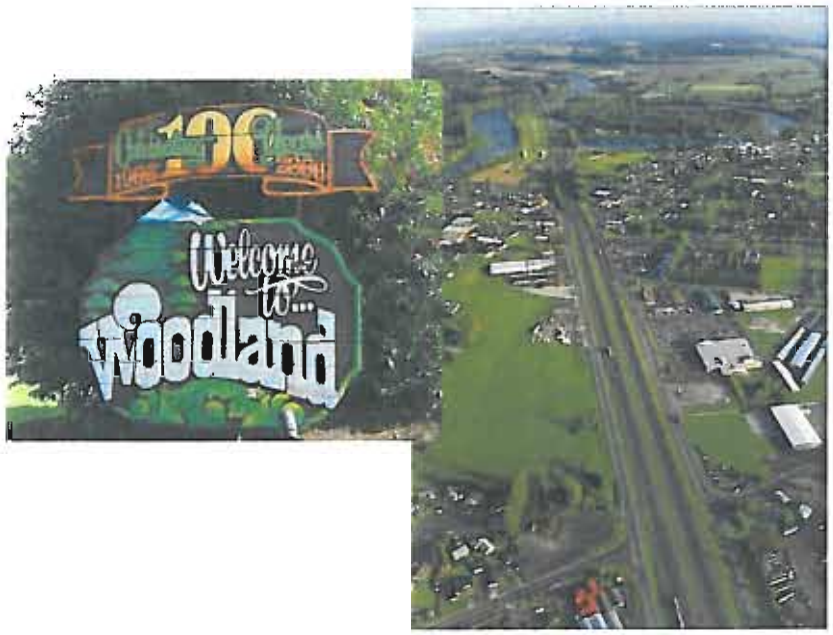
Woodland

Transportation Infrastructure
Strategic Plan

Final Report Summary



Prepared for

Cowlitz-Wahkiakum Council of Governments

November 2008

Prepared by

Parametrix

In Association with:

Transpo Group
Normandeau Associates
Economic and Financial Analysis

WOODLAND TRANSPORTATION INFRASTRUCTURE STRATEGIC PLAN
AGENCY COMMITMENT FOR PROJECT IMPLEMENTATION

Based on the collaborative planning process undertaken to prepare the Woodland Transportation Infrastructure Strategic Plan, the following agencies agree to work cooperatively together to carry out implementation of the Plan's recommendations.

Mayor Chuck Blum, City of Woodland — Date 3/2/09

Erica Rainford, Port of Woodland — Date 3/11/09

George Raiter, Cowlitz County Commissioners Chairman — Attest: Vickie M. Middlebrook, Clerk of the Board — 3-18-09

BOARD OF COUNTY COMMISSIONERS COWLITZ COUNTY WASHINGTON

Bart Gernhart, Washington State Department of Transportation — Date 2-24-09

Steve Harvey, Cowlitz-Wahkiakum Council of Governments — Date 3/13/09

Woodland
Transportation Infrastructure Strategic Plan

Final Report Summary

Prepared for

Cowlitz-Wahkiakum Council of Governments
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December, 2008 | 274-2398-006

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Aaron Christopherson
Benjamin Fredericks
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Marilee McCall
Darwin Rounds
Prior Mayor Doug Monge

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Erica Rainford - Port of Woodland
Kathleen Griffin and Michael Green - Woodland School District
Ryan Lopossa and Duane Decker - Cowlitz County Public Works Department
Sharon Zimmerman (Planning Manager), Jeff Bareness, Karyn Anderson, Ken Hash, and Jack Burke (former Planning Manager) - Washington State Department of Transportation
Rosemary Siipola and Steve Harvey - Cowlitz Wahkiakum Council of Governments

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Mara Krinke, Jennifer Hughes, Cyrus Bullock, Michael Marshall (Parametrix) – Environmental Sciences/Planning
Craig Hainey, Karen Martinek, Paula Morgan (Parametrix) – GIS and Graphics
Dena Horton (Normandeau Associates) – Public Involvement and Implementation Strategy
Eric Shimizu, Brent Turley, Stefanie Fishman (Transpo) – Traffic Modeling and Analysis
Lynelle Hatton, Ray Bartlett (Economic and Financial Analysis – Funding Analysis

Parametrix. 2008. Final Report Summary. Prepared by Parametrix, Portland, Oregon. December, 2008.

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1. SUMMARY OF RECOMMENDED IMPROVEMENT PLAN

1.1 BACKGROUND AND NEED FOR IMPROVEMENTS

Incorporated in 1906, the City of Woodland has recently experienced significant growth in both population and employment. Between 1990 and 2004 the city's population grew by approximately 65 percent (from 2,500 to nearly 4,100) or at an annualized rate of 3.7 percent, making it the fastest growing city in the Cowlitz-Wahkiakum area. The city's employment includes a strong base in retail, service and industrial sectors and grew by roughly 32 percent between 1994 and 2004. As of 2004, total employment in the city is estimated at over 3,000 jobs. In addition to local employment, the city also has a strong retail employment base as the market area for these services covers a sizeable area of southern Cowlitz and northern Clark County, in addition to I-5-related retail demand.

Consistent with the growth in both population and employment, traffic volumes on major streets in Woodland have also grown over the past five to ten years (ranging from 2 to 4 percent per year in the eastern and northwestern portions of city). A significant share of this growth has occurred in the vicinity of the I-5 interchanges at both SR 503 and Dike Access Road. During peak periods, traffic congestion at the I-5 interchange with SR 503 results in growing vehicle backups that approach the freeway mainline. Additionally, there is a significant volume of truck traffic in the industrial sections of city and on other streets resulting from local industry and from logging and quarry operations outside of the urban growth area. In the northwestern portion of the city, truck traffic comprises more than 20 percent of existing volumes on certain streets. Along SR 503 trucks comprise as much as 5 percent of the traffic stream.

Related to the localized congestion is the high accident experience along several roadways in the city, particularly SR 503 to the east of I-5. Sections of this highway and at the intersections of the state highway with Gun Club Road and Pacific Avenue are experiencing a high incidence of rear end and angle collisions. Existing accident experience led to many of the improvement recommendations in the city's adopted 2005 *Transportation Plan* which involve widening of SR 503 to provide for center turn lanes and other improvements.

By 2025, the number of residential households in Woodland is expected to grow by 82 percent, with eastern portions of the city more than doubling. Employment is expected to more than double to 6,238 jobs with the bulk of this growth occurring in the northwest portion of the city (over 1,500 new jobs) and the central city along the east side of I-5 (with over 1,000 new jobs). Coupled with this growth are significant increases in traffic volumes ranging from a 50 percent increase to a tripling over existing levels depending on location. Critical areas of future congestion are expected to be located along SR 503 and Dike Road in the vicinity of the I-5 interchanges. These problems are exacerbated by the lack of east/west connectivity across I-5 which forces local traffic to mix with freeway-destined traffic.

1.2 PURPOSE OF THIS STUDY

The primary purpose of this study was to build upon the foundation provided by the Woodland *Transportation Plan* by fleshing out improvement recommendations for the I-5 interchanges, and refining other major system improvement opportunities, particularly to serve the Woodland Industrial/Port area. This study was developed using a collaborative process and has culminated in a strategic infrastructure plan that addresses growing freeway and community traffic demand, increases arterial system connectivity including east/west

cross-freeway circulation, and provides enhanced and safer access to growing industrial and residential portions of the city, particularly along SR 503.

1.3 STUDY AREA

The geographical area which is included in the *Woodland Transportation Infrastructure Strategic Plan* (TISP) is presented in Figure 1. This area includes the entire corporate limits of the City, as well as immediately surrounding unincorporated areas in Cowlitz and Clark Counties. Figure 1 also identifies the key areas that were the focus of analysis and decision-making for the TISP.

1.4 DEVELOPMENT OF IMPROVEMENT RECOMMENDATIONS

A variety of improvement options were developed and evaluated to address the major transportation system issues within the City of Woodland including: existing and future congestion problems at the I-5 interchanges, the lack of east/west connectivity within the city for non-freeway traffic, lack of east/west accessibility over the BNSF mainline railroad, and safety issues along SR 503 in the eastern portion of the city.

The assessment of improvement options was based on a two-step, phased approach that became increasingly detailed as the analysis process progressed. The initial phase of analysis focused on brainstorming potential improvements which were screened against a series of evaluation criteria that had been developed through the technical and public involvement process. This screening identified a "short list" of feasible improvement options for which a more detailed evaluation was conducted and design concepts were developed.

From this short list of improvement options, recommended projects have been identified to address each of the major transportation system needs and issues described above. Priorities for implementation of improvement recommendations were established and an implementation strategy was developed. This implementation strategy includes conceptual design for each recommendation and a phased Capital Improvement Program that identifies the timing, cost, funding options, and general approach and responsibilities for developing each project. Plan recommendations and the implementation strategy are summarized in this report.

