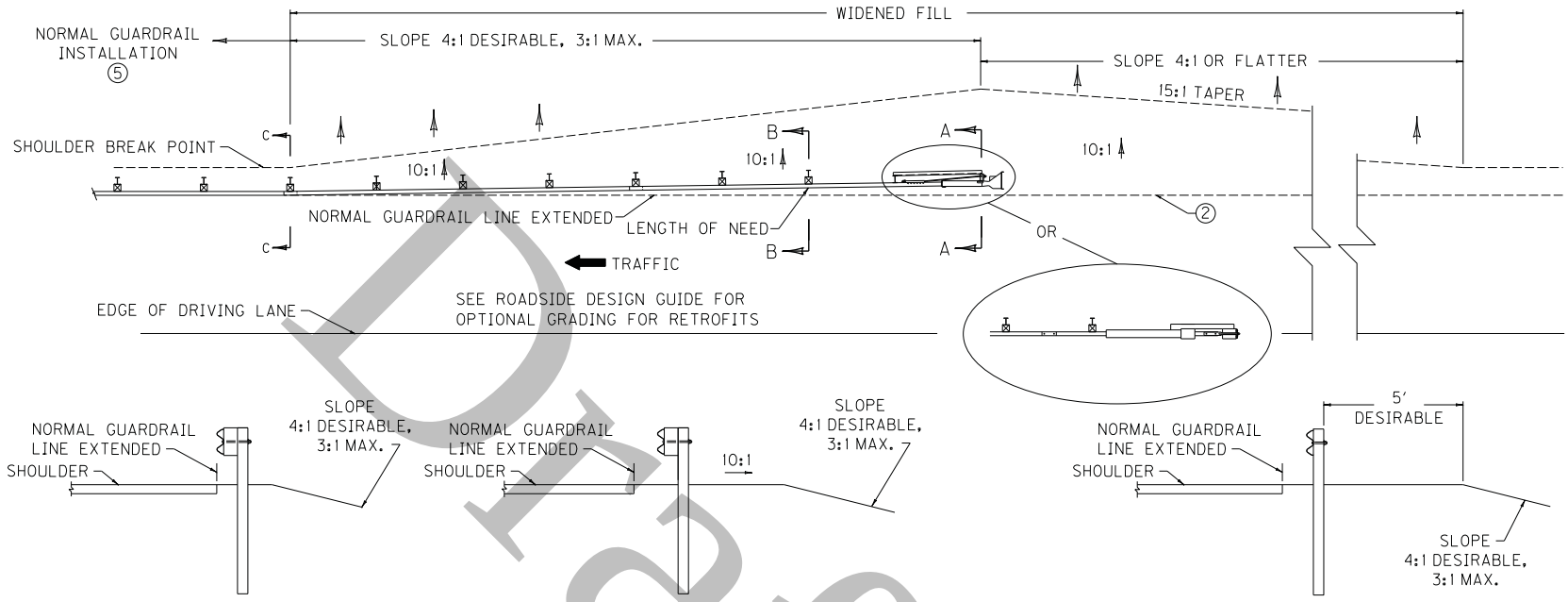

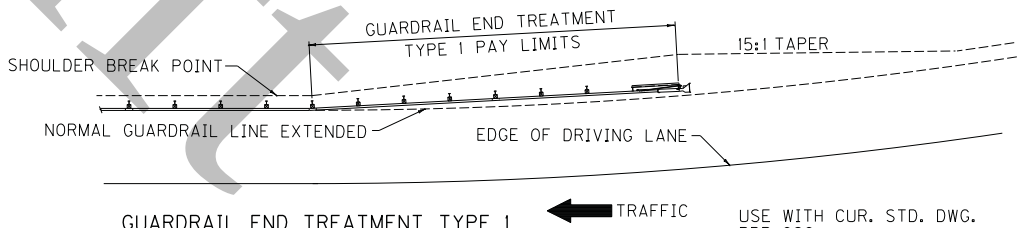

GUARDRAIL END TREATMENT TYPE 1 INSTALLED ON A CURVE ③

USE WITH CUR. STD. DWG. RBR-020

~ NOTES ~

BID ITEMS AND UNIT TO BID:

GUARDRAIL END TREATMENT TYPE 1	EACH
ROADWAY OR BORROW EXCAVATION, OR EMBANKMENT IN PLACE	CUYD

1. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).

② GUARDRAIL EXTRUDER EDGE CLOSEST TO TRAFFIC SHALL BE PLACED ON NORMAL GUARDRAIL LINE EXTENDED.

③ END TREATMENT TYPE 1 MAY BE ATTACHED TO CURVED GUARDRAIL PROVIDED CURVE IS A 550' RADIUS OR MORE. END TREATMENT TYPE 1 SHALL BE INSTALLED ON A STRAIGHT LINE TAPER WITHIN THE PAY LIMITS.

4. INTENDED USE: FILLS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND GUARDRAIL.

⑤ FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION "SEPIA 33", TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.

KENTUCKY DEPARTMENT OF HIGHWAYS

INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1

SUBMITTED William S. Ballard 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

025

COUNTY OF	ITEM NO.	SHEET NO.
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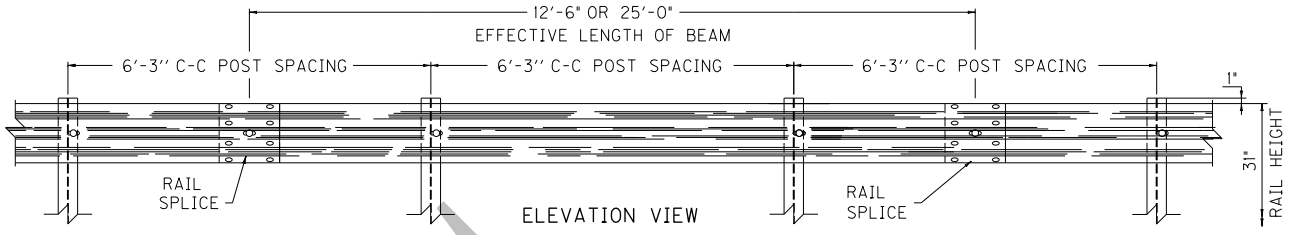
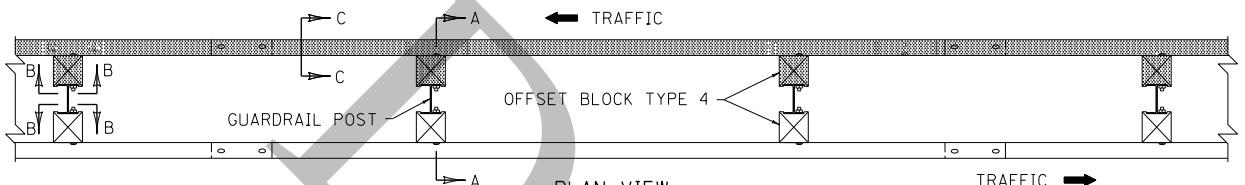
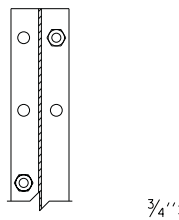


