



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
PLANNING DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334

June 8, 2004

Mr. Jim Moore, Manager 2
Program Development and Scheduling Office
Suite 600, James K. Polk Building
Nashville, Tennessee 37243-0341

SUBJECT: Advance Planning Report, US 431 (State Route 65), From
north of I-24 at Joelton to Batson Parkway / Walling Road
south of Springfield, Davidson and Robertson Counties

Dear Mr. Moore:

Enclosed is an approved copy of the subject report, which has been signed by the appropriate department personnel. This report is being forwarded for your use in determining priorities, establishing future scheduling and initiating further development of the project. In addition, a PDF file of the APR is available on the Facilities Planning Office APR database.

If you have any questions, please contact me.

Sincerely,

Bill Hart
Transportation Manager 1
Transportation Planning Office

BH:TG:tg

Enclosure

Cc/enc: Ed Wasserman, Doug Delaney, Mike Clinard, Jim Waters, Carolyn Stonecipher, David Horne, David Marshall, James A. Graham, Howard R. Bradley (Robertson County Mayor/Executive), Jeanne Stevens (Nashville MPO)

E-mail copies: Ed Cole, Paul Degges, Jim Zeigler, Dennis Cook, Jeff Jones, Chris Christianson, Ralph Comer, Mark Holloran, Jerry Moorhead, Charles Graves, Bill Hart, Terry Gladden

ADVANCE PLANNING REPORT

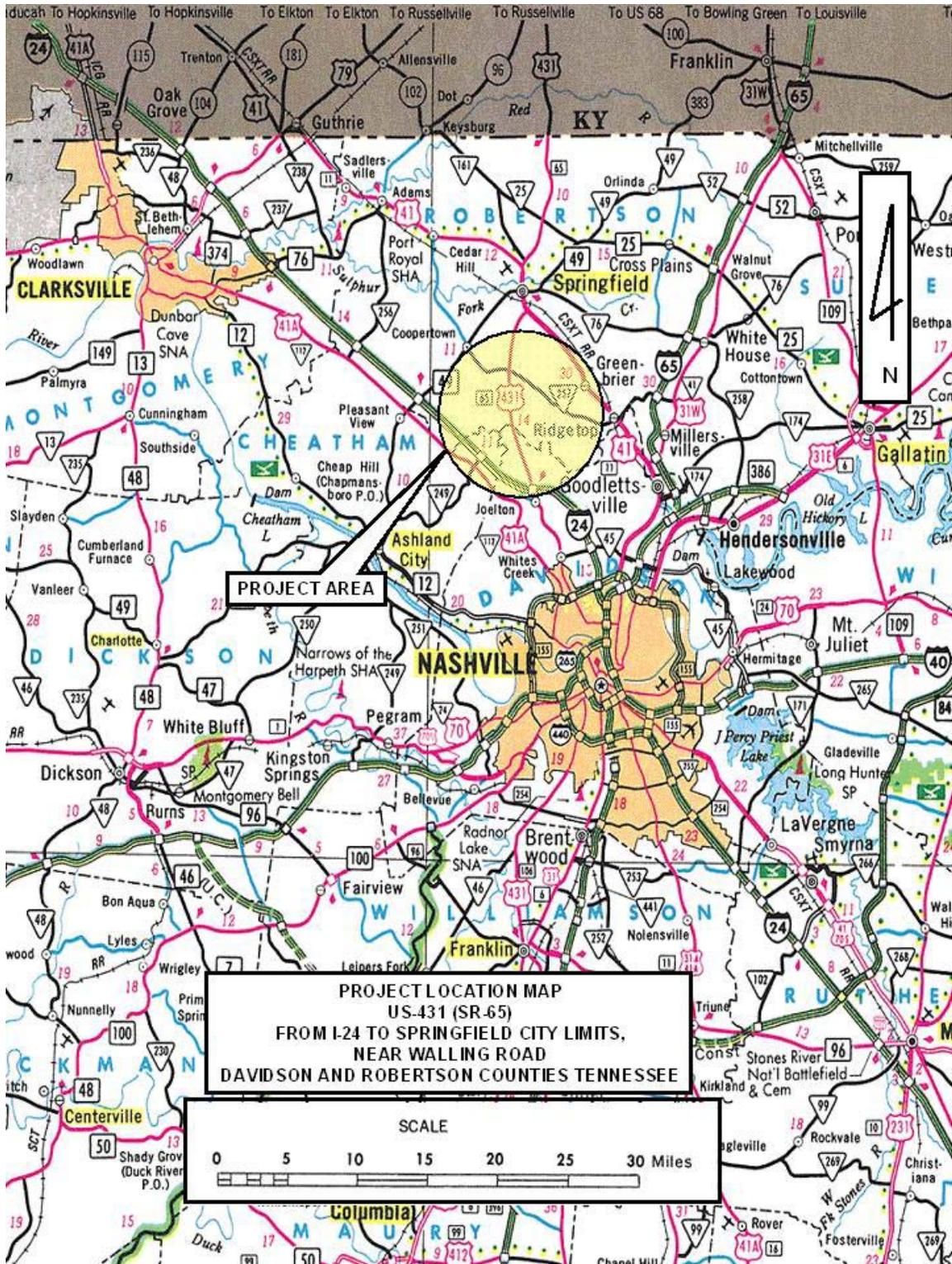
**US 431 / STATE ROUTE 65
FROM NORTH OF I-24 AT JOELTON TO
BATSON PARKWAY / WALLING ROAD
SOUTH OF SPRINGFIELD
DAVIDSON / ROBERTSON COUNTIES**

PREPARED BY
THE TENNESSEE DEPARTMENT OF TRANSPORTATION
PLANNING DIVISION

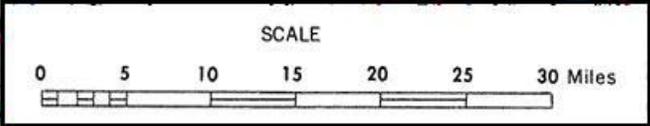
Approved by: Ed Cole 5/2/04 Paul D. Dreyer 5/28/04
Chief of Env. & Pln. Date Chief Engineer Date

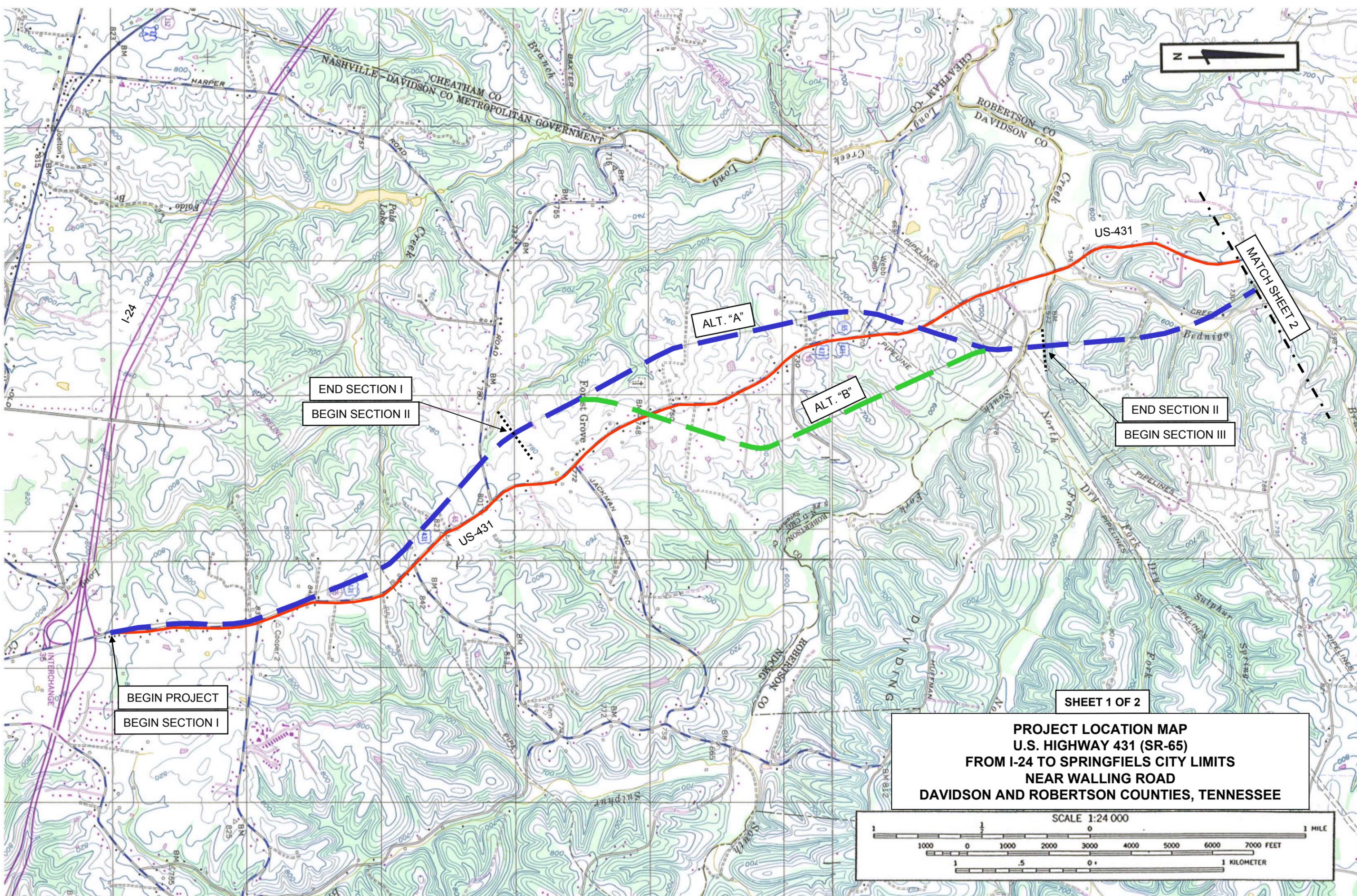
REVISION

Recommended by:	INITIALS	DATE	Recommended by:	INITIALS	DATE
TRANS. DIRECTOR PLANNING DIVISION	R.E.C.	05/10/04	TRANS. DIRECTOR PLANNING DIVISION		
TRANS. DIRECTOR ENV. PLN. AND PERMITS	[Signature]	05/14/04	TRANS. DIRECTOR ENV. PLN. AND PERMITS		
ENG. DIRECTOR DESIGN DIVISION	[Signature]	5/20/04	ENG. DIRECTOR DESIGN DIVISION		
ENG. DIRECTOR STRUCTURES DIVISION	[Signature]	5/14/04	ENG. DIRECTOR STRUCTURES DIVISION		
^{TD} TRANS. DIRECTOR PROG. DEV. DIVISION	[Signature]	5/25/04	TRANS. DIRECTOR PROG. DEV. DIVISION		
ASSISTANT CHIEF ENGINEER	[Signature]	5/26/04	ASSISTANT CHIEF ENGINEER		
ASSISTANT CHIEF OF ENV. & PLN.	[Signature]	5/26/04	ASSISTANT CHIEF OF ENV. & PLN.		



