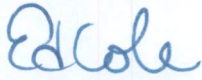
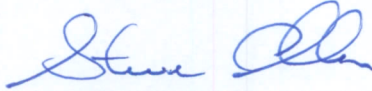
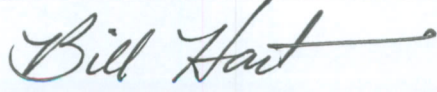


TRANSPORTATION PLANNING REPORT

**STATE ROUTE 22
FROM STATE ROUTE 20 TO HAMLETT STREET
LEXINGTON, HENDERSON COUNTY
PIN# 109561.00**



**PREPARED BY
KIMLEY-HORN AND ASSOCIATES
FOR THE
TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT PLANNING DIVISION**

Recommended by:	Signature	DATE
CHIEF OF ENVIRONMENT AND PLANNING		2/28/08
TRANSPORTATION DIRECTOR PROJECT PLANNING DIVISION		2-28-08
TRANSPORTATION MANAGER 2 PROJECT PLANNING DIVISION		2/22/08

This document is covered by 23 USC § 409 and its production pursuant to fulfilling public planning requirements does not waive the provisions of § 409.

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1.0 HISTORY AND BACKGROUND INFORMATION

1.1 History

This report documents the analyses conducted to evaluate transportation options for improving State Route 22 from State Route 20 (US 412) to Hamlett Street in Lexington, Tennessee. The Southwest Tennessee Rural Planning Organization (SWTRPO) requested that a Transportation Planning Report be performed by TDOT to obtain guidance for options to improve the existing conditions along the referenced section of roadway.

The Preliminary Purpose and Needs Statement evaluated the need for improvement of State Route 22 from State Route 15 (US 64) in Adamsville, McNairy County to Interstate 40 in Parkers Crossroads, Henderson County, with a total length of 41.56 miles. For planning purposes, the roadway was divided into five Segments of Independent Utility (SIU's). Based on the deficiency analysis, the Long Range Planning Division identified the segment of State Route 22 from State Route 20 (US 412) to Hamlett Street (Segment D) for further evaluation and requested a Transportation Planning Report be conducted. The findings of the Preliminary Purpose and Need Statement indicated that this section of State Route 22 is currently capacity deficient, lane width deficient, and has a crash rate higher than the statewide average rate. A copy of the Preliminary Purpose and Needs Statement is contained in the Appendix.

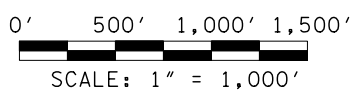
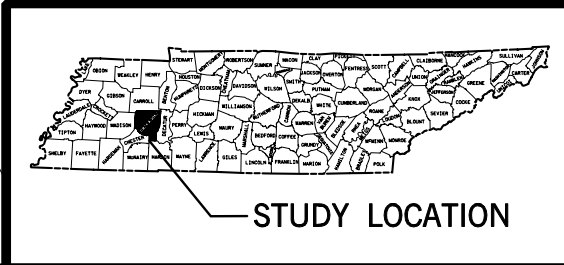
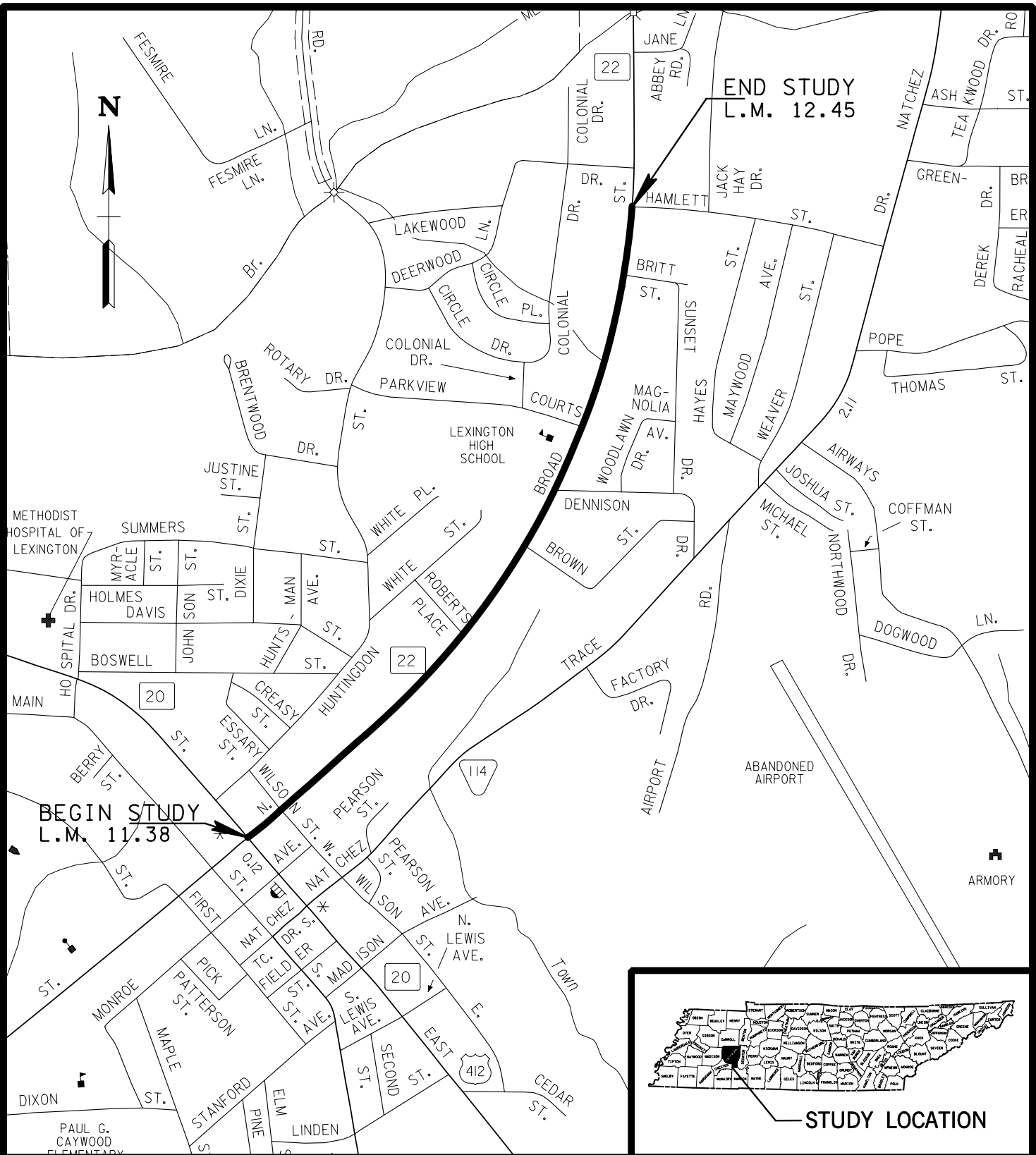
1.2 Study Area

The study area is located in the north-central portion of Lexington in Henderson County. The study area is primarily residential with light commercial development at the south end of the study area from State Route 20 to just north of Wilson Street. The existing businesses in this segment of roadway include two gas station/convenience stores, a mixed commercial development, and a real estate office. Lexington High School is located on the west side of State Route 22 south of Parkview Courts. The remaining development in the study area is primarily single family residential, with two apartment complexes. The Area Location Map is provided as Figure 1. The Study Area Location Map is provided as Figure 2.

State Route 22 provides Lexington and surrounding areas with direct access to Interstate 40, a major east-west interstate located approximately ten miles north of the city. State Route 22 is the major north-south route for access to local schools, hospitals, businesses, and industry in Lexington and Henderson County.

1.3 Community Profile

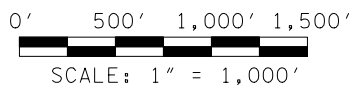
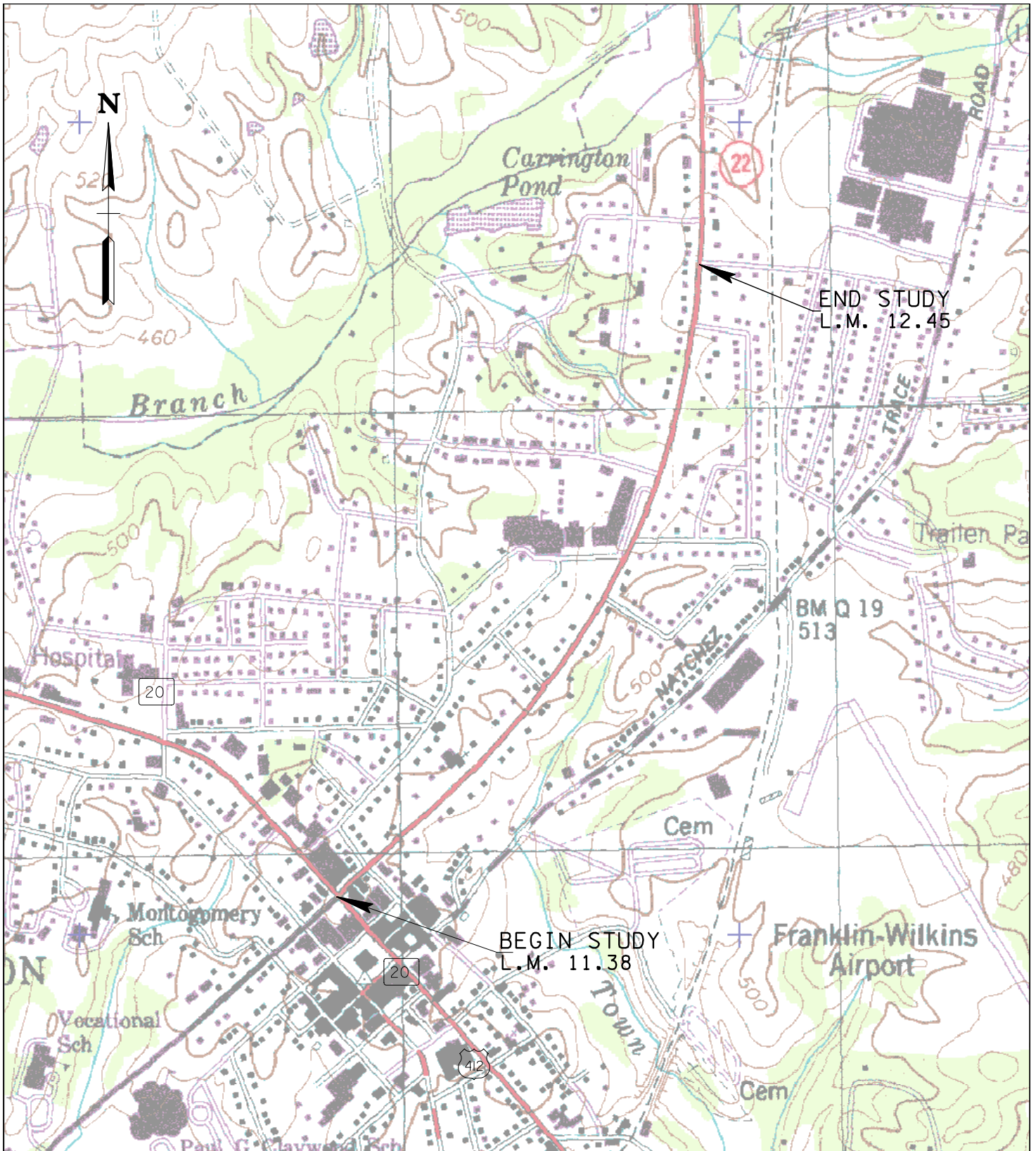
The City of Lexington is the county seat of Henderson County, and is located in west Tennessee midway between Memphis and Nashville. The City was incorporated in 1824 and was named in honor of the first battle site of the Revolutionary War, Lexington, Massachusetts.



LOCATION MAP

TRANSPORTATION PLANNING REPORT
 STATE ROUTE 22 FROM STATE ROUTE 20 TO HAMLET STREET
 LEXINGTON, HENDERSON COUNTY

FIGURE 1



LOCATION MAP

(USGS Lexington, TN Quadrangle)

TRANSPORTATION PLANNING REPORT
 STATE ROUTE 22 FROM STATE ROUTE 20 TO HAMLET STREET
 LEXINGTON, HENDERSON COUNTY

FIGURE 2

With a 2006 estimated population of 26,574, Lexington is the trade center for those who live within a 20 mile radius of the city. It is home to diverse commercial activity ranging from manufacturing to retail. Lexington's largest employers include:

- M.I.G. 1 Manufacturers – 963 Employees
- Leroy Somer – 700 Employees
- Mark IV Automotive – 500 Employees
- AutoZone Distribution Center – 380 Employees
- Volvo Penta Marine – 283 Employees
- Columbus McKinnon Corporation – 260 Employees

The 1,000 acre Beech Lake is a major attraction in Lexington and is located in the northwest part of the City. The lake provides Lexington with its water source as well as recreation and lakefront living. Natchez Trace State Park is located about six miles northeast of Lexington.

Several utilities are located in the study area. The utility services provided include:

- Electric – Above Ground (Poles)
- Gas
- Water
- Waste Water – Sewers
- Cable (Television and Internet) – Above and Below Ground (Poles and Conduit)
- Telephone – Above and Below Ground (Poles and Conduit)

Lexington Middle School and Caywood Elementary School are part of the Lexington School System. All other public schools (k-12) in Henderson County, including Lexington High School are part of the Henderson County School System. Lexington High School serves the City of Lexington and a portion of Henderson County, and has an enrollment of approximately 920 students.

The Franklin Wilkins Airport on State Route 114 (Natchez Trace Drive) once served Lexington, but has now been abandoned. The Beech River Airport (general aviation) in the City of Darden, approximately 10 miles to the east now serves the area.

The Henderson County Community Hospital is located in the northwest part of the City on State Route 20 (US 412) approximately 1,800' west of State Route 22. The Hospital has 45 licensed beds and 94 hospital employees.

1.4 Existing Conditions

State Route 22 is functionally classified as an urban principle arterial roadway and is the primary north-south route through Lexington and Henderson County. The limits of the study area are State Route 22 from State Route 20 (US 412) to Hamlett Street. The study area length along State Route 22 is 1.07 miles, and has two distinct existing typical sections. From State Route 20 to Dennison Drive, State Route 20 is a four lane undivided roadway with 2' shoulders (curb and gutter), a grass strip, and sidewalks. From Dennison Drive to Hamlett Street, State Route 22 is a five lane roadway, with a continuous center

turn lane, 8' shoulders and curb, with no sidewalks. The posted speed on State Route 22 through the study area is 40 mph.

The lane widths on the four lane section of State Route 22 from State Route 20 (US 412) to Dennison Drive are approximately 9' to 10' each, with a total width of 40' as measured from face of curb to face of curb. Turning movement counts show that percent of trucks ranges from 7% to 10% along State Route 22 through the study area. The combination of narrow lane widths and percentage of trucks results in a reduction in the travel speed and capacity. Based on field observation, the trucks tend to travel through this section using a portion of the adjacent lane due to the narrow lane widths and the horizontal curvature of the roadway. The lane widths on the north section of State Route 22 are 11'.