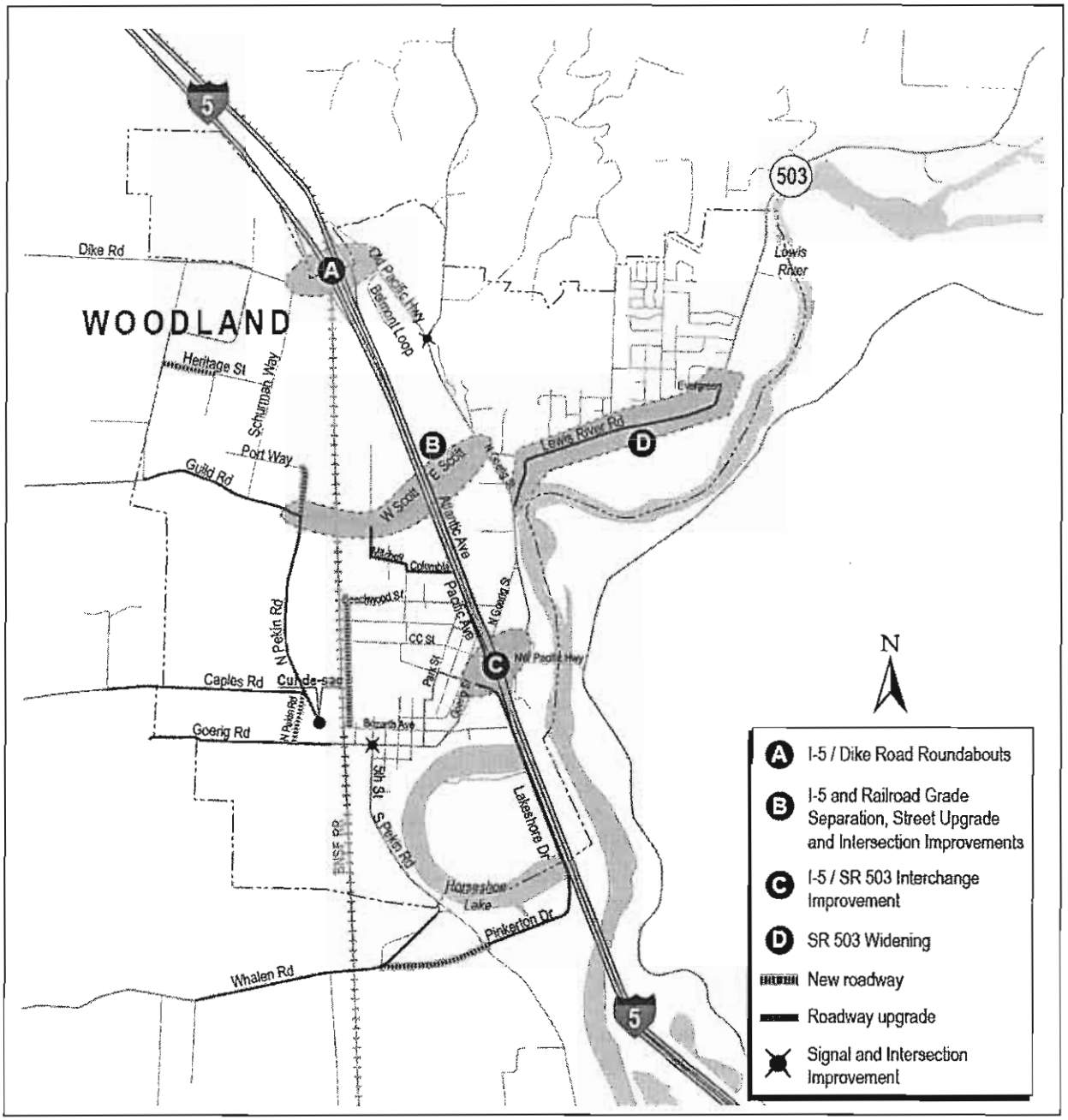
1.5 CAPITAL IMPROVEMENTS PROGRAM

Figure 1 on the following page, provides an overview of the major focus areas for which recommended improvements have been identified in the *Woodland Transportation Infrastructure Strategic Plan*. Projects of the magnitude identified in the TISP are typically constructed using a combination of funding and financing over several years or even decades, and they often require a combination of local, state, and federal funding participation. A deliberate phasing strategy is required to focus available local funding on portions of the study area that benefit travelers and commerce the most. The following pages identify specific projects and priorities that are recommended to be built over the next 20+ years to meet both the immediate traffic congestion and safety needs, and to achieve long-term improvement goals.

Priorities were developed based on several factors, including:

- Technical evaluation that addressed existing congestion, safety, and connectivity issues.

Figure 1. Overview of Improvement Recommendations



- Public input on needs and priorities which emphasized the importance of addressing existing problems in the vicinity of the freeway interchanges, SR 503 on the east side of the city, and the lack of east/west connectivity.
- Costs of each high priority project in relation to available funding and the potential for securing additional funding through grants and other sources.
- Time required to secure funding, right-of-way acquisition, permitting and to address design or other implementation complexities.

Recommended Short-Term, Mid-Term and Long-Term priorities are presented on the following page in Table 1. Detailed illustrations of specific improvement recommendations are presented in Figures 2 through 8b.

1.6 PROJECT IMPLEMENTATION STRATEGY

The project implementation strategy focuses both on identifying funding sources to develop and build the phased project recommendations in the Capital Improvements Program, and on an approach for securing the necessary funding.

1.6.1 Funding Opportunities

The Implementation Strategy provides an overview of general funding conditions and forecasts (including applicability of various funding sources in relation to the recommended improvements), and identifies a general approach to securing funding from a variety of sources. Options for packaging projects to meet specific funding programs are also identified, as are relationships among project recommendations that could influence funding.

Potential funding sources for the recommended projects in the Woodland TISP include a variety of state resources (including federal pass-through funds), regional funding opportunities such as the creation of a Transportation Benefit District, and local sources including development fees, exactions, and Local Improvement Districts. State funding includes loans from the Public Works Board, and grants for a variety of specific project types or project elements from the Washington State Department of Transportation (WSDOT), the Transportation Improvement Board (TIB), and other sources. Railroad grade-separation improvements at existing gated crossings like Scott Avenue are also eligible for a percentile share of funding from the railroad company. Most of the recommended improvement projects included in the TISP meet eligibility criteria for multiple funding sources.

1.6.2 Implementation Activities

The Implementation Strategy also includes a discussion of specific activities to be undertaken to fund, develop and build each individual project recommendation. Included in this discussion is:

- A timeline for implementing projects based on the phasing of recommendations presented in the Capital Improvements Program.
- An Action Plan that outlines recommended actions for the first three years after Plan adoption. This Action Plan is a three-year renewable or rolling short-term strategy that can be regularly monitored for progress and updated as tasks are completed.
- A discussion of actions necessary to establish a Transportation Benefit District (TBD) to include projects in the study area.

Table 1-1. Woodland Transportation Infrastructure Strategic Plan, Capital Improvements Program

Project Name	Location/Limits	Description	Cost Estimate (2008 $)	Project Interdependence	Primary Benefits
SHORT-TERM PROJECTS					
I-5 at Dike Road	At I-5 northbound and southbound amp intersections	• Construct single lane roundabouts at ramp termini	Wal-Mart mitigation	None	• Addresses future intersection failure • Provides access to growth westside businesses including industrial property, Port access, and major commercial center of the community • Safety enhancement, particularly for proposed school
Dike Road at Schurman Way	At intersection	• Construct single lane roundabout at Schurman (Option 3B)	$2,500,000	Must work in coordination with I-5 ramp roundabouts. Dependent on development and/or improvement of Schurman Way by City	• Addresses future intersection failure • Provides access to growth westside businesses including industrial property, Port access, and major commercial center of the community
Scott Avenue Crossing - Segment 2	I-5 Undercrossing	• Construct undercrossing of I-5 (raise I-5 profile) with one through lane in each direction sidewalks and bicycle lanes, signalize and provide turn lane channelization for interchange ramp termini on Scott, (Option 4D)	$33,100,000	Independent project	• Congestion relief at I-5 interchanges • Provides access to growth westside businesses including industrial property, Port access, and major commercial center of the community • Major street connectivity • Emergency response times
Scott Avenue Crossing - Segment 3	Scott Ave / Old Pacific Hwy Intersection	• Signalize intersection, realign east leg to meet Old Pacific Hwy at 90-degrees, add eastbound left turn lane, and southbound and westbound right turn lanes	$2,000,000	Independent project	• Addresses future intersection failure, and sub-standard design
SR 503	Hillshire Drive to Gun Club Road	• Interim improvement - two-way left turn lane (Hillshire to Gun Club) with 4-foot shoulder (compatible with longer-term improvement)	$1,140,000 (WSDOT ear-mark available)	Independent project	• Addresses most critical portion of existing High Accident Corridor condition • Provides improved bicycle and pedestrian circulation
		Total Short-Term Cost Estimate	**$38,740,000**		
MID-TERM PROJECTS					
Scott Avenue Crossing - Segment 1	RR Overcrossing	• Construct two lane overcrossing of railroad with sidewalks and bicycle lanes, and at-grade intersection with Down River Drive (Option 4D)	$18,500,000	This improvement must also include the extension of N Pekin Road to connect with Port Way as described below	• Congestion relief at I-5 interchanges • Provides access to westside businesses including industrial property, Port access, and major commercial center of the community • Major street connectivity s • Safety of high speed, mainline rail crossing • Emergency response times

Table 1-1. Woodland Transportation Infrastructure Strategic Plan, Capital Improvements Program Cont.

