CALL NO. 103

CONTRACT ID. 234214

JACKSON COUNTY

FED/STATE PROJECT NUMBER HSIP 4211(051)

DESCRIPTION US HIGHWAY 421 (US 421)

WORK TYPE ASPHALT PAVEMENT & ROADWAY REHAB

PRIMARY COMPLETION DATE 11/30/2024

LETTING DATE: August 24,2023

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME August 24,2023. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 15%

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

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SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 11

CONTRACT ID - 234214

HSIP 4211(051)

COUNTY - JACKSON

PCN - 1105504212302
HSIP 4211(051)

US HIGHWAY 421 (US 421) (MP 21.445) FROM 0.036 MILES NORTH OF KY 3446 EXTENDING NORTHWEST TO THE ROCKCASTLE COUNTY LINE (MP 29.574), A DISTANCE OF 08.13 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 11-09017.

GEOGRAPHIC COORDINATES LATITUDE 37:29:36.00 LONGITUDE 84:08:25.00

ADT 3,262

COMPLETION DATE(S):

COMPLETED BY 11/30/2024 APPLIES TO ENTIRE PROJECT

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's electronic bidding software. The Bidder must download the bid file located on the Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

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. When prescribed in said directives, the contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom shall be contacted through their individual Protection Notification Center. Non-compliance with these directives can result in the enforcement of penalties.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by KRS 14A.9-010 to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under KRS 14A.9-030 unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in KRS 14A.9-010, the foreign entity should identify the applicable exception. Foreign entity is defined within KRS 14A.1-070.

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at https://secure.kentucky.gov/sos/ftbr/welcome.aspx .

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/contract). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

HARDWOOD REMOVAL RESTRICTIONS

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially

disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004.

BUILD AMERICA, BUY AMERICA ACT (BABA)

On November 15, 2021, President Biden signed into law the Infrastructure Investment and Jobs Act (IIJA), Pub. L. No. 117-58, includes the Build America, Buy America Act ("the Act"). Pub. L. No. 117-58, §§70901-52. The Act strengthens the Buy America preference to include "construction materials." The current temporary waiver for **"construction materials"** will expire on November 10, 2022.

The Act will apply to construction materials as outlined in the guidance issued in OMB M-22-11.

Construction Materials – Includes an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives – that is or consists primarily of:

- Non-ferrous metals
- Plastic/polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- Glass (including optic glass);
- Lumber; or
- Drywall.

Construction Materials only applies to items, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project.

Construction Materials does not apply to tools, equipment or supplies brought to the jobsite and removed before completion.

BOYCOTT PROVISIONS

If applicable, the contractor represents that, pursuant to KRS 45A.607, they are not currently engaged in, and will not for the duration of the contract engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which Kentucky can enjoy open trade. **Note:** The term Boycott does not include actions taken for bona fide business or economic reasons, or actions specifically required by federal or state law.

If applicable, the contractor verifies that, pursuant to KRS 41.480, they do not engage in, and will not for the duration of the contract engage in, in energy company boycotts as defined by KRS 41.472.

LOBBYING PROHIBITIONS

The contractor represents that they, and any subcontractor performing work under the contract, have not violated the agency restrictions contained in KRS 11A.236 during the previous ten (10) years, and pledges to abide by the restrictions set forth in such statute for the duration of the contract awarded.

The contractor further represents that, pursuant to KRS 45A.328, they have not procured an original, subsequent, or similar contract while employing an executive agency lobbyist who was convicted of a crime related to the original, subsequent, or similar contract within five (5) years of the conviction of the lobbyist.

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Rating
102.13 Irregular Bid Proposals
102.09 Proposal Guaranty
102.08 Preparation and Delivery of Proposals
102.14 Disqualification of Bidders

CIVIL RIGHTS ACT OF 1964

The Kentucky Transportation Cabinet, Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, disability, income- level, or Limited English Proficiency (LEP)in consideration for an award.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free “hotline” Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report such activities.

The “hotline” is part of the DOT’s continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECOND TIER SUBCONTRACTS

Second tier subcontracts are acceptable per Section 108.01 of the Standard Specifications for Road and Bridge Construction. S u b - Contractors fulfilling a disadvantaged business enterprise goal on a project may enter into a 2nd tier subcontract with a Non-DBE Subcontractor. However, in this instance, none of the work subcontracted to the Non-DBE Contractor will count toward fulfilling the established Disadvantaged Goal for the project.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet ("the Cabinet") that Disadvantaged Business Enterprises ("DBE") shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS [MRA(1)]

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

"The bidder certifies that it has secured participation by Disadvantaged Business Enterprises ("DBE") in the amount of_____percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program."

The certification statement is located in the electronic bid file. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 14-35 DBE, within 5 days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder's DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

1. Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
2. Description of the work each is to perform including the work item, unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Proposal Line Number, Category Number, and the Project Line Number can be found in the "material listing" on the Construction Procurement website under the specific letting;
3. The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows;
   a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:
      - The entire expenditure paid to a DBE manufacturer;
      - 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
      - The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.
   b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;

c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;
4. Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

AFTER PROJECT AWARD AND BEFORE NOTICE TO PROCEED/WORK ORDER IS ISSUED (SEE SECTION 103.06, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

Prime Contractors awarded a federally funded project with a DBE Goal greater than zero will be required to submit DBE Subcontract Agreement Form, TC 14-36, along with the attached FHWA 1273 and Certificate of Liability Insurance for each DBE Firm submitted as part of the previously approved DBE Utilization Plan (TC 14-35). A signed quote or purchase order shall be attached when the DBE subcontractor is a material supplier or broker.

The Certificate of Liability Insurance submitted must meet the requirements outlined in Section 107.18 of the Standard Specifications for Road and Bridge Construction.

Changes to ***APPROVED*** DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set (hard copy along with an electronic copy) of this information must be received in the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

1. Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
2. Whether the bidder provided solicitations through all reasonable and available means;
3. Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
4. Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainly whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the Disadvantaged Enterprise Business Liaison Officer (DEBLO) in the Office for Civil Rights and Small Business Development to give notification of the bidder's inability to get DBE quotes;
5. Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
6. Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
7. Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
8. Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
9. Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
10. Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
11. Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry out the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Suspension of Prequalification;
- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

The prime contractor will be required to pay the DBE and Non-DBE Subcontractors within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to complete and submit a ***signed and notarized*** Affidavit of Subcontractor Payment (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. These documents must be completed and signed within 7 days of being paid by the Cabinet.

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

******* IMPORTANT *******

Please mail the original, signed and completed TC (18-7) Affidavit of Subcontractor Payment form and all copies of checks for payments listed above to the following address:

Office for Civil Rights and Small Business Development
6th Floor West 200 Mero Street
Frankfort, KY 40622

The prime contractor should notify the KYTC Office for Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact in this office is Mr. Melvin Bynes. Mr. Bynes' current contact information is email address – melvin.bynes2@ky.gov and the telephone number is (502) 564-3601.

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

PROHIBITION ON TELECOMMUNICATIONS EQUIPMENT OR SERVICES

In accordance with the FY 2019 National Defense Authorization Act (NDAA), 2 CFR 200.216, and 2 CFR 200.471, Federal agencies are prohibited, after August 13, 2020, from obligating or expending financial assistance to obtain certain telecommunications and video surveillance services and equipment from specific producers. As a result of these regulations, contractors and subcontractors are prohibited, on projects with federal funding participation, from providing telecommunication or video surveillance equipment, services, or systems produced by:

- Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities)
- Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities)

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO PREFERENCE ACT (CPA).

(REV 12-17-15) (1-16)

SECTION 7 is expanded by the following new Article:

102.10 **Cargo Preference Act – Use of United States-flag vessels.**

Pursuant to Title 46CFR Part 381, the Contractor agrees

- To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

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.

DGA BASE

Unless otherwise noted, the Department estimates the rate of application for DGA Base to be 115 lbs/sy per inch of depth.

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, which is STA 1383+30.72 at the intersection of US 421 and KY 1955 (extension of the centerline of KY 1955 to US 421 centerline along the skew) and corresponds to mile point 26.199 along US 421. **NOTE**: The existing mile marker signs may not correspond to the proposed work locations.

SURVEY & LIDAR

Survey information was obtained from two sources for this project. The existing ground line was obtained from KYTC Statewide Aerial LiDAR. Pipe flowline elevations and pavement elevations at pipes and in curves (at 50' spacing) were obtained from GPS survey methods. All work 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 and environmentally cleared 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.

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:

Pavement Resurfacing. The existing roadway is to be resurfaced at various spots throughout the corridor (i.e., at pipe replacement locations, shoulder repairs, base repairs, etc.). Other items that may be associated with the pavement resurfacing include the following: removal of existing pavement by milling and texturing, construction of edge keys, installation of rumble strips, and application of pavement markings. Refer to the rumble strip Standard Drawings for recommended placement of rumble strips.

Shoulder Repair. Areas have been identified along the route for Shoulder Repair. The repair locations listed on the Pavement Repair Summary are approximately only. The Engineer will determine the actual repair locations at the time of construction. Work will include milling/trenching the existing roadside, placing asphalt, and re-grading the roadside, as shown and described on the Shoulder Repair Detail. Refer to the Special Note for Shoulder Milling/Trenching for more information.

Base Failure Repairs. Areas have been identified along the route for Base Failure Repair. The repair locations and dimensions listed on the Pavement Repair Summary are approximate only. The Engineer will determine actual repair locations and dimensions at the time of construction. Refer to the Special Note for Base Failure Repair for more details on this item of work.

Roadside Regrading. Areas have been identified along the route for Roadside Regrading. The overall intent of the Roadside Regrading work operation is to improve the existing roadside by constructing a proposed width of earth shoulder and regrading the roadside fill slopes, ditch foreslopes, and/or ditch backslopes as flat as possible within the Right-of-Way (or any work areas the Department has obtained through Consent & Release), while NOT disturb any sensitive obstructions (i.e. fences, buildings, utilities, etc.). A variety of information is included in the proposal to communicate the proposed Roadside Regrading.

- The Special Note for Roadside Regrading provides information on:
  - The required materials and construction methods.
  - How roadside regrading is measured and paid.
- The ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS includes:
  - 11 different Figures that show the common conditions and situations that may be encountered when performing Roadside Regrading.
  - Notes that provide guidance on how to adjust the proposed shoulder and/or roadside dimensions so that Roadside Regrading work operations will remain within the Right-of-Way (or Consent & Release work area) and/or not impact a sensitive obstruction.
- The Typical Section(s) show:
  - The desired dimensions of the proposed shoulder, ditch, and/or roadside slopes.
  - NOTE: There may situations where the desired shoulder, ditch, and/or roadside dimensions must be modified based on existing site conditions. When situations arise

where the desired roadside dimensions need to be adjusted, the Contractor and Engineer should work together to determine the final dimensions for the proposed shoulder, ditch, and/or roadside slopes. The notes within the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS provide guidance on ways to adjust the Roadside Regrading when common site conditions and constraints are encountered.

- The Roadside Regrading Summary:
  - Lists the locations where Roadside Regrading is to be performed. While the Department anticipates the limits of Roadside Regrading shown on the Roadside Regrading Summary are accurate, it is always possible the condition of the existing shoulders and existing ditches could change between the Design phase and Construction phase of the project. Therefore, the Contractor and the Engineer are to work together to review the limits of Roadside Regrading and make alterations per Section 104.02.
  - Lists estimated volumes of excavation and embankment for each Roadside Regrading location to help indicate the approximate level of effort of each Roadside Regrading location. NOTE: the estimated volumes of excavation and embankment are provided for informational purposes only and final payment for Roadside Regrading will be made based on the actual LF of Roadside Regrading performed.
  - Indicates which Figure reference within the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS is the closest representation of each proposed Roadside Regrading location.
  - Lists the Targeted Fill Slope (or Ditch Foreslope) and, if applicable, the Targeted Backslope for each Roadside Regrading location.
  - Indicates if there is a need for Embankment Benching, a DGA Wedge, and Channel Lining for each Roadside Regrading location.
  - If applicable, lists the estimated quantities of DGA, Asphalt Seal Coat, Asphalt Seal Aggregate, Channel Lining, and Geotextile Fabric for each Roadside Regrading location.
  - Summarizes the quantities of the bid items associated with the Roadside Regrading work operation.
- The Consent & Release Summary provides:
  - A listing of the locations in which the Department has obtained a Consent & Release from the adjacent property owner.
  - A description of the work that is to occur within the Consent & Release work area.

DGA Wedge & Chip Seal. Some sections of "Roadside Regrading" are set up to receive a DGA Wedge & Chip Seal after the roadside regrading operations are complete. Other areas of "Roadside Regrading" are NOT to receive the DGA Wedge & Chip Seal. Construct the DGA Wedge & Chip Seal at the locations identified on the Roadside Regrading Summary, or at locations as directed by the Engineer. The proposed DGA Wedge dimensions are detailed on the Typical Sections. Refer to the Special Note for Roadside Regrading and the Special Note for Double Asphalt Seal Coat for more information on the DGA Wedge & Chip Seal.

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 areas throughout the project where the existing entrance pipe will have to be removed and replaced to line up with the new ditch line. Refer to the Entrance Detail within the Typical Sections for details on this work item. See the Pipe Replacement & Extension Summary for the locations and bid items/quantities associated with the entrance pipe

replacements. The existing driveway surface is noted on the summary sheet and is to be replaced with like-kind surfacing. The Engineer will make the final determination as to the locations and quantities required to complete the work based on the existing conditions encountered during construction. Refer to the Special Note for Pipe Replacements / Extensions for more information on this item of work.

Pipe Replacements & Extensions. There are locations throughout the project where culvert pipes are being extended or replaced. Locations and estimated quantities are noted on the Pipe Replacement & Extension Summary. For pipe extensions where the existing pipe is RCP, remove the existing headwall and first section of existing RCP attached to the headwall (approx. 3 to 4 ft of existing pipe). Other items that may be included with the pipe extensions/replacements include culvert headwalls, sloped & mitered concrete headwalls, intermediate anchor/collar, roadside regrading, ditching, channel lining, erosion control blanket, asphalt pavement quantities, etc. Refer to the Special Note for Pipe Replacements/Extensions for more information on this item of work.

Sloped & Mitered Concrete Headwalls. Sloped & Mitered Concrete Headwalls shall be constructed as shown on the detail sheets titled: SLOPED & MITERED CONCRETE HEADWALL DETAILS. This headwall is intended to combine the benefits of a pipe headwall with the advantages of safety and adaptability by allowing the headwall to be custom fit to the surrounding embankment. The Pipe Replacement & Extension Summary identifies which pipe ends are to receive the Sloped & Mitered Concrete Headwalls. The identified pipe ends shall have the headwall installed and the pipe mitered at a slope that matches the final embankment slopes at each location. <u>If the pipe is on a skew, install the headwall and miter the pipe so that the concrete slope paving of the new headwall is perpendicular to the roadway</u>. In other words, the embankment slope should <u>not</u> be warped to fit the skew of the pipe; the headwall should be installed and the pipe should be mitered to match the final embankment slope, so that the roadside fill slope is fairly consistent prior to the pipe, at the pipe, and beyond the pipe, and does not create an excessive bulge in the embankment. When completed the edges of the Sloped & Mitered Concrete Headwall should be flush with the surrounding ground line. Payment at the Contract unit price Each shall be full compensation for furnishing all labor, materials, equipment, and incidentals necessary to install the headwall and miter the pipe.

<u>NOTE</u>: For pipes that receive the Sloped & Mitered Concrete Headwall, the pipe length will be measured to the furthest point along the mitered end of the pipe.

Intermediate Anchor/Collar. There are quantities of Class A Concrete included in the contract to construct an intermediate anchor, or collar, around the pipes at the pipe extension locations. This is so the new pipe can be securely connected to the existing pipe. The intermediate anchors shall be constructed as shown on Standard Drawing RDX-060, current edition.

Channel Lining. A quantity of **<u>1,592 Tons of Channel Lining Class II</u>** has been included in the Pipe Replacement & Extension and the Roadside Regrading Summaries for use at the locations indicated on the summary. An additional **<u>250 Tons of Channel Lining Class II</u>** has been included in the contract for potential use around drop box inlets, safety box inlets, inlets and outlets of pipes, along areas of regraded ditch line and/or fill slope, and other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Channel Lining throughout this project. The Engineer will make the final determination as to the needed quantities and placement of Channel Lining.

General Notes & Description of Work
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Erosion Control Blanket. A quantity of **10,000 square yards** of Erosion Control Blanket has been included in the contract for potential use along areas of regraded shoulders, 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. Several locations within the project are set up for guardrail replacement. The approximate locations and estimated quantities are noted on the Guardrail Summary. Refer to the Special Note for Guardrail, Typical Sections, and Plan Sheets for more detail and information on this item of work.
NOTE: When the plans call for a Type 1 or Type 4A End Treatment, a MASH eligibility letter from FHWA is required for these end terminals. When a MASH tested eligibility letter is not available for the end terminal being utilized, the most recent NCHRP 350 eligibility letter from FHWA for that terminal will apply. Acceptance of the terminal will be at the discretion of the Engineer.

Removal of Existing Signing Assemblies and Installation of Proposed Signing. A quantity of **11** each of "Remove Sign" has been included for removal of existing signs along the corridor, as identified in Proposal. An estimated quantity of new signing and sign post is included on the Signing Summary. The Contractor and Engineer will work with the District Traffic Section to determine the final signing layout and sign types prior to installation of the proposed signing. Refer to the Special Note for Signing and the Special Note for Signage for more details concerning the procedures for determining and staking the final layout and installation of the signing.

Trim & Remove Trees, Stumps, and Brush. There are locations within the project where Trees, Stumps, or Brush are to be removed and/or trimmed. Locations are noted on the Tree Trimming & Removal Summary. Refer to the Special Note for Tree, Stump, and Brush Removal for more information.

High Friction Surface Treatment. There are locations within the project where High Friction Surface Treatment is to be installed. Locations are noted on the Pavement Repair Summary. Refer to the Special Note for Polymer Concrete Overlay Systems and the Special Note for Striping on High Friction Surface for more information on this item of work.

Temporary Striping. A quantity of **12,000 linear** feet of Pave Striping – Temp Paint – 4 in has been included in the contract for potential use in the area of the Pavement Repair areas, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine any locations throughout the project requiring temporary pavement striping. The Engineer will make the final determination as to the quantities and placement of temporary pavement striping.

Spray Thermo 6" Striping. A quantity of Pave Striping – Spray Thermo – 6 in has been included in the contract to restripe the entire corridor with 6" permanent paint.

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 201.03.01, perform items 1 & 2 usually performed by the Engineer.
2. Using the proposed pavement superelevation rates, runout lengths, and runoff lengths, determine the necessary elevation changes along the edges of pavement for each proposed curve and the transitions leading into and out of each curve to achieve the proposed superelevation improvements. The intent is to provide a consistent superelevation throughout each proposed curve and smooth transitions into and out of each curve. Once the elevation changes along the edges of pavement for each proposed curve are determined and prior to starting paving operations, verify the proposed roadside re-grading corresponding to each curve can be constructed so that the new roadside will be flush with the new edges of pavement and the new toe of slope, or top of cut, will remain within the Right-of-Way, or within the general area noted on any applicable Consent & Releases, and/or not impact a sensitive obstruction. If necessary, and with the approval of the Engineer, reduce the proposed superelevation rate of a curve if the new elevations of the edges of pavement will cause the proposed roadside grading to extend beyond the Right-of-Way, or extend outside of the general area described on any applicable Consent & Releases, and/or impact a sensitive obstruction. Alternatively, with the approval of the Engineer and to the extent allowable by the "Roadside Regrading and Embankment Benching Details" and/or the Special Note for Roadside Regrading, the Contractor may be allowed to adjust the proposed dimensions of the roadside grading so the new toe of slope or top of cut will remain within the Right-of-Way, or within the general area noted on any applicable Consent & Releases, and/or not impact a sensitive obstruction. After the final proposed elevation changes along the edges of pavement for each curve are determined and before paving operations begin, submit to the Engineer and obtain approval for the number of asphalt lifts, each asphalt lift's thickness, and the mix design of each lift of Leveling & Wedging the contractor plans to use to achieve the proposed superelevation improvement. Ensure positive drainage upon completion of the work.
3. 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.
4. 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.

5. Produce and furnish to the Engineer "As Built" information for the superelevation improvements and the drainage improvements. For superelevation improvements, as built information will consist of a record of the final pavement cross slopes every 50 feet, for each lane of travel along the curves and the transitions into and out of the curves. Elevation data of the curve improvements is not necessary; simply the cross slope percentage every 50 feet. 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.
6. 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.
7. Prior to incorporating into the work, obtain the Engineers approval of all revisions determined by the Contractor.
8. Perform any and all other staking operations required to control and construct the 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 Roadside Regrading

I. DESCRIPTION

Except as provided herein, all work shall be performed in accordance with 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) Maintaining and Controlling Traffic; (2) Site Preparation; (3) Roadside Regrading; (4) Constructing Embankments, Embankment Benching, and/or Excavation; (5) Erosion Control; and (6) Any other work as specified in this 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.

C. DGA. Furnish Dense Graded Aggregate as per Section 805.

D. Asphalt Seal Coat. See the Special Note for Double Asphalt Seal Coat.

E. Asphalt Seal Aggregate. See the Special Note for Double Asphalt Seal Coat.

F. Channel Lining, Class II. When listed as a bid item, furnish Channel Lining, Class II as per Section 805.

G. Geotextile Fabric Class 1. When listed as a bid item, furnish Geotextile Fabric Class 1 as per Section 843.

H. Crushed Stone Base. Furnish Crushed Stone Base as per Section 805.

III. CONSTRUCTION METHODS

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

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

C. Site Preparation. Be responsible for all site preparation including, but not limited to: staking; clearing, grubbing, and removal of all obstructions or any other items; excavation, embankment benching, compacting embankment in place; temporary pollution and erosion control; disposal of excess, waste, and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the Engineer.

D. Staking. See the Special Note for Staking.

E. Roadside Regrading. Perform Roadside Regrading at the approximate locations listed on the Summary Sheets and/or Plan Sheets, or at locations as directed by the Engineer. All work shall be completed as specified in the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS, the Typical Sections, the Plan Sheets, or as directed by the Engineer. Roadside Regrading shall consist of any necessary clearing, grubbing, grading, and/or reshaping of the existing shoulder, ditch, and/or roadside to achieve the proposed shoulder, ditch, and/or roadside dimensions detailed on the Typical Sections. Depending on the existing conditions encountered and to achieve the dimensions as detailed in the Typical Sections, Roadside Regrading may also include, but is not limited to: embankment benching, excavating and removing excess material, excavation of rock, providing additional earth material suitable for vegetation growth and grading, shaping, and compacting the earth material.

Provide positive drainage of ditches and slopes at all times during and upon completion of construction. When asphalt surfacing or resurfacing is included in the contract, perform all Roadside Regrading operations as is practical before beginning final surfacing operations.

F. Embankment Benching. Embankment Benching shall be required when the existing groundline has an incline greater than 15%. Any and all required embankment benching shall be incidental to the bid item ROADSIDE REGRADING. For more information refer to the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS.

G. DGA Wedge & Chip Seal. Some, or possibly all, areas of Roadside Regrading may be set up to receive a DGA Wedge & Chip Seal after the Roadside Regrading operations are complete. Other areas of Roadside Regrading may NOT be set up to receive the DGA Wedge & Chip Seal. See the Summary Sheets and/or Plan Sheets for the approximate locations to receive the DGA Wedge & Chip Seal. The Engineer will determine the exact limits of the DGA Wedge & Chip Seal at the time of construction. Construct and compact the DGA as required by Section 302. Place Chip Seal over the entire width of the DGA Wedge. See the Special Note for Double Asphalt Seal Coat for the Chip Seal requirements.

H. Channel Lining. Install Class II Channel Lining along any sections of ditches, fill slopes, or ditch backslopes identified in the Proposal, or any other locations the Engineer directs for slope protection or erosion control. When Channel Lining is proposed to be installed along a steep fill slope in order to establish a width of shoulder (as shown in Figure 5 of the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS), the Channel Lining is to be capped with Geotextile Fabric Class 1 and 4” of Crushed Stone Base. In lieu of 4” of Crushed Stone Base, 4” of DGA and a

Double Asphalt Seal Coat may be specified in the Proposal. Install whichever aggregate capping material the Proposal specifies, or as directed by the Engineer.

I. 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.

J. 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.

K. 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.

L. 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.

M. 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.

N. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed excess material, debris, and 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.

O. 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.

IV. METHOD OF MEASUREMENT

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

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

C. 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.

D. Staking. See Special Note for Staking.

E. Roadside Regrading. The Department will measure the bid item ROADSIDE REGRADING in linear feet along the centerline of the roadway as the length of the actual Roadside Regrading work performed. Further, this measurement will only include one side of the roadway. Therefore, for areas where Roadside Regrading occurs on both sides of the road, the Department will measure each side independently. The Department will not measure cleaning pipe structures 36 inches or less in diameter or reshaping any deformed ends on metal entrance pipes that are to remain in place, as these operations are considered incidental to the bid item ROADSIDE REGRADING.

F. Embankment Benching. The Department will not measure Embankment Benching for payment. Any and all required embankment benching shall be incidental to the bid item ROADSIDE REGRADING.

G. DGA, CSB. When listed as bid items, DGA and Crushed Stone Base shall be measured according to Section 302.04.

H. Chip Seal. When specified in the contract, the bid items associated with Chip Seal shall be measured according to the Special Note for Double Asphalt Seal Coat.

I. Channel Lining, Class II. When listed as a bid item, Class II Channel Lining shall be measured according to Section 703.04.

J. Geotextile Fabric, Class 1. When listed as bid items, Geotextile Fabric, Class 1 shall be measured according to Section 214.04.

K. 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.

V. BASIS OF PAYMENT

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

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

C. Staking. See Special Note for Staking.

D. Roadside Regrading. The Department will make payment for the completed and accepted quantities under the bid item ROADSIDE REGRADING. The Department will consider payment full compensation for furnishing all labor, materials, equipment, and incidentals necessary to perform Roadside Regrading as required by these notes, at the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.

E. DGA, CSB. When listed as bid items, the Department will make payment for DGA and Crushed Stone Base according to Section 302.05.

F. Chip Seal. When specified in the contract, the Department will make payment for the bid items associated with Chip Seal according to the Special Note for Double Asphalt Seal Coat.

G. Channel Lining, Class II. When listed as a bid item, the Department will make payment for Class II Channel Lining according to Section 703.05.

H. Geotextile Fabric, Class 1. When listed as a bid item, the Department will make payment for Geotextile Fabric, Class 1 according to Section 214.05.

SPECIAL NOTE

For Tree Removal

Jackson County
PERFORM LOW COST SAFETY IMPROVEMENTS ON US 421 FROM MP 21.445 TO MP 29.574 IN JACKSON COUNTY
Item No. 11-9017

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

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) 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 Tree Trimming Detail. On this detail, the horizontal width is taken from the edge of pavement measured perpendicular to the roadway, but not to extend beyond the obvious Right-of-Way limits, or as directed by the Engineer. To achieve the tree trimming/clearing dimensions shown on the Tree Trimming Detail, the complete removal of some trees may be necessary. The Department’s expectation is that if the trunk or any portion of the trunk of any tree is within the tree trimming/clearing dimensions shown on the Tree Trimming Detail, any such tree shall be cut and removed as part of this bid item. Additionally, if there are trees whose main trunk is not within the tree trimming/clearing dimensions, but more than approximately 50% of the tree’s canopy will be removed due to trimming, any such tree shall be cut and removed as part of this bid item. 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 inches (4") 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. The Contractor and Engineer should work together to identify the trees and/or stumps requiring removal. The Engineer will make the final determination on the decision to remove or leave any trees and/or stumps in question.

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 item "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 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/her 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/her 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/her activities to the 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 workday,

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 Linear Foot, per side of the highway. See the Tree Trimming Detail for the horizontal and vertical tree trimming/clearing dimensions.

D. Stump Treatment. The Department will NOT measure for payment the operation of Stump Treatment. This activity 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 Linear Foot. 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 brush.

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

Special Note for Pipe Replacements and 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 existing 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 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, regardless of cover height, backfill culvert pipes with flowable fill as shown on the Culvert Pipe Replacement Detail from the outside edge of shoulder or back of curb to outside edge of shoulder or back of curb. 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. For culvert pipe beyond the outside edge of shoulder or back of curb, backfill according to Section 701.03.06.

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: ROADSIDE REGRADING 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, geotextile fabric, 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 PIPELINE INSPECTION

1.0 DESCRIPTION. The Department will perform visual inspections on all pipe on the project. A video inspection will be required on projects having more than 250 linear feet of storm sewer and/or culvert pipe and on routes with an ADT of greater than 1,000 vehicles. Conduct video inspections on all pipe located under the roadway and 50 percent of the remaining pipe not under the roadway. Storm sewer runs and outfall pipes not under the roadway take precedence over rural entrance pipes. Contractors performing this item of work must be prequalified with the Department in the work type J51 (Video Pipe Inspection and Cleaning). Deflection testing shall be completed using a mandrel in accordance with the procedure outlined below or by physical measurement for pipes greater than 36inches in diameter. Mandrel testing for deflection must be completed prior to the video inspection testing. Unless otherwise noted, Section references herein are to the Department's most current version of the Standard Specifications for Road and Bridge Construction.

2.0 VIDEO INSPECTION. Ensure pipe is clear of water, debris or obstructions. Complete the video inspection and any necessary measurement prior to placing the final surface over any pipe. When paving will not be delayed, take measurements 30 days or more after the completion of earthwork to within 1 foot of the finished subgrade. Notify the Engineer a minimum of 24 hours in advance of inspection and notify the Engineer immediately if distresses or locations of improper installation are logged.

2.1 INSPECTION FOR DEFECTS AND DISTRESSES

A) Begin at the outlet end and proceed through to the inlet at a speed less than or equal to 30 ft/minute. Remove blockages that will prohibit a continuous operation.

B) Document locations of all observed defects and distresses including but not limited to: cracking, spalling, slabbing, exposed reinforcing steel, sags, joint offsets, joint separations, deflections, improper joints/connections, blockages, leaks, rips, tears, buckling, deviation from line and grade, damaged coatings/paved inverts, and other anomalies not consistent with a properly installed pipe.

C) During the video inspection provide a continuous 360 degree pan of every pipe joint.

D) Identify and measure all cracks greater than 0.1" and joint separations greater than 0.5".

E) Video Inspections are conducted from junction to junction which defines a pipe run. A junction is defined as a headwall, drop box inlet, curb box inlet, manhole, buried junction, or other structure that disturbs the continuity of the pipe. Multiple pipe inspections may be conducted from a single set up location, but each pipe run must be on a separate video file and all locations are to be referenced from nearest junction relative to that pipe run.

F) Record and submit all data on the TC 64-765 and TC 64-766 forms.

3.0 MANDREL TESTING. Mandrel testing will be used for deflection testing. For use on Corrugated Metal Pipe, High Density Polyethylene Pipe, and Polyvinyl Chloride Pipe,

use a mandrel device with an odd number of legs (9 minimum) having a length not less than the outside diameter of the mandrel. The diameter of the mandrel at any point shall not be less than the diameter specified in Section 3.6. Mandrels can be a fixed size or a variable size.

3.1 Use a proving ring or other method recommended by the mandrel manufacturer to verify mandrel diameter prior to inspection. Provide verification documentation for each size mandrel to the Engineer.

3.2 All deflection measurements are to be based off of the AASHTO Nominal Diameters. Refer to the chart in section 3.6.

3.3 Begin by using a mandrel set to the 5.0% deflection limit. Place the mandrel in the inlet end of the pipe and pull through to the outlet end. If resistance is met prior to completing the entire run, record the maximum distance achieved from the inlet side, then remove the mandrel and continue the inspection from the outlet end of the pipe toward the inlet end. Record the maximum distance achieved from the outlet side.

3.4 If no resistance is met at 5.0% then the inspection is complete. If resistance occurred at 5.0% then repeat 3.1 and 3.2 with the mandrel set to the 10.0% deflection limit. If the deflection of entire pipe run cannot be verified with the mandrel then immediately notify the Engineer.

3.5 Care must be taken when using a mandrel in all pipe material types and lining/coating scenarios. Pipe damaged during the mandrel inspection will be video inspected to determine the extent of the damage. If the damaged pipe was video inspected prior to mandrel inspection then a new video inspection is warranted and supersedes the first video inspection. Immediately notify the Engineer of any damages incurred during the mandrel inspection and submit a revised video inspection report.

3.6 AASHTO Nominal Diameters and Maximum Deflection Limits.

Base Pipe Diameter	AASHTO Nominal Diameter	Max. Deflection Limit	
		5.0%	10.0%
(inches)	(inches)	(inches)	
15	14.76	14.02	13.28
18	17.72	16.83	15.95
24	23.62	22.44	21.26
30	29.53	28.05	26.58
36	35.43	33.66	31.89
42	41.34	39.27	37.21
48	47.24	44.88	42.52
54	53.15	50.49	47.84
60	59.06	56.11	53.15

4.0 PHYSICAL MEASUREMENT OF PIPE DEFLECTION. Alternate method for deflection testing when there is available access or the pipe is greater than 36 inches in diameter, as per 4.1. Use a contact or non-contact distance instrument. A leveling device is recommended for establishing or verifying vertical and horizontal control.

4.1 Physical measurements may be taken after installation and compared to the AASHTO Nominal Diameter of the pipe as per Section 3.6. When this method is used, determine the smallest interior diameter of the pipe as measured through the center point of the pipe (D2). All measurements are to be taken from the inside crest of the corrugation. Take the D2 measurements at the most deflected portion of the pipe run in question and at intervals no greater than ten (10) feet through the run. Calculate the deflection as follows:

% Deflection = [(AASHTO Nominal Diameter - D2) / AASHTO Nominal Diameter] x 100%

Note: The Engineer may require that preset monitoring points be established in the culvert prior to backfilling. For these points the pre-installation measured diameter (D1) is measured and recorded. Deflection may then be calculated from the following formula:

$$\% \text{ Deflection} = [(D1 - D2) / D1] (100\%)$$

4.2 Record and submit all data.

5.0 DEDUCTION SCHEDULE. All pipe deductions shall be handled in accordance with the tables shown below.

FLEXIBLE PIPE DEFLECTION	
Amount of Deflection (%)	Payment
0.0 to 5.0	100% of the Unit Bid Price
5.1 to 9.9	50% of the Unit Bid Price [(1)]
10 or greater	Remove and Replace [(2)]

[(1)] Provide Structural Analysis for HDPE and metal pipe. Based on the structural analysis, pipe may be allowed to remain in place at the reduced unit price. [(2)] The Department may allow the pipe to remain in place with no pay to the Contractor in instances where it is in the best interest to the public and where the structural analysis demonstrates that the pipe should function adequately.

RIGID PIPE REMEDIATION TABLE PIPE	
Crack Width (inches)	Payment
≤ 0.1	100% of the Unit Bid Price
Greater than 0.1	Remediate or Replace [(1)]

[(1)] Provide the Department in writing a method for repairing the observed cracking. Do not begin work until the method has been approved.

6.0 PAYMENT. The Department will measure the quantity in linear feet of pipe to inspect. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24814EC	Pipeline Inspection	Linear Foot
10065NS	Pipe Deflection Deduction	Dollars

Special Note for Signage

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

All permanent signs and sign components shall be fabricated using Type XI sheeting.

The following signs and sign components shall be fabricated using Type XI 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 XI 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 pointing arrow (W16-7P) plaques that supplement Bicycle Warning signs.
- Pedestrian Warning signs and diagonal downward pointing arrow plaques that supplement Pedestrian 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

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.

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. describing and/or detailing 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 aluminum sheet 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 sign posts shall be of sufficient lengths so that a single, continuous length of sign post extends 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., or installations on existing asphalt, such as flush medians, Type I steel posts shall be mounted on a Type D Surface Mount. For Type D Surface Mounts use only Kleen Break Model 425 by Xcessories Squared of Auburn, IL. If the Surface Mount is to be installed on sufficiently cured concrete, use part number XKBSM42520-G. If the Surface Mount is to be installed on asphalt surface, use part numbers XKB42520-G and AXT225-36-G. 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 on the plans and/or summaries, fabricate Reflective Sign Post Panels from .080 gauge aluminum alloy 5052-H38 or 6061-T6, in accordance with ASTM B-209 and to the size(s) specified. Prepare the side of the aluminum sheet to receive the retroreflective background material according to the recommendations of the sheeting and retroreflective material manufacturer(s). 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 XI Sheeting)
- White and yellow (Type XI Sheeting)

Reflective Sign Post Panels shall be 2 inches wide and will typically have a height of 60 inches for rural installations and typically have a height of 84 inches for urban installations. There will be certain instances where a proposed Reflective Sign Post Panel will have a height dimension less than 60 inches; typically, this will be when the bottom of the bottom-most sign is mounted lower than the standard 5 ft minimum mounting height (e.g. 3 ft or 4 ft mount heights). In those cases, the height

of the Reflective Sign Post Panel is expected to closely match (within 1-2 inches) the distance between the top of the anchor or support to the bottom edge of the bottom-most sign. Reflective Sign Post Panels 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.

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. Use bracing as indicated on the plans, summaries, and/or standard signing detail sheets, and/or when directed by the Engineer and/or District Traffic Engineer.

All sign posts shall be attached to anchors 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 more than one sign is mounted beside each other, the posts shall be spaced to provide approximately six inches (6") of spacing between signs.

E. Remove & Relocate Sheet Signs. When listed on the plans and/or summaries, and/or as directed by the Engineer and/or District Traffic Engineer, remove the specified existing sheet sign(s) from the existing post(s) and reinstall on a new sign post. Once the specified existing sheet sign(s) have been removed and relocated, and if the existing sign post(s) are no longer needed to support other existing signs, removal of the existing sign post(s) will be paid under the bid item REMOVE SIGN. If any of the existing hardware components (bracing, brackets, bolts, rivets, etc.) are found to have pre-existing damage or are damaged during the Contractor's removal and reinstallation efforts, the Contractor shall provide the necessary replacement hardware for proper re-installation of the sheet sign. These components shall be incidental to the bid item REMOVE AND RELOCATE SHEET SIGNS.

Prior to removing and reinstalling a sheet sign, the Contractor shall first review the existing sheet sign for damage. It is the Contractor's responsibility to notify the Engineer of any existing sheet sign damage prior to removal and relocation of the sheet sign, so that it can be documented that the existing sheet sign had pre-existing damage. If the Contractor does not make the Engineer aware of pre-existing damage prior to detaching the sheet sign from its existing post, the Department will assume the damage was the result of the Contractor's removal and reinstallation efforts. The Contractor shall replace any sheet signs that are damaged during the removal and reinstallation efforts. Replacement of sheet signs damaged by the Contractor shall be incidental to the bid item REMOVE AND RELOCATE SHEET SIGNS.

If the existing sheet sign is found to have pre-existing damage, the Department will provide the Contractor with a new sheet sign to replace the sheet sign with pre-existing damage. Detaching the existing, damaged sheet sign from the existing post and attaching the new, Department-provided sheet sign to the new sign post shall be incidental the bid item REMOVE AND RELOCATE SHEET SIGNS.

F. Remove & Relocate Sign Assemblies. When listed on the plans and/or summaries, and/or as directed by the Engineer and/or District Traffic Engineer, remove the specified existing sign assemblies from the existing location and reinstall in a new location. The Department will consider all signs attached to one or more connected posts as a single sign assembly, no matter how many signs are attached to the existing sign assembly. If any of the existing hardware components (bracing, brackets, bolts, rivets, etc.) are found to have pre-existing damage or are damaged during the Contractor's removal and reinstallation efforts, the Contractor shall provide the necessary replacement hardware for proper re-installation of the sign assembly. These components shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

Prior to removing and relocating a sign assembly, the Contractor shall review the existing sign(s) and sign post(s) for damage. It is the Contractor's responsibility to notify the Engineer of any sign or sign post damage prior to removal and relocation of the sign assembly, so that it can be documented that the existing sign and/or sign post had pre-existing damage. If the Contractor does not make the Department aware of pre-existing damage prior to removing a sign assembly from its existing location, the Department will assume the damage was the result of the Contractor's removal and reinstallation efforts. The Contractor shall replace any components of a sign assembly that are damaged during removal and relocation. Replacement of any components damaged by the Contractor shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign that is part of a sign assembly to be removed and relocated is found to have pre-existing damage, the Department will provide the Contractor with a new sign to replace the sign with pre-existing damage. Detaching the existing, damaged sign from the existing post and attaching the new, Department-provided sign to the relocated existing post shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign assembly that is to be removed and relocated is found to not have an existing soil stabilizer plate, or if the soil stabilizer plate and/or anchor is damaged during removal, then a new soil stabilizer plate and/or anchor shall be provided by the Contractor and shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign assembly that is being relocated is not currently mounted on a Type D breakaway sign support, but the plans and/or summaries indicate, or wind load standards dictate, a Type D breakaway sign support or a Type D Surface Mount is required, provide and install the specified Type D support as part of the removal and reinstallation efforts. Type D breakaway sign supports shall be paid under the bid item GMSS TYPE D and Type D Surface Mount supports shall be paid under the bid item GMSS TYPE D (SURFACE MOUNT).

If an existing sign that is being relocated is found to have pre-existing damage to one or more of the sign post, the Department will <u>NOT</u> utilize the bid item REMOVE AND RELOCATE SIGN ASSEMBLY for removing and relocating such a sign assembly. Instead, the Department will require the Contractor to install a new sign post(s) at the new location, and pay for the new post(s) under the bid item STEEL POST TYPE I. Detaching the existing sign(s) from the existing, damaged post(s) and attaching the existing sign(s) to the new sign post(s) shall be incidental to the bid item STEEL POST TYPE I. Any hardware that is needed to complete the installation shall also be incidental to the bid item STEEL

POST TYPE I. Removal of the existing damaged post(s) and any other sign components not needed will be paid under the bid item REMOVE SIGN.

G. 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.

H. 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.

I. 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.

J. 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.

K. 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.

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.

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 and Reflective Sign Post Panels. The Department will measure the finished in-place area of signs and Reflective Sign Post Panels 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 breakaway 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. 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.

I. Remove & Relocate Sheet Signs. The Department will measure sheet signs removed from an existing sign post and reinstalled on a new sign post as Each sheet sign removed and reinstalled. as indicated in the contract documents, or as directed by the Engineer. The new sign post shall be measured as indicated in paragraph D. of this section.

J. Remove & Relocate Sign Assemblies. The Department will consider all signs attached to one or more connected posts as a single sign assembly. When the contract documents indicate that an existing sign assembly is to be removed from its existing location and reinstalled in a new location, the Department will measure and pay for "Remove and Relocate Sign Assembly" as each sign assembly removed and relocated; NOT each individual sign removed and relocated.

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.

L. 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, Final Dressing and Seeding and Protection.

V. BASIS OF PAYMENT

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

B. Signs and Reflective Sign Post Panels. 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 and any Reflective Sign Post Panels, as required by these notes and the details found elsewhere in the plans/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 plans/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: The permissible Type D Surface Mount alternative is: 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. Remove & Relocate Sheet Signs. The Department will make payment for the completed and accepted quantities under the bid item REMOVE AND RELOCATE SHEET SIGNS. Any hardware that is needed to complete the removal and reinstallation shall be incidental. The Department will consider payment full compensation for all work and incidentals necessary to remove and reinstall the existing sheet signs as indicated on the plans, summaries, and/or as directed by the Engineer.

I. Remove & Relocate Sign Assemblies. The Department will make payment for the completed and accepted quantities under the bid item REMOVE AND RELOCATE SIGN ASSEMBLY. Any hardware that is needed to complete the removal and reinstallation shall be incidental. The Department will consider payment full compensation for all work and incidentals necessary to remove and reinstall the existing sign assembly as indicated on the plans, summaries, and/or as directed by the Engineer

Special Note for Polymer Concrete Overlay Systems

I. DESCRIPTION

This work shall be performed in accordance with the current edition of the Department's Standard Specifications, and applicable Standard or Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications. The Contractor shall furnish all materials, labor, and equipment for the following work:

(1) Maintaining and Controlling Traffic; (2) Cleaning and preparing the existing surface; (3) Installing a high friction surface treatment in accordance with the contract documents; and (4) All other work as specified as part of this contract.

II. MATERIALS

Provide for sampling and testing of all materials in accordance with the Department's Materials Field Sampling and Testing Manual. Make materials available, within the State of Kentucky, for sampling a sufficient time in advance of the use of the materials. Allow a minimum of 15 working days for testing. The Contractor shall use materials listed on the Department's List of Approved Materials for Polymer Concrete Overlay Systems (High Friction Surface and Bridge Deck Overlays).

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

B. High Friction Surface Treatment. The high friction surface treatment shall consist of a polymer resin binder and aggregate system chosen from the Department's List of Approved Materials. The Department will obtain samples of each binder component and aggregate at a frequency of one sample per lot per contract. The Department will obtain one, one-quart (32 ounce) sample of each binder component for testing. The Department will obtain one 60 to 70 pound composite sample of aggregate for testing. Reclaimed aggregate shall not be allowed for use.

a) Binder. The polymer resin binder shall hold the aggregate firmly in position and meet the following requirements:

TWO-PART MODIFIED BINDER REQUIREMENTS		
Property	**Specification Limits**	**Test Method**
Ultimate Tensile Strength	17.0 – 25.0 MPa (19.65 MPa)	ASTM D638
Compressive Strength	5mm min.; > 13 MPa	ASTM D695
Gel Time	50 ml; 10 minutes min. (16 minutes)	ASTM D2471
Elongation at break	30% minimum (54.0%)	ASTM D638
Peak Exothermic Temperature	150°F min.	ASTM D2471
Water Absorption	Less than 0.25%	ASTM D570
Shore Hardness	70 min.	ASTM D2240, Shore D
Cure Rate	3 hours max	ASTM D1640 @ 75°F
Mixing Ratio	Per Manufacturer's Recommendation	n/a

b) Aggregate. Ensure that the aggregate is clean, dry, and free from foreign matter and meets the following requirements:

AGGREGATE REQUIREMENTS		
Property	**Specification Limits**	**Test Method**
SFC – Side Force Coefficient	0.70 min.	ASTM E670
SN – Skid Number	75 min SN40R	ASTM E274
PSV – Polished Stone Value	75.0 mm max. (70 mm)	ASTM E660
Texture Depth – Sand Patch Method	1 mm min. (1.2 mm)	ASTM E965
AAV – Aggregate Abrasion Value	20 max	AASHTO T96
Aggregate Gradation	95.0 – 100.0% Passing No. 6 0.0 – 5.0% Passing No. 16	AASHTO T27
Aluminum Oxide (Al_2O_3)	87 min	ASTM C114

III. CONSTRUCTION METHODS

Prior to beginning work, provide the Engineer with a certification from the manufacturer of the binder stating that all material used in the work will meet the requirements of Section II B. a. in this Special Note. Also provide the Engineer with a certification stating that all aggregates used in the work will meet the requirements of Section II B. b. of this Special Note.

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

B. Site Preparation. Be responsible for all site preparation, including but not limited to the following:

a) Preparation and Restoration. Ensure that a manufacturer's representative is on site to provide technical assistance during the startup operations and as necessary during the surface preparation, material placement, and during any necessary remedial work.

b) Protective Coverings. Utilities, drainage structures, curbs, bridge joints, and any other structure within or adjacent to the high friction surface treatment location shall be protected from surface preparation activities and application of the surface treatment materials. Cover and protect all existing pavement markings that are adjacent to the surface treatment location. Pavement markings that conflict with the surface application shall be removed prior to performing the required surface preparation.

c) Surface Preparation. Prepare all surfaces in accordance with the following requirements. Ensure surfaces are dry and meet the requirements of the section immediately prior to installation of the high friction surface treatment. Surfaces contaminated with oils, greases, or other deleterious materials not removed by the required surface preparation shall be washed with a mild detergent solution, rinsed with clean potable water, and dried using a hot compressed air lance.

d) Asphalt Pavement. Clean asphalt pavement surfaces using mechanical sweepers and high-pressure air wash. Mechanically sweep all surfaces to remove dirt, loose aggregate, debris, and deleterious material. Air wash all surfaces using a minimum of 180 CFM clean and dry compressed air. Maintain the air lance perpendicular to the surface and the tip of air lance within 12 inches of the surface. For applications on new asphalt pavement, ensure the surface has cured a minimum of 30 days prior to performing surface preparation and installation of the high friction surface treatment.

e) Concrete Pavement. Clean concrete pavement surfaces by shot blasting and vacuum sweeping. Shot blast all surfaces to remove all curing compound, loosely bonded mortar, surface carbonation, and deleterious material. The prepared surface shall comply with the International Concrete Repair Institute (ICRI) standard for surface roughness CSP 5. After shot blasting, vacuum sweep all surfaces to remove all dust, debris, and deleterious material.

f) Concrete Bridge Deck. Clean the entire area of the deck surface and vertical faces of curbs, barrier walls and plinths up to a height of one inch above the top elevation of the overlay, and areas to receive epoxy-sand slurry, by shot blasting and vacuum sweeping. Shot blast all surfaces to remove all curing compound, loosely bonded mortar, surface carbonation, and deleterious material. Areas to receive epoxy-sand slurry shall be cleaned to a bright, clean appearance. The prepared bridge deck surface to receive high friction surface treatment shall comply with the International Concrete Repair Institute (ICRI) standard for surface roughness CSP 5. After shot blasting, vacuum sweep all surfaces to remove all dust, debris, and deleterious material.

g) Pre-Treating. Pre-treat joints and cracks greater than 1/4 inch in width and depth with properly proportioned and mixed polymer resin binder. Once the binder in the pre-treated areas has gelled, the installation of the high friction surface treatment may proceed.

C. Mechanized Application. Do not apply surface treatment on a wet surface, when the ambient air or surface temperature is below 50°F or above 110°F, or when the anticipated weather conditions or surface temperature would prevent the proper application of the surface treatment as determined by the manufacturer.

Apply the polymer resin binder by a truck or trailer mounted application machine that must be capable of continually mixing and delivering the binder components on demand within the temperature range specified in varying widths of up to 12 feet wide at a uniform application thickness. Ensure that the mechanically applied distributing equipment includes accurate measuring devices and/or calibrated containers and thermometers for measuring the binder temperature prior to placement should heating be required. Operations will proceed in such a manner that will not allow the binder material to separate in the mixing lines, cure, dry, or otherwise impair retention bonding of the high friction surfacing aggregate. The application machine shall be equipped with flushing systems such that blockages of lines will not occur, and installation operations are not delayed, stopped, or otherwise compromised. Ensure that mechanical applications are capable of applying binder uniformly at a minimum rate of 10 gallons per minute. The mixed components are mechanically applied onto a prepared surface with a minimum coverage rate of 3.5 square yards per gallon at a minimum uniform thickness of 50 mils

onto the surface. In addition, ensure that the application machine complies with the requirements of the binder manufacturer.

The aggregate shall be applied within 120 seconds of the binder application onto the surface. Uniformly spread aggregate immediately without causing excessive overlap of aggregate outside of coverage area. Ensure that the mechanical aggregate spreader is capable of applying a continuous application of varying widths up to 12 feet wide, in a manner to not violently disturb the wet binder film, at a rate of approximately 13-15 lbs per square yard. Complete coverage of the "wet" binder with aggregate is necessary to achieve a uniform surface. No exposed wet spots of the binder shall be visible once the aggregate is installed. The operations should proceed in such a manner that will not allow the mixed binder material to separate, cure, dry, be exposed, or otherwise harden in such a way as to impair retention and bonding of the high friction surfacing aggregate. Do not use reclaimed aggregate. Do not use vibratory or impact type compaction on the aggregate after placement.

D. Hand Application. At the Engineers discretion, corrective work and application to areas such as intersections or areas less than 300 square yards, or where truck mounted application machines are not applicable to the specified locations because of logistical restrictions, may be performed by hand application of the high friction surface treatment.

Do not apply surface treatment on a wet surface, when the ambient air or surface temperature is below 50°F or above 110°F, or when the anticipated weather conditions or surface temperature would prevent the proper application of the surface treatment as determined by the manufacturer.
The polymer resin binder components Part (A) and Part (B) shall be proportioned to the correct ratio (+/- 2% by volume), mixed using a low-speed high torque drill fitted with a helical stirrer.

The mixed components shall be hand applied onto a prepared surface at a minimum coverage rate of 3.5 square yards per gallon at a minimum uniform thickness of 50 mils onto the surface. Hand applied binder will be uniformly spread onto the prepared surface by the use of a continuous V notch serrated edged squeegee.

Immediately after placing the binder, apply the aggregate, in a manner to not violently disturb the wet binder film, at a rate of approximately 13-15 lbs per square yard. Do not use reclaimed aggregate. Do not use vibratory or impact type compaction on the aggregate after placement.

E. Curing of Installed High Friction Surface Treatment. Allow the installed high friction surface treatment to cure in accordance with manufacturer recommendations (approximately 3 hours at an ambient air temperature of at least 50 degrees Fahrenheit). Protect treated surfaces from traffic and environmental effects until the area has cured.

F. Removal of Excess Aggregate. Remove the excess aggregate from the treatment area and all adjacent surfaces by mechanical sweeping or vacuum sweeping the surfaces a minimum of 3 times before applying additional application and/or opening to traffic. In addition, re-sweep the treatment area and adjacent surfaces using mechanical sweeping or vacuum sweeping 48 hours

after opening to traffic to remove all additional loose aggregate and aggregate shed by the action of traffic.

G. Disposal of Waste. All debris, excess aggregate, materials containers, and other waste shall be disposed of off the Right-of-Way at approved sites obtained by the Contractor at no cost to the Department. No separate payment will be made for the disposal of waste and debris from the project but shall be incidental to the other items of the work.

H. Restoration. Any roadway features disturbed by the work or the Contractor's operations shall be restored in like kind materials and design as directed by the Engineer at no additional cost to the Department.

I. 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.

J. 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.

K. Right-of-Way Limits. All work is located within the existing right of way. Limit work activities to the Right-of-Way, and work and staging areas secured by the Contractor, at no additional cost to the Department. Be responsible for all encroachments onto private lands.

L. 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.

M. 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.

IV. FIELD EVALUATION

High friction surface treatment locations that can be safely tested at 40 mph shall be evaluated by locked wheel skid test as per ASTM E274 between 60 and 90 days after installation. A minimum skid number of 75 SN40R is required. Installations that are not conducive to skid testing due to roadway geometrics or speed limitations shall be accepted based upon visual determination of acceptable bond and aggregate exposure.

Surface treatment applications not meeting average minimum skid test results of 75 SN **shall be removed and replaced** at no cost to the Department.

V. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See 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 high friction surface treatment.

C. High Friction Surface Treatment. The Department will measure the surface area coverage of High Friction Surface Treatment in Square Yards.

VI. BASIS OF PAYMENT

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

B. High Friction Surface Treatment. Payment for the accepted quantity at the Contract unit price per Square Yard shall be full compensation for furnishing all labor, materials, equipment, and incidentals for furnishing and installing High Friction Surface Treatment. Payment shall not be made prior to the final and accepted sweeping, 48 hours after installation.

Special Note for Striping on High friction Surface treatments

I. DESCRIPTION

Installation of pavement striping, temporary, durable waterborne markings, and/or thermoplastic markings on High Friction Surface (HFS) Treatments.

II. CONSTRUCTION

Conduct striping under lane closures meeting the conditions of the MUTCD and Kentucky Standard Drawings and Specifications, current editions. Upon initial completion of the HFS installation, install temporary striping as the Engineer directs. Upon completion of the 48-hour vacuum sweeping, install either durable waterborne markings or thermoplastic markings, whichever the Contract specifies or as directed by the Engineer. Temporary Pavement Striping will comply with all applicable requirements within Section 112. Thermoplastic markings shall comply with all applicable requirements within Section 714. Durable waterborne markings shall comply with all applicable requirements within Section 713.

III. MEASUREMENT

The Department will measure striping quantities in linear feet. NOTE: On HFS installations, the Contractor is advised that it may be necessary to install multiple passes of striping in order to achieve the required specifications. Final payment will be based on the actual length of the final striping regardless of the number passes required to meet specifications.

IV. PAYMENT

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

Code	Pay Item	Pay Unit
----	Pavement Striping - Temporary	Linear Foot
----	Durable Waterborne Marking, width, color	Linear Foot
----	Pavement Striping - Thermoplastic, width, color	Linear Foot

The Department will consider payment as full compensation for all work required under this note, Section 112, Section 713, and Section 714.

Special Note for Completion Date & Liquidated Damages

I. COMPLETION DATE

The ultimate fixed completion date for this project will be November 30, 2024. Liquidated Damages for failure to complete the project on time will be assessed following Section 108.09.

II. LIQUIDATED DAMAGES

In addition to the requirements of Section 108.09, the Department will assess Liquidated Damages in the amount of **$1,000** per hour for each hour, or fraction of an hour, for any and all lane closures that are in place beyond the time frame(s) noted in the Traffic Control Plan and approved by the Engineer.

Contrary to Section 108.09, Liquidated Damages will be assessed regardless of whether seasonal limitations prohibit the Contractor from performing work on the controlling operation.

NOTE: At the sole discretion of the Engineer, all, or part, of these Liquidated Damages may be waived due to unforeseen circumstances, such as unexpected weather.

Trees and/or bushes that are 5 inches or greater (diameter at breast height) shall not be cut or trimmed between June 1st and July 31st. Any trees and/or bushes that are cut or trimmed between June 1st and July 31st will NOT receive payment at the contract unit price. Furthermore, failure to adhere to these restrictions shall result in Liquidated Damages in the amount of **$392** per affected tree. Activities that are a part of this contract that do not involve the initial trimming and/or cutting of trees and/or bushes will be permitted under the ultimate fixed completion date.

Contrary to Section 108.09, Liquidated Damages will be assessed for the months of December through March.

All liquidated damages will be applied accumulatively.

All other applicable portions of Section 108 apply.

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

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	0 - 30	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. Provide the correct nozzles that is recommend by the producer to ensure proper coverage of tack is obtained. 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 on to the 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. Placement of non-tracking tack is not permitted from October 1st to May 15th. When applying material, ensure the roadway temperature is a minimum of 40˚F and rising. Prior to application, 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 the initial heating, 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 minimum rate of 0.70 pounds (0.08 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. Increase material application rate if needed to achieve full coverage. Schedule the work so that, at the end of the day's production, all non-tracking tack is covered with the asphalt mixture. If for some reason the non-tracking tack cannot be covered by an asphalt mixture, ensure the non-tracking tack material is clean and reapply the non-tracking tack prior to placing the asphalt mixture. Do not heat material more than twice in one day.

3.3 Non-tracking Tack Certification. Furnish the tack 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 non-tracking tack. 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. Non-tracking tack will not be permitted for use from October 1st to May 15th. During this timeframe, the department will allow the use of an approved asphalt emulsion in lieu of a non-tracking tack product but will not adjust the unit bid price of the material. 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.	30 max.	≤ 31	32 - 33	34 - 35	36 - 37	≥ 38
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, º 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

Revised: May 23, 2022

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 DOUBLE ASPHALT SEAL COAT

Use RS-2 or RS-2C asphalt material that is compatible with the seal aggregate. Apply the first course of asphalt seal coat at the rate of 3.2 lbs/sy of asphalt and 30 lbs/sy of size #78 seal coat aggregate. Apply the second course at 2.8 lbs/sy of asphaltt and 20 lbs/sy of size #9M seal coat aggregate. The Engineer may adjust the rate of application as conditions warrant. Use caution in applying liquid asphalt material to avoid over spray getting on curbs, gutter, barrier walls, bridges, guardrail, and other roadway appurtenances.

The Department will not measure any surface preparation required prior to applying the asphalt seal coat, but shall be incidental to “Asphalt Material for Asphalt Seal Coat”.

1-3215 Double Asphalt Seal Coat
01/02/2012

SPECIAL NOTE FOR SHOULDER FAILURE REPAIR

Repair locations listed in the summary are approximate only. The Engineer will determine the actual shoulder failure repair locations and dimensions at the time of construction. Prior to milling and/or resurfacing, saw cut the existing pavement, asphalt surface, base, DGA, and PCC pavement (if present). Excavate to an approximate depth of 25.5 inches below the top of the existing shoulder pavement level. Remove and dispose of all materials. Use all possible care to avoid damaging existing culvert pipes and any existing underground utilities. Repair or restore any damaged items at no additional cost to the Department. Waste all removed materials 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.

On the same day trench is excavated, backfill the excavated area with 12 inches of Crushed Limestone Size No. 23, wrapped on the bottom and sides in Class 2 Geotextile Fabric, 4 inches of DGA, and 8 inches of Class 2 Asphalt Base 1.00D PG64-22, in 4-inch maximum courses, up to the existing pavement surface. Compact the asphalt base to the proper compaction as required by the Section 403 and seal with Leveling and Wedging. Perform all shoulder failure repairs in such a manner that removal and replacement are completed on the same day. Do this work as one of the Contractor's first operations. Do not place new asphalt surface over repaired shoulder failures until a minimum of 14 days has elapsed after placement of the final course of asphalt base. After the 14 calendar day waiting period, and/or when the Engineer determines the repair areas have sufficiently stabilized, begin milling and/or resurfacing operations. Prior to milling and/or constructing the new asphalt surface, level and wedge any settlement of the repair areas.

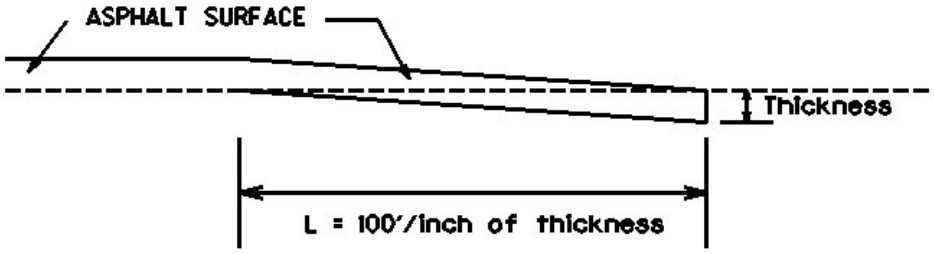
The bidder must draw his or her own conclusions as to the conditions to be encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation of the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit prices per ton for Crushed Limestone, DGA, Asphalt Base, and Leveling and Wedging as full compensation for all labor, materials, equipment, and incidentals for saw cutting pavement and excavating and disposing of all materials; furnishing and placing crushed limestone stone wrapped in geotextile fabric; furnishing and placing DGA and asphalt base up to the existing pavement boundary; leveling and wedging until the repair areas stabilize; and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer. The Department will not measure pavement removal, excavation, and geotextile fabric, but shall be incidental to Crushed Limestone and Asphalt Base as applicable.

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 = 1.25 Inches

L = 125 LF

L= Length of Edge Key

Special Note 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, Guardrail with Extra Length Post, 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. Furnish the quantity of Extra Length Post (9 foot length, steel, no alternates) shown in the proposal.

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

D. DGA. Furnish Dense Graded Aggregate as per Section 805.

E. 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 and locations for Extra Length Posts 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. DGA. Place and compact DGA along and under the guardrail as shown on the Typical Section(s) or as directed by the Engineer. Place a Double Asphalt Seal Coat over the entire width of the DGA along and under the guardrail. See the Special Note for Double Asphalt Seal Coat.

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

F. 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.

G. 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.

H. 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.

I. 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.

J. 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.

K. 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, Extra Length Post, End Treatments, Bridge End Connectors, Terminal Sections, and Remove Guardrail. The Department will measure according to Section 719.04.

D. DGA. The Department will measure according to Section 302.04.

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

F. 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.

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

V. BASIS OF PAYMENT

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

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

C. DGA. The Department will make payment according to Section 302.05.

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

E. 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 BASE FAILURE REPAIR

Repair locations listed on the summary are approximate only. The Engineer will determine actual repair locations and dimensions at the time of construction. Prior to milling and/or resurfacing, saw cut the existing pavement, asphalt surface, base, DGA, and PCC pavement (if present). Excavate to an approximate depth of 25.5 inches below the existing pavement surface level. Use all possible care to avoid damaging existing culvert pipes and any existing underground utilities. Repair or restore any damaged items at no additional cost to the Department. Waste all removed materials 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.

On the same day trench is excavated, backfill the excavated area with 12 inches of Crushed Limestone Size No. 23, wrapped on the bottom and sides in Class 2 Geotextile Fabric, 4 inches of DGA, and 8 inches of Class 2 Asphalt Base 1.00D PG64-22, in 4-inch maximum courses, up to the existing pavement surface. Compact the asphalt base to the proper compaction as required by Section 403. Seal the asphalt base with leveling and wedging. Perform all base failure repairs in such a manner that removal and replacement are completed on the same day. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over repaired base failure areas until a minimum of 14 calendar days have elapsed after placement of the final course of asphalt base. After the 14 calendar day waiting period, and/or when the Engineer determines the base failure repair areas have sufficiently stabilized, begin milling and/or resurfacing operations. Prior to milling and/or constructing the new asphalt surface, level and wedge any settlement of the repair areas.

The bidder must draw his or her own conclusions as to the conditions to be encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation of the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit prices per ton for Crushed Limestone, DGA, Asphalt Base, and Leveling and Wedging as full compensation for all labor, materials, equipment, and incidentals for saw cutting pavement and excavating and disposing of all materials; furnishing and placing crushed limestone stone wrapped in geotextile fabric; furnishing and placing DGA and asphalt base up to the existing pavement boundary; leveling and wedging until the repair areas stabilize; and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer. The Department will not measure pavement removal, excavation, and geotextile fabric, but shall be incidental to Crushed Limestone and Asphalt Base as applicable.

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, Supplemental 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 shall 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

Maintain alternating one-way traffic during construction. Provide a minimum clear lane width of 10 feet; however, provide for passage of vehicles of up to 16 feet in width. 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.

Take these restrictions into account in submitting bid. The Department will not consider any claims for money or grant contract time extensions for any delays to the Contractor as a result of these restrictions.

Unless otherwise approved by the Engineer, no lane closures will be allowed during the following times:

Labor Day Weekend	3 pm Friday, September 1, 2023 – 8 pm Monday, September 4, 2023
Thanksgiving Holiday	3 pm Wednesday, November 22, 2023 – 8 pm Sunday, November 26, 2023
Christmas Holiday	3 pm Friday, December 22, 2023 – 8 pm Monday, December 25, 2023
New Year's Day Holiday	7 am Saturday, December 30, 2023 – 8 pm Monday, January 1, 2024
Easter Weekend	3 pm Friday, March 29, 2024 – 8 pm Sunday, March 31, 2024
Memorial Day Weekend	3 pm Friday, May 24, 2024 – 8 pm Monday, May 27, 2024
Independence Day	7 am Thursday, July 4, 2024 – 11 pm Sunday, July 7, 2024
Labor Day Weekend	3 pm Friday, August 30, 2024 – 8 pm Monday, September 2, 2024
Thanksgiving Holiday	3 pm Wednesday, November 27, 2024 – 8 pm Sunday, December 1, 2024

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

The Contractor shall submit proposed lane closure days and times to the Engineer at least 14 calendar days in advance for approval. Liquidated Damages will be assessed for each hour or fraction of an hour that a lane closure is in place outside of an approved time period. See the Special Notes for Completion Dates & Liquidated Damages for details on the Liquidated Damages amount.

NOTE: In addition to the typical work zone signing, two "LOOSE GRAVEL" signs (W8-7), one sign for each direction of travel, shall be erected prior to the installation of the HFST and shall remain in place until the final 48-hour

vacuum sweep has been completed. These signs shall be installed in accordance with the current edition of Standard Drawing TTD-125.

LANE CLOSURES

Long term lane closures shall not be allowed; therefore, lane closures will not be measured for payment. Do not leave lane closures in place during non-working hours and prohibited periods

TEMPORARY SIGNS

Temporary signposts 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. Temporary signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, only long-term temporary signs (temporary signs intended to be continuously in place for more than 3 days) will be measured for payment. Short-term temporary signs (temporary 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.

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs in advance of and within the project at locations determined by the Engineer. If work is in progress concurrently in both directions or if more than one lane closure is in place in the same direction of travel, provide additional changeable message signs as directed by the Engineer. Place changeable message signs approximately one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens, relocate or provide additional changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. 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. If the damage or mechanical/electrical failure is identified during active work operations, repair or replace the Changeable Message Sign within 6 hours. If the damage or mechanical/electrical failure is identified when there are no active work operations on the project, repair or replace the Changeable Message Sign within 12 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/or relocated during the duration of the project. The Department will not measure for payment any replacements for damaged Changeable Message Signs or any changeable message signs the Engineer directs to be replaced due to poor condition or readability. Retain possession of the Changeable Message Signs upon completion of the work.

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 above, 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.

THERMOPLASTIC INTERSECTION MARKINGS

Consider the locations listed on the summary and/or shown on the plan sheets as approximate only. Prior to milling and/or resurfacing, locate and document the locations of the existing markings. After final surfacing operations, replace the markings at their approximate existing locations, as shown on the plan sheets, or as directed by the Engineer. Place markings not existing prior to resurfacing as shown on the plan sheets or as directed by the Engineer.

PAVEMENT MARKINGS

If there is to be a deviation from the existing striping plan, the Engineer will furnish the Contractor a 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.

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 ensuring 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 ensure 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	CRASH AHEAD/ USE ACCS RD NEXT RIGHT
Alternate	ALT	CRASH 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	CRASH ON AA HWY/ EXPECT DELAYS
Hour	HR	CRASH 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	CRASH 3 MI AHEAD/ USE ALT RTE
Minor	MNR	CRASH 3 MI MNR DELAY
Minutes	MIN	CRASH 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	CRASH 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 NOT 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
CRASH AHEAD	ALL TRAFFIC EXIT RT
CRASH/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

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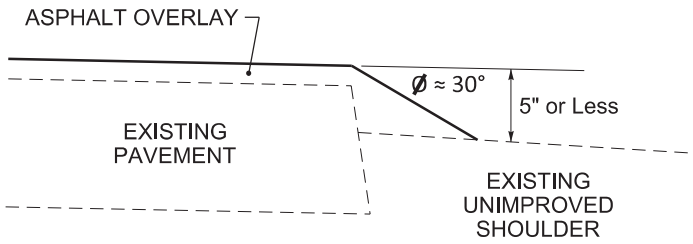
Typical Messages (cont.)

Reason/Problem	**Action**
FOG XX MILES	PASS TO RIGHT
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	

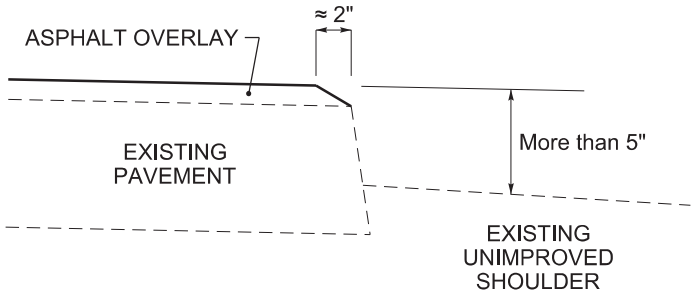
DURABLE PAVEMENT EDGE DETAIL

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



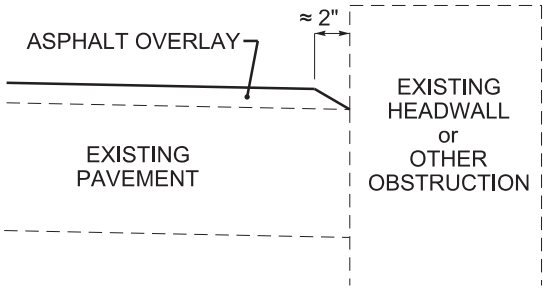
DURABLE PAVEMENT EDGE DETAIL

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



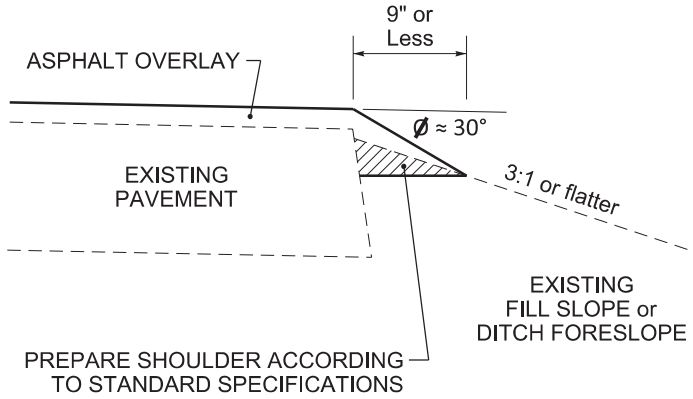
DURABLE PAVEMENT EDGE DETAIL

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



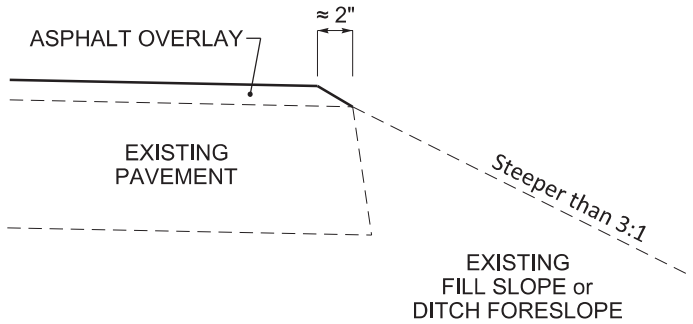
DURABLE PAVEMENT EDGE DETAIL

(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 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.

Revised: 1/14/2021

TEAM KENTUCKY TRANSPORTATION CABINET

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)
11-9017.00	Jackson	FD52 055 0421 021-030	HSIP 4211(051)

PROJECT DESCRIPTION

Perform Low Cost Safety Improvements on US 421 from MP 21.445-29.574

☒ **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	N/A	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed			
Condemnation			
Signed ROE			

Notes/ Comments (Text is limited. Use additional sheet if necessary.)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	
Signature		Signature	Greg Combs Digitally signed by Greg Combs Date: 2023.06.07 11:22:51 -04'00'
Date		Date	

Right of Way Director		FHWA	
Printed Name		Printed Name	
Signature	2023.06.07 11:34:22 -04'00'	Signature	No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Date		Date	

Begin MP	Begin STA	End MP	End STA	Side	Owner(s)	Consent & Release Description	Status	Additional Notes
27.388	1446+09				The Allen Co. Inc.	Install embankment material to roadway shoulder/slopes and channel lining on the outlet of a pipe. This work is being done to improve the safety of the roadside grading the shoulder/slopes of the roadway to a 3:1 or flatter. The embankment will extend approximately 13 feet off right-of-way and will remain in place. Therefore, this consent allows state and contract forces to access your property for the installation of the embankment material and channel lining. See attached cross sections for designed placement of materials. Any disturbed areas will be dressed/seeded back to original condition.	Signed	
23.776	1255+37	23.900	1261+92		Donna Isaacs	Install embankment material to roadway shoulder/slopes and channel lining on the outlet of a pipe. This work is being done to improve the safety of the roadside by grading the shoulder/slopes of the roadway to a 3:1 or flatter. The embankment will extend approximately 17 feet at its widest point off right-of-way and will remain in place. Therefore, this consent allows state and contract forces to access your property for the installation of embankment material and channel lining. See attached cross sections for designed placement of materials, Any disturbed areas will be dresses/seeded back to original condition.	Signed	Address: DONNA ISAACS 1004 VINEYARD WAY BEREA, KY 40403
22.510	1188+53			LT	Brook Sparks	Install a drop box inlet for an existing 18" cross drain. This work is being done to improve the safety of the roadside by reducing the depth of the hole currently at the location of the cross drain inlet. The drop box will extend approximately 10 feet of right-of-way and will remain in place. Therefore, this consent allows state and contract forces to access your property for the installation of the drop box and for future maintenance of the box. See attached cross section for designed placement of the box. Any disturbed areas will be dresses/seeded back to original condition.	Signed	Address: BROOK SPARKS PO BOX 304 MCKEE, KY 40447
27.500	1452+00	27.550	1454+64	RT	Christopher Gray	Install embankment material and extend/replace entrance pipe. This work is being done to improve the safety of the roadside by eliminating a roadside drop off and a section of guardrail. The embankment will extend approximately 15 feet at its widest point off right-of-way and will remain in place. Additionally the existing entrance will be excavated and a new 60" entrance pipe will be installed and connected to a junction box. The entrance will be out of service for 1 day while a new entrance pipe is being installed. Once pipe is installed the entrance will be put back in kind. Therefore, this consent allows state and contract forces to access your property for the installation of the embankment materials and replace the existing entrance pipe with a new 60" pipe. See attached cross sections for design of embankment materials, placement of the junction box, and installation of the 60" entrance pipe. Any disturbed areas will be dresses/seeded back to original condition.	Signed	Address: CHRISTOPHER GRAY 8109 421 N MCKEE MCKEE, KY 40447
27.500	1452+00	27.550	1454+64	RT	Soso Nafee	Install embankment material to roadway shoulder/slopes. This work is being done to improve the safety of the roadside by grading the shoulder/slopes of the roadway to a 3:1 or flatter. The embankment will extend approximately 12 feet a its widest point off right-of-way and will remain in place. Therefore, this consent allows state and contract forces to access your property for the installation of the embankment material. See attached cross sections for designed placement of material. Any disturbed areas will be dresses/seeded back to original condition.	Signed	
27.590	1456+75	27.680	1461+50	RT	Mark & Angela Miller	Install embankment material to roadway shoulder/slopes and headwall on the outlet of a pipe. This work is being done to improve the safety of the roadside by grading the shoulder/slopes of the roadway to a 3:1 or flatter. The embankment/headwall will extend approximately 7 feet at its widest point off right-of-way and will remain in place. Therefore, this consent allows state and contract forces to access your property for the installation of the embankment material and pipe headwall. See attached cross sections for designed placement of materials. Any disturbed areas will be dresses/seeded back to original condition.	Signed	Address: MARK LEE & ANGELA MILLER 3015 S TREE RD SAND GAP, KY 40481

UTILITIES AND RAIL CERTIFICATION NOTE

Jackson County - HSIP 4211 (051)
FD52 055 0421 021-029
Safety Improvements along US 421 from MP 21.445 to MP 29.574)
Item No. 11-9017.00

GENERAL PROJECT NOTES ON UTILITIES

For all projects over 2000 linear feet, which are defined as a "Large Project" in KRS 367.4903(18), the awarded contractor shall initially mark the first 2000 linear feet minimally of proposed excavation or construction boundaries of the project to be worked using the procedure set forth in KRS 367.4909(9)(k). This temporary field locating of the project excavation boundary shall take place prior to submitting an excavation location request to the underground utility protection Kentucky Contact Center. For large projects, the awarded contractor shall work with the impacted utilities to determine when additional white lining of the remainder of the project site will take place. This provision shall not alter or relieve the awarded contractor from complying with requirements of KRS 367.4905 to 367.4917 in their entirety.

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

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his/her activities. The contractor will coordinate his/her 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.

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.

UTILITIES AND RAIL CERTIFICATION NOTE

Jackson County - HSIP 4211 (051)
FD52 055 0421 021-029
Safety Improvements along US 421 from MP 21.445 to MP 29.574)
Item No. 11-9017.00

NOTE: DO NOT DISTURB THE FOLLOWING UTILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

Jackson Energy and Peoples Telephone have overhead lines adjacent to and crossing US 421 at various locations. These facilities are to remain in place and are not to be disturbed unless otherwise noted.

Jackson County Water has a 4-inch and 6-inch PVC water mains running adjacent to US 421. The side of the road where lines are present varies with location. See Plans for additional details. Hand digging may be required in some areas when extending pipes and adding drainage structures. Jackson County Water should be contacted prior to digging in the vicinity of a water line.

Delta Natural Gas / Peoples Natural Gas: Based upon BUD tickets, no gas lines have been indicated along or crossing this corridor.

If an unknown utility is encountered, the contractor will be responsible for arranging an on-site meeting with utility representatives and the Engineer to discuss possible impacts and solutions to either avoid the utility or relocate the utility.

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

N/A

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE COMPANY OR THE COMPANY'S SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

N/A

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

N/A

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ **No Rail Involvement** ☐ **Rail Involved** ☐ **Rail Adjacent**

UTILITIES AND RAIL CERTIFICATION NOTE

Jackson County - HSIP 4211 (051)
FD52 055 0421 021-029
Safety Improvements along US 421 from MP 21.445 to MP 29.574)
Item No. 11-9017.00

AREA UTILITIES CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information
1. Jackson Energy Cooperative	James Angel	115 Jackson Energy Lane McKee, KY 40447 800-262-7480 ext. 6081
2. Jackson County Water Association	Tim Farmer	200 Buleah Lake Road McKee, KY 40447 606-287-7000
3. Delta Natural Gas / Peoples Natural Gas	Robert Nellopowitz	3617 Lexington Road Winchester, KY 40391 859-744-6171
4. Peoples Rural Telephone Cooperative Corporation, Inc.	Time Lakes	259 Main Street McKee, KY 40447 606-287-5467

NOTE: The Utilities Contact List is provided as informational only, and may not be a complete list of all Utility Companies with facilities in the project area.

PS&E Environmental Materials

US 421 Jackson County HSIP

Item No. 11-9017

Attached Files:

- PSE Jackson County - Env Compliance Plan.pdf
- PSE Jackson County - Special Notes.pdf
- PSE Jackson County - Permits.pdf

Environmental Compliance Plan (ECP)	Item No. 11-9017 Jackson County HSIP

Special Note for Environmental Compliance Plan (ECP)

Project:	Highway Safety Improvement Project (HSIP) beginning at MP 21.445 to MP 29.574 on US 421 in Jackson County with Asphalt Pavement and Roadway Rehabilitation in various locations:
Item No:	11-9017
County:	Jackson

The following ECP checklist outlines responsibilities of the Contractor and/or the KYTC to ensure all environmental commitments are met. Please pay special attention to:

- Commitment Description (commitment made to resource agencies)
- Responsible Party
- Compliance Document (how compliance is to be documented)

If you have any questions please email Danny.Peake@ky.gov

Environmental Compliance Plan (ECP)	Item No. 11-9017 Jackson County HSIP

#	Subject	Commitment Description	ENV Reference/ Oversight Agency	Responsibility Phase	Responsible Party	Compliance Document	Doc to Include in Bid Pkg and Contract	Bid Pkg / Contract Doc Attached?
1	Other	Project/Site dependent	NEPA Doc - FHWA	Environmental	KYTC DEA	n/a	CE	Yes
2	Archaeology	Keep all work in Environmentally Cleared Area. Stop work if unanticipated discoveries, including human remains	SHPO Concurrence 2/07/23	Construction	Contractor	See instruction in Special Note	Special Note for Additional Environmental Commitments	Yes
4	Species	Do not clear trees during June or July	Programmatic Consultation - USFWS	Construction	Contractor	Daily Work Report (DWR)	Special Note for Seasonal Restrictions	Yes
6	Water Quality	If 1.0 acre or more of land is disturbed in total (including staging areas) must obtain KPDES permit	KYR10 (BMP) - USEPA KDOW	Construction	Contractor	See instructions in KPDES	KPDES KYR10 (BMP)	Yes
7	Air Quality	Notify DAQ 10 days prior to demolition, as appropriate	USEPA and KDAQ	Construction	Contractor	DEP 7036 Form and email to KDAQ	DEP 7036 Form	Yes

KYTC Project: US 421 Jackson County
HSIP Item No. 11-9017

N O T I C E

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS

NATIONWIDE SECTION 404 PERMIT AUTHORIZATION

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

KENTUCKY DIVISION OF WATER

SECTION 401 WATER QUALITY CERTIFICATION

PROJECT DESCRIPTION: US 421 Jackson County, KY;
HSIP Project; Item No. 11-9017

The Sections 404 and 401 activities for this project have previously been permitted under the authority of the Department of the Army, Section 404 Nationwide Permit Number 14, *Linear Transportation Projects* (with additional *Kentucky Regional General Conditions*), and the Kentucky Division of Water, Section 401 General Water Quality Certification. For these authorized permits to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Permit Number 14 and General Water Quality Certification in a conspicuous location at the project site, with unencumbered public access, for the duration of construction and comply with the general conditions required.

KYTC Project: US 421 Jackson County HSIP
Item No. 11-9017

Locations Impacting Water Quality

Station-Location	Description
Various	The proposed project, which will be conducted within the existing right-of-way, proposes to address pavement and roadway rehabilitation, remove and replace culvert headwalls, install cribbing behind the guardrail, replace and extend guardrails. The project may involve the removal of debris and/or sediment; however, the removal will not extend farther than 100 feet from the structure.

This project involves work near and/or within Jurisdictional Waters of the United States as defined by the U. S. Army Corps of Engineers; therefore, requiring a Nationwide Number 14 General Section 404 permit. The Division of Water conditionally certified this General Permit. Importantly, one of those conditions regards the use of heavy equipment in any stream channel, or streambed. If there is need to cross the stream channel with heavy equipment, or conduct work within the stream channel, a work platform or temporary crossing, is authorized. This should be constructed with clean rock and sufficient pipe to allow stream flow to continue, unimpeded. Other conditions may be found under the heading, *General Certification—Nationwide Permit # 14 Linear Transportation Projects*.

In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Permit Number 14 Approval in a conspicuous location at the project site, for the duration of the 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 Kentucky Transportation Cabinet, Division of Environmental Analysis. If such changes necessitate further permitting, then the contractor will be responsible for applying to the U. S. Army Corps of Engineers and the Kentucky Division of Water. A copy of any request to the Corps of Engineers or Division of Water 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.

Nationwide #14
Linear Transportation Projects
Effective Date February 25, 2022/ Expiration Date: March 14, 2026

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, driveways, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge of dredged or fill material 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 of dredged or fill material 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 of dredged or fill material, 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 preconstruction 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 of dredged or fill material 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). 12

Note 2: Some discharges of dredged or fill material 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)(4) 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).

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an

NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the preconstruction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to preconstruction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied

and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine

whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification

that the proposed activity will have “no effect” on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take'' means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete preconstruction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106. (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect

determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is

required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activityspecific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)). (e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address

documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not

necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements)

may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2- acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible

mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district

engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions: (a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1⁄3-acre. (b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

_____

(Transferee)

_____

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and (c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a “USACE project”), the prospective permittee must submit a pre-construction notification. See paragraph

(b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a preconstruction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete.

The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer

will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and 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 for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require preconstruction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the “study river” (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the preconstruction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) Form of Pre-Construction Notification: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require preconstruction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district

engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan.

The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31)

2021 KENTUCKY REGIONAL GENERAL CONDITIONS

These regional conditions are in addition to, but do not supersede, the requirements in the Federal Register (See volume 86, date January 13, 2021, pp 2867-2874 for the text of Section C, General Conditions).

Notifications for all Nationwide Permits (NWPs) shall be in accordance with General Condition No. 32.

1. For activities that would result in a loss of Outstanding State or National Resource Waters (OSNRWs), Exceptional Waters (EWs), Coldwater Aquatic Habitat Waters (CAHs) and waters with Designated Critical Habitat (DCH) under the Endangered Species Act for the NWPs listed below, a Pre-Construction Notification (PCN) will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs for impacts to these waters.

NWP 3 (Maintenance)
NWP 4 (Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities)
NWP 5 (Scientific Measurement Devices)
NWP 6 (Survey Activities)
NWP 12 (Oil or Natural Gas Pipeline Activities)
NWP 13 (Bank Stabilization)
NWP 14 (Linear Transportation Projects)
NWP 15 (U.S. Coast Guard Approved Bridges)
NWP 16 (Return Water from Upland Contained Disposal Areas)
NWP 17 (Hydropower Projects)
NWP 18 (Minor Discharges)
NWP 19 (Minor Dredging)
NWP 20 (Response Operations for Oil or Hazardous Substances)
NWP 22 (Removal of Vessels)
NWP 23 (Approved Categorical Exclusions)
NWP 25 (Structural Discharges)
NWP 30 (Moist Soil Management for Wildlife)
NWP 32 (Completed Enforcement Actions)
NWP 33 (Temporary Construction, Access, and Dewatering)
NWP 36 (Boat Ramps)
NWP 41 (Reshaping Existing Drainage Ditches)
NWP 51 (Land-Based Renewable Energy Generation Facilities)
NWP 57 (Electric Utility Line and Telecommunications Activities)
NWP 58 (Utility Line Activities for Water and Other Substances)

2. In addition to the notification and agency coordination requirements in the NWPs, for impacts greater than 0.25 acres in all “waters of the U.S.” for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

NWP 3 (Maintenance)
NWP 14 (Linear Transportation Projects)

3. Nationwide Permit No. 14 – Linear Transportation Projects.

(a) New road alignments or realignments are limited to a permanent loss of 500 linear feet of intermittent or perennial stream length or the stream bed acreages listed in the table below at each crossing. Road crossings with permanent losses greater than 500 linear feet of intermittent or perennial stream or the stream bed acreages listed in the table below associated with new alignments or realignments will be evaluated as an individual permit (i.e., a Letter of Permission or Standard Permit).

Table of Acreages at Varying Stream Widths for 500 Linear Feet of Impact	
Stream Width (Feet)	Acres of Stream at Varying Widths for 500 Linear Feet of Stream
1	0.011
2	0.023
3	0.034
4	0.046
5	0.057
6	0.069
7	0.080
8	0.092
9	0.103
10	0.115

(b) In addition to the notification requirements contained in NWP 14, the permittee must submit a PCN to the district engineer prior to commencing the activity for the permanent loss of greater than 300 linear feet of stream bed or the stream bed acreages listed in the table below. (See General Condition 32 and the definition of "loss of waters of the United States" in the Nationwide Permits for further information.)