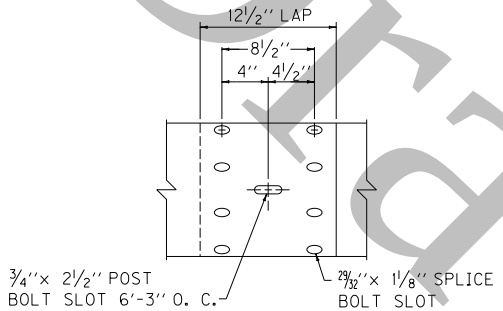
ELEVATION VIEW



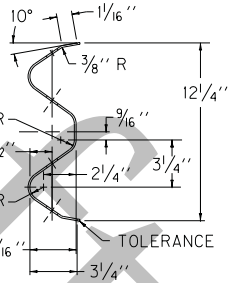
PLAN VIEW
(DOUBLE FACE RAIL OR SINGLE FACE RAIL)



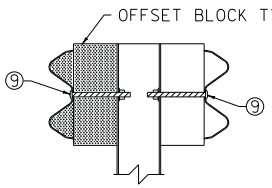
SECTION B-B



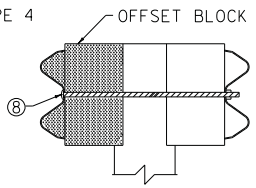
RAIL SPLICE ⑤



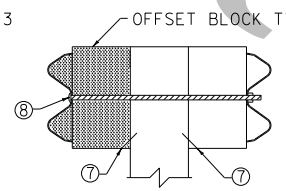
SECTION C-C
(RAIL CORRUGATED SHEET STEEL BEAM)



SECTION A-A
DOUBLE FACE RAIL WITH STEEL POST (W6x9) (TIMBER OR APPROVED COMPOSITE OFFSET BLOCK)



SECTION A-A
DOUBLE FACE RAIL WITH ROUND TIMBER POST



SECTION A-A
DOUBLE FACE RAIL WITH TIMBER POST

~ NOTES ~

BID ITEM AND UNIT TO BID
GUARDRAIL-STEEL W BEAM-S FACE LF
OR
GUARDRAIL-STEEL W BEAM-D FACE LF

1. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE AND ACCEPTED MANUFACTURING PRACTICES.
2. THE RAIL ELEMENT SHALL COMPLY WITH AASHTO M-180 -CLASS A, TYPE II.
3. ALL LAPS SHALL BE PLACED IN THE DIRECTION OF TRAFFIC FLOW.

④ TOLERANCE + 1¼", -¼"

⑤ 8-⅝"× 1¼" LONG BUTTON HEAD BOLTS AND HEX HEAD RECESS NUTS REQUIRED FOR EACH RAIL SPLICE.

⑥ LENGTH EQUALS POST AND BLOCK WIDTH PLUS 2" FOR BOLT OR 2¼" FOR THREADED ROD.

⑦ GALVANIZED STEEL 10d COMMON COATED NAIL (DRIVE NAIL AT THE TOP OR BOTTOM CENTER OF BLOCK AND POST AFTER BOLT IS INSTALLED).

⑧ ⅝"× ⑥ STEEL THREADED ROD AND TWO (2) HEX HEAD NUTS OR ⅝"× ⑥ BUTTON OR HEX HEAD BOLT AND HEX HEAD NUT.

⑨ ⅝"×8" BUTTON HEAD BOLT, HEX HEAD RECESS NUT AND ONE ⅝" ROUND WASHER (TYP.). BOLT SHALL HAVE A MINIMUM THREAD LENGTH OF 2".

▨ REQUIRED FOR DOUBLE RAIL

10. BOTH 12'-6" AND 25' LENGTHS OF "W" BEAM GUARDRAIL SECTIONS WILL BE PERMITTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

KENTUCKY DEPARTMENT OF HIGHWAYS

STEEL BEAM GUARDRAIL ("W" BEAM)

SUBMITTED William S. Ballard 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

027

COUNTY OF	ITEM NO.	SHEET NO.
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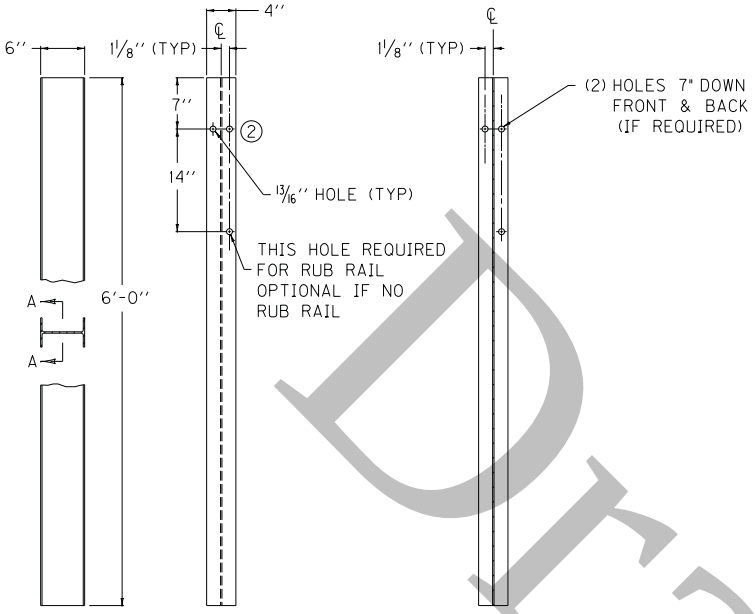


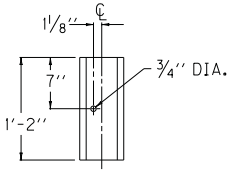
~ W6 X 9.0 STEEL POST ① ~

~ NOTES ~

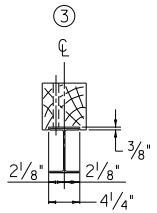
① W6 X 8.5 IS AN ACCEPTABLE ALTERNATE.