At the intersection of State Route 20 and State Route 22 (US 412), traffic is controlled by a fully actuated eight-phase traffic signal. Traffic control at each of the other intersections along State Route 20 through the study area is stop controlled for the minor cross street. An overhead flashing yellow light is located on State Route 22 at the main entrance to Lexington High School adjacent to Dennison Drive. The City of Lexington Police Department directs traffic during peak periods on State Route 22 at the main school driveway. The peak periods for ingress and egress of the school are 7:25-7:45 a.m., and 2:45-3:00 p.m.

Based on historic traffic count data from TDOT's Advanced Traffic Data Analysis and Management (ADAM) system, the average annual growth rate for traffic on State Route 22 in the study area is 1.56% per year.

The base year (2012) average annual daily traffic (AADT) along State Route 22 ranges from a low of 14,550 between Britt Street and Parkview Court to a high of 15,600 between Brown Street and Roberts Place. Trucking is the dominant means of freight movement to and from local businesses and industry, as there are no alternative modes, such as rail or waterways shipping in the County. Based on turning movement counts in the study area, trucks comprise approximately 10% of the AADT on State Route 22. Figure 3 shows the base and design year AADT and percent trucks along State Route 22 in the study area.

There are few alternative modes of transportation available in the study area. Sidewalks provide access for pedestrians along the segment of State Route 22 from State Route 20 to Dennison Drive. The shoulders on State Route 22 from Dennison Drive to Hamlett Street are 8' wide, which is sufficient to accommodate bicycle lanes. Public transportation is available in Henderson County through the Southwest Human Resource Agency (SWHRA) Transportation System. The service is demand responsive only, and is limited to low income patrons and people with disabilities.

Vehicle crash rates were calculated from crash data for the years 2003 through 2005. Table 1 summarizes the crash rates for the two sections of roadway. The section between State Route 20 (US 412) and Dennison Drive has a crash rate of 4.38 which is higher than the statewide average of 3.27 for similar facilities. The section between Dennison Drive and Hamlett Street has a crash rate of 2.76 which is slightly higher than the statewide average of 2.65 for similar facilities. The crash rates for both segments of roadway, however, are lower than the critical crash rate, which takes into account the variation of the statewide average, traffic volume, and the length of the segment analyzed. Crash rates for each location are provided in Table 1.

Table 1: Vehicle Crash Rates for 2003 through 2005

Location on State Route 22	Actual Crash Rate	Statewide Average Crash Rate	Critical Crash Rate	Ratio of Actual to Critical
State Route 20 to Dennison Dr.	4.38	3.27	4.68	0.94
Dennison Dr. to Hamlett St.	2.76	2.65	4.31	0.64

2.0 PURPOSE AND NEED

2.1 Purpose and Need

The purpose of the improvements to State Route 22 is to improve safety, and to improve regional access and mobility. Improvements are needed due to deficiencies in safety, capacity, and roadway geometry. As the only north-south roadway connecting McNairy, Chester, Henderson, and Carroll Counties, the route was identified by the Southwest Tennessee Rural Planning Organization (SWTRPO) as a priority for the region. TDOT's Long Range Planning Division Preliminary Purpose and Needs Statement identifies the 1.07 mile segment of State Route 22 from State Route 20 to Hamlet Street as the most critical element of the 41.56 mile corridor through the region. The Long Range Planning Division recommended that a TPR be developed for this segment due to deficiencies in lane width, capacity, and crash rate.

One of the purposes of the improvements is to improve safety along the existing route. State Route 22 has an actual crash rate that slightly exceeds the statewide average rate for similar facilities. Existing roadway characteristics that contribute to this rate include narrow lane widths and inadequate sight distance on several cross street approaches.

Improvement of regional access and mobility is another purpose of the improvements to State Route 22. State Route 22 is an interstate connector route that connects the City of Lexington, which is the county seat of Henderson County, to Interstate 40 to the north. The segment of State Route 22 just north of Hamlett Street to Interstate 40 has been improved to meet the minimum design standards for a five lane roadway. Extension of these improvements would enhance regional mobility, as well as provide improved access to local industry, residence, and institutions located on and near the route.

2.2 Purpose and Need Justification

As noted in the Tennessee Department of Transportation's Draft Transportation Planning Manual, there are several topics that may be used to justify a project's purpose and need. The topics include the following:

- Project Status – The project status is provided in *Section 1.1 – Project History* of this TPR.
- System Linkage – State Route 22 is a connecting link to other transportation corridors such as State Route 20 and Interstate 40. As mentioned previously, State Route 22 is the primary north-south route through McNairy, Chester, and Henderson Counties, and is an interstate connector route that connects Lexington, which is the Henderson County seat to Interstate 40. State Route 22

is not on the National Highway System (NHS) or the Strategic Highway Network (STRAHNET).

- Capacity – There are capacity constraints at several intersections along the route in the base and horizon years. Congestion on the southern section of State Route 22 is in part due to the narrow lane widths and high truck percentage. Improvements to State Route 22 are needed to address this congestion. *Section 3.3 – Measures of Effectiveness* of this report describes the analysis and findings of the capacity analysis.
- Transportation Demand – The study area is not within a Metropolitan Planning Organization (MPO) boundary. The SWTRPO has been involved in the development of this project. The transportation demand along State Route 22 is consistent with the adopted Statewide Long Range Transportation Plan. Traffic forecasts developed for this study were based on historic growth along the corridor. These volumes were compared to the projected volumes from the travel demand model used to develop the adopted Tennessee 2030 Long Range Transportation Plan. The horizon year daily volumes used in the study are consistent with the volumes produced by the state travel demand model. Traffic projections are provided with this TPR.
- Legislation – The SWTRPO has been involved with and requested that a Transportation Planning Report be developed by the Department. State Route 22 provides access between Lexington, which is the county seat of Henderson County, and I-40. Therefore State Route 22 is a County Seat Connector route. Section 54-5-102, Part B of the Tennessee Code Annotated (TCA) states that “It is the intend of the general assembly that all county seats should be connected by a four-lane highway to the nearest interstate highway by the shortest route available over an existing state or federal highway.” State Route 22 maintains a four and five lane cross section through the study area. There are no other known local, Federal, or State mandates for the action.
- Social Demands or Economic Development – No identified groups were observed during the environmental scan of the study area. Prior to any right-of-way acquisition or construction, an appropriate environmental document will be prepared in accordance with the provisions outlined by the National Environmental Protection Act (NEPA).
- Modal Inter-relationships – There are no airports, rail or port facilities in or adjacent to the study area. As described in *Section 1.4 – Existing Conditions*, there is a demand responsive transit system operated by SWHRA Transportation System. There are pedestrian facilities that exist on the southern portion of the route within the study area. The improvements to State Route 22 would benefit the transit system by reducing the response time. Improvements to State Route 22 are needed to adequately serve alternative bicyclists and pedestrians.
- Safety – The actual crash rate on State Route 22 is slightly higher than the Statewide average for similar facility types. Improvements are needed to address

the safety along the route. Discussion of safety is provided in *Section 1.4 – Existing Conditions*.

- **Roadway Deficiencies** – Existing roadway deficiencies are discussed in *Section 1.4 – Existing Conditions* of this TPR. Corrections to address these deficiencies are provided in *Section 3.0 – Options Analyzed* of this TPR.

3.0 OPTIONS ANALYZED

3.1 Route Options

Several options were considered and evaluated as a means of addressing the transportation needs of the State Route 20 corridor from State Route 22 to Hamlett Street in Lexington. The options examined include:

- **Option A – No-Build** – Make no geometric improvements other than normal maintenance,
- **Option B – Widen State Route 22 Symmetrically** – Widen State Route 22 about the centerline including sidewalk, curb and gutter.
- **Option C – Widen State Route 22 to the east** - maintain the existing west edge of pavement and add curb, gutter, and sidewalk.
- **Option D – Widen State Route 22 to the west** - maintain the existing east edge of pavement and add curb, gutter and sidewalk.
- **Option E – Enhanced Lane Delineation and Intersection Improvements** – Provide highly reflective pavement markings and raised pavement markers within the 4-lane section of State Route 22 and complete intersection improvements at Wilson Street and State Route 20.

3.2 Cross Section

Options A through D include increasing the four lane section of State Route 22 from State Route 20 to Dennison Drive to five lanes, and widening the existing five lane section of State Route 22 from Dennison Drive to Hamlett Street. As the roadway is an urban principle arterial and the existing roadway is an urban type design, the cross section for the build alternatives is an urban section with closed drainage and curb and gutter. For State Route 22 in the study area, the typical section will consist of a continuous 12' two-way left-turn lane, two 12' inside through lanes, two 14' outside lanes, curb and gutter, a five foot grass/utility strip, and five foot sidewalks. This five lane section is adequate for base and design year traffic.

Although not counted as part of the study, it is anticipated that there is demand for use of this facility by bicyclists and pedestrians due to the location of Lexington High School. The proposed cross section for Options A through D will accommodate pedestrians via the sidewalks. The outside lane widths are 14 feet, which will accommodate shared bicycle lanes.

Additionally, with each build option, the west leg of Wilson Street at the intersection of State Route 22 will be modified to only allow right turn in and right turn out. This is due, primarily to the restricted sight distance from eastbound Wilson to the south. This will allow for the extension of the southbound left-turn lane at the intersection of State Route 22 and State Route 20.

3.3 Level of Service (LOS)

Level of service is a qualitative measure that describes the traffic conditions related to speed and time of travel, freedom to maneuver, traffic interruptions, etc. There are six levels ranging from “A” to “F”, with “F” being the worst. Each level represents a range of operating conditions. General descriptions of operating conditions for each level of service are as follows:

LOS Traffic Flow Conditions

- A Free flow operations. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic system. The general level of physical and psychological comfort provided to the driver is high.
- B Reasonably free flow operations. The ability to maneuver within the traffic stream is only slightly restricted and the general level of physical and psychological comfort provided to the driver is still high.
- C Flow with speeds at or near free flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted and lane changes require more vigilance on the part of the driver. The driver notices an increase in tension because of the additional vigilance required for safe operation.
- D Speeds decline with increasing traffic. Freedom to maneuver within the traffic stream is more noticeably limited. The driver experiences reduced physical and psychological comfort levels.
- E At lower boundary, the facility is at capacity. Operations are volatile because there are virtually no gaps in the traffic stream. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.
- F Breakdowns in traffic flow. The number of vehicles entering the highway section exceeds the capacity or ability of the highway to accommodate that number of vehicles. There is little or no room to maneuver. The driver experiences poor levels of physical and psychological comfort.

The LOS analysis completed for this route utilized the study base and design years of 2012 and 2032 traffic on the existing route, as well as the proposed improvement. The LOS of the build and no-build options is provided in the attached Study Data Tables.

Since Options A through D have the same traffic control and laneage, the Level of Service with these options is the same. The increase in the proposed laneage and increased lane widths on State Route 22 through the study area does have a positive impact on the Level of Service and delay. Tables 2 and 3 show the Level of Service with the No-Build and Build Options, respectively. Table 4 shows the Level of Service with the implementation of Option E.

Table 2: Intersection Level of Service with the No-Build Option

Intersection Location	Type of Traffic Control	Year 2012		Year 2032	
		AM Peak	PM Peak	AM Peak	PM Peak
State Route 20 (US 412)	Signalized	C (22.2)	C (30.9)	D (37.4)	E (57.9)
Wilson Street	Two-Way Stop	C (15.8)	C (21.0)	C (23.5)	F (50.4)
Roberts Place	One-Way Stop	B (13.6)	C (21.6)	C (16.9)	E (35.1)
Brown Street	One-Way Stop	B (14.3)	B (12.9)	C (17.5)	D (28.7)
Lexington High School**	One-Way Stop	B (11.8)	B (12.9)	B (13.9)	C (22.9)
Dennison Drive	One-Way Stop	B (11.1)	B (12.7)	B (12.2)	B (15.0)
Parkview Courts	One-Way Stop	B (10.6)	B (14.2)	B (11.6)	C (18.2)
Britt Street	One-Way Stop	B (10.4)	B(11.7)	B (11.2)	B (13.1)
Hamlett Street	One-Way Stop	B (12.3)	C (15.5)	B (14.4)	C (22.0)

Table 3: Intersection Level of Service with Build Options

Intersection Location	Type of Traffic Control	Year 2012		Year 2032	
		AM Peak	PM Peak	AM Peak	PM Peak
State Route 20 (US 412)	Signalized	C (22.2)	C (30.9)	D (37.4)	E (57.9)
Wilson Street	Two-Way Stop	B (11.7)	B (13.1)	B (13.4)	C (16.6)
Roberts Place	One-Way Stop	B (11.7)	B (14.3)	B (13.2)	C (17.7)
Brown Street	One-Way Stop	B (11.3)	B (12.9)	B (12.3)	B (15.0)
Lexington High School**	One-Way Stop	B (11.0)	B (12.9)	B (12.3)	C (15.9)
Dennison Drive	One-Way Stop	B (11.1)	B (12.7)	B (12.2)	B (15.0)
Parkview Courts	One-Way Stop	B (10.6)	B (14.2)	B (11.6)	C (18.2)
Britt Street	One-Way Stop	B (10.4)	B(11.7)	B (11.2)	B (13.1)
Hamlett Street	One-Way Stop	B (12.3)	C (15.5)	B (14.4)	C (22.0)

Table 4: Intersection Level of Service Option E

Intersection Location	Type of Traffic Control	Year 2012		Year 2032	
		AM Peak	PM Peak	AM Peak	PM Peak
State Route 20 (US 412)	Signalized	C (22.2)	C (30.9)	D (37.4)	E (57.9)
Wilson Street	Two-Way Stop	B (12.7)	B (12.9)	C (15.8)	C (22.7)
Roberts Place	One-Way Stop	B (13.6)	C (21.6)	C (16.9)	E (35.1)
Brown Street	One-Way Stop	B (14.3)	B (12.9)	C (17.5)	D (28.7)
Lexington High School**	One-Way Stop	B (11.8)	B (12.9)	B (13.9)	C (22.9)
Dennison Drive	One-Way Stop	B (11.1)	B (12.7)	B (12.2)	B (15.0)
Parkview Courts	One-Way Stop	B (10.6)	B (14.2)	B (11.6)	C (18.2)
Britt Street	One-Way Stop	B (10.4)	B(11.7)	B (11.2)	B (13.1)
Hamlett Street	One-Way Stop	B (12.3)	C (15.5)	B (14.4)	C (22.0)

* - For unsignalized intersections, the level-of-service for the worst approach is shown

** - Turning movement counts were conducted while school was not in session.

With the build options, the delay is reduced and the level of service is improved over the No-Build Option on the segment of State Route 22 between State Route 20 and Dennison Drive. There is no change in delay or level of service for the north segment of State Route 22 from Dennison Drive to Hamlett Street.

Some of the congestion along the existing roadway is attributable to the narrow lane widths. Narrow lane widths generally result in lower freeflow speeds and can contribute to congestion. A capacity analysis was also conducted for State Route 22 using the procedures outlined in the Highway Capacity Manual, 2000 (HCM) Urban Streets chapter. The free-flow speed along the roadway with the No Build option is approximately 25 mph with a level of service C. Based on the Highway Capacity Manual, 2000 (Exhibit 21-4), increasing the lane widths from 10 feet to 12 feet on this multi-lane highway can increase the freeflow speed 6.6 mph. With an increase in the freeflow speed, the vehicle density along the roadway is reduced, capacity is increased, and the level of service is B.