Table of Acreages at Varying Stream Widths for 300 Linear Feet of Impact	
Stream Width (Feet)	Acres of Stream at Varying Widths for 300 Linear Feet of Stream
1	0.007
2	0.014
3	0.021
4	0.028
5	0.034
6	0.041
7	0.048
8	0.055
9	0.062
10	0.069

4. Notification in accordance with General Condition 32 is required to the Corps for all activities located in the following Section 10 waterways, to include the portion of their tributaries below the Ordinary High Water Mark or navigation pool, or otherwise subject to inundation, by the Section 10 waterway:

- Mississippi River
- Ohio River
- Licking River
- Kentucky River
- Salt River
- Green River
- Cumberland River
- Tennessee River
- Big Sandy River (from mouth to Louisa, KY)

5. All applications and requests should be submitted electronically. To submit applications or other requests electronically, all documents should be saved as a PDF document, and then submitted as an attachment in an email to the following email address:

CELRL.Door.To.The.Corps@usace.army.mil

Your email should include the following:

a) Subject Line with the name of the applicant, type of request, and location (County and State). Example: RE: Doe, John, DA Permit Application, Jefferson County, KY

b) Brief description of the request and contact information (phone number, mailing address, and email address) for the applicant and/or their agent.

c) Project Location: Address and Latitude/Longitude in decimal degrees (e.g. 42.927883, -88.362576).

All forms that require signature must be digitally signed or signed manually, scanned and then sent electronically.

Electronic documents must have sufficient resolution to show project details. In order to have the highest quality documents, the original digital documents should be converted to PDF rather than providing scanned copies of original documents.

The electronic application and attached documents must not exceed 10 megabytes (10MB).

6. For all activities, the applicant shall review the U.S. Fish and Wildlife Service's IPaC website: http://ecos.fws.gov/ipac to determine if the activity might affect threatened and/or endangered species or designated critical habitat. If federally listed species or designated critical habitat are identified, a PCN in accordance with General Condition 18 and 32 would be triggered and the official species list generated from the IPaC website must be submitted with the PCN.

Further information:

Outstanding State or National Resource Water (OSNRWs), Exceptional Waters (EWs), and Coldwater Aquatic Habitat Waters (CAHs) are waters designated by the Commonwealth of Kentucky, Natural Resources and Environmental Protection Cabinet. The list can be found at the following link: http://eppcapp.ky.gov/spwaters/

Designated Critical Habitat (DCH) under the Endangered Species Act is determined within the Commonwealth of Kentucky by the U.S. Fish and Wildlife Service. The current list of Kentucky's Threatened, Endangered, and Federal Candidate Species can be found at the following link: http://www.fws.gov/frankfort/EndangeredSpecies.html

Information on Pre-Construction Notification (PCN) can be found at NWP General Condition No. 32 in the Federal Register (See volume 86, date January 13, 2021, pp 2867- 2874 for the text of Section C, General Conditions).

COORDINATING RESOURCE AGENCIES

Chief, Wetlands Regulatory Section
U.S. Environmental Protection Agency
Region IV
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

Supervisor
U.S. Fish & Wildlife Service
JC Watts Federal Building, Room 265
330 West Broadway
Frankfort, Kentucky 40601

Supervisor
401 Water Quality Certification
Kentucky Division of Water
300 Sower Boulevard, 3rd Floor
Frankfort, KY 40601

Commissioner
Department of Fish and Wildlife Resources
#1 Sportsman's Lane
Frankfort, KY 40601

Executive Director and State Historic Preservation Officer
Kentucky Heritage Council
410 High Street
Frankfort, KY 40601

ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

General Certification--Nationwide Permit # 14
Linear Transportation Projects

This General Certification is issued **December 18, 2020**, 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 General Certification and all General Certifications of Nationwide Permits (NWP), the term 'surface water' is defined pursuant to 401 KAR Chapter 10, Section 1(72): 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.

As required by 40 CFR Part 121 – State Certification of Activities Requiring a Federal License or Permit, all conditions include a statement explaining why the condition is necessary to assure that any discharge authorized under the general permit will comply with water quality requirements and a citation to federal, state, or tribal law that authorizes the condition. The statements and citations are included with each condition. The statements are written entirely at the end of the certification under the section *Statements of Necessity*.

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, 303, 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 conditions in this certification are met. Activities that do not meet the conditions of this General Certification require an Individual Section 401 Water Quality Certification.

General Certification--Nationwide Permit # 14
Linear Transportation Projects
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1. Activities occurring within surface waters assessed by the Kentucky Division of Water as designated Outstanding State Resource Waters, National Resource Waters, Cold Water Aquatic Habitat, Exceptional Waters, or identified as candidate Outstanding State Resource Waters or candidate Exceptional Waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(1), Section 1(2), & Section 1(3); and 401 KAR 10:031, Section 4(2) & Section 8]

2. Activities impacting surface waters assessed by the Kentucky Division of Water as impaired for warm water or cold water aquatic habitat where the parameter or source is related to habitat* are not authorized under this General Certification and require an Individual Certification. [Statement B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]

   *These include waters impaired by the parameter 'habitat assessment', 'combined biota/habitat bioassessment' or any parameter from the parameter group 'habitat alterations, and/or waters where the parameter identified as a cause of impairment has a source from the source group 'habitat impacts'.

3. Activities impacting surface waters assessed by the Kentucky Division of Water as full support for warm water or cold water aquatic habitat are not authorized under this General Certification and require an Individual Certification. [Statements A and B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]

4. The activity will not occur within surface waters identified as perpetually-protected mitigation sites (e.g., deed restriction or conservation easement). [Statement C and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3); and 40 C.F.R. 230.97]

5. Activities with cumulative temporary and permanent impacts greater than 1/2 acre of wetland or 300 linear feet of surface waters are not authorized under this General Certification and require an Individual Certification. This General Certification shall not apply to projects where multiple Nationwide Permits are issued for individual crossings which are part of a single, larger transportation projects. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

6. For complete linear transportation projects, all impacts shall not exceed a cumulative length of 500 linear feet within each Hydrologic Unit Code (HUC) 14. [401 KAR 10:030 and 401 KAR 10:031]

7. Stream realignment greater than 100 feet is not authorized under this General Certification and require and Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

General Certification--Nationwide Permit # 14
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8. Surface water impacts covered under this General 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 (KAWQP). [Statements A and F and citations KRS 224.71-145(1), 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

9. Any crossings must be constructed in a manner that does not impede natural water flow. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

10. The use of creek rock for bank stabilization; grouted rip-rap; unformed, poured grout; unformed, poured concrete; poured asphalt; or asphalt pieces is not authorized under this General Certification and requires an Individual Certification. Poured concrete or grout will be authorized under this General Certification when contained by tightly sealed forms or cells. Equipment shall not discharge waste washwater into surface waters at any time without adequate wastewater treatments. [Statement A and citations 401 KAR 10:030, Section 1(3)(b) & 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

11. New stormwater detention/ retention basins constructed in surface waters or modifications to stormwater detention/ retention basins resulting in the reduction in reach or that cause impairment of flow of surface waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

12. Erosion and sedimentation pollution control plans and Best Management Practices (BMPs) 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. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

13. 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, 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, 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. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

General Certification--Nationwide Permit # 14
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14. Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering surface waters. [Statements A and D and citations. [KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

15. Removal of riparian vegetation shall be limited to that necessary for equipment access. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

16. To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

17. Heavy equipment (e.g., bulldozers, backhoes, and draglines), 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. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

18. 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. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

19. If domestic water supply intakes are located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when such work will be done prior to construction. [Statement E and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

20. 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 Kentucky Division of Water shall be notified immediately by calling (800) 928-2380. [Statement A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

21. The Kentucky Division of Water requires submission of a formal application for any federal applicant that is not required to submit a Preconstruction Notification that would typically be required of any non-federal applicant. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

22. The Kentucky Division of Water may require submission of a formal application for an Individual Certification for any project that has been determined to likely have a significant adverse effect upon water quality or degrade surface waters so that existing uses of the water body or downstream waters are precluded. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

23. If the final issued General Permit for Nationwide Permit 14 Linear Transportation Projects changes significantly, the Division of Water may opt to deny certification for this permit. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

Statements of Necessity:

A. This condition is necessary to protect waters categorized under the anti-degradation policy to protect the designated and existing uses and to maintain the associated water quality criteria necessary to protect these water resources.

B. This condition is necessary to protect existing uses and the level of water quality necessary to protect those existing uses shall be assured in impaired water.

C. This condition is necessary for long-term protection of compensatory mitigation sites.

D. This condition is necessary to provide for the prevention, abatement, and control of all water pollution and to conserve water resources for legitimate uses, safeguard from pollution the uncontaminated waters, prevent the creation of any new pollution, and abate any existing pollution.

E. This condition is necessary to protect domestic water supply use.

F. This condition is necessary to evaluate, develop, and improve best-management practices in conservation plans, compliance plans, and forest stewardship management plans; establish statewide and regional agriculture water quality plans; and otherwise promote soil and water conservation activities that protect surface waters from the adverse impacts of agriculture operations within the Commonwealth.

Violation of Kentucky state water quality standards may result in civil penalties and remediation actions.

For assistance contact the Kentucky Division of Water, Water Quality Certification Section by email (401WQC@ky.gov) or by phone (502)-564-3410.

Kentucky Transportation Cabinet

Highway District 11

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 421 in Jackson County

Project: Item # 11-9017

Revised 3/4/2016

KYTC BMP Plan for Project Item # **11-9017**

Project information

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

1. Owner – Kentucky Transportation Cabinet, District 11
2. Resident Engineer: (2)
3. Contractor name: (2)
   Address: (2)

   Phone number: (2)
   Contact: (2)
   Contractor's agent responsible for compliance with the KPDES permit requirements (3):
4. Project Control Number: (2)
5. Route (Address): US 421
6. Latitude/Longitude (project mid-point): 37° 29' 36", -84° 08' 25"
7. County (project mid-point): Jackson
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KYTC BMP Plan for Project Item # **11-9017**

A. Site description:

1. Nature of Construction Activity (from letting project description): Asphalt Pavement and Roadway Rehab.

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

3. Projected volume of material to be moved: 8,622 LF of Roadside Regrading.

4. Estimate of total project area (acres): 55.4

5. Estimate of area to be disturbed (acres): 27.1

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: Clover Bottom Creek and S. Fork Station Camp

10. TMDLs and Pollutants of Concern in Receiving Waters: (1) Typically use: *No TDML's were involved on this project.* (If unsure, consult with DEA)

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.

KYTC BMP Plan for Project Item # **11-9017**

- 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: (1) Typically use: *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. (1) Typically use: *There are no other local (MS4) requirements that are expected to be necessary for this project.* (If MS4 requirements are necessary, it will be noted on the CE in Section M. Water Resource Impacts.)

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. (1) Typically use: *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:

KYTC BMP Plan for Project Item # **11-9017**

_____ 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.

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 Item # 11-9017

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. 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.

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 Item # **11-9017**

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.

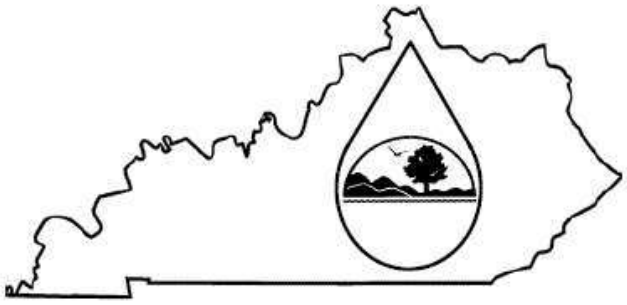
Item No.: 11-9017
JACKSON County
Highway Safety Improvement Project along US 421
from MP 21.445 – 29.574

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: 361182

Thank you for submitting your information via the Kentucky Department for Environmental Protection eForms website. Please save a copy of this submittal for your records. We recommend saving a copy as a .mht, .html, or .htm file.
The Submittal ID for this transaction is 361182 and was submitted on May 26, 2023 01:11 PM Eastern Time. If you need to contact EEC regarding your submission, please reference your Submittal ID.

The eForm Submittal ID allows you to use the data from this submittal as a template and/or download a copy of your submittal.



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.l

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 Perm	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 - D	Chris	J	Jones

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
603 Railroad Ave.	Manchester	Kentucky	40962

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
chrisj.jones@ky.gov	606-598-2145	Phone

SECTION II -- GENERAL SITE LOCATION INFORMATION

Project Name:(*)	Status of Owner/Operator(*)	SIC Code(*)
11-9017: Low cost safety improvements on l	State Governme	1611 Highway a

Company Name:(✓)	First Name:(✓)	M.I.:	Last Name:(✓)
Kentucky Transportation Cabinet - D	Chris	J	Jones

Site Physical Address:(*)
US-421, mile point 21.250 - 29.574

City:(*)	State:(*)	Zip:(*)
Clover Bottom	Kentucky	40447

County:(*)	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal)	Longitude(decimal degrees)(*)
Jackson	37.493601	-84.140558

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION

Section III requires part A or part B to be completed.

Project Description:(*)
Perform low cost safety improvements on US-421 in Jackson County from mile point 21.250 - 29.

a. For single projects provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
55.4	27.1
Anticipated Start Date:(✓)	**Anticipated Completion Date:(✓)**
8/18/2023	8/18/2025

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

Complete the following table if the permitted site discharges to a water body. Please note that if you enter a row in hte below table, all columns are required to be filled out.
Unnamed Tributary?: Does discharge enter an unnamed tributary prior to entering a named receiving water?
Latitude in decimal degrees: Format must be between 36.490000 and 39.150000, with a minimum of 5 decimal points of accuracy.

Longitude in decimal degrees: Format must be between -89.580000 and -81.960000, with a minimum of 5 decimal points of accuracy.
Receiving Water Name: Recieving water name must be from the following list of possible receiving waters.(click here for a list (Controls/ReceivingStream.htm)). If the discharge flows into an unnamed tributary, please enter the first "named" receiving water for which the unnamed tributary(ies) eventually flows into.

Discharge Point(s):

Unnamed Tributary?	Latitude	Longitude	Receiving Water Name
Yes	37.483856	-84.095156	Clover Bottom Creek
Yes	37.482673	-84.096008	Clover Bottom Creek
Yes	37.482947	-84.098707	Clover Bottom Creek
Yes	37.483437	-84.100368	Clover Bottom Creek
Yes	37.484108	-84.103960	Clover Bottom Creek
Yes	37.483944	-84.105191	Clover Bottom Creek
Yes	37.483301	-84.107541	Clover Bottom Creek
Yes	37.482953	-84.108857	Clover Bottom Creek
Yes	37.482745	-84.109925	Clover Bottom Creek
Yes	37.482728	-84.111518	Clover Bottom Creek
Yes	37.482831	-84.113243	Clover Bottom Creek
No	37.484205	-84.114267	Clover Bottom Creek
No	37.485216	-84.114718	Clover Bottom Creek
No	37.485768	-84.115809	Clover Bottom Creek
No	37.485928	-84.119446	Clover Bottom Creek
No	37.485777	-84.121764	Clover Bottom Creek
No	37.485505	-84.122838	Clover Bottom Creek
No	37.484485	-84.126919	Clover Bottom Creek
No	37.484157	-84.128780	Clover Bottom Creek
No	37.484088	-84.131174	Clover Bottom Creek
No	37.485039	-84.134118	Clover Bottom Creek
No	37.486058	-84.135708	Clover Bottom Creek
No	37.487825	-84.136754	Clover Bottom Creek
No	37.485552	-84.137174	Clover Bottom Creek
No	37.490790	-84.138632	Clover Bottom Creek
No	37.491765	-84.139243	Clover Bottom Creek
No	37.492661	-84.139679	Clover Bottom Creek
No	37.494831	-84.141710	Clover Bottom Creek
No	37.496387	-84.144515	Clover Bottom Creek
No	37.496701	-84.147421	Clover Bottom Creek
Yes	37.495399	-84.149723	Clover Bottom Creek
Yes	37.495577	-84.151752	South Fork Station Camp Creek
Yes	37.495857	-84.154269	South Fork Station Camp Creek
Yes	37.496244	-84.155119	South Fork Station

			Camp Creek
Yes	37.497081	-84.155800	South Fork Station Camp Creek
Yes	37.498739	-84.156870	South Fork Station Camp Creek
Yes	37.499059	-84.157347	South Fork Station Camp Creek
Yes	37.499790	-84.157774	South Fork Station Camp Creek
No	37.500439	-84.158863	South Fork Station Camp Creek
No	37.500484	-84.159776	South Fork Station Camp Creek
No	37.500280	-84.160761	South Fork Station Camp Creek
No	37.500091	-84.161852	South Fork Station Camp Creek
No	37.499889	-84.162914	South Fork Station Camp Creek
Yes	37.499819	-84.165213	South Fork Station Camp Creek
No	37.501162	-84.166098	South Fork Station Camp Creek
No	37.501863	-84.166884	South Fork Station Camp Creek
No	37.502298	-84.167589	South Fork Station Camp Creek
No	37.502820	-84.168660	South Fork Station Camp Creek
No	37.503047	-84.170537	South Fork Station Camp Creek
No	37.503118	-84.171637	South Fork Station Camp Creek
No	37.503178	-84.172654	South Fork Station Camp Creek
No	37.503372	-84.173270	South Fork Station Camp Creek
No	37.503834	-84.173895	South Fork Station Camp Creek
No	37.505123	-84.178320	South Fork Station Camp Creek
No	37.507842	-84.182103	South Fork Station Camp Creek
No	37.508698	-84.183294	South Fork Station Camp Creek
No	37.509000	-84.183686	South Fork Station Camp Creek
No	37.509402	-84.184277	South Fork Station Camp Creek
No	37.509749	-84.184880	South Fork Station Camp Creek
Yes	37.511160	-84.186154	South Fork Station Camp Creek
Yes	37.514051	-84.187594	South Fork Station Camp Creek
Yes	37.516828	-84.192234	South Fork Station Camp Creek
Yes	37.517079	-84.193111	South Fork Station Camp Creek
Yes	37.517564	-84.194955	South Fork Station Camp Creek
Yes	37.519393	-84.198253	South Fork Station Camp Creek

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

List all MS4 Discharge Points
Latitude in decimal degrees. Format must be between 36.490000 and 39.150000, with a minimum of 5 decimal points of accuracy.
Longitude in decimal degrees. Format must be between -89.580000 and -81.960000, with a minimum of 5 decimal points of accuracy.

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?:(*)	Yes
If Yes, describe scope of activity: (✓)	Pipe extensions, roadside regrading, bank st
Is a Clean Water Act 404 permit required?:(*)	Yes
Is a Clean Water Act 401 Water Quality Certification required?:(*)	Yes

SECTION VII -- NOI PREPARER INFORMATION

First Name:(*)	M.I.:	Last Name:(*)	Company Name:(*)
Joshua	J	Higgins	Kentucky Transportation Cabinet - D

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
603 Railroad Ave.	Manchester	Kentucky	40962

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
joshuaj.higgins@ky.gov	606-598-2145	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:(*)
Chris J. Jones	Chief District Engineer

First Name:(*)	M.I.:	Last Name:(*)
Chris	J	Jones

eMail Address:(*)	Business Phone:(*)	Alternate Phone:	Signature Date:(*)
chrisj.jones@ky.gov	606-598-2145	Phone	5/26/202

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

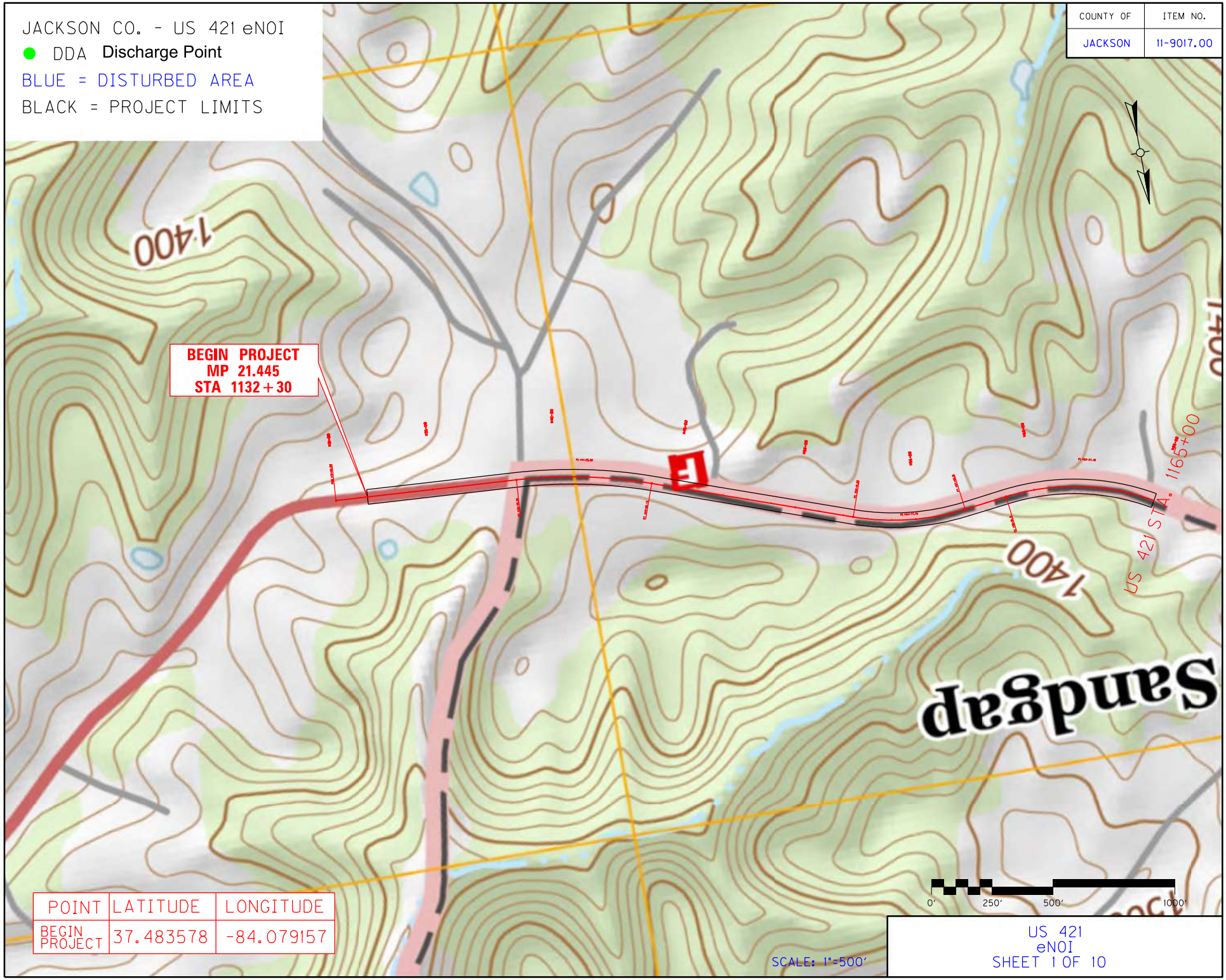
JACKSON CO. - US 421 eNOI

● DDA Discharge Point

BLUE = DISTURBED AREA

BLACK = PROJECT LIMITS

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



POINT	LATITUDE	LONGITUDE
BEGIN PROJECT	37.483578	-84.079157

SCALE: 1"=500'

US 421
eNOI
SHEET 1 OF 10

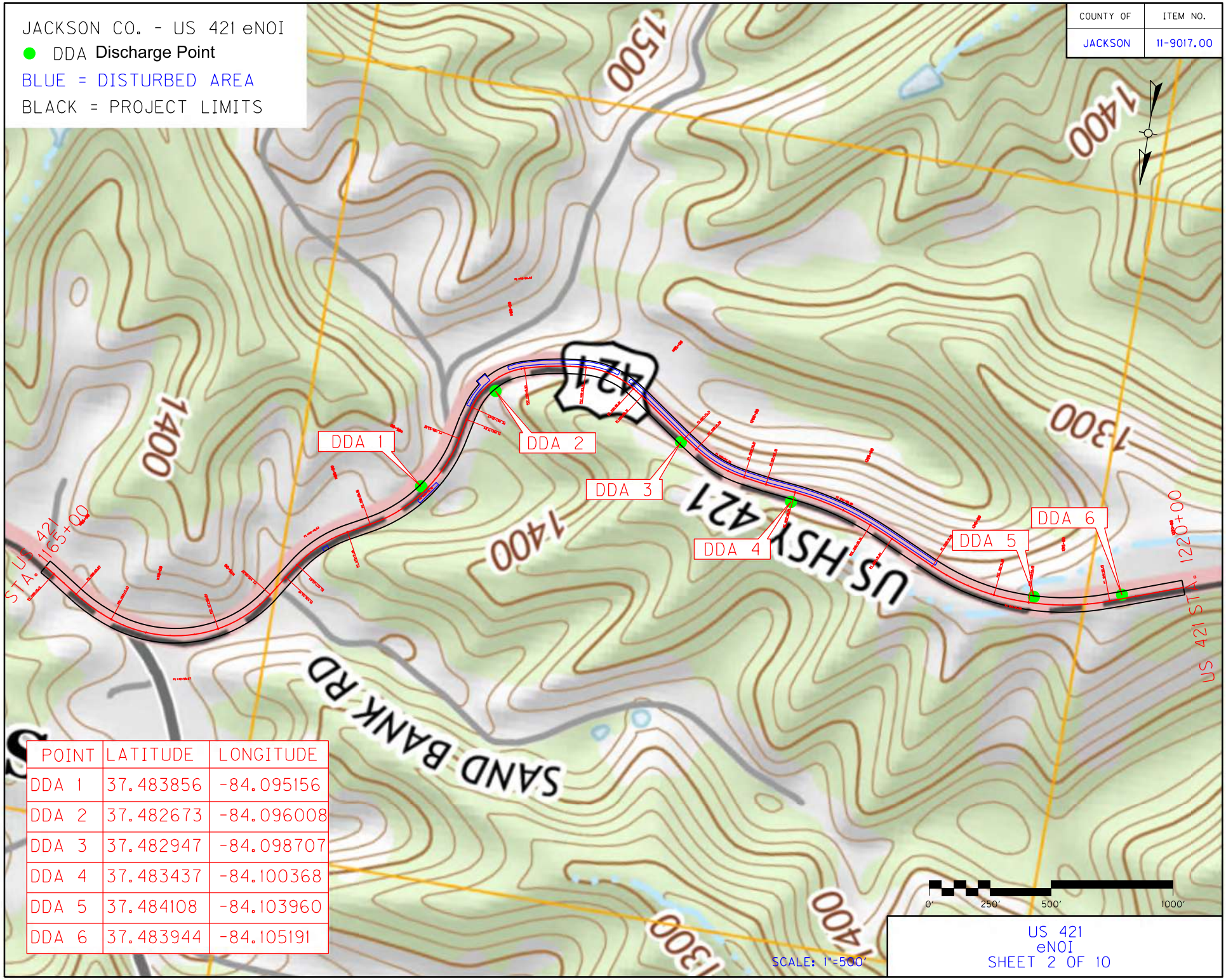
JACKSON CO. - US 421 eNOI

● DDA Discharge Point

BLUE = DISTURBED AREA

BLACK = PROJECT LIMITS

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



POINT	LATITUDE	LONGITUDE
DDA 1	37.483856	-84.095156
DDA 2	37.482673	-84.096008
DDA 3	37.482947	-84.098707
DDA 4	37.483437	-84.100368
DDA 5	37.484108	-84.103960
DDA 6	37.483944	-84.105191

SCALE: 1"=500'

US 421
eNOI
SHEET 2 OF 10

JACKSON CO. - US 421 eNOI

● DDA Discharge Point

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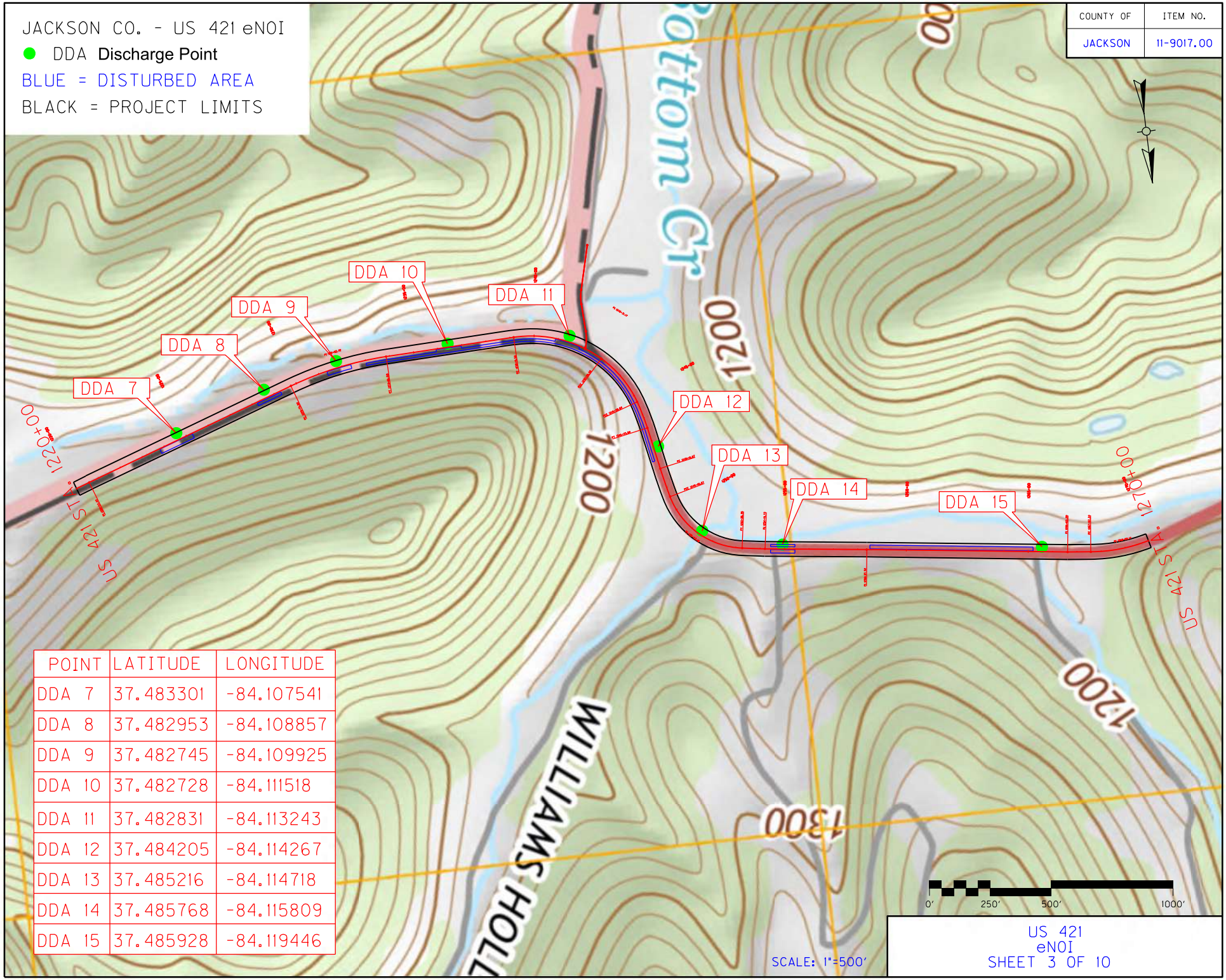
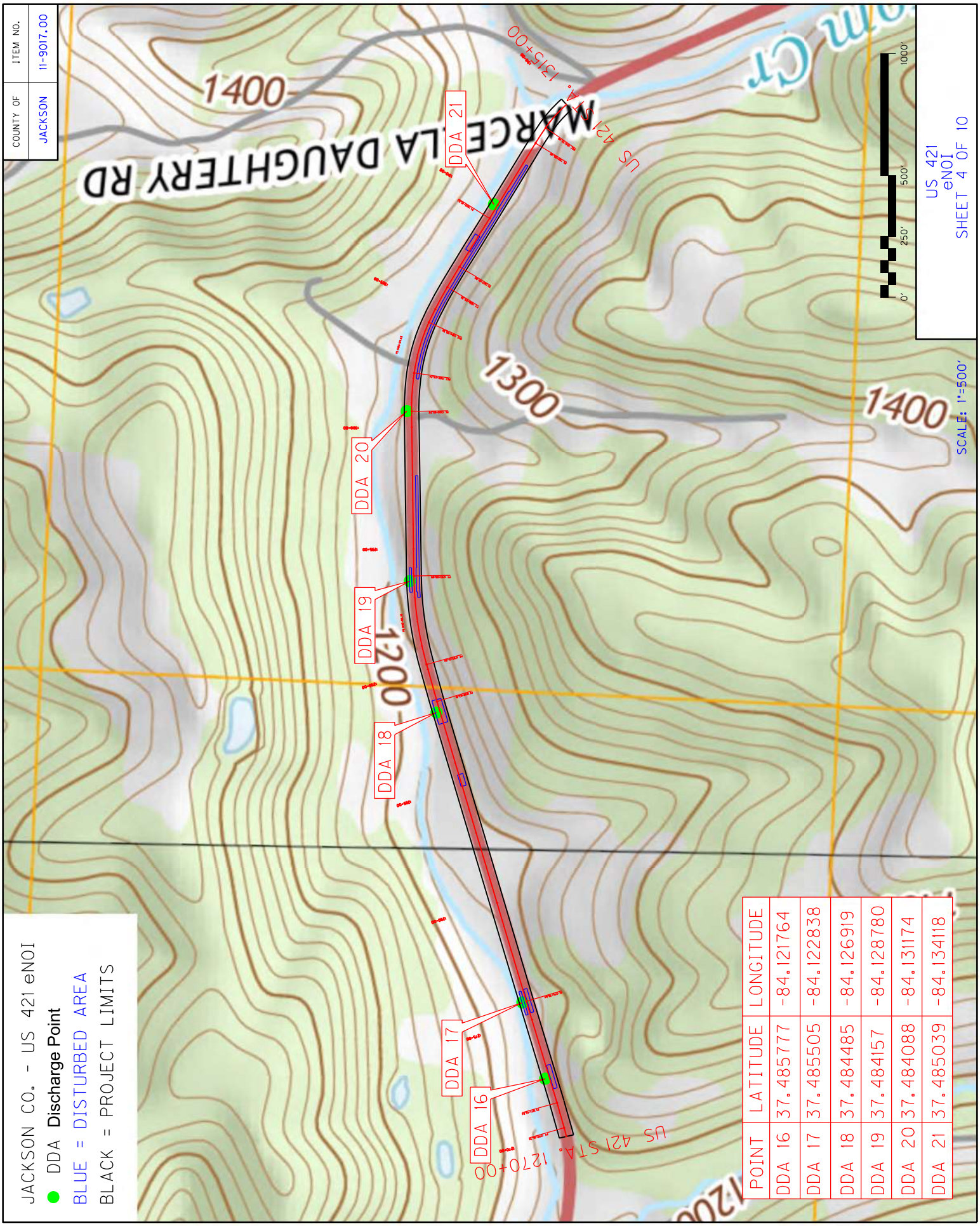
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



POINT	LATITUDE	LONGITUDE
DDA 7	37.483301	-84.107541
DDA 8	37.482953	-84.108857
DDA 9	37.482745	-84.109925
DDA 10	37.482728	-84.111518
DDA 11	37.482831	-84.113243
DDA 12	37.484205	-84.114267
DDA 13	37.485216	-84.114718
DDA 14	37.485768	-84.115809
DDA 15	37.485928	-84.119446

SCALE: 1"=500'

US 421
eNOI
SHEET 3 OF 10



POINT	LATITUDE	LONGITUDE
DDA 16	37.485777	-84.121764
DDA 17	37.485505	-84.122838
DDA 18	37.484485	-84.126919
DDA 19	37.484157	-84.128780
DDA 20	37.484088	-84.131174
DDA 21	37.485039	-84.134118

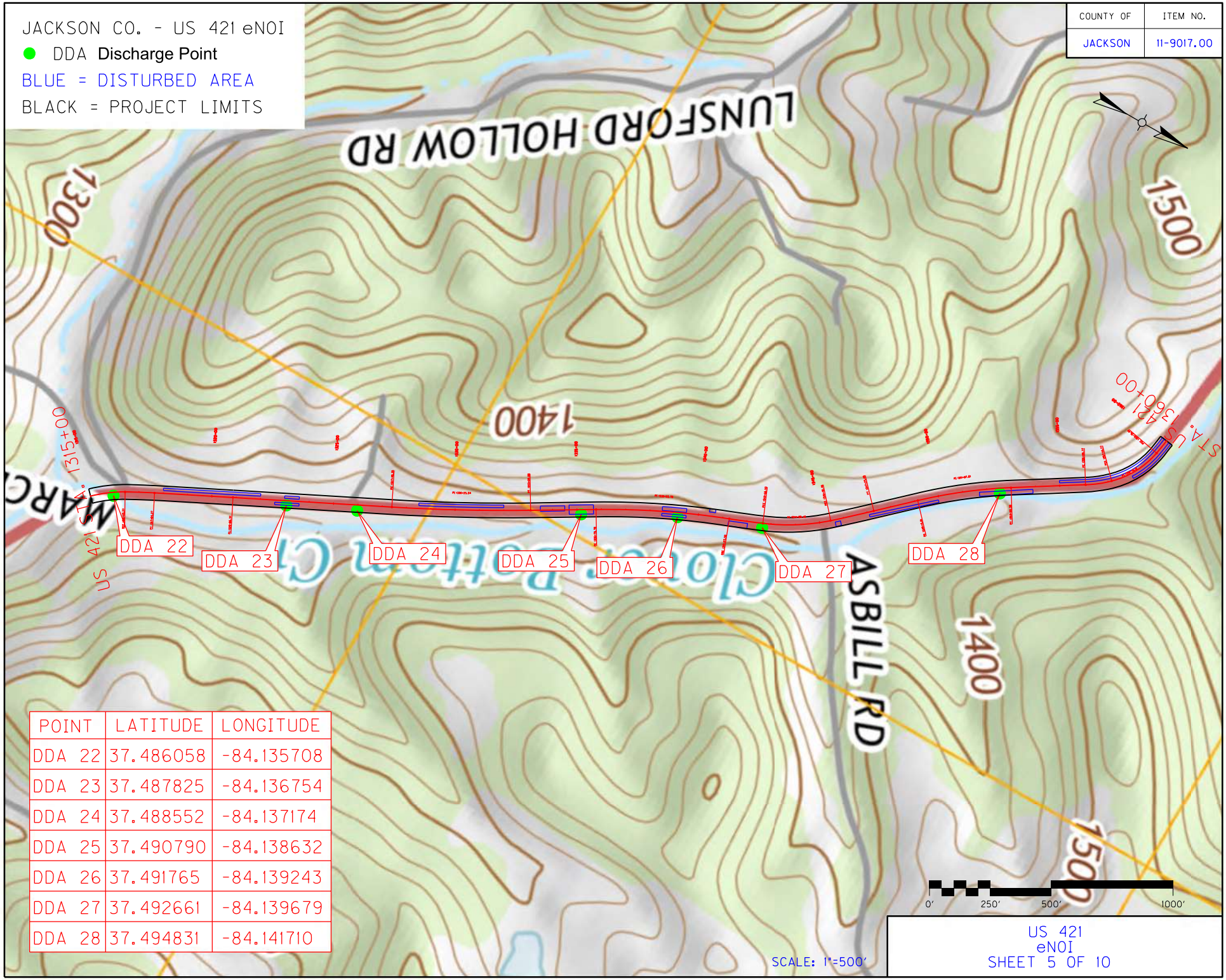
JACKSON CO. - US 421 eNOI

● DDA Discharge Point

BLUE = DISTURBED AREA

BLACK = PROJECT LIMITS

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



POINT	LATITUDE	LONGITUDE
DDA 22	37.486058	-84.135708
DDA 23	37.487825	-84.136754
DDA 24	37.488552	-84.137174
DDA 25	37.490790	-84.138632
DDA 26	37.491765	-84.139243
DDA 27	37.492661	-84.139679
DDA 28	37.494831	-84.141710

SCALE: 1"=500'

US 421
eNOI
SHEET 5 OF 10

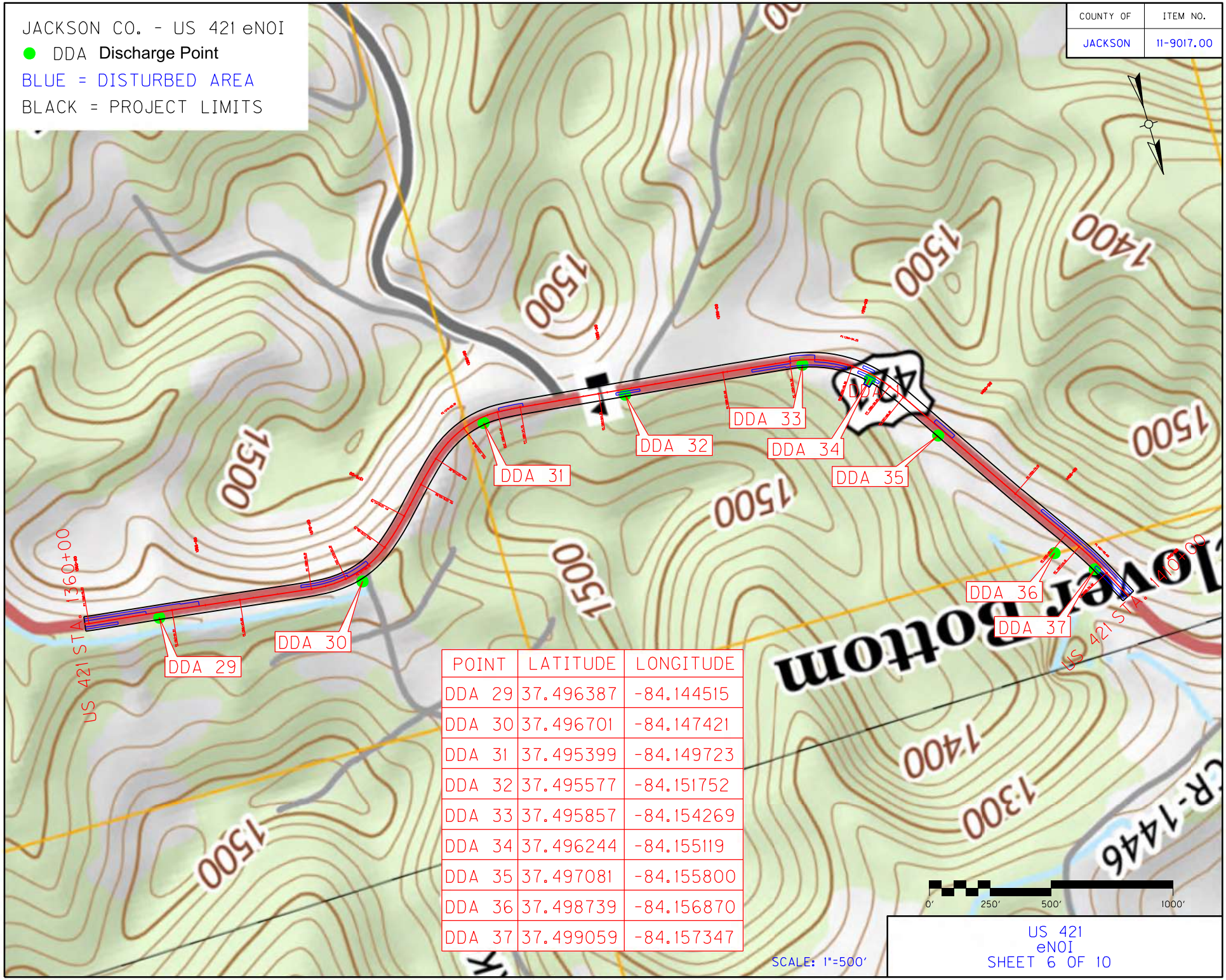
JACKSON CO. - US 421 eNOI

● DDA Discharge Point

BLUE = DISTURBED AREA

BLACK = PROJECT LIMITS

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



POINT	LATITUDE	LONGITUDE
DDA 29	37.496387	-84.144515
DDA 30	37.496701	-84.147421
DDA 31	37.495399	-84.149723
DDA 32	37.495577	-84.151752
DDA 33	37.495857	-84.154269
DDA 34	37.496244	-84.155119
DDA 35	37.497081	-84.155800
DDA 36	37.498739	-84.156870
DDA 37	37.499059	-84.157347

SCALE: 1"=500'

US 421
eNOI
SHEET 6 OF 10

JACKSON CO. - US 421 eNOI

● DDA Discharge Point

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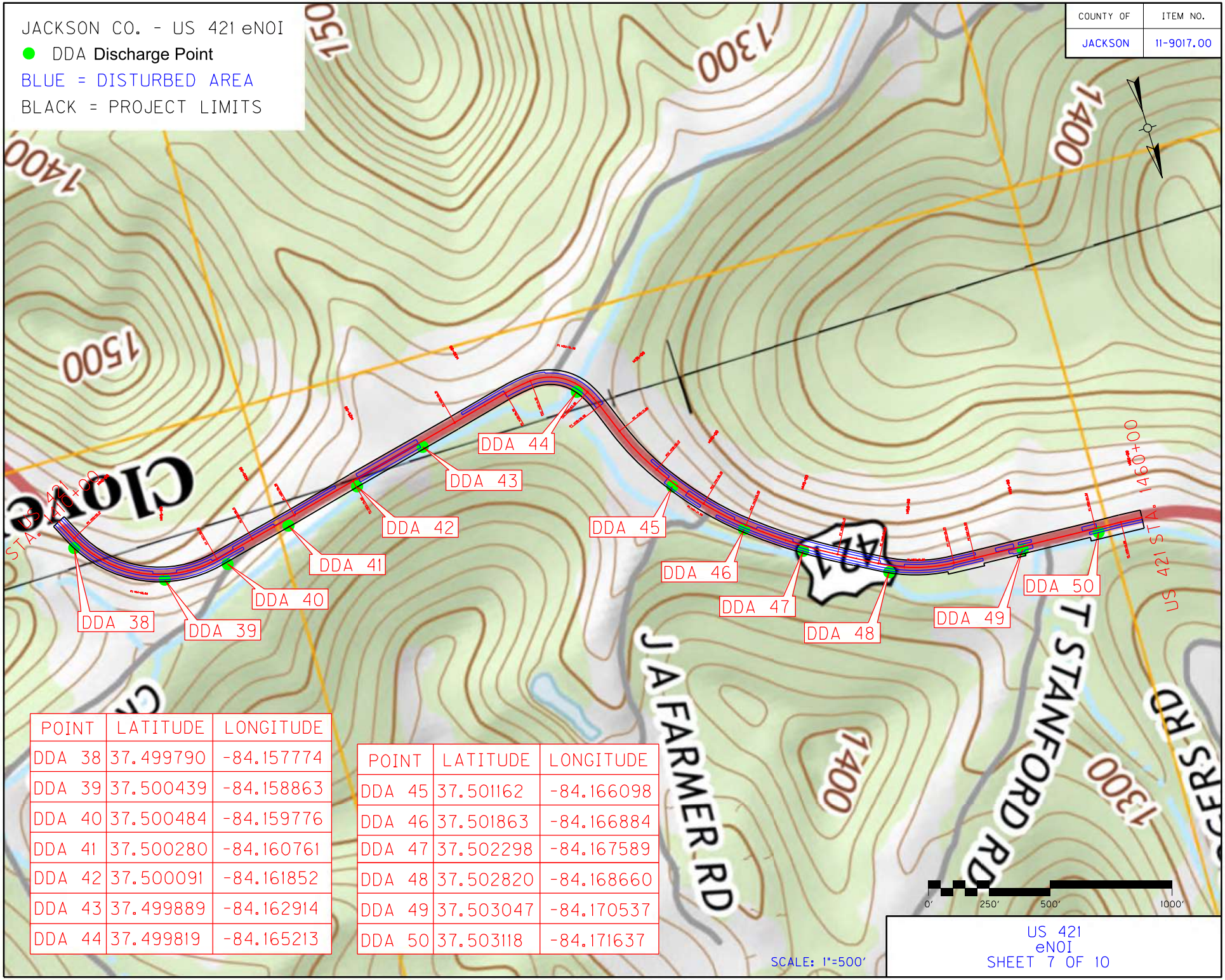
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



POINT	LATITUDE	LONGITUDE
DDA 38	37.499790	-84.157774
DDA 39	37.500439	-84.158863
DDA 40	37.500484	-84.159776
DDA 41	37.500280	-84.160761
DDA 42	37.500091	-84.161852
DDA 43	37.499889	-84.162914
DDA 44	37.499819	-84.165213

POINT	LATITUDE	LONGITUDE
DDA 45	37.501162	-84.166098
DDA 46	37.501863	-84.166884
DDA 47	37.502298	-84.167589
DDA 48	37.502820	-84.168660
DDA 49	37.503047	-84.170537
DDA 50	37.503118	-84.171637

SCALE: 1"=500'

US 421
eNOI
SHEET 7 OF 10

JACKSON CO. - US 421 eNOI

● DDA Discharge Point

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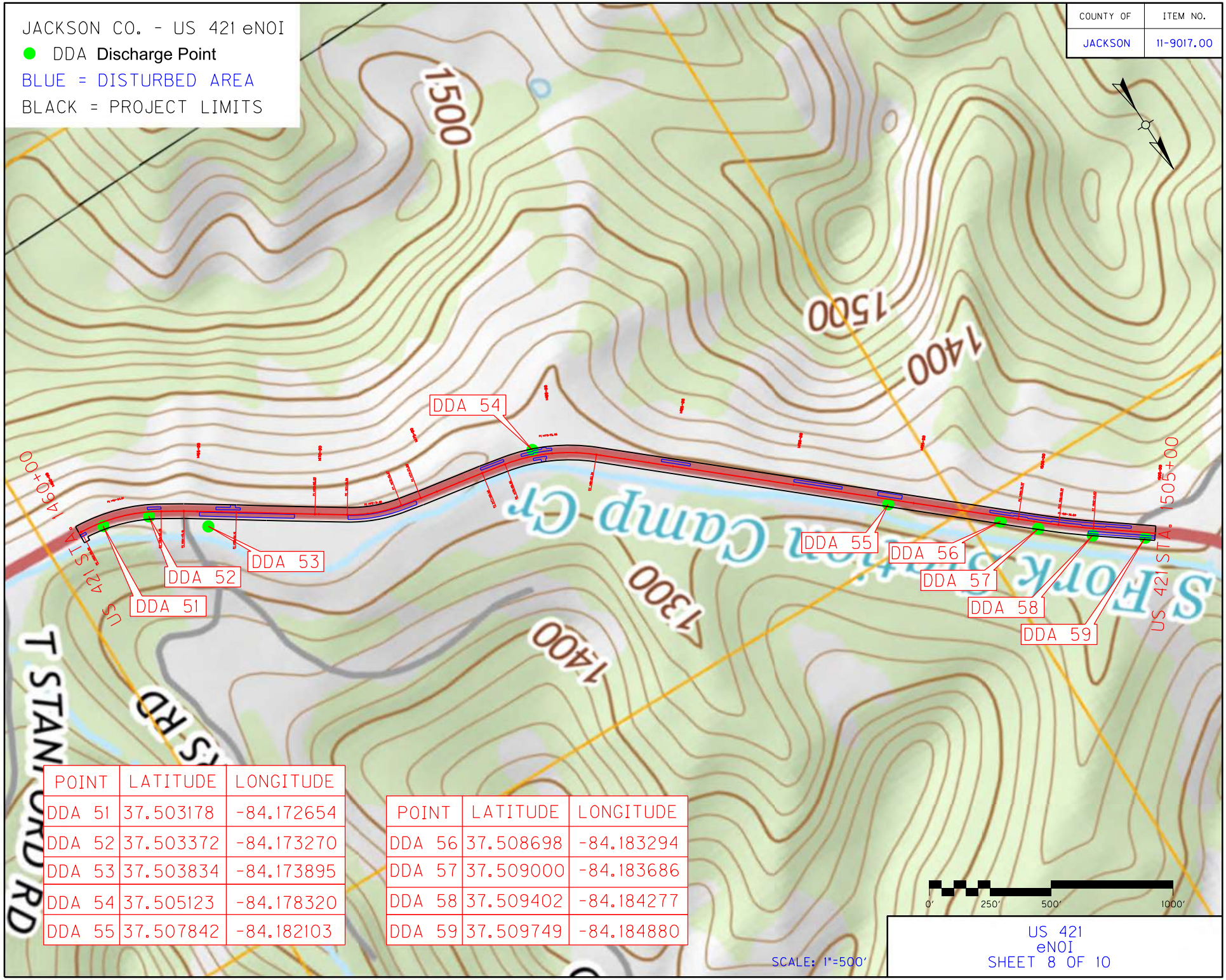
BLACK = PROJECT LIMITS

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

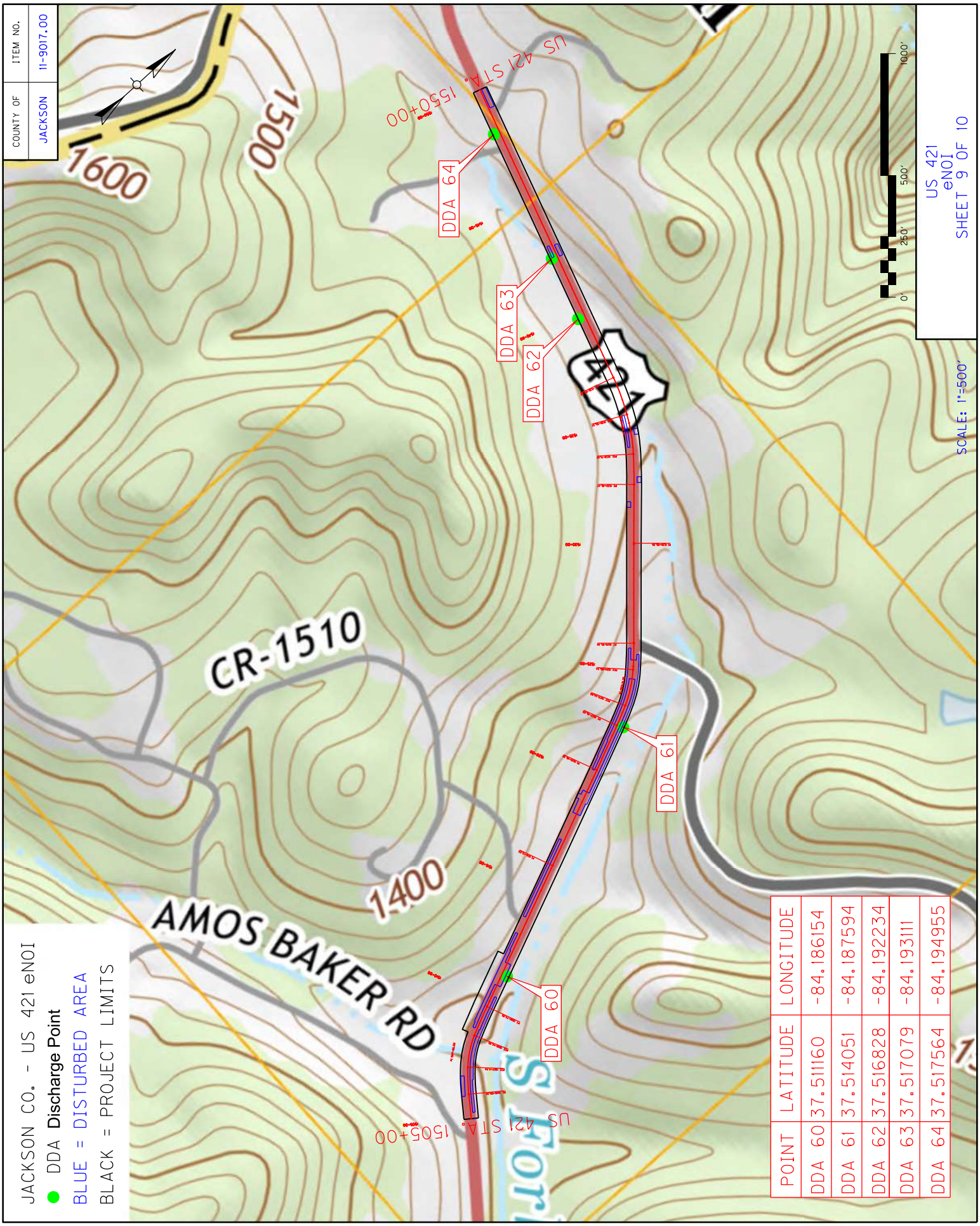


POINT	LATITUDE	LONGITUDE
DDA 51	37.503178	-84.172654
DDA 52	37.503372	-84.173270
DDA 53	37.503834	-84.173895
DDA 54	37.505123	-84.178320
DDA 55	37.507842	-84.182103

POINT	LATITUDE	LONGITUDE
DDA 56	37.508698	-84.183294
DDA 57	37.509000	-84.183686
DDA 58	37.509402	-84.184277
DDA 59	37.509749	-84.184880

SCALE: 1"=500'

US 421
eNOI
SHEET 8 OF 10



POINT	LATITUDE	LONGITUDE
DDA 60	37.511160	-84.186154
DDA 61	37.514051	-84.187594
DDA 62	37.516828	-84.192234
DDA 63	37.517079	-84.193111
DDA 64	37.517564	-84.194955

JACKSON CO. - US 421 eNOI

● DDA Discharge Point

BLUE = DISTURBED AREA

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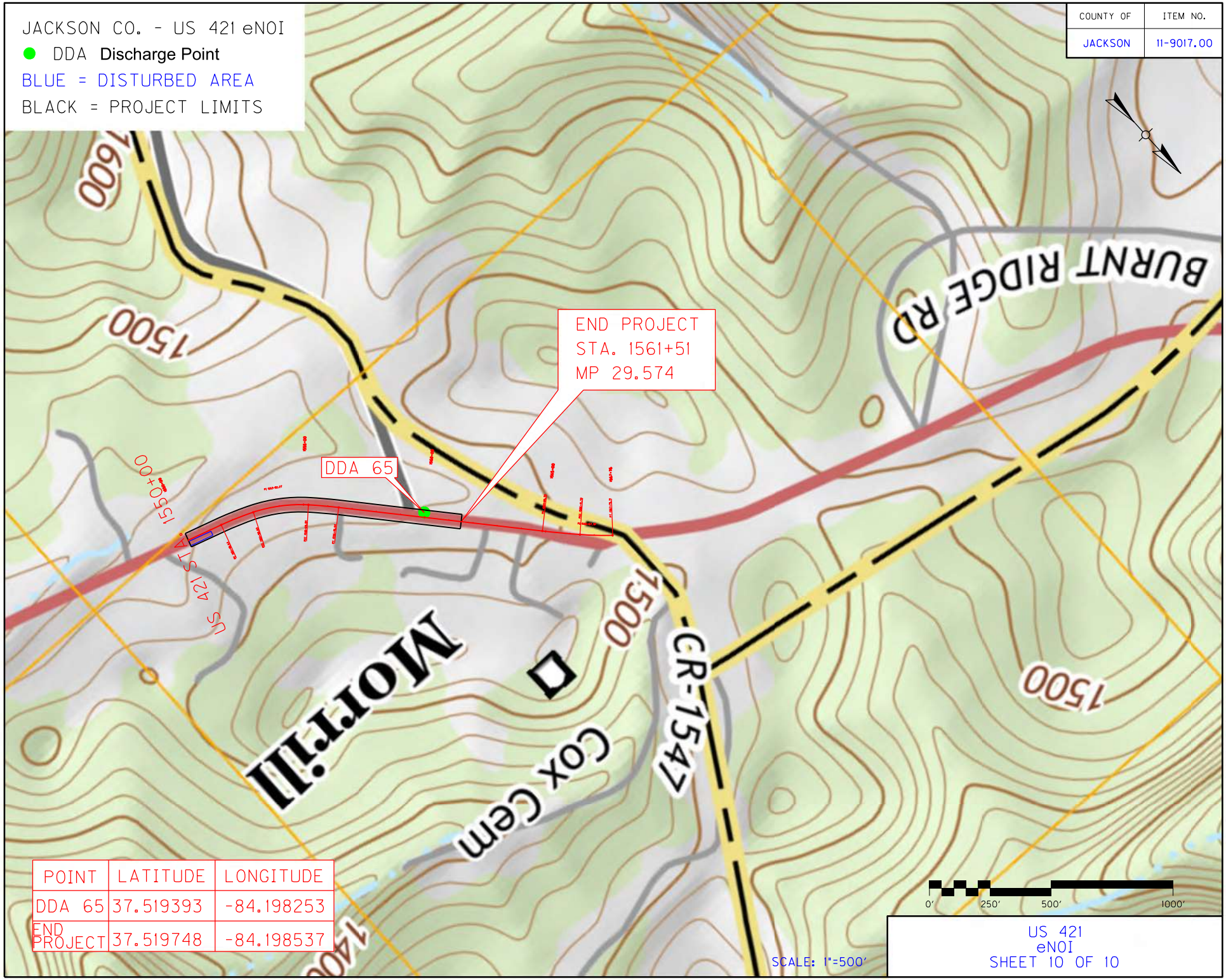
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



POINT	LATITUDE	LONGITUDE
DDA 65	37.519393	-84.198253
END PROJECT	37.519748	-84.198537

SCALE: 1"=500'

US 421
eNOI
SHEET 10 OF 10

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

June 12, 2023

Chris Jones
KYTC District 11
603 Railroad Ave
Manchester, KY 40962

Re: KYR10 Coverage Acknowledgment
KPDES No.: KYR10R455
11-9017: Low cost safety improvements on US-421 i
Permit Type: Construction Stormwater
AI ID: 110141
Jackson County, Kentucky

Dear Chris Jones :

The discharges associated with the Notice of Intent you submitted have been approved for coverage under the "Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Storm Water Discharges Associated with Construction Activities (KYR100000)" master general permit. Your coverage becomes effective on the date of this letter. This coverage automatically terminates two years from the effective date of your coverage unless an extension is requested prior to the termination date, until the KYR100000 master general permit expires on November 30, 2024, or the Division of Water revokes coverage, whichever comes first. During this period of coverage all discharges shall comply with the conditions of the KYR100000 master general permit. This permit and links to the eNOI (and permit coverage extension) and eNOT forms can be found on our website:
https://eec.ky.gov/Environmental-Protection/Water/PermitCert/KPDES/Documents/KYR10PermitPage.pdf.

Any person aggrieved by the issuance of a permit final decision may demand a hearing pursuant to KRS 224.10-420(2) within thirty (30) days from the date of the issuance of this letter. Any demand for a hearing on the permit shall be filed in accordance with the procedures specified in KRS 224.10-420, 224.10-440, 224.10-470, and the regulations promulgated thereto. The request for hearing should be submitted in writing to the Energy and Environment Cabinet, Office of Administrative Hearings, 211 Sower Boulevard, Frankfort, Kentucky 40601 and the Commonwealth of Kentucky, Energy and Environment Cabinet, Division of Water, 300 Sower Boulevard, Frankfort, Kentucky 40601. For your record keeping purposes, it is recommended that these requests be sent by certified mail. The written request must conform to the appropriate statutes referenced above.

Any questions concerning the general permit and its requirements should be directed to me at 502-782-7123 or email me at Karina.Villanueva@ky.gov

Construction Site GPS Coordinates: 37.493601, -84.140558
Receiving Water: Clover Bottom Creek, South Fork Station Camp Creek.

Sincerely,

Karina Villanueva
Surface Water Permits Branch
Division of Water
Signed by Karina Villanueva

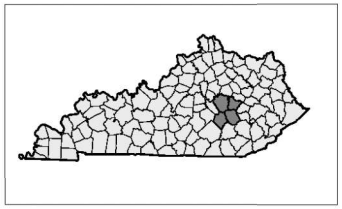
cc: Joshua Higgins, eNOI Preparer
Robert Miller, London Regional Office
Shawn Hokanson, Division of Water

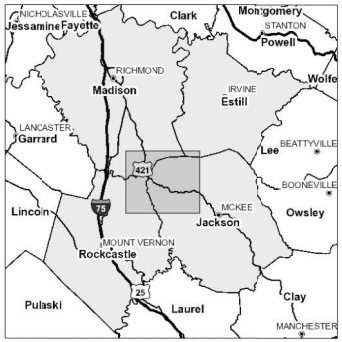
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

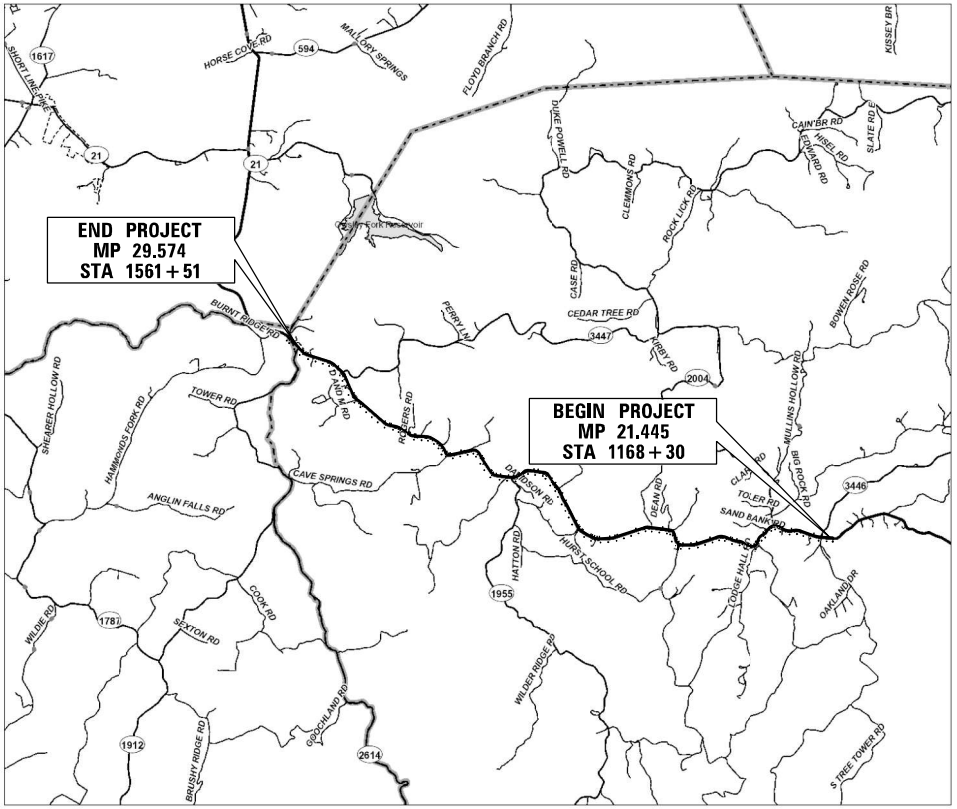
COUNTY OF	ITEM NO.
JACKSON	11-9017.00

JACKSON COUNTY

US 421
11-9017.00







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SCALE IN MILES

VICINITY MAP

GENERAL SUMMARY - US 421 Jackson County 11-9017.00

Item	Description	Unit	Quantity
1	DGA	TON	889
20	Traffic Bound Base	TON	25
80	Crushed Agg. #23	TON	951
100	Asphalt Seal Aggregate	TON	60.66
103	Asphalt Seal Coat	TON	7.51
190	Leveling & Wedging PG 64-22	TON	27
212	CL 2 Asph Base 1.00D PG 64-22	TON	693
307	CL 2 Asph Surf 0.38B PG 64-22	TON	411
356	Asphalt Material for Tack	TON	9.4
461	Culvert Pipe - 15 in	LF	11
462	Culvert Pipe - 18 in	LF	363
464	Culvert Pipe - 24 in	LF	295
472	Culvert Pipe - 60 in	LF	88.5
1005	Perforated Pipe Edge Drain	LF	1,450
1010	Non-Perforated Pipe - 4 in	LF	130
1024	Perf Pipe Headwall TY 2 - 4 in	EACH	5
1310	Remove Pipe	LF	323
1490	Drop Box Inlet Type 1	EACH	2
1650	Junction Box	EACH	1
1726	Safety Box Inlet - 18 in SDB-1	EACH	23
1727	Safety Box Inlet - 24 in SDB-1	EACH	7
1728	Safety Box Inlet - 18 in DBL SDB-5	EACH	2
1729	Safety Box Inlet - 24 in DBL SDB-5	EACH	7
1987	Delineator for Guardrail B/W	EACH	111
2159	Temp Ditch	LF	19,661
2160	Clean Temp Ditch	LF	9,830
2223	Granular Embankment	CUYD	14.3
2237	Ditching	LF	22
2262	Fence - Woven Wire Type 1	LF	175
2360	Terminal Section No. 1	EACH	10
2367	End Treatment Type 1	EACH	2
2371	End Treatment Type 7	EACH	2
2381	Remove Guardrail	LF	5,437.5
2403	Remove Concrete Masonry	CUYD	0.3
2483	Channel Lining CL II	TON	1,842
2484	Channel Lining CL III	TON	20
2562	Temporary Signs	SQFT	470
2567	Delineator Post	EACH	18
2569	Demobilization	LS	1
2602	Fabric - Geotextile Class I	SQYD	23
2603	Fabric - Geotextile Class 2	SQYD	20.5
2607	Fabric - Geotextile Class II for Pipe	SQYD	2,225

Item	Description	Unit	Quantity
2625	Remove Headwall	EACH	59
2650	Maintain & Control Traffic	LS	1
2671	Portable Changeable Message Sign	EACH	2
2676	Mobilization for Mill & Text	LS	1
2677	Asphalt Pave Milling & Texturing	TON	323
2690	Safeloading	CY	5.4
2697	Edgeline Rumble Strips	LF	6,045
2701	Temporary Silt Fence	LF	19,661
2703	Silt Trap Type A	EACH	27
2704	Silt Trap Type B	EACH	27
2705	Silt Trap Type C	EACH	27
2706	Clean Silt Trap Type A	EACH	27
2707	Clean Silt Trap Type B	EACH	27
2708	Clean Silt Trap Type C	EACH	27
2726	Staking	LS	1
3269	Trim and Remove Trees and Brush	LF	16,015
5950	Erosion Control Blanket	SQYD	10,000
5952	Temp Mulch	SQYD	87,815
5953	Temporary Seeding and Protection	SQYD	65,534.0
5963	Initial Fertilizer	TON	4
5964	Maintenance Fertilizer	TON	6.8
5985	Seeding and Protection	SQYD	131,067.00
5992	Agricultural Limestone	TON	81.20
6406	SBM Alum Sheet Signs 0.080 in	SQFT	117
6410	Steel Post - Type 1	LF	165
6510	Pave Striping - Temp Paint - 4 in	LF	12,000
6568	Pave Marking - Thermo Stop Bar - 24 in	LF	290
6572	Pave Marking - Dotted Lane Exten	LF	291
8100	Concrete Class A	CUYD	74.6
8150	Steel Reinforcement	LB	1,874
21373ND	Remove Signs	EACH	11
21802EC	Guardrail - Steel W Beam - S Face (7 FT Post)	LF	5,273.75
23229EC	High Friction Surface Treatment	SY	1,187
24631EC	Barcode Sign Inventory	EACH	13
24651ED	Concrete Island	SQYD	8
24814EC	Pipeline Inspection	LF	679
24995EC	Pave Striping- Spray Thermo-6 In W	LF	85,840
24996EC	Pave Striping- Spray Thermo-6 In Y	LF	73,291
26130ED	Sloped and Mitered Headwall - 15 in	EACH	1
26131ED	Sloped and Mitered Headwall - 18 in	EACH	9
26132ED	Sloped and Mitered Headwall - 24 in	EACH	8
26175EC	Roadside Regrading	LF	8,762

Guardrail Summary — Jackson County — US 421

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)
RT	Type 1	1186+15	22.465	1198+40	22.697	Type 7	1,125.00		Type 1 shall be Trinity SoftStop System	RT	1186+15	22.465	1198+40	22.697	1,225.00
RT	Terminal Section 1	1198+75	22.704	1207+65	22.872	Terminal Section 1	903.75	1		RT	1198+75	22.704	1207+65	22.872	900.00
RT	Terminal Section 1	1207+80	22.875	1213+13	22.976	Terminal Section 1	552.50	4		RT	1207+80	22.875	1213+13	22.976	537.50
										RT	1213+75	22.988	1214+00	22.992	25.00
LT	Type 1	1230+00	23.295	1235+90	23.407	Terminal Section 1	553.75	1	Type 1 shall be Trinity SoftStop System	LT	1230+00	23.295	1235+90	23.407	600.00
LT	Terminal Section 1	1236+18	23.413	1242+00	23.523	Terminal Section 1	602.50	4		LT	1236+18	23.413	1241+88	23.520	575.00
RT	Terminal Section 1	1408+00	26.667	1418+50	26.866	Type 7	1,007.50	2		RT	1408+00	26.667	1418+50	26.866	1,050.00
RT	Terminal Section 1	1418+75	26.870	1424+00	26.970	Terminal Section 1	528.75	1		RT	1418+75	26.870	1424+00	26.970	525.00

Summary of Items					
G/R Steel W Beam-S Face (7 FT Post)	5,273.75	LF	GR Connector to Bridge End Type A	0	EACH
Remove Guardrail	5,437.50	LF	GR Connector to Bridge End Type A-1	0	EACH
Delineator for Guardrail B/W	111	EACH	GR Connector to Bridge End Type C	0	EACH
End Treatment Type 1	2	EACH	GR Connector to Bridge End Type D	0	EACH
End Treatment Type 2A	0	EACH	Thrie-Beam Transition (TL-2)	0	EACH
End Treatment Type 3	0	EACH	Thrie-Beam Transition (TL-3)	0	EACH
End Treatment Type 4A	0	EACH	DGA	424	TONS
End Treatment Type 7	2	EACH	Asphalt Seal Coat	5.51	TONS
Terminal Section No. 1	10	EACH	Asphalt Seal Aggregate	45.66	TONS
Guardrail-Steel W Beam-S Face A	0	LF		0	LF

NOTES

1. Quantities carried over to the General Summary.
2. Locations and quantities are approximate.
3. Final locations will be determined by the Engineer in the field.

PROPOSED PAVEMENT REPAIR SUMMARY - US 421 JACKSON COUNTY 11-9017.00

Offset	Begin Station	Begin Milepoint	End Station	End Milepoint	Width	#23's (Ton)	DGA 4" (Ton)	Level & Wedge (Ton)	Asphalt Base 8.00" (Ton)	Asphalt Surface 1.5" (Ton)	Asphalt Material for Tack (Ton)	High Friction Surf. (SY)	Mill & Text 1.5" (Ton)	Perforated Pipe Edge Drain 4" (LF)	Non-Perforated Pipe 4" (LF)	Perf Pipe Hdwl TY-2 4" (EACH)	Edgeline Rumble (LF)	Notes
LT	1197+27	22.676	1198+27	22.695	4				2	4	0.2		4				100	Pipe
RT	1217+55	23.060	1219+65	23.099	6	97	33	1	62	12	0.2			210	30	1	210	Shoulder
RT	1224+20	23.186	1225+20	23.205	4				2	4	0.2		4				100	Pipe
RT	1228+24	23.262	1229+24	23.281	4				2	4	0.2		4				100	Pipe
RT	1231+37	23.321	1232+37	23.340	4				2	4	0.2		4				100	Pipe
RT	1235+95	23.408	1236+95	23.427	4				2	4	0.2		4				100	Pipe
RT	1240+92	23.502	1241+92	23.521	4				2	4	0.2		4				100	Pipe
RT	1254+43	23.758	1255+43	23.777	4				2	4	0.2		4				100	Pipe
LT	1258+50	23.835	1265+20	23.962	6	309	103	10	197	37	0.8			670	40	2	670	Shoulder
RT	1272+03	24.091	1273+03	24.110	4				2	4	0.2		4				100	Pipe
RT	1275+29	24.153	1276+29	24.172	4				2	4	0.2		4				100	Pipe
RT	1285+00	24.337	1285+50	24.347	5	20	7	1	13	5	0.2		5				50	Repair
FULL	1287+71	24.388	1288+71	24.407	24				12	22	0.2		22				200	Pipe
LT	1307+75	24.768	1308+50	24.782	4	24	8	1	15	8	0.2		8				75	Repair
LT	1333+50	25.256	1334+50	25.275	4	31	11	1	20	11	0.2		11				100	Repair
FULL	1334+68	25.278	1335+68	25.297	24				12	22	0.2		22				200	Pipe
LT	1338+50	25.350	1339+50	25.369	4				2	4	0.2		4				100	Pipe
LT	1362+55	25.806	1364+75	25.848	6	102	34	3	65	25	0.4		25				220	Pipe / Repair
LT	1371+00	25.966	1372+00	25.985	4				2	4	0.2		4				100	Pipe
LT	1380+50	26.146	1381+50	26.165	6	47	16	2	30	11	0.2		11				100	Repair
FULL	1392+63	26.376	1393+63	26.395	24				6	22	0.2		22				200	Pipe
LT	1399+29	26.502	1400+29	26.521	4				2	4	0.2		4				100	Pipe
LT	1414+56	26.791	1415+56	26.810	4				2	4	0.2		4				100	Pipe
LT	1417+10	26.839	1418+10	26.858	4				2	4	0.2		4				100	Pipe
LT	1420+04	26.895	1421+04	26.914	4				2	4	0.2		4				100	Pipe
RT	1424+00	26.970	1426+85	27.024	6	131	44	4	84	16	0.4			285	30	1	285	Shoulder
LT	1424+00	26.970	1426+85	27.024	6	131	44	4	84	16	0.4			285	30	1	285	Shoulder
FULL	1430+95	27.101	1435+40	27.186	24							1,187						Curve
FULL	1439+50	27.263	1440+50	27.282	24				6	22	0.2		22				200	Pipe
LT	1442+72	27.324	1443+72	27.343	4				2	4	0.2		4				100	Pipe
LT	1445+29	27.373	1446+29	27.392	4				2	4	0.2		4				100	Pipe
LT	1449+00	27.443	1450+00	27.462	4				2	4	0.2		4				100	Pipe
LT	1453+85	27.535	1454+60	27.549	6	35	12		22	4	0.2						75	Entrance
RT	1454+36	27.545	1455+36	27.564	4				2	4	0.2		4				100	Pipe
LT	1457+50	27.604	1458+00	27.614	6	24	8		15	3	0.2						50	Entrance
RT	1465+10	27.748	1469+00	27.822	6					22	0.4		22				390	Resurface Shoulder
RT	1471+20	27.864	1474+05	27.918	6					16	0.4		16				285	Resurface Shoulder
FULL	1510+72	28.612	1511+72	28.631	24				6	22	0.2		22				200	Pipe
FULL	1518+47	28.759	1519+47	28.778	24				6	22	0.2		22				200	Pipe
FULL	1524+50	28.873	1525+25	28.887	24					17	0.2		17				150	Resurface
				TOTAL		**951**	**320**	**27**	**693**	**411**	**9.4**	**1,187**	**323**	**1,450**	**130**	**5**	**6,045**	

Item	Description	Unit	Quantity
1	DGA Base	TON	320
80	Crushed Agg. #23	TON	951
190	Leveling & Wedging PG 64-22	TON	27
212	CL2 Asph Base 1.00D PG64-22	TON	693
307	CL2 Asph Surf 0.38B PG64-22	TON	411
356	Asphalt Material for Tack	TON	9.4
1005	Perforated Pipe Edge Drain - 4in	LF	1,450
1010	Non-Perforated Pipe - 4in	LF	130
1024	Perf Pipe Headwall TY 2 - 4in	EACH	5
2676	Mobilization for Mill & Text	LS	1
2677	Asphalt Pave Milling & Texturing	TON	323
2697	Edgeline Rumble Strips	LF	6,045
23229EC	High Friction Surface Treatment	SY	1,187

NOTES

1. Quantities carried over to the General Summary.
2. Locations and quantities are approximate.
3. Final locations will be determined by the Engineer in the field.

PIPE REPLACEMENT & EXTENSION SUMMARY

Mile Point	Station	Existing					Proposed																				Comments
		Pipe Size, Type	Left Hdwl	Right Hdwl	Skew	Length (LF)	Remove Pipe (LF)[3]		Remove Headwall (EA)		Pipe Extension Legth (LF)		Class A Concrete for Intermediate Anchor/Collar (CU YD)[4]	Entrance Pipe 15" (LF)	Entrance Pipe 18" (LF)	Culvert Pipe 15" (LF)	Culvert Pipe 18" (LF)	Culvert Pipe 24" (LF)	Safeload (CY)	Headwall or Drainage Box		Roadside Regrading (LF)		Ditching (LF) (Perpndclr to Rdwy)		Channel Lining Cl II (TON)		
							Left	Right	Left	Right	Left	Right								Left	Right	Left	Right	Left	Right	Left	Right	
22.41	1183+40	18" RCP	Std.	Std.	0°	45		4		1		11	1.13				11				Sloped & Mitered Conc. 18 Inch		100*						Clean out pipe
22.51	1188+56	18" RCP	Std.	Std.	0°	68	4		1		6		1.13				6			Drop Box Inlet Type 1		125*						Clean out pipe / H=4.85'
22.69	1197+77	18" RCP	Ell	Std.	0°	40	4		1		6		1.13				6			Safety Box Inlet 18 Inch		100*						Clean out pipe
22.78	1202+86	18" RCP/ 15" CMP	Ell	Std.	0°	60	4		1		4		1.13				4			Safety Box Inlet 18 Inch		100*						Clean out pipe
22.99	1213+76	6'x3' STONE	Std.	Std.	0°	48																					See Details in Structures Sheet
23.06	1217+49	18" RCP	Std.	Std.	0°	35																					Clean out pipe
23.20	1224+70	18" RCP	---	Std.	0°	44		4		1		7	1.13				7				Safety Box Inlet 18 inch		85*					Clean out pipe
23.27	1228+74	18" RCP	---	Std.	0°	49		4		1		9	1.13				9				Safety Box Inlet 18 inch		24*					Clean out pipe
23.33	1231+87	18" RCP	Std.	Std.	0°	44		4		1		5	1.13				5				Safety Box Inlet 18 inch		52*					Clean out pipe
23.42	1236+45	18" RCP	Std.	Ell	0°	31		4		1		5	1.13				5				Safety Box Inlet 18 inch		95*					Clean out pipe
23.51	1241+42	18" RCP	Std.	Ell	0°	39		4		1		5	1.13				5				Safety Box Inlet 18 inch		100*					Clean out pipe
23.62	1247+33	24" RCP	Std.	Std.	0°	40		4		1		14	1.68					14			Sloped & Mitered Conc. 24 Inch		100*					Clean out pipe
23.77	1254+93	24" RCP	Std.	Std.	0°	37	4	4	1	1	15	11	3.36					26		Sloped & Mitered Conc. 24 Inch	DBL. Safety Box Inlet 24 inch	100*	40*					Clean out pipe
24.10	1272+53	24" RCP	Std.	Std.	0°	34		4		1		8	1.68					8			DBL. Safety Box Inlet 24 inch		100*					Clean out pipe
24.16	1275+79	24" RCP	Std.	Std.	0°	34		4		1		11	3.36					11			Safety Box Inlet 24 inch	100*	50*					Clean out pipe
24.40	1288+21	18" RCP	Std.	Std.	0°	31	31		1	1								42		Sloped & Mitered Conc. 24 Inch	Safety Box Inlet 24 inch	100*	50*					Encase in flowable fill
24.50	1293+73	18" RCP	Std.	Std.	0°	41	4	4	1	1	11	6	2.26				17			Sloped & Mitered Conc. 18 Inch	Sloped & Mitered Conc. 18 Inch	100*	100*					Clean out pipe

PIPE REPLACEMENT & EXTENSION SUMMARY

Mile Point	Station	Existing					Proposed																				Comments
		Pipe Size, Type	Left Hdwl	Right Hdwl	Skew	Length (LF)	Remove Pipe (LF)[3]		Remove Headwall (EA)		Pipe Extension Legth (LF)		Class A Concrete for Intermediate Anchor/Collar (CU YD)[4]	Entrance Pipe 15" (LF)	Entrance Pipe 18" (LF)	Culvert Pipe 15" (LF)	Culvert Pipe 18" (LF)	Culvert Pipe 24" (LF)	Safeload (CY)	Headwall or Drainage Box		Roadside Regrading (LF)		Ditching (LF) (Perpndclr to Rdwy)		Channel Lining Cl II (TON)		
							Left	Right	Left	Right	Left	Right								Left	Right	Left	Right	Left	Right	Left	Right	
24.81	1310+21	24" RCP	Std.	Std.	0°	33		4		1		8	1.68					8			Sloped & Mitered Conc. 24 Inch								Clean out pipe
25.06	1323+09	24" RCP	Std.	Std.	0°	37	4	4	1	1	9	13	3.36				22			Safety Box Inlet 24 Inch	Sloped & Mitered Conc. 18 Inch								Clean out pipe
25.29	1335+18	18" RCP	Std.	Std.	0°	34	34		1	1							46			Safety Box Inlet 18 Inch	Sloped & Mitered Conc. 18 Inch								Encase in flowable fill
25.36	1339+00	24" RCP	Std.	Std.	0°	34	4	4	1	1	9	15	3.36					24		DBL. Safety Box Inlet 24 Inch	Sloped & Mitered Conc. 24 Inch								Clean out pipe
25.82	1363+05	24" RCP	Ell	Std.	0°	39	4		1		8		1.68					8		Safety Box Inlet 24 Inch									Clean out pipe
25.98	1371+50	18" RCP / 15" HDPE	Ell	---	0°	61	4		1		7		1.13				7			Safety Box Inlet 18 Inch									Clean out pipe
26.25	1385+84	24" RCP	---	Std.	0°	67		4		1		8	1.68					8			DBL. Safety Box Inlet 24 inch								Clean out pipe
26.39	1393+13	18" RCP	Ell	Std.	0°	43			1	1								48	2.7	Safety Box Inlet 24 Inch	Sloped & Mitered Conc. 24 Inch								Encase in flowable fill
26.44	1396+11	18" RCP	Ell	Std.	0°	43	4	4	1	1	7	17	2.26				24			Safety Box Inlet 18 Inch	Sloped & Mitered Conc. 18 Inch				10		5	Clean out pipe / Consent & Release Required
26.51	1399+79	18" RCP	Ell	Std.	0°	43	4		1		8		1.13				8			Safety Box Inlet 18 Inch									Clean out pipe
26.63	1406+00	18" RCP	Ell	---	0°	105	4		1		6		1.13				6			Safety Box Inlet 18 Inch									Clean out pipe
26.67	1408+28	18" RCP	Ell	Std.	0°	44	4		1		6		1.13				6			Safety Box Inlet 18 Inch									Clean out pipe
26.73	1411+24	18" RCP	Ell	---	0°	53	4		1		6		1.13				6			Drop Box Inlet Type 1									Clean out pipe / H=4.00'
26.80	1415+06	18" RCP	Ell	Std.	0°	37	4		1		7		1.13				7			Safety Box Inlet 18 Inch									Clean out pipe
26.85	1417+60	18" RCP	Ell	---	0°	54	4		1		7		1.13				7			Safety Box Inlet 18 Inch									Clean out pipe
26.90	1420+54	24" RCP	Ell	---	0°	43	4		1		9		1.68					9		Safety Box Inlet 24 Inch									Clean out pipe

PIPE REPLACEMENT & EXTENSION SUMMARY

Mile Point	Station	Existing					Proposed																				Comments
		Pipe Size, Type	Left Hdwl	Right Hdwl	Skew	Length (LF)	Remove Pipe (LF)[3]		Remove Headwall (EA)		Pipe Extension Legth (LF)		Class A Concrete for Intermediate Anchor/Collar (CU YD)[4]	Entrance Pipe 15" (LF)	Entrance Pipe 18" (LF)	Culvert Pipe 15" (LF)	Culvert Pipe 18" (LF)	Culvert Pipe 24" (LF)	Safeload (CY)	Headwall or Drainage Box		Roadside Regrading (LF)		Ditching (LF) (Perpndclr to Rdwy)		Channel Lining Cl II (TON)		
							Left	Right	Left	Right	Left	Right								Left	Right	Left	Right	Left	Right	Left	Right	
27.27	1440+00	15" RCP	Ell	Std.	0°	35	35		1	1							43			Safety Box Inlet 18 Inch	Sloped & Mitered Conc. 18 Inch							Encase in flowable fill
27.33	1443+22	15" RCP	Std.	Std.	0°	37	4		1		11		0.91			11				Sloped & Mitered Conc. 15 Inch								Clean out pipe
27.38	1445+79	18" RCP	Std.	Std.	0°	38	4		1		7						7			Safety Box Inlet 18 Inch								Clean out pipe
27.45	1449+50	18" RCP	Std.	Std.	0°	43	4		1		8						8			Safety Box Inlet 18 Inch								Clean out pipe
27.55	1454+86	24" RCP	Std.	Std.	0°	34	4	4	1	1	9	14	3.36					23		Sloped & Mitered Conc. 24 Inch	Junction Box TY. A							Clean out pipe / JB-A No. 7 / Connect Entr. Pipe / Consent & Release Req.
27.61	1458+05	18" RCP	Std.	Std.	0°	43	4	4	1	1	5	15	2.26				20			Safety Box Inlet 18 Inch	Sloped & Mitered Conc. 18 Inch							Clean out pipe / Consent & Release Required
27.67	1461+05	18" RCP	---	---	0°																						Clean out pipe
27.71	1463+02	18" RCP	Ell	Std.	0°	43	4		1		5		1.13				5			Safety Box Inlet 18 Inch								Clean out pipe
27.77	1466+27	24" RCP	Std.	DBI	0°	41	4		1		5		1.68					5		DBL. Safety Box Inlet 24 Inch								Clean out pipe
28.02	1479+25	18" RCP	Std.	Std.	0°	43		4		1		8	1.13				8				Safety Box Inlet 18 inch							Clean out pipe / Remove Tree & Stump at outlet
28.30	1493+99	24" RCP	Std.	Std.	0°	43	4		1		6		1.68					6		DBL. Safety Box Inlet 24 Inch								Clean out pipe
28.38	1498+64	18" RCP	Std.	Std.	0°	40	4		1		6		1.13				6			DBL. Safety Box Inlet 18 Inch								Clean out pipe
28.41	1500+22	24" RCP	Std.	Std.	0°	46	4		1		6		1.68					6		DBL. Safety Box Inlet 24 Inch								Clean out pipe
28.46	1502+45	18" RCP	Std.	Std.	0°	49	4		1		7		1.13				7			DBL. Safety Box Inlet 18 Inch								Clean out pipe
28.62	1511+22	18" RCP	---	Ell	0°	42				1								49	2.7	Sloped & Mitered Conc. 24 Inch	Safety Box Inlet 24 inch				12	6		Encase in flowable fill / Consent & Release Required
28.77	1518+97	Unk.	Ell	Std.	0°	31	31		1	1							40			Safety Box Inlet 18 Inch	Sloped & Mitered Conc. 18 Inch							Encase in flowable fill

PIPE REPLACEMENT & EXTENSION SUMMARY

Mile Point	Station	Existing					Proposed																				Comments
		Pipe Size, Type	Left Hdwl	Right Hdwl	Skew	Length (LF)	Remove Pipe (LF)[3]		Remove Headwall (EA)		Pipe Extension Legth (LF)		Class A Concrete for Intermediate Anchor/Collar (CU YD)[4]	Entrance Pipe 15" (LF)	Entrance Pipe 18" (LF)	Culvert Pipe 15" (LF)	Culvert Pipe 18" (LF)	Culvert Pipe 24" (LF)	Safeload (CY)	Headwall or Drainage Box		Roadside Regrading (LF)		Ditching (LF) (Perpndclr to Rdwy)		Channel Lining Cl II (TON)		
							Left	Right	Left	Right	Left	Right								Left	Right	Left	Right	Left	Right	Left	Right	
29.21	1542+49	18" RCP	Std.	Ell	0°	43	4		1		5		1.13				5				Safety Box Inlet 18 inch							Clean out pipe
					TOTALS:		323 LF		59 EA				63.34 CU YD	0 LF	0 LF	11 LF	363 LF	295 LF	5.40 CU YD			0 LF		22 LF		11 TON		

Headwall Totals		
Drop Box Inlet Type 1	2	Each
Junction Box	1	Each
Safety Box Inlet 18 Inch	23	Each
Safety Box Inlet 24 Inch	7	Each
DBL. Safety Box Inlet 18 Inch	2	Each
DBL. Safety Box Inlet 24 Inch	7	Each
Sloped & Mitered Conc. Headwall - 15"	1	Each
Sloped & Mitered Conc. Headwall - 18"	9	Each
Sloped & Mitered Conc. Headwall - 24"	8	Each

* These locations of Roadside Regrading are already accounted for in the Roadside Regrading Summary and are NOT included in the TOTALS on this Pipe Replacement & Extension Summary.