② THESE HOLES ARE REQUIRED FOR ATTACHING RAIL.

③ TIMBER OR COMPOSITE BLOCKOUTS MAY BE USED WITH STEEL POST.

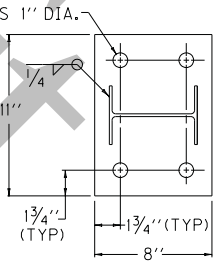


REAR ELEVATION

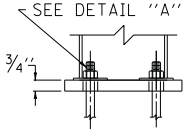


PLAN VIEW

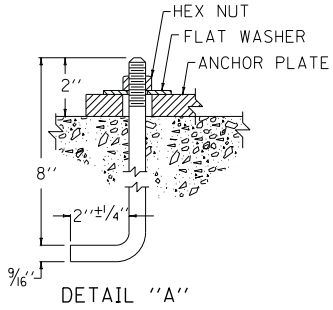
OFFSET BLOCK TYPE 4
6" X 8" (Nominal Size)
(TIMBER OR APPROVED COMPOSITE)
(FOR USE WITH STEEL POST ONLY)



PLAN VIEW



SIDE VIEW
ANCHOR PLATE



DETAIL ''A''

KENTUCKY DEPARTMENT OF HIGHWAYS

STEEL
GUARDRAIL POSTS

SUBMITTED William S. Stallard 3-06-18
DIRECTOR DIVISION OF DESIGN DATE

028

COUNTY OF	ITEM NO.	SHEET NO.
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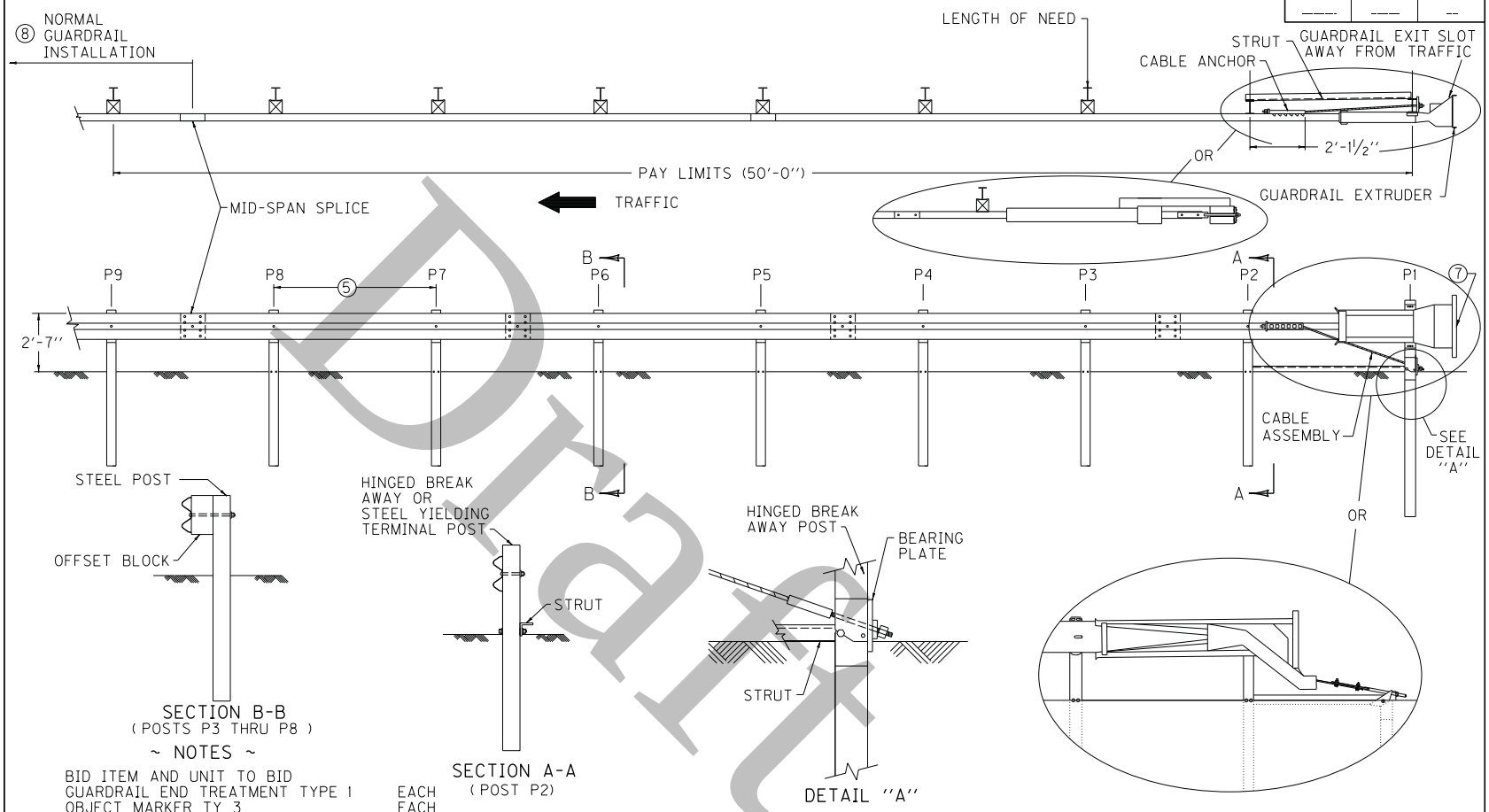


~ NOTES ~

BID ITEM AND UNIT TO BID

GUARDRAIL END TREATMENT TYPE 1	EACH
OBJECT MARKER TY 3	EACH

1. GUARDRAIL END TREATMENT TYPE 1 SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND INCLUDES POSTS, RAIL ELEMENTS, GUARDRAIL EXTRUDER AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION AS DETAILED.
2. PERMISSIBLE ALTERNATES FOR GUARDRAIL END TREATMENT TYPE 1 ARE PATENTED ITEMS: SOFT-STOP MANUACTURED BY TRINITY INDUSTRIES OF DALLAS, TEXAS OR MSKT MANUFACTURED BY ROAD SYSTEMS INC. OF BIG SPRINGS, TEXAS.
3. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP PLANS TO THE CONTRACTOR WITH EACH INSTALLATION.
4. THE COMPLETED INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE MANUFACTURER (SEE SHOP DRAWINGS).