Project Name	Location/Limits	Description	Cost Estimate (2008 $)	Project Interdependence	Primary Benefits
MID-TERM PROJECTS Continued					
Scott Avenue - Complete Project (if earlier phases are not completed in short-term)	Schurman to Old Pacific Highway	• Construct overcrossing of railroad and undercrossing of I-5 (raise I-5 profile), signalize ramp termini on Scott, at-grade intersection with Down River (Option 4D)	$53,400,000*	This improvement must also include the extension of N Pekin Road to connect with Port Way	• Congestion relief at I-5 interchanges • Provides access to growth westside businesses including industrial property, Port access, and major commercial center of the community • Major street connectivity s • Safety of high speed, mainline rail crossing • Emergency response times
Scott Avenue at Pekin Road	Relocation of existing connection	• Grade-separate Scott Avenue and N Pekin, connect N Pekin to Schurman via Port Way (Option 1)	$8,600,000	Required as part of railroad overcrossing project	• Replaces connectivity between Pekin Road and Scott Avenue that would be lost when railroad overcrossing structure is built • Provides major northbound/south backbone transportation network for Westside of city
SR-503	Hillshire Drive to Evergreen Lane	• Widen to 3-lane cross-section, install bicycle and pedestrian facilities	$7,100,000	Independent project	• Addresses existing High Accident Corridor • Improves traffic operations at intersections • Provides improved bicycle and pedestrian circulation • Addresses stormwater treatment • Can enhance street appearance
SR 503	At Goerig and Scott	• Signalize Scott, smooth curve and add left turn channelization on SR 503, restrict NB left movement at Goerig (Option 3B) Note: cost for signal at Goerig not included.++	$4,200,000	Independent project., but should occur as part of SR 503 full widening project	• Improves traffic operations at future failing intersections
		Total Mid-Term Cost Estimate	**$38,400,000**		
LONG-TERM PROJECTS					
I-5 at SR 503	Buckeye/Goerig to SR 503/A Street	• Add turn lanes at SR 503 intersections with I-5, relocate CC Street connection to A Street, and add eastbound through lane from Atlantic to past A Street (Option 6)	$8,900,000	Dependent on Scott Avenue crossing being in place to divert significant traffic volumes away from this interchange area. Follow Scott Crossing	• Addresses future interchange area failure including expected periodic traffic queuing onto I-5 northbound mainline • Enhances safety • Provides improved pedestrian and bicycle connectivity
		Total Long Term Cost Estimate	**$8,900,000**		
		TOTAL PROJECT COSTS* ++	**$86,040,000**		

* Cost estimate not included in total to avoid double counting with project as presented and constructed in segments.

++ Cost of traffic signal installation at intersection of SR 503 and Goerig is not included as this intersection may not meet signal warrants during the planning period. An optional signal is identified for installation if needed.

- Highlights of an on-going public involvement strategy to provide public input on the Action Plan and on-going project development activities, and to maintain public support for and interest in the recommendations of the TISP.
- Contingency plan for circumstances where projects are not funded as anticipated.

Highlights of the Three-Year Action Plan are presented in Table 1-2 below.

Table 1-2. Three-Year Action Plan, Major Activities to Be Accomplished

Timeline by Year	Major Activities
Year 1	1. Assign responsibilities: • Identify project champions, assign responsibilities for delivery of projects • Identify project advocates, assign responsibilities for pursuing funding • Assign responsibilities for monitoring projects, updating estimates and timelines
	2. Get recommendations of TISP on the RTPO's list of regionally-approved transportation projects
	3. Establish Transportation Benefit District (TBD)
	4. Develop approach to seeking state and federal legislative assistance to secure funding: • Develop timeline and designate target state legislators • Develop timelines and designate target federal legislators
	5. Initiate outreach with state and federal legislators and staff.
Year 2	1. Continue meetings with state and federal legislators who represent the district.
	2. Continue outreach activities
Year 3	1. Continue meetings with state and federal legislators who represent the district.
	2. Continue outreach activities
	3. Reassess the short-term goals of the TISP's Capital Improvements Program and make any adjustments necessary to the timelines, cost estimates, etc.
Outlying Years	1. Continue three-year cycle presented above with annual updates based on progress towards securing funding and implementing the project recommendations.

Note: See *Woodland Transportation Infrastructure Strategic Plan, Implementation Strategy Technical Memorandum*, dated August 2008 for further details on actions to be taken during each year after Plan adoption (included in Appendix F to the Final Project Report).

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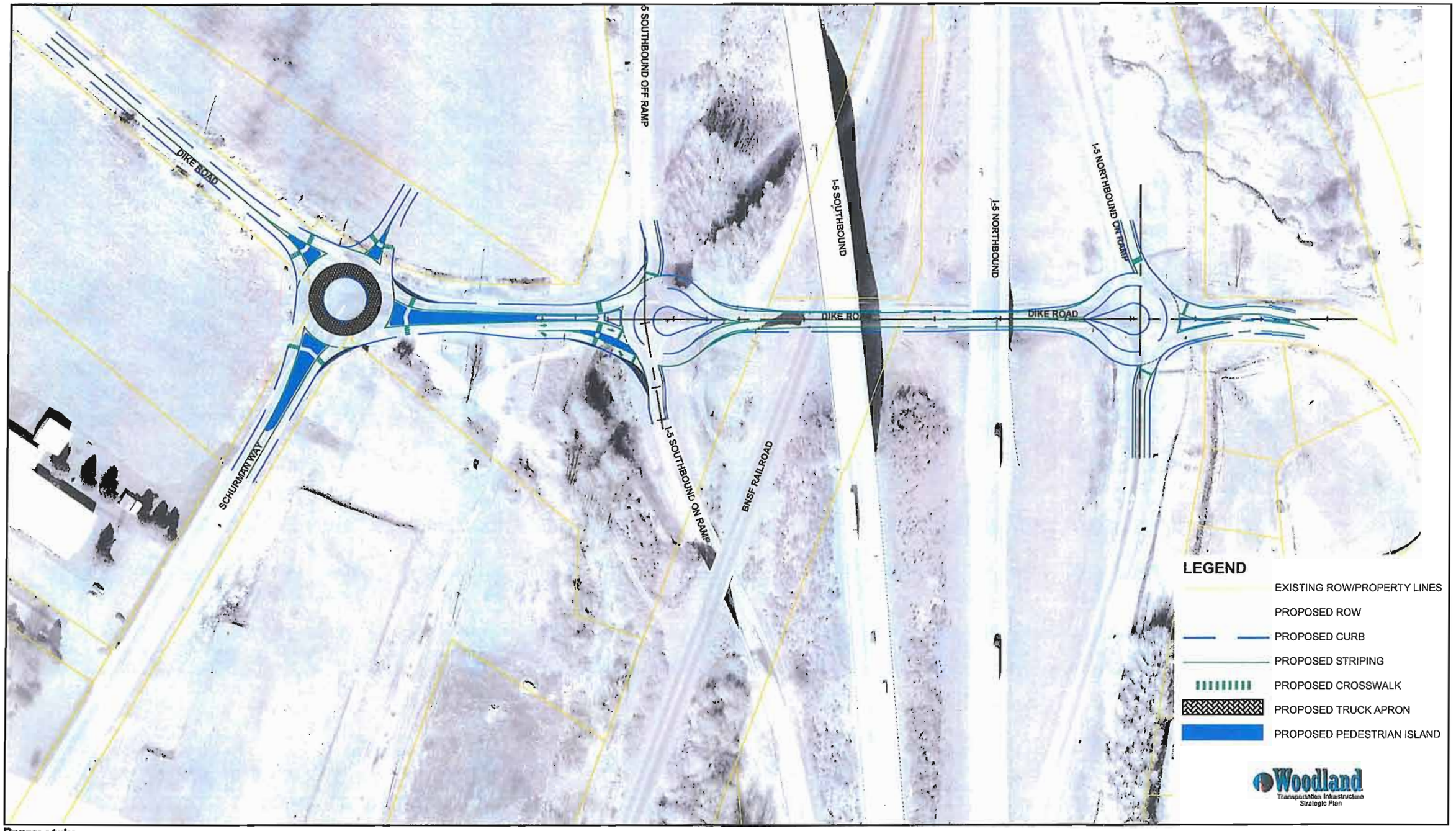

