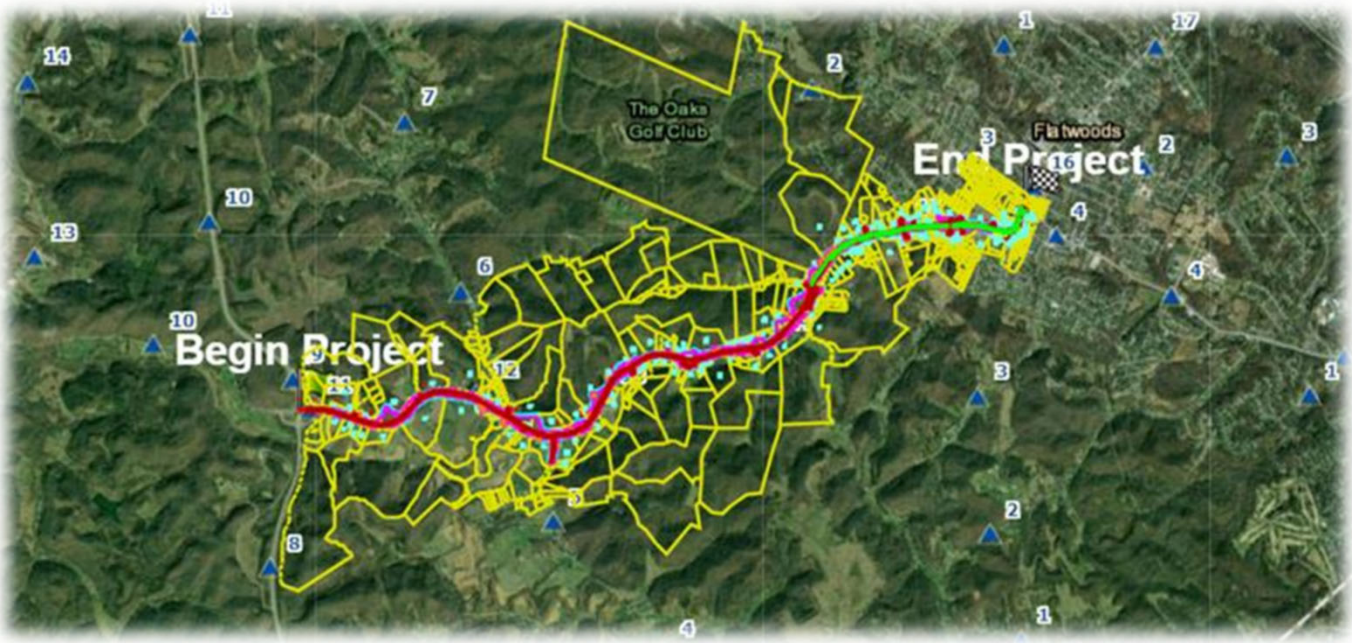
KENTUCKY TRANSPORTATION CABINET

Value Study

Report – Final



KY 207 Reconstruction | Item No. 9-8509

Greenup County

Kentucky Transportation Cabinet

VE Letter Agreement No. 05

Study Dates: June 16-18, and June 20, 2025

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Disclaimer

The information contained in this report summarizes the professional opinions of the Value Team members offered during the Value Study. These opinions were based on the information provided to the Value Team at the time of the Study. This information may develop further as the project continues, and new data may become available after this report is submitted. Evaluation of how this new information may affect the value proposals and findings contained in this report must be considered when using its content to judge their feasibility or any decisions are made about them.

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PART I

Value Study Results and Proposals

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Section

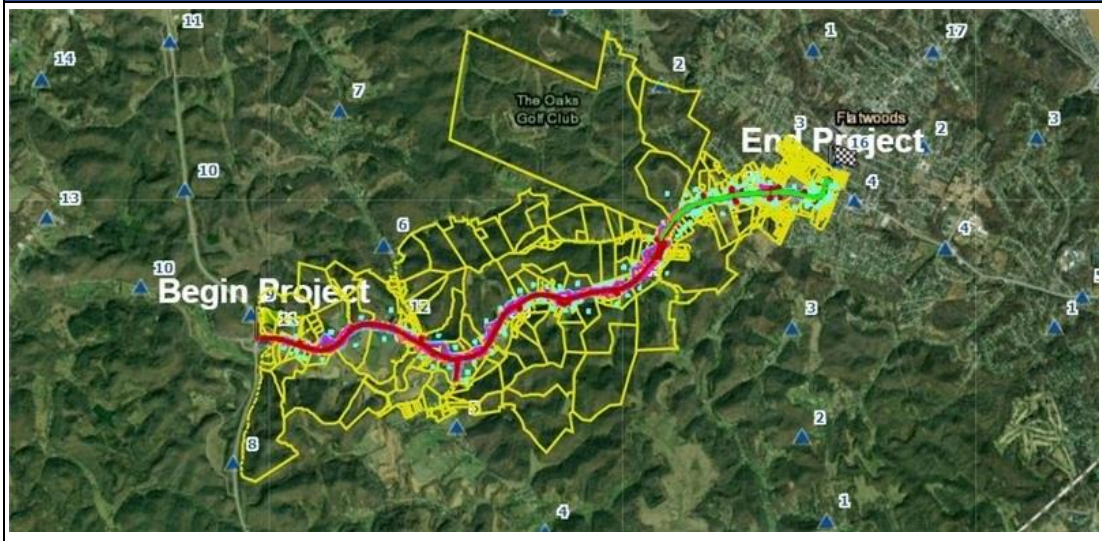
1

Executive Summary

1.1 Value Study Results

VALUE STUDY RESULTS SUMMARY				
	Project Name:	KY 207 Reconstruction	**Item No.:**	9-8509
	Project Location:	Greenup County, KY	**Designer:**	HMB
	Client:	Kentucky Transportation Cabinet (KYTC)		
	Value Study Dates:	June 16-18 and June 20, 2025	**Current Working Estimate (Construction):**	Urban Section - $12.5M Rural Section - $24.8M
	Baseline:	Preferred Alignment		

PROJECT OVERVIEW



This project is on KY 207 in Greenup County, Kentucky, from the Industrial Parkway – KY 67 (MP 10.932) to the KY 207/KY 693 intersection (MP 15.88) in Flatwoods.

The project corridor along KY 207 contains both rural (MP 11 to MP 14.6) and urban (MP 14.6 to MP 15.9) sections. Both sections are classified as major collectors having 10’ driving lanes. The rural section has 0’ to 2’ paved shoulders, little to no clear zone, and a posted speed limit of 55 mph (MP 10.932 to MP 14.286). The urban section has posted speed limits of both 45 mph (MP 14.286 to MP 14.941) and then 35 mph (MP 14.941 to MP 15.88) closer into town. A stretch of the urban section has sidewalks (MP 15.75 to MP 15.88).

The existing roadway has approximately 42 horizontal curves with 22 meeting 55-mph design criteria. An additional 4 curves meet 45 mph with the remaining 16 curves not meeting a design speed of at least 45 mph. There are approximately 69 vertical curves with 22 meeting 55-mph design criteria. An additional 7 curves meet 45 mph with the remaining 40 curves not meeting a design speed of at least 45 mph. There is insufficient sight distance at school bus stop locations, driver passing areas, and at intersections throughout the corridor. There is also congested traffic at key intersections. One congested intersection is the 3-way stop at KY 207 and KY 503 and a second is where KY 207 makes a 90-degree turn (through movement) joining KY 693.

Right-of-way plans are ready to submit. The project is not currently funded for construction.

VALUE STUDY BENEFITS | **KEY WORKSHOP OUTCOMES**

After reviewing the project documents and receiving a "story map" presentation by the Kentucky Transportation Cabinet (KYTC) and design team (HMB), the value team began to see their opportunity to contribute suggestions to the design to improve the value of the project through the alignment of function, performance and cost. The value team developed several alternatives to address right-of-way, roadway sections, hydrological impacts, contract packaging, earthwork and innovative intersections. These alternatives aligned with the project's purpose and need, to improve safety and reduce travel time. Because the value study is an exercise in adding value in lieu of cutting scope, some of the alternatives added cost; however, from the value team's perspective, improved function and performance. In all cases, the value team considered an alternative's impact to the performance attributes discussed with the project team on the first day (see **Appendix B: Project Analysis**).	The value team brainstormed 120 ideas and, of these, developed 24 value proposals. The value proposals apply to: (1) Urban Section only; (2) Rural Section only; or (3) both Urban and Rural Sections. The value team developed two Value Packages for the project team's consideration. These packages are titled "Optimize Alignment" and "Best Value," with the intent of recommending how the value proposals could work in combination with one another to achieve greater value. In addition to the value proposals presented, 33 Design/Estimate Comments were identified for the project team to consider in the next phase of design development. The value team was specifically asked by the project team to challenge the cost estimate; the output of this request was a thorough cost analysis (see **Appendix F: Cost Analysis**). The project team met regarding the disposition of value proposals; of the 24 value proposals developed, 16 were determined as "Further Study," and 8 "Reject" (see **Section 2.2**).

1.2 Value Study Background

A virtual value study was conducted on June 16-18 and June 20, 2025, on the project documents prepared by the designer, HMB, for the KY 207 Reconstruction, Greenup County project. The following value study background includes discussion on project goals, project purpose and need, constraints, value study objectives, and value study highlights.

The project goals, purpose and need and the workshop objectives were identified and discussed during the in-brief presentation given by the project team to the value team members on Monday, June 16, 2025.

1.2.1 Project Purpose and Need

A project's "need" is an identified transportation deficiency or problem, and its "purpose" is the set of objectives that will be met to address the transportation deficiency. A reasonable solution or range of solutions is developed and evaluated based on these objectives.

From the Performance Based Flexible Solution's (PBFS) study's *Executive Summary*, the purpose of the project is to design an improved KY 207 road connecting Flatwoods at KY 207/KY 693 and the Industrial Parkway to improve safety and reduce travel time. Several needs of the project have been identified:

Improve existing horizontal/vertical curves
Improve safety, including that of children/school bus stops and at the Super Quik station intersection
Improve emergency response times and commute times to Industrial Parkway
Reduce collisions and congestion
Provide best junction of KY 207 / KY 693
Paved shoulders
Reconstruct areas where flooding occurs
Consideration of bikes and pedestrian
Meet future traffic volumes
Minimize impact to adjacent property owners
Maintain traffic throughout construction
Get most value for the dollar
Economic development opportunities
Consider project as 2 sections, 1 rural and 1 urban
Explore possibility of additional lanes

1.2.2 Value Study Objectives

During the in-brief meeting, the following list of objectives were discussed and focused the value team's effort during the workshop:

- Apply solid VM principles to review project for value (function/resources) improvements
- Challenge cost estimates
- Review relocations, specifically those required for septic
- Minimize right-of-way impacts
- Evaluate roadway section, shoulder width, and clear zone
- Evaluate hydrological impacts
- Evaluate contract packaging
- Review earthwork
- Consider innovation intersections

1.2.3 Project Constraints

The following list of constraints were also discussed during the in-brief meeting. Constraints are restrictions on some parameters of a solution (e.g., laws, standards, market demand, policies, resources, commitments made, etc.) and they can be real or perceived. The value team considered these constraints throughout the workshop.

- Maintain two lanes of traffic during construction (no full closure)
- No major deviation from project goals
- There needs to be some improvement on the intersections, equal to or better

1.2.4 Value Study Highlights

- **Preparation** - Value team review of project documents resulted in Key Issue Memos documenting issues, observations, risks, questions, and targets of opportunity for the value study. This initial effort prepared the value team to be engaged throughout the workshop. **See Appendix B, Project Analysis.**
- **Information** – After the in-brief presentation, the value team discussed the workshop objectives (the focus for the value study), identified and defined key performance criteria, and discussed potential risks (threats) to performance, schedule, and cost. A cost model was also reviewed with a focus on 80% of the costs found in 20% of the items (Pareto). **See Appendix B, Project Analysis.**
- **Function Analysis / Creativity** – Key functions were identified and later selected by the value team that proved useful in Creativity, including: Increase Sight-distance, Maintain Traffic, Reduce Congestion, Improve Continuity, Access Recreation, Acquire Property, Reduce Maintenance, Support Traffic, Improve Channelization, Convey Water, and Improve Aesthetic. **See Appendix C, Function Analysis and Appendix D, Idea List and Idea Evaluation.**
- **Evaluation** – Using the previously identified/defined performance criteria and a value rubric, the value team scored ideas that they believed would optimize value for the project. **See Appendix D, Idea List and Idea Evaluation.**
- **Development** – During the development of the value proposals, the value team completed workbooks that included narrative, performance impacts, sketches, and costs. In addition, the value team identified two Value Packages, “Optimize Alignment” and “Best Value.” **See Section 2, Summary Results and Individual Proposals.**
- **Presentation** – The out-brief presentation was conducted on June 20, 2025, wherein summary results and key findings were presented for discussion. A copy of the out-brief presentation is provided as part of the study deliverables.
- **Post-Workshop** - Following the out-brief presentation, the value team completed their team review of value proposals and resolved comments. In addition, **preliminary** draft deliverables were provided that included the out-brief presentation, workbooks, and implementation form so that the project team could consider in their next phase of design development. Final draft deliverables include this Value Study Report, Preliminary Determination Form, and Value Study Summary Results.
- **Implementation** – After the value study, the KYTC project team met to discuss and document their preliminary determination of the developed ideas. A summary of the Value Engineering recommendations and decisions regarding these recommendations appears in Section 2.2 of this report (Table of Value Proposals – Preliminary Determination). Please note that 16 of the value

proposals were determined as "Further Study" and it is recommended that the project team update the Preliminary Determination Form (as part of Section 2.2 and a standalone form) so that KYTC can complete the table below for FHWA reporting purposes.

# of Proposed VE Recommendations	Value of Proposed VE Recommendations (Cost Avoid Only)	Value of VE Proposed VE Recommendations (Cost Add Only)	# of Approved VE Recommendations	Value of Approved VE Recommendations (Cost Avoid Only)	Value of Approved VE Recommendations (Cost Add Only)
Urban Section: 10	*$1,291,000*	*($1,785,000)*	*TBD*	*TBD*	*TBD*
Rural Section: 9	*$15,787,000*	*($58,000)*	*TBD*	*TBD*	*TBD*
Both Urban & Rural Sections: 5	*$11,572,000*	*($229,000)*	*TBD*	*TBD*	*TBD*
Total: 24	*$28,650,000*	*($2,072,000)*	*TBD*	*TBD*	*TBD*

Section

2

Value Study Results and Proposals

2.1 Introduction

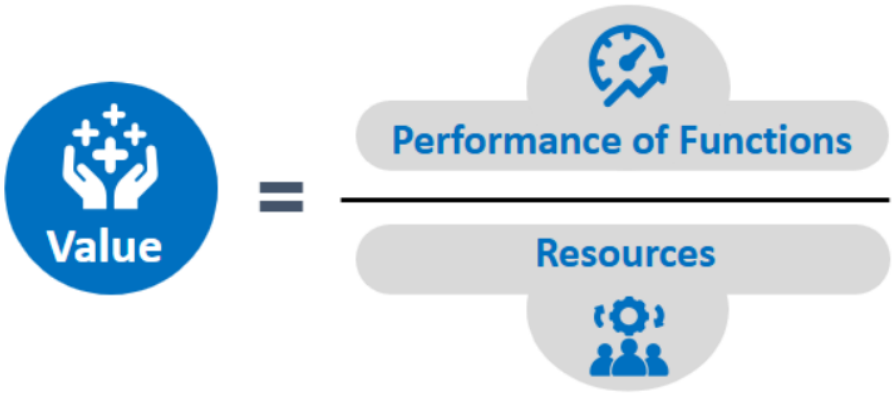
The value team brainstormed 119 creative ideas, of which 24 ideas were identified for further development as Value Proposals (cost avoidance or cost add). Their detailed development information can be found under "**Individual Value Proposals**" later in this Section.

Also, 33 Comments were prepared and listed in this section so they can be considered in the next phase of design development. The following table tallies and describes each category.

Table 2-1: Classification of Brainstormed Ideas into Value Proposals

Proposal Type	Description	Development Status in this Report	Number of Proposals
Value Proposals	Proposals that avoided/added cost or were not costed in regard to the project being studied.	Developed into write-ups	24
Comments	Recommendations derived from observations made during the value team's review of the project documents and/or during Creativity phase and scored as a "C" during Evaluation phase. These are standalone comments that could be considered by the project team in the next phase of design development.	No write-up provided (standalone comments)	33

It is important to reiterate that the definition of value is as follows:



Understanding Performance of Functions is key in the evaluation and later recommendation of an idea to become a Value Proposal. By definition, a Value Proposal is expected to impact the initial cost of the project being studied (noted as the "Resources" denominator in the formula), and it is expected to improve some elements of the project performance (the numerator, "Performance of Functions"), therefore improving the value of the project. To objectively understand this, performance criteria for this

project were developed with the value team. These criteria were used to both evaluate and develop the creative ideas and are detailed under Performance Evaluations in **Appendix B: Project Analysis** later in this report.

2.2 Tables of Value Proposals – Preliminary Decision

The tables below and on the following pages list all proposals that were developed as part of the value study, separated as follows:

- Those that apply to the Urban Section (Table 2-2.1)
- Those that apply to the Rural Section (Table 2-2.2)
- Those that apply to both the Urban and Rural Sections (Table 2-2.3)

Each table includes:

- Idea Number
- Idea Title
- An assessment of how the idea impacts Reliability, Functionality, Operations & Maintenance, and Schedule (Improved, Maintained, Degraded)
- Initial Cost Avoid (Cost Add)
- **Preliminary Decision**
  - **A (Accept):** any proposal that is accepted in part or in full. The concept is "intent to integrate;" it is possible that the proposal ultimately is not feasible and is not implemented in later design.
  - **FS (Further Study):** any proposal that requires further review by the project team before a decision to "Reject" or "Accept" is made.
  - **AM (Accept with Modification):** any proposal that is determined to be feasible for the next phase of design development but requires some modification.
  - **R (Reject):** any proposal that is 100% rejected.

The last column, Preliminary Decision Rationale, documents the justification of the decision for an alternative. Please note that several alternatives require "Further Study" and, once their disposition is determined to Accept, Accept with Modifications, or Reject, it is suggested that this table be updated.

Table 2-2.1: Value Proposal Table (applies to Urban Section only)

Idea No.	Idea Title	Reliability; Impact on the robustness and service life of the value study subject	Functionality; Impact on the performance and/or quality of the value study subject	O&M; Impact on the robustness and service life of the value study subject	Schedule Impact	Initial Cost Avoid / (Cost Add)	Preliminary Decision* A=Accept; FS=Further Study; AM=Accept with Modification; R=Reject	Preliminary Decision Rationale*
RC-01	Construct a roundabout at KY 693/KY 207 at Super Quik	Improved	Improved	Improved	Maintained	($1,470,000)	FS	The Project Design Team would like to further study this proposal idea. Investigate R/W, access management, public involvement, etc. Perform traffic / safety analysis to determine viability of this option. Would need to know if and how much benefit would be gained. Even if there is significant improvement, would require a new public involvement campaign and get, at least, buy-in from local officials.
AP-07	Reduce ROW impacts by reducing approach relocations	Maintained	Maintained	Improved	Improved	$307,000	R	The Project Design Team has rejected this proposed idea since the approaches have already been designed for safety, MOT, etc. They do not believe there is any opportunity without decreasing intersection safety or complicating MOT.
AR-06	Extend sidewalks to the Reed Street Connection & Park Access Road at Sta 331 + 50	Maintained	Improved	Degraded	Maintained	($9,000)	FS	The Project Design Team would like to further study this proposal idea. There are no existing sidewalks to tie to, but would be possible to extend the sidewalks through this approach to allow for the potential for future sidewalks to tie to. The Project Design Team will talk

Idea No.	Idea Title	Reliability; Impact on the robustness and service life of the value study subject	Functionality; Impact on the performance and/or quality of the value study subject	O&M; Impact on the robustness and service life of the value study subject	Schedule Impact	Initial Cost Avoid / (Cost Add)	Preliminary Decision* A=Accept; FS=Further Study; AM=Accept with Modification; R=Reject	Preliminary Decision Rationale*
								with the City of Flatwoods and if they would like to expand their sidewalk system, they can add this connector as part of it. We can document accordingly.
AR-07	Tighten radii at the KY 207/KY 693 intersection; large radii cause longer ped crossing	Maintained	Improved	Maintained	Maintained	$22,000	FS	The Project Design Team would like to further investigate pedestrian crossing lengths but the radii were set using AutoTurn for trucks.
MT-11	Allow phase shutdown of small roads	Maintained	Maintained	Maintained	Improved	Not costed	FS	The Project Design Team would like to further investigate the detour lengths and Emergency Response times for this proposal idea.
MT-13	Allow closure of existing KY 207 near Conlon St to eliminate need for diversion	Maintained	Improved	Improved	Improved	$363,000	R	The Project Design Team has rejected this proposal idea since this would require detouring the traffic through the neighborhood streets and could potentially cause safety issues and unnecessary road damage to those streets.
IC-04	Eliminate or decrease TWLTL	Maintained	Improved	Improved	Maintained	$484,000	R	The Project Design Team has rejected this proposal idea since they believe it is contradictory to the project goals and believe that it would have a negative impact on safety and congestion.
IA-05	Consider safety lighting options	Maintained	Improved	Degraded	Maintained	($306,000)	FS	The Project Design Team would like to further investigate this proposal idea and the lighting warrants. They would have to discuss with the city to determine if the lighting would be maintained by the City or KYTC. Currently there are cobra heads consistently mounted on the electric poles from the intersection at the end of the project extending to south just past the 90 degree turn at the KY 207/KY 693 intersection. Then there are a few random cobra heads continuing south and a few regular security lights (assume those are private). I assume the City is paying for those and that we'll replace the ones that are relocated as part of our utility agreement. We'll need to include new cobra heads along the new (urban) route but will coordinate that in the utility phase as well (assuming the City will pay the bill). There is the potential that the plans could include provisions for conduit to coordinate any new lighting.
MMF-01	Consider multi-modal facilities	Maintained	Maintained	Maintained	Maintained	$51,000	R	The Project Design Team would like to reject this proposal idea due to determining that there are no potential bus routes and bus stop locations in this area. They believe that the shared use path would accommodate any pedestrians and bicyclists.
AR-071	Terminate project 250 ft west of KY 207/KY 693 intersection	Maintained	Improved	Maintained	Improved	$64,000	R	The Project Design Team would like to reject this proposal idea since they believe it does not meet the purpose and need or the project goals; it also would not

Idea No.	Idea Title	Reliability; Impact on the robustness and service life of the value study subject	Functionality; Impact on the performance and/or quality of the value study subject	O&M; Impact on the robustness and service life of the value study subject	Schedule Impact	Initial Cost Avoid / (Cost Add)	Preliminary Decision* A=Accept; FS=Further Study; AM=Accept with Modification; R=Reject	Preliminary Decision Rationale*
								address the truck turning movements at the intersection itself. One of the project goals for this projects is to improve the intersection and the turning movements through this intersection.

Table 2-2.2: Value Proposal Table (applies to Rural Section only)

Idea No.	Idea Title	Reliability; Impact on the robustness and service life of the value study subject	Functionality; Impact on the performance and/or quality of the value study subject	O&M; Impact on the robustness and service life of the value study subject	Schedule Impact	Initial Cost Avoid / (Cost Add)	Preliminary Decision* A=Accept; FS=Further Study; AM=Accept with Modification; R=Reject	Preliminary Decision Rationale*
RC-04	Use a Green T type intersection at KY 503/KY 207 (no signal)	Maintained	Improved	Maintained	Maintained	Not Costed	FS	The Project Design Team would like to further study this proposal idea. They are not sure that there is enough traffic to substantiate the development of a Green "T" intersection. They will consider the benefit versus cost during their study and also consider any safety concerns since this is a 2-lane facility.
AP-02	Explore alternative approaches to allow for septic to be relocated on existing property	Maintained	Maintained	Maintained	Improved	$4,605,000	FS	The Project Design Team would like to further study this proposal idea and try to implement it into the design. Update: Jeremiah sent the requested documentation to the Project Design Team to help with further study.
AP-06	Utilize retaining wall design to reduce acquisition areas	Maintained	Maintained	Maintained	Maintained	$794,000	FS	The Project Design Team would like to further investigate the potential to utilize more retaining walls in their design. They will look for additional locations. They will also look at the potential to reduce right-of-way and relocations.
IS-01	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs	Maintained	Degraded	Maintained	Improved	$8,446,000	R	The Project Design Team would like to reject this proposal idea. A Performance Based Flexible Solutions (PBFS) team examined this in more detail than VE and it was rejected because it didn't provide significant cost savings when crash costs were considered. The Project Design Team will refer to the work that was performed in the PBFS study on this idea and make it clear that the B/C ration was evaluated, including the safety analysis which did not result in significant cost savings.
MT-04	During construction, restrict roadway to trucks from the west Super Quik into Flatwoods to minimize MOT curves for transitions	Maintained	Maintained	Maintained	Maintained	$372,000	FS	The Project Design Team would like to further study this proposal idea and determine how the trucks would be routed if they are not able to use KY 207. Will also need to look at the vertical curvature in this location to determine if it is feasible.
MT-09	Consider rock or fill "burritos" to maximize part width construction and minimize part width settlement issues and reduce excavation	Maintained	Maintained	Maintained	Maintained	$555,000	FS	The Project Design Team would like to further study this proposal idea since they do believe this is already being proposed with the project. They will review the geotechnical report to determine if this is the case.
RM-12	Use 7' tall culverts to accommodate skid steer cleanout	Improved	Improved	Improved	Maintained	($58,000)	FS	The Project Design Team would like to further study this proposal idea. District 9 has done this with another project in Elliott County where they used 8-ft tall culverts. Being that the structures have not yet been designed, this proposal idea has even more benefit. Will need to study the hydraulics to ensure that minimums are met. They will likely look at using 6-ft tall culverts as well, since the cover heights may pose an issue.

Idea No.	Idea Title	Reliability; Impact on the robustness and service life of the value study subject	Functionality; Impact on the performance and/or quality of the value study subject	O&M; Impact on the robustness and service life of the value study subject	Schedule Impact	Initial Cost Avoid / (Cost Add)	Preliminary Decision* A=Accept; FS=Further Study; AM=Accept with Modification; R=Reject	Preliminary Decision Rationale*
ST-03	Use 8′ shoulder (4′ paved)	Maintained	Maintained	Maintained	Improved	$671,000	FS	The Project Design Team would like to further investigate using 8-ft shoulders with 4-ft paved. The District will discuss with maintenance staff to get their opinion and also will require a review of the Maintenance of Traffic to ensure that they will not need the extra width on the shoulder.
CW-02	Consider precast culverts (RCBC locations)	Maintained	Maintained	Maintained	Improved	$344,000	FS	The Project Design Team would like to further investigate this proposal idea to determine if there is a benefit to MOT.

Table 2-2.3: Value Proposal Table (applies to both Urban and Rural Sections)

Idea No.	Idea Title	Reliability; Impact on the robustness and service life of the value study subject	Functionality; Impact on the performance and/or quality of the value study subject	O&M; Impact on the robustness and service life of the value study subject	Schedule Impact	Initial Cost Avoid / (Cost Add)	Preliminary Decision* A=Accept; FS=Further Study; AM=Accept with Modification; R=Reject	Preliminary Decision Rationale*
AP-08	Many areas throughout project, offset for proposed ROW line seems to be much greater than 10′-15′ from limits of construction; some exceed 30′-50′	Improved	Improved	Improved	Maintained	Approximately 6 acres of reduction to Fee Simple Acquisitions	FS	The Project Design Team would like to further investigate this proposal idea and noted that the proposed right-of-way lines will likely get more conservative as the final R/W plans are developed. They will also have to consider the utility relocations as well.
ST-08	Explore pavement options	Improved	Improved	Improved	Maintained	$142,000	FS	The Project Design Team would like to further study this proposal idea and consult with the Pavement Branch.
IA-03	Add overhead/ streetlighting at major intersections	Maintained	Improved	Degraded	Maintained	($229,000)	FS	The Project Design Team would like to further study this proposal idea and discuss options with the City.
MC-09	Explore alternative delivery types	Maintained	Improved	Maintained	Improved	Not costed	R	The Project Design Team would like to reject this proposal idea as they believe that it does not add any benefit to the project.
ESI-01	Explore spot improvements	Maintained	Maintained	Maintained	Improved	$11,430,000	R	The Project Design Team would like to reject this proposal idea since spot improvements were investigated during preliminary design and as part of PBFS study. The spot improvements were rejected both times as they do not provide geometric consistency and do not meet project goals.

2.4 Comments

Comments represent another category of recommendations from the review of the project documents and subsequent Key Issue Memos (KIM), work that was accomplished by the value team in preparation for the workshop. In addition, during the brainstorming process (Creativity Phase), some ideas were later determined (Evaluation Phase) to also be comments and are included on the list below.

The following table summarizes all those findings the value team identified during the preparation and performance of the value study that are standalone comments for the project design team to consider in the next phase of design development. They should be considered self-explanatory and do not require a formal response to accept or reject.

Table 2-5: Comments

Idea No.	Idea Title
AP-03	Obtain geotechnical information in large cut areas to eliminate possibility of flattening slopes before acquisition phase
AP-04	Do property acquisition as one phase even if construction is multiple phases
AP-05	Phase property acquisition in priority segments
AR-05	Consider best access point to baseball fields
MT-03	Allow the closure of the roadway during construction
RM-04	Use ITS for advanced warning during maintenance
RM-11	Flatten embankments to reduce guardrail
ST-07	Extend asphalt under concrete wedge curb to prevent cracking
CW-01	Use as many open ditches rather than piping water
IT-02	Accommodate tree plantings in urban area, especially near park
MC-02	Let project with Utility Impact notes even if utilities are not clear
MC-03	Place water lines or other allowable utility relocates in construction contract
MC-04	Install temporary rumbles to increase awareness of upcoming construction and increase law enforcement officer presence
MC-05	Split the contracts to $10M or less each due to funding constraints
MC-07	Close shoulders two miles before project to give visual cue of entering a work zone
MR-01	Pre-negotiate unit rates with contractors
MR-02	Get temporary easement for geotechnical drilling; additional geotechnical information will help refine plans and possibly reduce excavation quantities
MR-04	Make utility relocations part of the construction contract
MR-05	Employ a robust public engagement during ROW and construction phases
MR-06	Complete geotechnical exploration after ROW purchase
RW-01	Utilize recycled materials like reclaimed asphalt pavement
RW-05	Use recycled materials or reclaimed asphalt pavement to reduce the need for new materials
RW-06	Identify borrow opportunities with contiguous projects
RW-11	Use excess excavation to construct usage areas along industrial parkway

Idea No.	Idea Title
DC-01	Paving quantities show 0.75D base; the approved pavement design and the typical sections all list 1.0D base
DC-02	Need surfacing schedule in typical for shared use path
DC-03	could limits of prop. row be reduced in certain areas to reduce total area needed for acquisition
DC-04	Remove rock layer designations from cut slope sheets in the geotechnical section (R175q, 175y,175aa and others)
DC-05	Joint adhesive shown on typical for diversion (not needed).
EC-01	Using the 1.0D base is also more cost effective than 0.75D base (lower bid price)
EC-02	Need to verify excavation quantities
EC-03	Estimates appear to be missing escalation to mid-point of construction
EC-04	Some unit prices used appear to be low compared to the unit prices from bid results from 2024

2.5 Individual Value Proposals

The following pages detail the Value Proposals developed as part of the study by the value team and include the following information:

- Unique Identifying Number (XX-##)
- Creative Idea Title
- Function Identification
- Associated Ideas, if applicable
- Value Proposal Synopsis – A brief statement summarizing the proposal's value proposition
- Initial Cost Avoidance – Estimated cost avoidance or cost addition (a positive number indicates a reduction in cost and a negative number indicates an increase in cost)
- Qualitative Benefits (improved, maintained, degraded)
    - Reliability – Impact on the robustness and service life of the value study subject
    - Operations & Maintenance – Impact on future and long-term operations and maintenance related to the value study subject
    - Functionality – Impact on the performance and/or quality of the value study subject
    - Schedule Impact – Time impact anticipated to result from the proposal
- Baseline Concept Description – Brief description of the baseline concept that would be changed by the relevant value proposal
- Value Proposal Description – Brief summary of the value proposal relative to the baseline concept
- Advantages and Disadvantages – Bulleted list of potential benefits and drawbacks of the value proposal
- Discussion and Justification – Detailed justification, including technical considerations, cost considerations, schedule impacts, risk considerations, project management considerations, stakeholder acceptance, implementation considerations
- Review Comments – Addresses any review comments or feedback received during the out-brief meeting
- Impact to Performance – Addresses and impacts to performance attributes (see **Appendix B: Project Analysis**) as a result of this value proposal

- Sketches and Diagrams – To assist the reader in visualizing how the proposal differs from the baseline concept
- Cost Estimates – Supports cost avoid / cost add, including any assumptions and calculations

The cost data provided by the project team was used in estimating costs for value proposals. Where the value team has offered alternate costs, they are provided for information only, reflective of the short duration of the value study, and should be evaluated by the project team. Value Proposals are provided for their evaluation and implementation exclusively by the project team.

VALUE PROPOSAL
RC-01
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Construct a roundabout at KY 693/KY 207 at Super Quik
FUNCTION	**Reduce Congestion**

VALUE PROPOSAL SYNOPSIS:

A roundabout at the KY 207/KY 693 intersection will improve traffic operations and safety. This could be executed as a stand-alone project.

Reliability	**Improved**	**Functionality**	**Improved**	**$ Initial Cost Add**	
O&M	**Improved**	**Schedule Impact**	**Maintained**	**($1,470,000)**	

BASELINE CONCEPT DESCRIPTION:

In the baseline concept, the KY 693/KY 207 intersection is a traditional signalized intersection.

VALUE PROPOSAL DESCRIPTION:

Roundabout would improve safety, improve traffic operations, and reduce O&M cost by eliminating a traffic signal.

ADVANTAGES:	DISADVANTAGES:
● Reduction in crashes (improve safety)	● Expands scope
● Improve traffic operations (reduce congestion)	● Not discussed during public engagement
● Eliminates traffic signal reducing O&M cost	● Additional construction cost
	● Additional ROW & Utility Impacts

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$3,816,000	$0	$3,816,000
VALUE PROPOSAL	$5,286,000	$0	$5,286,000
TOTAL (Baseline less Proposed)	($1,470,000)	$0	($1,470,000)
			ADD COST

VALUE PROPOSAL

RC-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Construct a roundabout at KY 693/KY 207 at Super Quik

DISCUSSION & JUSTIFICATION:

Reconstructing the KY 207/KY 693 intersection as a roundabout adds value to the project:

• Safety will be improved

• Construction cost will increase

• ROW impacts increase

• Traffic operations will improve

71 crashes occurred in the vicinity of this intersection between Jun 2020 and June 2025. Per FHWA's Proven Safety Countermeasures Fact Sheet, roundabouts can reduce Fatal and Injury crashes by 78%. Of the 71 crashes, 4 involved injuries in a five year period. Applying the 78% reduction, this could mean only 1 Injury crash in a 5 year period. Per SCDOT, roundabouts reduce overall crashes by 35%. This would mean, in a 5 yr period, instead of 71 crashes, only 46 might be expected. Using cost from the PBFS: Fatal/Injury $691,777 and PDO $11,900, the crash cost savings in 5 yrs would be 3X691777 +(71-3-46)X11900=(2,075,331+261,800)=$2,337,131. Over 20 yrs that would be $9,348,524 and over 50 yrs that would be $23,371,310.

Proposed Sketch assumed Inscribed Diameter of 180ft with 2 - 24ft lanes. Dark Circle shows the 180ft diameter. A 2 lane roundabout would be a tight fit.

CAP-X analysis is included and shows a 2 lane roundabout operating better than a signalized intersection. It should be noted that the Yellow alignment will change travel patterns. Two approach lanes may not be needed on all legs. Forecasts, based on the Yellow alignment should be considered along with SIDRA modeling for the roundabout.

OUT-BRIEF PRESENTATION COMMENTS:

No comments captured from out-brief meeting.

VALUE PROPOSAL

RC-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

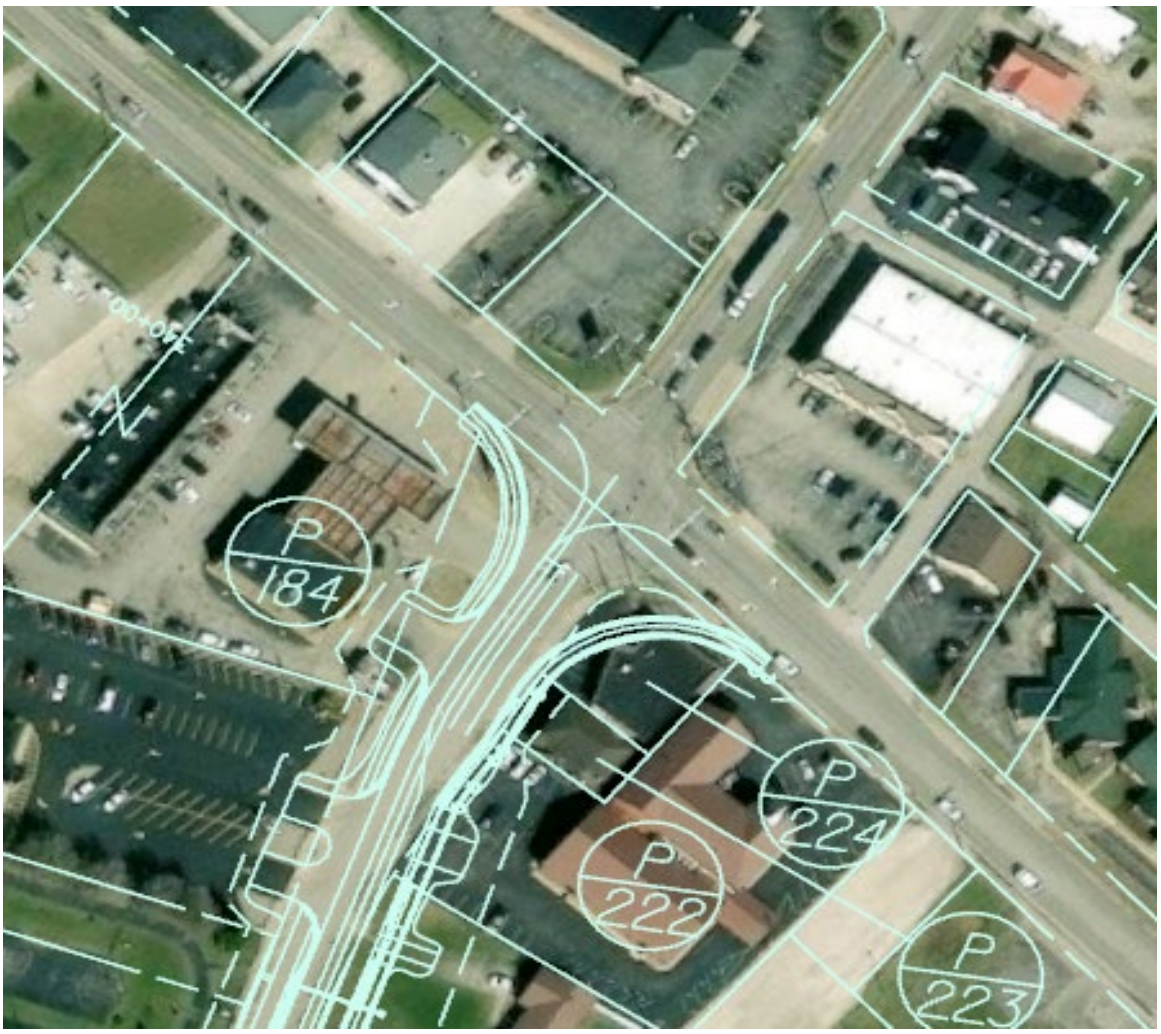
TITLE	Construct a roundabout at KY 693/KY 207 at Super Quik

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Improved
Justification for Impact Score	Traffic operations and safety will improve with a roundabout.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Improved
Justification for Impact Score	Traffic operations and safety will improve with a roundabout.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Improved
Justification for Impact Score	Roundabout will eliminate the existing traffic signal, reducing Maintenance and Operations.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Degraded
Justification for Impact Score	Constructing a roundabout will be disruptive during construction.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance [default].	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Degraded
Justification for Impact Score	Roundabout would lessen impact on one parcel in SE quadrant, but would introduce 2 new parcels. One at NE and one at SE quadrants for intersection.	

TITLE	Construct a roundabout at KY 693/KY 207 at Super Quik

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

RC-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Construct a roundabout at KY 693/KY 207 at Super Quik

SKETCH/DIAGRAM: VALUE PROPOSAL

CAP-X Results

AM Peak

TYPE OF INTERSECTION	Overall V/C Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
2 X 2 Roundabout	0.21	1	Good	Excellent
Traffic Signal	0.39	2	Good	Excellent
2NS X 1EW Roundabout	0.39	3	Good	Excellent
1 X 1 Roundabout	0.42	4	Excellent	Excellent
75 ICD	0.59	5	Excellent	Good
50 ICD	0.59	6	Excellent	Good
All-Way Stop Control	0.92	7	Good	Excellent
Two-Way Stop Control N-S	1.08	8	Fair	Good
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PM Peak

TYPE OF INTERSECTION	Overall v/c Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
2 X 2 Roundabout	0.31	1	Good	Excellent
Traffic Signal	0.45	2	Good	Excellent
2NS X 1EW Roundabout	0.59	3	Good	Excellent
1 X 1 Roundabout	0.62	4	Excellent	Excellent
75 ICD	0.84	5	Excellent	Good
50 ICD	0.87	6	Excellent	Good
All-Way Stop Control	1.36	7	Good	Excellent
Two-Way Stop Control N-S	2.98	8	Fair	Good
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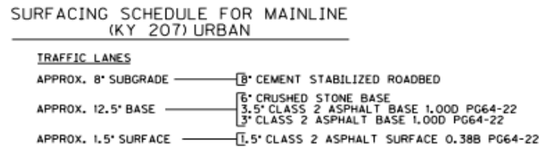
VALUE PROPOSAL
RC-01
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Construct a roundabout at KY 693/KY 207 at Super Quik
Assumptions & Calculations	Very little work is proposed at the intersection for the baseline design. A separate proposal, AR-071, calculated the cost savings of terminating the project just south of the Super Quick to be $69,000. This would be the cost avoided before adding the cost for construction of the roundabout. Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL			
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $	
CL2 ASPH BASE 0.75D PG64-22	27.98%	TON	13,689	$95.00	$1,664,322	13,543	$95.00	$1,646,571	**Section Eliminated**
CRUSHED STONE BASE	27.98%	TON	15,806	$33.03	$668,148	15,641	$33.03	$661,173	Terminate the project just south of Super Quick
CL2 ASPH SURF 0.38B PG64-22	27.98%	TON	4,014	$147.97	$760,139	3,922	$147.97	$742,717	See proposal AR-071
CEMENT STABILIZED ROADBED	27.98%	SY	82,555	$4.44	$469,103	82,222	$4.44	$467,211	This change saves $69,000
SIDEWALK-4 IN CONCRETE	27.98%	SY	2,999	$66.36	$254,698	2,760	$66.36	$234,400	
---ROUNDABOUT---									**Roundabout Estimate** **$1,533,467**
CL2 ASPH BASE 0.75D PG64-22	27.98%	TON				530	$95.00	$64,438	For estimating, entire inscribed circle of 180ft diameter is assume to be same pavement design as Mainline (KY 207) Urban. Area for paving =π×90^2 =π×8100≈3.1416×8100≈25,446.9 SF - 25,4447/9 = 2,827 SY plus 4 legs X ((150 X ((60X48)/2)))/9 = 3,600 -- total 2,827+3,600 = 6,427 SY
CRUSHED STONE BASE	27.98%	TON				2,025	$33.03	$85,600	
CL2 ASPH SURF 0.38B PG64-22	27.98%	TON				2,298	$147.97	$435,177	Surface (6427X110X1.5)/2000 = 530 TONS Base (6427X110X6.5)/2000 = 2298 TONS CSB (6427X105X6)/2000 = 2025 TONS
CEMENT STABILIZED ROADBED	27.98%	SY				6,427	$4.44	$36,520	
SIDEWALK-4 IN CONCRETE	27.98%	SY				4,800	$66.36	$407,652	Sidewalks assume 150 lf X 2 sides of road X 4 legs of intersection X 4ft wide = 4,800 SF
DETECTABLE WARNINGS	27.98%	SF				320	$72	$29,487	
MAINTAIN & CONTROL TRAFFIC	27.98%	LS				1	$75,000	$95,985	
STANDARD CURB AND GUTTER	27.98%	LF				2,781	$34	$122,647	Circumference=π×180≈3.1416×180≈565.49 and Circumference=π×132≈3.1416×132≈414.69 and assume 150 lf X 2 sides of road X 4 legs of intersection = 1,200 lf and 4 legs X 150 lf/median = 600 ----- 566 + 415 + 1,200 + 600 = 2,781
MISC	27.98%	LS				1	$200,000	$255,960	MISC - Placeholder for overheading lighting, signage, striping, mobilization, etc.
TOTAL					$3,816,000			$5,286,000	
							Impact to Initial Cost (Baseline Less Proposed)	**($1,470,000)**	



Note: Total costs are rounded to the nearest thousand dollars.

ADD COST

VALUE PROPOSAL
AP-07
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Reduce ROW impacts by reducing approach relocations
FUNCTION	**Acquire Property**

VALUE PROPOSAL SYNOPSIS:

Maintain the alignment for side road approaches for Greenhills Dr and Murdock Rd. Eliminating the reconstruction of these two approaches to be inline will save in right of way costs and construction costs.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance**
O&M	**Improved**	**Schedule Impact**	**Improved**	**$307,000**

BASELINE CONCEPT DESCRIPTION:

The baseline design includes the reconstruction of Greenhills Dr and Murdock Rd approaches.

VALUE PROPOSAL DESCRIPTION:

Eliminate reconstruction of Greenhills Dr and Murdock Rd approaches and connect these side roads to the mainline near the current configuration. This change will eliminate some right-of-way purchases, reduce construction costs. It will also eliminate some construction work, which will reduce the construction time.

ADVANTAGES:	DISADVANTAGES:
● Ease of construction	● No improvement to intersection geometry
● Reduce right-of-way costs	
● Reduce construction costs	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$336,000	$0	$336,000
VALUE PROPOSAL	$29,000	$0	$29,000
TOTAL (Baseline less Proposed)	$307,000	$0	$307,000

AVOID COST

VALUE PROPOSAL

AP-07

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Reduce ROW impacts by reducing approach relocations

DISCUSSION & JUSTIFICATION:

Eliminating reconstruction of Greenhill Dr and Murdock Rd will save construction costs and eliminate 2 parcel relocations. Greenhill Dr can be connected to the mainline at its current configuration. Murdock Rd can be improved by shifting the approach as shown in the proposed sketch but with less impact than the baseline plan. The reduced work saves $120,000 in construction costs. The baseline design reconstructs these two side roads to align the approaches. Intersections with higher traffic volumes are safer when aligned. The risk of conflicting traffic movements at this location is low due to low traffic volumes.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

AP-07

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Reduce ROW impacts by reducing approach relocations

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Degraded
Justification for Impact Score	Intersection geometry less than ideal, but acceptable due to low traffic volumes.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Improved
Justification for Impact Score	Less roadway to maintain.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	Reduced impact from construction.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Improved
Justification for Impact Score	Less time needed for construction.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	Reduce the number of relocations.	

VALUE PROPOSAL

AP-07

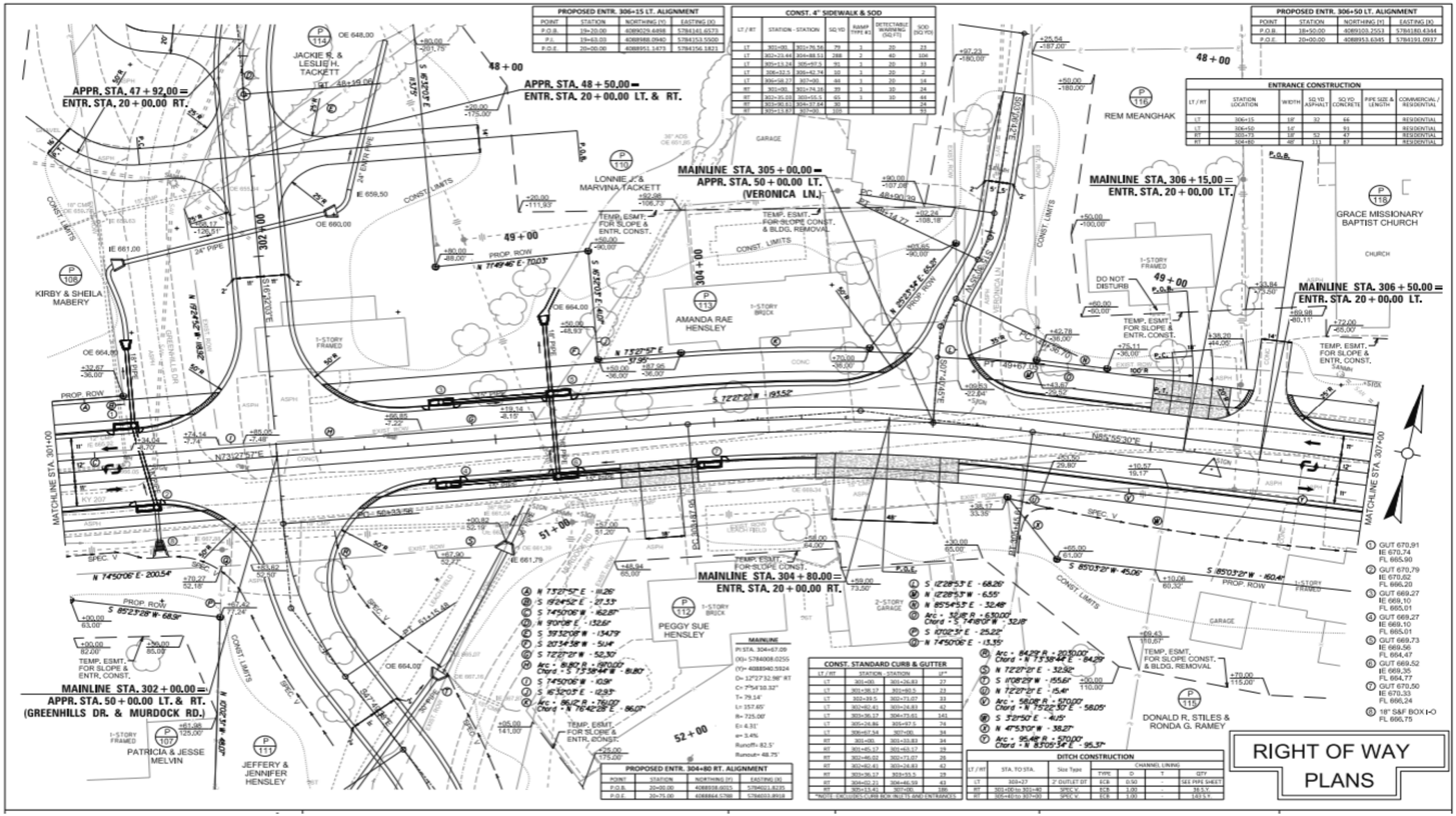
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Reduce ROW impacts by reducing approach relocations

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

AP-07

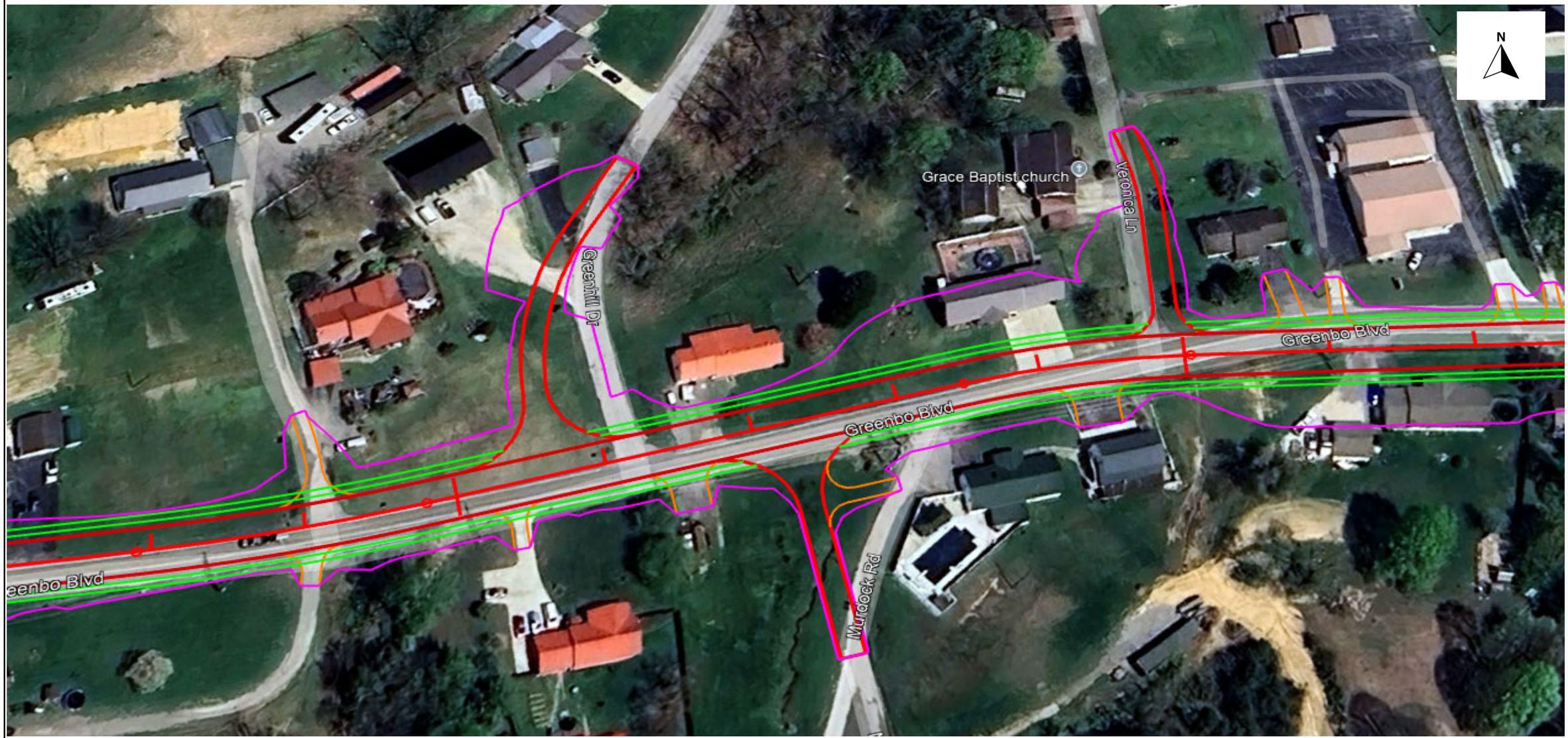
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Reduce ROW impacts by reducing approach relocations

SKETCH/DIAGRAM: VALUE PROPOSAL



VALUE PROPOSAL

AP-07

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Reduce ROW impacts by reducing approach relocations
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction. **The relocation of Parcels item is not within the scope of the construction portion of the construction portion of the project but it is a savings to the overall project cost.**

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Roadway Excavation	27.98%	CY	1,364	$10	$16,793			
Entrance Pipe - 24 IN	27.98%	LF	20	$94	$2,406			
Culvert Pipe - 24 IN	27.98%	LF	96	$228	$28,012	40	$228	$11,672
Culvert Pipe - 30 IN	27.98%	LF	70	$164	$14,692			
Culvert Pipe - 36 IN	27.98%	LF				20	$186	$4,761
30" Precast Headwall	27.98%	EA	2	$3,200	$8,191			
CL2 ASPH SURF 0.38D PG64-22	27.98%	TON	116	$105	$15,588	50	$105	$6,719
CL2 ASPH BASE 0.75D PG64-22	27.98%	TON	412	$95	$50,091	30	$95	$3,647
Crushed Stone Base	27.98%	TON	926	$33	$39,108	60	$33	$2,534
Cement Stabilized Roadbed	27.98%	SY	1,560	$4	$8,864			
Cement	27.98%	TON	29	$260	$9,650			
Relocation of Parcel	10.00%	EACH	2	$65,000	$143,000			
TOTAL					$336,000			$29,000
							Impact to Initial Cost (Baseline Less Proposed)	**$307,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL

AR-06

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Extend sidewalks to the Reed Street Connection & Park Access Road at Sta 331 + 50
FUNCTION	**Access Recreation**

VALUE PROPOSAL SYNOPSIS:

By providing sidewalks connecting KY 207 to Reed Street, access to recreation and pedestrian safety are improved.

Reliability	**Maintained**	**Functionality**	**Improved**	**$ Initial Cost Add**
O&M	**Degraded**	**Schedule Impact**	**Maintained**	**($9,000)**

BASELINE CONCEPT DESCRIPTION:

Sidewalks are provided along mainline in the urban section.

VALUE PROPOSAL DESCRIPTION:

Improve access to recreation areas by providing sidewalk connection from KY 207 to Reed Street residential area and ballparks.

ADVANTAGES:	DISADVANTAGES:
● Pedestrian access improved	● Cost increase
● Pedestrian safety improved	● Additional maintenance of sidewalk

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$1,050,000	$0	$1,050,000
VALUE PROPOSAL	$1,059,000	$0	$1,059,000
TOTAL (Baseline less Proposed)	($9,000)	$0	($9,000)
			ADD COST

VALUE PROPOSAL

AR-06

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Extend sidewalks to the Reed Street Connection & Park Access Road at Sta 331 + 50

DISCUSSION & JUSTIFICATION:

Extending the sidewalks from KY 207 to Reed Street adds value to the project:

• This is a minor design change.

• Approximately 750 sf (83 SY) of additional 4-inch Sidewalk (83 SY X $66.36/SY = $5,507.88 before markup)

• 20 SF additional Detectable Warnings (20 SF X $50.69 = $1,013.80 before markup)

• Future maintenance cost is minimal

• No ROW or Utility impacts

• Improves access from Reed Street to Flatwoods City Park

• Improves access from KY 207 to ball park

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

AR-06

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Extend sidewalks to the Reed Street Connection & Park Access Road at Sta 331 + 50

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Improved
Justification for Impact Score	Providing sidewalks on Reed Street connection separates pedestrians from automobile traffic improving operations and safety.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

VALUE PROPOSAL

AR-06

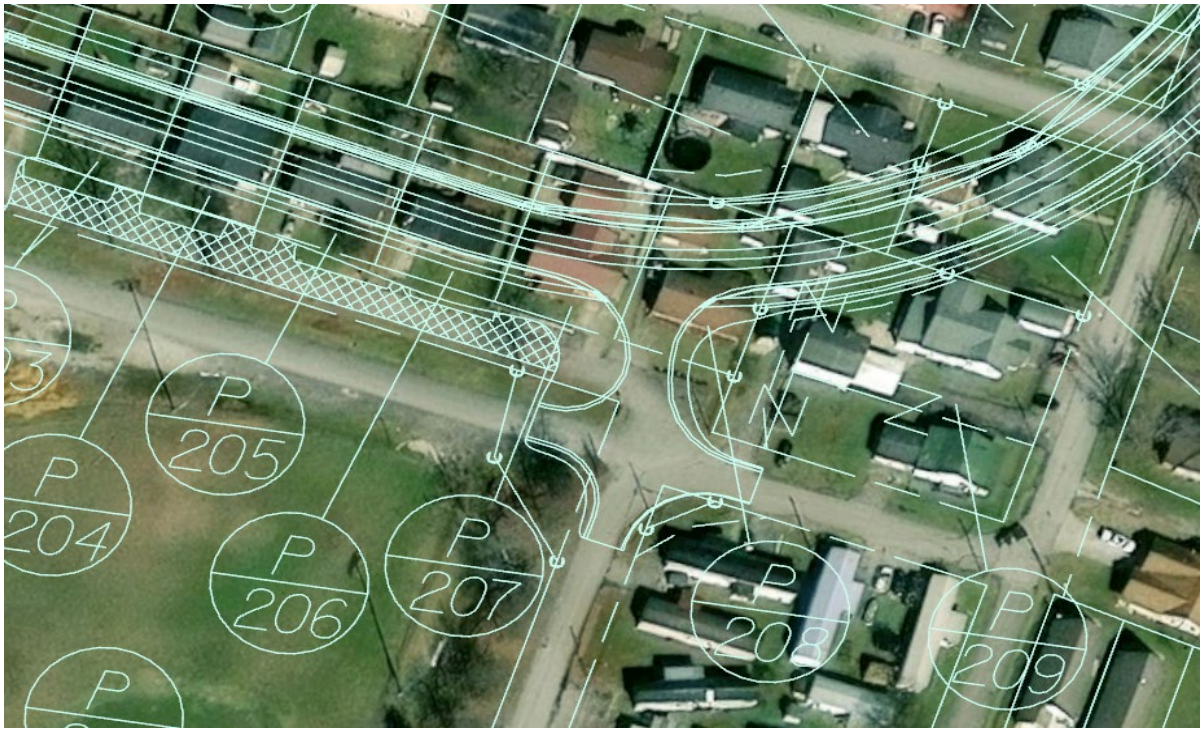
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Extend sidewalks to the Reed Street Connection & Park Access Road at Sta 331 + 50

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

AR-06

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Extend sidewalks to the Reed Street Connection & Park Access Road at Sta 331 + 50

SKETCH/DIAGRAM: VALUE PROPOSAL

VALUE PROPOSAL

AR-06

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Extend sidewalks to the Reed Street Connection & Park Access Road at Sta 331 + 50
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
SIDEWALK-4 IN CONCRETE	27.98%	CY	2,999	$66	$254,698	3,082	$66	$261,747
DETECTABLE WARNINGS	27.98%	SF	8,630	$72	$795,217	8,650	$72	$797,059
TOTAL					$1,050,000			$1,059,000
							Impact to Initial Cost (Baseline Less Proposed)	**($9,000)**

Note: Total costs are rounded to the nearest thousand dollars.

ADD COST

VALUE PROPOSAL
AR-07
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Tighten radii at the KY 207/KY 693 intersection; large radii cause longer ped crossing
FUNCTION	**Access Recreation**

VALUE PROPOSAL SYNOPSIS:

Tightening the radii for the south leg for the KY 207/KY 693 will improve pedestrian safety by reducing crossing time and will enhance traffic signal operations. Value is added by improving access and safety for pedestrians.

Reliability	**Maintained**	**Functionality**	**Improved**	**$ Initial Cost Avoidance**	
O&M	**Maintained**	**Schedule Impact**	**Maintained**	**$22,000**	

BASELINE CONCEPT DESCRIPTION:

The baseline design reconstructs south leg of the KY 207/KY 693 intersection at Super Quick increasing the radii at both SE and SW quadrants to 100 ft.

VALUE PROPOSAL DESCRIPTION:

Keep radii as in the existing condition. This is consistent with NE and NW quadrants and does not increase the pedestrian crossing distance. Enhancing pedestrian safety over the baseline proposed design.

ADVANTAGES:	DISADVANTAGES:
● Improves pedestrian safety	● Turning radii remain tight
● Reduces construction cost	
● Reduces construction time and impact	
● Reduces ROW impact	
● Reduces Utility impact	
● Eliminates need to rebuild traffic signal	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$3,344,000	$0	$3,344,000
VALUE PROPOSAL	$3,322,000	$0	$3,322,000
TOTAL (Baseline less Proposed)	$22,000	$0	$22,000
			AVOID COST

VALUE PROPOSAL

AR-07

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Tighten radii at the KY 207/KY 693 intersection; large radii cause longer ped crossing

DISCUSSION & JUSTIFICATION:

No additional lanes are added in the proposed design. The proposed design only address the turning radii at 2 of the of quadrants. The existing intersections operates adequately with radii of approximately 65 ft. Changing radii has a negative impact on pedestrian crossing distance. This will impact pedestrian safety and could impact signal timing with subsequent negative impact on traffic operations:

• Proposed design increases pedestrian crossing distance from approximately 95 ft to 150 ft - increase of 55 ft - Radii areas are approximately 333 SY

• Reducing radii decreases construction cost

• Reducing radii decreases ROW impacts

• Reducing radii decreases Utility impacts

• Project termini could be moved east 50 to 200 feet from the intersection - this is addressed as AR-071

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

AR-07

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Tighten radii at the KY 207/KY 693 intersection; large radii cause longer ped crossing

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Improved
Justification for Impact Score	Reducing pedestrian crossing time improves traffic signal timing and traffic operations. Pedestrian safety is also improved.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	Less impact to the intersection during construction.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Improved
Justification for Impact Score	Less impact to the intersection during construction reducing construction time and complexity.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	Less impacts to P 224, P 223, and P 184.	

VALUE PROPOSAL

AR-07

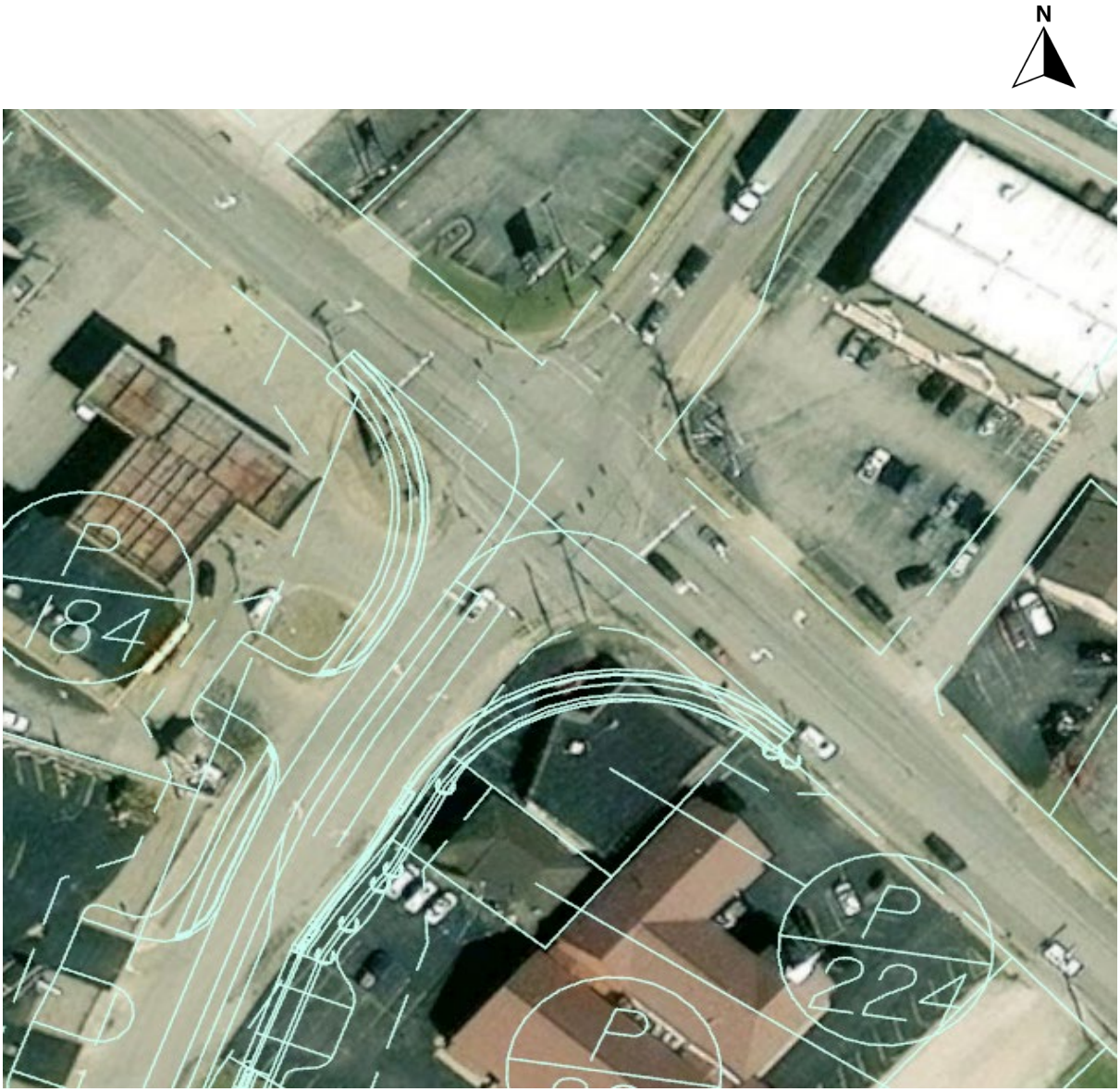
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Tighten radii at the KY 207/KY 693 intersection; large radii cause longer ped crossing

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

AR-07

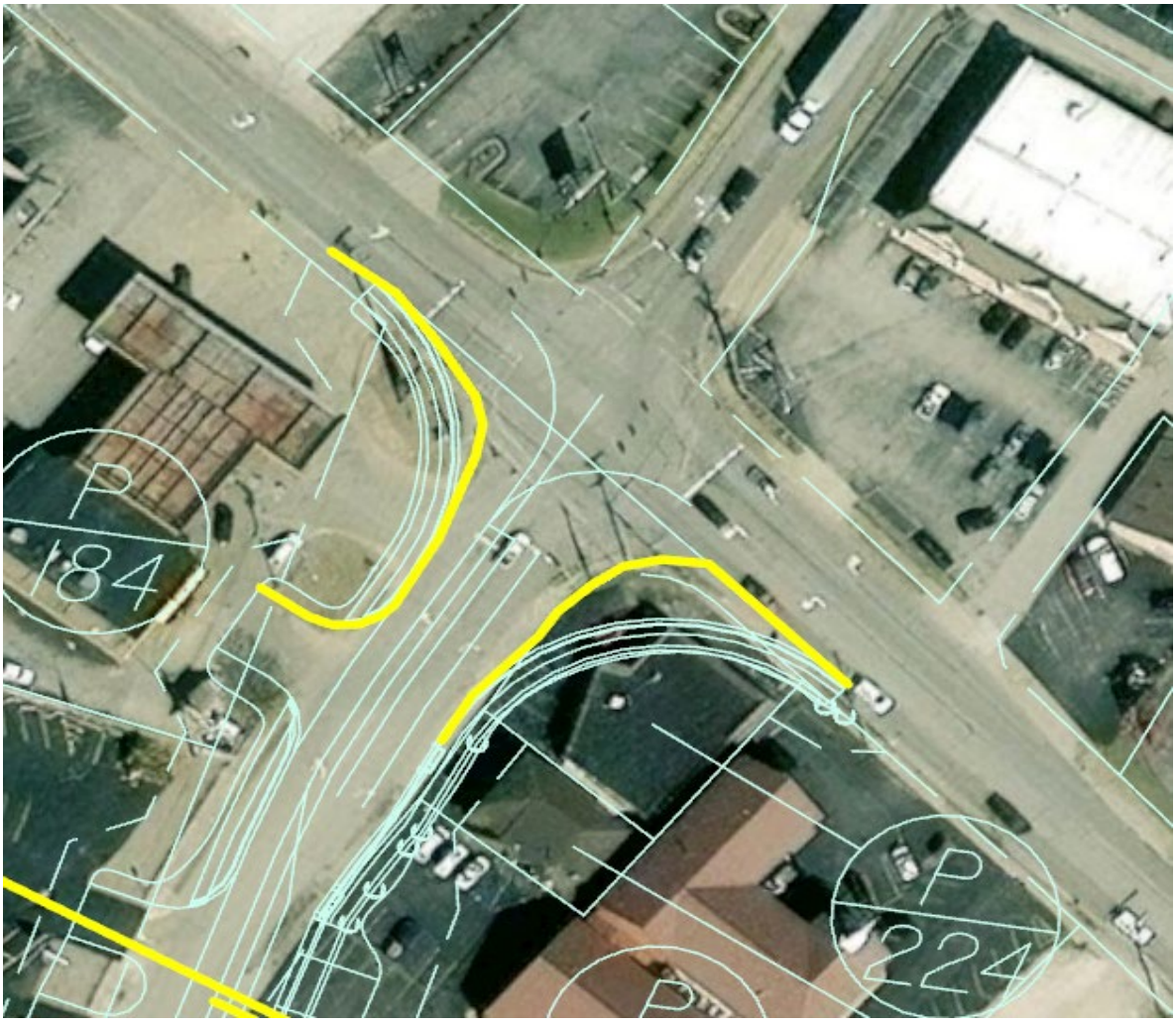
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Tighten radii at the KY 207/KY 693 intersection; large radii cause longer ped crossing

SKETCH/DIAGRAM: VALUE PROPOSAL



VALUE PROPOSAL

AR-07

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Tighten radii at the KY 207/KY 693 intersection; large radii cause longer ped crossing
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
CL2 ASPH BASE 0.75D PG64-22	27.98%	TON	13,689	$95.00	$1,664,322	13,593	$95.00	$1,652,705
CRUSHED STONE BASE	27.98%	TON	15,806	$33.03	$668,148	15,691	$33.03	$663,287
CL2 ASPH SURF 0.38B PG64-22	27.98%	TON	4,014	$105.61	$542,531	3,987	$105.61	$538,814
CEMENT STABILIZED ROADBED	27.98%	SY	82,555	$4.44	$469,103	82,222	$4.44	$467,211
TOTAL					$3,344,000			$3,322,000
							Impact to Initial Cost (Baseline Less Proposed)	**$22,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL

MT-11

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow phase shutdown of small roads
FUNCTION	**Maintain Traffic**

VALUE PROPOSAL SYNOPSIS:

By allowing phase shutdown of local roads with alternate connectivity, the construction phasing becomes simpler and, in theory, more affordable.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance (Add)**
O&M	**Maintained**	**Schedule Impact**	**Improved**	**NOT COSTED**

BASELINE CONCEPT DESCRIPTION:

The baseline proposed allows constant access during construction for local roads in all phases.

VALUE PROPOSAL DESCRIPTION:

The proposal disconnects KY 207 from some local roads for part or all of the construction phases.