PROJECT LOCATION MAP
 US-431 (SR-65)
 FROM I-24 TO SPRINGFIELD CITY LIMITS,
 NEAR WALLING ROAD
 DAVIDSON AND ROBERTSON COUNTIES TENNESSEE





END SECTION I
BEGIN SECTION II

ALT. "A"

ALT. "B"

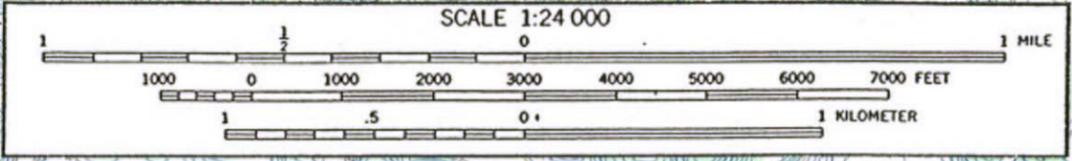
END SECTION II
BEGIN SECTION III

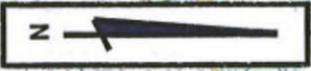
MATCH SHEET 2

BEGIN PROJECT
BEGIN SECTION I

SHEET 1 OF 2

**PROJECT LOCATION MAP
U.S. HIGHWAY 431 (SR-65)
FROM I-24 TO SPRINGFIELD CITY LIMITS
NEAR WALLING ROAD
DAVIDSON AND ROBERTSON COUNTIES, TENNESSEE**





END SECTION III
BEGIN SECTION IV

ALT. "A"

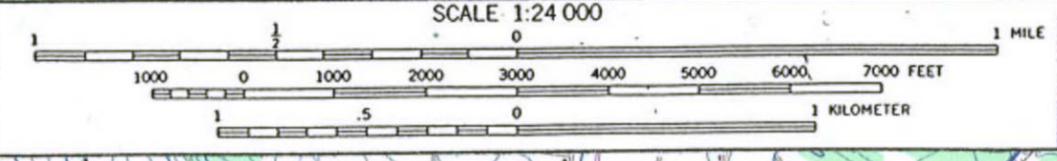
END SECTION IV
END PROJECT

MATCH SHEET 1

BATSON PARKWAY

SHEET 2 OF 2

**PROJECT LOCATION MAP
U.S. HIGHWAY 431 (SR-65)
FROM I-24 TO SPRINGFIELD CITY LIMITS
NEAR WALLING ROAD
DAVIDSON AND ROBERTSON COUNTIES, TENNESSEE**



**DATA TABLE
US 431 (State Route 65)
Davidson - Robertson Counties**

Total Section

From: North of I-24 to near Baston Parkway-Walling Road south of Springfield. EXISTING

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	10.37_±
Cross Section Feet	22' / 28' / 60', 24' / 44' / 200', 36' / 56' / 200'*
Present ADT (2007)	12,400
Projected Future ADT (2027)	20,200
Percent Trucks	8%
Estimated Right-of-Way Acquisition (Acres)	
Estimated Right-of-Way Tracts Affected	
Estimated Family Displacements	
Estimated Business Displacements	
Estimated Right-of-Way Cost	
Estimated Utility Cost Reimbursable	
Estimated Utility Cost Non-Reimbursable	
Estimated Construction Cost	
Estimated Preliminary Engineering Cost	
Total Estimated Section Cost	

*** Typical section with truck climbing lane.**

DATA TABLE
US 431 (State Route 65)
Davidson - Robertson Counties

Section I Alternate AB

From: North of I-24 to North of Baxter Road Proposed

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	2.19_±
Cross Section Feet	48' / 124' / 250'
Present ADT (2007)	12,400
Projected Future ADT (2027)	20,200
Percent Trucks	8%
Estimated Right-of-Way Acquisition (Acres)	78.7
Estimated Right-of-Way Tracts Affected	28
Estimated Family Displacements	4
Estimated Business Displacements	0
Estimated Right-of-Way Cost	\$1,590,000
Estimated Utility Cost Reimbursable	\$930,000
Estimated Utility Cost Non-Reimbursable	\$415,000
Estimated Construction Cost	\$5,260,000
Estimated Preliminary Engineering Cost	\$480,000
Total Estimated Section Cost	\$8,675,000

DATA TABLE
US 431 (State Route 65)
Davidson - Robertson Counties

Section II Alternate A

From: North of Baxter Rd to near Sycamore Creek Rd. Proposed

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	2.58_±
Cross Section Feet	48' / 124' / 250'
Present ADT (2007)	12,400
Projected Future ADT (2027)	20,200
Percent Trucks	8%
Estimated Right-of-Way Acquisition (Acres)	82.1
Estimated Right-of-Way Tracts Affected	27
Estimated Family Displacements	2
Estimated Business Displacements	0
Estimated Right-of-Way Cost	\$1,050,000
Estimated Utility Cost Reimbursable	\$800,000
Estimated Utility Cost Non-Reimbursable	\$115,000
Estimated Construction Cost	\$11,285,000
Estimated Preliminary Engineering Cost	\$1,025,000
Total Estimated Section Cost	\$14,275,000

DATA TABLE
US 431 (State Route 65)
Davidson - Robertson Counties

Section II Alternate B

From: North of Baxter Rd to near Sycamore Creek Rd. Proposed

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	2.59₊
Cross Section Feet	48' / 124' / 250'
Present ADT (2007)	12,400
Projected Future ADT (2027)	20,200
Percent Trucks	8%
Estimated Right-of-Way Acquisition (Acres)	78.7
Estimated Right-of-Way Tracts Affected	30
Estimated Family Displacements	3
Estimated Business Displacements	0
Estimated Right-of-Way Cost	\$1,025,000
Estimated Utility Cost Reimbursable	\$790,000
Estimated Utility Cost Non-Reimbursable	\$125,000
Estimated Construction Cost	\$10,915,000
Estimated Preliminary Engineering Cost	\$590,000
Total Estimated Section Cost	\$13,845,000

**DATA TABLE
US 431 (State Route 65)
Davidson - Robertson Counties**

Section III Alternate AB

From: Near Sycamore Creek Rd to near Old Highway 431. Proposed

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	1.49+
Cross Section Feet	48' / 124' / 250'
Present ADT (2007)	12,400
Projected Future ADT (2027)	20,200
Percent Trucks	8%
Estimated Right-of-Way Acquisition (Acres)	45.1
Estimated Right-of-Way Tracts Affected	28
Estimated Family Displacements	1
Estimated Business Displacements	0
Estimated Right-of-Way Cost	\$515,000
Estimated Utility Cost Reimbursable	\$25,000
Estimated Utility Cost Non-Reimbursable	\$95,000
Estimated Construction Cost	\$9,455,000
Estimated Preliminary Engineering Cost	\$860,000
Total Estimated Section Cost	\$10,950,000

DATA TABLE
US 431 (State Route 65)
Davidson - Robertson Counties

Section IV Alternate AB

From: Near Old Highway 431 to near Baston Parkway-Walling Rd. Proposed

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	4.04+
Cross Section Feet	48' / 124' / 250' 84' / 200'
Present ADT (2007)	12,400
Projected Future ADT (2027)	20,200
Percent Trucks	8%
Estimated Right-of-Way Acquisition (Acres)	39.1
Estimated Right-of-Way Tracts Affected	25
Estimated Family Displacements	2
Estimated Business Displacements	0
Estimated Right-of-Way Cost	\$700,000
Estimated Utility Cost Reimbursable	\$265,000
Estimated Utility Cost Non-Reimbursable	\$770,000
Estimated Construction Cost	\$10,025,000
Estimated Preliminary Engineering Cost	\$910,000
Total Estimated Section Cost	\$12,670,000

DATA TABLE
US 431 (State Route 65)
Davidson - Robertson Counties

Alternate A

From: North of I-24 to near Baston Parkway-Walling Rd south of Springfield. Proposed

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	10.30+
Cross Section Feet	48' / 124' / 250' 84' / 200'
Present ADT (2007)	12,400
Projected Future ADT (2027)	20,200
Percent Trucks	8%
Estimated Right-of-Way Acquisition (Acres)	245.0
Estimated Right-of-Way Tracts Affected	108
Estimated Family Displacements	9
Estimated Business Displacements	0
Estimated Right-of-Way Cost	\$3,855,000
Estimated Utility Cost Reimbursable	\$2,020,000
Estimated Utility Cost Non-Reimbursable	\$1,395,000
Estimated Construction Cost	\$36,025,000
Estimated Preliminary Engineering Cost	\$3,275,000
Total Estimated Section Cost	\$46,570,000

DATA TABLE
US 431 (State Route 65)
Davidson - Robertson Counties

Alternate B

From: North of I-24 to near Baston Parkway-Walling Rd south of Springfield. Proposed

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	10.30+
Cross Section Feet	48' / 124' / 250' 84' / 200'
Present ADT (2007)	12,400
Projected Future ADT (2027)	20,200
Percent Trucks	8%
Estimated Right-of-Way Acquisition (Acres)	241.6
Estimated Right-of-Way Tracts Affected	111
Estimated Family Displacements	10
Estimated Business Displacements	0
Estimated Right-of-Way Cost	\$3,830,000
Estimated Utility Cost Reimbursable	\$2,010,000
Estimated Utility Cost Non-Reimbursable	\$1,405,000
Estimated Construction Cost	\$35,655,000
Estimated Preliminary Engineering Cost	\$3,240,000
Total Estimated Section Cost	\$46,140,000

PURPOSE OF STUDY

The purpose of this study is to evaluate the need and feasibility of improving US 431 (State Route 65) from north of Interstate 24 at Joelton to Batson Parkway / Wallington Road south of Springfield. The objectives of this study are to examine traffic volumes, the accident history and roadway geometry in order to develop recommendations for improvements. The study will also estimate the costs of project implementation, and identify any preliminary environmental concerns. The project was initiated at the request of Local Government officials.

DEFICIENCIES

Geometrics Structures _____ Operational R/R Crossing _____

Accident Rate 1.51 Statewide Average Rate 1.68

Other _____

EXISTING CONDITIONS

From north of Interstate 24 at Joelton to Batson Parkway and Walling Road south of Springfield US 431 (State Route 65) is classified a rural minor arterial. The existing cross section from north of Interstate 24 in Davidson County to south of Old US 431 in Robertson County is 2 @ 11' travel lanes with 3' shoulders and ditches within a 50' / 60' right-of-way. The cross section from south of Old US 431 to east of State Route 257 Betts Road / Mount Zion Road is 2 @ 12' travel lanes with 10' shoulders and ditches within a 200' right-of-way. The cross section from east of State Route 257 Betts Road / Mount Zion Road to Batson Parkway / Walling Road south of Springfield is 2 @ 12' travel lanes with 12' truck climbing lane 10' shoulders and ditches within a 200' right-of-way. The land use is rural.



Typical section of existing State Route 65 north of Interstate 24 to near Old 431.