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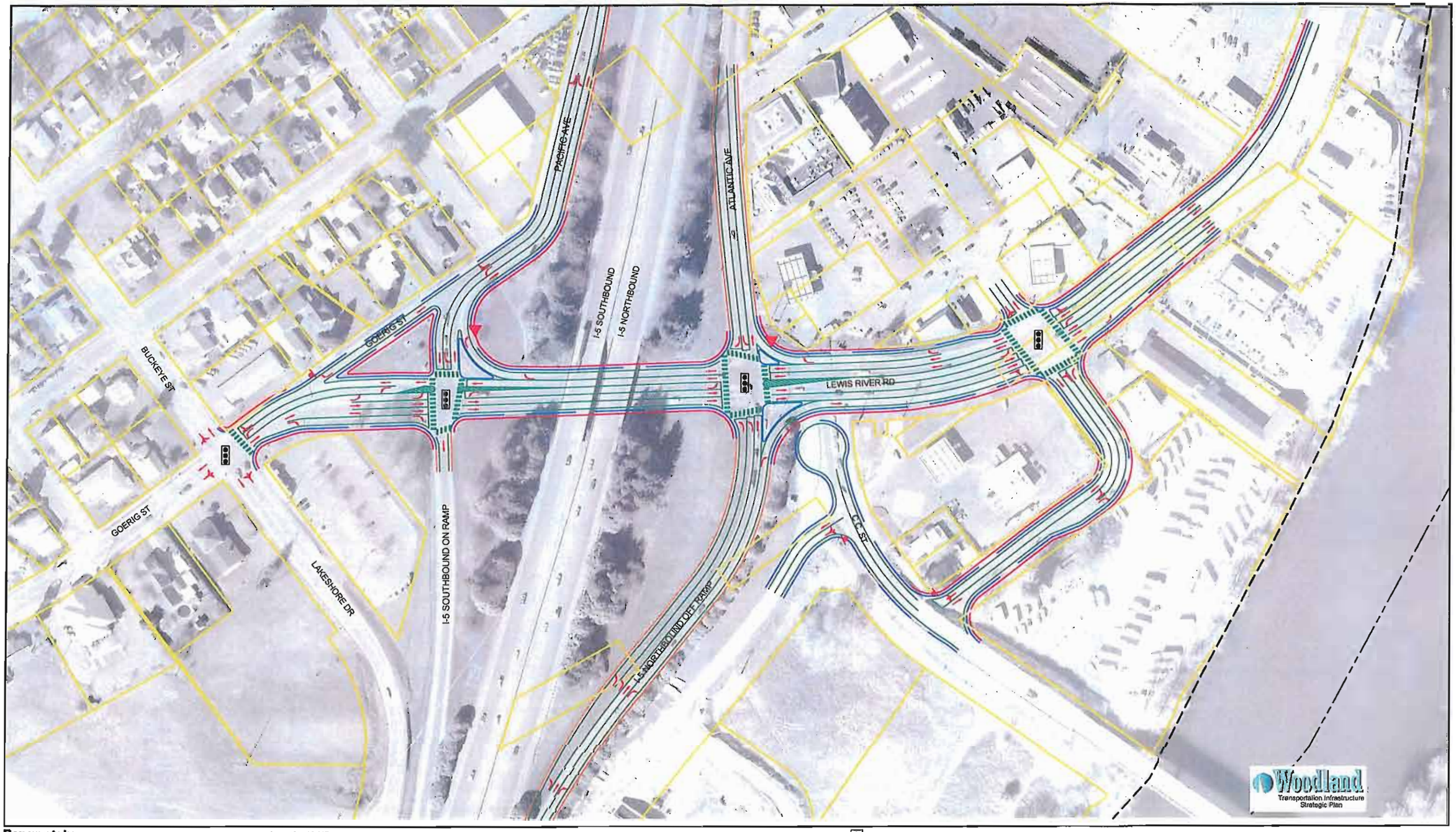
Figure 2
I5/DIKE ROAD INTERCHANGE
RECOMMENDED IMPROVEMENT



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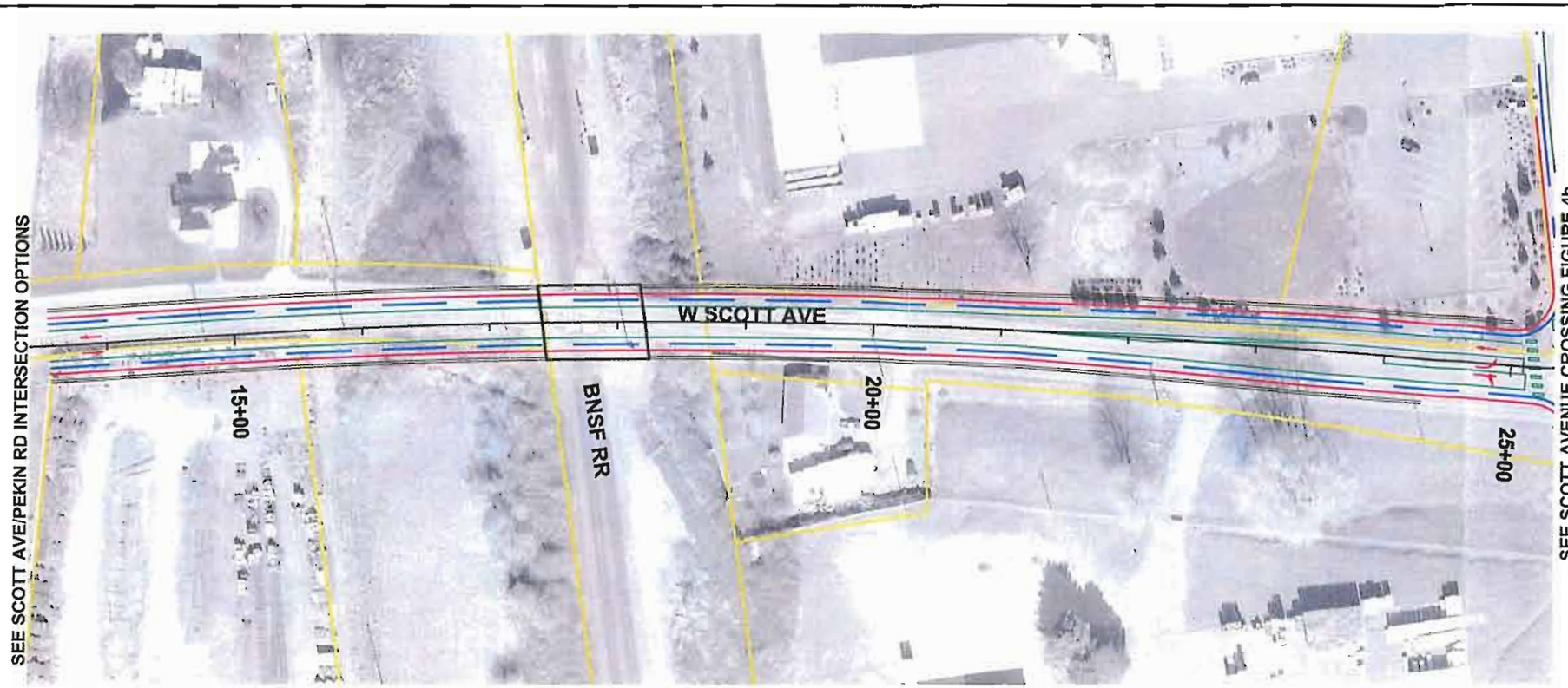
LEGEND

- EXISTING ROW/PROPERTY LINES
- PROPOSED ROW
- PROPOSED CURB
- PROPOSED STRIPING
- PROPOSED CROSSWALK
- PROPOSED SIDEWALK
- PROPOSED EDGE OF PAVEMENT
- TRAFFIC SIGNAL
- STOP SIGN
- YIELD SIGN