ADVANTAGES:	DISADVANTAGES:
● Faster construction	● Public confusion and frustration
● Reduced MOT costs	● Slightly longer access times
● Better quality route tie ins	

NOT COSTED

VALUE PROPOSAL

MT-11

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow phase shutdown of small roads

DISCUSSION & JUSTIFICATION:

Conlon Street, Clearwater Street, Luci Mae Drive, and Reid Street all have alternate access points. By closing them for select phases or for the project duration, contractor safety and efficiency is improved. It would be the preferred method of construction. The cost of such is difficult to capture.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

MT-11

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow phase shutdown of small roads

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Degraded
Justification for Impact Score	Slightly longer commute times during construction.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	Quicker and safer approach construction.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Improved
Justification for Impact Score	Slightly quicker phase construction.	
Risk Impacts	An assessment of the identified risks of the project.	Improved
Justification for Impact Score	Lowers potential for phase construction related crashes and confusion.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Improved
Justification for Impact Score	Improved phasing	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

VALUE PROPOSAL

MT-11

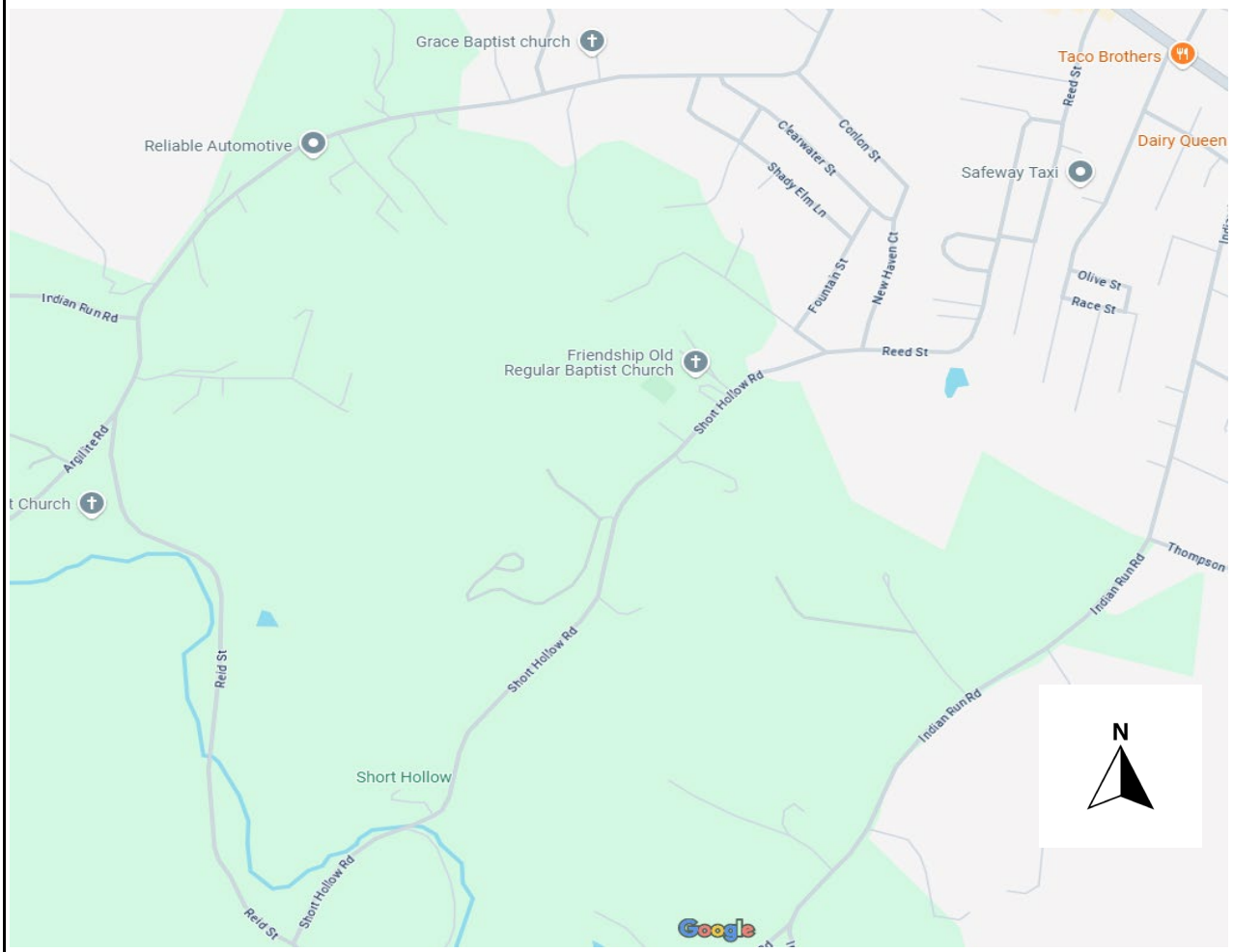
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow phase shutdown of small roads

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

MT-11

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow phase shutdown of small roads

SKETCH/DIAGRAM: VALUE PROPOSAL

VALUE PROPOSAL

MT-13

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow closure of existing KY 207 near Conlon St to eliminate need for diversion
FUNCTION	**Maintain Traffic**
ASSOCIATED IDEAS	AP-09 Shift alignment to the left near Conlon St to avoid houses on right; MT-14 Build Sta 318 to end in pre-phase and temporarily close portion of existing 207 to eliminate diversion road

VALUE PROPOSAL SYNOPSIS:

Adjusting phasing and alignment will reduce costs for diversions.

Reliability	**Maintained**	**Functionality**	**Improved**	**$ Initial Cost Avoidance**	
O&M	**Improved**	**Schedule Impact**	**Improved**	**$363,000**	

BASELINE CONCEPT DESCRIPTION:

Create a diversion for access to KY207 from Greenup Blvd.

VALUE PROPOSAL DESCRIPTION:

Eliminate diversion by moving Mayme St work to first phase with minor alignment shift.

ADVANTAGES:	**DISADVANTAGES:**
● Eliminates detour	● None apparent
● Reduces parcel impact	
● Reduction of 72" pipe	

$ COST SUMMARY	**Initial Costs**	**O&M Costs**	**Total Life Cycle Cost**
BASELINE CONCEPT	$621,000	$0	$621,000
VALUE PROPOSAL	$258,000	$0	$258,000
TOTAL (Baseline less Proposed)	$363,000	$0	$363,000

AVOID COST

VALUE PROPOSAL

MT-13

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow closure of existing KY 207 near Conlon St to eliminate need for diversion

DISCUSSION & JUSTIFICATION:

This proposal will require extensive rework by the design team but has the potential to eliminate quite a few items and simplify phase construction.

If you eliminate Mayme Street and build access in the first phase you can tie in the ultimate in the early phase. This gets local driver familiar to the ultimate patterns. It also eliminates the need for the temp diversion.

The proposal also modifies alignments to reduce impacts to parcels.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

MT-13

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow closure of existing KY 207 near Conlon St to eliminate need for diversion

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Improved
Justification for Impact Score	Improves maintenance by shorter 72" pipe.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	Reduces need for diversion	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Improved
Justification for Impact Score	Simplified Phasing	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	Reduces right-of-way needed.	

VALUE PROPOSAL

MT-13

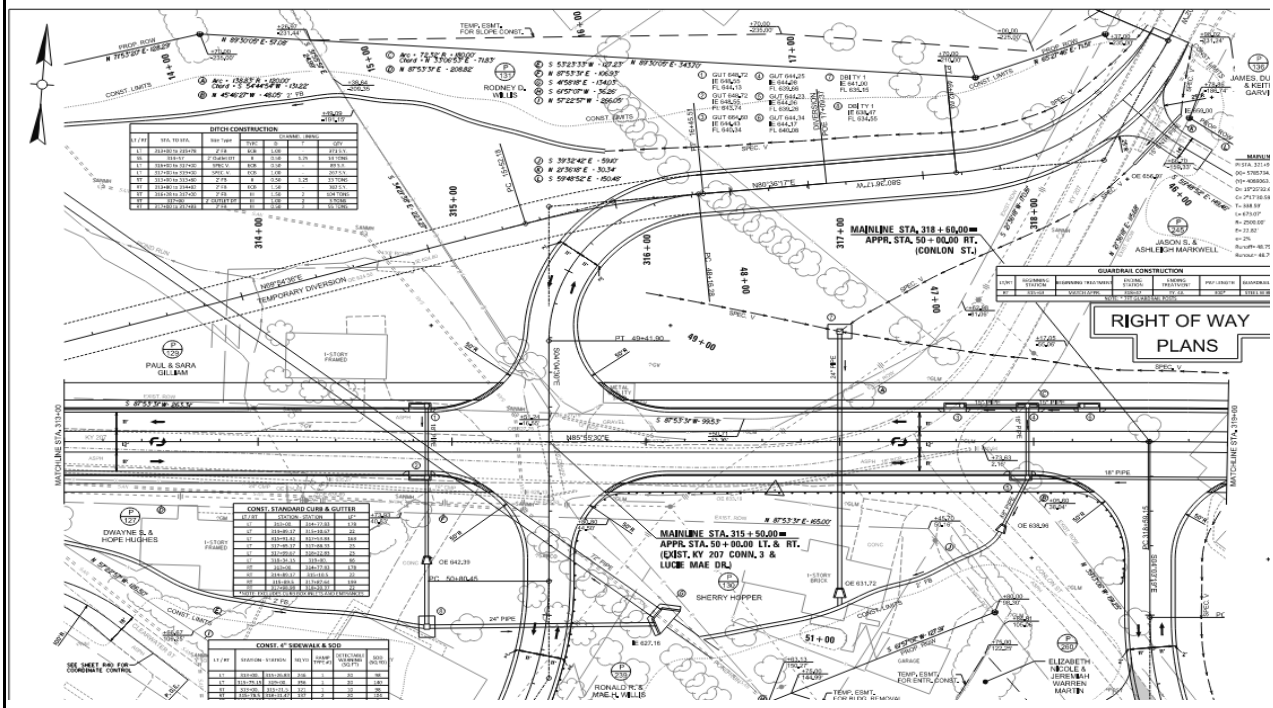
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow closure of existing KY 207 near Conlon St to eliminate need for diversion

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

MT-13

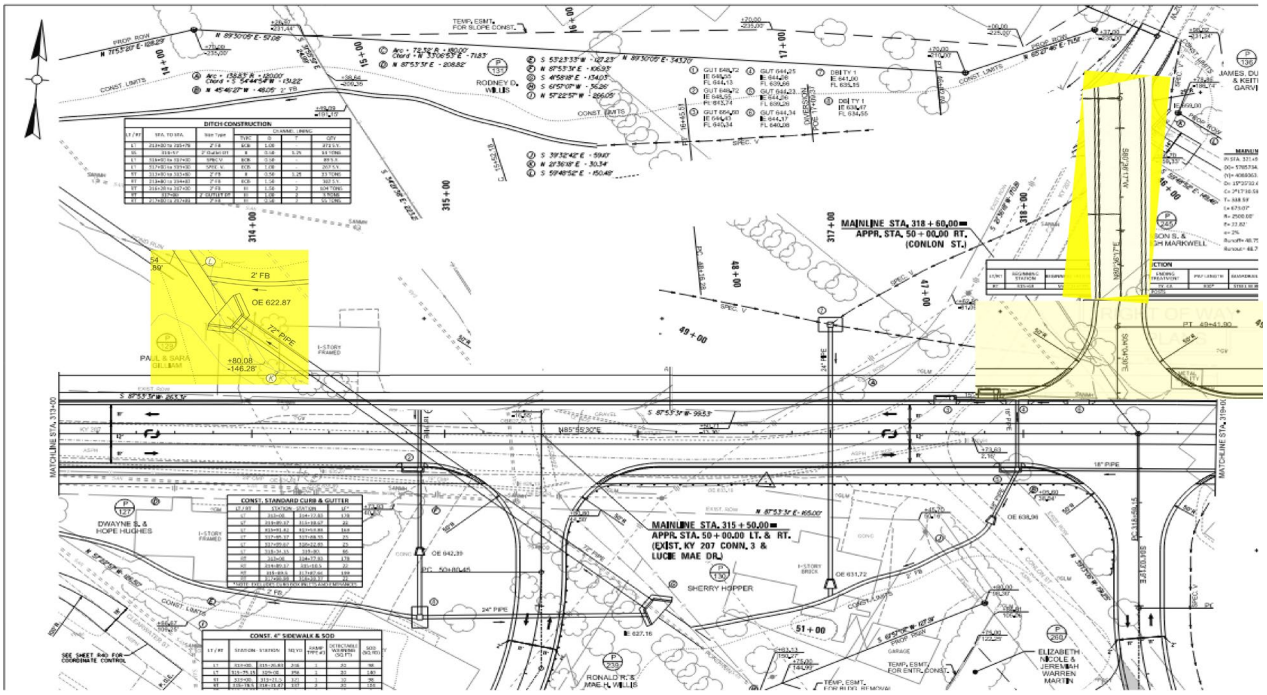
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow closure of existing KY 207 near Conlon St to eliminate need for diversion

SKETCH/DIAGRAM: VALUE PROPOSAL



VALUE PROPOSAL

MT-13

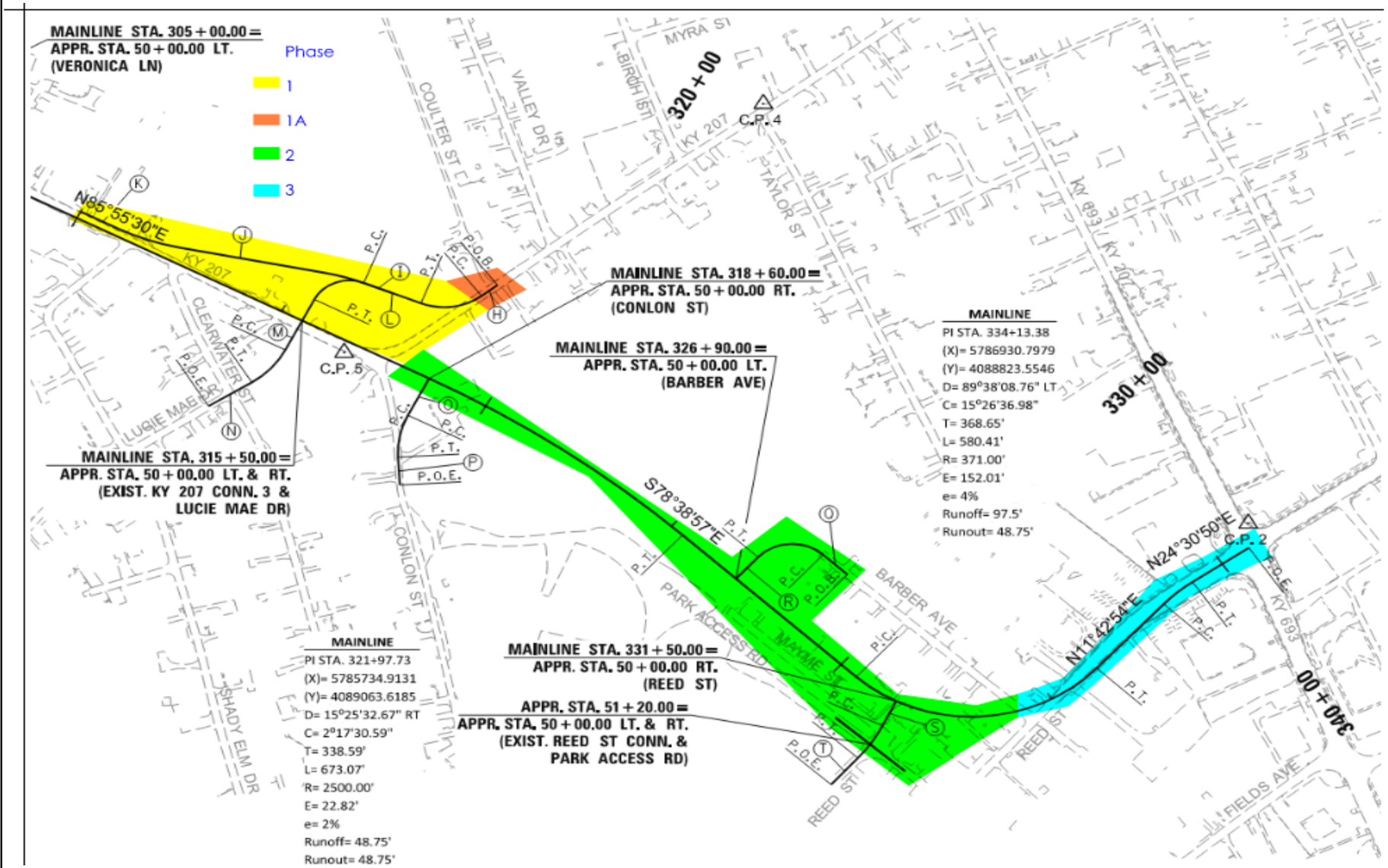
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow closure of existing KY 207 near Conlon St to eliminate need for diversion

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

MT-13

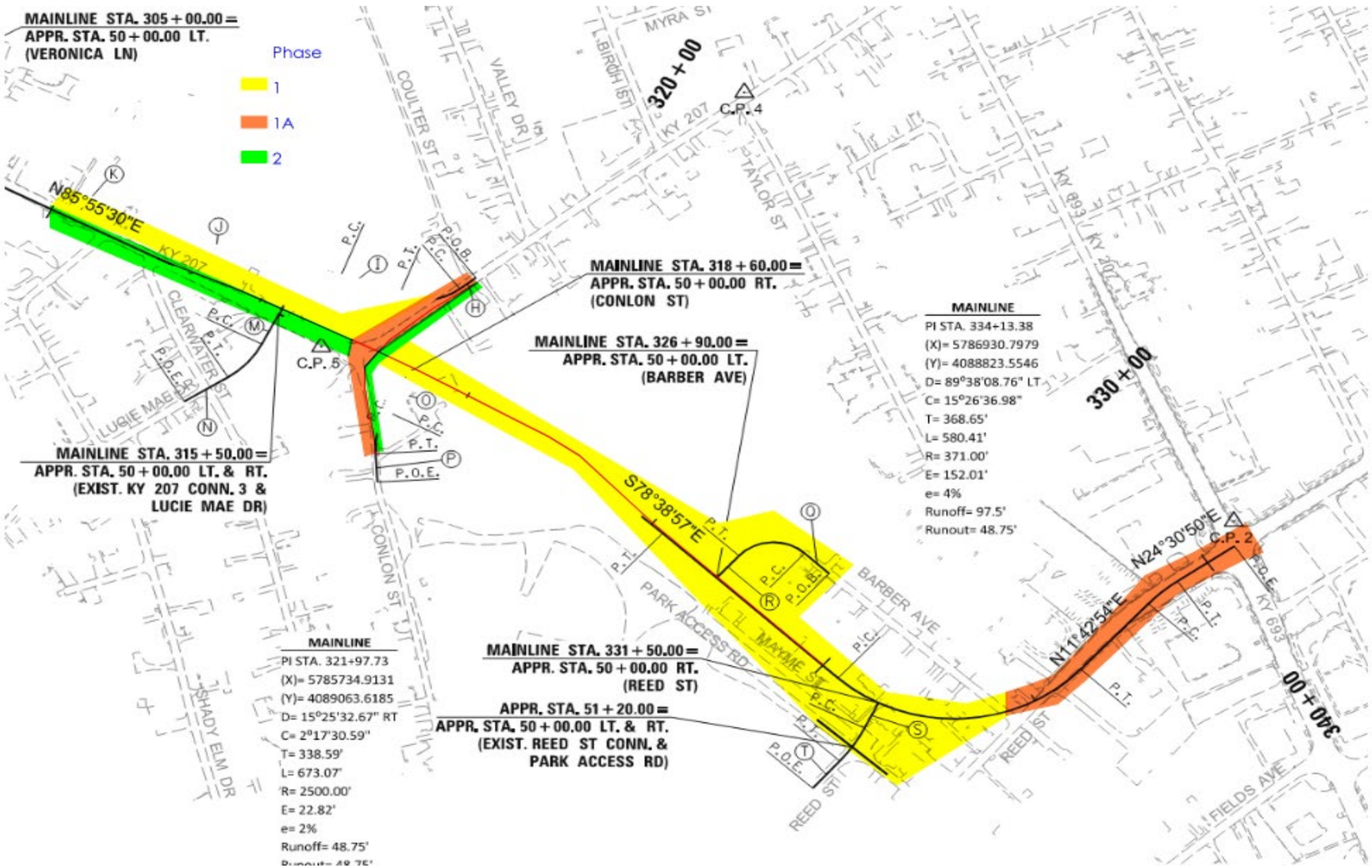
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow closure of existing KY 207 near Conlon St to eliminate need for diversion

SKETCH/DIAGRAM: VALUE PROPOSAL



VALUE PROPOSAL

MT-13

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Allow closure of existing KY 207 near Conlon St to eliminate need for diversion
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	**Mark-up**	**BASELINE CONCEPT**				**VALUE PROPOSAL**		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
CL2 Asph Surf 0.38B 64-22	27.98%	TON	322	$147.97	$60,978			
CL2 Asph Surf 0.38D 64-22	27.98%	TON	488	$105.61	$65,958			
CL2 AsphBase 0.75D 64-22	27.98%	TON	687	$95.00	$83,526			
Intelligent Compaction for Asphalt	27.98%	TON	810	$0.25	$259			
Culvert Pipe - 72IN	27.98%	LF	539	$594.43	$410,045	339	$594.43	$257,895
TOTAL					$621,000			$258,000
							Impact to Initial Cost (Baseline Less Proposed)	**$363,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL
IC-04
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Eliminate or decrease the Two-Way Left-Turn Lane (TWLTL)
FUNCTION	**Improve Channelization**
ASSOCIATED IDEAS	IC-02 Eliminate TWLTL from Sta 317 to Sta 326

VALUE PROPOSAL SYNOPSIS:

Removal of the proposed TWLTL will reduce construction cost and impacts to ROW and Utilites. With the low traffic volumes, the TWLTL does little to improve traffic operations and as only a small safety benefit.

Reliability	**Maintained**	**Functionality**	**Improved**	**$ Initial Cost Avoidance**
O&M	**Improved**	**Schedule Impact**	**Maintained**	**$484,000**

BASELINE CONCEPT DESCRIPTION:

Proposed design adds Two-Way Left Turn Lane (TWLTL) from Sta 270 to end of project at approx. Sta 339.

VALUE PROPOSAL DESCRIPTION:

Value can be added by reducing TWLTL and thereby reducing roadway width, construction cost, maintenance cost, ROW and Utility impacts.

ADVANTAGES:	DISADVANTAGES:
● Reduced construction cost	● Potential slight increase in congestion
● Less pavement to maintain	● Potential slight increase in crashes
● Less ROW impacts	
● Less Utility impacts	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$3,345,000	$0	$3,345,000
VALUE PROPOSAL	$2,861,000	$0	$2,861,000
TOTAL (Baseline less Proposed)	$484,000	$0	$484,000

AVOID COST

VALUE PROPOSAL

IC-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Eliminate or decrease the Two-Way Left-Turn Lane (TWLTL)

DISCUSSION & JUSTIFICATION:

TWLTL provides little benefit on this road with low traffic volumes. TWLTL could be eliminated between Sta 270 and Sta 326, but keeping turn lanes at Sta 315+50 (intersection with existing KY 207 - con 3 - and Lucie Mae Drive). This would eliminate approximately 4,850 linear feet of 12 ft wide TWLTL. This assumes 3 - 250ft sections are kept for the turn lanes at the intersection at Sta 270 (Indian Run Road) and Sta 315+50 (Lucie Mae Drive). This is 4,850 X 12 = 58,200 SQFT or 6,467 SQYDs of pavement that could be eliminated.

• Traffic volumes for Segment 2 is 3,160 (PBFS) in the forecast year (2038). Typically, TWLTL are not considered on roads with VPD less than 6,000. TWLTL is likely not warranted based on traffic operations.

• Safety - TWLTL do improve safety then volumes are relatively high and rear-end crashes occur due to turns. Based on the 2013-2018 crash data (PBFS), 40 of 122 crashes were rear-end.

• Construction cost would be reduced with a significant reduction in pavement needed.

• ROW impacts would be reduced with the reduction in 12 ft of the roadway typical section.

• As an alternate, the space proposed for the TWLTL could be re-allocated as bike lanes and the shared-us path could be eliminated.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

IC-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

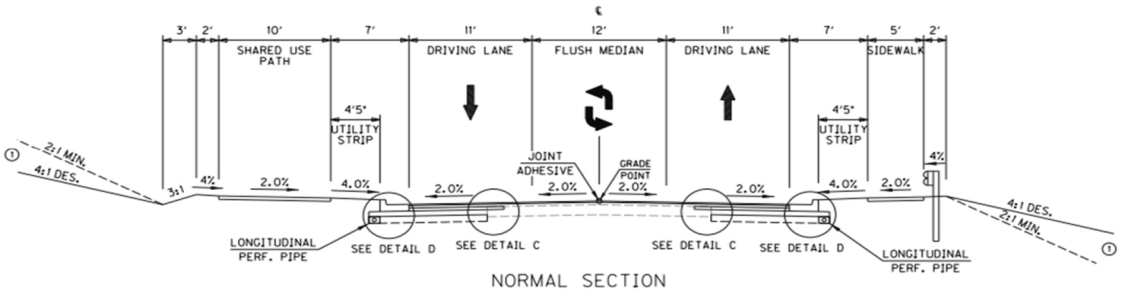
TITLE	Eliminate or decrease the Two-Way Left-Turn Lane (TWLTL)

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Improved
Justification for Impact Score	Less pavement to maintain.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	A narrower roadway typical section, reduced by 12 ft, would also reduce the ROW needed for the project.	

TITLE	Eliminate or decrease the Two-Way Left-Turn Lane (TWLTL)

SKETCH/DIAGRAM: BASELINE CONCEPT



NORMAL SECTION

VALUE PROPOSAL

IC-04

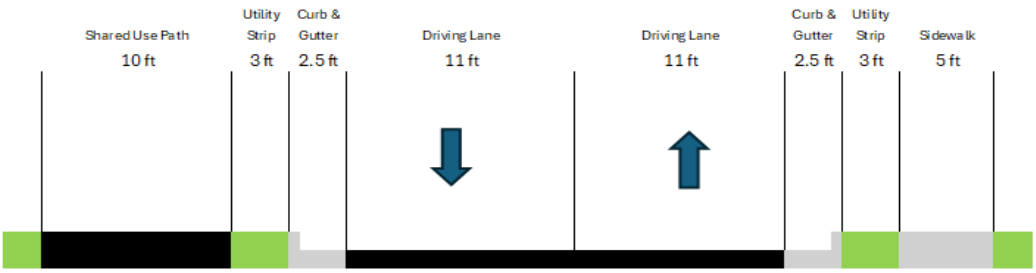
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Eliminate or decrease the Two-Way Left-Turn Lane (TWLTL)

SKETCH/DIAGRAM: VALUE PROPOSAL



Elminate TWLTL. Reduce utility strip to 3 ft.
Overall width is reduced by 15 ft.

Between curbs pavement reduced from 34 ft to 22 ft (4 ft reductions) so 35.3% reduction.
Utility strips reduced from 2 X 4 ft 5 inches = 8 ft 10 inches to 2 X 3 ft = 6 ft. Reduction of 2 ft 10 inches or 32% sodding.
Stiping changes negiligible.

VALUE PROPOSAL

IC-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Eliminate or decrease the Two-Way Left-Turn Lane (TWLTL)
Assumptions & Calculations	Qty is based on Mainline KY 207. TWLTL could be eliminated between Sta 270 and Sta 326, but keeping turn lanes at Sta 315+50 (intersection with existing KY 207 - con 3 - and Lucie Mae Drive). This would eliminate approximately 4,850 linear feet of 12 ft wide TWLTL. This assumes 3 - 250ft sections are kept for the turn lanes at the intersection at Sta 270 (Indian Run Road) and Sta 315+50 (Lucie Mae Drive). This is 4,850 X 12 = 58,200 SQFT or 6,467 SQYDs of pavement that could be eliminated. Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
CEMENT STABILIZED ROADBED	27.98%	SY	82,555	$4.44	$469,103	76,079	$4.44	$432,305
CL2 ASPH BASE 0.75D PG64-22	27.98%	TON	13,698	$95.00	$1,665,417	11,368	$95.00	$1,382,133
CL2 ASPH SURF 0.38B PG64-22	27.98%	TON	4,014	$105.61	$542,531	3,480	$105.61	$470,356
CRUSHED STONE BASE	27.98%	TON	15,806	$33.03	$668,148	13,633	$33.03	$576,291
TOTAL					$3,345,000			$2,861,000
							Impact to Initial Cost (Baseline Less Proposed)	**$484,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL
IA-05
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Consider safety lighting options
FUNCTION	**Illuminate Area**
ASSOCIATED IDEAS	IA-01 Add pedestrian level lighting near park; IA-02 Add street lights along shared-use path; IA-04 Use solar lighting to reduce long-term costs

VALUE PROPOSAL SYNOPSIS:

Adding lighting to shared use path increases visibility at night and increases safety. This adds overall value to the project by increasing safety for pedestrians and cyclists.

Reliability	**Maintained**	**Functionality**	**Improved**	**$ Initial Cost Add**	
O&M	**Degraded**	**Schedule Impact**	**Maintained**	**($306,000)**	

BASELINE CONCEPT DESCRIPTION:

The baseline design does not include solar powered lighting for the shared use path.

VALUE PROPOSAL DESCRIPTION:

Lighting for the shared use path adds value to the project by increasing visibility and safety. Increased visibility helps users be more aware of obstacles and the surroundings.

ADVANTAGES:	DISADVANTAGES:
● Increases visibility	● Additional construction costs
● Increases safety	● Additional maintenance costs

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$0	$0	$0
VALUE PROPOSAL	$306,000	$0	$306,000
TOTAL (Baseline less Proposed)	($306,000)	$0	($306,000)

ADD COST

VALUE PROPOSAL

IA-05

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider safety lighting options

DISCUSSION & JUSTIFICATION:

The addition of lighting along the shared use path will add value to the project by increasing safety for pedestrians and cyclists. The improved visibility will let the persons be aware of obstacles and their surroundings. Per KYTC policy, pedestrian lighting is not provided by KYTC, but can be added through the permit process by cities or local governments. If added to this project, the additional costs is estimated at $306,000 ($35,000 per solar powered light).

MID-POINT REVIEW & OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

IA-05

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider safety lighting options

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Improved
Justification for Impact Score	Lighting will improve bicycle and pedestrian operations and access.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Degraded
Justification for Impact Score	Lighting is an additional maintenance cost.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

VALUE PROPOSAL

IA-05

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider safety lighting options

SKETCH/DIAGRAM: VALUE PROPOSAL

SHARED USE PATH LIGHTING

VALUE PROPOSAL

IA-05

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider safety lighting options
Assumptions & Calculations	Pricing for new Solar-Powered Lights with poles comes from the RS Means database and includes localized labor rates and markups that mimic those used in the estimate provided to the VE team. markups include a 10% estimate contingency and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Solar-powered light	25.07%	EA				70	$3,500	$306,422
TOTAL					$0			$306,000
							Impact to Initial Cost (Baseline Less Proposed)	**($306,000)**

Note: Total costs are rounded to the nearest thousand dollars.

ADD COST

VALUE PROPOSAL

MMF-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider multi-modal facilities
FUNCTION	**Miscellaneous**
ASSOCIATED IDEAS	AR-01 Eliminate path on both sides of the roadway; utilize multi-use path & remove sidewalk; AR-02 Use bike lanes instead of shared-use path; AR-03 Construct shared-use path on both sides; AR-04 Reduce space between shared-use path and curb; use delineators for safety; RM-05 Use stamped concrete for verge between curb and sidewalk or shared-use path; RM-06 Consider alternative pavements for shared-use path (concrete or asphalt); RM-07 Construct shared use path with chip seal; RM-08 Reduce utility strip (verge) to 3 ft; IT-01 Use stamped concrete in verge (utility strip)

VALUE PROPOSAL SYNOPSIS:

Reduce cost and width, switch Shared-use Path to Bike Lanes. Eliminate TWLTL. Narrow Utility Strip. Same functionality, but reduced width and reduced ROW and Utility impacts.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance**	
O&M	**Maintained**	**Schedule Impact**	**Maintained**	**$51,000**	

BASELINE CONCEPT DESCRIPTION:

Proposed design has a 10ft Shared-use Path on one side and 5 ft sidewalk on the other side with a 4ft 5 inch Utility Strip (verge).

VALUE PROPOSAL DESCRIPTION:

Replace Shared-use Path with Bike Lanes and Sidewalk. Also reduce utility strip to 3 ft and eliminate TWLTL.

ADVANTAGES:	**DISADVANTAGES:**
● Reduced width of typical roadway section	● Bikes and cars adjacent
● ROW impacts reduced	
● Construction cost reduced	
● Bikes and pedestrians separated	
● Maintenace reduced	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$3,627,000	$0	$3,627,000
VALUE PROPOSAL	$3,576,000	$0	$3,576,000
TOTAL (Baseline less Proposed)	$51,000	$0	$51,000
			AVOID COST

VALUE PROPOSAL

MMF-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider multi-modal facilities

DISCUSSION & JUSTIFICATION:

The Shared-use path could be replaced with a 5 ft sidewalk and bike lanes. The Utility Strip (verge) could be reduced (consider stamped concrete instead of grass). The TWLTL could be eliminated and some of the space repurposed for the bike lanes. This would start at Indian Run Road (approx. Sta 270) and would transition just west of Barber Avenue (approx. Sta 326). This is a distance of 5,600 ft:

• Shared-use paths introduce conflict between pedestrians and bikes. Bike lanes eliminate this issue.

• The traffic volumes are around 3,000 vpd which doesn't typically warrant TWLTL. This space could be used for bike lanes.

• Cost could be reduced if removal of TWLTL and narrower Utility Strip are considered.

Baseline plans show at 10ft Shared-use path on the left side, but the plan sheets still have quantities for a 5ft sidewalk on the left sides. The paving summary shows quantities for the asphalt 10ft Shared-use path. It appears the current estimate has quantities correct, showing the Shared-use Path on the LT and a 5 ft sidewalk on RT, but the plan sheets need to be corrected to show Shared-use path on RT.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

MMF-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

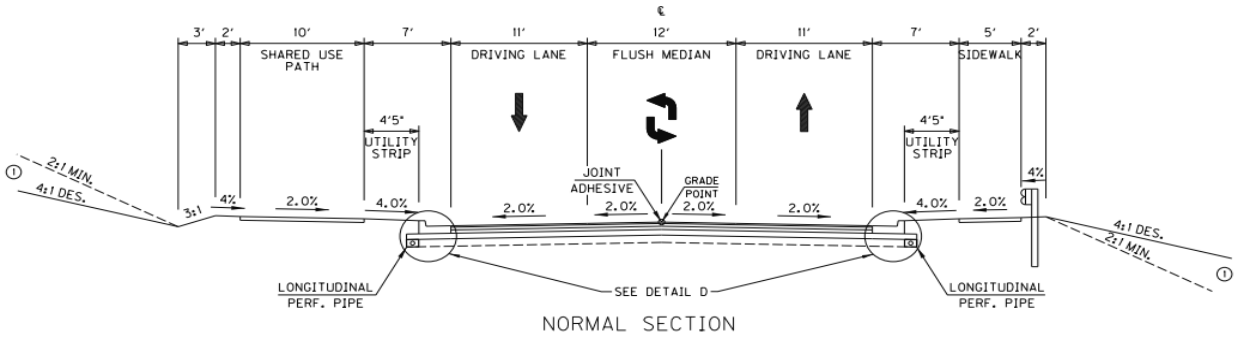
TITLE	Consider multi-modal facilities

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Improved
Justification for Impact Score	Bike Lanes will be easier to maintain than a Shared-use Path.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

TITLE	Consider multi-modal facilities

SKETCH/DIAGRAM: BASELINE CONCEPT



NORMAL SECTION

VALUE PROPOSAL

MMF-01

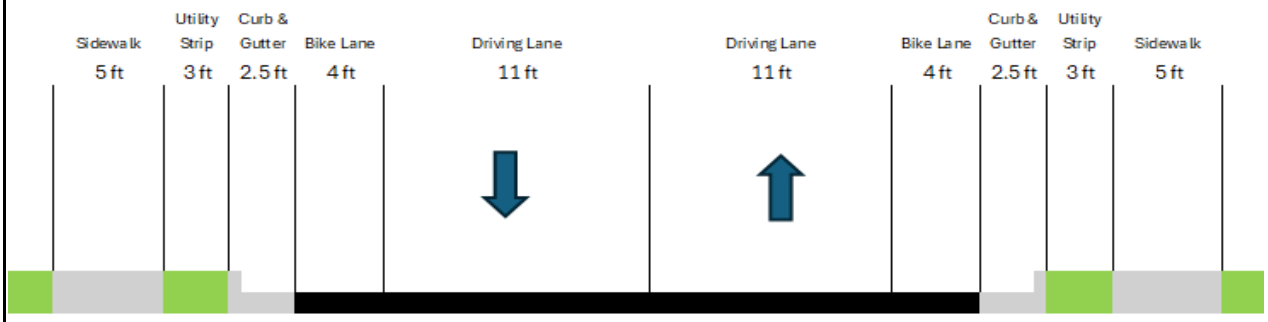
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider multi-modal facilities

SKETCH/DIAGRAM: VALUE PROPOSAL



Replace shared use path with bike lanes. Elminate TWLTL. Reduce utility strip to 3 ft.
Overall width is reduced by 12 ft.

Between curbs pavement reduced from 34 ft to 30 ft (4 ft reductions) so 11.8% reduction.

Utility strips reduced from 2 X 4 ft 5 inches = 8 ft 10 inches to 2 X 3 ft = 6 ft. Reduction of 2 ft 10 inches or 32% sodding.

Sidewalks doubled.

Shared Use Path pavement eliminated.

Stiping changes negiligible.

VALUE PROPOSAL

MMF-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider multi-modal facilities
Assumptions & Calculations	Indian Run Road (approx. Sta 270) to just west of Barber Avenue (approx. Sta 326) is a distance of 5,600 ft. Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
PATH								
CL2 ASPH SURF 0.38B PG64-22	27.98%	TON	749	$105.61	$101,235			
CL2 ASPH BASE 0.75D PG64-22	27.98%	TON	1,134	$95.00	$137,873			
CRUSHED STONE BASE	27.98%	TON	3,194	$33.03	$135,016			
SIDEWALK-4 IN CONCRETE	27.98%	CY	2,999	$66.36	$254,698	6,000	$66.36	$509,565
DETACABLE WARNINGS	27.98%	SF	520	$72.00	$47,916	1,040	$72.00	$95,831
SODDING	27.98%	SY	4,879	$9.87	$61,630	3,415	$9.87	$43,137
TWLTL (5600x4)/9x(110x1.5)/2000=205 TONS - 4FT WIDE								
CL2 ASPH SURF 0.38B PG64-22	27.98%	TON	4,104	$105.61	$554,695	3,899	$148	$738,361
CL2 ASPH BASE 0.75D PG64-22	27.98%	TON	13,698	$95.00	$1,665,417	12,808	$95	$1,557,209
CRUSHED STONE BASE	27.98%	TON	15,806	$33.03	$668,148	14,947	$33	$631,837
TOTAL					$3,627,000			$3,576,000
							Impact to Initial Cost (Baseline Less Proposed)	**$51,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL
AR-071
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Terminate project 250 ft west of KY 207/KY 693 intersection
FUNCTION	**Access Recreation**

VALUE PROPOSAL SYNOPSIS:

Tightening the radii for the south leg for the KY 207/KY 693 will improve pedestrian safety by reducing crossing time and will enhance traffic signal operations. Value is added by improving access and safety for pedestrians.

Reliability	**Maintained**	**Functionality**	**Improved**	**$ Initial Cost Avoidance**
O&M	**Maintained**	**Schedule Impact**	**Improved**	**$64,000**

BASELINE CONCEPT DESCRIPTION:

Baseline proposed design reconstructs south left of the KY 207/KY 693 intersection at Super Quick increasing the radii at both SE and SW quadrants to 100 ft.

VALUE PROPOSAL DESCRIPTION:

Terminate project at Sta 337+90, approximately 250 ft west of the KY 207/KY 693 intersection.

ADVANTAGES:	DISADVANTAGES:
● Improves pedestrian safety	● Turning radii remain tight
● Reduces construction cost	● Super Quick entrance at Sta 339+15 remains
● Reduces construction time and impact	
● Reduces ROW impact	
● Reduces Utility impact	
● Eliminates need to rebuild traffic signal	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$3,816,000	$0	$3,816,000
VALUE PROPOSAL	$3,752,000	$0	$3,752,000
TOTAL (Baseline less Proposed)	$64,000	$0	$64,000

AVOID COST

VALUE PROPOSAL

AR-071

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Terminate project 250 ft west of KY 207/KY 693 intersection

DISCUSSION & JUSTIFICATION:

No additional lanes are added in the proposed design. Ending project 250 ft west of intersection with KY 693 will save cost and reduce impacts. The proposed design only address the turning radii at 2 of the of quadrants. The existing intersections operates adequately with radii of approximately 65 ft. Changing radii has a negative impact on pedestrian crossing distance. This will impact pedestrian safety and could impact signal timing with subsequent negative impact on traffic operations:

• Baseline design increases pedestrian crossing distance from approximately 95 ft to 150 ft - increase of 55 ft - Radii areas are approximately 333 SY

• Terminating project at Sta 337+90 reduces construction cost

• Reduces ROW impacts

• Reduces Utility impacts

• Avoids need to rebuild traffic signal

OUT-BRIEF PRESENTATION COMMENTS:

Project team expressed concern about truck turning movements and at other intersections at this location.

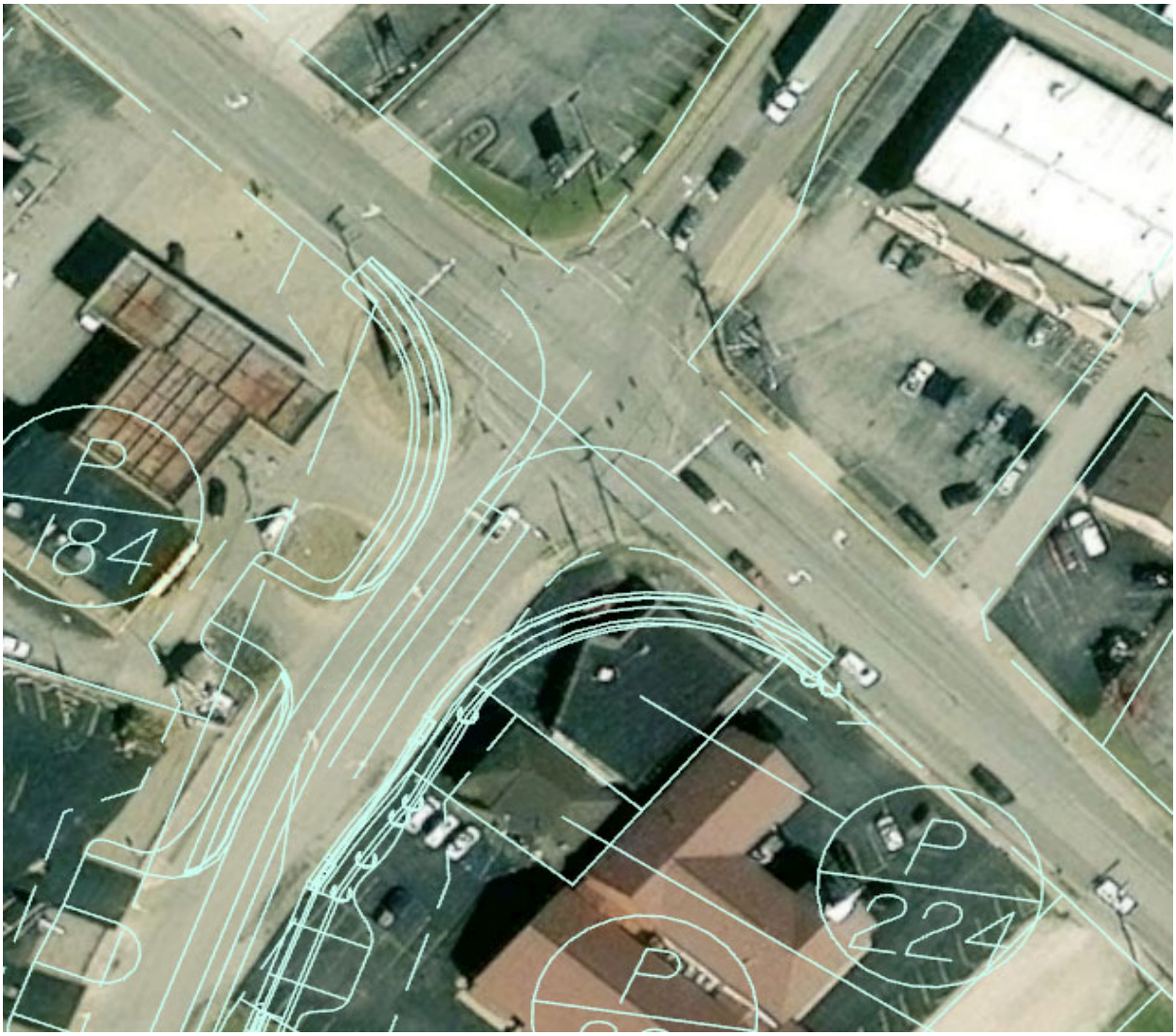
TITLE	Terminate project 250 ft west of KY 207/KY 693 intersection

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Improved
Justification for Impact Score	Reducing pedestrian crossing time improves traffic signal timing and traffic operations. Pedestrian safety is also improved.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	Less impact to the intersection during construction.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Improved
Justification for Impact Score	Less impact to the intersection during construction reducing construction time and complexity.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	Less impacts to P 224, P 223, and P 184.	

TITLE	Terminate project 250 ft west of KY 207/KY 693 intersection

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

AR-071

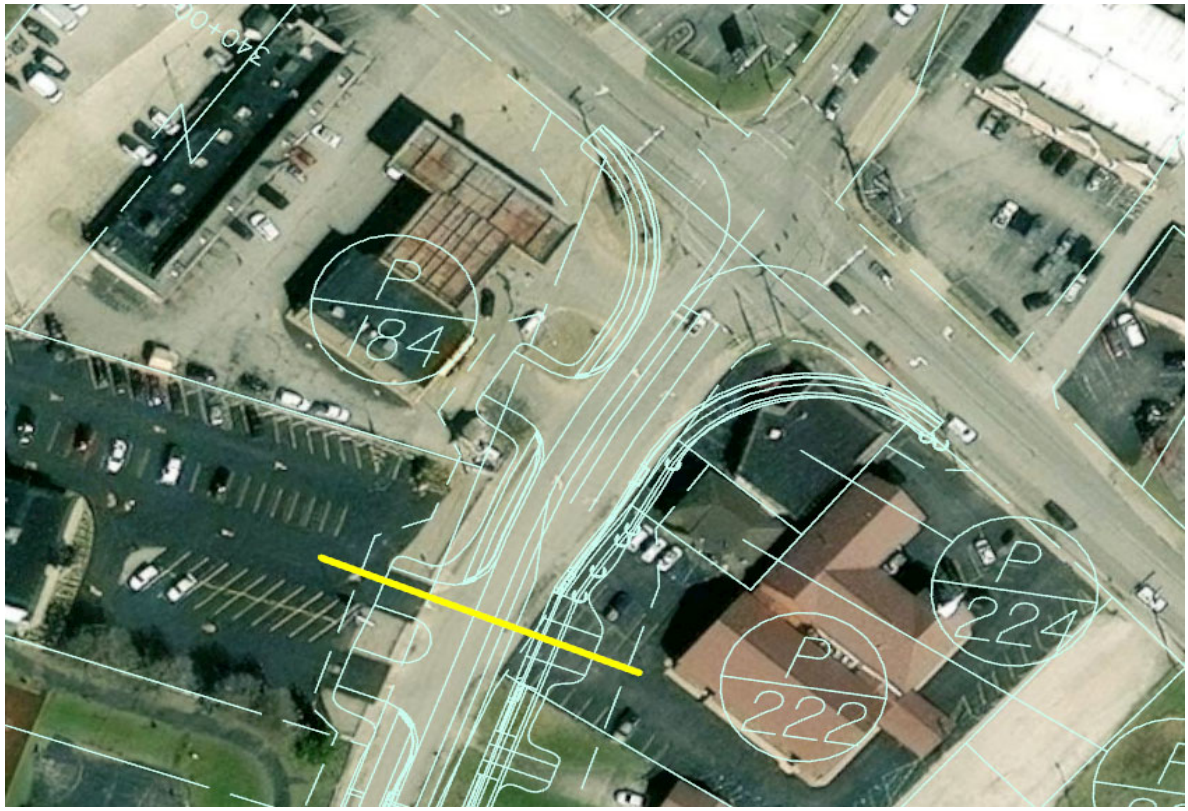
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Terminate project 250 ft west of KY 207/KY 693 intersection

SKETCH/DIAGRAM: VALUE PROPOSAL



VALUE PROPOSAL

AR-071

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Terminate project 250 ft west of KY 207/KY 693 intersection
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	**Mark-up**	**BASELINE CONCEPT**				**VALUE PROPOSAL**		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
CL2 ASPH BASE 0.75D PG64-22	27.98%	TON	13,689	$95.00	$1,664,322	13,543	$95.00	$1,646,571
CRUSHED STONE BASE	27.98%	TON	15,806	$33.03	$668,148	15,641	$33.03	$661,173
CL2 ASPH SURF 0.38B PG64-22	27.98%	TON	4,014	$147.97	$760,139	3,922	$147.97	$742,717
CEMENT STABILIZED ROADBED	27.98%	SY	82,555	$4.44	$469,103	82,222	$4.44	$467,211
SIDEWALK-4 IN CONCRETE	27.98%	SY	2,999	$66.36	$254,698	2,760	$66.36	$234,400
TOTAL					$3,816,000			$3,752,000
							Impact to Initial Cost (Baseline Less Proposed)	**$64,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL

RC-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use a Green T type intersection at KY 503/KY 207 (no signal)
FUNCTION	**Reduce Congestion**

VALUE PROPOSAL SYNOPSIS:

Minor striping revision to improve traffic operations.

Reliability	**Maintained**	**Functionality**	**Improved**	**$ Initial Cost Avoidance (Add)**
O&M	**Maintained**	**Schedule Impact**	**Maintained**	**NOT COSTED**

BASELINE CONCEPT DESCRIPTION:

Traditional T-intersection with turn lanes.

VALUE PROPOSAL DESCRIPTION:

Revising striping to allow acceleration for traffic from KY 503 turn left onto KY 207 west.

ADVANTAGES:	DISADVANTAGES:
● Traffic operation improvements	● None apparent
● Safety improved	

NOT COSTED

VALUE PROPOSAL

RC-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use a Green T type intersection at KY 503/KY 207 (no signal)

DISCUSSION & JUSTIFICATION:

Revise striping to mimic Green T-intersection but without traffic signal:

- No cost change

- Traffic operations and safety improvement

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at out-brief meeting.

VALUE PROPOSAL

RC-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use a Green T type intersection at KY 503/KY 207 (no signal)

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Improved
Justification for Impact Score	KY 207 WB will be a continuous movement.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Improved
Justification for Impact Score	KY 503 turning left, WB onto KY 207 will have an acceleration lane.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

VALUE PROPOSAL

RC-04

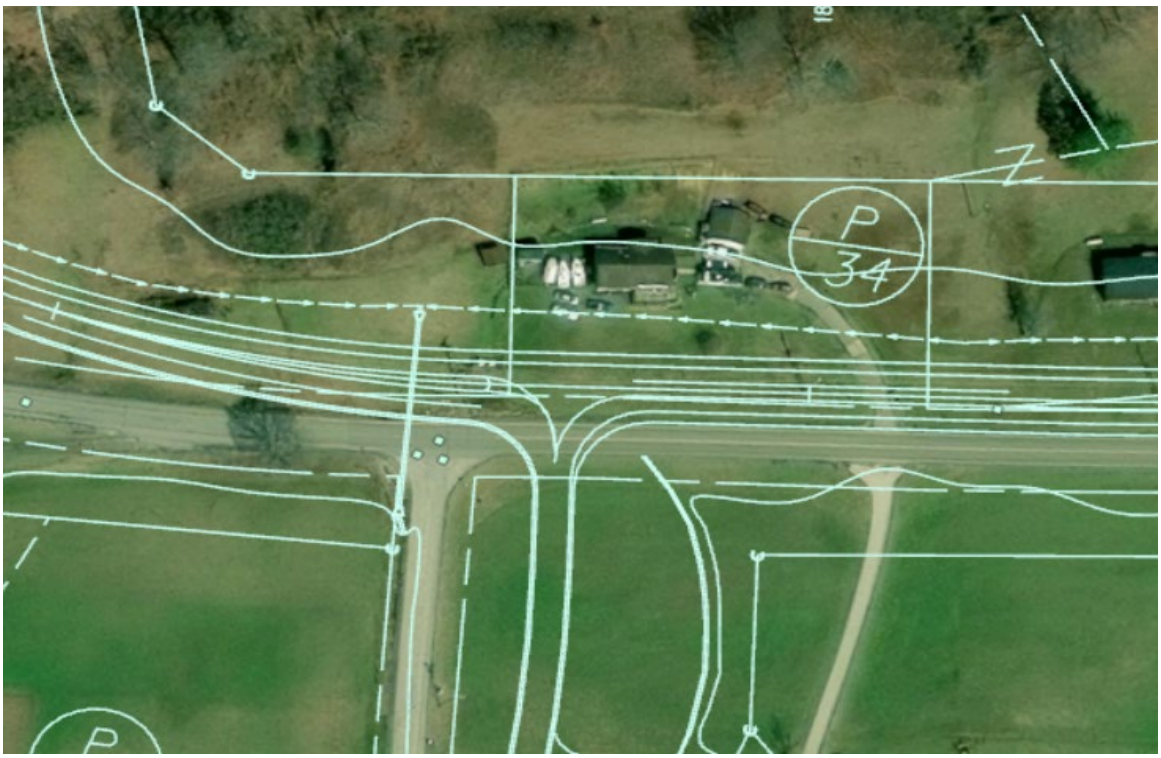
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use a Green T type intersection at KY 503/KY 207 (no signal)

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

RC-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use a Green T type intersection at KY 503/KY 207 (no signal)

SKETCH/DIAGRAM: VALUE PROPOSAL

VALUE PROPOSAL
AP-02
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Explore alternative approaches to allow for septic to be relocated on existing property
FUNCTION	**Acquire Property**
ASSOCIATED IDEAS	AP-10 Use Innovative/Alternative Septic Systems to reduce amount of area needed for septic and therefore reduce need to purchase properties

VALUE PROPOSAL SYNOPSIS:

The use of compact biofilters will allow septic systems to have a reduced footprint. This may allow for reduction in relocations.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance**
O&M	**Maintained**	**Schedule Impact**	**Improved**	**$4,605,000**

BASELINE CONCEPT DESCRIPTION:

The acquisition of leach fields and septic systems require relocation and acquisition of entire properties.

VALUE PROPOSAL DESCRIPTION:

Some relocations may be avoided if the existing parcel can be maintained with a retrofitted compact biofilter.

ADVANTAGES:	DISADVANTAGES:
● Reduces relocations	● Possible increased homeowner cost depending on model
● Reduces total area of acquisitions	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$6,205,000	$0	$6,205,000
VALUE PROPOSAL	$1,600,000	$0	$1,600,000
TOTAL (Baseline less Proposed)	$4,605,000	$0	$4,605,000

AVOID COST

VALUE PROPOSAL

AP-02

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore alternative approaches to allow for septic to be relocated on existing property

DISCUSSION & JUSTIFICATION:

Less expensive models of these systems can reduce the footprint of a leach field by 33% for a cost of about $10,000 installed. These are passive systems with a similar lifecycle of a traditional septic system.

More sophisticated systems with electric grind pumps and UV light treatment can eliminate the need for a leach field all together. The effluent can be placed directly in a ditch at a cost of around $50,000 installed. The more sophisticated systems require electric use.

Utilization of these systems could reduce the affected relocations from a possible 25 to 0.

Note: Intelligent Compaction for Asphalt is not currently being used and the removal of it is included in the cost savings. Also the Typical sections and approved pavement design use 1.0D base and the bid items include 0.75D base. This estimate uses the correct 1.0D base.

https://www.premiertechaqua.com/en-us/septic-system/ecoflo
https://waterloo-biofilter.com/residential/
https://www.anuainternational.com/products/onsite-wastewater-solutions/puraflo/puraflo-peat/
https://www.orenco.com/products/treatment-systems
https://biomicrobics.com/
https://www.aquaklear.net/
https://jetincorp.com/residential/
https://www.norweco.com/residential/
https://www.fujicleanusa.com/
https://hootsystems.com/residential-solutions/

OUT-BRIEF PRESENTATION COMMENTS:

Project team asked if electric and maintenance costs were included in cost calculations. In addition, were various soil types explored. After the presentation, the value team readdressed these questions/concerns and they have been included in the value proposal.

TITLE	Explore alternative approaches to allow for septic to be relocated on existing property

DISCUSSION & JUSTIFICATION: (cont.)

Expected Costs for Compact Septic Systems in Kentucky (General Estimates):

Aerobic Treatment Units (ATUs):

Initial Installation: Expect to pay $10,000 to $20,000 or more. Some sources even suggest higher for complex systems or very difficult site conditions, potentially ranging from $15,000 to $35,000.
Why it's more expensive: Higher initial equipment cost, more complex installation, and electrical hookups.

Ongoing Costs: ATUs require more frequent maintenance, including annual inspections and potentially maintenance contracts (often $200-$500 annually). They also consume electricity.

Leaching Chamber Systems:

Initial Installation: Generally range from $5,000 to $12,000.
Why it's a compact option: Reduces the drainfield footprint compared to traditional gravel and pipe, which can save on excavation and material costs in some situations.

Mound Systems:

Initial Installation: Typically $10,000 to $20,000.
Why it's more expensive: Requires significant imported fill material (sand, gravel), extensive excavation, and a pump system. However, they are vital for sites where conventional systems aren't feasible.

Ecoflo Biofilter Septic Systems (and similar biofilter systems):

Initial Installation: For a 3-4 bedroom home in Kentucky, estimates for a Waterloo Biofilter System (a type of biofilter) can range from $10,000 to $20,000, including installation, the treatment unit, pump tank, pumps and controls, electrical, and soil absorption field.

Premier Tech's Ecoflo systems for a 3-bedroom home on "simple sites" might be $18,000 - $23,000 (Illinois example), and on "difficult sites" $23,000 - $33,000 (Illinois example), with Kentucky costs likely in a similar range.

Why it's compact: The biofilter unit significantly treats the wastewater, allowing for a much smaller drainfield.

TITLE	Explore alternative approaches to allow for septic to be relocated on existing property

DISCUSSION & JUSTIFICATION: (cont.)

Ongoing Costs: These systems require annual maintenance (around $200-$300/year for inspections), and the filtering media needs replacement every 10-15 years (which can be a significant cost, potentially $3,500-$6,500+ depending on access and labor).

General Cost Components (regardless of system type):

Septic Tank (material only):
Plastic/Polyethylene: $500 – $2,000
Concrete: $700 – $2,000
Fiberglass: $1,200 – $2,000

(Note: These are for the tank itself, not including installation)

Percolation Tests / Soil Tests: $450 – $1,400 (crucial for design)

Excavation and Site Prep: Can range from $1,500 to $6,300 for basic work, but much more for extensive leveling or rock removal.

Drainfield Installation:
General: $5,000 to $12,000 (can vary widely by size and type)
Aerobic system drainfield: Around $7,000
Mound system drainfield: Around $12,000 (this is part of the total mound system cost)

VALUE PROPOSAL

AP-02

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore alternative approaches to allow for septic to be relocated on existing property

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Improved
Justification for Impact Score	Reduction in relocations gets the project to Construction faster.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	Less need for relocations.	

VALUE PROPOSAL

AP-02

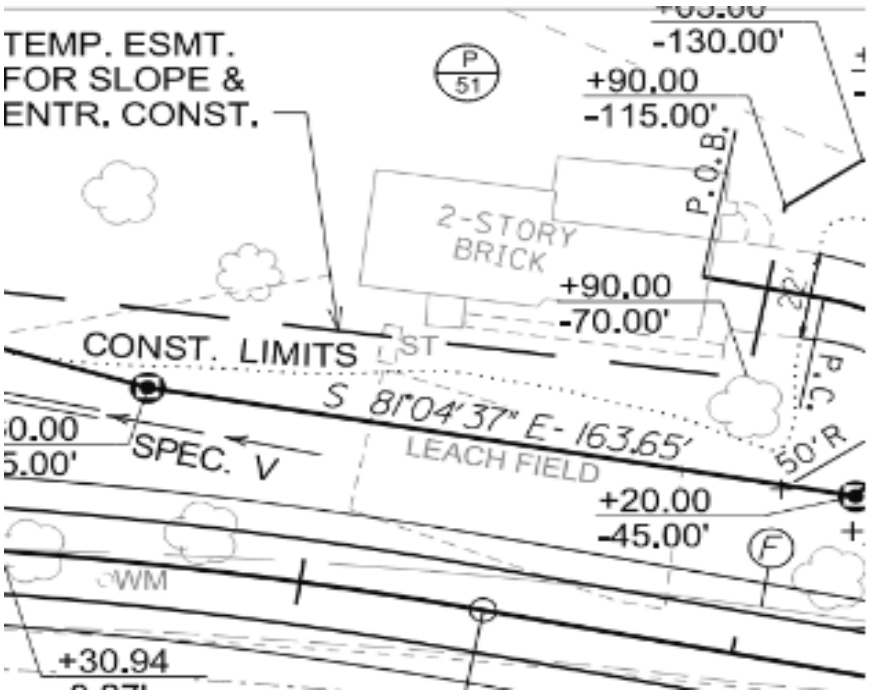
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore alternative approaches to allow for septic to be relocated on existing property

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

AP-02

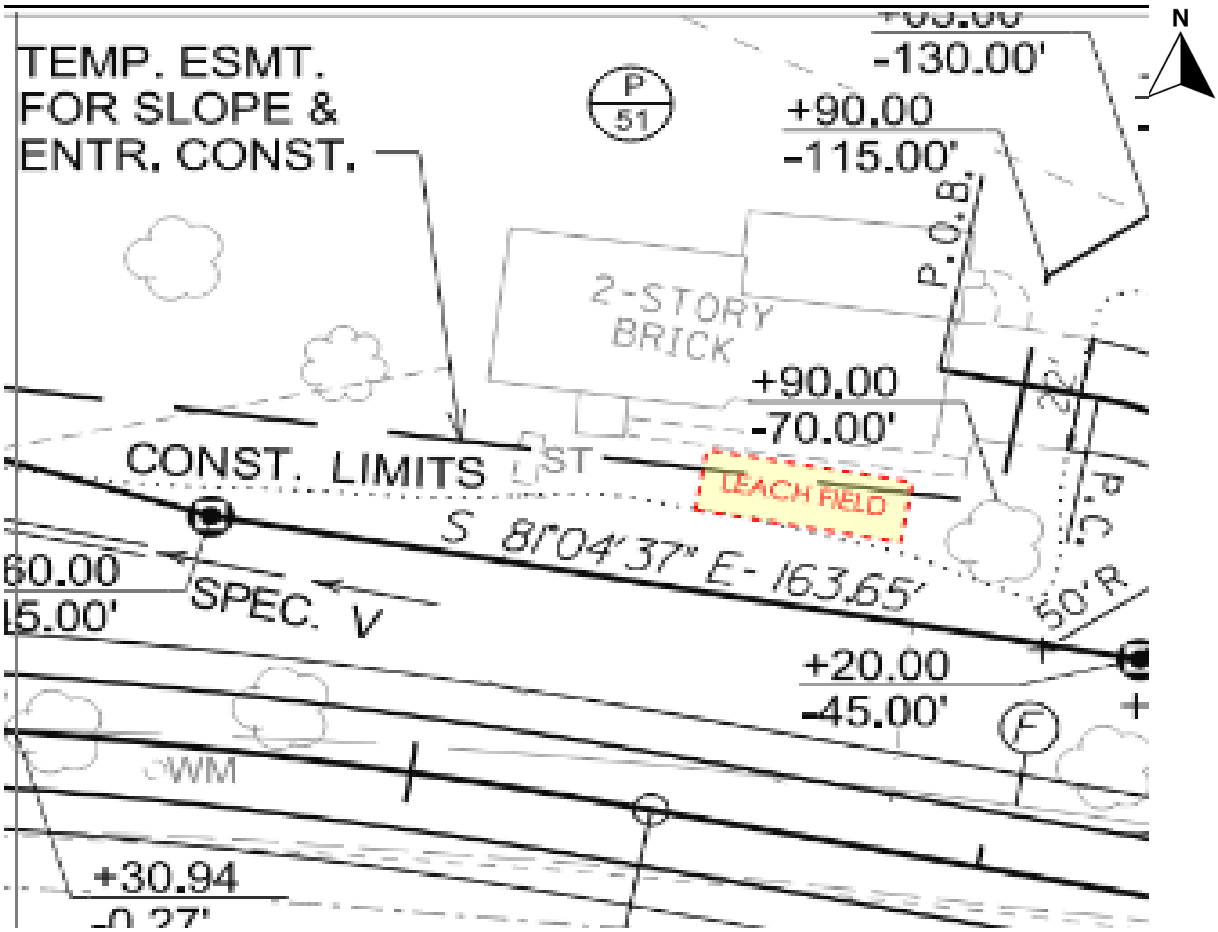
Kentucky Transportation Cabinet

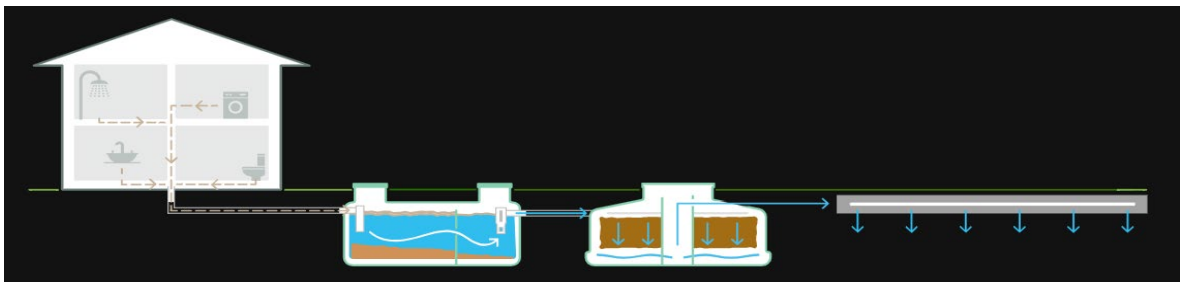
KY 207, Greenup County

Item No. 9-8509

TITLE	Explore alternative approaches to allow for septic to be relocated on existing property

SKETCH/DIAGRAM: VALUE PROPOSAL





VALUE PROPOSAL

AP-02

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore alternative approaches to allow for septic to be relocated on existing property
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Cost of Compact Bio Septic system is a conservative cost all-inclusive from historical data. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction. Estimated Cost of Purchase is outside of the Construction portion but it will be a savings to the overall project.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Compact Bio Septic System	27.98%	EA				25	$50,000	$1,599,750
Relocation of Parcel	27.98%	EA	25	$65,000	$2,079,675			
Estimated Cost of Purchase	10.00%	EA	25	$150,000	$4,125,000			
TOTAL					$6,205,000			$1,600,000
							Impact to Initial Cost (Baseline Less Proposed)	**$4,605,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL

AP-06

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Utilize retaining wall design to reduce acquisition areas
FUNCTION	**Acquire Property**

VALUE PROPOSAL SYNOPSIS:

Roadway excavation and ROW needs are large contributors to the total cost of this project. By reducing the size of the cuts with the use of retaining walls, the total material excavated and the area needed for ROW purchase will be reduced lowering total cost for the project.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance**	
O&M	**Maintained**	**Schedule Impact**	**Maintained**	**$794,000**	

BASELINE CONCEPT DESCRIPTION:

The baseline design includes a large quantity of excavation.

VALUE PROPOSAL DESCRIPTION:

Construct retaining walls in cut and fill sections to reduce height of embankments and slopes. This will reduce the amount of ROW needed to be acquired. Maintain stable slope configurations while reducing the amount of property needed to be purchased during ROW phase. Cost of constructing walls is offset by the reduced excavation and maintenance cost of walls is offset by less slopes to maintain.

ADVANTAGES:	**DISADVANTAGES:**
● Less ROW needed	● Retaining walls to build
● Less excavation	● Retaining walls to maintain
● Can help MOT	

$ COST SUMMARY	**Initial Costs**	**O&M Costs**	**Total Life Cycle Cost**
BASELINE CONCEPT	$18,480,000	$0	$18,480,000
VALUE PROPOSAL	$17,686,000	$0	$17,686,000
TOTAL (Baseline less Proposed)	$794,000	$0	$794,000

AVOID COST

VALUE PROPOSAL

AP-06

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Utilize retaining wall design to reduce acquisition areas

DISCUSSION & JUSTIFICATION:

• Technical Considerations: Wall type(s), height(s), design and aesthetics.

• Cost Considerations: Cost of standard gravity or modular block walls will be comparable to the reduction in cost for less excavation. MSE walls will add some additional cost and more advanced walls will greatly increase costs. Reduction in ROW needed will reduce cost and time in the ROW phase.

• Schedule Impacts: Time to construct the walls is similar to the time savings for the reduction in excavation. This should reduce the time needed for ROW purchase due to less area needed to be purchased.

• Risk Considerations: No improvement in ROW time due to condemnations not affected by reduced need.

• Project Management Considerations: More construction items added to the project.

• Stakeholder Acceptance: Property owners will be impacted and should be coordinated with.

• Implementation Considerations: Review slope stability with different wall types. Determine and design wall type(s) and configurations that provide adequate ROW reduction.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

TITLE	Utilize retaining wall design to reduce acquisition areas

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	Maintenance is maintained: although this value proposal will increase maintenance cost for the upkeep of the wall, it may be partially offset by having less area to mow and potentially fail.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	Reduces the amount of right-of-way needed.	

VALUE PROPOSAL

AP-06

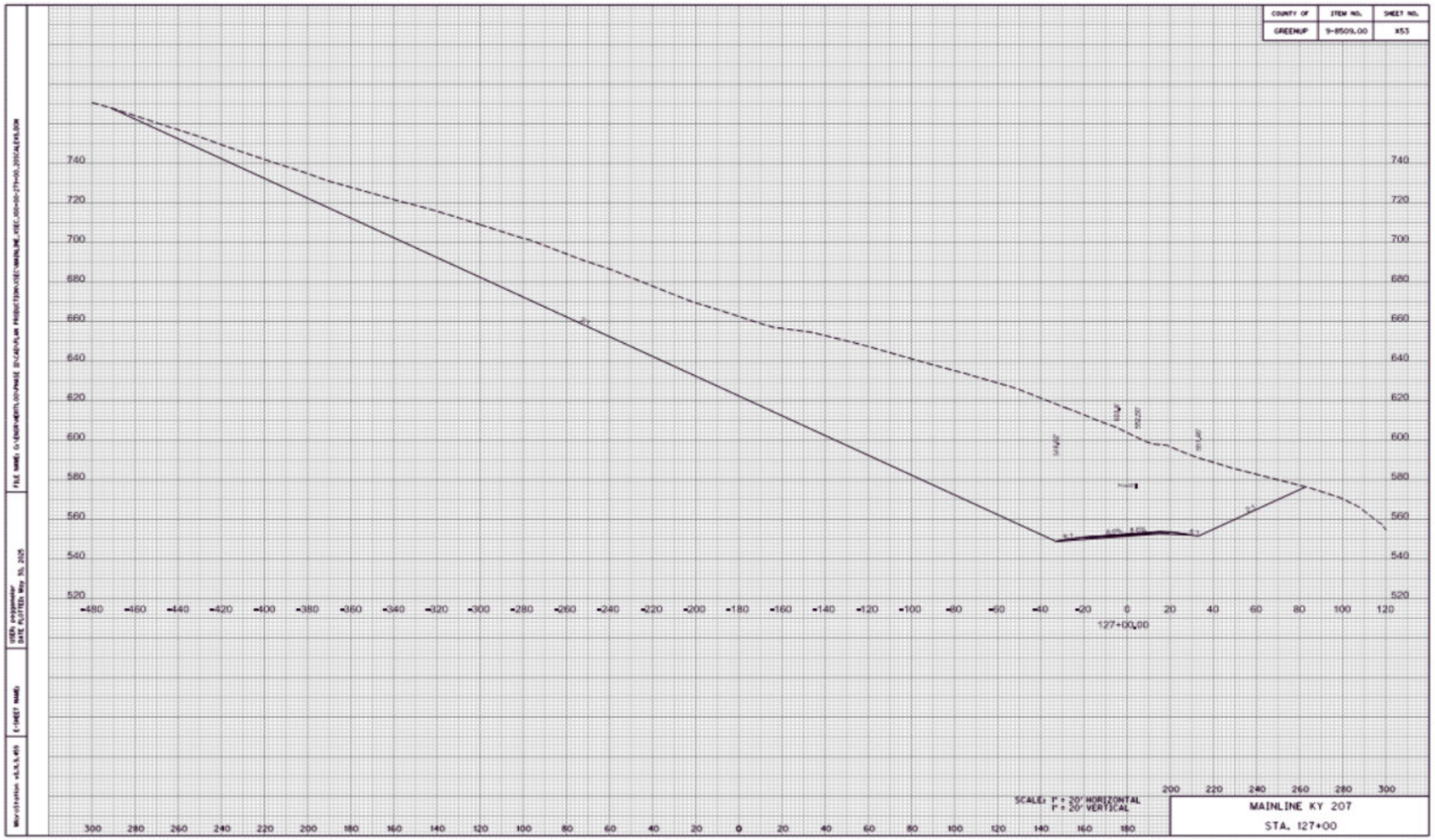
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Utilize retaining wall design to reduce acquisition areas

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

AP-06

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Utilize retaining wall design to reduce acquisition areas

SKETCH/DIAGRAM: VALUE PROPOSAL

VALUE PROPOSAL

AP-06

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Utilize retaining wall design to reduce acquisition areas
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Class A concrete	27.98%	CY				1,100	$705	$992,063
Roadway excavation	27.98%	CY	1,500,977	$10	$18,479,543	1,338,977	$10	$16,485,051
steel reinforcement	27.98%	LB				10,000	$2	$23,676
Foundation prep	27.98%	LS				1	$144,756	$185,258
TOTAL					$18,480,000			$17,686,000
							Impact to Initial Cost (Baseline Less Proposed)	**$794,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs
FUNCTION	**Increase Sight-distance**
ASSOCIATED IDEAS	IS-05 Revisit design speed in the PBFS report; Sta 192 to Sta 274, reducing design speed might allow; MI-01 Correcting poor geometry will increase sight distance; increased sight distance should reduce the need for turn lanes and TWLTL

VALUE PROPOSAL SYNOPSIS:

The 55 MPH design speed in the PBFS report was selected as the preferred option. A design speed of 45 MPH would allow the new construction to more closely follow the existing alignment, which would reduce construction and right of way costs.