⑤ POSTS P1 THROUGH P9 ARE SPACED 6'-3" ON CENTER.

6. INTENDED USE: AREAS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND END TREATMENT.

⑦ OBJECT MARKER TYPE 3 (SEE CURRENT MUTCD MANUAL FOR DETAILS)

⑧ FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION "SEPIA 33", TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.

USE WITH CUR. STD. DWG. RBI-004

KENTUCKY DEPARTMENT OF HIGHWAYS

GUARDRAIL END TREATMENT TYPE 1

SUBMITTED William S. Haskell 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

029

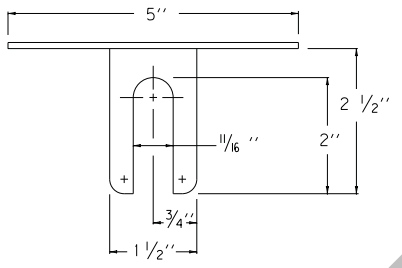
COUNTY OF	ITEM NO.	SHEET NO.

~ NOTES ~

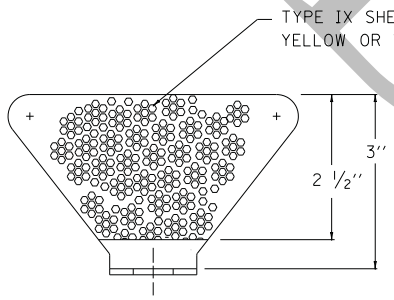
BID ITEMS AND UNIT TO BID

DELINEATOR FOR GUARDRAIL B/W	EACH
DELINEATOR FOR GUARDRAIL M/W	EACH
DELINEATOR FOR GUARDRAIL M/Y	EACH

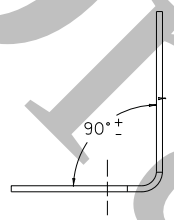
1. DELINEATORS SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
2. DELINEATOR SHAPE AND DIMENSIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS.
3. GUARDRAIL DELINEATORS SHALL BE REQUIRED ON ALL GUARDRAIL.
4. DELINEATORS SHALL NOT BE INSTALLED WITHIN THE PAY LIMITS OF THE END TREATMENT.
5. DELINEATORS SHALL BE MANUFACTURED FROM 12 GA. GALVANIZED STEEL.
6. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MANUFACTURER'S TOLERANCES.
7. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL, AND DELINEATORS SHALL COMPLY WITH CURRENT STANDARD DRAWING RBM-020.
8. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



PLAN VIEW

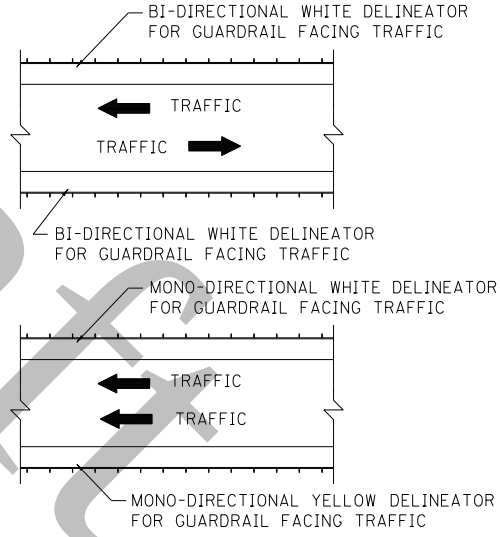


FRONT VIEW

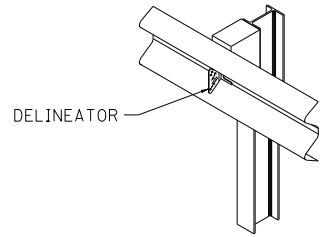


SIDE VIEW

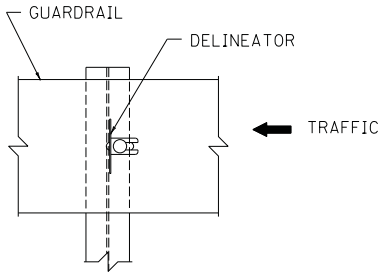
DIMENSIONS SHOWN ARE FOR ONE VERSION OF A WEB-MOUNTED GUARDRAIL DELINEATOR. DELINEATORS WITH ALTERNATE DIMENSIONS MAY BE CONSIDERED FOR INCLUSION ON THE APPROVED PRODUCTS LIST.



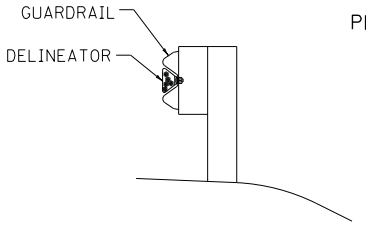
PLACEMENT OF DELINEATORS FOR GUARDRAIL



ISOMETRIC VIEW



FRONT VIEW



SIDE VIEW

APPROXIMATE DELINEATOR SPACING	
TANGENT	100'
CURVE	50'

SPACING SHOULD BE ADJUSTED IN CURVES SO THAT SEVERAL DELINEATORS ARE ALWAYS SIMULTANEOUSLY VISIBLE TO THE ROAD USER.