3.4 Cost Estimates

Cost estimates are provided for all options analyzed. The estimated right-of-way cost for the build options is a significant portion of the total estimated construction cost. The cost for right-of-way varies with build option A through D from \$2,565,000 to \$4,913,000 for 1.07 miles of roadway improvements. This is due to the urbanized character of the route with a high density of residential development adjacent to the roadway. The right of way cost Option E is \$11,000 as minimum right of way impacts are anticipated. The costs are summarized in the Study Data Tables and Cost Data Sheets provided in this report.

3.5 Option A - No Build

The No Build option provides no improvements and serves as a baseline option against which all other options are compared. For the No Build option, State Route 22 is expected to operate at a level of service C or better through the year 2012. The average delay encountered by vehicles will increase and the Level of service is expected to worsen to level of service D after year 2012. Some of the approach movements on the cross-streets will also operate at LOS D or worse. State Route 22 is the primary access to Interstate 40. With the narrow travel lanes on State Route 22, the commercial and personal travel is somewhat restricted during peak periods.

One of the goals of this study is to develop options to improve safety and mobility for pedestrians, bicyclists, motorists, and freight carriers. The No Build option does not provide for bicycle or pedestrian facilities north of Dennison Drive. South of Dennison Drive, the narrow lane widths restrict traffic flow, reduce travel speed, and contribute to peak hour congestion in the corridor.

3.6 Option B – Widen State Route 22 Symmetrically

Option B provides a five lane cross section through the study corridor by widening State Route 22 symmetrically about the centerline of the existing roadway. This build option impacts a number of properties along the route. Along the 1.07 mile segment, there are 72 tracts that will be impacted with this option. There are eight residences and two apartment buildings that would be removed with the construction.

With the symmetrical widening, the topography along the existing route would require approximately 1,400' of retaining walls along the west side of State Route 22 from just north of Wilson Street to Roberts Street.

Bicycle and pedestrian facilities would be provided along the corridor. The two-way left-turn lane and inside travel lane widths would be improved to a standard 12' width. The outside travel lanes would be widened to 14'. This option, as with all of the other build options, would improve the Level of Service to B along the corridor. The level of service would also be improved at a number of intersections along the route. Access between Lexington and Interstate 40 to the north would be improved for passenger cars and freight carriers.

Option B is estimated to cost \$7,637,000, with a significant portion of the cost being for right-of-way. The costs of improvements are presented in the Cost Data Sheets and in the Study Data Tables.

3.7 Option C – Widen State Route 22 to the East

Option C provides a five lane cross section through the study corridor by maintaining the west edge of pavement and widening State Route 22 to the east. The total number of properties impacted is roughly one half that of Option B, but there are more residences (16) that would be removed with construction. No retaining walls are anticipated.

As with the other build options, the inside lane widths would be improved to the standard 12' width and the outside travel lanes would be widened to 14'. Bicycle and pedestrian facilities would be provided along the entire study length. The Level of Service would be improved over the No Build option to a Level of Service B. Access between Lexington and Interstate 40 to the north would be improved for passenger cars and freight carriers.

Of the build options considered, Option C has the second lowest estimated total construction cost of \$6,470,000. The costs of improvements are presented in the Cost Data Sheets and in the Study Data Tables.

3.8 Option D – Widen State Route 22 to the West

Option D provides a five lane cross section through the study corridor by maintaining the east edge of pavement and widening State Route 22 to the west. This option has the greatest impact to residential and church property. There are a total of 46 tracts impacted, with 15 residences, two apartment buildings, and one church that would be removed with construction. Also, a number of parking spaces would be lost along the Lexington High School frontage. Approximately 1,400' of retaining wall would be required with the roadway improvements.

There is a steep vertical down grade on Roberts Street approaching State Route 22. With the widening of State Route 22 to the west, Roberts Street will need to be reconstructed for a distance of approximately 100-150 feet to the west. Other private drives will also require reconstruction to the west due to the widening and the change in grade.

As with the other build options, the inside lane widths would be improved to the standard 12' width and the outside travel lanes would be widened to 14'. Bicycle and pedestrian facilities would be provided along the entire study length. The Level of Service would be improved over the No Build option to a Level of Service B. Access between Lexington and Interstate 40 to the north would be improved for passenger cars and freight carriers.

Of the build options considered, Option D has the highest estimated total construction cost of \$9,676,000. The costs of improvements are presented in the Cost Data Sheets and in the Study Data Tables.

3.9 Option E – Enhanced Lane Delineation and Intersection Improvements

Option E maintains the existing cross section through the study corridor with no widening along State Route 22. Highly reflective pavement markings and raised pavement markers would be provided along State Route 22 from State Route 20 to Dennison Drive.

Although the lane widths in this segment of State Route 22 would not increase, this option could increase visibility of lane boundaries and therefore improve safety. Modifications to the intersection of State Route 22 and Wilson Street to reduce delay include:

- Widening the westbound approach by 12' to include a 12' receiving lane, a 12' exclusive left-turn lane, and a 12' exclusive right turn lane, and
- Modifying the eastbound approach to allow only right turns in and right turns out.

Of each of the build options, Option E has the least impact to properties along State Route 22. The properties along the north and south sides of Wilson Street just east of State Route 22 are the only impacted properties. There is an existing retaining wall on the south side of Wilson Street that would likely be impacted by this improvement. Approximately 80' of the retaining wall along Wilson Street would be impacted if widening occurs on the south side. Widening along the north side of Wilson Street is restricted by the potential gas tanks buried at the gas station. If this option is utilized, it is recommended that additional survey be completed at this intersection to determine the most cost effective solution to widening the east leg of the intersection.

Lane delineation along State Route 22 would include installation of highly reflective pavement markings and raised pavement reflectors from State Route 20 to Dennison Drive. Pavement markings would include lane lines, edge lines, and double yellow lines. The raised reflectors would be installed along the centerline and between each of the through lanes.

Of the build options considered, Option E has the lowest estimated total construction cost of \$266,800. The costs of improvements are presented in the Cost Data Sheets and in the Study Data Tables.

4.0 ASSESSMENT OF OPTIONS

The Tennessee Department of Transportation has adopted seven guiding principles against which all transportation projects are to be evaluated. These guiding principles address concerns for system management, mobility, economic growth, safety, community, environmental stewardship, and fiscal responsibility. These guiding principles are discussed in the following paragraphs as they relate to the options for improving State Route 22.

4.1 Guiding Principle 1: Preserve and Manage the Existing Transportation System

Since constructed, State Route 22 has provided a facility for regional mobility through Henderson County. That function has degraded due to lack of access control combined with increased commercial development along the route. All of the options presented are consistent with TDOT's goal of preserving the existing transportation system. Widening of State Route 22 under Options B through D will provide the necessary additional capacity to service existing and design year traffic volumes and will improve safety. Option E will improve lane delineation within the four-lane section improving mobility and safety.

4.2 Guiding Principle 2: Move a Growing, Diverse, and Active Population

Build Options B through D considered in this report will provide additional capacity to address Lexington's and Tennessee's regional travel demands. Improving this segment of State Route 22 will promote more efficient and safe movement of people through north Lexington. Providing for pedestrians and bicyclists along the entire segment of State Route 22 will allow better access to activity centers such as Downtown Lexington, the regional hospital, and Lexington High School. Option E increases capacity at the intersections of State Route 22 and State Route 20 by increasing the southbound left-turn lane storage and increasing capacity at the intersection of State Route 22 and Wilson Street.

4.3 Guiding Principle 3: Support the State's Economy

Based on traffic counts in the study area, State Route 20 appears to be a major truck route from Interstate 40, south through Lexington, and Henderson County. The truck traffic that uses this route serves commercial and industrial development that is critical to the economy of Lexington, Henderson County, and ultimately the State. Although to a limited degree, reducing the congestion and travel time that freight carriers experience along this route will serve to support the State's economy.

The difference in average operating speed along this segment of roadway with the State Route 22 widening and No-Build Options is approximately 6.6 mph in the peak periods. Over the study area length, this increase in travel speed equates to approximately 19 seconds of less travel time. There is no increase in operating speed with Option E.

4.4 Guiding Principle 4: Maximize Safety and Security

Traffic crash rates on existing State Route 22 were calculated from crash data for years 2003 through 2005. A total of 58 crashes were reported during that period, of which 11

(19%) involved an injury. There were no fatalities during this time period. The widening of State Route 22 will create better and safer access to existing residential and commercial areas along the route, as well as future residential and commercial developments. Option E provides lane delineation to increase visibility of the lane boundaries and therefore increasing safety within the four-lane section of State Route 22.

4.5 Guiding Principle 5: Build Partnerships for Livable Communities

Throughout the process, the Tennessee Department of Transportation (TDOT) staff has coordinated with the Southwest Tennessee Rural Planning Organization to identify their concerns and objectives. In keeping with the goals of TDOT's current Public Involvement Process, additional meetings with local officials and the public to coordinate the transportation needs envisioned by the local community and TDOT will be necessary. This public involvement will continue as mandated by the provisions of the National Environmental Policy Act (NEPA).

4.6 Guiding Principle 6: Promote Stewardship of the Environment

A detailed environmental study is needed to fully address the impact of each considered option. It should be noted that the items listed on the Preliminary Environmental Evaluation Form are located within the identified corridors, but may not necessarily be impacted. A benefit of widening State Route 22 will be improved travel flow. In turn, this could positively impact air quality. Also, alternative transportation modes, such as bicycle and pedestrian facilities, that reduce noise and air pollution, are provided for with each of the build alternatives.

There are existing underground storage tanks located on the northeast corner of State Route 22 and State Route 20 at the BP/AMACO gas station, and on the northeast corner of State Route 22 and Wilson Street at the Block and Barrel gas station. The Broad Street Church of Christ is located on the west side of State Route 22 between Wilson and Roberts Street. Lexington High School is located on the west side of State Route 22 at Dennison Drive. All of these areas should be avoided if possible.

There are no blue-line streams within the study limits. Based on information from the FEMA's Flood Insurance Rate Maps, there are no flood zones (100 year or 500 year) within the study area limits. The National Register of Historic Places database was searched and no historic properties within the study area limits were identified. The Checklist of Determinates provided in this report provides a listing of these and other potential environmentally sensitive locations present within the study area.

As previously mentioned, there is substantial impact to residential property with each of the widening options. There are between 36 and 72 tracts impacted with a significant number of relocations depending upon the option. There are 2 properties impacted under Option E.

4.7 Guiding Principle 7: Emphasize Financial Responsibility

Each of the four widening options has beneficial effects on the corridor. The additional lane widths, turn lanes, shared bicycle lanes and sidewalks improve the safety and operating conditions along the corridor. Along with this comes increased capacity,

improved local accessibility, and enhanced potential for future growth within the community.

Preliminary cost estimates were prepared for each option considered. The total costs included right-of-way, utility relocation, construction costs, and costs of preliminary engineering. The estimated cost of options ranged from \$0 with the No Build option to \$9,676,000 with Option D. The greatest cost with each build option was for the right-of-way. The options and their associated costs are listed below. The listing of costs is provided in the Cost Data Sheets and in the Study Data Tables.

<u>Option</u>	<u>Cost</u>
Option A - No Build	\$ 0
Option B	\$7,637,000
Option C	\$6,470,000
Option D	\$9,676,000
Option E	\$ 266,800

As each of the widening options considered has the same potential benefit for each of the other Guiding Principles, the cost of the option should be a primary factor in the evaluation of the options. Option E has less of these benefits, but provides less impact to properties and has a lower estimated cost.

5.0 SUMMARY

State Route 22, an urban principle arterial roadway, is the primary north-south route through Lexington and Henderson County. State Route 22 is the primary connection between the Henderson County seat of Lexington and Interstate 40. This access to Interstate 40 is critical to the continued growth of Lexington. The narrow lane widths that exist on the segment of State Route 22 from State Route 20 to Dennison Drive and the increased traffic volumes along the route contribute to traffic congestion through the study area.

Traffic crash rates on State Route 22 were calculated from crash data for the years 2003 through 2005. A total of 58 crashes were reported during that period. The section of State Route 22 from State Route 20 to Dennison Drive had a crash rate 1.34 times that of the statewide average. The section of State Route 22 from Dennison Drive had a crash rate 1.04 times the statewide average. The ratio of actual to critical rates for these two segments was 0.94 and 0.64, respectively.

Improvement of State Route 22 from State Route 20 to Hamlett Street is necessary in order to address the following needs:

- Improve the safety and mobility for pedestrians, bicyclists, motorists, and freight carriers,
- Reduce the traffic congestion along State Route 22 in north Lexington, and
- Improve access between Interstate 40 and Lexington.

Five options were considered in this evaluation. Following are items that summarize the performance or issues associated with each option:

5.1 Option A – No Build

- Does not increase the mobility between Lexington and Interstate 40.
- Does not provide for alternative modes of transportation, such as bicycles and pedestrian facilities, along the entire segment.
- Does not reduce traffic congestion along the route.
- Does not improve the safety along the route.
- Has no impact to existing residential or commercial properties.
- No cost associated with this option.

5.2 Option B – Widen State Route 22 Symmetrically

- Increases mobility for pedestrians, bicyclists, motorists, and freight carriers.
- Provides for alternative transportation modes.
- Potential for improved safety.
- Improves access between Lexington and Interstate 40.
- Has substantial impact to residential property adjacent to the route with 72 properties impacted. Eight residences and two apartment buildings will require removal.
- This option is estimated to cost \$7,637,000.

5.3 Option C – Widen State Route 22 to the East

- Increases mobility for pedestrians, bicyclists, motorists, and freight carriers.
- Provides for alternative transportation modes.
- Potential for improved safety.
- Improves access between Lexington and Interstate 40.
- Has substantial impact to residential property adjacent to the route with 36 properties impacted. 16 residences will require removal.
- This option is estimated to cost \$6,470,000.

5.4 Option D – Widen State Route 22 to the West

- Increases mobility for pedestrians, bicyclists, motorists, and freight carriers.
- Provides for alternative transportation modes.
- Potential for improved safety.
- Improves access between Lexington and Interstate 40.
- Has substantial impact to residential property adjacent to the route with 46 properties impacted. 15 residences, two apartment buildings, and one church will require removal.
- This option is estimated to cost \$9,676,000.