Reliability	**Maintained**	**Functionality**	**Degraded**	**$ Initial Cost Avoidance**
O&M	**Maintained**	**Schedule Impact**	**Improved**	**$8,446,000**

BASELINE CONCEPT DESCRIPTION:

The baseline concept is the 55 MPH design speed in the PBFS report.

VALUE PROPOSAL DESCRIPTION:

A lower design speed would be able to more closely follow the existing roadway, which results in less overall construction and right-of-way acquisition impacts. Reduced design speed results in lower right-of-way and construction costs by reducing the overall footprint of the project.

ADVANTAGES:	DISADVANTAGES:
● Reduces right-of-way costs	● Increases travel time
● Reduces parcel relocations	● Not an optimal 55 mph design
● Reduces construction costs	
● Reduces time needed for right-of-way and construction	
● Reduces environmental impacts	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$28,175,000	$0	$28,175,000
VALUE PROPOSAL	$19,729,000	$0	$19,729,000
TOTAL (Baseline less Proposed)	$8,446,000	$0	$8,446,000

AVOID COST

VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs

DISCUSSION & JUSTIFICATION:

The Performance Based Flexible Solutions (PBFS) review was performed in 2018 and showed considerable savings in the construction phase in the rural section for a 45 mph design speed compared to a 55 mph design speed. The baseline design was 55 mph design speed and included 10 ft shoulders and 22 ft clear zone. The proposed 45 mph design speed maintained a 10 ft shoulder and the clear zone reduced to 20 ft. At that time, construction costs for the rural section for 55 mph design speed was $15.1 million and 45 mph design speed was $10.6 million. This is a 30% reduction in costs. The 2024 estimates equate to $24.8 million for 55 mph design speed, compared to $17.4 million for the 45 mph design speed. In addition to reduced construction costs, the reduced design speed requires 33 relocations compared to 47 with the baseline sketch. Two items in the Purpose and Need for this project are "minimize impact to adjacent property owners" and "get most value for the dollar". This value proposal meets these two requirements while improving geometry, safety, and emergency response times from the existing conditions.

OUT-BRIEF PRESENTATION COMMENTS:

No comments captured from the out-brief presentation.

VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Degraded
Justification for Impact Score	Design speed is reduced from 55 to 45 mph.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	Construction time will be reduced.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Improved
Justification for Impact Score	Total area impacted is less.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Improved
Justification for Impact Score	Fewer right of way acquisitions results in less time and construction time is reduced.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	Fewer right of way acquisitions will be needed.	

VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs

SKETCH/DIAGRAM: BASELINE CONCEPT

VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs

SKETCH/DIAGRAM: BASELINE CONCEPT

VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs

SKETCH/DIAGRAM: BASELINE CONCEPT

VALUE PROPOSAL

IS-01

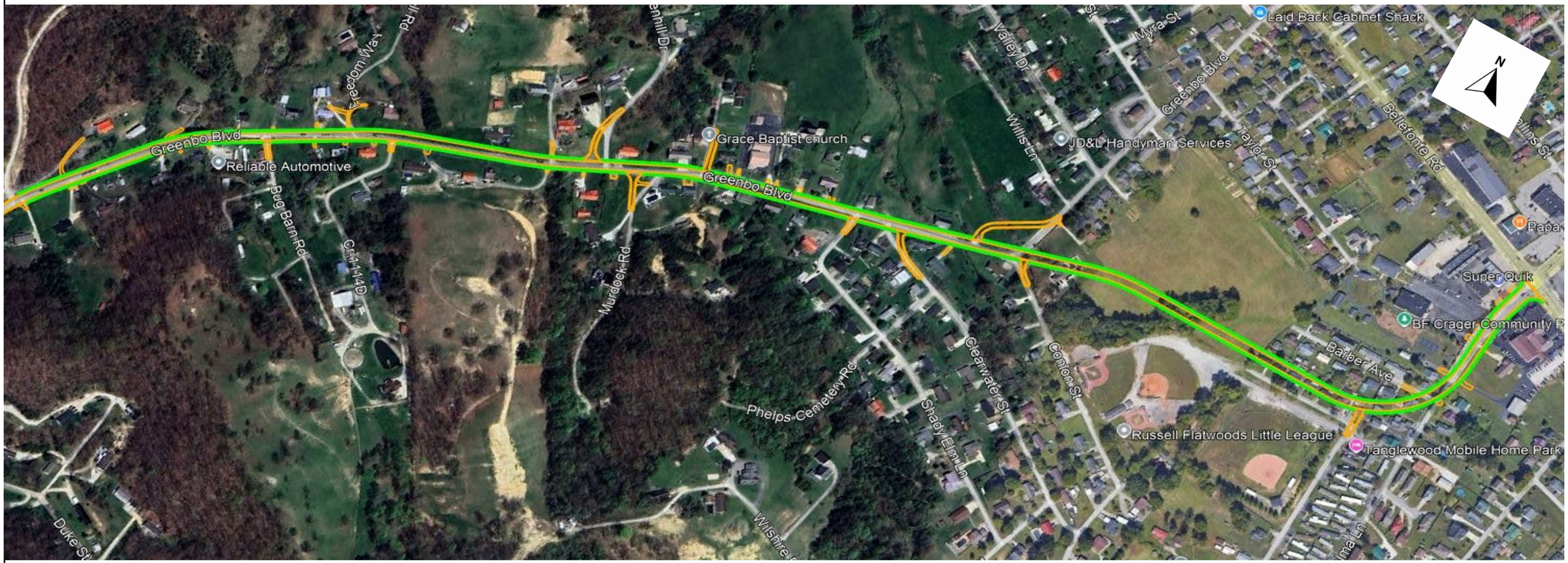
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

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SKETCH/DIAGRAM: VALUE PROPOSAL

VALUE PROPOSAL

IS-01

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KY 207, Greenup County

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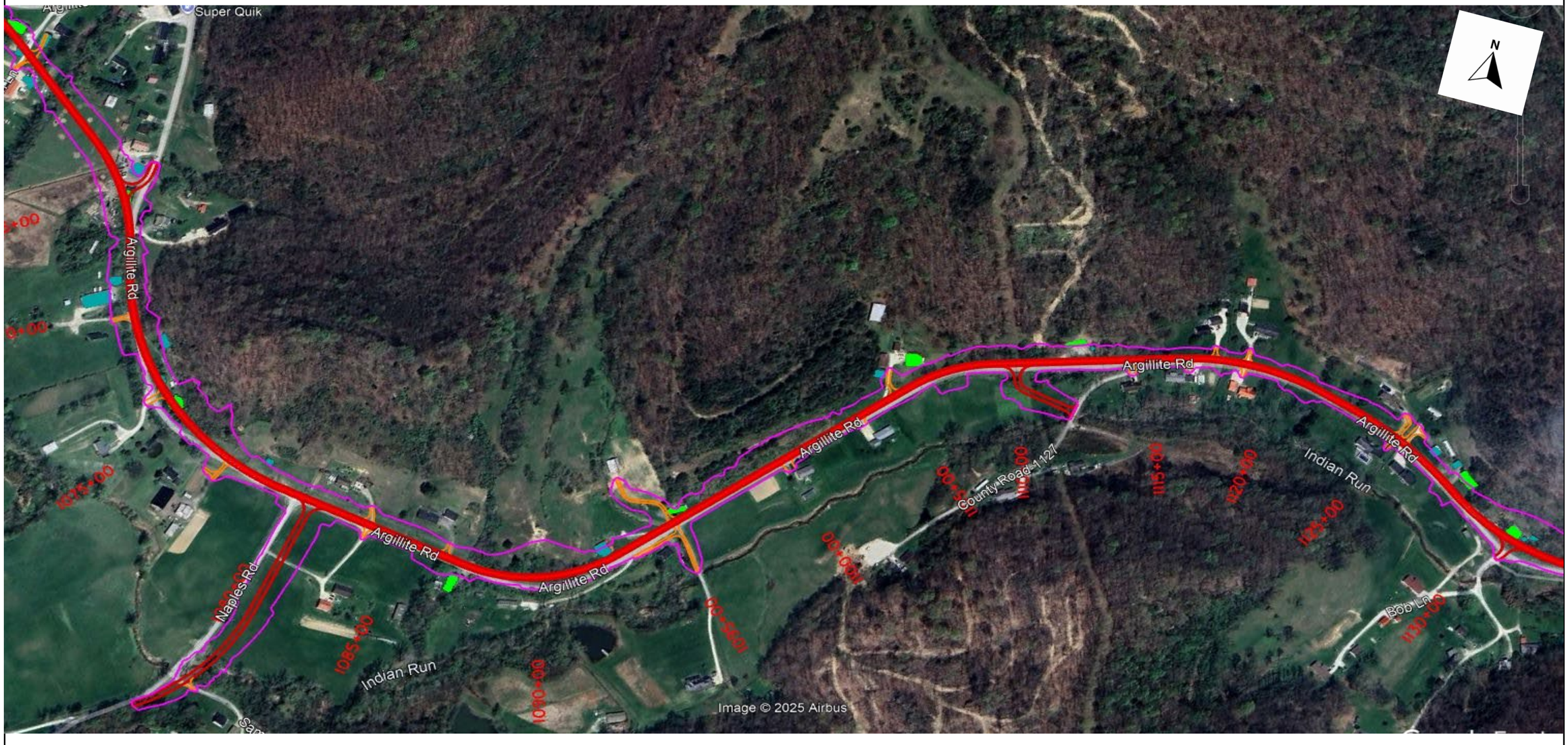

VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

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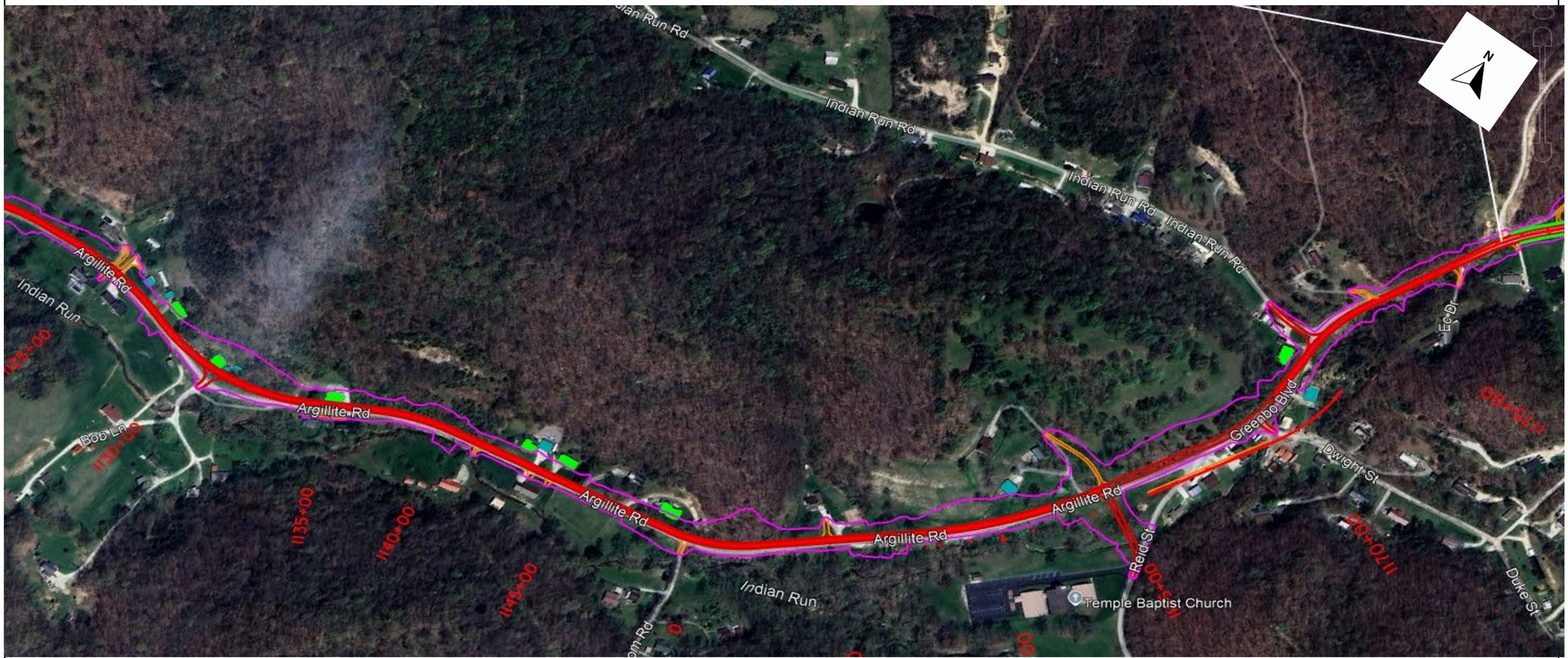


VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs

SKETCH/DIAGRAM: VALUE PROPOSAL

VALUE PROPOSAL

IS-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs
Assumptions & Calculations	Projected savings for the rural section equate to 30% for the total cost. Total cost for construction is the estimated cost provided not included contingency which is being added as a 10% markup. Parcel Relocations is not part of the Construction estimate but will be savings to the overall project.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Construction of Rural Section	10.00%	LS	1	$22,558,342	$24,814,176	70%	$22,558,342	$17,369,923
Parcel Relocations	10.00%	EA	47	$65,000	$3,360,500	33	$65,000	$2,359,500
TOTAL					$28,175,000			$19,729,000
							Impact to Initial Cost (Baseline Less Proposed)	**$8,446,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL
MT-04
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	During construction, restrict roadway to trucks from the west Super Quik into Flatwoods to minimize MOT curves for transitions
FUNCTION	**Maintain Traffic**

VALUE PROPOSAL SYNOPSIS:

By eliminating trucks during construction, temporary lane widths can be reduced and diversion curves can be tightened.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance**
O&M	**Maintained**	**Schedule Impact**	**Maintained**	**$372,000**

BASELINE CONCEPT DESCRIPTION:

The baseline concept has no truck restrictions.

VALUE PROPOSAL DESCRIPTION:

The proposed concept will limit truck traffic between the Industrial Parkway and the KY 503/KY 207 Super Quik intersection (MP 12.1).

ADVANTAGES:	DISADVANTAGES:
● Safer Construction	● Increased MOT signing
● Potential reduced cost	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$630,000	$0	$630,000
VALUE PROPOSAL	$258,000	$0	$258,000
TOTAL (Baseline less Proposed)	$372,000	$0	$372,000

AVOID COST

VALUE PROPOSAL

MT-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	During construction, restrict roadway to trucks from the west Super Quik into Flatwoods to minimize MOT curves for transitions

DISCUSSION & JUSTIFICATION:

By eliminating truck traffic during construction, safety is improved. The project team can evaluate whether a reduction in temporary lane configuration or reduction of project footprint is warranted.

Advanced signing on the Industrial Parkway (KY 67) and in the City of Flatwoods would warn drivers not to use KY 207 as a through route. If truck drivers fail to heed these warnings, additional signing can be placed prior to the KY 207/ KY 503 Super Quik, allowing drivers to turn at the Super Quik.

By removing truck traffic, the east detour can be modified for tighter turn radii, or eliminated altogether. This will allow phase rearrangement so the future Greenbo Blvd. can be built in one of the first phases. This could reduce or eliminate quantities of temporary pavement and shorten the planned 72 inch culvert.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

MT-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	During construction, restrict roadway to trucks from the west Super Quik into Flatwoods to minimize MOT curves for transitions

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Improved
Justification for Impact Score	The 72" culvert is shorter so maintenance would be reduced.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	Construction is safer.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Improved
Justification for Impact Score	Elimination of trucks on much of the rural and all of the urban section will benefit phasing.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	The potential is there to narrow lane widths and reduce Right of Way needs and should be evaluated by the project team.	

VALUE PROPOSAL

MT-04

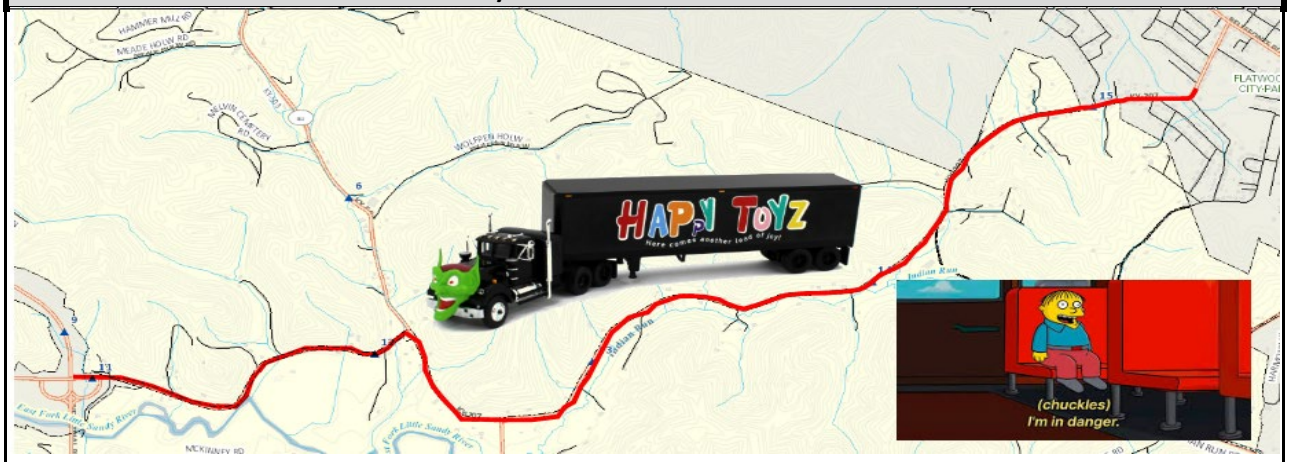
Kentucky Transportation Cabinet

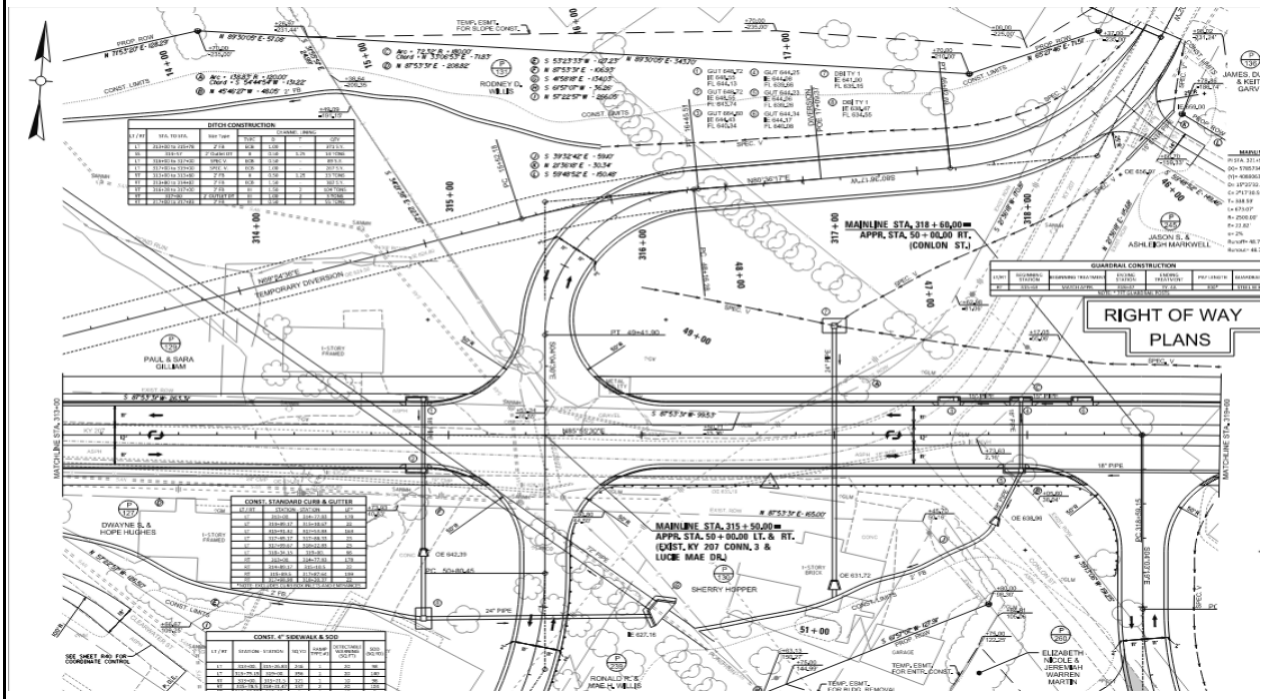
KY 207, Greenup County

Item No. 9-8509

TITLE	During construction, restrict roadway to trucks from the west Super Quik into Flatwoods to minimize MOT curves for transitions

SKETCH/DIAGRAM: BASELINE CONCEPT





VALUE PROPOSAL

MT-04

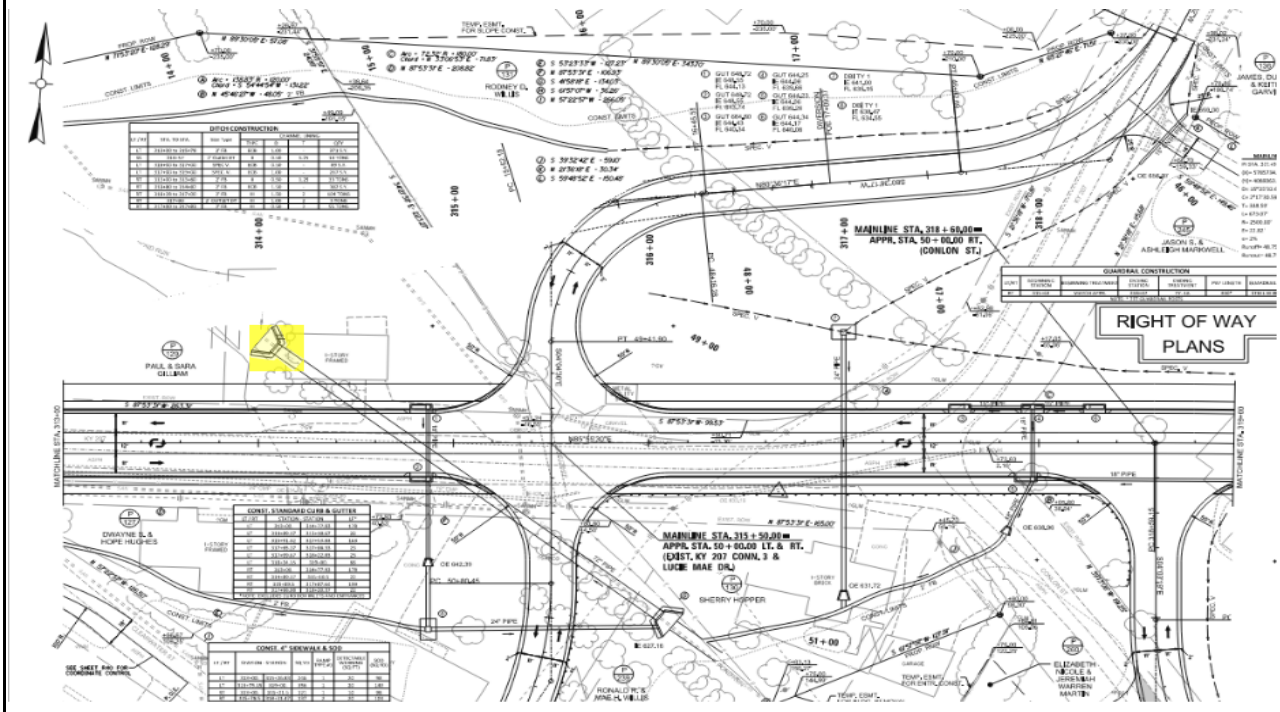
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	During construction, restrict roadway to trucks from the west Super Quik into Flatwoods to minimize MOT curves for transitions

SKETCH/DIAGRAM: VALUE PROPOSAL



VALUE PROPOSAL

MT-04

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	During construction, restrict roadway to trucks from the west Super Quik into Flatwoods to minimize MOT curves for transitions
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
CL2 Asph Surf 0.38B 64-22	27.98%	TON	322	$105.61	$43,521			
CL2 Asph Surf 0.38D 64-22	27.98%	TON	488	$147.97	$92,414			
CL2 Asph Base 0.75D 64-22	27.98%	TON	687	$95.00	$83,526			
Intelligent Compaction for Asphalt	27.98%	TON	810	$0.25	$259			
Culvert Pipe - 72IN	27.98%	LF	539	$594.43	$410,045	339	$594.43	$257,895
TOTAL					$630,000			$258,000
							Impact to Initial Cost (Baseline Less Proposed)	**$372,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL
MT-09
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Consider rock or fill "burritos" to maximize part width construction and minimize part width settlement issues and reduce excavation
FUNCTION	**Maintain Traffic**

VALUE PROPOSAL SYNOPSIS:

Utilizing temporary retaining walls, a substantial Right of Way and Excavation savings may be realized.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance**
O&M	**Maintained**	**Schedule Impact**	**Maintained**	**$555,000**

BASELINE CONCEPT DESCRIPTION:

Build phase construction with temporary slopes to existing road and then later fill to ultimate flatter slopes.

VALUE PROPOSAL DESCRIPTION:

Build phase construction with temporary fabric wrapped slopes or wove wire retaining walls to provide consistent roadway foundation and reduce right-of-way and excavation impacts.

ADVANTAGES:	**DISADVANTAGES:**
● Less excavation	● Redesign of alignment
● Less right-of-way	● Increased construction inspection

$ COST SUMMARY	**Initial Costs**	**O&M Costs**	**Total Life Cycle Cost**
BASELINE CONCEPT	$20,308,000	$0	$20,308,000
VALUE PROPOSAL	$19,753,000	$0	$19,753,000
TOTAL (Baseline less Proposed)	$555,000	$0	$555,000

AVOID COST

VALUE PROPOSAL

MT-09

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider rock or fill "burritos" to maximize part width construction and minimize part width settlement issues and reduce excavation

DISCUSSION & JUSTIFICATION:

This project tested method has been employed on many projects that are short on space. Unlike a sheet pile wall or a timber lagging wall, this fabric wall can be directly buried and compacted against. This minimizes project footprint and creates a consistent roadbed under the new construction.

With the limited time of the study, the team has selected Sta 196+50 as an example to show. At this station, the proposal saves roughly 25% in excavation and roughly 10 feet of Right of Way acquisition.

This cross section is not typical, nor does the team suggest this method be employed throughout the project. Rather, when selectively employed, it is estimated to save 3% to 5% of excavation costs while providing a more consistent road bed. A consistent road bed is the whole point of the intelligent compaction bid item the team has included.

Quantity adjustments to unit prices such as higher expected excavation costs and lower anticipated rock costs due to quantity would make this suggestion more viable. Savings shown do not include Right of Way acquisition savings.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

MT-09

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider rock or fill "burritos" to maximize part width construction and minimize part width settlement issues and reduce excavation

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	Less right-of-way required with this alternative.	

VALUE PROPOSAL

MT-09

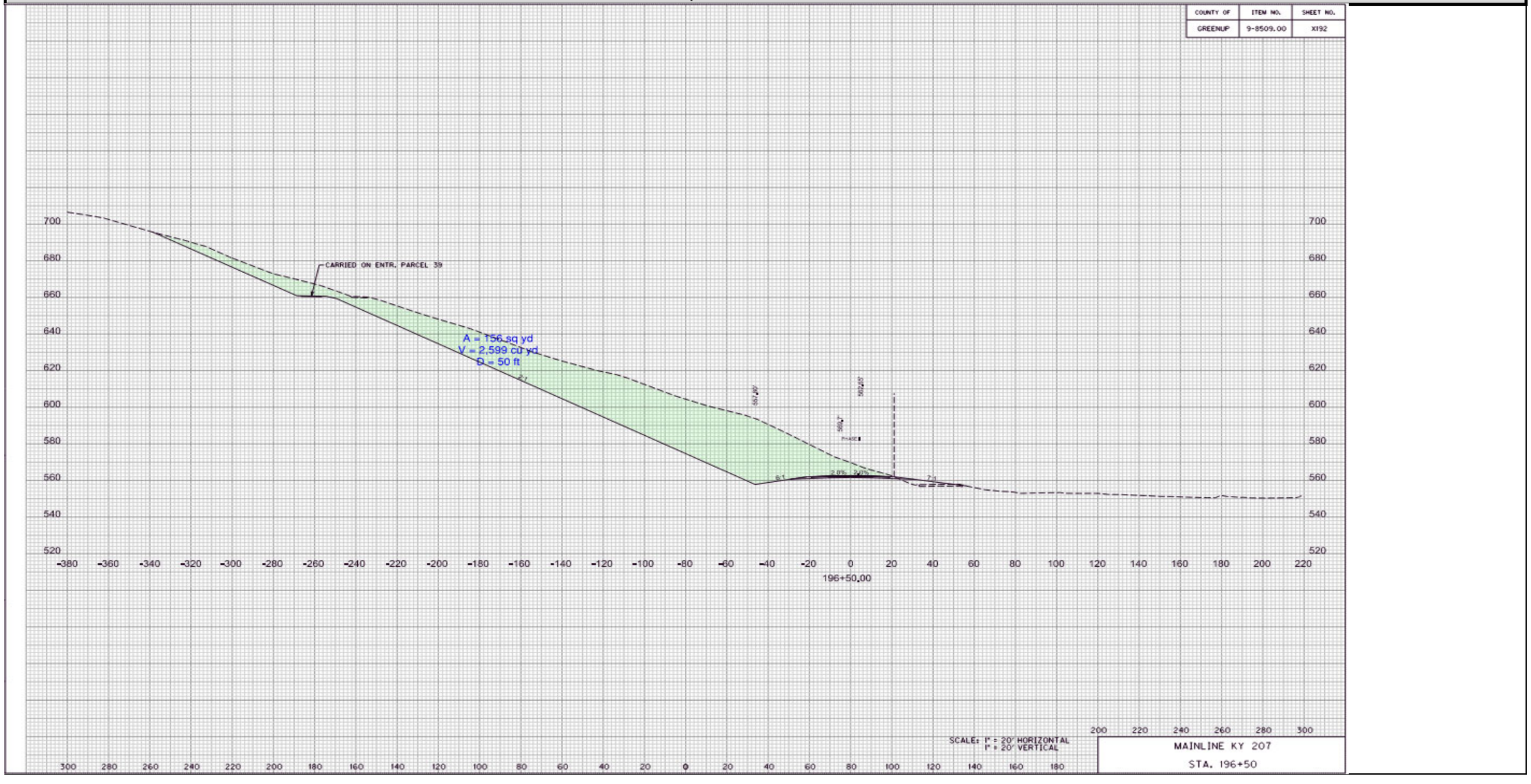
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider rock or fill "burritos" to maximize part width construction and minimize part width settlement issues and reduce excavation

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

MT-09

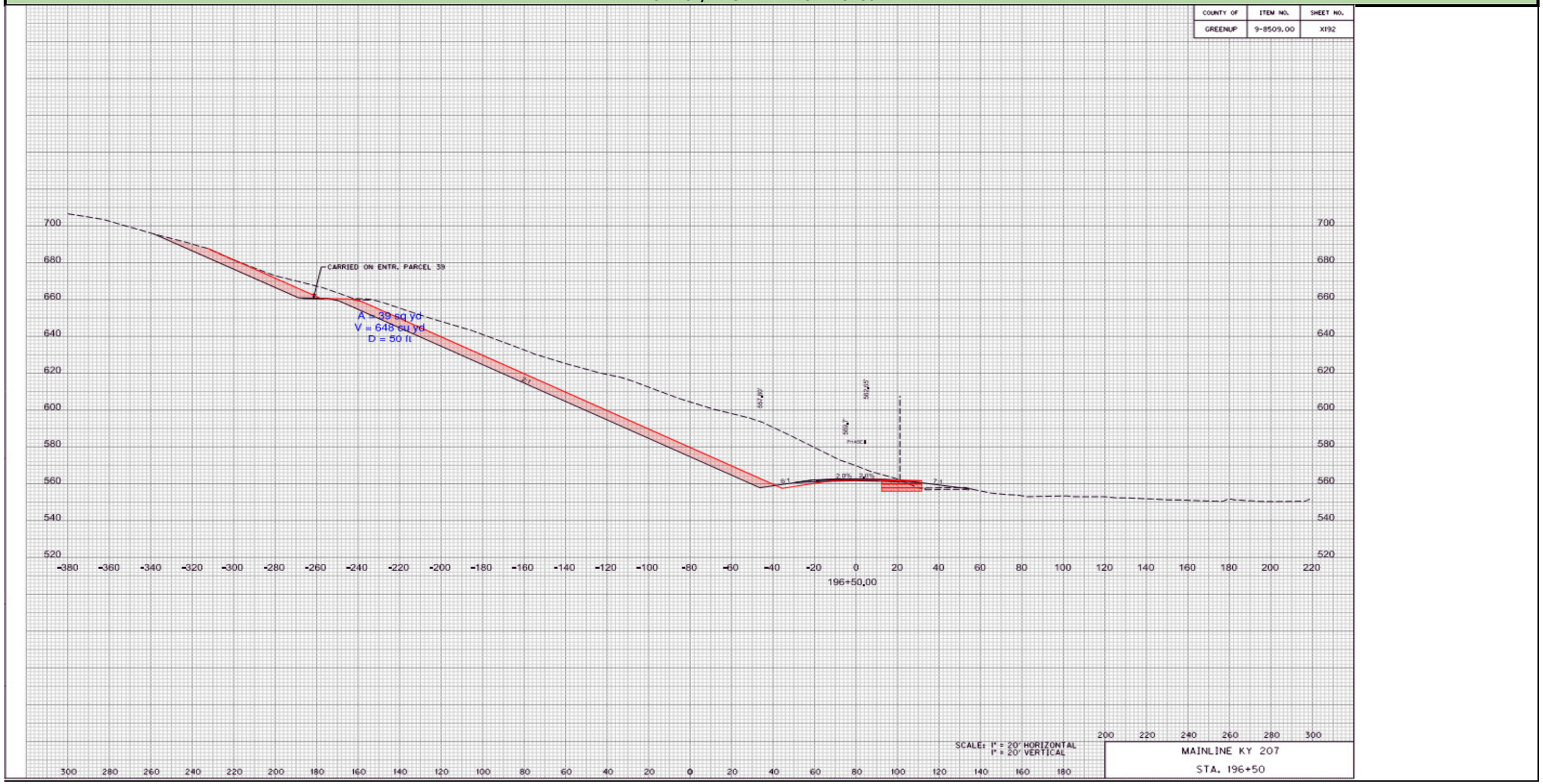
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider rock or fill "burritos" to maximize part width construction and minimize part width settlement issues and reduce excavation

SKETCH/DIAGRAM: VALUE PROPOSAL



VALUE PROPOSAL

MT-09

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider rock or fill "burritos" to maximize part width construction and minimize part width settlement issues and reduce excavation
Assumptions & Calculations	Conservative estimate of 3% excavation savings. Burritos calculated at 10 locations, 3 layers at 1 foot depth by 10 foot transverse by 50 feet longitudinal. Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Roadway Excavation	27.98%	CY	1,649,255	$9.62	$20,305,093	1,599,777	$9.62	$19,695,936
Fabric - Geotextile Type I	27.98%	SY	360	$3.40	$1,566	4,560	$3.40	$19,842
Crushed Aggregate Size No. 2	27.98%	TON	24	$33.03	$1,015	875	$33.03	$36,988
TOTAL					$20,308,000			$19,753,000
							Impact to Initial Cost (Baseline Less Proposed)	**$555,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL
RM-12
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Use 7' tall culverts to accommodate skid steer cleanout
FUNCTION	**Reduce Maintenance**

VALUE PROPOSAL SYNOPSIS:

Increase the culvert dimensions for all new culverts to a minimum of 7' in height to improve life cycle cost and ease of maintenance(cleaning).

Reliability	**Improved**	**Functionality**	**Improved**	**$ Initial Cost Add**	
O&M	**Improved**	**Schedule Impact**	**Maintained**	**($58,000)**	

BASELINE CONCEPT DESCRIPTION:

The planned culvert designs call for a 6'X6' and 14'X6' culvert.

VALUE PROPOSAL DESCRIPTION:

Increase the culvert dimensions to 6'X7' and 14'X7' for ease of maintenance cleaning with equipment. Larger culverts are less likely to become stopped up and cause flooding. Hydraulically, the larger culvert will provide additional capacity if this area is developed in the future.

ADVANTAGES:	DISADVANTAGES:
● Greatly improves ease of long term maintenance	● Slight increase in construction cost
● Improves drainage capacity	
● Improves ease of construction	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$965,000	$0	$965,000
VALUE PROPOSAL	$1,023,000	$0	$1,023,000
TOTAL (Baseline less Proposed)	($58,000)	$0	($58,000)

ADD COST

VALUE PROPOSAL

RM-12

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 7' tall culverts to accommodate skid steer cleanout

DISCUSSION & JUSTIFICATION:

• **Technical Considerations:**
The design of the 6'x7' and 14'X7' culverts are similar to the planned 6'x6' and 14'X6' with only a slight increase in material.

• **Performance Impacts:**
The taller culverts are easier to construct, maintain, and receive better bid prices per square foot opening. As you can see in the sketches on the following pages, a typical skid steer can fit and scoop out the 7' culverts much easier than a 6' culvert.

• **Cost Considerations:**
Increased initial costs are offset by savings in future maintenance cost reductions and improved operability.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at out-brief meeting.

VALUE PROPOSAL

RM-12

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 7' tall culverts to accommodate skid steer cleanout

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Improved
Justification for Impact Score	Greatly improves ease of long term maintenance	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	Improves ease of construction	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Improved
Justification for Impact Score	Improves drainage capacity	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

VALUE PROPOSAL

RM-12

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 7' tall culverts to accommodate skid steer cleanout

SKETCH/DIAGRAM: BASELINE CONCEPT

6' tall culverts attempting to be cleaned

VALUE PROPOSAL

RM-12

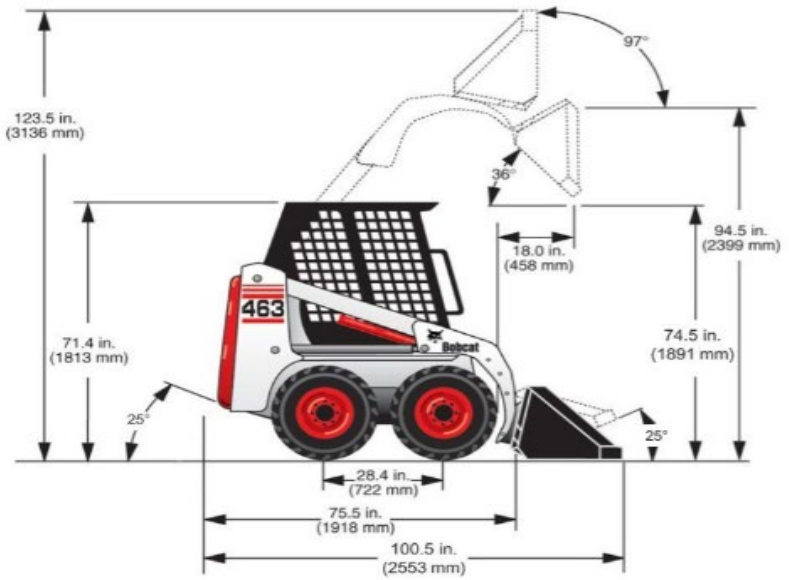
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 7' tall culverts to accommodate skid steer cleanout

SKETCH/DIAGRAM: VALUE PROPOSAL



Angle of Departure	25°
Carry Position	8.14" (207 mm)
Dump Angle @ Maximum Height	34°
Dump Height with Standard Bucket	74.5" (1891 mm)
Dump Reach @ Maximum Height	18.5" (470 mm)
Ground Clearance	5.5" (140 mm)
Height to Bucket Hinge Pin	94.5" (2399 mm)
Height with Operator Cab	71.4" (1814 mm)
Length without Attachment	75.5" (1918 mm)
Length with Standard Bucket	100.5" (2553 mm)
Operating Height	123.3" (3132 mm)
Rollback @ Carry Position	25°
Rollback Fully Raised @ Maximum Height	97°
Wheelbase	28.4" (722 mm)

Turning Radius with Standard Bucket	61.3" (1557 mm)
A) Width (over tires)	
23 x 5.70-12	35.4" (900 mm)
23 x 8.50-12	43.3" (1100 mm)
B) Wheel Tread	
23 x 5.70-12	29.6" (752 mm)
23 x 8.50-12	35.5" (902 mm)
C) Width (over bucket)	
36" Bucket	36.0" (914 mm)
44" Bucket	44.5" (1130 mm)

6' skid steer easily cleans a 7' culvert

VALUE PROPOSAL

RM-12

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 7' tall culverts to accommodate skid steer cleanout
Assumptions & Calculations	Quantities were increased based on relative size increase for each culvert. Values were 1.083% larger for 6'X7' and 1.05% for 14'X7' culverts. Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	**Mark-up**	**BASELINE CONCEPT**				**VALUE PROPOSAL**		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Concrete Class A	27.98%	CY	577	$1,002.63	$740,900	612	$1,002.63	$785,749
Steel Reinforcement	27.98%	LB	94,455	$1.85	$223,634	100,153	$1.85	$237,125
TOTAL					$965,000			$1,023,000
							Impact to Initial Cost (Baseline Less Proposed)	**($58,000)**

Note: Total costs are rounded to the nearest thousand dollars.

ADD COST

VALUE PROPOSAL
ST-03
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Use 8' shoulder (4' paved)
FUNCTION	**Support Traffic**
ASSOCIATED IDEAS	IC-01 Use consistent shoulders and clear zone in major segments; RM-02 Use geogrid grass shoulders; RM-09 Reduce paved portion of shoulders; RM-10 Reduce shoulder width overall

VALUE PROPOSAL SYNOPSIS:

Reduction to pavement and excavation by reducing the width of the shoulder and the paved portion of the shoulder will still provide improved safety with a reduction in cost. Using geogrid to reinforce the shoulders will provide a stable area for vehicles to traverse without the cost of asphalt.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance**
O&M	**Maintained**	**Schedule Impact**	**Improved**	**$671,000**

BASELINE CONCEPT DESCRIPTION:

Current shoulder design is a 10' shoulder with 8' paved with 4.5" of asphalt.

VALUE PROPOSAL DESCRIPTION:

Reduce total shoulder width to 8' with only 4' paved with 4.5" of asphalt. The other 4' of grass shoulder will be underlain with geogrid to provide stability.

ADVANTAGES:	DISADVANTAGES:
● Cost savings	● Shared use path closer to roadway
● Less excavation in cuts	● Guardrail installed through geogrid
● More green space	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$7,422,000	$0	$7,422,000
VALUE PROPOSAL	$6,751,000	$0	$6,751,000
TOTAL (Baseline less Proposed)	$671,000	$0	$671,000

AVOID COST

VALUE PROPOSAL

ST-03

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 8' shoulder (4' paved)

DISCUSSION & JUSTIFICATION:

• Technical Considerations: Safety of vehicles needing to exit the travel way onto the shoulder. An 8' shoulder will allow passenger vehicles room to exit the travel way and larger vehicles to get mostly out of the way. Earth shoulders need to be reinforced to withstand traffic loading. The geogrid reinforcement added to the CSB layer will provide a stabilizing force and a geotextile layer separating the CSB and soil will allow grass to grow.

• Cost Considerations: Reduction in the excavation with a smaller typical section and reduction in the asphalt quantities. Cost savings will be offset slightly by the inclusion of geogrid and additional geotextile fabric.

• Stakeholder Acceptance: With adding more green space the scenery is enhanced. This will provide less change in shoulder design between the rural and urban sections increasing driver expectancy.

Note: Intelligent Compaction for Asphalt is no longer used by the Cabinet, so the removal of this items is shown as a cost savings on this proposal. Also the approved pavement design and the typical sections show the asphalt base type to be 1.0D base and the bit item list shows 0.75D base. This proposal updates this to only include the correct 1.0D base.

OUT-BRIEF PRESENTATION COMMENTS:

The project team inquired if there was any concerns about Maintenance of Traffic. The response was that District Maintenance has performed typical with geogrid.

VALUE PROPOSAL

ST-03

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 8' shoulder (4' paved)

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Improved
Justification for Impact Score	Improved since more green space on shoulders.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Improved
Justification for Impact Score	Reduces impervious pavement.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

VALUE PROPOSAL

ST-03

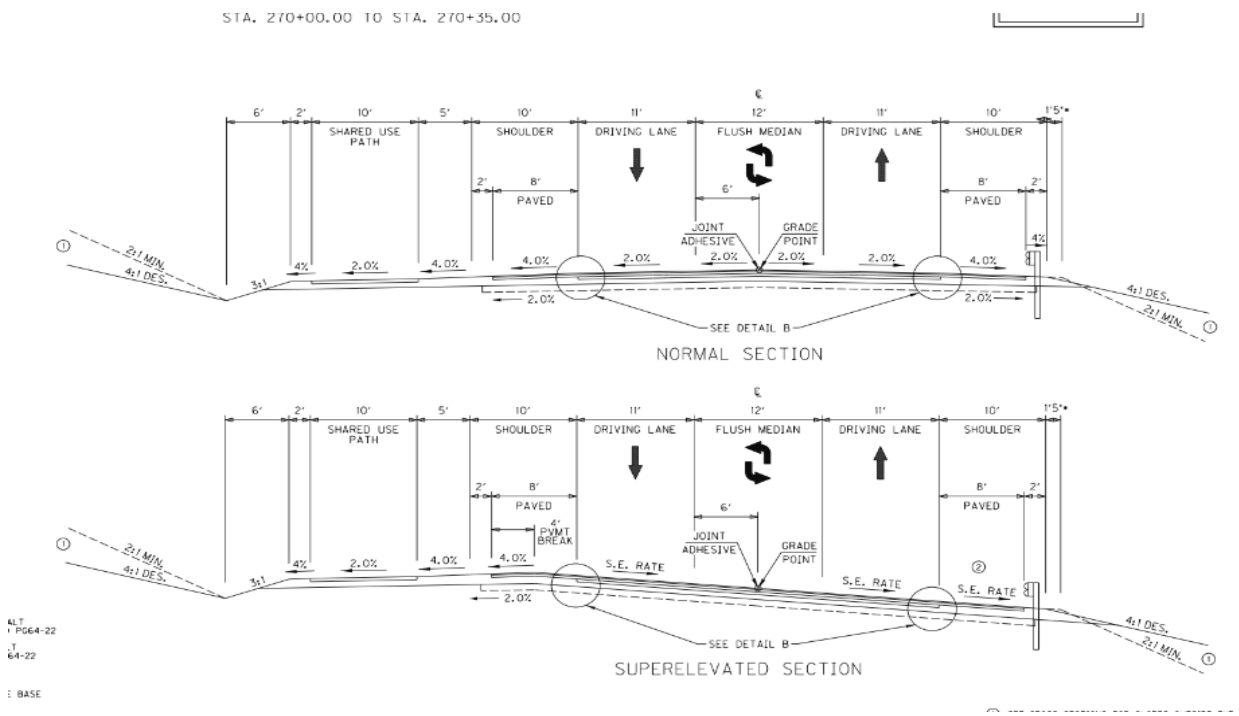
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 8' shoulder (4' paved)

SKETCH/DIAGRAM: BASELINE CONCEPT



VALUE PROPOSAL

ST-03

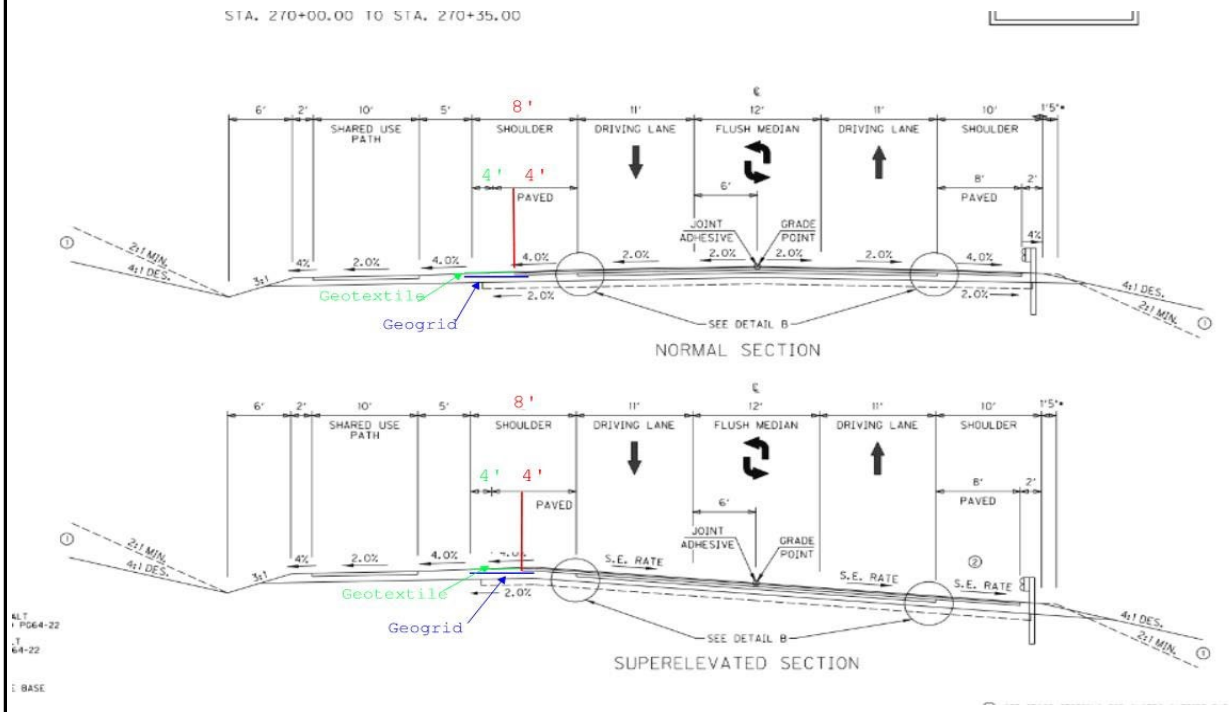
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 8' shoulder (4' paved)

SKETCH/DIAGRAM: VALUE PROPOSAL



NOTE: Adjustments on the left side of the graphic also apply to the right side.

VALUE PROPOSAL

ST-03

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Use 8' shoulder (4' paved)
Assumptions & Calculations	Shoulder reduction of 10' (8' paved) to 8' total (4' paved) is from STA 100+00 to 279+00. Asphalt is reduced by a total of 8' of width with CSB and cement reduced by 4' total width. Geogrid is extended 1' under paved shoulder for a total width added of 5' each side and geotextile is increased by 4' each side. Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Class 2 ASPH BASE 1.0D PG64-22	27.98%	TON	10,049	$83.04	$1,067,953	7,424	$83.04	$788,983
Crushed stone base	27.98%	TON	72,566	$33.03	$3,067,495	68,221	$33.03	$2,883,824
Cement stabilized roadbed	27.98%	SY	125,050	$4.44	$710,573	117,095	$4.44	$665,370
Class 2 ASPH SURF 0.38D PG64-22	27.98%	TON	9,291	$105.61	$1,255,769	7,979	$105.61	$1,078,439
Fabric-geotextile class 2	27.98%	SY	13,284	$2.54	$43,182	29,195	$2.54	$94,904
Geogrid reinforcement for subgrade	27.98%	SY				19,900	$2.17	$55,266
Cement	27.98%	TON	3,786	$260.99	$1,264,581	3,545	$260.99	$1,184,083
Intelligent Compaction for Asphalt		TON	48,597	$0	$12,149	0	$0	$0
TOTAL					$7,422,000			$6,751,000
							Impact to Initial Cost (Baseline Less Proposed)	**$671,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL
CW-02
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Consider precast culverts (RCBC locations)
FUNCTION	**Convey Water**

VALUE PROPOSAL SYNOPSIS:

Use precast culverts to reduce construction time and provide equivalent drainage structures. Reduction in contract times improves safety and reduces cost.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance**	
O&M	**Maintained**	**Schedule Impact**	**Improved**	**$344,000**	

BASELINE CONCEPT DESCRIPTION:

Install 2 cast in place culverts.

VALUE PROPOSAL DESCRIPTION:

Decrease the time needed to construct cast in place culverts by installing precast culverts. These precast culverts are as durable and provide the same service as cast in place, but can be installed much quicker.

ADVANTAGES:	DISADVANTAGES:
● Quicker construction	● Requires solid foundation
● Reduces MOT time and cost	

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$7,706,000	$0	$7,706,000
VALUE PROPOSAL	$7,362,000	$0	$7,362,000
TOTAL (Baseline less Proposed)	$344,000	$0	$344,000

AVOID COST

VALUE PROPOSAL

CW-02

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider precast culverts (RCBC locations)

DISCUSSION & JUSTIFICATION:

Using precast culverts reduces the construction time for large drainage structures. These precast culverts are equivalent to traditional cast in place culverts in terms of water conductivity and durability. The quicker work items can be completed increases safety by reducing worker and public exposure. Less disruption in traffic flow and increased driver satisfaction.

The only issue with precast culverts is the foundation needs to be founded on solid rock, install a thicker full paved invert or follow section 701.03.01 for replacing unstable foundation soils to ensure stability and durability.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

VALUE PROPOSAL

CW-02

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider precast culverts (RCBC locations)

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	Quicker construction.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Improved
Justification for Impact Score	Quicker construction.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Improved
Justification for Impact Score	Potential for quicker and more efficient phasing operations.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

VALUE PROPOSAL

CW-02

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider precast culverts (RCBC locations)

SKETCH/DIAGRAM: BASELINE CONCEPT

VALUE PROPOSAL

CW-02

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider precast culverts (RCBC locations)

SKETCH/DIAGRAM: VALUE PROPOSAL

VALUE PROPOSAL

CW-02

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Consider precast culverts (RCBC locations)
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction. **For JOOH, it is assume that the savings on schedule duration will equate to 15% in the base vs 13.5% in the alternative based on a 10% schedule savings.**

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Class A Concrete	27.98%	CY	603	$1,003	$774,262			
Steel Reinforcement	27.98%	LB	101,190	$2	$239,580			
Foundation Prep	27.98%	LS	1	$144,756	$185,258	1	$144,756	$185,258
Concrete box culvert	27.98%	LF				400	$2,580	$1,320,754
JOOH Savings	27.98%	LS	0.15	$33,895,227	$6,506,867	0.14	$33,895,227	$5,856,180
TOTAL					$7,706,000			$7,362,000
							Impact to Initial Cost (Baseline Less Proposed)	**$344,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL

AP-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Many areas throughout project, offset for proposed ROW line seems to be much greater than 10'-15' from limits of construction; some exceed 30'-50'
FUNCTION	**Acquire Property**
ASSOCIATED IDEAS	Decrease overall area for ROW acquisition

VALUE PROPOSAL SYNOPSIS:

There are areas within the plans that the Proposed ROW lines seem to be outside the 10'-15' typical offset from the construction limits. Each parcel needs to be reviewed and considered for reducing the acquisition areas.

Reliability	**Improved**	**Functionality**	**Improved**	**$ Initial Cost Avoidance**
O&M	**Improved**	**Schedule Impact**	**Maintained**	**Approximately 6 acres of reduction to Fee Simple Acquisitions**

BASELINE CONCEPT DESCRIPTION:

ROW limits proposed outside of construction limits.

VALUE PROPOSAL DESCRIPTION:

Reduce the area needed for proposed ROW acquisition.

ADVANTAGES:	DISADVANTAGES:
● Reduce ROW acquisition cost	● None apparent

Approximately 6 acres of reduction to Fee Simple Acquisitions

VALUE PROPOSAL

AP-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Many areas throughout project, offset for proposed ROW line seems to be much greater than 10'-15' from limits of construction; some exceed 30'-50'

DISCUSSION & JUSTIFICATION:

By reducing the areas needed for ROW acquisition, it will benefit the overall cost of completing the project:

- Each parcel will need to be reviewed for reduction in area needed for acquisition.

- By reducing the area of need, the cost will be reduced.

- This will not have any impact on the schedule of the project and should be acceptable by all parties.

OUT-BRIEF PRESENTATION COMMENTS:

The project team asked if utility relocations were considered. Value team responded that we did not have plans to determine utility impacts.

VALUE PROPOSAL

AP-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Many areas throughout project, offset for proposed ROW line seems to be much greater than 10'-15' from limits of construction; some exceed 30'-50'

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	A reduction in overall area needed for acquisition will reduce cost to ROW acquisition phase of the project.	

VALUE PROPOSAL

AP-08

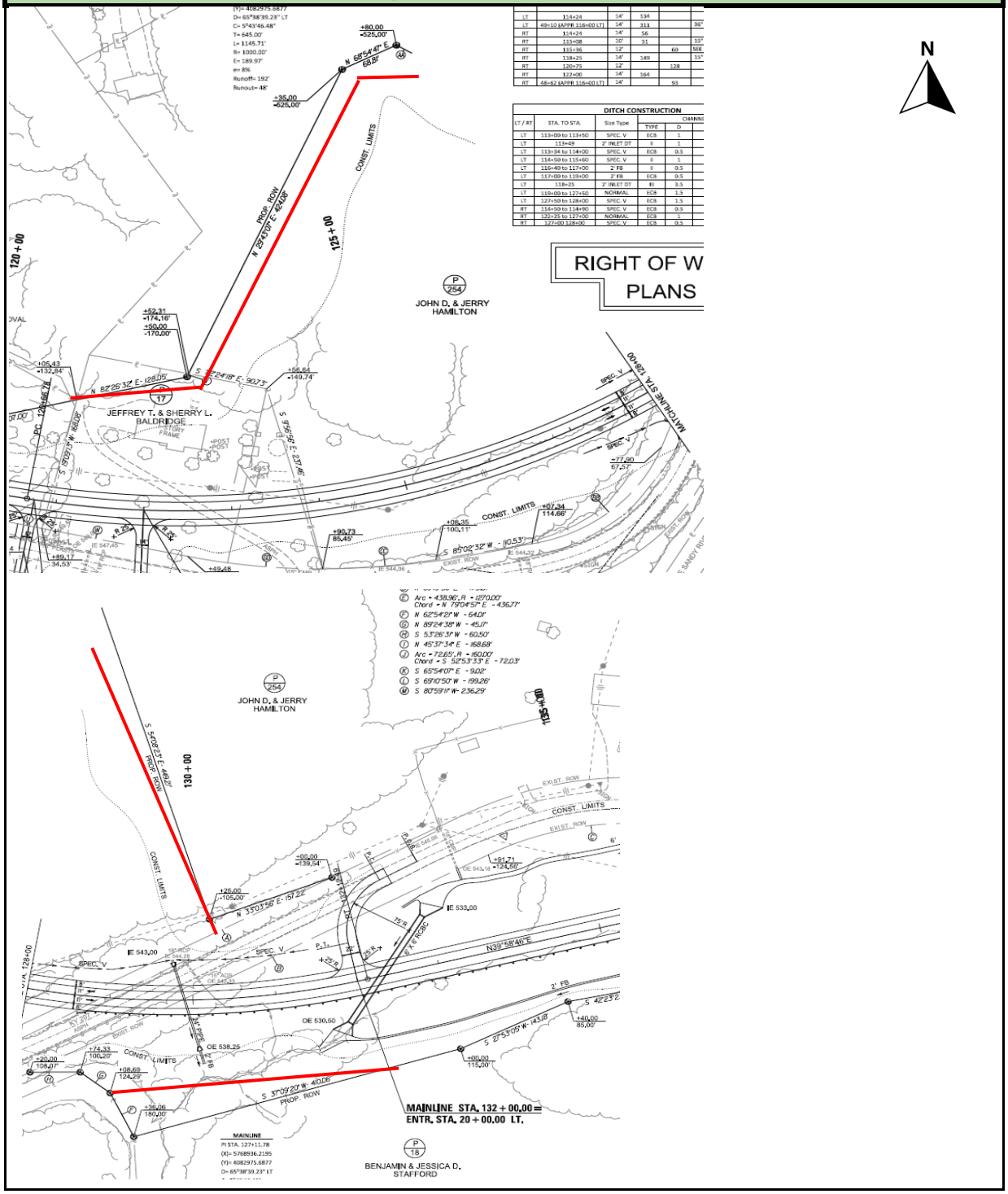
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Many areas throughout project, offset for proposed ROW line seems to be much greater than 10'-15' from limits of construction; some exceed 30'-50'

SKETCH/DIAGRAM: VALUE PROPOSAL



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Kentucky Transportation Cabinet

KY 207, Greenup County

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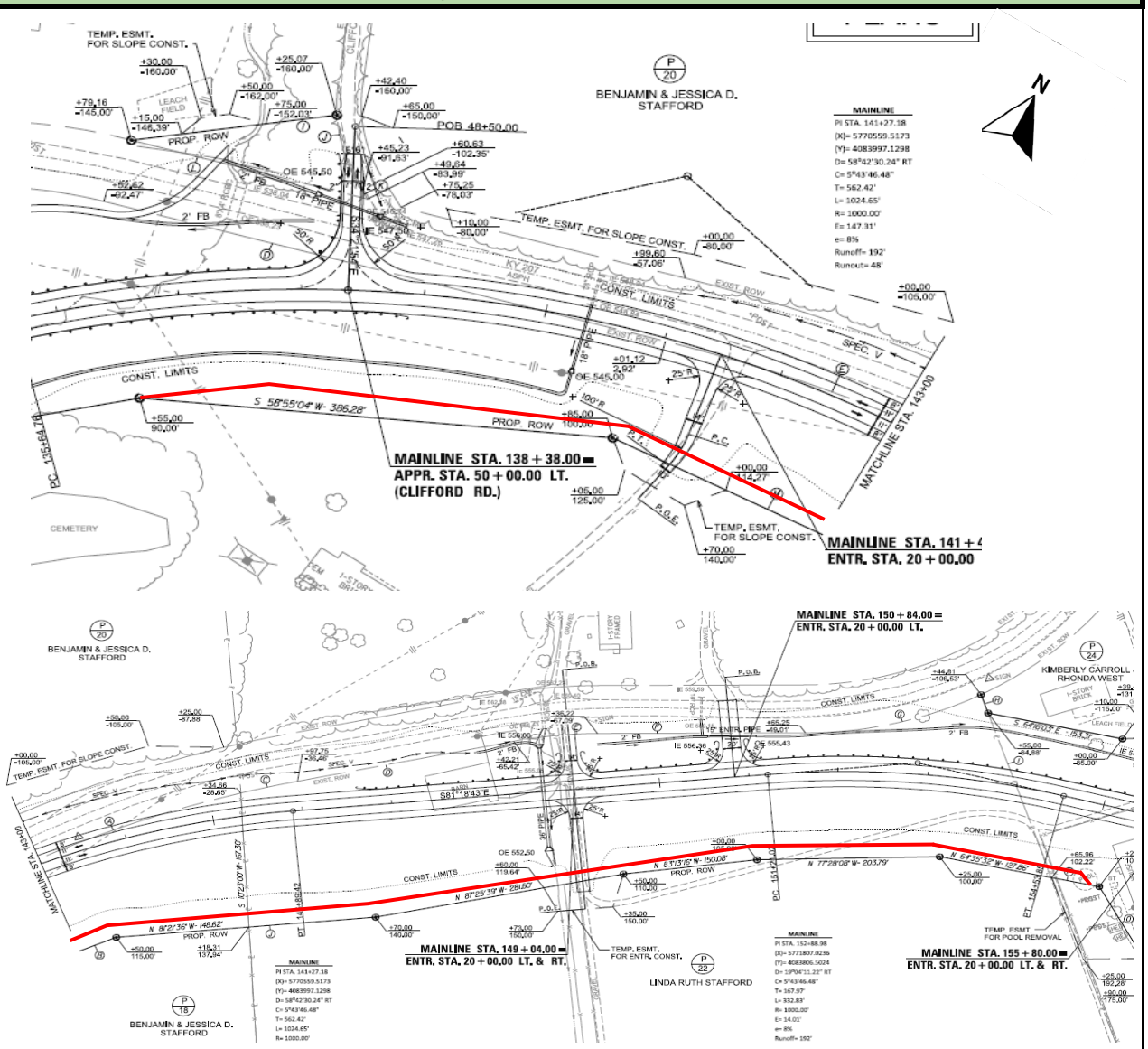

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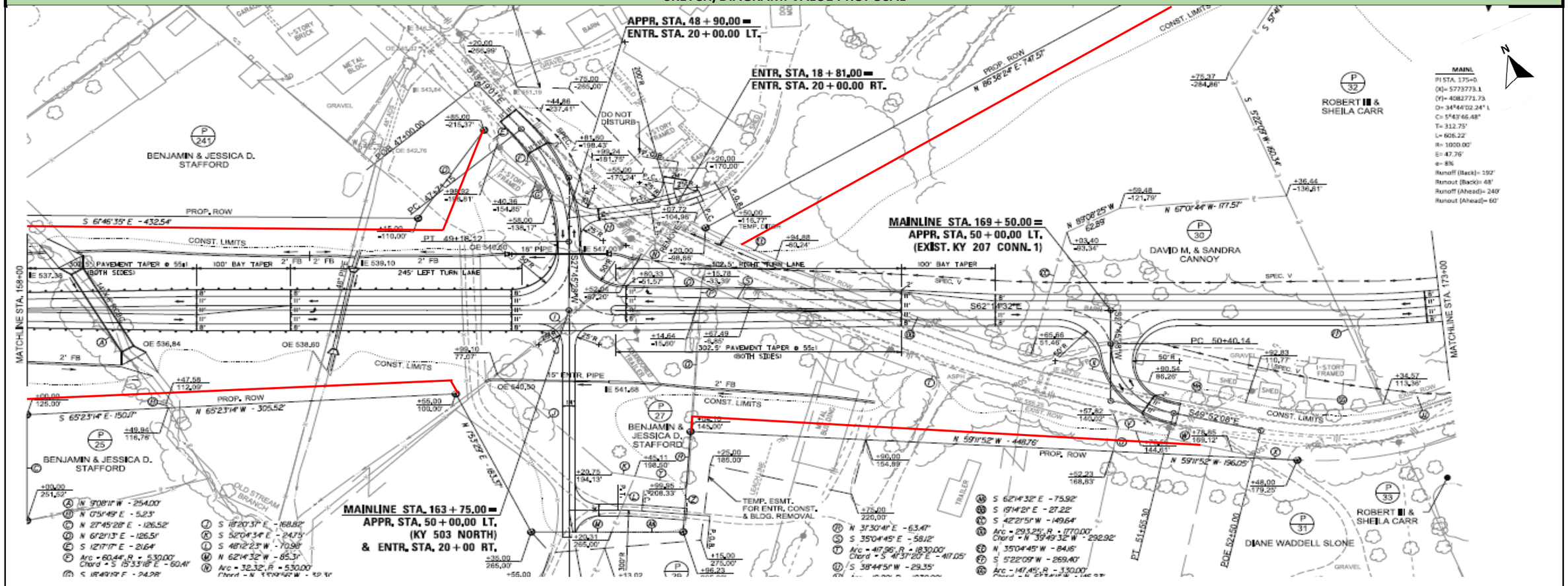

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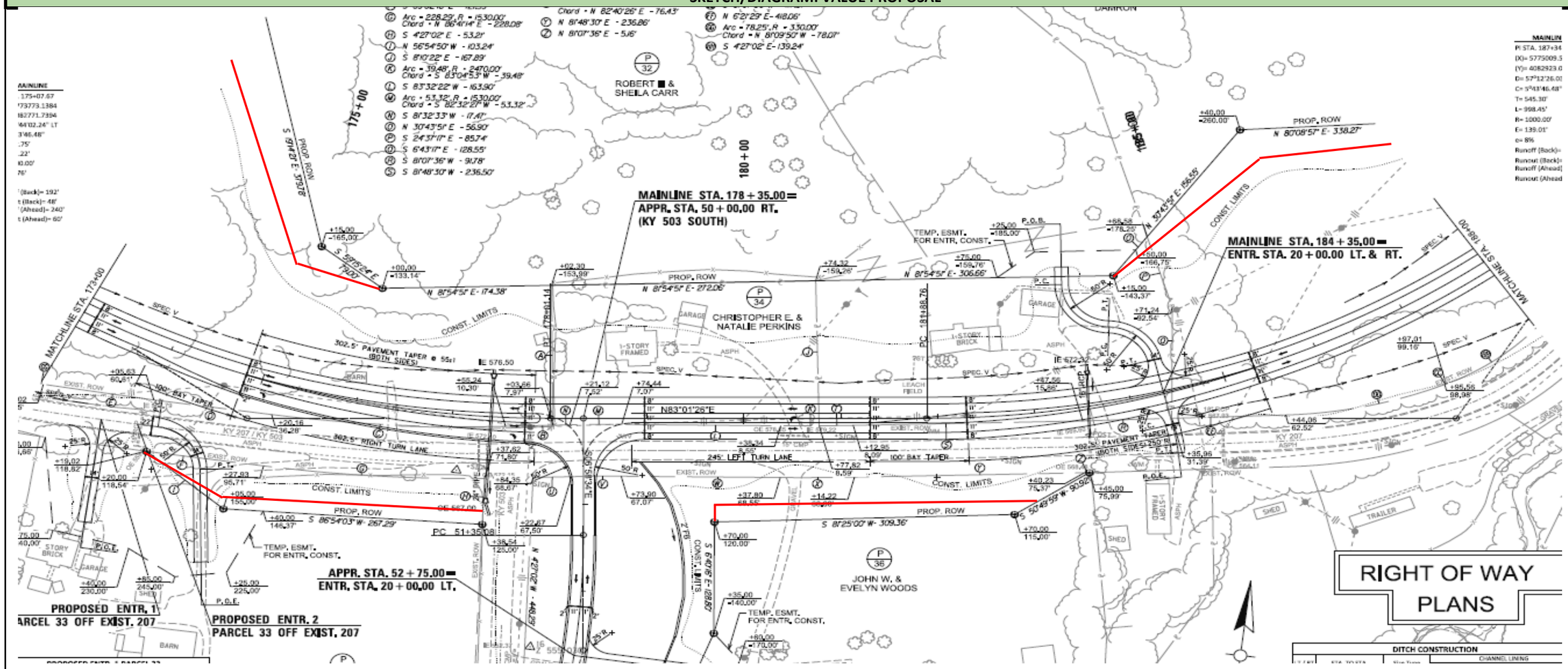

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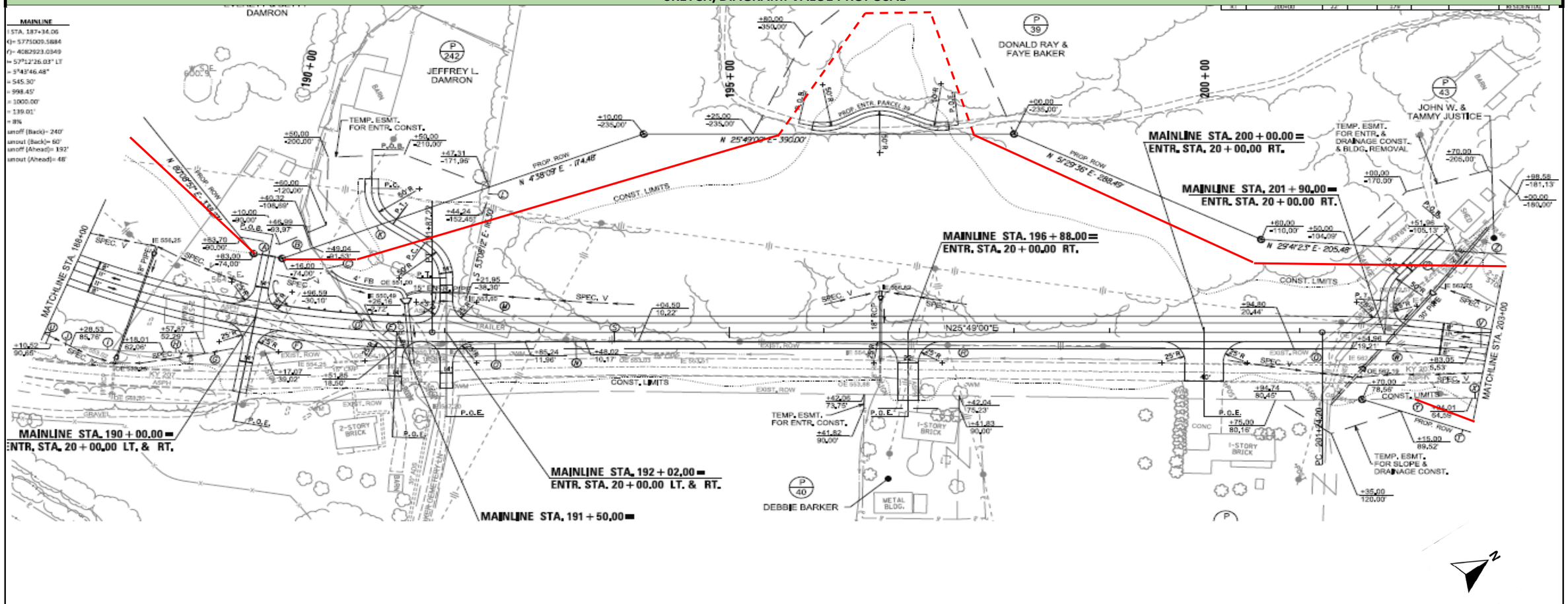