USE WITH CUR. STD. DWGS. RBM-020, RBR-060

KENTUCKY DEPARTMENT OF HIGHWAYS

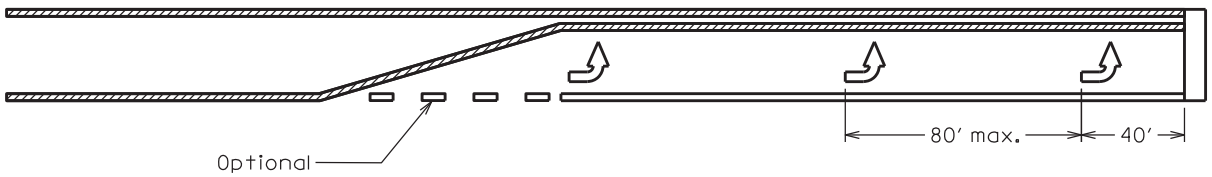
DELINEATORS FOR GUARDRAIL

SUBMITTED William S. Stallard DIRECTOR DIVISION OF DESIGN 11-17-17 DATE

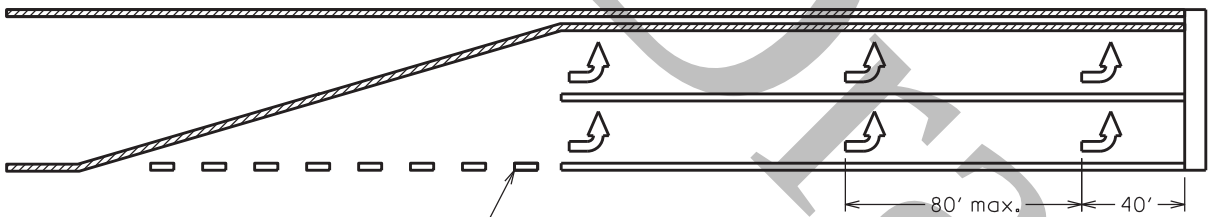
032

COUNTY OF	ITEM NO.	SHEET NO.

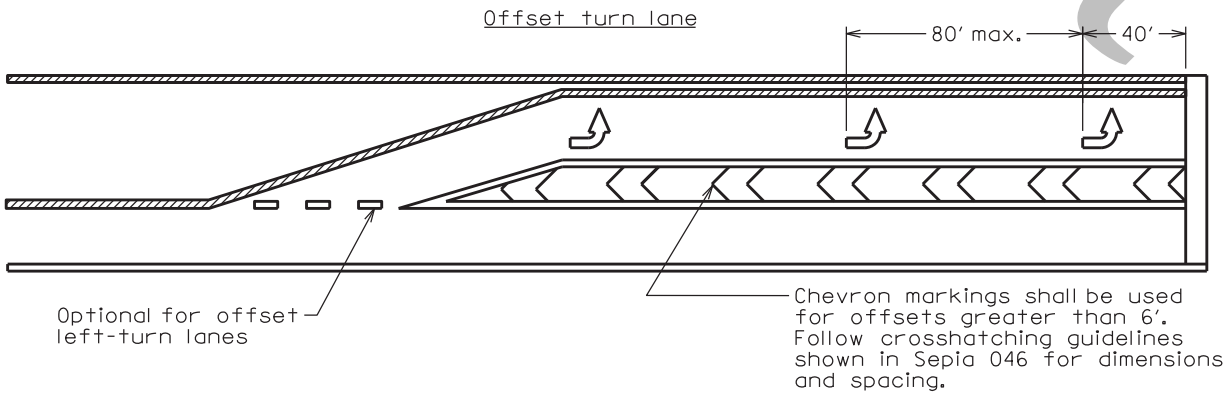
Single turn lane



Dual turn lane



Offset turn lane



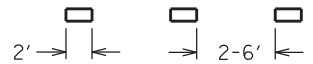
STRIPING NOTES:

-ARROWS SHALL BE USED IN ANY EXCLUSIVE TURN LANES.
-IN A SINGLE TURN LANE, DOTTED WHITE LANE LINE EXTENSIONS MAY BE USED THROUGH THE TAPER OF THE TURN LANE.
-IF USED, DOTTED WHITE LANE LINE EXTENSIONS SHALL BE NORMAL WIDTH, AND SHOULD BE 2' LONG, WITH A GAP OF 2-6' BETWEEN EACH LINE.
-IN DUAL TURN LANES, DOTTED WHITE LANE LINE EXTENSIONS SHOULD BE USED THROUGH THE TAPER OF THE TURN LANE. BOTH SOLID LINES FORMING THE TURN LANES SHALL BEGIN AT THE DOWNSTREAM END OF THE TAPER.

ARROW SPACING NOTES:

IN SINGLE-DIRECTION TURN LANES, ARROWS SHOULD BE SPACED AS FOLLOWS:
-AT LEAST TWO ARROWS SHOULD BE USED IN EACH TURN LANE. HOWEVER, IF A TURN LANE IS LESS THAN 80' IN LENGTH, THE DOWNSTREAM ARROW MAY BE ELIMINATED.
-THE FIRST UPSTREAM ARROW SHALL BE PLACED AT THE BEGINNING OF THE SOLID LINE FOR THE TURN LANE.
-THE LAST DOWNSTREAM ARROW SHOULD BE PLACED 40' FROM THE STOP BAR.
-ANY ADDITIONAL ARROWS SHOULD BE EVENLY SPACED. SPACING SHOULD NOT EXCEED 80'.
-ARROW SPACING AND NUMBER OF ARROWS MAY VARY BASED ON SITE CONDITIONS.

DOTTED EXTENSION DIMENSIONS:



Dotted extensions shall be normal width.

DRAWING NOT TO SCALE

LEGEND

MARKINGS

WHITE

YELLOW

KENTUCKY
DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS FOR TURN LANES

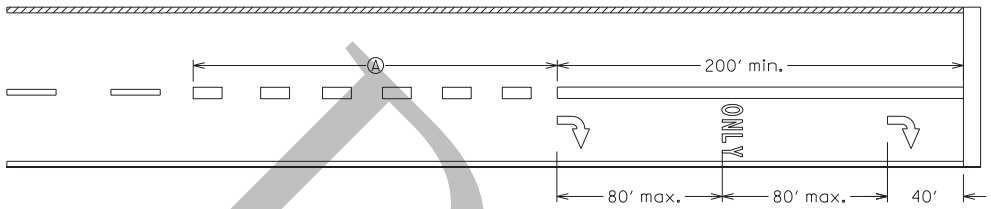
SUBMITTED R. Allen Wolfe 11-30-18
DATE

042

MARSHALL COUNTY
HSIP 5038(001)
Contract ID: 204202
Page 273 of 279

COUNTY OF	ITEM NO.	SHEET NO.