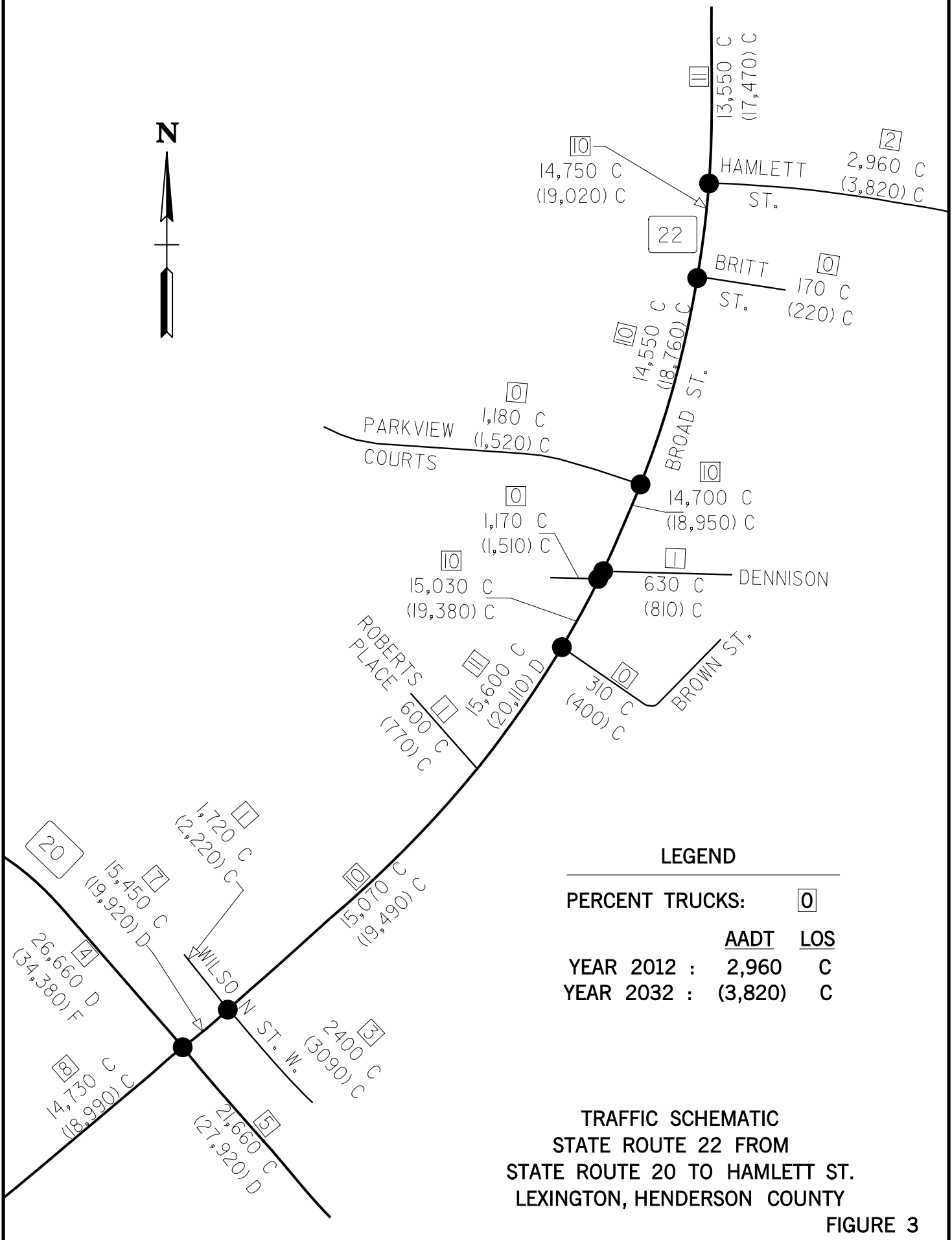
5.5 Option E – Enhanced Lane Delineation and Intersection Improvements

- Increases capacity and safety at the intersection of SR 22 and Wilson Road.
- Potential for improved safety along SR 22 from SR 20 to Dennison Drive.
- Has low impact to property adjacent to the route with 2 properties impacted.
- This option is estimated to cost \$266,800.

CHECK LIST OF DETERMINANTS FOR LOCATION STUDY

If any of the following facilities or ESE categories are located within the project area or corridor, 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	
2. Airport (existing or proposed)	
3. Commercial area, shopping center	X
4. Floodplains	
5. Forested land	
6. Historic, cultural, or natural landmark	
7. Industrial park, factory	X
8. Institutional usages	
a. School or other educational institution	X
b. Church or other religious institution (Cemetery)	X
c. Hospital or other medical facility	
d. Public building, e.g., fire station	
e. Defense installation	
9. Recreation usages	
a. Park or recreational area	
b. Game reserve or wildlife area	
10. Residential establishment	X
11. Urban area, town, city, or community (Lexington, Population 26,574)	X
12. Waterway, lake, pond, river, stream, spring (Permit required: Coast Guard	
Section 404	
TVA Section 26a review	
NPDES	
Aquatic Resource Alteration	
13. Other	
14. Location coordinated with local officials	X
15. Railroad crossings	
16. Hazardous materials site or Underground Storage Tanks	X



TRAFFIC SCHEMATIC
 STATE ROUTE 22 FROM
 STATE ROUTE 20 TO HAMLETT ST.
 LEXINGTON, HENDERSON COUNTY

FIGURE 3

COST DATA SHEET
OPTION B - Equal Widening on East and West Side of State Route 22

STATE ROUTE 22 TRANSPORTATION PLANNING REPORT
CROSS SECTION: 5-LANE
LENGTH: 1.07 Miles

Right-of-Way:

Land, Improvements, and Damages	\$	1,338,000
Incidentals (72 Tracts)	\$	216,000
(8 Residences)		
(2 Apt. Buildings)		
(0 Businesses)		
Relocation Payments (0 Non-Profits)	\$	240,000
TOTAL RIGHT OF WAY COST (x 1.43)	\$	2,565,000

Utility Relocation:

Reimbursable	\$	-
Non-Reimbursable	\$	1,211,000
TOTAL Adjustment Cost	\$	1,211,000

Construction:

Clear and Grubbing	\$	288,000
Earthwork	\$	131,000
Pavement Removal	\$	112,000
Drainage	\$	653,000
Structures	\$	-
Railroad Crossing or Separation	\$	-
Paving	\$	615,000
Retaining Walls	\$	420,000
Maintenance of Traffic	\$	40,000
Topsoil	\$	-
Seeding	\$	-
Sodding	\$	96,000
Striping & Signing	\$	6,000
Lighting	\$	168,000
Signalization	\$	-
Fence	\$	-
Guardrail	\$	-
Rip Rap or Slope Protection	\$	-
Construction Item Subtotal	\$	2,529,000
Other Const. Items (8.5%)	\$	214,965
Erosion Control (3.5%)	\$	88,515
Mobilization	\$	358,000
SUB-TOTAL CONSTRUCTION COST	\$	3,190,480
10% Eng. & And Cont.	\$	319,048
Total Construction Cost	\$	3,510,000
Preliminary Engineering (10%)	\$	351,000

TOTAL COST	\$	7,637,000
Cost Per Mile	\$	7,137,383

COST DATA SHEET
OPTION C - Widening on East Side of State Route 22

STATE ROUTE 22 TRANSPORTATION PLANNING REPORT
CROSS SECTION: 5-LANE
LENGTH: 1.07 Miles

Right-of-Way:

Land, Improvements, and Damages	\$	1,567,000
Incidentals (36 Tracts)	\$	108,000
		(16 Residences)
		(0 Apt. Buildings)
		(0 Businesses)
Relocation Payments (0 Non-Profits)	\$	160,000
TOTAL RIGHT OF WAY COST (x 1.43)	\$	2,624,000

Utility Relocation:

Reimbursable	\$	-
Non-Reimbursable	\$	1,198,000
TOTAL Adjustment Cost	\$	1,198,000

Construction:

Clear and Grubbing	\$	287,000
Earthwork	\$	47,000
Pavement Removal	\$	40,000
Drainage	\$	653,000
Structures	\$	-
Railroad Crossing or Separation	\$	-
Paving	\$	464,000
Retaining Walls	\$	-
Maintenance of Traffic	\$	40,000
Topsoil	\$	-
Seeding	\$	-
Sodding	\$	65,000
Striping & Signing	\$	6,000
Lighting	\$	84,000
Signalization	\$	-
Fence	\$	-
Guardrail	\$	-
Rip Rap or Slope Protection	\$	-
Construction Item Subtotal	\$	1,686,000
Other Const. Items (8.5%)	\$	143,310
Erosion Control (3.5%)	\$	59,010
Mobilization	\$	300,000
SUB-TOTAL CONSTRUCTION COST	\$	2,188,320
10% Eng. & And Cont.	\$	218,832
Total Construction Cost	\$	2,407,000
Preliminary Engineering (10%)	\$	241,000

TOTAL COST	\$	6,470,000
Cost Per Mile	\$	6,046,729

COST DATA SHEET
OPTION D - Widening on West Side of State Route 22

STATE ROUTE 22 TRANSPORTATION PLANNING REPORT
CROSS SECTION: 5-LANE
LENGTH: 1.07 Miles

Right-of-Way:

Land, Improvements, and Damages	\$	2,968,000
Incidentals (46 Tracts)	\$	138,000
		(15 Residences)
		(2 Apt. Buildings)
		(0 Businesses)
Relocation Payments (1 Non-Profits)	\$	330,000
TOTAL RIGHT OF WAY COST (x 1.43)	\$	4,913,000

Utility Relocation:

Reimbursable	\$	-
Non-Reimbursable	\$	1,193,000
TOTAL Adjustment Cost	\$	1,193,000

Construction:

Clear and Grubbing	\$	288,000
Earthwork	\$	154,000
Pavement Removal	\$	33,000
Drainage	\$	652,000
Structures	\$	-
Railroad Crossing or Separation	\$	-
Paving	\$	518,000
Retaining Walls	\$	420,000
Maintenance of Traffic	\$	40,000
Topsoil	\$	-
Seeding	\$	-
Sodding	\$	64,000
Striping & Signing	\$	6,000
Lighting	\$	84,000
Signalization	\$	-
Fence	\$	-
Guardrail	\$	-
Rip Rap or Slope Protection	\$	-
Construction Item Subtotal	\$	2,259,000
Other Const. Items (8.5%)	\$	192,015
Erosion Control (3.5%)	\$	79,065
Mobilization	\$	420,000
SUB-TOTAL CONSTRUCTION COST	\$	2,950,080
10% Eng. & And Cont.	\$	295,008
Total Construction Cost	\$	3,245,000
Preliminary Engineering (10%)	\$	325,000

TOTAL COST	\$	9,676,000
Cost Per Mile	\$	9,042,991

COST DATA SHEET
OPTION E - Lane Delineation and Intersection Improvements

STATE ROUTE 22 TRANSPORTATION PLANNING REPORT
CROSS SECTION: Existing Cross Section
LENGTH: 1.07 Miles

Right-of-Way:

Land, Improvements, and Damages	\$	5,000
Incidentals (1 Tracts)	\$	3,000
(0 Residences)		
(0 Apt. Buildings)		
(1 Business)		
Relocation Payments (0 Non-Profits)	\$	-
TOTAL RIGHT OF WAY COST (x 1.43)	\$	11,000

Utility Relocation:

Reimbursable	\$	-
Non-Reimbursable	\$	5,000
TOTAL Adjustment Cost	\$	5,000

Construction:

Clear and Grubbing	\$	18,000
Earthwork	\$	5,000
Pavement Removal	\$	17,000
Drainage	\$	28,000
Structures	\$	-
Railroad Crossing or Separation	\$	-
Paving	\$	42,000
Retaining Walls	\$	-
Maintenance of Traffic	\$	20,000
Topsoil	\$	-
Seeding	\$	-
Sodding	\$	-
Striping & Pavement Markers	\$	20,000
Lighting	\$	-
Signalization	\$	-
Fence	\$	-
Guardrail	\$	-
Rip Rap or Slope Protection	\$	-
Construction Item Subtotal	\$	150,000
Other Const. Items (8.5%)	\$	12,750
Erosion Control (3.5%)	\$	5,250
Mobilization	\$	39,000
SUB-TOTAL CONSTRUCTION COST	\$	207,000
10% Eng. & And Cont.	\$	20,700
Total Construction Cost	\$	228,000
Preliminary Engineering (10%)	\$	22,800

TOTAL COST	\$	266,800
Cost Per Mile	\$	249,346

PRELIMINARY PURPOSE AND NEEDS STATEMENT

SOUTHWEST TENNESSEE RPO

Prime Study Description: SR-22 from US 64 (SR-15), Adamsville, McNairy Co. to I-40, Parkers Crossroads, Henderson Co. Total Miles: 41.56

Recommendation: TPR from SR-20 to Hamlet St. in Lexington, Henderson Co.

The Long Range Planning Division selected SR-22 from US 412 (SR-20) to Hamlet Street in Lexington, Henderson County (Segment 'D') as a section of independent utility (SIU), and requested a TPR for this section. The section is currently capacity deficient, lane width deficient, and has a high accident rate.

The SR-22 corridor, including this section, provides access to I-40 for Henderson, Chester, And McNairy Counties. This SIU also serves as a county seat connector for Lexington.

Improvement to this section would provide a continuous roadway at design standards from US 412 (SR-20), in Lexington, to I-40.

<u>Segment</u>	<u>County</u>	<u>Route</u>	<u>Termini</u>
A	McNairy	SR-22 (Broad St.)	US 64 (SR-15) Adamsville, McNairy Co. to Milledgeville, Chester Co. line
B	Chester	SR-22	McNairy Co. line to Henderson Co.
C	Henderson	SR-22	Chester Co. line to SR-20, Lexington
D	Henderson	SR-22 (Broad St. S/N)	US 412 (SR-20) to Hamlet St., Lexington, Henderson Co.
E	Henderson	SR-22	Hamlet St., Lexington to I-40, Parkers Crossroads

Congestion (Capacity)

A capacity analysis of the 41.5 mile corridor using the Roadway Efficiency Evaluation (EVE) program indicated the year of deficiency ranged from the current year(in segment D) to beyond year 2032 (in segments A, B and E). Traffic congestion is measured with Level of Service (LOS) grades A through F, with A being the best condition and F being the worst. EVE designates that a roadway capacity deficiency occurs at LOS 'D' in rural areas, and at 'E' in urban areas. The capacity factors for the individual segments* are shown below.

Segment*	Mileage	Current ADT	Current LOS	Forecast ADT	Capacity Deficient
A	10.39	3,680-4,890	'C'	6,095-8,099	>2032
B	7.81	2,900-3,370	'B'	2,932-3,525	>2032
C	11.38	4,920-13,570	'C'	7,938-22,145	2016
D	1.07	12,580	'E'	20,530	2006
E	8.67	6,160-10,010	'B'	9,939-16,158	>2032

* Roadway segments are illustrated in the attached map and needs assessment table

Safety (Crash and Geometrics)

The Tennessee Roadway Information Management System (TRIMS) provides crash data for locations that exceed statewide critical rates, and for geometric deficiencies such as narrow lane and shoulder width, and excessive curves and grades, as defined by generally accepted design standards.

Segment 'D' shows safety deficiencies involving both geometrics and crash issues.

Segment	Shoulder width deficiency	Lane width deficiency	Excessive Curves & Grades	Actual Crash Rate > Critical Rate
A	X		X	
B	X			
C	X			
D	X	X		yes
E	X			

5/14/2007

Access (System Linkage/Corridor Connection /Social/Economic/Infrastructure Demand)

SR-20 is the primary north – south access route for, Henderson, Chester, and McNairy Counties. This corridor provides regional access to the Henderson Regional Hospital, Jackson State Community College (extension) in Lexington, Beech River Regional Airport / Franklin Wilkins Airports, and a corridor connection to I-40 and US 64 (SR-15).

The infrastructure facilities and amenities listed below have been provided by the local RPO Coordinator:

- Provides access to I-40 for Henderson, Chester, and McNairy Counties
- Primary north-south route through Lexington
- County Seat Connector, connecting Henderson County seat to I-40
- Major route for Chester County to Regional Hospital and medical clinics in Henderson County
- Major route and access to schools
- Access to Beech River Regional Airport
- Access to Jackson State Community College extension campus in Lexington
- Access to industrial facilities

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

STATE OF TENNESSEE

DEPARTMENT OF TRANSPORTATION

BUREAU OF ENGINEERING

HENDERSON COUNTY

TENN.	YEAR 2007	SHEET NO. 1
FED. AID PROJ. NO.		
STATE PROJ. NO.		