NOTES:

1. These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the contractor and approved by the engineer in the field.
2. Clearing and grubbing necessary to install draingage items, as directed by the Engineer, will be considered part of Site Preparation, which is incidental to the Contract.
3. Remove Pipe shall be incidental to the construction of new pipe.
4. See Standard Drawing RDX-060-03 for Intermediate Anchor details.

Roadside Regrading Summary — Jackson County — US 421

Notes:
* The "Figure References" noted below refer to the Figure number within the Roadside Regrading and Embankment Benching Detail Sheet that is the closest representation of the intended Roadside Regrading.
** The Estimated Volumes of Excavation and Embankment are provided for informational purposes ONLY. The Department gives no guarantee to the accuracy of the estimated volumes. The Bidder must draw his/her own conclusion. Payment will be based on the Linear Footage of Roadside Regrading performed, regardless of the accuracy of the Estimated Volumes of Excavation and Embankment.

LOCATION					Length (LF)	Estimated Excavation Volume** (CU YD)	Estimated Embankment Volume** (CU YD)	Roadside Regrading Detail Sheet Figure Ref.*	Embankment Benching Required?	Target Fill Slope or Ditch Foreslope	Target Ditch Backslope	Include DGA Wedge? (Yes/No)	DGA (TONS)	Asphalt Seal Coat (TON)	Asphalt Seal Aggregate (TON)	Channel Line Ditch, Fill Slope or Cut Slope? (Yes/No)	Channel Lining Class II (TONS)	Geotex. Fabric Class 1 (SQ YD)	Remarks
Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint															
RT	1182+90	22.403	1183+90	22.422	100		25	Figure 2	No	3 : 1		No							
LT	1187+35	22.488	1188+60	22.511	125	18	6	Figure 9	No	3 : 1	3 : 1	No				Yes - Ditch	68		
LT	1189+50	22.528	1194+00	22.614	450	13		Figure 9	No	3 : 1	2 : 1	No				Yes - Ditch	244		
LT	1194+50	22.623	1197+77	22.685	327	14	8	Figure 9	No	3 : 1	2 : 1	No				Yes - Ditch	178		
LT	1198+00	22.689	1202+86	22.781	486	12		Figure 9	No	3 : 1	2 : 1	No				Yes - Ditch	264		
LT	1203+00	22.784	1209+40	22.905	640	6	19	Figure 9	No	3 : 1	2 : 1	No				Yes - Ditch	347		
RT	1212+70	22.968	1214+10	22.994	140	264	227	Figure 2	No	3 : 1		No							See Struct. Sheet
RT	1223+85	23.179	1224+70	23.195	85	6	1	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1228+50	23.267	1228+74	23.272	24	7		Figure 9	No	3 : 1	2 : 1	No				No			
RT	1231+35	23.321	1231+87	23.331	52	0	5	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1235+50	23.400	1236+45	23.418	95	4		Figure 9	No	3 : 1	2 : 1	No				No			
RT	1237+00	23.428	1243+00	23.542	600	3	10	Figure 9	No	3 : 1	2 : 1	Yes	62	0.80	6.67	Yes - Ditch	325		
RT	1246+83	23.614	1247+83	23.633	100	2	8	Figure 2	No	3 : 1		No				No			
LT	1254+43	23.758	1255+43	23.777	100	6		Figure 2	No	3 : 1		No				No			
RT	1254+73	23.764	1255+13	23.771	40	1		Figure 9	No	3 : 1	3 : 1	No				No			
RT	1272+03	24.091	1273+03	24.110	100		6	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1275+25	24.152	1276+25	24.171	100	107	64	Figure 6	No	6 : 1		Yes	11	0.14	1.12	No			
RT	1275+29	24.153	1275+79	24.163	50		3	Figure 9	No	3 : 1	3 : 1	No				No			
LT	1287+71	24.388	1288+71	24.407	100		3	Figure 2	No	3 : 1		No				No			
RT	1288+21	24.398	1288+71	24.407	50	4	1	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1293+23	24.493	1294+23	24.512	100	5	6	Figure 2	No	3 : 1		No				No			
RT	1293+23	24.493	1294+23	24.512	100	3		Figure 9	No	3 : 1	2 : 1	No				No			
RT	1309+71	24.805	1310+71	24.824	100	13	3	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1322+59	25.049	1323+59	25.068	100	10	1	Figure 2	No	3 : 1		No				No			
LT	1323+09	25.059	1323+59	25.068	50		1	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1334+68	25.278	1335+68	25.297	100		1	Figure 2	No	3 : 1		No				No			
LT	1335+18	25.288	1335+68	25.297	50	1		Figure 9	No	3 : 1	2 : 1	No				No			
LT	1338+50	25.350	1339+50	25.369	100	8		Figure 9	No	3 : 1	2 : 1	No				No			
RT	1338+50	25.350	1339+50	25.369	100	6	1	Figure 2	No	3 : 1		No				No			
RT	1341+40	25.405	1341+90	25.415	50	88		Figure 5	No	2 : 1		Yes	6	0.07	0.56	No	87	23	
RT	1351+85	25.603	1353+85	25.641	200	228	116		No	6 : 1		Yes	21	0.27	2.23	No			
LT	1363+05	25.815	1364+55	25.844	150		12	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1371+50	25.975	1372+00	25.985	50	1		Figure 9	No	3 : 1	2 : 1	No				No			
RT	1385+34	26.238	1386+34	26.256	100		2	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1391+00	26.345	1395+00	26.420	400		143	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1392+63	26.376	1393+13	26.385	50		18	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1395+50	26.430	1396+50	26.449	100		12	Figure 2	No	3 : 1		No				No			
LT	1395+61	26.432	1396+11	26.441	50	3		Figure 9	No	3 : 1	2 : 1	No				No			
LT	1399+29	26.502	1399+79	26.511	50	2	2	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1405+50	26.619	1406+00	26.629	50	2		Figure 9	No	3 : 1	2 : 1	No				No			
LT	1407+78	26.663	1408+28	26.672	50	7		Figure 9	No	3 : 1	2 : 1	No				No			
LT	1410+24	26.709	1411+24	26.728	100	4	2	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1414+56	26.791	1415+06	26.800	50	2	2	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1417+10	26.839	1417+60	26.848	50		2	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1420+04	26.895	1420+54	26.904	50	2		Figure 9	No	3 : 1	2 : 1	No				No			

Roadside Regrading Summary — Jackson County — US 421

Notes:
* The "Figure References" noted below refer to the Figure number within the Roadside Regrading and Embankment Benching Detail Sheet that is the closest representation of the intended Roadside Regrading.
** The Estimated Volumes of Excavation and Embankment are provided for informational purposes ONLY. The Department gives no guarantee to the accuracy of the estimated volumes. The Bidder must draw his/her own conclusion. Payment will be based on the Linear Footage of Roadside Regrading performed, regardless of the accuracy of the Estimated Volumes of Excavation and Embankment.

LOCATION					Length (LF)	Estimated Excavation Volume** (CU YD)	Estimated Embankment Volume** (CU YD)	Roadside Regrading Detail Sheet Figure Ref.*	Embankment Benching Required?	Target Fill Slope or Ditch Foreslope	Target Ditch Backslope	Include DGA Wedge? (Yes/No)	DGA (TONS)	Asphalt Seal Coat (TON)	Asphalt Seal Aggregate (TON)	Channel Line Ditch, Fill Slope or Cut Slope? (Yes/No)	Channel Lining Class II (TONS)	Geotex. Fabric Class 1 (SQ YD)	Remarks
Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint															
RT	1439+50	27.263	1440+50	27.282	100		115	Figure 3	No	2 : 1		No				No			
LT	1440+00	27.273	1440+50	27.282	50	1	1	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1442+72	27.324	1443+72	27.343	100	20		Figure 9	No	3 : 1	2 : 1	No				No			
LT	1445+79	27.382	1446+29	27.392	50	2		Figure 9	No	3 : 1	2 : 1	No				No			
LT	1449+50	27.453	1450+00	27.462	50		2	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1452+00	27.500	1453+25	27.524	125	66	108	Figure 2	Yes	3 : 1		Yes	7	0.09	0.70	No			Consent & Release Required
RT	1454+50	27.547	1455+00	27.557	50		1	Figure 2	No	4 : 1		No				No			Consent & Release Required
LT	1454+86	27.554	1455+36	27.564	50	2		Figure 9	No	3 : 1	2 : 1	No				No			Consent & Release Required
RT	1457+75	27.609	1460+25	27.656	250	291	541	Figure 6	Yes	3 : 1		Yes	13	0.17	1.39	No			Consent & Release Required
LT	1463+02	27.709	1463+52	27.718	50		1	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1465+77	27.761	1466+77	27.780	100	12		Figure 9	No	3 : 1	2 : 1	No				No			
LT	1478+75	28.007	1479+25	28.016	50		7		No			No				No			Clear Ex. Outlet of Silt; See Pipe Section for ditch shape
RT	1479+25	28.016	1479+75	28.026	50		4	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1493+49	28.286	1494+49	28.305	100		7	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1498+14	28.374	1499+14	28.393	100	2	11	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1499+72	28.404	1500+72	28.423	100	2	1	Figure 9	No	3 : 1	2 : 1	No				No			
LT	1501+95	28.446	1502+95	28.465	100		10	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1505+25	28.509	1508+75	28.575	350	253			N/A			No				No			Hoe Ram Rock Face - See Typical Sections & X-secs
LT	1508+75	28.575	1512+25	28.641	350	437	844	Figure 6	Yes	3 : 1		Yes	18	0.24	1.95	No			Consent & Release Required
RT	1511+22	28.622	1511+72	28.631	50	2	1	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1518+90	28.767	1519+50	28.778	60		3	Figure 8	No	3 : 1	2 : 1	No				No			
LT	1518+97	28.768	1519+25	28.774	28		2	Figure 9	No	4 : 1	4 : 1	No				No			
LT	1520+40	28.795	1521+75	28.821	135	70	62	Figure 9	Yes	3 : 1	2 : 1	Yes	7	0.09	0.75	Yes - Ditch	68		
RT	1542+43	29.213	1542+93	29.222	50		14	Figure 9	No	3 : 1	2 : 1	No				No			
RT	1549+50	29.347	1551+00	29.375	150		26	Figure 9	No	3 : 1	2.5 : 1	No				No			

Summary of Items

Roadside Regrading	8,762	LF		Asphalt Seal Coat	2	TONS		Channel Lining Class II	1,581	TONS
DGA	145	TONS		Asphalt Seal Aggregate	15	TONS		Fabric - Geotextile Class I	23	SQ YD

NOTES

1. Quantities carried over to the General Summary.
2. Locations and quantities are approximate.
3. Final locations will be determined by the Engineer in the field.

Sign Summary — Jackson County — US 421

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										
	RT		1170+07	22.160	WB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	12			12	1
	RT		1172+00	22.197	WB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	12			12	1
	RT		1176+16	22.276	WB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	12			12	1
	LT		1241+80	23.519	EB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	12			12	1
	RT		1252+92	23.730	WB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
	RT		1265+48	23.967	WB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
	LT		1316+25	24.929	EB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
	RT		1345+31	25.479	WB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
	LT		1386+13	26.252	EB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
	LT		1433+08	27.142	EB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
	LT		1503+93	28.484	EB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
	RT		1526+12	28.904	WB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
	LT		1559+11	29.529	EB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1

Summary of Items		
SBM Alum Sheet Signs 0.080 INCH	117.00	SQ FT
SBM Alum Sheet Signs 0.125 INCH	0.00	SQ FT
Barcode Sign Inventory	13	EACH

Summary of Items		
Steel Post - Type 1	165	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" Thermo (LF)
21.445	1132+30	21.463	1133+25	Solid Left, Broken Right	127
21.463	1133+25	21.553	1138+00	Solid Double	950
21.553	1138+00	21.634	1142+25	Solid Right, Broken Left	567
21.634	1142+25	21.648	1143+00	Solid Double	150
21.648	1143+00	21.733	1147+50	Solid Left, Broken Right	600
21.733	1147+50	21.747	1148+25	Solid Double	150
21.747	1148+25	21.818	1152+00	Solid Right, Broken Left	500
21.818	1152+00	23.087	1219+00	Solid Double	13400
23.087	1219+00	23.163	1223+00	Solid Left, Broken Right	534
23.163	1223+00	23.726	1252+75	Solid Double	5950
23.726	1252+75	23.878	1260+75	Solid Left, Broken Right	1067
23.878	1260+75	23.887	1261+25	Solid Double	100
23.887	1261+25	24.006	1267+50	Solid Right, Broken Left	834
24.006	1267+50	24.039	1269+25	Solid Double	350
24.039	1269+25	24.205	1278+00	Solid Left, Broken Right	1167
24.205	1278+00	24.318	1284+00	Skip Stripe	200
24.318	1284+00	24.432	1290+00	Solid Right, Broken Left	800
24.432	1290+00	24.943	1317+00	Solid Double	5400
24.943	1317+00	25.114	1326+00	Solid Left, Broken Right	1200
25.114	1326+00	25.308	1336+25	Skip Stripe	342
25.308	1336+25	25.436	1343+00	Solid Right, Broken Left	900
25.436	1343+00	26.458	1397+00	Solid Double	10800
26.458	1397+00	26.534	1401+00	Solid Left, Broken Right	534
26.534	1401+00	26.610	1405+00	Solid Double	800
26.610	1405+00	26.723	1411+00	Solid Right, Broken Left	800
26.723	1411+00	26.847	1417+50	Solid Double	1300
26.847	1417+50	26.970	1424+00	Solid Left, Broken Right	867
26.970	1424+00	27.121	1432+00	Solid Right, Broken Left	1067
27.121	1432+00	28.049	1481+00	Solid Double	9800
28.049	1481+00	28.134	1485+50	Solid Left, Broken Right	600
28.134	1485+50	28.201	1489+00	Solid Double	700
28.201	1489+00	28.390	1499+00	Solid Left, Broken Right	1334
28.390	1499+00	28.409	1500+00	Solid Double	200
28.409	1500+00	28.542	1507+00	Solid Right, Broken Left	934
28.542	1507+00	28.580	1509+00	Solid Double	400
28.580	1509+00	28.636	1512+00	Solid Left, Broken Right	400
28.636	1512+00	28.693	1515+00	Skip Stripe	100
28.693	1515+00	28.835	1522+50	Solid Right, Broken Left	1000
28.835	1522+50	29.091	1536+00	Solid Double	2700
29.091	1536+00	29.242	1544+00	Solid Left, Broken Right	1067

29.242	1544+00	29.299	1547+00	Skip Stripe	100
29.299	1547+00	29.413	1553+00	Solid Right, Broken Left	800
29.413	1553+00	29.574	1561+50	Solid Double	1700
				TOTAL	**73,291**

PROPOSED PAVEMENT MARKINGS - EDGELINE

Begin MP	Begin Station	End MP	End Station	Description	6" Thermo White (LF)		Dotted Lane Ext. (LF)	
					Left	Right	Left	Right
21.445	1132+30	29.574	1561+50	Solid Single White	42,920	42,920		
21.559	1138+32	21.575	1139+14	Dotted White				
21.569	1138+85	21.581	1139+50	Dotted White				
22.140	1169+00	22.162	1170+13	Dotted White				28
22.187	1171+48	22.203	1172+30	Dotted White				21
22.434	1184+52	22.453	1185+53	Dotted White			25	
23.518	1241+75	23.533	1242+56	Dotted White			20	
23.717	1252+26	23.734	1253+15	Dotted White				22
24.665	1302+33	24.677	1302+92	Dotted White			15	
24.928	1316+19	24.939	1316+78	Dotted White			15	
25.471	1344+89	25.480	1345+36	Dotted White			12	
26.185	1382+56	26.205	1383+65	Dotted White			27	
26.251	1386+05	26.264	1386+75	Dotted White			18	
27.133	1432+60	27.155	1433+76	Dotted White			29	
28.485	1504+00	28.495	1504+55	Dotted White			14	
28.663	1513+41	28.669	1513+72	Dotted White			8	
28.893	1525+55	28.906	1526+25	Dotted White			18	
29.528	1559+09	29.544	1559+90	Dotted White			20	
				TOTAL	**42,920**	**42,920**	**220**	**71**

PROPOSED PAVEMENT MARKINGS - THERMO

MP	Station	Offset	Description	24" Stop Bar (LF)
21.564	1138+60	LT	For S. Tree Rd	15
21.575	1139+15	RT	For KY 3446	15
22.058	1164+68	LT	For John St.	10
22.157	1169+89	RT	For KY 2004	15
22.197	1172+00	RT	For Dollar Store Y	15
22.443	1185+00	LT	For Lodge Hall Rd	15
23.523	1242+00	LT	For Clover Bottom Creek Rd	15

23.726	1252+75	RT	For Williams Hollow Rd	15
23.762	1254+65	RT	For Dean Rd	15
23.965	1265+35	RT	For Durham School Rd	15
24.931	1316+35	LT	For Lindsey Hollow Rd	15
25.110	1325+80	LT	For Golden Rd	15
25.478	1345+25	RT	For Azbill Rd	15
26.193	1383+00	LT	For KY 1955	15
26.255	1386+25	LT	For Rice Hill School Rd	15
27.145	1433+25	LT	For Cave Springs Rd	15
28.490	1504+25	LT	For Amos Baker Rd	15
28.666	1513+54	LT	For Baker Rd	10
28.902	1526+00	RT	For KY 3447	15
29.531	1559+25	LT	For KY 1912	15
			TOTAL	**290**

Item	Description	Unit	Quantity
6568	Pave Marking-Thermo Stop Bar-24 in	LF	290
6572	Pave Marking-Dotted Lane Ext	LF	291
24995EC	Pave Striping-Spray Thermo-6 IN W	LF	85,840
24996EC	Pave Striping-Spray Thermo-6 IN Y	LF	73,291

NOTES

1. These items, quantities, and locations are approximate and are intended to provide a basis for bid.
2. Final locations and quantities will be determined by the contractor and approved by the engineer in the field.
3. All quantities were carried over to the General Summary.
4. No deductions for approach roads where made to these quantities.

Trim and Remove Trees and Brush Summary — Jackson County — US 421

Notes:
* The intent of the Remarks column is to provide the contractor with the an approximate level of effort for each location. Refer to the Staking Note and Special Note for Tree Stump and Brush Removal for further details about expected level of effort, particularly Part B of the Construction Methods which describes when complete removal of trees are required.
** Approximate Horizontal Offset Dimension for Tree Clearing. Actual Dimension shall be determined in the field by the Engineer at the time of construction. Refer to the Staking Note.

LOCATION					Length (LF)	"X" Dimension**	03269 - TRIM & REMOVE TREES & BRUSH - LF *					24894EC REMOVE STUMP EACH	Remarks *
Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint			Case 1 * Tree Trimming without Undergrowth Removal	Case 1B * Tree Trimming with Undergrowth Removal	Case 2 * Tree Trimming and/or Tree Removal without Undergrowth Removal	Case 2B * Tree Trimming and/or Tree Removal with Undergrowth Removal	Case 3B * Undergrowth Removal Only		
RT	1178+60	22.322	1178+65	22.323	**5**	5	X						
LT	1197+00	22.670	1203+50	22.794	**650**	10	X						
RT	1233+00	23.352	1247+00	23.617	**1400**	5	X						
RT	1293+00	24.489	1298+00	24.583	**500**	5	X						
RT	1302+00	24.659	1312+00	24.848	**1000**	10	X						
LT	1318+00	24.962	1322+00	25.038	**400**	10	X						
LT	1328+50	25.161	1332+00	25.227	**350**	10	X						
LT	1340+54	25.389	1340+59	25.390	**5**	10	X						
RT	1342+58	25.428	1342+63	25.429	**5**	10	X						REMOVE TREE STA. 1342+58
RT	1345+75	25.488	1345+80	25.489	**5**	5	X						
RT	1347+00	25.511	1350+00	25.568	**300**	5	X						
RT	1351+80	25.602	1351+85	25.603	**5**	5	X						
LT	1355+00	25.663	1364+00	25.833	**900**	5			X				REMOVE TREE STA. 1362+25
RT	1358+00	25.720	1361+35	25.783	**335**	5	X						
LT	1369+00	25.928	1371+00	25.966	**200**	5	X						
RT	1392+40	26.371	1394+50	26.411	**210**	10	X						
LT	1405+00	26.610	1423+00	26.951	**1800**	5	X						
RT	1408+25	26.671	1417+70	26.850	**945**	5	X						
LT	1429+00	27.064	1432+75	27.135	**375**	5	X						
LT	1438+50	27.244	1453+00	27.519	**1450**	5	X						
RT	1439+50	27.263	1452+00	27.500	**1250**	5	X						
LT	1466+45	27.774	1466+50	27.775	**5**				X				REMOVE TREE STA. 1466+47
LT	1477+00	27.973	1478+00	27.992	**100**	5	X						
LT	1479+00	28.011	1480+00	28.030	**100**	10			X				REMOVE TREE STA. 1479+67
RT	1479+62	28.023	1479+67	28.024	**5**	5	X						
LT	1484+50	28.116	1485+70	28.138	**120**	5	X						
LT	1490+00	28.220	1492+00	28.258	**200**	5	X						
LT	1499+00	28.390	1504+00	28.485	**500**	5	X						
RT	1502+25	28.452	1505+00	28.504	**275**	5	X						
LT	1506+04	28.523	1506+09	28.524	**5**	5	X						
RT	1506+60	28.534	1510+25	28.603	**365**	5				X			WITH ROCK CUT
LT	1506+65	28.535	1506+70	28.536	**5**	5	X						
LT	1509+00	28.580	1513+00	28.655	**400**	5	X						
LT	1513+75	28.670	1517+25	28.736	**350**	5	X						
RT	1519+00	28.769	1525+50	28.892	**650**	5	X						
LT	1519+17	28.772	1519+22	28.773	**5**	5	X						
LT	1521+00	28.807	1525+75	28.897	**475**	5	X						
LT	1531+62	29.008	1531+67	29.009	**5**	5	X						
RT	1532+67	29.028	1532+72	29.029	**5**	5	X						

Trim and Remove Trees and Brush Summary Jackson County US 421

Notes:
* The intent of the Remarks column is to provide the contractor with the an approximate level of effort for each location. Refer to the Staking Note and Special Note for Tree Stump and Brush Removal for further details about expected level of effort, particularly Part B of the Construction Methods which describes when complete removal of trees are required.
** Approximate Horizontal Offset Dimension for Tree Clearing. Actual Dimension shall be determined in the field by the Engineer at the time of construction. Refer to the Staking Note.

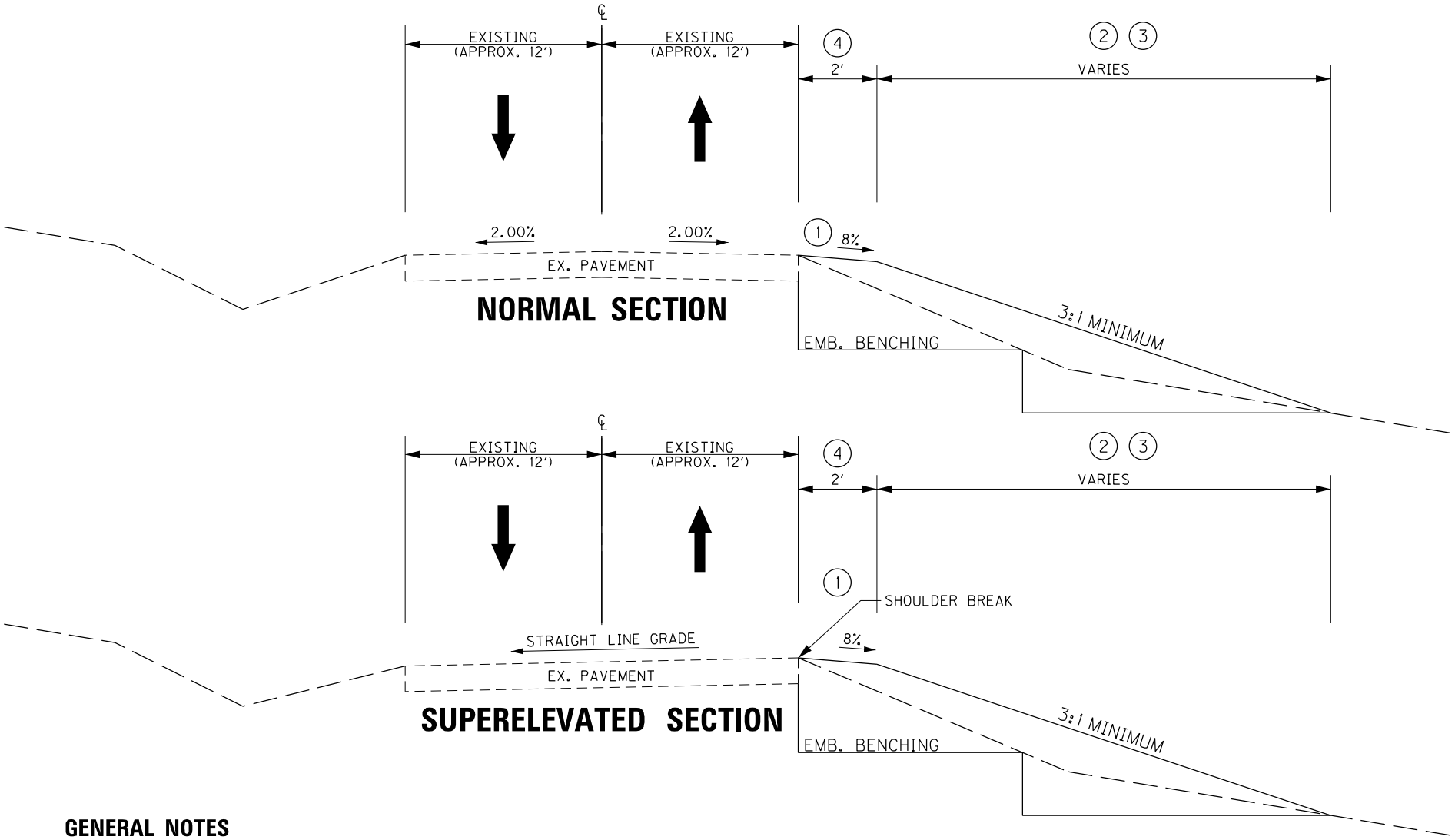
LOCATION					Length (LF)	"X" Dimension**	03269 - TRIM & REMOVE TREES & BRUSH - LF *					24894EC REMOVE STUMP EACH	Remarks *
Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint			Case 1 * Tree Trimming without Undergrowth Removal	Case 1B * Tree Trimming with Undergrowth Removal	Case 2 * Tree Trimming and/or Tree Removal without Undergrowth Removal	Case 2B * Tree Trimming and/or Tree Removal with Undergrowth Removal	Case 3B * Undergrowth Removal Only		
LT	1534+00	29.053	1535+35	29.079	**135**	5	X						
RT	1534+63	29.065	1534+68	29.066	**5**	5	X						
LT	1542+50	29.214	1543+00	29.223	**50**	5	X						
RT	1549+15	29.340	1550+75	29.370	**160**	10	X						
LT	1553+07	29.414	1553+12	29.415	**5**	5	X						

Total Estimated Quantity of 3269 TRIM & REMOVE TREES & BRUSH	**16,015**	**LF**
Total Estimated Quantity of 24894EC REMOVE STUMP	**0**	**EACH**

TYPICAL SECTIONS

RE-GRADE EMBANKMENT

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



GENERAL NOTES

1. DOUBLE ASPHALT SEAL COAT REQUIRED FROM EDGE OF SHOULDER TO A POINT 2 FEET DOWN THE DITCH OR FILL SLOPE.
2. SEE CROSS SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.
3. SEE CONSENT & RELEASE SUMMARY BEFORE WORKING OFF RIGHT OF WAY.
4. UNLESS OTHERWISE NOTED ON THE CROSS SECTIONS, EARTH SHOULDER SHALL BE 2' IN EMBANKMENT RE-GRADE SECTIONS.

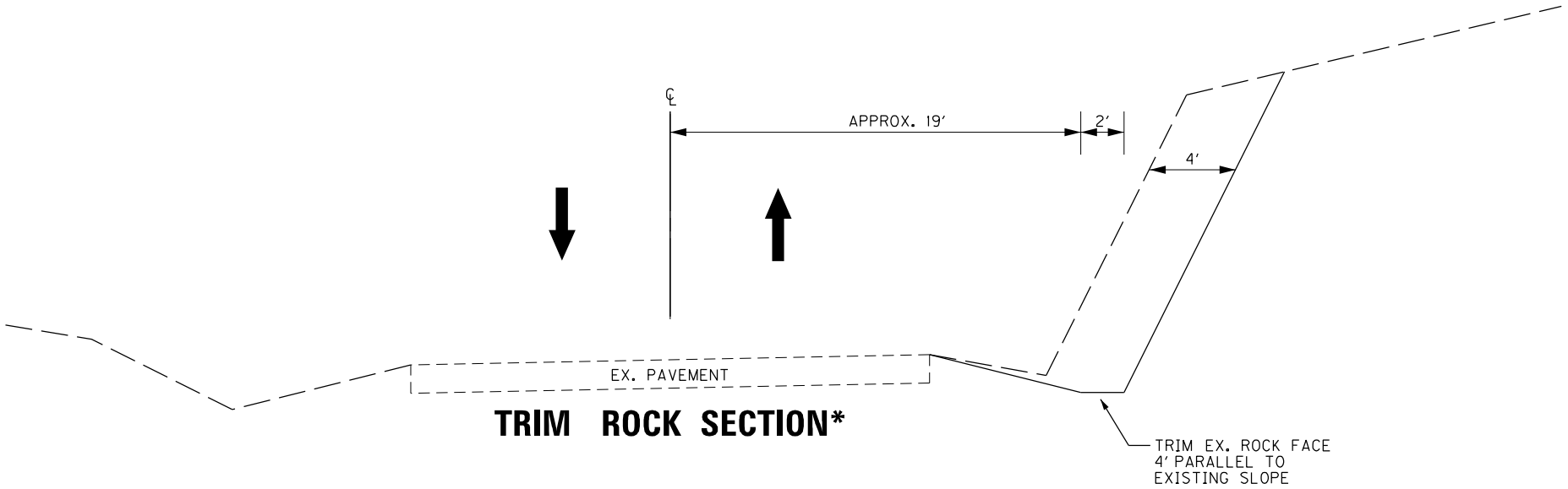
N.T.S.

TYPICAL SECTIONS

TYPICAL SECTIONS

TRIM ROCK EMBANKMENT

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



TRIM ROCK SECTION*

* WHERE EXISTING SITE CONDITIONS PERMIT

THE ENGINEER WILL MAKE THE FINAL
DETERMINATION AS TO CONDITIONS THAT
ARE APPROPRIATE FOR THIS TYPICAL SECTION

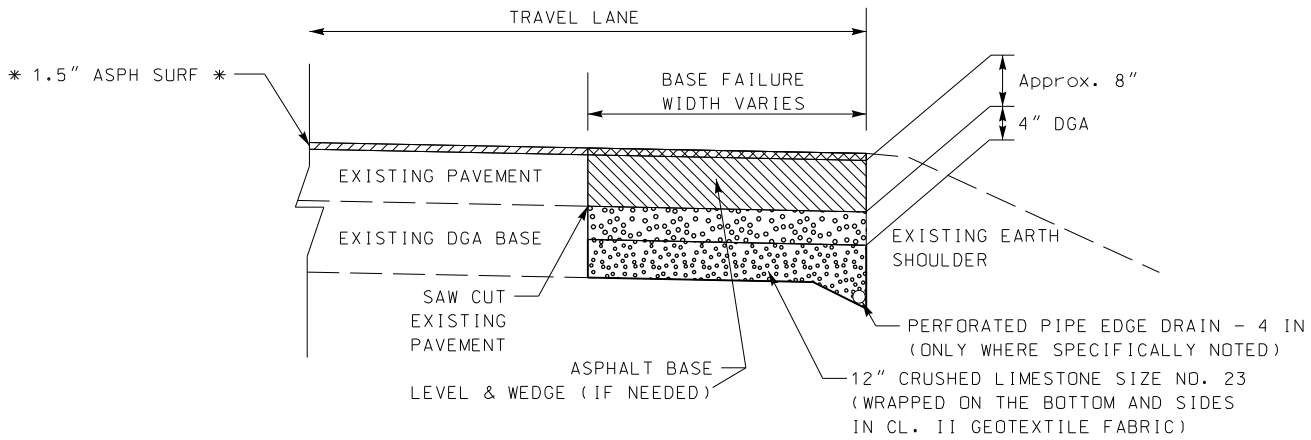
N.T.S.

TYPICAL SECTIONS

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

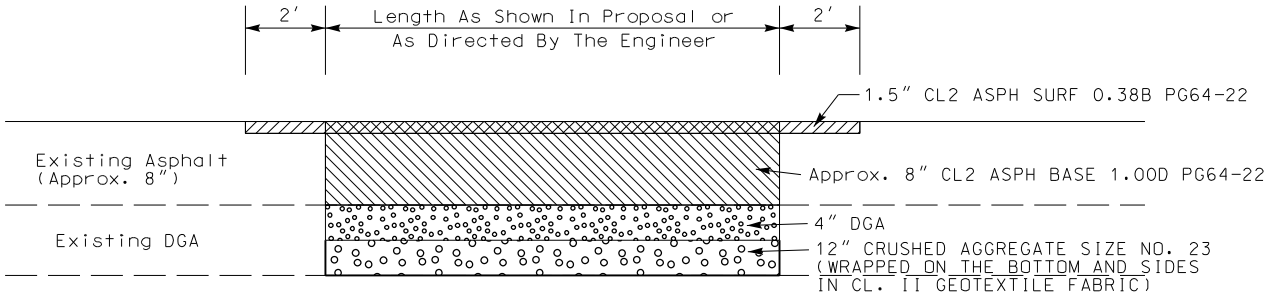
BASE/SHOULDER FAILURE REPAIR DETAILS

BASE FAILURE CROSS SECTION DETAIL

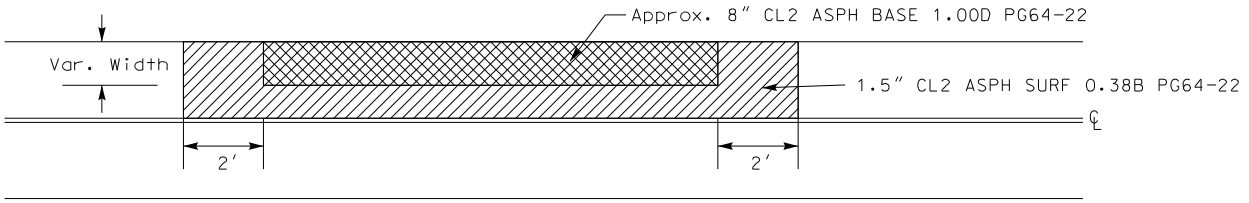


* For Base/Shoulder Failure Repair locations, Mill & Inlay 1.5" Asph Surf according to the "Profile" and "Top View" details below, and according to the Special Notes.

BASE FAILURE PROFILE DETAIL



BASE FAILURE TOP VIEW DETAIL



FOR MORE INFORMATION, REFER TO THE "SPECIAL NOTE FOR BASE FAILURE REPAIR"

① "BASE FAILURE" locations are listed elsewhere in the proposal. The Engineer shall make the final determination as to the width, depth, and length, and the exact location of each base failure.

Once work has begun, the contrator will work continuously until the asphalt base is completed.

NTS.

TYPICAL SECTIONS

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

0' 50' 100' 200'

SCALE: 1"=100'

US 421

STA. 1131+00 TO STA. 1134+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

US 421

STA. 1134+00 TO STA.1141+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

1141+00

1145+00

1150+00

SMITH TRAVIS & LABRISKA

JACKSON COUNTY SCHOOL DIST.

SAND GAP
VOL.FIRE DEPT.

S TREE TOWER RD.

SMITH THELMA

1141+25.82

EXIST R/W

WM

EXIST R/W

EXIST R/W

EXIST R/W

PT 1144+02.73

STEELE JAMES & EVA

JONES ETHAN

PAYNE BILLY J.

MARCUM VIVIAN

0' 50' 100' 200'

SCALE: 1"=100'

US 421

STA. 1141+00 TO STA.1150+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

1150+00

1155+00

1158+00

COMBS TONYA & RONDALD D.

SMITH THELMA

PC 1152+41.20

PT 1157+05.81

EXIST R/W

EXIST R/W

EXIST R/W

EXIST R/W

PI 1154+77.78

MARCUM MERTIE

COMBS DION & TONYA

MARCUM TONYA

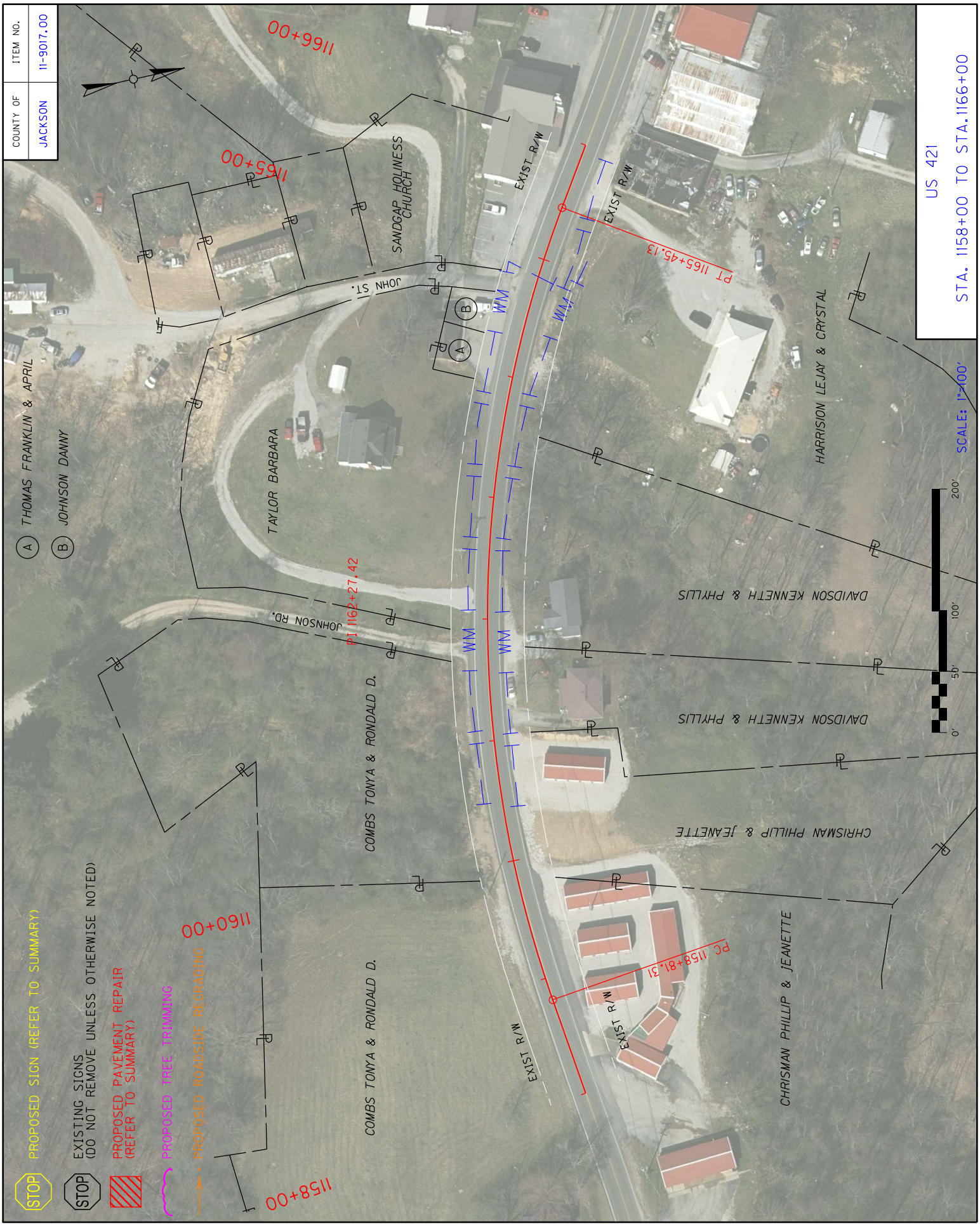
CHRISMAN PHILLIP & JEANETTE

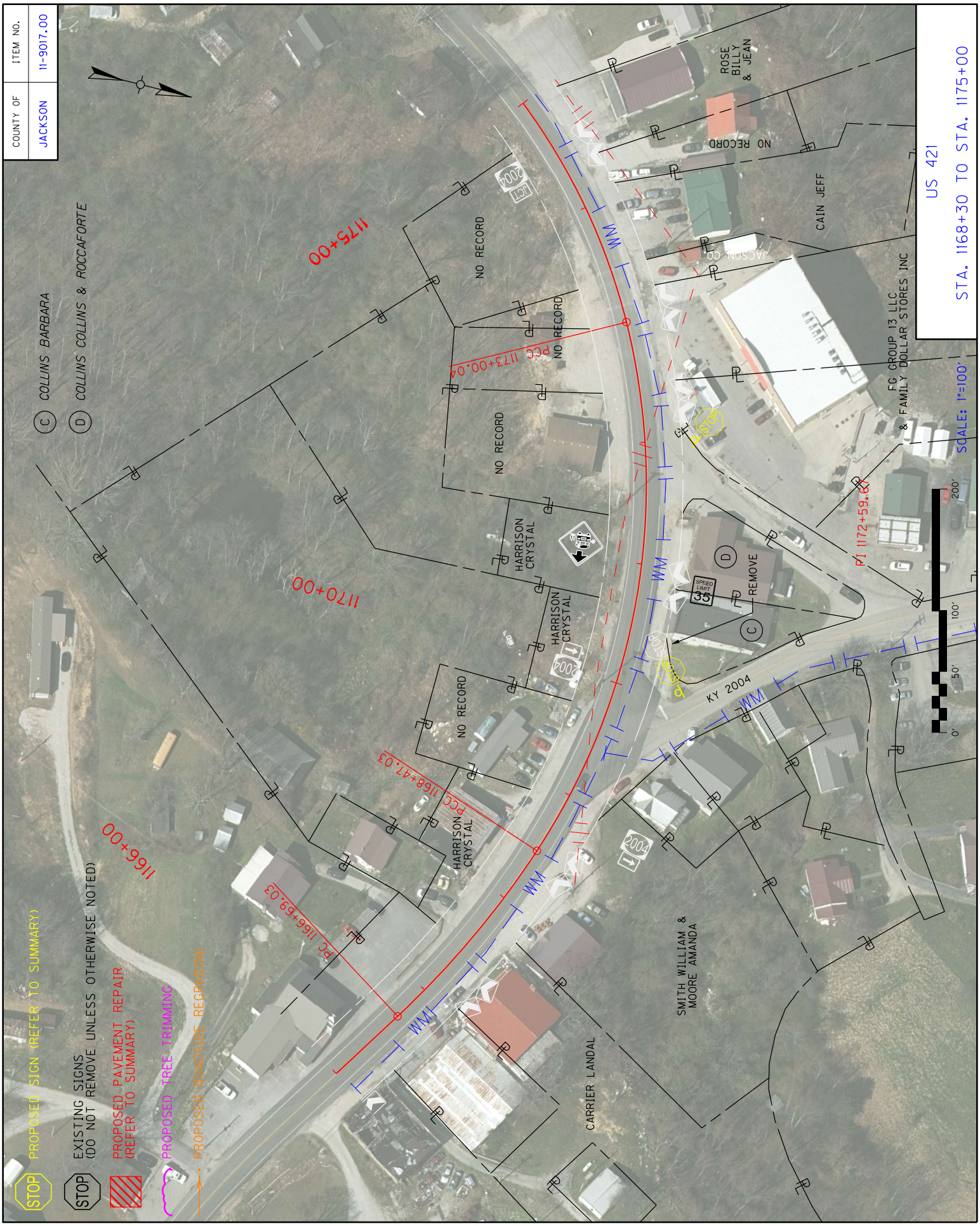
0' 50' 100' 200'

SCALE: 1"=100'

US 421

STA. 1150+00 TO STA.1158+00


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1158+00 TO STA.1166+00
SCALE: 1"=100'
0'
50'
100'
200'
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
A THOMAS FRANKLIN & APRIL
B JOHNSON DANNY
TAYLOR BARBARA
SANDGAP HOLINESS CHURCH
JOHN ST.
JOHNSON RD.
COMBS TONYA & RONDALD D.
COMBS TONYA & RONDALD D.
DAVIDSON KENNETH & PHYLLIS
DAVIDSON KENNETH & PHYLLIS
CHRISMAN PHILLIP & JEANETTE
CHRISMAN PHILLIP & JEANETTE
HARRISON LEJAY & CRYSTAL
EXIST R/W
EXIST R/W
EXIST R/W
PI 1162+27.42
PT 1165+45.13
PC 1158+81.31
1166+00
1165+00
1160+00
1158+00
WM
WM
WM


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
US 421
STA. 1168+30 TO STA. 1175+00
SCALE: 1"=100'
1166+00
1170+00
1175+00
PC 1166+69.03
PCC 1168+47.03
PCC 1173+00.04
PI 1172+59.61
KY 2004
NO RECORD
HARRISON CRYSTAL
SMITH WILLIAM & MOORE AMANDA
CARRIER LANDAL
CAIN JEFF
ROSE BILLY & JEAN
FG GROUP 13 LLC & FAMILY DOLLAR STORES INC
COLLINS BARBARA
COLLINS COLLINS & ROCCAFORTE
REMOVE
SPEED LIMIT 35
STOP
WM

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

1175+00

1180+00

1184+00

ISAACS DUANE & SONYIA

ISAACS DUANE & SONYIA

CARRIER LANDAL

CARRIER LANDAL

PT 1175+58.04

PI 1178+49.63

PC 1180+69.95

OVERHEAD UTILITIES

OVERHEAD UTILITIES

EXIST R/W

EXIST R/W

EXIST R/W

EXIST R/W

WM

WM

WM

WM

STOP

TRIM TREE

MILLER MARK & ANGELA

CLEAN PIPE

PI 1176+53.40

PC 1177+22.64

PT 1179+71.46

PI 1183+49.70

ROSE BILLY & JEAN

SAND BANK RD.

ELAM BILLIE

CONST. 1 - HEADWALL (SLOPED & MITERED CONC - FOR 18" PIPE) ON EX. 18" RCP

RT STA. 1182+90 TO 1183+90
CONST. 100 LF OF ROADSIDE REGRADING

RT STA. 1178+60 TO STA. 1178+65
TRIM TREES AS INDICATED
IN SPECIAL NOTE

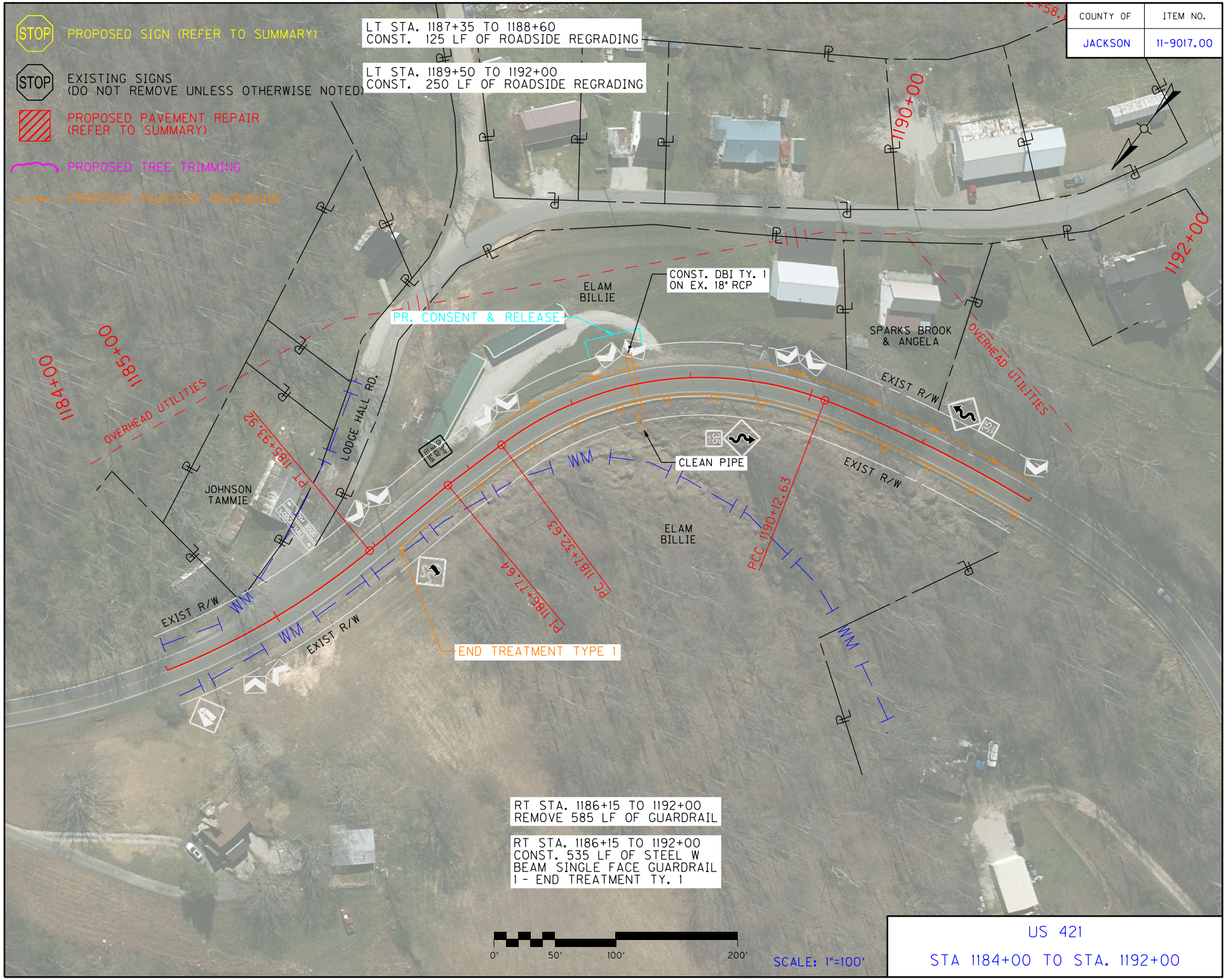
0' 50' 100' 200'

SCALE: 1"=100'

US 421

STA. 1175+00 TO STA. 1184+00

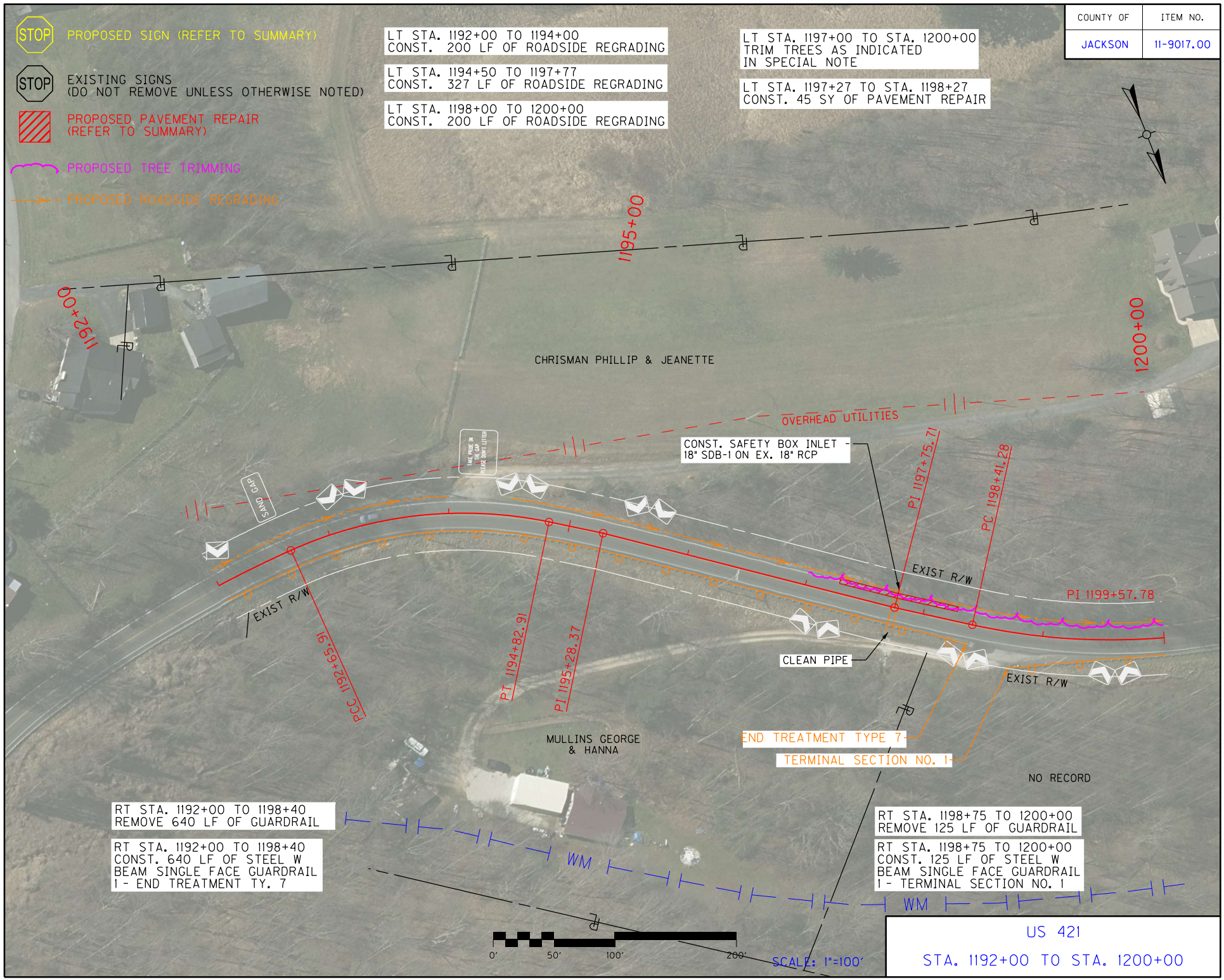
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA 1184+00 TO STA. 1192+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1192+00 TO STA. 1200+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

LT STA. 1200+00 TO 1202+86
CONST. 286 LF OF ROADSIDE REGRADING

LT STA. 1203+00 TO 1209+00
CONST. 600 LF OF ROADSIDE REGRADING

LT STA. 1200+00 TO 1203+50
TRIM TREES AS INDICATED
IN SPECIAL NOTE

1200+00

1205+00

1209+00

CHRISMAN PHILLIP & JEANETTE

CHRISMAN PHILLIP & JEANETTE

OVERHEAD UTILITIES

PT 1200+70.61

PI 1201+64.76

CONST. SAFETY BOX INLET -
18" SDB-1 ON EX. 18" RCP

PI 1204+88.90

OVERHEAD UTILITIES

EXIST R/W

EXIST R/W

CLEAN PIPE

PC 1202+88.95

GRAY CHRISTOPHER W.

PCC 1206+26.95

PT 1207+31.64

TERMINAL SECTION NO. 1

WM

WM

RT STA. 1200+00 TO 1207+65
REMOVE 778.75 LF OF GUARDRAIL

RT STA. 1200+00 TO 1207+65
CONST. 778.75 LF OF STEEL W
BEAM SINGLE FACE GUARDRAIL
1 - TERMINAL SECTION NO. 1

RT STA. 1207+80 TO 1209+00
REMOVE 120 LF OF GUARDRAIL

RT STA. 1207+80 TO 1209+00
CONST. 120 LF OF STEEL W
BEAM SINGLE FACE GUARDRAIL
1 - TERMINAL SECTION NO. 1

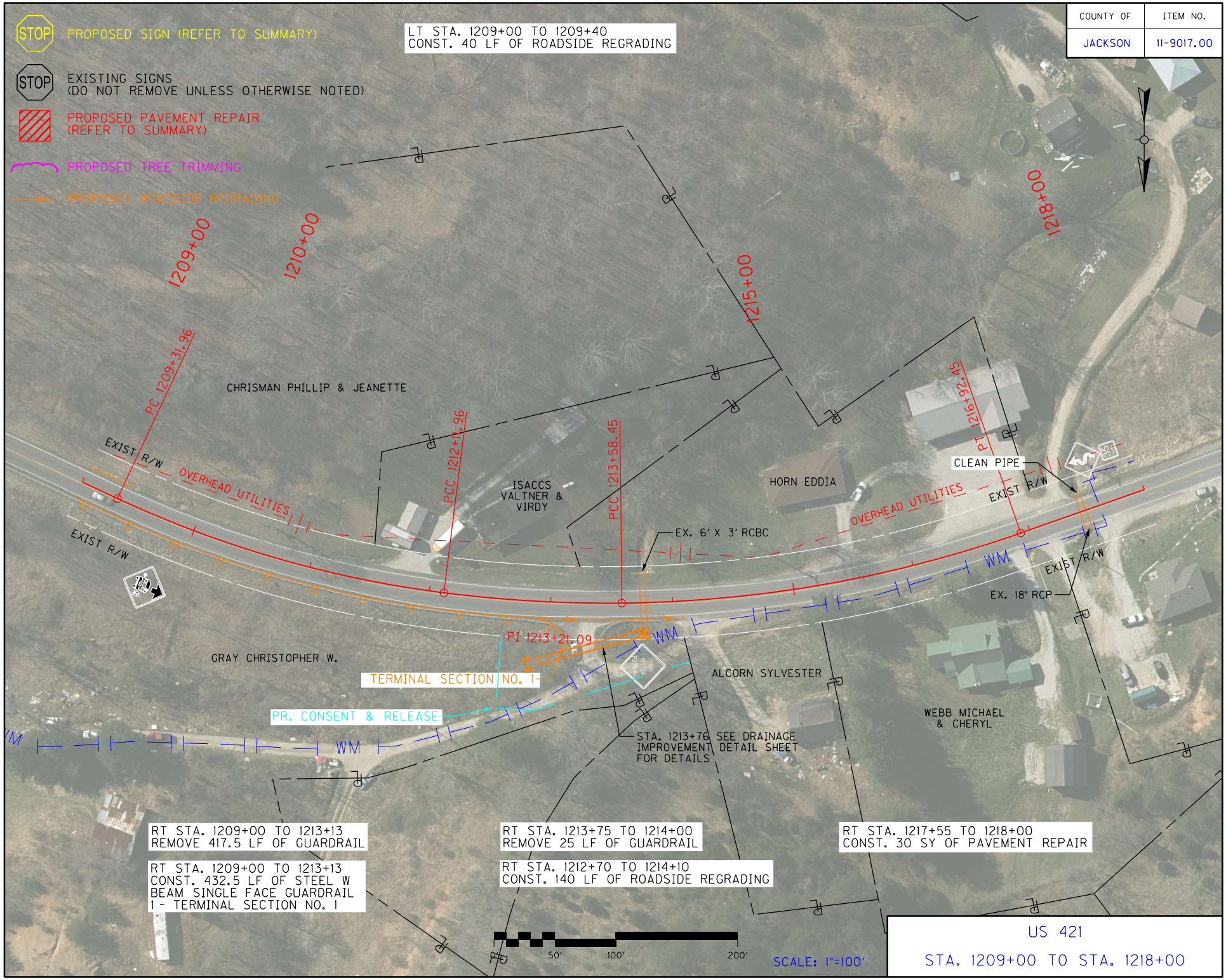
0' 50' 100' 200'

SCALE: 1"=100'

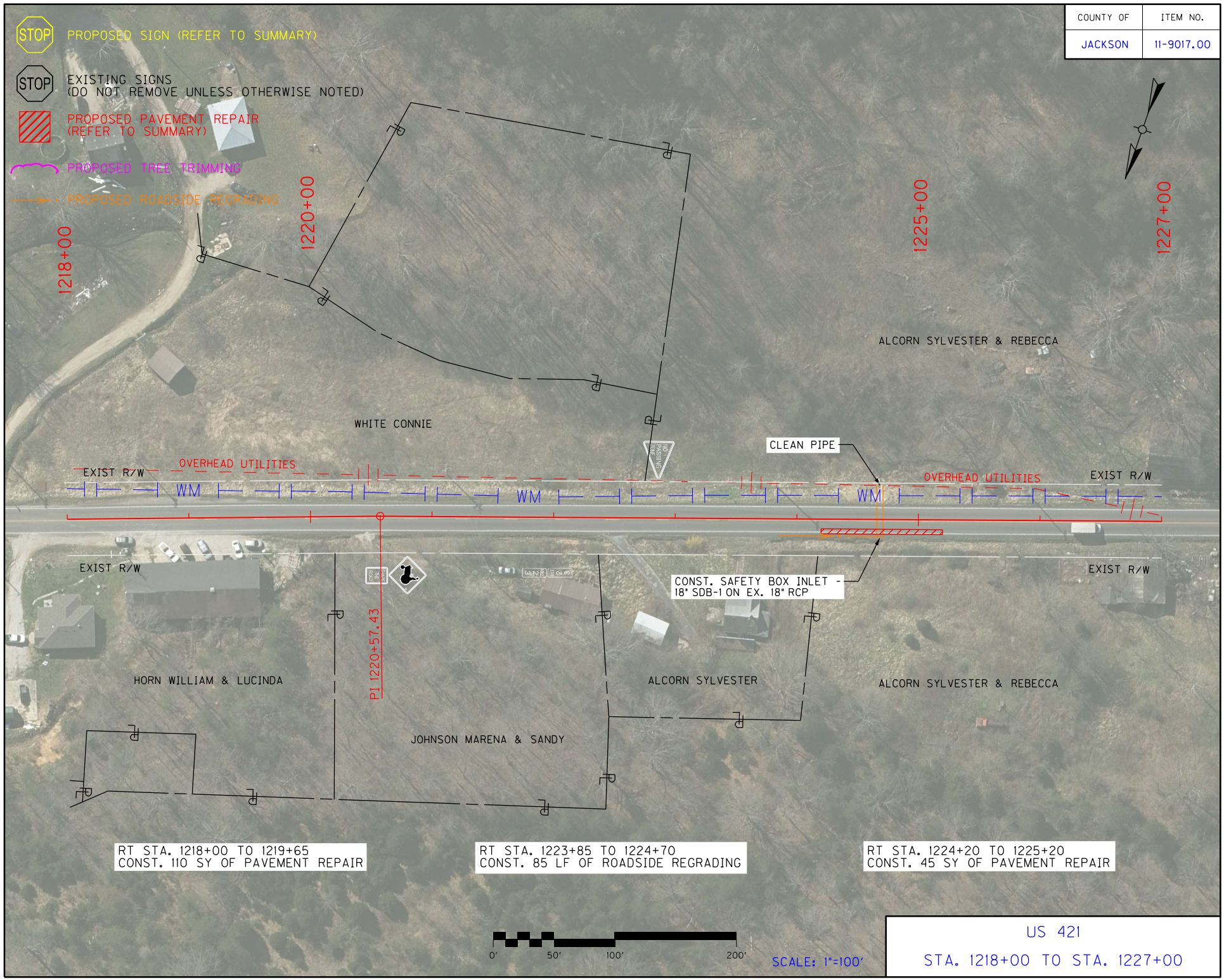
US 421

STA. 1200+00 TO STA. 1209+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1218+00 TO STA. 1227+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

PROPOSED SIGN (REFER TO SUMMARY)

EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

LT STA. 1230+00 TO 1235+90
REMOVE 553.75 LF OF GUARDRAIL

LT STA. 1230+00 TO 1235+90
CONST. 553.75 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL
1 - END TREATMENT TY. 1
1 - TERMINAL SECTION NO. 1

1227+00

1230+00

1235+00

1236+00

ALCORN SYLVESTER & REBECCA

END TREATMENT TYPE 1

CLEAN PIPE

EXIST R/W

WM

PI 1231+82.42

CLEAN PIPE

TERMINAL SECTION NO. 1

EXIST R/W

WM

EXIST R/W

CONST. SAFETY BOX INLET - 18" SDB-1 ON EX. 18" RCP

OVERHEAD UTILITIES

CONST. SAFETY BOX INLET - 18" SDB-1 ON EX. 18" RCP

PC 1229+75.82

PT 1233+86.00

ALCORN SYLVESTER & REBECCA

OVERHEAD UTILITIES

RT STA. 1231+37 TO 1232+37
CONST. 45 SY OF PAVEMENT REPAIR

RT STA. 1228+24 TO 1229+24
CONST. 45 SY OF PAVEMENT REPAIR

RT STA. 1233+00 TO STA. 1236+00
TRIM TREES AS INDICATED IN SPECIAL NOTE

RT STA. 1235+95 TO 1236+00
CONST. 3 SY OF PAVEMENT REPAIR

RT STA. 1228+50 TO 1228+74
CONST. 24 LF OF ROADSIDE REGRADING

RT STA. 1231+35 TO 1231+87
CONST. 52 LF OF ROADSIDE REGRADING

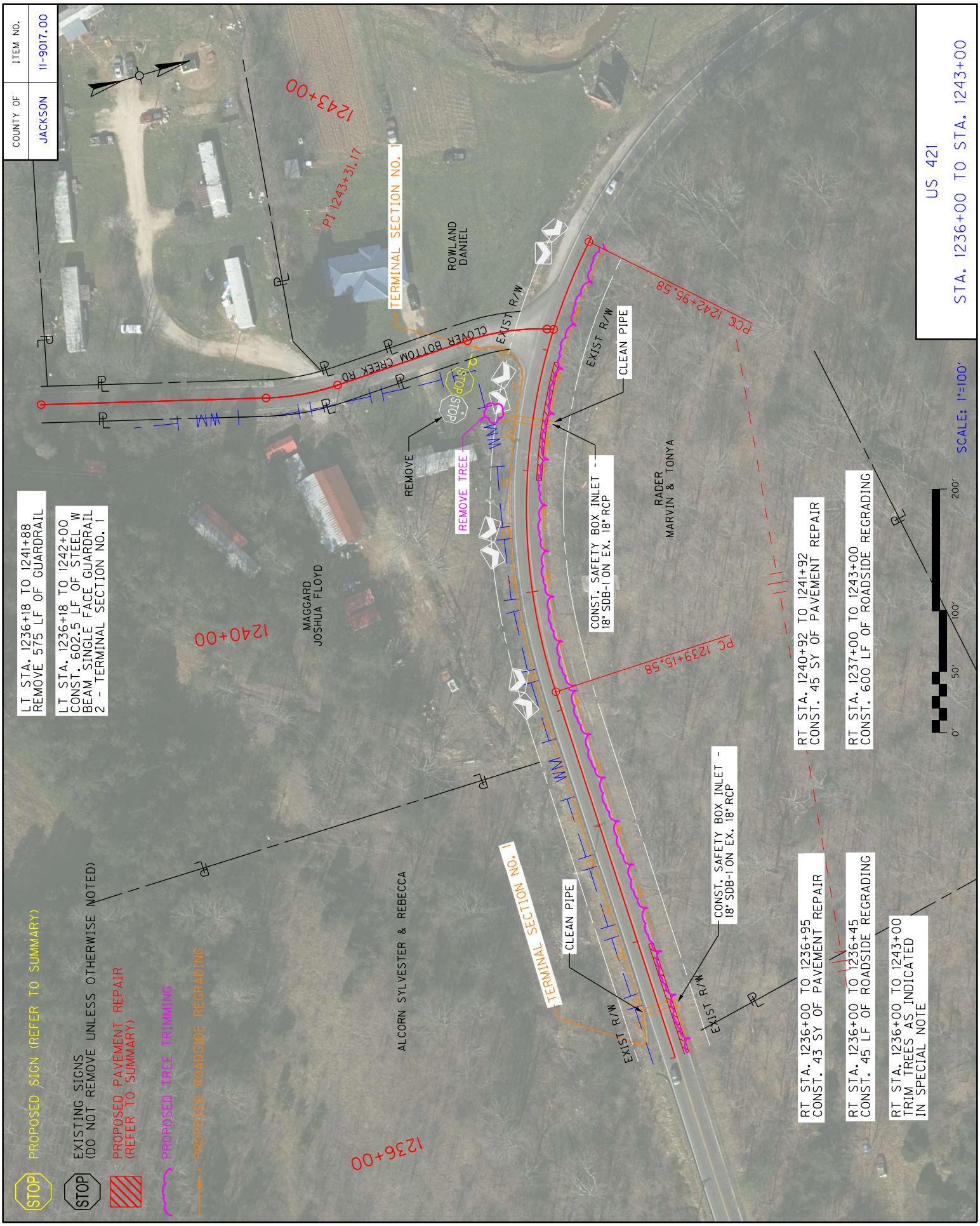
RT STA. 1235+50 TO 1236+00
CONST. 50 LF OF ROADSIDE REGRADING

0' 50' 100' 200'

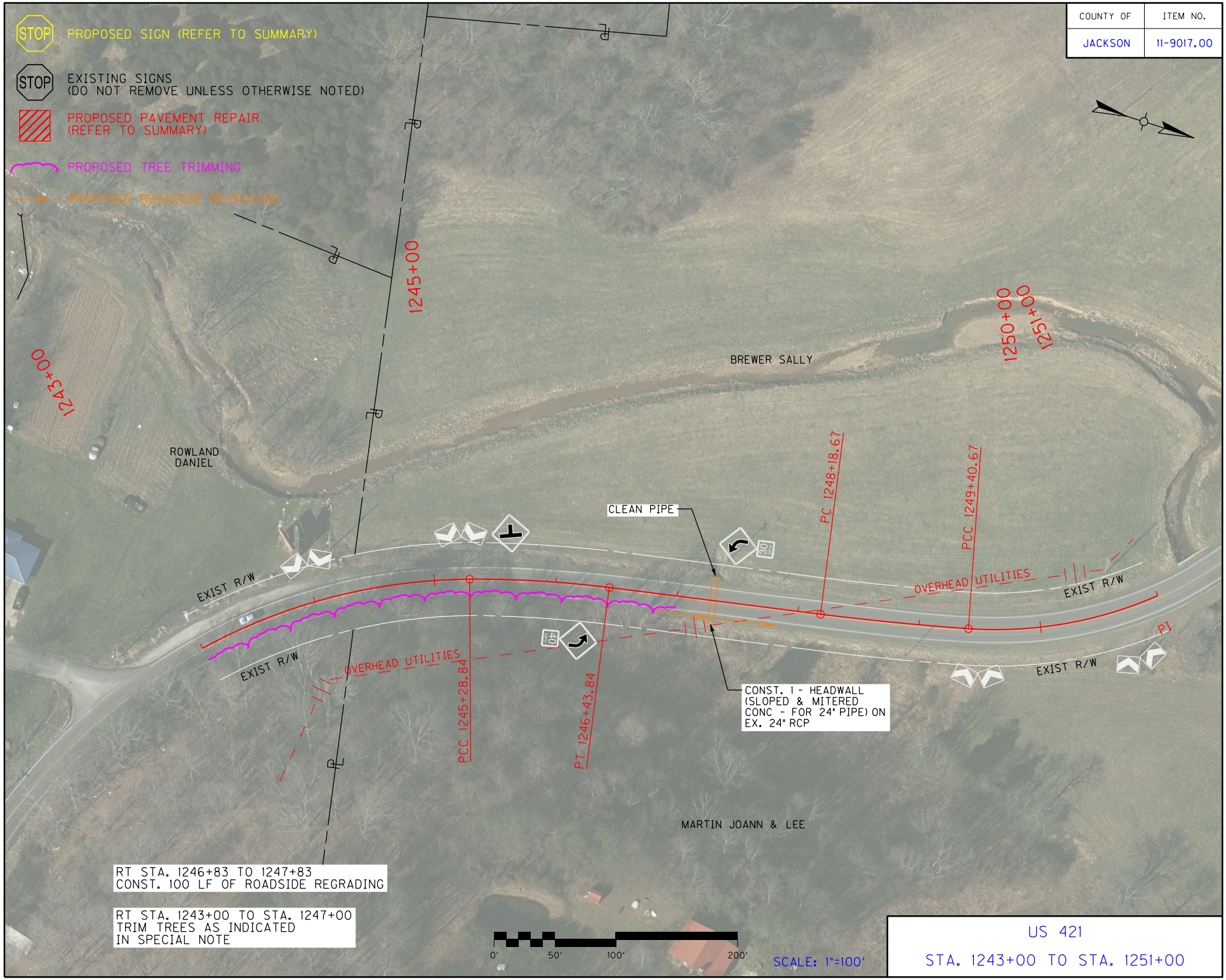
SCALE: 1"=100'

US 421

STA. 1227+00 TO STA. 1236+00


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1236+00 TO STA. 1243+00
SCALE: 1"=100'
0'
50'
100'
200'
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
LT STA. 1236+18 TO 1241+88
REMOVE 575 LF OF GUARDRAIL
LT STA. 1236+18 TO 1242+00
CONST. 602.5 LF OF STEEL W
BEAM SINGLE FACE GUARDRAIL
2 - TERMINAL SECTION NO. 1
RT STA. 1236+00 TO 1236+95
CONST. 43 SY OF PAVEMENT REPAIR
RT STA. 1236+00 TO 1236+45
CONST. 45 LF OF ROADSIDE REGRADING
RT STA. 1236+00 TO 1243+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE
RT STA. 1240+92 TO 1241+92
CONST. 45 SY OF PAVEMENT REPAIR
RT STA. 1237+00 TO 1243+00
CONST. 600 LF OF ROADSIDE REGRADING
1236+00
1240+00
1243+00
PI 1243+31.17
PC 1239+15.58
PCC 1242+95.58
TERMINAL SECTION NO. 1
TERMINAL SECTION NO. 1
CLOVER BOTTOM CREEK RD
EXIST R/W
EXIST R/W
EXIST R/W
EXIST R/W
CLEAN PIPE
CLEAN PIPE
CONST. SAFETY BOX INLET -
18" SDB-1 ON EX. 18" RCP
CONST. SAFETY BOX INLET -
18" SDB-1 ON EX. 18" RCP
REMOVE
REMOVE TREE
STOP
STOP
ROWLAND
DANIEL
RADER
MARVIN & TONYA
MAGGARD
JOSHUA FLOYD
ALCORN SYLVESTER & REBECCA

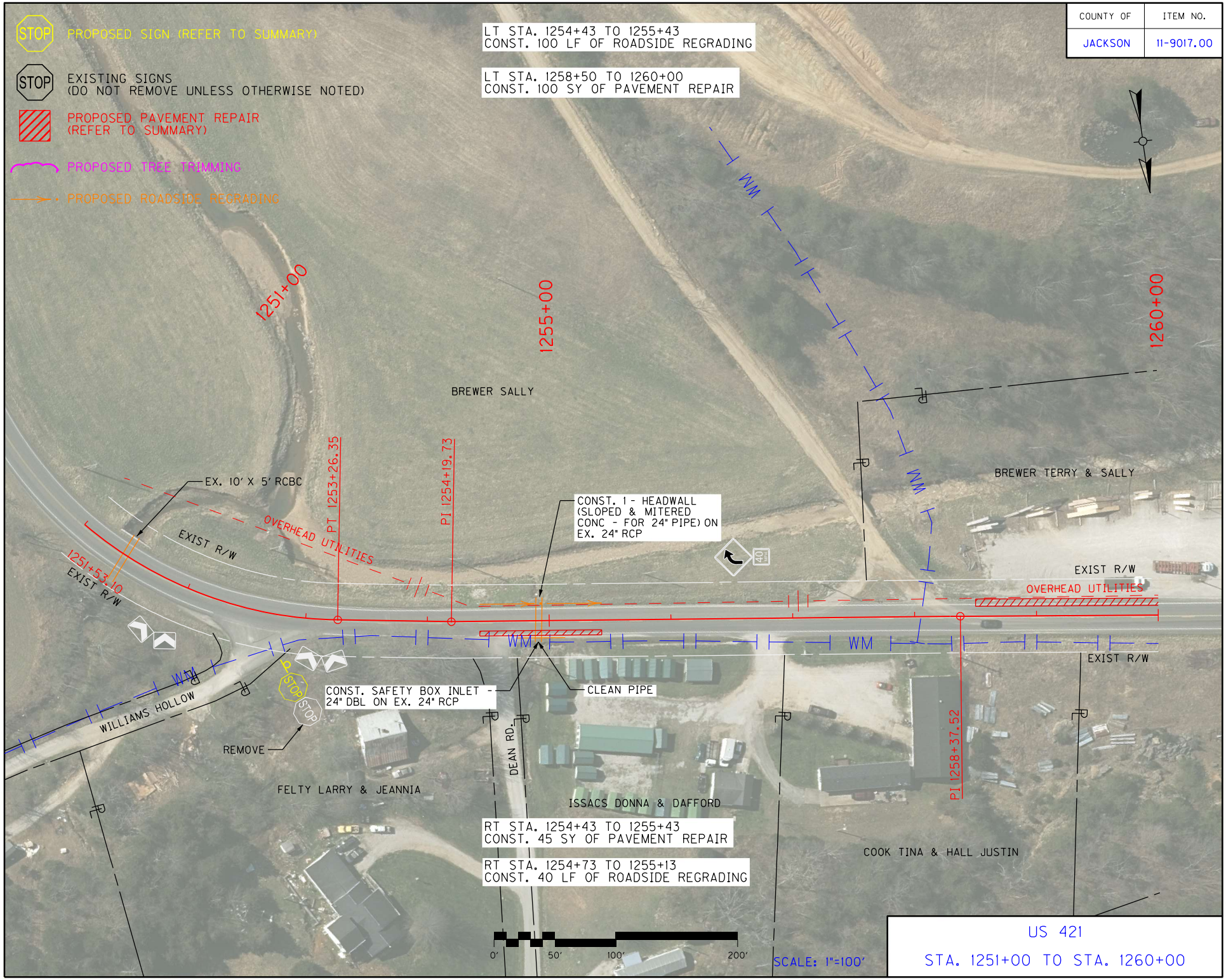
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

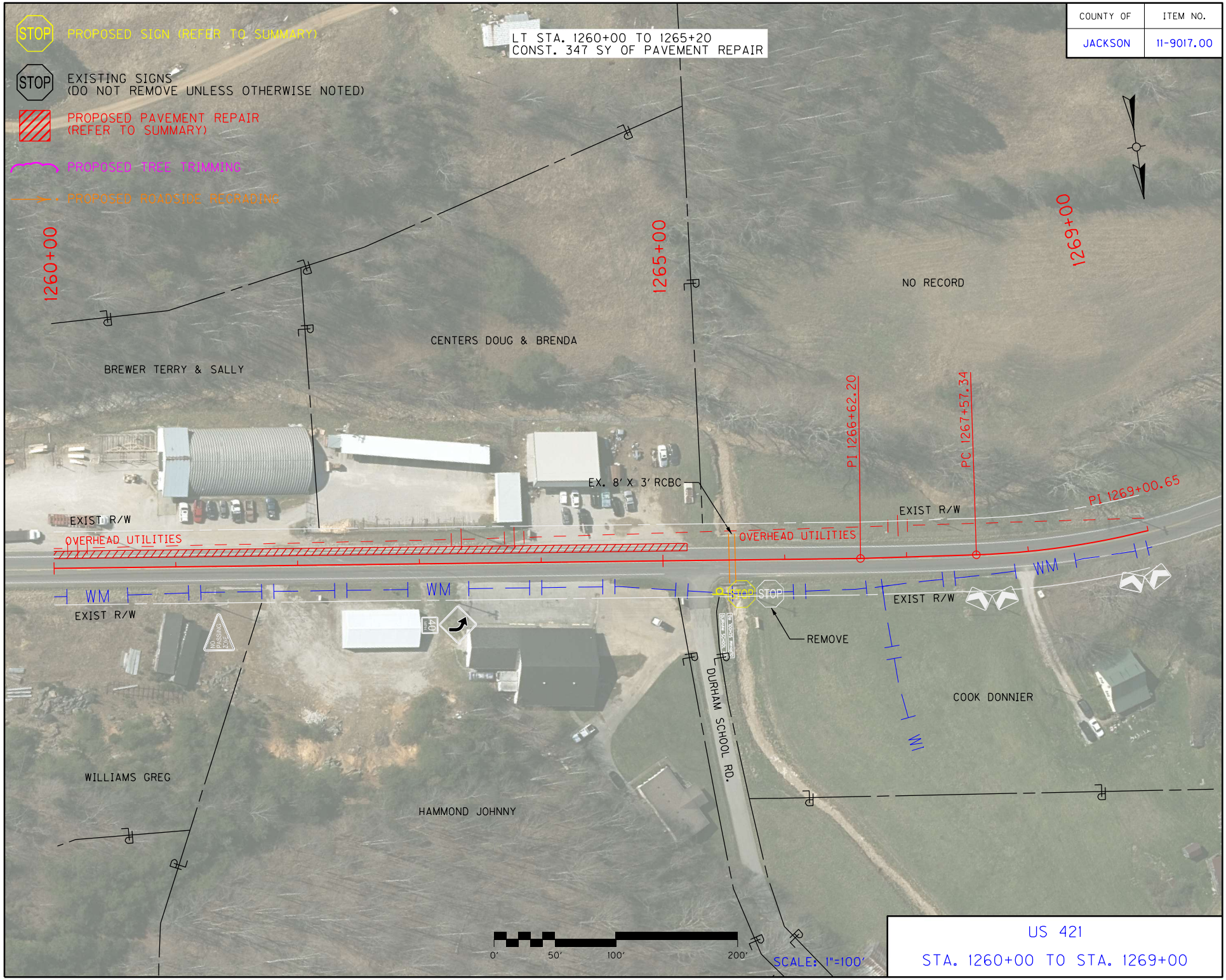
STA. 1243+00 TO STA. 1251+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

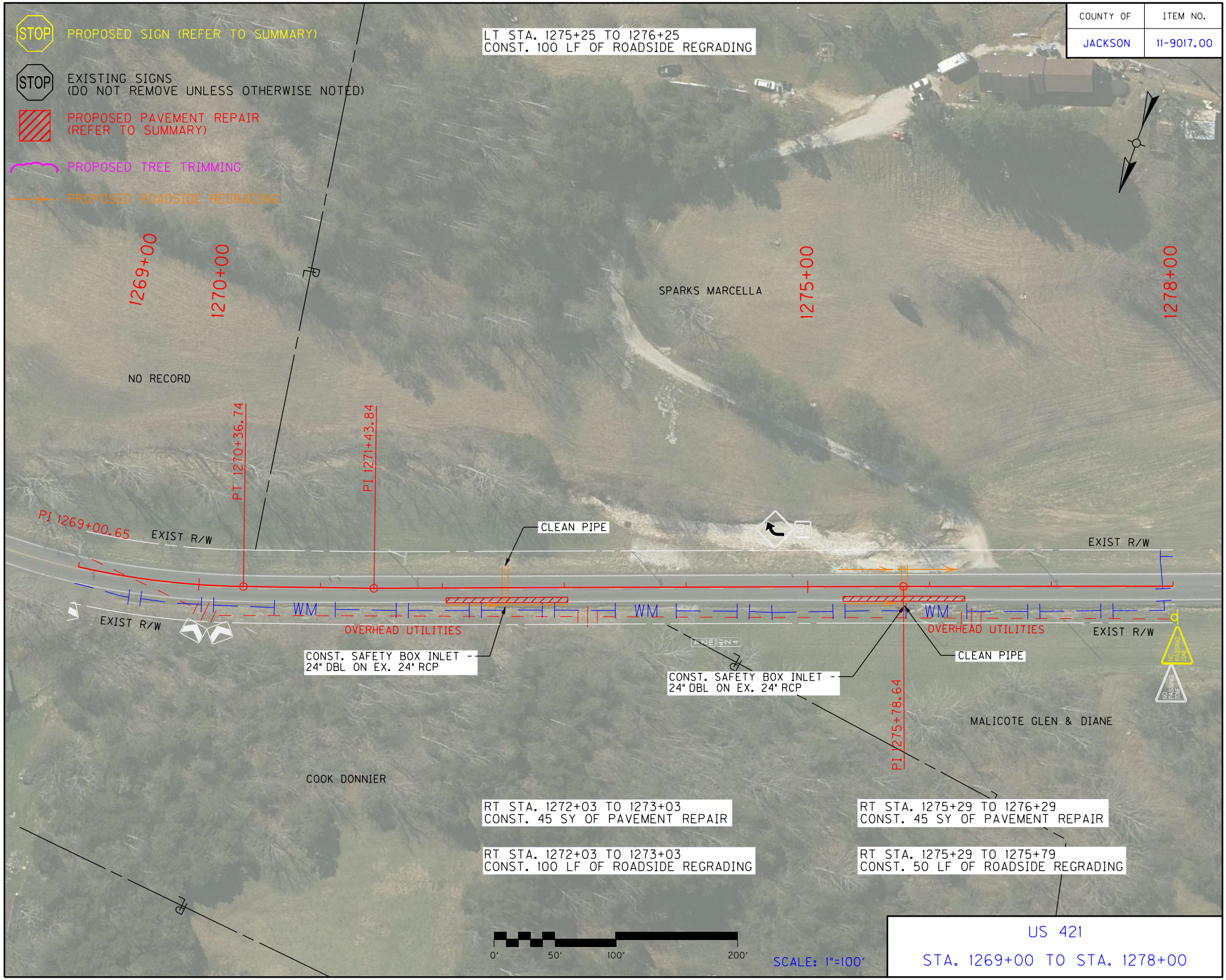


US 421

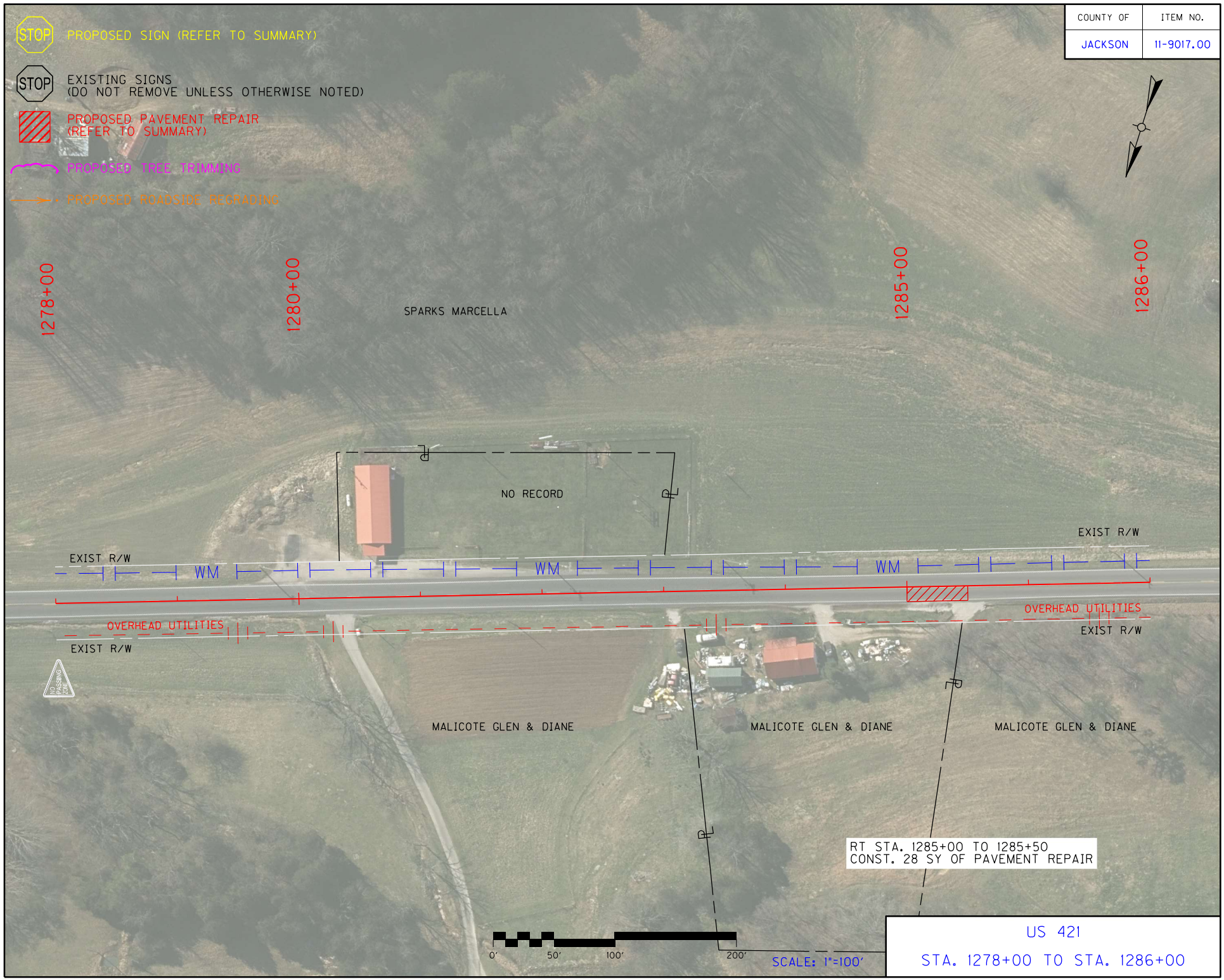
STA. 1251+00 TO STA. 1260+00


STOP PROPOSED SIGN (REFER TO SUMMARY)
STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
LT STA. 1260+00 TO 1265+20
CONST. 347 SY OF PAVEMENT REPAIR
COUNTY OF
JACKSON
ITEM NO.
11-9017.00
1260+00
1265+00
1269+00
NO RECORD
CENTERS DOUG & BRENDA
BREWER TERRY & SALLY
PI 1266+62.20
PC 1267+57.34
PI 1269+00.65
EX. 8' X 3' RCBC
EXIST R/W
OVERHEAD UTILITIES
WM
STOP
REMOVE
DURHAM SCHOOL RD.
COOK DONNIER
WILLIAMS GREG
HAMMOND JOHNNY
0'
50'
100'
200'
SCALE: 1"=100'
US 421
STA. 1260+00 TO STA. 1269+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1278+00 TO STA. 1286+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