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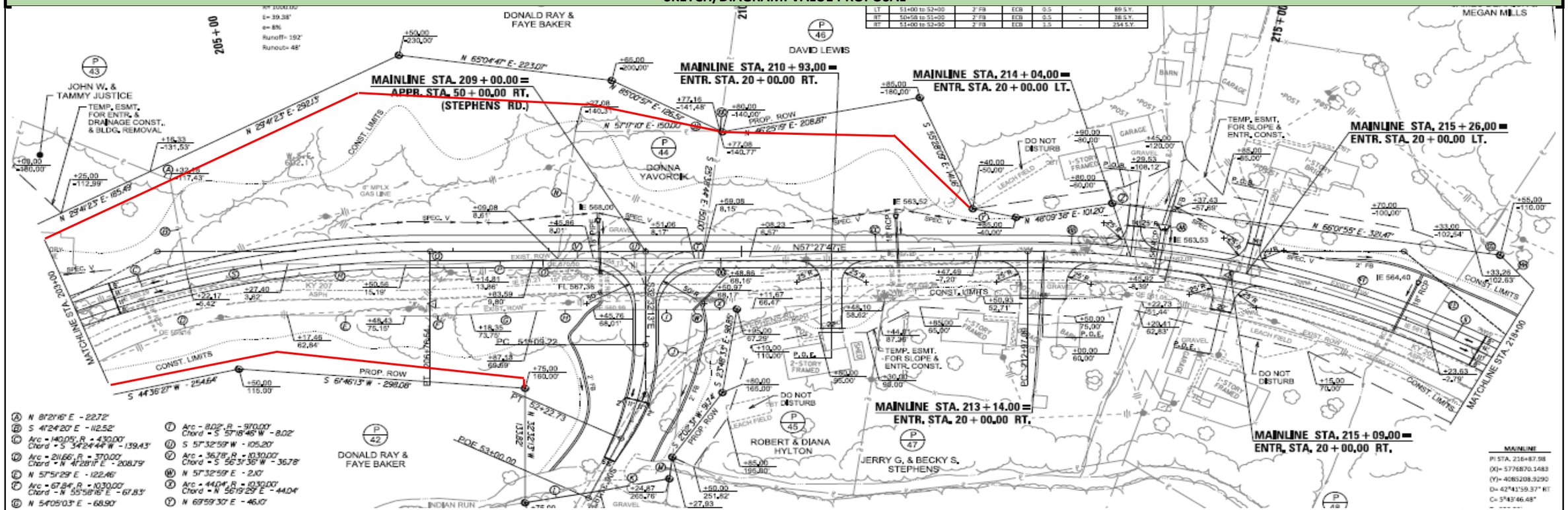

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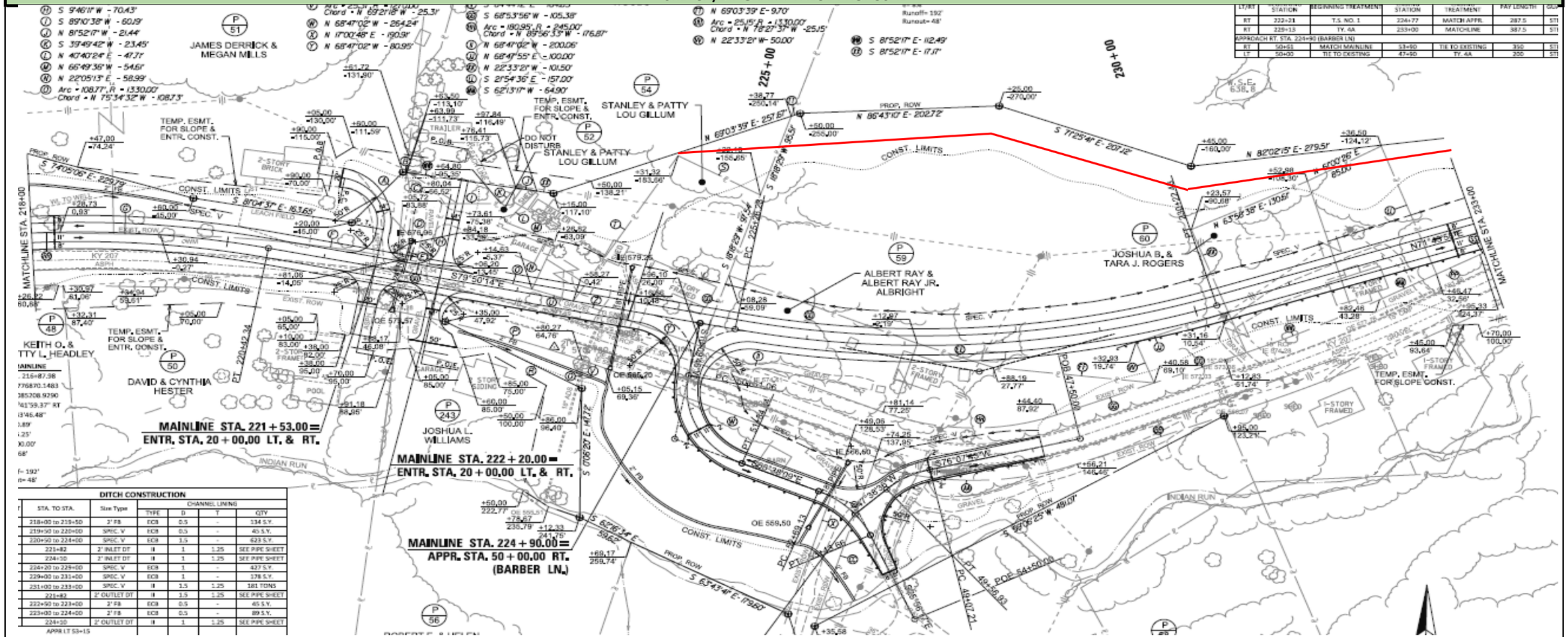

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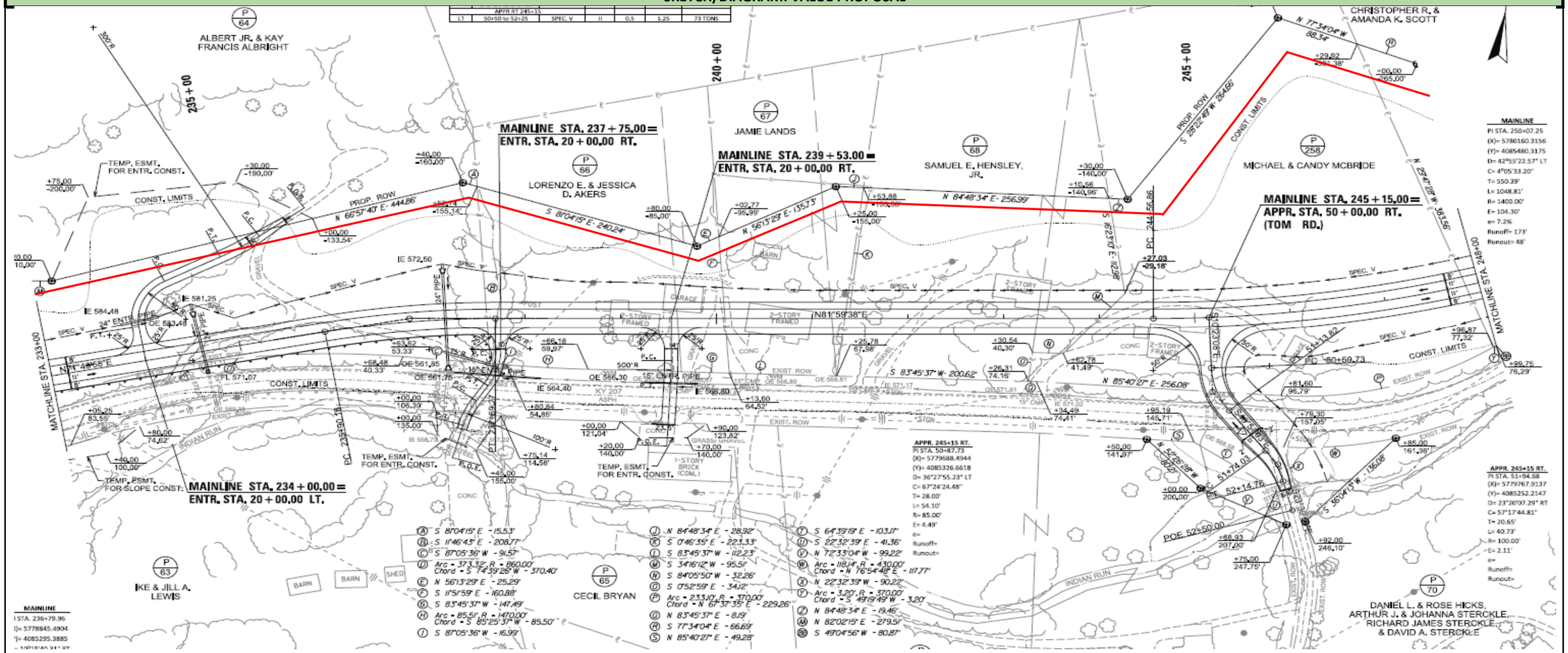

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KY 207, Greenup County

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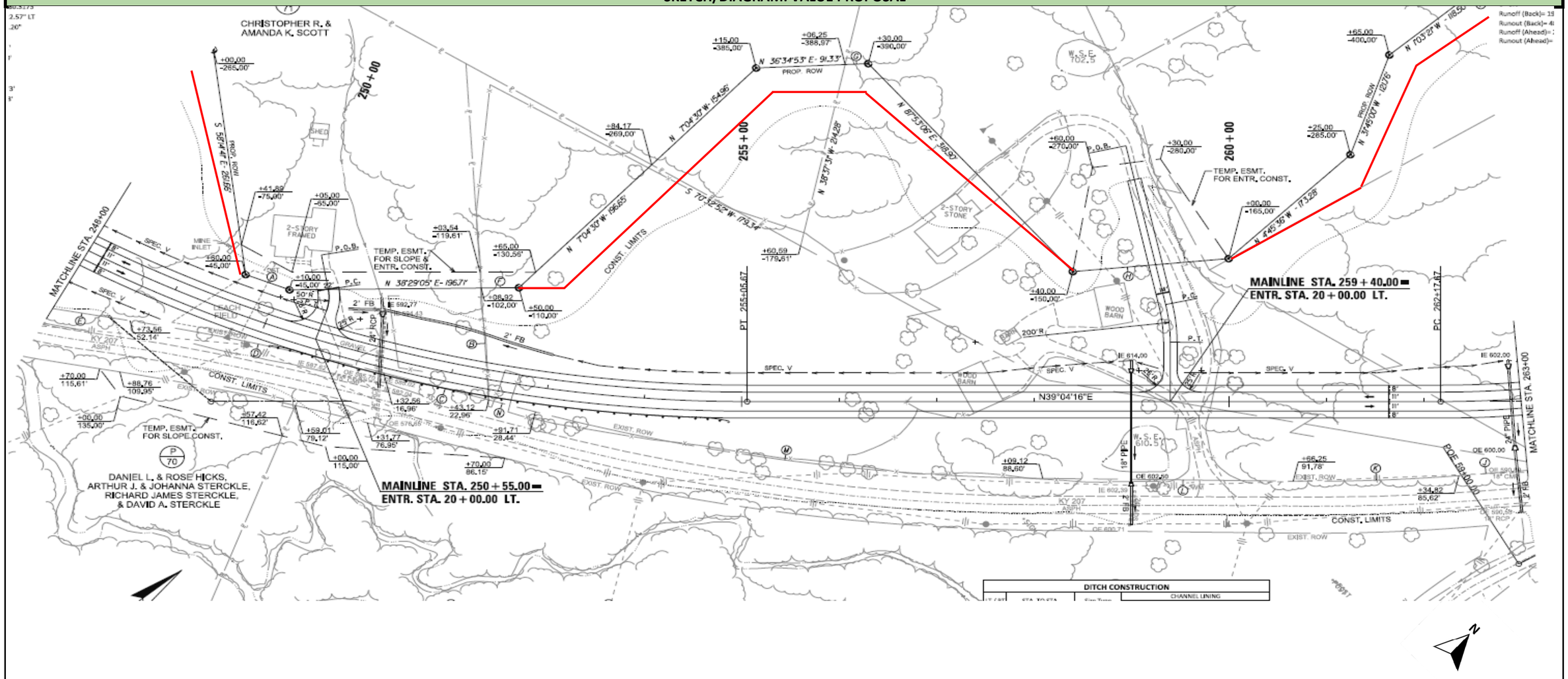

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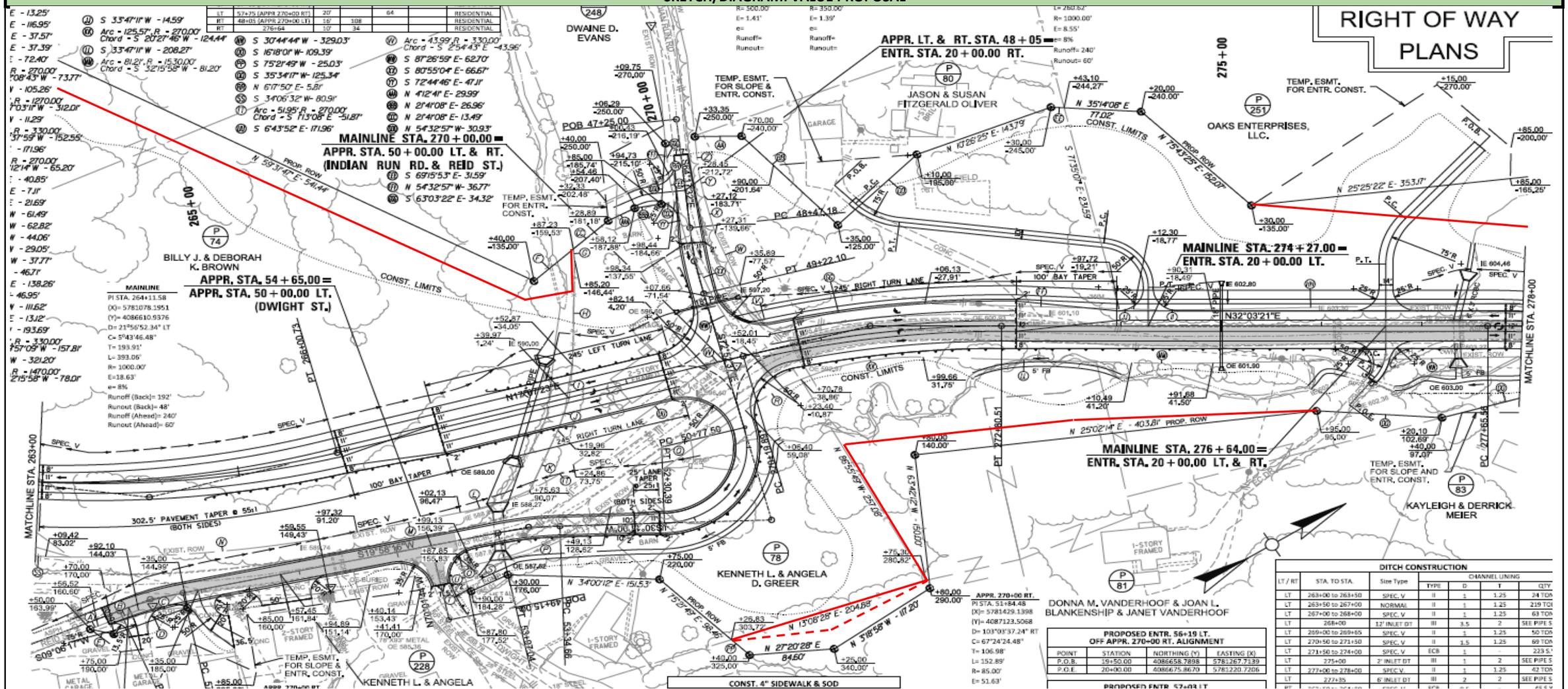

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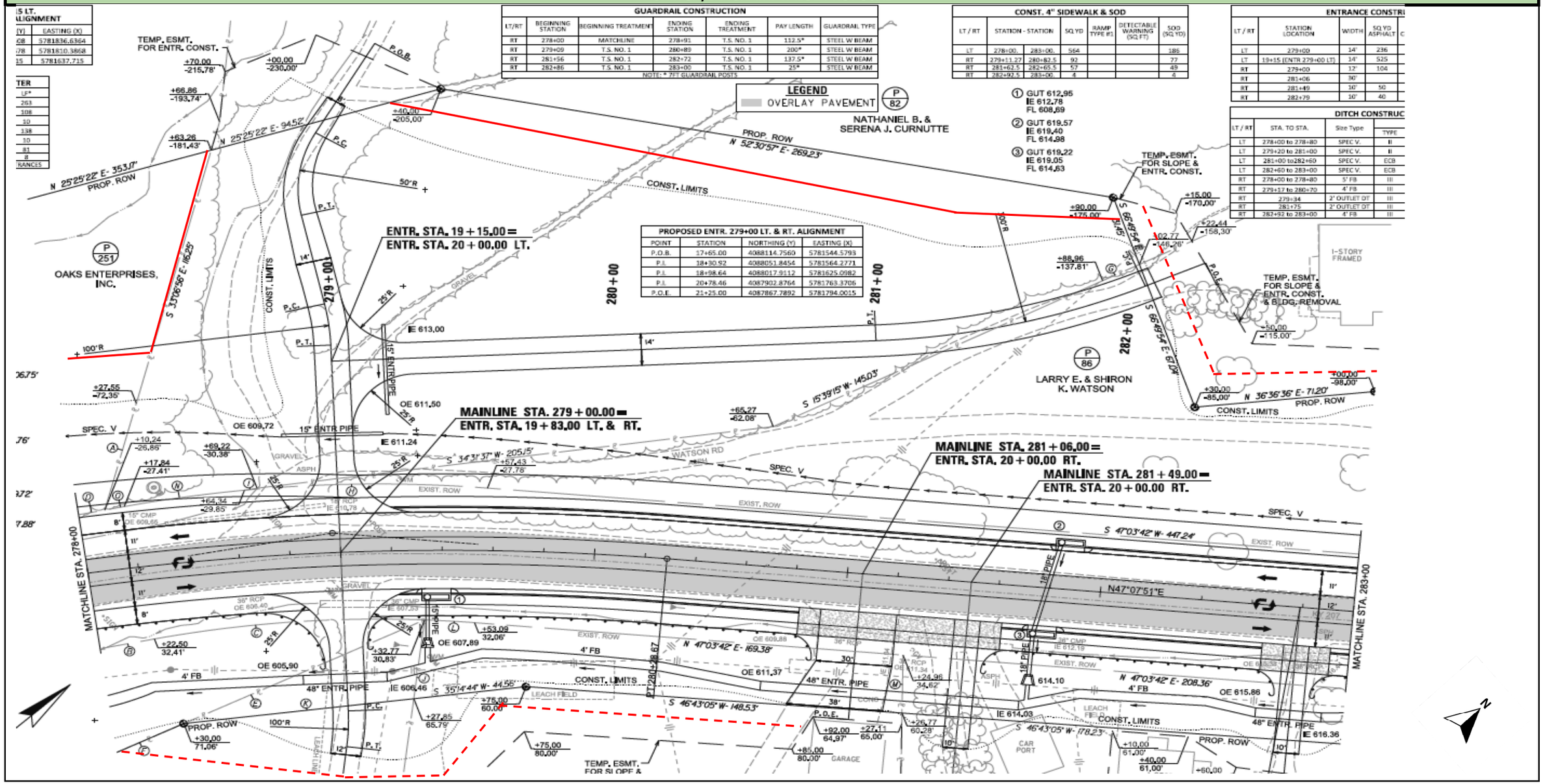
TITLE	Many areas throughout project, offset for proposed ROW line seems to be much greater than 10'-15' from limits of construction; some exceed 30'-50'

SKETCH/DIAGRAM: VALUE PROPOSAL



VALUE PROPOSAL

AP-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Many areas throughout project, offset for proposed ROW line seems to be much greater than 10'-15' from limits of construction; some exceed 30'-50'

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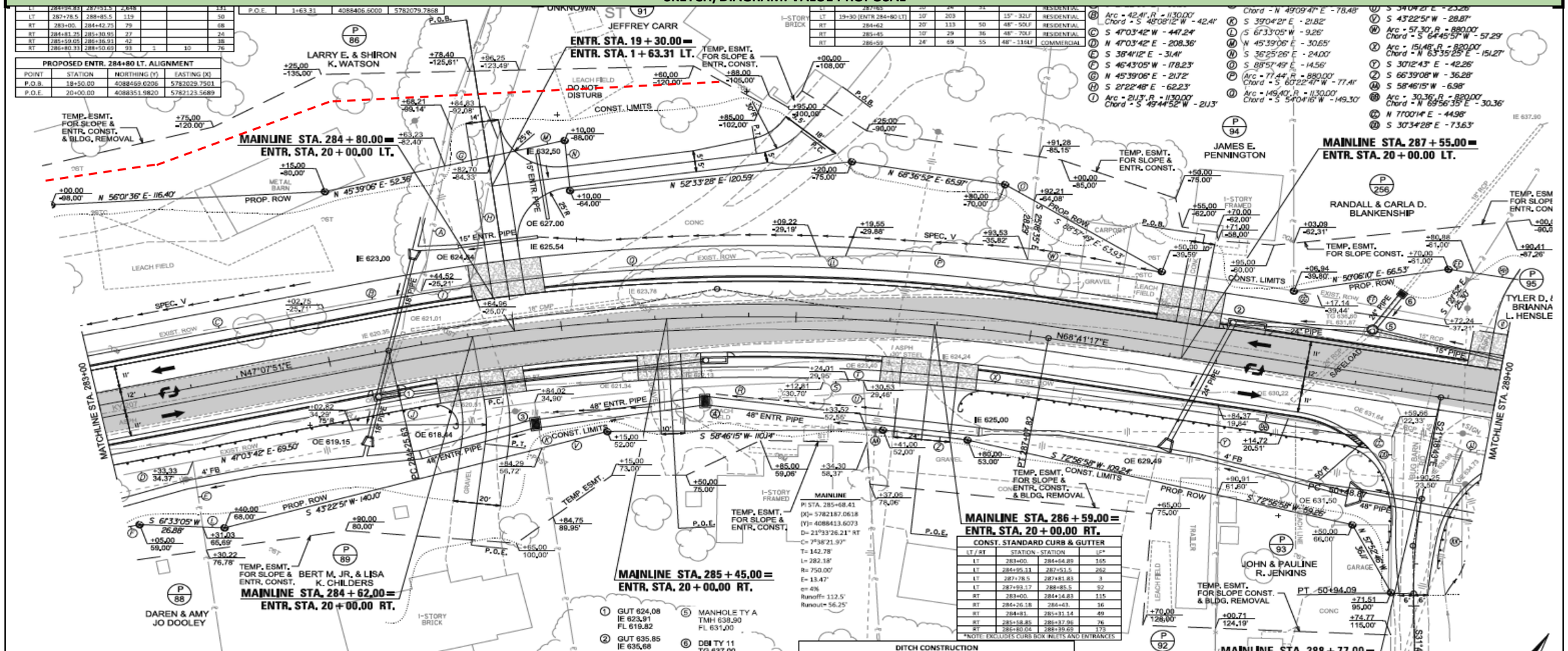

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AP-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

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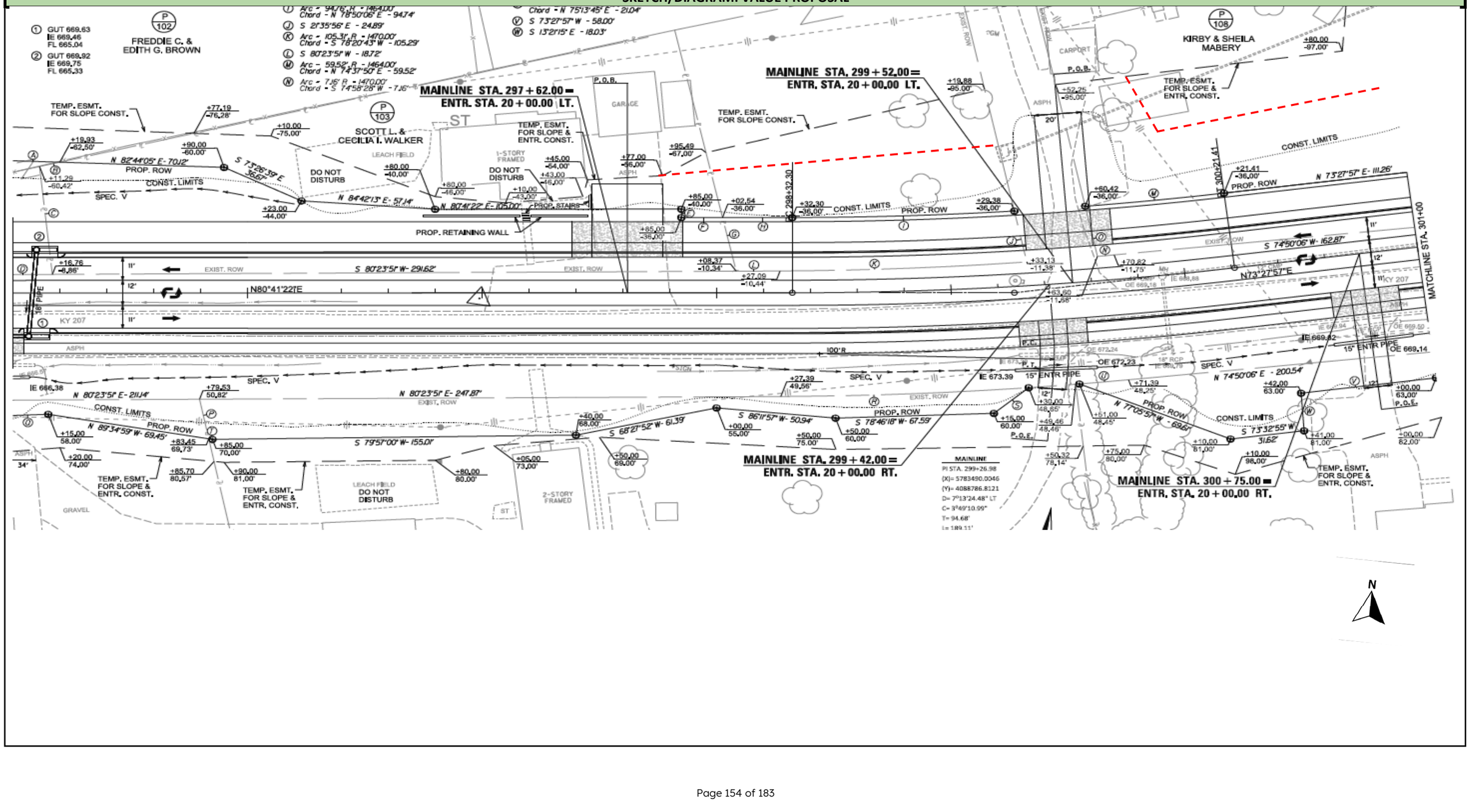

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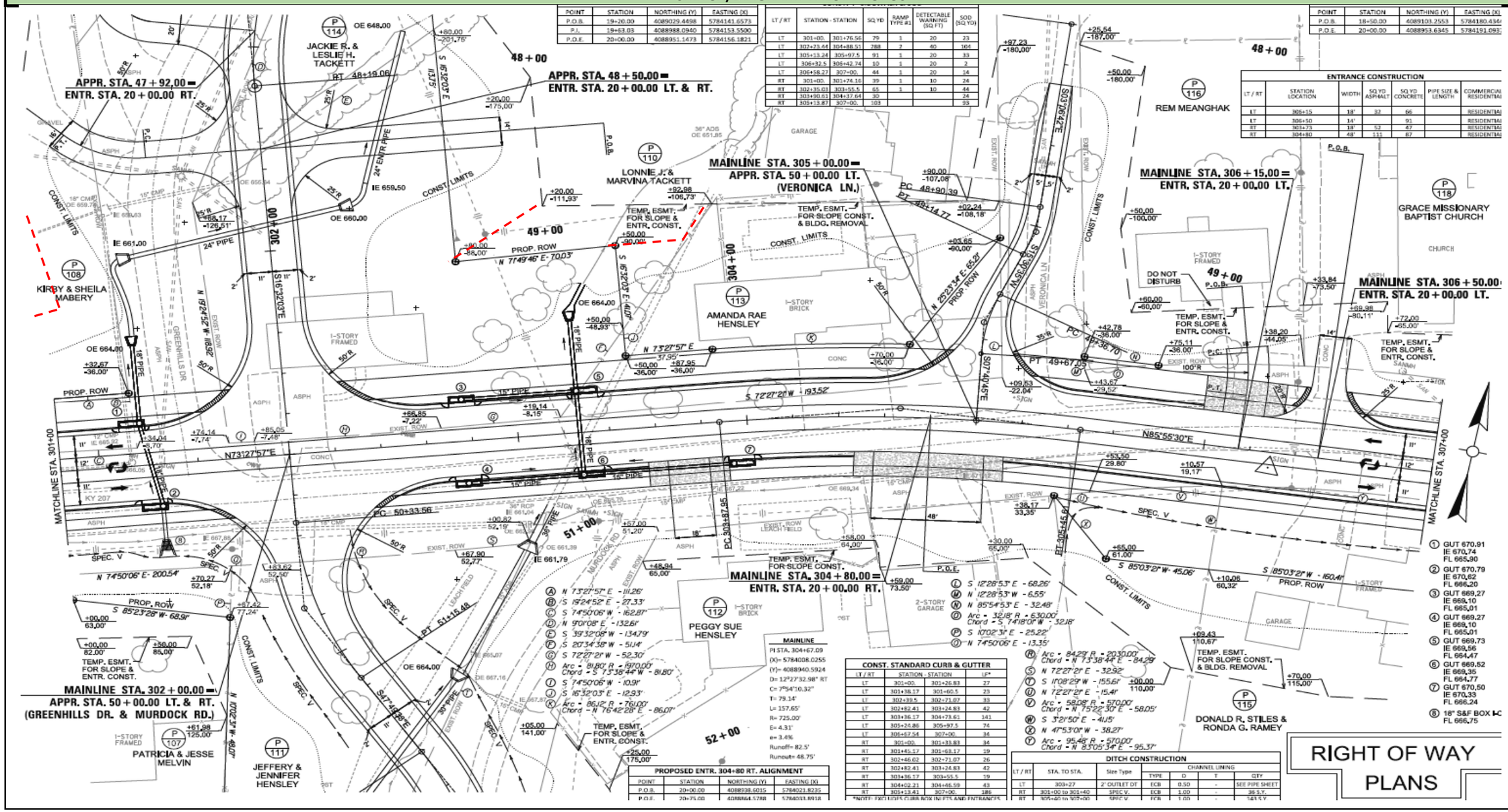

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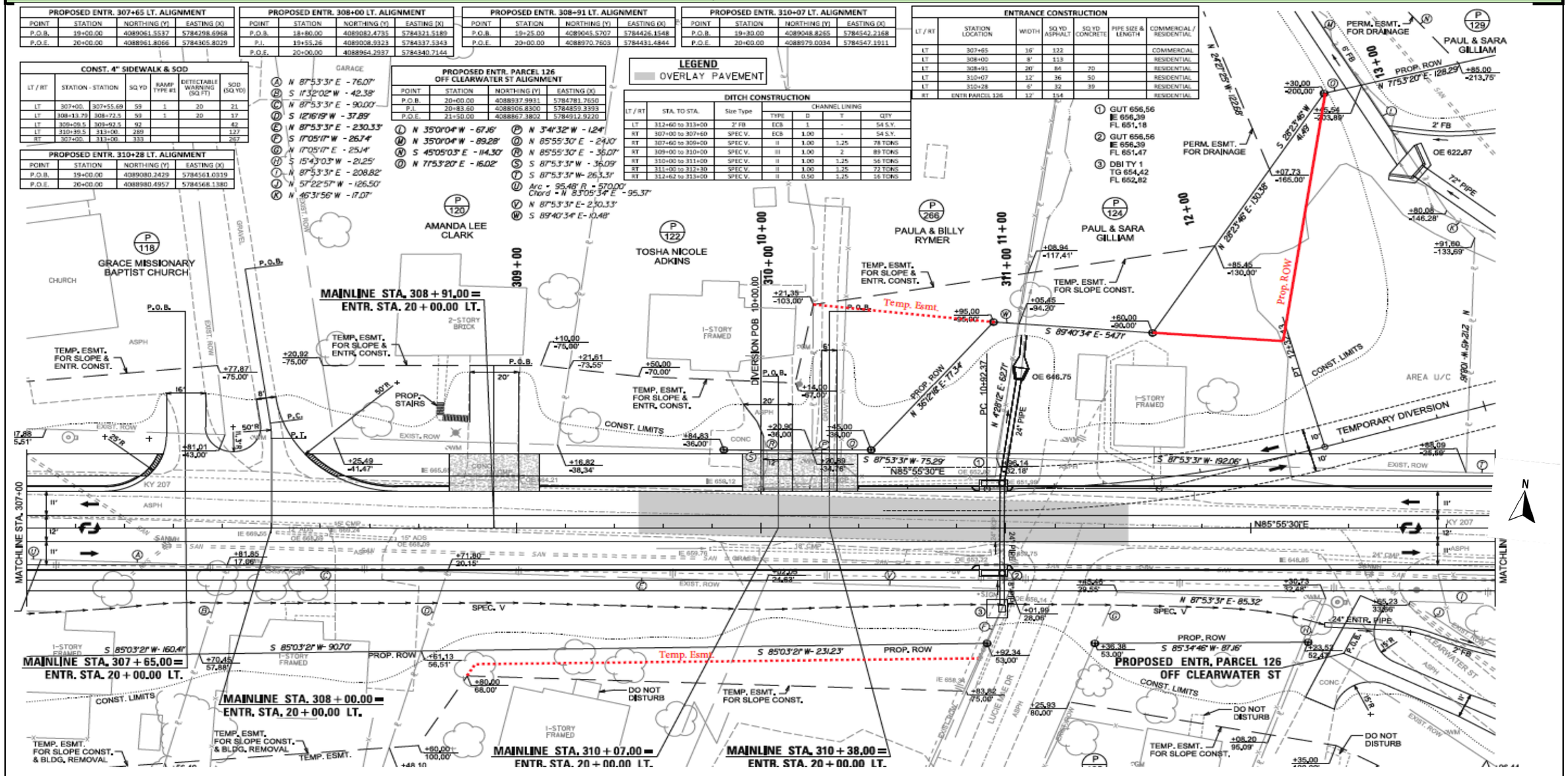

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KY 207, Greenup County

Item No. 9-8509

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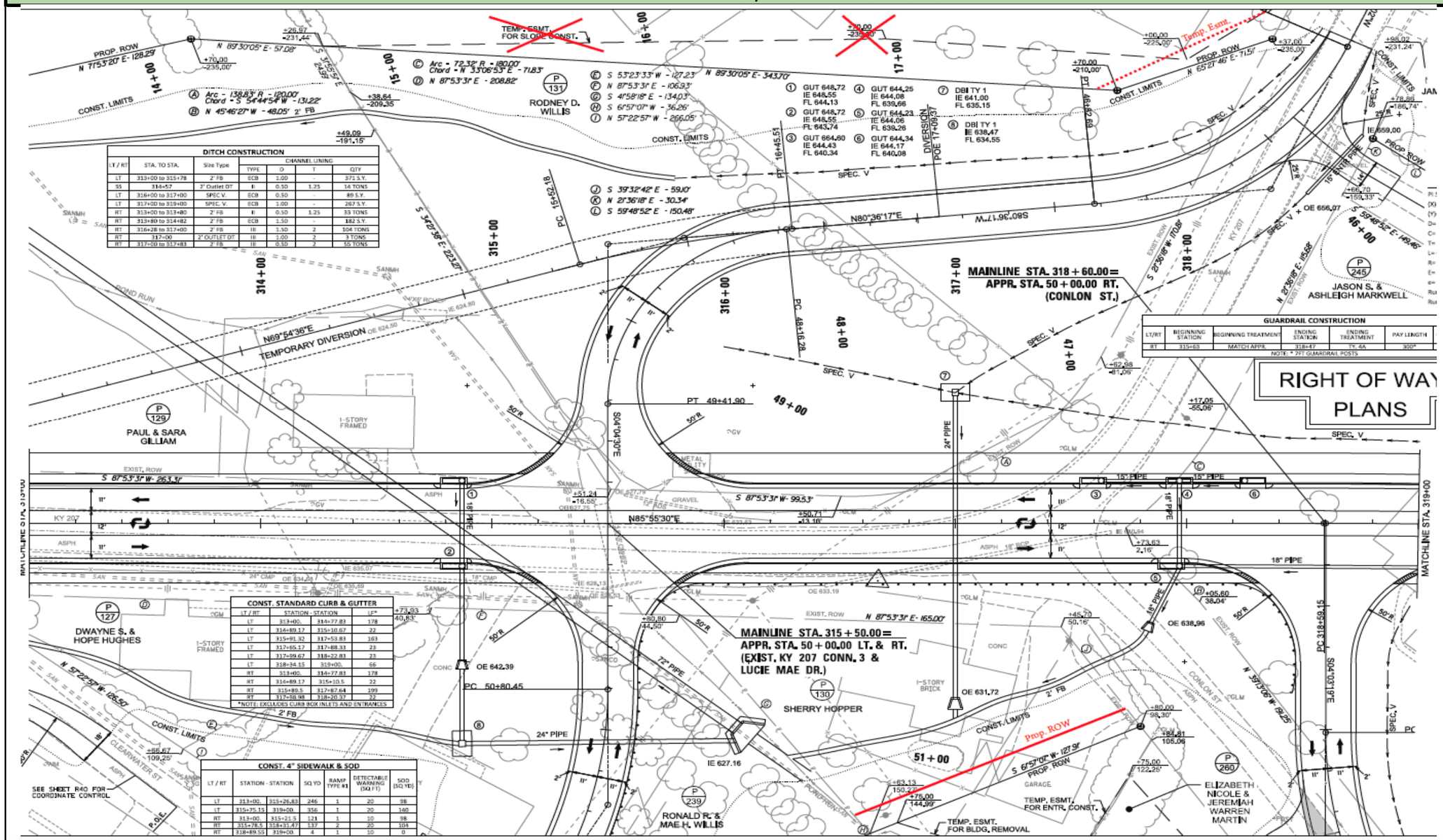

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KY 207, Greenup County

Item No. 9-8509

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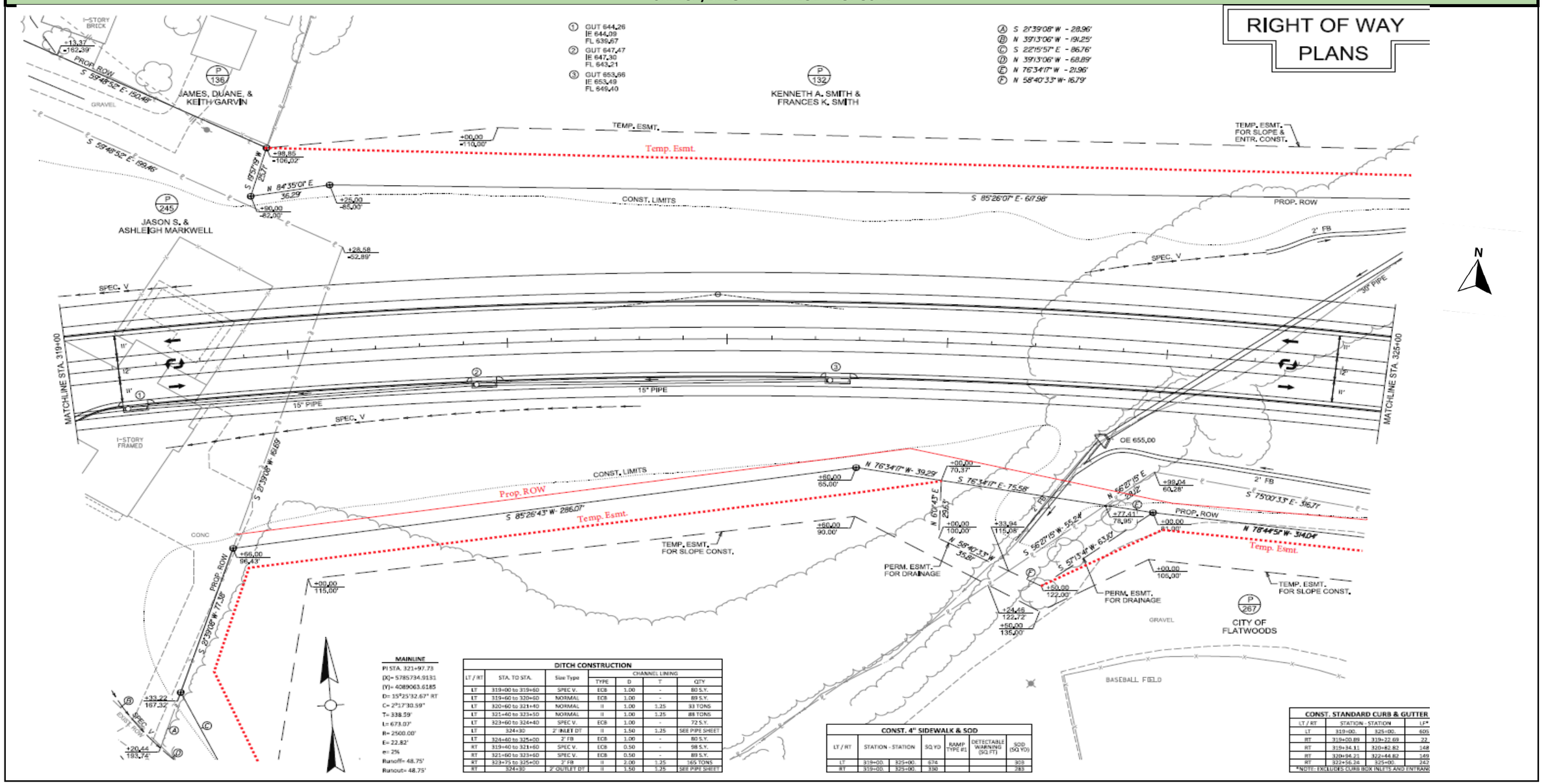

DITCH CONSTRUCTION

LT / RT	STA. TO STA.	Size Type	CHANNEL LINING TYPE	D	T	QTY
LT	319+00 to 319+60	SPEC V.	ECB	1.00	-	80 S.Y.
LT	319+60 to 320+60	NORMAL	ECB	1.00	-	89 S.Y.
LT	320+60 to 321+40	NORMAL	II	1.00	1.25	33 TONS
LT	321+40 to 323+50	NORMAL	II	1.00	1.25	88 TONS
LT	323+60 to 324+40	SPEC V.	ECB	1.00	-	72 S.Y.
LT	324+30	2' INLET DT	II	1.50	1.25	SEE PIPE SHEET
LT	324+40 to 325+00	2' FB	ECB	1.00	-	80 S.Y.
RT	319+40 to 321+60	SPEC V.	ECB	0.50	-	98 S.Y.
RT	321+60 to 323+60	SPEC V.	ECB	0.50	-	89 S.Y.
RT	323+75 to 325+00	2' FB	II	2.00	1.25	165 TONS
RT	324+30	2' OUTLET DT	II	1.50	1.25	SEE PIPE SHEET

CONST. 4" SIDEWALK & SOD

LT / RT	STATION - STATION		SQ.YD	RAMP TYPE #1	DETECTABLE WARNING (SQ.FT)	SOD (SQ.YD)
LT	319+00,	325+00,	674			303
RT	319+00,	325+00,	330			283

CONST. STANDARD CURB & GUTTER

LT / RT	STATION - STATION		LF*
LT	319+00,	325+00,	605
RT	319+00.89	319+22.69	22
RT	319+34.31	320+82.82	148
RT	320+94.21	322+44.82	149
RT	322+56.24	325+00,	243

*NOTE: EXCLUDES CURB BOX INLETS AND ENTRANC

VALUE PROPOSAL

AP-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

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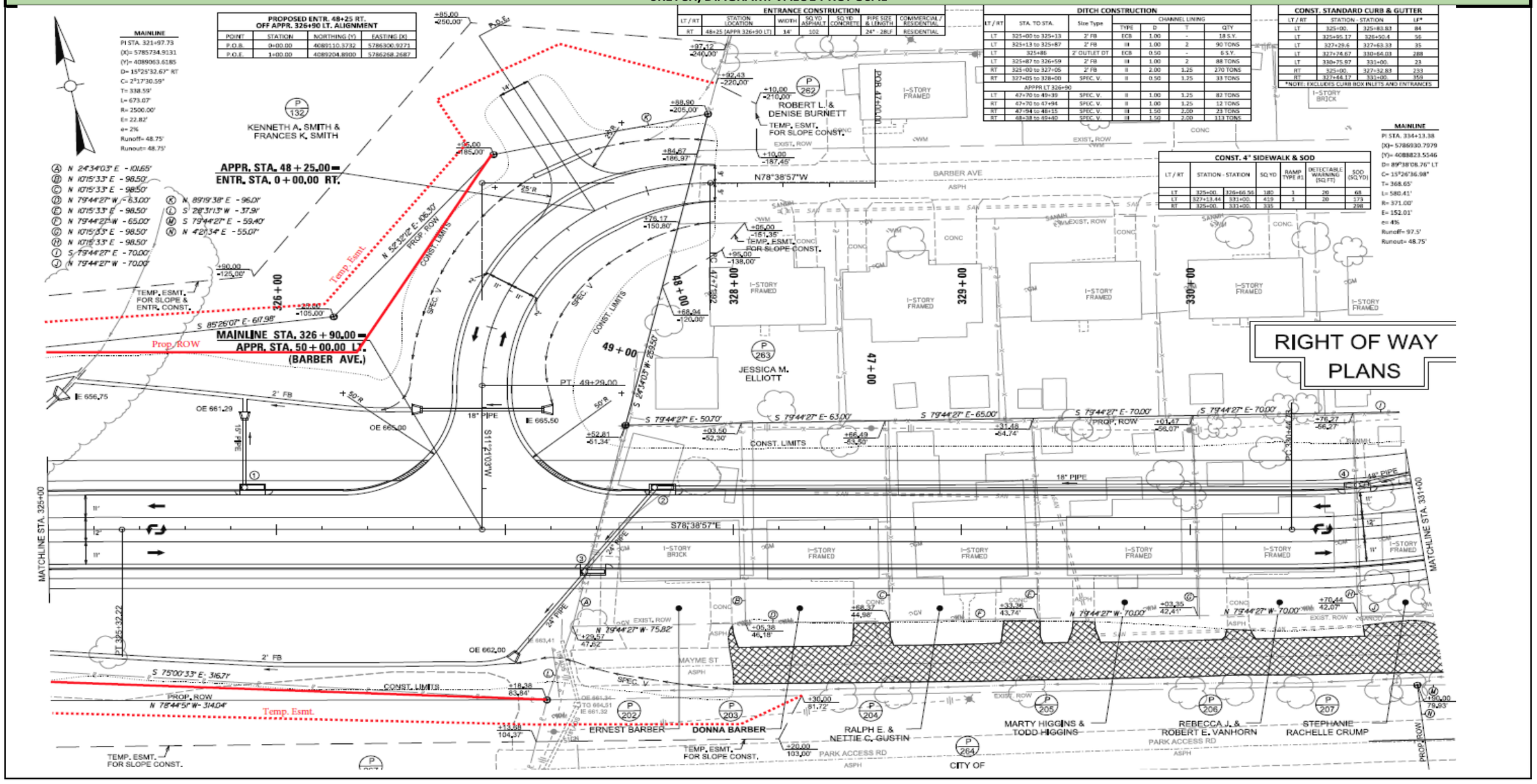

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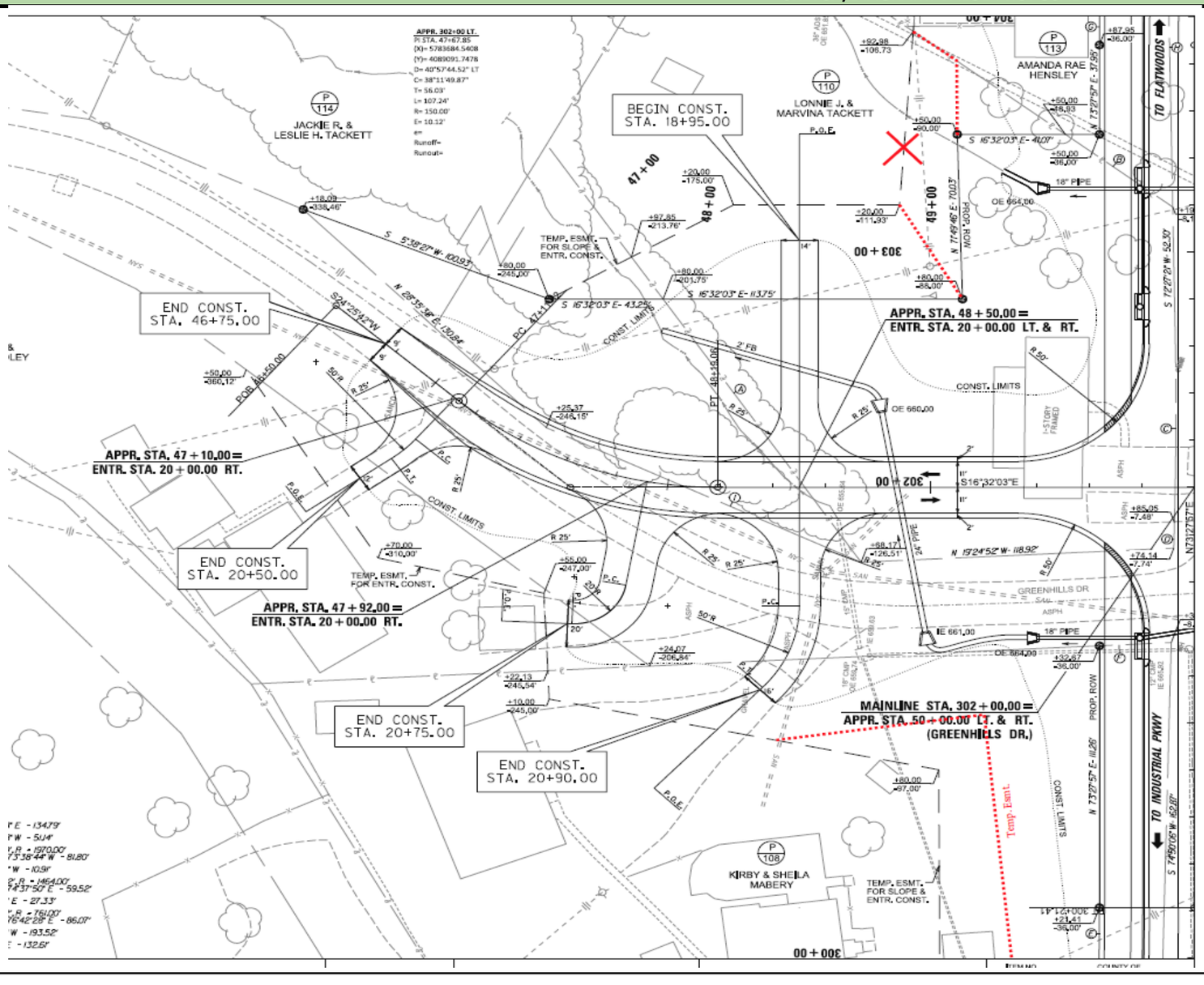

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Item No. 9-8509

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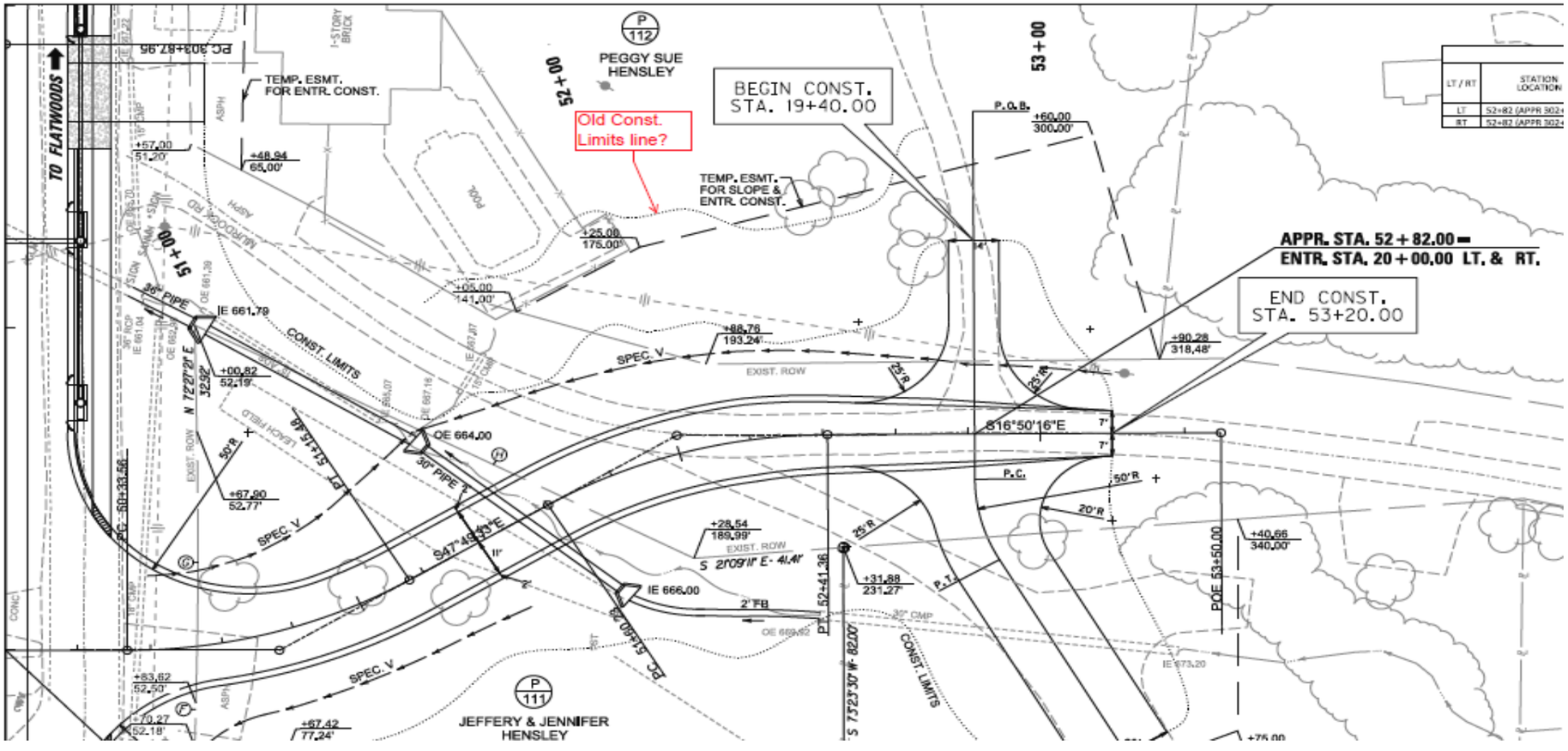

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KY 207, Greenup County

Item No. 9-8509

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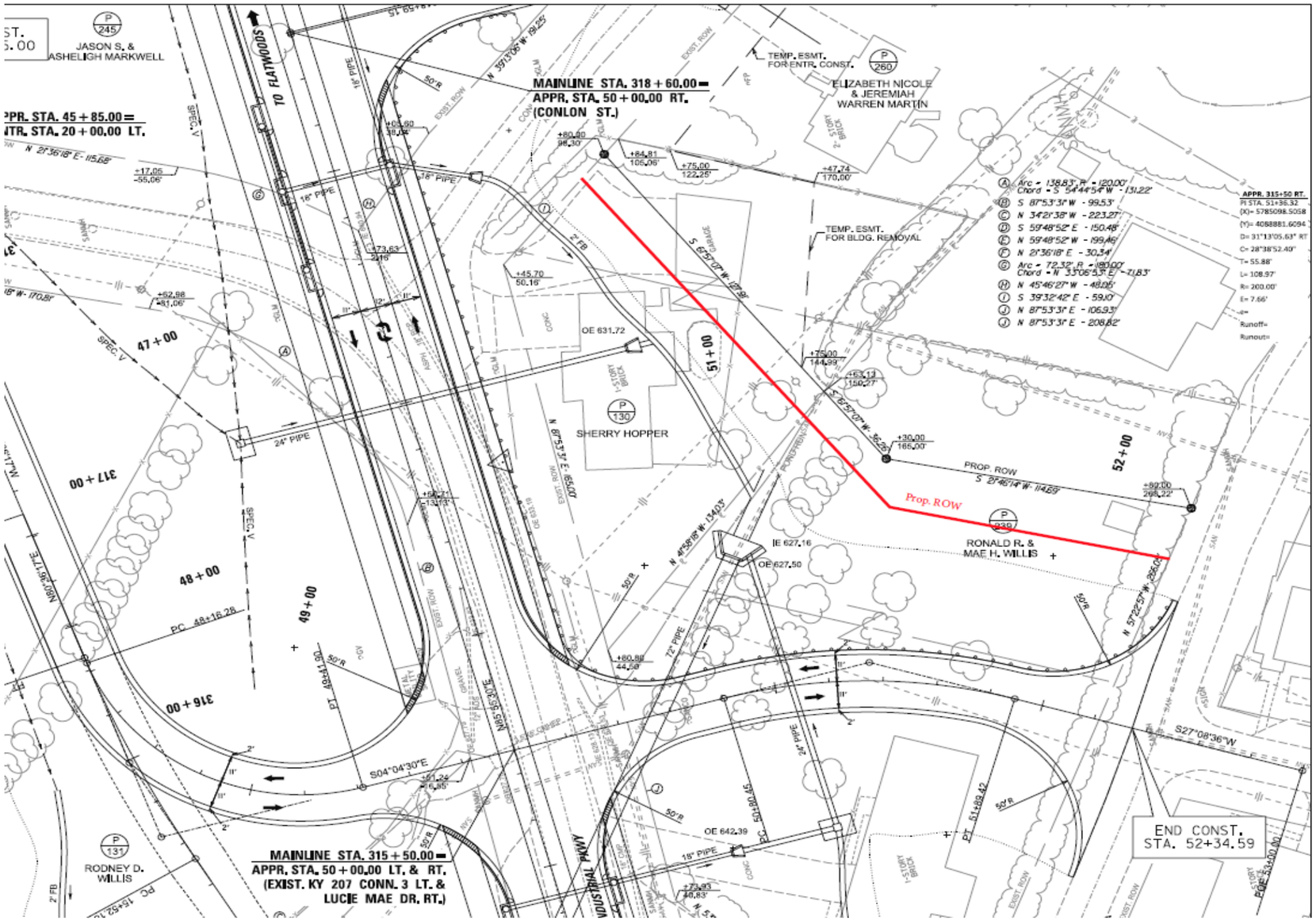


VALUE PROPOSAL

AP-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Many areas throughout project, offset for proposed ROW line seems to be much greater than 10'-15' from limits of construction; some exceed 30'-50'
Assumptions & Calculations	Areas are calculated using very approximately measuring length x width.

DESIGN ELEMENT	**Mark-up**	**BASELINE CONCEPT**				**VALUE PROPOSAL**		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Proposed ROW Reduction		SF				-263,608		
Temp. Easement Reduction		SF				-46,840		

NOT COSTED: Approximately 6 acres of reduction to Fee Simple Acquisitions

VALUE PROPOSAL

ST-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore pavement options
FUNCTION	**Support Traffic**
ASSOCIATED IDEAS	ST-01 Install geogrid to improve durability and possibly reduce needed thickness; ST-02 Increase cement stabilized layer to 12" and reduce asphalt thickness; ST-04 Review different pavement thickness options; ST-05 Utilize pavement fibers to increase durability; ST-06 Reduce pavement section in outside shoulders

VALUE PROPOSAL SYNOPSIS:

Asphalt materials are a major cost item for this project. Reducing the amount of asphalt while still providing adequate durability and ride quality will provide cost savings.

Reliability	**Improved**	**Functionality**	**Improved**	**$ Initial Cost Avoidance**	
O&M	**Improved**	**Schedule Impact**	**Maintained**	**$142,000**	

BASELINE CONCEPT DESCRIPTION:

Current pavement design is 8" cement stabilized roadbed, 6" CSB, 6.5" Class 2 ASPH BASE **1.0D** PG64-22 and 1.5" class 2 ASPH SURF 0.38D PG 64-22

VALUE PROPOSAL DESCRIPTION:

Use innovative products to reduce pavement thickness while maintaining durability and strength. We propose to increase the cement stabilized layer to 12" and add a geogrid reinforcement into the CSB layer and include fibers in the asphalt layers. The new design would be 12" cement stabilized, 8" CSB with geogrid, 4" Cl 2 ASPH BASE 1.0D PG64-22 and 1.5" CL 2 ASPH SURF 0.38D PG64-22.

ADVANTAGES:	**DISADVANTAGES:**
● Long-term cost savings	● Add labor for grid install
● Using innovative products	● Geogrid must be installed properly
● Maintain pavement durability	
● Better overall finished product	
● Improved lifespan of the pavement	
● Reduce asphalt thickness	

$ COST SUMMARY	**Initial Costs**	**O&M Costs**	**Total Life Cycle Cost**
BASELINE CONCEPT	$4,920,000	$0	$4,920,000
VALUE PROPOSAL	$4,778,000	$0	$4,778,000
TOTAL (Baseline less Proposed)	$142,000	$0	$142,000

AVOID COST

VALUE PROPOSAL

ST-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore pavement options

DISCUSSION & JUSTIFICATION:

• Technical Considerations: Explore innovative pavement enhancements and increase one proven procedure.

Chemical stabilization has proven to be a cost effective way to greatly enhance the life and performance of pavements. Increasing the depth from 8" to 12" adds more durability to an already strong layer allowing for a reduction in the asphalt thickness of approximately 1.5".

The use of fiber reinforcement in asphalt pavements will increase the design life of the pavement through an increase in strength, durability, reduction of cracking and less fatigue stress issues. Based on research from some Aramid fiber suppliers, adding the fibers increases crack resistance by up to 50% and rut resistance by up to 15%. Including the fibers doesn't change the asphalt production process or affect project schedule, but does increase cost by approximately $10/ton of asphalt.

The use of geogrids in the aggregate base layer reinforces and strengthens the CSB/DGA by locking the aggregate particles together in a tight matrix. This increases the bearing strength of the aggregate layer and allows for a reduction in asphalt layer thickness. Geogrid selection and installation is the two most important aspects of geogrid use. The correct grid aperture size must be selected based on the aggregate size, see product specifications for product selection. Correct installation requires the geogrid to be slightly tensioned and placed flat with not wrinkles or bends. Construction traffic is limited to rubber tires equipment and no turning movements.

Note: Intelligent compaction for Asphalt is no longer used by the Cabinet and its removal is shown as a cost savings. Also typical sections and the approved pavement design shown use of 1.0D base but the bid items show use of 0.75D base. This proposal corrects this to only use the correct 1.0D base.

OUT-BRIEF PRESENTATION COMMENTS:

The project team had a question on constructability for long runs. The response was "yes," on lanes.

VALUE PROPOSAL

ST-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

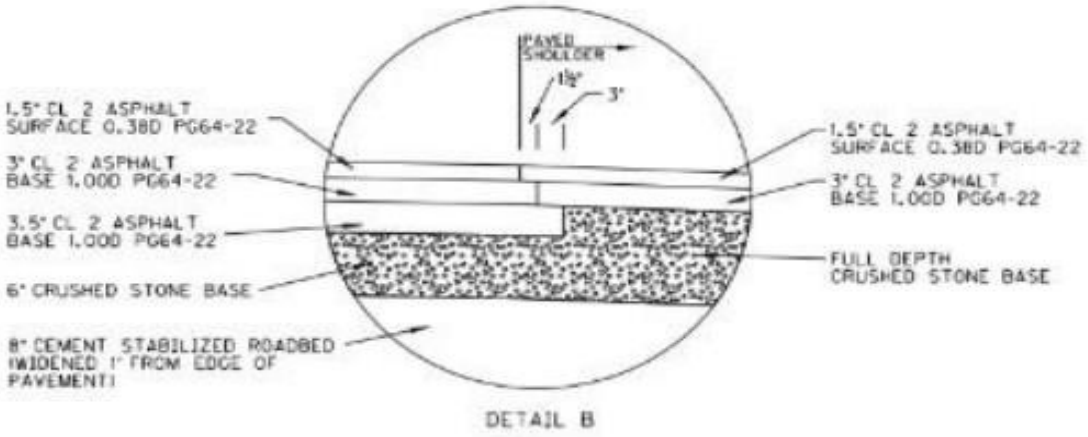
TITLE	Explore pavement options

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Improved
Justification for Impact Score	Improved lifespan of the pavement	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

TITLE	Explore pavement options

SKETCH/DIAGRAM: BASELINE CONCEPT



DETAIL B

VALUE PROPOSAL

ST-08

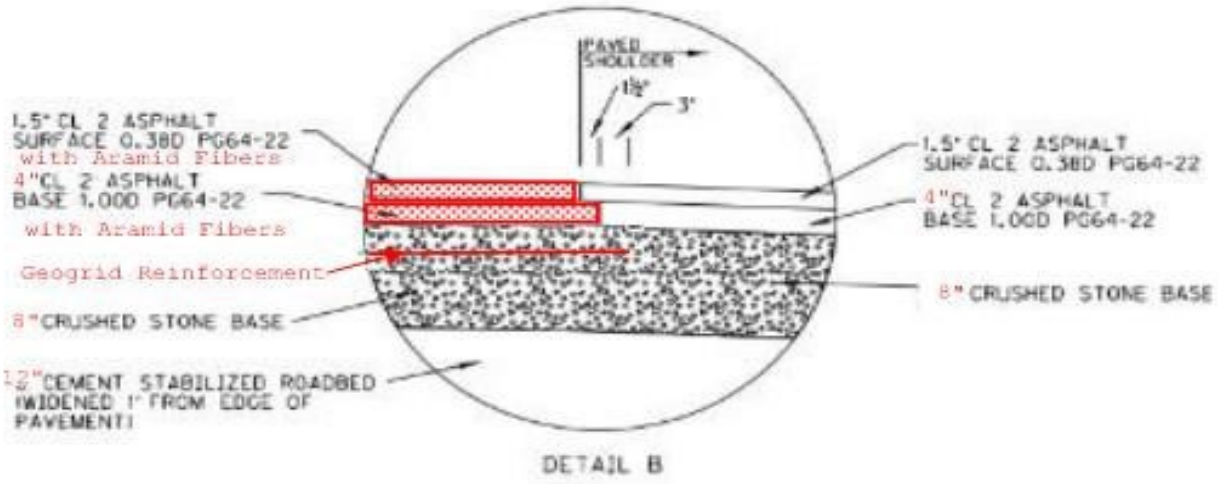
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore pavement options

SKETCH/DIAGRAM: VALUE PROPOSAL



DETAIL B

VALUE PROPOSAL

ST-08

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore pavement options
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
Cement stabilized roadbed	27.98%	SQYD	76,778	$4.44	$436,277	76,778	$4.44	$436,277
Cement	27.98%	TON	1,464	$260.99	$488,998	1,947	$260.99	$650,367
Cl2 ASPH BASE 1.0D PG64-22	27.98%	TON				16,892	$83.04	$1,795,190
CL2 ASPH BASE 0.75D PG64-22	27.98%	TON	21,323	$95.00	$2,592,411			
Crushed Stone Base	27.98%	TON	32,893	$33.03	$1,390,446	35,317	$33.03	$1,492,913
Geogrid Reinforcement for subgrade	27.98%	SQYD				48,933	$2.17	$135,895
Fiber Reinforcement for HMA	27.98%	TON				23,227	$8.99	$267,230
Intelligent Compaction for Asphalt		TON	48,597	$0	$12,149	0	$0	$0
TOTAL					$4,920,000			$4,778,000
							Impact to Initial Cost (Baseline Less Proposed)	**$142,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

VALUE PROPOSAL
IA-03
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Add overhead/streetlighting at major intersections
FUNCTION	**Illuminate Area**

VALUE PROPOSAL SYNOPSIS:

Adding overhead lighting to select major intersections increases visibility at night and increases safety. This adds overall value to the project by increasing safety for drivers.

Reliability	**Maintained**	**Functionality**	**Improved**	**$ Initial Cost Add**
O&M	**Degraded**	**Schedule Impact**	**Maintained**	**($229,000)**

BASELINE CONCEPT DESCRIPTION:

The baseline design does not indicate overhead lighting at major intersections.

VALUE PROPOSAL DESCRIPTION:

Overhead lighting at major intersections improves visibility and overall safety along the corridor.

ADVANTAGES:	DISADVANTAGES:
● Improves safety	● Additional construction costs
● Improves visibility	● Long term maintenance costs

$ COST SUMMARY	Initial Costs	O&M Costs	Total Life Cycle Cost
BASELINE CONCEPT	$0	$0	$0
VALUE PROPOSAL	$229,000	$0	$229,000
TOTAL (Baseline less Proposed)	($229,000)	$0	($229,000)
			ADD COST

VALUE PROPOSAL

IA-03

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Add overhead/streetlighting at major intersections

DISCUSSION & JUSTIFICATION:

Installing overhead lighting at major intersections improves visibility and overall safety along the corridor. Currently there is overhead lighting at the beginning of the project at the Industrial Parkway. The other major intersections include KY 503 North, KY 503 South, Indian Run Rd/Reid St and KY 693.

OUT-BRIEF PRESENTATION COMMENTS:

Not presented at the out-brief meeting.

TITLE	Add overhead/streetlighting at major intersections

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Improved
Justification for Impact Score	Lighting at intersections would improve safety.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	Lighting at local intersections would improve safety.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Degraded
Justification for Impact Score	Lighting and electrical equipment add long term maintenance costs.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Degraded
Justification for Impact Score	This addition adds time to construction.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	No impact to performance.	
Risk Impacts	An assessment of the identified risks of the project.	Improved
Justification for Impact Score	As a result of better lighting would reduce probability and risk of incidents.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

VALUE PROPOSAL

IA-03

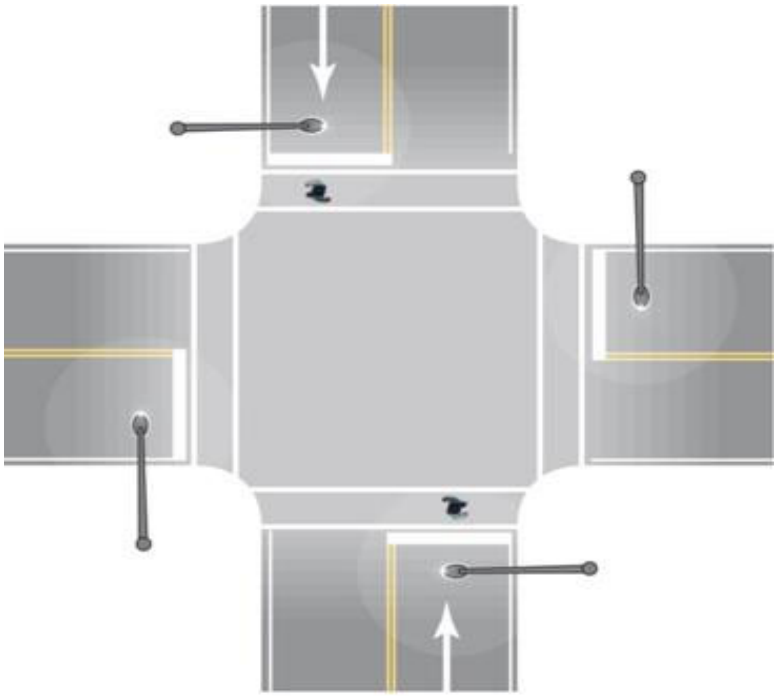
Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Add overhead/streetlighting at major intersections

SKETCH/DIAGRAM: VALUE PROPOSAL



VALUE PROPOSAL

IA-03

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Add overhead/streetlighting at major intersections
Assumptions & Calculations	Prices taken from the estimate provided and the 2024 Average Unit Prices. Markups include escalation to date of estimate, contingency, and escalation to mid-point of construction.

DESIGN ELEMENT	Mark-up	BASELINE CONCEPT				VALUE PROPOSAL		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
POLE 30 FT MTG HT	27.98%	EACH				8	$2,336	$23,912
BRACKET 10 FT	27.98%	EACH				8	$658	$6,738
POLE BASE	27.98%	EACH				8	$1,887	$19,319
TRANSFORMER BASE	27.98%	EACH				4	$1,047	$5,358
LIGHTING CONTROL EQUIPMENT	27.98%	EACH				4	$28,891	$147,901
FUSED CONNECTOR	27.98%	EACH				4	$184	$944
CONDUIT-2 IN	27.98%	LF				400	$11	$5,554
TRENCHING AND BACKFILLING	27.98%	LF				400	$11	$5,744
CABLE-NO. 4/3/C DUCTED	27.98%	LF				120	$9	$1,305
ELECTRICAL SERVICE	27.98%	LF				4	$2,340	$11,976
TOTAL					$0			$229,000
							Impact to Initial Cost (Baseline Less Proposed)	**($229,000)**

Note: Total costs are rounded to the nearest thousand dollars.

ADD COST

VALUE PROPOSAL

MC-09

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore alternative delivery types
FUNCTION	**Manage Construction**
ASSOCIATED IDEAS	MC-01 Halt design and let project as Design-Build; MC-06 Let as a CMGC contract; allow a contractor to propose innovative ideas

VALUE PROPOSAL SYNOPSIS:

This value proposal explores alternative delivery methods in construction which offer various approaches beyond the traditional design-bid-build, aiming to improve efficiency, collaboration, and risk management.

Reliability	**Maintained**	**Functionality**	**Improved**	**$ Initial Cost Avoidance (Add)**
O&M	**Maintained**	**Schedule Impact**	**Improved**	**NOT COSTED**

BASELINE CONCEPT DESCRIPTION:

The baseline presented to the VE includes a traditional Design-Bid-Build type contract which as the VE team understands is the traditional method used by the State of Kentucky.

VALUE PROPOSAL DESCRIPTION:

In this value proposal, some of the contract methods to explore include Design-Build, Construction Manager at Risk (CMAR), Progressive Design-Build (PDB), Public-Private Partnerships (P3), and Integrated Project Delivery (IPD). Each method has unique characteristics and is suitable for different types of projects.

ADVANTAGES:	DISADVANTAGES:
● Shorter project timelines	● Additional upfront contract work
● Increased collaboration	● Not the traditional way of doing contracts
● Assigning risks to the contractor instead of the Owner	
● Allows for ongoing Value Engineering	

NOT COSTED

VALUE PROPOSAL

MC-09

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore alternative delivery types

DISCUSSION & JUSTIFICATION:

This value engineering idea explores the various alternative methods for contracting the work for the KY207 project. Each method has unique characteristics and is suitable for different types of projects.
Alternative Delivery Methods include:

Design-Build (DB): A single entity is responsible for both design and construction, fostering collaboration and potentially speeding up the project timeline. This contract options has gathered popularity in the last two decades as it is created to accelerate construction and assign risks to the contractor.

Progressive Design-Build (PDB): A two-phase approach where the owner and design-builder collaborate initially, then move to construction after finalizing plans. Sometimes, early packages of design such as demolitions or utility relocations can be released for construction earlier to accelerate the project schedule.

Construction Manager at Risk (CMAR): The construction manager acts as a representative for the owner during the design and construction phases, and the CM takes on project risk (usually with a contract that has a guaranteed maximum price). This type of contract shifts the risk to the CM and assures that the project total won't exceed initial contract. This is ideal for funding constrained projects.

Public-Private Partnership (P3): A private company and government entity collaborate on a project, typically funded by the government entity and managed by the private company.