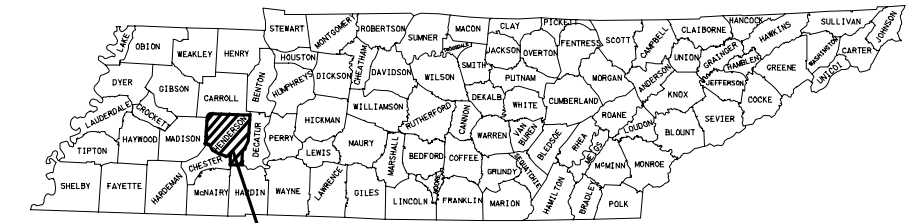
INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.....	TITLE SHEET
2.....	PROPOSED TYPICAL SECTION
3-7.....	PRESENT AND PROPOSED LAYOUTS OPTION B
8-12.....	PRESENT AND PROPOSED LAYOUTS OPTION C
13-17.....	PRESENT AND PROPOSED LAYOUTS OPTION D
18-20.....	PRESENT AND PROPOSED LAYOUTS OPTION E

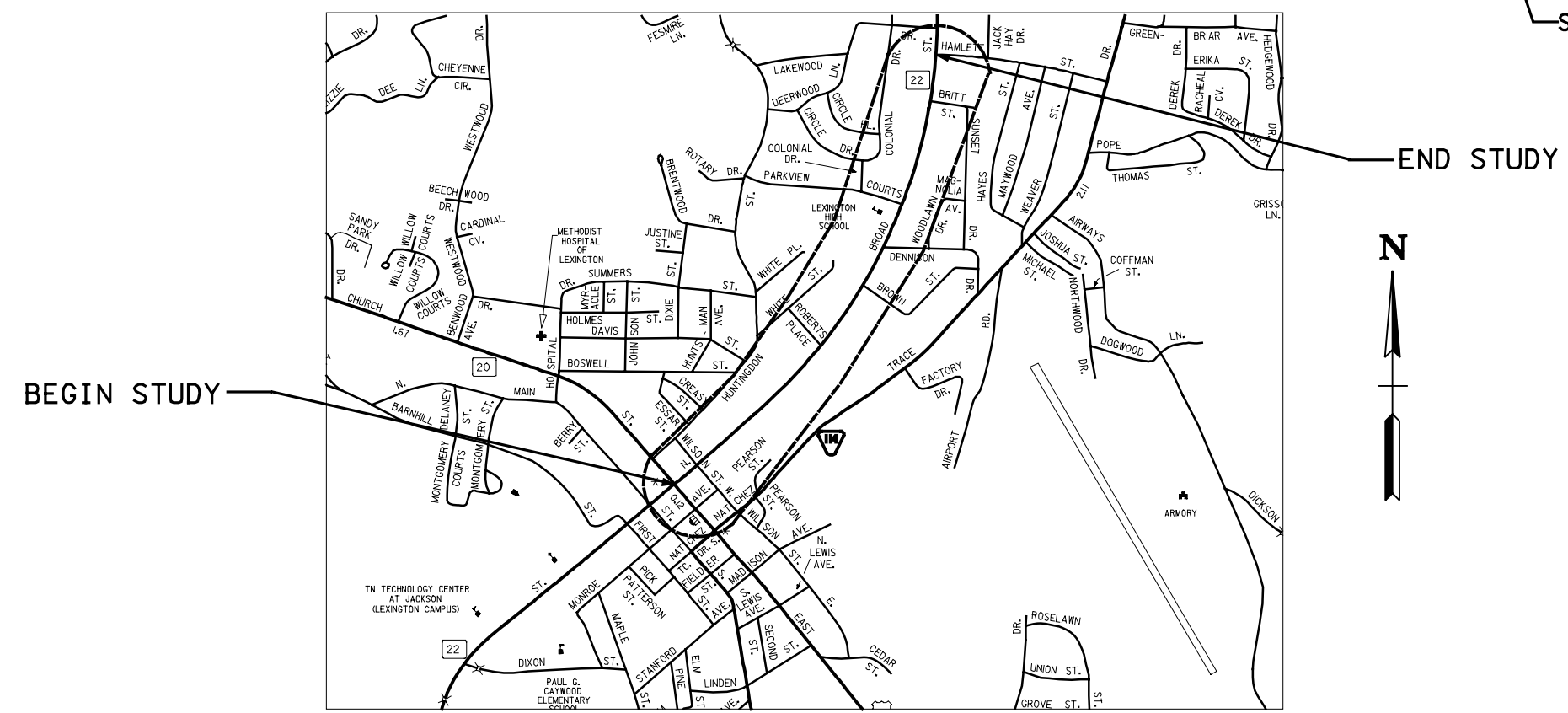
STATE ROUTE 22
 FROM STATE ROUTE 20 TO HAMLETT ST.
 LEXINGTON

TRANSPORTATION PLANNING REPORT

STATE HIGHWAY NO. 22 F.A.H.S. NO. 22



STUDY LOCATION

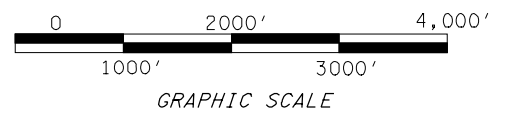


SPECIAL NOTES

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, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT

TDOT ROAD SP. SV. 2 _____
 DESIGNER KENNETH MONROE, P.E. CHECKED BY JAMES COLLINS, P.E.
 DESIGN BY KIMLEY-HORN & ASSOCIATES, INC.



ROADWAY LENGTH	1.070 MILES
BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES
PROJECT LENGTH	1.070 MILES

TRAFFIC DATA	
	S.R. 22
ADT (2012)	15,070
ADT (2032)	19,490
DHV (2032)	3,144
D	65-35
T (ADT)	2%
T (DHV)	1%
V	40 mph

APPROVED: _____
 CHIEF ENGINEER

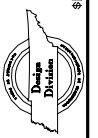
DATE: _____

APPROVED: _____
 COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
 DIVISION ADMINISTRATOR DATE

\$FILE\$
 \$TIME\$
 \$DATE\$

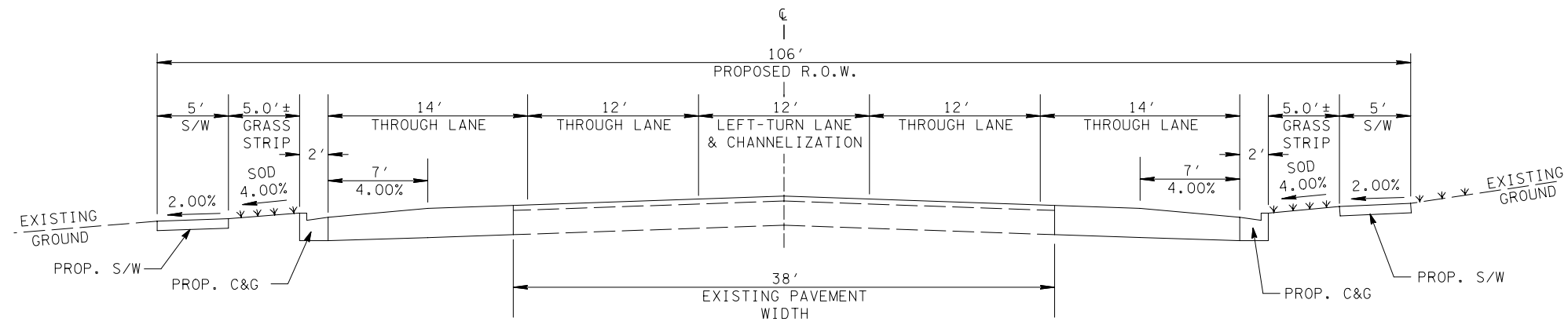


TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		2

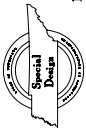
TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

K:\PROJECTS\115004083 - SR 22 Roadway TPR\CADD\PLANS\Equal widen typ sectn SR22.dgn



12/27/2007 10:59:20 AM



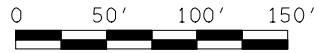
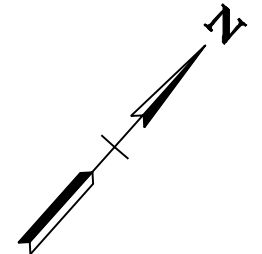
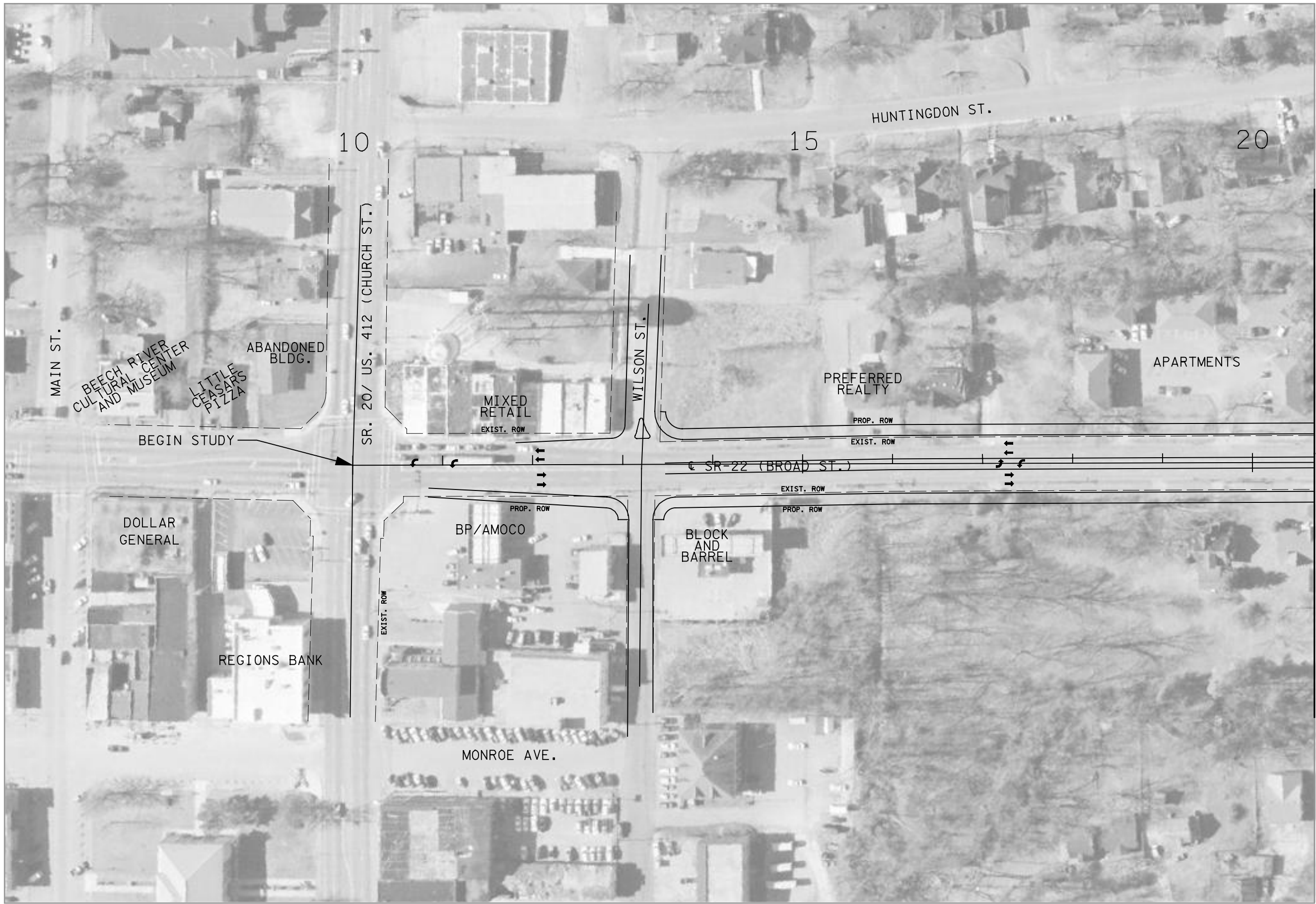
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TYPICAL
SECTIONS

TPR
SR 22

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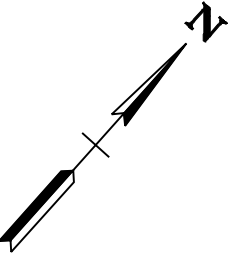
TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		3



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION B

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		4

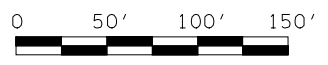


MATCHLINE SEE SHEET 3

MATCHLINE SEE SHEET 5

FILE

DATE

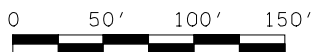
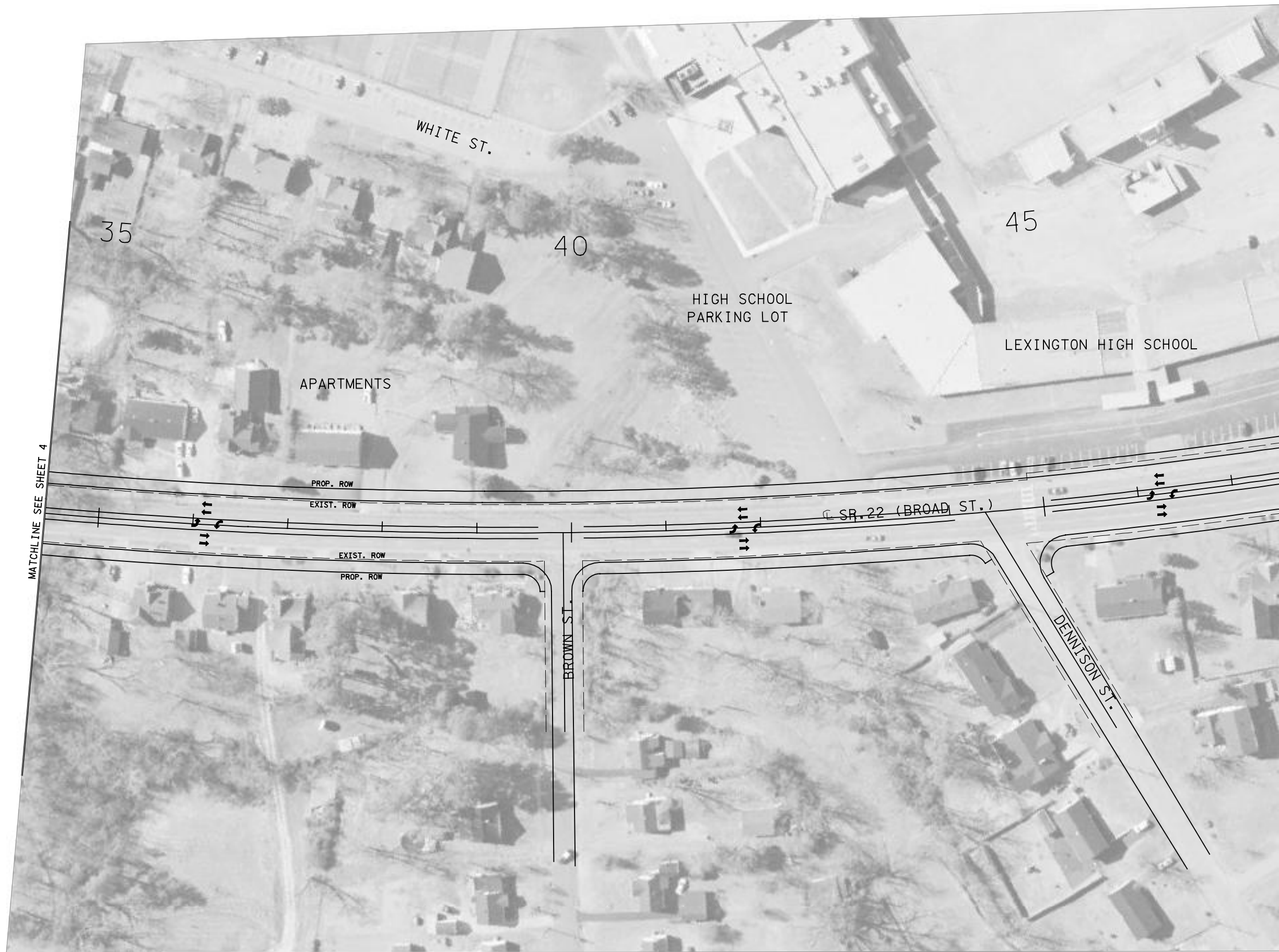
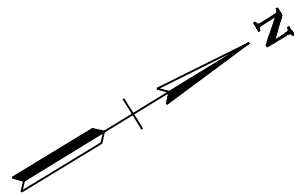