Typical section of existing State Route 65 from Old 431 to near State Route 257.



Typical section of existing State Route 65 from east State Route 257 to Batson Parkway / Walling Road south of Springfield.

PROPOSED IMPROVEMENT

Section I Alternate AB: Beginning north of Interstate 24 to north of Baxter Road on new location (Length 2.19± mile) the proposed 4 lane typical section will consist of 4 @ 12' traffic lanes with a 52' median, 12' shoulders, and ditches within 250' right-of-way. The proposed section connects to the existing 4 lane at the Interstate 24 interchange (See Functional Page 3) then begins on new location to the west of the existing location which is all in Davidson County.

Section II Alternate A: Beginning on the proposed new location north of Baxter Road to near Sycamore Creek Road (Length 2.58± mile) the proposed 4 lane typical section will consist of 4 @ 12' traffic lanes with a 52' median, 12' shoulders, and ditches within 250' right-of-way. At this point the proposed alignment would continue on the west side or left of the existing location. Major structures will be required over Sycamore Creek that will also bridge 3 natural gas pipe lines (See Functional Page 13).

Section II Alternate B: Beginning on the proposed new location north of Baxter Road to near Sycamore Creek Road (Length 2.59± mile) the proposed 4 lane typical section will consist of 4 @ 12' traffic lanes with a 52' median, 12' shoulders, and ditches within 250' right-of-way. At this point the proposed alignment would continue on the east side or right of the existing location. Major structures will be required over Sycamore Creek that will also bridge 3 natural gas pipe lines (See Functional Page 32).

Section III Alternate AB: Beginning on the proposed new location near Sycamore Creek Road to near Old Highway 431 (Length 1.49± mile) the proposed 4 lane typical section will consist of 4 @ 12' traffic lanes with a 52' median, 12' shoulders, and ditches within 250' right-of-way. At this point the proposed alignment would continue on the east side or right of the existing location. This section connects to the existing location near Old Highway 431 where it is proposed to widen the existing.

Section IV Alternate AB: Beginning on the existing location near Old Highway 431 to near Baston Parkway / Wallington Road (Length 4.04± mile) the proposed 4 lane typical section will consist of 4 @ 12' traffic lanes with a 52' median, 12' shoulders, and ditches within 250' right-of-way. At this point the proposed alignment would continue on the east side or right of the existing location. This section is proposed to widen the existing road on the east or right side. The proposed typical section will transition to a five lane urban section at the end of the project.

LEVEL OF SERVICE:

The operational characteristics of a highway facility is described in terms of a "Level Of Service" (LOS), which ranges from A to F, and takes into account three

critical variables: travel speed, density, and flow rate with LOS "A" representing the best traffic flow conditions and LOS "F" representing the worst or "Failure" conditions.

The existing route capacity analysis shows a level of service (LOS) "E" during the base year (2007) and a (LOS) "E" during the design year (2027).

Proposed route capacity analysis shows a level of service (LOS) "A" during the base year (2007) and a LOS "A" during the design year (2027).

DISPOSITION OF EXISTING ROUTE

The remaining existing roadway will be removed from the highway system and maintenance will become the responsibility of the Local Government.

BICYCLE AND PEDESTRIAN CONSIDERATIONS

Bicyclists and pedestrians may utilize the 12' paved shoulders provided along the entire length of the project.

ENVIRONMENTAL CONSIDERATIONS

Detailed environmental technical studies were not prepared for this project; however, preliminary investigations were conducted to identify environmentally sensitive areas for historic, archaeological, and ecological considerations.

FIELD INVESTIGATION

A field review was held for the proposed project on October 22, 2002. The following were in attendance:

TDOT:	Charles Graves, Functional Design
	C. L. Tilley, Functional Design
	Anne Kaderabek, Functional Design
	David Thompson, Environmental Planning
	Gary Webber, Facilities Planning Division
	Andrew Taylor, Facilities Planning Division
	Terry Arnold, Design Region III
	Doug Langford, Design Region III
	Sylvia Odum, Title VI
	Brian Fouch, FHWA
	Chad Thompson, FHWA

CHECK LIST OF DETERMINANTS FOR LOCATION STUDY

If preliminary field reviews indicate the presence of any of the following facilities or ESE categories, place an "x" in the blank opposite the item. Where more than one alternate is to be considered, place its letter designation in the blank.

1. Agricultural land usage..... X
2. Airport existing or proposed) _____
3. Commercial area, shopping center..... _____
4. Floodplains..... _____
5. Forested land..... X
6. Historical, archaeological, cultural, or natural landmark
Or cemeteries..... X
7. Industrial park, factory..... _____
8. Institutional usage's
 - a. School or other educational institution..... _____
 - b. Church or other religious institution..... X
 - c. Hospital or other medical facility..... _____
 - d. Public building, e.g. fire station..... _____
 - e. Defense installation..... _____
9. Recreational usage's
 - a. Park or recreational area, State Natural Area..... _____
 - b. Wildlife refuge or wildlife management area..... _____
10. Residential establishment..... x
11. Urban area, town, city, or community..... _____
12. Waterway, lake, pond, river, stream, spring, wetland..... X
Permit required: Coast Guard _____ Section 404 X
Section 10 _____ TVA Section 26a review _____
NPDES X Aquatic Resource Alternation Permit X
Class V Injection Wells _____
13. Location coordinated with local officials..... X
14. Railroad Crossings..... _____
15. Hazardous Material Site (U.G.T. – Underground Tanks)..... _____
16. Other..... _____

TENNESSEE DEPARTMENT OF TRANSPORTATION

DESIGN CRITERIA FOR LOCATION AND DESIGN PHASE

ROUTE: SR-65 (US-431) ALTERNATE: A & B SECTION: I-IV
REGION: III COUNTY: Davidson / Robertson PROJECT: _____
LOCATION: From: North of I-24 to near Walling Rd. / Baston
Pkwy. south of Springfield

20	<u>07</u>	ADT	<u>12,400</u>
20	<u>27</u>	ADT	<u>20,200</u>
PERCENT TRUCKS			<u>8%</u>
DHV			<u>2,222</u>
FUNCTIONAL CLASSIFICATION			<u>Arterial</u>
MINIMUM DESIGN SPEED			<u>70 MPH</u>
ACCESS CONTROL			<u>Non</u>
MAXIMUM CURVE			<u>3° 00' (SE: 0.08'/.)</u>
MAXIMUM GRADE			<u>4%</u>
MINIMUM STOPPING SIGHT DISTANCE			<u>625' - 850'</u>
SURFACE WIDTH			<u>2 @ 24</u>
NUMBER OF LANES			<u>4</u>
USEABLE SHOULDER WIDTH			<u>2 @ 12'</u>
MEDIAN WIDTH			<u>52'</u>
MINIMUM RIGHT-OF-WAY			<u>* 250'</u>
SIGNALIZATION			<u>N / A</u>

REMARKS: * For estimating purposes only. Actual
Right-Of-Way to be determined by slopes.

**TENNESSEE DEPARTMENT OF TRANSPORTATION
MAPPING AND STATISTICS OFFICE
TRAFFIC AND SAFETY PLANNING SECTION**

(REV. 4/22/02)

PROJECT NO.: _____ ROUTE: S.R.-65 (U.S.-431)
 COUNTY: DAVIDSON/ROBERTSON CITY: _____
 PROJECT PIN NUMBER: _____
 PROJECT DESCRIPTION: FROM I-24 TO SPRINGFIELD CITY LIMITS.

DIVISION REQUESTING:

MAINTENANCE	<input type="checkbox"/>	PAVEMENT DESIGN	<input type="checkbox"/>
PLANNING	<input checked="" type="checkbox"/>	STRUCTURES	<input type="checkbox"/>
PROG. DEVELOPMENT & ADM.	<input type="checkbox"/>	SURVEY & DESIGN	<input type="checkbox"/>
PUBLIC TRANS. & AERO.	<input type="checkbox"/>	TRAFFIC SIGNAL DESIGN	<input type="checkbox"/>
YEAR PROJECT PROGRAMMED FOR CONSTRUCTION:	_____	OTHER _____	<input type="checkbox"/>
PROJECTED LETTING DATE:	_____		

TRAFFIC ASSIGNMENT:

BASE YEAR		DESIGN YEAR					DESIGN ROADWAY % TRUCKS		DESIGN AVERAGE DAILY LOADS	
ADT	YEAR	ADT	DHV	%	YEAR	DIR.DIST.	DHV	ADT	FLEX	RIGID
12,400	2007	20,200	2,222	11	2027	65-35	6	8		

REQUESTED BY: NAME TOMMY BATES DATE 8/26/02
 DIVISION PLANNING
 ADDRESS SUITE 900 J.K. POLK BLDG.
NASHVILLE, TN 37243

REVIEWED BY: TONY ARMSTRONG *Tony Armstrong* DATE 8-27-02
 TRANSPORTATION MANAGER 1
 SUITE 1000, JAMES K. POLK BUILDING

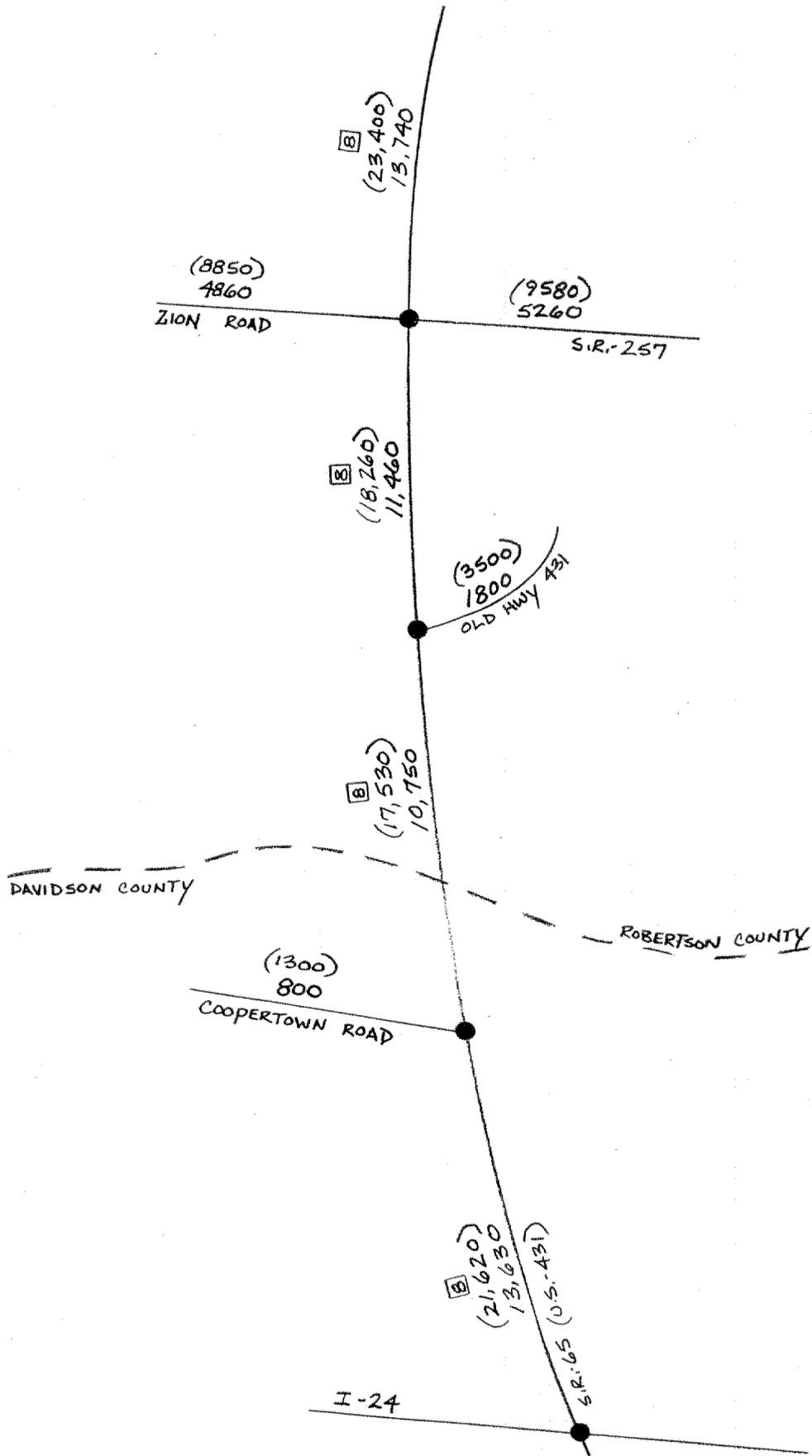
APPROVED BY: STEVE ALLEN *Steve Allen* DATE 8-27-02
 TRANSPORTATION MANAGER 2
 SUITE 1000, JAMES K. POLK BUILDING