Lane drop scenario

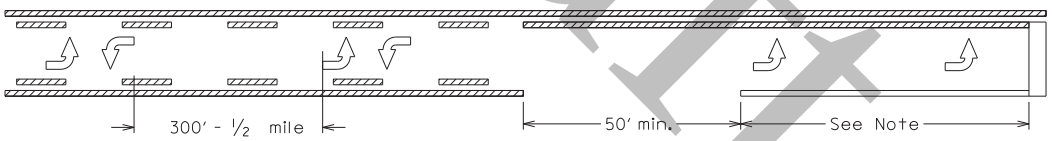


WIDE DOTTED LANE LINE DIMENSIONS:

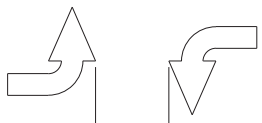
Dotted lane lines shall be twice the normal width in lane drop scenarios.

Speed Limit	Ⓐ
25	125′
35	245′
45	540′
55	660′
65	780′

Two-way left-turn lane



TWLTL ARROW DETAILS:



LANE DROP MARKINGS NOTES:

IN SITUATIONS WHERE A THROUGH LANE BECOMES A MANDATORY TURN LANE, THE FOLLOWING GUIDELINES APPLY:
- A WIDE SOLID LINE SHOULD EXTEND BACK A MINIMUM OF 200′ FROM THE STOP BAR.
- A WIDE, DOTTED LINE SHALL EXTEND FROM THE END OF THE SOLID LINE BACK A MINIMUM OF THE DISTANCE SHOWN IN THE CHART (A). THESE LINES SHALL BE 3′ LONG, WITH A SPACE OF 9′ BETWEEN LINES.
- ALTERNATING ARROWS AND "ONLY" WORD MESSAGES SHALL BE USED, WITH THE FIRST AND LAST MARKING BEING AN ARROW.
- ALTERNATING ARROWS AND "ONLY" WORD MESSAGES SHOULD BE SPACED EVENLY, FOLLOWING GUIDELINES FOR ARROW SPACING. THESE SYMBOLS SHALL EXTEND BACK AT LEAST TO THE END OF THE SOLID STRIPE, BUT MAY BE EXTENDED BACK FARTHER IF ADDITIONAL GUIDANCE IS NEEDED.

TWO-WAY LEFT-TURN LANE NOTES:

IN A TWO-WAY LEFT-TURN LANE, THE FOLLOWING GUIDELINES APPLY:
- ONE SET OF ARROWS SHOULD BE PLACED AT OR NEAR THE BEGINNING OF THE TWO-WAY LEFT-TURN LANE.
- ADDITIONAL SETS OF ARROWS SHOULD BE PLACED THROUGHOUT THE TWO-WAY LEFT-TURN LANE IF LEFT TURN MOVEMENTS ARE EXPECTED. THEY SHOULD BE SPACED NO LESS THAN 300′ AND NO MORE THAN 1/2 MILE.
- THE SPACING BETWEEN EACH ARROW IN A SINGLE ARROW SET SHOULD BE 16 FEET.
- TWO-WAY LEFT-TURN LANES SHALL TERMINATE IN A DEDICATED LEFT-TURN LANE AT A SIGNALIZED INTERSECTION. THEY MAY TERMINATE IN A DEDICATED LEFT-TURN LANE AT OTHER LOCATIONS IF DEEMED NECESSARY.
- CONTACT TRAFFIC ENGINEER FOR RECOMMENDED DISTANCE FOR LEFT TURN STORAGE AT INTERSECTIONS.
- REFER TO THE TRAFFIC OPERATIONS GUIDANCE MANUAL SECTION TO-504 FOR MORE GUIDANCE ON TWO-WAY LEFT-TURN LANES.

DRAWING NOT TO SCALE

LEGEND
MARKINGS
WHITE
YELLOW

KENTUCKY DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS FOR TURN LANES

SUBMITTED R. Gilbert Wolfe 4-22-19
DATE

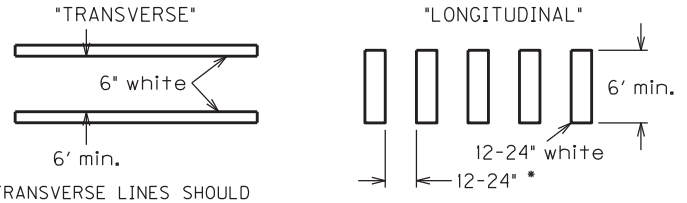
043

COUNTY OF	ITEM NO.	SHEET NO.

STOP LINE NOTES

1. STOP LINES SHALL BE 24" WHITE AND SHALL EXTEND ACROSS ALL APPROACH LANES.
2. STOP LINES SHOULD BE PLACED A MINIMUM OF 4' IN ADVANCE OF THE NEAREST EDGE OF A MARKED CROSSWALK. IN THE ABSENCE OF A MARKED CROSSWALK, STOP LINES SHOULD BE PLACED NO MORE THAN 30' OR NO LESS THAN 4' FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.
3. STOP LINES IN LEFT TURN LANES MAY BE PULLED BACK SO AS NOT TO INTERFERE WITH THE WHEEL PATH OF TURNING VEHICLES.