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION B



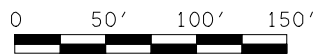
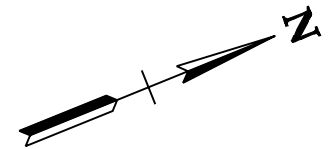
TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		5



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

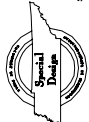
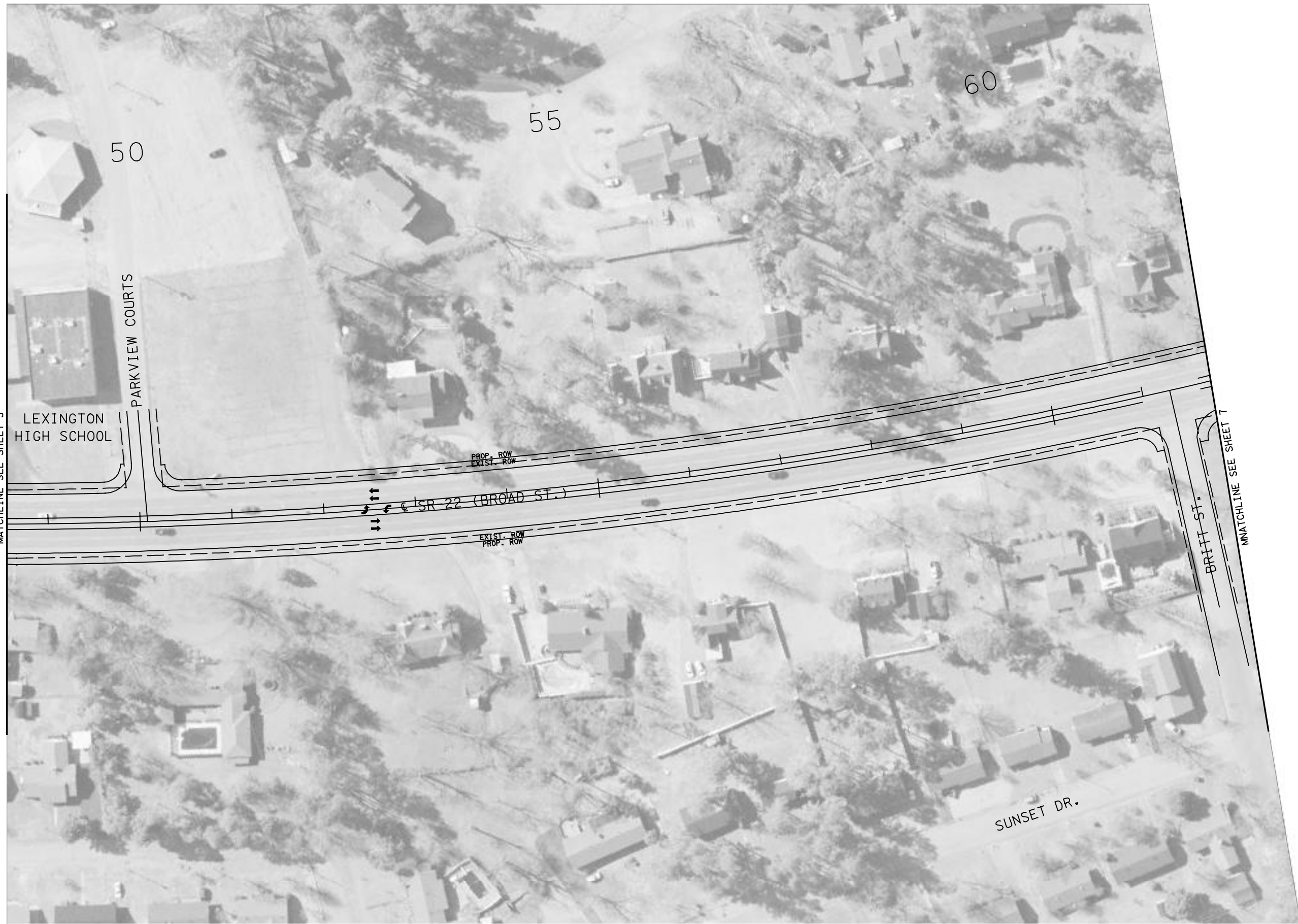
HENDERSON CO.
SR. 22
OPTION B

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		6

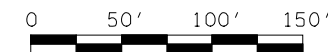
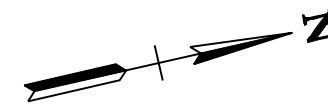


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION B



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		7

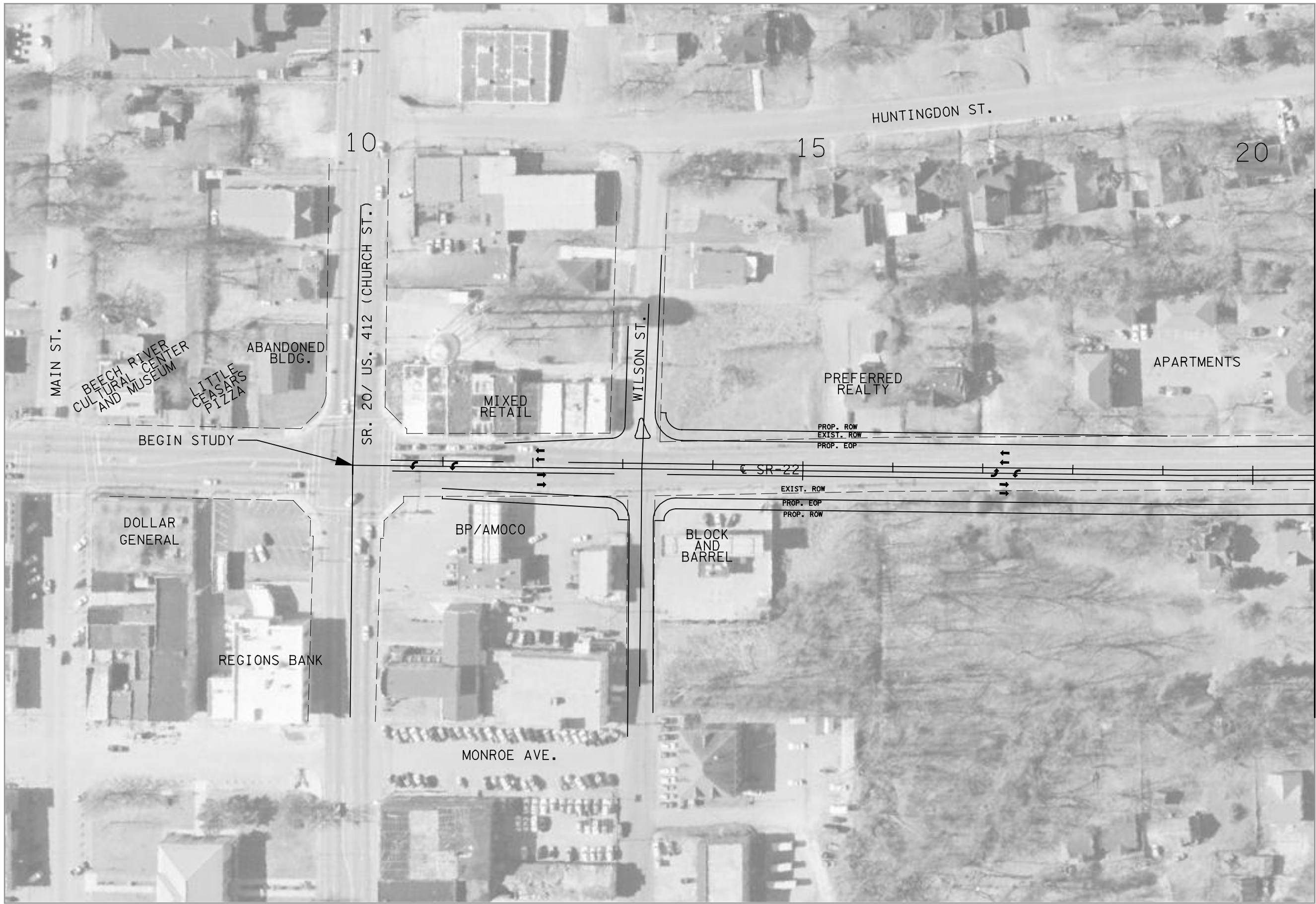


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION B



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		8



MATCHLINE SEE SHEET 9

FILE#

DATE#



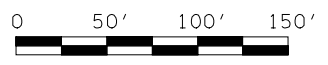
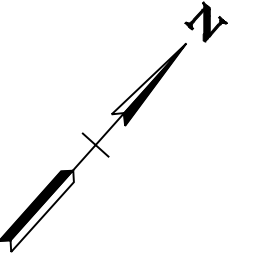
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION C

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		9

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.



MATCHLINE SEE SHEET 8

MATCHLINE SEE SHEET 10

EXIST. & PROP. ROW
PROP. EOP

EXIST. ROW
PROP. EOP
PROP. ROW

SR-22

ROBERTS ST.

BROAD ST.
CHURCH OF CHRIST

25

30

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

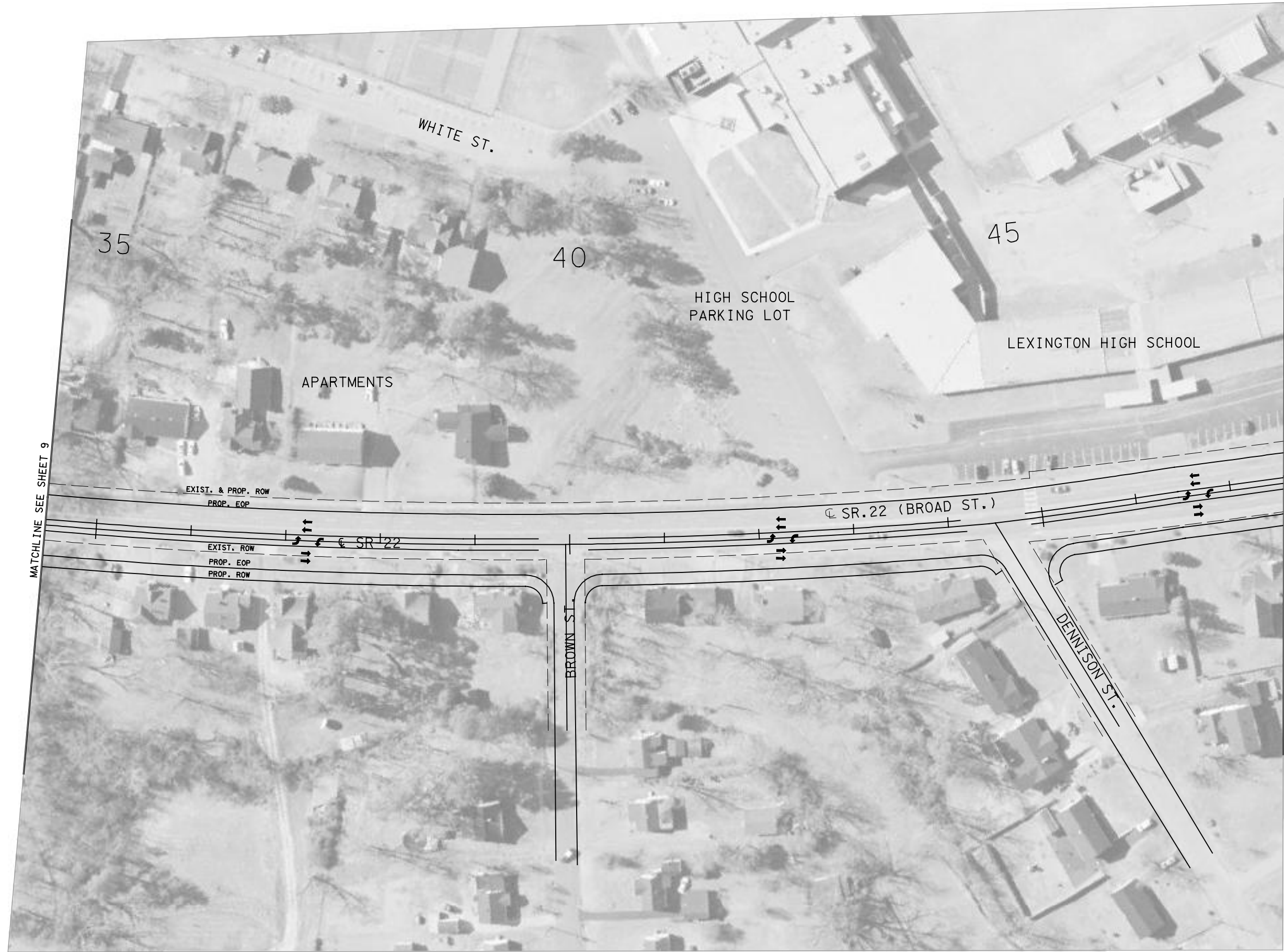
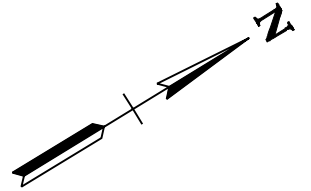
HENDERSON CO.
SR. 22
OPTION C