Integrated Project Delivery (IPD): is a relatively recent addition to the suite of project delivery options. In these projects, all the project team members are contractually connected with only one contract. All team members are selected before design begins, and they each play a role in the whole process, from design to construction,

Deciding which construction project delivery method is best for a project relies a lot on the type of project, how much control over the project and risk the owner wants, the project timeline, and the budget.

OUT-BRIEF PRESENTATION COMMENTS:

No comments at out-brief meeting.

TITLE	Explore alternative delivery types

DISCUSSION & JUSTIFICATION (continued):

Cost Savings: DB and IPD can lead to cost savings through value engineering and reduced change orders.

Time Savings: DB and IPD can accelerate project delivery due to overlapping phases.

Collaboration: IPD emphasizes collaboration among all stakeholders, potentially leading to better communication and fewer disputes.

VALUE PROPOSAL

MC-09

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore alternative delivery types

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Improved
Justification for Impact Score	With greater collaboration, impacts to construction would be improved.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Maintained
Justification for Impact Score	Potential for project schedule to be improved as a result of good collaboration with alternative delivery.	
Risk Impacts	An assessment of the identified risks of the project.	Improved
Justification for Impact Score	Anticipate that alternative delivery would reduce project risk.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Maintained
Justification for Impact Score	No impact to performance.	

VALUE PROPOSAL
ESI-01
Kentucky Transportation Cabinet
KY 207, Greenup County
Item No. 9-8509

TITLE	Explore spot improvements
FUNCTION	**Miscellaneous**
ASSOCIATED IDEAS	RC-02 Add passing lanes or truck climbing lanes; MT-02 Use oversized signs to warn of "problem" curves; MT-05 Add median delineators/ barriers in problem curves; MT-06 Add high friction surface treatments (HFST) in problem areas; MT-07 Add dedicated left- and right-turn lanes at problem Intersections; MT-08 Install roadside barriers to shield unmovable objects or steep embankments; MT-10 Add longitudinal rumble strips and stripes on problem areas to alert of lane departures; MC-08 Widen existing pavement and reduce the quantity of new alignment; RW-04 Widen existing roads only

VALUE PROPOSAL SYNOPSIS:

This idea is to explore spot improvements that can be done instead of the full road replacement.

Reliability	**Maintained**	**Functionality**	**Maintained**	**$ Initial Cost Avoidance**	
O&M	**Maintained**	**Schedule Impact**	**Improved**	**$11,430,000**	

BASELINE CONCEPT DESCRIPTION:

The current design is for a new road and the current estimate of $37.3M for both Urban and Rural may be low.

VALUE PROPOSAL DESCRIPTION:

This ideal explores ideas of upgrading the current road with improvements instead of a full replacement of the existing road. Redesigning an existing road and building a new road each have distinct advantages and disadvantages, impacting cost, traffic flow, and community needs.

ADVANTAGES:	**DISADVANTAGES:**
● Avoids full design	● It may not address all existing issues
● Cost-effective solution for improving traffic flow and safety	● Can disrupt traffic during construction
● Quicker solution for addressing immediate congestion issues	
● Will likely avoid most land acquisitions	

$ COST SUMMARY	**Initial Costs**	**O&M Costs**	**Total Life Cycle Cost**
BASELINE CONCEPT	$37,285,000	$0	$37,285,000
VALUE PROPOSAL	$25,855,000	$0	$25,855,000
TOTAL (Baseline less Proposed)	$11,430,000	$0	$11,430,000

AVOID COST

VALUE PROPOSAL

ESI-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore spot improvements

DISCUSSION & JUSTIFICATION:

This value idea explores several options of upgrading the existing road and avoid the design of a full road that comes at a value that may be over the current budget projections. Some of these options:

RC-02 - Add passing lanes or truck climbing lanes - this option will add passing lanes at long runs of the road to accommodate the safe passing of faster cars over larger/slower traffic.
MT-02 - Use oversized signs to warn of "problem" curves - this option will help alert drivers of potential hazards in the upcoming road including, pedestrians crossing, incoming turning lanes, etc.
MT-05 - Add median delineators/ barriers in problem curves - this solution addresses the existing head-on collision prone areas.
MT-06 - Add high friction surface treatments (HFST) in problem areas - This option is designed to significantly increase friction, reducing crashes and injuries at specific locations.
MT-07 - Add dedicated left- and right-turn lanes at problem Intersections - this option can significantly improve safety and traffic flow by reducing collisions and delays.
MT-10 - Add longitudinal rumble strips and stripes on problem areas to alert of lane departures - this option could be designed to provide both an auditory and tactile warning through vibrations and noise when a vehicle's tires travel over them. These features are particularly effective in reducing roadway departure crashes, which account for a significant portion of fatal accidents.
MC-08 - Widen existing pavement and reduce the quantity of new alignment - this option involves evaluating the existing pavement's condition and structural capacity to determine if it can be widened to accommodate increased traffic or improved road features like shoulders or turn lanes.
RW-04 - Widen existing roads only - this is the same as MC-08.

OUT-BRIEF PRESENTATION COMMENTS:

No comments provided at the out-brief meeting.

TITLE	Explore spot improvements

DISCUSSION & JUSTIFICATION: (cont.)

The VE team considerations for these include:

• Technical Considerations - Redesigning an existing road can be a more cost-effective solution for improving traffic flow and safety, while new roads offer the opportunity for a completely fresh design and layout.

• Cost Considerations - Creating a mix of solutions to the existing road could help alleviate the issues of recurrent crashes at a lesser value of a new road design.

• Schedule Impacts - None as the upgrades to the existing road should be a schedule savings.

• Risk Considerations - It may not fully address all the current issues.

• Project Management Considerations - This will likely change the current approach.

• Stakeholder Acceptance - This changes the current design approach and will need stakeholder acceptance.

• Implementation Considerations - There may be incorporated or combined with the existing design to reduce cost while using the existing road to the maximum extent possible.

The best approach depends on a variety of factors, including the specific location, budget, community needs, and long-term goals. A combination of both approaches (New construction and upgrades to the existing road) may also be necessary to address the complexities of transportation infrastructure.

VALUE PROPOSAL

ESI-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore spot improvements

IMPACT TO PERFORMANCE

Performance Attribute	Definition	Score
Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.	Degraded
Justification for Impact Score	Spot improvements are a lesser product in many areas.	
Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.	Maintained
Justification for Impact Score	No impact to performance.	
Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.	Maintained
Justification for Impact Score	No impact to performance.	
Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.	Maintained
Justification for Impact Score	No impact to performance.	
Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.	Maintained
Justification for Impact Score	No impact to performance.	
Project Schedule	An assessment of the total project delivery from the time as measured from the time of the Value Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).	Improved
Justification for Impact Score	Upgrades to the existing road should represent Cost and Schedule savings. It is projected that the construction of the new road will likely take 3 years. The upgrade of the existing will likely take 2 years or less.	
Risk Impacts	An assessment of the identified risks of the project.	Maintained
Justification for Impact Score	No impact to performance.	
Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of "throw-away work" involved as well as future traffic and public impacts when the planned future improvements are made.	Maintained
Justification for Impact Score	No impact to performance.	
Hydrological Impacts	An assessment of the project's impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.	Maintained
Justification for Impact Score	No impact to performance.	
Right-of-way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.	Improved
Justification for Impact Score	With upgrading the exiting road to the max extend possible, the environmental impacts will be lessen and purchasing or properties could be reduced to a minimum.	

VALUE PROPOSAL

ESI-01

Kentucky Transportation Cabinet

KY 207, Greenup County

Item No. 9-8509

TITLE	Explore spot improvements
Assumptions & Calculations	The assumption is that at least 50% of savings will come from the Group 0002: Roadway and Group 0005: RCBC as most of the excavation will be avoided and new drainage won't be as much. The only applicable markup is the 10% Contingency.

DESIGN ELEMENT	**Mark-up**	**BASELINE CONCEPT**				**VALUE PROPOSAL**		
Description	%	Unit	Qty	Unit Cost $	TOTAL $	Qty	Unit Cost $	TOTAL $
RURAL SECTION								
Group 0001: PAVING	10.00%	LS	1	$5,524,636	$6,077,100	1.00	$5,524,636	$6,077,100
Group 0002: ROADWAY	10.00%	LS	1	$14,188,646	$15,607,511	0.50	$14,188,646	$7,803,755
Group 0003: DRAINAGE	10.00%	LS	1	$685,126	$753,639	1.00	$685,126	$753,639
Group 0004: 6' x 6' RCBC - STA. 132+30	10.00%	LS	1	$241,784	$265,962	1.00	$241,784	$265,962
Group 0005: 14' x 6' RCBC - STA. 158+80	10.00%	LS	1	$541,473	$595,620	0.50	$541,473	$297,810
Group 0019: DEMOBILIZATION &/OR MOBILIZATION	10.00%	LS	1	$1,376,677	$1,514,345	1.00	$1,376,677	$1,514,345
URBAN SECTION								
Group 0001: PAVING	10.00%	LS	1	$3,155,210	$3,470,731	1.00	$3,155,210	$3,470,731
Group 0002: ROADWAY	10.00%	LS	1	$6,052,007	$6,657,208	0.50	$6,052,007	$3,328,604
Group 0003: DRAINAGE	10.00%	LS	1	$1,437,864	$1,581,650	1.00	$1,437,864	$1,581,650
Group 0019: DEMOBILIZATION &/OR MOBILIZATION	10.00%	LS	1	$691,804	$760,984	1.00	$691,804	$760,984
TOTAL					$37,285,000			$25,855,000
							Impact to Initial Cost (Baseline Less Proposed)	**$11,430,000**

Note: Total costs are rounded to the nearest thousand dollars.

AVOID COST

PART

II

Appendices

Value Study Documentation

Appendix

A

Value Study Overview

A.1 Introduction

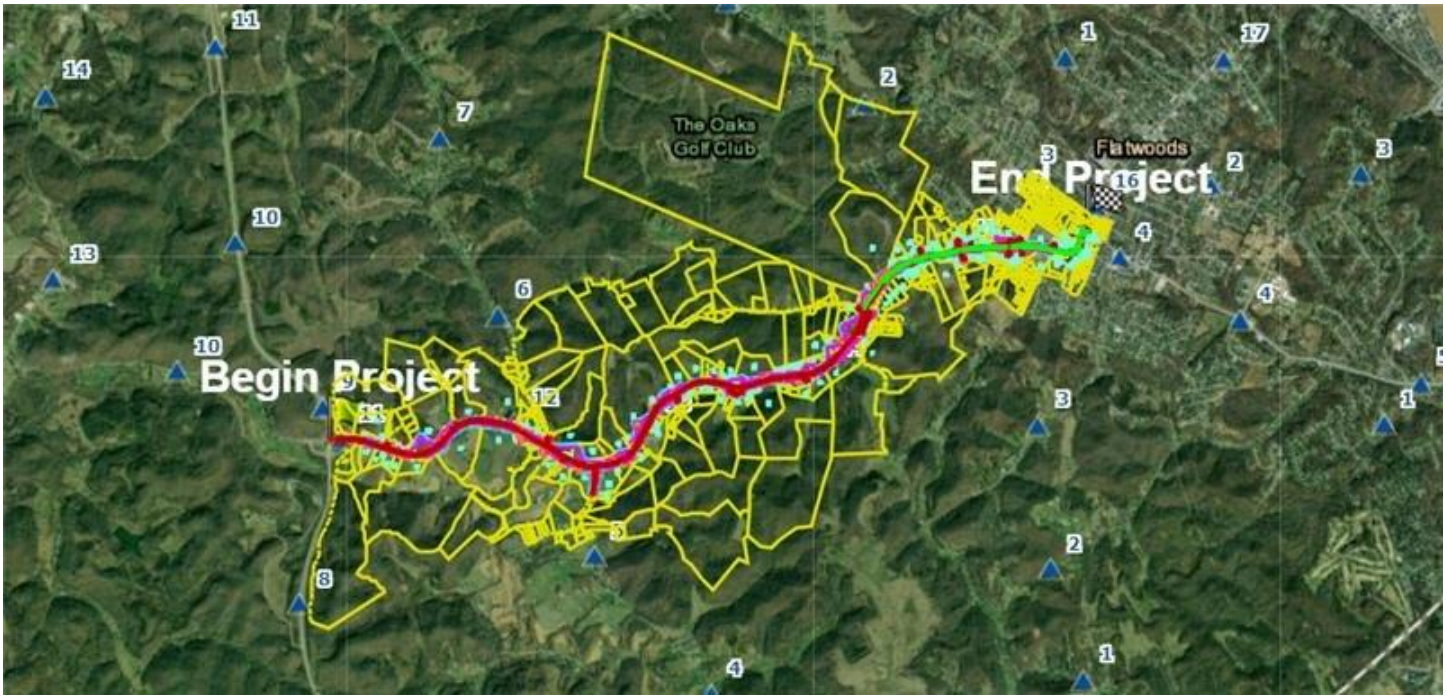
A virtual value study workshop was conducted on June 16-18 and June 20, 2025, on the project documents provided by KYTC for the KY 207 Reconstruction, Greenup County project.

The value team, primarily Kentucky-based and which consisted of constructability, geotechnical, maintenance, design, and cost subject matter experts, began the value study by reviewing the provided project documents and receiving the in-brief presentation. Throughout the workshop, the value team searched for opportunities to contribute quantitative and qualitative suggestions and improvements that would improve the value of this project through improved function. The proposals developed by the value team are offered as creative contributions to the design effort that has brought the project to this point.

A.2 Project Overview

This project is on KY 207 in Greenup County, Kentucky, from the Industrial Parkway – KY 67 (MP 10.932) to the KY 207/KY 693 intersection (MP 15.88) in Flatwoods.

Figure A-1: Project Map



The project corridor along KY 207 contains both rural (MP 11 to MP 14.6) and urban (MP 14.6 to MP 15.9) sections. Both sections are classified as major collectors having 10' driving lanes. The rural section has 0' to 2' paved shoulders, little to no clear zone, and a posted speed limit of 55 mph (MP 10.932 to MP 14.286). The urban section has posted speed limits of both 45 mph (MP 14.286 to MP 14.941) and then 35 mph (MP 14.941 to MP 15.88) closer into town. A stretch of the urban section has sidewalks (MP 15.75 to MP 15.88).

The existing roadway has approximately 42 horizontal curves with 22 meeting 55-mph design criteria. An additional 4 curves meet 45 mph with the remaining 16 curves not meeting a design speed of at least 45 mph. There are approximately 69 vertical curves with 22 meeting 55-mph design criteria. An additional 7 curves meet 45 mph with the remaining 40 curves not meeting a design speed of at least 45 mph. There

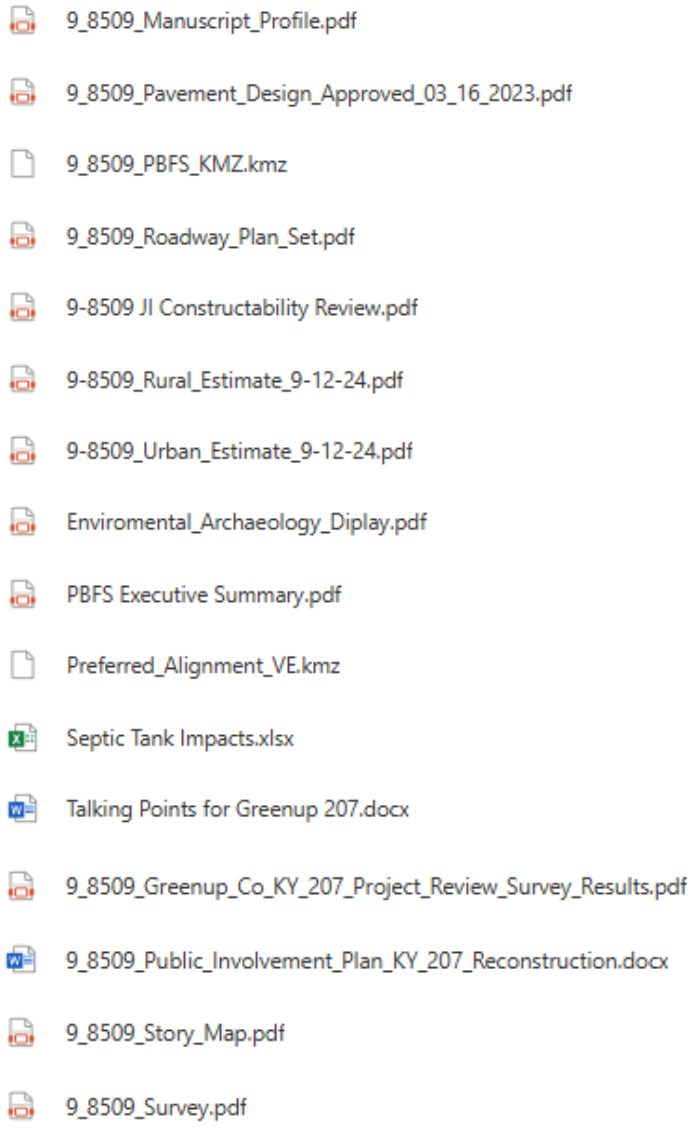
is insufficient sight distance at school bus stop locations, driver passing areas, and at intersections throughout the corridor. There is also congested traffic at key intersections. One congested intersection is the 3-way stop at KY 207 and KY 503 and a second is where KY 207 makes a 90-degree turn (through movement) joining KY 693.

The terrain within the project area is rolling. The land in the rural section is a mix of residential, farmland, wooded areas, and a few businesses. Portions of the wooded areas contain coal beds that have been mined extensively. The majority of land in the urban section is residential with a few commercial properties. There is a large area of Federal Emergency Management Agency (FEMA) designated floodplain along the corridor and designated wetlands. Low areas of KY 207 and side roads experience flooding from heavy rainfall. In addition, there have been numerous slides along the existing embankments.

A.2.1 List of Documents Reviewed

The following list of documents were available to the value team to develop their understanding of the project and establish project purpose and need, workshop objectives, and constraints.

- 2024 Average Unit Bid Prices.xlsx
- 9_8509_45_MPH_CL_PBFS.kmz
- 9_8509_45_MPH_PBFS_ALG.dgn
- 9_8509_Cross_Sections.pdf
- 9_8509_DES_01_10_2023.pdf
- 9_8509_Earthwork_Joint_Inspection.xlsm
- 9_8509_Entrance_Earthwork_Joint_Inspection.xlsx
- 9_8509_Estimate_Joint_Inspection.pdf
- 9_8509_FONSI_KY_207_Reconstruction_Signed_01_13_2022.pdf
- 9_8509_Geotech_Report_05_05_2024.pdf
- 9_8509_KY 207_Capacity_Analysis_with_Figures_2018.pdf
- 9_8509_KY_207_Crash_Analysis_Memo_2018.pdf
- 9_8509_KY_207_Greenup_County_Traffic_Forecast_2018.pdf
- 9_8509_Manuscript_Plan_Aerial.pdf
- 9_8509_Manuscript_Plan_Mapping.pdf



A.2.2 In-brief Meeting

At the in-brief meeting on Monday, June 16, 2025, representatives from KYTC presented a briefing on the project to the value team. In addition to identifying the key elements of the project, the value and project design teams discussed the workshop objectives (the focus of the value study) and overall project goals. The goals and objectives are listed in Section 1 of this report.

A.2.3 Site Visit

While the value team was not able to visit the project site, the in-brief presentation given by the design team representatives as a story map provided valuable context on the condition of the site.

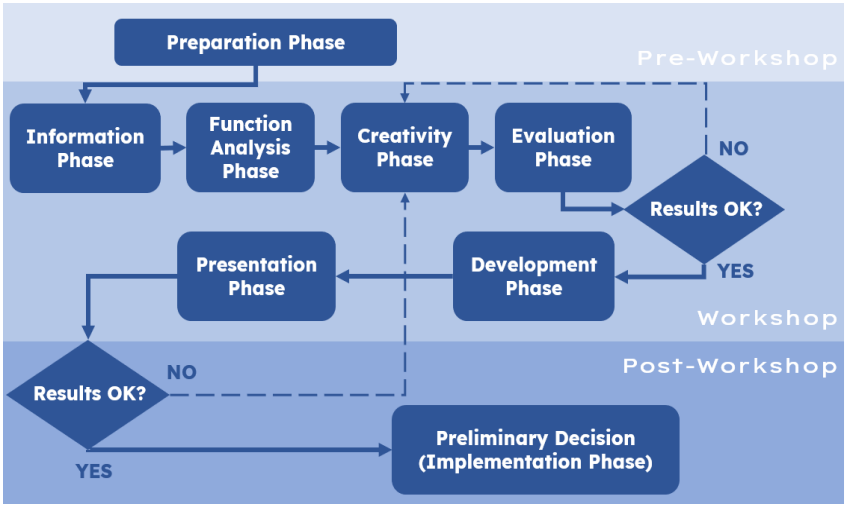
A.2.4 Presentation

An out-brief presentation was held on Friday, June 20, 2025. The objective of the presentation was to put forward the results of the value study. This involved a PowerPoint slide presentation to the value study stakeholders and decision makers. During the presentation, the value team highlighted aspects of value proposals, providing an opportunity for discussion and/or clarification of the concepts presented. This report has been created to document the value study in greater detail.

A.3 VM Process

The value methodology (Synonyms: value analysis, value engineering, and value management) is a function-oriented, systematic, team approach to add customer value to a program, facility, system, or service. Improvements like performance, quality, initial and life cycle cost are paramount in the value methodology.

Figure A-2: The VM Process



The workshop was conducted in accordance with the methodology as established by SAVE International, the value society, and was structured using the Value Methodology as outlined as follows:

Table A-1: The VM Job Plan

Value Methodology Stage / Phase	VM Phase Functions Achieved	Objectives of this Phase	Outcomes of this Phase
Phase 1: Preparation Phase	Identify Subject Identify Goals Define Value Organize Effort	• Identify the study project • Identify roles and responsibilities • Define study scope, goals, and objectives • Select team leader • Conduct pre-study meeting • Select value study team members • Identify stakeholders, decision-makers, and technical reviewers • Obtain time commitment • Identify data collection • Select study dates • Determine study logistics, agenda • Collect and distribute data • Perform technology dry-run for a virtual workshop • Send team primer to value study team • Team members to complete Key Issues Memos (KIM)	• Fosters understanding of value study priorities • Defines and manages expectations • Organizes the value study • Offers a thorough review of the project • Tests meeting platform and virtual tools to maximize engagement and collaboration • Primes the team for the value workshop
Phase 2: Information Phase	Analyze Information	• Present design concept • Present stakeholders' interests • Review project issues and objectives	• It brings all value study team members to a common understanding of the project,

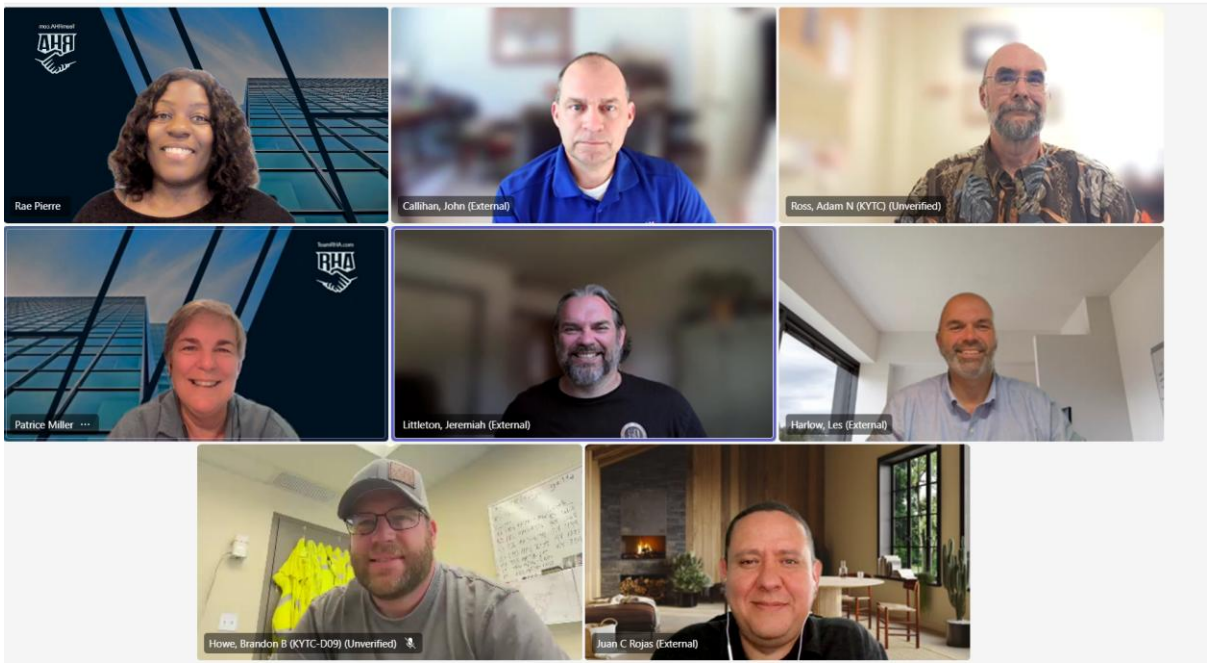
Value Methodology Stage / Phase	VM Phase Functions Achieved	Objectives of this Phase	Outcomes of this Phase
	Transform Information Orient Participants	• Discuss deviation from design standards • Define project performance metrics • Discuss problems the project must solve • Identify issues the design may not address • Visit project site / virtual site tour	including its challenges and constraints • Establishes the benchmark for which to identify alternatives • Gains a real-world perspective of the project and builds the foundation for function analysis
Phase 3: Function Analysis Phase	Define Functions Allocate Resources Allocate Performance Prioritize Functions	• Identify and classify functions • Apply cost and risk relative to performance • Prioritize functions • Select specific functions for study	• Provides a comprehensive understanding by focusing on what the project does rather than what it is • Identifies what the project must do to satisfy needs and objectives • Focuses on functions with the greatest opportunity for project improvements
Phase 4: Creativity Phase	Generate Ideas	• Brainstorm to generate performance-focused ideas for alternative ways to perform functions • Discuss, build on and clarify ideas	• The value team develops a broad array of ideas that provides a wide variety of possible alternative components or methods to improve project value
Phase 5: Evaluation Phase	Evaluate Ideas Select Ideas	• Eliminate obvious "fatal flaw" ideas • Score ideas based on meeting performance criteria, value key and project/study goals • Discuss conflicting rankings, further clarify ideas and determine final rankings • Discuss ideas with client and decision-makers (midpoint review) • Assign alternatives for the development phase	• Prioritizes ideas for development, focusing on those with the highest potential for performance improvement and cost savings • Determine value: performance/cost • Focuses team's effort to develop alternatives that best meet client study objectives
Phase 6: Development Phase	Transform Ideas Develop Information	• Validate and refine idea concepts • Compare to the original design concept • Define implementation considerations • Prepare sketches and calculations • Measure performance • Estimate costs, life-cycle cost benefits/costs	• Provides a side-by-side comparison of baseline and alternative—concepts, initial costs, life-cycle costs, sketches, performance metrics
Phase 7: Presentation Phase	Present Information Propose Change	• Present developed ideas to client, designers, decision-makers, stakeholders • Document feedback • Produce draft report	• Ensures management and other key stakeholders understand the rationale of the value alternatives and design suggestions
Phase 8: Implementation Phase	Implement Change Manage Change	• Document process and study findings • Develop and distribute VE study summary report • Review study summary report	• Involves those who will implement and increases the likelihood of implementation • Improves the actual value of the project

Value Methodology Stage / Phase	VM Phase Functions Achieved	Objectives of this Phase	Outcomes of this Phase
	Realize Value	• Assess alternatives for acceptance • Prepare draft implementation dispositions • Resolve conditionally accepted alternatives • Develop an implementation plan with the project manager • Project manager sign-off on VE implementation plan • Final presentation of study results	

A.4 Participants

Table A-2: Value Team Participants

Name	Organization	Position
John Callihan	AECOM	Design
Jeremiah Littleton	Qk4	Construction/MOT
Les Harlow	Qk4	Right-of-Way
Brandon Howe	KYTC	Safety/Construction & Maintenance
Adam Ross	KYTC	Geotechnical/Construction
Juan Rojas	Limites Services Group	Cost Estimator
Pat Miller, CVS	RHA	Team Leader
Rae Pierre, VMA	RHA	Technical Assistant



Top Row: Rae Pierre, John Callihan, Adam Ross
Middle Row: Pat Miller, Jeremiah Littleton, Les Harlow
Last Row: Brandon Howe, Juan Rojas

A.4.1 Attendance Records

The following page details the attendance of all participants during the workshop, including the in-brief and out-brief presentation meetings.

Workshop Attendee List

Jun 16	June 16 - 18, 20								Name	Organization	Position
	16		17		18		20				
DR	am	pm	am	pm	am	pm	am	pm			
☑	☑	☑	☑	☑	☑	☑	☑	☑	Patrice Miller, CVS	RHA	Team Leader
☑	☑	☑	☑	☑	☑	☑	☑	☑	Rae Pierre, VMA	RHA	Workshop Assistant
☑	☑	☑	☑	☑	☑	☑	☑	☑	Jeremiah Littleton	Qk4	Construction/MOT
☑	☑	☑	☑	☑	☑	☑	☑	☑	Adam Ross	Kentucky Transportation Cabinet	Geotech/pavement design
☑	☑	☑	☑	☑	☑	☑	☑	☑	Brandon Howe	Kentucky Transportation Cabinet	Safety/Construction & Maintenance
☑	☑	☑	☑	☑	☑	☑	☑	☑	Les Harlow	Qk4	Right-of-Way
☑	☑	☑	☑	☑	☑	☑	☑	☑	Juan Rojas	Limites Services Group	Cost Estimator
☑	☑	☑	☑	☑	☑	☑	☑	☑	John Callihan	AECOM	Design
☑	☑	☐	☐	☐	☐	☐	☐	☑	Darrin Eldridge	Kentucky Transportation Cabinet	Project Manager/Branch Manager D-9
☑	☑	☐	☐	☐	☐	☐	☐	☑	Wendy Southworth	Kentucky Transportation Cabinet	VE Coordinator
☑	☑	☐	☐	☐	☐	☐	☐	☑	Joey Mosley	HMB	Principal in Charge
☑	☑	☐	☐	☐	☐	☐	☐	☑	Anthony Damron	Kentucky Transportation Cabinet	Quality Assurance
☑	☑	☐	☐	☐	☐	☐	☐	☑	John Meyer	HMB	Roadway Design Division Manager
☑	☑	☐	☐	☐	☐	☐	☐	☑	Patrick Eggemeier	HMB	Roadway Design

A.5 Agenda

A copy of the agenda used for the value study, noting the time allocated to each one of the Value Methodology Job Plan phases, is included on the following pages.

Value Engineering (VE) Study Agenda

Project Name KY 207, Greenup County
Dates/Time: June 16-18 & 20, 2025, Monday-Wednesday & Friday, 8:30 AM – 5:00 PM ET
Study Location: Virtual

Day 1: Monday, June 16, 2025, 8:30 AM – 5:00 PM ET

Meeting Link [Dial in by phone: 323-484-8978, phone conference ID: 395 982 225#]

Time	VE Study Activity	Participants	Comments
8:30 AM	Welcome, Introductions, Overview of VE Process	All	
INFORMATION PHASE			
9:00 AM	Presentations by Design / Project Management Team	All	
10:00 AM	Break		
10:15 AM	Questions and Answers - VE Team and Management/Design Team	All	
11:00 AM	Review Project Goals, VE Study Objectives & Constraints Project Performance Attributes	All	
12:00 PM	Review Cost Models, Schedule, Project Risks **Complete Information Phase**	VE Team	
12:30 PM	Lunch		
FUNCTION ANALYSIS PHASE			
1:00 PM	• Identify/Classify Project Functions • Assign Cost and/or Risk to Functions • Prioritize & Select Functions for Creativity Phase **Complete Function Analysis Phase**	VE Team	
3:00 PM	Break		
CREATIVITY PHASE			
3:15 PM	Begin Brainstorming	VE Team	Brainstorm by Function
5:00 PM	Adjourn		

All: Decision-makers, Design Team, Stakeholders, VE Team (Shaded rows)
VE Team: Subject Matter Experts and others serving as full-time VE Team members

Day 2: Tuesday, June 17, 2025, 8:30 AM – 5:00 PM ET

Meeting Link [Dial in by phone: 323-484-8978, phone conference ID: 395 982 225#]

Time	VE Study Activity	Participants	Comments
8:30 AM	Check-in	VE Team	
CREATIVITY PHASE (continued)			
8:35 AM	Brainstorm Ideas **Complete Creativity Phase**	VE Team	
10:00 AM	Break		
EVALUATION PHASE			
10:15 AM	Two-step Evaluation Process (Shortlist Ideas for Development) **Complete Evaluation Phase**	VE Team	
12:30 PM	Lunch		
DEVELOPMENT PHASE			
1:00PM	Assign Workbooks for Development Review Workbook Format & Process Develop / Cost Workbooks	VE Team	
5:00 PM	Adjourn		

Day 3: Wednesday, June 18, 2025, 8:30 AM – 5:00 PM ET

Meeting Link [Dial in by phone: 323-484-8978, phone conference ID: 395 982 225#]

Time	VE Study Activity	Participants	Comments
8:30 AM	Check-in	VE Team	
DEVELOPMENT PHASE (continued)			
8:35 AM	Develop / Cost Alternatives	VE Team	
10:00 AM	Break		
10:15 AM	Develop / Cost Alternatives	VE Team	
12:30 PM	Lunch		
1:00 PM	Develop / Cost Alternatives	VE Team	
3:00 PM	Break		
3:15 PM	Develop / Cost Alternatives	VE Team	
5:00 PM	Adjourn		

All: Decision-makers, Design Team, Stakeholders, VE Team (Shaded rows)
VE Team: Subject Matter Experts and others serving as full-time VE Team members

Day 4: Friday, June 20, 2025, 8:30 AM – 5:00 PM ET

Meeting Link [Dial in by phone: 323-484-8978, phone conference ID: 395 982 225#]

Time	VE Study Activity	Participants	Comments
8:30 AM	Check-in	VE Team	
DEVELOPMENT PHASE (continued)			
8:35 AM	Select Alternatives for Presentation **Complete Development Phase**	VE Team	
10:30 AM	Break		
10:45 AM	Run-through Presentation Peer Review Workbooks	VE Team	
12:00 PM	Lunch		
PRESENTATION PHASE			
12:30 PM	Practice Presentation	VE Team	
2:00 PM	Out-brief Presentation of Key Findings/VE Alternatives to Stakeholders/Decision-makers	All	
4:00 PM	Workshop Close-out & Next Steps	VE Team	
5:00 PM	Adjourn		

All: Decision-makers, Design Team, Stakeholders, VE Team (Shaded rows)
VE Team: Subject Matter Experts and others serving as full-time VE Team members

Appendix

B

Project Analysis

B.1 Cost Estimate Comments

Cost models were prepared for the project; they are based on the cost estimate data provided by KYTC

The Pareto Concept: Typically, 80% of the total cost of a project is due to 20% of the elements of that project. Focusing on that 20% achieves the greatest impact in cost reduction and value improvement.

How to read the Cost Model Data Tables: In the Cost Model Data Tables, the project elements are sorted from largest down to smallest with a cumulative percentage; all project items above the 80% mark represent approximately 80% of the total project cost.

Table B-1: Cost Model Data Table (Summary)

Item #	Description	UOM	QTY	Average of Unit Price	Totals	% of Total	Cummulative	Cummulative
1	ROADWAY EXCAVATION	CUYD	1,649,243.00	$9.62	$ 12,321,615	36.35%	$ 12,321,615	36.35%
2	CL2 ASPH BASE 0.75D PG64-22	TON	25,996.00	$95.00	$ 2,469,620	7.29%	$ 14,791,235	43.64%
3	CRUSHED STONE BASE	TON	72,566.00	$33.03	$ 2,347,060	6.92%	$ 17,138,295	50.56%
4	MOBILIZATION	LS	2.00	$795,569.66	$ 1,591,139	4.69%	$ 18,729,434	55.26%
5	EROSION CONTROL BLANKET	SQYD	413,446.00	$1.89	$ 883,820	2.61%	$ 19,613,254	57.86%
6	CL2 ASPH SURF 0.38D PG64-22	TON	9,291.00	$105.61	$ 876,555	2.59%	$ 20,489,809	60.45%
7	CL2 ASPH BASE 1.00D PG64-22	TON	10,049.00	$83.04	$ 834,469	2.46%	$ 21,324,278	62.91%
8	MAINTAIN & CONTROL TRAFFIC	LS	2.00	$375,000.00	$ 750,000	2.21%	$ 22,074,278	65.13%
9	CONCRETE-CLASS A	CUYD	704.70	$1,002.63	$ 649,168	1.92%	$ 22,723,447	67.04%
10	GUARDRAIL-STEEL W BEAM-S FACE	LF	18,525.00	$33.84	$ 626,224	1.85%	$ 23,349,671	68.89%
11	CEMENT	TON	2,384.00	$260.99	$ 613,942	1.81%	$ 23,963,613	70.70%
12	CEMENT STABILIZED ROADBED	SQYD	125,050.00	$4.44	$ 512,403	1.51%	$ 24,476,016	72.21%
13	CONCRETE-CLASS B	CUYD	2,214.00	$225.00	$ 498,150	1.47%	$ 24,974,166	73.68%
14	CL2 ASPH SURF 0.38B PG64-22	TON	3,261.00	$147.97	$ 482,530	1.42%	$ 25,456,696	75.10%
15	DEMOBILIZATION	LS	2.00	$238,670.90	$ 477,342	1.41%	$ 25,934,038	76.51%
16	FUEL ADJUSTMENT	DOLL	449,611.00	$1.00	$ 449,611	1.33%	$ 26,383,649	77.84%
17	CEM CONC ENT PAVEMENT-8 IN	SQYD	3,786.00	$102.86	$ 381,961	1.13%	$ 26,765,610	78.97%
18	CULVERT PIPE-72 IN	LF	539.00	$594.43	$ 354,075	1.04%	$ 27,119,685	80.01%
19	EDGE KEY	LF	8,788.00	$40.00	$ 351,520	1.04%	$ 27,471,205	81.05%
135	WATER	MGAL	14.00	$0.17	$ 2	0.00%	$ 33,895,227	100.00%
136	ENTRANCE PIPE-48 IN	LF	397.00	$0.00	$ -	0.00%	$ 33,895,227	100.00%
13%	Grand Total		8,115,309.70	$13,677.82	$ 33,895,227	100.00%		

Of the 138 items listed in the above table (B-1), 18 items (highlighted rows), or 13% of items, represent 80% of the total cost. Please note that roadway excavation represents 36.35% of the total estimated amount.

B.2 Cost Estimate Considerations

The following cost estimate considerations were noted by the value team during the workshop.

- Using the 1.0D base is also more cost effective than 0.75D base (lower bid price)
- Suggest verifying excavation quantities
- Estimates appear to be missing escalation to mid-point of construction
- Some unit prices used appear to be low compared to the unit prices from bid results from 2024

NOTE: A comprehensive cost estimate analysis is included in **Appendix E**.

B.3 Performance Criteria

During the Information Phase's in-brief meeting, the performance criteria below were discussed with the project team to confirm their inclusion as a tool to both evaluate and develop ideas during the Evaluation and Development Phases of the workshop. Table B-2 presents the list and description of these criteria.

Table B-2: List of Performance Criteria

LIST OF CRITERIA	#	Criteria:	Description:
	A	Mainline Operations	An assessment of traffic operations and safety on the mainline facility to maintain consistent travel speed throughout. Operational considerations include level of service relative to the 20-year traffic projections as well as geometric considerations such as design speed, sight distance, clear zone, lane widths and shoulder widths. Consistent driver expectation.
	B	Local Operations	An assessment of traffic operations and safety on the local roadway infrastructure, including approaches and entrances. Operational considerations include level of service relative to the 20-year traffic projections; geometric considerations such as design speed, sight distance, lane widths; bicycle and pedestrian operations and access. Consistent driver expectation.
	C	Maintainability	An assessment of the long-term maintainability of the transportation facility(s). Maintenance considerations include the overall durability, longevity and maintainability of pavements, structures and systems; ease of maintenance; accessibility and safety considerations for maintenance personnel.
	D	Construction Impacts	An assessment of the temporary impacts to the public during construction related to traffic disruptions, detours and delays; impacts to emergency vehicles and school buses, businesses and residents relative to access, visual, noise, vibration, dust and construction traffic; environmental impacts.
	E	Environmental Impacts	An assessment of the permanent impacts to the environment including ecological (i.e., flora, fauna, air quality, water quality, visual, noise); socioeconomic impacts (i.e., community impacts, business, residents); impacts to cultural, recreational and historic resources.
	F	Project Schedule	An assessment of the total project delivery from the time as measured from the time of the VE Study to completion of construction. A delay in project schedule could potentially impact project cost (right-of-way, utility, construction costs).
	G	Risk Impacts	An assessment of the identified risks of the project.
	H	Phaseability	An assessment of how easily a transportation facility can be improved or expanded upon at some future date. This attribute considers the degree of “throw-away work” involved as well as future traffic and public impacts when the planned future improvements are made.
	I	Hydrological Impacts	An assessment of the project’s impact to wetlands, rivers and streams in its vicinity. The attribute also considers the performance of the transportation facility during flood events.
	J	Right-of-Way Impacts	Fewer displacement and minimized environmental/social impacts. Limiting right-of-way acquisition and disruption to homes, businesses, and community structures.

B.4 Value Team Observations and Concerns

In the Preparation Phase for the workshop and after completing their review of project documentation, the value team completed Key Issue Memos for which they identified observations and concerns to be addressed during the creative generation of potential ideas and alternatives. The following is a list of the value team's observations:

- Numerous roadway segments have blind curves and blind hills. Sight distance is an issue.
- Concentration of crashes. The crash concentrations seem to be at intersections, some of which have poor geometrics, but the rest a distributed relatively evenly. Improvements at key intersections would seem to be a reasonable approach to safety.
- Limited shoulders. Improving shoulders may have some safety benefit, but perhaps not a major need.
- Steep embankments with a history of requiring repairs. This is accurate but this is only prevalent in a few locations. Does this warrant a complete rebuild of the road?
- Stop conditions that serve to slow traffic movement. There are only two intersections that cause this in the five miles. It could be argued that these stop conditions help control speeds and improve safety.
- Right-of-way impacts for this project are significant.
- A lot of the rock cuts were not drilled during geotechnical investigation due to property owner issues.
- Wrong asphalt base (0.75D) shown on estimate and in paving summary; approved pavement design and typical sections show (1.0D).
- Geotextile fabric for subgrade stabilization has been updated to Class 4A since this was designed.
- Intelligent compaction is not currently used; bid item can be removed.
- A lot of properties (houses) need to be purchased for this alignment.
- There may be too many relocations for the area to absorb.
- Many safety issues due to bad geometry in the existing conditions.
- The areas where relocations are going to be required will more than likely require the acquisition of uneconomic remainders in several properties during negotiations.
- Geometry of existing roadway is poor, which is the leading cause of collisions.
- Terrain and geotechnical composition require higher construction costs.
- Several relocations. Possibly look at shifting alignment to reduce ROW costs (ex. Sta 235-250).

B.5 Risk Identification

In the Preparation Phase for the workshop and after completing a review of project documentation, the value team identified project risks. During the Information Phase, a preliminary Risk Register was developed and discussed among members of the value team.

Risk is a measure of future uncertainties in achieving program and/or project performance goals and objectives within defined cost, schedules, and performance constraints. Risk can be associated with all aspects of a program/project (e.g., threat, technology maturity, supplier capability, design maturation, performance against plan) as these aspects relate across the project's cost and schedule. Risk addresses the potential variation in the planned approach and its expected outcome. Risks may also represent opportunities within a project that could be exploited to the benefit of the project.

Please note that these identified risks assisted the value team in prioritizing functions for selection to brainstorm alternatives and were an opportunity to identify mitigation measures during the Creativity Phase; these have the potential of impacting the project budget, schedule, and performance.

Table B-3: Preliminary Risk Register

No.	Need/Objective	Risk Description	Likelihood (Low/Med/High)	Impact (Low/Med/High)	Urban, Rural, or Both	Mitigation Strategy/Comments
01	Improve curves (horizontal/vertical)	Existing curves may be costly or challenging to realign	**Medium**	**High**	Both	Survey and geotechnical studies to optimize designs; major issue that needs to be addressed during the workshop
02	Improve safety	Insufficient safety improvements could lead to continued collisions	**Medium**	**High**	Both	Follow FHWA safety audit standards
03	Improve emergency response times	Delays during construction could impact response times	**Medium**	**Medium**	Both	Coordinate with emergency services; detour plans
04	Reduce collisions/congestion	Poor traffic flow designs may worsen congestion	**Medium**	**High**	Both	Use traffic modeling to inform decisions
05	Improve Super Quik intersection	Intersection design may not adequately address safety	**High**	**High**	Urban	Traffic signalization and sight distance improvements; consider roundabout
06	Improve commute to Industrial Parkway	Delay in project or design flaws may increase commute	**Medium**	**Medium**	Rural	Optimize route alignment and signal timing
07	KY 207 / KY 693 junction	Poor junction design could create traffic hazards	**High**	**High**	Urban	Intersection redesign using turning lanes/signals
08	Paved shoulders	May be costly or limited by ROW constraints	**Low**	**Medium**	Both	Prioritize in safety-critical areas
09	Reconstruct flooding areas	May be underestimated	**Medium**	**High**	Rural	Hydrological studies and floodplain mapping
10	Bike/pedestrian considerations	Risk of noncompliance with multimodal standards	**Medium**	**Medium**	Urban	Include sidewalks/bike lanes per KYTC Complete Streets policy

No.	Need/Objective	Risk Description	Likelihood (Low/Med/High)	Impact (Low/Med/High)	Urban, Rural, or Both	Mitigation Strategy/Comments
11	Meet future traffic volumes	Underestimating growth could cause early obsolescence	**Low**	**Medium**	Both	Use long-range traffic forecasts in design
12	Minimize adjacent property impact	ROW acquisition or design encroachments	**High**	**High**	Both	Community engagement and flexible alignments
13	Maintain traffic during construction	Disruption could harm local mobility and business	**High**	**High**	Both	Staged construction and detours
14	Maximize value for dollar	Cost overruns or inefficiencies	**Medium**	**High**	Both	Cost-benefit analysis, value engineering
15	Economic development	Missed opportunity to support local growth	**Low**	**Low**	Both	Coordinate with local economic development authorities
16	Treat as rural/urban sections	Design may not address section-specific needs	**Medium**	**High**	Both	Segment the project by context with tailored approaches
17		Stabilization or flatter slopes could be required in deep cuts where no geotechnical exploration has been completed which could cause additional r/w to be acquired.	**Low**	**Medium**	Rural	
18		Project will take a long time to construct, causing a lot of disruption	**High**	**Medium**	Both	
19		Bypassing KY 207/KY 503 at rural Super Quick might impact a community's sense of identity	**High**	**Medium**	Rural	
20		Cutting through farm (Parcel 132) and then through properties to tie	**High**	**High**	Urban	

No.	Need/Objective	Risk Description	Likelihood (Low/Med/High)	Impact (Low/Med/High)	Urban, Rural, or Both	Mitigation Strategy/Comments
		into Reed Street has ROW cost, relocation, and potential to impact Reed Street Ball Fields (Parcel 267)				
21		Emergency response MOT	**Medium**	**High**	Both	
22		Unknown geotechnical issues due to coal mine areas and fill locations	**Medium**	**Medium**	Rural	
23		Weather-related delays	**Low**	**Low**	Both	
24		Pricing for estimate is for optimal summer-like conditions	**High**	**High**	Both	
25		Price hikes due to recent tariffs	**High**	**Medium**	Both	
26		Unaccounted escalation	**High**	**Medium**	Both	

Appendix

C

Function Analysis

C.1 Introduction

Function analysis is the heart of the Value Methodology (VM). It is the primary activity that separates VM from all other "improvement" programs. The objective of this phase is to ensure the entire value team agrees upon the purposes for the project elements. Furthermore, this phase assists with identifying the most beneficial areas for continuing study.

C.2 Random Function Identification

The value team identified the functions of the project using active verbs and measurable nouns. This process allowed the value team to truly understand the functions associated with the project.

Functions were identified and prioritized using the previously identified risks, Pareto cost model, and the team members' expertise. The value team identified **"Improve Safety," "Improve System-linkage,"** and **"Enhance Access"** as the basic functions of the project. The Function Analysis Worksheet (Table C-1) is shown for the project and reflects the complete list of functions.

Table C-1: Random Function Identification Worksheet for Project

Identify Functions		Classify Functions	Prioritize Functions
Active Verb	**Measurable Noun**	**Higher Order Basic Secondary**	**SELECT FOR CREATIVITY PHASE**
Benefit	*Community*	*Higher Order*	
Support	*Economic-development*	*Higher Order*	
Improve	**Safety**	**Basic**	
Maintain	**System-linkage**	**Basic**	
Enhance	**Access**	**Basic**	
Increase	Sight-distance	Secondary	X
Maintain	Traffic	Secondary	X
Reduce	Congestion	Secondary	X
Improve	Continuity	Secondary	X
Access	Recreation	Secondary	X
Acquire	Property	Secondary	X
Reduce	Maintenance	Secondary	X
Support	Traffic	Secondary	X
Improve	Channelization	Secondary	X
Convey	Water	Secondary	X
Improve	Aesthetic	Secondary	X
Illuminate	Area	Secondary	X
Manage	Risk	Secondary	X
Manage	Construction	Secondary	X
Reduce	Waste	Secondary	X
Reduce	Travel-time	Secondary	
Meet	Standards	Secondary	

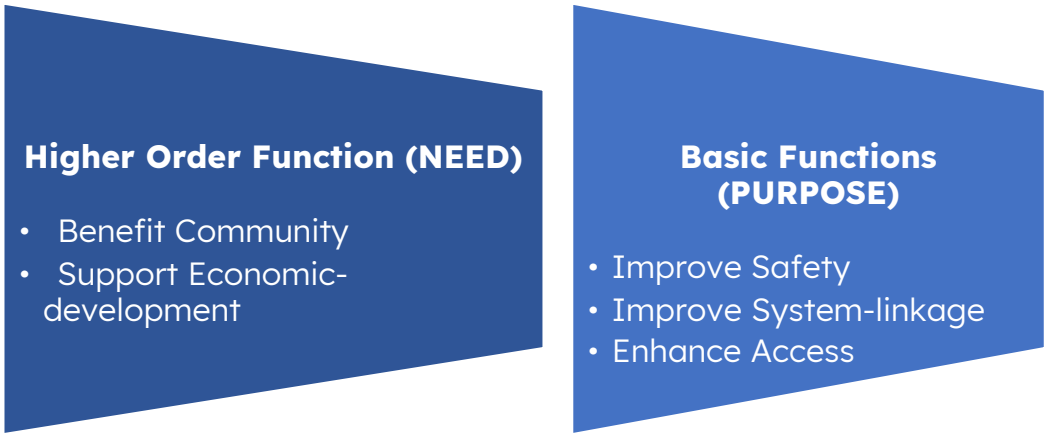
Identify Functions		Classify Functions	Prioritize Functions
Active Verb	**Measurable Noun**	**Higher Order Basic Secondary**	**SELECT FOR CREATIVITY PHASE**
Build	Project	Secondary	
Minimize	Collisions	Secondary	
Support	Weight	Secondary	
Prevent	Water-rise	Secondary	
Relay	Information	Secondary	
Engage	Community	Secondary	
Avoid	Environmental-impacts	Secondary	
Protect	Wildlife	Secondary	
Avoid	Obstacles	Secondary	
Ensure	Air-quality	Secondary	
Minimize	Noise-impacts	Secondary	
Maximize	Stewardship	Secondary	
Maximize	Value	Secondary	
Protect	Hazards	Secondary	

The definitions of the classifications are:

- **Higher Order Function:** The specific goals or needs for which the basic function exists and is outside the scope of the subject under study. [NEED]
- **Basic Function:** The specific purpose(s) for which a project exists and answers the question, "what must it do?" [PURPOSE]
- **Secondary Function:** A function that supports the basic function or required secondary functions and results from the specific design approach to achieve the basic function.

Please note that the Basic and Higher-Order functions relate directly to the project's Purpose and Need as illustrated in Figure C-1.

Figure C-1: Function Analysis and Purpose & Need



Appendix

D

Idea List and Evaluation

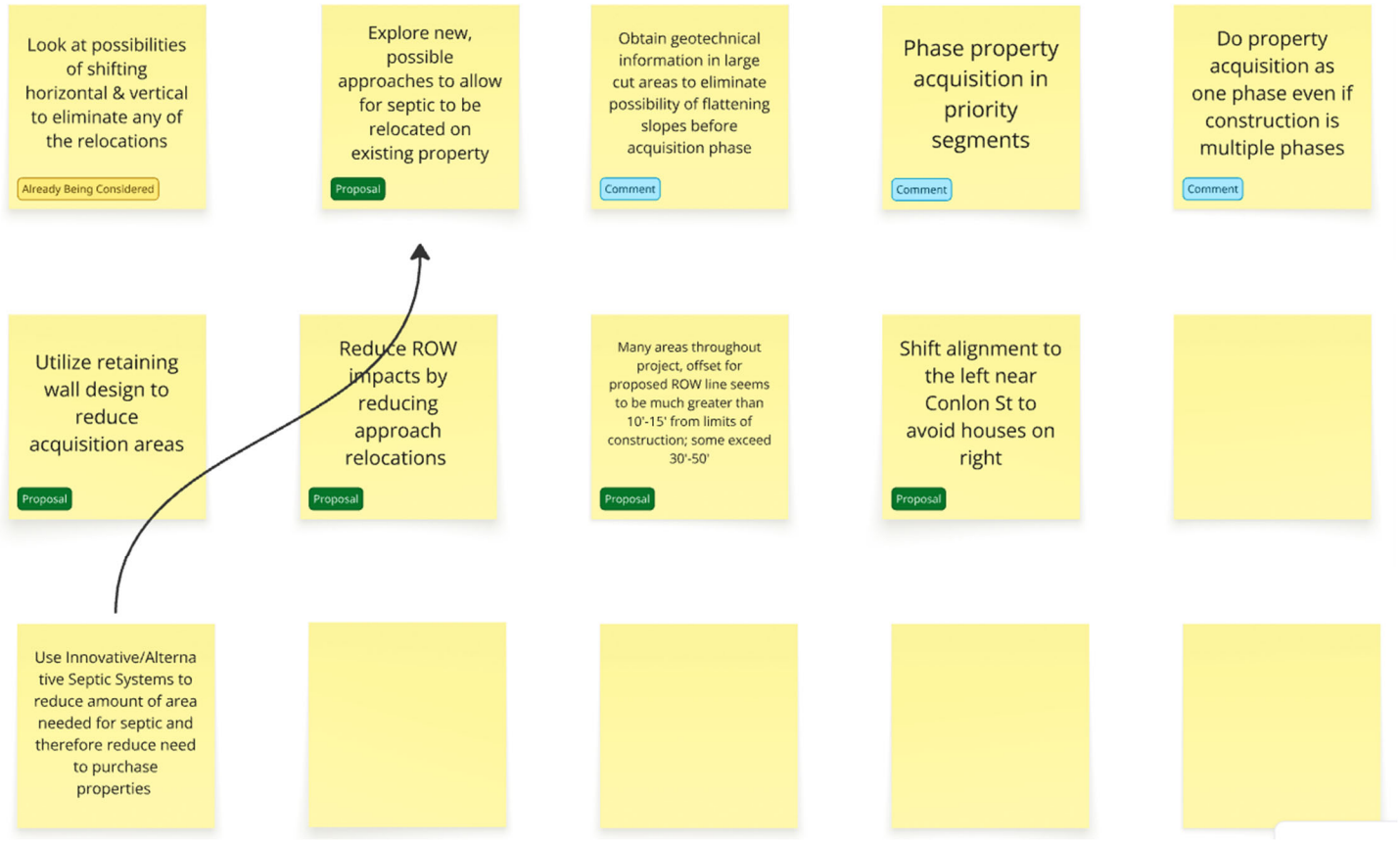
D.1 Introduction

The objective of the Creativity Phase is to generate a large quantity of ideas on alternate ways to perform each function selected for study. It uses common brainstorming techniques, including ideation that is unconstrained by habit, tradition, negative attitudes, assumed restrictions, and specific criteria. No judgment takes place during this phase of the study, though ideas are discussed for clarification purposes.

What makes the Creativity Phase of the value methodology successful is for the value team not to conceive ways to design a project, but to develop a variety of ways to perform the functions selected for study.

The value team brainstormed 119 ideas. Of these, 24 ideas were identified for further development into Value Proposals. In addition, 33 Comments were identified during the value study to be considered in the next phase of design development. The value team members brainstormed creative ideas in a collaborative virtual whiteboard space on Miro where ideas were brainstormed on "sticky notes" under key project functions.

Figure D-1: Sample of Miro Brainstorming Exercise for Function "Acquire Property"



D.2 Summary of Outcomes

The table below summarizes by function the total number of ideas brainstormed and developed as Value Proposals and Comments.

Table D-1: Summary of Ideas Brainstormed (by Function)

Function / Focus Area	Abbreviation	Total Number of Ideas Brainstormed	Total Number of Value Proposals Developed	Total Number of Comments
Reduce Congestion	RC	6	2	0
Acquire Property	AP	10	4	3
Improve Continuity	IC	3	0	0
Access Recreation	AR	8	3	1
Increase Sight-distance	IS	5	1	0
Maintain Traffic	MT	15	4	1
Reduce Maintenance	RM	12	1	2
Support Traffic	ST	8	2	1
Improve Channelization	IC	4	1	0
Convey Water	CW	2	1	1
Illuminate Area	IA	5	2	0
Improve Aesthetic	IT	2	0	1
Manage Construction	MC	9	1	5
Reduce Waste	RW	11	0	4
Manage Risk	MR	6	0	5
Miscellaneous	MI	4	2	0
Design Comments	DC	5	0	5
Estimate Comments	EC	4	0	4
		119	**24**	**33**

D.3 Evaluation Techniques Used

Using the Miro collaborative tool, the value team members evaluated the ideas using an evaluation key (see Table D-2) that measured value potential (Performance of Functions / Resources). After determining value potential, the value team rated the idea in one of four categories to shortlist ideas for further development (see Table D-3).

Table D-2: Evaluation Key

Resources: *How does this idea impact the amount of resources used?*	**Performance of Functions:** *How does this idea impact the functionality of the project?*				
	Large Improvement	Small Improvement	No Impact	Small Reduction	Large Reduction
Large Decrease	P	P	P	P	X
Small Decrease	P	P	P	X	X
No Impact	P / C*	P / C*	X	X	X
Small Increase	P	X	X	X	X
Large Increase	X	X	X	X	X

Table D-3: Rating

Score	Description	Outcome
P (Proposal)	**Great Value**, meets function/performance, and avoids resources	Developed as a Value Proposal
	Good Value, meets function/performance, and avoids or slightly increases resources	
C (Comment)	**Comment,** Standalone comment for consideration by the project team that needs no further explanation	Included, as-is, in separate list of Comments
X (Do Not Pursue)	**Poor Value**, reduces function/performance, and adds resources	Remains on full list of ideas and is not developed further
	Moderate Value, does not meet function/performance in a way that adds value	
	Out of Scope, Against Code/Regulation, or otherwise impossible	
ABC	**Already Being Considered/Done,** included in the existing design or previously explored and ruled out by the project team	Remains on full list of ideas and is not developed further

D.4 List of Scored Ideas Organized by Function

The list of scored ideas is shown on the following pages. During the Creativity and Evaluation Phases of the workshop, all value team members were actively engaged in the brainstorming and evaluation of ideas. During the Evaluation Phase, some ideas were combined with others and are designated as such by the nomenclature "w/" (with another idea/s).

Table D-4: "Scored" Creative Idea List

Idea No.	Idea Title	Score
Score Key: P=Proposal developed as it provides Great (or Good) Value X=Do not pursue further as it provides Poor Value or Moderate Value; or it is a Fatal Flaw or Out-of-scope ABC=Already Been Considered/Already Being Done C=Design or Estimate Comment		
Reduce Congestion (RC)		
RC-01	Allow full westbound side for construction rather than phases and use a 1-and-1 traffic pattern	P
RC-02	Add passing lanes or truck climbing lanes	w/ ESI-01
RC-03	Construct a roundabout at KY 207 and KY 503 to also provide access to Super Quik	X
RC-04	Use a Green T type intersection at KY 503/KY 207 (no signal)	P
RC-05	Build mini-roundabouts at the two 90-degree intersections	X
RC-06	Realign KY 207 to the south at KY 503 to improve sight distance - both vertical and horizontal	X
Acquire Property (AP)		
AP-01	Look at possibilities of shifting horizontal & vertical to eliminate any of the relocations	ABC
AP-02	Explore alternative approaches to allow for septic to be relocated on existing property	P
AP-03	Obtain geotechnical information in large cut areas to eliminate possibility of flattening slopes before acquisition phase	C
AP-04	Do property acquisition as one phase even if construction is multiple phases	C
AP-05	Phase property acquisition in priority segments	C
AP-06	Utilize retaining wall design to reduce acquisition areas	P
AP-07	Reduce ROW impacts by reducing approach relocations	P
AP-08	Many areas throughout project, offset for proposed ROW line seems to be much greater than 10'-15' from limits of construction; some exceed 30'-50'	P
AP-09	Shift alignment to the left near Conlon St to avoid houses on right	w/ MT-13
AP-10	Use Innovative/Alternative Septic Systems to reduce amount of area needed for septic and therefore reduce need to purchase properties	w/ AP-02
Improve Continuity (IC)		
IC-01	Use consistent shoulders and clear zone in major segments	w/ ST-03
IC-02	Use alternate layouts for KY 503 and KY 693 "right angle intersections"	w/ other(s)
IC-03	Use Curb & Gutter with flumes in Rural Section to reduce ROW; Design Speed might need to be less than 45 mph	X
Access Recreation (AR)		
AR-01	Eliminate path on both sides of the roadway; utilize multi-use path & remove sidewalk	w/ MMF-01
AR-02	Use bike lanes instead of shared-use path	w/ MMF-01
AR-03	Construct shared-use path on both sides	w/ MMF-01
AR-04	Reduce space between shared-use path and curb; use delineators for safety	w/ MMF-01

Idea No.	Idea Title	Score
Score Key: P=Proposal developed as it provides Great (or Good) Value X=Do not pursue further as it provides Poor Value or Moderate Value; or it is a Fatal Flaw or Out-of-scope ABC=Already Been Considered/Already Being Done C=Design or Estimate Comment		
AR-05	Consider best access point to baseball fields	C
AR-06	Extend sidewalks to the Reed Street Connection & Park Access Road at Sta 331 + 50	P
AR-07	Tighten radii at the KY 207/KY 693 intersection; large radii cause longer ped crossing	P
AR-071	Terminate project 250 ft west of KY 207/KY 693 intersection	P
Increase Sight-distance (IS)		
IS-01	Revisit design speed in the PBFS report; use 45-MPH design speed in the rural section to reduce ROW and capital costs	P
IS-02	Clear sight triangles of visual obstructions	X
IS-03	Use ITS warnings	X
IS-04	Signalize KY 503/KY 207 instead of rebuild to improve safety	X
IS-05	Revisit design speed in the PBFS report; Sta 192 to Sta 274, reducing design speed might allow	w/IS-01
Maintain Traffic (MT)		
MT-01	Add speed bumps in current road in accident prone areas	X
MT-02	Use oversized signs to warn of "problem" curves	w/ ESI-01
MT-03	Allow the closure of the roadway during construction	C
MT-04	During construction, restrict roadway to trucks from the west Super Quik into Flatwoods to minimize MOT curves for transitions	P
MT-05	Add median delineators/ barriers in problem curves	w/ ESI-01
MT-06	Add high friction surface treatments (HFST) in problem areas	w/ ESI-01
MT-07	Add dedicated Left- and Right-Turn Lanes at problem Intersections	w/ ESI-01
MT-08	Install roadside barriers to shield unmovable objects or steep embankments	w/ ESI-01
MT-09	Consider rock or fill "burritos" to maximize part width construction and minimize part width settlement issues	P
MT-10	Add Longitudinal Rumble Strips and Stripes on problem areas to alert of lane departures	w/ ESI-01
MT-11	Allow phase shutdown of small roads	P
MT-12	Add Speed Safety Cameras	X
MT-13	Allow closure of KY 207 near Conlon St to eliminate need for diversion	P
MT-14	Build Sta 318 to end in pre-phase and temporarily close portion of existing 207 to eliminate diversion road	w/ MT-13
MT-15	Eliminate Left turns (Right turns only with R-cuts or small roundabouts) at appropriate locations	X
Reduce Maintenance (RM)		
RM-01	Reduce or eliminate any features that require water for ease of maintenance	X
RM-02	Use geogrid grass shoulders	w/ ST-03
RM-03	Build full-depth shoulders to allow for future maintenance of traffic	X
RM-04	Use ITS for advanced warning during maintenance	C
RM-05	Use stamped concrete for verge between curb and sidewalk or shared-use path	w/ MMF-01
RM-06	Consider alternative pavements for shared-use path (concrete or asphalt)	w/ MMF-01
RM-07	Construct shared use path with chip seal	w/ MMF-01
RM-08	Reduce utility strip (verge) to 3 ft	w/ MMF-01
RM-09	Reduce paved portion of shoulders	w/ ST-03
RM-10	Reduce shoulder width overall	w/ ST-03

Idea No.	Idea Title	Score
Score Key: P=Proposal developed as it provides Great (or Good) Value X=Do not pursue further as it provides Poor Value or Moderate Value; or it is a Fatal Flaw or Out-of-scope ABC=Already Been Considered/Already Being Done C=Design or Estimate Comment		
RM-11	Flatten embankments to reduce guardrail	C
RM-12	Use 7′ tall culverts to accommodate skid steer cleanout	P
Support Traffic (ST)		
ST-01	Install geogrid to improve durability and possibly reduce needed thickness	w/ ST-08
ST-02	Increase cement stabilized layer to 12″ and reduce asphalt thickness	w/ ST-08
ST-03	Use 8′ shoulder (4′ paved)	P
ST-04	Review different pavement thickness options	w/ ST-08
ST-05	Utilize pavement fibers to increase durability	w/ ST-08
ST-06	Reduce pavement section in outside shoulders	w/ ST-08
ST-07	Extend asphalt under concrete wedge curb to prevent cracking	C
ST-08	Explore pavement options	P
Improve Channelization (IC)		
IC-01	Use centerline rumble strips in curves	ABC
IC-02	Eliminate TWLTL from Sta 317 to Sta 326	w/ IC-04
IC-03	Rework access points at KY 693/KY 207 (near Super Quik) intersection	X
IC-04	Eliminate or decrease TWLTL	P
Convey Water (CW)		
CW-01	Use as many open ditches rather than piping water	C
CW-02	Consider precast culverts (RCBC locations)	P
Illuminate Area (IA)		
IA-01	Add pedestrian level lighting near park	w/ IA-05
IA-02	Add street lights along shared-use path	w/ IA-05
IA-03	Add overhead/ streetlighting at major intersections	P
IA-04	Use solar lighting to reduce long term costs	w/ IA-05
IA-05	Consider safety lighting options	P
Improve Aesthetic (IT)		
IT-01	Use stamped concrete in verge (utility strip)	w/ MMF-01
IT-02	Accommodate tree plantings in urban area, especially near park	C
Manage Construction (MC)		
MC-01	Halt design and let project as Design-Build	w/ MC-09
MC-02	Let project with Utility Impact notes even if utilities are not clear	C
MC-03	Place water lines or other allowable utility relocates in construction contract	C
MC-04	Install temporary rumbles to increase awareness of upcoming construction and increase law enforcement officer presence	C
MC-05	Split the contracts to $10M or less each due to funding constraints	C
MC-06	Let as a CMGC contract; allow a contractor to propose innovative ideas	w/ MC-09
MC-07	Close shoulders two miles before project to give visual cue of entering a work zone	C
MC-08	Widen existing pavement and reduce the quantity of new alignment	w/ ESI-01
MC-09	Explore alternative delivery types	P
Manage Risk (MR)		
MR-01	Pre-negotiate unit rates with contractors	C
MR-02	Get temporary easement for geotechnical drilling; additional geotechnical information will help refine plans and possibly reduce excavation quantities	C
MR-03	Build float into the schedule for long lead items (e.g., power supply cabinets, traffic signals, transformers, poles)	ABC

Idea No.	Idea Title	Score
Score Key: P=Proposal developed as it provides Great (or Good) Value X=Do not pursue further as it provides Poor Value or Moderate Value; or it is a Fatal Flaw or Out-of-scope ABC=Already Been Considered/Already Being Done C=Design or Estimate Comment		
MR-04	Make utility relocations part of the construction contract	C
MR-05	Employ a robust public engagement during ROW and construction phases	C
MR-06	Complete geotechnical exploration after ROW purchase	C
Reduce Waste (RW)		
RW-01	Utilize recycled materials like reclaimed asphalt pavement	C
RW-02	Use more excavation material to change grade/alignment to minimize relocations	w/ other(s)
RW-03	Align the road with natural land contours to minimize earthwork and reduce the need for retaining walls	ABC
RW-04	Widen existing roads only	w/ ESI-01
RW-05	Use recycled materials or reclaimed asphalt pavement to reduce the need for new materials	C
RW-06	Identify borrow opportunities with contiguous projects	C
RW-07	Build the embankment out of geofoam to reduce borrow and protect utilities	X
RW-08	Use asphaltic concrete friction course (ACFC) millings in embankment to reduce borrow; allow contractor to use to offset borrow (include in specification)	X
RW-09	Install retaining wall or toe down barrier to reduce borrow	w/ other(s)
RW-10	Flatten embankment slopes to use more excavation on site	w/ other(s)
RW-11	Use excess excavation to construct usage areas along industrial parkway	C
Miscellaneous (MI) or Other Designation		
MI-01	Correcting poor geometry will increase sight distance; increased sight distance should reduce the need for turn lanes and TWLTL	w/ IS-01
MI-02	Change crash wall ties from grout to epoxy	X
ESI-01	Explore spot improvements	P
MMF-01	Consider multi-modal facilities	P
Design Comments (DC)		
DC-01	Paving quantities show 0.75D base; the approved pavement design and the typical sections all list 1.0D base	C
DC-02	Need surfacing schedule in typical for shared use path	C
DC-03	could limits of prop. row be reduced in certain areas to reduce total area needed for acquisition	C
DC-04	Remove rock layer designations from cut slope sheets in the geotechnical section (R175q, 175y,175aa and others)	C
DC-05	Joint adhesive shown on typical for diversion (not needed).	C
Estimate Comments (EC)		
EC-01	Using the 1.0D base is also more cost effective than 0.75D base (lower bid price)	C
EC-02	Need to verify excavation quantities	C
EC-03	Estimates appear to be missing escalation to mid-point of construction	C
EC-04	Some unit prices used appear to be low compared to the unit prices from bid results from 2024	C

Appendix

E

Cost Analysis

E.1 Cost Analysis

A comprehensive cost analysis was performed by RHA's cost estimating consultant, Juan Rojas (Limites Services Group) for the purposes of the value workshop. The details of this analysis are captured on the following pages, and include:

- **Cost Estimates** for both the Urban and Rural sections, both dated 09/12/2024 (provided by the Project Team). The bulk of the work in both estimates is continued in the Group 0001: Paving and Group 0002: Roadway; it is in these two groups of the estimates where 80% or more of the estimated amount is contained and where the value team focused their efforts during the workshop.
- **Summary Pivot Tables** for both the Urban and Rural Sections – Pareto analysis, used by the value team to identify high-cost items for each section (Urban and Rural) wherein there may be highest potential for value opportunity during the workshop (discussed in the Information Phase)
- **Detailed Pivot Table** for combined Urban and Rural Sections – Pareto analysis, used by the value team to identify high-cost items for the entire project (both Urban and Rural sections) wherein there may be the highest potential for value opportunity during the workshop (discussed in the Information Phase)
- **Estimate Analysis** – Analysis performed to compare project funding to the cost estimate assuming a letting date of January 2029. Also, column **Total $/UOM** was used by the value team in developing estimates for value proposals.
- **Kentucky Average Unit Bid Prices** – When cost estimate data was not provided in the estimate, these costs were used by the value team in developing estimates for value proposals.
    - **NOTE:** Based on discussions with KYTC and further analysis, the average unit bid price for Roadway Excavation was determined to be $10/CY. Please refer to **Item Bid History for Roadway Excavation**.

Original Budget/Funding Assumptions (construction is not currently funded):

Phase	Fiscal Year 2021	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2026
Design	$2,000,000	-	-	-
Right-of-way	-	$2,600,000	$6,600,000	-
Utilities	-	$2,700,000	$4,700,000	-
Construction	-	-	-	$32,900,000
TOTAL	**$2,000,000**	**$5,300,000**	**$11,300,000**	**$32,900,000**

Key Baseline Estimate Assumptions:

- Base Date: 09/12/2024
- Season: Summer
- County: Greenup
- Two estimates provided:
    - Rural: $24.8M
    - Urban: $12.47M
- Funding Year is 2027

- Costs are inclusive of labor, material and all sub-markups

Key Schedule Assumptions:

Phase	Time
Right-of-way	24-30 months
Utility	6-12 months
Construction	24-36 months (2-3 seasons)
Letting Date	January 2029

Cost Analysis Key Findings:

- After applying assumptions, contingencies, and escalation, the Rural Section appears to be over the baseline estimate by $10.5M (43%)
- After applying assumptions, contingencies, and escalation, the Urban Section appears to be over the baseline estimate by $2.8M (22%)
- The value team understands that the Traffic Signal at KY 207/KY 692 will need to be rebuilt with the proposed design; this does not appear to be accounted for in the cost estimate.
- There does not appear to be electrical items included in the estimate.
- The line item “Entrance Pipe-48” has a quantity but no costs for the Urban estimate.

Conclusion:

The value team recognizes that the cost estimate is a work-in-progress and will be refined as new information is known. It is recommended that the project team refer to the recent bid results as these are the best indicator of the expected results. In addition, if the projects are not constructed for several years, it is recommended to add the proper escalation to the expected mid-point of construction.

The true benefit of this analysis was to focus the value team on potential targets for value opportunity and to identify innovative ways to build the project and meet potential budget/funding limitations.