LT STA. 1287+71 TO 1288+71
CONST. 100 LF OF ROADSIDE REGRADING

LT STA. 1293+23 TO 1294+23
CONST. 100 LF OF ROADSIDE REGRADING

1286+00

1290+00

1295+00

SPARKS MARCELLA

NO RECORD

CONST. 1 - HEADWALL
(SLOPED & MITERED
CONC - FOR 24" PIPE) ON
NEW 24" PIPE

CONST. 2 - HEADWALL
(SLOPED & MITERED
CONC - FOR 18" PIPE) ON
EX. 18" RCP

PI 1292+06.10

EXIST R/W

WM

EXIST R/W

WM

EXIST R/W

CLEAN PIPE

EXIST R/W

OVERHEAD UTILITIES

CONST. SAFETY BOX INLET -
24" SDB-1 ON NEW 24" PIPE

PI 1288+63.01

PC 1290+21.04

PT 1293+89.09

OVERHEAD UTILITIES

MALICOTE GLEN & DIANE

LAWS ASHLEY

STA. 1287+71 TO 1288+71
CONST. 267 SY OF PAVEMENT REPAIR

RT STA. 1293+23 TO 1294+23
CONST. 100 LF OF ROADSIDE REGRADING

RT STA. 1288+21 TO 1288+71
CONST. 50 LF OF ROADSIDE REGRADING

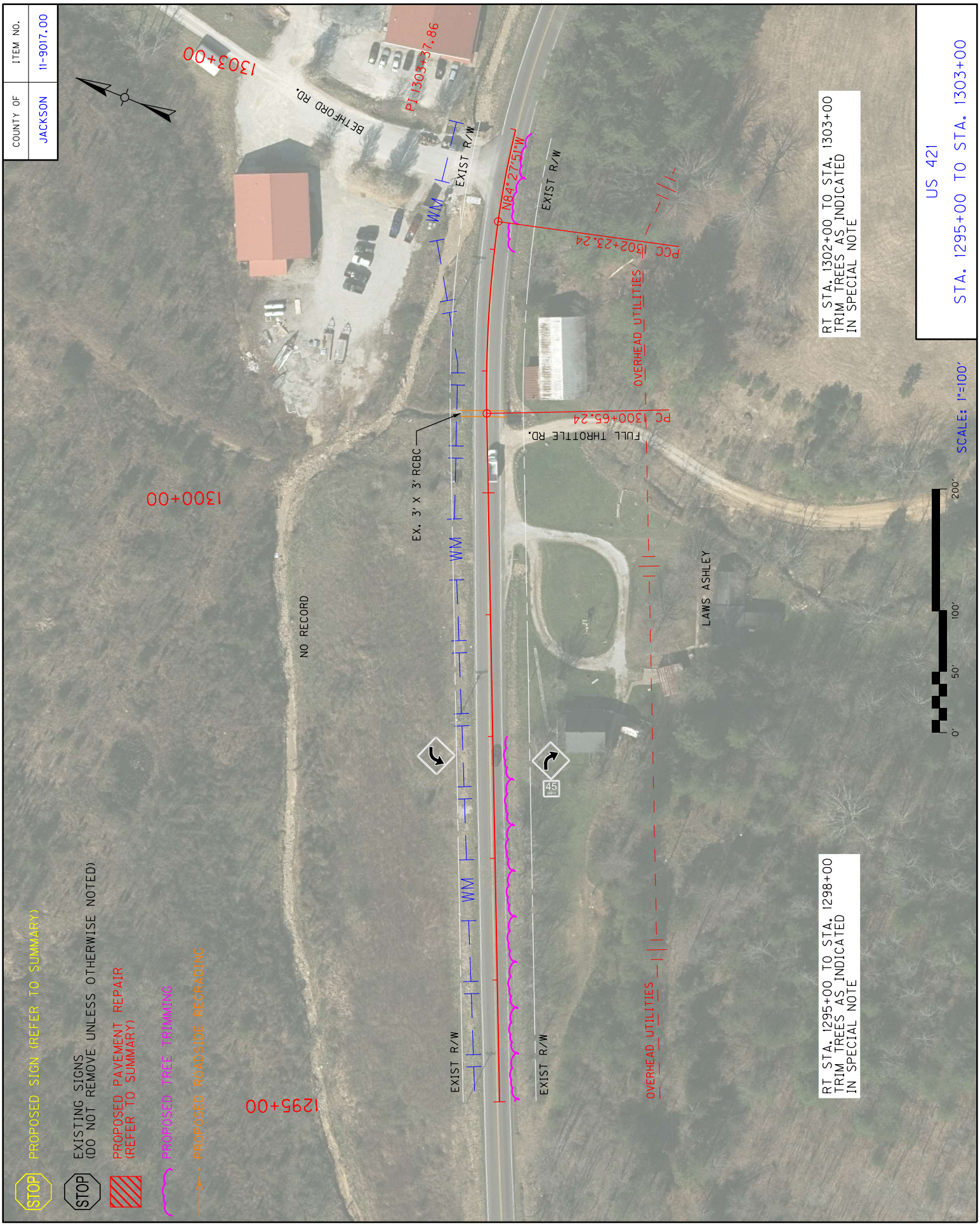
RT STA. 1293+00 TO STA. 1295+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE

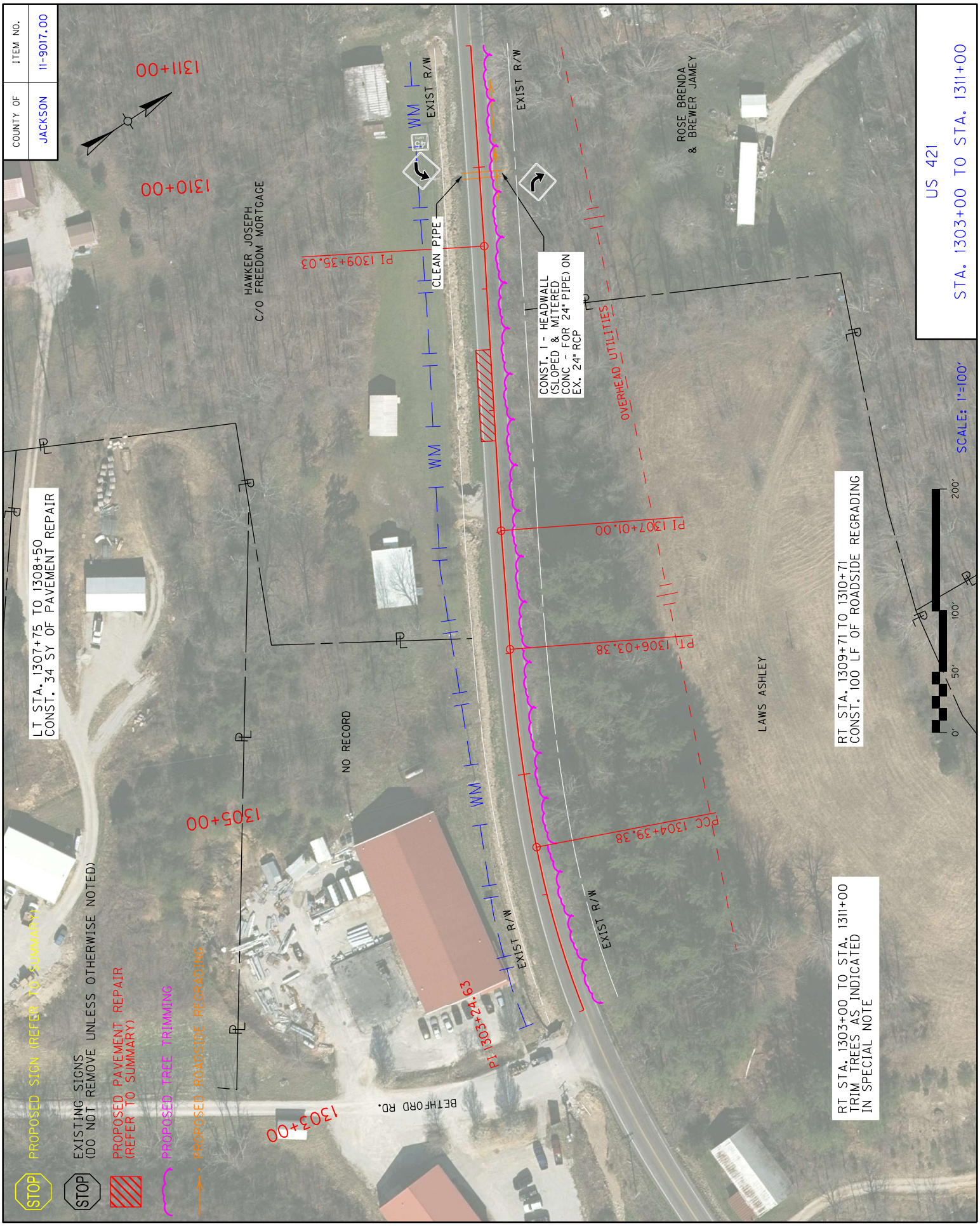
0' 50' 100' 200'

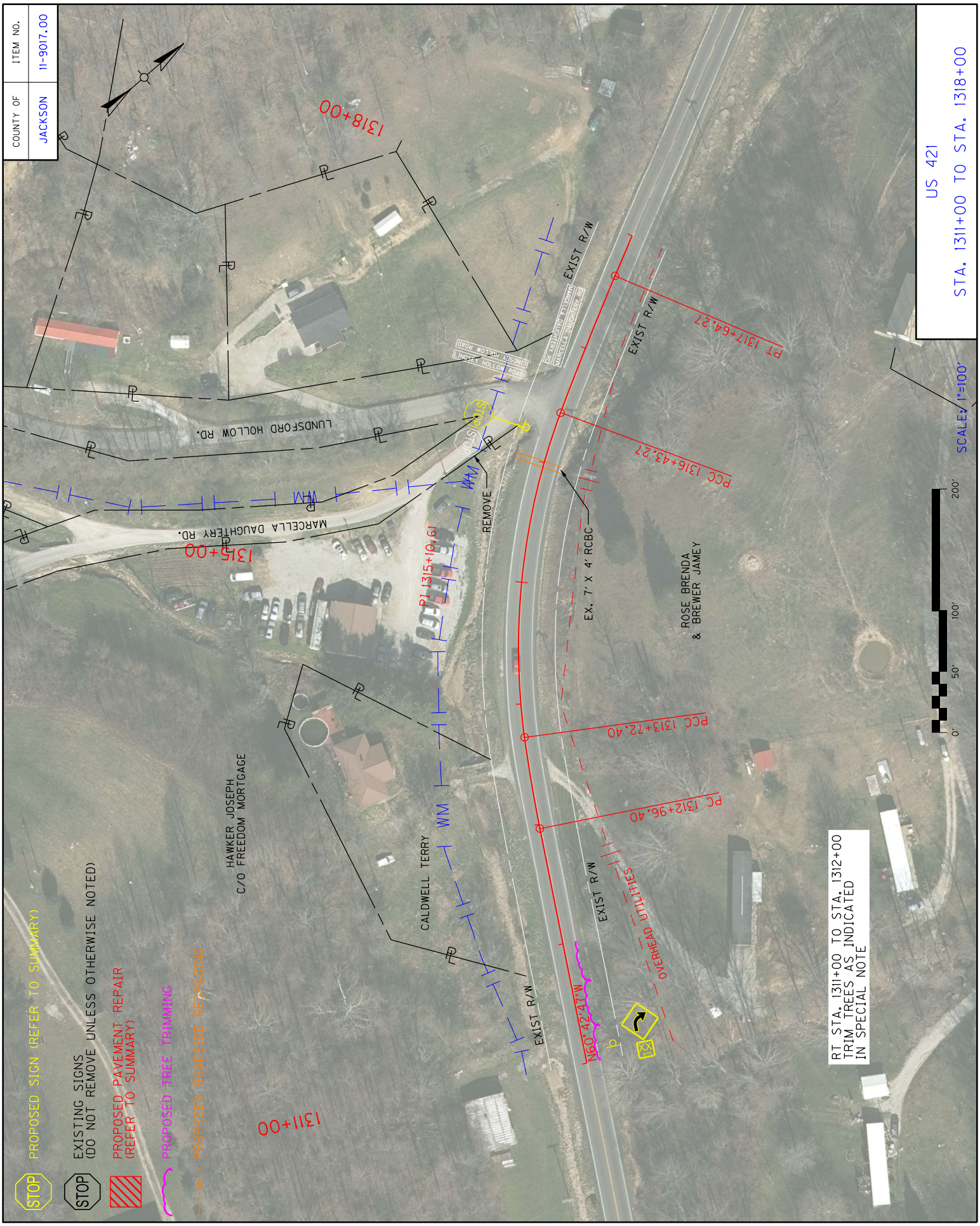
SCALE: 1"=100'

US 421

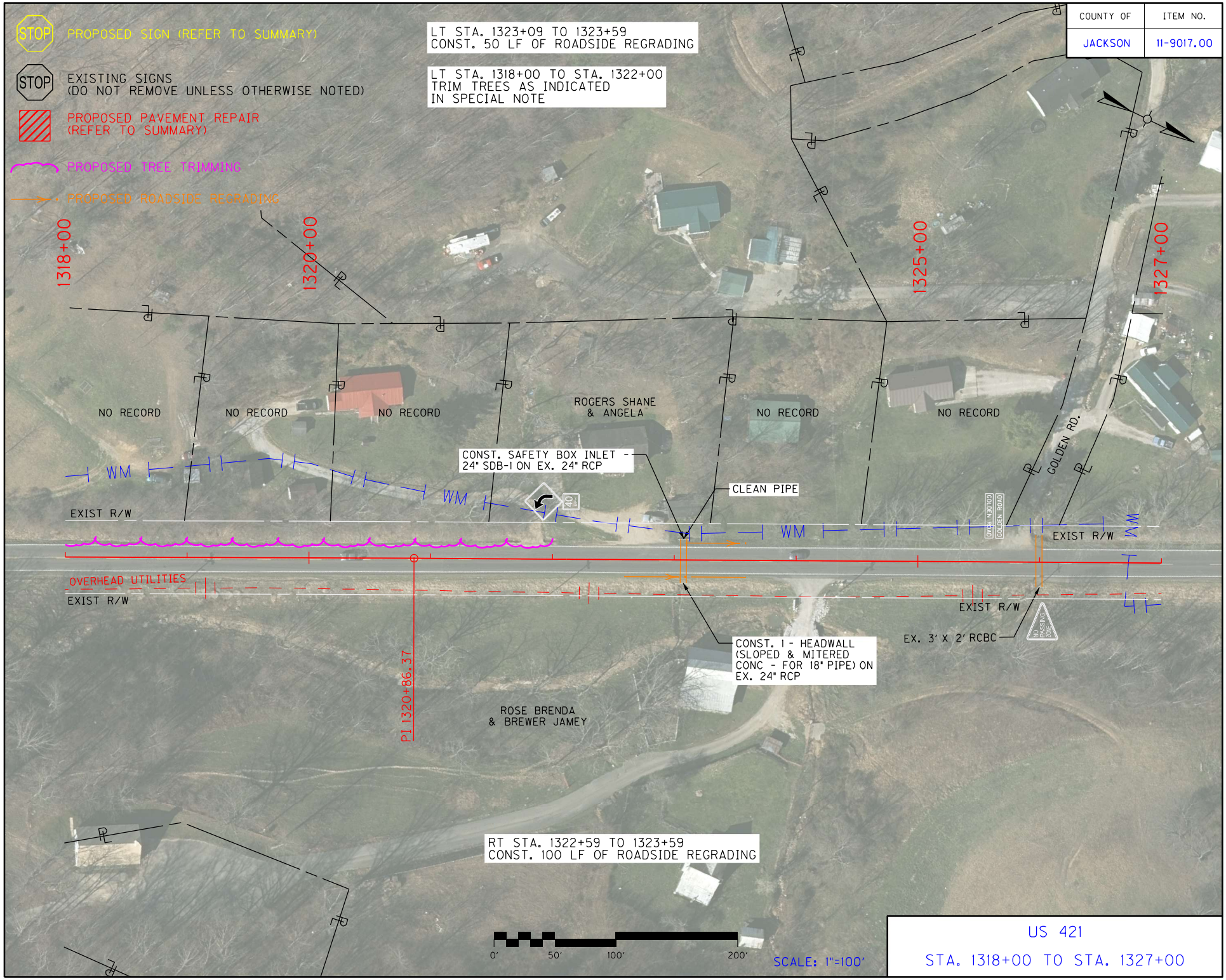
STA. 1286+00 TO STA. 1295+00


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
US 421
STA. 1295+00 TO STA. 1303+00
SCALE: 1"=100'
0'
50'
100'
200'
RT STA. 1302+00 TO STA. 1303+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE
RT STA. 1295+00 TO STA. 1298+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE
1303+00
1300+00
1295+00
BETHFORD RD.
PI 1305+37.86
EXIST R/W
N84°27'51"W
PC 1302+23.24
OVERHEAD UTILITIES
PC 1300+65.24
FULL THROTTLE RD.
EX. 3' X 3' RCBC
NO RECORD
LAWS ASHLEY
WM
45


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1303+00 TO STA. 1311+00
SCALE: 1"=100'
0'
50'
100'
200'
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
LT STA. 1307+75 TO 1308+50
CONST. 34 SY OF PAVEMENT REPAIR
RT STA. 1303+00 TO STA. 1311+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE
RT STA. 1309+71 TO 1310+71
CONST. 100 LF OF ROADSIDE REGRADING
CONST. 1 - HEADWALL
(SLOPED & MITERED
CONC - FOR 24" PIPE) ON
EX. 24" RCP
CLEAN PIPE
OVERHEAD UTILITIES
PI 1309+35.03
PI 1307+01.00
PI 1306+03.38
PCC 1304+39.38
PI 1303+24.63
EXIST R/W
WM
HAWKER JOSEPH
C/O FREEDOM MORTGAGE
ROSE BRENDA
& BREWER JAMEY
LAWS ASHLEY
NO RECORD
BETHFORD RD.
1303+00
1305+00
1310+00
1311+00


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1311+00 TO STA. 1318+00
SCALE: 1"=100'
0'
50'
100'
200'
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
1318+00
1315+00
1311+00
LUNSFORD HOLLOW RD.
MARCELLA DAUGHTERY RD.
HAWKER JOSEPH
C/O FREEDOM MORTGAGE
CALDWELL TERRY
ROSE BRENDA
& BREWER JAMEY
EXIST R/W
REMOVE
EX. 7' X 4' RCBC
PI 1315+10.61
PT 1317+64.27
PCC 1316+43.27
PCC 1313+72.40
PC 1312+96.40
N60°42'47"W
OVERHEAD UTILITIES
RT STA. 1311+00 TO STA. 1312+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE

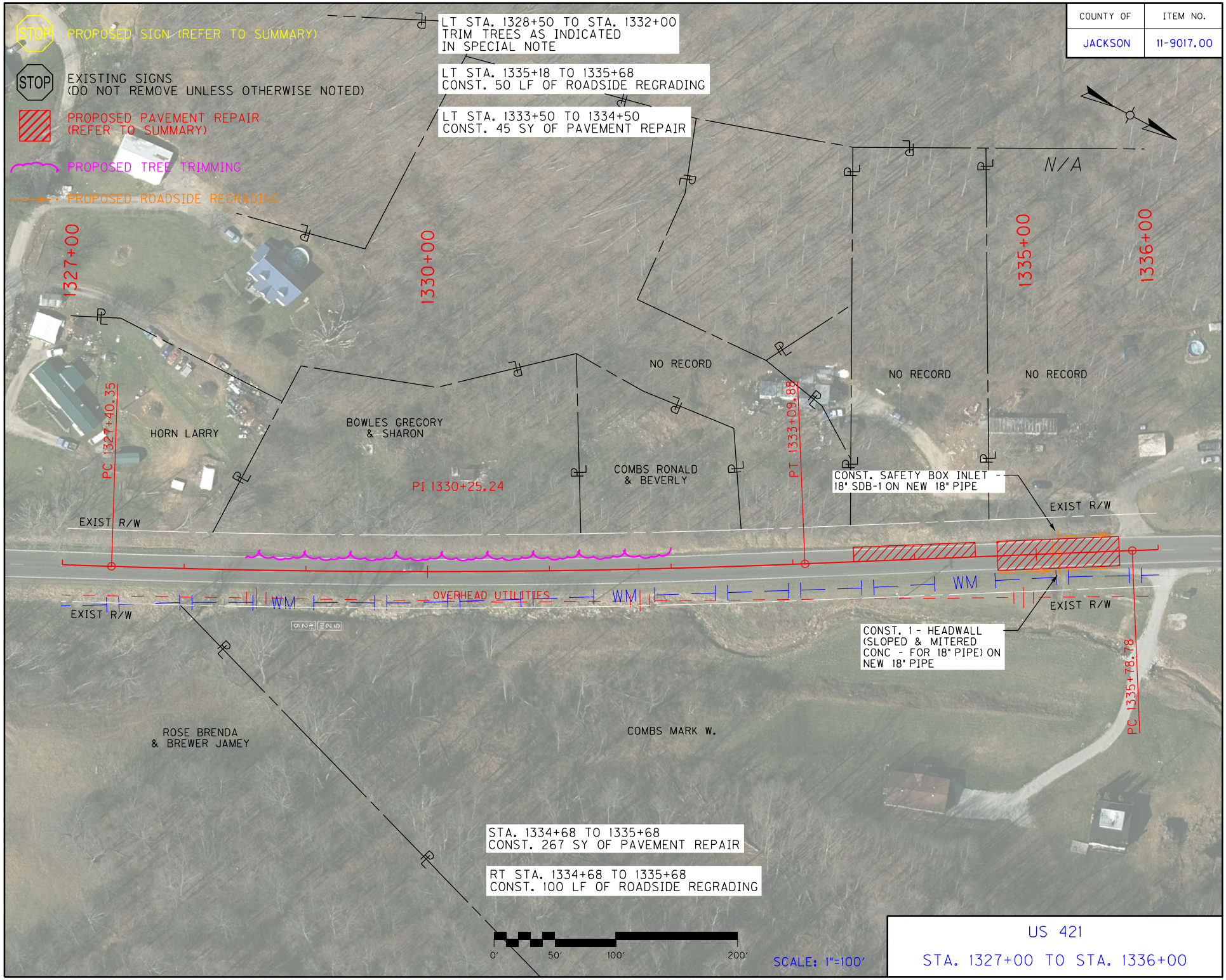
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1318+00 TO STA. 1327+00

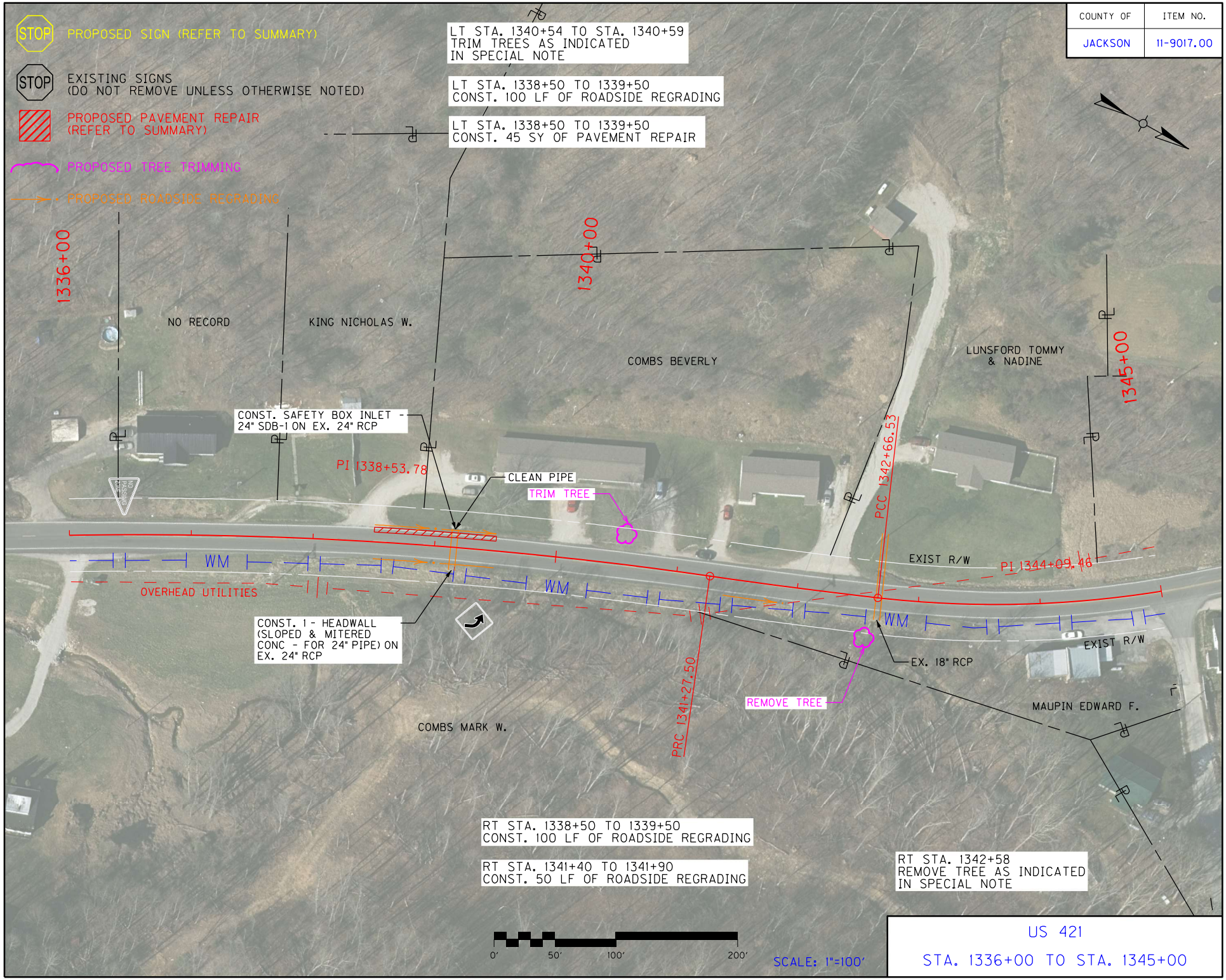
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1327+00 TO STA. 1336+00

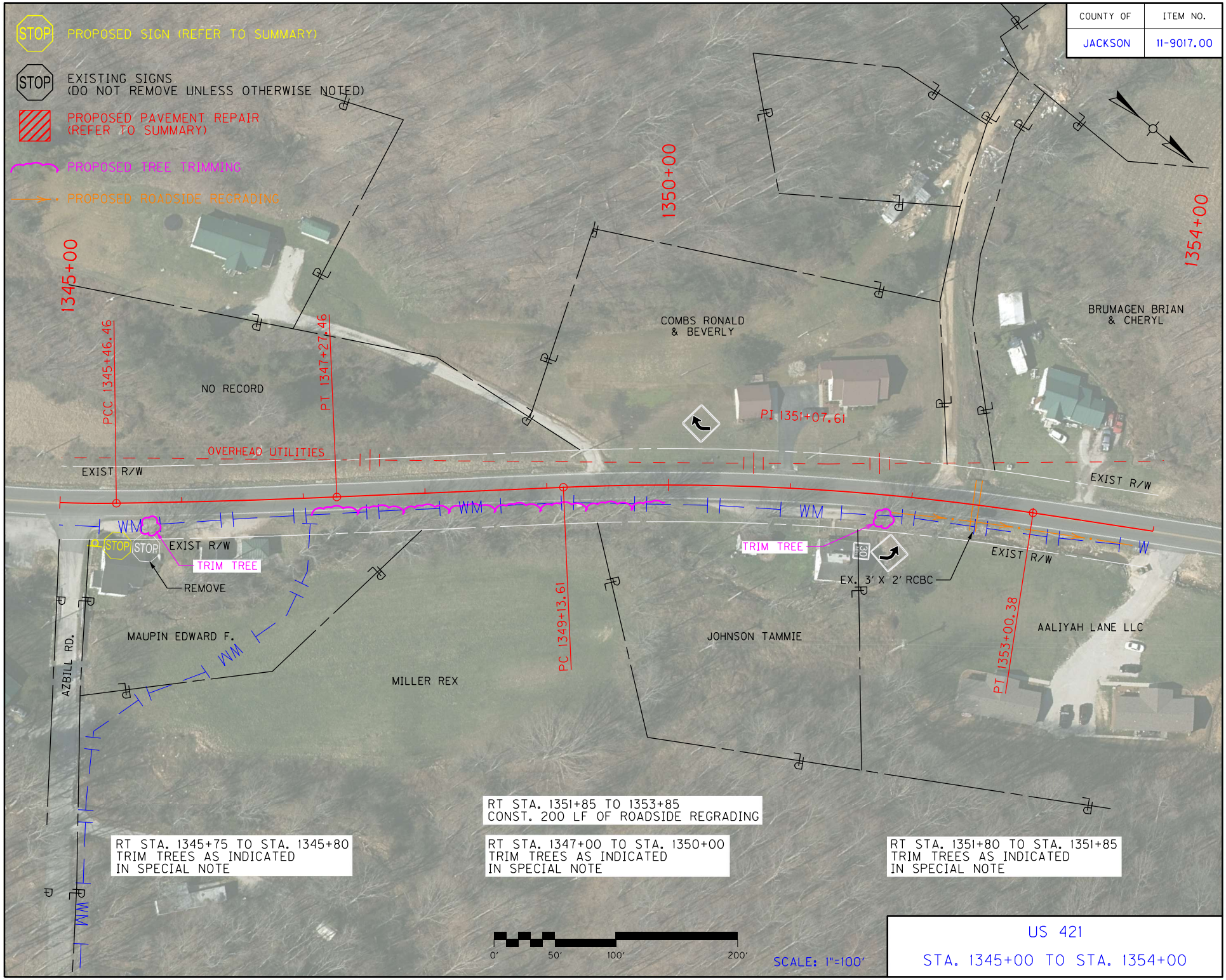
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



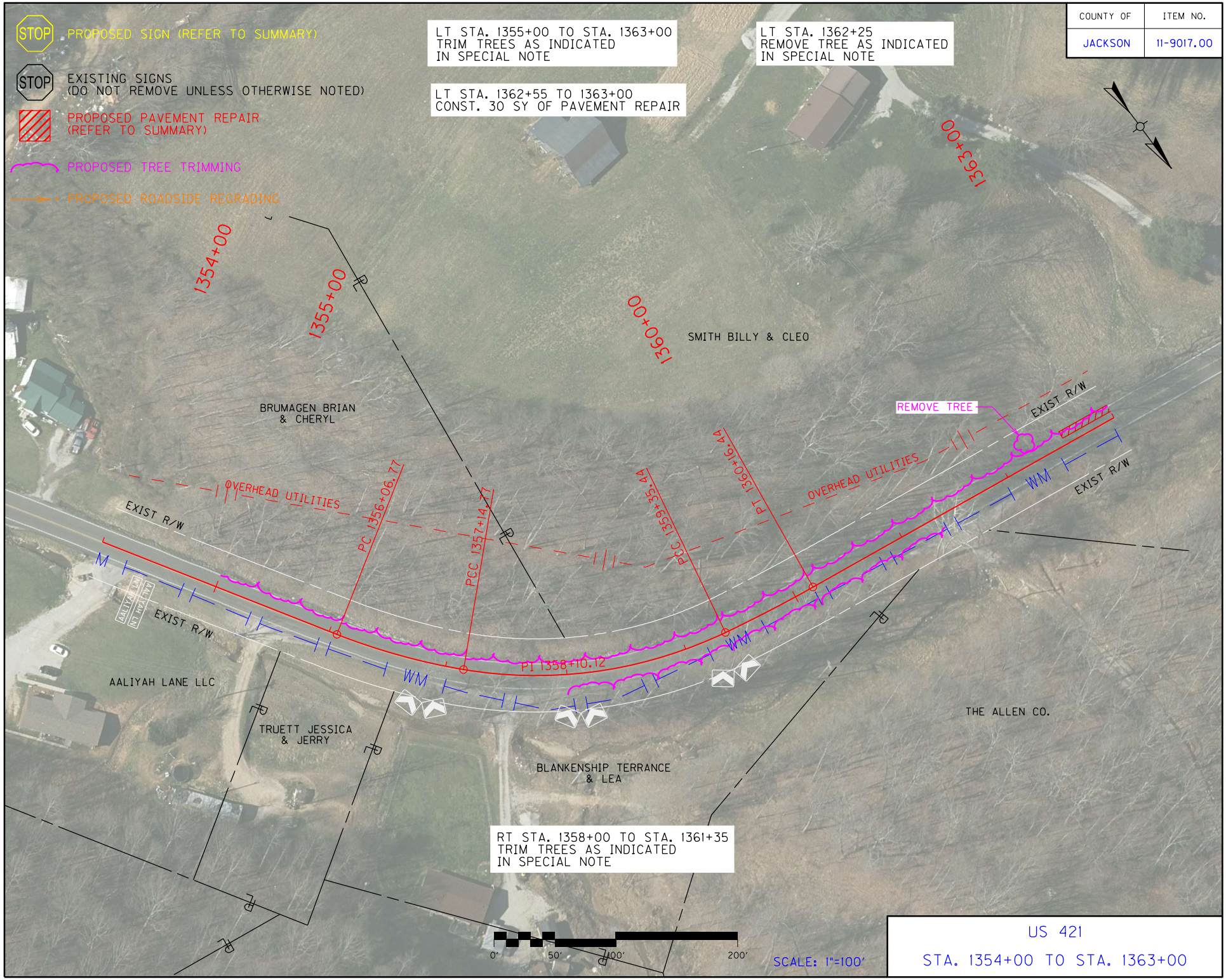
US 421

STA. 1336+00 TO STA. 1345+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1354+00 TO STA. 1363+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

LT STA. 1363+00 TO STA. 1364+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE

LT STA. 1363+05 TO 1364+55
CONST. 150 LF OF ROADSIDE REGRADING

LT STA. 1363+00 TO 1364+75
CONST. 117 SY OF PAVEMENT REPAIR

LT STA. 1369+00 TO STA. 1371+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE

LT STA. 1371+50 TO 1372+00
CONST. 50 LF OF ROADSIDE REGRADING

LT STA. 1371+00 TO 1372+00
CONST. 45 SY OF PAVEMENT REPAIR

1363+00

1365+00

1370+00

1372+00

SMITH LN.

SMITH BILLY & CLEO

CONST. SAFETY BOX INLET -
24" SDB-1 ON EX. 24" RCP

CONST. SAFETY BOX INLET -
18" SDB-1 ON EX. 18" RCP

PCC 1369+40.81

PCC 1370+87.81

PI 1371+85.1C

OVERHEAD UTILITIES

EXIST R/W

WM

CLEAN PIPE

PI 1363+61.97

PI 1366+43.80

BLANKENSHIP TERRANCE
& LEA

NO RECORD

NO RECORD

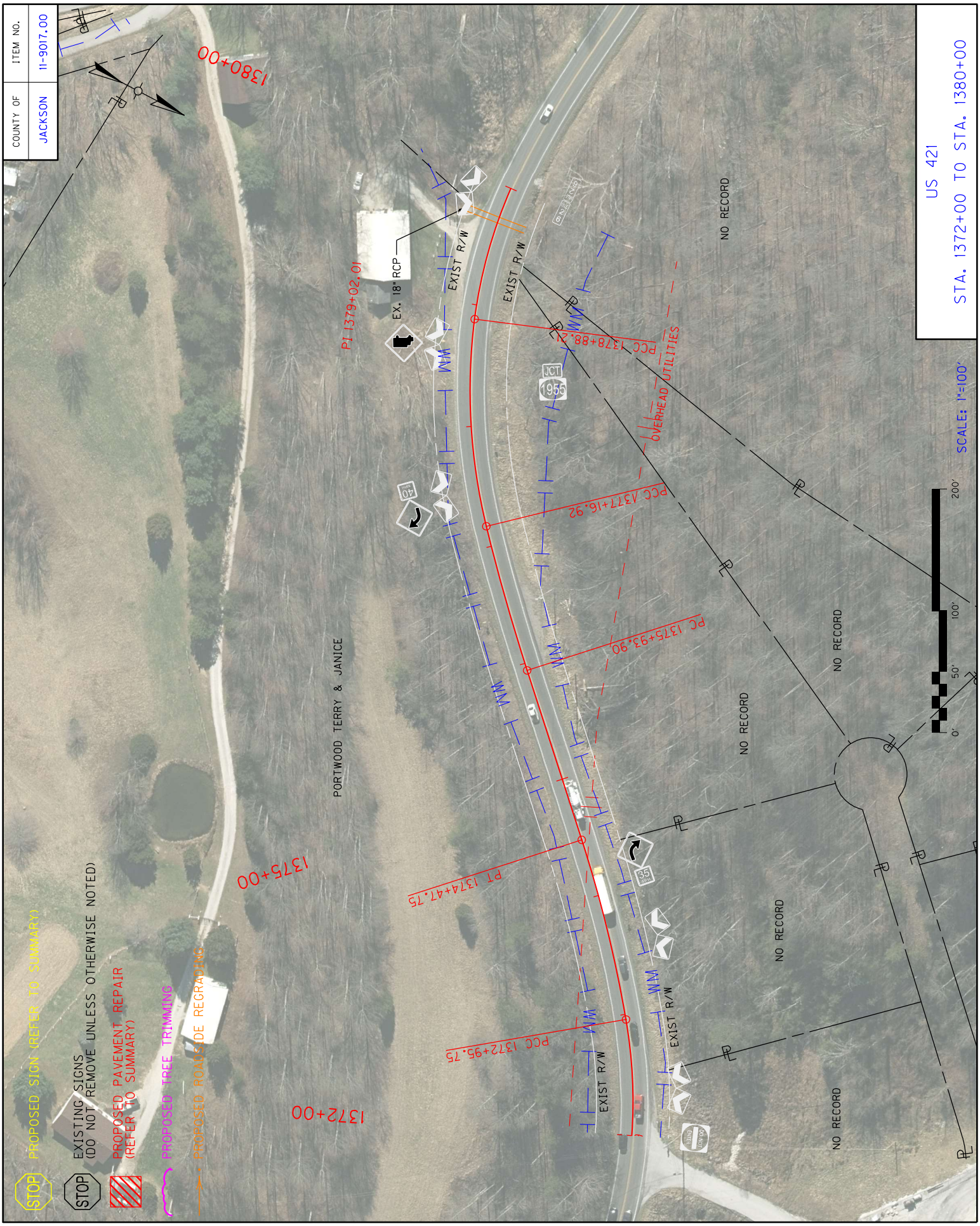
NO RECORD

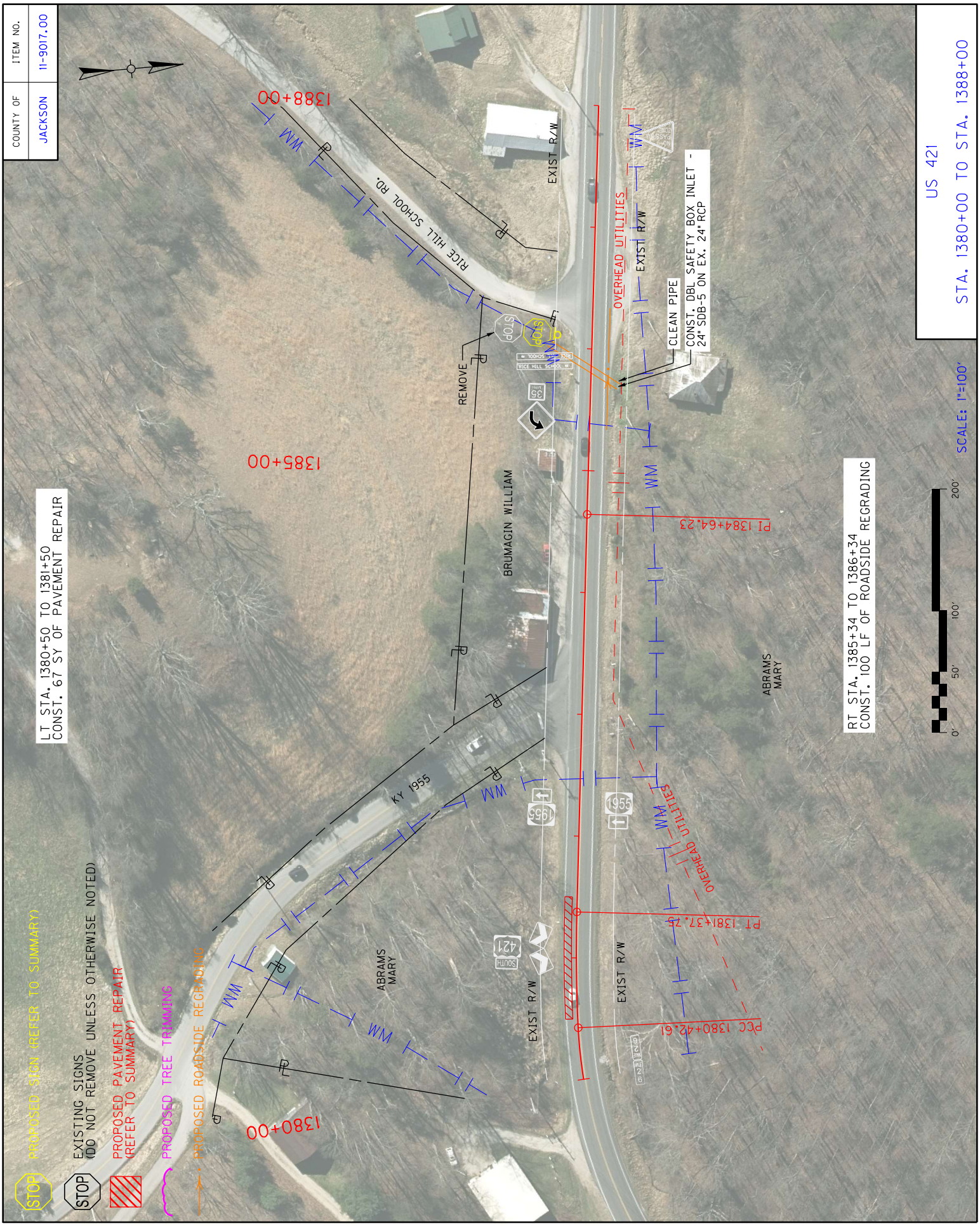
0' 50' 100' 200'

SCALE: 1"=100'

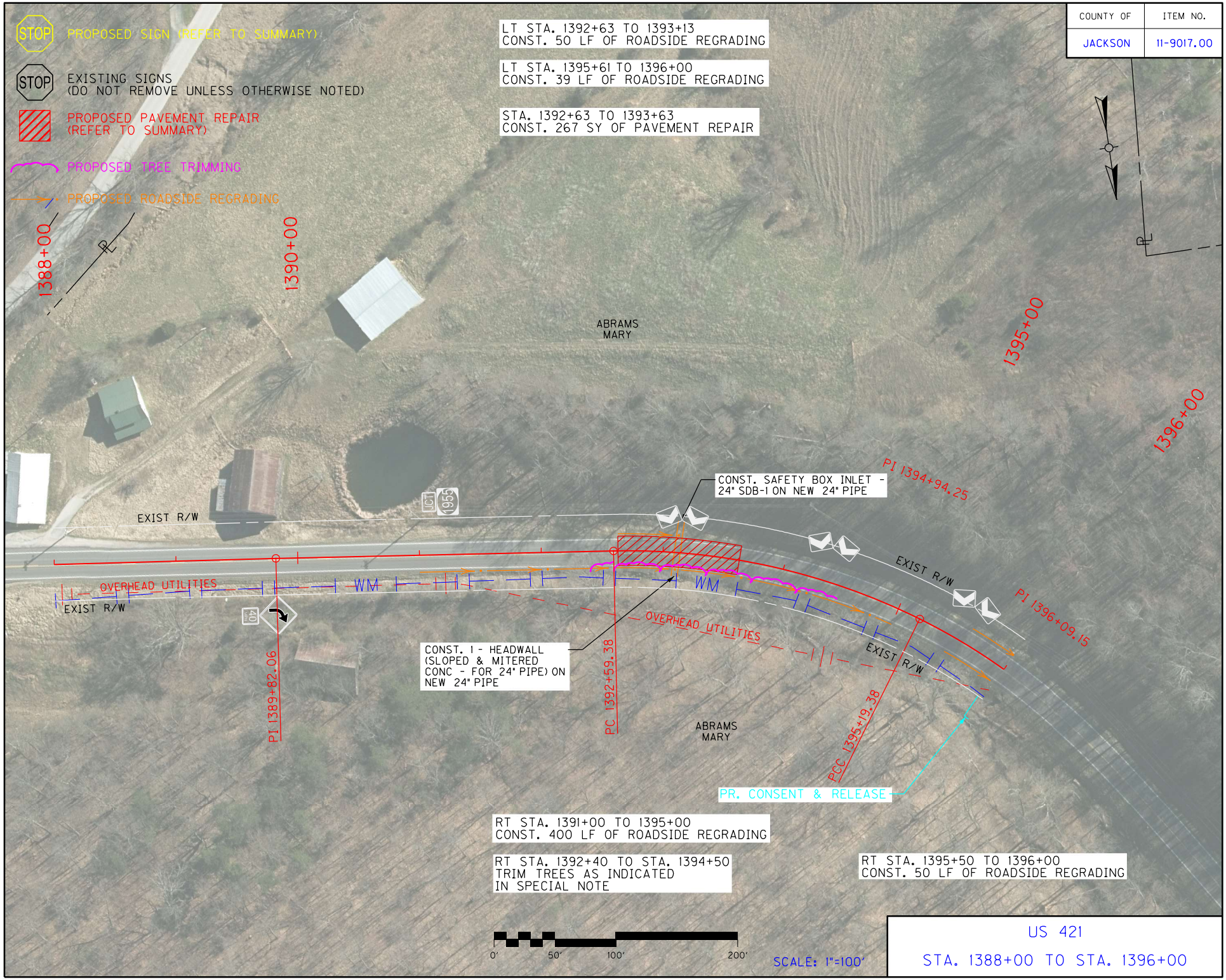
US 421

STA. 1363+00 TO STA. 1372+00


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1372+00 TO STA. 1380+00
SCALE: 1"=100'
0'
50'
100'
200'
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
1380+00
1375+00
1372+00
PI 1379+02.01
EX. 18" RCP
EXIST R/W
PCC 1378+88.27
JCT 1955
OVERHEAD UTILITIES
PCC 1377+16.92
PC 1375+93.90
PT 1374+47.75
PCC 1372+95.75
PORTWOOD TERRY & JANICE
NO RECORD
NO RECORD
NO RECORD
NO RECORD
NO RECORD
EXIST R/W
EXIST R/W
WM
PL


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1380+00 TO STA. 1388+00
SCALE: 1"=100'
0'
50'
100'
200'
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
LT STA. 1380+50 TO 1381+50
CONST. 67 SY OF PAVEMENT REPAIR
RT STA. 1385+34 TO 1386+34
CONST. 100 LF OF ROADSIDE REGRADING
1380+00
1385+00
1388+00
RICE HILL SCHOOL RD.
KY 1955
REMOVE
CLEAN PIPE
CONST. DBL SAFETY BOX INLET -
24" SDB-5 ON EX. 24" RCP
OVERHEAD UTILITIES
EXIST R/W
BRUMAGIN WILLIAM
ABRAMS
MARY
PI 1384+64.23
PT 1381+32.75
PCC 1380+42.61
STOP
SOUTH
421
1955
35
WM

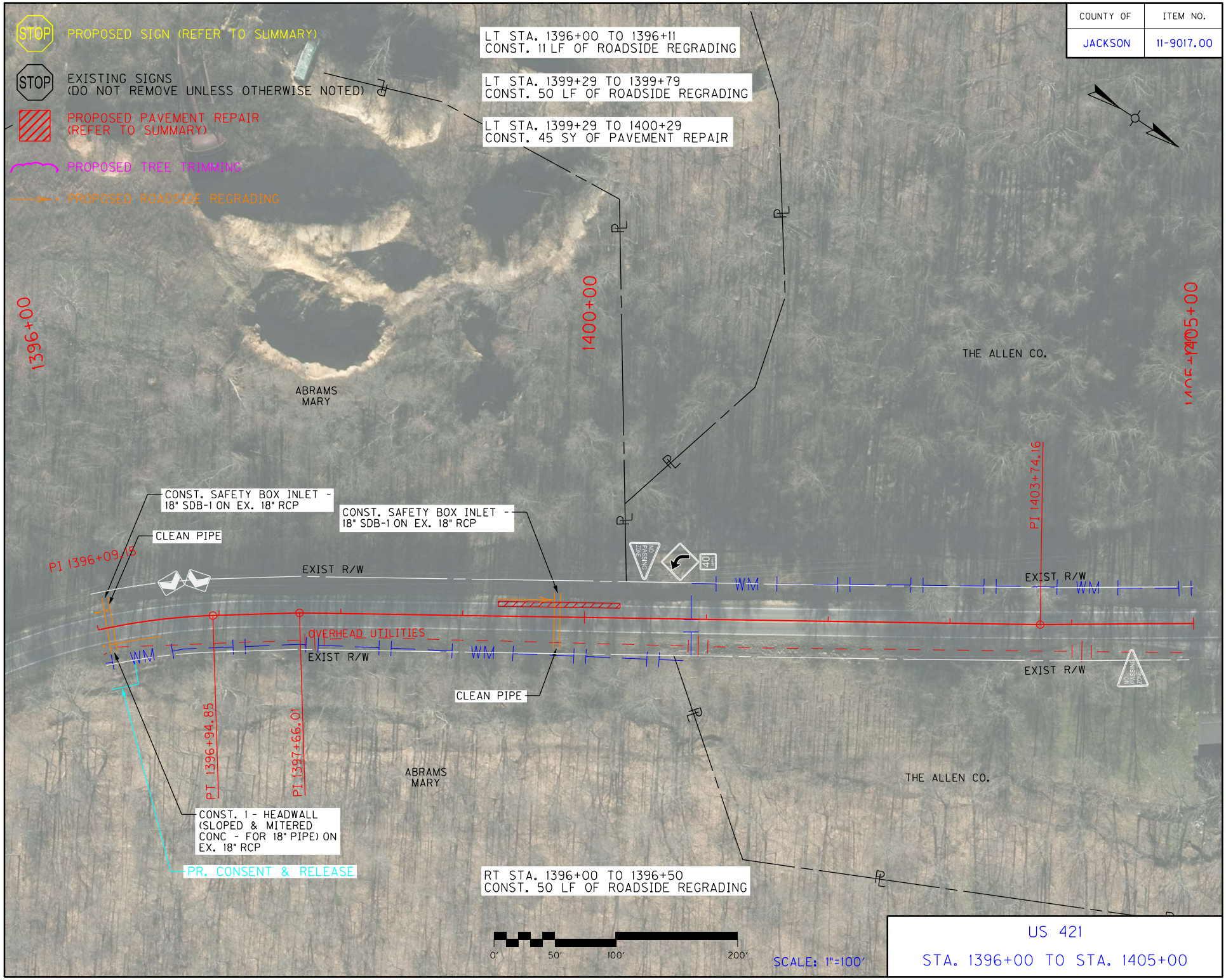
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1388+00 TO STA. 1396+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1396+00 TO STA. 1405+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

LT STA. 1405+00 TO STA. 1414+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE

LT STA. 1405+50 TO 1406+00
CONST. 50 LF OF ROADSIDE REGRADING

LT STA. 1407+78 TO 1408+28
CONST. 50 LF OF ROADSIDE REGRADING

LT STA. 1410+24 TO 1411+24
CONST. 100 LF OF ROADSIDE REGRADING

1405+00

1410+00

1414+00

THE ALLEN CO.

CONST. SAFETY BOX INLET -
18" SDB-1 ON EX. 18" RCP

CLEAN PIPE

CONST. SAFETY BOX INLET -
18" SDB-1 ON EX. 18" RCP

CLEAN PIPE

PI 1407+92.60

PC 1410+92.21

CONST. DBI TY. 1
ON EX. 18" RCP

EXIST R/W

EXIST R/W

EXIST R/W

EXIST R/W

WM

WM

TERMINAL SECTION
NO. 1

SCHOOL BUS STOP AHEAD

PI 1406+40.11

PC 1407+14.13

PT 1408+70.92

CLEAN PIPE

PI 1

RT STA. 1408+25 TO STA. 1414+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE

THE ALLEN CO.

RT STA. 1408+00 TO 1414+00
REMOVE 600 LF OF GUARDRAIL

RT STA. 1408+00 TO 1414+00
CONST. 600 LF OF STEEL W
BEAM SINGLE FACE GUARDRAIL
1 - TERMINAL SECTION NO. 1

℄

℄

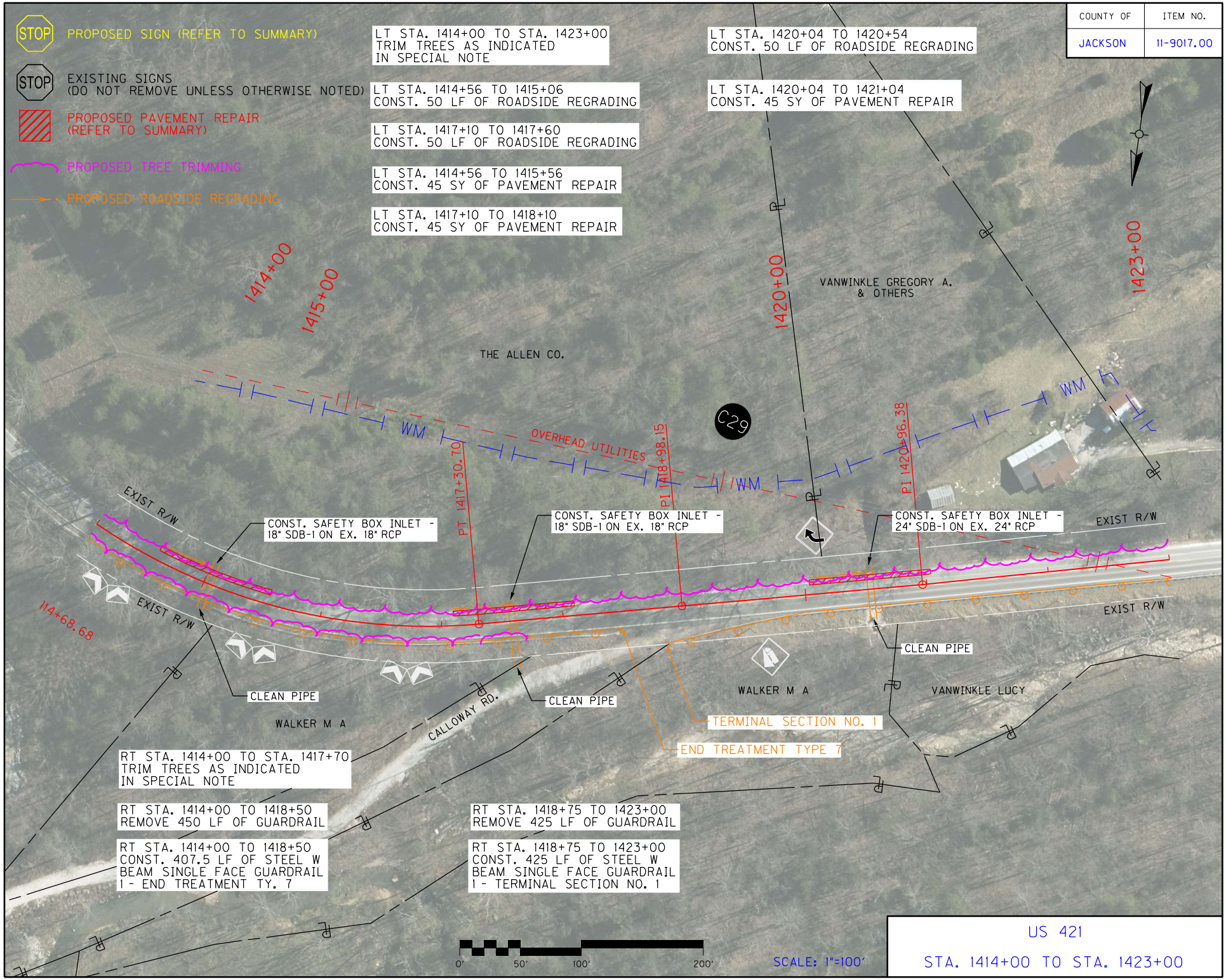
0′ 50′ 100′ 200′

SCALE: 1"=100′

US 421

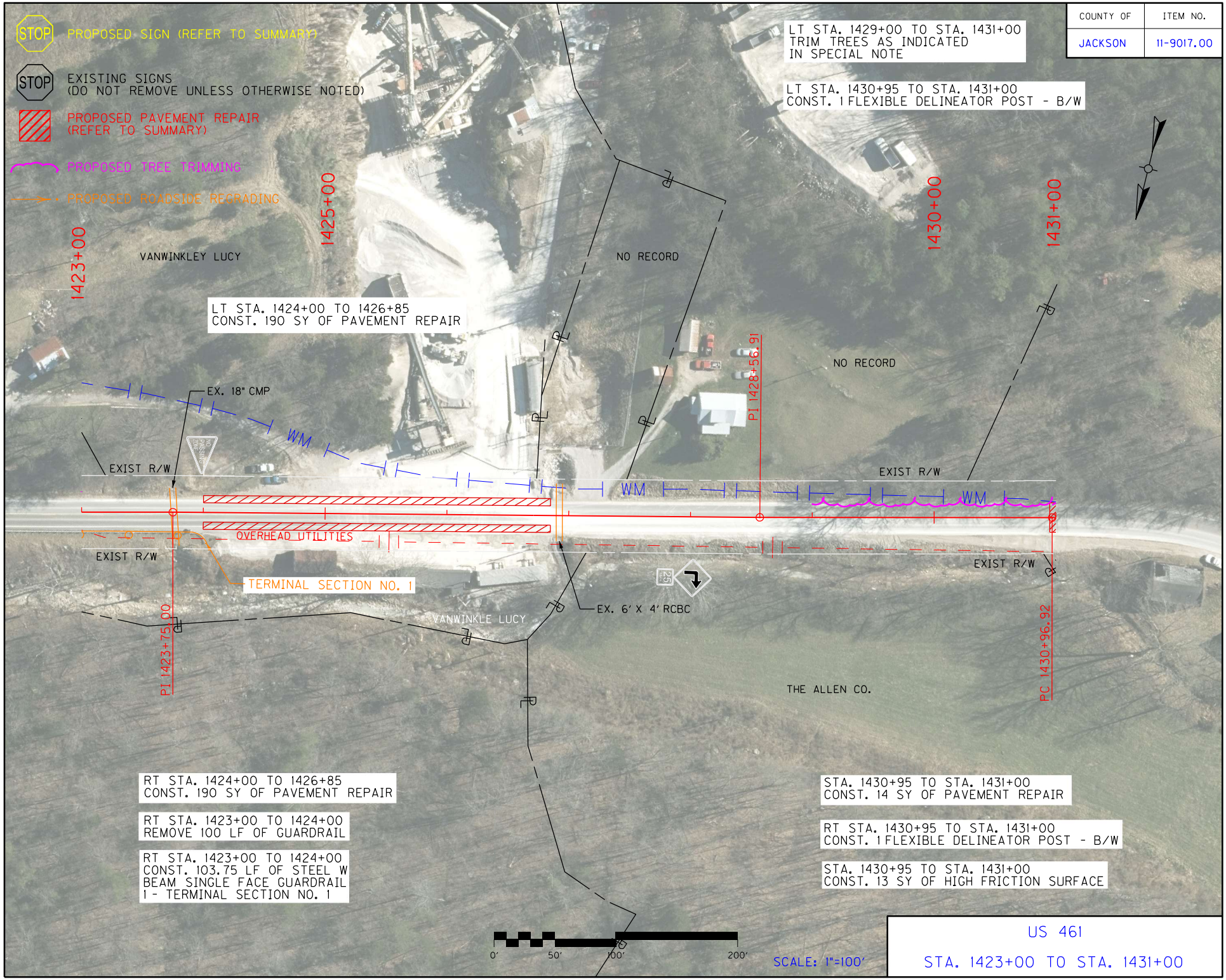
STA 1405+00 TO STA. 1414+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

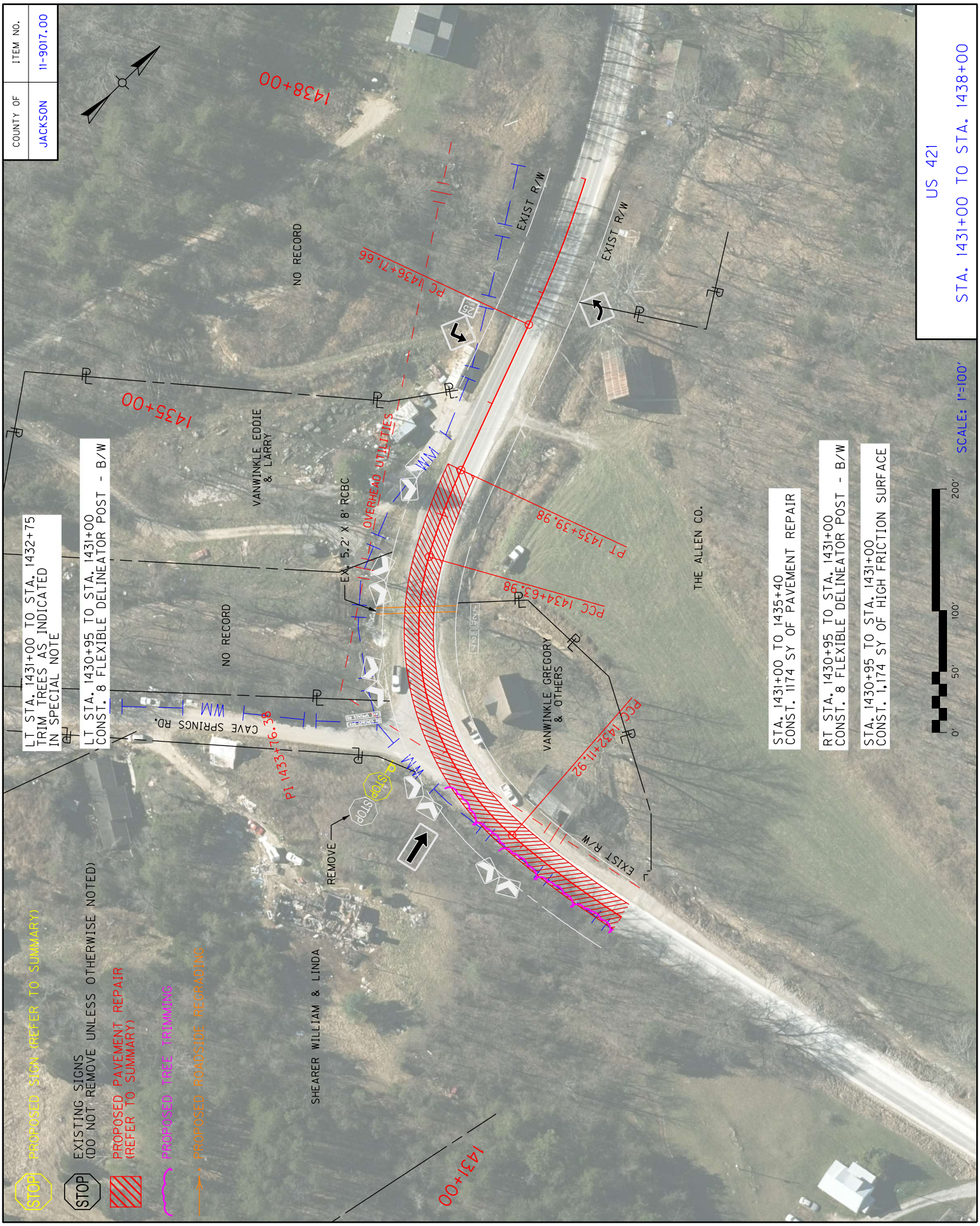
STA. 1414+00 TO STA. 1423+00



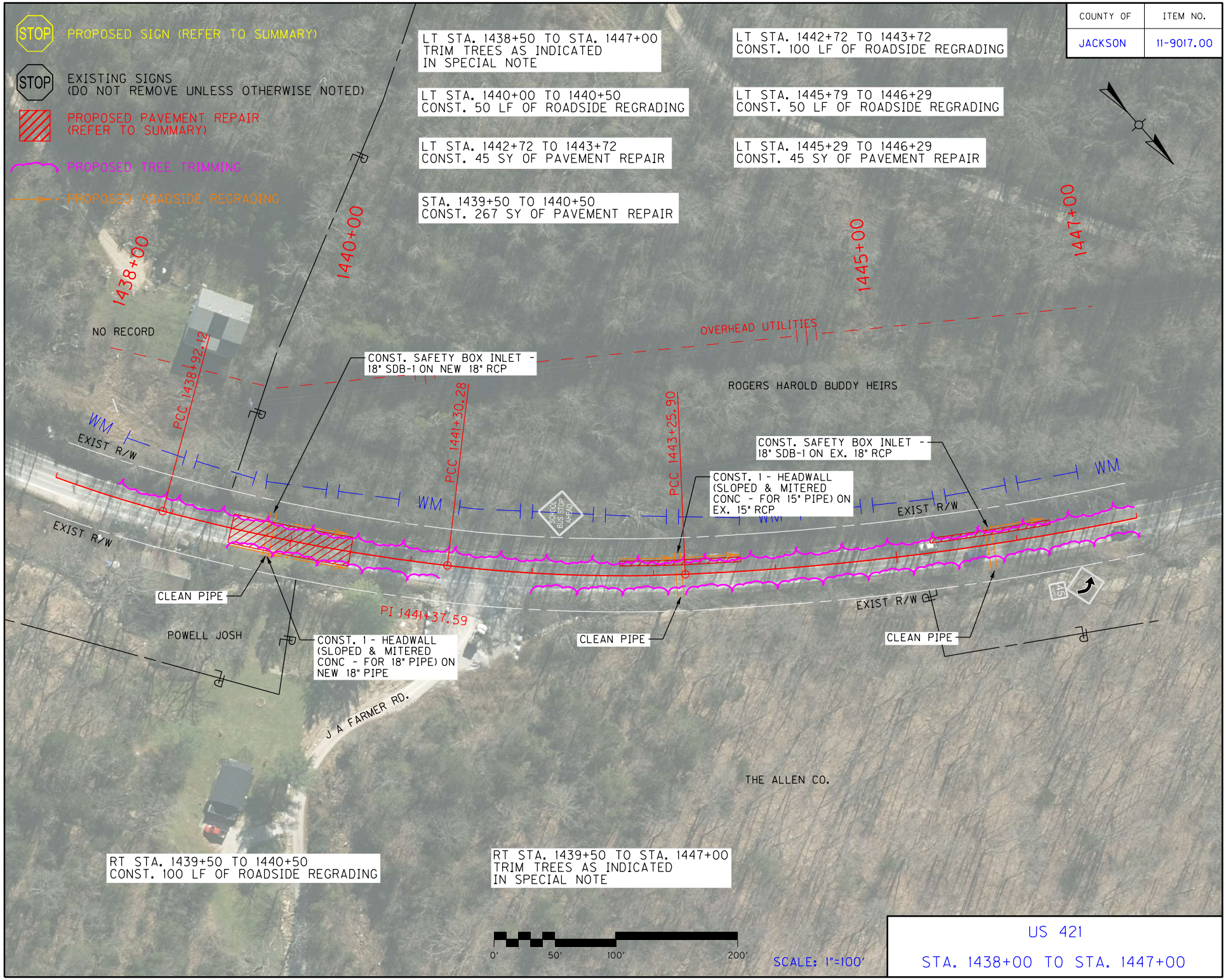
COUNTY OF	ITEM NO.
JACKSON	11-9017.00

US 461

STA. 1423+00 TO STA. 1431+00


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1431+00 TO STA. 1438+00
SCALE: 1"=100'
0'
50'
100'
200'
1438+00
1435+00
1431+00
PC 1436+71.66
PT 1435+39.98
PCC 1434+63.98
PCC 1432+11.92
EXIST R/W
NO RECORD
VANWINKLE EDDIE & LARRY
EX. 5.2' X 8' RCBC
OVERHEAD UTILITIES
CAVE SPRINGS RD.
PI 1433+76.38
SHEARER WILLIAM & LINDA
REMOVE
VANWINKLE GREGORY & OTHERS
THE ALLEN CO.
STOP
LT STA. 1431+00 TO STA. 1432+75
TRIM TREES AS INDICATED
IN SPECIAL NOTE
LT STA. 1430+95 TO STA. 1431+00
CONST. 8 FLEXIBLE DELINEATOR POST - B/W
STA. 1431+00 TO 1435+40
CONST. 1174 SY OF PAVEMENT REPAIR
RT STA. 1430+95 TO STA. 1431+00
CONST. 8 FLEXIBLE DELINEATOR POST - B/W
STA. 1430+95 TO STA. 1431+00
CONST. 1,174 SY OF HIGH FRICTION SURFACE
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1438+00 TO STA. 1447+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

STOP EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

LT STA. 1447+00 TO STA. 1453+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE

LT STA. 1449+50 TO 1450+00
CONST. 50 LF OF ROADSIDE REGRADING

LT STA. 1453+85 TO 1454+60
CONST. 50 SY OF PAVEMENT REPAIR

LT STA. 1449+00 TO 1450+00
CONST. 45 SY OF PAVEMENT REPAIR

1447+00

1450+00

1455+00

1456+00

OVERHEAD UTILITIES

PT 1447+21.13

PC 1448+93.02

PT 1452+05.29

PI 1452+93.00

CAIN
MIKE & DAPHNE

QUILLEN
LARRY & DOROTHY

ROGERS HAROLD
BUDDY HEIRS
C/O WALTER ABRAMS

CONST. 1 - HEADWALL
(SLOPED & MITERED
CONC - FOR 24" PIPE) ON
EX. 24" RCP

CONST. SAFETY BOX INLET -
18" SDB-1 ON EX. 18" RCP

CLEAN PIPE

EXIST R/W

WM

PI 1450+51.88

CONST. JUNCTION BOX
TY. A ON EX. 24" RCP

PR. CONSENT & RELEASE

PR. CONSENT & RELEASE

MIKE
MCKEE LLC

T STANFORD RD.

RT STA. 1454+36 TO 1455+36
CONST. 45 SY OF PAVEMENT REPAIR

RT STA. 1454+50 TO 1455+00
CONST. 50 LF OF ROADSIDE REGRADING

RT STA. 1447+00 TO STA. 1452+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE

RT STA. 1452+00 TO 1453+25
CONST. 125 LF OF ROADSIDE REGRADING

0' 50' 100' 200'

SCALE: 1"=100'

US 421

STA. 1447+00 TO STA. 1456+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

PROPOSED SIGN (REFER TO SUMMARY)

EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)

PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)

PROPOSED TREE TRIMMING

PROPOSED ROADSIDE REGRADING

LT STA. 1463+02 TO 1463+52
CONST. 50 LF OF ROADSIDE REGRADING

LT STA. 1457+50 TO 1458+00
CONST. 34 SY OF PAVEMENT REPAIR

1456+00

1460+00

1464+00

VANWINKLE
LEE ANN

PI 1458+04.54

CONST. SAFETY BOX INLET -
18" SDB-1 ON EX. 18" RCP

CLEAN PIPE

EX. 18" RCP

PI 1461+84.61

CONST. SAFETY BOX INLET -
18" SDB-1 ON EX. 18" RCP

OVERHEAD UTILITIES

EXIST R/W

EXIST R/W

CLEAN PIPE

CLEAN PIPE

EXIST R/W

EXIST R/W

PR. CONSENT & RELEASE

CONST. 1 - HEADWALL
(SLOPED & MITERED
CONC - FOR 18" PIPE) ON
EX. 18" RCP

MILLER
MARK LEE &
ANGELA

PI 1459+10.88

PC 1460+09.80

PT 1463+52.45

ROGERS RD.

T STANFORD RD.

RT STA. 1457+75 TO 1460+25
CONST. 250 LF OF ROADSIDE REGRADING

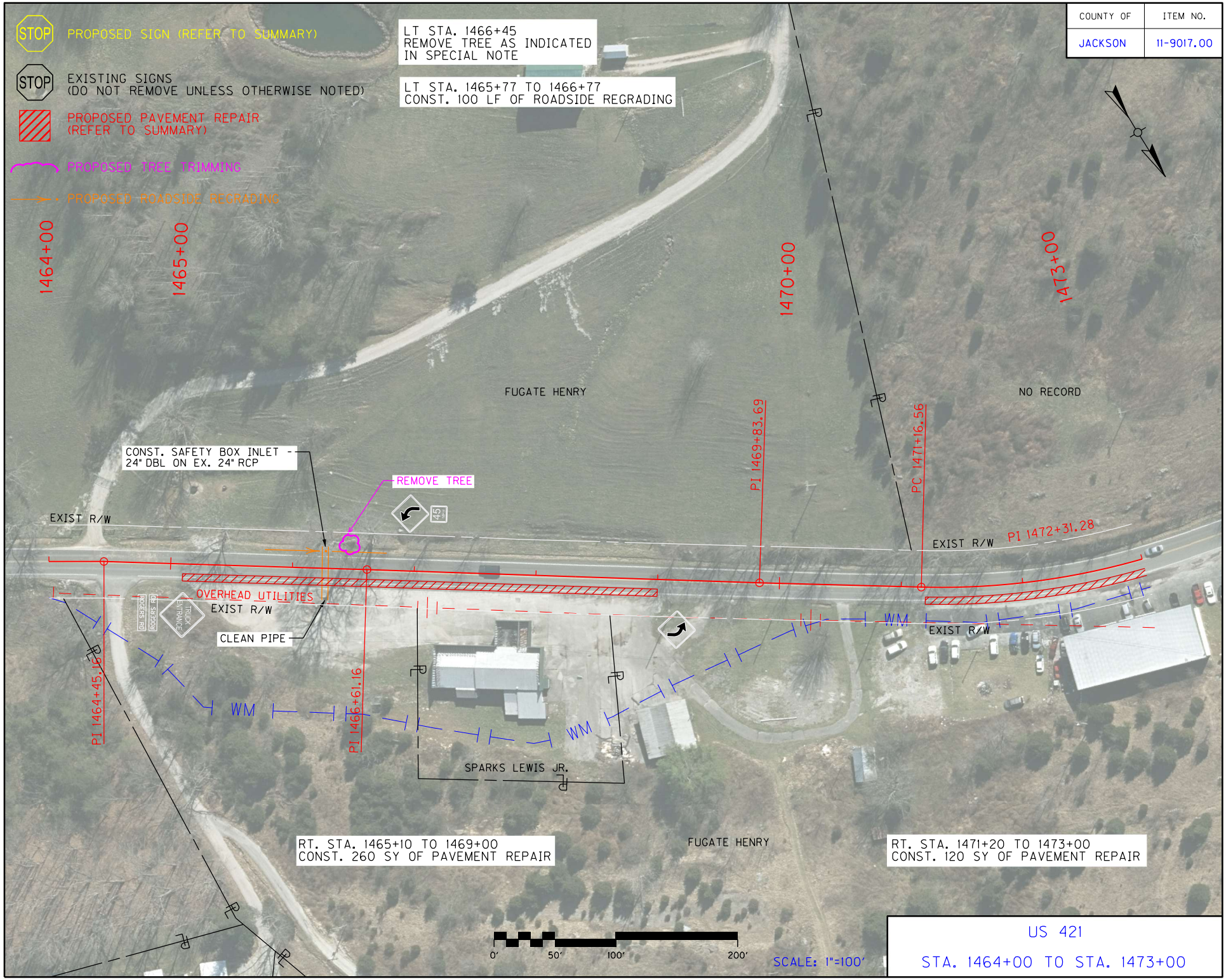
0' 50' 100' 200'

SCALE: 1"=100'

US 421

STA. 1456+00 TO STA. 1464+00

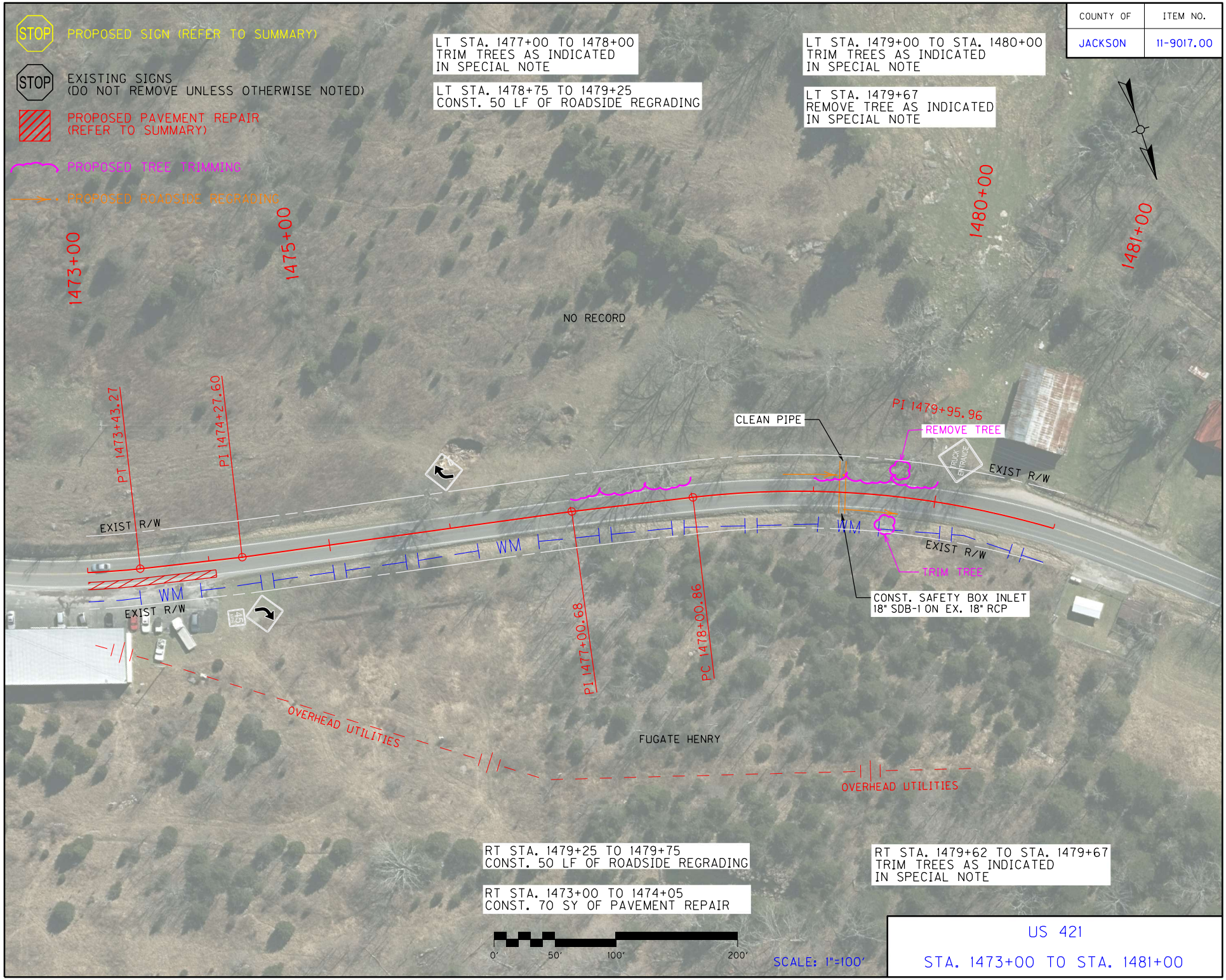
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1464+00 TO STA. 1473+00

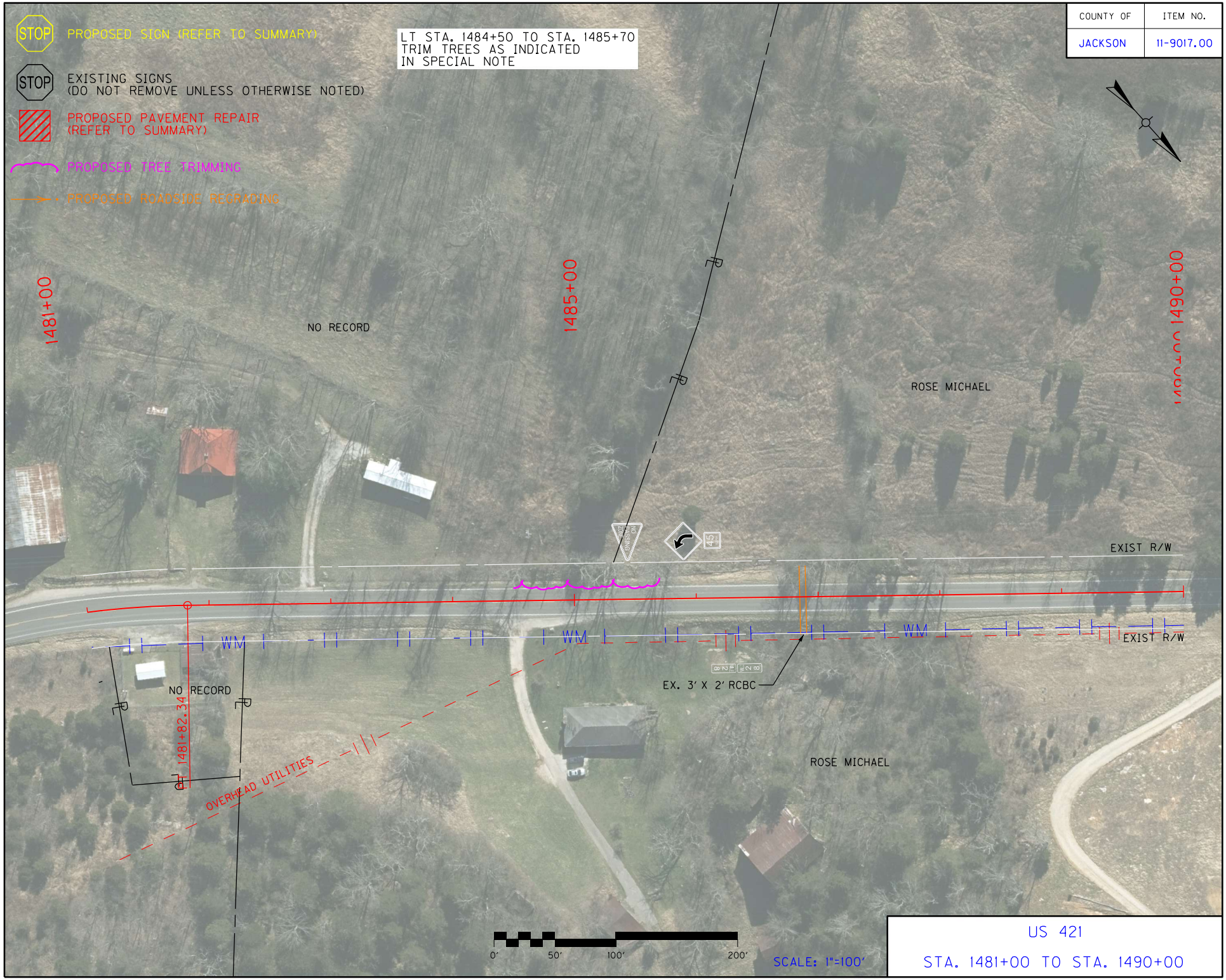
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1473+00 TO STA. 1481+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

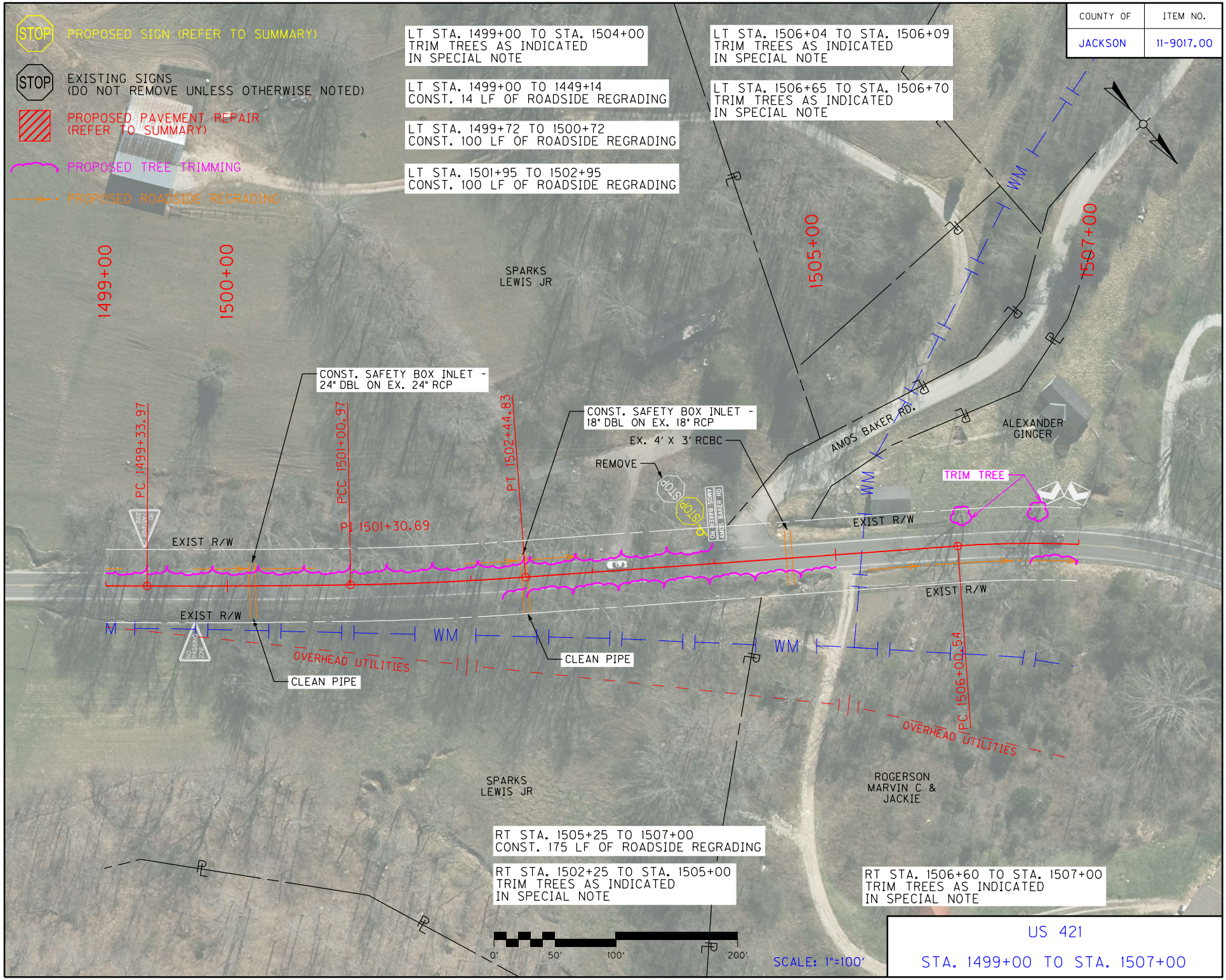
STA. 1481+00 TO STA. 1490+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