COMMENTS:

THIS TRAFFIC UPDATED FROM 2002 CYCLE COUNTS. FUTURE TRAFFIC BASED ON CYCLE COUNT GROWTH TRENDS AND CALCULATIONS BY THE ADAM COMPUTER PROGRAM. *MAINLINE TRAFFIC ONLY WITHIN LIMITS OF THE PROJECT.

DHV'S ARE NOT REQUIRED FOR SIDE ROADS LESS THAN 1000 ADT.

NOTE: FOR BRIDGE REPLACEMENT PROJECTS, ADLs ARE NOT REQUIRED FOR ADTs OF 1000 OR LESS AND PERCENTAGE OF TRUCKS OF 7% OR LESS.
 SEE ATTACHMENTS FOR TURNING MOVEMENTS AND/OR OTHER DETAILS.



DAVIDSON/ROBERTSON
 S.R. 65 (U.S. -431)

2007 ADT - 000
 2027 ADT - (000)
 ADT TRUCK % - □

AUGUST 27, 2002

B. J. Darter

COST DATA SHEET
US 431 (State Route 65)
Davidson - Robertson Counties
Section IV Alternate AB

PROJECT: Near Old Highway 431 to near Baston Parkway-Walling
Road.

LENGTH: 4.04 ± Miles CROSS-SECTION: 48' / 124' / 250'
84' / 200'

Right-of Way

Land, Improvements and Damages (39.1± Acres)	\$ 570,000
Incidentals (25 Tracts)	\$ 65,000
Relocation Payments: (2 Residences)	\$ 65,000
(0 Business)	
(0 Non-Profits)	
TOTAL RIGHT-OF-WAY COST	<u>\$ 700,000</u>

Utility Relocation

Reimbursable	\$ 265,000
Non-Reimbursable	<u>\$ 770,000</u>
TOTAL ADJUSTMENT COST	<u>\$ 1,035,000</u>

Construction

Clearing and Grubbing	\$ 185,000
Earthwork	\$ 2,775,000
Pavement Removal	\$ N/A
Drainage	\$ 655,000
Structures	\$ N/A
Railroad Crossing or Separation	\$ N/A
Paving	\$ 3,925,000
Retaining Walls	\$ N/A
Maintenance of Traffic	\$ 200,000
Topsoil	\$ 60,000
Seeding	\$ 40,000
Sodding	\$ 20,000
Signing	\$ 20,000
Lighting	\$ N/A
Signalization	\$ N/A
Fence	\$ N/A
Guardrail	\$ 140,000
Rip Rap or Slope Protection	\$ 30,000
Other Construction items (8.5%)	\$ 685,000
Mobilization	\$ 380,000
10% Engineering and Contingencies	<u>\$ 910,000</u>
TOTAL CONSTRUCTION COST	<u>\$ 10,025,000</u>

Preliminary Engineering (10%) \$ 910,000

TOTAL SECTION COST **\$ 12,670,000**

COST DATA SHEET
US 431 (State Route 65)
Davidson - Robertson Counties
Total Alternate A

PROJECT: North of I-24 to near Baston Parkway-Walling Road south of
Springfield.

48' / 124' / 250'

LENGTH: 10.30 ± Miles CROSS-SECTION: 84' / 200'

Right-of Way

Land, Improvements and Damages (245.0± Acres).....	\$ 3,250,000
Incidentals (108 Tracts).....	\$ 315,000
Relocation Payments: (9 Residences).....	\$ 290,000
(0 Business).....	
(0 Non-Profits).....	
TOTAL RIGHT-OF-WAY COST	\$ 3,855,000

Utility Relocation

Reimbursable	\$ 2,020,000
Non-Reimbursable	\$ 1,395,000
TOTAL ADJUSTMENT COST	\$ 3,415,000

Construction

Clearing and Grubbing	\$ 470,000
Earthwork	\$ 11,495,000
Pavement Removal.....	\$ 50,000
Drainage	\$ 1,850,000
Structures	\$ 3,795,000
Railroad Crossing or Separation	\$ N/A
Paving	\$ 10,090,000
Retaining Walls.....	\$ N/A
Maintenance of Traffic	\$ 270,000
Topsoil	\$ 155,000
Seeding	\$ 105,000
Sodding	\$ 55,000
Signing.....	\$ 35,000
Lighting.....	\$ N/A
Signalization	\$ N/A
Fence	\$ N/A
Guardrail	\$ 405,000
Rip Rap or Slope Protection.....	\$ 140,000
Other Construction items (8.5%)	\$ 2,460,000
Mobilization	\$ 1,375,000
10% Engineering and Contingencies	\$ 3,275,000
TOTAL CONSTRUCTION COST	\$ 36,025,000

Preliminary Engineering (10%)

\$ 3,275,000

TOTAL SECTION COST

\$ 46,570,000

COST DATA SHEET
US 431 (State Route 65)
Davidson - Robertson Counties
Total Alternate B

PROJECT: North of I-24 to near Baston Parkway-Walling Road south of
Springfield.

48' / 124' / 250'

LENGTH: 10.30 ± Miles CROSS-SECTION: 84' / 200'

Right-of Way

Land, Improvements and Damages (241.6± Acres).....	\$ 3,185,000
Incidentals (111 Tracts).....	\$ 320,000
Relocation Payments: (10 Residences).....	\$ 325,000
(0 Business).....	
(0 Non-Profits).....	
TOTAL RIGHT-OF-WAY COST	<u>\$ 3,830,000</u>

Utility Relocation

Reimbursable	\$ 2,010,000
Non-Reimbursable	\$ 1,405,000
TOTAL ADJUSTMENT COST	<u>\$ 3,415,000</u>

Construction

Clearing and Grubbing	\$ 470,000
Earthwork	\$ 11,505,000
Pavement Removal.....	\$ 50,000
Drainage	\$ 1,745,000
Structures	\$ 3,615,000
Railroad Crossing or Separation	\$ N/A
Paving	\$ 10,075,000
Retaining Walls.....	\$ N/A
Maintenance of Traffic	\$ 275,000
Topsoil	\$ 155,000
Seeding	\$ 105,000
Sodding	\$ 55,000
Signing.....	\$ 35,000
Lighting.....	\$ N/A
Signalization	\$ N/A
Fence	\$ N/A
Guardrail	\$ 405,000
Rip Rap or Slope Protection	\$ 130,000
Other Construction items (8.5%)	\$ 2,435,000
Mobilization	\$ 1,360,000
10% Engineering and Contingencies	<u>\$ 3,240,000</u>
TOTAL CONSTRUCTION COST	<u>\$ 35,655,000</u>

Preliminary Engineering (10%)

\$ 3,240,000

TOTAL SECTION COST

\$ 46,140,000

Index Of Sheets

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTION
3-32	PROPOSED LAYOUT

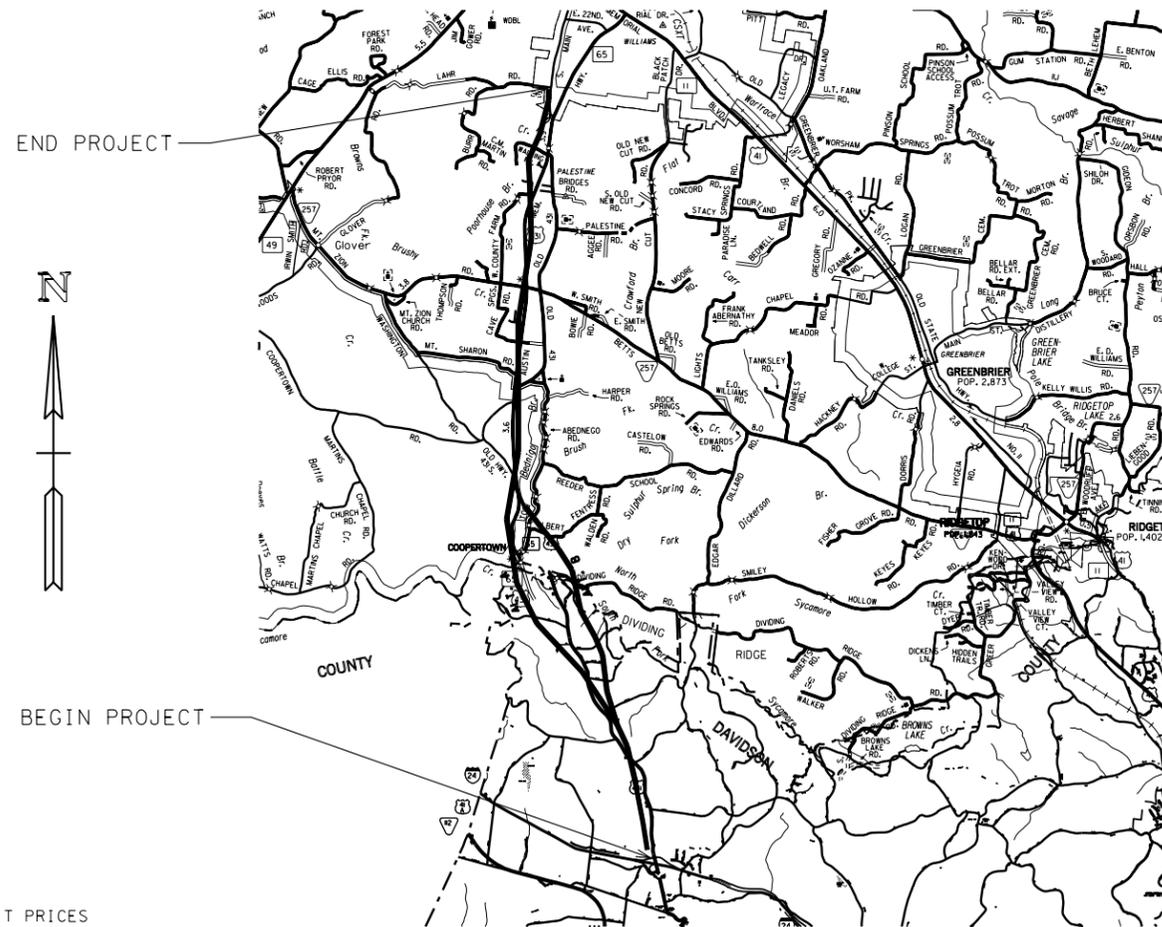
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2003	1
FED. AID PROJ. NO.		
STATE PROJ. NO.		