Estimate 9-8509.00

Estimated Cost:$22,558,341.85

Contingency: 10.00%

Estimated Total: $24,814,176.04

KY 207 RECONSTRUCTION

Base Date: 09/12/24

Spec Year: 08

Unit System: E

Work Type: GRADE & DRAIN WITH ASPHALT SURFACE

Highway Type: STATE ROUTE

Urban/Rural Type: RURAL

Season: SUMMER

County: GREENUP

Latitude of Midpoint: 383016

Longitude of Midpoint: 824529

District: 09

Federal Project Number: FD 52 045 0207 010-016

State Project Number:

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension

Group 0001: PAVING

0007	00301 CL2 ASPH SURF 0.38D PG64-22	7,870.00	TON	$89.38	$703,420.60
0008	00221 CL2 ASPH BASE 0.75D PG64-22	21,959.00	TON	$95.00	$2,086,105.00
0009	00003 CRUSHED STONE BASE	51,587.00	TON	$31.41	$1,620,347.67
0010	00008 CEMENT STABILIZED ROADBED	91,624.00	SQYD	$3.71	$339,925.04
0011	02542 CEMENT	1,747.00	TON	$253.55	$442,951.85
0012	00358 ASPHALT CURING SEAL	92.00	TON	$888.19	$81,713.48
0013	02702 SAND FOR BLOTTER	228.00	TON	$46.17	$10,526.76
0014	00100 ASPHALT SEAL AGGREGATE	378.00	TON	$118.32	$44,724.96
0015	00103 ASPHALT SEAL COAT	44.00	TON	$998.04	$43,913.76
0016	00020 TRAFFIC BOUND BASE	375.00	TON	$44.20	$16,575.00
0017	02677 ASPHALT PAVE MILLING & TEXTURING	540.00	TON	$38.76	$20,930.40
0018	24970EC ASPHALT MATERIAL FOR TACK NON-TRACKING	61.00	TON	$5.27	$321.47
0019	20071EC JOINT ADHESIVE	21,146.00	LF	$0.84	$17,762.64
0020	24891EC PAVE MOUNT INFRARED TEMP EQUIPMENT	2,273,661.00	SF	$0.01	$22,736.61
0021	24781EC INTELLIGENT COMPACTION FOR ASPHALT	29,829.00	TON	$0.25	$7,457.25
0022	00190 LEVELING & WEDGING PG64-22	618.00	TON	$105.54	$65,223.72

Total for Group 0001:$5,524,636.21

Group 0002: ROADWAY

0024	00078 CRUSHED AGGREGATE SIZE NO 2	24.00	TON	$60.59	$1,454.16
0025	01000 PERFORATED PIPE-4 IN	2,020.00	LF	$10.19	$20,583.80
0026	01010 NON-PERFORATED PIPE-4 IN	246.00	LF	$14.85	$3,653.10
0027	01020	2.00	EACH	$1,022.44	$2,044.88

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
	PERF PIPE HEADWALL TY 1-4 IN				
0028	01024 PERF PIPE HEADWALL TY 2-4 IN	1.00	EACH	$1,355.05	$1,355.05
0029	01028 PERF PIPE HEADWALL TY 3-4 IN	10.00	EACH	$1,098.20	$10,982.00
0030	01032 PERF PIPE HEADWALL TY 4-4 IN	10.00	EACH	$970.56	$9,705.60
0031	01310 REMOVE PIPE	100.00	LF	$38.85	$3,885.00
0032	02014 BARRICADE-TYPE III	20.00	EACH	$111.32	$2,226.40
0033	02091 REMOVE PAVEMENT	7,000.00	SQYD	$7.33	$51,310.00
0034	02101 CEM CONC ENT PAVEMENT-8 IN	1,219.00	SQYD	$108.38	$132,115.22
0035	02159 TEMP DITCH	8,400.00	LF	$0.36	$3,024.00
0036	02160 CLEAN TEMP DITCH	4,200.00	LF	$0.12	$504.00
0037	02200 ROADWAY EXCAVATION	1,500,977.00	CUYD	$7.00	$10,506,839.00
0039	02242 WATER	7.00	MGAL	$0.17	$1.19
0040	02351 GUARDRAIL-STEEL W BEAM-S FACE	10,087.50	LF	$33.49	$337,830.38
0041	02360 GUARDRAIL TERMINAL SECTION NO 1	26.00	EACH	$77.53	$2,015.78
0042	02381 REMOVE GUARDRAIL	1,300.00	LF	$3.68	$4,784.00
0043	02391 GUARDRAIL END TREATMENT TYPE 4A	19.00	EACH	$4,140.40	$78,667.60
0044	02397 TEMP GUARDRAIL	1,300.00	LF	$20.64	$26,832.00
0045	02399 EXTRA LENGTH GUARDRAIL POST	236.00	EACH	$103.73	$24,480.28
0046	02429 RIGHT-OF-WAY MONUMENT TYPE 1	129.00	EACH	$194.67	$25,112.43
0047	02432 WITNESS POST	129.00	EACH	$130.97	$16,895.13
0048	02483 CHANNEL LINING CLASS II	4,170.00	TON	$45.80	$190,986.00
0049	02484 CHANNEL LINING CLASS III	3,505.00	TON	$43.24	$151,556.20
0050	02545	1.00	LS	$100,000.00	$100,000.00

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
	CLEARING AND GRUBBING				
0051	02562 TEMPORARY SIGNS	500.00	SQFT	$10.48	$5,240.00
0052	02585 EDGE KEY	3,120.00	LF	$40.00	$124,800.00
0053	02602 FABRIC-GEOTEXTILE CLASS 1	360.00	SQYD	$3.40	$1,224.00
0054	02603 FABRIC-GEOTEXTILE CLASS 2	6,642.00	SQYD	$2.54	$16,870.68
0055	02607 FABRIC-GEOTEXTILE CLASS 2 FOR PIPE	13,329.00	SQYD	$2.00	$26,658.00
0056	02650 MAINTAIN & CONTROL TRAFFIC	1.00	LS	$350,000.00	$350,000.00
0057	02671 PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH	$5,263.89	$21,055.56
0058	02676 MOBILIZATION FOR MILL & TEXT	1.00	LS	$8,000.00	$8,000.00
0059	02690 SAFELOADING	5.00	CUYD	$590.94	$2,954.70
0060	02696 SHOULDER RUMBLE STRIPS	33,600.00	LF	$0.27	$9,072.00
0061	02701 TEMP SILT FENCE	8,400.00	LF	$2.50	$21,000.00
0062	02703 SILT TRAP TYPE A	118.00	EACH	$114.74	$13,539.32
0063	02704 SILT TRAP TYPE B	118.00	EACH	$97.79	$11,539.22
0064	02705 SILT TRAP TYPE C	118.00	EACH	$181.57	$21,425.26
0065	02706 CLEAN SILT TRAP TYPE A	118.00	EACH	$10.90	$1,286.20
0066	02707 CLEAN SILT TRAP TYPE B	118.00	EACH	$23.66	$2,791.88
0067	02708 CLEAN SILT TRAP TYPE C	118.00	EACH	$22.33	$2,634.94
0068	02726 STAKING	1.00	LS	$40,000.00	$40,000.00
0069	05950 EROSION CONTROL BLANKET	290,663.00	SQYD	$2.50	$726,657.50
0070	05952 TEMP MULCH	378,376.00	SQYD	$0.20	$75,675.20
0071	05953 TEMP SEEDING AND PROTECTION	283,782.00	SQYD	$0.22	$62,432.04
0072	05963	59.00	TON	$1,150.00	$67,850.00

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
	INITIAL FERTILIZER				
0073	05964 MAINTENANCE FERTILIZER	29.00	TON	$972.97	$28,216.13
0074	05985 SEEDING AND PROTECTION	289,407.00	SQYD	$0.32	$92,610.24
0075	05992 AGRICULTURAL LIMESTONE	352.00	TON	$58.46	$20,577.92
0076	06406 SBM ALUM SHEET SIGNS .080 IN	852.00	SQFT	$37.64	$32,069.28
0077	06407 SBM ALUM SHEET SIGNS .125 IN	72.00	SQFT	$41.88	$3,015.36
0078	06410 STEEL POST TYPE 1	1,850.00	LF	$29.42	$54,427.00
0079	06412 STEEL POST MILE MARKERS	10.00	EACH	$478.91	$4,789.10
0080	06514 PAVE STRIPING-PERM PAINT-4 IN	8,258.00	LF	$0.37	$3,055.46
0081	06515 PAVE STRIPING-PERM PAINT-6 IN	76,196.00	LF	$0.28	$21,334.88
0082	06568 PAVE MARKING-THERMO STOP BAR-24IN	186.00	LF	$11.71	$2,178.06
0083	06569 PAVE MARKING-THERMO CROSS-HATCH	1,554.00	SQFT	$5.21	$8,096.34
0084	06574 PAVE MARKING-THERMO CURV ARROW	29.00	EACH	$114.88	$3,331.52
0085	08100 CONCRETE-CLASS A	28.00	CUYD	$884.26	$24,759.28
0086	10020NS FUEL ADJUSTMENT	334,316.00	DOLL	$1.00	$334,316.00
0087	10030NS ASPHALT ADJUSTMENT	119,036.00	DOLL	$1.00	$119,036.00
0088	20430ED SAW CUT	7,830.00	LF	$2.32	$18,165.60
0089	21289ED LONGITUDINAL EDGE KEY	7,830.00	LF	$3.73	$29,205.90
0090	22664EN WATER BLASTING EXISTING STRIPE	18,200.00	LF	$0.83	$15,106.00
0091	23158ES505 DETECTABLE WARNINGS	364.00	SQFT	$68.79	$25,039.56
0092	24489EC INLAID PAVEMENT MARKER	190.00	EACH	$38.66	$7,345.40
0093	24631EC BARCODE SIGN INVENTORY	58.00	EACH	$33.87	$1,964.46
0094	24814EC	3,265.00	LF	$2.59	$8,456.35

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
	PIPELINE INSPECTION				
0095	24845EC UTILITY COORDINATION	1.00	LS	$10,000.00	$10,000.00

Total for Group 0002:$14,188,645.54

Group 0003: DRAINAGE

0096	00462 CULVERT PIPE-18 IN	1,154.00	LF	$107.81	$124,412.74
0097	00464 CULVERT PIPE-24 IN	655.00	LF	$213.93	$140,124.15
0098	00466 CULVERT PIPE-30 IN	112.00	LF	$178.72	$20,016.64
0099	01212 PIPE CULVERT HEADWALL-36 IN	3.00	EACH	$4,336.15	$13,008.45
0100	00468 CULVERT PIPE-36 IN	301.00	LF	$174.40	$52,494.40
0101	00470 CULVERT PIPE-48 IN	167.00	LF	$287.15	$47,954.05
0102	00471 CULVERT PIPE-54 IN	44.00	LF	$402.62	$17,715.28
0103	00474 CULVERT PIPE-72 IN	110.00	LF	$488.86	$53,774.60
0104	00440 ENTRANCE PIPE-15 IN	605.00	LF	$84.69	$51,237.45
0105	00443 ENTRANCE PIPE-24 IN	40.00	LF	$94.08	$3,763.20
0106	22581EN ENTRANCE PIPE-36 IN	77.00	LF	$200.00	$15,400.00
0107	01204 PIPE CULVERT HEADWALL-18 IN	23.00	EACH	$2,055.37	$47,273.51
0108	01208 PIPE CULVERT HEADWALL-24 IN	12.00	EACH	$2,400.00	$28,800.00
0109	01210 PIPE CULVERT HEADWALL-30 IN	2.00	EACH	$3,200.18	$6,400.36
0110	01216 PIPE CULVERT HEADWALL-48 IN	3.00	EACH	$5,498.74	$16,496.22
0111	24025EC PIPE CULVERT HEADWALL-72 IN	2.00	EACH	$12,000.00	$24,000.00
0112	24026EC PIPE CULVERT HEADWALL-54 IN	1.00	EACH	$10,052.90	$10,052.90
0113	01650 JUNCTION BOX	3.00	EACH	$4,067.21	$12,201.63

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
				Total for Group 0003:	$685,125.58
Group 0004: 6' x 6' RCBC - STA. 132+30					
0114	08100 CONCRETE-CLASS A	184.30	CUYD	$884.26	$162,969.12
0115	08150 STEEL REINFORCEMENT	29,550.00	LB	$1.73	$51,121.50
0116	08002 STRUCTURE EXCAV-SOLID ROCK	96.00	CUYD	$90.56	$8,693.76
0117	08003 FOUNDATION PREPARATION	1.00	LS	$19,000.00	$19,000.00
				Total for Group 0004:	$241,784.38
Group 0005: 14' x 6' RCBC - STA. 158+80					
0118	08100 CONCRETE-CLASS A	393.10	CUYD	$884.26	$347,602.61
0119	08150 STEEL REINFORCEMENT	64,905.00	LB	$1.73	$112,285.65
0120	08002 STRUCTURE EXCAV-SOLID ROCK	145.00	CUYD	$90.56	$13,131.20
0121	08003 FOUNDATION PREPARATION	1.00	LS	$28,000.00	$28,000.00
				Total for Group 0005:	$501,019.46
Group 0006: 10' x 3' RCBC EXT - STA. 53+95.67 (OFF APPR. 270+00 RT.)					
0122	08100 CONCRETE-CLASS A	26.00	CUYD	$884.26	$22,990.76
0123	08150 STEEL REINFORCEMENT	6,735.00	LB	$1.73	$11,651.55
0124	08002 STRUCTURE EXCAV-SOLID ROCK	20.00	CUYD	$90.56	$1,811.20
0125	08003 FOUNDATION PREPARATION	1.00	LS	$4,000.00	$4,000.00
				Total for Group 0006:	$40,453.51
Group 0019: DEMOBILIZATION &/OR MOBILIZATION					
0005	02568 MOBILIZATION	1.00	LS	$1,058,982.44	$1,058,982.44
0006	02569 DEMOBILIZATION	1.00	LS	$317,694.73	$317,694.73
				Total for Group 0019:	$1,376,677.17

Estimate 9-8509.00

Estimated Cost:$11,336,884.67

Contingency: 10.00%

Estimated Total: $12,470,573.14

KY 207 RECONSTRUCTION

Base Date: 09/12/24

Spec Year: 08

Unit System: E

Work Type: GRADE & DRAIN WITH ASPHALT SURFACE

Highway Type: STATE ROUTE

Urban/Rural Type: URBAN

Season: SUMMER

County: GREENUP

Latitude of Midpoint: 383016

Longitude of Midpoint: 824529

District: 09

Federal Project Number: FD 52 045 0207 010-016

State Project Number:

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
Group 0001: PAVING					
0007	00307 CL2 ASPH SURF 0.38B PG64-22	3,261.00	TON	$147.97	$482,530.17
0008	00301 CL2 ASPH SURF 0.38D PG64-22	1,421.00	TON	$121.84	$173,134.64
0009	00221 CL2 ASPH BASE 0.75D PG64-22	4,037.00	TON	$95.00	$383,515.00
0010	00212 CL2 ASPH BASE 1.00D PG64-22	10,049.00	TON	$83.04	$834,468.96
0011	00003 CRUSHED STONE BASE	20,979.00	TON	$34.64	$726,712.56
0012	00008 CEMENT STABILIZED ROADBED	33,426.00	SQYD	$5.16	$172,478.16
0013	02542 CEMENT	637.00	TON	$268.43	$170,989.91
0014	00358 ASPHALT CURING SEAL	35.00	TON	$985.09	$34,478.15
0015	02702 SAND FOR BLOTTER	83.00	TON	$56.65	$4,701.95
0016	00100 ASPHALT SEAL AGGREGATE	36.00	TON	$318.90	$11,480.40
0017	00103 ASPHALT SEAL COAT	4.00	TON	$1,563.15	$6,252.60
0018	00020 TRAFFIC BOUND BASE	375.00	TON	$44.20	$16,575.00
0019	02677 ASPHALT PAVE MILLING & TEXTURING	377.00	TON	$43.17	$16,275.09
0020	24970EC ASPHALT MATERIAL FOR TACK NON-TRACKING	11.00	TON	$189.67	$2,086.37
0021	20071EC JOINT ADHESIVE	8,718.00	LF	$1.23	$10,723.14
0022	24891EC PAVE MOUNT INFRARED TEMP EQUIPMENT	944,594.00	SF	$0.01	$9,445.94
0023	24781EC INTELLIGENT COMPACTION FOR ASPHALT	18,768.00	TON	$0.25	$4,692.00
0024	00190 LEVELING & WEDGING PG64-22	921.00	TON	$102.79	$94,669.59

Total for Group 0001:$3,155,209.63

Group 0002: ROADWAY

0025	00078 CRUSHED AGGREGATE SIZE NO 2	24.00	TON	$60.59	$1,454.16
0026	01000	9,378.00	LF	$8.49	$79,619.22

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
	PERFORATED PIPE-4 IN				
0027	01010 NON-PERFORATED PIPE-4 IN	20.00	LF	$22.19	$443.80
0029	01024 PERF PIPE HEADWALL TY 2-4 IN	2.00	EACH	$1,128.50	$2,257.00
0032	01310 REMOVE PIPE	100.00	LF	$38.85	$3,885.00
0033	01810 STANDARD CURB AND GUTTER	9,875.00	LF	$34.46	$340,292.50
0034	02014 BARRICADE-TYPE III	20.00	EACH	$111.32	$2,226.40
0035	02091 REMOVE PAVEMENT	3,000.00	SQYD	$9.48	$28,440.00
0036	02101 CEM CONC ENT PAVEMENT-8 IN	2,567.00	SQYD	$97.33	$249,846.11
0037	02159 TEMP DITCH	3,523.00	LF	$0.54	$1,902.42
0038	02160 CLEAN TEMP DITCH	1,761.00	LF	$0.13	$228.93
0039	02200 ROADWAY EXCAVATION	148,266.00	CUYD	$12.24	$1,814,775.84
0040	02223 GRANULAR EMBANKMENT	2,214.00	CUYD	$46.84	$103,703.76
0041	02242 WATER	7.00	MGAL	$0.17	$1.19
0042	02351 GUARDRAIL-STEEL W BEAM-S FACE	8,437.50	LF	$34.18	$288,393.75
0043	02360 GUARDRAIL TERMINAL SECTION NO 1	25.00	EACH	$77.73	$1,943.25
0044	02381 REMOVE GUARDRAIL	1,300.00	LF	$3.68	$4,784.00
0045	02391 GUARDRAIL END TREATMENT TYPE 4A	17.00	EACH	$4,140.40	$70,386.80
0046	02397 TEMP GUARDRAIL	1,300.00	LF	$20.64	$26,832.00
0047	02399 EXTRA LENGTH GUARDRAIL POST	260.00	EACH	$103.73	$26,969.80
0048	02429 RIGHT-OF-WAY MONUMENT TYPE 1	98.00	EACH	$195.69	$19,177.62
0049	02432 WITNESS POST	98.00	EACH	$133.90	$13,122.20
0050	02483 CHANNEL LINING CLASS II	2,560.00	TON	$48.57	$124,339.20
0051	02484	2,950.00	TON	$43.84	$129,328.00

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
	CHANNEL LINING CLASS III				
0052	02545 CLEARING AND GRUBBING	1.00	LS	$30,000.00	$30,000.00
0053	02555 CONCRETE-CLASS B	2,214.00	CUYD	$225.00	$498,150.00
0054	02562 TEMPORARY SIGNS	500.00	SQFT	$10.48	$5,240.00
0055	02585 EDGE KEY	5,668.00	LF	$40.00	$226,720.00
0056	02602 FABRIC-GEOTEXTILE CLASS 1	360.00	SQYD	$3.40	$1,224.00
0057	02603 FABRIC-GEOTEXTILE CLASS 2	6,642.00	SQYD	$2.54	$16,870.68
0058	02607 FABRIC-GEOTEXTILE CLASS 2 FOR PIPE	13,498.00	SQYD	$2.00	$26,996.00
0059	02650 MAINTAIN & CONTROL TRAFFIC	1.00	LS	$400,000.00	$400,000.00
0060	02611 HANDRAIL-TYPE A-1	412.00	LF	$100.91	$41,574.92
0061	02651 DIVERSIONS (BY-PASS DETOURS)	2.00	LS	$100,000.00	$200,000.00
0062	02671 PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH	$5,263.89	$21,055.56
0063	02676 MOBILIZATION FOR MILL & TEXT	1.00	LS	$8,000.00	$8,000.00
0064	02690 SAFELOADING	5.00	CUYD	$590.94	$2,954.70
0065	02701 TEMP SILT FENCE	3,523.00	LF	$2.91	$10,251.93
0066	02703 SILT TRAP TYPE A	37.00	EACH	$130.59	$4,831.83
0068	02704 SILT TRAP TYPE B	37.00	EACH	$115.60	$4,277.20
0069	02706 CLEAN SILT TRAP TYPE A	37.00	EACH	$11.84	$438.08
0070	02705 SILT TRAP TYPE C	37.00	EACH	$202.18	$7,480.66
0071	02707 CLEAN SILT TRAP TYPE B	37.00	EACH	$26.18	$968.66
0072	02708 CLEAN SILT TRAP TYPE C	37.00	EACH	$26.34	$974.58
0073	02720 SIDEWALK-4 IN CONCRETE	2,999.00	SQYD	$66.36	$199,013.64
0074	02726	1.00	LS	$30,000.00	$30,000.00

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
	STAKING				
0075	05950 EROSION CONTROL BLANKET	122,783.00	SQYD	$1.28	$157,162.24
0076	05952 TEMP MULCH	117,236.00	SQYD	$0.23	$26,964.28
0077	05953 TEMP SEEDING AND PROTECTION	87,927.00	SQYD	$0.26	$22,861.02
0078	05963 INITIAL FERTILIZER	18.00	TON	$1,158.28	$20,849.04
0079	05964 MAINTENANCE FERTILIZER	9.00	TON	$1,072.94	$9,656.46
0080	05985 SEEDING AND PROTECTION	56,644.00	SQYD	$0.55	$31,154.20
0081	05990 SODDING	4,879.00	SQYD	$9.87	$48,155.73
0082	05992 AGRICULTURAL LIMESTONE	109.00	TON	$66.63	$7,262.67
0083	06406 SBM ALUM SHEET SIGNS .080 IN	719.00	SQFT	$38.25	$27,501.75
0084	06407 SBM ALUM SHEET SIGNS .125 IN	56.00	SQFT	$42.49	$2,379.44
0085	06410 STEEL POST TYPE 1	1,573.00	LF	$29.67	$46,670.91
0086	06412 STEEL POST MILE MARKERS	10.00	EACH	$478.91	$4,789.10
0087	06514 PAVE STRIPING-PERM PAINT-4 IN	7,644.00	LF	$0.38	$2,904.72
0088	06515 PAVE STRIPING-PERM PAINT-6 IN	33,772.00	LF	$0.32	$10,807.04
0089	06565 PAVE MARKING-THERMO X-WALK-6 IN	1,282.00	LF	$3.77	$4,833.14
0090	06568 PAVE MARKING-THERMO STOP BAR-24IN	262.00	LF	$11.36	$2,976.32
0091	06569 PAVE MARKING-THERMO CROSS-HATCH	123.00	SQFT	$6.67	$820.41
0092	06574 PAVE MARKING-THERMO CURV ARROW	34.00	EACH	$114.24	$3,884.16
0093	08001 STRUCTURE EXCAVATION-COMMON	2,214.00	CUYD	$20.00	$44,280.00
0094	08100 CONCRETE-CLASS A	28.00	CUYD	$1,239.38	$34,702.64
0095	10020NS FUEL ADJUSTMENT	115,295.00	DOLL	$1.00	$115,295.00
0096	10030NS	196,790.00	DOLL	$1.00	$196,790.00

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
	ASPHALT ADJUSTMENT				
0097	20430ED SAW CUT	7,830.00	LF	$2.32	$18,165.60
0098	21289ED LONGITUDINAL EDGE KEY	7,830.00	LF	$3.73	$29,205.90
0099	21799EN BORE AND JACK PIPE-24 IN	59.00	LF	$675.00	$39,825.00
0100	22664EN WATER BLASTING EXISTING STRIPE	7,800.00	LF	$1.14	$8,892.00
0101	23158ES505 DETECTABLE WARNINGS	156.00	SQFT	$75.21	$11,732.76
0102	24489EC INLAID PAVEMENT MARKER	363.00	EACH	$33.48	$12,153.24
0103	24631EC BARCODE SIGN INVENTORY	48.00	EACH	$34.64	$1,662.72
0104	24814EC PIPELINE INSPECTION	5,181.00	LF	$2.18	$11,294.58
0105	24845EC UTILITY COORDINATION	1.00	LS	$25,000.00	$25,000.00

Total for Group 0002:$6,052,007.46

Group 0003: DRAINAGE

0106	00521 STORM SEWER PIPE-15 IN	964.00	LF	$107.49	$103,620.36
0108	00522 STORM SEWER PIPE-18 IN	1,360.00	LF	$100.76	$137,033.60
0109	00524 STORM SEWER PIPE-24 IN	800.00	LF	$132.15	$105,720.00
0110	00526 STORM SEWER PIPE-30 IN	183.00	LF	$175.83	$32,176.89
0111	01490 DROP BOX INLET TYPE 1	3.00	EACH	$5,066.24	$15,198.72
0113	01499 DROP BOX INLET TYPE 4	2.00	EACH	$6,000.00	$12,000.00
0114	01538 DROP BOX INLET TYPE 7	2.00	EACH	$8,058.93	$16,117.86
0115	01544 DROP BOX INLET TYPE 11	3.00	EACH	$4,708.87	$14,126.61
0116	01559 DROP BOX INLET TYPE 13G	3.00	EACH	$5,529.61	$16,588.83
0117	01456 CURB BOX INLET TYPE A	39.00	EACH	$7,127.29	$277,964.31
0118	01450 S & F BOX INLET-OUTLET-18 IN	1.00	EACH	$3,841.16	$3,841.16

Line #	Item Number / Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
0119	01202 PIPE CULVERT HEADWALL-15 IN	3.00	EACH	$1,844.07	$5,532.21
0120	01204 PIPE CULVERT HEADWALL-18 IN	13.00	EACH	$2,122.88	$27,597.44
0121	01208 PIPE CULVERT HEADWALL-24 IN	8.00	EACH	$2,394.91	$19,159.28
0123	01210 PIPE CULVERT HEADWALL-30 IN	5.00	EACH	$3,200.18	$16,000.90
0124	01212 PIPE CULVERT HEADWALL-36 IN	1.00	EACH	$4,175.34	$4,175.34
0125	01216 PIPE CULVERT HEADWALL-48 IN	2.00	EACH	$5,498.74	$10,997.48
0126	01650 JUNCTION BOX	1.00	EACH	$3,700.05	$3,700.05
0134	01756 MANHOLE TYPE A	2.00	EACH	$4,296.21	$8,592.42
0143	00440 ENTRANCE PIPE-15 IN	263.00	LF	$93.05	$24,472.15
0144	00443 ENTRANCE PIPE-24 IN	28.00	LF	$94.08	$2,634.24
0145	21257ED ENTRANCE PIPE-48 IN	397.00	LF	$0.00	$0.00
0150	00462 CULVERT PIPE-18 IN	146.00	LF	$138.67	$20,245.82
0151	00464 CULVERT PIPE-24 IN	361.00	LF	$242.21	$87,437.81
0152	00466 CULVERT PIPE-30 IN	240.00	LF	$149.77	$35,944.80
0153	00468 CULVERT PIPE-36 IN	20.00	LF	$198.86	$3,977.20
0154	00470 CULVERT PIPE-48 IN	50.00	LF	$437.30	$21,865.00
0155	00474 CULVERT PIPE-72 IN	429.00	LF	$700.00	$300,300.00
0156	24025EC PIPE CULVERT HEADWALL-72 IN	2.00	EACH	$12,000.00	$24,000.00

Total for Group 0003:$1,351,020.48

Group 0007: 6' x 3' RCBC EXTENSION - STA. 277+34.56

0146	08100 CONCRETE-CLASS A	45.30	CUYD	$1,239.38	$56,143.91
0147	08150 STEEL REINFORCEMENT	7,895.00	LB	$2.20	$17,369.00

Line #	Item Number	Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
0148	08002	STRUCTURE EXCAV-SOLID ROCK	38.00	CUYD	$140.27	$5,330.26
0149	08003	FOUNDATION PREPARATION	1.00	LS	$8,000.00	$8,000.00

Total for Group 0007:$86,843.17

Group 0019: DEMOBILIZATION &/OR MOBILIZATION

Line #	Item Number	Description / *Supplemental Description*	Quantity	Units	Unit Price	Extension
0005	02568	MOBILIZATION	1.00	LS	$532,156.87	$532,156.87
0006	02569	DEMOBILIZATION	1.00	LS	$159,647.06	$159,647.06

Total for Group 0019:$691,803.93

Item Bid History for 02200

ROADWAY EXCAVATION

High bid: $27.50 Low Bid: $3.65 Average: $8.67 (2023) or $9.32 in today's dollars. $10.47 in 2027

Proposal

Bidder	Unit	Quantity	Unit Price	Total
211003				
THE ALLEN COMPANY INC	CUYD	647,917.00000	$4.05000	$2,624,063.85
FREDERICK & MAY CONSTRUCTION CO	CUYD	647,917.00000	$4.90000	$3,174,793.30
241306				
WALKER CONSTRUCTION & MATERIALS LLC	CUYD	607,693.00000	$24.15000	$14,675,785.95
TRITON CONSTRUCTION INC	CUYD	607,693.00000	$27.50000	$16,711,557.50
221339				
FREDERICK & MAY CONSTRUCTION CO	CUYD	843,601.00000	$5.40000	$4,555,445.40
PHILMOR CONTRACTING INC	CUYD	843,601.00000	$5.60000	$4,724,165.60
WALKER CONSTRUCTION & MATERIALS LLC	CUYD	843,601.00000	$5.78000	$4,876,013.78
KANAWHA STONE COMPANY INC	CUYD	843,601.00000	$8.40000	$7,086,248.40
HINKLE CONSTRUCTION SERVICES LLC	CUYD	843,601.00000	$11.30000	$9,532,691.30
211056				
WALKER CONSTRUCTION & MATERIALS LLC	CUYD	739,299.00000	$5.55000	$4,103,109.45
FREDERICK & MAY CONSTRUCTION CO	CUYD	739,299.00000	$7.32000	$5,411,668.68
HAYDON BRIDGE CO INC J/V BUSH & BURCHETT INC	CUYD	739,299.00000	$8.80000	$6,505,831.20
TRITON CONSTRUCTION INC AND SUBSIDIARIES	CUYD	739,299.00000	$11.50000	$8,501,938.50
221327				
THE ALLEN COMPANY INC	CUYD	748,336.00000	$5.40000	$4,041,014.40
KAY & KAY CONTRACTING LLC	CUYD	748,336.00000	$7.66000	$5,732,253.76
211307				
HINKLE CONSTRUCTION SERVICES LLC	CUYD	1,200,526.00000	$3.65000	$4,381,919.90
FREDERICK & MAY CONSTRUCTION CO	CUYD	1,200,526.00000	$4.20000	$5,042,209.20
BIZZACK CONSTRUCTION LLC	CUYD	1,200,526.00000	$4.86000	$5,834,556.36

Search Parameters

Description:	Roadway Excavation
Unit:	CUYD
Start Date:	01/17/2021
End Date:	06/17/2025
Minimum Quantity:	500000
Maximum Quantity:	2500000

Bidders All | None

- [x] BIZZACK CONSTRUCTION LLC
- [x] FREDERICK & MAY CONSTRUCTION CO
- [x] HAYDON BRIDGE CO INC J/V BUSH & BURCHETT INC
- [x] HINKLE CONSTRUCTION SERVICES LLC
- [x] KANAWHA STONE COMPANY INC
- [x] KAY & KAY CONTRACTING LLC
- [x] PHILMOR CONTRACTING INC
- [x] THE ALLEN COMPANY INC
- [x] TRITON CONSTRUCTION INC
- [x] WALKER CONSTRUCTION & MATERIALS LLC

KY 207 RECONSTRUCTION - Summary Pivot Table

Estimate	Group	Totals	% of Total	Contingency	Total
Rural	Group 0001: PAVING	$ 5,524,636	24.49%		
	Group 0002: ROADWAY	$ 14,188,646	62.90%		
	Group 0003: DRAINAGE	$ 685,126	3.04%		
	Group 0004: 6' x 6' RCBC - STA. 132+30	$ 241,784	1.07%		
	Group 0005: 14' x 6' RCBC - STA. 158+80	$ 541,473	2.40%		
	Group 0019: DEMOBILIZATION &/OR MOBILIZATION	$ 1,376,677	6.10%		
Rural Total		**$ 22,558,342**	**100.00%**	$ 2,255,834.19	**$ 24,814,176.04**
Grand Total		**$ 22,558,342**	**100.00%**		

Estimate	Group	Totals	% of Total	Contingency	Total
Urban	Group 0001: PAVING	$ 3,155,210	27.83%		
	Group 0002: ROADWAY	$ 6,052,007	53.38%		
	Group 0003: DRAINAGE	$ 1,437,864	12.68%		
	Group 0019: DEMOBILIZATION &/OR MOBILIZATION	$ 691,804	6.10%		
Urban Total		**$ 11,336,885**	**100.00%**	$ 1,133,688.47	**$ 12,470,573.14**
Grand Total		**$ 11,336,885**	**100.00%**		

COMBINED TOTAL	**$ 33,895,226.52**	**$ 3,389,522.65**	**$ 37,284,749.18**

KY 207 RECONSTRUCTION - Detailed Pivot Table

Item #	Description	UOM	Estimate	QTY	Average of Unit Price	Totals	% of Total	Cumulative
1	ROADWAY EXCAVATION	CUYD		1,649,243.00	$9.62	$ 12,321,615	36.35%	36.35%
2	CL2 ASPH BASE 0.75D PG64-22			25,996.00	$95.00	$ 2,469,620	7.29%	43.64%
3	CRUSHED STONE BASE			72,566.00	$33.03	$ 2,347,060	6.92%	50.56%
4	MOBILIZATION			2.00	$795,569.66	$ 1,591,139	4.69%	55.26%
5	EROSION CONTROL BLANKET			413,446.00	$1.89	$ 883,820	2.61%	57.86%
6	CL2 ASPH SURF 0.38D PG64-22			9,291.00	$105.61	$ 876,555	2.59%	60.45%
7	CL2 ASPH BASE 1.00D PG64-22			10,049.00	$83.04	$ 834,469	2.46%	62.91%
8	MAINTAIN & CONTROL TRAFFIC			2.00	$375,000.00	$ 750,000	2.21%	65.13%
9	CONCRETE-CLASS A			704.70	$1,002.63	$ 649,168	1.92%	67.04%
10	GUARDRAIL-STEEL W BEAM-S FACE			18,525.00	$33.84	$ 626,224	1.85%	68.89%
11	CEMENT			2,384.00	$260.99	$ 613,942	1.81%	70.70%
12	CEMENT STABILIZED ROADBED			125,050.00	$4.44	$ 512,403	1.51%	72.21%
13	CONCRETE-CLASS B			2,214.00	$225.00	$ 498,150	1.47%	73.68%
14	CL2 ASPH SURF 0.38B PG64-22			3,261.00	$147.97	$ 482,530	1.42%	75.10%
15	DEMOBILIZATION			2.00	$238,670.90	$ 477,342	1.41%	76.51%
16	FUEL ADJUSTMENT			449,611.00	$1.00	$ 449,611	1.33%	77.84%
17	CEM CONC ENT PAVEMENT-8 IN			3,786.00	$102.86	$ 381,961	1.13%	78.97%
18	CULVERT PIPE-72 IN			539.00	$594.43	$ 354,075	1.04%	80.01%
19	EDGE KEY			8,788.00	$40.00	$ 351,520	1.04%	81.05%
20	STANDARD CURB AND GUTTER			9,875.00	$34.46	$ 340,293	1.00%	82.05%
21	ASPHALT ADJUSTMENT			315,826.00	$1.00	$ 315,826	0.93%	82.98%
22	CHANNEL LINING CLASS II			6,730.00	$47.19	$ 315,325	0.93%	83.91%
23	CHANNEL LINING CLASS III			6,455.00	$43.54	$ 280,884	0.83%	84.74%
24	CURB BOX INLET TYPE A			39.00	$7,127.29	$ 277,964	0.82%	85.56%
25	CULVERT PIPE-24 IN			1,016.00	$228.07	$ 227,562	0.67%	86.23%
26	DIVERSIONS (BY-PASS DETOURS)			2.00	$100,000.00	$ 200,000	0.59%	86.82%
27	SIDEWALK-4 IN CONCRETE			2,999.00	$66.36	$ 199,014	0.59%	87.41%
28	STEEL REINFORCEMENT			109,085.00	$1.85	$ 192,428	0.57%	87.98%
29	LEVELING & WEDGING PG64-22			1,539.00	$104.17	$ 159,893	0.47%	88.45%
30	GUARDRAIL END TREATMENT TYPE 4A			36.00	$4,140.40	$ 149,054	0.44%	88.89%
31	CULVERT PIPE-18 IN			1,300.00	$123.24	$ 144,659	0.43%	89.32%
32	STORM SEWER PIPE-18 IN			1,360.00	$100.76	$ 137,034	0.40%	89.72%
33	CLEARING AND GRUBBING			2.00	$65,000.00	$ 130,000	0.38%	90.10%

KY 207 RECONSTRUCTION - Detailed Pivot Table

Item #	Description	UOM	Estimate	QTY	Average of Unit Price	Totals	% of Total	Cumulative
34	SEEDING AND PROTECTION			346,051.00	$0.44	$ 123,764	0.37%	90.47%
35	ASPHALT CURING SEAL			127.00	$936.64	$ 116,192	0.34%	90.81%
36	STORM SEWER PIPE-24 IN			800.00	$132.15	$ 105,720	0.31%	91.12%
37	GRANULAR EMBANKMENT			2,214.00	$46.84	$ 103,704	0.31%	91.43%
38	STORM SEWER PIPE-15 IN			964.00	$107.49	$ 103,620	0.31%	91.74%
39	TEMP MULCH			495,612.00	$0.22	$ 102,639	0.30%	92.04%
40	STEEL POST TYPE 1			3,423.00	$29.55	$ 101,098	0.30%	92.34%
41	PERFORATED PIPE-4 IN			11,398.00	$9.34	$ 100,203	0.30%	92.63%
42	INITIAL FERTILIZER			77.00	$1,154.14	$ 88,699	0.26%	92.89%
43	TEMP SEEDING AND PROTECTION			371,709.00	$0.24	$ 85,293	0.25%	93.15%
44	REMOVE PAVEMENT			10,000.00	$8.41	$ 79,750	0.24%	93.38%
45	ENTRANCE PIPE-15 IN			868.00	$88.87	$ 75,710	0.22%	93.60%
46	PIPE CULVERT HEADWALL-18 IN			36.00	$2,089.13	$ 74,871	0.22%	93.83%
47	STAKING			2.00	$35,000.00	$ 70,000	0.21%	94.03%
48	CULVERT PIPE-48 IN			217.00	$362.23	$ 69,819	0.21%	94.24%
49	SBM ALUM SHEET SIGNS .080 IN			1,571.00	$37.95	$ 59,571	0.18%	94.41%
50	FOUNDATION PREPARATION			4.00	$14,750.00	$ 59,000	0.17%	94.59%
51	LONGITUDINAL EDGE KEY			15,660.00	$3.73	$ 58,412	0.17%	94.76%
52	CULVERT PIPE-36 IN			321.00	$186.63	$ 56,472	0.17%	94.93%
53	ASPHALT SEAL AGGREGATE			414.00	$218.61	$ 56,205	0.17%	95.09%
54	CULVERT PIPE-30 IN			352.00	$164.25	$ 55,961	0.17%	95.26%
55	TEMP GUARDRAIL			2,600.00	$20.64	$ 53,664	0.16%	95.42%
56	FABRIC-GEOTEXTILE CLASS 2 FOR PIPE			26,827.00	$2.00	$ 53,654	0.16%	95.57%
57	EXTRA LENGTH GUARDRAIL POST			496.00	$103.73	$ 51,450	0.15%	95.73%
58	ASPHALT SEAL COAT			48.00	$1,280.60	$ 50,166	0.15%	95.87%
59	SODDING			4,879.00	$9.87	$ 48,156	0.14%	96.02%
60	PIPE CULVERT HEADWALL-72 IN			4.00	$12,000.00	$ 48,000	0.14%	96.16%
61	PIPE CULVERT HEADWALL-24 IN			20.00	$2,397.46	$ 47,959	0.14%	96.30%
62	RIGHT-OF-WAY MONUMENT TYPE 1			227.00	$195.18	$ 44,290	0.13%	96.43%
63	STRUCTURE EXCAVATION-COMMON			2,214.00	$20.00	$ 44,280	0.13%	96.56%
64	PORTABLE CHANGEABLE MESSAGE SIGN			8.00	$5,263.89	$ 42,111	0.12%	96.68%
65	HANDRAIL-TYPE A-1			412.00	$100.91	$ 41,575	0.12%	96.81%
66	BORE AND JACK PIPE-24 IN			59.00	$675.00	$ 39,825	0.12%	96.93%

KY 207 RECONSTRUCTION - Detailed Pivot Table

Item #	Description	UOM	Estimate	QTY	Average of Unit Price	Totals	% of Total	Cumulative
67	MAINTENANCE FERTILIZER			38.00	$1,022.96	$ 37,873	0.11%	97.04%
68	ASPHALT PAVE MILLING & TEXTURING			917.00	$40.97	$ 37,205	0.11%	97.15%
69	DETECTABLE WARNINGS			520.00	$72.00	$ 36,772	0.11%	97.26%
70	SAW CUT			15,660.00	$2.32	$ 36,331	0.11%	97.36%
71	UTILITY COORDINATION			2.00	$17,500.00	$ 35,000	0.10%	97.47%
72	FABRIC-GEOTEXTILE CLASS 2			13,284.00	$2.54	$ 33,741	0.10%	97.57%
73	TRAFFIC BOUND BASE			750.00	$44.20	$ 33,150	0.10%	97.66%
74	PAVE MOUNT INFRARED TEMP EQUIPMENT			3,218,255.00	$0.01	$ 32,183	0.09%	97.76%
75	STORM SEWER PIPE-30 IN			183.00	$175.83	$ 32,177	0.09%	97.85%
76	PAVE STRIPING-PERM PAINT-6 IN			109,968.00	$0.30	$ 32,142	0.09%	97.95%
77	TEMP SILT FENCE			11,923.00	$2.71	$ 31,252	0.09%	98.04%
78	WITNESS POST			227.00	$132.44	$ 30,017	0.09%	98.13%
79	STRUCTURE EXCAV-SOLID ROCK			299.00	$102.99	$ 28,966	0.09%	98.21%
80	SILT TRAP TYPE C			155.00	$191.88	$ 28,906	0.09%	98.30%
81	JOINT ADHESIVE			29,864.00	$1.04	$ 28,486	0.08%	98.38%
82	AGRICULTURAL LIMESTONE			461.00	$62.55	$ 27,841	0.08%	98.47%
83	PIPE CULVERT HEADWALL-48 IN			5.00	$5,498.74	$ 27,494	0.08%	98.55%
84	WATER BLASTING EXISTING STRIPE			26,000.00	$0.99	$ 23,998	0.07%	98.62%
85	PIPE CULVERT HEADWALL-30 IN			7.00	$3,200.18	$ 22,401	0.07%	98.68%
86	PIPELINE INSPECTION			8,446.00	$2.39	$ 19,751	0.06%	98.74%
87	INLAID PAVEMENT MARKER			553.00	$36.07	$ 19,499	0.06%	98.80%
88	SILT TRAP TYPE A			155.00	$122.67	$ 18,371	0.05%	98.85%
89	CULVERT PIPE-54 IN			44.00	$402.62	$ 17,715	0.05%	98.91%
90	PIPE CULVERT HEADWALL-36 IN			4.00	$4,255.75	$ 17,184	0.05%	98.96%
91	DROP BOX INLET TYPE 13G			3.00	$5,529.61	$ 16,589	0.05%	99.01%
92	DROP BOX INLET TYPE 7			2.00	$8,058.93	$ 16,118	0.05%	99.05%
93	MOBILIZATION FOR MILL & TEXT			2.00	$8,000.00	$ 16,000	0.05%	99.10%
94	JUNCTION BOX			4.00	$3,883.63	$ 15,902	0.05%	99.15%
95	SILT TRAP TYPE B			155.00	$106.70	$ 15,816	0.05%	99.19%
96	ENTRANCE PIPE-36 IN			77.00	$200.00	$ 15,400	0.05%	99.24%
97	SAND FOR BLOTTER			311.00	$51.41	$ 15,229	0.04%	99.28%
98	DROP BOX INLET TYPE 1			3.00	$5,066.24	$ 15,199	0.04%	99.33%
99	DROP BOX INLET TYPE 11			3.00	$4,708.87	$ 14,127	0.04%	99.37%

KY 207 RECONSTRUCTION - Detailed Pivot Table

Item #	Description	UOM	Estimate	QTY	Average of Unit Price	Totals	% of Total	Cumulative
100	INTELLIGENT COMPACTION FOR ASPHALT			48,597.00	$0.25	$ 12,149	0.04%	99.41%
101	DROP BOX INLET TYPE 4			2.00	$6,000.00	$ 12,000	0.04%	99.44%
102	PERF PIPE HEADWALL TY 3-4 IN			10.00	$1,098.20	$ 10,982	0.03%	99.47%
103	TEMPORARY SIGNS			1,000.00	$10.48	$ 10,480	0.03%	99.50%
104	PIPE CULVERT HEADWALL-54 IN			1.00	$10,052.90	$ 10,053	0.03%	99.53%
105	PERF PIPE HEADWALL TY 4-4 IN			10.00	$970.56	$ 9,706	0.03%	99.56%
106	STEEL POST MILE MARKERS			20.00	$478.91	$ 9,578	0.03%	99.59%
107	REMOVE GUARDRAIL			2,600.00	$3.68	$ 9,568	0.03%	99.62%
108	SHOULDER RUMBLE STRIPS			33,600.00	$0.27	$ 9,072	0.03%	99.65%
109	PAVE MARKING-THERMO CROSS-HATCH			1,677.00	$5.94	$ 8,917	0.03%	99.67%
110	MANHOLE TYPE A			2.00	$4,296.21	$ 8,592	0.03%	99.70%
111	REMOVE PIPE			200.00	$38.85	$ 7,770	0.02%	99.72%
112	PAVE MARKING-THERMO CURV ARROW			63.00	$114.56	$ 7,216	0.02%	99.74%
113	ENTRANCE PIPE-24 IN			68.00	$94.08	$ 6,397	0.02%	99.76%
114	PAVE STRIPING-PERM PAINT-4 IN			15,902.00	$0.38	$ 5,960	0.02%	99.78%
115	SAFELOADING			10.00	$590.94	$ 5,909	0.02%	99.80%
116	PIPE CULVERT HEADWALL-15 IN			3.00	$1,844.07	$ 5,532	0.02%	99.81%
117	SBM ALUM SHEET SIGNS .125 IN			128.00	$42.19	$ 5,395	0.02%	99.83%
118	PAVE MARKING-THERMO STOP BAR-24IN			448.00	$11.54	$ 5,154	0.02%	99.84%
119	TEMP DITCH			11,923.00	$0.45	$ 4,926	0.01%	99.86%
120	PAVE MARKING-THERMO X-WALK-6 IN			1,282.00	$3.77	$ 4,833	0.01%	99.87%
121	BARRICADE-TYPE III			40.00	$111.32	$ 4,453	0.01%	99.89%
122	NON-PERFORATED PIPE-4 IN			266.00	$18.52	$ 4,097	0.01%	99.90%
123	GUARDRAIL TERMINAL SECTION NO 1			51.00	$77.63	$ 3,959	0.01%	99.91%
124	S & F BOX INLET-OUTLET-18 IN			1.00	$3,841.16	$ 3,841	0.01%	99.92%
125	CLEAN SILT TRAP TYPE B			155.00	$24.92	$ 3,761	0.01%	99.93%
126	BARCODE SIGN INVENTORY			106.00	$34.26	$ 3,627	0.01%	99.94%
127	PERF PIPE HEADWALL TY 2-4 IN			3.00	$1,241.78	$ 3,612	0.01%	99.95%
128	CLEAN SILT TRAP TYPE C			155.00	$24.34	$ 3,610	0.01%	99.96%
129	CRUSHED AGGREGATE SIZE NO 2			48.00	$60.59	$ 2,908	0.01%	99.97%
130	FABRIC-GEOTEXTILE CLASS 1			720.00	$3.40	$ 2,448	0.01%	99.98%
131	ASPHALT MATERIAL FOR TACK NON-TRACKING			72.00	$97.47	$ 2,408	0.01%	99.99%
132	PERF PIPE HEADWALL TY 1-4 IN			2.00	$1,022.44	$ 2,045	0.01%	99.99%

KY 207 RECONSTRUCTION - Detailed Pivot Table

Item #	Description	UOM	Estimate	QTY	Average of Unit Price	Totals	% of Total	Cumulative
133	**CLEAN SILT TRAP TYPE A**			155.00	$11.37	$ 1,724	0.01%	100.00%
134	**CLEAN TEMP DITCH**			5,961.00	$0.13	$ 733	0.00%	100.00%
135	**WATER**			14.00	$0.17	$ 2	0.00%	100.00%
136	**ENTRANCE PIPE-48 IN**			397.00	$0.00	$ -	0.00%	100.00%
13%	**Grand Total**			**8,115,309.70**	**$13,677.82**	**$ 33,895,227**	**100.00%**	

KY 207 RECONSTRUCTION - Estimate Analysis

Item #	UOM	Description	Estimate Values Rural QTY	$/UOM	Totals	Urban QTY	$/UOM	Totals	Total QTY	Total $/UOM	Total Totals	2024 Pricing $/UOM	Rural	Urban	Delta Rural	Delta Urban
1	CUYD	AGRICULTURAL LIMESTONE	352.00	$58.46	$ 20,578	109.00	$66.63	$ 7,263	461.00	$62.55	$ 27,841	$91.87	$ 32,338	$ 10,014	($11,760)	($2,751)
2	TON	ASPHALT ADJUSTMENT	119,036.00	$1.00	$ 119,036	196,790.00	$1.00	$ 196,790	315,826.00	$1.00	$ 315,826	$1.03	$ 122,607	$ 202,694	($3,571)	($5,904)
3	TON	ASPHALT CURING SEAL	92.00	$888.19	$ 81,713	35.00	$985.09	$ 34,478	127.00	$936.64	$ 116,192	$842.12	$ 77,475	$ 29,474	$4,238	$5,004
4	LS	ASPHALT MATERIAL FOR TACK NON-TRACKING	61.00	$5.27	$ 321	11.00	$189.67	$ 2,086	72.00	$97.47	$ 2,408	$392.53	$ 23,944	$ 4,318	($23,623)	($2,231)
5	SQYD	ASPHALT PAVE MILLING & TEXTURING	540.00	$38.76	$ 20,930	377.00	$43.17	$ 16,275	917.00	$40.97	$ 37,205	$19.52	$ 10,541	$ 7,359	$10,390	$8,916
6	TON	ASPHALT SEAL AGGREGATE	378.00	$118.32	$ 44,725	36.00	$318.90	$ 11,480	414.00	$218.61	$ 56,205	$133.78	$ 50,569	$ 4,816	($5,844)	$6,664
7	TON	ASPHALT SEAL COAT	44.00	$998.04	$ 43,914	4.00	$1,563.15	$ 6,253	48.00	$1,280.60	$ 50,166	$1,087.07	$ 47,831	$ 4,348	($3,917)	$1,904
8	LS	BARCODE SIGN INVENTORY	58.00	$33.87	$ 1,964	48.00	$34.64	$ 1,663	106.00	$34.26	$ 3,627	$45.68	$ 2,649	$ 2,193	($685)	($530)
9	CUYD	BARRICADE-TYPE III	20.00	$111.32	$ 2,226	20.00	$111.32	$ 2,226	40.00	$111.32	$ 4,453	$230.40	$ 4,608	$ 4,608	($2,382)	($2,382)
10	LF	BORE AND JACK PIPE-24 IN				59.00	$675.00	$ 39,825	59.00	$675.00	$ 39,825		$ -	$ -	$0	$39,825
11	TON	CEM CONC ENT PAVEMENT-8 IN	1,219.00	$108.38	$ 132,115	2,567.00	$97.33	$ 249,846	3,786.00	$102.86	$ 381,961	$133.28	$ 162,468	$ 342,130	($30,353)	($92,284)
12	SQYD	CEMENT	1,747.00	$253.55	$ 442,952	637.00	$268.43	$ 170,990	2,384.00	$260.99	$ 613,942	$314.01	$ 548,575	$ 200,024	($105,624)	($29,034)
13	CUYD	CEMENT STABILIZED ROADBED	91,624.00	$3.71	$ 339,925	33,426.00	$5.16	$ 172,478	125,050.00	$4.44	$ 512,403	$4.49	$ 411,392	$ 150,083	($71,467)	$22,395
14	TON	CHANNEL LINING CLASS II	4,170.00	$45.80	$ 190,986	2,560.00	$48.57	$ 124,339	6,730.00	$47.19	$ 315,325	$50.57	$ 210,877	$ 129,459	($19,891)	($5,120)
15	LS	CHANNEL LINING CLASS III	3,505.00	$43.24	$ 151,556	2,950.00	$43.84	$ 129,328	6,455.00	$43.54	$ 280,884	$53.65	$ 188,043	$ 158,268	($36,487)	($28,940)
16	DOLL	CL2 ASPH BASE 0.75D PG64-22	21,959.00	$95.00	$ 2,086,105	4,037.00	$95.00	$ 383,515	25,996.00	$95.00	$ 2,469,620	$122.99	$ 2,700,737	$ 496,511	($614,632)	($112,996)
17	SQYD	CL2 ASPH BASE 1.00D PG64-22				10,049.00	$83.04	$ 834,469	10,049.00	$83.04	$ 834,469	$112.15	$ -	$ 1,126,995	$0	($292,526)
18	LF	CL2 ASPH SURF 0.38B PG64-22				3,261.00	$147.97	$ 482,530	3,261.00	$147.97	$ 482,530	$106.30	$ -	$ 346,644	$0	$135,886
19	LF	CL2 ASPH SURF 0.38D PG64-22	7,870.00	$89.38	$ 703,421	1,421.00	$121.84	$ 173,135	9,291.00	$105.61	$ 876,555	$106.25	$ 836,188	$ 150,981	($132,767)	$22,153
20	LF	CLEAN SILT TRAP TYPE A	118.00	$10.90	$ 1,286	37.00	$11.84	$ 438	155.00	$11.37	$ 1,724	$31.10	$ 3,670	$ 1,151	($2,384)	($713)
21	DOLL	CLEAN SILT TRAP TYPE B	118.00	$23.66	$ 2,792	37.00	$26.18	$ 969	155.00	$24.92	$ 3,761	$35.84	$ 4,229	$ 1,326	($1,437)	($357)
22	TON	CLEAN SILT TRAP TYPE C	118.00	$22.33	$ 2,635	37.00	$26.34	$ 975	155.00	$24.34	$ 3,610	$30.46	$ 3,594	$ 1,127	($959)	($152)
23	TON	CLEAN TEMP DITCH	4,200.00	$0.12	$ 504	1,761.00	$0.13	$ 229	5,961.00	$0.13	$ 733	$0.83	$ 3,486	$ 1,462	($2,982)	($1,233)
24	EACH	CLEARING AND GRUBBING	1.00	$100,000.00	$ 100,000	1.00	$30,000.00	$ 30,000	2.00	$65,000.00	$ 130,000	$81,095.75	$ 81,096	$ 81,096	$18,904	($51,096)
25	LF	CONCRETE-CLASS A	631.40	$884.26	$ 558,322	73.30	$1,239.38	$ 90,847	704.70	$1,002.63	$ 649,168	$1,011.69	$ 638,781	$ 74,157	($80,459)	$16,690
26	LS	CONCRETE-CLASS B				2,214.00	$225.00	$ 498,150	2,214.00	$225.00	$ 498,150	$506.87	$ -	$ 1,122,210	$0	($624,060)
27	SQYD	CRUSHED AGGREGATE SIZE NO 2	24.00	$60.59	$ 1,454	24.00	$60.59	$ 1,454	48.00	$60.59	$ 2,908	$33.64	$ 807	$ 807	$647	$647
28	LB	CRUSHED STONE BASE	51,587.00	$31.41	$ 1,620,348	20,979.00	$34.64	$ 726,713	72,566.00	$33.03	$ 2,347,060	$34.74	$ 1,792,132	$ 728,810	($171,785)	($2,098)
29	TON	CULVERT PIPE-18 IN	1,154.00	$107.81	$ 124,413	146.00	$138.67	$ 20,246	1,300.00	$123.24	$ 144,659	$163.33	$ 188,483	$ 23,846	($64,070)	($3,600)
30	EACH	CULVERT PIPE-24 IN	655.00	$213.93	$ 140,124	361.00	$242.21	$ 87,438	1,016.00	$228.07	$ 227,562	$171.59	$ 112,391	$ 61,944	$27,733	$25,494
31	LF	CULVERT PIPE-30 IN	112.00	$178.72	$ 20,017	240.00	$149.77	$ 35,945	352.00	$164.25	$ 55,961	$163.54	$ 18,316	$ 39,250	$1,700	($3,305)
32	LF	CULVERT PIPE-36 IN	301.00	$174.40	$ 52,494	20.00	$198.86	$ 3,977	321.00	$186.63	$ 56,472	$231.43	$ 69,660	$ 4,629	($17,166)	($651)
33	LS	CULVERT PIPE-48 IN	167.00	$287.15	$ 47,954	50.00	$437.30	$ 21,865	217.00	$362.23	$ 69,819	$220.70	$ 36,857	$ 11,035	$11,097	$10,830
34	SQYD	CULVERT PIPE-54 IN	44.00	$402.62	$ 17,715				44.00	$402.62	$ 17,715	$280.67	$ 12,349	$ -	$5,366	$0
35	TON	CULVERT PIPE-72 IN	110.00	$488.86	$ 53,775	429.00	$700.00	$ 300,300	539.00	$594.43	$ 354,075	$545.65	$ 60,022	$ 234,084	($6,247)	$66,216
36	LF	CURB BOX INLET TYPE A				39.00	$7,127.29	$ 277,964	39.00	$7,127.29	$ 277,964	$6,563.02	$ -	$ 255,958	$0	$22,007
37	CUYD	DEMOBILIZATION	1.00	$317,694.73	$ 317,695	1.00	$159,647.06	$ 159,647	2.00	$238,670.90	$ 477,342	$30,958.26	$ 30,958	$ 30,958	$286,736	$128,689
38	LF	DETECTABLE WARNINGS	364.00	$68.79	$ 25,040	156.00	$75.21	$ 11,733	520.00	$72.00	$ 36,772	$50.69	$ 18,451	$ 7,908	$6,588	$3,825
39	SQYD	DIVERSIONS (BY-PASS DETOURS)				2.00	$100,000.00	$ 200,000	2.00	$100,000.00	$ 200,000	$134,857.80	$ -	$ 269,716	$0	($69,716)
40	LF	DROP BOX INLET TYPE 1				3.00	$5,066.24	$ 15,199	3.00	$5,066.24	$ 15,199	$5,753.47	$ -	$ 17,260	$0	($2,062)
41	LF	DROP BOX INLET TYPE 11				3.00	$4,708.87	$ 14,127	3.00	$4,708.87	$ 14,127	$4,729.38	$ -	$ 14,188	$0	($62)
42	TON	DROP BOX INLET TYPE 13G				3.00	$5,529.61	$ 16,589	3.00	$5,529.61	$ 16,589	$6,319.24	$ -	$ 18,958	$0	($2,369)
43	SQYD	DROP BOX INLET TYPE 4				2.00	$6,000.00	$ 12,000	2.00	$6,000.00	$ 12,000	$8,660.99	$ -	$ 17,322	$0	($5,322)
44	SQYD	DROP BOX INLET TYPE 7				2.00	$8,058.93	$ 16,118	2.00	$8,058.93	$ 16,118	$8,295.53	$ -	$ 16,591	$0	($473)
45	LF	EDGE KEY	3,120.00	$40.00	$ 124,800	5,668.00	$40.00	$ 226,720	8,788.00	$40.00	$ 351,520	$15.92	$ 49,670	$ 90,235	$75,130	$136,485
46	EACH	ENTRANCE PIPE-15 IN	605.00	$84.69	$ 51,237	263.00	$93.05	$ 24,472	868.00	$88.87	$ 75,710	$85.12	$ 51,498	$ 22,387	($260)	$2,086
47	LS	ENTRANCE PIPE-24 IN	40.00	$94.08	$ 3,763	28.00	$94.08	$ 2,634	68.00	$94.08	$ 6,397	$131.11	$ 5,244	$ 3,671	($1,481)	($1,037)
48	LF	ENTRANCE PIPE-36 IN	77.00	$200.00	$ 15,400				77.00	$200.00	$ 15,400	$150.00	$ 11,550	$ -	$3,850	$0
49	SQFT	ENTRANCE PIPE-48 IN				397.00	$0.00	$ -	397.00	$0.00	$ -		$ -	$ -	$0	$0
50	LS	EROSION CONTROL BLANKET	290,663.00	$2.50	$ 726,658	122,783.00	$1.28	$ 157,162	413,446.00	$1.89	$ 883,820	$2.47	$ 717,938	$ 303,274	$8,720	($146,112)
51	LF	EXTRA LENGTH GUARDRAIL POST	236.00	$103.73	$ 24,480	260.00	$103.73	$ 26,970	496.00	$103.73	$ 51,450	$119.35	$ 28,167	$ 31,031	($3,686)	($4,061)
52	LF	FABRIC-GEOTEXTILE CLASS 1	360.00	$3.40	$ 1,224	360.00	$3.40	$ 1,224	720.00	$3.40	$ 2,448	$2.28	$ 821	$ 821	$403	$403
53	TON	FABRIC-GEOTEXTILE CLASS 2	6,642.00	$2.54	$ 16,871	6,642.00	$2.54	$ 16,871	13,284.00	$2.54	$ 33,741	$1.91	$ 12,686	$ 12,686	$4,184	$4,184
54	LF	FABRIC-GEOTEXTILE CLASS 2 FOR PIPE	13,329.00	$2.00	$ 26,658	13,498.00	$2.00	$ 26,996	26,827.00	$2.00	$ 53,654	$2.00	$ 26,658	$ 26,996	$0	$0
55	LF	FOUNDATION PREPARATION	3.00	$17,000.00	$ 51,000	1.00	$8,000.00	$ 8,000	4.00	$14,750.00	$ 59,000	$144,755.80	$ 434,267	$ 144,756	($383,267)	($136,756)
56	SQYD	FUEL ADJUSTMENT	334,316.00	$1.00	$ 334,316	115,295.00	$1.00	$ 115,295	449,611.00	$1.00	$ 449,611	$1.02	$ 341,002	$ 117,601	($6,686)	($2,306)
57	EACH	GRANULAR EMBANKMENT				2,214.00	$46.84	$ 103,704	2,214.00	$46.84	$ 103,704	$56.50	$ -	$ 125,091	$0	($21,387)
58	TON	GUARDRAIL END TREATMENT TYPE 4A	19.00	$4,140.40	$ 78,668	17.00	$4,140.40	$ 70,387	36.00	$4,140.40	$ 149,054	$4,407.24	$ 83,738	$ 74,923	($5,070)	($4,536)
59	SQYD	GUARDRAIL TERMINAL SECTION NO 1	26.00	$77.53	$ 2,016	25.00	$77.73	$ 1,943	51.00	$77.63	$ 3,959	$110.44	$ 2,871	$ 2,761	($856)	($818)
60	EACH	GUARDRAIL-STEEL W BEAM-S FACE	10,087.50	$33.49	$ 337,830	8,437.50	$34.18	$ 288,394	18,525.00	$33.84	$ 626,224	$35.04	$ 353,466	$ 295,650	($15,636)	($7,256)
61	EACH	HANDRAIL-TYPE A-1				412.00	$100.91	$ 41,575	412.00	$100.91	$ 41,575	$199.60	$ -	$ 82,235	$0	($40,660)
62	EACH	INITIAL FERTILIZER	59.00	$1,150.00	$ 67,850	18.00	$1,158.28	$ 20,849	77.00	$1,154.14	$ 88,699	$1,431.34	$ 84,449	$ 25,764	($16,599)	($4,915)
63	CUYD	INLAID PAVEMENT MARKER	190.00	$38.66	$ 7,345	363.00	$33.48	$ 12,153	553.00	$36.07	$ 19,499	$29.76	$ 5,654	$ 10,803	$1,691	$1,350

			Estimate Values									2024 Pricing			Delta	
			Rural			Urban			Total QTY	Total $/UOM	Total Totals					
Item #	UOM	Description	QTY	$/UOM	Totals	QTY	$/UOM	Totals				$/UOM	Rural	Urban	Rural	Urban
64	EACH	INTELLIGENT COMPACTION FOR ASPHALT	29,829.00	$0.25	$ 7,457	18,768.00	$0.25	$ 4,692	48,597.00	$0.25	$ 12,149				$7,457	$4,692
65	LF	JOINT ADHESIVE	21,146.00	$0.84	$ 17,763	8,718.00	$1.23	$ 10,723	29,864.00	$1.04	$ 28,486	$0.40	$ 8,458	$ 3,487	$9,304	$7,236
66	LF	JUNCTION BOX	3.00	$4,067.21	$ 12,202	1.00	$3,700.05	$ 3,700	4.00	$3,883.63	$ 15,902		$ 12,202	$ 3,700	$0	$0
67	TON	LEVELING & WEDGING PG64-22	618.00	$105.54	$ 65,224	921.00	$102.79	$ 94,670	1,539.00	$104.17	$ 159,893	$99.29	$ 61,361	$ 91,446	$3,863	$3,224
68	TON	LONGITUDINAL EDGE KEY	7,830.00	$3.73	$ 29,206	7,830.00	$3.73	$ 29,206	15,660.00	$3.73	$ 58,412	$3.83	$ 29,989	$ 29,989	($783)	($783)
69	SQFT	MAINTAIN & CONTROL TRAFFIC	1.00	$350,000.00	$ 350,000	1.00	$400,000.00	$ 400,000	2.00	$375,000.00	$ 750,000	$49,629.69	$ 49,630	$ 49,630	$300,370	$350,370
70	LF	MAINTENANCE FERTILIZER	29.00	$972.97	$ 28,216	9.00	$1,072.94	$ 9,656	38.00	$1,022.96	$ 37,873	$1,521.52	$ 44,124	$ 13,694	($15,908)	($4,037)
71	LS	MANHOLE TYPE A				2.00	$4,296.21	$ 8,592	2.00	$4,296.21	$ 8,592	$3,517.24	$ -	$ 7,034	$0	$1,558
72	SQYD	MOBILIZATION	1.00	$1,058,982.44	$ 1,058,982	1.00	$532,156.87	$ 532,157	2.00	$795,569.66	$ 1,591,139	$351,072.40	$ 351,072	$ 351,072	$707,910	$181,084
73	TON	MOBILIZATION FOR MILL & TEXT	1.00	$8,000.00	$ 8,000	1.00	$8,000.00	$ 8,000	2.00	$8,000.00	$ 16,000	$5,759.81	$ 5,760	$ 5,760	$2,240	$2,240
74	SF	NON-PERFORATED PIPE-4 IN	246.00	$14.85	$ 3,653	20.00	$22.19	$ 444	266.00	$18.52	$ 4,097	$21.35	$ 5,252	$ 427	($1,599)	$17
75	LF	PAVE MARKING-THERMO CROSS-HATCH	1,554.00	$5.21	$ 8,096	123.00	$6.67	$ 820	1,677.00	$5.94	$ 8,917	$5.37	$ 8,345	$ 661	($249)	$160
76	LF	PAVE MARKING-THERMO CURV ARROW	29.00	$114.88	$ 3,332	34.00	$114.24	$ 3,884	63.00	$114.56	$ 7,216	$122.97	$ 3,566	$ 4,181	($235)	($297)
77	LF	PAVE MARKING-THERMO STOP BAR-24IN	186.00	$11.71	$ 2,178	262.00	$11.36	$ 2,976	448.00	$11.54	$ 5,154	$12.85	$ 2,390	$ 3,367	($212)	($390)
78	EACH	PAVE MARKING-THERMO X-WALK-6 IN				1,282.00	$3.77	$ 4,833	1,282.00	$3.77	$ 4,833	$4.43	$ -	$ 5,679	$0	($846)
79	CUYD	PAVE MOUNT INFRARED TEMP EQUIPMENT	2,273,661.00	$0.01	$ 22,737	944,594.00	$0.01	$ 9,446	3,218,255.00	$0.01	$ 32,183	$0.01	$ 22,737	$ 9,446	$0	$0
80	EACH	PAVE STRIPING-PERM PAINT-4 IN	8,258.00	$0.37	$ 3,055	7,644.00	$0.38	$ 2,905	15,902.00	$0.38	$ 5,960	$0.25	$ 2,065	$ 1,911	$991	$994
81	LF	PAVE STRIPING-PERM PAINT-6 IN	76,196.00	$0.28	$ 21,335	33,772.00	$0.32	$ 10,807	109,968.00	$0.30	$ 32,142	$0.29	$ 22,097	$ 9,794	($762)	$1,013
82	TON	PERF PIPE HEADWALL TY 1-4 IN	2.00	$1,022.44	$ 2,045				2.00	$1,022.44	$ 2,045	$875.08	$ 1,750	$ -	$295	$0
83	EACH	PERF PIPE HEADWALL TY 2-4 IN	1.00	$1,355.05	$ 1,355	2.00	$1,128.50	$ 2,257	3.00	$1,241.78	$ 3,612	$1,049.08	$ 1,049	$ 2,098	$306	$159
84	LF	PERF PIPE HEADWALL TY 3-4 IN	10.00	$1,098.20	$ 10,982				10.00	$1,098.20	$ 10,982	$925.66	$ 9,257	$ -	$1,725	$0
85	EACH	PERF PIPE HEADWALL TY 4-4 IN	10.00	$970.56	$ 9,706				10.00	$970.56	$ 9,706	$612.16	$ 6,122	$ -	$3,584	$0
86	LF	PERFORATED PIPE-4 IN	2,020.00	$10.19	$ 20,584	9,378.00	$8.49	$ 79,619	11,398.00	$9.34	$ 100,203	$11.82	$ 23,876	$ 110,848	($3,293)	($31,229)
87	EACH	PIPE CULVERT HEADWALL-15 IN				3.00	$1,844.07	$ 5,532	3.00	$1,844.07	$ 5,532	$1,674.26	$ -	$ 5,023	$0	$509
88	EACH	PIPE CULVERT HEADWALL-18 IN	23.00	$2,055.37	$ 47,274	13.00	$2,122.88	$ 27,597	36.00	$2,089.13	$ 74,871	$2,524.96	$ 58,074	$ 32,824	($10,801)	($5,227)
89	LF	PIPE CULVERT HEADWALL-24 IN	12.00	$2,400.00	$ 28,800	8.00	$2,394.91	$ 19,159	20.00	$2,397.46	$ 47,959	$2,610.16	$ 31,322	$ 20,881	($2,522)	($1,722)
90	EACH	PIPE CULVERT HEADWALL-30 IN	2.00	$3,200.18	$ 6,400	5.00	$3,200.18	$ 16,001	7.00	$3,200.18	$ 22,401	$3,085.52	$ 6,171	$ 15,428	$229	$573
91	EACH	PIPE CULVERT HEADWALL-36 IN	3.00	$4,336.15	$ 13,008	1.00	$4,175.34	$ 4,175	4.00	$4,255.75	$ 17,184	$4,161.84	$ 12,486	$ 4,162	$523	$14
92	EACH	PIPE CULVERT HEADWALL-48 IN	3.00	$5,498.74	$ 16,496	2.00	$5,498.74	$ 10,997	5.00	$5,498.74	$ 27,494	$4,034.40	$ 12,103	$ 8,069	$4,393	$2,929
93	LS	PIPE CULVERT HEADWALL-54 IN	1.00	$10,052.90	$ 10,053				1.00	$10,052.90	$ 10,053	$6,690.64	$ 6,691	$ -	$3,362	$0
94	EACH	PIPE CULVERT HEADWALL-72 IN	2.00	$12,000.00	$ 24,000	2.00	$12,000.00	$ 24,000	4.00	$12,000.00	$ 48,000	$31,773.46	$ 63,547	$ 63,547	($39,547)	($39,547)
95	EACH	PIPELINE INSPECTION	3,265.00	$2.59	$ 8,456	5,181.00	$2.18	$ 11,295	8,446.00	$2.39	$ 19,751	$2.72	$ 8,881	$ 14,092	($424)	($2,798)
96	LF	PORTABLE CHANGEABLE MESSAGE SIGN	4.00	$5,263.89	$ 21,056	4.00	$5,263.89	$ 21,056	8.00	$5,263.89	$ 42,111	$3,775.29	$ 15,101	$ 15,101	$5,954	$5,954
97	TON	REMOVE GUARDRAIL	1,300.00	$3.68	$ 4,784	1,300.00	$3.68	$ 4,784	2,600.00	$3.68	$ 9,568	$3.60	$ 4,680	$ 4,680	$104	$104
98	EACH	REMOVE PAVEMENT	7,000.00	$7.33	$ 51,310	3,000.00	$9.48	$ 28,440	10,000.00	$8.41	$ 79,750	$10.46	$ 73,220	$ 31,380	($21,910)	($2,940)
99	EACH	REMOVE PIPE	100.00	$38.85	$ 3,885	100.00	$38.85	$ 3,885	200.00	$38.85	$ 7,770	$25.72	$ 2,572	$ 2,572	$1,313	$1,313
100	TON	RIGHT-OF-WAY MONUMENT TYPE 1	129.00	$194.67	$ 25,112	98.00	$195.69	$ 19,178	227.00	$195.18	$ 44,290		$ 25,112	$ 19,178	$0	$0
101	EACH	ROADWAY EXCAVATION	1,500,977.00	$7.00	$ 10,506,839	148,266.00	$12.24	$ 1,814,776	1,649,243.00	$9.62	$ 12,321,615	$17.19	$ 25,801,795	$ 2,548,693	($15,294,956)	($733,917)
102	EACH	S & F BOX INLET-OUTLET-18 IN				1.00	$3,841.16	$ 3,841	1.00	$3,841.16	$ 3,841	$3,602.05	$ -	$ 3,602	$0	$239
103	SQFT	SAFELOADING	5.00	$590.94	$ 2,955	5.00	$590.94	$ 2,955	10.00	$590.94	$ 5,909	$320.14	$ 1,601	$ 1,601	$1,354	$1,354
104	EACH	SAND FOR BLOTTER	228.00	$46.17	$ 10,527	83.00	$56.65	$ 4,702	311.00	$51.41	$ 15,229	$30.95	$ 7,057	$ 2,569	$3,470	$2,133
105	EACH	SAW CUT	7,830.00	$2.32	$ 18,166	7,830.00	$2.32	$ 18,166	15,660.00	$2.32	$ 36,331	$2.10	$ 16,443	$ 16,443	$1,723	$1,723
106	EACH	SBM ALUM SHEET SIGNS .080 IN	852.00	$37.64	$ 32,069	719.00	$38.25	$ 27,502	1,571.00	$37.95	$ 59,571	$45.31	$ 38,604	$ 32,578	($6,535)	($5,076)
107	LF	SBM ALUM SHEET SIGNS .125 IN	72.00	$41.88	$ 3,015	56.00	$42.49	$ 2,379	128.00	$42.19	$ 5,395	$48.92	$ 3,522	$ 2,740	($507)	($360)
108	LF	SEEDING AND PROTECTION	289,407.00	$0.32	$ 92,610	56,644.00	$0.55	$ 31,154	346,051.00	$0.44	$ 123,764	$0.66	$ 191,009	$ 37,385	($98,398)	($6,231)
109	SQFT	SHOULDER RUMBLE STRIPS	33,600.00	$0.27	$ 9,072				33,600.00	$0.27	$ 9,072	$0.28	$ 9,408	$ -	($336)	$0
110	EACH	SIDEWALK-4 IN CONCRETE				2,999.00	$66.36	$ 199,014	2,999.00	$66.36	$ 199,014	$74.06	$ -	$ 222,106	$0	($23,092)
111	LF	SILT TRAP TYPE A	118.00	$114.74	$ 13,539	37.00	$130.59	$ 4,832	155.00	$122.67	$ 18,371	$169.93	$ 20,052	$ 6,287	($6,512)	($1,456)
112	EACH	SILT TRAP TYPE B	118.00	$97.79	$ 11,539	37.00	$115.60	$ 4,277	155.00	$106.70	$ 15,816	$152.44	$ 17,988	$ 5,640	($6,449)	($1,363)
113	LF	SILT TRAP TYPE C	118.00	$181.57	$ 21,425	37.00	$202.18	$ 7,481	155.00	$191.88	$ 28,906	$168.99	$ 19,941	$ 6,253	$1,484	$1,228
114	LF	SODDING				4,879.00	$9.87	$ 48,156	4,879.00	$9.87	$ 48,156	$9.60	$ -	$ 46,838	$0	$1,317
115	CUYD	STAKING	1.00	$40,000.00	$ 40,000	1.00	$30,000.00	$ 30,000	2.00	$35,000.00	$ 70,000	$42,199.67	$ 42,200	$ 42,200	($2,200)	($12,200)
116	EACH	STANDARD CURB AND GUTTER				9,875.00	$34.46	$ 340,293	9,875.00	$34.46	$ 340,293	$36.83	$ -	$ 363,696	$0	($23,404)
117	SQFT	STEEL POST MILE MARKERS	10.00	$478.91	$ 4,789	10.00	$478.91	$ 4,789	20.00	$478.91	$ 9,578	$483.13	$ 4,831	$ 4,831	($42)	($42)
118	LF	STEEL POST TYPE 1	1,850.00	$29.42	$ 54,427	1,573.00	$29.67	$ 46,671	3,423.00	$29.55	$ 101,098	$33.74	$ 62,419	$ 53,073	($7,992)	($6,402)
119	LF	STEEL REINFORCEMENT	101,190.00	$1.73	$ 175,059	7,895.00	$2.20	$ 17,369	109,085.00	$1.85	$ 192,428	$1.77	$ 179,106	$ 13,974	($4,048)	$3,395
120	LF	STORM SEWER PIPE-15 IN				964.00	$107.49	$ 103,620	964.00	$107.49	$ 103,620	$98.83	$ -	$ 95,272	$0	$8,348
121	EACH	STORM SEWER PIPE-18 IN				1,360.00	$100.76	$ 137,034	1,360.00	$100.76	$ 137,034	$89.99	$ -	$ 122,386	$0	$14,647
122	LF	STORM SEWER PIPE-24 IN				800.00	$132.15	$ 105,720	800.00	$132.15	$ 105,720	$122.91	$ -	$ 98,328	$0	$7,392
123	EACH	STORM SEWER PIPE-30 IN				183.00	$175.83	$ 32,177	183.00	$175.83	$ 32,177	$158.54	$ -	$ 29,013	$0	$3,164
124	EACH	STRUCTURE EXCAVATION-COMMON				2,214.00	$20.00	$ 44,280	2,214.00	$20.00	$ 44,280	$60.20	$ -	$ 133,283	$0	($89,003)
125	EACH	STRUCTURE EXCAV-SOLID ROCK	261.00	$90.56	$ 23,636	38.00	$140.27	$ 5,330	299.00	$102.99	$ 28,966	$113.19	$ 29,543	$ 4,301	($5,906)	$1,029
126	EACH	TEMP DITCH	8,400.00	$0.36	$ 3,024	3,523.00	$0.54	$ 1,902	11,923.00	$0.45	$ 4,926	$1.22	$ 10,248	$ 4,298	($7,224)	($2,396)
127	EACH	TEMP GUARDRAIL	1,300.00	$20.64	$ 26,832	1,300.00	$20.64	$ 26,832	2,600.00	$20.64	$ 53,664	$21.67	$ 28,171	$ 28,171	($1,339)	($1,339)
128	EACH	TEMP MULCH	378,376.00	$0.20	$ 75,675	117,236.00	$0.23	$ 26,964	495,612.00	$0.22	$ 102,639	$0.33	$ 124,864	$ 38,688	($49,189)	($11,724)