CROSSWALK DETAIL

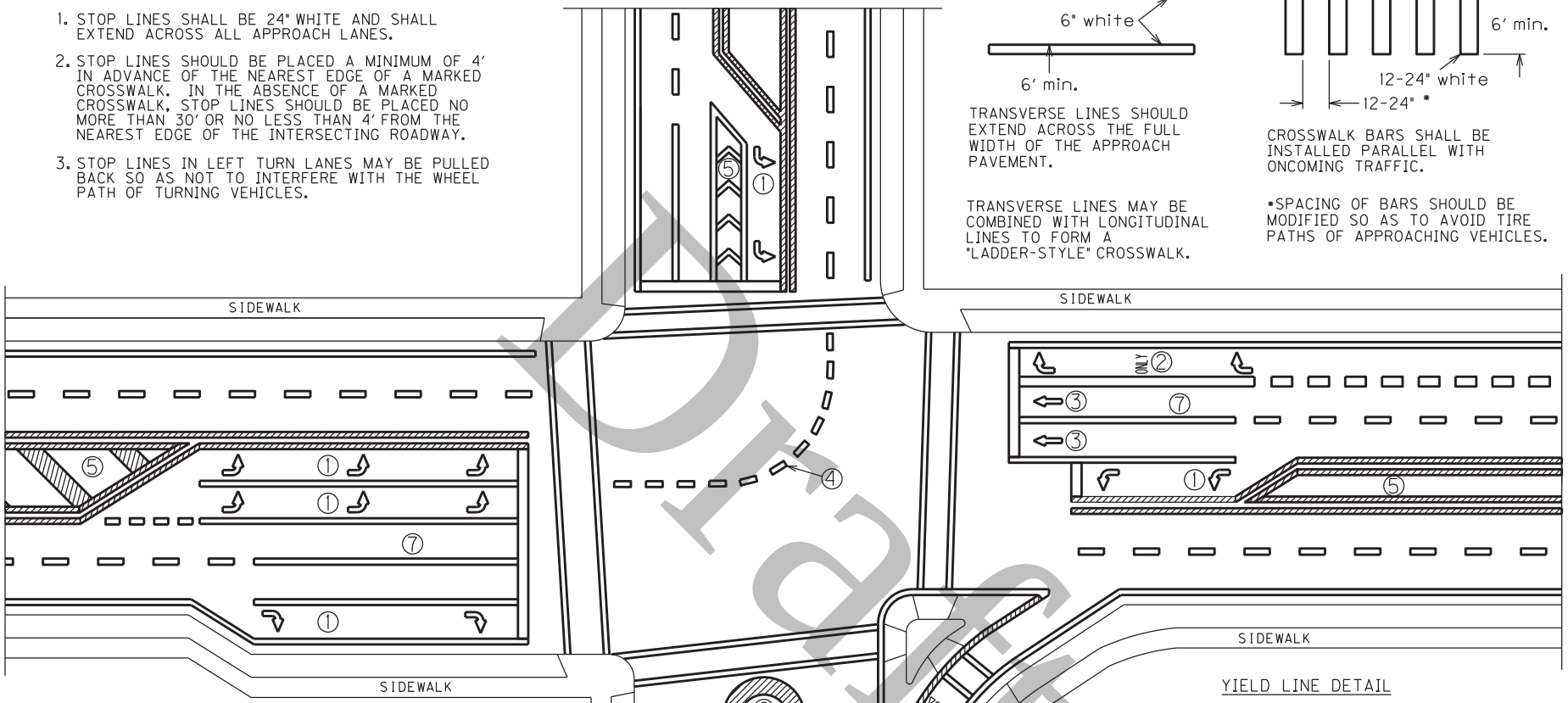


TRANSVERSE LINES SHOULD EXTEND ACROSS THE FULL WIDTH OF THE APPROACH PAVEMENT.

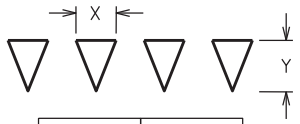
TRANSVERSE LINES MAY BE COMBINED WITH LONGITUDINAL LINES TO FORM A "LADDER-STYLE" CROSSWALK.

CROSSWALK BARS SHALL BE INSTALLED PARALLEL WITH ONCOMING TRAFFIC.

*SPACING OF BARS SHOULD BE MODIFIED SO AS TO AVOID TIRE PATHS OF APPROACHING VEHICLES.



YIELD LINE DETAIL



X	Y
12" or 24"	18" or 36"

NOTE: SPACING BETWEEN TRIANGLES SHOULD BE 3-12"

① ARROWS SHALL BE USED IN ALL DEDICATED TURN LANES AT SIGNALIZED INTERSECTIONS. REFER TO SEPIA 042 FOR GUIDANCE ON SPACING.

② ARROWS, ALONG WITH THE WORD "ONLY", SHALL ONLY BE USED IN A LANE DROP SCENARIO. REFER TO SEPIA 043 FOR GUIDANCE ON SPACING.

③ ARROWS ARE OPTIONAL IN THROUGH LANES.

④ DOTTED LANE LINE EXTENSIONS SHALL BE USED WITH DUAL TURN LANES. THEY SHALL BE THE SAME COLOR OF THE LINES WHICH THEY EXTEND AND SHOULD BE 6" IN WIDTH, 2' IN LENGTH, WITH A GAP OF 2-6' BETWEEN LINES.

⑤ REFER TO SEPIA 046 FOR GUIDANCE ON, AND DIMENSIONS OF, CROSSHATCH AND CHEVRON MARKINGS.

⑥ REFER TO SEPIA 046 FOR GUIDANCE ON MEDIAN NOSES.

⑦ SOLID LINE SEPARATING THROUGH LANES SHOULD EXTEND BACK A MINIMUM OF 50' FROM THE STOP BAR.

*NOTE: OTHER THAN LONGITUDINAL STRIPING, ALL MARKINGS SHOWN ON THIS DRAWING SHOULD BE THERMOPLASTIC.

DRAWING NOT TO SCALE

LEGEND
MARKINGS
WHITE
YELLOW

KENTUCKY DEPARTMENT OF HIGHWAYS

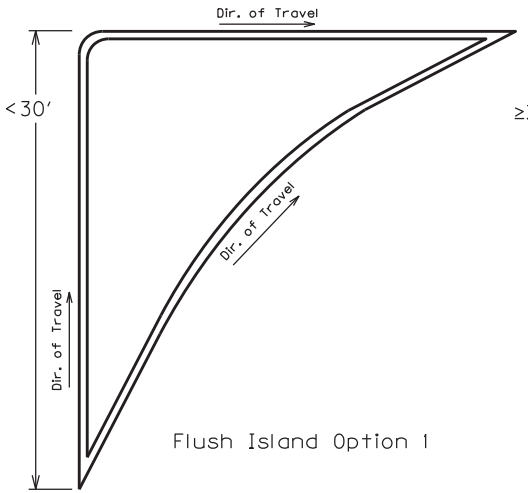
TYPICAL MARKINGS AT SIGNALIZED INTERSECTIONS

SUBMITTED R. Jeffrey Wolfe 11-30-18 DATE

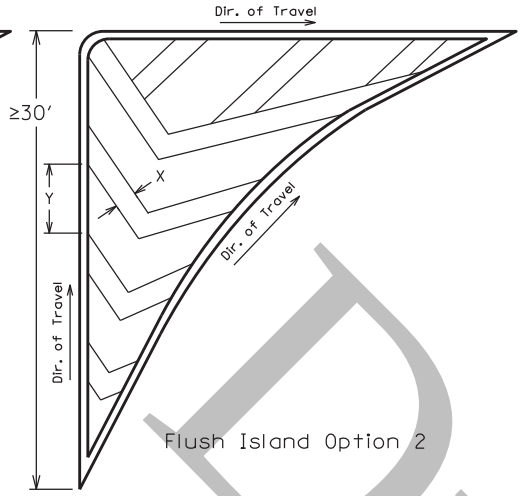
048

COUNTY OF	ITEM NO.	SHEET NO.