US 421

STA. 1490+00 TO STA. 1499+00

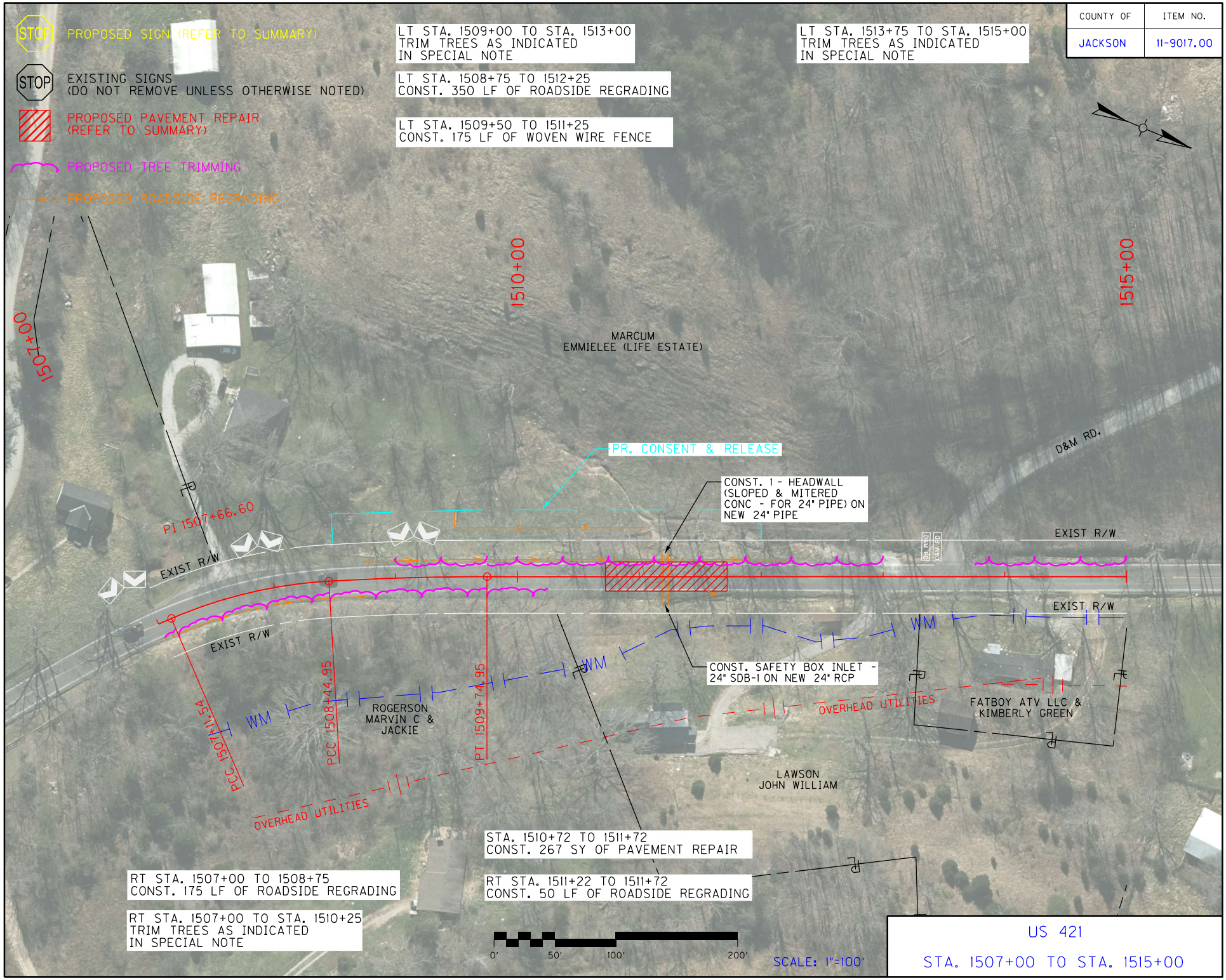
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

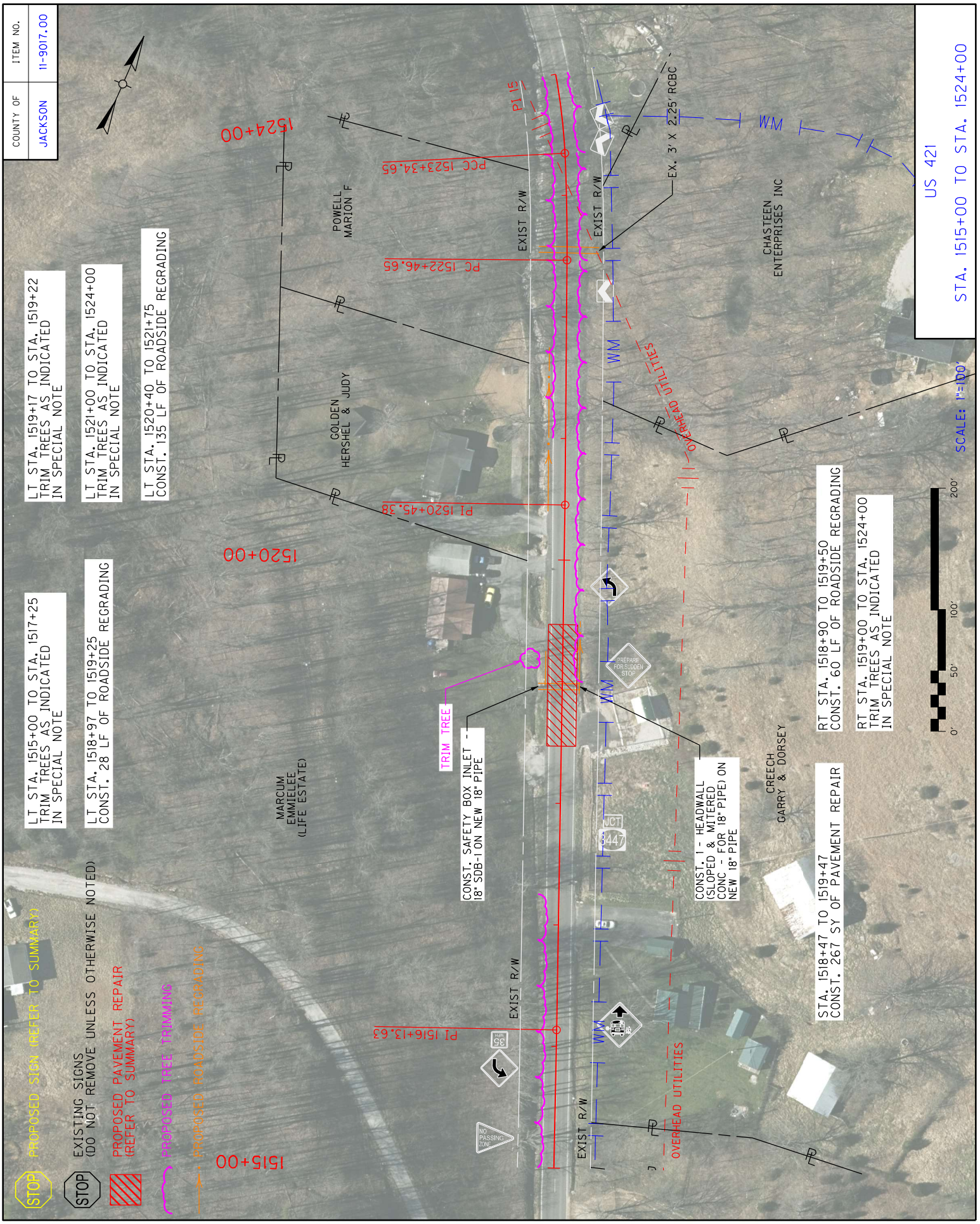
STA. 1499+00 TO STA. 1507+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

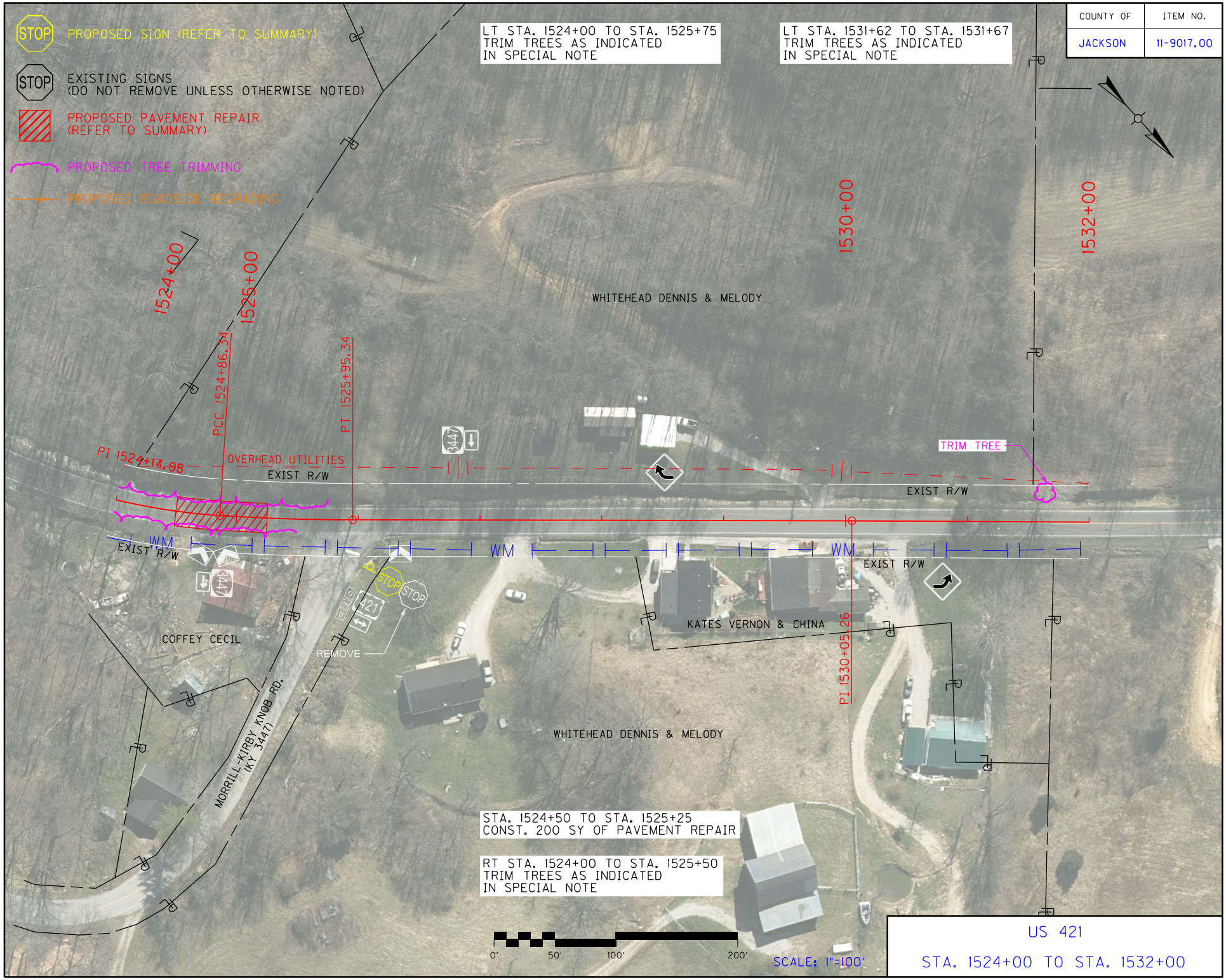


US 421

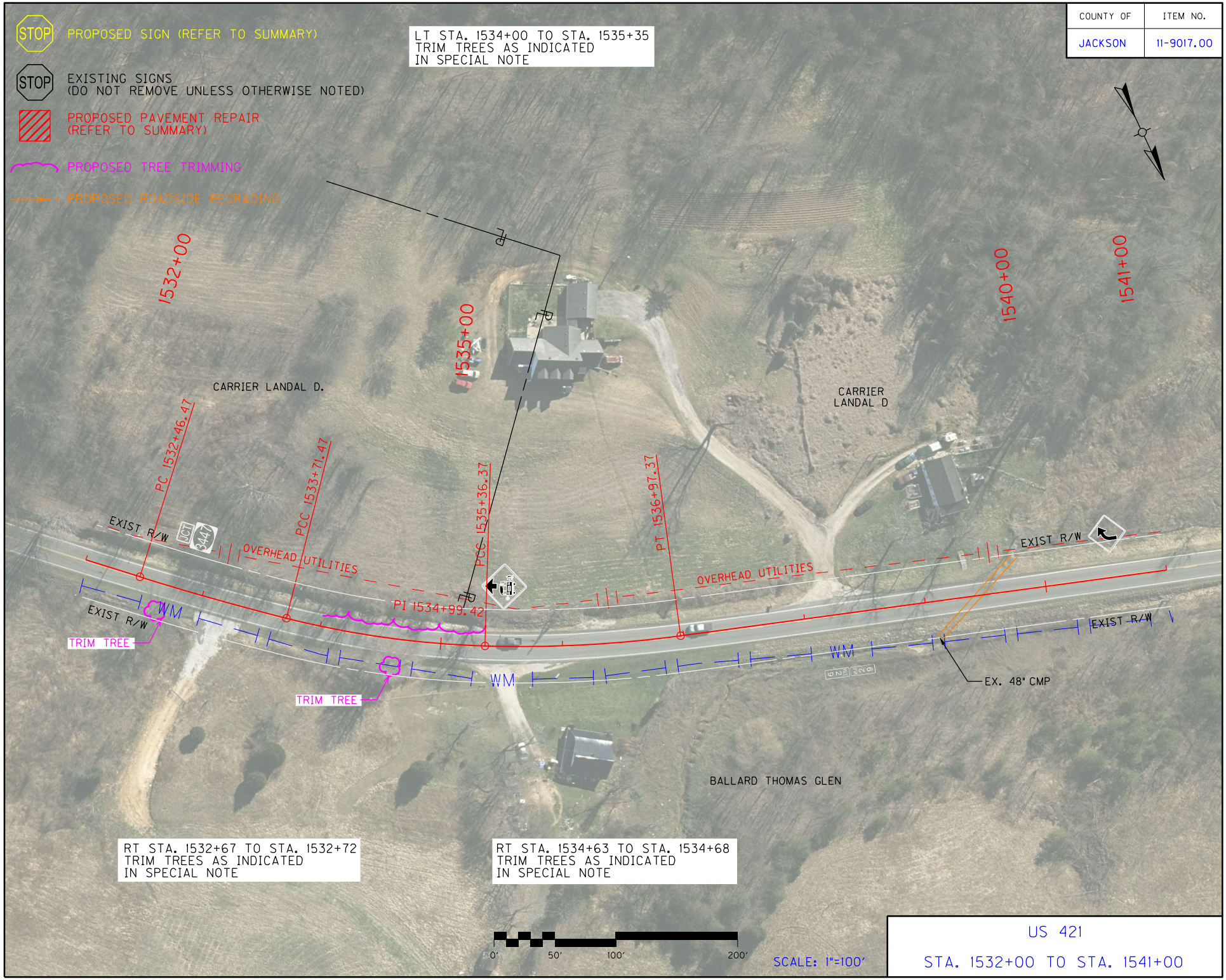
STA. 1507+00 TO STA. 1515+00


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1515+00 TO STA. 1524+00
SCALE: 1"=100'
0'
50'
100'
200'
PROPOSED SIGN (REFER TO SUMMARY)
EXISTING SIGNS
(DO NOT REMOVE UNLESS OTHERWISE NOTED)
PROPOSED PAVEMENT REPAIR
(REFER TO SUMMARY)
PROPOSED TREE TRIMMING
PROPOSED ROADSIDE REGRADING
LT STA. 1515+00 TO STA. 1517+25
TRIM TREES AS INDICATED
IN SPECIAL NOTE
LT STA. 1518+97 TO 1519+25
CONST. 28 LF OF ROADSIDE REGRADING
LT STA. 1519+17 TO STA. 1519+22
TRIM TREES AS INDICATED
IN SPECIAL NOTE
LT STA. 1521+00 TO STA. 1524+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE
LT STA. 1520+40 TO 1521+75
CONST. 135 LF OF ROADSIDE REGRADING
RT STA. 1518+90 TO 1519+50
CONST. 60 LF OF ROADSIDE REGRADING
RT STA. 1519+00 TO STA. 1524+00
TRIM TREES AS INDICATED
IN SPECIAL NOTE
STA. 1518+47 TO 1519+47
CONST. 267 SY OF PAVEMENT REPAIR
1515+00
1520+00
1524+00
PI 1516+13.63
PI 1520+45.38
PC 1522+46.65
PC 1523+34.65
PI 15
EXIST R/W
EXIST R/W
EXIST R/W
EXIST R/W
TRIM TREE
CONST. SAFETY BOX INLET -
18" SDB-1 ON NEW 18" PIPE
CONST. 1 - HEADWALL
(SLOPED & MITERED
CONC - FOR 18" PIPE) ON
NEW 18" PIPE
OVERHEAD UTILITIES
OVERHEAD UTILITIES
EX. 3' X 2.25' RCBC
MARCUM
EMMIELEE
(LIFE ESTATE)
GOLDEN
HERSHEL & JUDY
POWELL
MARION F
CHASTEEN
ENTERPRISES INC
CREECH
GARRY & DORSEY
JCT
3447
PREPARE
FOR SUDDEN
STOP
NO
PASSING
ZONE
WM
WM
WM
WM

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



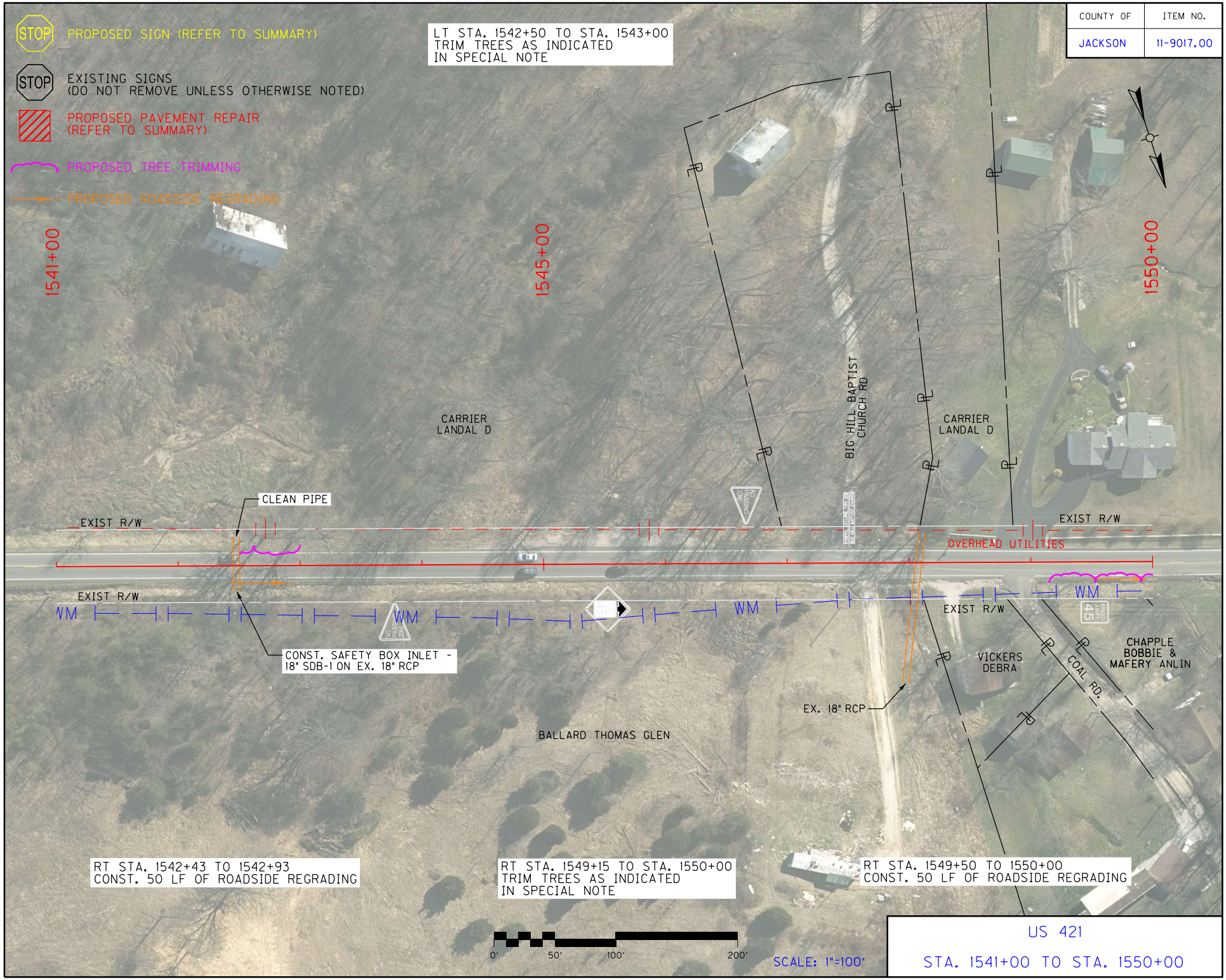
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1532+00 TO STA. 1541+00

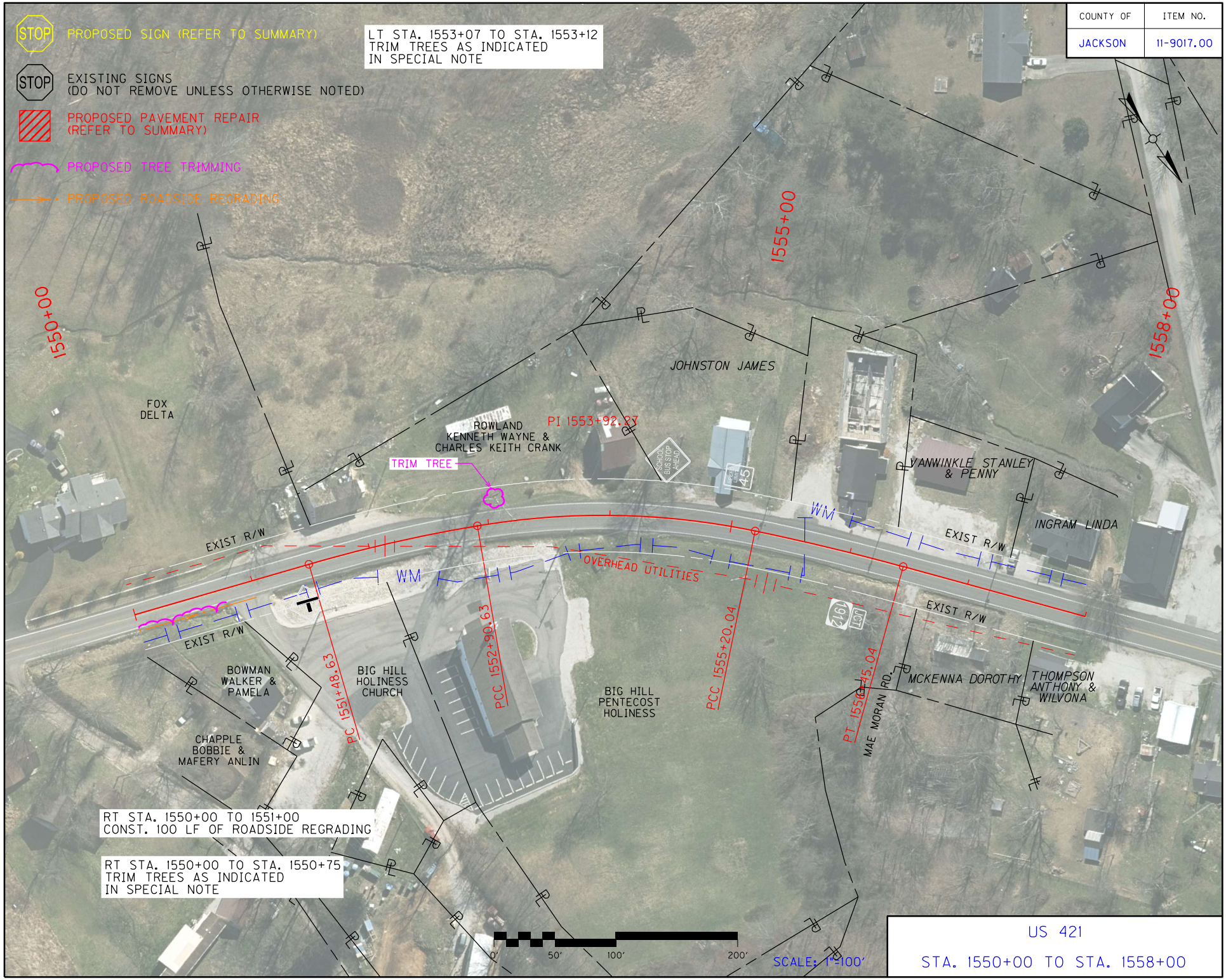
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

STA. 1541+00 TO STA. 1550+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

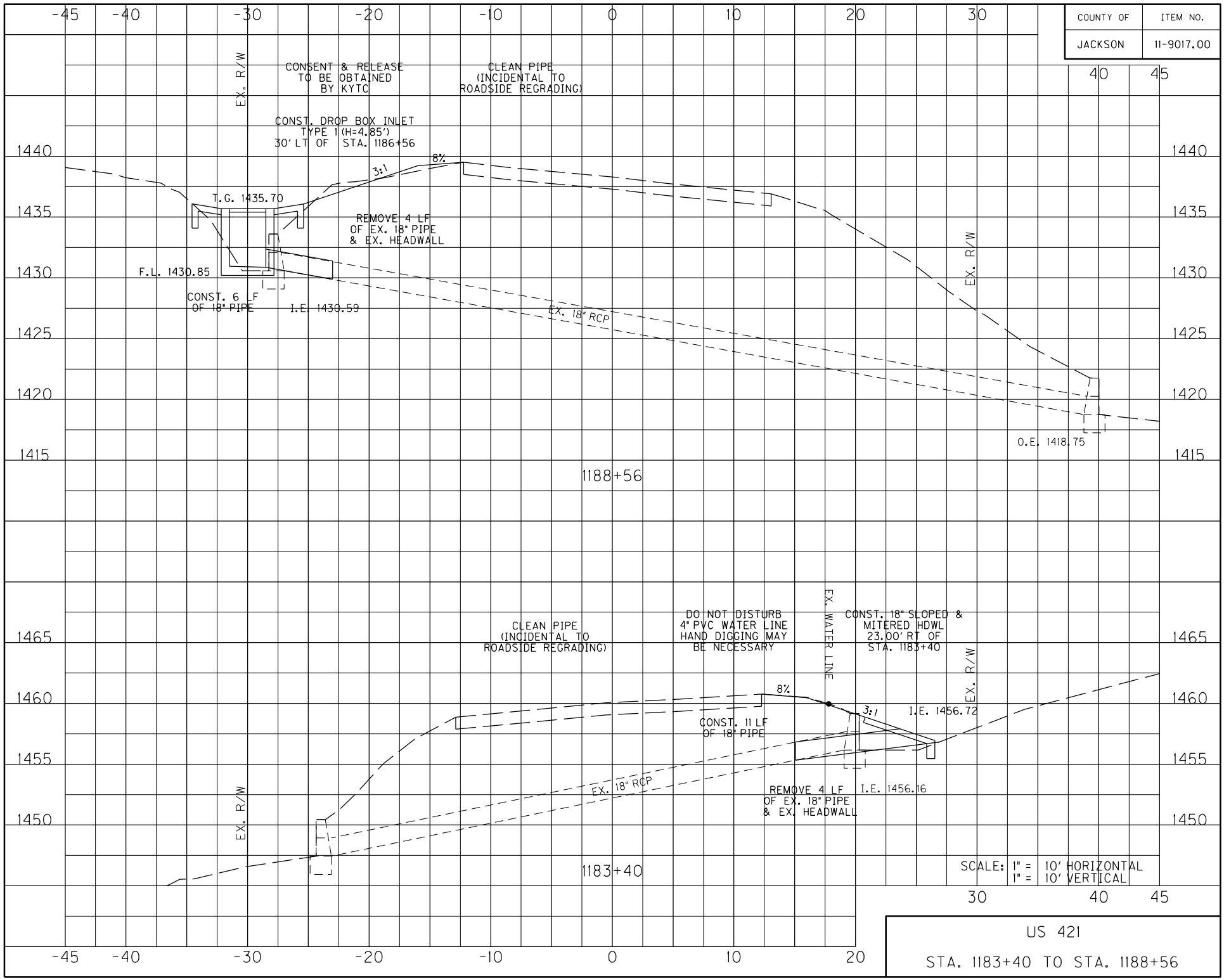
STA. 1550+00 TO STA. 1558+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

US 421

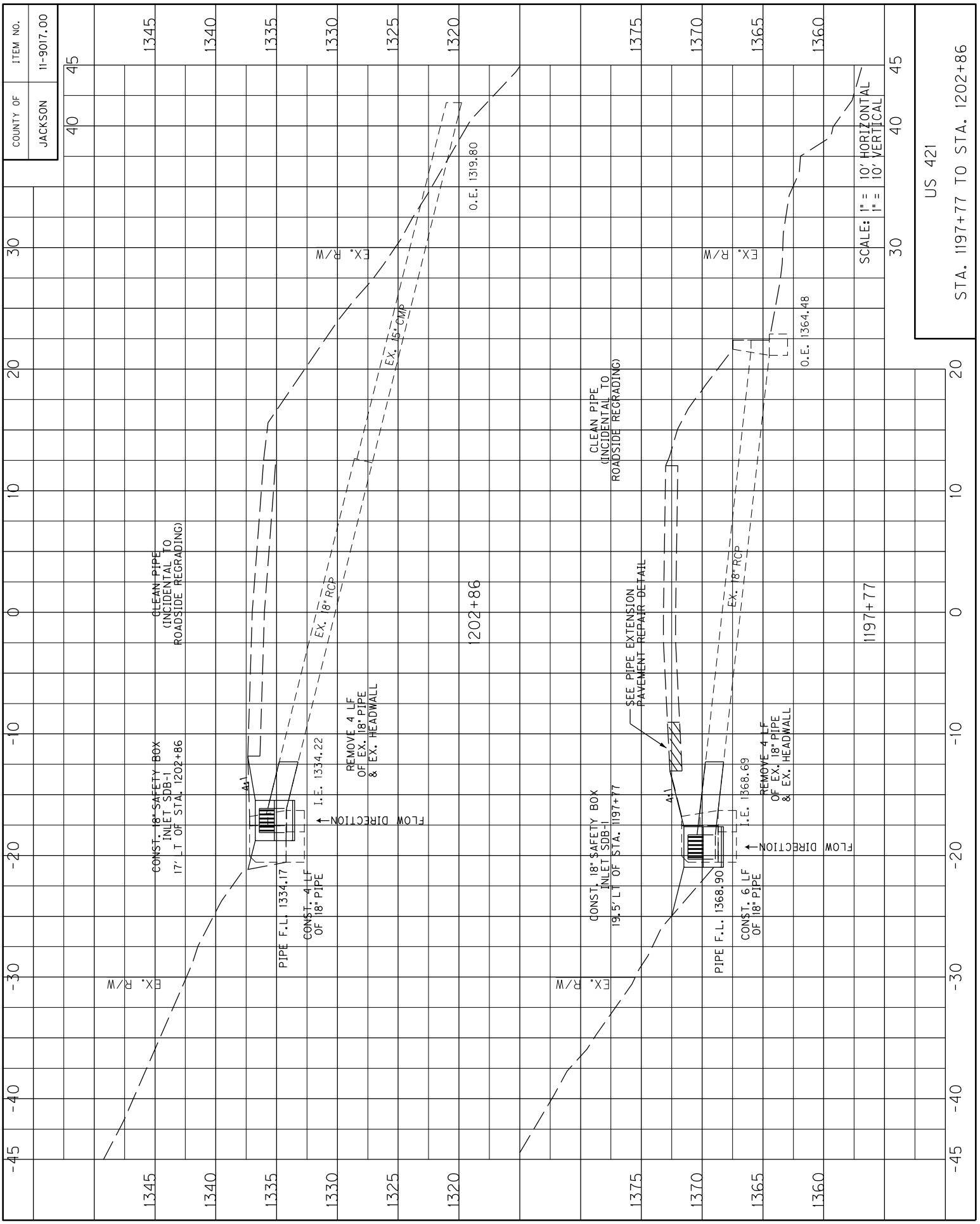
STA. 1558+00 TO STA. 1565+00

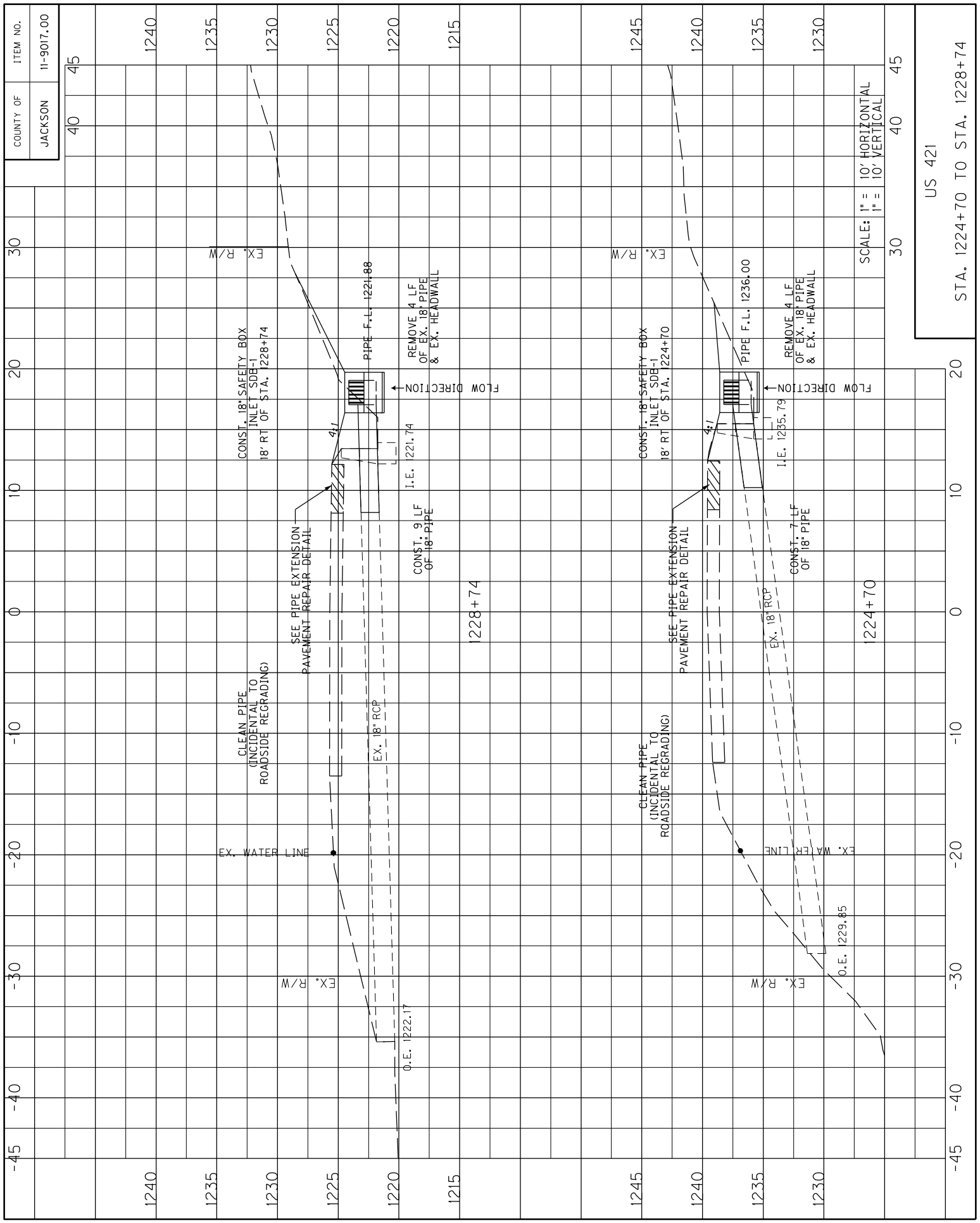
COUNTY OF	ITEM NO.
JACKSON	11-9017.00

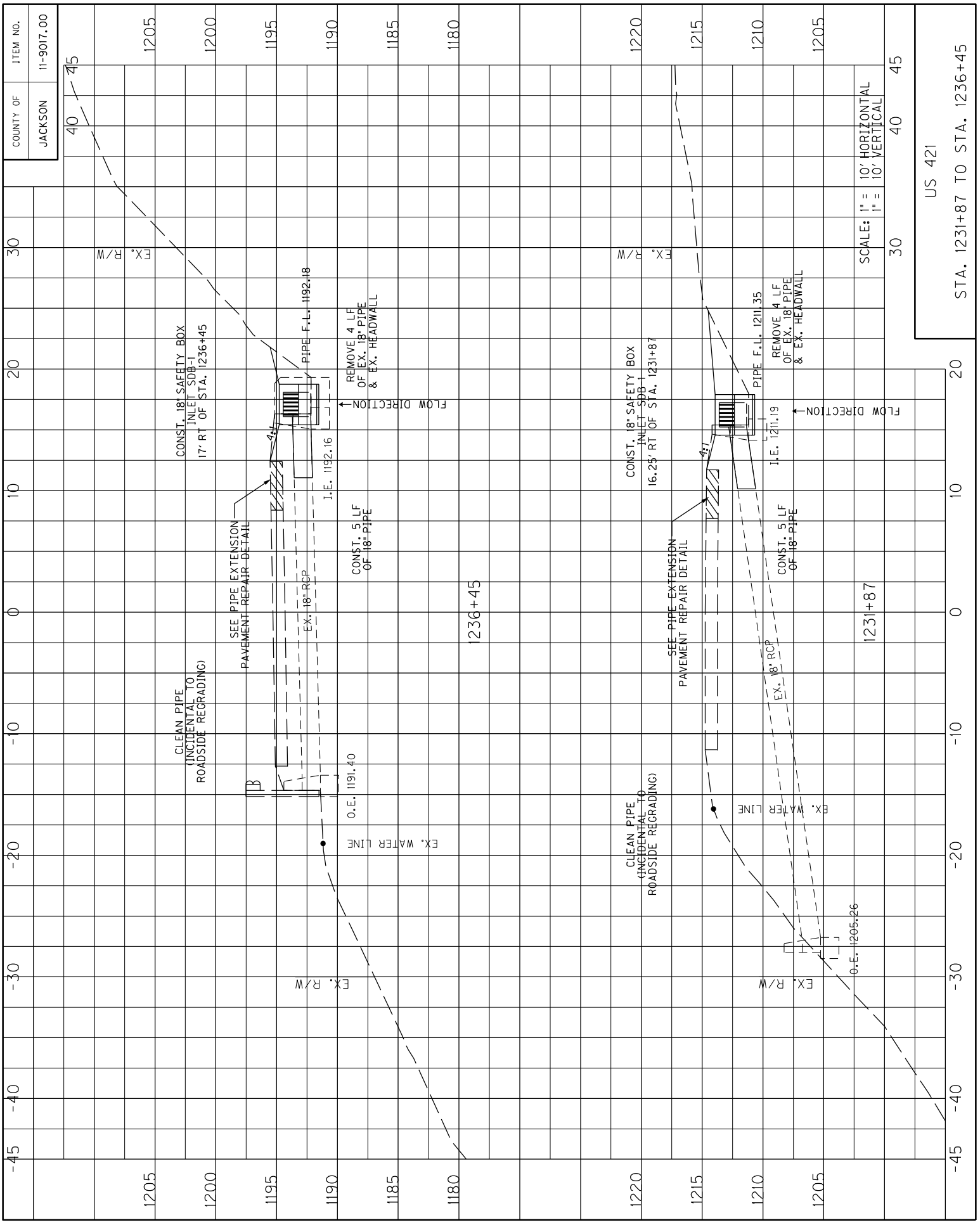


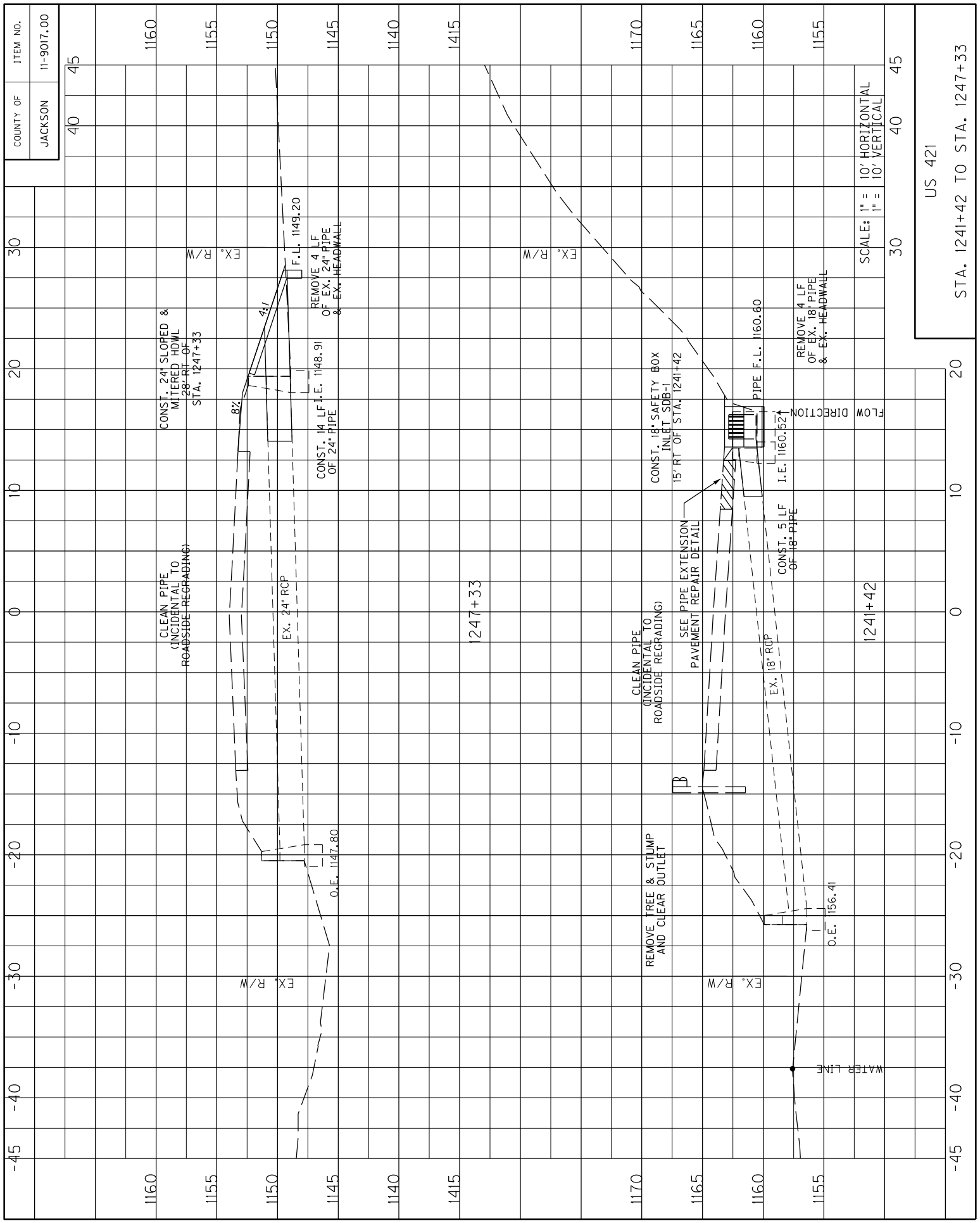
US 421

STA. 1183+40 TO STA. 1188+56

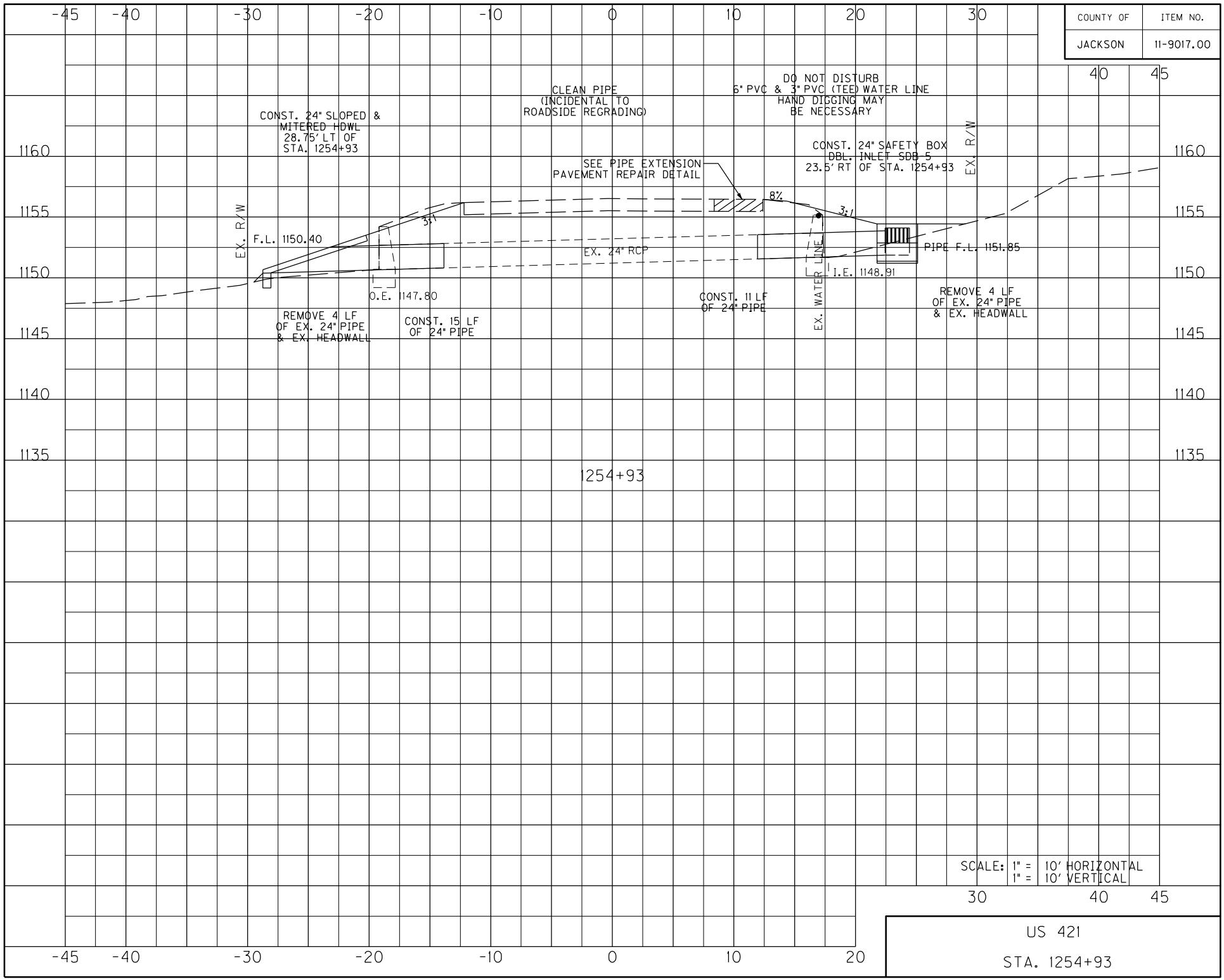

COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1197+77 TO STA. 1202+86
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
1202+86
1197+77
O.E. 1319.80
O.E. 1364.48
EX. R/W
EX. 15" CMP
EX. 18" RCP
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
CONST. 18" SAFETY BOX
INLET SDB-1
17' LT OF STA. 1202+86
4:1
I.E. 1334.22
FLOW DIRECTION
REMOVE 4 LF
OF EX. 18" PIPE
& EX. HEADWALL
PIPE F.L. 1334.17
CONST. 4 LF
OF 18" PIPE
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
SEE PIPE EXTENSION
PAVEMENT REPAIR DETAIL
CONST. 18" SAFETY BOX
INLET SDB-1
19.5' LT OF STA. 1197+77
I.E. 1368.69
PIPE F.L. 1368.90
CONST. 6 LF
OF 18" PIPE


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1224+70 TO STA. 1228+74
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CONST. 18" SAFETY BOX INLET SDB-1 18' RT OF STA. 1228+74
PIPE F.L. 1221.88
REMOVE 4 LF OF EX. 18" PIPE & EX. HEADWALL
FLOW DIRECTION
4:1
I.E. 1221.74
CONST. 9 LF OF 18" PIPE
SEE PIPE EXTENSION PAVEMENT REPAIR DETAIL
EX. 18" RCP
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
EX. R/W
EX. WATER LINE
O.E. 1222.17
1228+74
CONST. 18" SAFETY BOX INLET SDB-1 18' RT OF STA. 1224+70
PIPE F.L. 1236.00
REMOVE 4 LF OF EX. 18" PIPE & EX. HEADWALL
I.E. 1235.79
CONST. 7 LF OF 18" PIPE
EX. 18" RCP
O.E. 1229.85
1224+70


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1231+87 TO STA. 1236+45
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CONST. 18' SAFETY BOX
INLET SDB-1
17' RT OF STA. 1236+45
PIPE F.L. 1192.18
REMOVE 4 LF
OF EX. 18" PIPE
& EX. HEADWALL
FLOW DIRECTION
I.E. 1192.16
4:1
SEE PIPE EXTENSION
PAVEMENT REPAIR DETAIL
CONST. 5 LF
OF 18" PIPE
EX. 18" RCP
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
O.E. 1191.40
EX. WATER LINE
EX. R/W
1236+45
CONST. 18' SAFETY BOX
INLET SDB-1
16.25' RT OF STA. 1231+87
PIPE F.L. 1211.35
REMOVE 4 LF
OF EX. 18" PIPE
& EX. HEADWALL
FLOW DIRECTION
I.E. 1211.19
4:1
SEE PIPE EXTENSION
PAVEMENT REPAIR DETAIL
CONST. 5 LF
OF 18" PIPE
EX. 18" RCP
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
EX. WATER LINE
EX. R/W
O.E. 1205.26
1231+87


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1241+42 TO STA. 1247+33
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
CONST. 24" SLOPED & MITERED HDWL 28' RT OF STA. 1247+33
EX. 24" RCP
CONST. 14 LF OF 24" PIPE
I.E. 1148.91
O.E. 1147.80
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL
F.L. 1149.20
8%
4:1
EX. R/W
1247+33
REMOVE TREE & STUMP AND CLEAR OUTLET
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
SEE PIPE EXTENSION PAVEMENT REPAIR DETAIL
CONST. 18" SAFETY BOX INLET SDB-1 15' RT OF STA. 1241+42
CONST. 5 LF OF 18" PIPE
I.E. 1160.52
EX. 18" RCP
O.E. 156.41
PIPE F.L. 1160.60
FLOW DIRECTION
REMOVE 4 LF OF EX. 18" PIPE & EX. HEADWALL
1241+42
WATER LINE

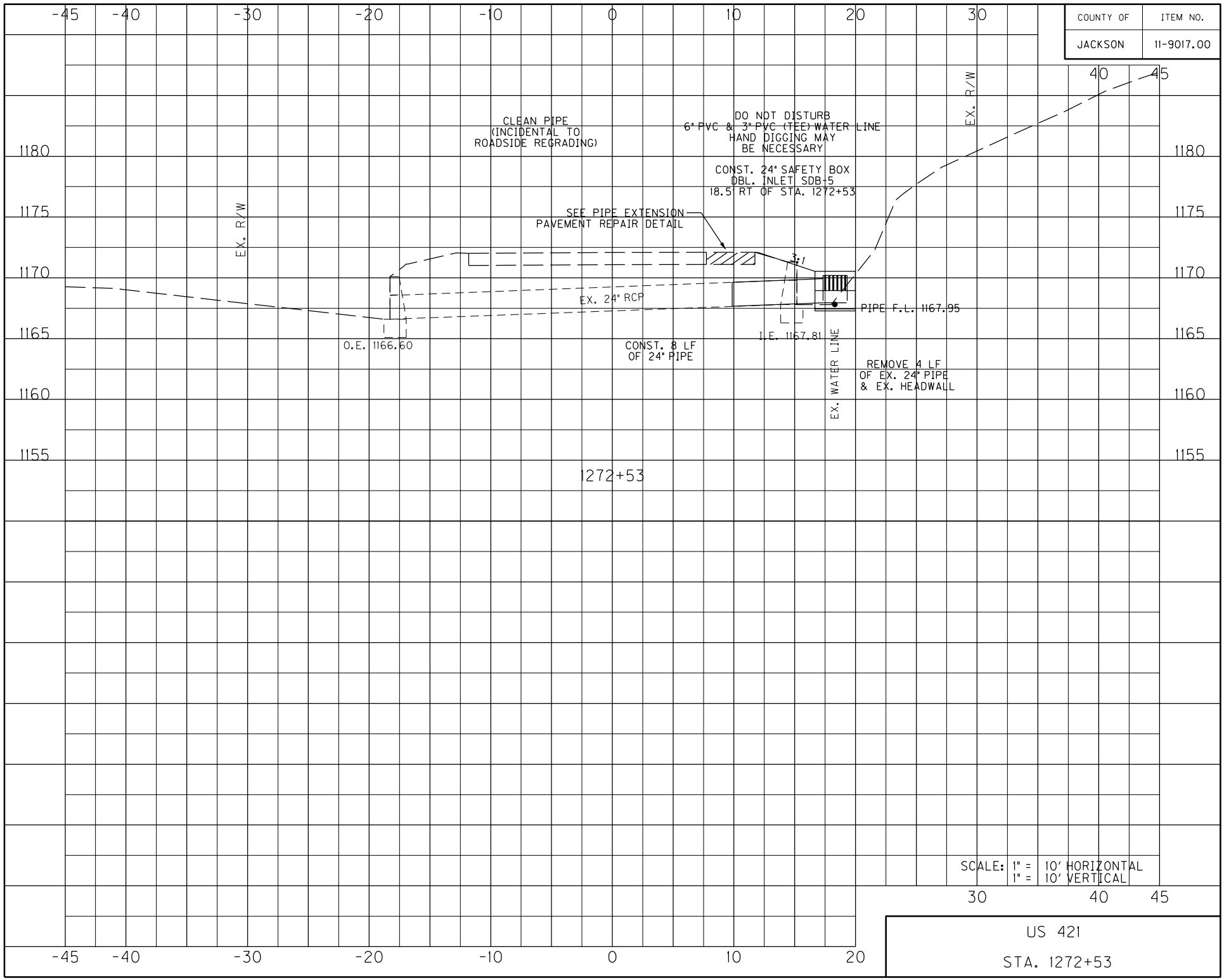
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

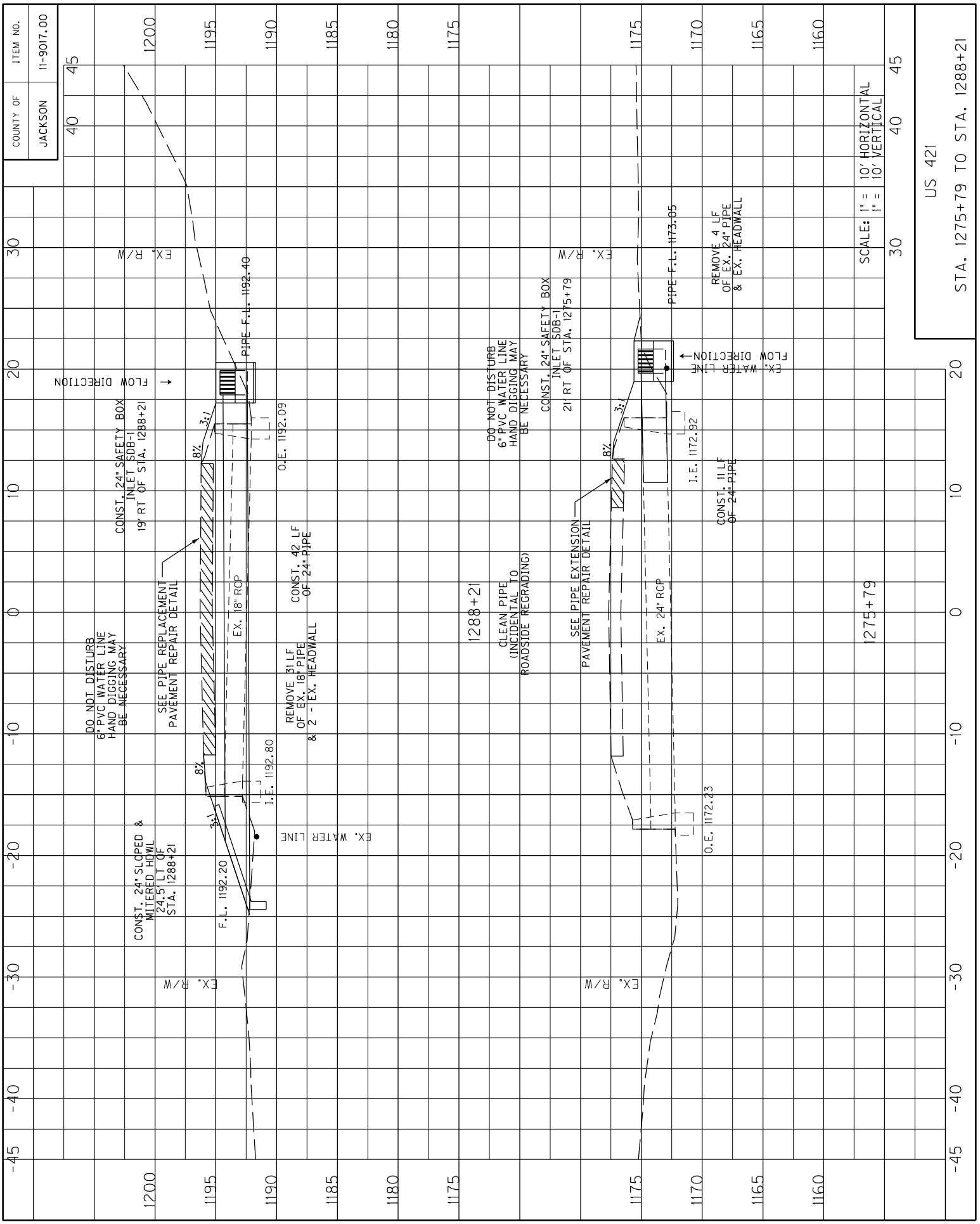
STA. 1254+93

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

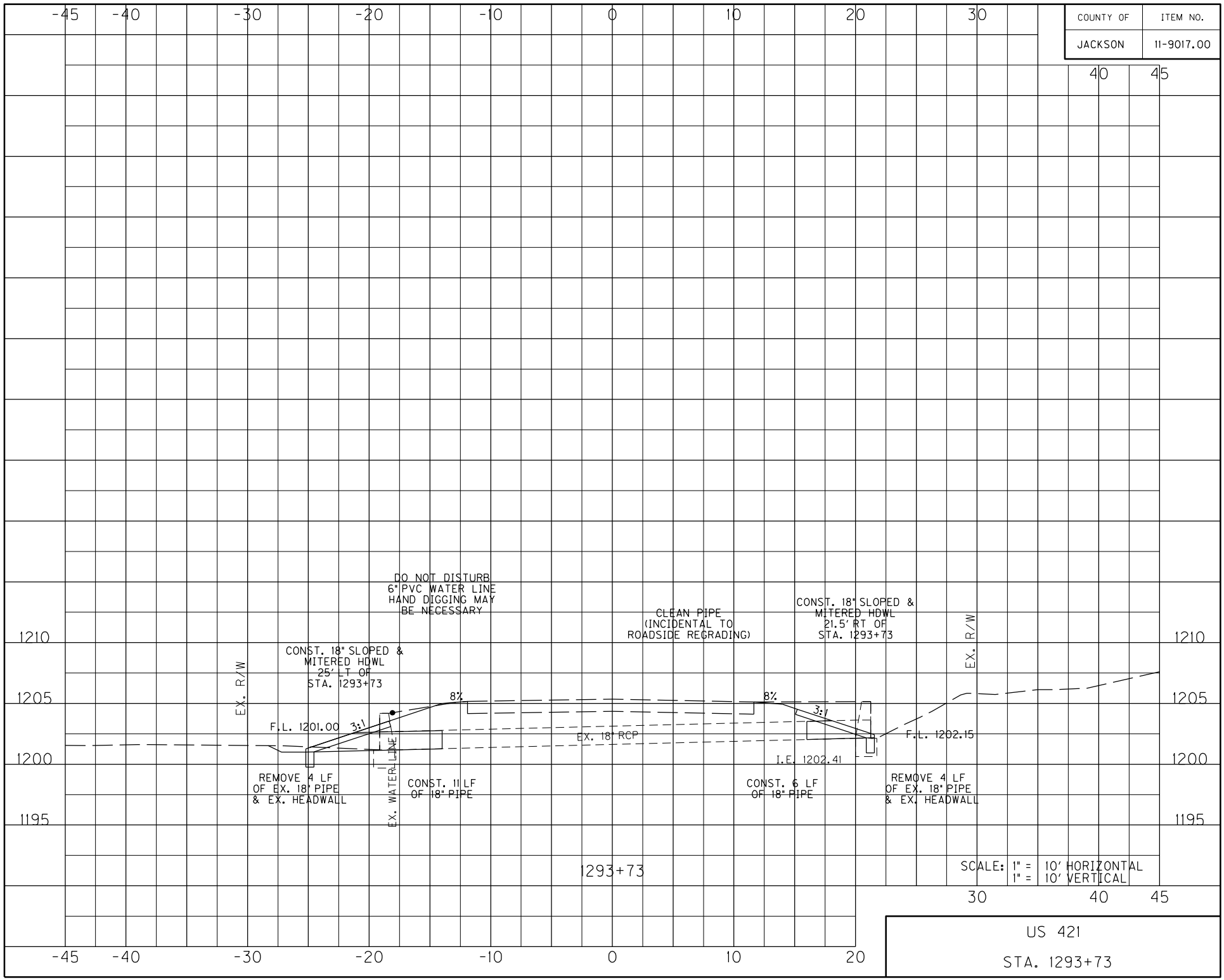


US 421

STA. 1272+53


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1275+79 TO STA. 1288+21
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CONST. 24" SAFETY BOX INLET SDB-1 19' RT OF STA. 1288+21
FLOW DIRECTION
PIPE F.L. 1192.40
O.E. 1192.09
DO NOT DISTURB 6" PVC WATER LINE HAND DIGGING MAY BE NECESSARY
SEE PIPE REPLACEMENT PAVEMENT REPAIR DETAIL
EX. 18" RCP
CONST. 42 LF OF 24" PIPE
REMOVE 31 LF OF EX. 18" PIPE & 2 - EX. HEADWALL
I.E. 1192.80
F.L. 1192.20
CONST. 24" SLOPED & MITERED HDWL 24.5' LT OF STA. 1288+21
EX. WATER LINE
EX. R/W
8%
3:1
1288+21
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
DO NOT DISTURB 6" PVC WATER LINE HAND DIGGING MAY BE NECESSARY
CONST. 24" SAFETY BOX INLET SDB-1 21' RT OF STA. 1275+79
SEE PIPE EXTENSION PAVEMENT REPAIR DETAIL
EX. 24" RCP
PIPE F.L. 1173.05
I.E. 1172.92
O.E. 1172.23
CONST. 11 LF OF 24" PIPE
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL
EX. WATER LINE
1275+79

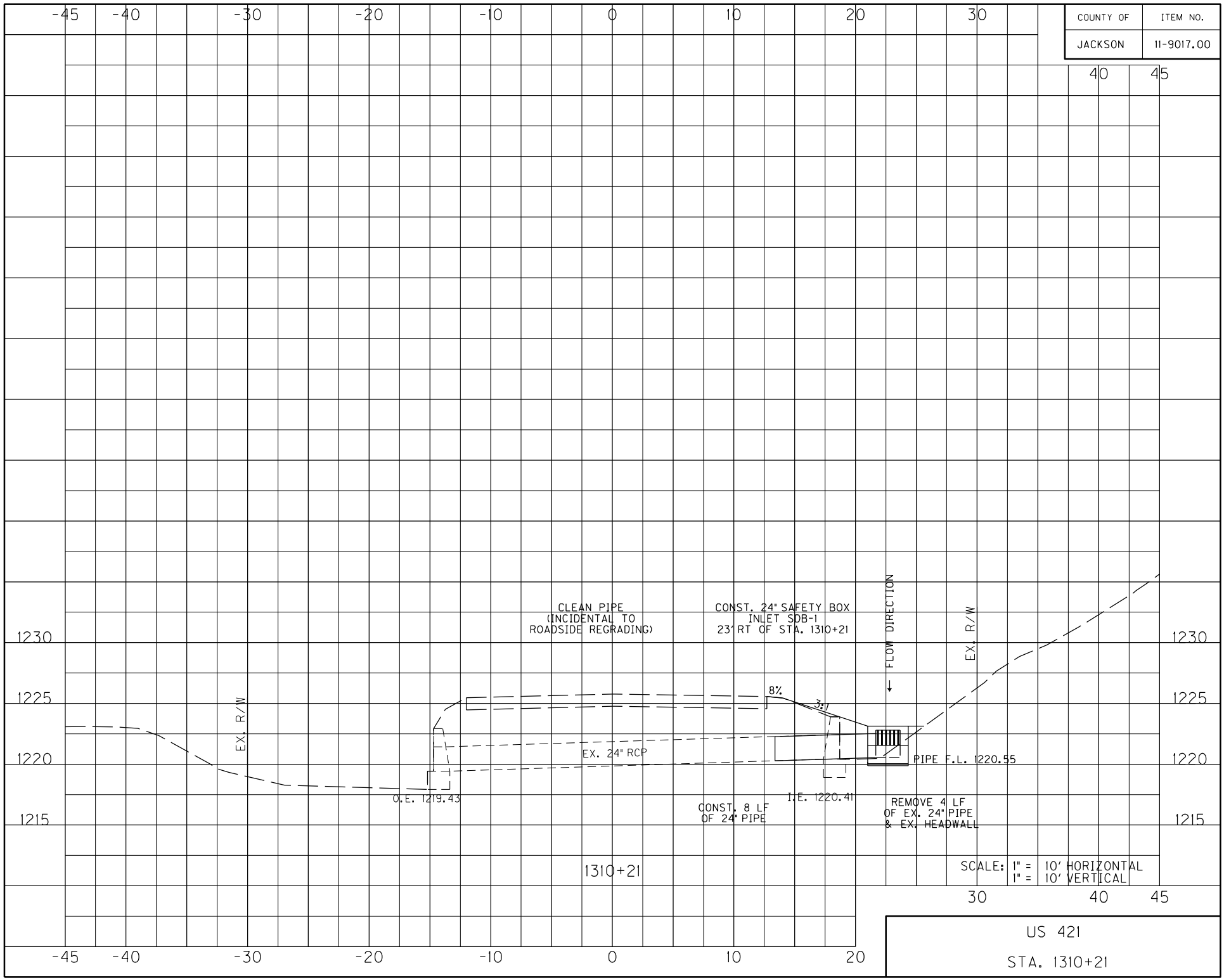
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

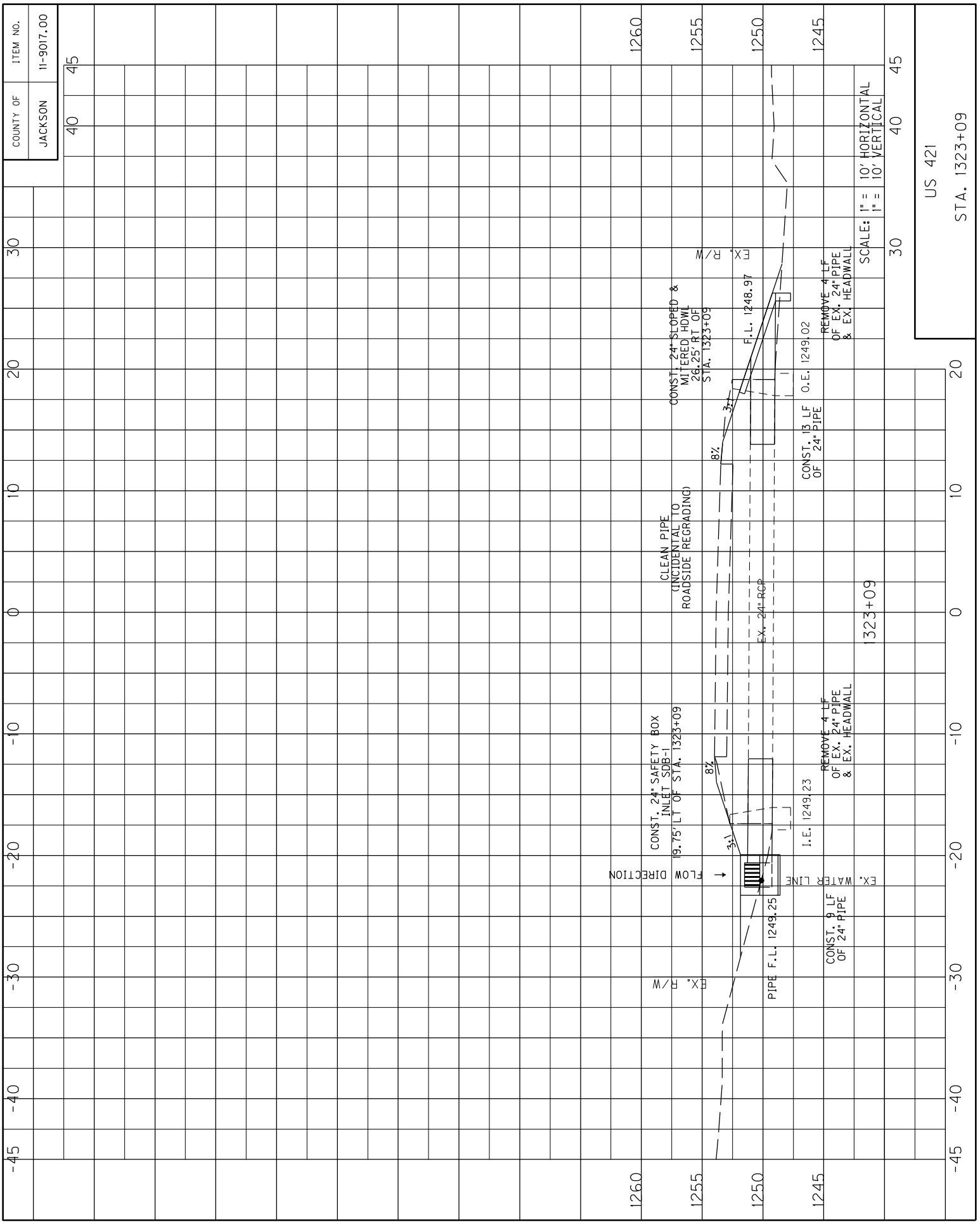
STA. 1293+73

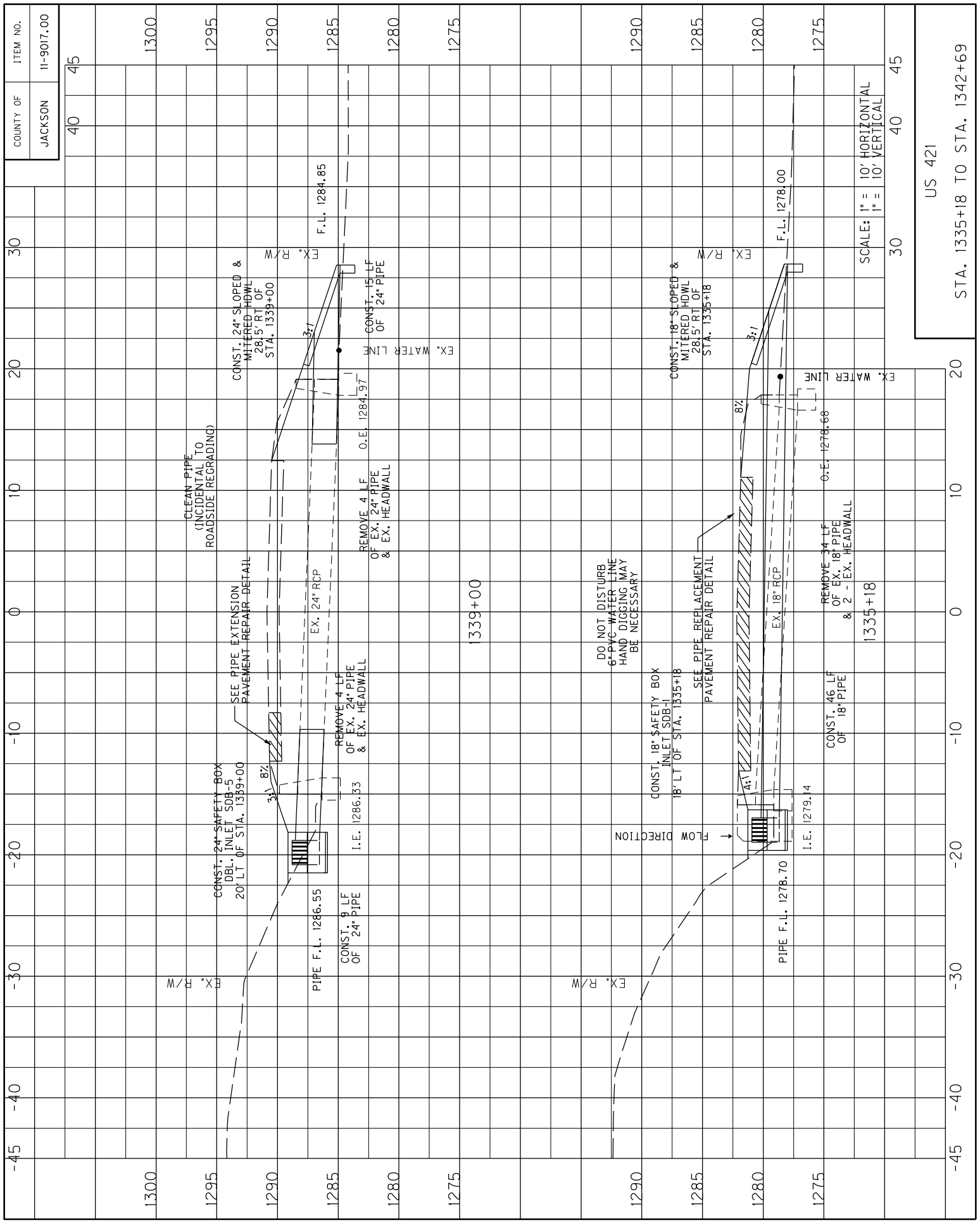
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



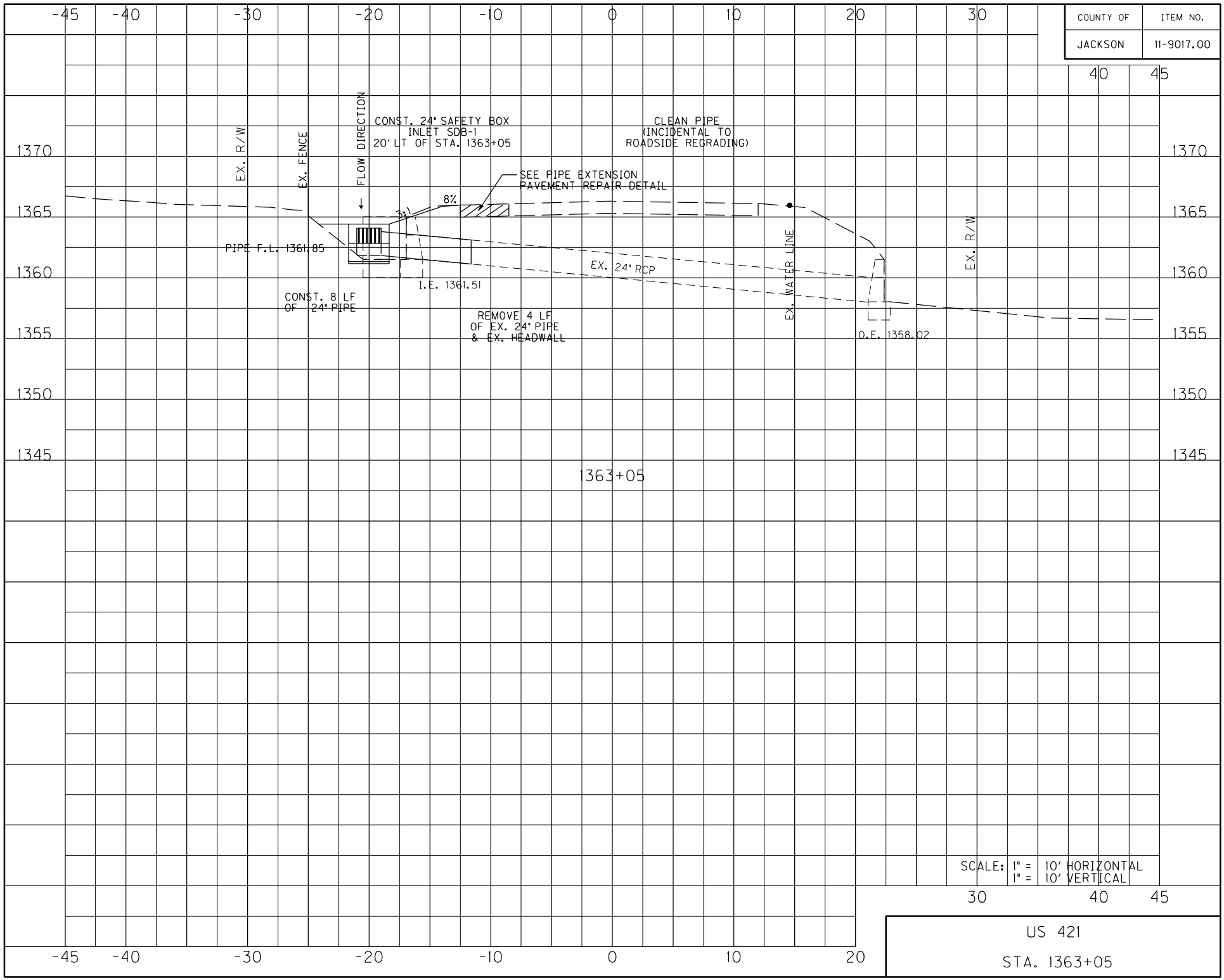
US 421

STA. 1310+21


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1323+09
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CONST. 24" SAFETY BOX INLET SDB-1 19.75' LT OF STA. 1323+09
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
CONST. 24" SLOPED & MITERED HDWL 26.25' RT OF STA. 1323+09
CONST. 13 LF OF 24" PIPE
CONST. 9 LF OF 24" PIPE
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL
EX. 24" RCP
PIPE F.L. 1249.25
I.E. 1249.23
O.E. 1249.02
F.L. 1248.97
FLOW DIRECTION
EX. R/W
EX. WATER LINE
8%
3:1
1323+09
1260
1255
1250
1245

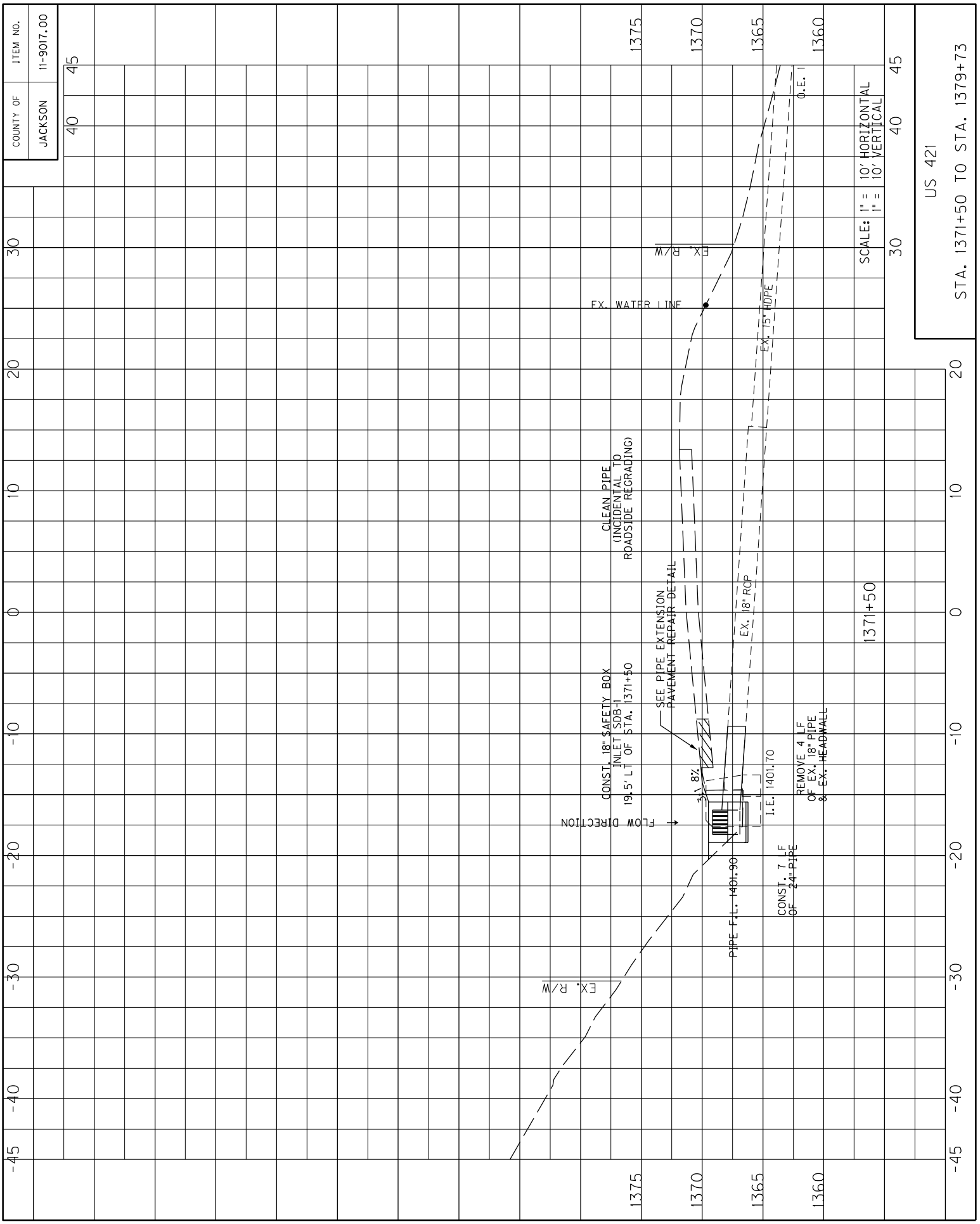

COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1335+18 TO STA. 1342+69
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
CONST. 24" SLOPED & MITERED HDWL 28.5' RT OF STA. 1339+00
CONST. 15 LF OF 24" PIPE
F.L. 1284.85
EX. R/W
EX. WATER LINE
O.E. 1284.97
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL
SEE PIPE EXTENSION PAVEMENT REPAIR DETAIL
CONST. 24" SAFETY BOX DBL. INLET SDB-5 20' LT OF STA. 1339+00
EX. 24" RCP
PIPE F.L. 1286.55
CONST. 9 LF OF 24" PIPE
I.E. 1286.33
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL
1339+00
DO NOT DISTURB 6" PVC WATER LINE HAND DIGGING MAY BE NECESSARY
CONST. 18" SAFETY BOX INLET SDB-1 18' LT OF STA. 1335+18
SEE PIPE REPLACEMENT PAVEMENT REPAIR DETAIL
FLOW DIRECTION
EX. 18" RCP
PIPE F.L. 1278.70
I.E. 1279.14
CONST. 46 LF OF 18" PIPE
CONST. 18" SLOPED & MITERED HDWL 28.5' RT OF STA. 1335+18
F.L. 1278.00
O.E. 1278.68
REMOVE 34 LF OF EX. 18" PIPE & 2 - EX. HEADWALL
1335+18
8%
3:1
4:1