			Estimate Values								
			Rural			Urban					
Item #	UOM	Description	QTY	$/UOM	Totals	QTY	$/UOM	Totals	Total QTY	Total $/UOM	Total Totals
129	TON	TEMP SEEDING AND PROTECTION	283,782.00	$0.22	$ 62,432	87,927.00	$0.26	$ 22,861	371,709.00	$0.24	$ 85,293
130	SQYD	TEMP SILT FENCE	8,400.00	$2.50	$ 21,000	3,523.00	$2.91	$ 10,252	11,923.00	$2.71	$ 31,252
131	TON	TEMPORARY SIGNS	500.00	$10.48	$ 5,240	500.00	$10.48	$ 5,240	1,000.00	$10.48	$ 10,480
132	EACH	TRAFFIC BOUND BASE	375.00	$44.20	$ 16,575	375.00	$44.20	$ 16,575	750.00	$44.20	$ 33,150
133	EACH	UTILITY COORDINATION	1.00	$10,000.00	$ 10,000	1.00	$25,000.00	$ 25,000	2.00	$17,500.00	$ 35,000
134	LF	WATER	7.00	$0.17	$ 1	7.00	$0.17	$ 1	14.00	$0.17	$ 2
135	MGAL	WATER BLASTING EXISTING STRIPE	18,200.00	$0.83	$ 15,106	7,800.00	$1.14	$ 8,892	26,000.00	$0.99	$ 23,998
136	LF	WITNESS POST	129.00	$130.97	$ 16,895	98.00	$133.90	$ 13,122	227.00	$132.44	$ 30,017
		Grand Total	**6,041,734.90**	**$16,866.19**	**$ 22,558,342**	**2,073,574.80**	**$10,759.24**	**$ 11,336,885**	**8,115,309.70**	**$13,677.82**	**$ 33,895,227**

https://www.bls.gov/data/inflation_calculator.htm

https://www.nww.usace.army.mil/Portals/28/CWCCIS_Tables_Mar_2025.pdf

2024 Pricing		
$/UOM	Rural	Urban
$0.36	$ 102,162	$ 31,654
$2.80	$ 23,520	$ 9,864
$6.24	$ 3,120	$ 3,120
$53.73	$ 20,149	$ 20,149
$32,345.87	$ 32,346	$ 32,346
$4.58	$ 32	$ 32
$0.57	$ 10,374	$ 4,446
$200.00	$ 25,800	$ 19,600
	$ 38,533,171	**$ 12,804,015**

Delta	
Rural	Urban
($39,729)	($8,793)
($2,520)	$388
$2,120	$2,120
($3,574)	($3,574)
($22,346)	($7,346)
($31)	($31)
$4,732	$4,446
($8,905)	($6,478)
($15,974,829)	**($1,467,130)**

June 24-June 25	2.32%	2.32%
Total in Today's Dollars	**$ 39,427,141**	**$ 13,101,068**
08 ROADS, RAILROADS & BRIDGES		
Q3-2025	1207.72	1207.72
Q3-2030	1373.22	1373.22
	13.70%	13.70%
Cost in Q3-2030	**$ 44,830,042**	**$ 14,896,374**
Contingency	10%	10%
New Projected Total	**$ 49,313,046**	**$ 16,386,011**
Current Estimates	$ 24,814,176	$ 12,470,573
Over/Understimate	**$ (24,498,870)**	**$ (3,915,438)**
	-99%	**-31%**

KENTUCKY AVERAGE UNIT BID PRICES FOR ALL AWARDED JOB FOR 2024

538 CONTRACTS - AWARDED TOTAL = $1,039,390,234

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
1	301	CL2 ASPH SURF 0.38D PG64-22	TON	885,640	$94,098.00	$106.25	9.05	344
2	2200	ROADWAY EXCAVATION	CUYD	4,066,082	$69,904.00	$17.19	6.73	68
3	190	LEVELING & WEDGING PG64-22	TON	282,714	$28,070.00	$99.29	2.7	352
4	388	CL3 ASPH SURF 0.38B PG64-22	TON	250,812	$27,451.00	$109.45	2.64	62
5	214	CL3 ASPH BASE 1.00D PG64-22	TON	331,482	$27,382.00	$82.60	2.63	32
6	2650	MAINTAIN & CONTROL TRAFFIC	LS	524	$26,006.00	49629.69	2.5	524
7	2568	MOBILIZATION	LS	74	$25,979.00	351072.4	2.5	74
8	8100	CONCRETE-CLASS A	CUYD	24,092	$24,373.00	$1,011.69	2.34	86
9	3	CRUSHED STONE BASE	TON	673,700	$23,403.00	$34.74	2.25	58
10	8104	CONCRETE-CLASS AA	CUYD	16,950	$22,846.00	$1,347.88	2.2	65
11	212	CL2 ASPH BASE 1.00D PG64-22	TON	198,315	$22,241.00	$112.15	2.14	102
12	2731	REMOVE STRUCTURE	LS	62	$18,885.00	304599.2	1.82	62
13	2569	DEMOBILIZATION	LS	532	$16,470.00	30958.26	1.58	532
14	342	CL4 ASPH SURF 0.38A PG76-22	TON	147,337	$16,101.00	$109.28	1.55	12
15	217	CL4 ASPH BASE 1.00D PG64-22	TON	181,152	$13,018.00	$71.86	1.25	9
16	21590EN	SOUND BARRIER WALL	SQFT	312,595	$12,826.00	$41.03	1.23	2
17	1	DGA BASE	TON	339,823	$12,768.00	$37.57	1.23	213
18	2230	EMBANKMENT IN PLACE	CUYD	885,440	$11,448.00	$12.93	1.1	30
19	18	DRAINAGE BLANKET-TYPE II-ASPH	TON	167,671	$11,104.00	$66.22	1.07	6
20	2677	ASPHALT PAVE MILLING & TEXTURING	TON	564,272	$11,016.00	$19.52	1.06	359
21	8003	FOUNDATION PREPARATION	LS	74	$10,712.00	144755.8	1.03	74
22	219	CL4 ASPH BASE 1.00D PG76-22	TON	125,583	$10,468.00	$83.35	1.01	9
23	78	CRUSHED AGGREGATE SIZE NO 2	TON	310,508	$10,446.00	$33.64	1.01	45
24	10030NS	ASPHALT ADJUSTMENT	DOLL	9,444,647	$9,691.00	$1.03	0.93	225
25	324	CL3 ASPH SURF 0.50B PG64-22	TON	83,902	$9,268.00	$110.47	0.89	14
26	24879EC	STEEL REPAIR	EACH	2,011	$9,039.00	$4,494.69	0.87	11
27	8151	STEEL REINFORCEMENT-EPOXY COATED	LB	4,745,632	$8,816.00	$1.86	0.85	67
28	6521	PAVE STRIPING-WB PAINT-4 IN Y	MILE	14,568	$8,530.00	$585.56	0.82	12
29	2545	CLEARING AND GRUBBING	LS	85	$6,893.00	81095.75	0.66	85
30	22906ES403	CL3 ASPH SURF 0.38A PG64-22	TON	66,509	$6,559.00	$98.62	0.63	13
31	8160	STRUCTURAL STEEL	LS	9	$6,223.00	691413.9	0.6	9
32	3171	CONCRETE BARRIER WALL TYPE 9T	LF	169,565	$6,129.00	$36.15	0.59	36
33	2351	GUARDRAIL-STEEL W BEAM-S FACE	LF	169,376	$5,935.00	$35.04	0.57	86
34	339	CL3 ASPH SURF 0.38D PG64-22	TON	63,808	$5,588.00	$87.57	0.54	11
35	6542	PAVE STRIPING-THERMO-6 IN W	LF	4,466,370	$5,424.00	$1.21	0.52	132
36	10020NS	FUEL ADJUSTMENT	DOLL	5,318,122	$5,416.00	$1.02	0.52	227
37	3240	BASE FAILURE REPAIR	SQYD	68,154	$5,323.00	$78.10	0.51	112
38	26220EC	STAY CABLE PROTECTIVE TAPE REPAIR	LS	1	$4,945.00	4945000	0.48	1
39	8039	PRE-DRILLING FOR PILES	LF	14,745	$4,910.00	$333.02	0.47	26
40	8051	PILES-STEEL HP14X89	LF	44,887	$4,862.00	$108.33	0.47	21
41	2726	STAKING	LS	113	$4,769.00	42199.67	0.46	113
42	6520	PAVE STRIPING-WB PAINT-4 IN W	MILE	8,695	$4,756.00	$546.94	0.46	12
43	1978	CONC MEDIAN BARRIER TYPE A TL5 56 IN	LF	38,868	$4,707.00	$121.11	0.45	3
44	8150	STEEL REINFORCEMENT	LB	2,630,382	$4,651.00	$1.77	0.45	68
45	6543	PAVE STRIPING-THERMO-6 IN Y	LF	3,784,810	$4,583.00	$1.21	0.44	125
46	23140EN	DURABLE WATERBORNE MARKING-6 IN W	MILE	2,968	$3,872.00	$1,304.59	0.37	9
47	21653ES403	CL2 ASPH SURF NO.4D PG64-22	TON	33,897	$3,820.00	$112.68	0.37	17
48	2542	CEMENT	TON	11,548	$3,626.00	$314.01	0.35	6
49	8636	PRECAST PC I BEAM TYPE 5	LF	5,826	$3,616.00	$620.68	0.35	2
50	2720	SIDEWALK-4 IN CONCRETE	SQYD	46,863	$3,471.00	$74.06	0.33	47
51	5985	SEEDING AND PROTECTION	SQYD	5,092,946	$3,382.00	$0.66	0.33	65
52	8634	PRECAST PC I BEAM TYPE 4	LF	6,128	$3,370.00	$550.00	0.32	1
53	23141EN	DURABLE WATERBORNE MARKING-6 IN Y	MILE	2,358	$3,282.00	$1,391.51	0.32	9
54	2073	JPC PAVEMENT-9 IN	SQYD	20,347	$3,240.00	$159.25	0.31	2
55	522	STORM SEWER PIPE-18 IN	LF	35,718	$3,214.00	$89.99	0.31	34
56	2484	CHANNEL LINING CLASS III	TON	56,654	$3,039.00	$53.65	0.29	40
57	216	CL3 ASPH BASE 1.00D PG76-22	TON	31,076	$2,999.00	$96.52	0.29	3
58	1810	STANDARD CURB AND GUTTER	LF	80,573	$2,968.00	$36.83	0.29	24
59	221	CL2 ASPH BASE 0.75D PG64-22	TON	24,097	$2,964.00	$122.99	0.29	36
60	23378EC	CONCRETE SEALING	SQFT	1,736,743	$2,928.00	$1.69	0.28	63
61	6522	PAVE STRIPING-WB PAINT-6 IN W	MILE	3,526	$2,927.00	$829.90	0.28	8
62	6523	PAVE STRIPING-WB PAINT-6 IN Y	MILE	3,176	$2,811.00	$885.05	0.27	8
63	24887EC	CL3 ASPH SURF NO.4A PG64-22	TON	20,585	$2,800.00	$136.01	0.27	5
64	2483	CHANNEL LINING CLASS II	TON	54,724	$2,767.00	$50.57	0.27	51
65	21802EN	G/R STEEL W BEAM-S FACE (7 FT POST)	LF	86,300	$2,764.00	$32.03	0.27	25
66	2223	GRANULAR EMBANKMENT	CUYD	48,521	$2,741.00	$56.50	0.26	27
67	23307EC	CL3 ASPH SURF NO.4B PG64-22	TON	22,794	$2,561.00	$112.36	0.25	8
68	23981EC	PPC I-BEAM TYPE HN 42-49	LF	3,433	$2,548.00	$742.06	0.25	3
69	6515	PAVE STRIPING-PERM PAINT-6 IN	LF	8,599,907	$2,536.00	$0.29	0.24	146
70	26215EC	FRICTION DAMPER	EACH	96	$2,526.00	26308	0.24	1
71	8434	CLEAN & PAINT STRUCTURAL STEEL	LS	3	$2,508.00	835933.3	0.24	3
72	2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	653	$2,465.00	$3,775.29	0.24	186
73	15119	S PUMP STATION	EACH	6	$2,422.00	403627.4	0.23	2
74	8019	CYCLOPEAN STONE RIP RAP	TON	43,335	$2,416.00	$55.75	0.23	48
75	14039	W PIPE DUCTILE IRON 12 INCH	LF	14,241	$2,401.00	$168.57	0.23	3
76	8	CEMENT STABILIZED ROADBED	SQYD	533,976	$2,395.00	$4.49	0.23	6
77	26172EC	DRILLED SHAFT-36 IN SOLID ROCK	LF	3,075	$2,395.00	$779.00	0.23	1
78	8633	PRECAST PC I BEAM TYPE 3	LF	4,388	$2,357.00	$537.04	0.23	3
79	1000	PERFORATED PIPE-4 IN	LF	195,641	$2,312.00	$11.82	0.22	32
80	2651	DIVERSIONS (BY-PASS DETOURS)	LS	16	$2,158.00	134857.8	0.21	16
81	336	CL3 ASPH SURF 0.38A PG76-22	TON	18,266	$2,157.00	$118.09	0.21	3
82	14042	W PIPE DUCTILE IRON 24 INCH	LF	5,300	$2,126.00	$401.06	0.2	2
83	8671	PRECAST PC BOX BEAM SB33	LF	4,600	$2,119.00	$460.73	0.2	4

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
84	24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	TON	5,392	$2,117.00	$392.53	0.2	190
85	6510	PAVE STRIPING-TEMP PAINT-4 IN	LF	12,736,092	$2,116.00	$0.17	0.2	371
86	2676	MOBILIZATION FOR MILL & TEXT	LS	365	$2,102.00	$5,759.81	0.2	365
87	26207ED	SECANT SHAFTS	LF	3,542	$2,090.00	$590.12	0.2	1
88	6514	PAVE STRIPING-PERM PAINT-4 IN	LF	8,226,803	$2,083.00	$0.25	0.2	229
89	335	CL4 ASPH SURF 0.50A PG76-22	TON	14,482	$2,027.00	$140.00	0.2	1
90	8033	TEST PILES	LF	8,659	$2,014.00	$232.60	0.19	44
91	23032EN	BRIDGE BARRIER RETROFIT	LF	5,551	$1,999.00	$360.20	0.19	3
92	521	STORM SEWER PIPE-15 IN	LF	20,148	$1,991.00	$98.83	0.19	25
93	25028ED	RAIL SYSTEM SINGLE SLOPE - 40 IN	LF	13,151	$1,979.00	$150.46	0.19	21
94	8534	CONCRETE OVERLAY-LATEX	CUYD	1,140	$1,943.00	$1,704.70	0.19	9
95	15142	S FORCE MAIN DCTL IRON RSTRND 18 IN	LF	4,940	$1,927.00	$390.00	0.19	1
96	21587EN	REINFORCED SOIL SLOPE	SQFT	29,242	$1,874.00	$64.10	0.18	1
97	2602	FABRIC-GEOTEXTILE CLASS 1	SQYD	817,363	$1,867.00	$2.28	0.18	47
98	8670	PRECAST PC BOX BEAM SB27	LF	4,128	$1,838.00	$445.31	0.18	4
99	2231	STRUCTURE GRANULAR BACKFILL	CUYD	23,508	$1,811.00	$77.05	0.17	43
100	307	CL2 ASPH SURF 0.38B PG64-22	TON	16,981	$1,805.00	$106.30	0.17	11
101	1456	CURB BOX INLET TYPE A	EACH	274	$1,798.00	$6,563.02	0.17	14
102	20694EN	ALUMINUM STRUCTURAL PLATE BOX CULVERT	LF	247	$1,782.00	$7,230.24	0.17	4
103	20603ED	SOIL NAIL WALL	SQFT	20,803	$1,765.00	$84.84	0.17	4
104	5952	TEMP MULCH	SQYD	5,364,099	$1,764.00	$0.33	0.17	60
105	2101	CEM CONC ENT PAVEMENT-8 IN	SQYD	12,981	$1,730.00	$133.28	0.17	14
106	22146EN	CONCRETE PATCHING REPAIR	SQFT	5,985	$1,679.00	$280.57	0.16	9
107	14059	W PIPE PVC 06 INCH	LF	26,390	$1,661.00	$62.93	0.16	9
108	2069	JPC PAVEMENT-10 IN	SQYD	10,964	$1,616.00	$147.35	0.16	2
109	8664	PRECAST PC BOX BEAM CB27-48	LF	4,673	$1,613.00	$345.13	0.16	9
110	2697	EDGELINE RUMBLE STRIPS	LF	6,036,192	$1,598.00	$0.26	0.15	171
111	356	ASPHALT MATERIAL FOR TACK	TON	7,236	$1,518.00	$209.82	0.15	257
112	8046	PILES-STEEL HP12X53	LF	18,225	$1,514.00	$83.09	0.15	31
113	23069NN	BRIDGE DECK REMOVAL	LS	2	$1,470.00	735000.4	0.14	2
114	333	CL4 ASPH SURF 0.50A PG64-22	TON	15,410	$1,464.00	$95.00	0.14	1
115	103	ASPHALT SEAL COAT	TON	1,346	$1,464.00	$1,087.07	0.14	99
116	225	CL3 ASPH BASE 0.75D PG76-22	TON	16,159	$1,462.00	$90.47	0.14	1
117	8637	PRECAST PC I BEAM TYPE 7	LF	2,176	$1,458.00	$670.00	0.14	1
118	2562	TEMPORARY SIGNS	SQFT	233,211	$1,455.00	$6.24	0.14	475
119	5950	EROSION CONTROL BLANKET	SQYD	582,901	$1,437.00	$2.47	0.14	57
120	13	LIME STABILIZED ROADBED	SQYD	171,383	$1,424.00	$8.31	0.14	4
121	5990	SODDING	SQYD	148,256	$1,423.00	$9.60	0.14	16
122	23229EC	HIGH FRICTION SURFACE TREATMENT	SQYD	49,631	$1,420.00	$28.62	0.14	7
123	100	ASPHALT SEAL AGGREGATE	TON	10,557	$1,412.00	$133.78	0.14	103
124	194	LEVELING & WEDGING PG76-22	TON	10,871	$1,387.00	$127.62	0.13	8
125	332	CL3 ASPH SURF 0.50A PG76-22	TON	9,223	$1,383.00	$150.00	0.13	1
126	8037	COFFERDAM	LS	1	$1,370.00	1370000	0.13	1
127	24463ED	PPC I-BEAM HN 54 49	LF	1,792	$1,353.00	$755.00	0.13	1
128	8662	PRECAST PC BOX BEAM CB17-48	LF	4,040	$1,336.00	$330.76	0.13	12
129	23859EC	FINGER EXPANSION JOINT	LF	132	$1,263.00	$9,570.00	0.12	1
130	263	ASPHALT MIX FOR PAVEMENT WEDGE	TON	13,160	$1,249.00	$94.89	0.12	21
131	15112	S PIPE PVC 08 INCH	LF	7,953	$1,244.00	$156.37	0.12	8
132	462	CULVERT PIPE-18 IN	LF	7,489	$1,223.00	$163.33	0.12	32
133	5953	TEMP SEEDING AND PROTECTION	SQYD	3,380,181	$1,210.00	$0.36	0.12	59
134	272	CL2 ASPH BIND 0.50D PG64-22	TON	10,233	$1,165.00	$113.82	0.11	4
135	2268	REMOVE & REPLACE FENCE	LF	66,550	$1,160.00	$17.44	0.11	3
136	20743ED	DRILLED SHAFT 54 IN-SOLID ROCK	LF	527	$1,141.00	$2,165.28	0.11	5
137	26173EC	DRILLED SHAFT-42 IN COMMON	LF	5,728	$1,117.00	$195.00	0.11	1
138	2367	GUARDRAIL END TREATMENT TYPE 1	EACH	262	$1,098.00	$4,191.52	0.11	62
139	26230EC	PILES-STEEL W21 X 147	LF	5,545	$1,092.00	$197.00	0.11	1
140	2403	REMOVE CONCRETE MASONRY	CUYD	1,114	$1,072.00	$962.34	0.1	20
141	15114	S PIPE PVC 12 INCH	LF	6,086	$1,062.00	$174.53	0.1	4
142	8665	PRECAST PC BOX BEAM CB33-48	LF	2,597	$1,030.00	$396.79	0.1	5
143	8666	PRECAST PC BOX BEAM CB42-48	LF	2,038	$1,019.00	$500.05	0.1	4
144	24520EC	PPC I-BEAM HN 48-49	LF	1,456	$1,012.00	$695.00	0.1	1
145	3299	ARMORED EDGE FOR CONCRETE	LF	8,442	$992.00	$117.54	0.1	67
146	358	ASPHALT CURING SEAL	TON	1,169	$984.00	$842.12	0.09	10
147	24583EC	HDPE PIPE LINER	LF	502	$975.00	$1,941.43	0.09	1
148	24610EC	MODULAR EXPANSION JOINT	LF	128	$924.00	$7,250.00	0.09	1
149	20411ED	LAW ENFORCEMENT OFFICER	HOUR	11,169	$903.00	$80.87	0.09	45
150	6569	PAVE MARKING-THERMO CROSS-HATCH	SQFT	167,161	$897.00	$5.37	0.09	74
151	21289ED	LONGITUDINAL EDGE KEY	LF	233,962	$895.00	$3.83	0.09	39
152	25010EC	GEOCOMPOSITE REINFORCEMENT FOR ASPHALT	SQYD	105,557	$895.00	$8.48	0.09	2
153	3304	BRIDGE OVERLAY APPROACH PAVEMENT	SQYD	15,143	$890.00	$58.75	0.09	10
154	4714	POLE 120 FT MTG HT HIGH MAST	EACH	15	$874.00	58291.7	0.08	3
155	20071EC	JOINT ADHESIVE	LF	2,152,678	$863.00	$0.40	0.08	33
156	23642EC	CONCRETE LAGGING	SQFT	18,704	$862.00	$46.07	0.08	2
157	14050	W PIPE DCTL IRON RSTRND JOINT 12 IN	LF	3,612	$862.00	$238.53	0.08	4
158	1001	PERFORATED PIPE-6 IN	LF	72,298	$849.00	$11.75	0.08	10
159	8672	PRECAST PC BOX BEAM SB42	LF	1,332	$849.00	$637.54	0.08	2
160	21652EN	MICROSURFACING-LEVELING COURSE	SQYD	324,612	$848.00	$2.61	0.08	6
161	23494EC	INSPECTION WALKWAY	LF	2,162	$843.00	$390.00	0.08	1
162	25017ED	RAIL SYSTEM SIDE MOUNTED MGS	LF	3,023	$838.00	$277.38	0.08	18
163	25024ED	CLASSIC BRIDGE RAIL	LF	3,234	$799.00	$247.10	0.08	2
164	24383EC	PC I-BEAM TY NH 66 61-HYBRID	LF	1,065	$799.00	$750.00	0.08	1
165	8052	PILES-STEEL HP14X117	LF	5,199	$798.00	$153.41	0.08	4
166	20744ED	DRILLED SHAFT 60 IN-COMMON	LF	437	$789.00	$1,806.32	0.08	4
167	8500	APPROACH SLAB	SQYD	1,348	$788.00	$584.62	0.08	5
168	6410	STEEL POST TYPE 1	LF	23,035	$777.00	$33.74	0.07	32
169	24858EC	POLYMER ASPHALT EMULSION FOR SCRUB SEAL	TON	770	$765.00	$994.12	0.07	8

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170	14060	W PIPE PVC 08 INCH	LF	8,453	$760.00	$89.94	0.07	4
171	4932	INSTALL STEEL STRAIN POLE	EACH	85	$756.00	$8,895.51	0.07	13
172	21527ND	PIER CAP REPAIR	LS	1	$750.00	750000	0.07	1
173	14019	W FIRE HYDRANT ASSEMBLY	EACH	73	$747.00	10238.79	0.07	11
174	1624	CONC MED BARR BOX INLET TY B2 TL5 56	EACH	52	$746.00	14341.58	0.07	2
175	26231ED	RAIL SYSTEM TYPE C412	LF	1,622	$745.00	$459.31	0.07	3
176	8663	PRECAST PC BOX BEAM CB21-48	LF	2,294	$737.00	$321.14	0.07	4
177	25078ED	THRIE BEAM GUARDRAIL TRANSITION TL-3	EACH	164	$724.00	$4,412.52	0.07	30
178	14010	W ENCASEMENT STEEL BORED RANGE 5	LF	592	$697.00	$1,176.99	0.07	2
179	2084	JPC PAVEMENT-8 IN	SQYD	4,506	$693.00	$153.87	0.07	11
180	23044ES508	CONCRETE MEDIAN BARRIER TY 14C(50)	LF	4,937	$691.00	$140.00	0.07	1
181	464	CULVERT PIPE-24 IN	LF	4,010	$688.00	$171.59	0.07	22
182	524	STORM SEWER PIPE-24 IN	LF	5,578	$686.00	$122.91	0.07	15
183	24567ED	TRUSS BRIDGE SUPERSTRUCTURE	LS	2	$685.00	342375	0.07	2
184	2058	REMOVE PCC PAVEMENT	SQYD	17,236	$683.00	$39.61	0.07	3
185	24888EC	CL2 ASPH SURF NO.4B PG64-22	TON	5,514	$682.00	$123.72	0.07	2
186	23931EC	EPS FOAM BLOCK	CUFT	138,663	$674.00	$4.86	0.06	1
187	14	LIME	TON	3,277	$672.00	$205.10	0.06	4
188	24961EC	ASPHALT SEAL AGGREGATE - TYPE D	SQYD	517,088	$662.00	$1.28	0.06	9
189	4820	TRENCHING AND BACKFILLING	LF	58,529	$656.00	$11.22	0.06	43
190	14053	W PIPE DCTL IRON RSTRND JOINT 24 IN	LF	1,060	$653.00	$615.94	0.06	2
191	387	CL3 ASPH SURF 0.38B PG76-22	TON	6,341	$653.00	$102.92	0.06	2
192	26217EC	CONNECTION SLEEVE REPAIR	EACH	192	$643.00	$3,350.78	0.06	1
193	6550	PAVE STRIPING-TEMP REM TAPE-W	LF	270,246	$640.00	$2.37	0.06	27
194	6511	PAVE STRIPING-TEMP PAINT-6 IN	LF	2,514,651	$628.00	$0.25	0.06	24
195	10202ND	TIME COMPONENT	DOLL	8,200	$615.00	$75.00	0.06	1
196	24957EC	MICROSURFACING-SURFACE COURSE - TYPE B	SQYD	234,298	$610.00	$2.60	0.06	2
197	8140	MECHANICAL REINF COUPLER #5 EPOXY COATED	EACH	10,162	$608.00	$59.80	0.06	15
198	24378EC	ROLL CURB MODIFIED	LF	32,379	$602.00	$18.59	0.06	1
199	2585	EDGE KEY	LF	37,793	$602.00	$15.92	0.06	101
200	14058	W PIPE PVC 04 INCH	LF	10,297	$597.00	$57.95	0.06	5
201	24785EC	FIBER REINFORCEMENT FOR HMA	TON	66,145	$595.00	$8.99	0.06	9
202	2003	RELOCATE TEMP CONC BARRIER	LF	185,683	$587.00	$3.16	0.06	16
203	2690	SAFELOADING	CUYD	1,826	$585.00	$320.14	0.06	19
204	25117EC	FURNISH QUEUE PROTECTION VEHICLES	MONT	92	$582.00	$6,355.33	0.06	7
205	6427	TRENCHING	LF	63,560	$577.00	$9.07	0.06	2
206	8510	REM EPOXY BIT FOREIGN OVERLAY	SQYD	19,444	$576.00	$29.63	0.06	8
207	26119EC	INSTALL RADAR PRESENCE DETECTOR TYPE A	EACH	600	$576.00	$959.28	0.06	61
208	23963EC	PPC I-BEAM TYPE HN 36-49	LF	953	$572.00	$600.00	0.06	1
209	50003	ELECTRICAL	LS	1	$572.00	571800	0.06	1
210	26206ED	RAILROAD GATE ARM ASSEMBLY	EACH	2	$570.00	285233	0.05	1
211	14004	W DIRECTIONAL BORE	LF	2,261	$568.00	$251.32	0.05	5
212	6490	CLASS A CONCRETE FOR SIGNS	CUYD	239	$568.00	$2,375.87	0.05	13
213	2701	TEMP SILT FENCE	LF	202,295	$566.00	$2.80	0.05	61
214	24692EC	DECK DRAIN RETROFIT	EACH	163	$562.00	$3,450.06	0.05	6
215	6568	PAVE MARKING-THERMO STOP BAR-24IN	LF	43,758	$562.00	$12.85	0.05	259
216	2381	REMOVE GUARDRAIL	LF	155,516	$560.00	$3.60	0.05	62
217	8661	PRECAST PC BOX BEAM CB12-48	LF	1,495	$549.00	$367.19	0.05	7
218	24083EC	FLOOR BEAM REPAIR	EACH	86	$546.00	$6,350.00	0.05	1
219	6574	PAVE MARKING-THERMO CURV ARROW	EACH	4,435	$545.00	$122.97	0.05	157
220	26229EC	PILES-STEEL W21 X 101	LF	2,998	$540.00	$180.00	0.05	1
221	6406	SBM ALUM SHEET SIGNS .080 IN	SQFT	11,822	$536.00	$45.31	0.05	34
222	26235ED	CURB BOX INLET TYPE F MODIFIED	EACH	152	$532.00	$3,500.00	0.05	1
223	3011	PRECAST CONC BOX SECT 6 X 4	LF	316	$532.00	$1,683.23	0.05	2
224	980	SLOTTED DRAIN PIPE-12 IN	LF	1,645	$528.00	$321.19	0.05	6
225	24982EC	CONCRETE COATING	LS	11	$526.00	47820.41	0.05	11
226	8101	CONCRETE-CLASS A MOD	CUYD	1,247	$520.00	$417.19	0.05	3
227	4761	LIGHTING CONTROL EQUIPMENT	EACH	18	$520.00	28891.44	0.05	12
228	2655	CROSSOVER	LS	3	$520.00	173333.3	0.05	3
229	528	STORM SEWER PIPE-36 IN	LF	2,622	$519.00	$198.07	0.05	8
230	25075EC	QUEUE PROTECTION VEHICLE	HOUR	5,588	$512.00	$91.64	0.05	7
231	14009	W ENCASEMENT STEEL BORED RANGE 4	LF	494	$508.00	$1,027.94	0.05	2
232	526	STORM SEWER PIPE-30 IN	LF	3,171	$503.00	$158.54	0.05	9
233	440	ENTRANCE PIPE-15 IN	LF	5,892	$502.00	$85.12	0.05	27
234	8002	STRUCTURE EXCAV-SOLID ROCK	CUYD	4,312	$488.00	$113.19	0.05	30
235	8020	CRUSHED AGGREGATE SLOPE PROT	TON	9,815	$488.00	$49.69	0.05	8
236	24964EC	FINE MILLING	SQYD	359,610	$485.00	$1.35	0.05	11
237	24958EC	MICROSURFACING-SURFACE COURSE - TYPE D	SQYD	129,427	$485.00	$3.75	0.05	3
238	8903	CRASH CUSHION TY VI CLASS BT TL3	EACH	61	$484.00	$7,941.89	0.05	17
239	15060	S FORCE MAIN PVC 06 INCH	LF	7,898	$484.00	$61.23	0.05	1
240	23274EN11F	TURF REINFORCEMENT MAT 1	SQYD	44,259	$484.00	$10.93	0.05	16
241	6405	SBM ALUMINUM PANEL SIGNS	SQFT	12,688	$476.00	$37.51	0.05	4
242	21415ND	EROSION CONTROL	LS	46	$475.00	10333.1	0.05	46
243	26138EC	QUEUE WARNING PORTABLE RADAR SENSORS	MONT	893	$471.00	$527.26	0.05	11
244	22664EN	WATER BLASTING EXISTING STRIPE	LF	809,374	$459.00	$0.57	0.04	31
245	1921	STANDARD BARRIER MEDIAN TYPE 4	SQYD	4,652	$453.00	$97.35	0.04	6
246	15092	S MANHOLE	EACH	68	$451.00	$6,625.38	0.04	7
247	20	TRAFFIC BOUND BASE	TON	8,285	$445.00	$53.73	0.04	25
248	21288ND	CONC MEDIAN BARRIER TYPE 12C2-50 IN	LF	4,532	$444.00	$98.00	0.04	1
249	3298	EXPAN JOINT REPLACE 4 IN	LF	631	$443.00	$701.17	0.04	6
250	6557	PAVE STRIPING-DUR TY 1-6 IN Y	LF	52,850	$441.00	$8.35	0.04	31
251	23158ES505	DETECTABLE WARNINGS	SQFT	8,630	$437.00	$50.69	0.04	53
252	8170	SHEAR CONNECTORS	LS	8	$435.00	54412.13	0.04	8
253	2572	QUALITY CONTROL	LS	12	$435.00	36250	0.04	12
254	24665EX	RAILROAD COORDINATION	LS	3	$433.00	144497	0.04	3
255	2604	FABRIC-GEOTEXTILE CLASS 1A	SQYD	122,499	$433.00	$3.54	0.04	17

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
256	24863EC	PVC FOLD AND FORM PIPE LINER-24 IN	LF	2,445	$433.00	$177.23	0.04	3
257	4701	POLE 40 FT MTG HT	EACH	163	$430.00	$2,636.77	0.04	9
258	5964	MAINTENANCE FERTILIZER	TON	281	$427.00	$1,521.52	0.04	63
259	3300	ELIMINATE TRANSVERSE JOINT	LF	790	$427.00	$539.90	0.04	7
260	6556	PAVE STRIPING-DUR TY 1-6 IN W	LF	50,167	$422.00	$8.41	0.04	31
261	2091	REMOVE PAVEMENT	SQYD	40,294	$421.00	$10.46	0.04	29
262	5963	INITIAL FERTILIZER	TON	292	$419.00	$1,431.34	0.04	58
263	20092ES611	PRECAST CONCRETE BOX CULVERT	LF	160	$413.00	$2,580.00	0.04	1
264	15018	S ENCASEMENT STEEL BORED RANGE 5	LF	380	$410.00	$1,080.00	0.04	1
265	6551	PAVE STRIPING-TEMP REM TAPE-Y	LF	165,205	$408.00	$2.47	0.04	27
266	1825	ISLAND CURB AND GUTTER	LF	10,363	$408.00	$39.33	0.04	4
267	2654	TRUCK MOUNTED ATTENUATOR	EACH	9	$403.00	44728.28	0.04	4
268	6613	INLAID PAVEMENT MARKER-B W/R	EACH	13,817	$401.00	$29.01	0.04	13
269	21370ED	LONGITUDINAL SAW CUT- 6 IN	LF	94,204	$396.00	$4.20	0.04	3
270	24695ED	BOX CULVERT HEADWALL	EACH	16	$394.00	24650	0.04	3
271	23071EN	OVERBAND CRACK SEALING	LB	212,970	$394.00	$1.85	0.04	20
272	5992	AGRICULTURAL LIMESTONE	TON	3,913	$388.00	$99.06	0.04	59
273	24001EC	DRILLED SHAFT-78 IN COMMON	LF	175	$387.00	$2,210.00	0.04	1
274	24862EC	PVC FOLD AND FORM PIPE LINER-18 IN	LF	2,983	$383.00	$128.51	0.04	2
275	20696ES403	CL2 ASPH BASE 1.00D PG76-22	TON	3,641	$383.00	$105.25	0.04	3
276	441	ENTRANCE PIPE-18 IN	LF	3,291	$383.00	$116.43	0.04	17
277	2220	FLOWABLE FILL	CUYD	1,121	$376.00	$335.56	0.04	6
278	4740	POLE BASE	EACH	197	$372.00	$1,886.87	0.04	12
279	26136EC	PORTABLE QUEUE WARNING ALERT SYSTEM	MONT	136	$372.00	$2,741.79	0.04	11
280	26216EC	VOID REPAIR	EACH	192	$370.00	$1,925.00	0.04	1
281	20391NS835	ELECTRICAL JUNCTION BOX TYPE A	EACH	183	$365.00	$1,994.21	0.04	25
282	14040	W PIPE DUCTILE IRON 16 INCH	LF	1,654	$361.00	$218.42	0.03	2
283	23362ES403	CL2 ASPH SURF 0.50B PG64-22	TON	2,734	$361.00	$131.88	0.03	1
284	1917	STANDARD BARRIER MEDIAN TYPE 2	SQYD	4,143	$360.00	$86.98	0.03	4
285	15025	S ENCASEMENT STEEL OPEN CUT RANGE 6	LF	650	$359.00	$551.70	0.03	2
286	2603	FABRIC-GEOTEXTILE CLASS 2	SQYD	186,102	$355.00	$1.91	0.03	25
287	80	CRUSHED AGGREGATE SIZE NO 23	TON	9,432	$355.00	$37.68	0.03	2
288	20757ED	PAVEMENT REPAIR	SQYD	9,038	$355.00	$39.29	0.03	3
289	21969NN	BEARING REPLACEMENT	EACH	24	$353.00	14700	0.03	2
290	2391	GUARDRAIL END TREATMENT TYPE 4A	EACH	80	$353.00	$4,407.24	0.03	17
291	26221ED	WIND TIE SYSTEM REMOVAL	LS	1	$351.00	351150	0.03	1
292	469	CULVERT PIPE-42 IN	LF	1,115	$351.00	$314.64	0.03	6
293	26137EC	QUEUE WARNING PCMS	MONT	893	$348.00	$389.59	0.03	11
294	23812EC	STEEL COVER PLATE	EACH	43	$344.00	$8,000.00	0.03	1
295	24786EN	HDPE PIPE	LF	156	$343.00	$2,198.08	0.03	1
296	71	CRUSHED AGGREGATE SIZE NO 57	TON	7,672	$343.00	$44.64	0.03	7
297	15017	S ENCASEMENT STEEL BORED RANGE 4	LF	639	$341.00	$533.42	0.03	3
298	26219EC	NEOPRENE BOOT REPLACEMENT	EACH	96	$341.00	$3,550.00	0.03	1
299	8435	JACK & SUPPORT BRIDGE SPAN	LS	3	$335.00	111666.7	0.03	3
300	2607	FABRIC-GEOTEXTILE CLASS 2 FOR PIPE	SQYD	166,472	$333.00	$2.00	0.03	37
301	2488	CHANNEL LINING CLASS IV	CUYD	13,150	$333.00	$25.31	0.03	2
302	40169	MICROSURFACING-SURFACE COURSE - TYPE B	SQYD	139,229	$331.00	$2.38	0.03	1
303	20257NC	SITE PREPARATION	LS	4	$331.00	82750	0.03	4
304	23949EC	BRIDGE CLEANING & PREVENTIVE MAINTENANCE	LS	2	$330.00	165000	0.03	2
305	193	ASPHALT SCRATCH COURSE PG76-22	TON	2,708	$328.00	$120.96	0.03	1
306	24094EC	PARTIAL DEPTH PATCHING	CUYD	431	$327.00	$760.25	0.03	9
307	6583	PAVEMENT MARKER TYPE IV-B W/R	EACH	42,875	$324.00	$7.55	0.03	1
308	2998	MASONRY COATING	SQYD	32,339	$323.00	$9.99	0.03	7
309	14111	W VALVE 24 INCH	EACH	7	$318.00	45419.29	0.03	2
310	6407	SBM ALUM SHEET SIGNS .125 IN	SQFT	6,498	$318.00	$48.92	0.03	22
311	8669	PRECAST PC BOX BEAM SB21	LF	710	$317.00	$446.30	0.03	2
312	4829	PIEZOELECTRIC SENSOR	EACH	126	$314.00	$2,493.86	0.03	16
313	25099ED	DEEP BEAM BRIDGE GUARDRAIL	LF	1,123	$313.00	$279.10	0.03	6
314	340	CL2 ASPH SURF 0.38D PG76-22	TON	2,443	$313.00	$128.00	0.03	1
315	26162EC	DURABLE WATERBORNE MARKING-12 IN W	MILE	84	$311.00	$3,700.00	0.03	1
316	16000	G DIRECTIONAL BORE	LF	2,133	$309.00	$145.00	0.03	1
317	4895	LOOP SAW SLOT AND FILL	LF	23,462	$308.00	$13.14	0.03	32
318	15570	S MANHOLE INST	EACH	22	$306.00	13915	0.03	1
319	21543EN	BORE AND JACK CONDUIT	LF	14,047	$306.00	$21.76	0.03	13
320	23138EN	RETROREFLECTOMETER	EACH	10	$305.00	30500	0.03	4
321	1010	NON-PERFORATED PIPE-4 IN	LF	14,264	$305.00	$21.35	0.03	29
322	2653	LANE CLOSURE	EACH	66	$303.00	$4,589.73	0.03	16
323	468	CULVERT PIPE-36 IN	LF	1,305	$302.00	$231.43	0.03	12
324	8301	REMOVE SUPERSTRUCTURE	LS	3	$301.00	100387	0.03	3
325	1811	STANDARD CURB AND GUTTER MOD	LF	4,935	$300.00	$60.83	0.03	6
326	23126EN	BORE AND JACK PIPE-18 IN	LF	461	$300.00	$650.85	0.03	3
327	8709	BRIDGE CHAIN LINK FENCE-7 FT	LF	1,340	$300.00	$223.59	0.03	3
328	21596ND	GMSS TYPE D	EACH	438	$299.00	$682.86	0.03	17
329	21421ED	DRILLED SHAFT-60 IN (SOLID ROCK)	LF	133	$296.00	$2,225.38	0.03	3
330	2775	ARROW PANEL	EACH	312	$294.00	$943.89	0.03	115
331	24865EC	PVC FOLD AND FORM PIPE LINER-36 IN	LF	1,095	$294.00	$268.85	0.03	2
332	6441	GMSS GALV STEEL TYPE C	LB	33,100	$294.00	$8.87	0.03	3
333	6612	INLAID PAVEMENT MARKER-BY	EACH	7,682	$293.00	$38.14	0.03	21
334	1691	FLUME INLET TYPE 2	EACH	42	$293.00	$6,972.79	0.03	12
335	2371	GUARDRAIL END TREATMENT TYPE 7	EACH	142	$290.00	$2,043.21	0.03	35
336	16017	G PIPE POLYETHYLENE/PLASTIC 04 INCH	LF	5,427	$289.00	$53.24	0.03	2
337	2399	EXTRA LENGTH GUARDRAIL POST	EACH	2,408	$287.00	$119.35	0.03	14
338	2261	FENCE-WOVEN WIRE	LF	37,716	$283.00	$7.51	0.03	2
339	1480	CURB BOX INLET TYPE B	EACH	39	$283.00	$7,259.51	0.03	9
340	21679EN	FIBERGLASS DRAIN PIPE	LF	2,262	$281.00	$124.17	0.03	2
341	26236EC	THRIE BEAM BULLNOSE TERMINAL	EACH	10	$281.00	28068.72	0.03	2

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342	24409EC	DRILL HOLES IN STEEL MEMBERS	EACH	190	$275.00	$1,444.74	0.03	4
343	1204	PIPE CULVERT HEADWALL-18 IN	EACH	108	$273.00	$2,524.96	0.03	26
344	25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	LF	1,202	$271.00	$225.34	0.03	4
345	6546	PAVE STRIPING-THERMO-12 IN W	LF	81,587	$268.00	$3.29	0.03	48
346	24814EC	PIPELINE INSPECTION	LF	98,600	$268.00	$2.72	0.03	31
347	14108	W VALVE 12 INCH	EACH	49	$266.00	$5,434.90	0.03	5
348	2429	RIGHT-OF-WAY MONUMENT TYPE 1	EACH	1,266	$264.00	$208.32	0.03	49
349	2159	TEMP DITCH	LF	214,317	$262.00	$1.22	0.03	55
350	3236	CRIBBING	SQFT	15,458	$262.00	$16.95	0.03	7
351	1459	CURB BOX INLET TYPE A MOD	EACH	45	$258.00	$5,724.40	0.02	3
352	24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	SF	23,580,709	$257.00	$0.01	0.02	8
353	2704	SILT TRAP TYPE B	EACH	1,682	$256.00	$152.44	0.02	59
354	6565	PAVE MARKING-THERMO X-WALK-6 IN	LF	57,663	$255.00	$4.43	0.02	47
355	2703	SILT TRAP TYPE A	EACH	1,479	$251.00	$169.93	0.02	55
356	15061	S FORCE MAIN PVC 08 INCH	LF	2,795	$250.00	$89.34	0.02	2
357	14014	W ENCASEMENT STEEL OPEN CUT RANGE 3	LF	1,344	$249.00	$185.34	0.02	6
358	20458ES403	CENTERLINE RUMBLE STRIPS	LF	972,055	$248.00	$0.26	0.02	56
359	15104	S PIPE DUCTILE IRON 08 INCH	LF	465	$248.00	$532.99	0.02	3
360	2705	SILT TRAP TYPE C	EACH	1,460	$247.00	$168.99	0.02	56
361	24679ED	PAVE MARK THERMO CHEVRON	SQFT	36,001	$246.00	$6.84	0.02	26
362	2262	FENCE-WOVEN WIRE TYPE 1	LF	26,168	$246.00	$9.40	0.02	6
363	466	CULVERT PIPE-30 IN	LF	1,504	$246.00	$163.54	0.02	10
364	6549	PAVE STRIPING-TEMP REM TAPE-B	LF	91,750	$246.00	$2.68	0.02	20
365	22883EN	CONCRETE WEDGE CURB	LF	13,298	$245.00	$18.43	0.02	7
366	15118	S PIPE SPECIAL	LF	1,186	$244.00	$206.00	0.02	1
367	24132EC	TIMBER LAGGING	SQFT	12,543	$238.00	$19.00	0.02	1
368	2696	SHOULDER RUMBLE STRIPS	LF	853,650	$238.00	$0.28	0.02	31
369	8668	PRECAST PC BOX BEAM SB17	LF	505	$236.00	$466.64	0.02	1
370	24681EC	CONSTRUCT DECORATIVE WALL	LS	1	$235.00	235000	0.02	1
371	20746ED	ROCK CORINGS	LF	1,788	$234.00	$130.68	0.02	11
372	20509ED	BLOW UP/RELIEF JOINT	SQYD	945	$233.00	$246.58	0.02	1
373	15011	S DIRECTIONAL BORE	LF	2,634	$232.00	$88.22	0.02	1
374	23386EC	JOINT SEAL REPLACEMENT	LF	1,743	$230.00	$131.77	0.02	4
375	23813EC	DECK DRAIN	EACH	126	$229.00	$1,815.74	0.02	10
376	4881	MAST ARM POLE	EACH	4	$228.00	56960	0.02	1
377	2898	RELOCATE CRASH CUSHION	EACH	65	$221.00	$3,404.39	0.02	16
378	26218EC	GREASE REPLACEMENT	EACH	192	$221.00	$1,150.00	0.02	1
379	3234	RAILROAD RAILS-DRILLED	LF	9,555	$220.00	$23.04	0.02	3
380	23594EC	HEAT STRAIGHTENING	LS	2	$220.00	110000	0.02	2
381	24908EC	INSTALL SIGNAL CONTROLLER-TY ATC	EACH	22	$219.00	$9,972.69	0.02	12
382	20602EC	LIGHTWEIGHT FILL	CUYD	936	$219.00	$234.38	0.02	1
383	22668EN	DIRECTIONAL BORE	LF	1,450	$218.00	$150.00	0.02	1
384	8141	MECHANICAL REINF COUPLER #6 EPOXY COATED	EACH	3,019	$217.00	$71.89	0.02	6
385	20166ES810	TEMPORARY PIPE	LF	1,596	$216.00	$135.40	0.02	8
386	24981EC	BRIDGE CLEANING	LS	9	$214.00	23722.22	0.02	9
387	20914ED	ROLLED CURB AND GUTTER	LF	9,053	$213.00	$23.54	0.02	2
388	26228EC	ELECTRONIC DELIVERY MGMT SYSTEM	LS	203	$212.00	$1,043.00	0.02	203
389	1005	PERFORATED PIPE EDGE DRAIN-4 IN	LF	23,205	$210.00	$9.05	0.02	4
390	1615	CONC MED BARR BOX INLET TY 14B2	EACH	16	$210.00	13112.5	0.02	1
391	4933	TEMP SIGNAL 2 PHASE	EACH	33	$209.00	$6,337.61	0.02	16
392	26141EC	GALVANIC ANODE	EACH	3,294	$208.00	$63.05	0.02	3
393	2397	TEMP GUARDRAIL	LF	9,582	$208.00	$21.67	0.02	6
394	3016	PRECAST CONC BOX SECT 8 X 4	LF	90	$206.00	$2,285.00	0.02	1
395	4935	TEMP SIGNAL	LS	5	$196.00	39258.14	0.02	5
396	4712	POLE 100 FT MTG HT HIGH MAST	EACH	4	$196.00	49000	0.02	1
397	23060EN	PRECAST CONCRETE ARCH CULVERT	LF	40	$196.00	$4,895.00	0.02	1
398	24275EC	ELIMINATE LONGITUDINAL JOINT	LF	303	$194.00	$640.70	0.02	2
399	26205ED	PRECAST PANEL RAILROAD CROSSING	LS	1	$193.00	193202	0.02	1
400	461	CULVERT PIPE-15 IN	LF	1,516	$192.00	$126.97	0.02	11
401	2742	TRAINEE PAYMENT REIMBURSEMENT	HOUR	8,400	$192.00	$22.83	0.02	5
402	6600	REMOVE PAVEMENT MARKER TYPE V	EACH	22,157	$192.00	$8.65	0.02	52
403	24880EC	REMOVE PAVEMENT MARKER	EACH	18,888	$191.00	$10.09	0.02	42
404	14003	W CAP EXISTING MAIN	EACH	76	$191.00	$2,506.97	0.02	10
405	21420ED	DRILLED SHAFT-66 IN (COMMON)	LF	90	$189.00	$2,100.00	0.02	2
406	5	GEOGRID REINFORCEMENT FOR SUBGRADE	SQYD	87,014	$189.00	$2.17	0.02	2
407	4750	TRANSFORMER BASE	EACH	180	$188.00	$1,046.73	0.02	10
408	3296	EXPAN JOINT REPLACE 2 1/2 IN	LF	239	$187.00	$781.03	0.02	2
409	24749EC	HIGH MAST LED LUMINAIRE	EACH	79	$186.00	$2,349.49	0.02	2
410	1450	S & F BOX INLET-OUTLET-18 IN	EACH	51	$184.00	$3,602.05	0.02	11
411	15153	S MANHOLE OVERSIZE	EACH	9	$182.00	20220	0.02	1
412	14047	W PIPE DCTL IRON RSTRND JOINT 06 IN	LF	867	$182.00	$209.55	0.02	2
413	6481	OSS GALV STEEL 90 FT TRUSS	EACH	1	$181.00	181146.8	0.02	1
414	2555	CONCRETE-CLASS B	CUYD	357	$181.00	$506.87	0.02	9
415	1208	PIPE CULVERT HEADWALL-24 IN	EACH	69	$180.00	$2,610.16	0.02	18
416	14036	W PIPE DUCTILE IRON 06 INCH	LF	1,303	$179.00	$137.44	0.02	5
417	15000	S BYPASS PUMPING	EACH	9	$178.00	19782.2	0.02	5
418	8018	RETAINING WALL	SQFT	2,235	$178.00	$79.55	0.02	2
419	24589ED	LED LUMINAIRE	EACH	183	$177.00	$968.35	0.02	11
420	14105	W VALVE 06 INCH	EACH	70	$176.00	$2,513.72	0.02	10
421	24582EN	PRECAST PC I BEAM-HN 72-49	LF	147	$176.00	$1,200.00	0.02	1
422	6566	PAVE MARKING-THERMO X-WALK-12 IN	LF	29,275	$176.00	$6.00	0.02	31
423	1451	S & F BOX INLET-OUTLET-24 IN	EACH	38	$175.00	$4,608.69	0.02	10
424	8549	BLAST CLEANING	SQYD	21,092	$174.00	$8.27	0.02	8
425	8050	PILES-STEEL HP14X73	LF	1,587	$173.00	$108.95	0.02	1
426	23849EC	BICYCLE RAIL	LF	871	$171.00	$196.00	0.02	1
427	20410ED	MAINTAIN LIGHTING	LS	2	$170.00	85000	0.02	2

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
428	15021	S ENCASEMENT STEEL OPEN CUT RANGE 2	LF	885	$169.00	$190.79	0.02	1
429	21741NC	MAINTAIN & CONTROL TRAFFIC	EACH	89	$167.00	$1,877.81	0.02	3
430	69	CRUSHED AGGREGATE SIZE NO 3	TON	4,735	$166.00	$35.00	0.02	1
431	1028	PERF PIPE HEADWALL TY 3-4 IN	EACH	179	$166.00	$925.66	0.02	19
432	2237	DITCHING	LF	25,906	$165.00	$6.35	0.02	6
433	471	CULVERT PIPE-54 IN	LF	582	$163.00	$280.67	0.02	3
434	15113	S PIPE PVC 10 INCH	LF	1,530	$162.00	$105.81	0.02	2
435	26212EC	SECANT SHAFTS WITH LIGHTWEIGHT CONCRETE	LF	237	$161.00	$680.00	0.02	1
436	1544	DROP BOX INLET TYPE 11	EACH	34	$161.00	$4,729.38	0.02	5
437	2233	SPECIAL EMBANKMENT	CUYD	80,000	$160.00	$2.00	0.02	1
438	24423EC	TEMPORARY SHORING	LS	1	$160.00	160000	0.02	1
439	14089	W TAPPING SLEEVE AND VALVE SIZE 1	EACH	21	$159.00	$7,592.18	0.02	4
440	24025EC	PIPE CULVERT HEADWALL-72 IN	EACH	5	$159.00	31773.46	0.02	3
441	1433	SLOPED BOX OUTLET TYPE 1-18 IN	EACH	35	$158.00	$4,509.42	0.02	6
442	15026	S FORCE MAIN AIR RLS/VAC VLV 02 IN	EACH	26	$156.00	$5,992.92	0.01	2
443	20550ND	SAWCUT PAVEMENT	LF	49,513	$156.00	$3.14	0.01	26
444	15016	S ENCASEMENT STEEL BORED RANGE 3	LF	170	$156.00	$915.00	0.01	1
445	14015	W ENCASEMENT STEEL OPEN CUT RANGE 4	LF	754	$156.00	$206.27	0.01	3
446	26131ED	SLOPED AND MITERED HEADWALL-18 IN	EACH	47	$155.00	$3,304.26	0.01	5
447	6610	INLAID PAVEMENT MARKER-MW	EACH	4,076	$155.00	$37.97	0.01	22
448	8053	PILES-STEEL HP14X102	LF	579	$153.00	$264.00	0.01	1
449	443	ENTRANCE PIPE-24 IN	LF	1,165	$153.00	$131.11	0.01	11
450	20465EC	CLEAN CULVERT	LS	4	$151.00	37750	0.01	4
451	1740	CORED HOLE DRAINAGE BOX CON-4 IN	EACH	718	$151.00	$210.22	0.01	14
452	1875	STANDARD HEADER CURB	LF	3,997	$151.00	$37.73	0.01	7
453	6401	FLEXIBLE DELINEATOR POST-M/W	EACH	2,205	$151.00	$68.31	0.01	10
454	24884ED	PERMANENT STEEL CASING	LF	312	$150.00	$480.77	0.01	2
455	23157EN	TRAFFIC SIGNAL POLE BASE	CUYD	391	$150.00	$383.09	0.01	14
456	14094	W TIE-IN 06 INCH	EACH	43	$149.00	$3,460.70	0.01	10
457	20814EC	MICROSURFACING-SURFACE COURSE - TYPE A	SQYD	16,706	$148.00	$8.85	0.01	1
458	14057	W PIPE PVC 03 INCH	LF	3,619	$147.00	$40.70	0.01	2
459	309	CL2 ASPH SURF 0.50D PG64-22	TON	1,389	$146.00	$105.07	0.01	2
460	1020	PERF PIPE HEADWALL TY 1-4 IN	EACH	166	$145.00	$875.08	0.01	15
461	529	STORM SEWER PIPE-42 IN	LF	820	$145.00	$176.86	0.01	2
462	8901	CRASH CUSHION TY VI CLASS BT TL2	EACH	18	$144.00	$8,016.70	0.01	8
463	25015EC	FRP WRAP	SQFT	633	$142.00	$225.00	0.01	1
464	24422EC	FLOOR BEAM RETROFIT	EACH	20	$142.00	$7,100.00	0.01	1
465	1581	DROP BOX INLET TYPE 16G	EACH	22	$142.00	$6,443.18	0.01	4
466	6411	STEEL POST TYPE 2	LF	4,123	$140.00	$33.84	0.01	8
467	2070	JPC PAVEMENT-12 IN	SQYD	996	$139.00	$139.50	0.01	1
468	20591EC	REMOVE BARRIER	LF	5,801	$139.00	$23.89	0.01	3
469	191	ASPHALT SCRATCH COURSE PG64-22	TON	1,420	$137.00	$96.27	0.01	2
470	470	CULVERT PIPE-48 IN	LF	616	$136.00	$220.70	0.01	5
471	3018	PRECAST CONC BOX SECT 8 X 6	LF	75	$135.00	$1,800.00	0.01	1
472	14017	W ENCASEMENT STEEL OPEN CUT RANGE 6	LF	337	$135.00	$399.65	0.01	1
473	23539EC	BRIDGE RAIL	LF	531	$134.00	$251.65	0.01	3
474	15015	S ENCASEMENT STEEL BORED RANGE 2	LF	222	$132.00	$595.00	0.01	1
475	24955ED	REMOVE SIGNAL EQUIPMENT	EACH	30	$131.00	$4,382.42	0.01	16
476	474	CULVERT PIPE-72 IN	LF	238	$130.00	$545.65	0.01	4
477	8551	MACHINE PREP OF SLAB	SQYD	7,581	$130.00	$17.13	0.01	5
478	1032	PERF PIPE HEADWALL TY 4-4 IN	EACH	212	$130.00	$612.16	0.01	11
479	24845EC	UTILITY COORDINATION	LS	4	$129.00	32345.87	0.01	4
480	14182	W METER 5/8 INCH	EACH	62	$128.00	$2,065.00	0.01	1
481	24631EC	BARCODE SIGN INVENTORY	EACH	2,791	$127.00	$45.68	0.01	42
482	14062	W PIPE PVC 12 INCH	LF	339	$127.00	$375.00	0.01	1
483	1568	DROP BOX INLET TYPE 13S	EACH	17	$127.00	$7,466.70	0.01	4
484	14080	W SERV PE/PLST LONG SIDE 3/4 IN	EACH	23	$126.00	$5,493.26	0.01	5
485	530	STORM SEWER PIPE-48 IN	LF	391	$126.00	$322.60	0.01	1
486	24186EC	BORE AND JACK PIPE-36 IN	LF	143	$126.00	$880.00	0.01	1
487	5997	TOPSOIL FURNISHED AND PLACED	CUYD	1,454	$125.00	$86.04	0.01	3
488	15089	S LATERAL SHORT SIDE 04 INCH	EACH	35	$123.00	$3,527.68	0.01	4
489	2432	WITNESS POST	EACH	625	$122.00	$195.20	0.01	53
490	2107	BREAKING AND SEATING PAVEMENT	SQYD	93,566	$122.00	$1.30	0.01	1
491	8526	CONC CLASS M FULL DEPTH PATCH	CUYD	104	$121.00	$1,166.29	0.01	8
492	1923	STANDARD BARRIER MEDIAN TYPE 5	SQYD	827	$121.00	$146.40	0.01	1
493	24801EC	IMPERMEABLE DETENTION BASIN LINING	SQYD	9,790	$120.00	$12.27	0.01	2
494	2014	BARRICADE-TYPE III	EACH	521	$120.00	$230.40	0.01	65
495	22680EN	QWICK CURB MEDIAN SEPARATOR	LF	1,018	$118.00	$115.89	0.01	4
496	1496	DROP BOX INLET TYPE 3	EACH	20	$118.00	$5,896.64	0.01	11
497	14007	W ENCASEMENT STEEL BORED RANGE 2	LF	347	$116.00	$335.57	0.01	2
498	3010	PRECAST CONC BOX SECT 6 X 5	LF	72	$115.00	$1,600.00	0.01	1
499	1490	DROP BOX INLET TYPE 1	EACH	20	$115.00	$5,753.47	0.01	11
500	23298EC	STEEL REPAIR	LS	1	$115.00	115000	0.01	1
501	22880ED	BARRIER WALL TRANSITION	LF	200	$113.00	$563.63	0.01	2
502	24900EC	PVC CONDUIT-1 1/4 IN-SCHEDULE 80	LF	21,758	$113.00	$5.17	0.01	13
503	2369	GUARDRAIL END TREATMENT TYPE 2A	EACH	81	$112.00	$1,378.81	0.01	16
504	2355	GUARDRAIL-STEEL W BEAM-S FACE A	LF	1,390	$110.00	$79.37	0.01	13
505	1577	DROP BOX INLET TYPE 14	EACH	40	$110.00	$2,750.00	0.01	2
506	23952EC	DRAINAGE JUNCTION BOX TY B	EACH	21	$109.00	$5,187.29	0.01	7
507	23249EC	DRILLED SHAFT-72 IN COMMON	LF	25	$109.00	$4,400.00	0.01	1
508	6201	OSS GALV STEEL CANTILEVER MOD	EACH	1	$108.00	107977.7	0.01	1
509	14090	W TAPPING SLEEVE AND VALVE SIZE 2	EACH	4	$108.00	26964.69	0.01	2
510	14077	W SERV PE/PLST LONG SIDE 1 IN	EACH	15	$108.00	$7,187.03	0.01	5
511	2352	GUARDRAIL-STEEL W BEAM-D FACE	LF	1,863	$107.00	$57.67	0.01	3
512	4797	CONDUIT-3 IN	LF	4,028	$107.00	$26.66	0.01	4
513	24404EC	MECHANICAL REINF COUPLER-#7 EPOXY COATED	EACH	868	$106.00	$122.00	0.01	1

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514	23000EX	DRILLED SHAFT-66 IN (ROCK)	LF	22	$106.00	$4,800.00	0.01	1
515	24878EC	ASPHALT EMULSION FOR FOG SEAL	TON	102	$104.00	$1,019.52	0.01	8
516	23778EC	WIRE-NO. 10	LF	85,415	$104.00	$1.22	0.01	7
517	1212	PIPE CULVERT HEADWALL-36 IN	EACH	25	$104.00	$4,161.84	0.01	11
518	14000	W AIR RELEASE VALVE 1 INCH	EACH	21	$104.00	$4,940.54	0.01	4
519	2700	SAND	TON	1,036	$104.00	$100.00	0.01	1
520	1626	CONC MED BARR BOX INLET TY A2 TL5 56	EACH	6	$102.00	16982.18	0.01	2
521	1210	PIPE CULVERT HEADWALL-30 IN	EACH	33	$102.00	$3,085.52	0.01	12
522	5989	SPECIAL SEEDING CROWN VETCH	SQYD	332,046	$101.00	$0.31	0.01	3
523	1767	MANHOLE TYPE C	EACH	9	$101.00	11255.37	0.01	3
524	1559	DROP BOX INLET TYPE 13G	EACH	16	$101.00	$6,319.24	0.01	5
525	23979EC	CRASH CUSHION TY VI CLASS C TL3	EACH	2	$101.00	50480.41	0.01	2
526	23967EC	ASPHALT DRIVEWAY/PARKING LOT REPLACEMENT	LF	1,060	$101.00	$95.00	0.01	1
527	20392NS835	ELECTRICAL JUNCTION BOX TYPE C	EACH	25	$101.00	$4,023.84	0.01	3
528	3247	REPAIR BLOWUP	SQYD	261	$100.00	$384.87	0.01	2
529	2707	CLEAN SILT TRAP TYPE B	EACH	2,775	$99.00	$35.84	0.01	57
530	24470ED	PERMEABLE PAVEMENT DRAIN	SQYD	187	$99.00	$531.32	0.01	1
531	15023	S ENCASEMENT STEEL OPEN CUT RANGE 4	LF	428	$99.00	$232.07	0.01	2
532	24902EC	PVC CONDUIT-3 IN-SCHEDULE 80	LF	6,189	$98.00	$15.91	0.01	4
533	20362ES403	SHOULDER RUMBLE STRIPS-SAWED	LF	447,292	$98.00	$0.22	0.01	8
534	6547	PAVE STRIPING-THERMO-12 IN Y	LF	14,980	$97.00	$6.48	0.01	33
535	20209EP69	GRANULAR PILE CORE	CUYD	2,144	$97.00	$45.24	0.01	1
536	14061	W PIPE PVC 10 INCH	LF	916	$95.00	$104.00	0.01	1
537	3293	EXPAN JOINT REPLACE 1 IN	LF	181	$95.00	$522.32	0.01	2
538	1015	INSPECT & CERTIFY EDGE DRAIN SYSTEM	LS	12	$94.00	$7,854.49	0.01	12
539	26233EC	MOBILIZATION FOR CONCRETE SURF TREATMENT	LS	30	$94.00	$3,129.33	0.01	30
540	83	CRUSHED AGGREGATE SIZE NO 8	TON	897	$94.00	$104.50	0.01	1
541	4780	FUSED CONNECTOR KIT	EACH	506	$93.00	$184.45	0.01	12
542	2015	CEMENT CONCRETE ISLAND	SQYD	1,985	$93.00	$46.95	0.01	1
543	14079	W SERV PE/PLST LONG SIDE 2 IN	EACH	11	$93.00	$8,456.82	0.01	2
544	24864EC	PVC FOLD AND FORM PIPE LINER-30 IN	LF	321	$93.00	$289.16	0.01	2
545	2702	SAND FOR BLOTTER	TON	2,997	$93.00	$30.95	0.01	10
546	20745ED	ROCK SOUNDINGS	LF	1,031	$93.00	$89.86	0.01	11
547	14085	W SERV PE/PLST SHORT SIDE 3/4 IN	EACH	98	$92.00	$943.84	0.01	6
548	24707ED	CABLE BARRIER SYSTEM REMOVE & RESTORE	LS	2	$92.00	46028.41	0.01	2
549	20188NS835	INSTALL LED SIGNAL-3 SECTION	EACH	185	$92.00	$496.56	0.01	14
550	21321NC	CSL TESTING (4 TUBES)	EACH	20	$92.00	$4,585.00	0.01	3
551	22885EN	DRILLED SHAFT-72 IN-ROCK	LF	48	$91.00	$1,890.00	0.01	1
552	15059	S FORCE MAIN PVC 04 INCH	LF	1,654	$90.00	$54.47	0.01	3
553	2365	CRASH CUSHION TYPE IX-A	EACH	6	$89.00	14903.61	0.01	2
554	16009	G ENCASEMENT STEEL OPEN CUT RANGE 2	LF	558	$89.00	$160.00	0.01	1
555	26176ED	CONC MEDIAN BARRIER TYPE 12C2-42 IN	LF	450	$89.00	$198.15	0.01	1
556	24896ED	RAIL SYSTEM TYPE T631	LF	569	$88.00	$155.34	0.01	2
557	24901EC	PVC CONDUIT-2 IN-SCHEDULE 80	LF	13,722	$88.00	$6.43	0.01	13
558	8504	EPOXY SAND SLURRY	SQYD	2,547	$88.00	$34.59	0.01	8
559	20637ED	DRILLED SHAFT-ROCK 48 IN	LF	40	$88.00	$2,200.00	0.01	1
560	8094	PILE POINTS-12 IN	EACH	490	$88.00	$178.75	0.01	26
561	6584	PAVEMENT MARKER TYPE IV-B Y/R	EACH	11,520	$87.00	$7.55	0.01	1
562	20738NS112	TEMP CRASH CUSHION	EACH	20	$87.00	$4,327.74	0.01	9
563	14051	W PIPE DCTL IRON RSTRND JOINT 16 IN	LF	260	$86.00	$332.00	0.01	1
564	8001	STRUCTURE EXCAVATION-COMMON	CUYD	1,421	$86.00	$60.20	0.01	6
565	24683ED	PAVE MARKING-THERMO DOTTED LANE EXTEN	LF	16,621	$85.00	$5.14	0.01	32
566	20394ES835	PVC CONDUIT-3 IN- IN MEDIAN BARRIER WALL	LF	4,260	$85.00	$20.00	0.01	1
567	20544NC	JACK AND SUPPORT BEAM ENDS	EACH	4	$85.00	21250	0.01	1
568	26214EC	STAY CABLE FREE LENGTH REPAIR	EACH	4	$85.00	21250	0.01	1
569	2165	REMOVE PAVED DITCH	SQYD	12,760	$85.00	$6.64	0.01	7
570	4834	WIRE-NO. 6	LF	47,390	$84.00	$1.77	0.01	5
571	26132ED	SLOPED AND MITERED HEADWALL-24 IN	EACH	21	$83.00	$3,969.32	0.01	4
572	14145	W SERV COPPER LONG SIDE 1 IN	EACH	17	$83.00	$4,901.76	0.01	2
573	4830	LOOP WIRE	LF	95,057	$83.00	$0.87	0.01	31
574	26213EC	SOIL GROUTING	CUYD	33	$83.00	$2,500.00	0.01	1
575	25079ED	THRIE BEAM GUARDRAIL TRANSITION TL-2	EACH	36	$82.00	$2,274.14	0.01	10
576	15062	S FORCE MAIN PVC 10 INCH	LF	493	$82.00	$165.71	0.01	2
577	24261EC	ISLAND CURB AND GUTTER(MODIFIED)	LF	2,084	$82.00	$39.11	0.01	1
578	26120EC	INSTALL RADAR ADVANCE DETECTOR TYPE B	EACH	84	$81.00	$964.85	0.01	23
579	2610	RETAINING WALL-GABION	CUYD	264	$80.00	$304.55	0.01	2
580	4700	POLE 30 FT MTG HT	EACH	34	$79.00	$2,335.53	0.01	5
581	2160	CLEAN TEMP DITCH	LF	95,606	$79.00	$0.83	0.01	50
582	389	CL3 ASPH SURF 0.38D PG76-22	TON	684	$79.00	$115.59	0.01	2
583	20430ED	SAW CUT	LF	37,694	$79.00	$2.10	0.01	10
584	2259	FENCE-TEMP	LF	5,320	$79.00	$14.85	0.01	2
585	22417EN	DRILLED SHAFT-54 IN-COMMON	LF	34	$78.00	$2,300.00	0.01	1
586	21320NC	CSL ACCESS TUBING (6 TUBES)	EACH	20	$78.00	$3,900.00	0.01	1
587	23233EC	DYNAMIC PILE TESTING	EACH	12	$78.00	$6,473.59	0.01	3
588	2469	CLEAN SINKHOLE	EACH	17	$78.00	$4,568.73	0.01	4
589	2373	GUARDRAIL END TREATMENT TYPE 3	EACH	27	$77.00	$2,869.73	0.01	5
590	1453	S & F BOX INLET-OUTLET-36 IN	EACH	7	$77.00	10963.85	0.01	5
591	14109	W VALVE 16 INCH	EACH	5	$77.00	15344.81	0.01	2
592	15117	S PIPE PVC 24 INCH	LF	313	$77.00	$245.12	0.01	1
593	23033EN	BRIDGE BARRIER REMOVAL	LF	639	$77.00	$120.00	0.01	1
594	8902	CRASH CUSHION TY VI CLASS B TL3	EACH	2	$76.00	38160	0.01	1
595	14106	W VALVE 08 INCH	EACH	24	$76.00	$3,180.00	0.01	5
596	6400	GMSS GALV STEEL TYPE A	LB	14,109	$76.00	$5.39	0.01	3
597	4793	CONDUIT-1 1/4 IN	LF	15,250	$76.00	$4.98	0.01	32
598	1505	DROP BOX INLET TYPE 5B	EACH	10	$76.00	$7,572.86	0.01	2
599	20418ED	REMOVE & RELOCATE SIGNS	EACH	66	$75.00	$1,136.94	0.01	10