Figure 3
SR 503/ I-5 INTERCHANGE
RECOMMENDED IMPROVEMENT



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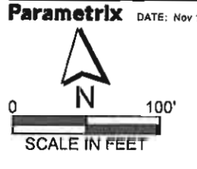
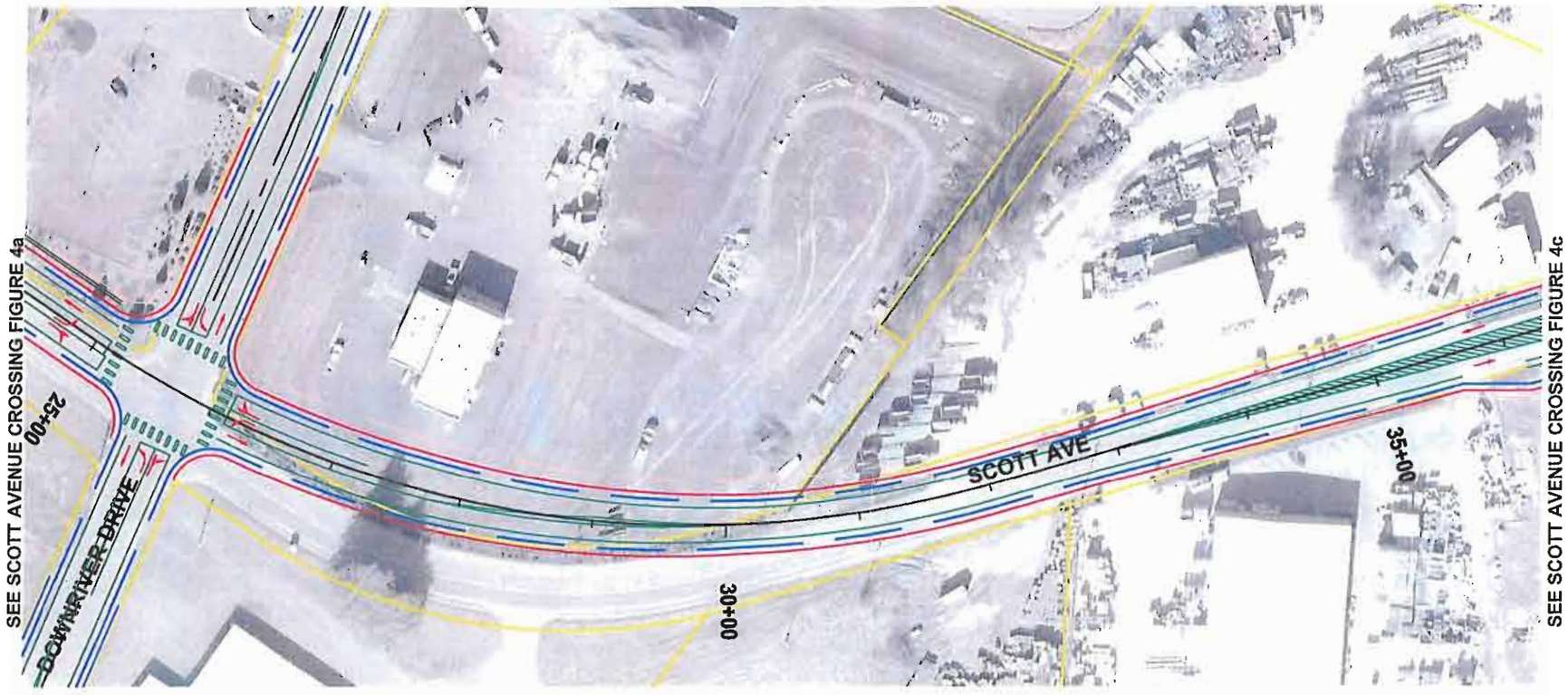
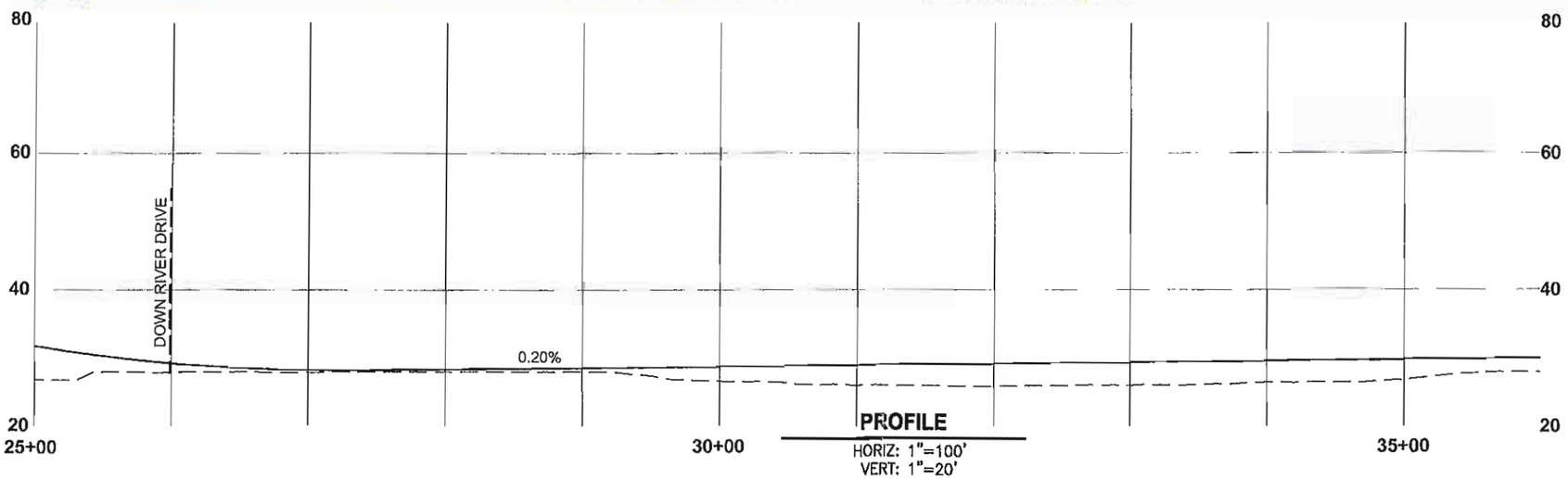
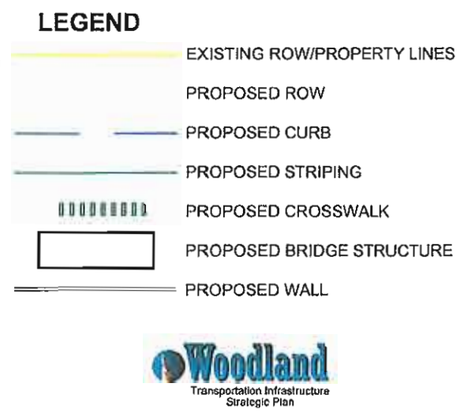


Figure 4a
SCOTT AVENUE CROSSING
RECOMMENDED IMPROVEMENT
Sta 13+55 - Sta 25+00







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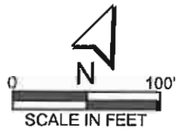
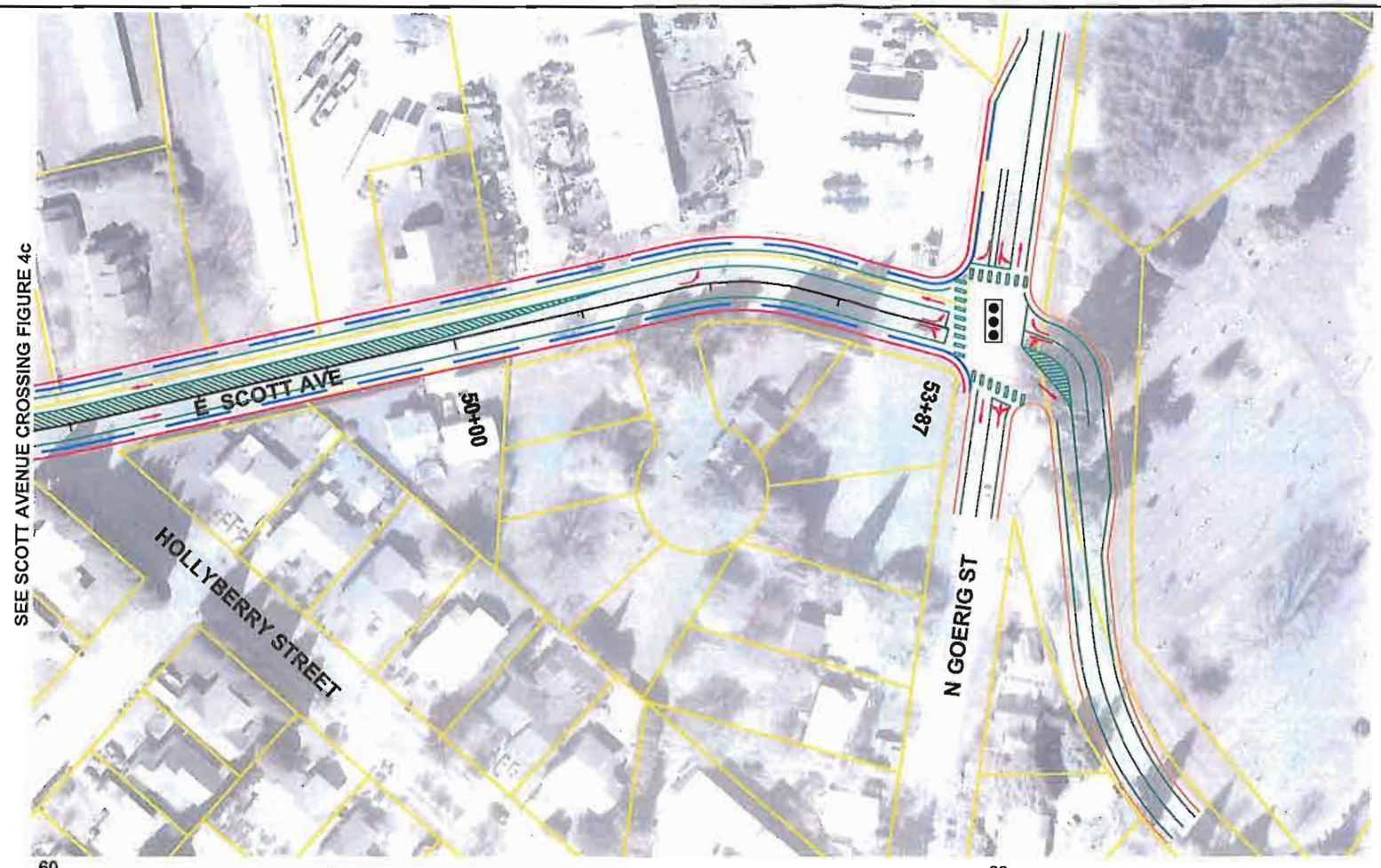
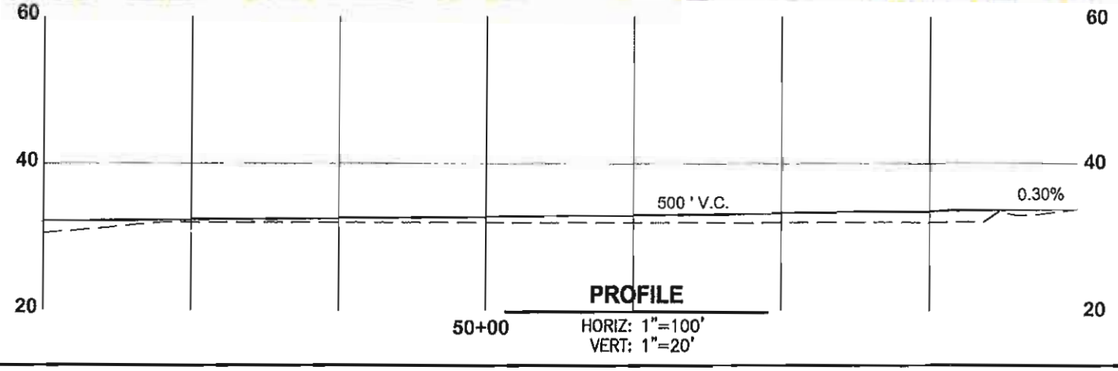