DAVIDSON, ROBERTSON COUNTIES

STATE ROUTE 65 (U.S. 431)
FROM: JUST NORTH OF I-24
TO: NEAR SPRINGFIELD CITY LIMITS

STATE HIGHWAY NO. 65 F.A.H.S. NO. 431



SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 1995 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT

SCALE: 1" = 1 mile

DESIGNER C.L. TILLEY DRAFTER T. PATE

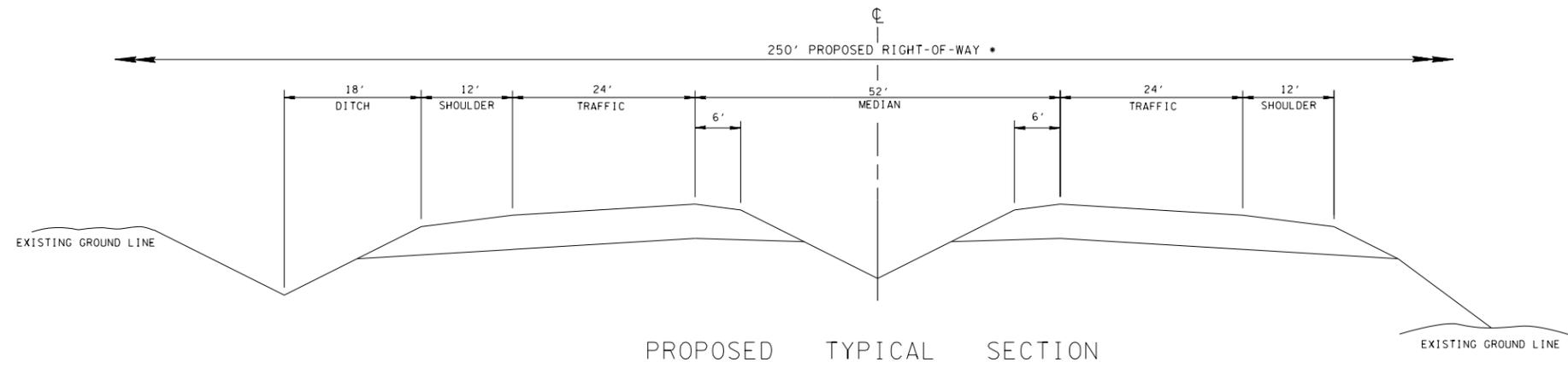
APPROVED: _____
DIRECTOR, DESIGN DIVISION

DATE: _____

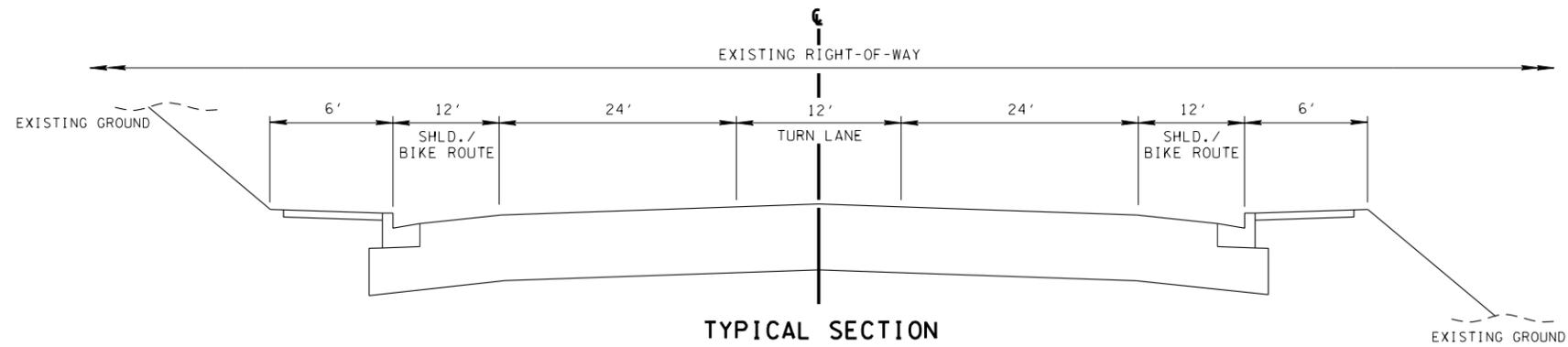
APPROVED: _____
COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
DIVISION ADMINISTRATOR DATE



* FOR ESTIMATING PURPOSES ONLY.
 ACTUAL RIGHT-OF-WAY WILL BE
 THAT WHICH IS REQUIRED FOR
 CONSTRUCTION OF PROJECT.



TYPICAL SECTION

FROM SOUTH OF SPRINGFIELD CITY LIMITS
TO NORTH OF THE SPRINGFIELD CITY LIMITS

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING & DEVELOPMENT

DAVIDSON
COUNTY
STATE ROUTE
65 (U.S. 431)

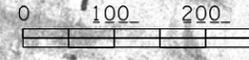


TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		3



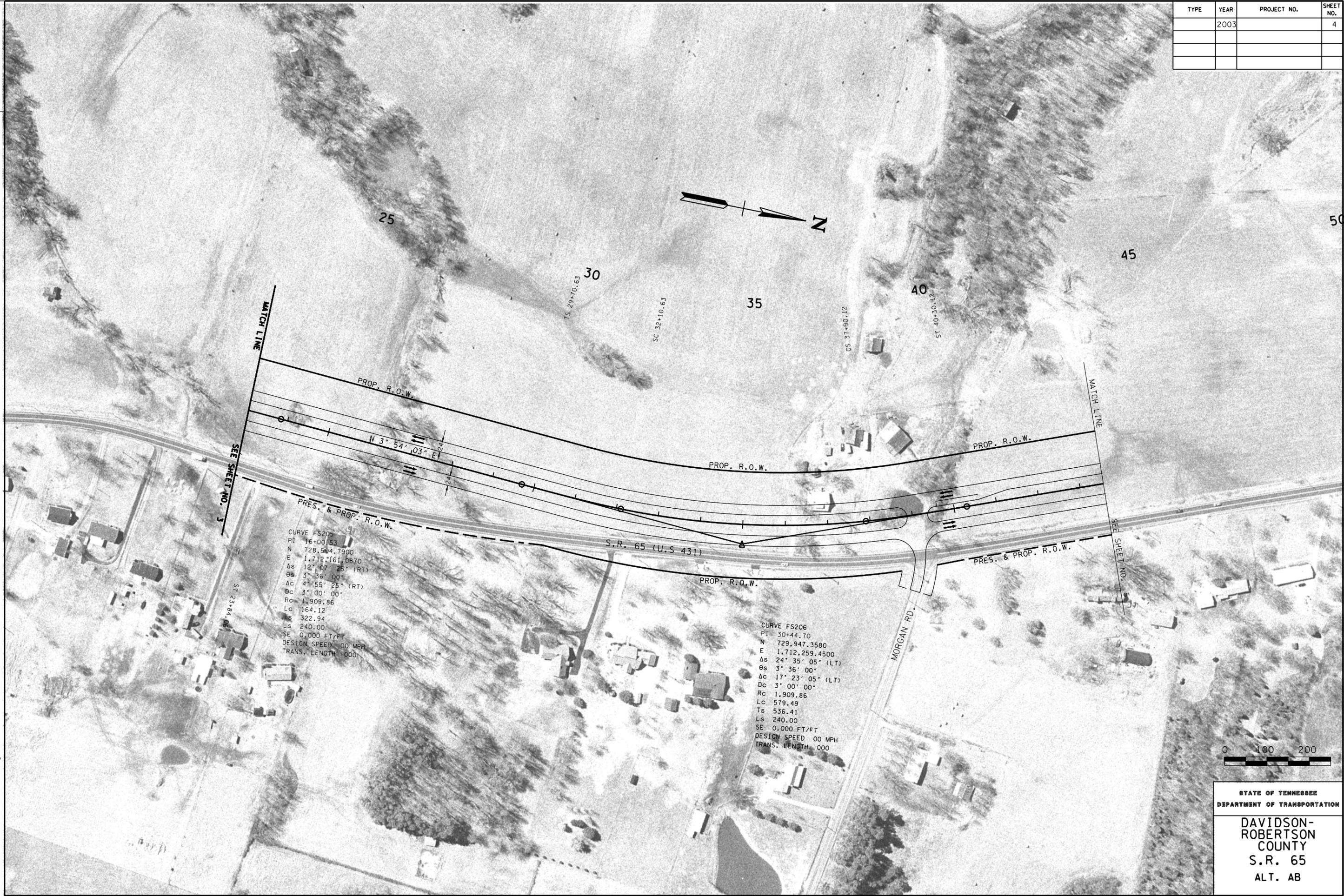
BEGIN PROJECT
 BEGIN SECTION I (ALT. AB)

CURVE ES204
 PI 4+62.87
 N 726,920.7140
 E 1,712,390.0020
 Δs 6' 36" 13" (RT)
 θs 1' 30" 00"
 Δc 3' 36" 13" (RT)
 Δc 1' 30" 00"
 RE 3,819.72
 LG 240.24
 TS 320.39
 LS 200.00
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 0.000



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		4



CURVE FS205
 PI 16+00.53
 N 728,504.7900
 E 1,712,161.0870
 Δs 12° 07' 26" (RT)
 θs 3° 36' 00"
 Δc 4° 55' 25" (RT)
 θc 3° 00' 00"
 Rc 1,909.86
 Lc 164.12
 Ts 322.94
 Ls 240.00
 SE 0.000 FT/PT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000

CURVE FS206
 PI 30+44.70
 N 729,947.3580
 E 1,712,259.4500
 Δs 24° 35' 05" (LT)
 θs 3° 36' 00"
 Δc 17° 23' 05" (LT)
 θc 3° 00' 00"
 Rc 1,909.86
 Lc 579.49
 Ts 536.41
 Ls 240.00
 SE 0.000 FT/PT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		6



SEE SHEET NO. 5

MATCH LINE

PROP. R.O.W.