FILE

DATE

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		10

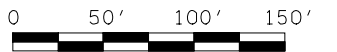


MATCHLINE SEE SHEET 9

MATCHLINE SEE SHEET 11

FILE#

DATE#

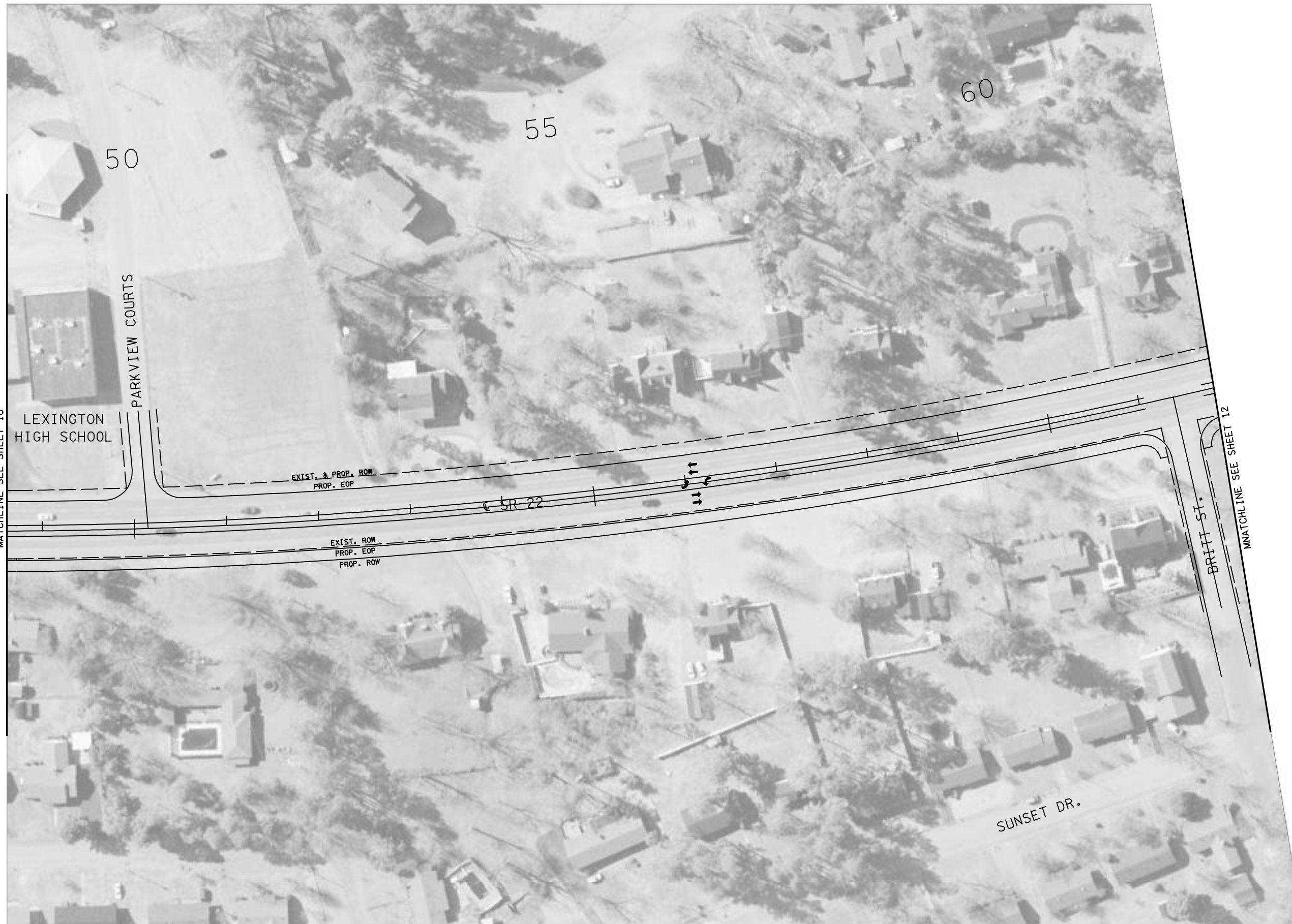
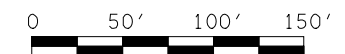
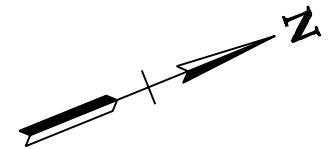


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION C



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		11

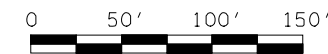
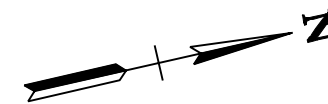


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION C



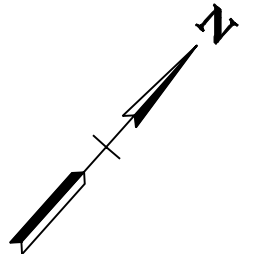
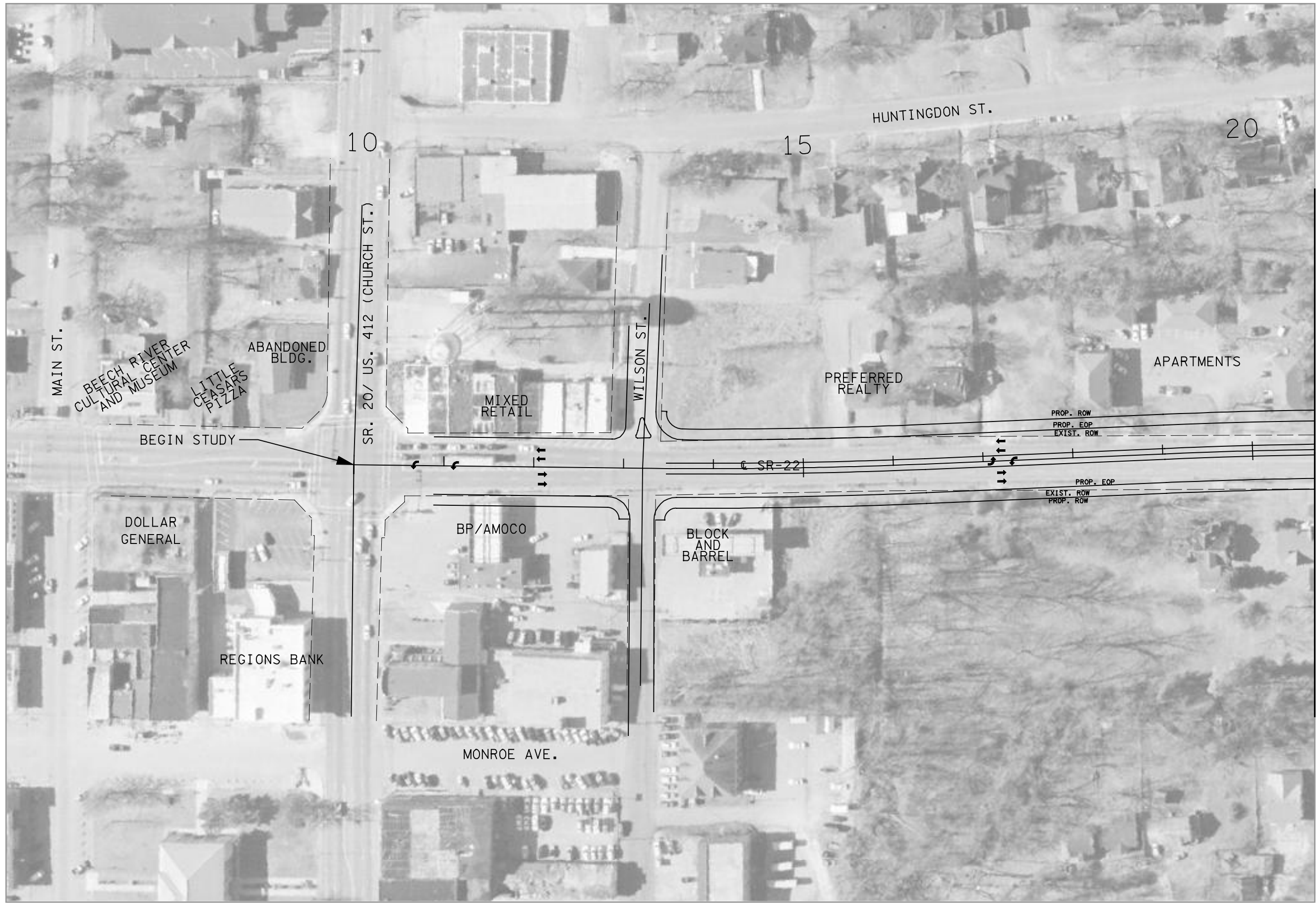
TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		12



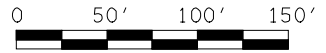
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION C

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		13



MATCHLINE SEE SHEET 14



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION D

DATE

DATE



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		14



MATCHLINE SEE SHEET 13

MATCHLINE SEE SHEET 15

PROP. ROW
PROP. EOP
EXIST. ROW

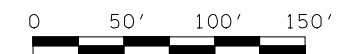
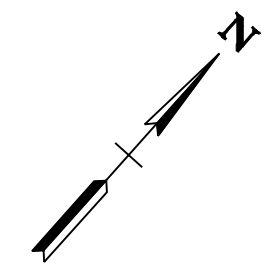
PROP. EOP
EXIST. & PROP. ROW

SR 22

ROBERTS ST.

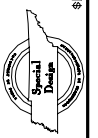
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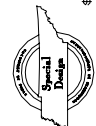
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION D

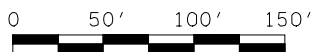
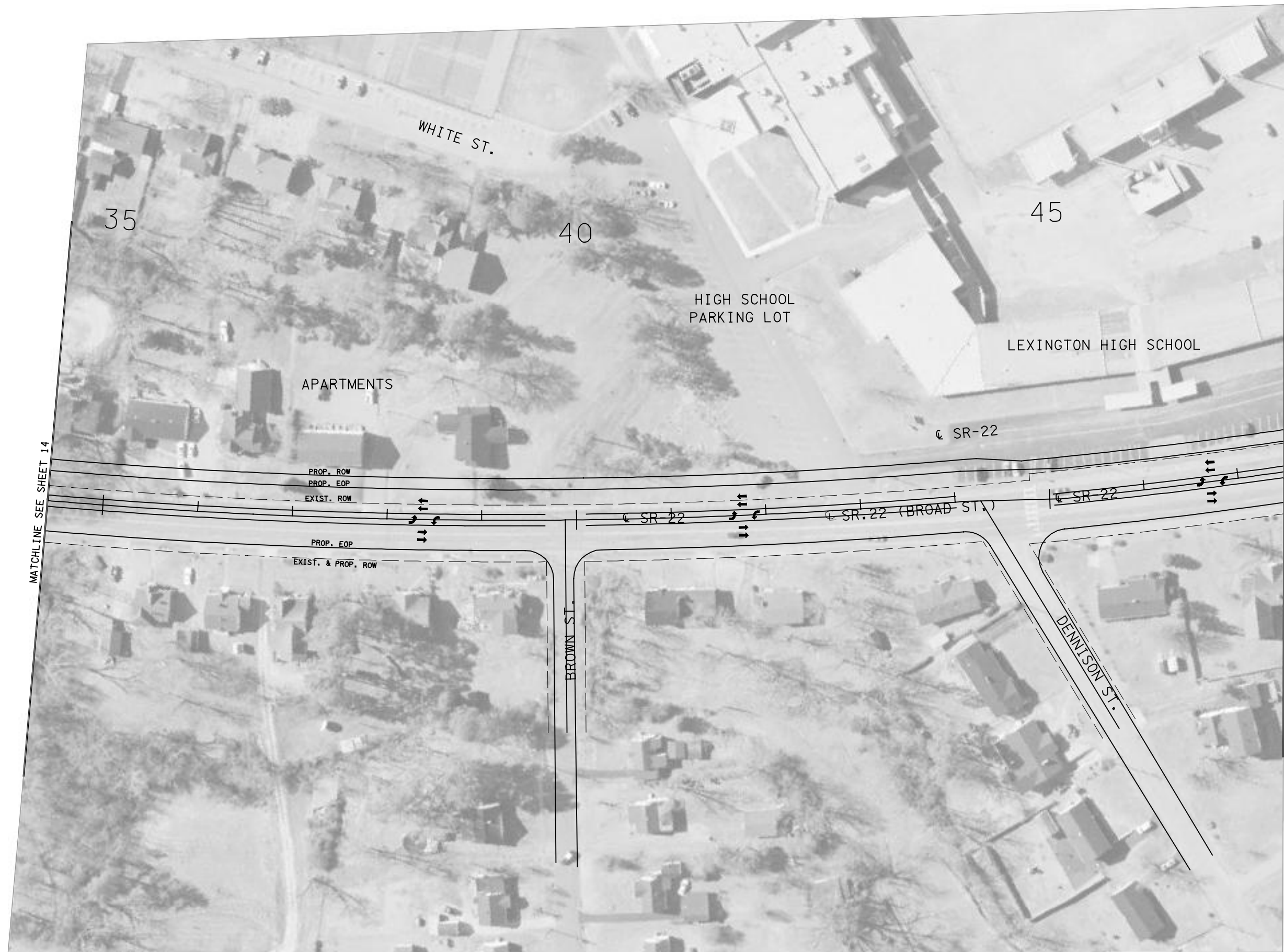
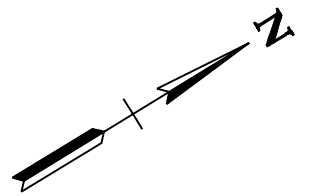


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DATE



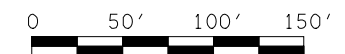
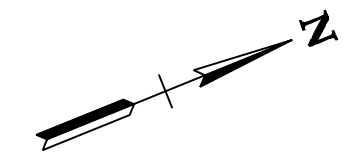
TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		15



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

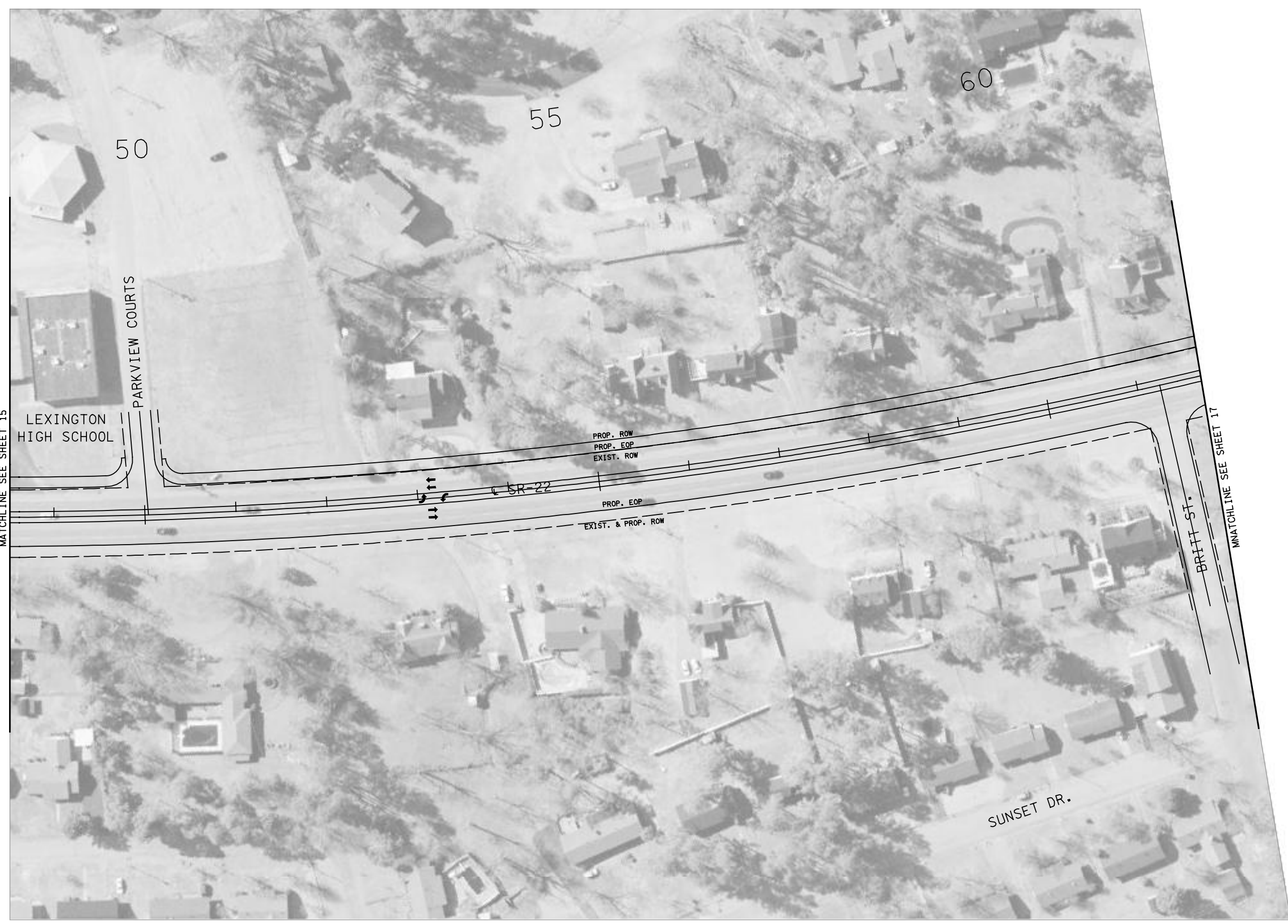
HENDERSON CO.
SR. 22
OPTION D

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		16



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION D

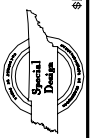


MATCHLINE SEE SHEET 15

MATCHLINE SEE SHEET 17

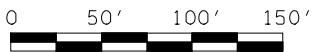
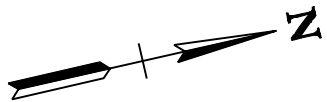
FILE