Figure 4b
SCOTT AVENUE CROSSING
RECOMMENDED IMPROVEMENT
Sta 25+00 - Sta 36+00





LEGEND

- EXISTING ROW/PROPERTY LINES
- PROPOSED ROW
- PROPOSED CURB
- PROPOSED STRIPING
- PROPOSED CROSSWALK
- PROPOSED EDGE OF PAVEMENT
- SIGNAL

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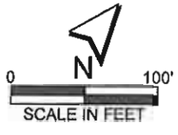

Figure 4d
SCOTT AVENUE CROSSING
RECOMMENDED IMPROVEMENT
Sta 47+00 - Sta 53+87

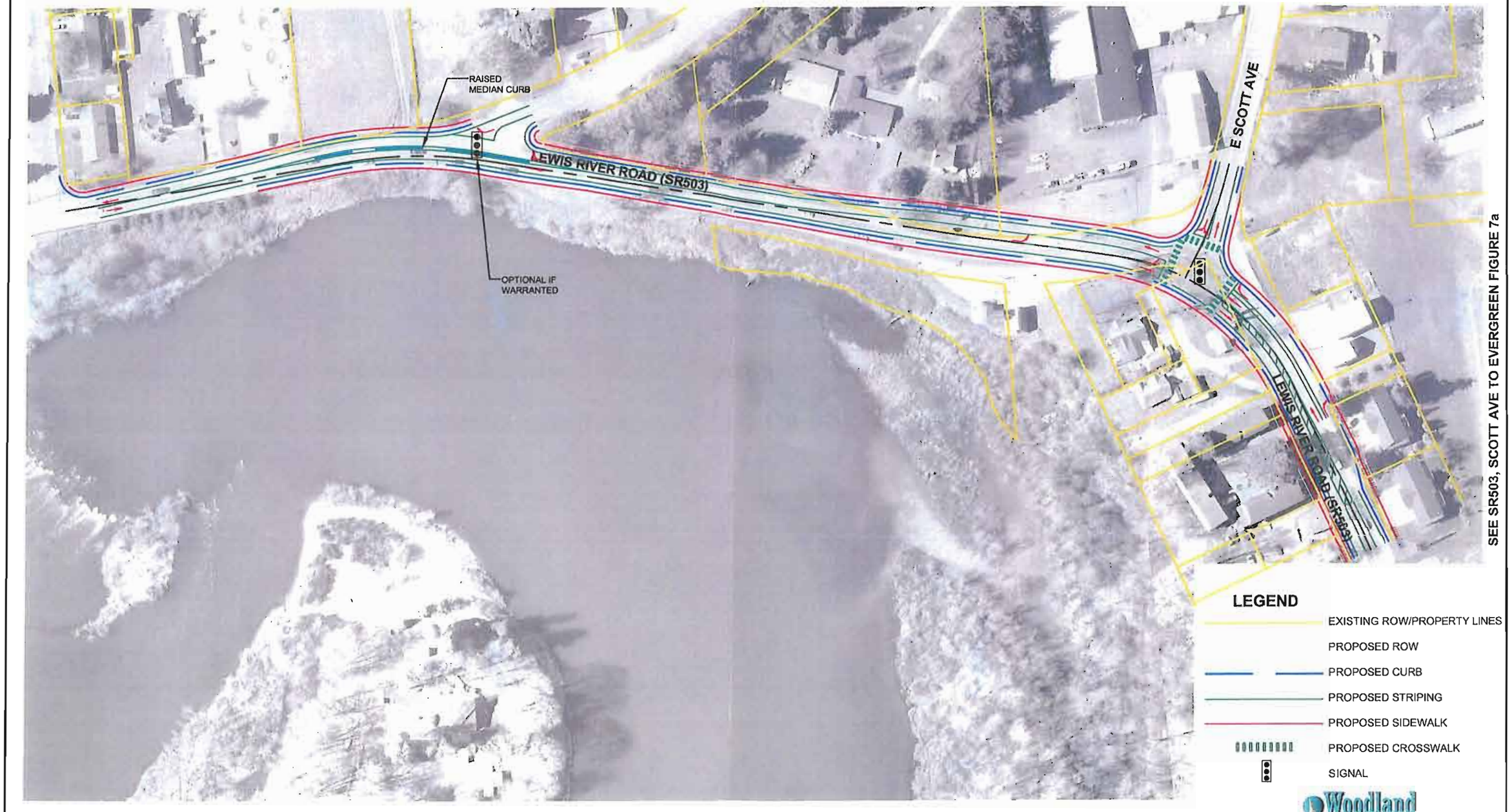

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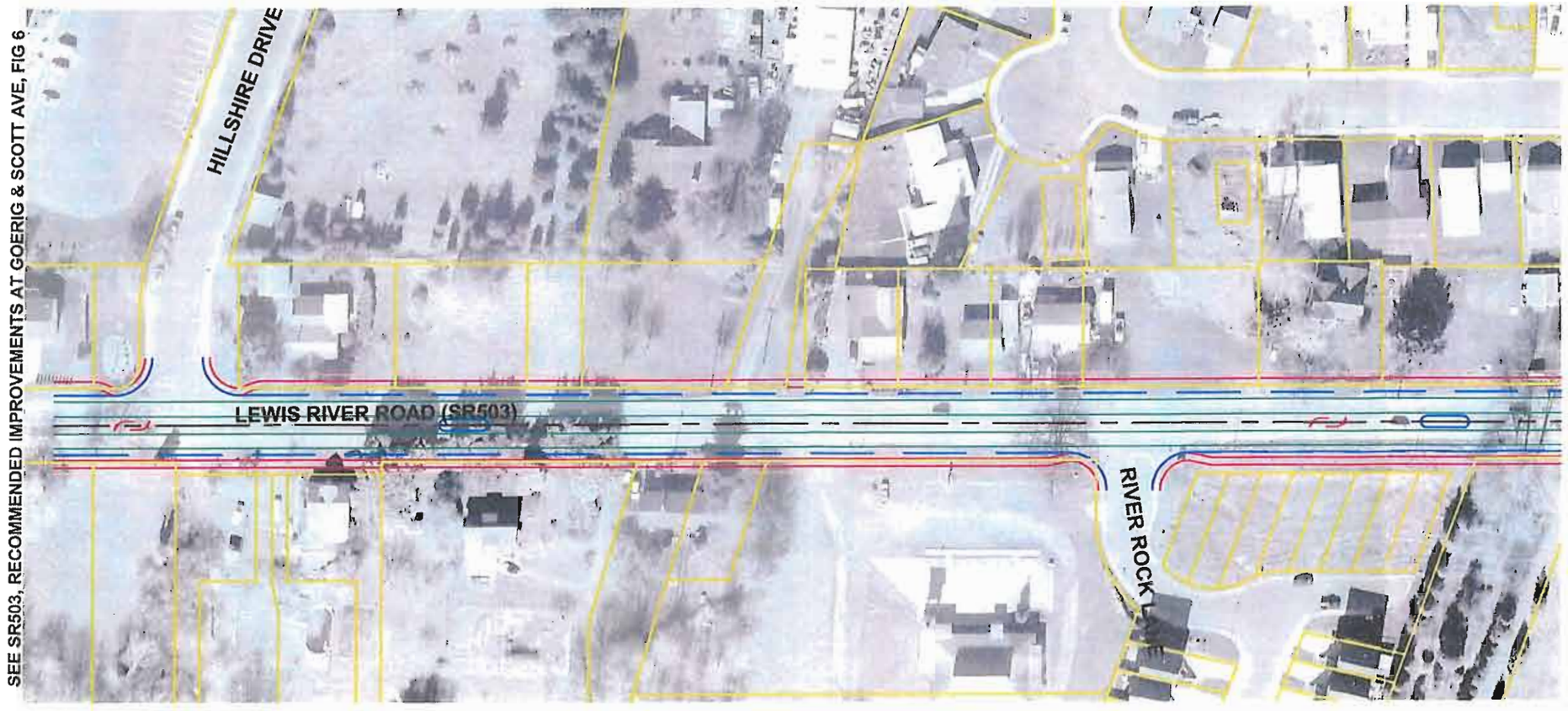
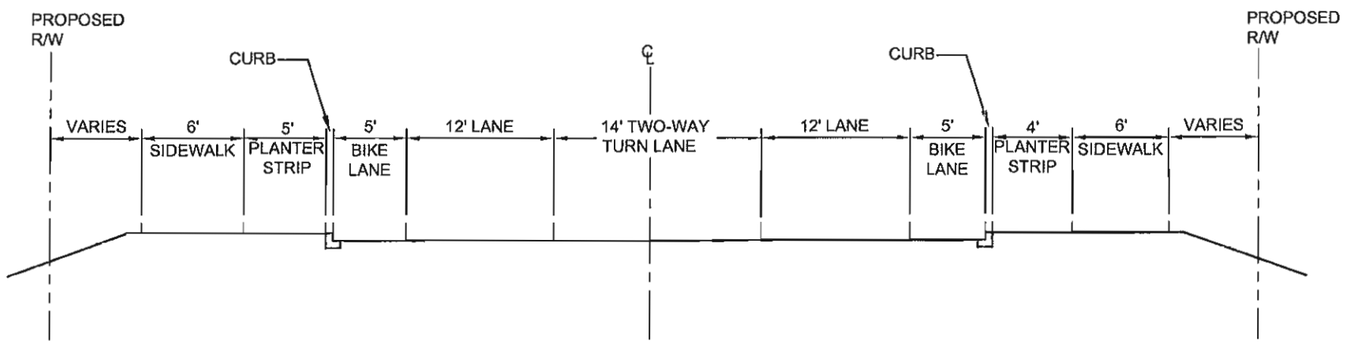
Figure 6
SR503 RECOMMENDED IMPROVEMENTS AT GOERIG AND SCOTT AVENUE