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600	14013	W ENCASEMENT STEEL OPEN CUT RANGE 2	LF	493	$75.00	$151.73	0.01	2
601	15057	S FORCE MAIN PVC 02 INCH	LF	880	$75.00	$85.00	0.01	1
602	4845	CABLE-NO. 14/7C	LF	23,575	$74.00	$3.12	0.01	11
603	15093	S MANHOLE ABANDON/REMOVE	EACH	47	$74.00	$1,565.33	0.01	7
604	8801	GUARDRAIL-STEEL W BEAM-S FACE BR	LF	259	$73.00	$282.35	0.01	3
605	8474	EXPANSION DAM-5 IN NEOPRENE	LF	81	$73.00	$900.00	0.01	1
606	8811	REMOVE BRIDGE RAIL	LF	7,200	$72.00	$10.00	0.01	1
607	1202	PIPE CULVERT HEADWALL-15 IN	EACH	43	$72.00	$1,674.26	0.01	10
608	8550	HYDRODEMOLITION	SQYD	2,242	$72.00	$32.00	0.01	1
609	3235	EXCAVATION AND BACKFILL	CUYD	693	$72.00	$103.35	0.01	3
610	1650	JUNCTION BOX	EACH	20	$71.00	$3,537.53	0.01	6
611	15102	S MANHOLE WITH LINING	EACH	5	$70.00	14067.94	0.01	1
612	14104	W VALVE 04 INCH	EACH	31	$70.00	$2,268.17	0.01	5
613	15024	S ENCASEMENT STEEL OPEN CUT RANGE 5	LF	319	$70.00	$219.54	0.01	1
614	14180	W SERV PE/PLST LONG SIDE 1-1/4 IN	EACH	10	$70.00	$7,000.00	0.01	1
615	4953	TEMP RELOCATION OF SIGNAL HEAD	EACH	189	$70.00	$369.45	0.01	8
616	2711	SEDIMENTATION BASIN	CUYD	4,649	$70.00	$15.00	0.01	1
617	24141EC	ASBESTOS CONCRETE PIPE REMOVAL	LF	3,500	$70.00	$19.86	0.01	1
618	291	EMULSIFIED ASPHALT RS-2	TON	67	$69.00	$1,038.53	0.01	5
619	6582	PAVEMENT MARKER TYPE IV-BY	EACH	9,135	$69.00	$7.55	0.01	1
620	21173EC	SAW-CLEAN-RESEAL RANDOM CRACKS	LF	11,480	$69.00	$6.00	0.01	1
621	14097	W TIE-IN 12 INCH	EACH	16	$69.00	$4,300.63	0.01	5
622	8016	REINF CONC SLOPE WALL-6 IN	SQYD	338	$68.00	$200.00	0.01	1
623	14006	W ENCASEMENT STEEL BORED RANGE 1	LF	214	$68.00	$315.70	0.01	2
624	2706	CLEAN SILT TRAP TYPE A	EACH	2,166	$67.00	$31.10	0.01	54
625	23744EC	EPOXY INJECTION CRACK REPAIR	LF	422	$67.00	$159.31	0.01	6
626	1024	PERF PIPE HEADWALL TY 2-4 IN	EACH	64	$67.00	$1,049.08	0.01	12
627	14056	W PIPE PVC 02 INCH	LF	1,394	$67.00	$48.00	0.01	1
628	14028	W METER 3/4 INCH	EACH	46	$67.00	$1,447.80	0.01	2
629	8472	EXPANSION DAM-4 IN NEOPRENE	LF	98	$66.00	$681.49	0.01	2
630	23697EC	VINYL FENCE	LF	1,327	$66.00	$50.00	0.01	1
631	16043	G TIE-IN POLYETHYLENE/PLASTIC 04 INCH	EACH	21	$66.00	$3,143.29	0.01	2
632	24810ED	SIDEWALK FLUME	EACH	6	$66.00	11000	0.01	1
633	6472	INSTALL SPAN MOUNTED SIGN	EACH	17	$66.00	$3,858.82	0.01	2
634	24969ED	LONGITUDINAL SAW CUT	LF	50,768	$65.00	$1.29	0.01	4
635	2363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH	19	$65.00	$3,437.45	0.01	4
636	24540	R/W MONUMENT TYPE 3	EACH	327	$65.00	$199.15	0.01	9
637	14093	W TIE-IN 04 INCH	EACH	21	$65.00	$3,082.03	0.01	4
638	23872EC	PAVE STRIPE-WET REF TAPE-6 IN W	LF	6,401	$65.00	$10.10	0.01	7
639	4886	MESSENGER-15400 LB	LF	8,540	$64.00	$7.55	0.01	8
640	2115	SAW-CLEAN-RESEAL TVERSE JOINT	LF	13,750	$64.00	$4.68	0.01	2
641	4725	BRACKET 15 FT	EACH	82	$64.00	$780.08	0.01	8
642	6598	PAVEMENT MARKING REMOVAL	SQFT	9,390	$64.00	$6.81	0.01	8
643	499	CULVERT PIPE-48 IN EQUIV	LF	208	$64.00	$306.36	0.01	2
644	2242	WATER	MGAL	13,927	$64.00	$4.58	0.01	45
645	223	CL3 ASPH BASE 0.75D PG64-22	TON	470	$62.00	$132.95	0.01	3
646	3295	EXPAN JOINT REPLACE 2 IN	LF	145	$62.00	$430.17	0.01	2
647	1945	MOUNTABLE MEDIAN TYPE 1A	SQYD	282	$62.00	$220.00	0.01	1
648	1432	SLOPED BOX OUTLET TYPE 1-15 IN	EACH	23	$62.00	$2,695.65	0.01	7
649	3225	TUBULAR MARKERS	EACH	725	$62.00	$85.45	0.01	5
650	8130	MECHANICAL REINF COUPLER #5	EACH	1,074	$61.00	$57.26	0.01	5
651	24798ED	DROP IN GRATE	EACH	2	$61.00	30500	0.01	1
652	2273	FENCE-4 FT CHAIN LINK	LF	1,220	$61.00	$49.86	0.01	3
653	14048	W PIPE DCTL IRON RSTRND JOINT 08 IN	LF	170	$61.00	$357.47	0.01	2
654	1939	MOUNTABLE MEDIAN TYPE 3	SQYD	572	$61.00	$106.07	0.01	2
655	24668EC	STEEL ENCASEMENT PIPE	LF	478	$61.00	$126.74	0.01	1
656	6531	PAVE STRIPING REMOVAL-6 IN	LF	103,784	$60.00	$0.58	0.01	4
657	23161EN	POLE BASE-HIGH MAST	CUYD	125	$60.00	$482.00	0.01	3
658	2625	REMOVE HEADWALL	EACH	124	$60.00	$485.51	0.01	17
659	1011	NON-PERFORATED PIPE-6 IN	LF	2,843	$60.00	$21.12	0.01	9
660	23380EC	BEARING PADS	EACH	12	$60.00	$5,000.00	0.01	1
661	24967EC	DURABLE WATERBORNE MARKING-6 IN B	MILE	30	$60.00	$2,000.00	0.01	1
662	16051	G VALVE POLYETHYLENE/PLASTIC 04 INCH	EACH	23	$60.00	$2,604.00	0.01	1
663	26198ED	TRASH RACK	SQFT	149	$59.00	$397.85	0.01	1
664	6575	PAVE MARKING-THERMO COMB ARROW	EACH	318	$59.00	$185.79	0.01	61
665	24899EC	PAVE MARKING-THERMO ELONG ROUTE SHIELD	EACH	17	$59.00	$3,464.71	0.01	2
666	21380ES719	GUARDRAIL THRIE BEAM	LF	806	$59.00	$73.02	0.01	2
667	4811	ELECTRICAL JUNCTION BOX TYPE B	EACH	57	$58.00	$1,021.33	0.01	18
668	14100	W TIE-IN 24 INCH	EACH	4	$58.00	14457.5	0.01	2
669	1312	REMOVE AND RELAY PIPE	LF	180	$58.00	$320.00	0.01	1
670	23379EC	STAMPED CONCRETE	SQYD	996	$57.00	$57.25	0.01	1
671	210	CL4 ASPH BASE 1.50D PG76-22	TON	435	$57.00	$130.00	0.01	1
672	24461ED	DRAINAGE GEOCOMPOSITE	SQYD	1,433	$55.00	$38.73	0.01	2
673	24431EC	DRAINAGE SYSTEM	EACH	1	$55.00	55000	0.01	1
674	476	CULVERT PIPE-84 IN	LF	60	$55.00	$914.16	0.01	1
675	20093NS835	INSTALL PEDESTRIAN HEAD-LED	EACH	67	$55.00	$816.31	0.01	8
676	22766ED	TRENCH DRAIN	LF	79	$55.00	$691.75	0.01	1
677	23871EC	PAVE STRIPE-WET REF TAPE-6 IN Y	LF	5,630	$55.00	$9.70	0.01	5
678	1310	REMOVE PIPE	LF	2,124	$55.00	$25.72	0.01	22
679	3262	CLEAN PIPE STRUCTURE	EACH	52	$54.00	$1,041.80	0.01	7
680	1529	DROP BOX INLET TYPE 6D	EACH	7	$54.00	$7,718.81	0.01	1
681	14133	W PRESSURE REDUCING VALVE 03 INCH	EACH	1	$54.00	53982.6	0.01	1
682	311	CL2 ASPH SURF 0.38B PG76-22	TON	435	$54.00	$123.95	0.01	1
683	24995EC	PAVE STRIPING-SPRAY THERMO-6 IN W	LF	35,880	$54.00	$1.50	0.01	1
684	24996EC	PAVE STRIPING-SPRAY THERMO-6 IN Y	LF	35,880	$54.00	$1.50	0.01	1
685	554	STORM SEWER PIPE-24 IN EQUIV	LF	236	$54.00	$228.01	0.01	1

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
686	2708	CLEAN SILT TRAP TYPE C	EACH	1,727	$53.00	$30.46	0.01	54
687	1371	METAL END SECTION TY 1-18 IN	EACH	18	$52.00	$2,906.35	0.01	4
688	23222EC	INSTALL SIGNAL PEDESTAL	EACH	13	$52.00	$4,014.49	0.01	5
689	205	CL3 ASPH BASE 1.50D PG64-22	TON	406	$52.00	$127.00	0	1
690	24963ED	LOOP TEST	EACH	83	$51.00	$618.98	0	13
691	21373ND	REMOVE SIGN	EACH	322	$50.00	$155.89	0	19
692	296	ASPHALT PRIME COAT	TON	56	$50.00	$896.80	0	5
693	25086EC	AUTOMATED SLIDE GATE	EACH	1	$50.00	50000	0	1
694	1985	DELINEATOR FOR BARRIER - YELLOW	EACH	3,749	$50.00	$13.28	0	6
695	24987EC	POLYMER ASPHALT EMULSION FOR CHIP SEAL	TON	39	$50.00	$1,275.00	0	1
696	2083	JPC PAVEMENT-10 IN SHLD	SQYD	359	$50.00	$138.50	0	1
697	8095	PILE POINTS-14 IN	EACH	228	$50.00	$217.50	0	10
698	6580	PAVEMENT MARKER TYPE IV-MW	EACH	6,523	$49.00	$7.55	0	1
699	24489EC	INLAID PAVEMENT MARKER	EACH	1,639	$49.00	$29.76	0	5
700	20748ED	SHOULDER MILLING/TRENCHING	SQYD	2,810	$49.00	$17.29	0	2
701	3269	TRIM & REMOVE TREES & BRUSH	LF	1,940	$48.00	$24.97	0	2
702	4940	REMOVE LIGHTING	LS	4	$48.00	12090.83	0	4
703	2060	PCC PAVEMENT DIAMOND GRINDING	SQYD	4,830	$48.00	$10.00	0	1
704	26145EC	4 IN CONCRETE LOAD DISTRIBUTOR	SQYD	510	$48.00	$93.76	0	1
705	2575	DITCHING AND SHOULDERING	LF	6,575	$48.00	$7.27	0	7
706	26197EC	AASHTO NO 89 STONE	TON	404	$48.00	$118.00	0	1
707	24255EC	REMOVE CABLE GUARDRAIL BARRIER SYSTEM	LF	18,293	$48.00	$2.60	0	1
708	6404	FLEXIBLE DELINEATOR POST-M/Y	EACH	676	$47.00	$70.17	0	7
709	1690	FLUME INLET TYPE 1	EACH	7	$47.00	$6,746.53	0	3
710	24026EC	PIPE CULVERT HEADWALL-54 IN	EACH	7	$47.00	$6,690.64	0	3
711	2712	CLEAN SEDIMENTATION BASIN	CUYD	4,649	$46.00	$10.00	0	1
712	14002	W AIR RELEASE VALVE SPECIAL	EACH	5	$46.00	$9,240.00	0	1
713	445	ENTRANCE PIPE-30 IN	LF	480	$46.00	$96.23	0	4
714	6526	PAVE STRIPING-WB PAINT-12 IN W	MILE	18	$45.00	$2,500.00	0	1
715	1587	DROP BOX INLET TYPE 16S	EACH	5	$45.00	$9,000.00	0	3
716	24280EC	PAVE MARK THERMO CHEVRON-48 IN	LF	1,870	$45.00	$24.00	0	1
717	1462	CURB BOX INLET TYPE A T-2	EACH	12	$45.00	$3,738.00	0	1
718	8714	BRIDGE CHAIN LINK FENCE-10 FT	LF	222	$45.00	$201.21	0	1
719	4844	CABLE-NO. 14/5C	LF	21,963	$45.00	$2.03	0	9
720	1216	PIPE CULVERT HEADWALL-48 IN	EACH	11	$44.00	$4,034.40	0	4
721	1987	DELINEATOR FOR GUARDRAIL B/W	EACH	2,806	$44.00	$15.81	0	83
722	2359	GUARDRAIL CONNECTOR TO CONC MED BARR	EACH	6	$44.00	$7,372.41	0	2
723	1452	S & F BOX INLET-OUTLET-30 IN	EACH	6	$44.00	$7,353.88	0	5
724	23070NN	GIRDER REPAIR	EACH	4	$44.00	11000	0	1
725	6578	PAVE MARKING-THERMO MERGE ARROW	EACH	142	$44.00	$307.26	0	25
726	1517	DROP BOX INLET TYPE 5F	EACH	6	$43.00	$7,237.47	0	2
727	1511	DROP BOX INLET TYPE 5D	EACH	6	$43.00	$7,214.85	0	4
728	15099	S MANHOLE TAP EXISTING	EACH	13	$43.00	$3,329.23	0	4
729	2471	FILL AND CAP SINKHOLE	EACH	14	$43.00	$3,077.50	0	3
730	24983EC	BEARING LUBRICATION	EACH	92	$43.00	$468.26	0	7
731	24851EC	CABLE-NO. 10/3C DUCTED	LF	9,155	$43.00	$4.69	0	2
732	14016	W ENCASEMENT STEEL OPEN CUT RANGE 5	LF	216	$43.00	$197.16	0	1
733	15137	S PIPE PVC 15 INCH	LF	209	$42.00	$202.49	0	1
734	21	DRAINAGE BLANKET-EMBANKMENT	CUYD	657	$42.00	$64.00	0	1
735	24388ES508	CONC MEDIAN BARRIER TYPE 14C1(50)	LF	120	$42.00	$350.00	0	1
736	24886EC	FLAP GATE	EACH	3	$42.00	14000	0	1
737	23139EN	STRIPING REMOVAL	LF	50,808	$42.00	$0.82	0	3
738	14095	W TIE-IN 08 INCH	EACH	14	$42.00	$2,983.49	0	7
739	1538	DROP BOX INLET TYPE 7	EACH	5	$41.00	$8,295.53	0	3
740	6541	PAVE STRIPING-THERMO-4 IN Y	LF	29,969	$41.00	$1.37	0	5
741	24525EC	ADVANCE WARNING FLASHER	EACH	5	$41.00	$8,169.00	0	2
742	4795	CONDUIT-2 IN	LF	3,732	$41.00	$10.85	0	21
743	15101	S MANHOLE WITH DROP	EACH	3	$41.00	13500.2	0	3
744	24578EN	PAVE STRIPE-WET REF THERMO-4 IN W	LF	4,500	$41.00	$9.00	0	2
745	1434	SLOPED BOX OUTLET TYPE 1-24 IN	EACH	9	$40.00	$4,498.44	0	6
746	6576	PAVE MARKING-THERMO ONLY	EACH	136	$40.00	$295.95	0	38
747	6540	PAVE STRIPING-THERMO-4 IN W	LF	29,333	$40.00	$1.37	0	5
748	3294	EXPAN JOINT REPLACE 1 1/2 IN	LF	86	$40.00	$464.70	0	2
749	2565	OBJECT MARKER TYPE 2	EACH	80	$40.00	$500.66	0	17
750	23853EC	BEARING REPAIR	EACH	2	$40.00	20000	0	1
751	24084EC	STRINGER REPAIR	EACH	5	$40.00	$8,000.00	0	1
752	1214	PIPE CULVERT HEADWALL-42 IN	EACH	9	$40.00	$4,433.38	0	6
753	1891	ISLAND HEADER CURB TYPE 2	LF	891	$40.00	$44.74	0	2
754	2353	INSTALL GUARDRAIL-STEEL W BM-S FACE	LF	2,803	$40.00	$14.18	0	1
755	1979	CONC MEDIAN BARRIER TYPE B TL5 56 IN	LF	189	$39.00	$205.00	0	1
756	1502	DROP BOX INLET TYPE 5A	EACH	5	$39.00	$7,710.23	0	2
757	24768EC	LANE SEPARATOR CURB	LF	487	$38.00	$78.91	0	2
758	1623	CONC MED BARR BOX INLET TY B1 TL5 56	EACH	2	$38.00	18926.33	0	1
759	2010	ADJUST MEDIAN BOX	EACH	3	$38.00	12572.72	0	1
760	21134ND	REMOVE-STORE AND REINSTALL SIGN	EACH	41	$38.00	$915.37	0	6
761	14022	W FLUSH HYDRANT ASSEMBLY	EACH	5	$37.00	$7,425.59	0	2
762	16015	G PIPE POLYETHYLENE/PLASTIC 02 INCH	LF	871	$37.00	$42.50	0	1
763	2360	GUARDRAIL TERMINAL SECTION NO 1	EACH	335	$37.00	$110.44	0	69
764	203	CL2 ASPH BASE 1.50D PG64-22	TON	255	$37.00	$145.00	0	1
765	24405EC	MECHANICAL REINF COUPLER-#8 EPOXY COATED	EACH	266	$37.00	$137.98	0	11
766	1830	STANDARD INTEGRAL CURB	LF	1,278	$37.00	$28.65	0	2
767	3385	PVC PIPE-6 IN	LF	1,220	$37.00	$30.00	0	1
768	4724	BRACKET 12 FT	EACH	64	$36.00	$570.12	0	5
769	1440	SLOPED BOX INLET-OUTLET TYPE 1	EACH	12	$36.00	$3,002.81	0	5
770	1604	CONC MED BARR BOX INLET TY B2T TL5 56	EACH	2	$36.00	18000	0	1
771	26201EC	24 HR FALLING HEAD PERM TEST IN CORES	EACH	3	$36.00	12000	0	1

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772	26203EC	SECANT SHAFT CONCRETE CORES	EACH	4	$36.00	$9,000.00	0	1
773	23261EC	PAVE MARK-THERMO-X-WALK-24 IN	LF	3,371	$36.00	$10.56	0	10
774	23395EC	EXPANSION JOINT REPAIR	LF	142	$36.00	$250.00	0	1
775	6614	INLAID PAVEMENT MARKER-B Y/R	EACH	1,053	$35.00	$33.61	0	8
776	23623EC	REMOVE MOUNTABLE MEDIAN	SQYD	1,314	$35.00	$26.80	0	1
777	2570	PROJECT CPM SCHEDULE	LS	1	$35.00	35000	0	1
778	21322NC	CSL TESTING (6 TUBES)	EACH	22	$35.00	$1,590.91	0	2
779	24923EC	CABINET FIBER TERMINATION PANEL	EACH	5	$35.00	$7,000.00	0	1
780	6451	REMOVE SIGN SUPPORT BEAM	EACH	99	$35.00	$353.32	0	4
781	556	STORM SEWER PIPE-30 IN EQUIV	LF	139	$35.00	$251.01	0	1
782	23010EN	PAVE MARK TEMP PAINT STOP BAR-24 IN	LF	3,663	$35.00	$9.48	0	23
783	1727	SAFETY BOX INLET-24 IN SDB-1	EACH	6	$35.00	$5,788.65	0	3
784	14008	W ENCASEMENT STEEL BORED RANGE 3	LF	110	$35.00	$315.00	0	1
785	1821	LIP CURB AND GUTTER MOD	LF	726	$34.00	$47.38	0	1
786	22520EN	PAVE MARKING-THERMO YIELD BAR-36 IN	LF	1,096	$34.00	$31.28	0	22
787	2289	DOUBLE VEHICULAR WOVEN WIRE GATE	EACH	5	$34.00	$6,856.62	0	2
788	22854EN	PAVE STRIPE PERM-6 IN HD21-WHITE	LF	122,238	$34.00	$0.28	0	1
789	23964EC	PROTECTIVE FENCE	LF	227	$34.00	$150.00	0	1
790	4741	POLE BASE IN MEDIAN WALL	EACH	17	$34.00	$2,000.00	0	1
791	16008	G ENCASEMENT STEEL OPEN CUT RANGE 1	LF	260	$34.00	$130.00	0	1
792	8711	BRIDGE CHAIN LINK FENCE-6 FT	LF	202	$34.00	$166.00	0	1
793	3250	WATERPROOFING MEMBRANE	SQYD	775	$33.00	$42.78	0	3
794	552	STORM SEWER PIPE-18 IN EQUIV	LF	172	$33.00	$192.71	0	2
795	1919	STANDARD BARRIER MEDIAN TYPE 3	SQYD	194	$33.00	$169.00	0	1
796	15022	S ENCASEMENT STEEL OPEN CUT RANGE 3	LF	180	$32.00	$180.00	0	1
797	1550	DROP BOX INLET TYPE 12A	LF	40	$32.00	$800.00	0	1
798	3305	RESET BEARING SHOE	EACH	7	$32.00	$4,571.43	0	2
799	460	CULVERT PIPE-12 IN	LF	356	$32.00	$89.77	0	5
800	15071	S FORCE MAIN TIE-IN 02 INCH	EACH	9	$32.00	$3,540.00	0	1
801	1535	DROP BOX INLET TYPE 6F	EACH	3	$32.00	10587.99	0	3
802	40027	ROCK EXCAVATION	CUYD	488	$32.00	$65.00	0	1
803	14001	W AIR RELEASE VALVE 3/4 INCH	EACH	23	$32.00	$1,372.83	0	2
804	20359NN	GALVANIZED STEEL CABINET	EACH	35	$31.00	$898.03	0	14
805	20782NS714	PAVE MARKING THERMO-BIKE	EACH	118	$31.00	$265.25	0	7
806	1541	DROP BOX INLET TYPE 10	EACH	7	$31.00	$4,465.92	0	1
807	4799	CONDUIT-4 IN	LF	388	$31.00	$80.50	0	2
808	6585	PAVEMENT MARKER TY IVA-MW TEMP	EACH	4,844	$31.00	$6.39	0	4
809	6555	PAVE STRIPING-DUR TY 1-4 IN Y	LF	2,827	$31.00	$10.81	0	6
810	23143ED	KPDES PERMIT AND TEMP EROSION CONTROL	LS	4	$31.00	$7,630.68	0	4
811	2383	REMOVE & RESET GUARDRAIL	LF	788	$30.00	$38.66	0	5
812	21417ES717	PAVE MARK THERMO CONE CAP-SOLID YELLOW	SQFT	4,299	$30.00	$7.06	0	13
813	14082	W SERV PE/PLST SHORT SIDE 1 IN	EACH	19	$30.00	$1,592.37	0	5
814	8257	HANDRAIL-PEDESTRIAN ALUMINUM	LF	288	$30.00	$105.00	0	1
815	491	CULVERT PIPE-18 IN EQUIV	LF	222	$30.00	$135.97	0	2
816	1396	METAL END SECTION TY 3-42 IN	EACH	4	$30.00	$7,500.00	0	1
817	21383ES508	CONC MEDIAN BARRIER TYPE 14C2(50)	LF	109	$30.00	$275.00	0	1
818	8137	MECHANICAL REINF COUPLER #14	EACH	120	$29.00	$245.00	0	1
819	4860	CABLE-NO. 8/3C DUCTED	LF	7,977	$29.00	$3.68	0	3
820	8133	MECHANICAL REINF COUPLER #8	EACH	284	$29.00	$102.90	0	2
821	4934	TEMP SIGNAL MULTI PHASE	EACH	6	$29.00	$4,866.67	0	3
822	1217	PIPE CULVERT HEADWALL-48 IN EQUIV	EACH	4	$29.00	$7,218.49	0	2
823	21843EN	GEOMEMBRANE LINER	SQYD	2,285	$29.00	$12.50	0	1
824	23270ES717	PAVE MARK TY 1 TAPE-CURV ARROW	EACH	41	$28.00	$693.37	0	3
825	1224	PIPE CULVERT HEADWALL-84 IN	EACH	1	$28.00	28300	0	1
826	26204EC	PGR GROUT	CUYD	41	$28.00	$689.00	0	1
827	26211ED	SLOPED AND MITERED HEADWALL-36 IN DBL	EACH	2	$28.00	14084.22	0	1
828	23806EC	CONC MED BARRIER BOX INLET-TY 12B2	EACH	3	$28.00	$9,353.79	0	1
829	1497	DROP BOX INLET TYPE 3 MOD	EACH	4	$28.00	$7,000.00	0	1
830	24651ED	CONCRETE ISLAND	SQYD	163	$28.00	$169.78	0	1
831	1394	METAL END SECTION TY 3-30 IN	EACH	4	$28.00	$6,911.37	0	2
832	2075	JPC PAVEMENT-6 IN	SQYD	199	$28.00	$138.89	0	1
833	14030	W METER RELOCATE	EACH	19	$28.00	$1,452.63	0	3
834	20360ES818	WOOD POST	EACH	80	$28.00	$344.34	0	18
835	24528ED	TETHER WIRE	LF	3,135	$27.00	$8.77	0	5
836	1726	SAFETY BOX INLET-18 IN SDB-1	EACH	5	$27.00	$5,323.37	0	3
837	25090EC	SINUSOIDAL RUMBLE STRIPS	LF	52,917	$26.00	$0.50	0	1
838	24728EX	ROCK ROADBED	CUYD	2,667	$26.00	$9.89	0	1
839	15547	S FORCE MAIN SPECIAL INST	LF	306	$26.00	$86.00	0	1
840	23756EC	PAVE MARK-THERM R/R ADVANCE WARN SYMBOL	EACH	22	$26.00	$1,186.36	0	12
841	1380	METAL END SECTION TY 2-15 IN	EACH	4	$26.00	$6,500.00	0	1
842	21077ED	FIBER OPTIC CABLE	LF	6,903	$26.00	$3.75	0	2
843	1880	BARRIER HEADER CURB	LF	705	$26.00	$36.59	0	1
844	15109	S PIPE DUCTILE IRON 24 INCH	LF	69	$26.00	$373.01	0	1
845	1580	DROP BOX INLET TYPE 15	EACH	7	$26.00	$3,644.23	0	3
846	1761	MANHOLE TYPE B	EACH	4	$25.00	$6,372.70	0	3
847	4960	REMOVE AND REPLACE SIDEWALK	SQYD	29	$25.00	$878.43	0	9
848	2116	SAW-CLEAN-RESEAL LONGIT JOINT	LF	4,800	$25.00	$5.25	0	1
849	1792	ADJUST MANHOLE	EACH	45	$25.00	$559.93	0	5
850	26237EC	CONNECTED ARROW PANEL	MONT	64	$25.00	$392.90	0	3
851	4833	WIRE-NO. 8	LF	13,560	$25.00	$1.85	0	2
852	24550EC	VIBRATION MONITORING	LS	1	$25.00	25000	0	1
853	2601	FINAL DRESSING CLASS B	LF	1,000	$25.00	$24.90	0	1
854	23625EC	PAVE MARK THERMO-6 IN W CAT TRAXX	LF	3,435	$25.00	$7.24	0	9
855	15095	S MANHOLE CASTING STANDARD	EACH	31	$25.00	$800.40	0	2
856	1756	MANHOLE TYPE A	EACH	7	$25.00	$3,517.24	0	5
857	20060ES719	GUARDRAIL STEEL W BEAM-S FACE CR	LF	300	$25.00	$82.00	0	1

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
858	496	CULVERT PIPE-36 IN EQUIV	LF	297	$24.00	$82.40	0	1
859	2001	CURB TO BARRIER WALL TRANS	EACH	4	$24.00	$6,102.37	0	2
860	20390NS835	INSTALL COORDINATING UNIT	EACH	14	$24.00	$1,738.88	0	8
861	2396	REMOVE GUARDRAIL END TREATMENT	EACH	33	$24.00	$735.60	0	12
862	24381EC	G/R STEEL W BEAM-S FACE-(NESTED)	LF	475	$24.00	$50.79	0	2
863	1508	DROP BOX INLET TYPE 5C	EACH	3	$24.00	$8,000.00	0	1
864	26202EC	WATER PSSR TEST IN CORES-SINGLE PACKER	EACH	2	$24.00	12000	0	1
865	1741	CORED HOLE DRAINAGE BOX CON-6 IN	EACH	260	$24.00	$91.94	0	5
866	14005	W ENCASEMENT CONCRETE	LF	92	$24.00	$258.79	0	3
867	1947	MOUNTABLE MEDIAN TYPE 3A	SQYD	108	$24.00	$220.00	0	1
868	6491	STEEL REINFORCEMENT FOR SIGNS	LB	7,518	$24.00	$3.15	0	3
869	20099ES842	PAVE MARK TEMP PAINT STOP BAR	LF	1,618	$24.00	$14.57	0	8
870	21554EN	EXCAVATION	CUYD	262	$24.00	$89.87	0	3
871	23649EC	DRAIN POND	LS	1	$23.00	23331.27	0	1
872	1791	ADJUST MANHOLE FRAME TO GRADE	EACH	91	$23.00	$254.69	0	11
873	20100ES842	PAVE MARK TEMP PAINT LINE ARROW	EACH	334	$23.00	$68.77	0	13
874	22855EN	PAVE STRIPE PERM-6 IN HD21-YELLOW	LF	82,000	$23.00	$0.28	0	1
875	24115EC	ROUNDABOUT ARROW	EACH	48	$23.00	$475.00	0	3
876	15058	S FORCE MAIN PVC 03 INCH	LF	1,030	$23.00	$22.00	0	1
877	1029	PERF PIPE HEADWALL TY 3-6 IN	EACH	31	$23.00	$726.00	0	6
878	2611	HANDRAIL-TYPE A-1	LF	112	$22.00	$199.60	0	3
879	314	CL3 ASPH SURF 0.50D PG76-22	TON	170	$22.00	$130.00	0	1
880	981	SLOTTED DRAIN PIPE-15 IN	LF	55	$22.00	$400.00	0	1
881	21213ED	CONCRETE PAVING REPLACEMENT	LF	277	$22.00	$79.00	0	1
882	15084	S FORCE MAIN VALVE GATE	EACH	11	$22.00	$1,976.27	0	1
883	15076	S FORCE MAIN TIE-IN 10 INCH	EACH	3	$22.00	$7,167.03	0	2
884	4832	WIRE-NO. 12	LF	24,730	$21.00	$0.87	0	11
885	24889EC	PAVE MARKING-THERMO U-TURN	EACH	84	$21.00	$254.73	0	7
886	2482	CHANNEL LINING CLASS IA	TON	218	$21.00	$98.09	0	2
887	1642	JUNCTION BOX-18 IN	EACH	7	$21.00	$3,025.58	0	4
888	15136	S LATERAL LOCATE	EACH	13	$21.00	$1,594.77	0	2
889	4903	REFERENCE MARKER	EACH	64	$21.00	$321.30	0	1
890	21476ED	SNOW FENCE	LF	3,670	$21.00	$5.59	0	4
891	520	STORM SEWER PIPE-12 IN	LF	119	$21.00	$172.47	0	4
892	21743NN	INSTALL PEDESTRIAN DETECTOR	EACH	62	$20.00	$330.25	0	6
893	20432ES112	REMOVE CRASH CUSHION	EACH	20	$20.00	$1,017.08	0	4
894	2265	REMOVE FENCE	LF	2,734	$20.00	$7.38	0	6
895	23977EC	CONC MED BARR BOX INLET TY 12B1-50(MOD)	EACH	2	$20.00	10000	0	1
896	6412	STEEL POST MILE MARKERS	EACH	41	$20.00	$483.13	0	7
897	24579EN	PAVE STRIPE-WET REF THERMO-4 IN Y	LF	2,200	$20.00	$9.00	0	1
898	439	ENTRANCE PIPE-12 IN	LF	105	$20.00	$188.38	0	2
899	24109EC	BARRIER CURB AND GUTTER-MOD	LF	369	$20.00	$53.54	0	1
900	15087	S LATERAL LONG SIDE 04 INCH	EACH	3	$20.00	$6,580.44	0	1
901	14081	W SERVICE RELOCATE	EACH	6	$20.00	$3,274.94	0	2
902	6449	REM OVERHEAD SIGN SUPPORT STR	EACH	5	$20.00	$3,927.04	0	4
903	15094	S MANHOLE ADJUST TO GRADE	EACH	10	$20.00	$1,950.60	0	3
904	14074	W PLUG EXISTING MAIN	EACH	18	$19.00	$1,078.51	0	3
905	4885	MESSENGER-10800 LB	LF	1,885	$19.00	$10.30	0	5
906	8410	LOW FLOW DIVERSION CURB	LS	1	$19.00	19330	0	1
907	23068NN	REMOVE & REINSTALL COORDINATING UNIT	EACH	9	$19.00	$2,144.47	0	5
908	23119EN	PEDESTRIAN SAFETY FENCE	LF	293	$19.00	$65.00	0	1
909	14086	W SERVICE SPECIAL	EACH	346	$19.00	$54.88	0	2
910	6450	REM OVERHEAD STRUC CONC BASE	EACH	4	$19.00	$4,726.81	0	4
911	6573	PAVE MARKING-THERMO STR ARROW	EACH	160	$19.00	$117.80	0	32
912	20191ED	OBJECT MARKER TY 3	EACH	249	$19.00	$75.41	0	37
913	25047EC	STRIP SEAL EXPANSION JOINT - 4 INCH	LF	55	$18.00	$335.00	0	1
914	1512	DROP BOX INLET TYPE 5D MOD	EACH	2	$18.00	$9,110.00	0	1
915	24625EC	REMOVE AND REINSTALL QWICK CURB	LF	500	$18.00	$36.40	0	2
916	6530	PAVE STRIPING REMOVAL-4 IN	LF	21,145	$18.00	$0.86	0	4
917	1395	METAL END SECTION TY 3-36 IN	EACH	2	$18.00	$9,033.26	0	2
918	14117	W VALVE CUT-IN 06 INCH	EACH	3	$18.00	$6,000.00	0	2
919	23644EC	DROP BOX INLET TY 3-SAG	EACH	2	$18.00	$9,000.00	0	1
920	1391	METAL END SECTION TY 3-18 IN	EACH	10	$18.00	$1,797.39	0	3
921	22665EN	REMOVE NON-MOUNTABLE MEDIAN	SQYD	356	$18.00	$50.00	0	1
922	14152	W SERV COPPER SHORT SIDE 3/4 IN	EACH	9	$18.00	$1,977.34	0	3
923	23148EN	END ANCHORS	EACH	5	$18.00	$3,544.00	0	2
924	4884	ANCHOR	EACH	22	$18.00	$803.33	0	4
925	15073	S FORCE MAIN TIE-IN 04 INCH	EACH	5	$18.00	$3,520.00	0	2
926	1499	DROP BOX INLET TYPE 4	EACH	2	$17.00	$8,660.99	0	1
927	1897	ASPHALT WEDGE CURB	LF	410	$17.00	$42.12	0	1
928	21935EN	REMOVE CONC MEDIAN BARRIER	LF	231	$17.00	$74.05	0	2
929	14084	W SERV PE/PLST SHORT SIDE 2 IN	EACH	7	$17.00	$2,402.96	0	3
930	8305	REMOVE REINF CONCRETE	LS	1	$17.00	16750	0	1
931	14096	W TIE-IN 10 INCH	EACH	3	$17.00	$5,552.00	0	1
932	14038	W PIPE DUCTILE IRON 10 INCH	LF	84	$17.00	$198.00	0	1
933	14027	W METER 2 INCH	EACH	3	$17.00	$5,505.00	0	1
934	4904	BARRIER MOUNTING BRACKET	EACH	27	$16.00	$604.18	0	2
935	14148	W SERV COPPER LONG SIDE 3/4 IN	EACH	1	$16.00	16279.48	0	1
936	23864EC	CHANNEL LINING CLASS III-MOD	TON	337	$16.00	$48.03	0	2
937	1644	JUNCTION BOX-30 IN	EACH	3	$16.00	$5,381.66	0	2
938	1584	CAP DROP BOX INLET	EACH	9	$16.00	$1,785.63	0	4
939	14087	W STRUCTURE ABANDONMENT	EACH	321	$16.00	$50.00	0	1
940	1484	CURB BOX INLET TYPE B-T	EACH	2	$16.00	$8,000.00	0	1
941	24279EC	TEMPORARY COFFERDAM CONSTRUCTION	LS	1	$16.00	16000	0	1
942	24689EC	PAVE MARK THERMO-WRONG WAY ARROW	EACH	42	$16.00	$380.95	0	9
943	24386EC	PAVE MARKING THERMO-BIKE LANE ARROW	EACH	127	$16.00	$125.97	0	9

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
944	1984	DELINEATOR FOR BARRIER - WHITE	EACH	1,045	$16.00	$15.21	0	6
945	1982	DELINEATOR FOR GUARDRAIL M/W	EACH	993	$16.00	$15.97	0	17
946	1729	SAFETY BOX INLET-24 IN DBL SDB-5	EACH	2	$16.00	$7,900.00	0	1
947	24751ED	REMOVE STORE & REINSTALL	EACH	40	$16.00	$393.97	0	2
948	1876	STANDARD HEADER CURB MOD	LF	183	$16.00	$85.36	0	2
949	20318ES508	RELOCATE CONC BARRIER WALL	LF	1,200	$16.00	$13.00	0	1
950	20266ES835	INSTALL LED SIGNAL- 4 SECTION	EACH	24	$15.00	$639.10	0	9
951	2404	SEPTIC TANK TREATMENT	EACH	8	$15.00	$1,916.81	0	3
952	24277EC	FLUSH SEDIMENT	LS	1	$15.00	15197.5	0	1
953	40130	ROTATING BEACON AND POLE	EACH	1	$15.00	15000	0	1
954	26130ED	SLOPED AND MITERED HEADWALL-15 IN	EACH	5	$15.00	$2,962.66	0	2
955	6563	PAVE MARKING-R/R XBUCKS 16 IN	LF	1,410	$15.00	$10.48	0	17
956	8471	EXPANSION DAM-2.5 IN NEOPRENE	LF	75	$15.00	$195.82	0	2
957	24890EC	SIDEWALK-8 IN CONCRETE	SQYD	84	$15.00	$175.55	0	1
958	1004	PERFORATED PIPE-12 IN	LF	98	$15.00	$150.00	0	1
959	14025	W METER 1 INCH	EACH	10	$15.00	$1,469.29	0	2
960	21813NN	REMOVE AND RELOCATE SHEET SIGNS	EACH	21	$15.00	$698.03	0	3
961	23815EC	EXPANSION PLATE RETROFIT	EACH	1	$15.00	14500	0	1
962	24114EC	PAVE MARK-THERMO-YIELD	EACH	41	$14.00	$352.51	0	7
963	2612	HANDRAIL-TYPE A-2	LF	64	$14.00	$223.13	0	2
964	1514	DROP BOX INLET TYPE 5E	EACH	2	$14.00	$7,131.53	0	2
965	24904EC	CL3 ASPH BASE CK PG64-22	TON	94	$14.00	$150.00	0	1
966	8135	MECHANICAL REINF COUPLER #10	EACH	72	$14.00	$195.00	0	1
967	30004	FIELD GATE	EACH	2	$14.00	$7,014.00	0	1
968	15122	S STRUCTURE REMOVAL	EACH	2	$14.00	$7,000.00	0	1
969	21659NN	RELOCATE SIGNAL HEAD	EACH	54	$14.00	$257.41	0	3
970	1643	JUNCTION BOX-24 IN	EACH	10	$14.00	$1,376.16	0	4
971	8805	GUARDRAIL-BRIDGE CASE I	LF	86	$14.00	$158.77	0	1
972	4936	MAINTAIN SIGNAL OPERATION	LS	1	$14.00	13500	0	1
973	22581EN	ENTRANCE PIPE-36 IN	LF	90	$14.00	$150.00	0	1
974	16048	G TIE-IN SPECIAL	EACH	4	$13.00	$3,372.87	0	1
975	4862	CABLE-NO. 4/3C DUCTED	LF	1,550	$13.00	$8.50	0	1
976	22045NN	FLUME INLET TY 2-MOD	EACH	2	$13.00	$6,572.37	0	1
977	1393	METAL END SECTION TY 3-24 IN	EACH	6	$13.00	$2,179.79	0	2
978	23944EC	ADVANCED GROUNDING SYSTEM	EACH	1	$13.00	13000	0	1
979	24939ED	FLOOD GATE	EACH	2	$13.00	$6,500.00	0	1
980	24640ED	OBJECT MARKER TYPE 1	EACH	28	$13.00	$464.01	0	7
981	2475	PLUG WATER WELL	EACH	3	$13.00	$4,300.89	0	2
982	2157	PAVED DITCH TYPE 1	SQYD	45	$13.00	$286.02	0	1
983	4850	CABLE-NO. 14/1 PAIR	LF	6,735	$13.00	$1.91	0	14
984	16110	G PIPE POLYETHYLENE/PLASTIC 01 INCH	LF	512	$13.00	$25.10	0	1
985	24601EC	INSTALL	EACH	11	$13.00	$1,163.64	0	3
986	4821	OPEN CUT ROADWAY	LF	1,990	$13.00	$6.43	0	2
987	6554	PAVE STRIPING-DUR TY 1-4 IN W	LF	1,599	$13.00	$7.88	0	5
988	1021	PERF PIPE HEADWALL TY 1-6 IN	EACH	13	$13.00	$964.63	0	3
989	1414	METAL END SECTION TY 4-30 IN	EACH	3	$12.00	$4,146.14	0	1
990	1890	ISLAND HEADER CURB TYPE 1	LF	191	$12.00	$65.00	0	1
991	1585	REMOVE DROP BOX INLET	EACH	20	$12.00	$619.89	0	8
992	20912ND	BARRIER WALL POST	EACH	7	$12.00	$1,760.26	0	2
993	20408ES835	INSTALL LED BEACON-12 IN	EACH	33	$12.00	$371.84	0	4
994	1614	CONC MED BARR BOX INLET TY 14A2	EACH	1	$12.00	12000	0	1
995	15120	S SPECIAL ITEM	EACH	1	$12.00	12000	0	1
996	23821EC	CENTERLINE RUMBLE STRIPS-12 IN	LF	60,065	$12.00	$0.20	0	2
997	1487	CURB BOX INLET TYPE F	EACH	2	$12.00	$5,803.63	0	2
998	14069	W PIPE POLYETHYLENE/PLASTIC 06 INCH	LF	210	$12.00	$55.00	0	1
999	2714	SHOULDERING	LF	918	$12.00	$12.57	0	1
1000	14032	W METER/FIRE SERVICE COMBO VAULT	EACH	1	$12.00	11515	0	1
1001	1444	SLOPED AND PARALLEL HEADWALL-18 IN	EACH	4	$11.00	$2,861.25	0	3
1002	2203	STRUCTURE EXCAV-UNCLASSIFIED	CUYD	35	$11.00	$325.00	0	1
1003	22692NS714	PAVEMENT MARKING-THERMO LETTERS	EACH	99	$11.00	$114.75	0	8
1004	2900	INSTALL TEMP CRASH CUSHION	EACH	2	$11.00	$5,610.00	0	1
1005	23166ED	BEARING RETAINER	EACH	14	$11.00	$800.00	0	1
1006	6611	INLAID PAVEMENT MARKER-MY	EACH	261	$11.00	$42.62	0	3
1007	14153	W LEAK DETECTION METER	EACH	2	$11.00	$5,530.00	0	1
1008	21541NN	CORED HOLE DRAINAGE BOX CON- 18 IN	EACH	10	$11.00	$1,101.40	0	7
1009	1608	CONC MED BARR BOX INLET TY 12B1	EACH	1	$11.00	11000	0	1
1010	23607EC	PAVE MARK THERMO-LANE REDUCTION ARROW	EACH	30	$11.00	$365.97	0	9
1011	4800	MARKER	EACH	22	$11.00	$497.53	0	2
1012	20758ED	REMOVE AND RESET PERF PIPE HEADWALL	EACH	28	$11.00	$385.71	0	2
1013	26146ES717	PAVE MARK TY 1 TAPE LANE REDUCTION ARROW	EACH	6	$11.00	$1,800.00	0	2
1014	1648	JUNCTION BOX-54 IN	EACH	1	$11.00	10508.73	0	1
1015	22620NN	CONC MED BARR BOX INLET TY 12A1-50	EACH	1	$11.00	10500	0	1
1016	24843EC	VIBRATING WIRE PIEZOMETER	EACH	8	$10.00	$1,300.00	0	1
1017	20194ED	REMOVE & RESET TRAFFIC SIGN	EACH	10	$10.00	$1,027.20	0	4
1018	1022	PERF PIPE HEADWALL TY 1-8 IN	EACH	8	$10.00	$1,250.00	0	1
1019	4927	COORDINATING UNIT	EACH	1	$10.00	10000	0	1
1020	22403NN	WEB CAMERA ASSEMBLY	EACH	1	$10.00	10000	0	1
1021	26223ED	PRESSURE TEST OF SOIL GROUTING	EACH	4	$10.00	$2,500.00	0	1
1022	26224ED	CCTV SOIL GROUTING INSPECTION	EACH	4	$10.00	$2,500.00	0	1
1023	2204	SPECIAL EXCAVATION	CUYD	150	$10.00	$66.45	0	1
1024	23340EC	PAVEMENT REPLACEMENT	TON	33	$10.00	$300.00	0	1
1025	4723	BRACKET 10 FT	EACH	15	$10.00	$658.13	0	5
1026	20419ND	ROADWAY CROSS SECTION	EACH	52	$10.00	$187.25	0	4
1027	21546ED	CURB BOX INLET TYPE B MODIFIED	EACH	1	$10.00	$9,723.58	0	1
1028	3261	CLEAN BRIDGE DRAINS	EACH	31	$10.00	$313.26	0	1
1029	4720	BRACKET 4 FT	EACH	15	$10.00	$644.09	0	3

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
1030	6545	PAVE STRIPING-THERMO-8 IN Y	LF	5,192	$10.00	$1.86	0	2
1031	1033	PERF PIPE HEADWALL TY 4-6 IN	EACH	16	$10.00	$596.88	0	3
1032	14158	W BLOWOFF ASSEMBLY	EACH	3	$9.00	$3,150.00	0	1
1033	1381	METAL END SECTION TY 2-18 IN	EACH	4	$9.00	$2,350.00	0	2
1034	2551	CONCRETE-CLASS A FOR STEPS	CUYD	4	$9.00	$2,291.04	0	2
1035	1506	DROP BOX INLET TYPE 5B MOD	EACH	1	$9.00	$9,110.00	0	1
1036	14107	W VALVE 10 INCH	EACH	2	$9.00	$4,535.00	0	1
1037	6581	PAVEMENT MARKER TYPE IV-MY	EACH	1,200	$9.00	$7.55	0	1
1038	1641	JUNCTION BOX-15 IN	EACH	3	$9.00	$3,000.00	0	1
1039	4871	POLE 35 FT WOODEN	EACH	3	$9.00	$3,000.00	0	2
1040	14136	W PRESSURE REDUCING VALVE 08 INCH	EACH	1	$9.00	$9,000.00	0	1
1041	40028	SELECT ROCK FILL EMBANKMENT	CUYD	90	$9.00	$100.00	0	1
1042	1390	METAL END SECTION TY 3-15 IN	EACH	8	$9.00	$1,091.29	0	1
1043	1370	METAL END SECTION TY 1-15 IN	EACH	5	$9.00	$1,743.72	0	3
1044	15106	S PIPE DUCTILE IRON 12 INCH	LF	26	$9.00	$328.00	0	1
1045	1491	DROP BOX INLET TYPE 1 MOD	EACH	2	$9.00	$4,251.00	0	2
1046	24365EC	RADAR PRESENCE DETECTOR TYPE A	EACH	3	$8.00	$2,809.67	0	2
1047	1493	DROP BOX INLET TYPE 2	EACH	2	$8.00	$4,110.00	0	1
1048	20468EC	ELECTRICAL JUNCTION BOX-10 X 8 X 4	EACH	10	$8.00	$819.83	0	8
1049	4730	BRACKET C	EACH	17	$8.00	$480.00	0	1
1050	6562	PAVE MARKING-THERMO R 6 FT	EACH	62	$8.00	$130.14	0	17
1051	1705	REMOVE CURB & GUTTER BOX INLET	EACH	9	$8.00	$894.32	0	4
1052	23264ES717	PAVE MARK TY 1 TAPE X-WALK-12 IN	LF	401	$8.00	$20.00	0	1
1053	20259ED	TEMPORARY MEDIAN CROSSOVER	EACH	1	$8.00	$8,000.00	0	1
1054	22590NN	CSL TESTING MOBILIZATION	EACH	2	$8.00	$4,000.00	0	1
1055	23828NC	REMOVE AND RELOCATE CCTV POLE	EACH	1	$8.00	$8,000.00	0	1
1056	21233ED	ASPHALT PAVING REPLACEMENT	LF	84	$8.00	$95.00	0	1
1057	21553EN	EMBANKMENT	CUYD	72	$8.00	$109.95	0	1
1058	1728	SAFETY BOX INLET-18 IN DBL SDB-5	EACH	1	$8.00	$7,900.00	0	1
1059	2692	SETTLEMENT PLATFORM	EACH	3	$8.00	$2,500.00	0	2
1060	24894EC	REMOVE	EACH	9	$8.00	$833.33	0	1
1061	23875NC	REMOVE THERMOPLASTIC ARROWS	EACH	58	$7.00	$126.79	0	5
1062	25030ED	ALUMINUM HANDRAIL	LF	88	$7.00	$83.00	0	1
1063	14091	W TIE-IN 02 INCH	EACH	5	$7.00	$1,447.00	0	2
1064	8134	MECHANICAL REINF COUPLER #9	EACH	48	$7.00	$150.00	0	1
1065	24543EC	CLEAN	LF	240	$7.00	$30.00	0	1
1066	14024	W MAIN POINT RELOCATE	EACH	1	$7.00	$7,140.54	0	1
1067	14181	W PRESSURE RELIEF VALVE SPECIAL	EACH	1	$7.00	$7,094.41	0	1
1068	4810	ELECTRICAL JUNCTION BOX	EACH	4	$7.00	$1,750.00	0	1
1069	22950NN	PAVE MARKING-THERMO STOP	EACH	16	$7.00	$425.00	0	8
1070	26222ED	VIBRATING WIRE DATA LOGGER (4 CHANNEL)	EACH	4	$7.00	$1,700.00	0	1
1071	16101	G VALVE ABOVE GRADE 04 INCH	EACH	3	$7.00	$2,214.00	0	1
1072	1002	PERFORATED PIPE-8 IN	LF	335	$7.00	$19.48	0	2
1073	14124	W VALVE SPECIAL	EACH	1	$7.00	$6,500.00	0	1
1074	1634	CAP CURB BOX INLET	EACH	4	$6.00	$1,590.00	0	1
1075	1376	METAL END SECTION TY 1-42 IN	EACH	2	$6.00	$3,164.61	0	1
1076	16041	G TIE-IN POLYETHYLENE/PLASTIC 02 INCH	EACH	3	$6.00	$2,108.21	0	1
1077	20597EC	DITCH EXCAVATION	CUYD	180	$6.00	$35.00	0	1
1078	6567	PAVE MARKING-THERMO STOP BAR-12IN	LF	795	$6.00	$7.91	0	7
1079	8067	PILES-14 IN	LF	18	$6.00	$340.00	0	1
1080	23822EC	CORED HOLE DRAINAGE BOX CON-15 IN	EACH	8	$6.00	$758.00	0	4
1081	1411	METAL END SECTION TY 4-18 IN	EACH	3	$6.00	$2,019.24	0	1
1082	14092	W TIE-IN 03 INCH	EACH	3	$6.00	$2,018.50	0	3
1083	1719	ADJUST INLET	EACH	1	$6.00	$6,028.87	0	1
1084	6588	PAVEMENT MARKER TY IVA-BY TEMP	EACH	846	$6.00	$7.12	0	3
1085	16049	G VALVE POLYETHYLENE/PLASTIC 02 INCH	EACH	5	$6.00	$1,201.00	0	1
1086	14037	W PIPE DUCTILE IRON 08 INCH	LF	50	$6.00	$120.00	0	1
1087	20569ES710	DROP BOX INLET TY 13G(MOD)	EACH	1	$6.00	$6,000.00	0	1
1088	14021	W FIRE HYDRANT REMOVE	EACH	4	$6.00	$1,499.66	0	4
1089	2016	REMOVE CONCRETE ISLAND	SQYD	207	$6.00	$28.90	0	2
1090	2263	FENCE-WOVEN WIRE TYPE 2	LF	188	$6.00	$31.73	0	1
1091	22415EN	CONCRETE-CLASS A FOR PAD	SQYD	3	$6.00	$1,974.28	0	1
1092	1812	REMOVE CURB AND GUTTER	LF	130	$6.00	$45.01	0	3
1093	3260	CLEAN ROADWAY DRAINS	EACH	4	$6.00	$1,450.73	0	2
1094	14120	W VALVE CUT-IN 12 INCH	EACH	1	$6.00	$5,800.00	0	1
1095	14151	W SERV COPPER SHORT SIDE 2 IN	EACH	2	$6.00	$2,860.00	0	1
1096	23254ES717	PAVE MARK TY 1 TAPE DOTTED LANE EXT	LF	585	$6.00	$9.77	0	3
1097	14154	W SPECIAL ITEM	EACH	12	$6.00	$466.67	0	2
1098	1314	PLUG PIPE	EACH	13	$6.00	$428.66	0	4
1099	23277EN11F	TURF REINFORCEMENT MAT 4	SQYD	441	$5.00	$12.40	0	1
1100	20098NC	CAP BOX INLET	EACH	2	$5.00	$2,654.48	0	1
1101	15072	S FORCE MAIN TIE-IN 03 INCH	EACH	2	$5.00	$2,641.00	0	1
1102	26199ED	STOP LOGS	SQFT	17	$5.00	$310.00	0	1
1103	14103	W VALVE 03 INCH	EACH	2	$5.00	$2,631.00	0	2
1104	6572	PAVE MARKING-DOTTED LANE EXTEN	LF	1,067	$5.00	$4.84	0	6
1105	14144	W LINE MARKER	EACH	72	$5.00	$70.47	0	6
1106	23791EC	PAVE STRIPING-CHEVRON MARKINGS	SQFT	1,019	$5.00	$4.97	0	2
1107	4721	BRACKET 6 FT	EACH	10	$5.00	$502.01	0	2
1108	1647	JUNCTION BOX-48 IN	EACH	1	$5.00	$5,000.00	0	1
1109	1711	FILL AND CAP WELL	EACH	1	$5.00	$5,000.00	0	1
1110	24619EC	SPLICE PILES	EACH	10	$5.00	$500.00	0	1
1111	15074	S FORCE MAIN TIE-IN 06 INCH	EACH	3	$5.00	$1,640.00	0	1
1112	2723	SIDEWALK-6 IN CONCRETE	SQYD	39	$5.00	$125.00	0	1
1113	23265ES717	PAVE MARK TY 1 TAPE STOP BAR-24 IN	LF	131	$5.00	$36.98	0	2
1114	6570	PAVE MARKING-PAINT CROSS-HATCH	SQFT	2,400	$5.00	$2.00	0	1
1115	14131	W METER SPECIAL	EACH	3	$5.00	$1,600.00	0	1

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
1116	20061ES719	G/R END TREATMENT TY 7 CR	EACH	2	$5.00	$2,400.00	0	1
1117	1545	DROP BOX INLET TYPE 11 MOD	EACH	1	$5.00	$4,679.00	0	1
1118	2430	RIGHT-OF-WAY MONUMENT TYPE 1A	EACH	18	$5.00	$259.83	0	4
1119	15012	S ENCASEMENT CONCRETE	LF	35	$5.00	$133.22	0	1
1120	23639ED	REM SIGN BRIDGE MOUNT ATTACHMENT	EACH	1	$5.00	$4,596.16	0	1
1121	472	CULVERT PIPE-60 IN	LF	4	$5.00	$1,140.00	0	1
1122	40045	PAVEMENT MARKING REMOVAL	SQFT	239	$5.00	$19.00	0	1
1123	4942	REMOVE STORE & REINSTALL POLE	EACH	1	$5.00	$4,530.67	0	1
1124	26192EC	PAVE MARKING-THERMO SHARED LANE MARKING	EACH	12	$5.00	$375.00	0	1
1125	6517	PAVE STRIPING-PERM PAINT-12 IN	LF	6,160	$4.00	$0.73	0	5
1126	40095	SEEDING AND MULCHING	ACRE	1	$4.00	$3,518.80	0	1
1127	21319NC	CSL ACCESS TUBING (4 TUBES)	EACH	1	$4.00	$4,400.00	0	1
1128	1845	ISLAND INTEGRAL CURB	LF	109	$4.00	$40.00	0	1
1129	3425	ADJUST WATER VALVE	EACH	49	$4.00	$88.85	0	9
1130	8470	EXPANSION DAM-2 IN NEOPRENE	LF	31	$4.00	$140.00	0	1
1131	2267	REMOVE & RESET FENCE	LF	157	$4.00	$27.31	0	2
1132	2387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	EACH	6	$4.00	$712.63	0	2
1133	23268ES717	PAVE MARK TY 1 TAPE-MERGE ARROW	EACH	2	$4.00	$2,105.59	0	1
1134	24805ED	OBJECT MARKER TYPE 4	EACH	15	$4.00	$279.39	0	3
1135	16065	G LINE MARKER	EACH	44	$4.00	$95.00	0	1
1136	15123	S LINE MARKER	EACH	47	$4.00	$88.51	0	2
1137	4841	CABLE-NO. 14/2C	LF	680	$4.00	$6.11	0	1
1138	7535	J-HOOK VANE	EACH	1	$4.00	$4,125.95	0	1
1139	16036	G SERVICE SHORT SIDE 1 OR 1-1/4 INCH	EACH	2	$4.00	$2,010.00	0	1
1140	22939ND	INSTALL LUMINAIRE POLE	EACH	4	$4.00	$1,000.00	0	2
1141	26166ES717	PAVE MARK TY1 TAPE CHEVRON	SQFT	100	$4.00	$40.00	0	1
1142	490	CULVERT PIPE-15 IN EQUIV	LF	34	$4.00	$116.92	0	1
1143	4722	BRACKET 8 FT	EACH	6	$4.00	$660.23	0	1
1144	23870EC	PAVE STRIPE-WET REF TAPE-4 IN W	LF	494	$4.00	$8.00	0	1
1145	1211	PIPE CULVERT HEADWALL-30 IN EQUIV	EACH	1	$4.00	$3,850.00	0	1
1146	25029ED	STEEL HANDRAIL	LF	28	$4.00	$137.00	0	1
1147	24561EN	ENTRANCE PIPE-42 IN	FT	36	$4.00	$100.96	0	1
1148	16031	G SERVICE LONG SIDE 1 OR 1-1/4 INCH	EACH	2	$4.00	$1,803.00	0	1
1149	1200	PIPE CULVERT HEADWALL-12 IN	EACH	3	$4.00	$1,171.00	0	1
1150	4794	CONDUIT-1 1/2 IN	LF	200	$4.00	$17.50	0	1
1151	23758EC	ELECTRICAL SERVICE CONNECTION	EACH	1	$4.00	$3,500.00	0	1
1152	40023	KYTC S&F HEADWALL-18 IN	EACH	1	$4.00	$3,500.00	0	1
1153	14073	W PIPE POLYETHYLENE/PLASTIC SPECIAL	LF	205	$3.00	$16.97	0	1
1154	1983	DELINEATOR FOR GUARDRAIL M/Y	EACH	209	$3.00	$16.29	0	7
1155	6544	PAVE STRIPING-THERMO-8 IN W	LF	1,583	$3.00	$2.09	0	3
1156	23055N	REMOVE	LS	1	$3.00	$3,252.31	0	1
1157	15096	S MANHOLE CASTING WATERTIGHT	EACH	5	$3.00	$639.45	0	1
1158	6586	PAVEMENT MARKER TY IVA-MY TEMP	EACH	527	$3.00	$6.00	0	2
1159	4792	CONDUIT-1 IN	LF	248	$3.00	$12.56	0	2
1160	3343	STEEL PIPE-4 IN	LF	88	$3.00	$35.00	0	2
1161	2617	DEFLECTOR-DUMPED STONE	EACH	2	$3.00	$1,500.00	0	1
1162	23173EC	REPLACE/REPAIR STEEL DIAPHRAGM	EACH	1	$3.00	$3,000.00	0	1
1163	23878EC	ADJUST MONITORING WELL	EACH	1	$3.00	$3,000.00	0	1
1164	24377EC	PREFAB BEND CONNECTION 25 DEG-15 IN	EACH	3	$3.00	$1,000.00	0	1
1165	25061EC	PAVE STRIPING-RIBBON THERMO-4 IN W	LF	1,060	$3.00	$2.83	0	2
1166	24793NN	TEST METER ASSEMBLY	EACH	1	$3.00	$2,914.66	0	1
1167	24441EC	GRAVEL REPLACEMENT DRIVEWAYS	LF	185	$3.00	$15.00	0	1
1168	2460	REMOVE TREES OR STUMPS	EACH	6	$3.00	$454.73	0	1
1169	3340	STEEL PIPE-2 1/2 IN	LF	90	$3.00	$30.46	0	2
1170	23610NC	CORED HOLE DRAINAGE BOX CON	EACH	2	$3.00	$1,350.00	0	1
1171	8469	EXPANSION DAM-1.5 IN NEOPRENE	LF	12	$3.00	$220.00	0	1
1172	14635	W LEAK DETECTION METER INST	EACH	1	$3.00	$2,591.18	0	1
1173	4873	POLE 45 FT WOODEN	EACH	2	$3.00	$1,268.45	0	1
1174	6403	FLEXIBLE DELINEATOR POST-B/W	EACH	36	$3.00	$69.57	0	1
1175	14177	W VALVE BOX REMOVE	EACH	1	$3.00	$2,500.00	0	1
1176	24605ED	RELOCATE	EACH	1	$3.00	$2,500.00	0	1
1177	6513	PAVE STRIPING-TEMP PAINT-12 IN	LF	3,767	$2.00	$0.66	0	3
1178	24402EC	DURABLE WATERBORNE MARKING-4 IN Y	LF	2,464	$2.00	$1.00	0	1
1179	2364	GUARDRAIL TERMINAL SECTION NO 2	EACH	2	$2.00	$1,200.00	0	1
1180	4899	ELECTRICAL SERVICE	EACH	1	$2.00	$2,339.50	0	1
1181	22400NN	REMOVE AND RELOCATE SIGN ASSEMBLY	EACH	3	$2.00	$765.43	0	2
1182	14130	W METER WITH PRV 3/4 INCH	EACH	1	$2.00	$2,200.00	0	1
1183	16068	G MAIN ABANDON	LS	2	$2.00	$1,075.00	0	2
1184	23260EC	PAVE MARK-THERMO-24 IN Y	LF	328	$2.00	$6.34	0	2
1185	23869EC	PAVE STRIPE-WET REF TAPE-4 IN Y	LF	260	$2.00	$8.00	0	1
1186	23839EC	REMOVE CONCRETE MEDIAN	SQYD	81	$2.00	$24.68	0	1
1187	1708	RECONSTRUCT CATCH BASIN	EACH	1	$2.00	$2,000.00	0	1
1188	1720	RECONSTRUCT INLET	EACH	1	$2.00	$2,000.00	0	1
1189	26155EC	PAVE MARK-THERMO POLY MOD LANE USE ARROW	EACH	4	$2.00	$500.00	0	1
1190	2556	CONCRETE CAP	CUYD	5	$2.00	$392.71	0	2
1191	20457NS835	INSTALL PED DETECTOR-AUDIBLE	EACH	5	$2.00	$374.70	0	2
1192	17046	EC POLE REMOVE	EACH	5	$2.00	$360.80	0	2
1193	14088	W STRUCTURE REMOVAL	EACH	1	$2.00	$1,800.00	0	1
1194	14163	W LINE STOP SIZE 1	EACH	1	$2.00	$1,800.00	0	1
1195	16099	G VALVE ABOVE GRADE 02 INCH	EACH	1	$2.00	$1,800.00	0	1
1196	1904	REMOVE CURB	LF	130	$2.00	$13.77	0	2
1197	20206EC	PAVE MARK HANDICAP SYMBOL	EACH	8	$2.00	$212.50	0	4
1198	8131	MECHANICAL REINF COUPLER #6	EACH	40	$2.00	$42.28	0	1
1199	14149	W SERV COPPER SHORT SIDE 1 IN	EACH	1	$2.00	$1,635.00	0	1
1200	1986	DELINEATOR FOR BARRIER WALL-B/Y	EACH	83	$2.00	$19.49	0	2
1201	1718	REMOVE INLET	EACH	3	$2.00	$530.33	0	2

OVERALL RANK	ITEM NUMBER	ITEM DESCRIPTION	UNITS	QUANTITY	DOLLARS (IN 000S)	AVERAGE PRICE	PERCENT DOLLARS	CONTRACT OCCURRENCES
1202	14018	W FIRE HYDRANT ADJUST	EACH	1	$2.00	$1,550.00	0	1
1203	6577	PAVE MARKING-THERMO SCHOOL	EACH	2	$2.00	$750.00	0	1
1204	23225EC	POLE 20 FT MTG HT	EACH	1	$2.00	$1,500.00	0	1
1205	24096EC	REMOVE AND RESET END TREATMENT	EACH	1	$2.00	$1,500.00	0	1
1206	26169EC	INSTALL MAST ARM DAMPENER	EACH	6	$2.00	$250.00	0	1
1207	23235EC	INSTALL PEDESTAL POST	EACH	2	$1.00	$707.52	0	1
1208	6571	PAVE MARKING-PAINT PARKING LOT	LF	400	$1.00	$3.50	0	1
1209	16056	G VALVE SPECIAL	EACH	3	$1.00	$465.00	0	1
1210	24526ED	INSTALL-BEACON CONTROLLER-2 CIRCUIT	EACH	1	$1.00	$1,381.53	0	1
1211	6533	PAVE STRIPING REMOVAL-12 IN	LF	1,479	$1.00	$0.93	0	2
1212	25120EC	PAVE STRIPE-WET REF TAPE-12 IN W	LF	68	$1.00	$20.00	0	1
1213	23269ES717	PAVE MARK TY 1 TAPE-COMBO ARROW	EACH	2	$1.00	$678.00	0	1
1214	2281	PEDESTRIAN GATE-CHAIN LINK	EACH	1	$1.00	$1,300.00	0	1
1215	23911EC	GROUT	CUYD	1	$1.00	$1,250.00	0	1
1216	1012	NON-PERFORATED PIPE-8 IN	LF	16	$1.00	$75.00	0	1
1217	24725EC	UTILITY RELOCATION	LS	1	$1.00	$1,200.00	0	1
1218	2350	ADJUST GUARDRAIL	LF	125	$1.00	$9.43	0	1
1219	30012	MILE MARKER	EACH	2	$1.00	$566.24	0	1
1220	23628EC	CORED HOLE DRAINAGE CONN TO HEADWALL	EACH	2	$1.00	$550.00	0	1
1221	14029	W METER ADJUST	EACH	1	$1.00	$1,050.00	0	1
1222	4941	REMOVE POLE BASE	EACH	1	$1.00	$1,000.00	0	1
1223	06601NC	PAVE MARKING-PAINT WORDS	EACH	4	$1.00	$250.00	0	1
1224	20478ND	FRAME AND LID TY 2	EACH	1	$1.00	$1,000.00	0	1
1225	16076	G SPECIAL ITEM	EACH	2	$1.00	$480.00	0	1
1226	24097EC	THERMO RUMBLE STRIPS TY 2	LF	120	$1.00	$8.00	0	1
1227	1990	DELINEATOR FOR BARRIER WALL-B/W	EACH	54	$1.00	$17.06	0	7
1228	20263ED	GEOGRID REINFORCEMENT	SQYD	115	$1.00	$8.00	0	1
1229	23608EC	YELLOW PAINT FOR MEDIAN SAFETY NOSE	SQFT	107	$1.00	$8.46	0	2
1230	40030	TEMPORARY SILT FENCE	LF	118	$1.00	$6.90	0	1
1231	2431	WITNESS R/W MONUMENT TYPE 2	EACH	3	$1.00	$258.78	0	1
1232	24541	R/W MONUMENT TYPE 3A	EACH	3	$1.00	$258.74	0	1
1233	4912	SIGNAL-3 SECTION 12 IN	EACH	1	$1.00	$636.00	0	1
1234	20205EC	PAVE MARK STOP BAR-24 IN PAINT	LF	95	$1.00	$6.58	0	2
1235	1670	SPRING BOX INLET TYPE B	EACH	1	$1.00	$600.00	0	1
1236	24817EC	PAVE MARK THERMO CONE CAP-SOLID WHITE	SQFT	52	$1.00	$10.20	0	1
1237	24909ED	TEMPORARY EARTH PAD	CUYD	20	$1.00	$26.00	0	1
1238	1025	PERF PIPE HEADWALL TY 2-6 IN	EACH	1	$0.00	$480.00	0	1
1239	24663ED	WITNESS R/W MONUMENT TYPE 4	EACH	2	$0.00	$204.24	0	1
1240	20189NS835	INSTALL LED SIGNAL-5 SECTION	EACH	1	$0.00	$350.00	0	1
1241	6516	PAVE STRIPING-PERM PAINT-8 IN	LF	818	$0.00	$0.40	0	1
1242	20208NC	PAVE MARK-PAINT ARROWS	EACH	4	$0.00	$66.00	0	1
1243	2395	REMOVE GUARDRAIL TERMINAL SECT	EACH	2	$0.00	$72.50	0	2
1244	24401EC	DURABLE WATERBORNE MARKING-4 IN W	LF	100	$0.00	$1.00	0	1
1245	25062EC	PAVE STRIPING-RIBBON THERMO-4 IN Y	LF	50	$0.00	$2.00	0	1
1246	6587	PAVEMENT MARKER TY IVA-BW TEMP	EACH	5	$0.00	$10.00	0	1
1247	22661EN	INSTALL CCTV CONTROL CABLE	EACH	50	$0.00	$0.50	0	1
1248	2709	CLEAN TEMP SILT FENCE	LF	1,350	$0.00	$0.01	0	1
1249	24617EC	INSTALL	LF	260	$0.00	$0.01	0	1
Total:					$1,039,390.00		100	

Appendix

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Certification Statement

SAVE International Value Standard Certification

Kentucky Transportation Cabinet

KY 207 Reconstruction, Greenup County (Item No. 9-8509)

Value Study Dates: June 16-18 & 20, 2025

The undersigned Certified Value Specialist (CVS) facilitator (along with any participating co-facilitators) attests that the Value Study was facilitated in accordance with the SAVE International® Standards of Conduct.

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Facilitator

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