PROP. R.O.W.

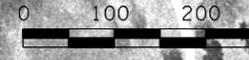
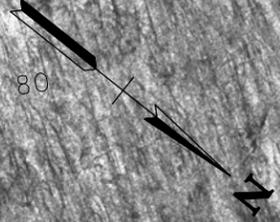
PROP. R.O.W.

PROP. R.O.W.

SEE SHEET NO. 7

MATCH LINE

CURVE FS207
 PI 73+17.47
 N 733,524.6470
 E 1,710,908.8520
 Δs 25° 12' 10" (LT)
 θs 2° 48' 45"
 Δc 19° 34' 40" (LT)
 Dc 2° 30' 00"
 Rc 2,291.83
 Lc 783.12
 Ts 625.04
 Ls 225.00
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		7



12/8/2003
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TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		8



SEE SHEET NO. 7

SEE SHEET NO. 9

MATCH LINE

MATCH LINE

PROP. R.O.W.

PROP. R.O.W.

PROP. R.O.W.

PROP. R.O.W.

115+44.01

EQUA. 125+00 Alt. A bk=
 0+00 Alt. B ah



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. A

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		9



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		10



165

170

175

180

185

SEE SHEET NO. 9

SEE SHEET NO. 11

MATCH LINE

MATCH LINE

PROP. R.O.W.

PROP. R.O.W.

PROP. R.O.W.

PROP. R.O.W.

ST 164+43.15



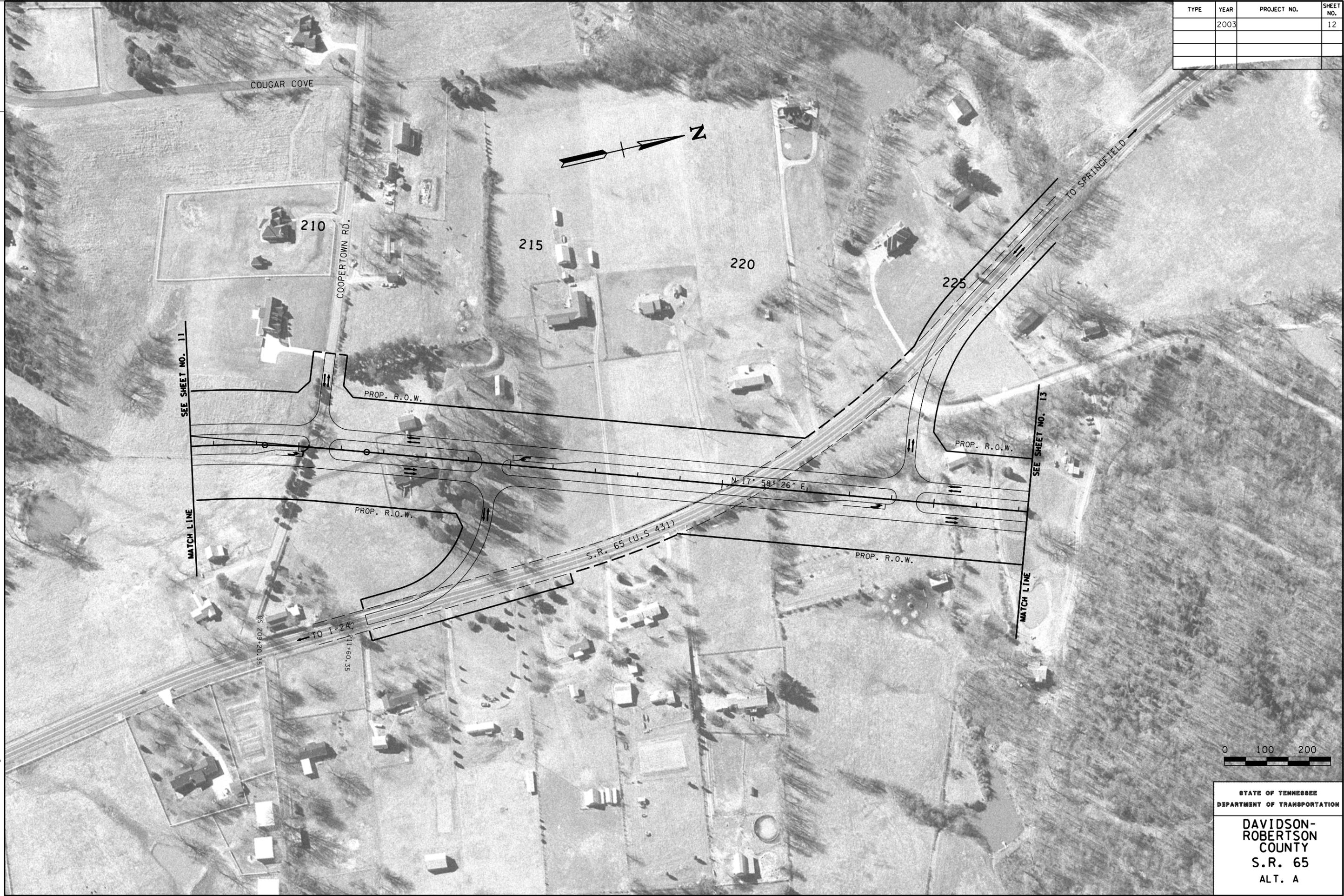
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. A

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		11



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		12



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		13

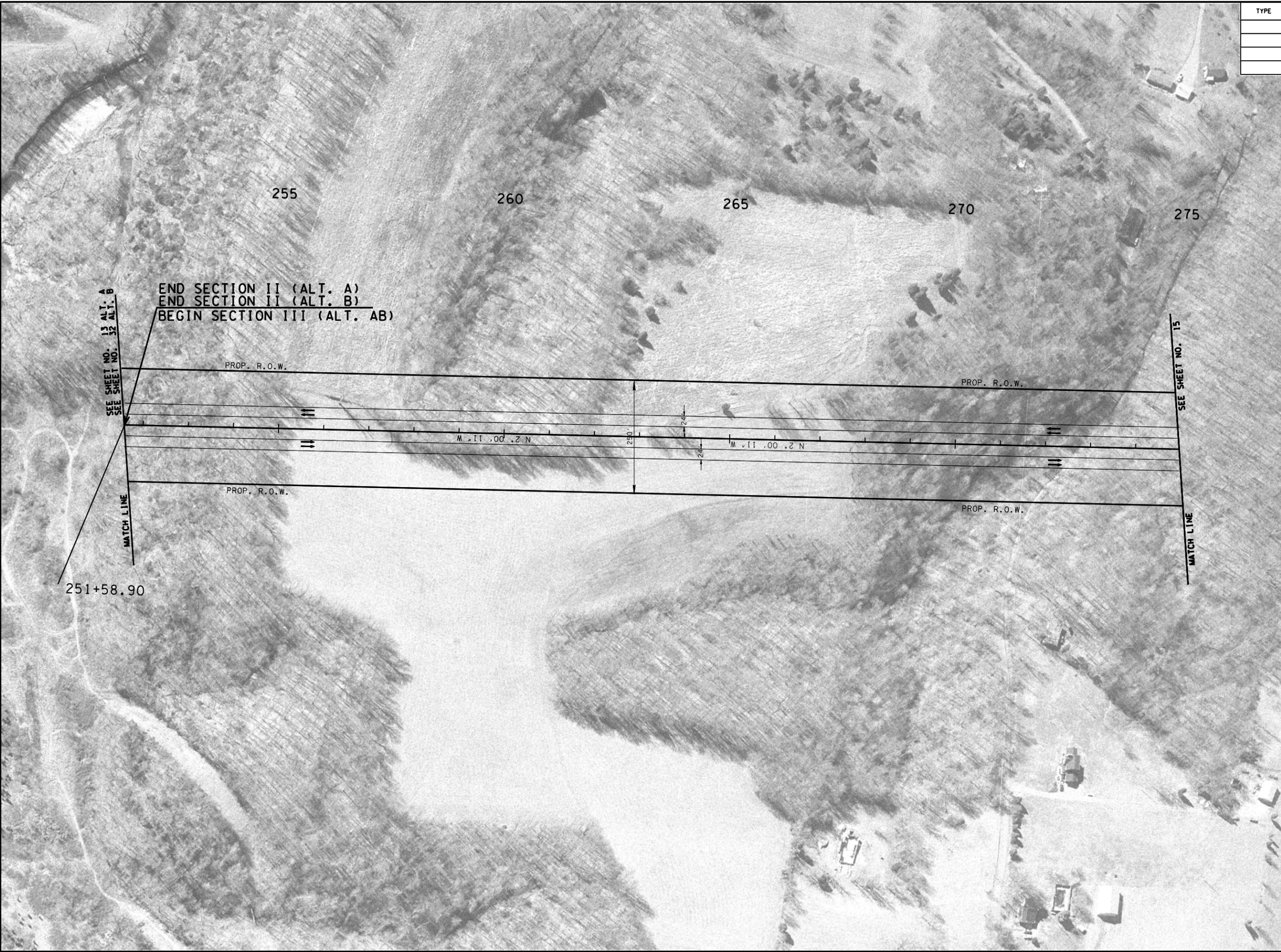


CURVE FS211
 PI 236+66.37
 N 747.848.6130
 E 1,705.818.0350
 Δs 19° 58' 37" (LT)
 θs 2° 09' 00"
 Δc 15° 40' 37" (LT)
 Dc 2' 00" 00"
 Rc 2,864.79
 Lc 783.84
 Ts 612.16
 Ls 215.00
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. A

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		14



251+58.90

SEE SHEET NO. 13 ALT. A
 SEE SHEET NO. 32 ALT. B

MATCH LINE

END SECTION II (ALT. A)
 END SECTION II (ALT. B)
 BEGIN SECTION III (ALT. AB)

PROP. R.O.W.

PROP. R.O.W.

PROP. R.O.W.

PROP. R.O.W.