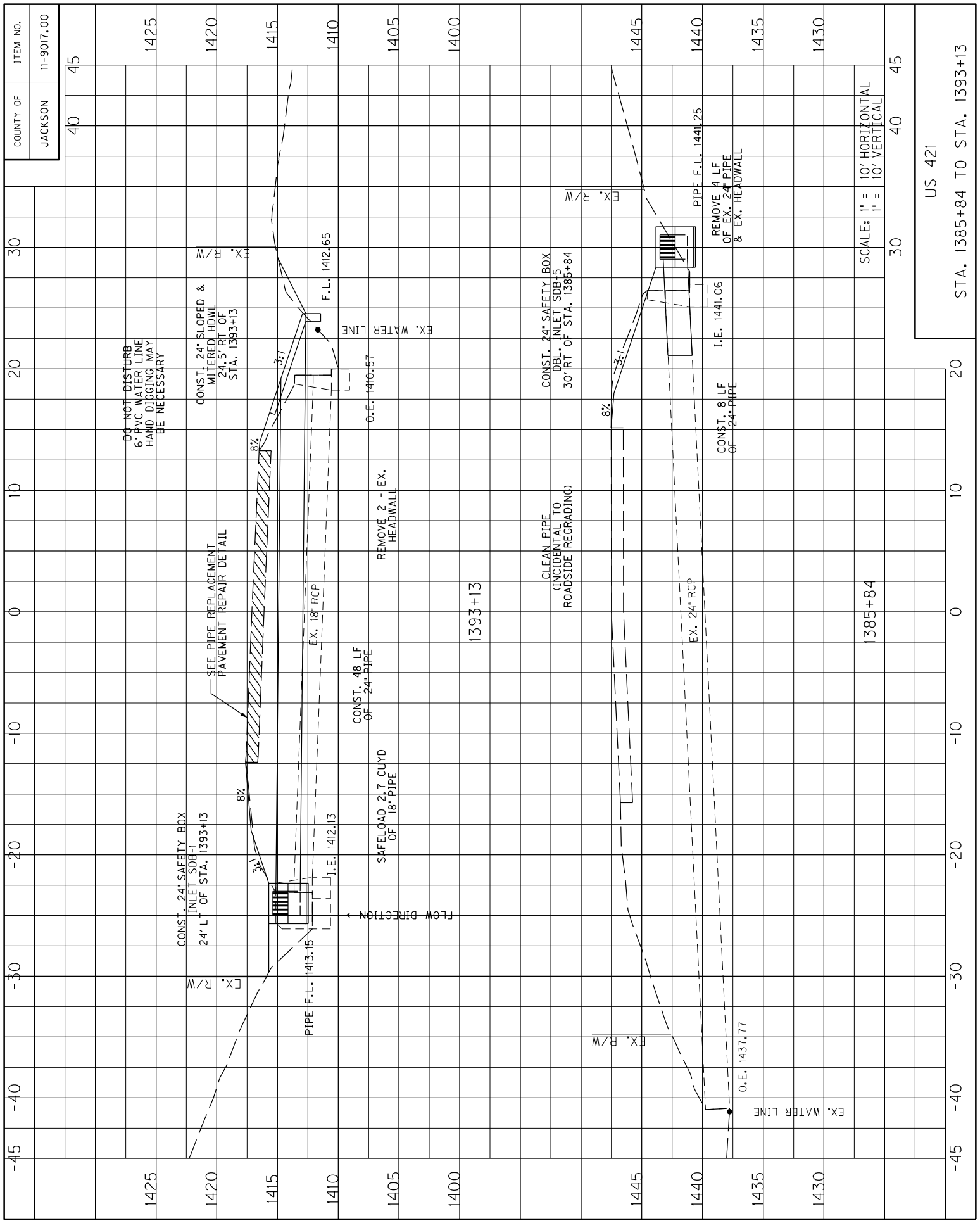
COUNTY OF	ITEM NO.
JACKSON	11-9017.00

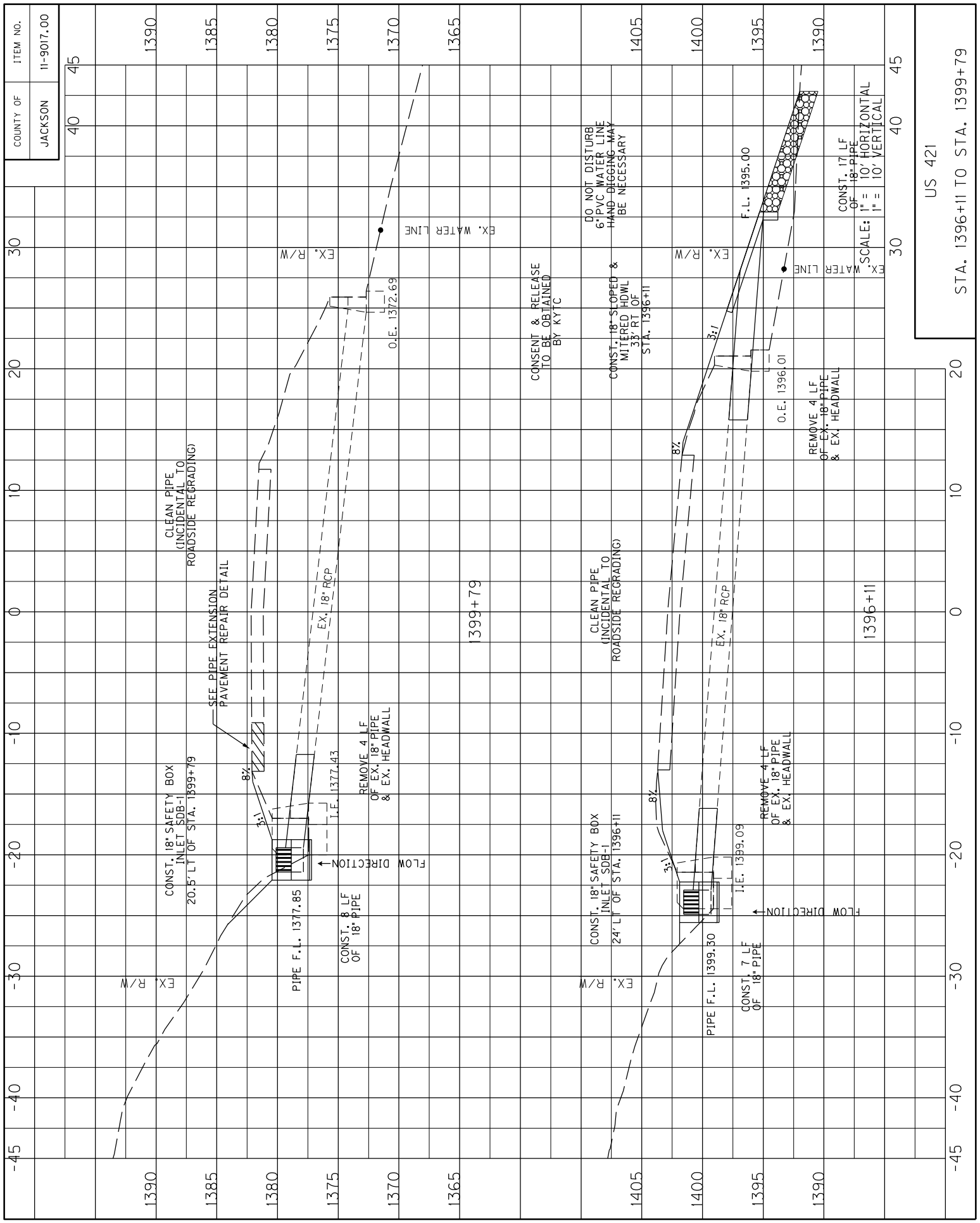


US 421

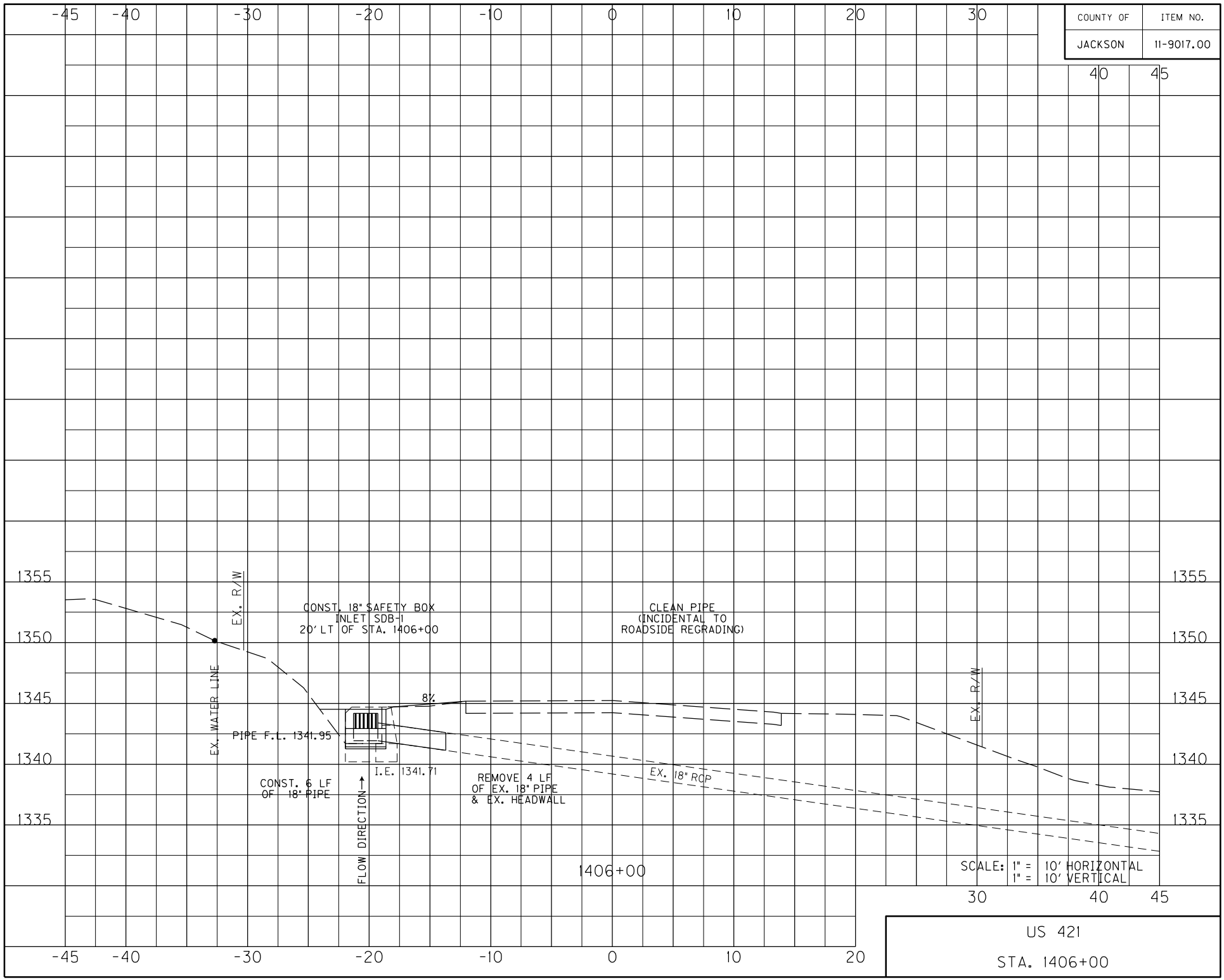
STA. 1363+05


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1371+50 TO STA. 1379+73
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
EX. R/W
EX. WATER LINE
EX. 15" HDPE
EX. 18" RCP
O.E. 1
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
CONST. 18" SAFETY BOX
INLET SDB-1
19.5' LT OF STA. 1371+50
SEE PIPE EXTENSION
PAVEMENT REPAIR DETAIL
3% 8%
FLOW DIRECTION
I.E. 1401.70
PIPE F.L. 1401.90
CONST. 7 LF
OF 24" PIPE
REMOVE 4 LF
OF EX. 18" PIPE
& EX. HEADWALL
1371+50
1375
1370
1365
1360


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1385+84 TO STA. 1393+13
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
DO NOT DISTURB
6" PVC WATER LINE
HAND DIGGING MAY
BE NECESSARY
CONST. 24" SLOPED &
MITERED HDWL
24.5' RT OF
STA. 1393+13
EX. R/W
F.L. 1412.65
EX. WATER LINE
O.E. 1410.57
SEE PIPE REPLACEMENT
PAVEMENT REPAIR DETAIL
EX. 18" RCP
REMOVE 2 - EX.
HEADWALL
CONST. 48 LF
OF 24" PIPE
1393+13
CONST. 24" SAFETY BOX
INLET SDB-1
24' LT OF STA. 1393+13
I.E. 1412.13
SAFELOAD 21.7 CUYD
OF 18" PIPE
PIPE F.L. 1413.15
FLOW DIRECTION
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
CONST. 24" SAFETY BOX
DBL. INLET SDB-5
30' RT OF STA. 1385+84
PIPE F.L. 1441.25
REMOVE 4 LF
OF EX. 24" PIPE
& EX. HEADWALL
I.E. 1441.06
CONST. 8 LF
OF 24" PIPE
EX. 24" RCP
1385+84
O.E. 1437.77
EX. WATER LINE
8%
3:1

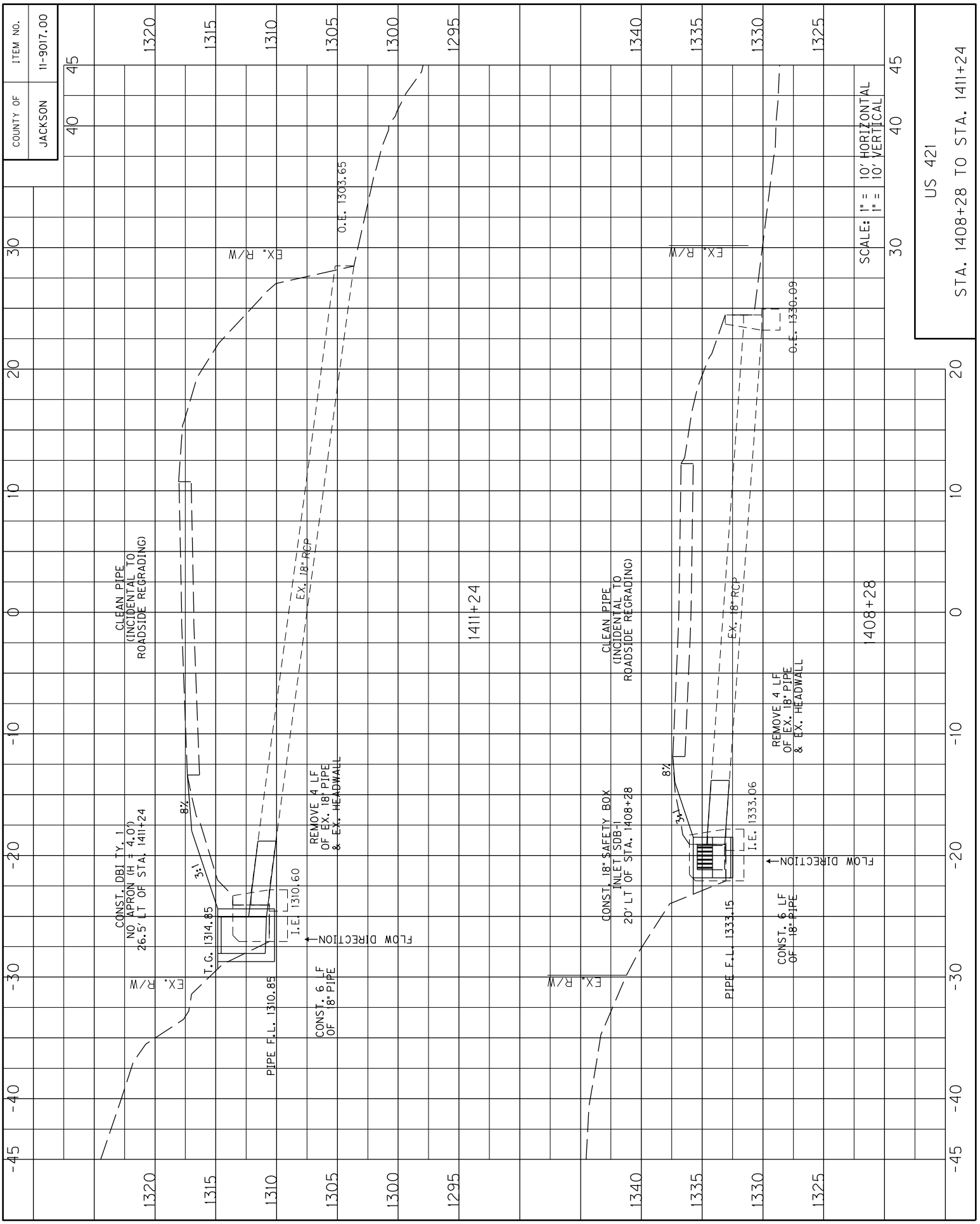

COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1396+11 TO STA. 1399+79
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CONST. 18" SAFETY BOX
INLET SDB-1
20.5' LT OF STA. 1399+79
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
SEE PIPE EXTENSION
PAVEMENT REPAIR DETAIL
8%
3:1
EX. 18" RCP
I.E. 1377.43
PIPE F.L. 1377.85
CONST. 8 LF
OF 18" PIPE
REMOVE 4 LF
OF EX. 18" PIPE
& EX. HEADWALL
FLOW DIRECTION
EX. R/W
EX. WATER LINE
O.E. 1372.69
1399+79
CONSENT & RELEASE
TO BE OBTAINED
BY KYTC
DO NOT DISTURB
6" PVC WATER LINE
HAND DIGGING MAY
BE NECESSARY
CONST. 18" SLOPED &
MITERED HDWL
33' RT OF
STA. 1396+11
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
CONST. 18" SAFETY BOX
INLET SDB-1
24' LT OF STA. 1396+11
PIPE F.L. 1399.30
CONST. 7 LF
OF 18" PIPE
I.E. 1399.09
F.L. 1395.00
O.E. 1396.01
REMOVE 4 LF
OF EX. 18" PIPE
& EX. HEADWALL
CONST. 17 LF
OF 18" PIPE
1396+11

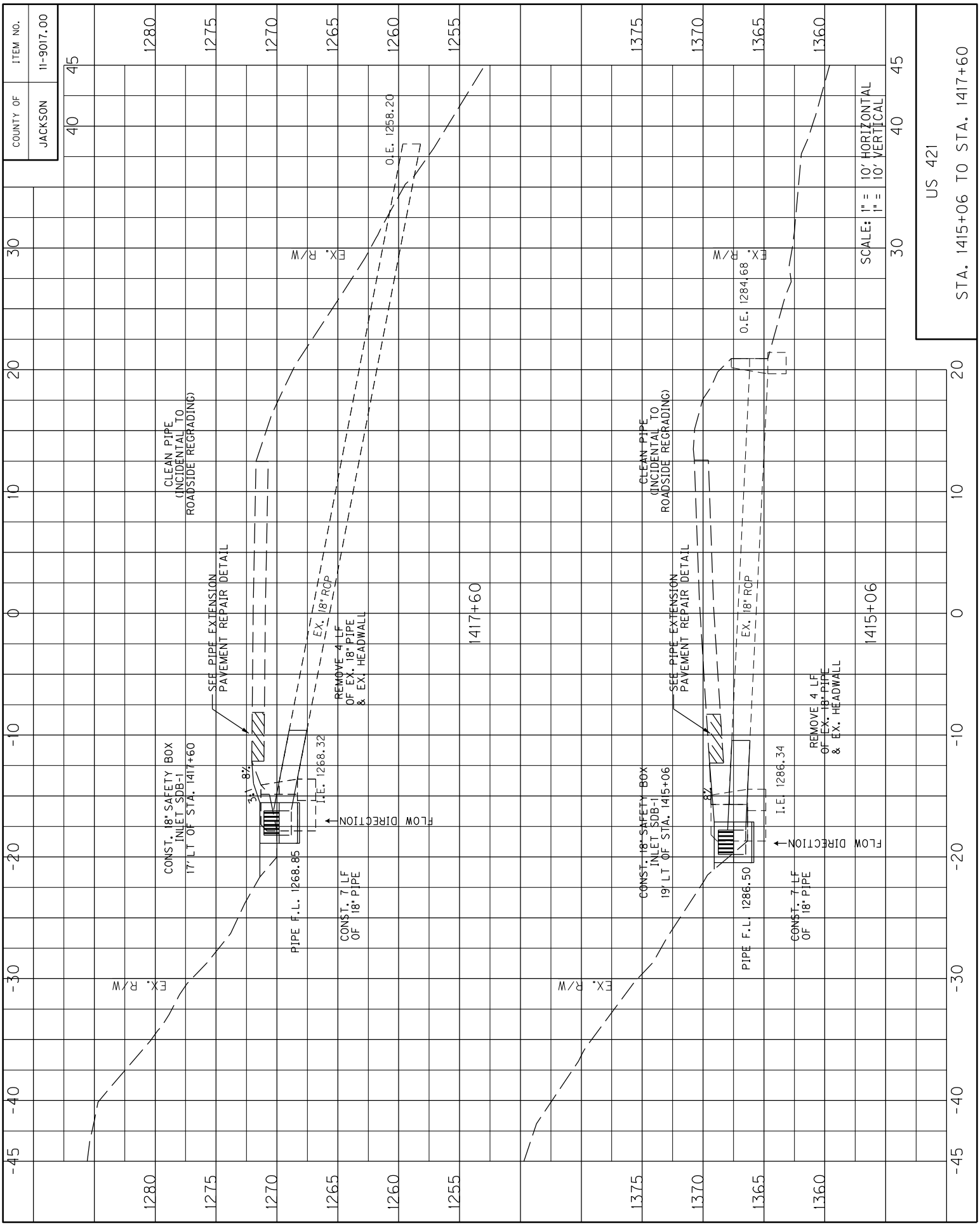
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



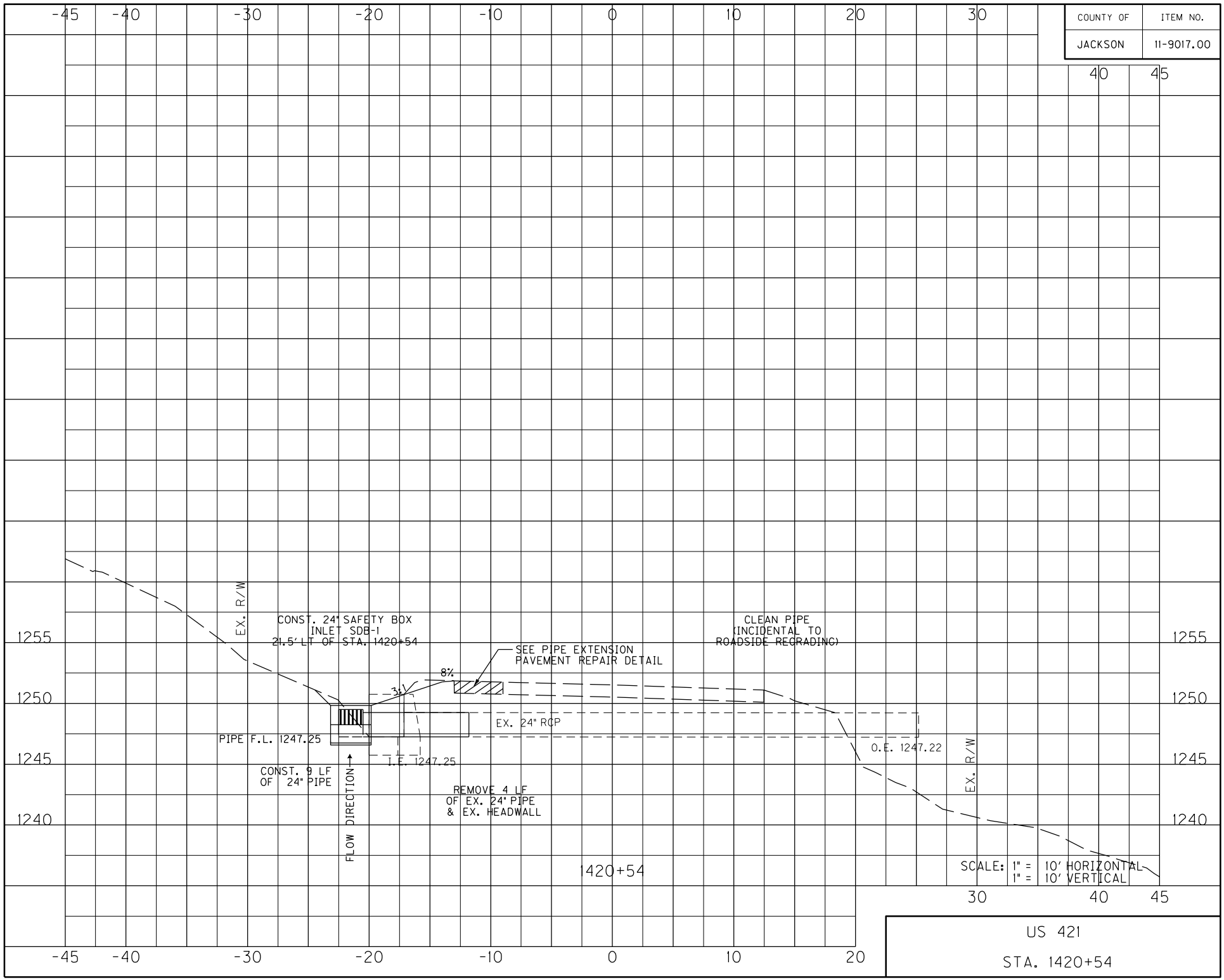
US 421

STA. 1406+00


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1408+28 TO STA. 1411+24
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CONST. DBI TY. 1
NO APRON (H ± 4.0')
26.5' LT OF STA. 1411+24
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
EX. R/W
T.G. 1314.85
8%
3:1
I.E. 1310.60
EX. 18" RCP
O.E. 1303.65
REMOVE 4 LF
OF EX. 18" PIPE
& EX. HEADWALL
FLOW DIRECTION
CONST. 6 LF
OF 18" PIPE
PIPE F.L. 1310.85
1411+24
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
CONST. 18" SAFETY BOX
INLET SDB-1
20' LT OF STA. 1408+28
EX. R/W
8%
3:1
EX. 18" RCP
I.E. 1333.06
O.E. 1330.09
REMOVE 4 LF
OF EX. 18" PIPE
& EX. HEADWALL
FLOW DIRECTION
PIPE F.L. 1333.15
CONST. 6 LF
OF 18" PIPE
1408+28


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1415+06 TO STA. 1417+60
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CONST. 18" SAFETY BOX INLET SDB-1 17' LT OF STA. 1417+60
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
SEE PIPE EXTENSION PAVEMENT REPAIR DETAIL
EX. 18" RCP
REMOVE 4 LF OF EX. 18" PIPE & EX. HEADWALL
CONST. 7 LF OF 18" PIPE
PIPE F.L. 1268.85
I.E. 1268.32
O.E. 1258.20
EX. R/W
FLOW DIRECTION
1417+60
CONST. 18" SAFETY BOX INLET SDB-1 19' LT OF STA. 1415+06
O.E. 1284.68
I.E. 1286.34
PIPE F.L. 1286.50
1415+06

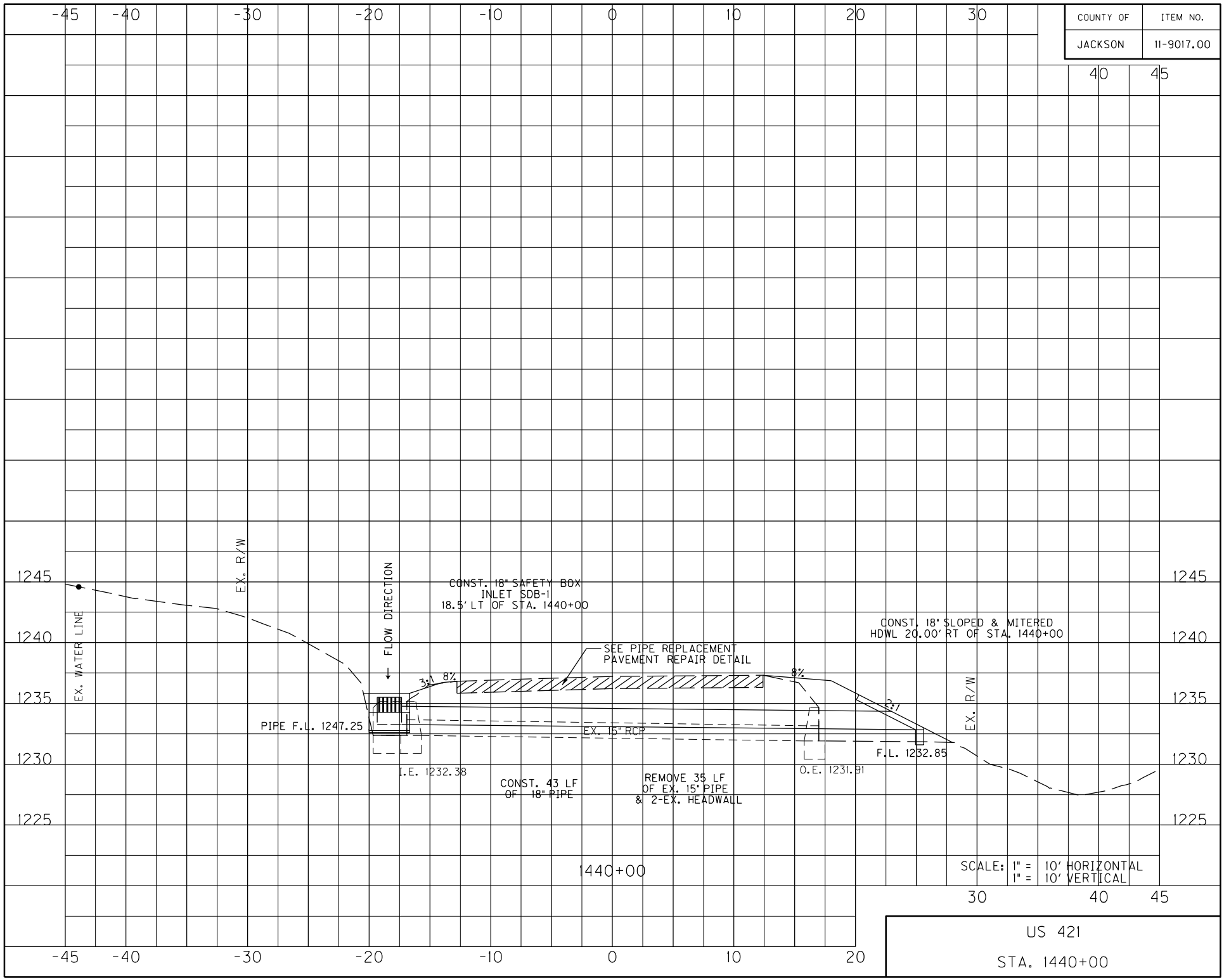
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



US 421

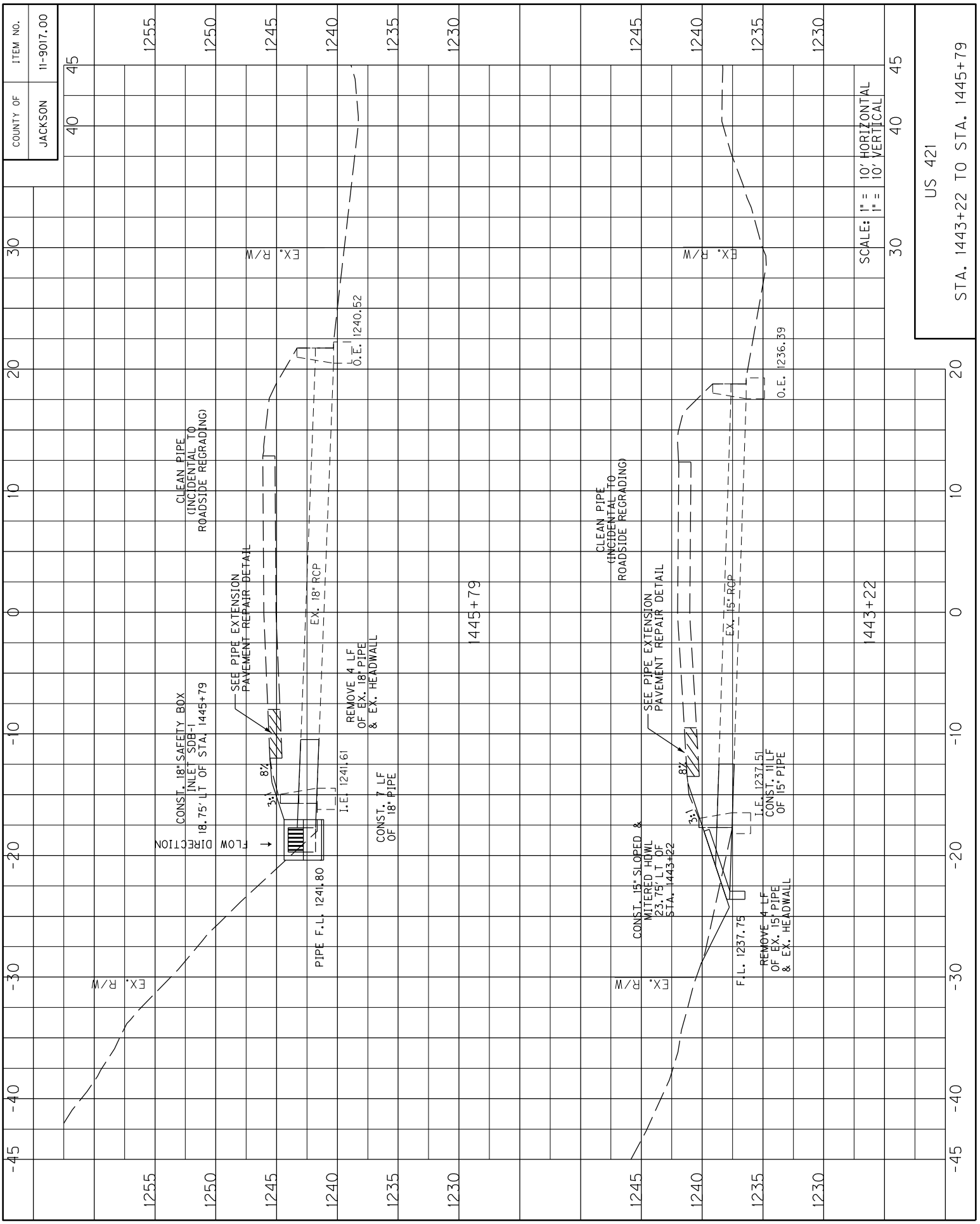
STA. 1420+54

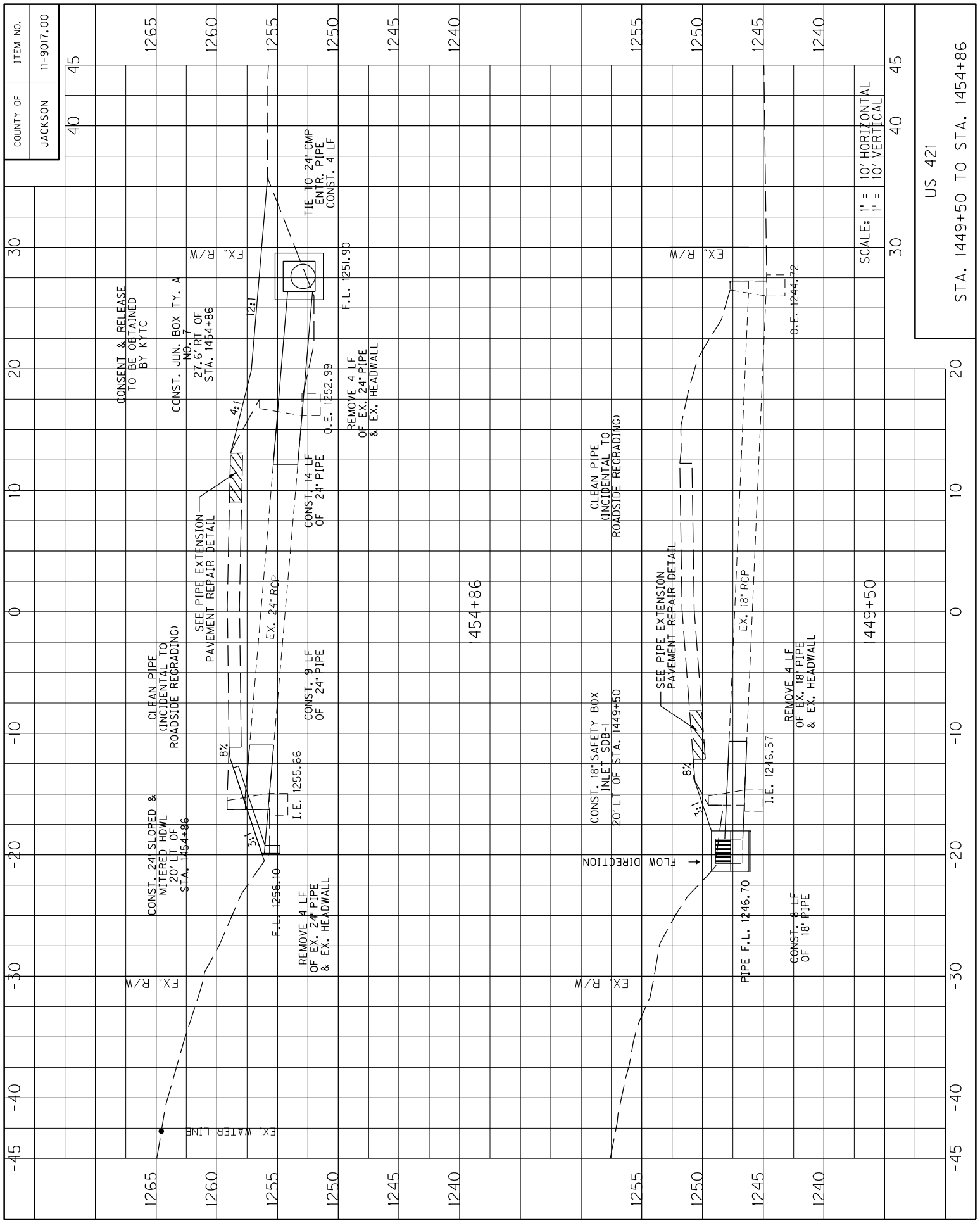
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



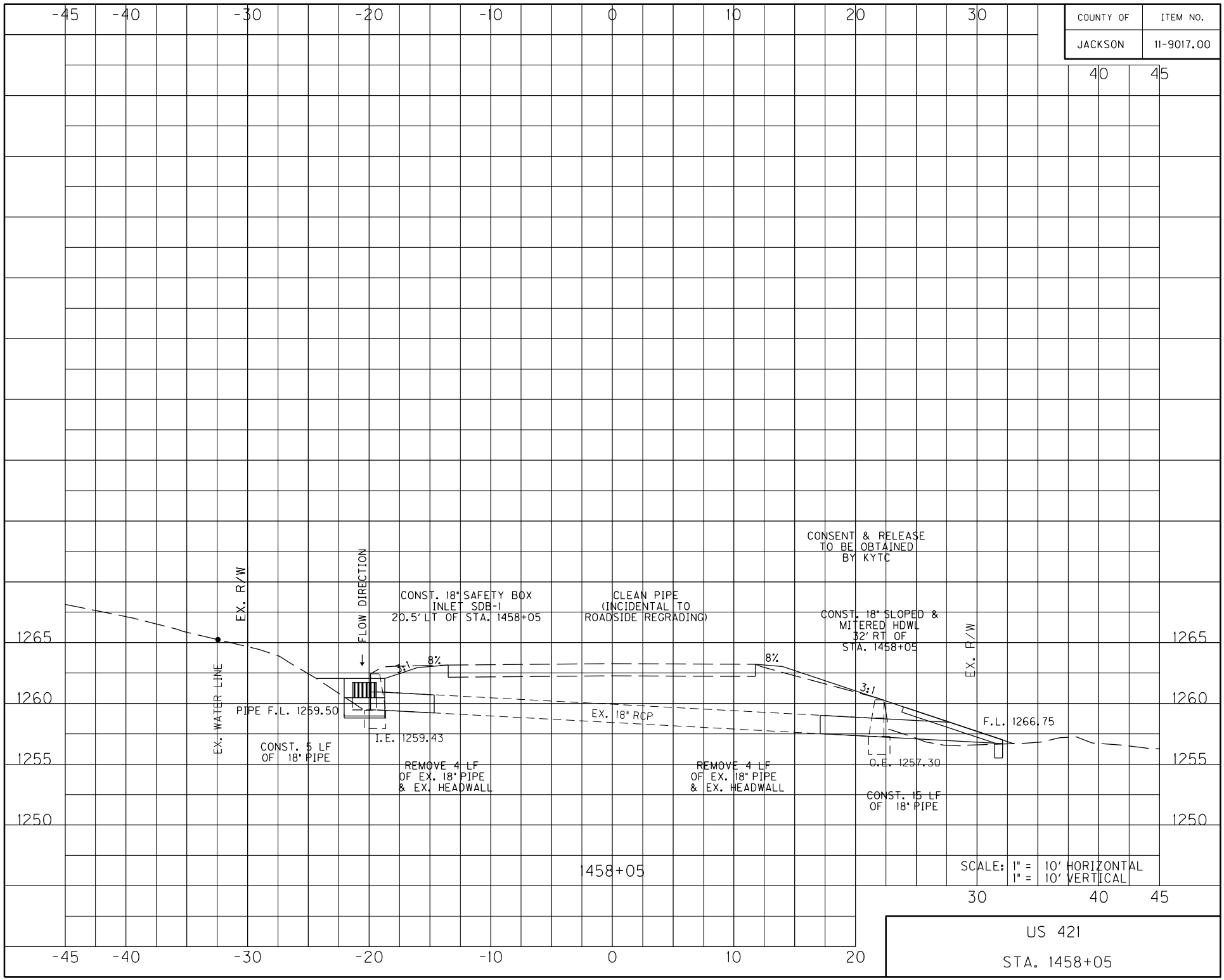
US 421

STA. 1440+00


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1443+22 TO STA. 1445+79
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
1445+79
1443+22
CONST. 18" SAFETY BOX INLET SDB-1 18.75' LT OF STA. 1445+79
SEE PIPE EXTENSION PAVEMENT REPAIR DETAIL
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
EX. 18" RCP
REMOVE 4 LF OF EX. 18" PIPE & EX. HEADWALL
CONST. 7 LF OF 18" PIPE
PIPE F.L. 1241.80
I.E. 1241.61
O.E. 1240.52
FLOW DIRECTION
EX. R/W
8%
3:1
CONST. 15" SLOPED & MITERED HDWL 23.75' LT OF STA. 1443+22
EX. 15" RCP
F.L. 1237.75
I.E. 1237.51
CONST. 111 LF OF 15" PIPE
REMOVE 4 LF OF EX. 15" PIPE & EX. HEADWALL
O.E. 1236.39

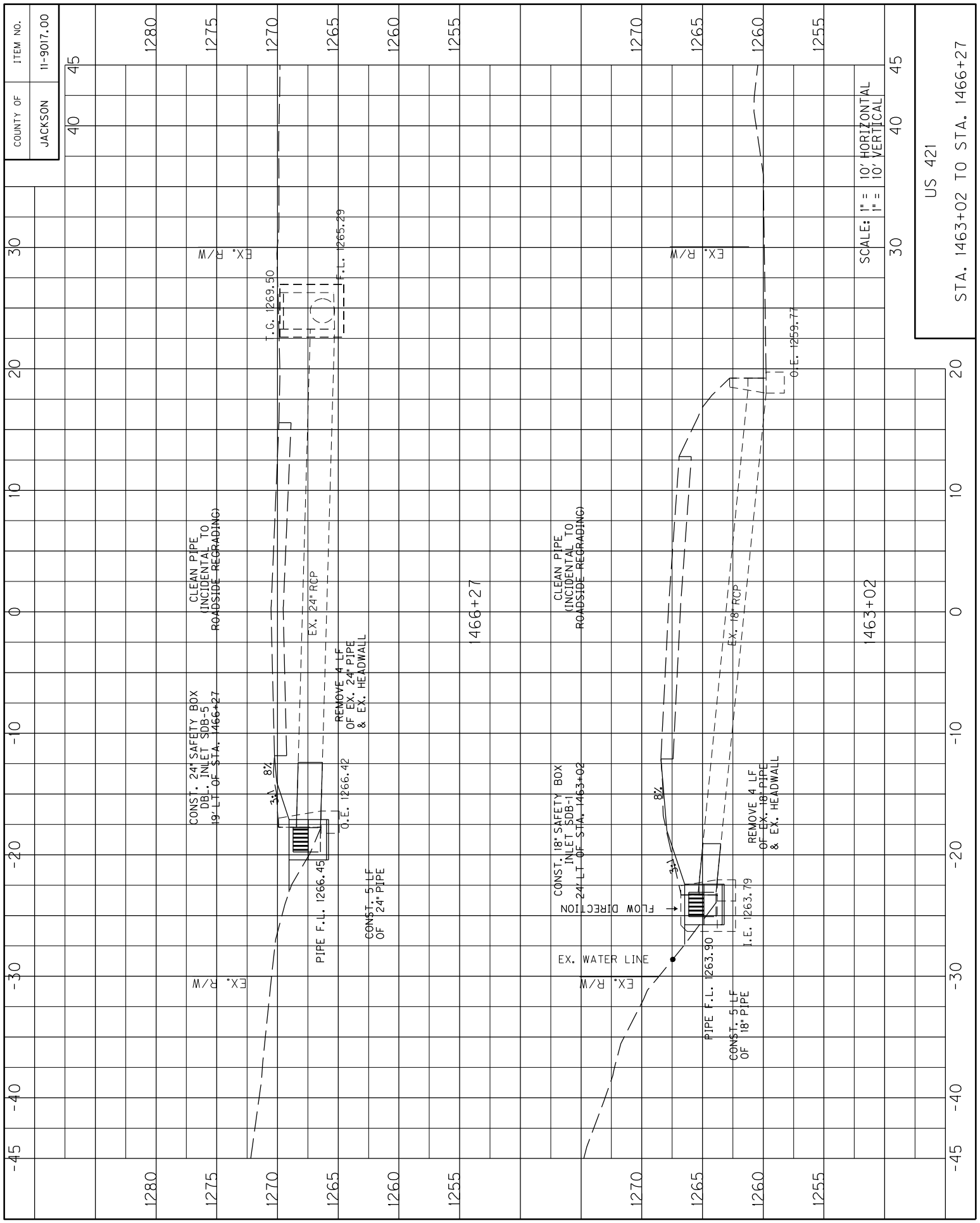

COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1449+50 TO STA. 1454+86
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
CONSENT & RELEASE TO BE OBTAINED BY KYTC
CONST. JUN. BOX TY. A NO. 7 27.6' RT OF STA. 1454+86
CONST. 24" SLOPED & MITERED HDWL 20' LT OF STA. 1454+86
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
SEE PIPE EXTENSION PAVEMENT REPAIR DETAIL
EX. 24" RCP
I.E. 1255.66
F.L. 1256.10
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL
CONST. 8 LF OF 24" PIPE
CONST. 14 LF OF 24" PIPE
O.E. 1252.99
F.L. 1251.90
TIE TO 24" CMP ENTR. PIPE CONST. 4 LF
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL
EX. WATER LINE
EX. R/W
8%
4:1
12:1
3:1
1454+86
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
CONST. 18" SAFETY BOX INLET SDB-1 20' LT OF STA. 1449+50
SEE PIPE EXTENSION PAVEMENT REPAIR DETAIL
EX. 18" RCP
I.E. 1246.57
O.E. 1244.72
PIPE F.L. 1246.70
FLOW DIRECTION
REMOVE 4 LF OF EX. 18" PIPE & EX. HEADWALL
CONST. 8 LF OF 18" PIPE
1449+50

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

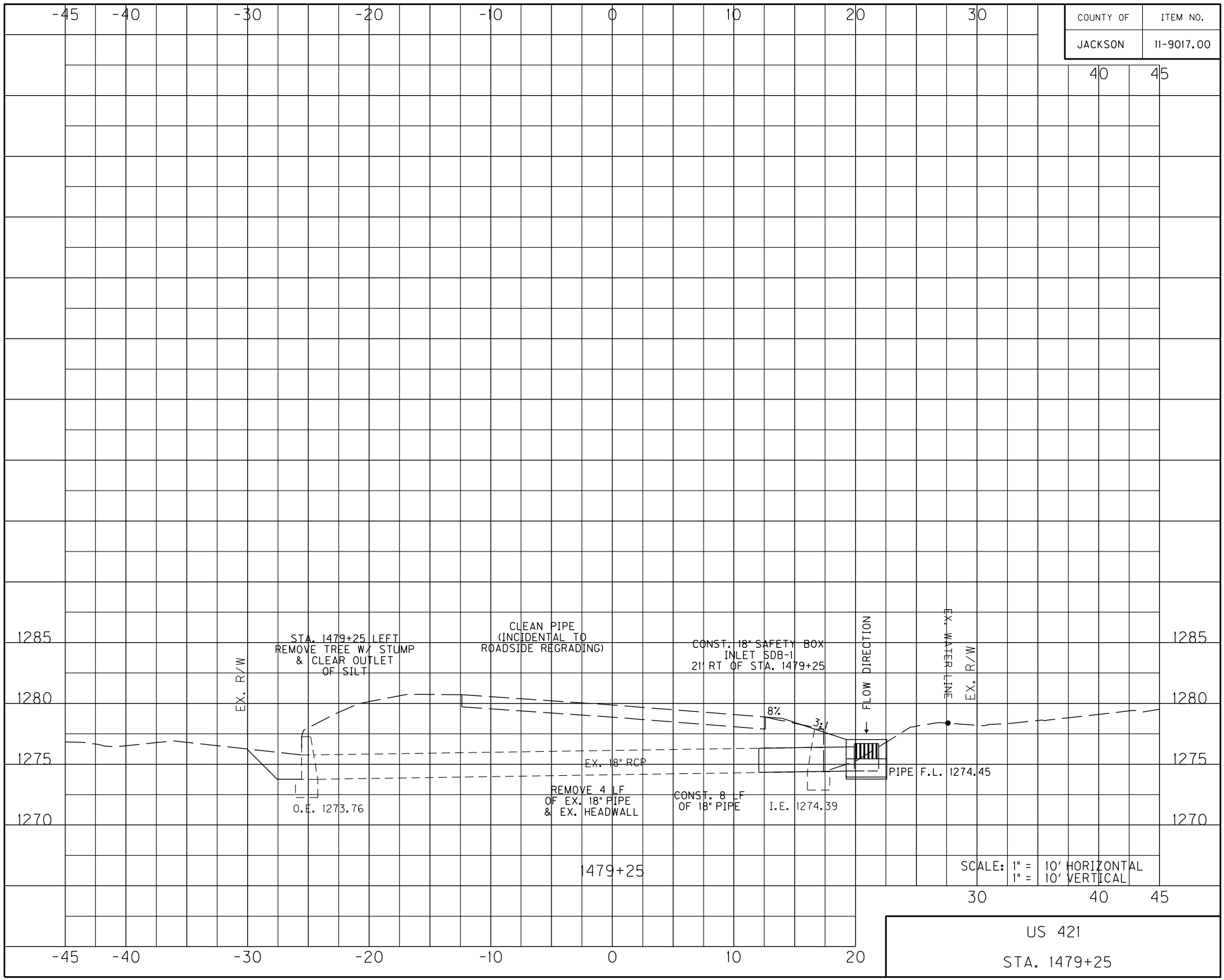


US 421

STA. 1458+05

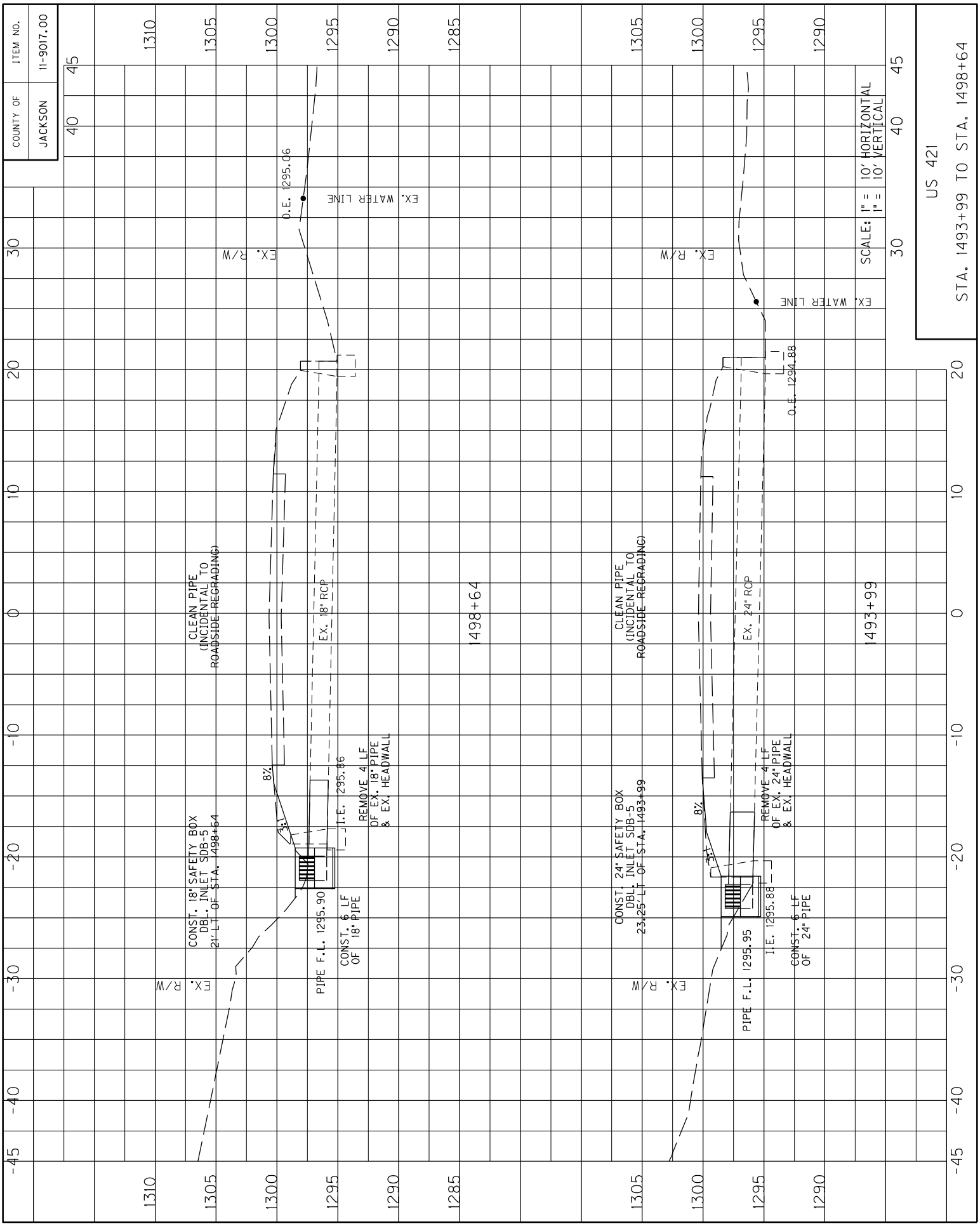

COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1463+02 TO STA. 1466+27
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
1466+27
1463+02
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
CONST. 24" SAFETY BOX DBL. INLET SDB-5 19' LT OF STA. 1466+27
EX. 24" RCP
T.G. 1269.50
F.L. 1265.29
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL
O.E. 1266.42
PIPE F.L. 1266.45
CONST. 5 LF OF 24" PIPE
8%
3:1
EX. R/W
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
CONST. 18" SAFETY BOX INLET SDB-1 24' LT OF STA. 1463+02
EX. 18" RCP
O.E. 1259.77
REMOVE 4 LF OF EX. 18" PIPE & EX. HEADWALL
FLOW DIRECTION
I.E. 1263.79
PIPE F.L. 1263.90
CONST. 5 LF OF 18" PIPE
EX. WATER LINE

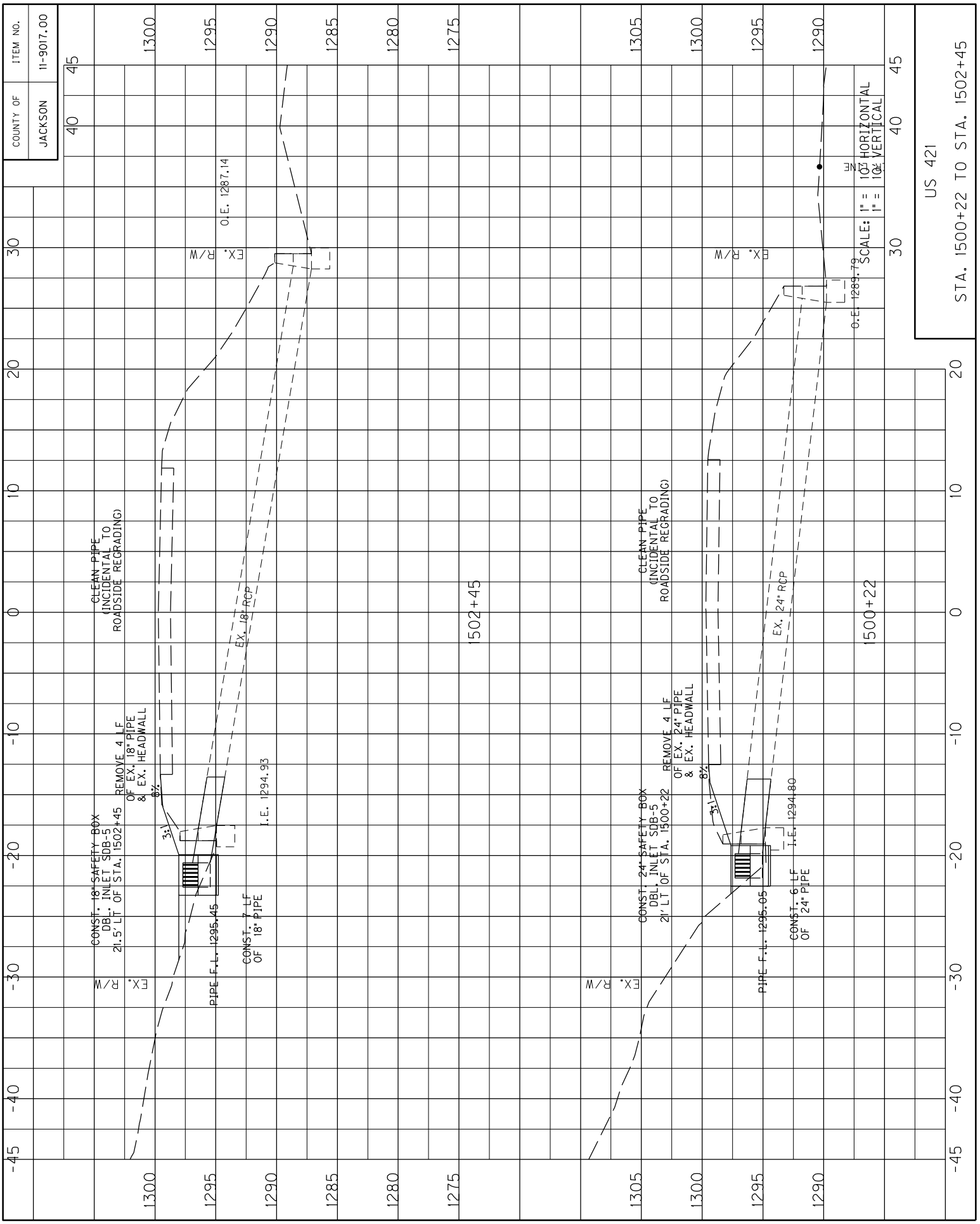
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



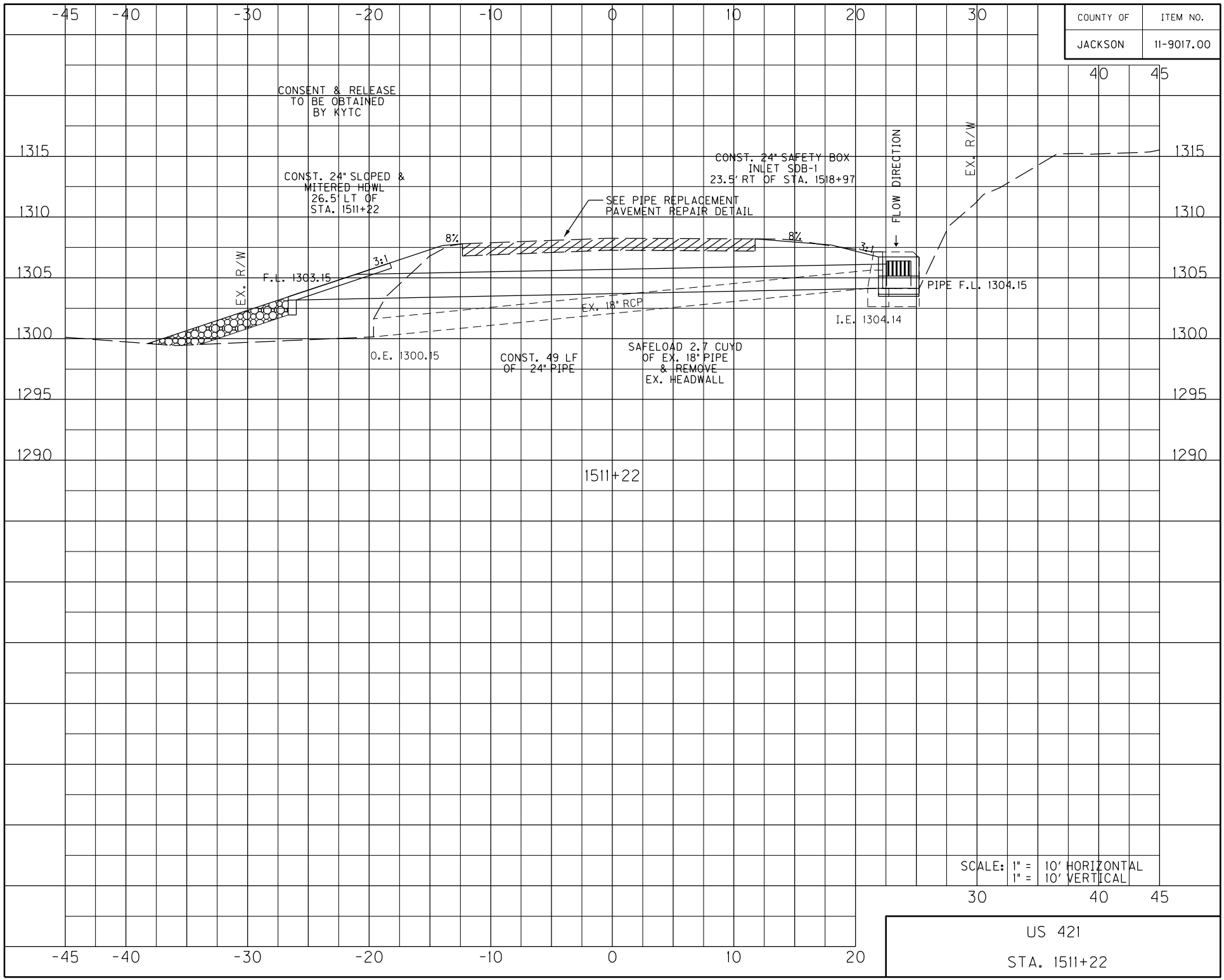
US 421

STA. 1479+25


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1493+99 TO STA. 1498+64
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
1498+64
1493+99
EX. R/W
EX. WATER LINE
O.E. 1295.06
O.E. 1294.88
CLEAN PIPE (INCIDENTAL TO ROADSIDE REGRADING)
CONST. 18" SAFETY BOX DBL. INLET SDB-5 21' LT OF STA. 1498+64
EX. 18" RCP
I.E. 295.86
PIPE F.L. 1295.90
CONST. 6 LF OF 18" PIPE
REMOVE 4 LF OF EX. 18" PIPE & EX. HEADWALL
8%
3:1
CONST. 24" SAFETY BOX DBL. INLET SDB-5 23.25' LT OF STA. 1493+99
EX. 24" RCP
I.E. 1295.88
PIPE F.L. 1295.95
CONST. 6 LF OF 24" PIPE
REMOVE 4 LF OF EX. 24" PIPE & EX. HEADWALL

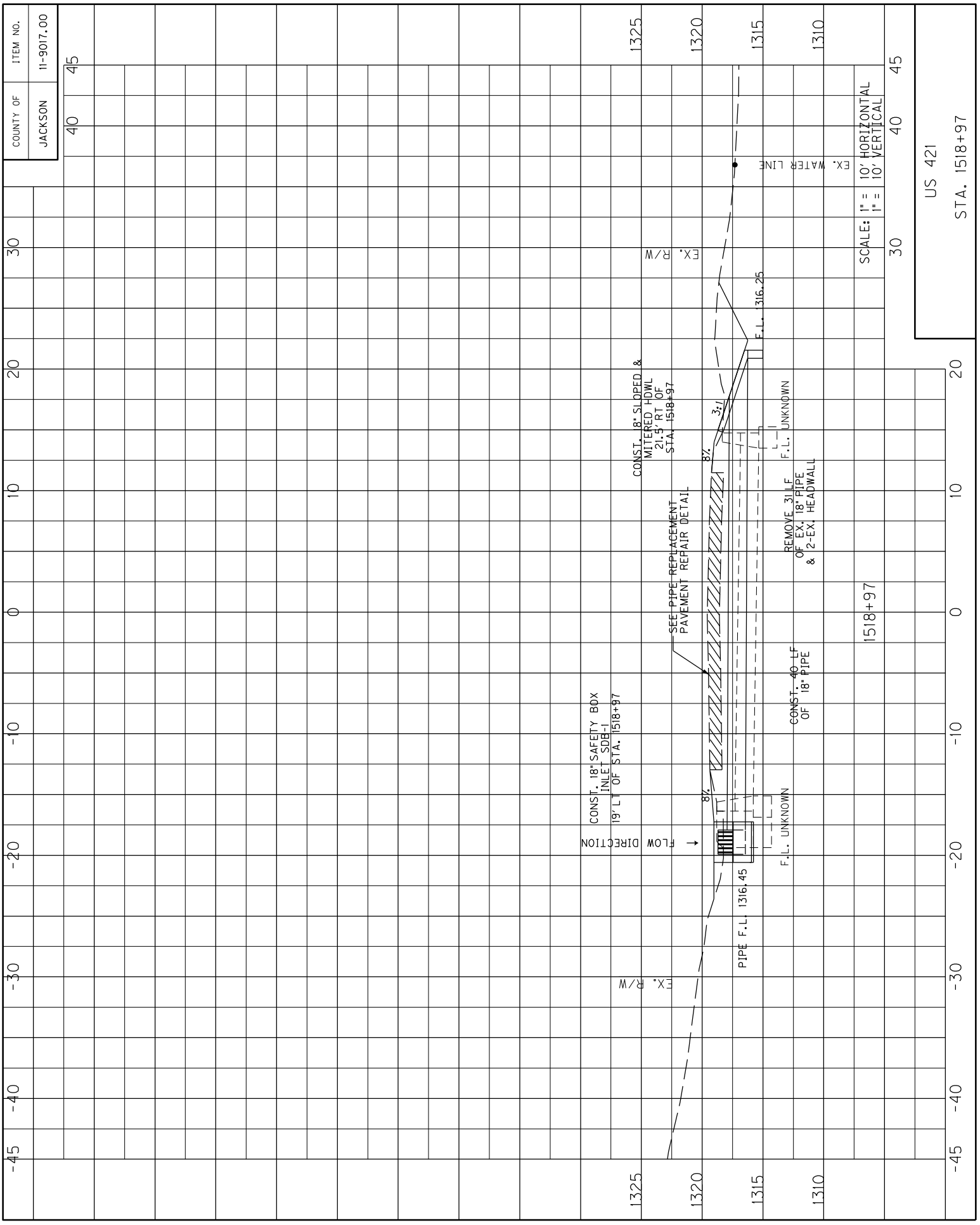

COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1500+22 TO STA. 1502+45
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
1502+45
1500+22
CONST. 18" SAFETY BOX
DBL. INLET SDB-5
21.5' LT OF STA. 1502+45
REMOVE 4 LF
OF EX. 18" PIPE
& EX. HEADWALL
8%
3:1
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
EX. 18" RCP
O.E. 1287.14
I.E. 1294.93
PIPE F.L. 1295.45
CONST. 7 LF
OF 18" PIPE
EX. R/W
CONST. 24" SAFETY BOX
DBL. INLET SDB-5
21' LT OF STA. 1500+22
REMOVE 4 LF
OF EX. 24" PIPE
& EX. HEADWALL
8%
3:1
CLEAN PIPE
(INCIDENTAL TO
ROADSIDE REGRADING)
EX. 24" RCP
O.E. 1289.79
I.E. 1294.80
PIPE F.L. 1295.05
CONST. 6 LF
OF 24" PIPE
EX. R/W

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

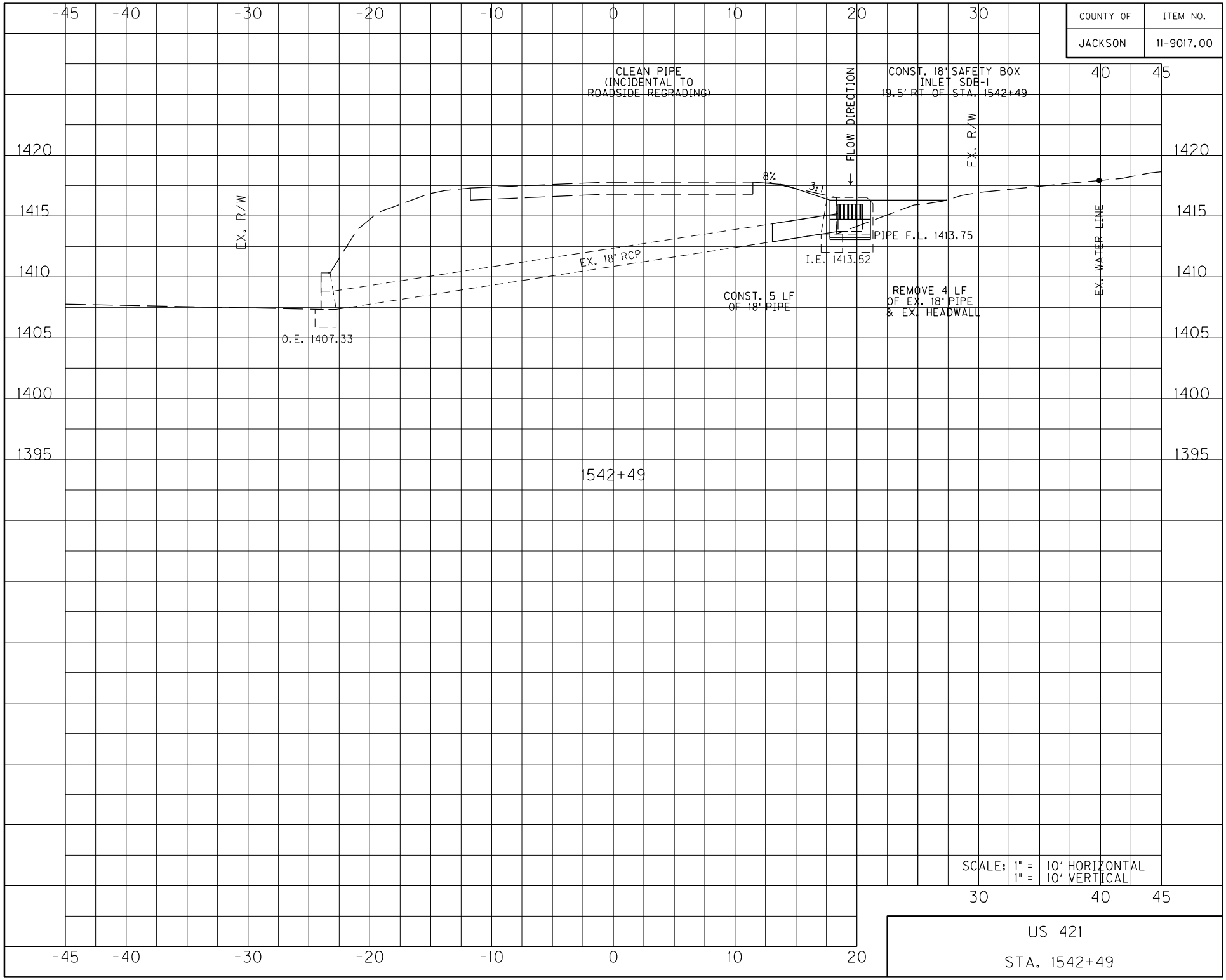


US 421

STA. 1511+22


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
US 421
STA. 1518+97
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
EX. WATER LINE
EX. R/W
CONST. 18" SLOPED & MITERED HDWL 21.5' RT OF STA. 1518+97
SEE PIPE REPLACEMENT PAVEMENT REPAIR DETAIL
3:1
8%
F.L. 1316.25
F.L. UNKNOWN
REMOVE 31 LF OF EX. 18" PIPE & 2-EX. HEADWALL
CONST. 40 LF OF 18" PIPE
1518+97
CONST. 18" SAFETY BOX INLET SDB-1 19' LT OF STA. 1518+97
FLOW DIRECTION
PIPE F.L. 1316.45
F.L. UNKNOWN
1325
1320
1315
1310

COUNTY OF	ITEM NO.
JACKSON	11-9017.00



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

US 421

STA. 1542+49

COUNTY OF	ITEM NO.
JACKSON	11-9017

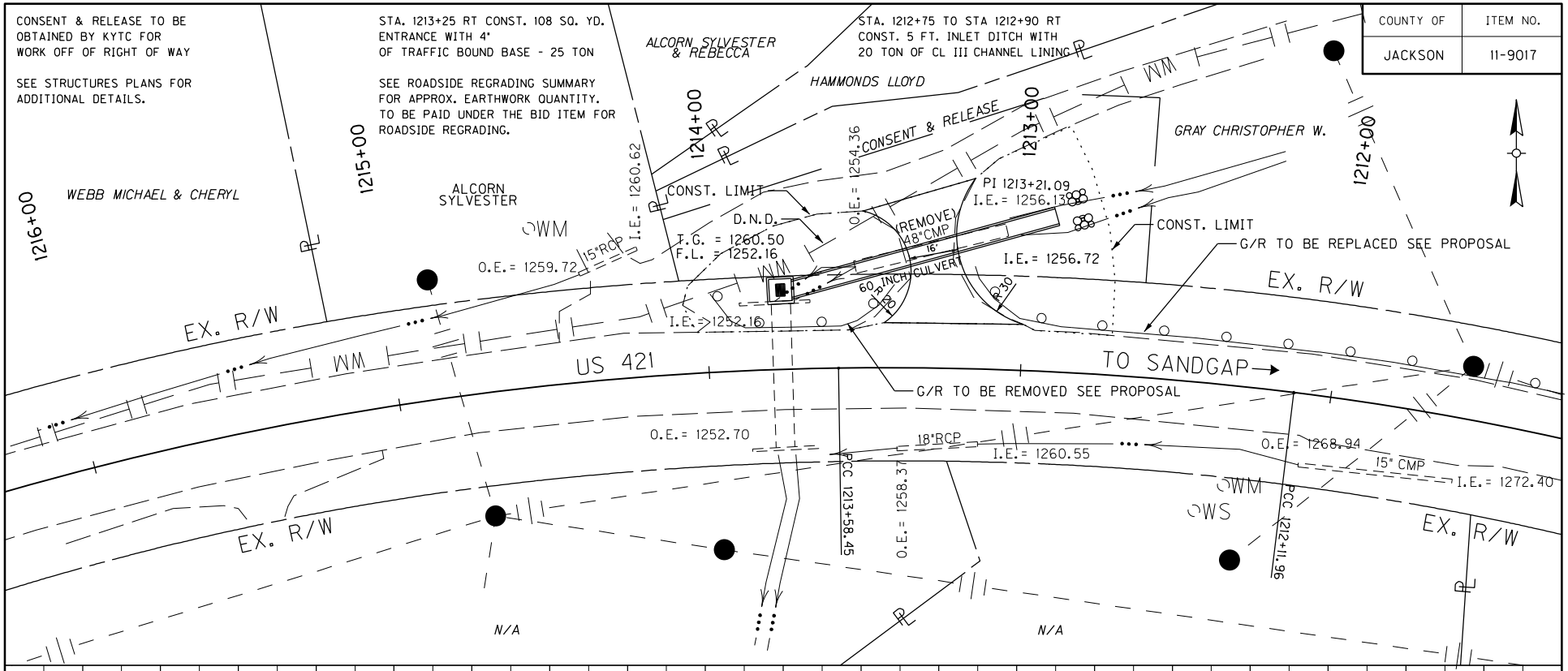
CONSENT & RELEASE TO BE OBTAINED BY KYTC FOR WORK OFF OF RIGHT OF WAY

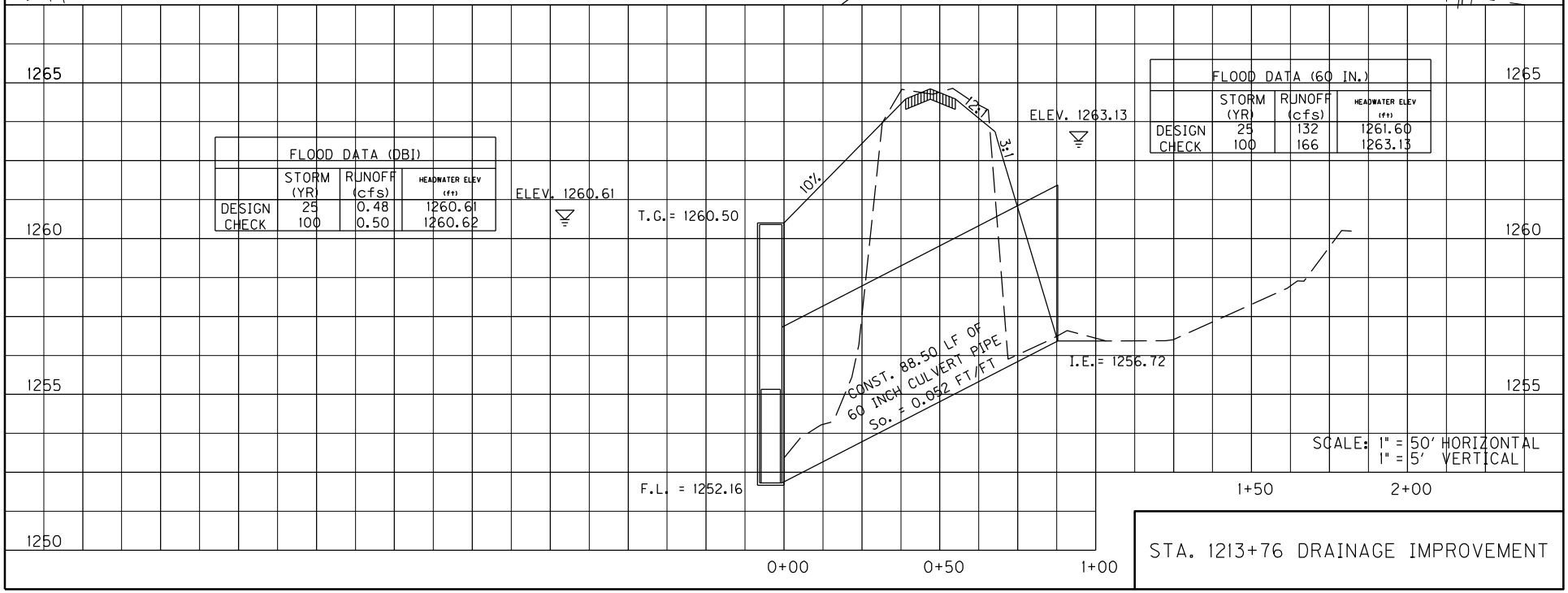
SEE STRUCTURES PLANS FOR ADDITIONAL DETAILS.

STA. 1213+25 RT CONST. 108 SQ. YD. ENTRANCE WITH 4" OF TRAFFIC BOUND BASE - 25 TON

SEE ROADSIDE REGRADING SUMMARY FOR APPROX. EARTHWORK QUANTITY. TO BE PAID UNDER THE BID ITEM FOR ROADSIDE REGRADING.

STA. 1212+75 TO STA 1212+90 RT CONST. 5 FT. INLET DITCH WITH 20 TON OF CL III CHANNEL LINING

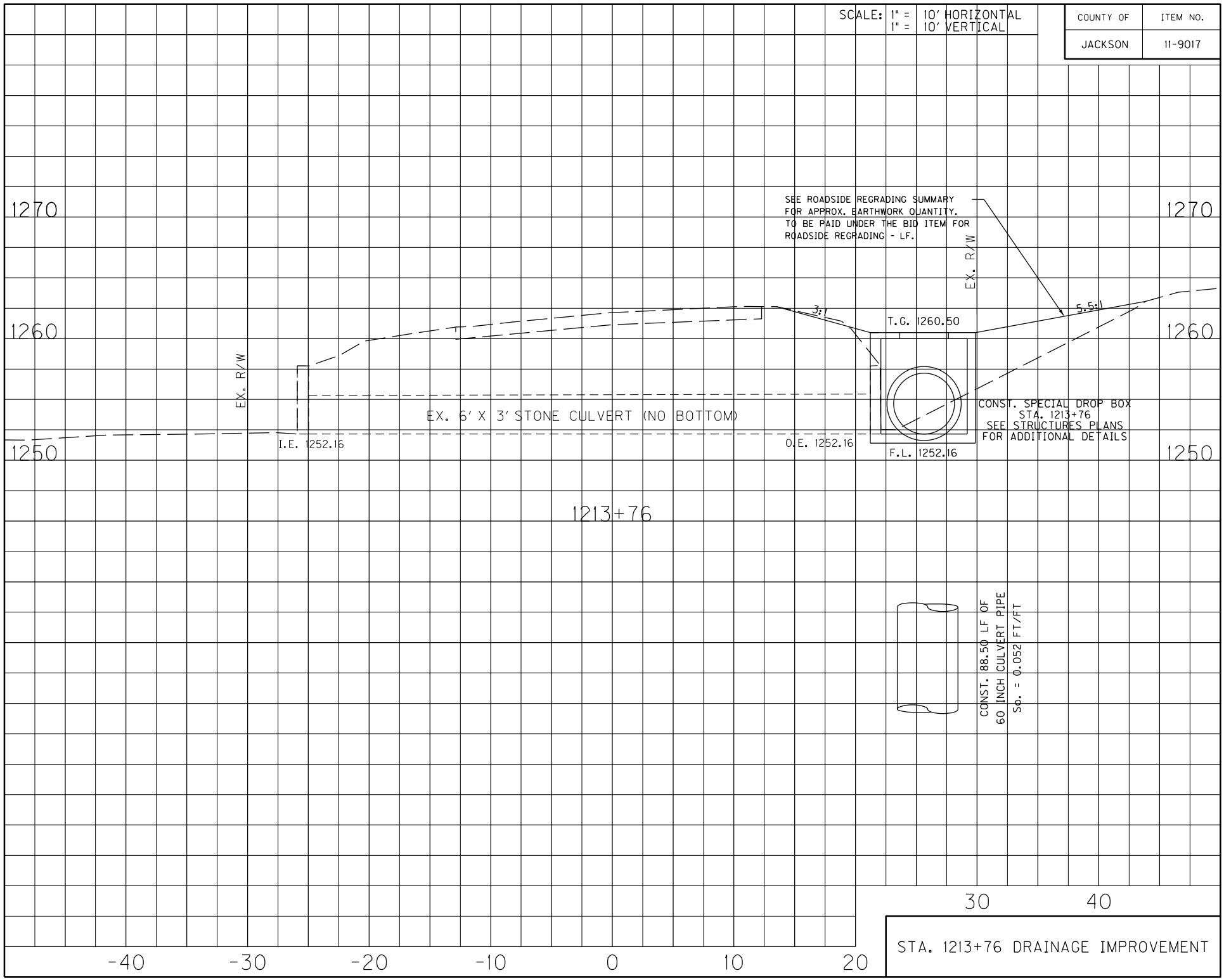




STA. 1213+76 DRAINAGE IMPROVEMENT

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

COUNTY OF	ITEM NO.
JACKSON	11-9017



STA. 1213+76 DRAINAGE IMPROVEMENT

GENERAL NOTES

SPECIFICATIONS: References to the Specifications are to the current edition of the 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 current edition of the AASHTO LRFD Bridge Design Specifications.

DESIGN LOAD: This structure is designed for KY HL-93 live load, (i.e. 1.25xAASHTO HL93 live load).

CONCRETE: Use Concrete, Class "A" thoughout.

MATERIALS DESIGN SPECIFICATIONS:
For Class "A" Reinforced 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: All exposed edges shall be beveled ¾", unless otherwise shown.

VERIFYING FIELD CONDITIONS: The contractor shall field verify all dimensions before ordering material. New material that is unsuitable because of variations in the existing structure shall be replaced at the contractor's expense. The opening in the proposed drop inlet shall match the opening of the existing culvert, to the best ability possible. Any changes required to the as detailed box shall be brought to the attention of the engineer for approval. The engineer is not responsible for deviations driven from changes due to existing field conditions.

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 Concerete 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. Clear distance to face of concrete is 2" unless otherwise noted. Spacing of bars is from center to center of bars.

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

BEFORE YOU DIG: The Contractor shall be responsible for all requirements and conformation with the Underground Facility Damage Prevention Act of 1994. The Contractor will be responsible for locating any utilities on this project. All underground utilities shall be located prior to construction. Any utilities disturbed or damaged as a result of the Contractor's operations will be repaired to the satisfaction of the utility owner at the Contractor's expense. The Contractor is advised to call (800) 752-6007 a minimum of two business days prior to excavation for information on the location of some, but not necessarily all underground utilities.

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

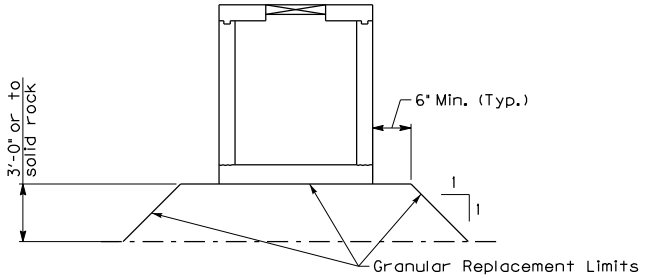
BONDING TO EXISTING CONCRETE USING STRUCTURAL ADHESIVES: Bond proposed plastic concrete to existing hardened concrete in all locations using a Type V Epoxy Resin or other approved Structural Adhesive as prescribed in section 826 of the specificatios. Follow the manufacturer's recommended application 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 or flatter beginning 12" from the base of the footing to the bottom of the excavation. Place Geotextile Fabrics Type II as a seperator 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. Material, labor, or construction operations not otherwise specified, are to be included in the bid item most appropriate to the work involved and otherwise considered incidental to the Contract. 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.

ESTIMATE OF QUANTITIES			
BID CODE	ITEM	QUANTITY	UNITS
2223	GRANULAR EMBANKMENT	14.3	CU YD
2603	FABRIC-GEOTEXTILE, TYPE II	20.5	SQ YD
2403	REMOVE CONCRETE MASONRY	0.3	CU YD
8100	CONCRETE-CLASS A	10.6	CU YD
8150	STEEL REINFORCEMENT	1874	LB

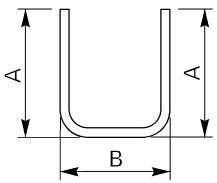
COUNTY OF	ITEM NO.
JACKSON	11-9017



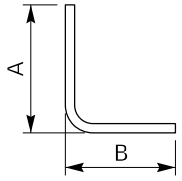
SECTION THOUGH BOX

Showing Granular Replacement Limits

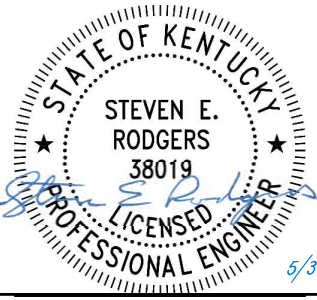
BILL OF REINFORCEMENT							
MARK	TYPE	NO.	SIZE	LENGTH	LOCATION	A	B
A1	STR.	16	4	7'-8"	Top Slab		
A2	STR.	16	4	8'-3"	Top Slab		
A3	5	4	5	10'-3"	Top Slab & Wall	8'-0"	2'-3"
A4	5	8	5	10'-1"	Top Slab & Wall	8'-0"	2'-1"
A5	5	4	5	5'-9"	Top Slab & Wall	3'-6"	2'-3"
A6	STR.	8	4	2'-3"	Top Slab		
A7	STR.	36	5	8'-10"	Wall		
A8	STR.	12	5	3'-6"	Wall		
A9	STR.	32	5	7'-8"	Wall		
A10	STR.	44	5	8'-3"	Wall		
A11	5	24	5	9'-11"	Bottom Slab	7'-3"	2'-8"
A12	2	12	5	10'-4"	Bottom Slab	2'-8"	7'-8"
A13	STR.	15	5	7'-8"	Bottom Slab		
A14	STR.	8	4	2'-1"	Top Slab		
A15	STR.	12	4	2'-9"	Wall Dowels		



TYPE 2



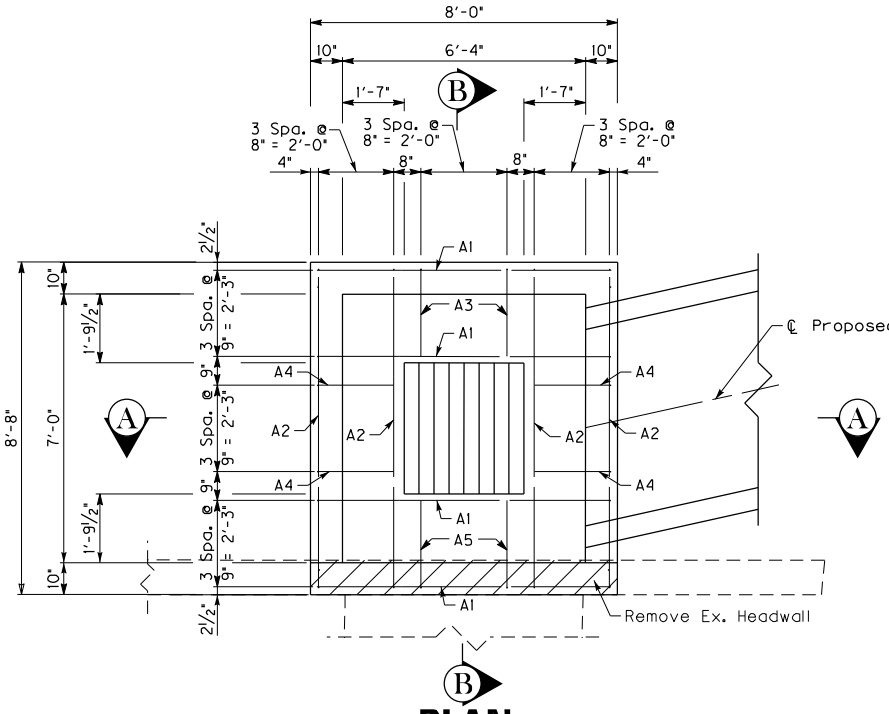
TYPE 5



5/31/2023

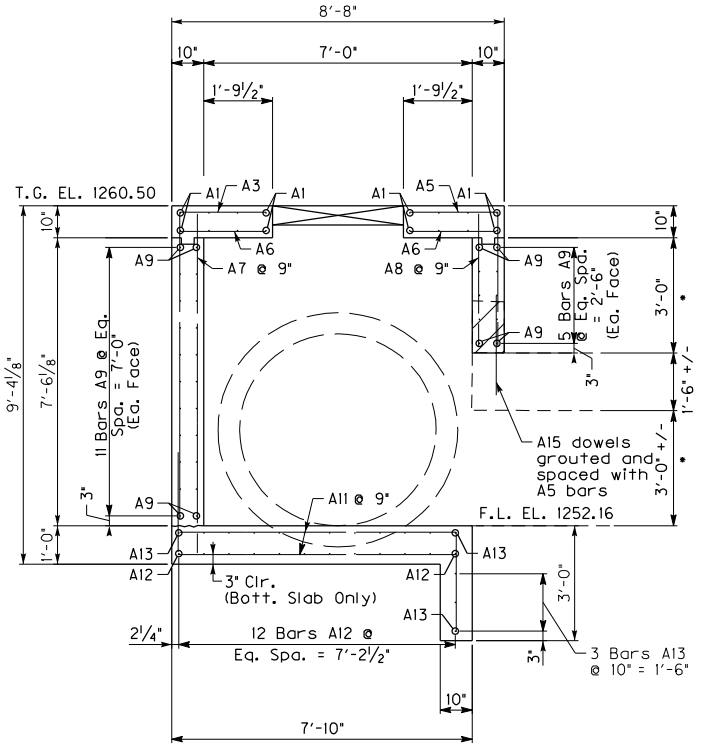
STA. 1213+76 DRAINAGE IMPROVEMENTS

COUNTY OF	ITEM NO.
JACKSON	11-9017



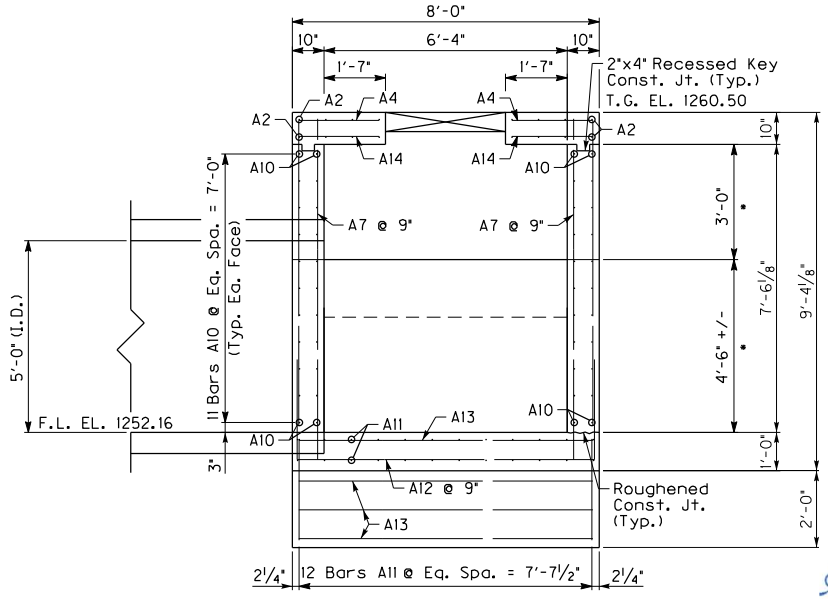
PLAN

Showing Top Slab Reinforcement Only.
Wall reinforcement not shown for clarity.



SECTION B–B

* - Contractor shall field verify and adjust as necessary.



SECTION A–A

* - Contractor shall field verify and adjust as necessary.

Notes:

See Std. Dwg. RDB-001-12 for Grate Details.

Limits of headwall removal shall be minimized such that only that which is needed to construct box.