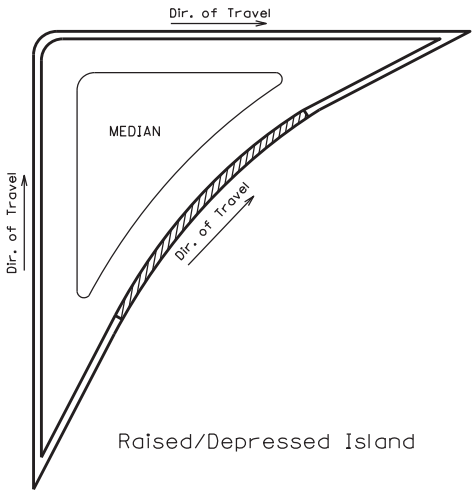
TYPICAL RIGHT-TURN CHANNELIZING ISLAND MARKINGS



Flush Island Option 1



Flush Island Option 2



Raised/Depressed Island

GENERAL NOTES

THE MINIMUM WIDTH (X) OF CROSSHATCH MARKINGS IS 12" FOR LOW SPEED ROADS (< 45 MPH) AND 24" FOR HIGH SPEED ROADS (≥ 45 MPH).

THE SPACE BETWEEN ADJACENT CROSSHATCH MARKINGS (Y) SHOULD BE SET AT 10 TIMES THE WIDTH (X) OF THE CROSSHATCH MARKINGS.

CROSSHATCH MARKINGS SHOULD NOT BE PLACED IN A MEDIAN LESS THAN 6' IN WIDTH.

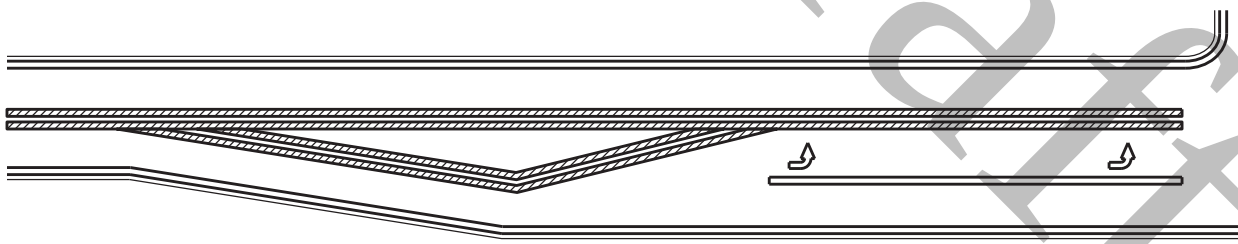
CROSSHATCH MARKINGS SHOULD NOT BE PLACED IN AND ISLAND IF ANY SIDE OF AN ISLAND IS LESS THAN 30' IN LENGTH.

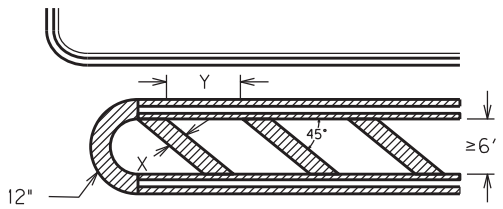
THE OUTLINE OF AN ISLAND SHOULD BE EITHER 8" OR 12".

MEDIAN NOSES MAY BE EITHER A SINGLE 12" LINE OR A SOLID SEMI-CIRCLE.

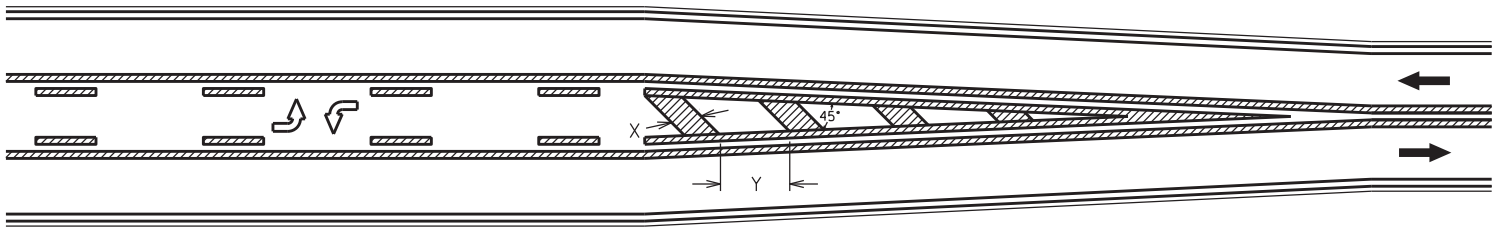
CROSSHATCH AND CHEVRON MARKINGS SHOULD BE THERMOPLASTIC.

TYPICAL LEFT-TURN LANE / FLUSH MEDIAN CROSSHATCH MARKINGS





TYPICAL TWO-WAY LEFT-TURN LANE (TWLTL) TRANSITION MARKINGS



Note: Crosshatch markings shall be placed in the transition area of a TWLTL.

LEGEND

MARKINGS

WHITE

YELLOW

DRAWING NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS FOR ISLANDS AND MEDIANS

SUBMITTED R. Jeffrey Wolfe 11-30-18 DATE

046

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

PART IV

INSURANCE

Refer to
Kentucky Standard Specifications for Road and Bridge Construction,
current edition

PART V

BID ITEMS