SECTION A-A

LEGEND

- EXISTING ROW/PROPERTY LINES
- PROPOSED ROW
- PROPOSED CURB
- PROPOSED STRIPING
- PROPOSED SIDEWALK

Woodland Transportation Infrastructure Strategic Plan

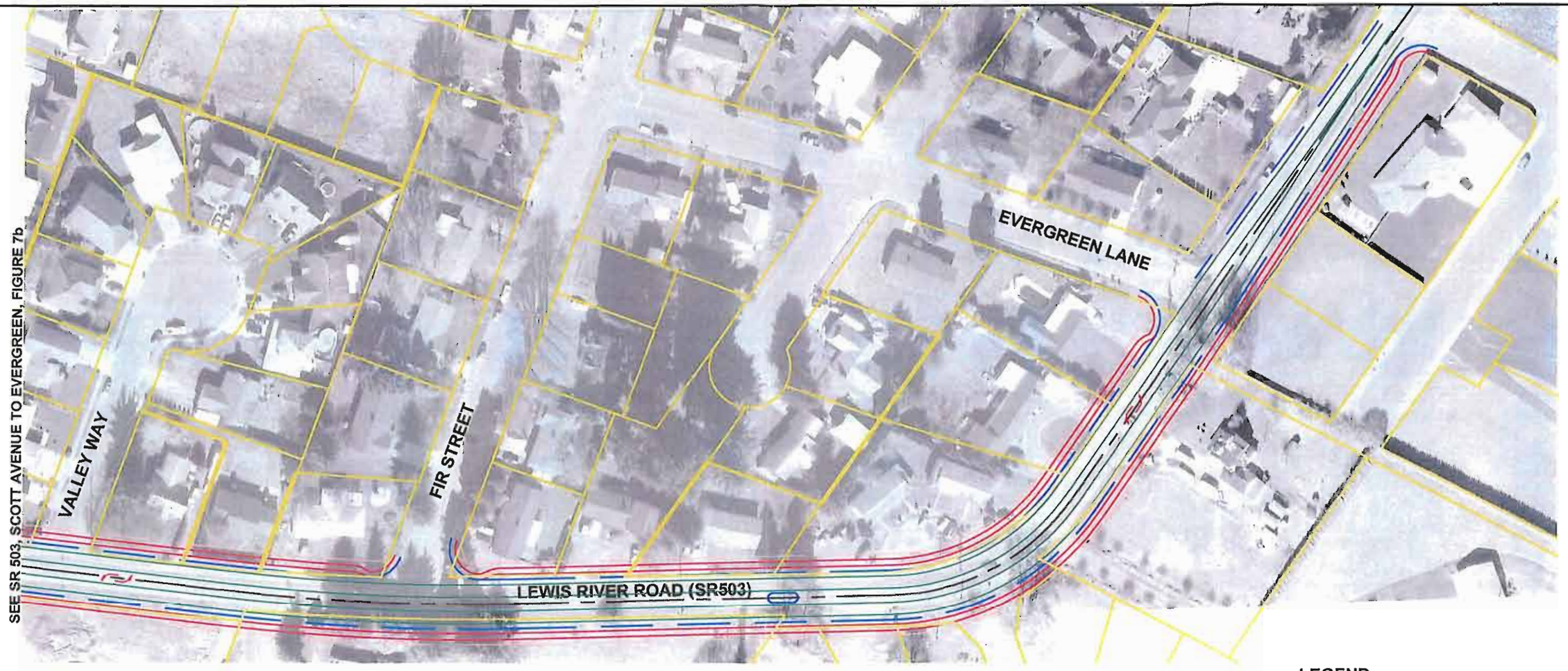
Parametrix DATE: Nov 17, 2008 FILE: P02398006F-45

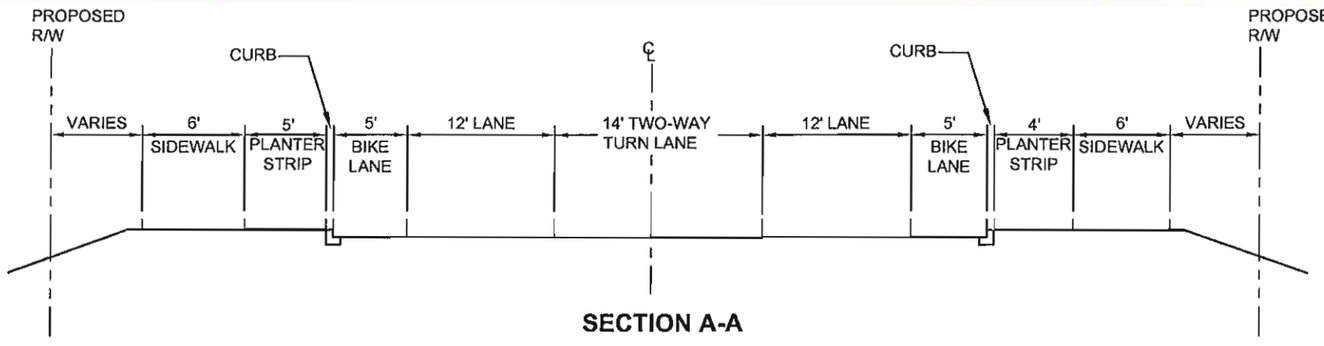
N

0 100'

SCALE IN FEET

Figure 7a
SR 503, SCOTT AVENUE TO EVERGREEN
RECOMMENDED IMPROVEMENT





SECTION A-A

LEGEND

- EXISTING ROW/PROPERTY LINES
- PROPOSED ROW
- PROPOSED CURB
- PROPOSED STRIPING
- PROPOSED SIDEWALK

Woodland
Transportation Infrastructure Strategic Plan

Parametrix DATE: Nov 17, 2008 FILE: P02398006F-47

N

0 100'