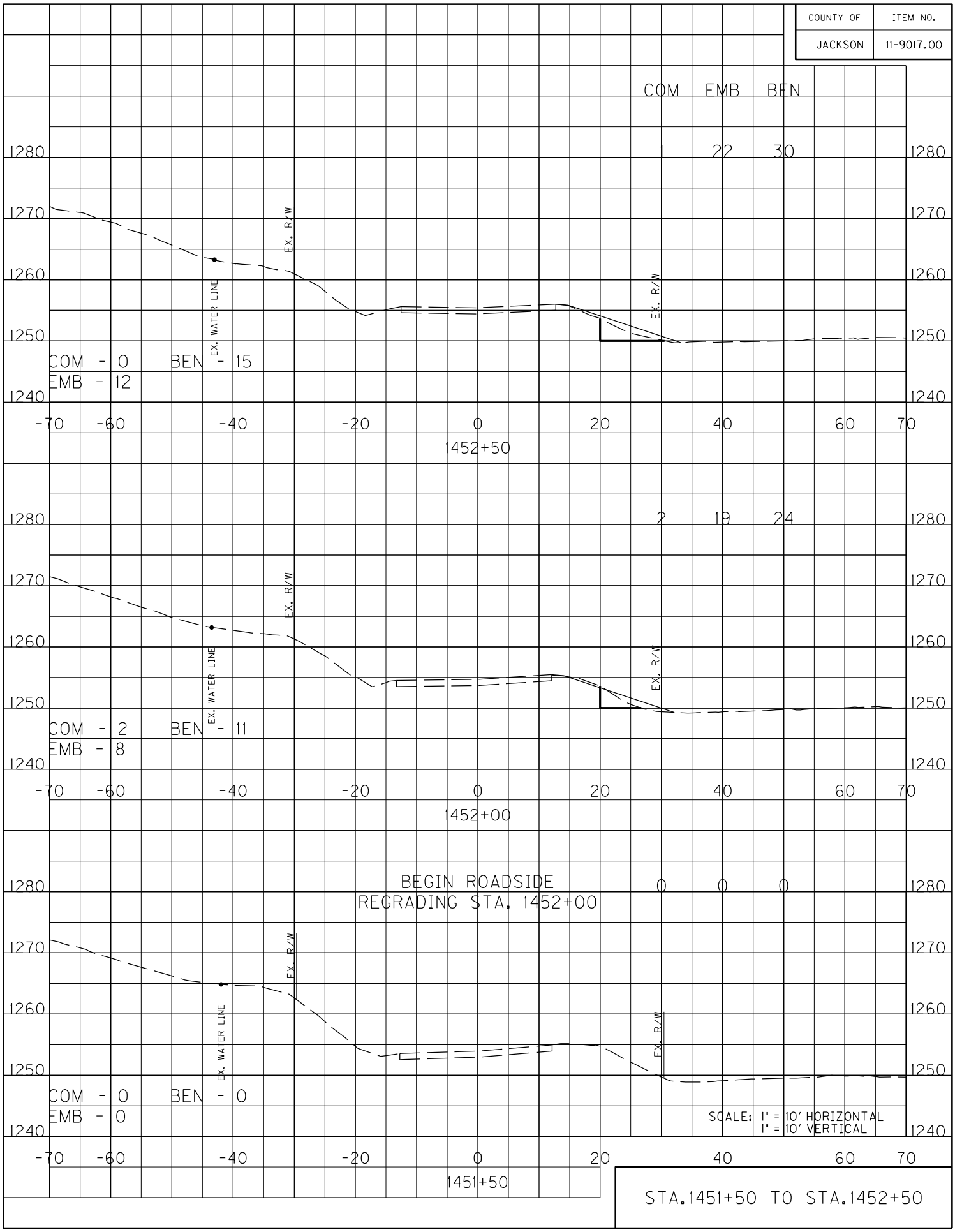
Reinforcement shall be trimmed as necessary to maintain minimum clear cover.

Reinforcement can be shifted up to 1" to avoid interference with other reinforcement.

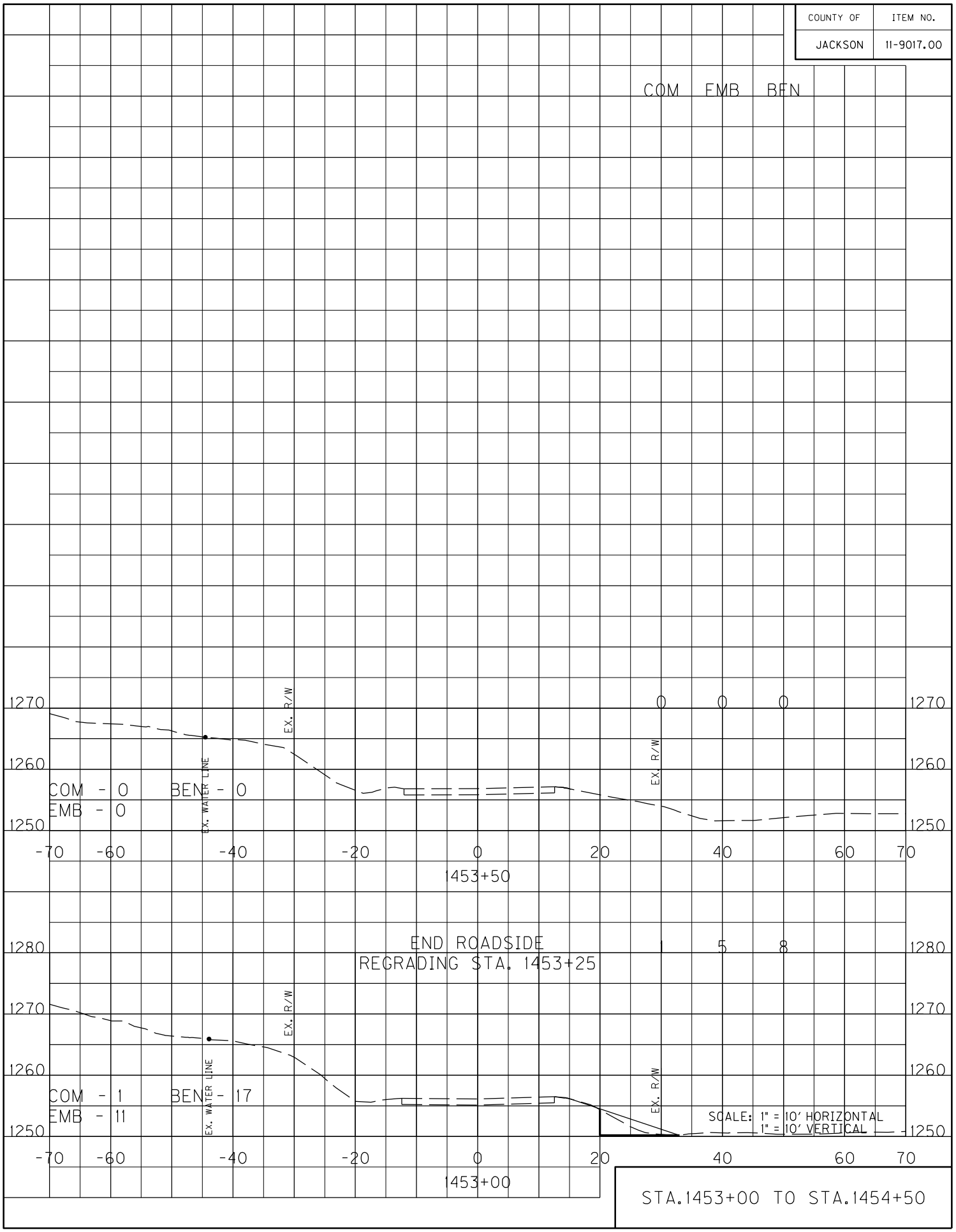
Contractor to verify grate dimensions and adjust top of box accordingly.

STATE OF KENTUCKY
STEVEN E. RODGERS
38019
LICENSED PROFESSIONAL ENGINEER

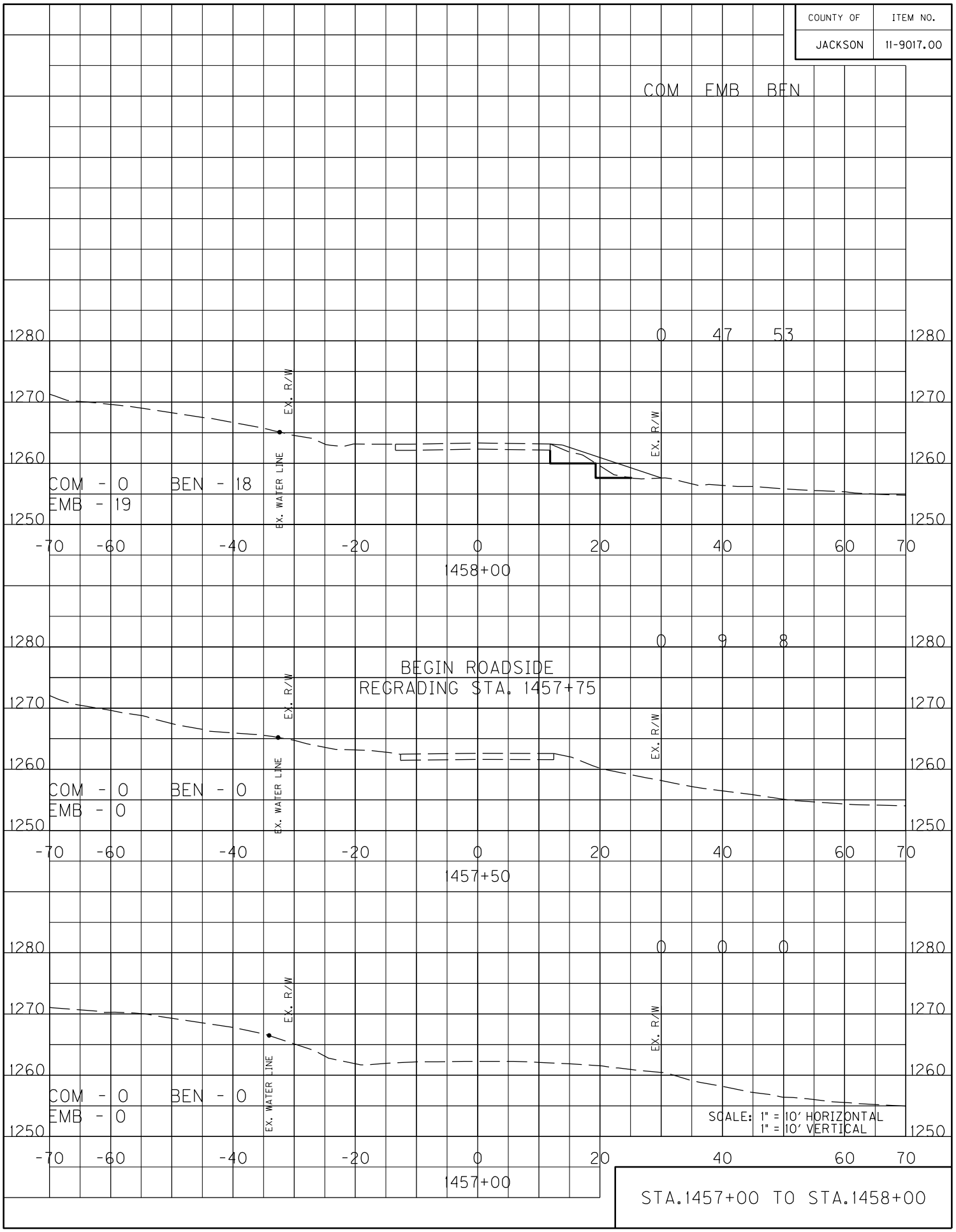
STA. 1213+76 DRAINAGE IMPROVEMENT


COUNTY OF
ITEM NO.
JACKSON
11-9017.00
COM EMB BEN
1 22 30
1280
1270
1260
1250
1240
EX. R/W
EX. WATER LINE
COM - 0
BEN - 15
EMB - 12
-70 -60 -40 -20 0 20 40 60 70
1452+50
2 19 24
COM - 2
BEN - 11
EMB - 8
1452+00
BEGIN ROADSIDE
REGRADING STA. 1452+00
0 0 0
COM - 0
BEN - 0
EMB - 0
1451+50
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
STA.1451+50 TO STA.1452+50

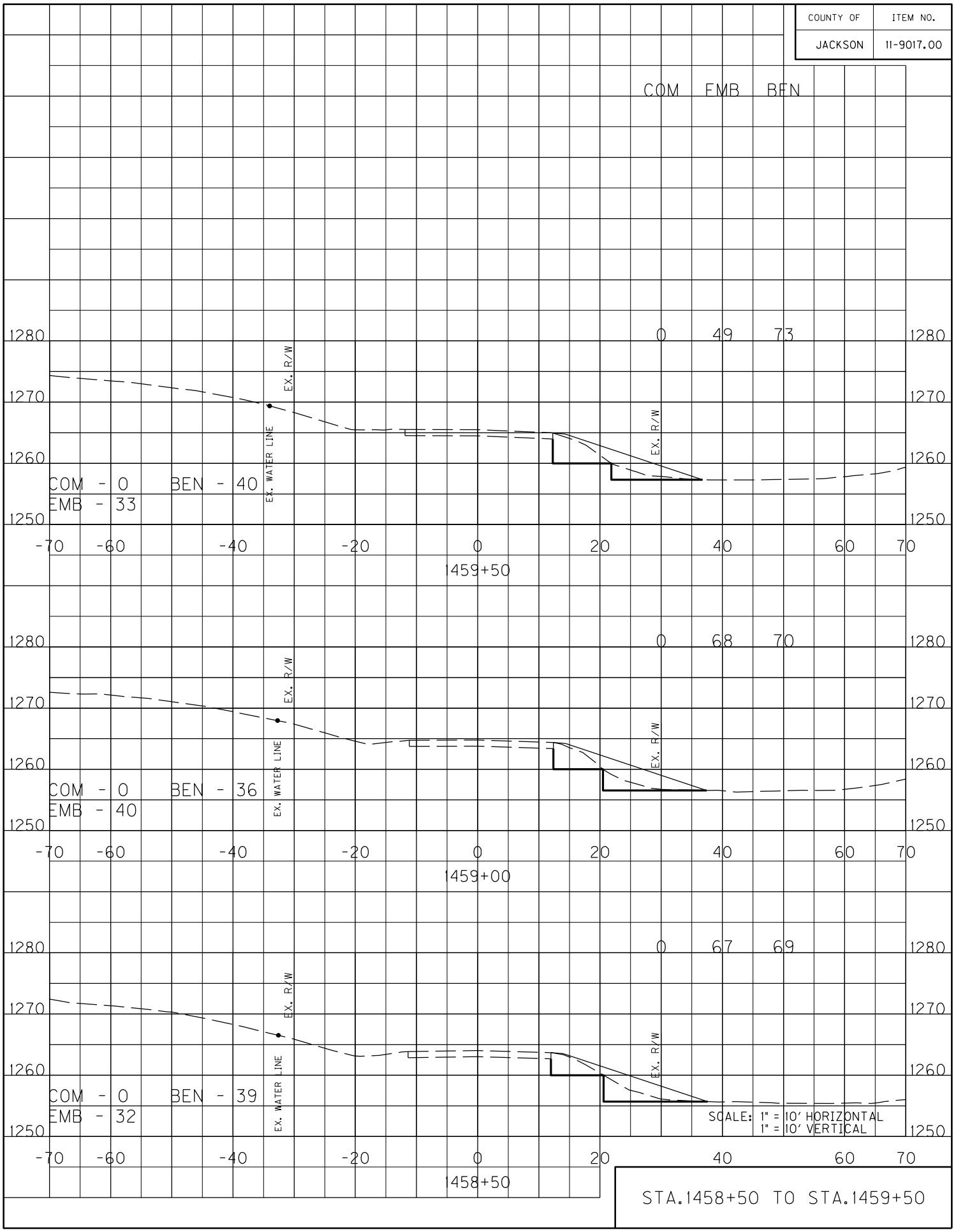
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



STA.1453+00 TO STA.1454+50

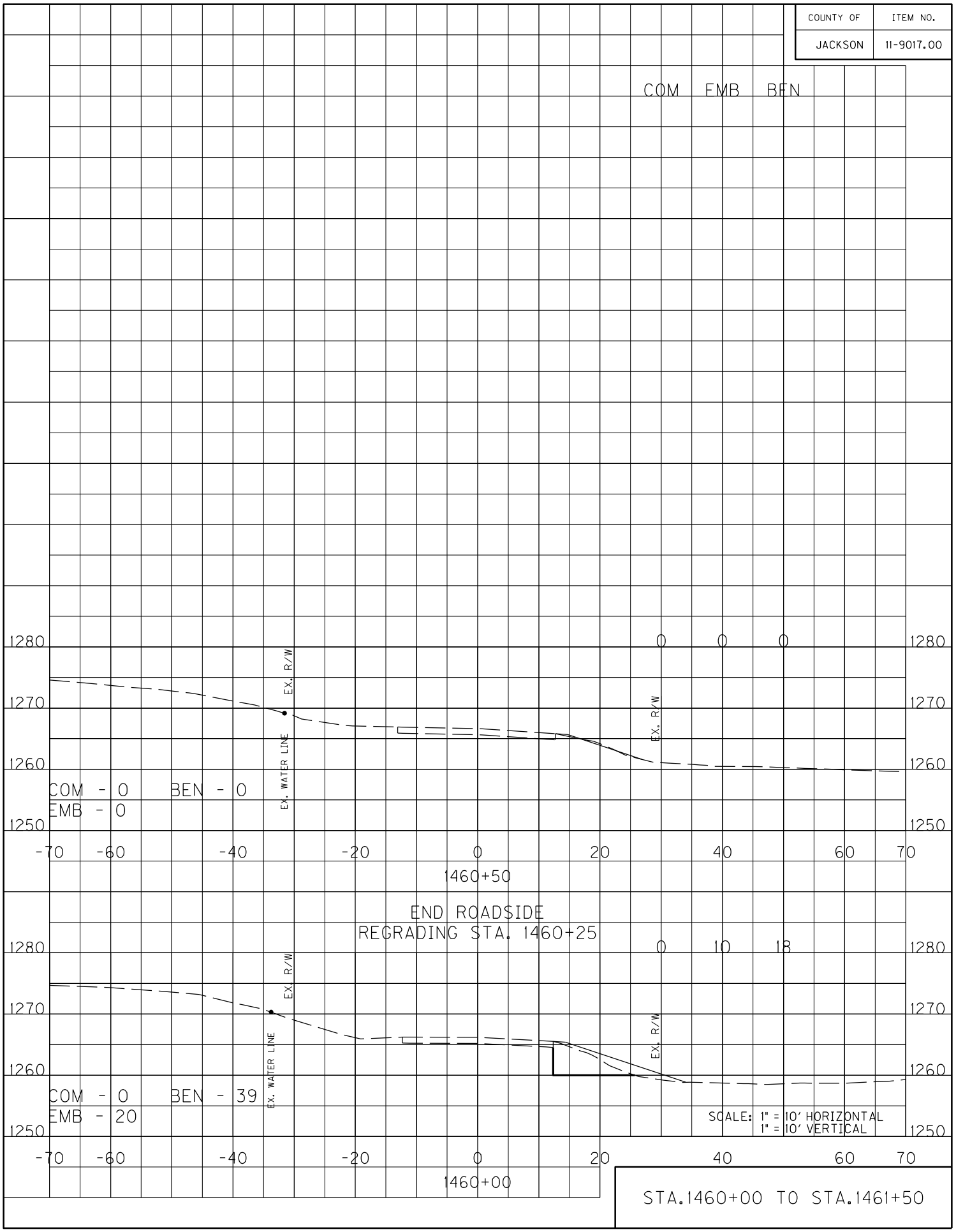

COUNTY OF
JACKSON
ITEM NO.
11-9017.00
COM EMB BEN
0 47 53
1280
1270
1260
1250
EX. R/W
EX. WATER LINE
COM - 0 BEN - 18
EMB - 19
-70 -60 -40 -20 0 20 40 60 70
1458+00
0 9 8
BEGIN ROADSIDE
REGRADING STA. 1457+75
COM - 0 BEN - 0
EMB - 0
1457+50
0 0 0
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
1457+00
STA.1457+00 TO STA.1458+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

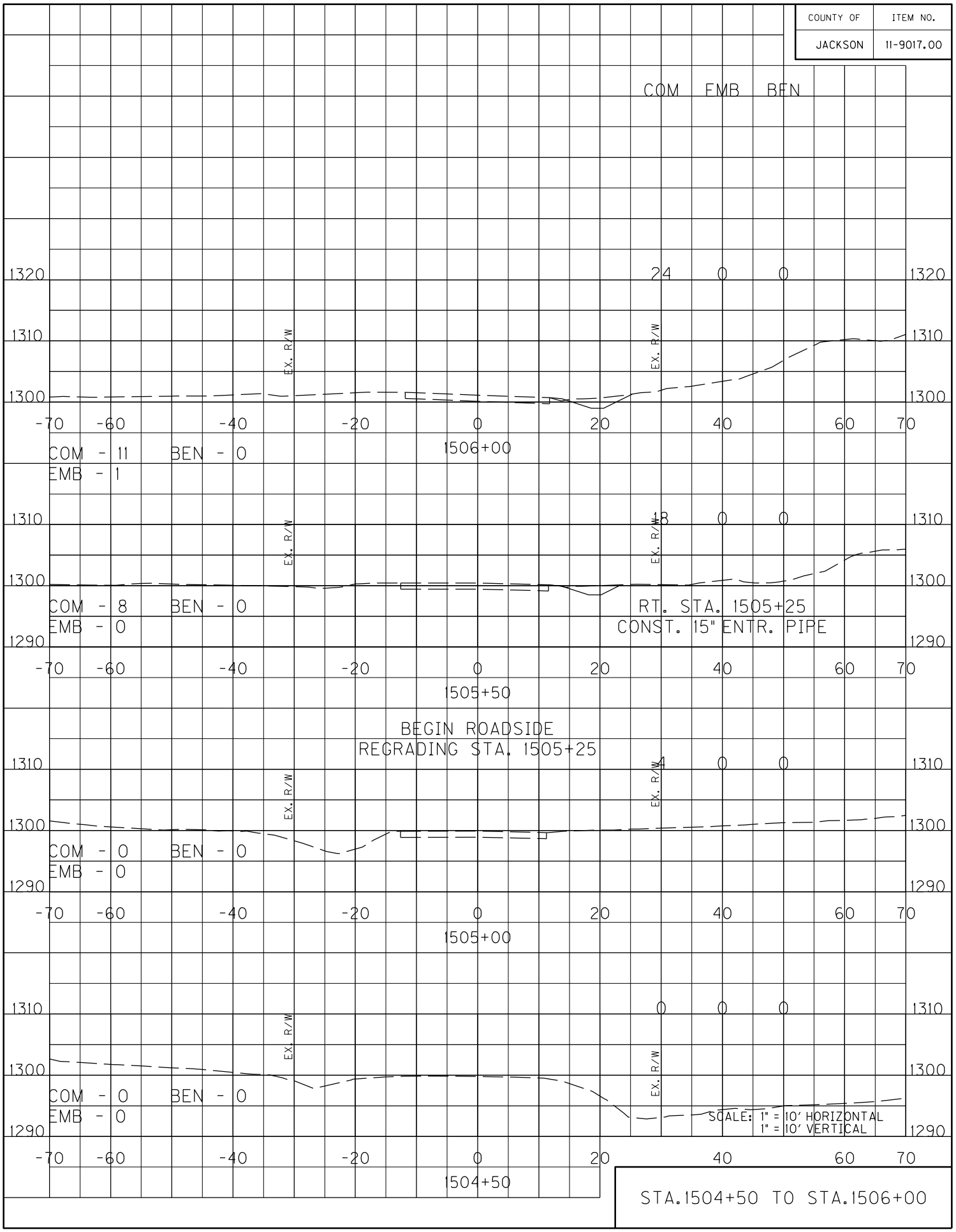


STA.1458+50 TO STA.1459+50

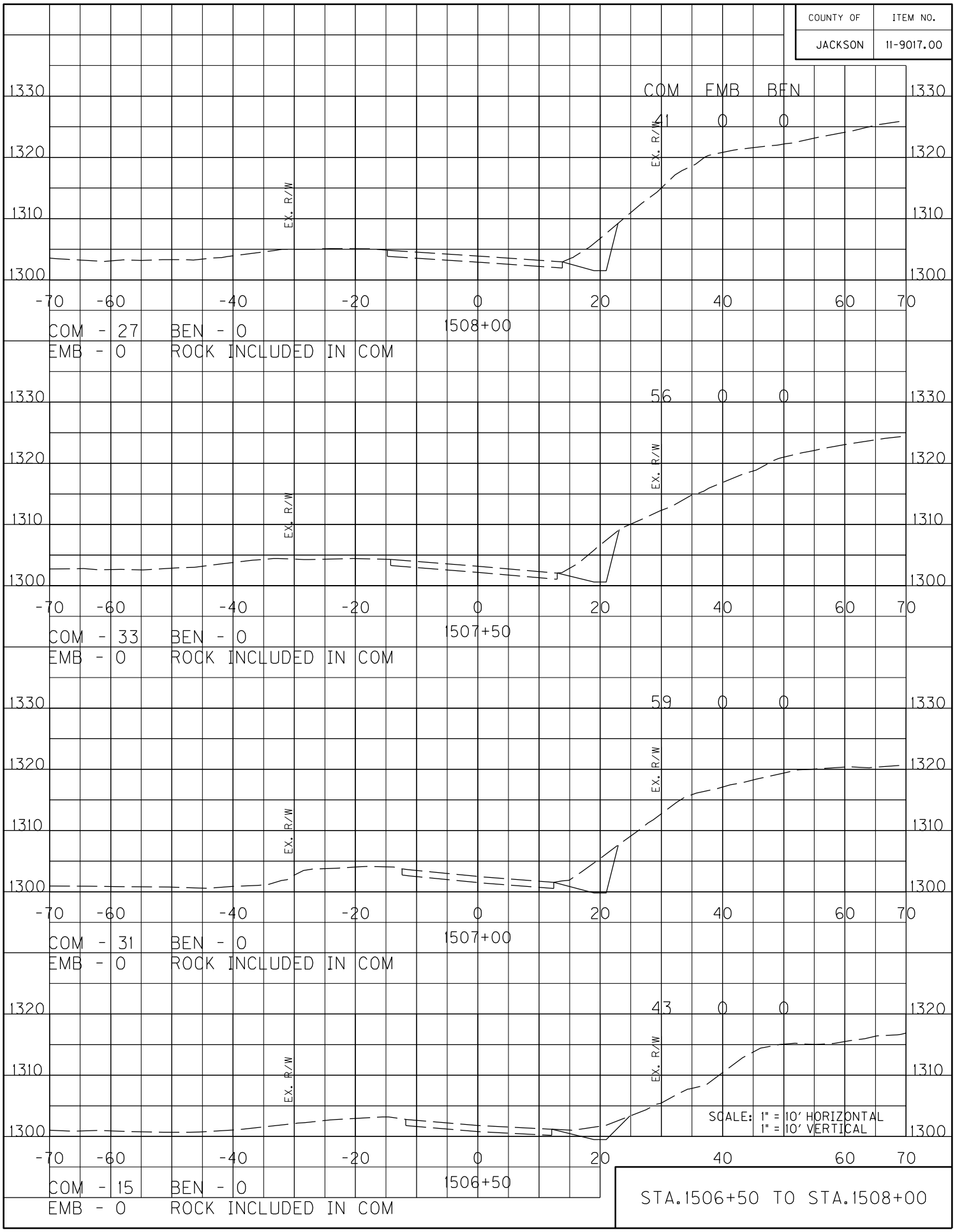
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



STA.1460+00 TO STA.1461+50

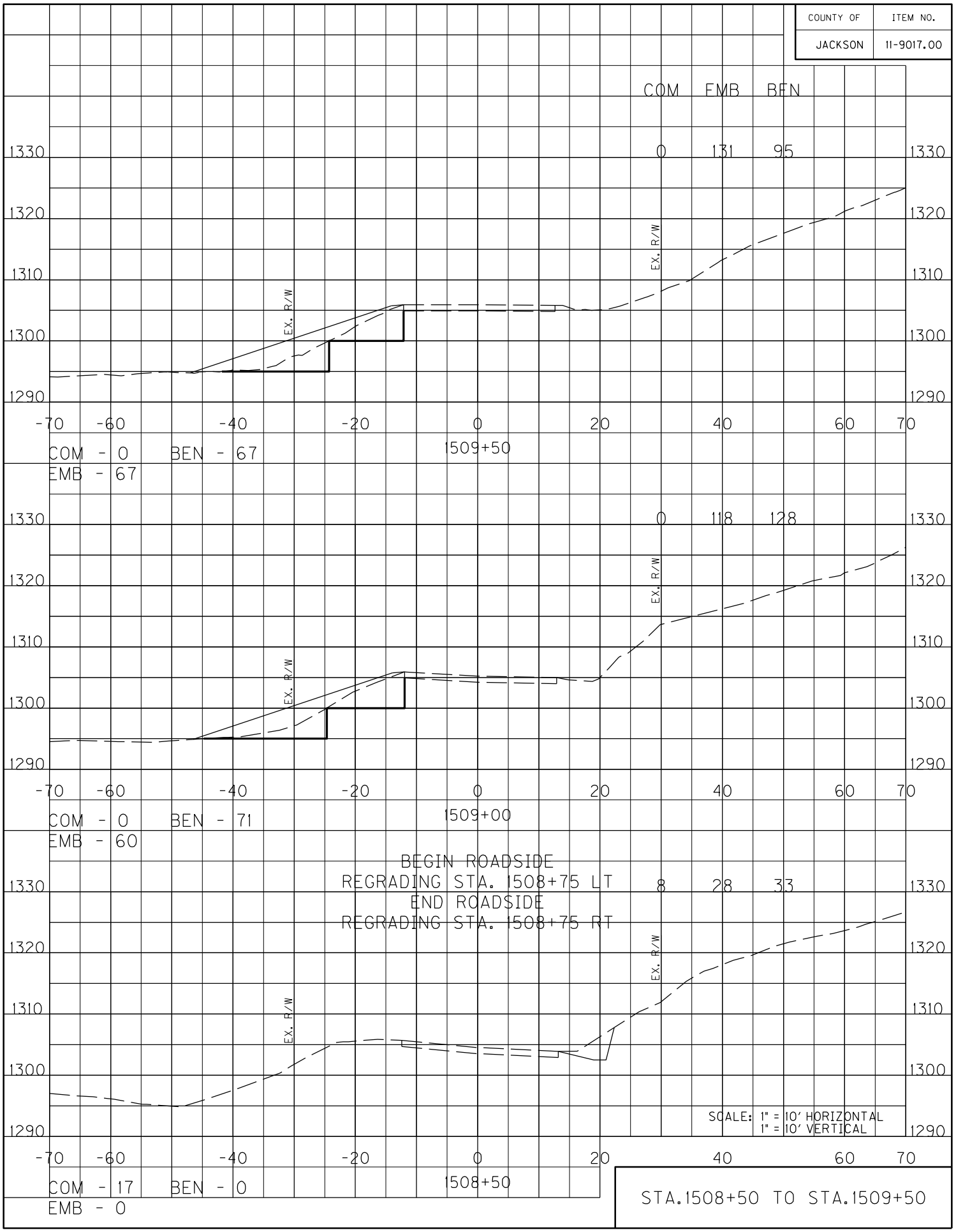

COUNTY OF
ITEM NO.
JACKSON
11-9017.00
COM EMB BEN
1320
1310
1300
1290
EX. R/W
-70 -60 -40 -20 0 20 40 60 70
24 0 0
1506+00
COM - 11 BEN - 0
EMB - 1
8 0 0
COM - 8 BEN - 0
EMB - 0
RT. STA. 1505+25
CONST. 15" ENTR. PIPE
1505+50
BEGIN ROADSIDE
REGRADING STA. 1505+25
4 0 0
COM - 0 BEN - 0
EMB - 0
1505+00
0 0 0
COM - 0 BEN - 0
EMB - 0
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
1504+50
STA.1504+50 TO STA.1506+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

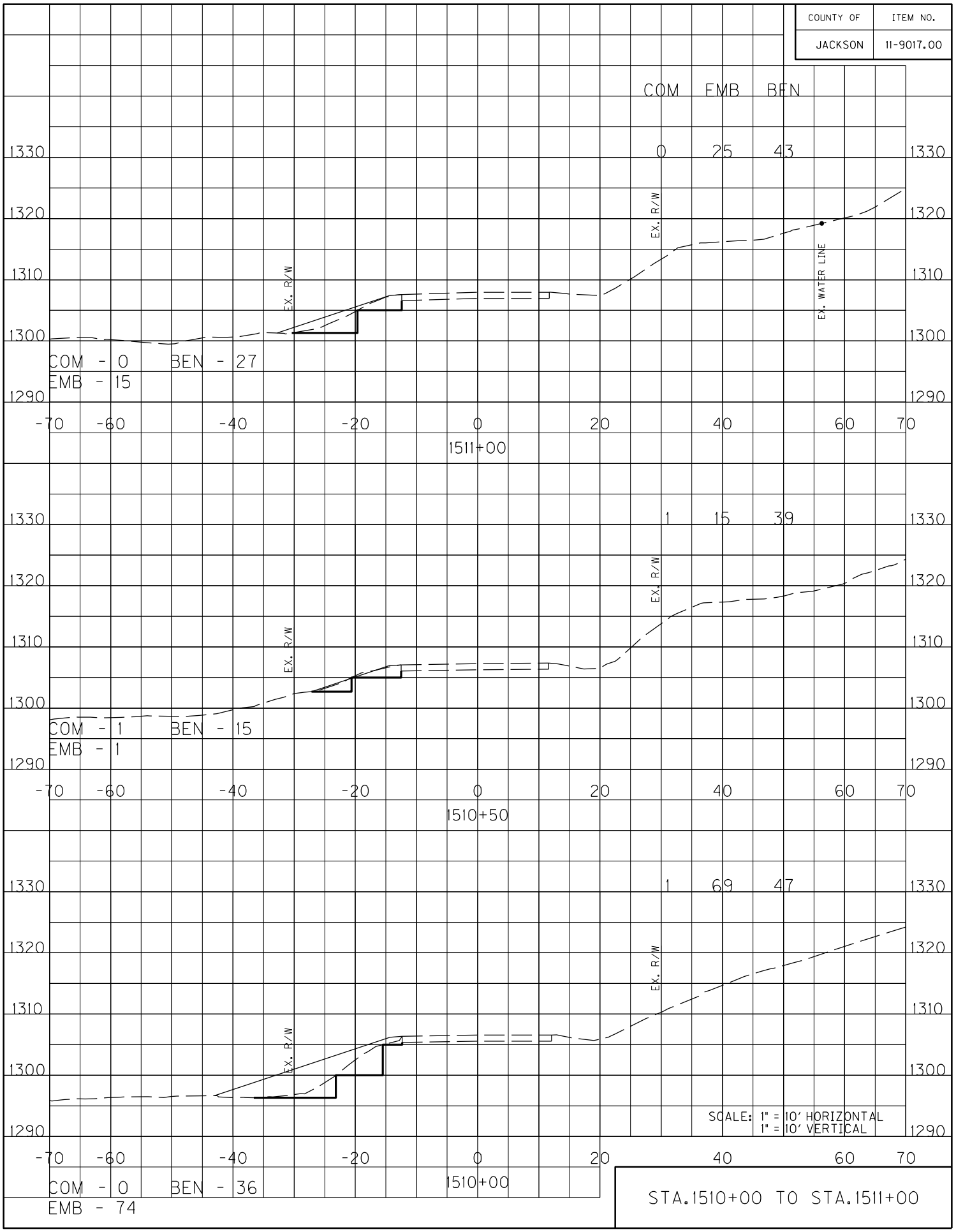


STA.1506+50 TO STA.1508+00

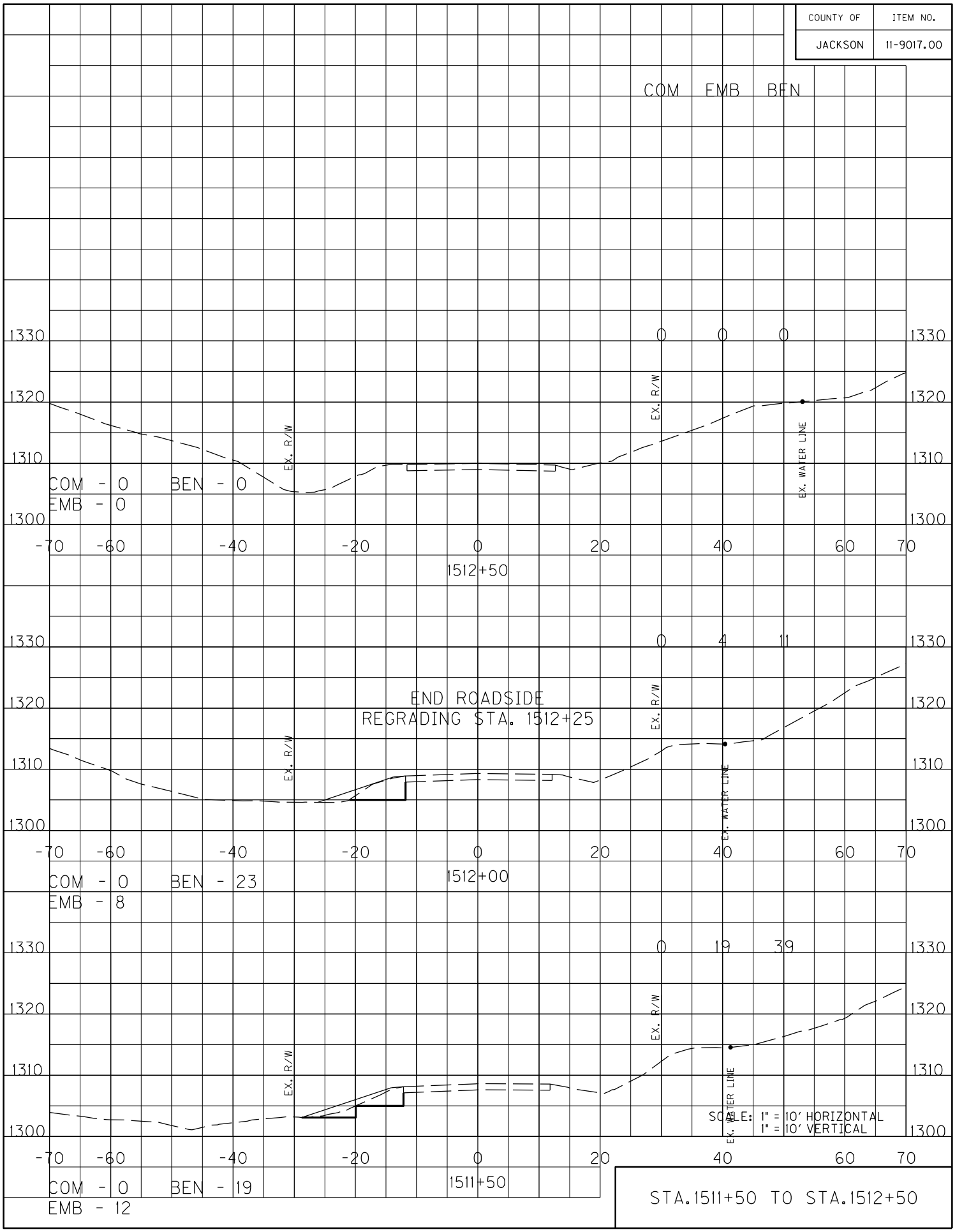
COUNTY OF	ITEM NO.
JACKSON	11-9017.00



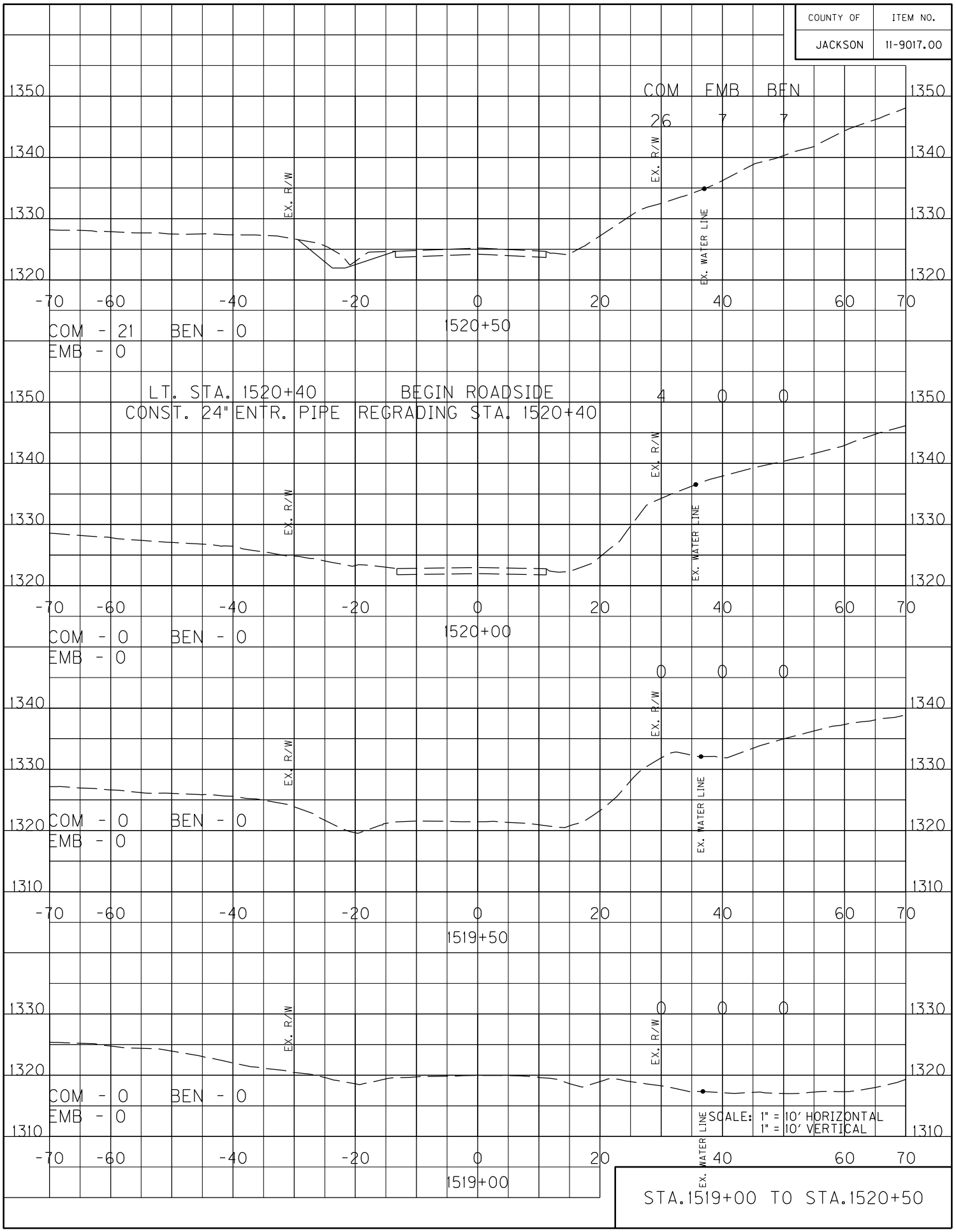
STA.1508+50 TO STA.1509+50

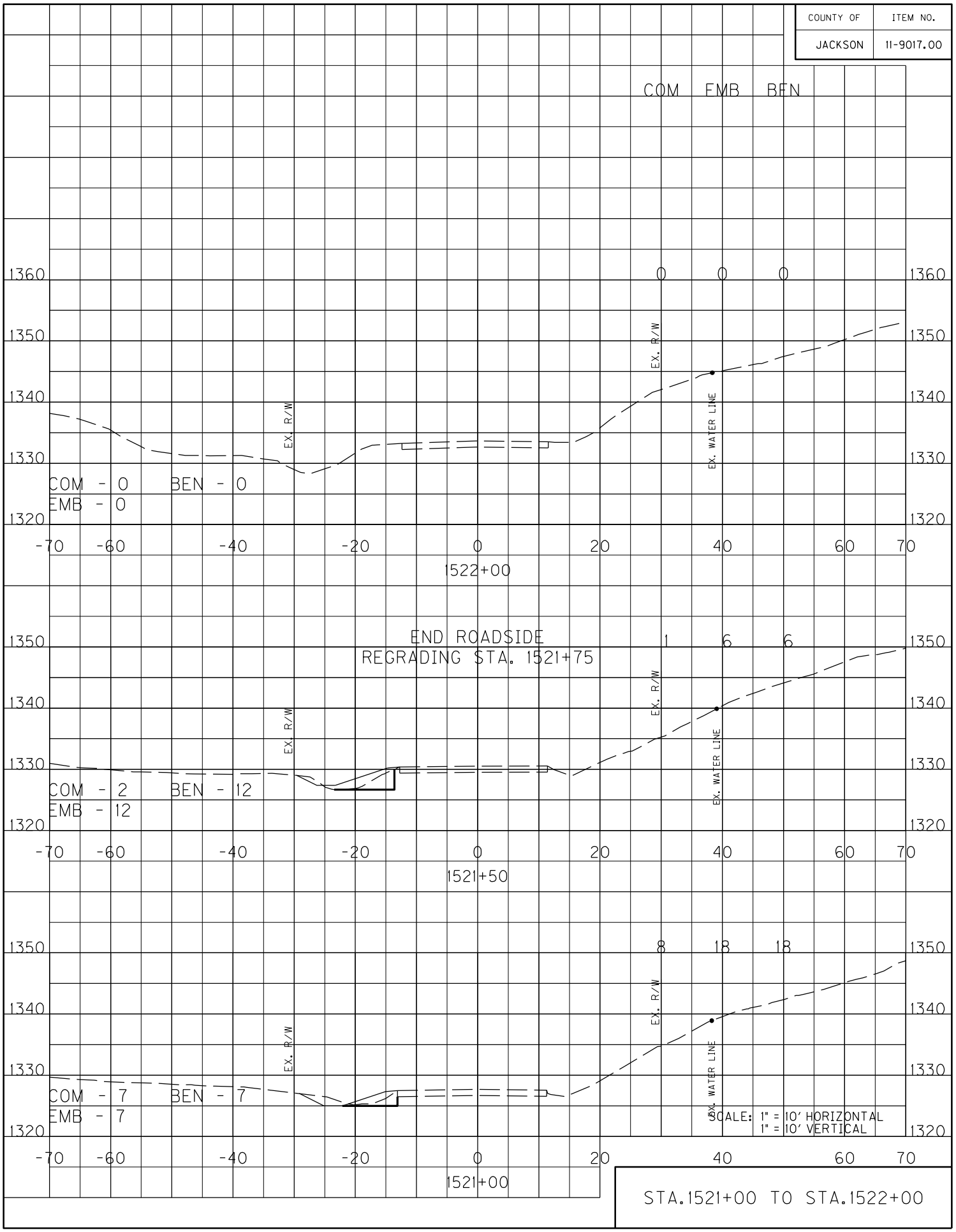

COUNTY OF
ITEM NO.
JACKSON
11-9017.00
COM EMB BEN
0 25 43
1 15 39
1 69 47
EX. R/W
EX. WATER LINE
1330
1320
1310
1300
1290
-70 -60 -40 -20 0 20 40 60 70
1511+00
1510+50
1510+00
COM - 0 BEN - 27
EMB - 15
COM - 1 BEN - 15
EMB - 1
COM - 0 BEN - 36
EMB - 74
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
STA.1510+00 TO STA.1511+00

COUNTY OF	ITEM NO.
JACKSON	11-9017.00

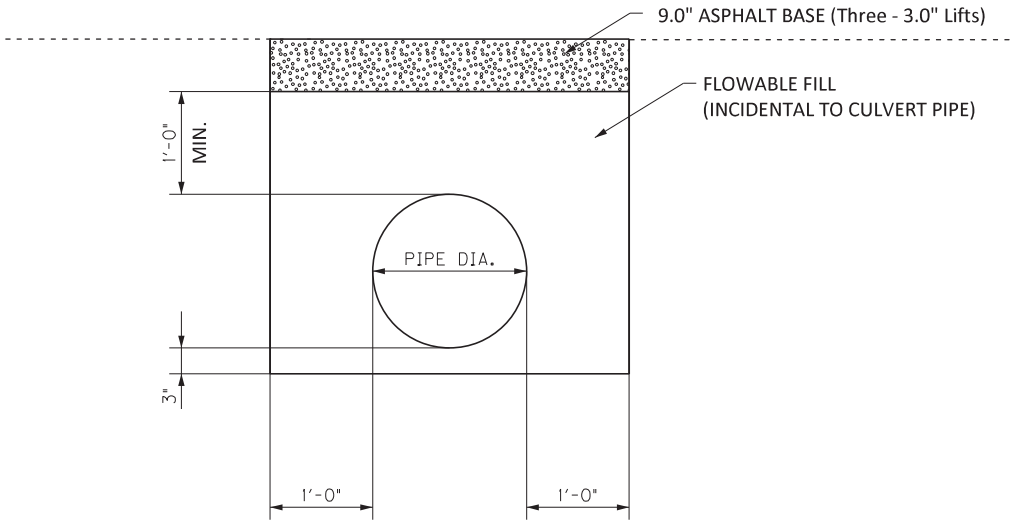


STA.1511+50 TO STA.1512+50


COUNTY OF
JACKSON
ITEM NO.
11-9017.00
COM FMB BEN
26 7 7
EX. R/W
EX. WATER LINE
1350
1340
1330
1320
1310
-70 -60 -40 -20 0 20 40 60 70
1520+50
COM - 21 BEN - 0
EMB - 0
LT. STA. 1520+40 BEGIN ROADSIDE
CONST. 24" ENTR. PIPE REGRADING STA. 1520+40
4 0 0
1520+00
COM - 0 BEN - 0
EMB - 0
0 0 0
1519+50
COM - 0 BEN - 0
EMB - 0
1519+00
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
STA.1519+00 TO STA.1520+50

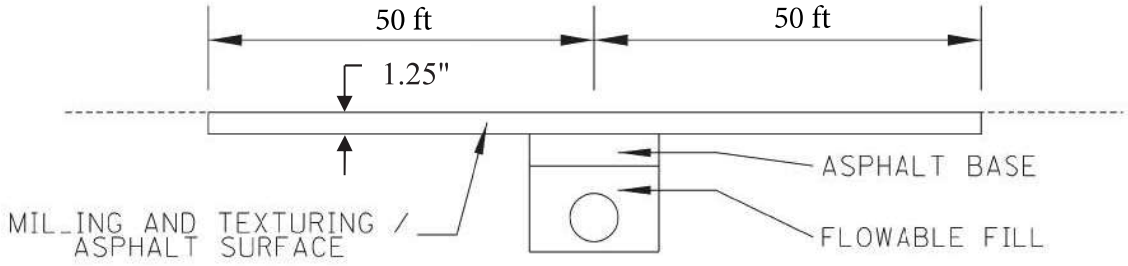

COUNTY OF
ITEM NO.
JACKSON
11-9017.00
COM EMB BEN
0 0 0
EX. R/W
EX. WATER LINE
COM - 0 BEN - 0
EMB - 0
1360
1350
1340
1330
1320
-70 -60 -40 -20 0 20 40 60 70
1522+00
END ROADSIDE
REGRADING STA. 1521+75
1 6 6
COM - 2 BEN - 12
EMB - 12
1521+50
8 18 18
COM - 7 BEN - 7
EMB - 7
1521+00
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
STA.1521+00 TO STA.1522+00

CULVERT PIPE REPLACEMENT DETAIL



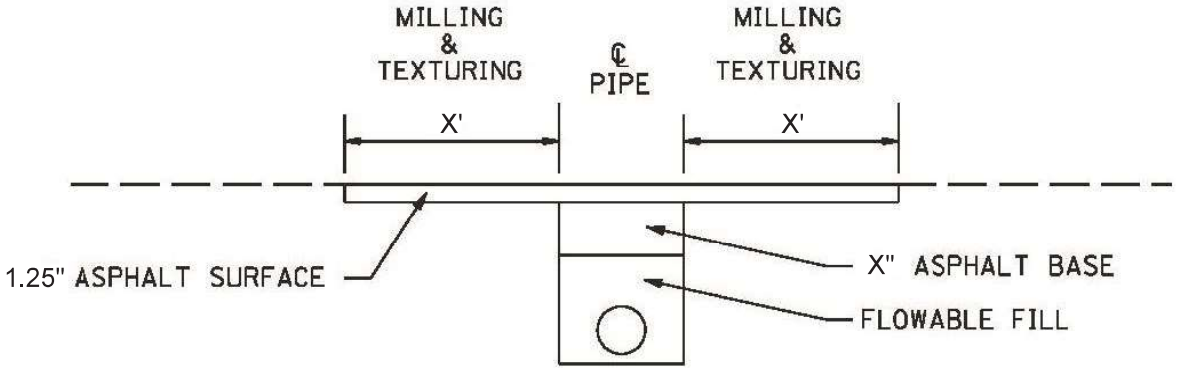
CULVERT PIPE REPLACEMENTS - INITIAL BACKFILL

Culvert Pipe Replacements shall be constructed according to the Initial Backfill Detail shown above, or as directed by the Engineer. Allow the asphalt base to be exposed to traffic a minimum of 14 days to allow for settlement. After the 14 day waiting period, mill and inlay 1.25 inches of asphalt surface according to the detail below.

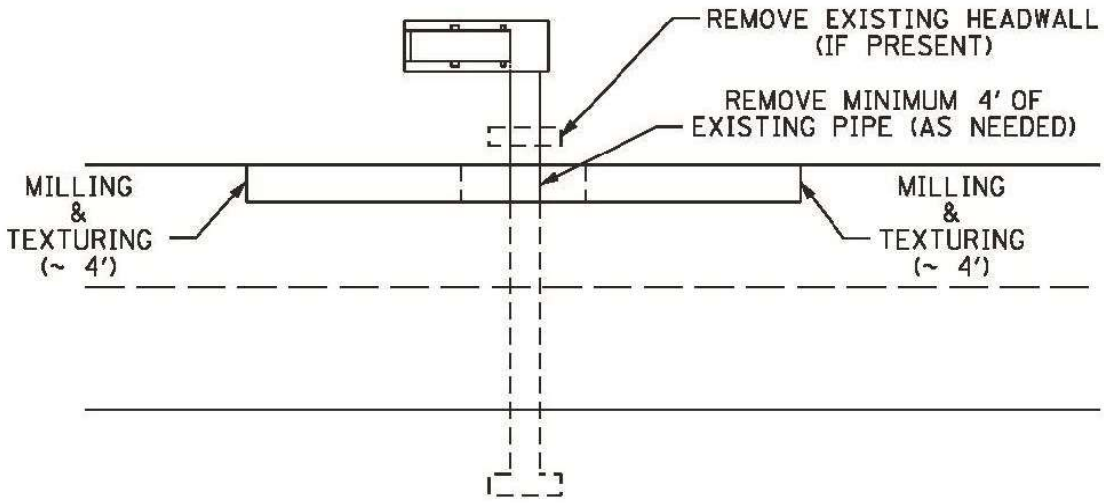


PIPE PAVING DETAIL

FOR PIPE EXTENSIONS WHERE THE REMOVAL OF A PORTION OF THE EXISTING PIPE WILL REQUIRE PAVING OPERATIONS

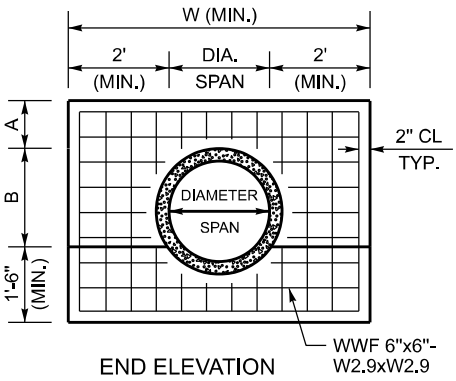


CROSS SECTION VIEW

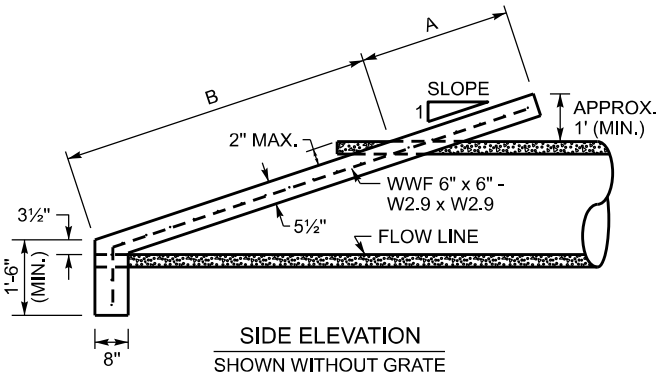


PLAN VIEW

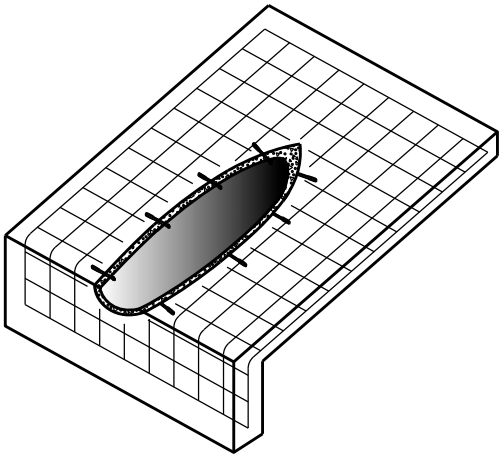
Allow asphalt base to be exposed to traffic a minimum of 14 days to allow for settlement. After the 14 day waiting period, mill and inlay 1.25 inches of asphalt surface according to the detail above.



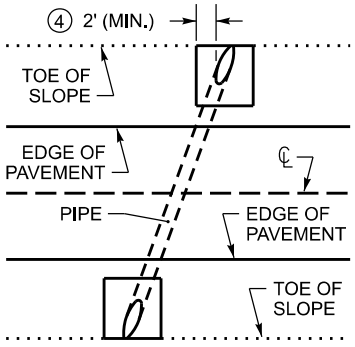
END ELEVATION
SHOWN WITH WOVEN WIRE REINFORCEMENT



SIDE ELEVATION
SHOWN WITHOUT GRATE



ISOMETRIC VIEW
SHOWN WITH WOVEN WIRE REINFORCEMENT AND WEDGE ANCHORS



PLAN VIEW
SHOWN WHEN THE PIPE IS ON A SKEW ④

~ NOTES ~

1. FOR PIPES THAT RECEIVE THE SLOPED & MITERED CONCRETE HEADWALL, THE PIPE LENGTH SHALL BE MEASURED TO THE FURTHEST POINT ALONG THE MITERED END OF THE PIPE.
2. THE EMBANKMENT FILL MATERIAL IS TO BE PLACED, COMPACTED, AND GRADED AROUND THE PIPE BEFORE THE CONCRETE SLOPE PAVING IS PLACED. THE INTENT IS FOR THE SLOPED & MITERED HEADWALL TO MATCH THE FINAL EMBANKMENT SLOPE.
3. THE PIPE SHALL BE MITERED AFTER THE CONCRETE SLOPE PAVING HAS BEEN PLACED AND SUFFICIENTLY CURED. THE PIPE SHOULD BE MITERED AS CLOSE TO FLUSH WITH THE SLOPE PAVING AS POSSIBLE, AND NO HIGHER THAN 2" ABOVE THE SLOPE PAVING. HAND FINISHING AND/OR CUTTING MAY BE NECESSARY.

④ WHEN THE PIPE IS ON A SKEW, INSTALL THE HEADWALL AND MITER THE PIPE SO THAT THE CONCRETE SLOPE PAVING IS PERPENDICULAR TO THE ROADWAY. FOR HEADWALLS ON SKEWED PIPES, THE HEADWALL WIDTH, W, SHALL BE WIDENED, AS NEEDED, SO THAT THE OUTSIDE EDGE OF THE CONCRETE SLOPE PAVING IS A MINIMUM OF 2' FROM THE OUTER MOST EDGE OF THE PIPE.

5. THE DIMENSION 'A' IS BASED ON THE FINAL GRADED SLOPE. THE DIMENSION 'B' IS BASED ON CIRCULAR REINFORCED CONCRETE PIPE AT 0° SKEW FOR THE LISTED SLOPE. THE DIMENSION 'W' IS BASED ON THE DIAMETER, OR SPAN, OF THE PIPE. THE FINAL HEADWALL DIMENSIONS AND CONCRETE QUANTITIES MAY VARY BASED ON THE FINAL GRADED SLOPE, PIPE SKEW, AND/OR TYPE OF PIPE.
6. WOVEN WIRE REINFORCEMENT (WWF 6"x6" - W2.9xW2.9) IS REQUIRED FOR THE SLOPE PAVING AND TOE WALL. UTILIZE 2" CLEARANCE FROM ALL EDGES.
7. DIMENSIONS AND CONCRETE QUANTITIES SHOWN ARE FOR ONE (1) HEADWALL, INSTALLED ON A PIPE WITH SKEW = 0°.
8. AFTER THE PIPE HAS BEEN MITERED, ANCHOR THE PIPE TO THE CONCRETE SLOPE PAVING BY CORE DRILLING AND INSTALLING 1/2" DIAMETER x 7" LENGTH STEEL WEDGE ANCHORS (3" MINIMUM EMBEDMENT) ON 18" CENTERS ALONG THE SIDES OF THE PIPE. HOLE SIZE & DEPTH, TORQUE, & INSTALLATION PROCEDURES PER RECOMMENDATION OF ANCHOR MANUFACTURE. NOTE: STEEL WEDGE ANCHORS ARE NOT REQUIRED FOR REINFORCED CONCRETE PIPE.

⑨ THE FOLLOWING SITUATIONS REQUIRE A HEADWALL WITH A GRATE:
-24" DIAMETER PIPE ON GREATER THAN 30° SKEW
-30" DIAMETER PIPE ON GREATER THAN 15° SKEW
-PIPE WITH GREATER THAN 30" DIAMETER.
-ELLIPTICAL PIPE GREATER THAN 24" EQUIVALENT DIAMETER
SEE SHEET 2 FOR GRATE DETAILS

10. ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT: ZINC PLATED, STAINLESS STEEL, OR STEEL THAT HAS BEEN GALVANIZED IN ACCORDANCE WITH AASHTO M 232.

** DIMENSIONS AND CONCRETE QUANTITIES ARE APPROXIMATE AND ARE LISTED FOR INFORMATIONAL PURPOSES ONLY **

DIMENSIONS AND CONCRETE QUANTITIES (FOR PIPE WITH SKEW = 0°) ④													
PIPE SIZE	3:1 SLOPE				4:1 SLOPE				6:1 SLOPE				GRATE REQUIRED
	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	
15"	3'	3'-7½"	5'-3"	0.79	4'	4'-8¾"	5'-3"	0.97	6'	6'-11¾"	5'-3"	1.35	NO
18"	3'	4'-5¾"	5'-6"	0.89	4'	5'-10"	5'-6"	1.10	6'	8'-7¼"	5'-6"	1.54	NO
24"	3'	6'-2½"	6'-0"	1.11	4'	8'-1"	6'-0"	1.38	6'	11'-11"	6'-0"	1.93	SEE ⑨
30"	3'	7'-10¾"	6'-6"	1.33	4'	10'-3¾"	6'-6"	1.67	6'	15'-2½"	6'-6"	2.35	SEE ⑨

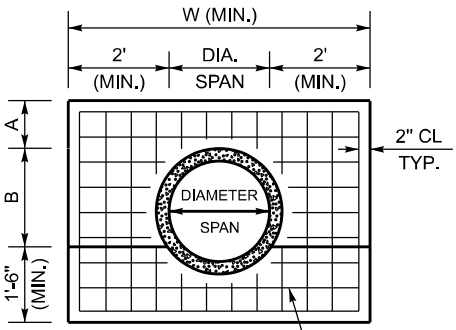
++ SEE SHEET 2 FOR DIMENSIONS OF HEADWALLS FOR PIPE OVER 30" DIAMETER ++

BID ITEM AND UNIT TO BID FOR PIPES BETWEEN 15 - 42 INCHES:
SLOPED & MITERED HEADWALL - _ IN EACH

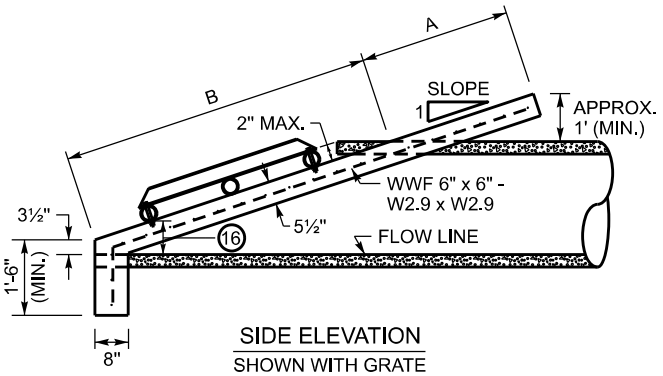
BID ITEM AND UNIT TO BID FOR PIPES LARGER THAN 42 INCHES:
HEADWALL (SLOPED & MITERED FOR _ INCH PIPE) EACH

NOT TO SCALE

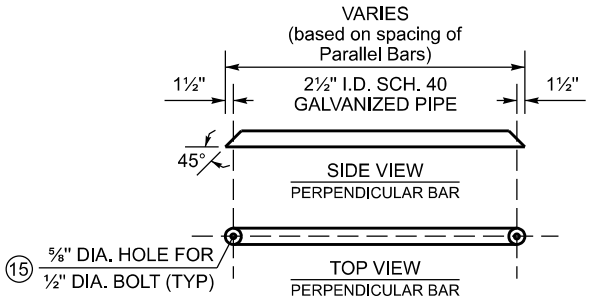
SLOPED & MITERED CONCRETE HEADWALL (SHEET 1 OF 2)

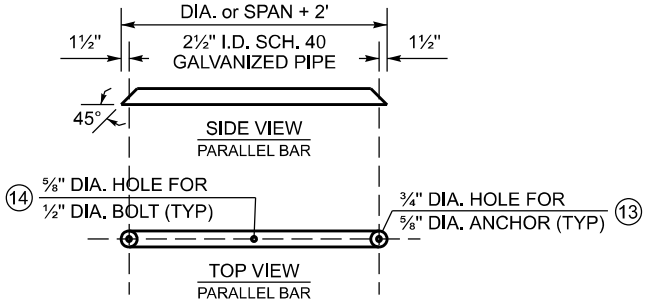


END ELEVATION
SHOWN WITH WOVEN WIRE REINFORCEMENT

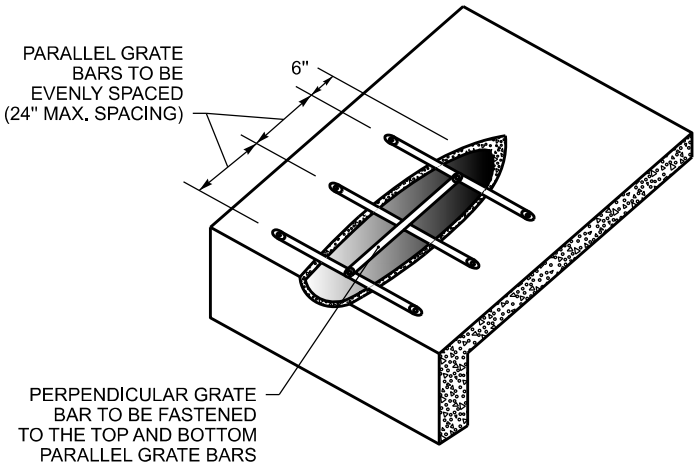


SIDE ELEVATION
SHOWN WITH GRATE





PIPE FOR GRATE DETAILS
SEE NOTE 9 TO DETERMINE IF GRATE IS REQUIRED



ISOMETRIC VIEW
SHOWING HEADWALL WITH GRATE

~ NOTES ~

SEE SHEET 1 FOR NOTES 1 THRU 8

9. THE FOLLOWING SITUATIONS REQUIRE A HEADWALL WITH GRATE:
-24" DIAMETER PIPE ON GREATER THAN 30° SKEW
-30" DIAMETER PIPE ON GREATER THAN 15° SKEW
-PIPE WITH GREATER THAN 30" DIAMETER.
-ELLIPTICAL PIPE GREATER THAN 24" EQUIVALENT DIAMETER
10. ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT: ZINC PLATED, STAINLESS STEEL, OR STEEL THAT HAS BEEN GALVANIZED IN ACCORDANCE WITH AASHTO M 232.
11. THE PIPE USED TO CONSTRUCT THE GRATE SHALL BE STEEL, SCHEDULE 40, CONFORMING TO ASTM A53, AND GALVANIZED IN ACCORDANCE WITH AASHTO M 111 AFTER FABRICATION.
12. ANY RAW METAL EXPOSED BY FIELD CUTTING AND/OR DRILLING SHALL BE TREATED WITH A COLD GALVANIZING COMPOUND.
13. FASTEN PARALLEL BARS TO HEADWALL WITH ⅝" DIA. x 4½" LENGTH STEEL WEDGE ANCHORS, MINIMUM EMBEDMENT = 2¾" HOLE SIZE AND DEPTH, TORQUE, & INSTALLATION PROCEDURES PER RECOMMENDATION OF ANCHOR MANUFACTURE.
14. CENTER BOLT HOLE SHALL ONLY BE DRILLED IN THE TOP AND BOTTOM PARALLEL BARS.
15. FASTEN THE PERPENDICULAR BAR TO THE TOP AND BOTTOM PARALLEL BARS WITH ½" DIA. x 4" LENGTH HEX HEAD BOLTS, HEX HEAD NUTS, & FLAT WASHERS.
16. THE BOTTOM PARALLEL BAR IS TO BE PLACED SO THAT IT IS APPROX. 6" ABOVE THE FLOWLINE OF THE PIPE.

** DIMENSIONS AND CONCRETE QUANTITIES ARE APPROXIMATE AND ARE LISTED FOR INFORMATIONAL PURPOSES ONLY **

DIMENSIONS AND CONCRETE QUANTITIES (FOR PIPE WITH SKEW = 0°) ④													
PIPE SIZE	3:1 SLOPE				4:1 SLOPE				6:1 SLOPE				GRATE REQUIRED
	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	
36"	3'	9'-7½"	7'-0"	1.57	4'	12'-6½"	7'-0"	1.98	6'	18'-6"	7'-0"	2.80	YES
42"	3'	11'-4"	7'-6"	1.83	4'	14'-9¼"	7'-6"	2.31	6'	21'-9½"	7'-6"	3.27	YES
48"	3'	12'-11"	8'-0"	2.07	4'	16'-10"	8'-0"	2.40	6'	24'-10"	8'-0"	3.33	YES

++ SEE SHEET 1 FOR DIMENSIONS OF HEADWALLS FOR PIPE 30" DIAMETER & LESS ++

BID ITEM AND UNIT TO BID FOR PIPES BETWEEN 15 - 42 INCHES:
SLOPED & MITERED HEADWALL - _ IN EACH

BID ITEM AND UNIT TO BID FOR PIPES LARGER THAN 42 INCHES:
HEADWALL (SLOPED & MITERED FOR _ INCH PIPE) EACH

NOT TO SCALE

SLOPED & MITERED CONCRETE HEADWALL (SHEET 2 OF 2)

FIGURE 1

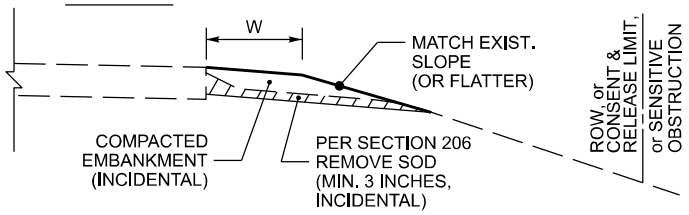


FIGURE 2

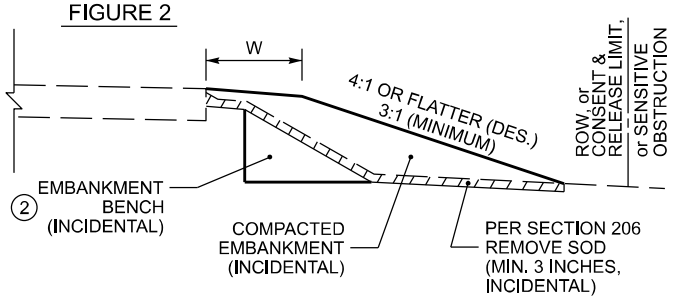


FIGURE 3

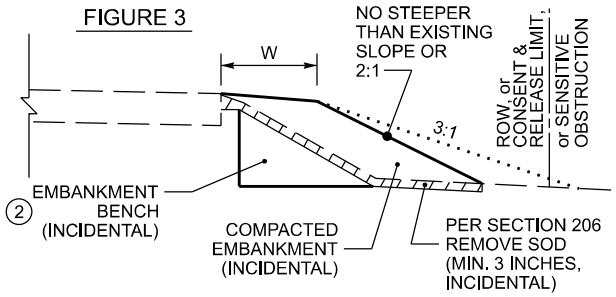


FIGURE 4

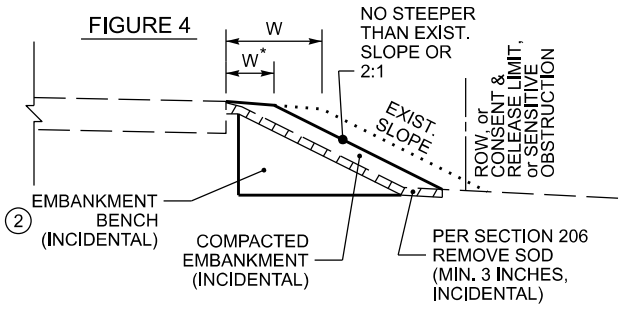


FIGURE 5

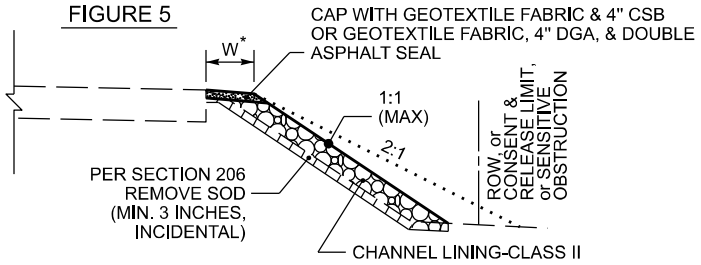
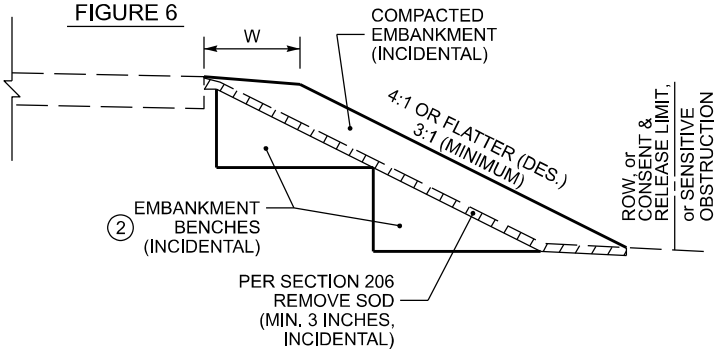


FIGURE 6



~ NOTES ~

BID ITEM AND UNIT TO BID:
26175EC - ROADSIDE REGRADING - LF

1. THE BID ITEM 'ROADSIDE REGRADING' SHALL CONSIST OF ANY AND ALL NECESSARY CLEARING & GRUBBING, GRADING, AND/OR RESHAPING OF THE EXISTING SHOULDER, DITCH, AND/OR ROADSIDE TO ACHIEVE THE PROPOSED SHOULDER, DITCH, AND/OR ROADSIDE DIMENSIONS, AS DETAILED ON THE TYPICAL SECTIONS. FINAL PAYMENT WILL BE BASED ON THE ACTUAL LINEAR FEET OF ROADSIDE REGRADING PERFORMED, AND WILL INCLUDE ALL WORK AND INCIDENTALS NECESSARY TO PERFORM THE ROADSIDE REGRADING ACCORDING TO THESE DETAILS, NOTES, AND ANY OTHER INFORMATION FOUND ELSEWHERE IN THE PROPOSAL OR STANDARD SPECIFICATIONS. IN THE CASE OF A DISCREPANCY, REFER TO SECTION 105.05 OF THE STANDARD SPECIFICATIONS. DEPENDING ON THE EXISTING CONDITIONS ENCOUNTERED, ROADSIDE REGRADING MAY ALSO INCLUDE, BUT IS NOT LIMITED TO:
   - PROVIDING ADDITIONAL EARTH MATERIAL AND GRADING, SHAPING, AND COMPACTING THE EARTH MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS. COMPACT MATERIAL ACCORDING TO SECTION 206 OF THE STANDARD SPECIFICATIONS.
     NOTE: ADDITIONAL EARTH MATERIAL PROVIDED SHALL BE SUITABLE FOR VEGETATION GROWTH.
   - EXCAVATING AND REMOVING EXCESS MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS
   - EMBANKMENT BENCHING

(2) EMBANKMENT BENCHING WILL BE REQUIRED WHEN THE EXISTING GROUNDLINE HAS AN INCLINE GREATER THAN 15% (APPROX. 6:1). ANY AND ALL REQUIRED EMBANKMENT BENCHING SHALL BE INCIDENTAL TO THE BID ITEM 'ROADSIDE REGRADING'. THE FOLLOWING ARE GUIDELINES FOR EMBANKMENT BENCHING USED IN CONJUNCTION WITH THE BID ITEM 'ROADSIDE REGRADING':
   - THE TYPICAL HEIGHT (OR RISE) IS 1' TO 6'
   - THE TYPICAL WIDTH (OR RUN) WILL VARY BASED ON THE HEIGHT OF THE BENCH
   - MULTIPLE SMALL BENCHES MAY BE USED, AND MAY BE MORE ADVANTAGEOUS AS THIS WILL REQUIRE PROCESSING LESS EARTHWORK AND MAY HELP AVOID ANY EXISTING UNDERGROUND UTILITIES.

3. AS SHOWN IN FIGURE 1, IN SOME SITUATIONS, MINOR SHOULDERING, WITH MINIMAL ADDITIONAL EARTH MATERIAL, MAY BE ALL THAT IS REQUIRED TO RESHAPE THE EARTH SHOULDER TO THE PROPOSED WIDTH AND BRING IT FLUSH WITH THE EDGE OF PAVEMENT.
4. AS SHOWN IN FIGURE 2, MOST SITUATIONS WILL REQUIRE ADDITIONAL EARTH MATERIAL TO ACHIEVE THE PROPOSED EARTH SHOULDER WIDTH. IT IS DESIRED THAT THE RESULTING FILL SLOPE BE INSTALLED AS FLAT AS POSSIBLE AND SHALL REMAIN WITHIN THE RIGHT-OF-WAY AND/OR ANY CONSENT & RELEASE AREAS OBTAINED BY KYTC NOTED IN THE PROPOSAL, WHILE ALSO AVOIDING ANY SENSITIVE OBSTRUCTIONS.
5. AS SHOWN IN FIGURE 3, IF A 3:1 FILL SLOPE WILL RESULT IN THE TOE OF SLOPE EXTENDING BEYOND THE RIGHT-OF-WAY OR OUTSIDE OF A CONSENT & RELEASE AREA OBTAINED BY KYTC NOTED IN THE PROPOSAL, OR WILL IMPACT A SENSITIVE OBSTRUCTION, THEN THE FILL SLOPE MAY BE INSTALLED STEEPER THAN 3:1, BUT NO STEEPER THAN THE EXISTING FILL SLOPE, OR A 2:1, WHICHEVER IS FLATTER.
6. AS SHOWN IN FIGURE 4, IF MATCHING THE EXISTING FILL SLOPE OR INSTALLING A 2:1 FILL SLOPE (WHICHEVER IS FLATTER) STILL RESULTS IN THE TOE OF SLOPE EXTENDING BEYOND THE RIGHT-OF-WAY OR OUTSIDE OF A CONSENT & RELEASE AREA OBTAINED BY KYTC NOTED IN THE PROPOSAL, OR STILL IMPACTS A SENSITIVE OBSTRUCTION, THEN THE PROPOSED EARTH SHOULDER WIDTH MAY BE REDUCED SO THAT THE RESULTING TOE OF SLOPE WILL REMAIN WITHIN THE RIGHT-OF-WAY OR CONSENT & RELEASE AREA, AND/OR NOT IMPACT THE SENSITIVE OBSTRUCTION.
7. AS SHOWN IN FIGURE 5, IF THE EXISTING FILL SLOPE IS STEEPER THAN 2:1 AND THERE IS NOT ENOUGH SPACE TO INSTALL A 2:1 FILL SLOPE WITHOUT EXTENDING BEYOND THE RIGHT-OF-WAY OR A CONSENT & RELEASE AREA OBTAINED BY KYTC NOTED IN THE PROPOSAL AND/OR IMPACTING A SENSITIVE OBSTRUCTION, THEN CLASS II CHANNEL LINING MAY BE INSTALLED ALONG THE STEEP EXISTING SLOPE IN ORDER TO ESTABLISH A WIDTH OF AGGREGATE SHOULDER. THESE LOCATIONS WILL BE NOTED IN THE PROPOSAL. THE CHANNEL LINING IS TO BE CAPPED WITH GEOTEXTILE FABRIC CLASS 1 AND 4" OF CRUSHED STONE BASE OR 4" OF DGA WITH DOUBLE ASPHALT SEAL COAT.
8. AS SHOWN IN FIGURE 6, AS THE HEIGHT OF THE FILL INCREASES, MULTIPLE EMBANKMENT BENCHES MAY BE REQUIRED. REFER TO NOTE (2) FOR MORE INFORMATION ABOUT EMBANKMENT BENCHING.

SEE SHEET 2 FOR NOTES 9 THRU 13

NOT TO SCALE

ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS (SHEET 1 OF 2)

FIGURE 7

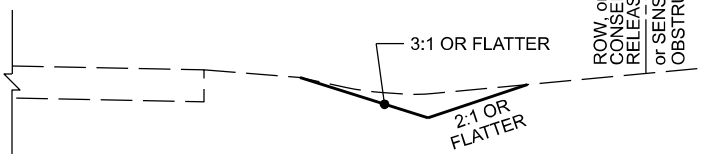


FIGURE 8

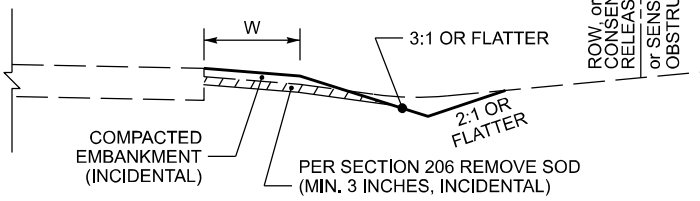


FIGURE 9

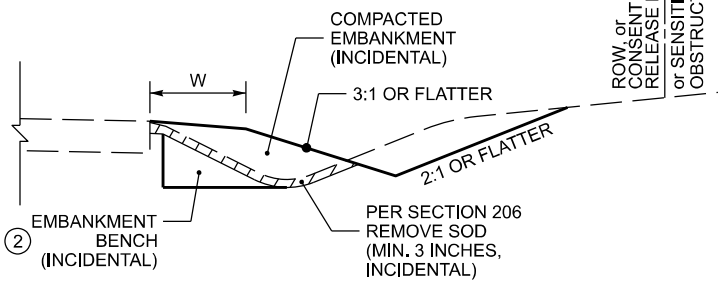


FIGURE 10

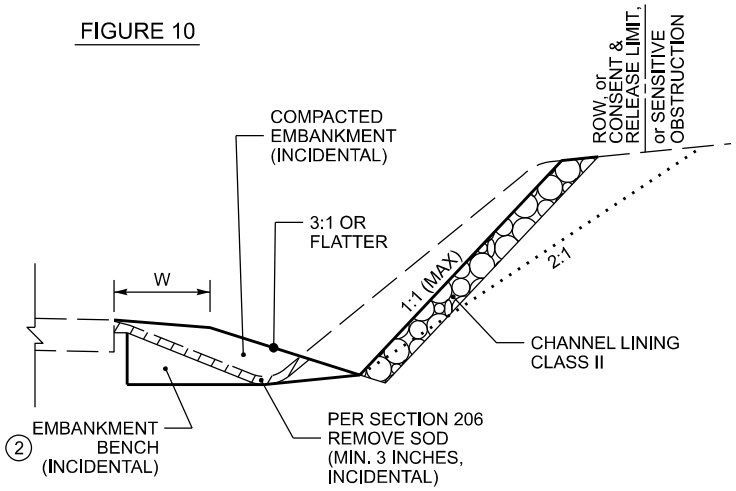
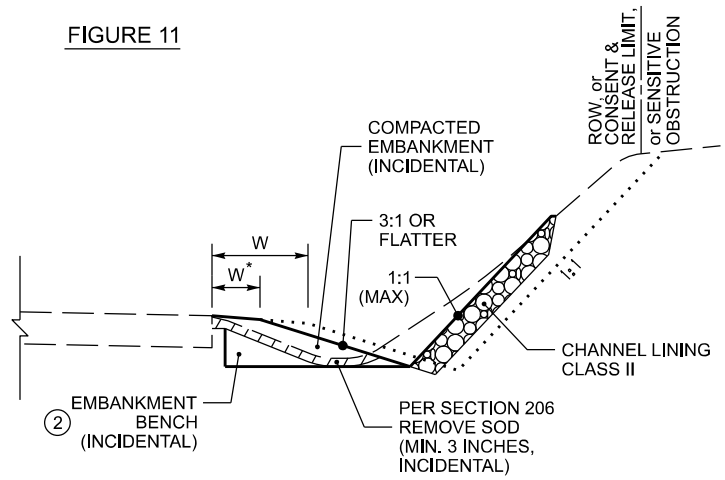


FIGURE 11



~ NOTES ~

BID ITEM AND UNIT TO BID:
26175EC - ROADSIDE REGRADING - LF

1. THE BID ITEM 'ROADSIDE REGRADING' SHALL CONSIST OF ANY AND ALL NECESSARY CLEARING & GRUBBING, GRADING, AND/OR RESHAPING OF THE EXISTING SHOULDER, DITCH, AND/OR ROADSIDE TO ACHIEVE THE PROPOSED SHOULDER, DITCH, AND/OR ROADSIDE DIMENSIONS, AS DETAILED ON THE TYPICAL SECTIONS. FINAL PAYMENT WILL BE BASED ON THE ACTUAL LINEAR FEET OF ROADSIDE REGRADING PERFORMED, AND WILL INCLUDE ALL WORK AND INCIDENTALS NECESSARY TO PERFORM THE ROADSIDE REGRADING ACCORDING TO THESE DETAILS, NOTES, AND ANY OTHER INFORMATION FOUND ELSEWHERE IN THE PROPOSAL OR STANDARD SPECIFICATIONS. IN THE CASE OF A DISCREPANCY, REFER TO SECTION 105.05 OF THE STANDARD SPECIFICATIONS. DEPENDING ON THE EXISTING CONDITIONS ENCOUNTERED, ROADSIDE REGRADING MAY ALSO INCLUDE, BUT IS NOT LIMITED TO:
   - PROVIDING ADDITIONAL EARTH MATERIAL AND GRADING, SHAPING, AND COMPACTING THE EARTH MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS. COMPACT MATERIAL ACCORDING TO SECTION 206 OF THE STANDARD SPECIFICATIONS.
     NOTE: ADDITIONAL EARTH MATERIAL PROVIDED SHALL BE SUITABLE FOR VEGETATION GROWTH.
   - EXCAVATING AND REMOVING EXCESS MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS
   - EMBANKMENT BENCHING

(2) EMBANKMENT BENCHING WILL BE REQUIRED WHEN THE EXISTING GROUNDLINE HAS AN INCLINE GREATER THAN 15% (APPROX. 6:1). ANY AND ALL REQUIRED EMBANKMENT BENCHING SHALL BE INCIDENTAL TO THE BID ITEM 'ROADSIDE REGRADING'. THE FOLLOWING ARE GUIDELINES FOR EMBANKMENT BENCHING USED IN CONJUNCTION WITH THE BID ITEM 'ROADSIDE REGRADING':
   - THE TYPICAL HEIGHT (OR RISE) IS 1' TO 6'
   - THE TYPICAL WIDTH (OR RUN) WILL VARY BASED ON THE HEIGHT OF THE BENCH
   - MULTIPLE SMALL BENCHES MAY BE USED, AND MAY BE MORE ADVANTAGEOUS AS THIS WILL REQUIRE PROCESSING LESS EARTHWORK AND MAY HELP AVOID ANY EXISTING UNDERGROUND UTILITIES.

SEE SHEET 1 FOR NOTES 3. THRU 8.