DATE





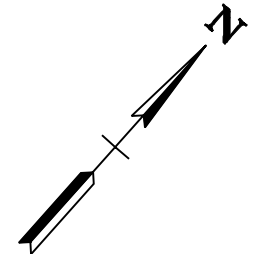
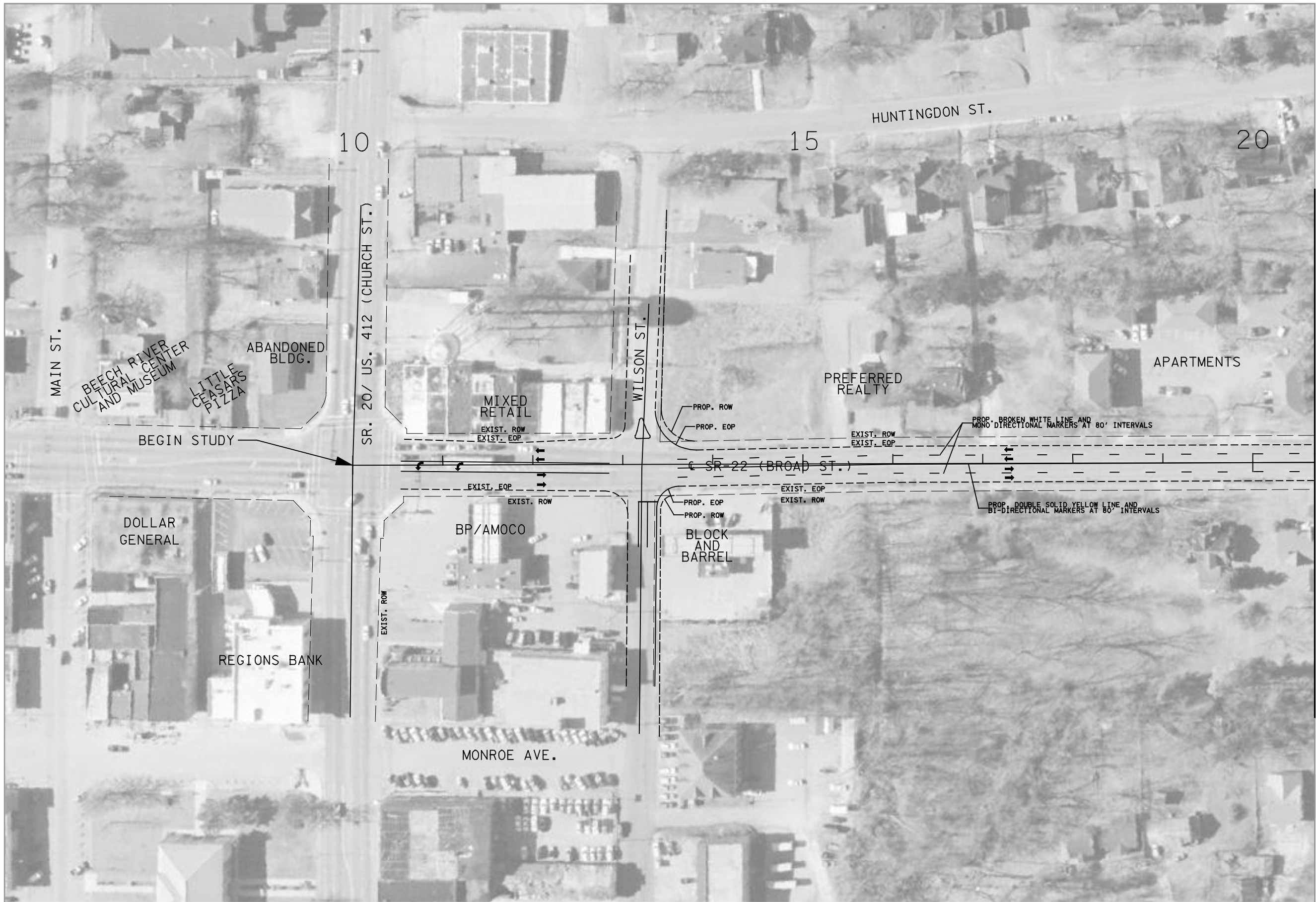
TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		17



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION D

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		18



MATCHLINE SEE SHEET 19



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

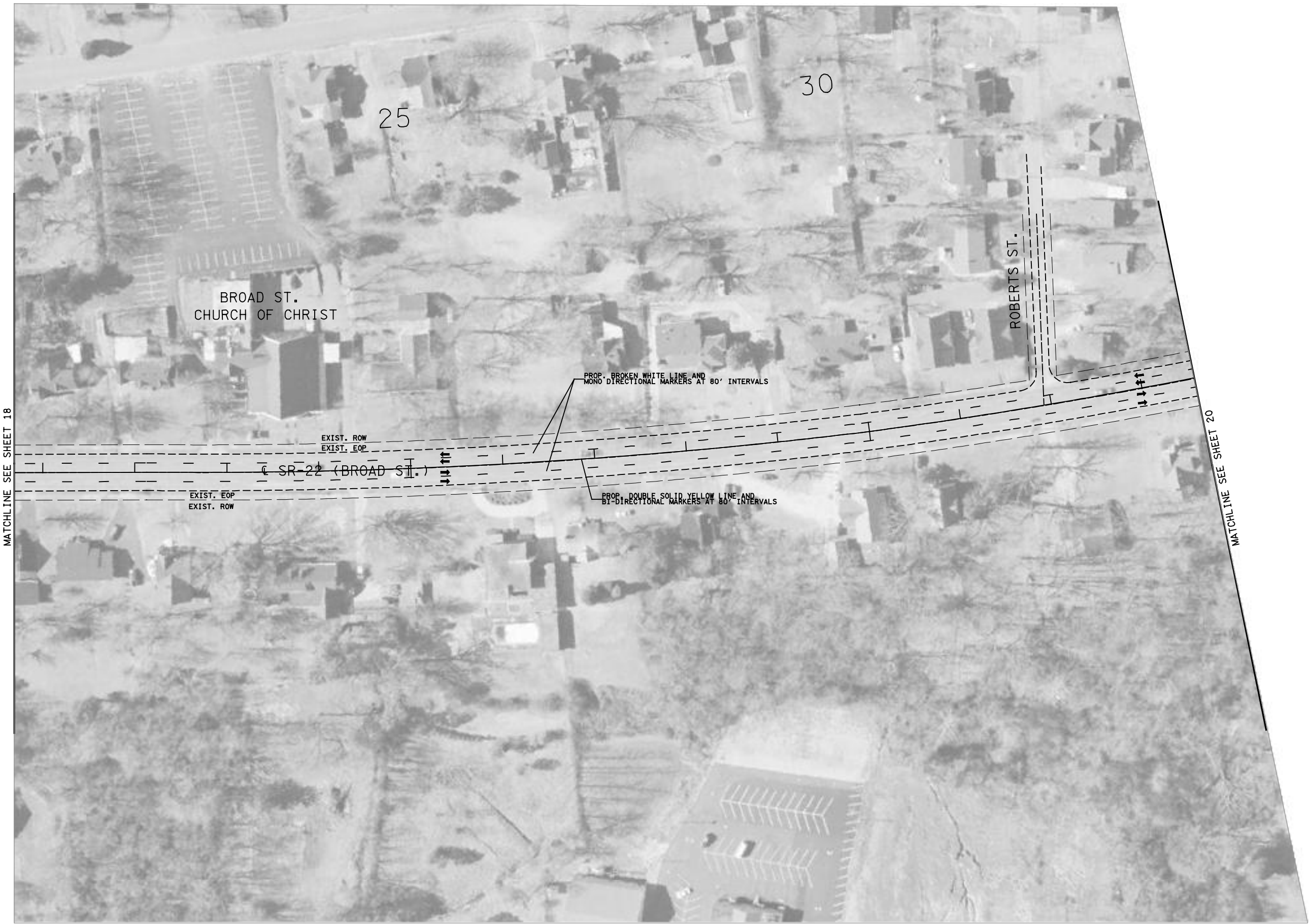
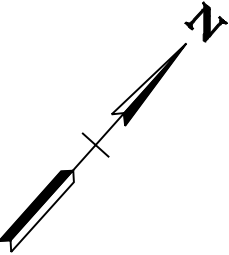
HENDERSON CO.
SR. 22
OPTION E

DATE

DATE



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		19



MATCHLINE SEE SHEET 18

MATCHLINE SEE SHEET 20

BROAD ST.
CHURCH OF CHRIST

ROBERTS ST.

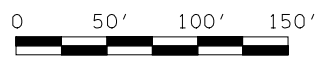
SR-22 (BROAD ST.)

PROP. BROKEN WHITE LINE AND
MONO DIRECTIONAL MARKERS AT 80' INTERVALS

PROP. DOUBLE SOLID YELLOW LINE AND
BI-DIRECTIONAL MARKERS AT 80' INTERVALS

EXIST. ROW
EXIST. EOP

EXIST. EOP
EXIST. ROW



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

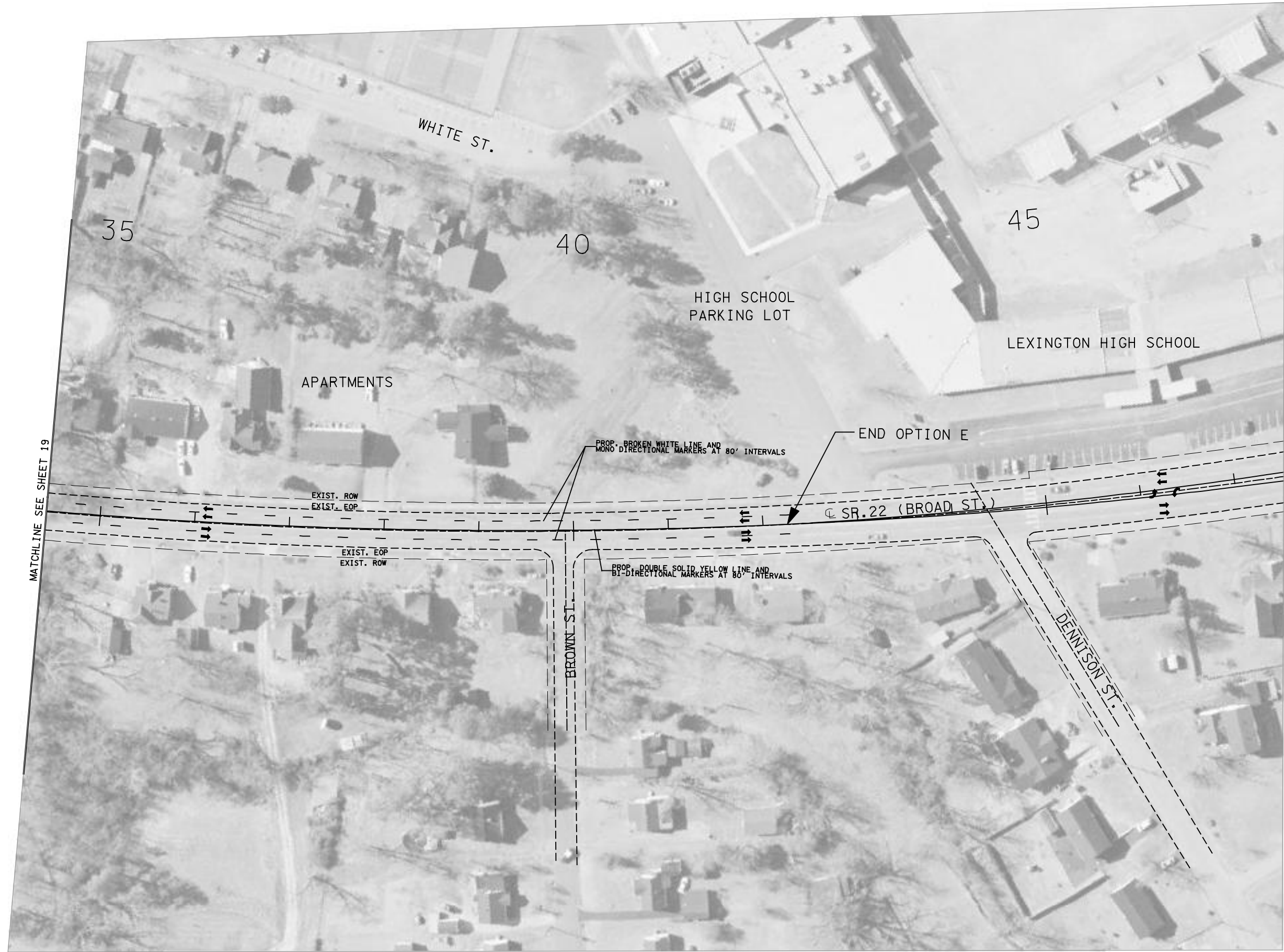
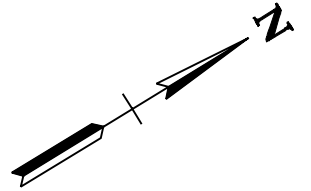
HENDERSON CO.
SR. 22
OPTION E



FILE

DATE

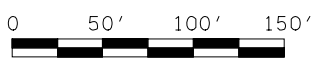
TYPE	YEAR	PROJECT NO.	SHEET NO.
	2007		20



MATCHLINE SEE SHEET 19

FILE

DATE



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

HENDERSON CO.
SR. 22
OPTION E