N 2 00 . 11 W

N 2 00 . 11 W

250'

24'

24'

SEE SHEET NO. 15

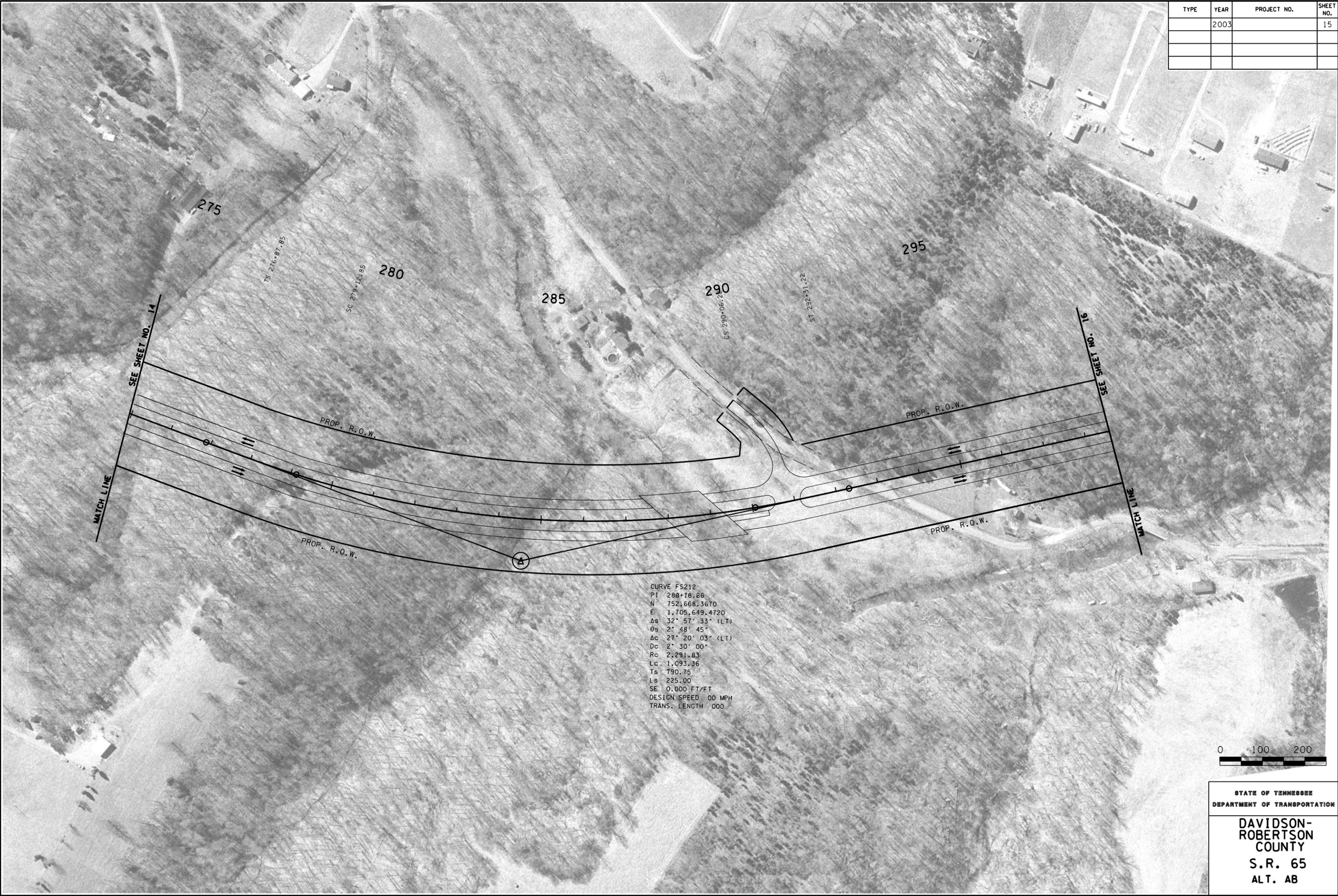
MATCH LINE



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

DAVIDSON-ROBERTSON
 COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		15

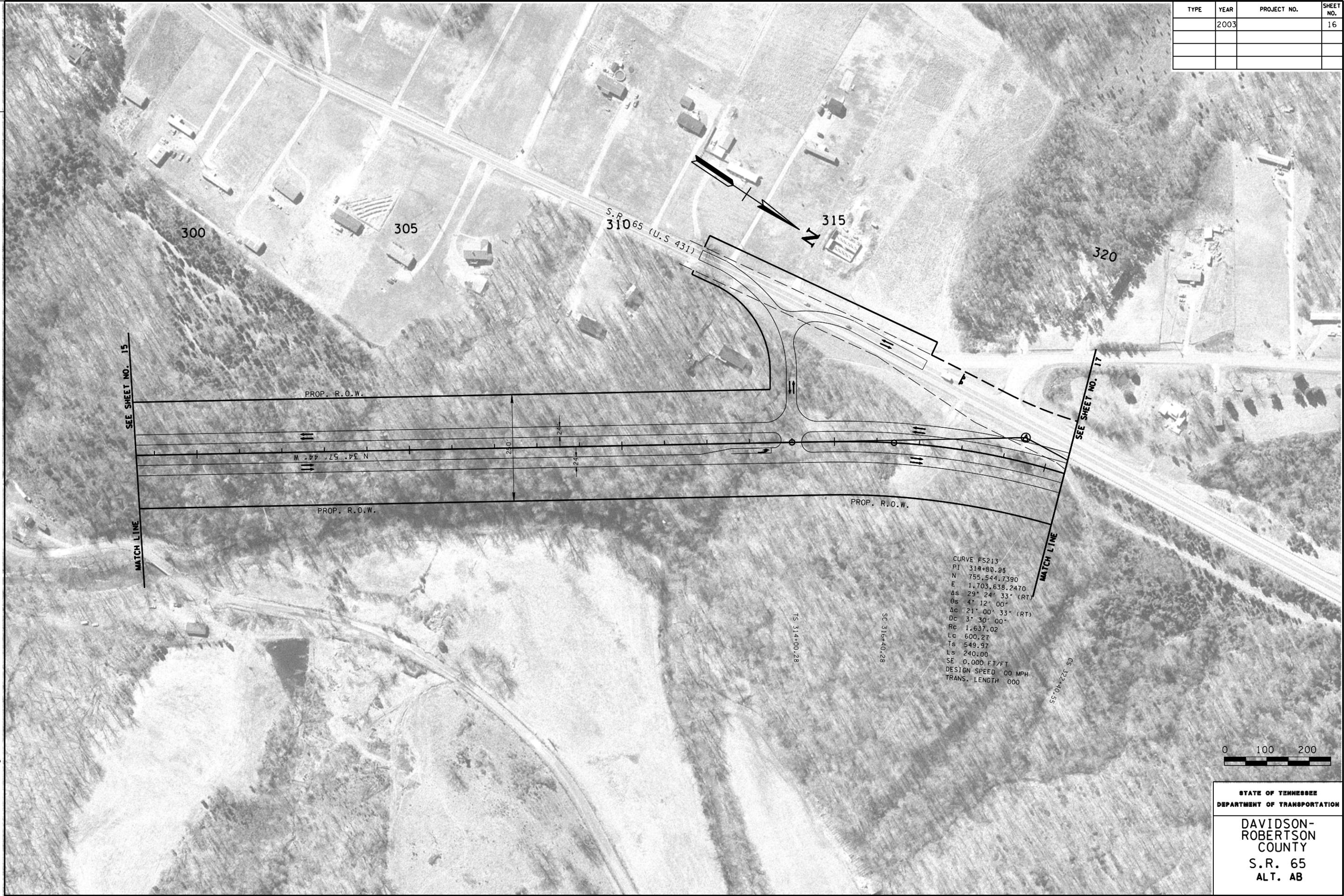


CURVE FS212
 PI 280+16.66
 N 752,668.3670
 E 1,705,649.4720
 Δs 32° 57' 33" (LT)
 θs 2° 48' 45"
 Δc 27° 20' 03" (LT)
 Dc 2° 30' 00"
 Rc 2,291.83
 Lc 1,093.36
 Ts 790.75
 Ls 225.00
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000

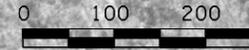


STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		16

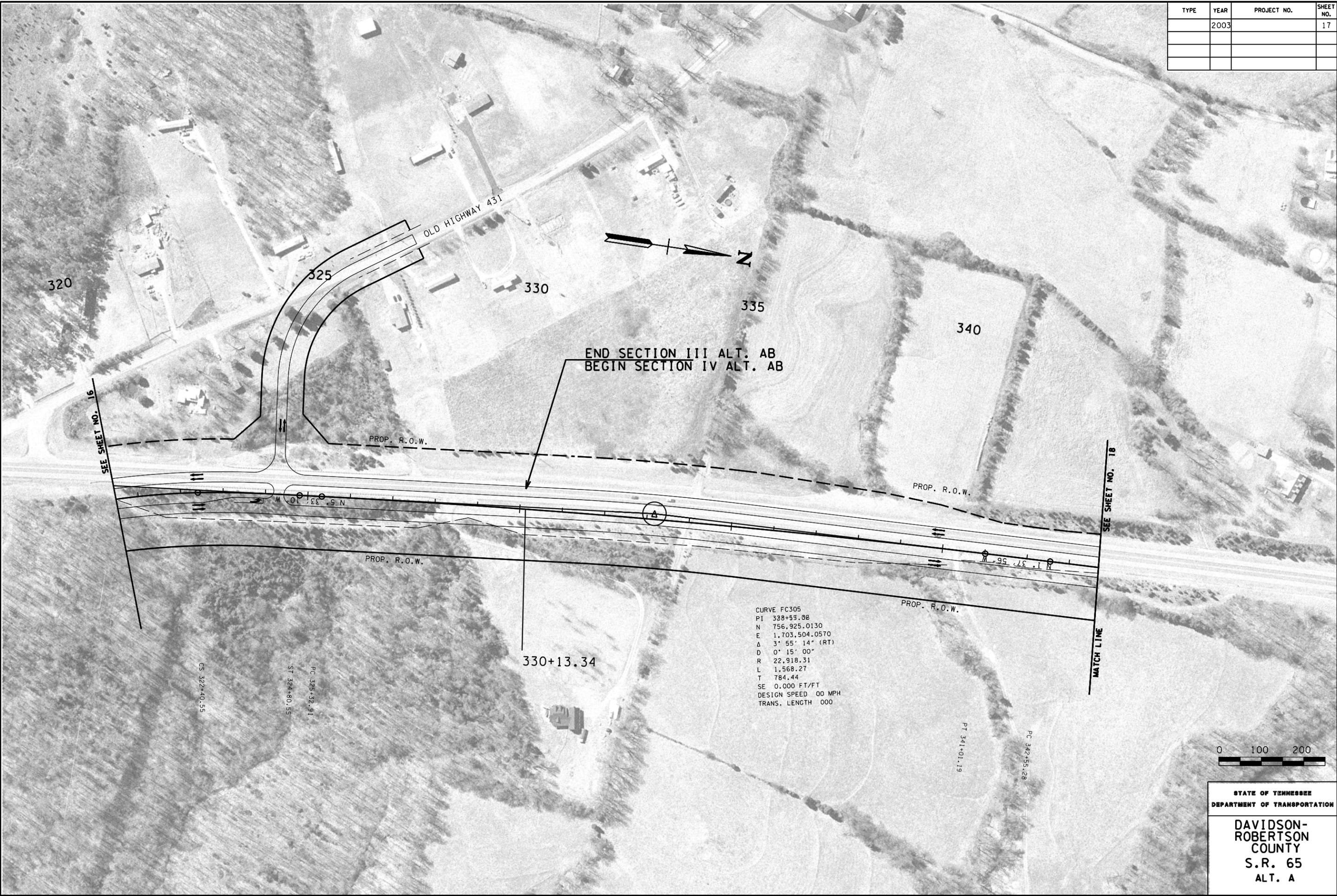


CURVE FS213
 PI 319+80.85
 N 755,544.7390
 E 1,703,638.2470
 Δs 29° 24' 33" (RT)
 θs 4° 12' 00"
 Δc 21° 00' 33" (RT)
 Δc 3° 30' 00"
 Rc 1,637.02
 Lc 600.27
 Ts 549.97
 Ls 240.00
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		17