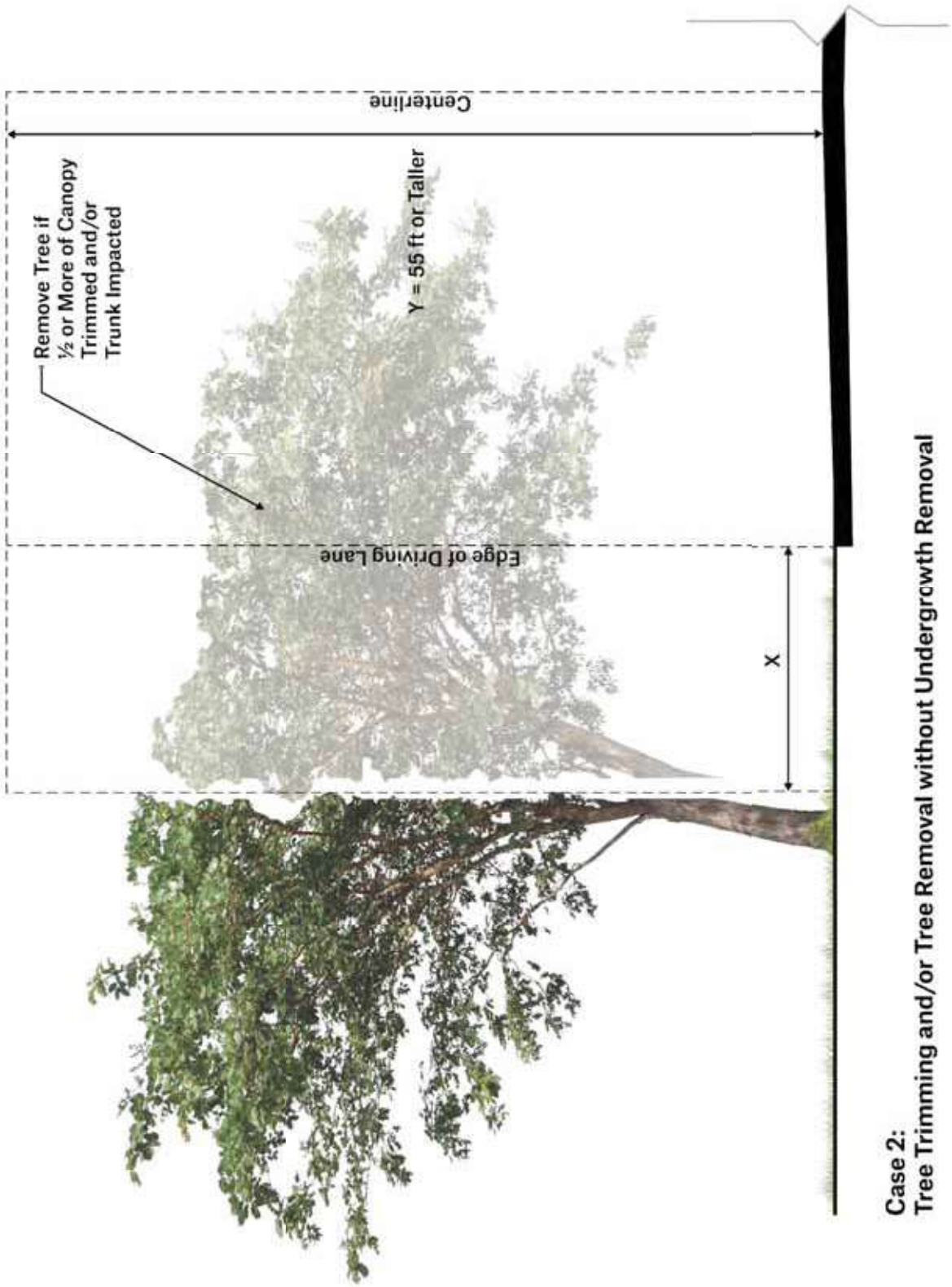
9. AS SHOWN IN FIGURE 7, IN SOME SITUATIONS, ALL THAT MAY BE REQUIRED IS TO CLEAN OUT THE EXISTING DITCH AND RESHAPE IT TO THE PROPOSED DIMENIONS. THE MATERIAL EXCAVATED FROM THE DITCH MAY BE RE-USED ELSEWHERE ON THE PROJECT, PROVIDED THE ENGINEER DETERMINES THE MATERIAL REMOVED FROM THE DITCH IS SUITABLE FOR THE INTENDED RE-USE.
10. AS SHOWN IN FIGURE 8, IN SOME SITUATIONS, THE DITCH AND SHOULDER MAY ONLY NEED MINOR REGRADING AND/OR RESHAPING. THE MATERIAL EXCAVATED FROM THE DITCH MAY BE USED TO RESHAPE THE EARTH SHOULDER, PROVIDED THE ENGINEER DETERMINES THE MATERIAL REMOVED FROM THE DITCH IS SUITABLE FOR SHOULDERING. IF THE MATERIAL IS NOT SUITABLE, ADDITIONAL EARTH MATERIAL MAY BE REQUIRED.
11. AS SHOWN IN FIGURE 9, IN MOST SITUATIONS, REGRADING AND RESHAPING THE ROADSIDE TO ACHIEVE THE PROPOSED SHOULDER, DITCH, AND/OR ROADSIDE DIMENSIONS WILL RESULT IN MOVING THE DITCH FURTHER AWAY FROM THE ROADWAY. IT IS DESIRED THAT DITCH FORESLOPES BE 3:1 OR FLATTER AND DITCH BACKSLOPES BE 2:1 OR FLATTER. IT IS ALSO DESIRED THAT THE NEW DITCH BACKSLOPE REMAIN WITHIN THE RIGHT-OF-WAY AND/OR ANY CONSENT & RELEASE AREAS OBTAINED BY KYTC NOTED IN THE PROPOSAL, WHILE ALSO AVOIDING ANY SENSITIVE OBSTRUCTIONS.
12. AS SHOWN IN FIGURE 10, IF INSTALLING A 2:1 DITCH BACKSLOPE WILL RESULT IN THE TOP OF CUT EXTENDING BEYOND THE RIGHT-OF-WAY OR OUTSIDE OF ANY CONSENT & RELEASE AREA OBTAINED BY KYTC NOTED IN THE PROPOSAL, AND/OR IMPACTING A SENSITIVE OBSTRUCTION, THEN THE DITCH BACK SLOPE MAY BE INSTALLED STEEPER THAN 2:1, UP TO 1:1 MAXIMUM. IN THIS SITUATION, THE DITCH BACKSLOPE SHALL HAVE CLASS II CHANNEL LINING INSTALLED FOR SLOPE PROTECTION.
13. AS SHOWN IN FIGURE 11, IF USING A 1:1 DITCH BACKSLOPE STILL RESULTS IN THE TOP OF CUT EXTENDING BEYOND THE RIGHT-OF-WAY OR OUTSIDE ANY CONSENT & RELEASE AREA OBTAINED BY KYTC NOTED IN THE PROPOSAL, AND/OR STILL IMPACTS A SENSITIVE OBSTRUCTION, THEN THE PROPOSED EARTH SHOULDER WIDTH MAY BE REDUCED SO THAT THE STEEP DITCH BACKSLOPE CAN BE INSTALLED WITHIN THE RIGHT-OF-WAY AND/OR TO AVOID A SENSITIVE OBSTRUCTION.

NOT TO SCALE

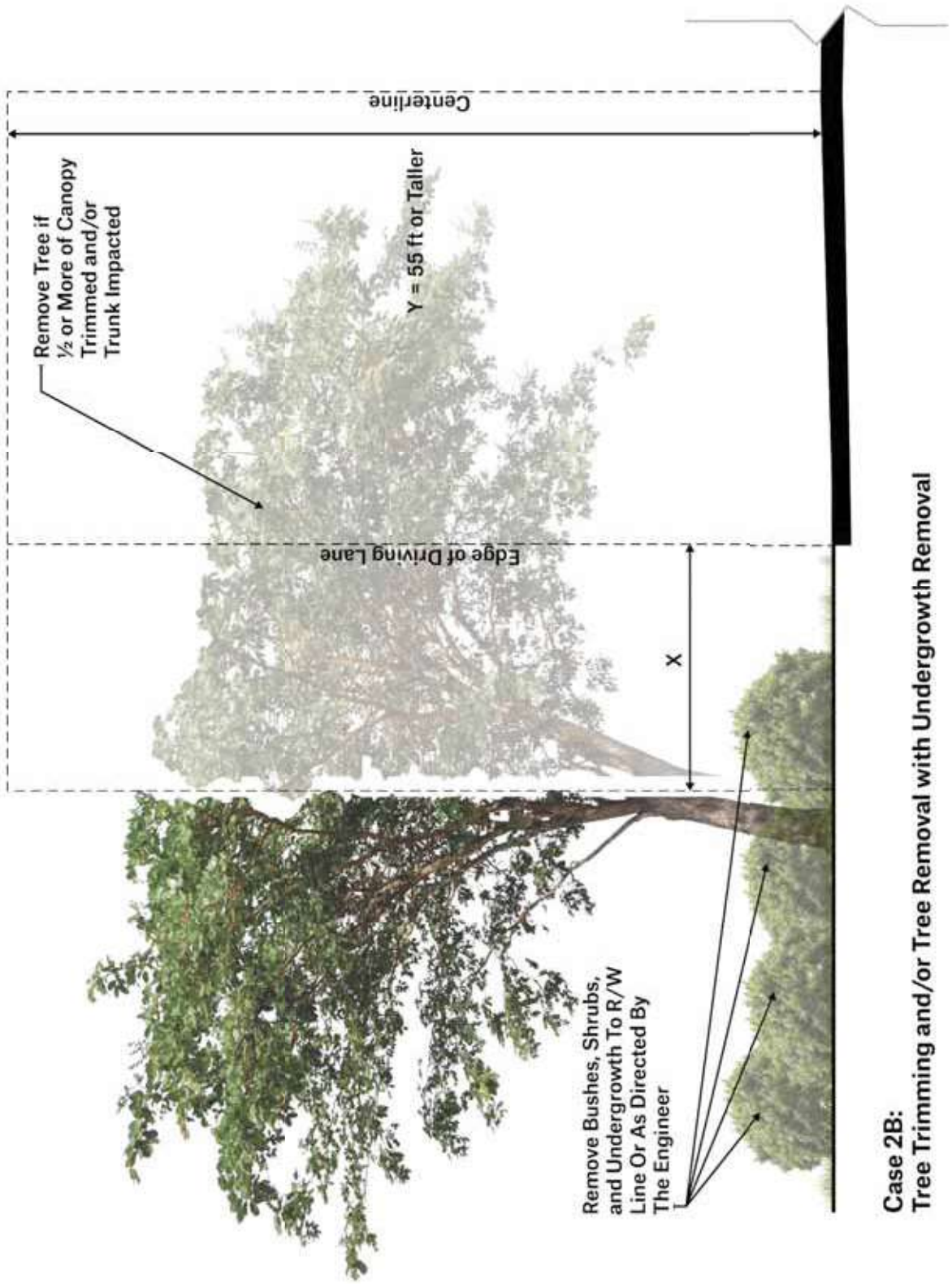
ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS (SHEET 2 OF 2)

Case 1:
Tree Trimming without Undergrowth Removal

Case 1B:
Tree Trimming with Undergrowth Removal



Case 2:
Tree Trimming and/or Tree Removal without Undergrowth Removal

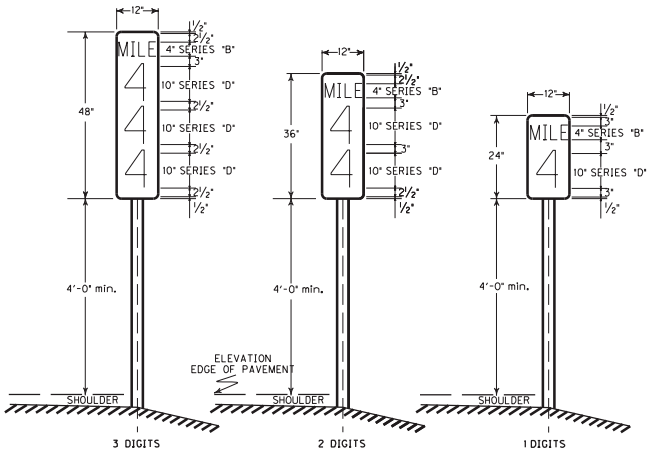


Case 2B:
Tree Trimming and/or Tree Removal with Undergrowth Removal

Case 3B:
Undergrowth Removal Only

COUNTY OF	ITEM NO.	SHEET NO.

MILEPOST MARKERS



TYPICAL SIGN PANEL DIMENSIONS AND MILEPOST LOCATIONS

MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

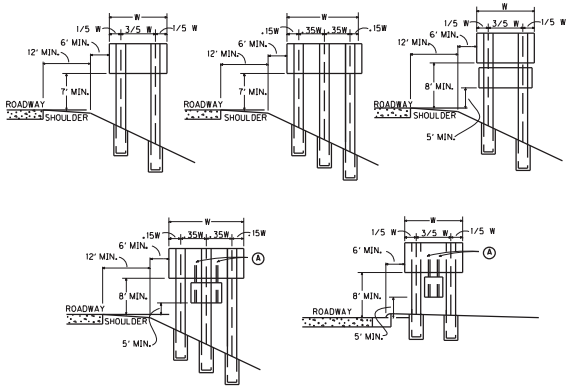
MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

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:

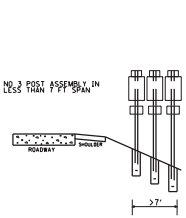
901 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6624
270-307-7456

PANEL SIGNS

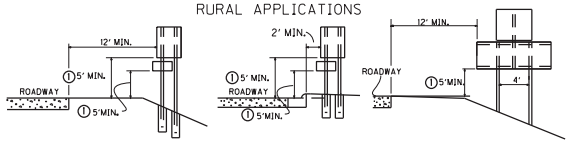


Ⓐ ATTACHMENT OF SECONDARY SIGN TO MAJOR SIGN IS TO BE MADE WITH TWO (2) 3" X 3" X 3/16" ANGLES OF SUFFICIENT LENGTH TO EXTEND FROM THE LOWER EDGE OF THE SECONDARY SIGN TO AT LEAST THREE FEET UP THE BACK OF THE MAJOR SIGN. A MINIMUM OF ONE POST CLIP PER FOOT SHALL BE USED IN ATTACHING EXTRUSIONS TO EACH ANGLE.

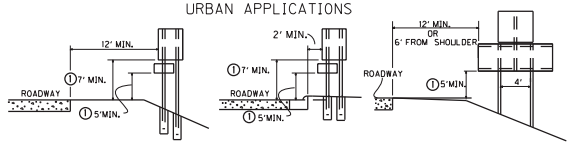
SHEETING SIGNS



RURAL APPLICATIONS



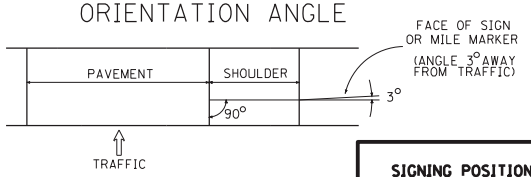
URBAN APPLICATIONS



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

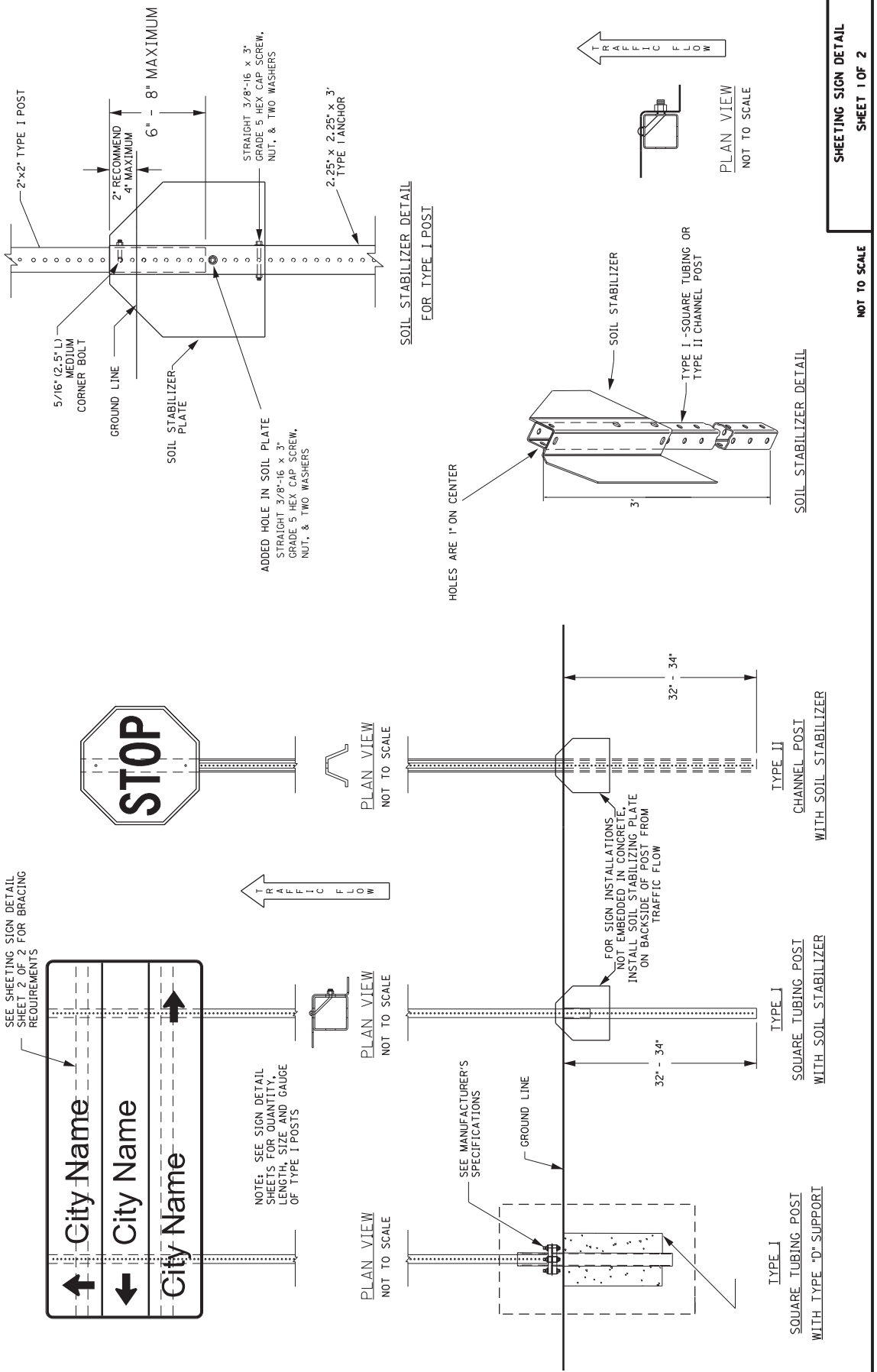


SIGNING POSITIONING DETAIL SHEET

COUNTY OF	ITEM NO.	SHEET NO.

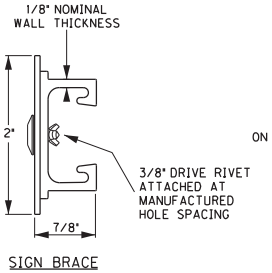
SHEETING SIGN DETAIL
SHEET 1 OF 2

NOT TO SCALE

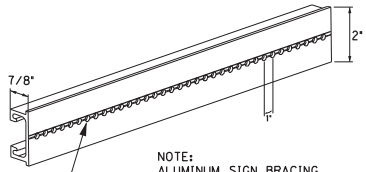


COUNTY OF	ITEM NO.	SHEET NO.

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

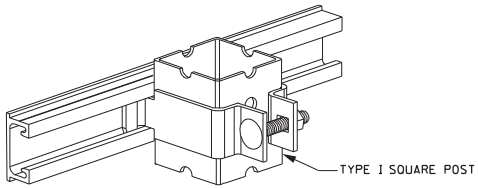


SIGN BRACE



NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS

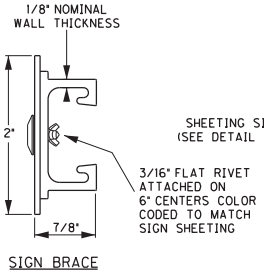
6061-T6 ALUMINUM ALLOY, PUNCHED WITH
3/8" DIAMETER HOLES ON 1" CENTERS FOR
ATTACHMENT OF SIGN SUBSTRATE
USING 3/8" DRIVE RIVETS



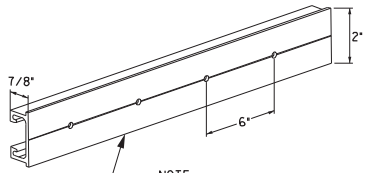
SQUARE POST CLAMP & BRACE

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

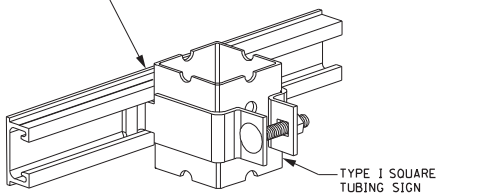


SIGN BRACE

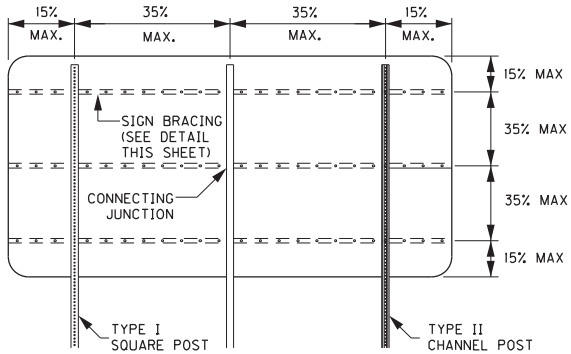


NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS

6061-T6 ALUMINUM ALLOY, PUNCHED WITH
3/16" DIAMETER HOLES ON 6" CENTERS FOR
ATTACHMENT OF SIGN SUBSTRATE USING RIVETS



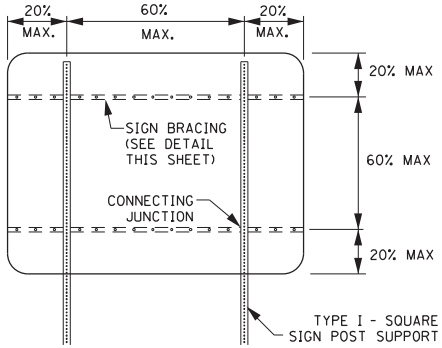
SQUARE POST CLAMP & BRACE



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.

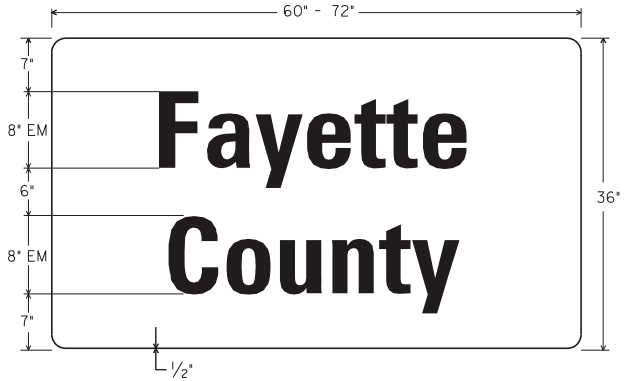
NOT TO SCALE

SHEETING SIGN DETAIL

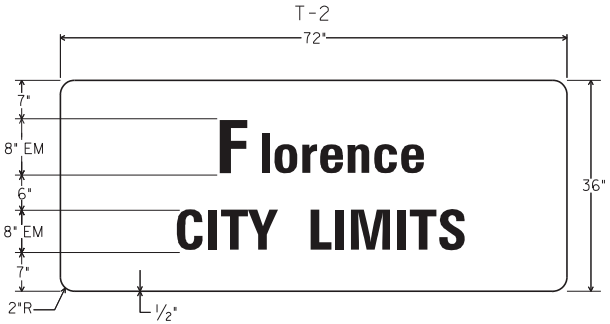
SHEET 2 OF 2

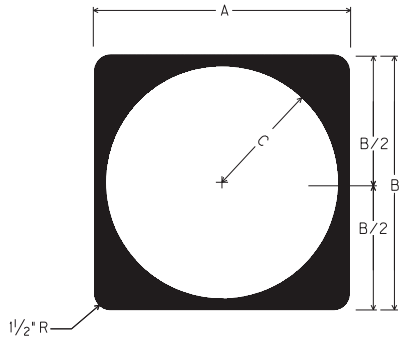
COUNTY OF	ITEM NO.	SHEET NO.

T-1

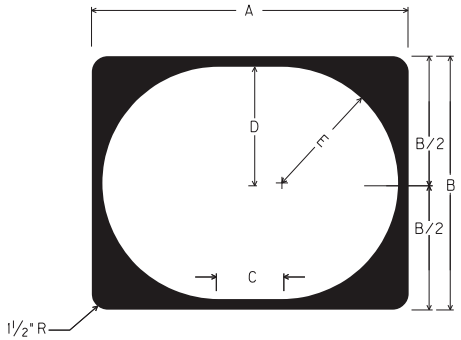


T-2





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_____

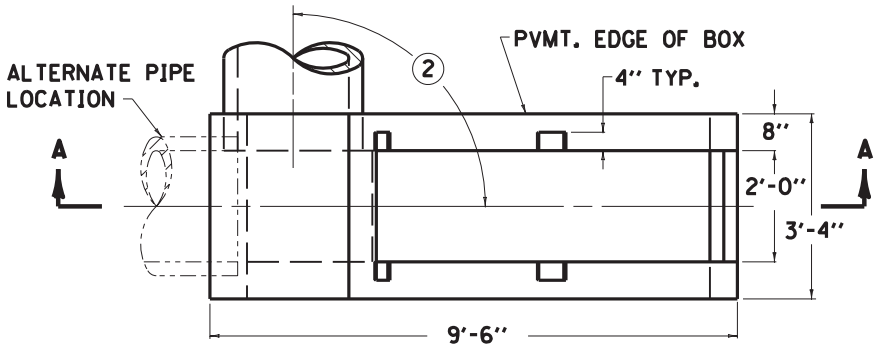
Signature Contractor's Representative_____& Date_____

**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: _____

COUNTY OF	ITEM NO.	SHEET NO.

JACKSON COUNTY
HSIP 4211(051)



PLAN VIEW

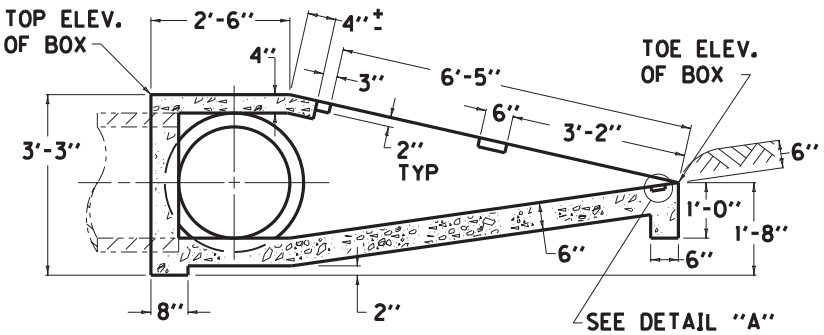
NOTES

ITEM CODE	BID ITEM	UNIT
1726	SAFETY BOX INLET-18 INCH SDB-1	EACH
1727	SAFETY BOX INLET-24 INCH SDB-1	EACH

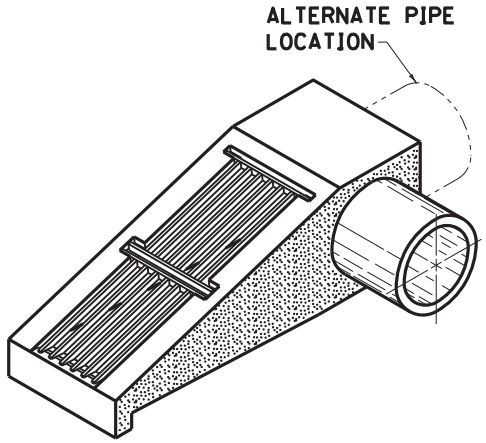
THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

(2) SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.

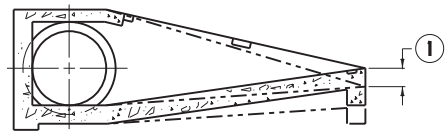


SECTION A-A

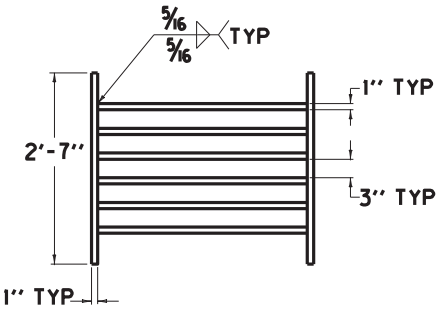


ISOMETRIC VIEW

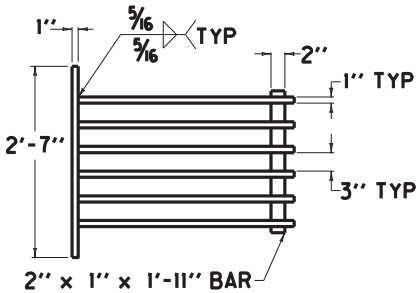
APPROXIMATE QUANTITIES			
CLASS "A" CONC.	GRATE	LBS. STRUCTURAL STEEL	
CUBIC YARDS	NUMBER	EACH GRATE	TOTAL POUNDS
1.44	1	145	298
	2	153	



SECTIONAL VIEW



GRATE NO. 1
PLAN VIEW



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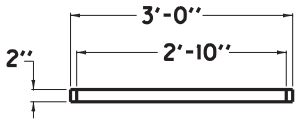
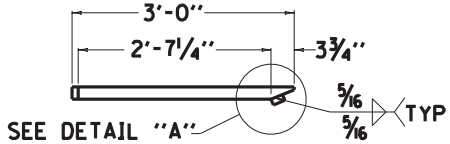
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



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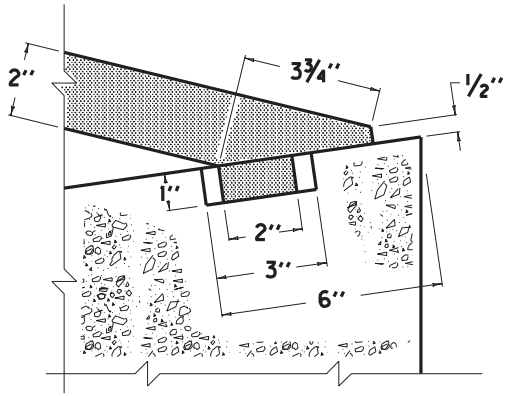
SIDE ELEVATION



DETAIL "A"

KENTUCKY
DEPARTMENT OF HIGHWAYS

SAFETY TYPE BOX INLET (18" OR 24")

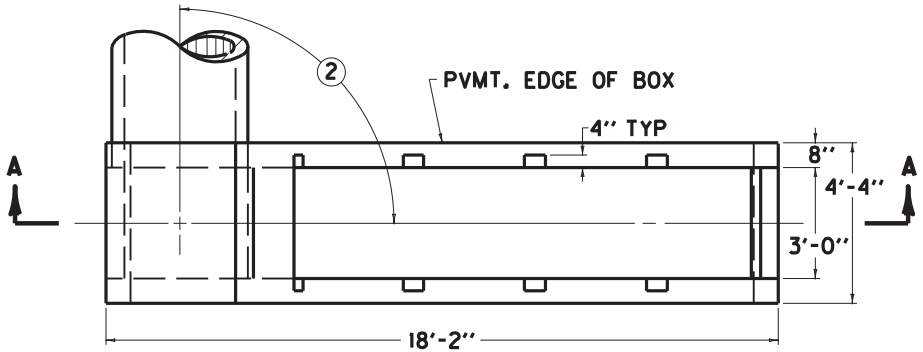
APPROVED _____ PROJECT ENGINEER

06-04-2008 DATE

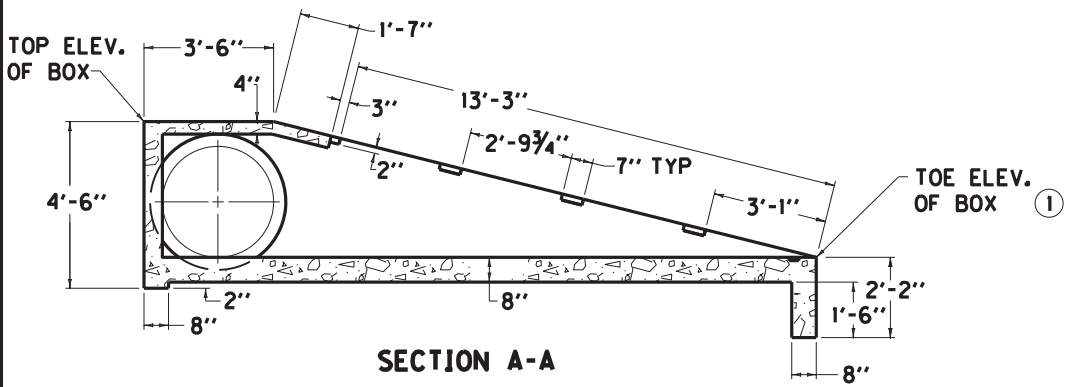
Contract ID: 234214
Page 295 of 342

COUNTY OF	ITEM NO.	SHEET NO.

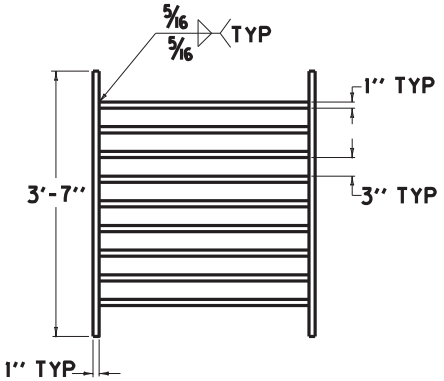
JACKSON COUNTY
HSIP 4211(051)



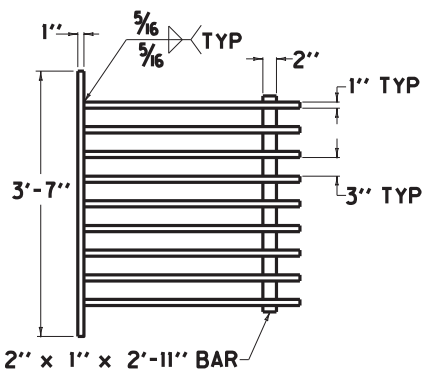
PLAN VIEW



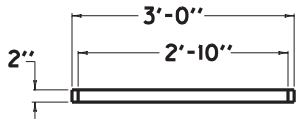
SECTION A-A



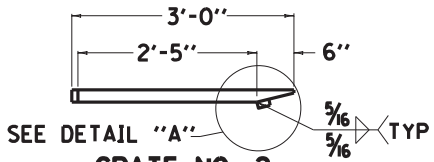
GRATE NO. 1
PLAN VIEW



GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION

NOTES

ITEM CODE	BID ITEM	UNIT
23044NS710	SAFETY BOX INLET-36 INCH SDB-1	EACH

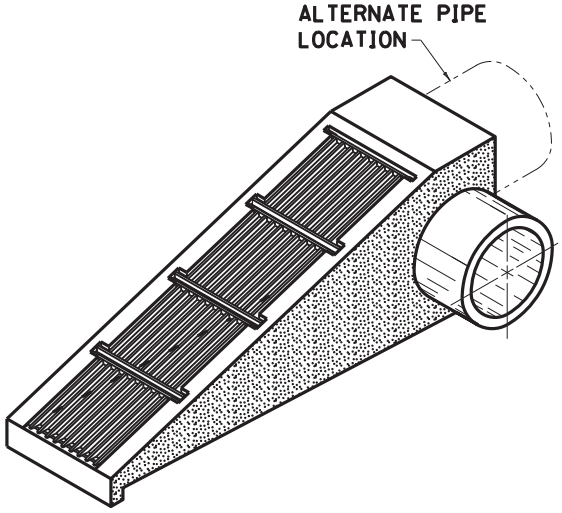
THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

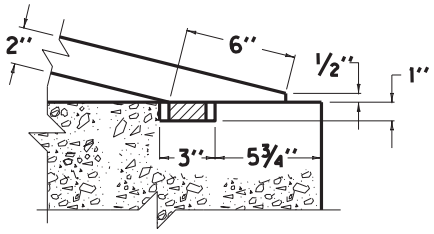
(2) SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.

3. ALL QUANTITIES ARE FOR ONE HEADWALL.

APPROXIMATE QUANTITIES					
CLASS "A" CONC.	GRATE	NO. OF GRATES REQ'D.	LBS.		
			STRUCTURAL STEEL		REINF. STEEL
CUBIC YARDS	NUMBER		EACH GRATE		
4.51	1	3	222	896	261
	2	1	230		



ISOMETRIC VIEW



DETAIL "A"

SHEET 1 OF 2

KENTUCKY
DEPARTMENT OF HIGHWAYS

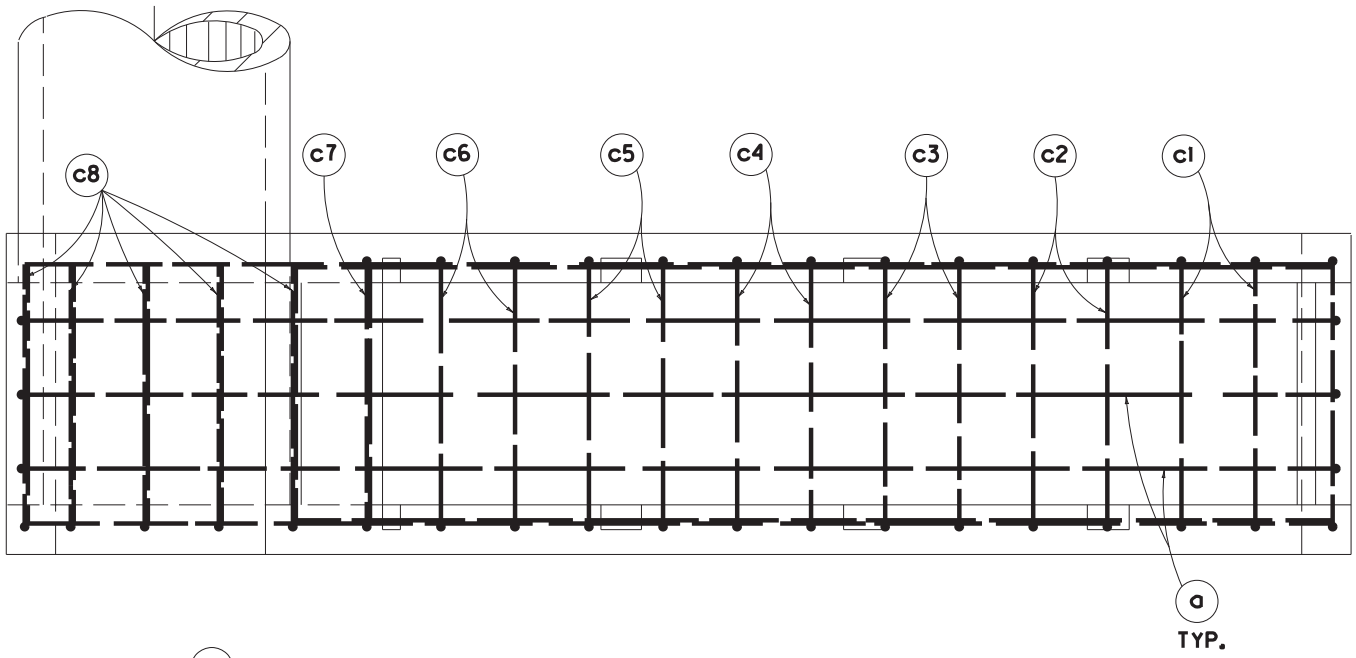
SAFETY TYPE BOX INLET (36")

APPROVED _____ PROJECT ENGINEER 06-04-2018 DATE

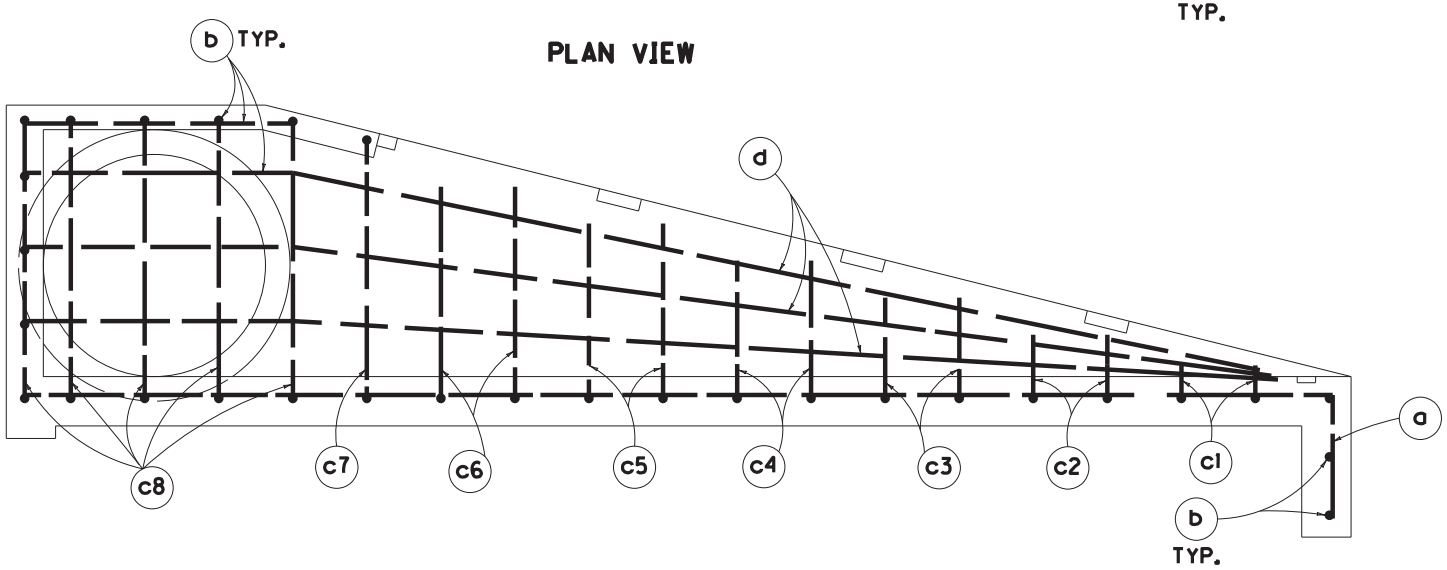
Contract ID: 234214
Page 196 of 342

COUNTY OF	ITEM NO.	SHEET NO.

JACKSON COUNTY
HSIP 4211(051)



PLAN VIEW

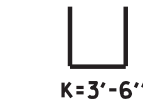


ELEVATION VIEW

NOTES

1. NUMBER OF BARS IN ONE HEADWALL.
2. DIMENSIONS ARE O. TO O. OF BARS.
3. ALL BARS ARE STRAIGHT EXCEPT THOSE SHOWN BELOW.

BENT BAR SHAPES



BARS (c)

BARS (a)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
36"						
a	4	5	19	6	1	8
b	4	16	3	6		
c1	4	2	5	0	3	6
c2	4	2	5	10	3	6
c3	4	2	6	10	3	6
c4	4	2	7	10	3	6
c5	4	2	8	10	3	6
c6	4	2	9	10	3	6
c7	4	1	11	0	3	6
c8	4	5	11	6	3	6
d	4	6	13	4		

SHEET 2 OF 2

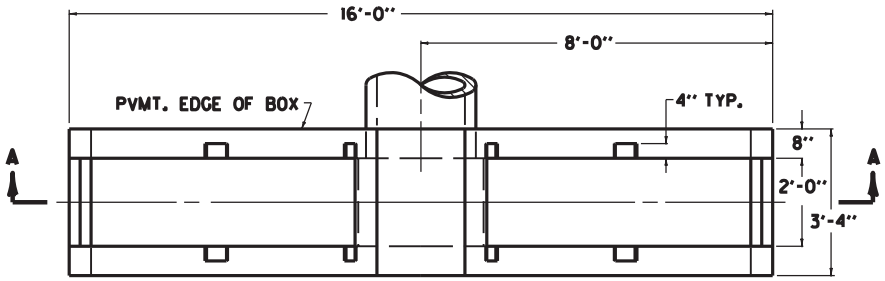
KENTUCKY
DEPARTMENT OF HIGHWAYS

BILL OF REINFORCEMENT SAFETY TYPE BOX INLET (36")

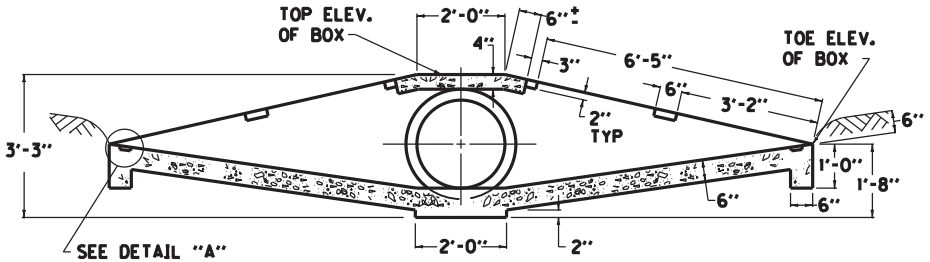
APPROVED _____ PROJECT ENGINEER 06-04-2008 DATE

Contract ID: 234214
Page 197 of 342

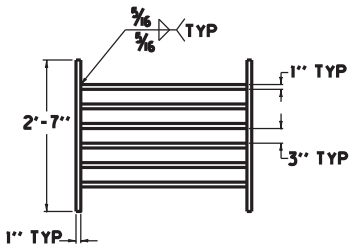
COUNTY OF	ITEM NO.	SHEET



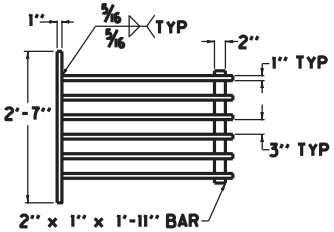
PLAN VIEW



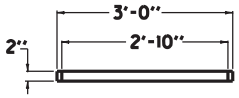
SECTION A-A



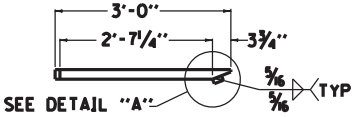
GRATE NO. 1
PLAN VIEW



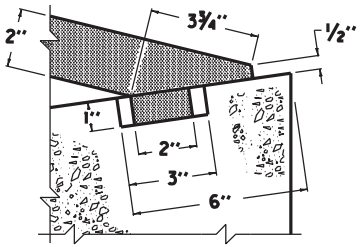
GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION



DETAIL "A"

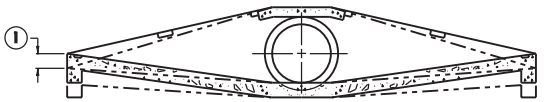
NOTES

ITEM CODE	BID ITEM	UNIT
1728	SAFETY BOX INLET-18 IN DBL SDB-5	EACH
1729	SAFETY BOX INLET-24 IN DBL SDB-5	EACH

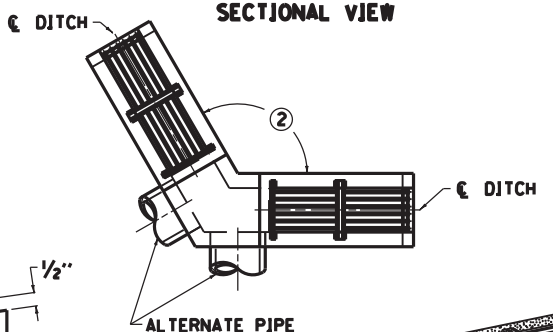
THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

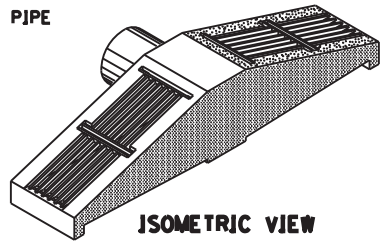
(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

(2) ANGLE BETWEEN BOX WALLS MAY VARY TO FIT EXISTING FIELD CONDITIONS.



SECTIONAL VIEW





ISOMETRIC VIEW

APPROXIMATE QUANTITIES			
CLASS "A" CONC.	GRATE	LBS. STRUCTURAL STEEL	
CUBIC YARDS	NUMBER	EACH GRATE	TOTAL POUNDS
2.07	1	145	596
	2	153	

N/A

DBL SAFETY BOX INLET DETAIL SHEET

Microstation v8.11.7.443
E-SHEET NAME: ——
USER: Patrick.Stone
DATE PLOTTED: September 24, 2013
FILE NAME: C:\USERS\PATRICK.STONE\APPDATA\LOCAL\MICROSOFT\WINDOWS\TEMPORARY INTERNET FILES\CONTENT.OUTLOOK\YOB43LNA\SAFETY BOX.DGN

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

STANDARD SPECIFICATIONS

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2019* and *Standard Drawings, Edition of 2020.*

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting. The Supplemental Specifications can be found at the following link:
http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx

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).

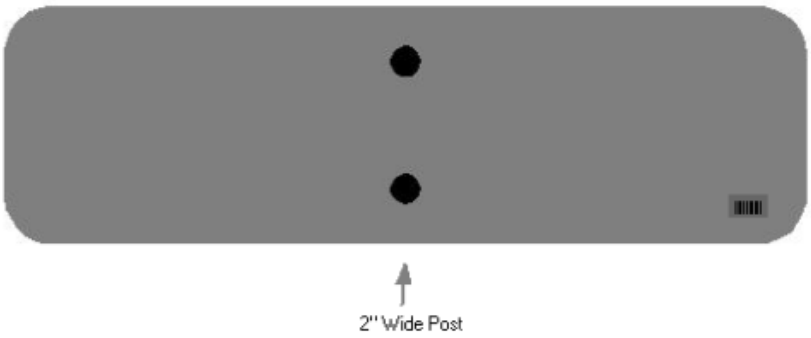
The installation of the permanent sign will be measured in accordance to Section 715.

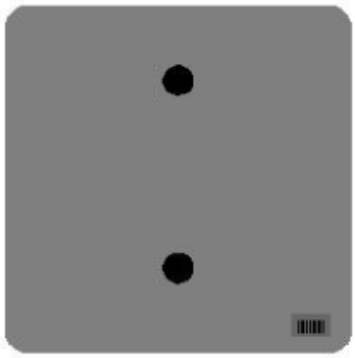
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

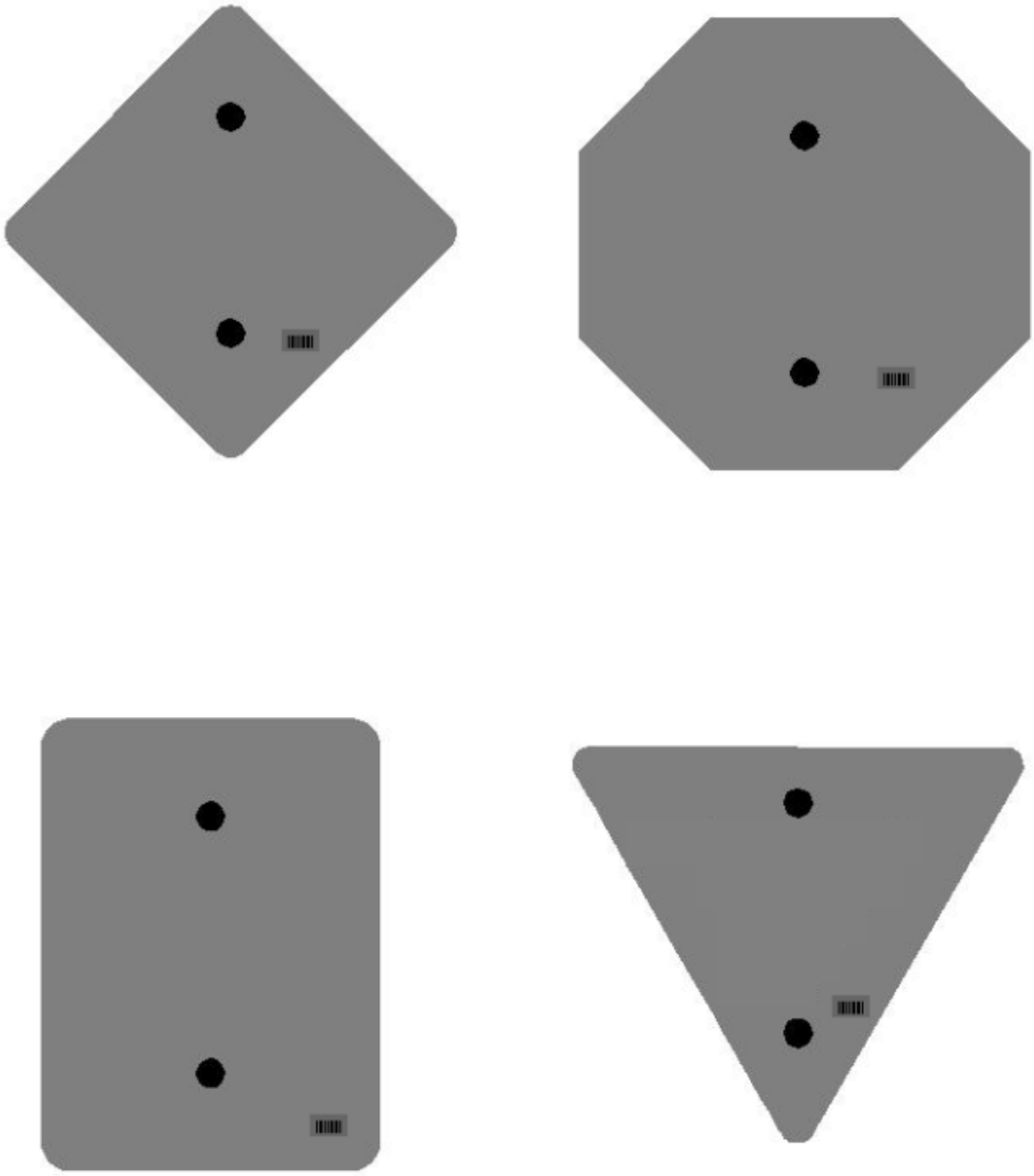
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment as full compensation for all work required under this special note.

One Sign Post

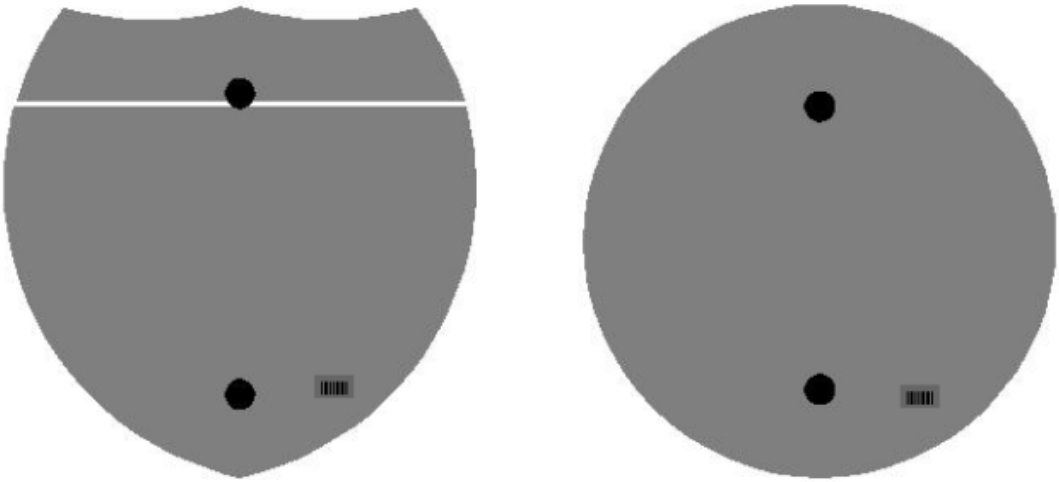


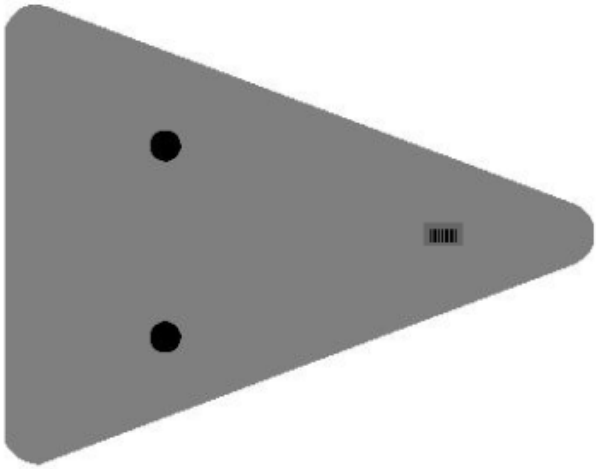


One Sign Post

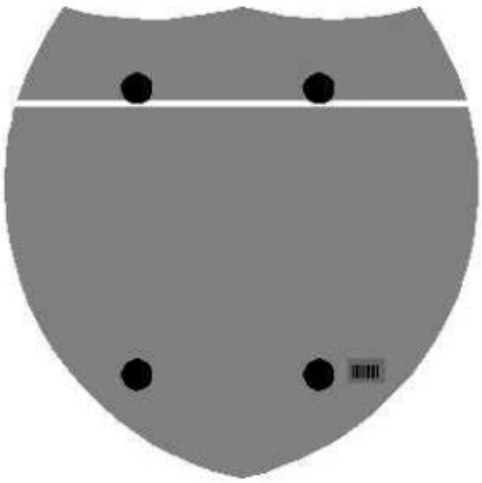


One Sign Post

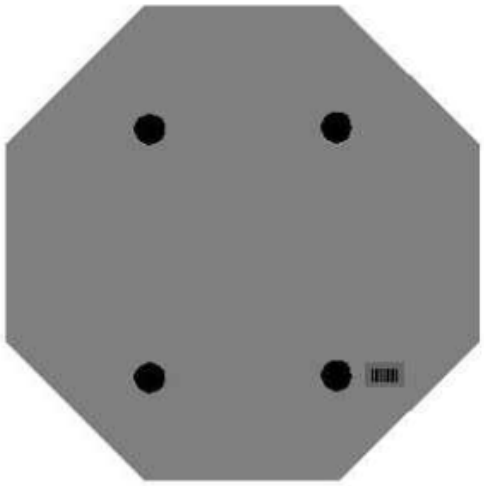




Double Sign Post

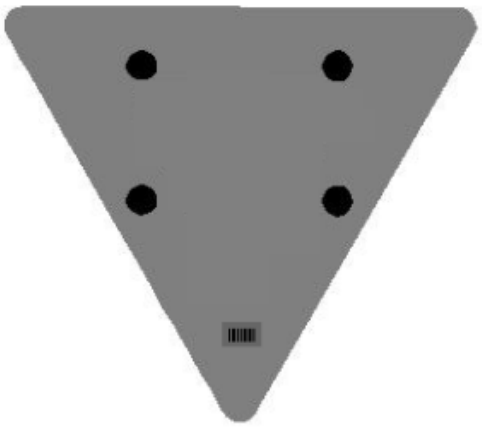


Interstate
Shield



48" Stop

2 Post Signs



2020 STANDARD DRAWINGS THAT APPLY

ROADWAY

~ BARRIERS ~

TYPICAL BARRIER INSTALLATIONS

TYPICAL GUARDRAIL INSTALLATIONS RBI-001-12
TYPICAL GUARDRAIL INSTALLATIONS RBI-002-07
TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A RBI-003-09
INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1 ..... RBI-004-06

GUARDRAIL HARDWARE

STEEL BEAM GUARDRAIL (W-BEAM) RBR-001-13
GUARDRAIL COMPONENTS RBR-005-11
GUARDRAIL TERMINAL SECTIONS RBR-010-06
STEEL GUARDRAIL POSTS RBR-015-06
GUARDRAIL END TREATMENT TYPE 1 ..... RBR-020-07
GUARDRAIL END TREATMENT TYPE 2A RBR-025-06
DELINEATORS FOR GUARDRAIL RBR-005-01

~ DRAINAGE ~

BOX INLETS AND OUTLETS

DROP BOXES

DROP BOX INLET TYPE 1 ..... RDB-001-12

PAVED DITCHES, FLUME INLETS AND CHANNEL LININGS

CHANNEL LINING CLASS II AND III RDD-040-05

TYPICAL DRAINAGE INSTALLATIONS

CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (12” – 24” PIPE) RDI-001-10
CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS (60” – 66” PIPE) RDI-004-04
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER PIPE RDI-020-10
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER, REINFORCED CONC. PIPE RDI-021-01
PIPE BEDDING, TRENCH CONDITION RDI-025-06
PIPE BEDDING, TRENCH CONDITION, REINFORCED CONC. PIPE RDI-026-01
COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PLATE PIPE ..... Sepia 021
EROSION CONTROL BLANKET SLOPE INSTALLATION RDI-040-01
EROSION CONTROL BLANKET CHANNEL INSTALLATION RDI-041-01

PERFORATED PIPE

PERFORATED PIPE TYPES AND COVER HEIGHTS RDP-001-06
PERFORATED PIPE FOR SUBGRADE DRAINAGE ON TWO-LANE (CLASS 2) AND MULTI-LANE ROADS RDP-005-05
PERFORATED PIPE UNDERDRAINS (LONGITUDINAL AND TRANSVERSE) RDP-006-04
PERFORATED PIPE DETAILS (SOLID ROCK) RDP-007-04
PERFORATED PIPE HEADWALLS RDP-010-09

Standard Drawings That Apply
Page 2 of 3

MISCELLANEOUS DRAINAGE

JUNCTION BOX RDX-001-06
JUNCTION BOX (DIMENSIONS AND QUANTITIES) RDX-002-04
INTERMEDIATE AND END ANCHORS FOR CIRCULAR PIPE RDX-060-04
SECURITY DEVICES FOR FRAMES, GRATES AND LIDS RDX-160-06
SECURITY PLATE ASSEMBLY ..... Sepia 020
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 ..... Sepia 025

~ FENCES AND GATES ~

CHAIN LINK FENCE

GATES

WOVEN WIRE GATES RFG-001-07

WOVEN WIRE FENCE

FENCING DETAILS RFW-001-06
WOVEN WIRE FENCE TYPE 1 ..... RFW-005-08
WOVEN WIRE FENCE TYPE 2 ..... RFW-006-07

~ GENERAL ~

CURVE WIDENING AND SUPERELEVATION

CURVE WIDENING AND SUPERELEVATION TRANSITIONS RGS-001-07

MISCELLANEOUS STANDARDS

MISCELLANEOUS STANDARDS RGX-001-06
TYPICAL EMBANKMENT FOUNDATION BENCHES RGX-010-04
TYPE D BREAKAWAY SIGN SUPPORT RGX-065-02
ONE POINT PROCTER FAMILY OF CURVES RGX-200-01

~ PAVEMENT ~

MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.

APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT RPM-110-07
ISLAND CURB CONSTRUCTION DETAILS (RIGID & FLEXIBLE PAVEMENT) RPM-120-07

TRAFFIC

~ PERMANENT ~

MARKERS

FLEXIBLE DELINEATOR POST ARRANGEMENTS FOR HORIZONTAL CURVES TPM-170-01

Standard Drawings That Apply
Page 3 of 3

PAVEMENT STRIPING DETAILS FOR TWO LANE TWO WAY ROADWAYS..... Sepia 017

RUMBLE STRIPS

SHOULDER & EDGELINE RUMBLE STRIPS PLACEMENT DETAILS TPR-115
EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS..... TPR-120

~ TEMPORARY ~

TRAFFIC CONTROL

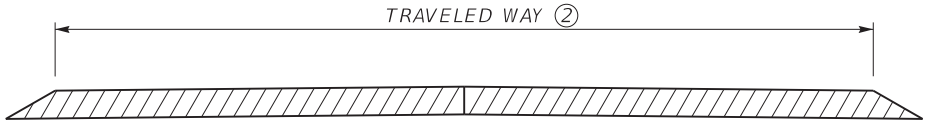
LANE CLOSURE TWO-LANE HIGHWAY..... TTC-100-05
SHOULDER CLOSURE TTC-135-03
TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR CONSTRUCTION ZONES TTC-155-02
TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR LANE CLOSURES..... TTC-160-02

DEVICES

DOUBLE FINES ZONE SIGNS..... TTD-120-03
PAVEMENT CONDITION WARNING SIGNS TTD-125-03
SPEED ZONE SIGNING FOR WORK ZONES TTD-130

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



TWO LANE ROADWAY
PAVEMENT CROSS-SECTION

TRAVELED WAY (2)	TYPE OF PAVEMENT STRIPING	NON-STATE PRIMARY ROUTES				STATE PRIMARY ROUTES	
		< 1000 ADT		>= 1000 ADT		ANY ADT	
		WIDTH	MATERIAL	WIDTH	MATERIAL	WIDTH	MATERIAL*
< 16' (4)	EDGELINE STRIPES ONLY	4"	PAINT	4"	PAINT	6"	THERMO (ASHPALT) TYPE I TAPE (CONCRETE)
16' TO < 20'	EDGELINE STRIPES ONLY OR CENTERLINE STRIPE ONLY	4"	PAINT	4"	PAINT	6"	THERMO (ASHPALT) TYPE I TAPE (CONCRETE)
>=20' (3)	CENTERLINE AND EDGELINE STRIPES	4" (5)	PAINT	6"	PAINT	6"	THERMO (ASHPALT) TYPE I TAPE (CONCRETE)

*OTHER DURABLE NON-WATERBORNE MARKINGS MAY BE USED WITH APPROVAL FROM THE DIVISION OF TRAFFIC OPERATIONS.

~ NOTES ~

1. INSTALL PAVEMENT STRIPING ON TWO LANE, TWO WAY ROADWAYS AS DETAILED IN THE ABOVE TABLE AND IN ACCORDANCE WITH THE PAVEMENT MARKINGS AND DELINEATION CHAPTER OF THE TRAFFIC OPERATIONS GUIDANCE MANUAL. CONTACT THE DIVISION OF TRAFFIC OPERATIONS FOR ADDITIONAL GUIDANCE IF NECESSARY.

(2) THE TRAVELED WAY IS THE PORTION OF ROADWAY FOR THE MOVEMENT OF VEHICLES, EXCLUSIVE OF THE SHOULDERS.

(3) ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 20 FT OR GREATER, BUT LESS THAN 22 FT, EDGELINE RUMBLE STRIPS ARE NOT A STANDARD APPLICATION, BUT THEY MAY BE INSTALLED. THE DIVISION OF TRAFFIC OPERATIONS IS AVAILABLE TO ASSIST WITH THE DETERMINATION OF WHETHER OR NOT TO INSTALL EDGELINE RUMBLE STRIPS ON PAVEMENT WIDTHS LESS THAN 22 FT, AS WELL AS THE DIMENSION AND PLACEMENT DETAILS OF THE RUMBLE STRIPS AND PAVEMENT STRIPING.

ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 22 FT OR GREATER, BUT LESS THAN 34 FT, INSTALL PAVEMENT STRIPING AS DETAILED IN THE ABOVE TABLE AND IN CONJUNCTION WITH CENTERLINE AND EDGELINE RUMBLE STRIPS AS DETAILED ON TPR-120 .

ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 34 FT OR GREATER, INSTALL PAVEMENT STRIPING AS DETAILED IN THE ABOVE TABLE AND IN CONJUCTION WITH CENTERLINE AND SHOULDER RUMBLE STRIPS AS DETAILED ON TPR-125.

(4) EDGELINES MAY BE OMITTED FROM ROADWAYS WITH A TRAVELED WAY WIDTH LESS THAN 16 FEET WITH THE APPROVAL OF THE DIVISION OF TRAFFIC OPERATIONS.

(5) EDGELINES MAY BE OMITTED ON NON-STATE PRIMARY ROUTES WITH A TRAVELED WAY WIDTH GREATER THAN OR EQUAL TO 20 FEET AND AN ADT LESS THAN 1,000.

6. EDGELINES MAY BE OMITTED, BASED ON ENGINEERING JUDGMENT, IN AREAS WHERE THE PAVEMENT EDGE IS DELINEATED BY PHYSICAL OBJECTS SUCH AS CURBS, PARKING SPACES, OR OTHER MARKINGS. EDGELINES SHOULD BE INSTALLED ON ROADWAYS WITH CURB AND GUTTER IF THE POSTED SPEED LIMIT IS 45 MPH OR GREATER.

DRAWING NOT TO SCALE

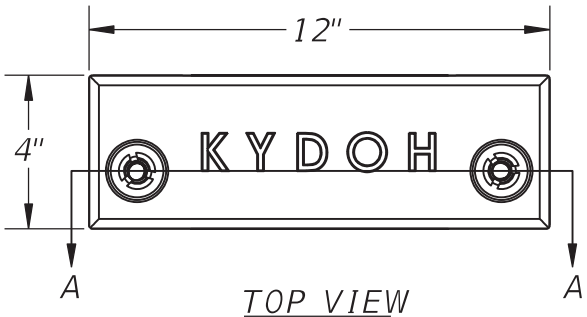
USE WITH CUR. STD. DWGS.
TPR-120 & TPR-125

KENTUCKY
DEPARTMENT OF HIGHWAYS

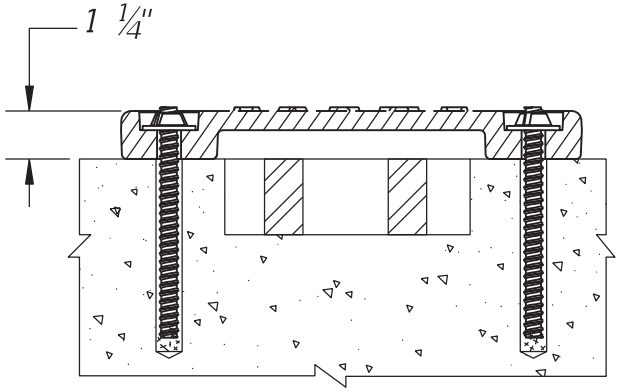
PAVEMENT STRIPING
DETAILS FOR TWO LANE
TWO WAY ROADWAYS

SUBMITTED _____ DIVISION DIRECTOR 06-09-21 DATE

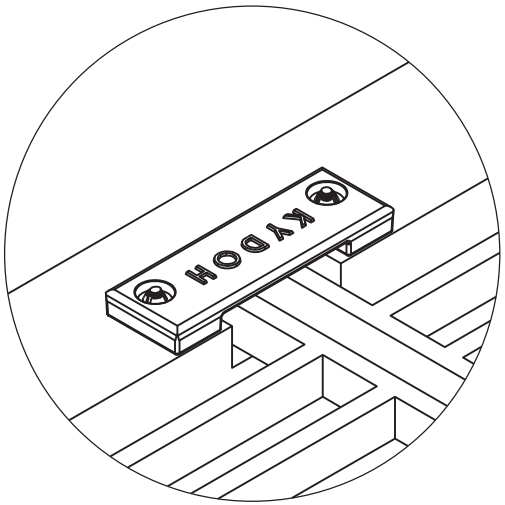
017



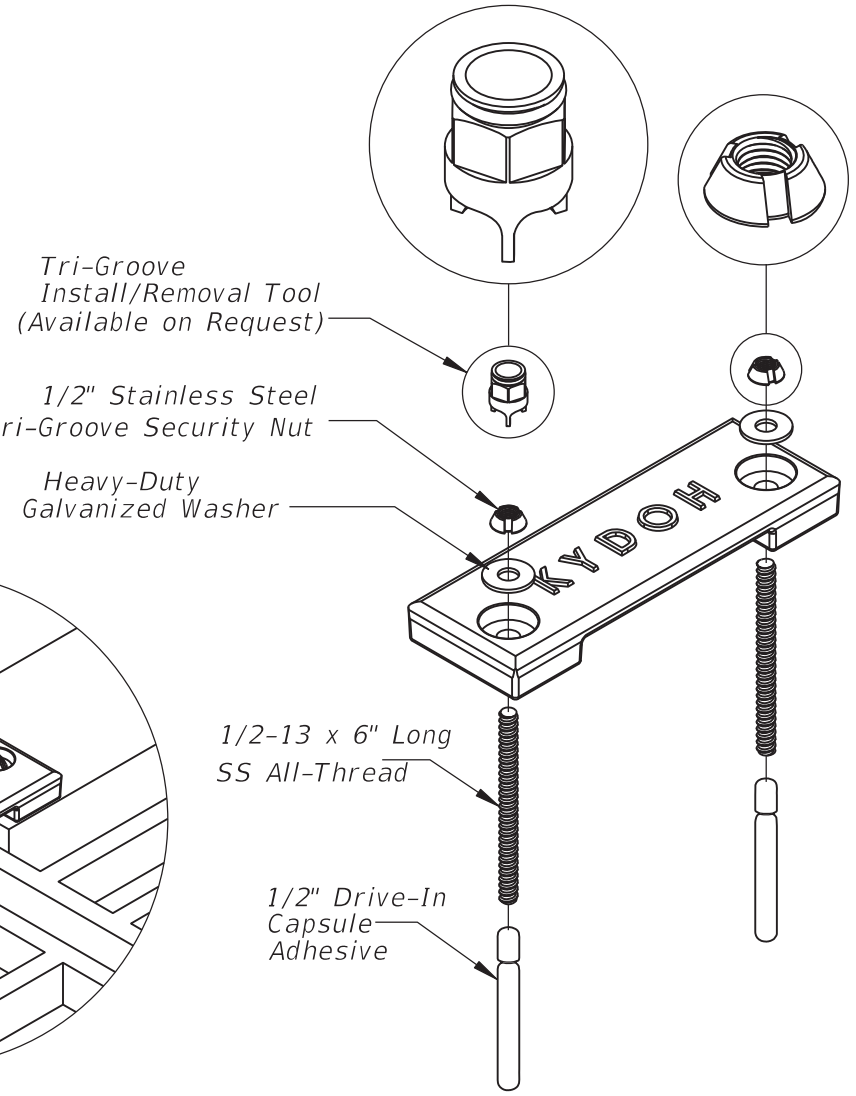
TOP VIEW



SECTION A-A



MOUNTED



BID ITEMS AND UNITS TO BID

24585EC SECURITY PLATE ASSEMBLY	EACH

KENTUCKY
DEPARTMENT OF HIGHWAYS

SECURITY PLATE
ASSEMBLY

SUBMITTED W. T. Sapp 02-26-2021
DIVISION DIRECTOR DATE

020

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised July 5, 2022

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Non-segregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XI. Certification Regarding Use of Contract Funds for Lobbying
XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding (29 CFR 5.5)

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records (29 CFR 5.5)

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a “Statement of Compliance,” signed by the contractor or

subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees (29 CFR 5.5)

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the

corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility (29 CFR 5.5)

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1 of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

* $27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this section. 29 CFR 5.5.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section. 29 CFR 5.5.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance

with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant

who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is

submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier

subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)

AN ACT OF THE KENTUCKY GENERAL ASSEMBLY TO PREVENT DISCRIMINATION IN EMPLOYMENT

KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Standard Title VI/Non-Discrimination Statutes and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:

a) The date of leaving office or termination of employment; or
b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 1025 Capital Center Drive, Suite 104, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: May 23, 2022

"General Decision Number: KY20230107 01/06/2023

Superseded General Decision Number: KY20220107

State: Kentucky

Construction Type: Highway

Counties: Adair, Barren, Bell, Breathitt, Casey, Clay, Clinton, Cumberland, Estill, Floyd, Garrard, Green, Harlan, Hart, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lincoln, Magoffin, Martin, McCreary, Menifee, Metcalfe, Monroe, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Rockcastle, Russell, Taylor, Wayne, Whitley and Wolfe Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at

http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2023

SUKY2015-047 10/20/2015

	Rates	Fringes
BOILERMAKER	$ 24.65	12.94
BRICKLAYER		
Bricklayer	$ 22.90	8.50
Stone Mason	$ 21.50	8.50
CARPENTER		
Carpenter	$ 24.90	14.50
Piledriver	$ 24.55	14.50
CEMENT MASON	$ 21.25	8.50
ELECTRICIAN		
Electrician	$ 29.36	10.55
Equipment Operator	$ 26.90	10.31
Groundsman	$ 17.79	8.51
Lineman	$ 30.09	10.94

When workmen are required to work from bosum chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and T.V. towers, structural steel (open, unprotected, unfloored raw steel), and bridges or similar hazardous locations where workmen are subject to fall, except where using JLG's and bucket trucks up to 75 feet: Add 25% to workman's base rate for 50 to 75 feet, and add 50% to workman's base rate for over 75 feet.

IRONWORKER	$ 27.56	20.57
LABORER		
Group 1	$ 21.80	12.36
Group 2	$ 22.05	12.36
Group 3	$ 22.10	12.36
Group 4	$ 22.70	12.36

GROUP 1: Aging and Curing of Concrete (Any Mode or Method), Asbestos Abatement Worker, Asphalt Plant Laborers, Asphalt Laborers, Batch Truck Dumpers, Carpenter Tenders, Cement Mason Tenders, Cleaning of Machines, Concrete Laborers, Demolition Laborers, Dredging Laborers, Drill Tender, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level D, Flagmen, Grade Checkers, All Hand Digging and Hand Back Filling, Highway Marker Placers, Landscaping Laborers, Mesh Handlers and Placers, Puddler, Railroad Laborers, Rip-rap and Grouters, Right of Way Laborers, Sign, Guard Rail and Fence Installers (All Types), Signalmen, Sound Barrier Installer, Storm and Sanitary Sewer Laborers, Swampers, Truck Spotters and Dumpers, Wrecking of Concrete Forms, General Cleanup

GROUP 2: Batter Board Men (Sanitary and Storm Sewer), Brickmason Tenders, Mortar Mixer Operator, Scaffold Builders, Burner and Welder, Bushammers, Chain Saw Operator, Concrete Saw Operators, Deckhand Scow Man, Dry Cement Handlers, Environmental Laborers - Nuclear, Radiation, Toxic and Hazardous Waste - Level C, Forklift Operators for Masonry, Form Setters, Green Concrete Cutting, Hand Operated Grouter and Grinder Machine Operator, Jack Hammers, Lead Paint Abatement, Pavement Breakers, Paving Joint Machine, Pipe

Layers - Laser Operators (Non-metallic), Plastic Pipe Fusion, Power Driven Georgia Buggy and Wheel Barrow, Power Post Hole Diggers, Precast Manhole Setters, Walk-behind Tampers, Walk-behind Trenchers, Sand Blasters, Concrete Chippers, Surface Grinders, Vibrator Operators, Wagon Drillers
GROUP 3: Air Track Driller (All Types), Asphalt Luteman and Rakers, Gunnite Nozzleman, Gunnite Operators and Mixers, Grout Pump Operator, Powderman and Blaster, Side Rail Setters, Rail Paved Ditches, Screw Operators, Tunnel Laborers (Free Air), Water Blasters
GROUP 4: Caisson Workers (Free Air), Cement Finishers, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level A and B, miners and Drillers (Free Air), Tunnel Blasters, and Tunnel Mockers (Free Air), Directional and Horizontal Boring, Air Track Drillers (All Types), Powder Man and Blasters, Troxler and Concrete Tester if Laborer is Utilized

PAINTER
All Excluding Bridges.....$ 19.92 9.57
Bridges.....$ 23.92 10.07

PLUMBER.....$ 22.52 7.80

POWER EQUIPMENT OPERATOR:
Group 1.....$ 29.95 14.40
Group 2.....$ 29.95 14.40
Group 3.....$ 27.26 14.40
Group 4.....$ 26.96 14.40
GROUP 1: Auto Patrol, Batcher Plant, Bituminous Paver, Cable-Way, Clamshell, Concrete Mixer (21 cu ft or over), Concrete Pump, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Engineer, Elevator (regardless of ownership when used for hoisting any building material), Elevating Grader and all types of Loaders, Hoe-type Machine, Hoisting Engine, Locomotive, LeTourneau or Carry-all Scoop, Bulldozer, Mechanic, Orangepeel Bucket, Piledriver, Power Blade, Roller (Bituminous), Roller (Earth), Roller (Rock), Scarifier, Shovel, Tractor Shovel, Truck Crane, Well Point, Winch Truck, Push Dozer, Grout Pump, High Lift, Fork Lift (regardless of lift height), all types of Boom Cats, Multiple Operator, Core Drill, Tow or Push Boat, A-Frame Winch Truck, Concrete Paver, Grade-All, Hoist, Hyster, Material Pump, Pumpcrete, Ross Carrier, Sheepfoot, Sideboom, Throttle-Valve Man, Rotary Drill, Power Generator, Mucking Machine, Rock Spreader attached to Equipment, Scoopmobile, KeCal Loader, Tower Cranes,(French, German and other types), Hydrocrane, Tugger, Backfiller Gurries, Self-propelled Compactor, Self-Contained Hydraulic Percussion Drill
GROUP 2: All Air Compressors (200 cu ft/min or greater), Bituminous Mixer, Concrete Mixer (21 cu. ft. or over), Welding Machine, Form Grader, Tractor (50 hp and over), Bull Float, Finish Machine, Outboard Motor Boat, Brakeman, Mechanic Tender, Whirly Oiler, Tract-air, Road Widening Trencher, Articulating Trucks
GROUP 3: Greaser on Grease Facilities servicing Heavy Equipment
GROUP 4: Bituminous Distributor, Cement Gun, Conveyor, Mud Jack, Paving Joint Machine, Pump, Tamping Machine, Tractor (under 50 hp), Vibrator, Oiler, Air Compressor (under 200 cu ft per minute), Concrete Saw, Burlap and Curing Machine, Hydro Seeder, Power Form Handling Equipment, Deckhand Oiler, Hydraulic Post Driver

SHEET METAL WORKER.....$ 20.40 7.80

TRUCK DRIVER		
Driver (3 Tons and Over), Driver (Truck Mounted Rotary Drill)	$ 23.74	14.50
Driver (3 Tons and Under), Tire Changer and Truck Mechanic Tender	$ 23.53	14.50
Driver (Semi-Trailer or Pole Trailer), Driver (Dump Truck, Tandem Axle), Driver of Distributor	$ 23.40	14.50
Driver on Mixer Trucks (All Types)	$ 23.45	14.50
Driver on Pavement Breakers	$ 23.55	14.50
Driver, Euclid and Other Heavy Earth Moving Equipment and Low Boy	$ 24.31	14.50
Driver, Winch Truck and A-Frame when used in Transporting Materials	$ 23.30	14.50
Greaser on Greasing Facilities	$ 24.40	14.50
Truck Mechanic	$ 23.50	14.50
Truck Tender and Warehouseman	$ 23.20	14.50

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular

rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
7.0%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Notification of Construction Contract Award Portal (NCAP) is OFCCP's preferred method for receiving construction contract award notifications. The NCAP can be found on OFCCP's website at https://www.dol.gov/agencies/ofccp/ncap. Users who prefer not to use the portal maintain the option to send their notifications via mail, email and facsimile to the OFCCP Regional office in which the work will be performed. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification must include: Prime Contract Number (issued by the federal agency or applicant); Name of Awarding Federal Agency, Applicant or Contractor; Contracting Officer, Applicant Representative or Contractor Representative Submitting Notification with name, phone number, email address; Contractor Awarded Contract or Subcontract with name, address, phone number, email address, EIN, dollar amount of the contract, estimated start date of the contract, estimated completion date of the contract, geographical area in which the contract is to be performed (state, county's city (if applicable)).
The notification shall be mailed to:

Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8931
Main Number: 404-893-4545 Fax: 404-893-4546
Regional Director Contact: OFCCP-SE@dol.gov
Construction Award Email: OFCCP-SE-ConstructionAward@dol.gov

4. As used in this Notice, and in the contract resulting from this solicitation, the **"covered area"** is Jackson County.

(Revised: 1/1/2023)

PART IV

INSURANCE

Refer to
Kentucky Standard Specifications for Road and Bridge Construction,
current edition

PART V

BID ITEMS

234214

PROPOSAL BID ITEMS

Report Date 7/26/23

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	889.00	TON		$	
0020	00020		TRAFFIC BOUND BASE	25.00	TON		$	
0030	00080		CRUSHED AGGREGATE SIZE NO 23	951.00	TON		$	
0040	00100		ASPHALT SEAL AGGREGATE	60.66	TON		$	
0050	00103		ASPHALT SEAL COAT	7.51	TON		$	
0060	00190		LEVELING & WEDGING PG64-22	27.00	TON		$	
0070	00212		CL2 ASPH BASE 1.00D PG64-22	693.00	TON		$	
0080	00307		CL2 ASPH SURF 0.38B PG64-22	411.00	TON		$	
0090	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0100	02677		ASPHALT PAVE MILLING & TEXTURING	323.00	TON		$	
0110	23229EC		HIGH FRICTION SURFACE TREATMENT	1,187.00	SQYD		$	
0120	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	9.40	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0130	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	111.00	EACH		$	
0140	02159		TEMP DITCH	19,661.00	LF		$	
0150	02160		CLEAN TEMP DITCH	9,830.00	LF		$	
0160	02223		GRANULAR EMBANKMENT	14.30	CUYD		$	
0170	02237		DITCHING	22.00	LF		$	
0180	02262		FENCE-WOVEN WIRE TYPE 1	175.00	LF		$	
0190	02360		GUARDRAIL TERMINAL SECTION NO 1	10.00	EACH		$	
0200	02367		GUARDRAIL END TREATMENT TYPE 1	2.00	EACH		$	
0210	02371		GUARDRAIL END TREATMENT TYPE 7	2.00	EACH		$	
0220	02381		REMOVE GUARDRAIL	5,437.50	LF		$	
0230	02403		REMOVE CONCRETE MASONRY	.30	CUYD		$	
0240	02483		CHANNEL LINING CLASS II	1,842.00	TON		$	
0250	02484		CHANNEL LINING CLASS III	20.00	TON		$	
0260	02602		FABRIC-GEOTEXTILE CLASS 1	23.00	SQYD		$	
0270	02650		MAINTAIN & CONTROL TRAFFIC (JACKSON US 421 HSIP)	1.00	LS		$	
0280	02697		EDGELINE RUMBLE STRIPS	6,045.00	LF		$	
0290	02701		TEMP SILT FENCE	19,661.00	LF		$	
0300	02703		SILT TRAP TYPE A	27.00	EACH		$	
0310	02704		SILT TRAP TYPE B	27.00	EACH		$	
0320	02705		SILT TRAP TYPE C	27.00	EACH		$	
0330	02706		CLEAN SILT TRAP TYPE A	27.00	EACH		$	
0340	02707		CLEAN SILT TRAP TYPE B	27.00	EACH		$	
0350	02708		CLEAN SILT TRAP TYPE C	27.00	EACH		$	
0360	02726		STAKING (JACKSON US 421 HSIP)	1.00	LS		$	
0370	03269		TRIM & REMOVE TREES & BRUSH	16,015.00	LF		$	
0380	05950		EROSION CONTROL BLANKET	10,000.00	SQYD		$	
0390	05952		TEMP MULCH	87,815.00	SQYD		$	

234214

PROPOSAL BID ITEMS

Report Date 7/26/23

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0400	05953		TEMP SEEDING AND PROTECTION	65,534.00	SQYD		$	
0410	05963		INITIAL FERTILIZER	4.00	TON		$	
0420	05964		MAINTENANCE FERTILIZER	6.80	TON		$	
0430	05985		SEEDING AND PROTECTION	131,067.00	SQYD		$	
0440	05992		AGRICULTURAL LIMESTONE	81.20	TON		$	
0450	06510		PAVE STRIPING-TEMP PAINT-4 IN	12,000.00	LF		$	
0460	06568		PAVE MARKING-THERMO STOP BAR-24IN	290.00	LF		$	
0470	06572		PAVE MARKING-DOTTED LANE EXTEN	291.00	LF		$	
0480	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	5,273.75	LF		$	
0490	24651ED		CONCRETE ISLAND	8.00	SQYD		$	
0500	24995EC		PAVE STRIPING-SPRAY THERMO-6 IN W	85,840.00	LF		$	
0510	24996EC		PAVE STRIPING-SPRAY THERMO-6 IN Y	73,291.00	LF		$	
0520	26175EC		ROADSIDE REGRADING	8,762.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0530	00461		CULVERT PIPE-15 IN	11.00	LF		$	
0540	00462		CULVERT PIPE-18 IN	363.00	LF		$	
0550	00464		CULVERT PIPE-24 IN	295.00	LF		$	
0560	00472		CULVERT PIPE-60 IN	88.50	LF		$	
0570	01005		PERFORATED PIPE EDGE DRAIN-4 IN	1,450.00	LF		$	
0580	01010		NON-PERFORATED PIPE-4 IN	130.00	LF		$	
0590	01024		PERF PIPE HEADWALL TY 2-4 IN	5.00	EACH		$	
0600	01310		REMOVE PIPE	323.00	LF		$	
0610	01490		DROP BOX INLET TYPE 1	2.00	EACH		$	
0620	01650		JUNCTION BOX	1.00	EACH		$	
0630	01726		SAFETY BOX INLET-18 IN SDB-1	23.00	EACH		$	
0640	01727		SAFETY BOX INLET-24 IN SDB-1	7.00	EACH		$	
0650	01728		SAFETY BOX INLET-18 IN DBL SDB-5	2.00	EACH		$	
0660	01729		SAFETY BOX INLET-24 IN DBL SDB-5	7.00	EACH		$	
0670	02603		FABRIC-GEOTEXTILE CLASS 2	20.50	SQYD		$	
0680	02607		FABRIC-GEOTEXTILE CLASS 2 FOR PIPE	2,225.00	SQYD	$2.00	$	$4,450.00
0690	02625		REMOVE HEADWALL	59.00	EACH		$	
0700	02690		SAFELOADING	5.40	CUYD		$	
0710	08100		CONCRETE-CLASS A	74.60	CUYD		$	
0720	08150		STEEL REINFORCEMENT	1,874.00	LB		$	
0730	24814EC		PIPELINE INSPECTION	679.00	LF		$	
0740	26130ED		SLOPED AND MITERED HEADWALL-15 IN	1.00	EACH		$	
0750	26131ED		SLOPED AND MITERED HEADWALL-18 IN	9.00	EACH		$	
0760	26132ED		SLOPED AND MITERED HEADWALL-24 IN	8.00	EACH		$	

Section: 0004 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0770	02562		TEMPORARY SIGNS	470.00	SQFT		$	
0780	02567		DELINEATOR POSTS	18.00	EACH		$	

PROPOSAL BID ITEMS

234214

Report Date 7/26/23

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0790	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		$	
0800	06406		SBM ALUM SHEET SIGNS .080 IN	117.00	SQFT		$	
0810	06410		STEEL POST TYPE 1	165.00	LF		$	
0820	21373ND		REMOVE SIGN	11.00	EACH		$	
0830	24631EC		BARCODE SIGN INVENTORY	13.00	EACH		$	

Section: 0005 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0840	02569		DEMOBILIZATION	1.00	LS		$	