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		18



CURVE FC306
 PI 350+91.80
 N 758,699.3470
 E 1,703,453.4990
 Δ 4° 10' 51" (RT)
 D 0° 15' 00"
 R 22,918.31
 L 1,672.29
 T 836.51
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		19



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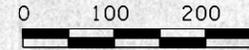
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	PROP		20



12/8/2003
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		21



CURVE FC308

PI	432+98.48
N	767.271.6690
E	1.704.362.7980
Δ	9° 30' 25" (LT)
Δ D	0° 45' 00"
R	1.639.44
L	1.267.60
T	635.26

SE 0.000 F.T./FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000

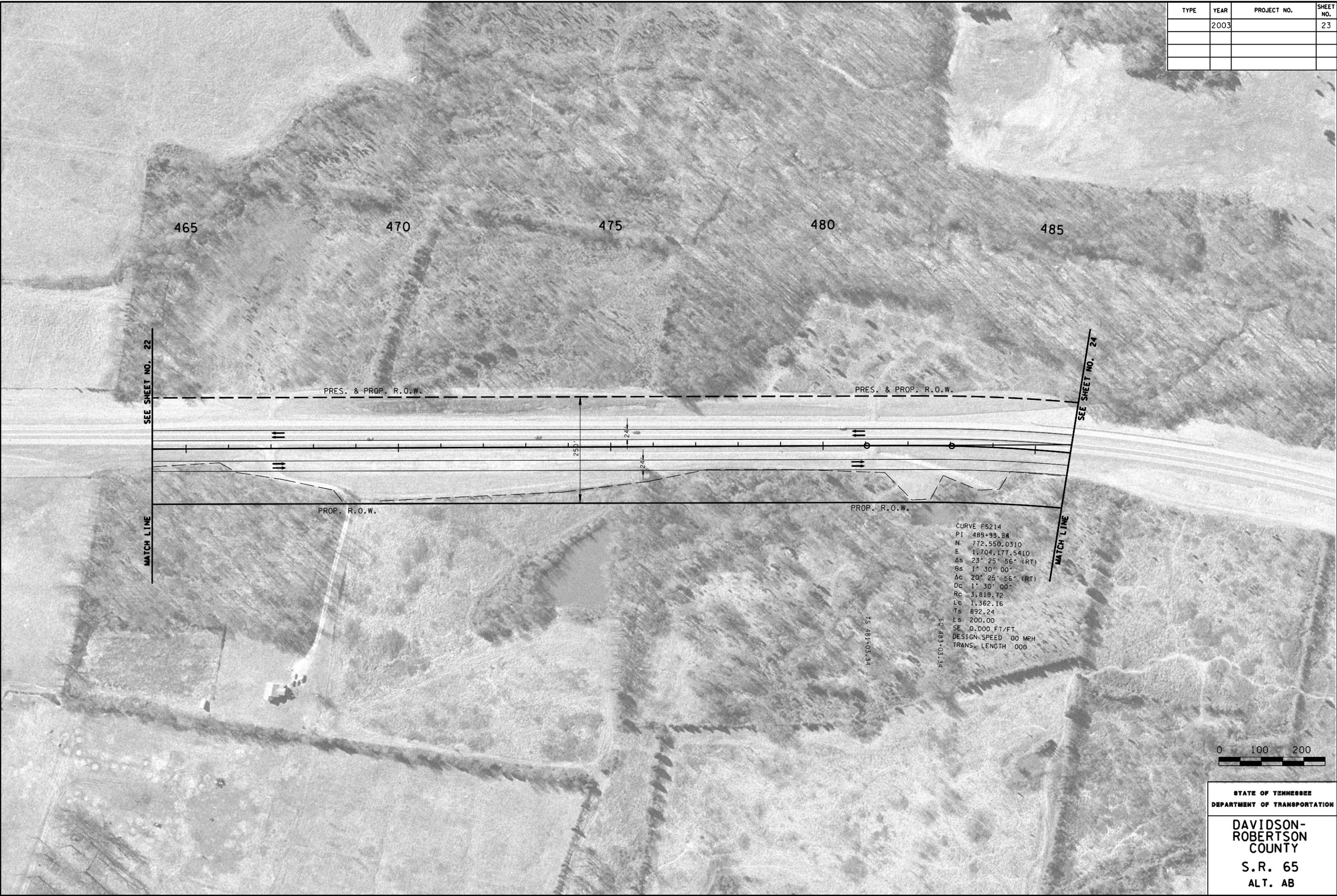


STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		22



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		23



465

470

475

480

485

SEE SHEET NO. 22

SEE SHEET NO. 24

PRES. & PROP. R.O.W.

PRES. & PROP. R.O.W.

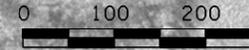
PROP. R.O.W.

PROP. R.O.W.

CURVE FS214
 PI 489+98.88
 N 772,550.0310
 E 1,704,177.5410
 Δs 23° 25' 56" (RT)
 θs 1° 30' 00"
 Δc 20° 25' 56" (RT)
 Δc 1° 30' 00"
 Rc 3,819.72
 Lc 1,362.16
 Ts 892.24
 Ls 200.00
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000

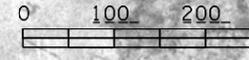
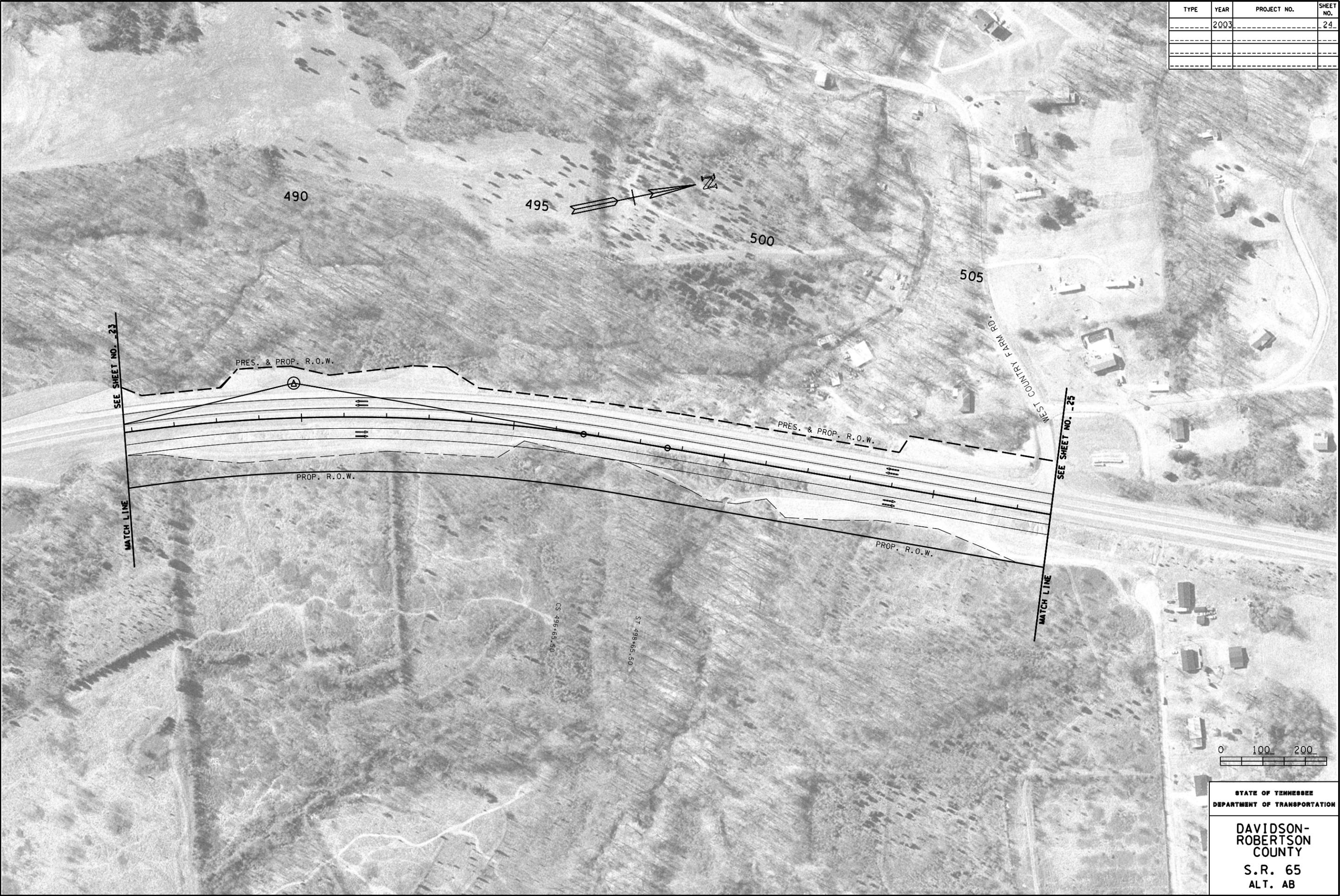
TS 481+03.34

SC 483+03.34



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		24



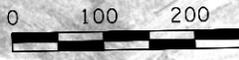
TENNESSEE D.O.T.
 DESIGN DIVISION
 FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		25



CURVE FS215
 PI 526+08.13
 N 776,364.1790
 E 1,705,674.0080
 Δs 16° 02' 21" (LT)
 Δs 3' 36' 00"
 Δc 8° 50' 21" (LT)
 Δc 3' 00' 00"
 Rc 1,909.86
 Lc 294.64
 Ts 389.24
 Ls 240.00
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000

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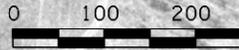


STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		26



11/19/2003
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. AB

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		27



11/4/2003
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DAVIDSON-ROBERTSON COUNTY
S.R. 65
ALT. B

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		28



11/4/2003
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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. B

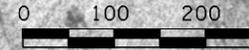
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	2003		29



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		30



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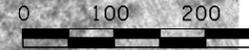


STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. B

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		31



11/19/2003
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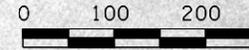
STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. B

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2003		32



CURVE FS307
 PI 116+99.71
 N 748.342.0850
 E 1,705.800.7760
 Δs 21° 09' 53" (RT)
 Δs 2° 48' 45"
 Δc 15° 32' 23" (RT)
 Dc 2' 30' 00"
 Rc 2,291.83
 Lc 621.59
 Ts 540.84
 Ls 225.00
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000

EQUA. 125+39.95
 250+00 Alt. B bk =
 Alt. A oh



STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 DAVIDSON-ROBERTSON COUNTY
 S.R. 65
 ALT. B