SCALE IN FEET

Figure 7c
SR 503, SCOTT AVENUE TO EVERGREEN
RECOMMENDED IMPROVEMENT

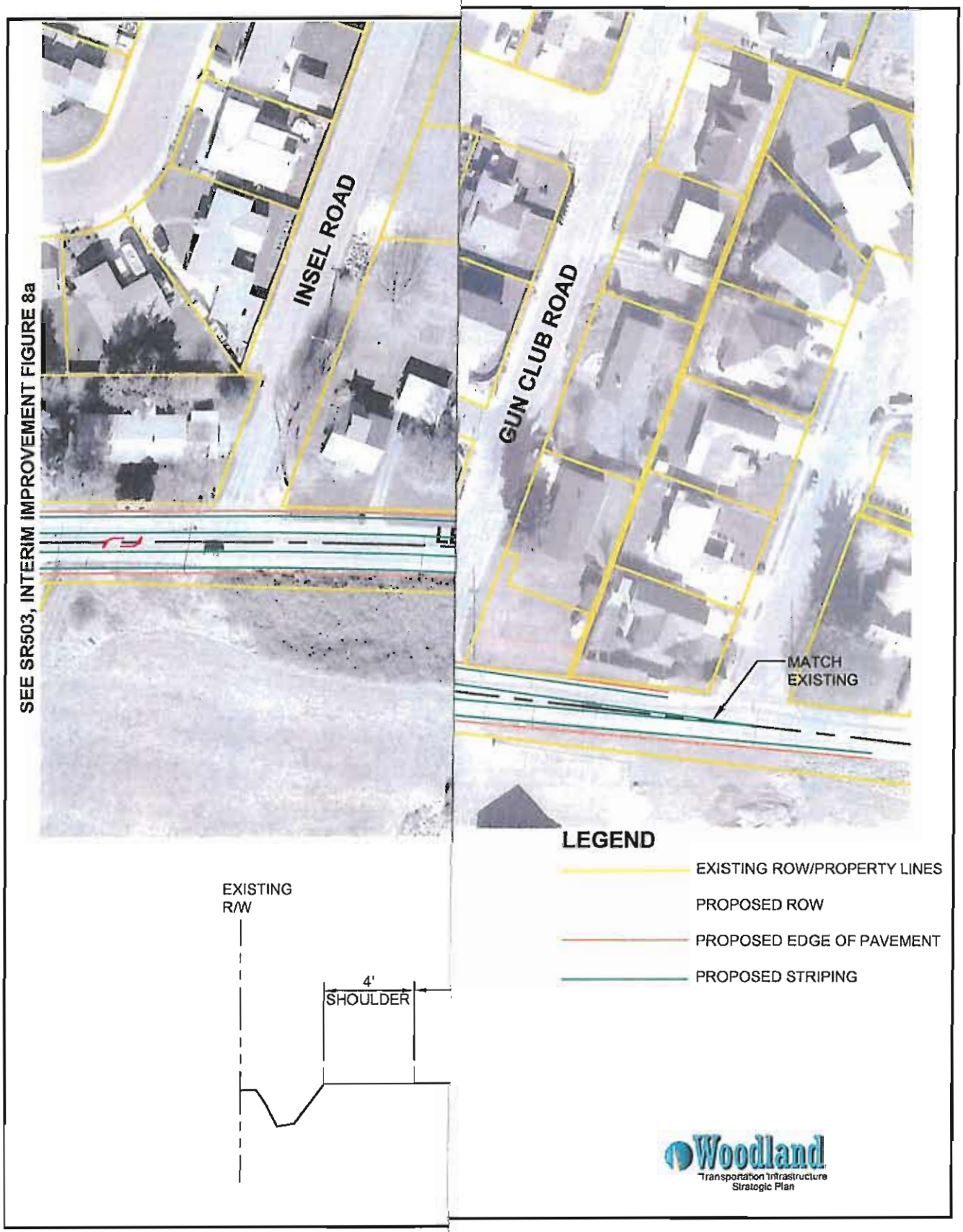
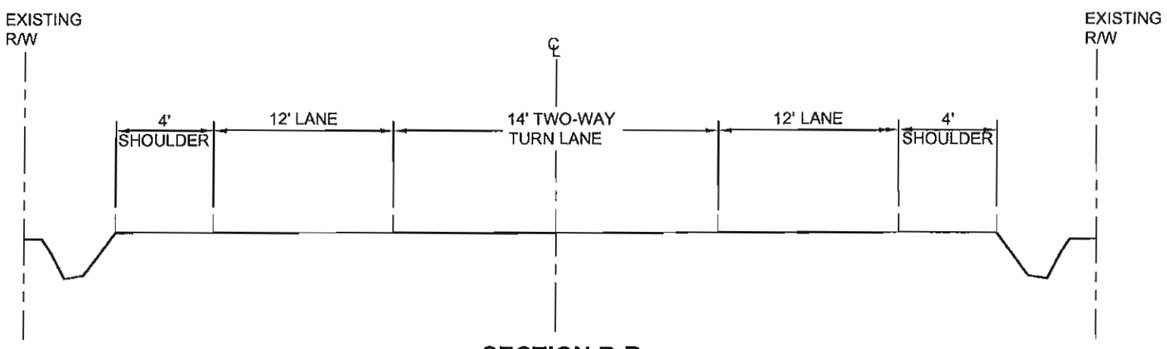


Figure 8b
SR 503, INTERIM IMPROVEMENT



SECTION B-B

LEGEND

- EXISTING ROW/PROPERTY LINES
- PROPOSED EDGE OF PAVMENT
- PROPOSED STRIPING

Woodland Transportation Infrastructure Strategic Plan

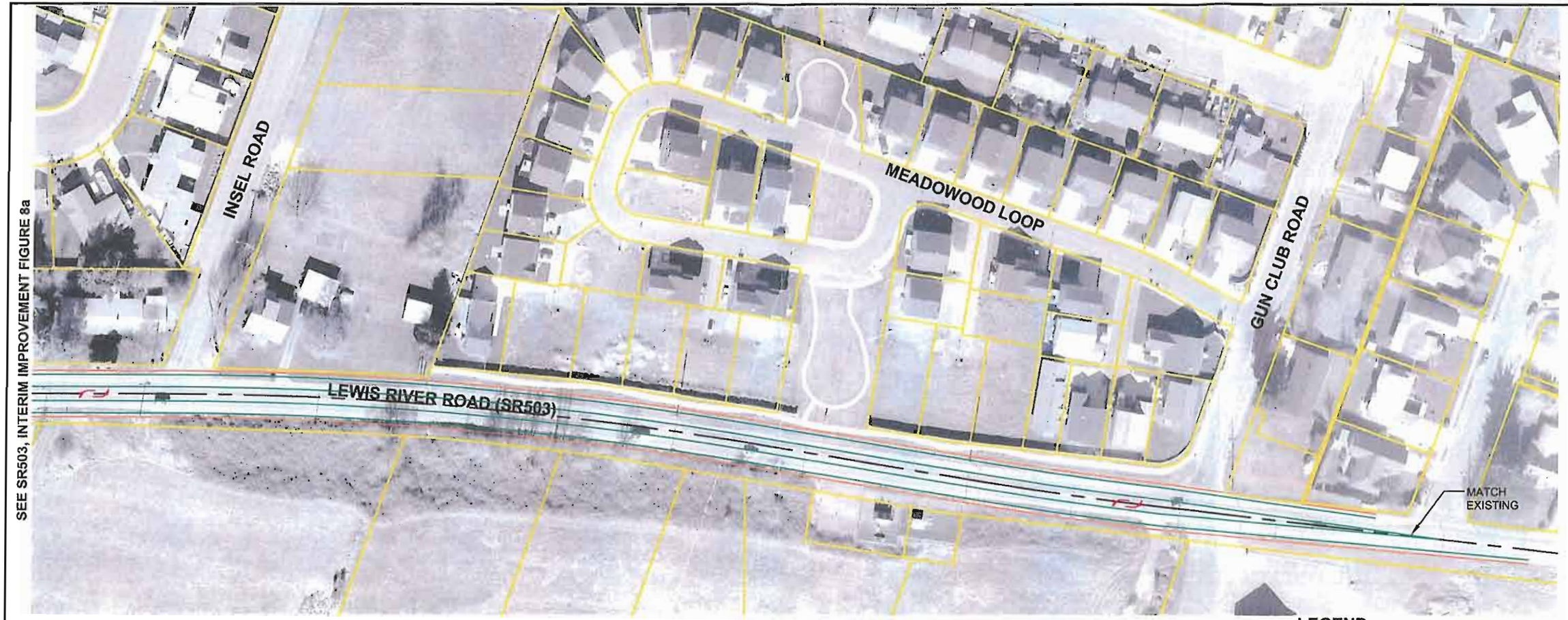
Parametrix DATE: Nov 17, 2008 FILE: PO2398006F-65

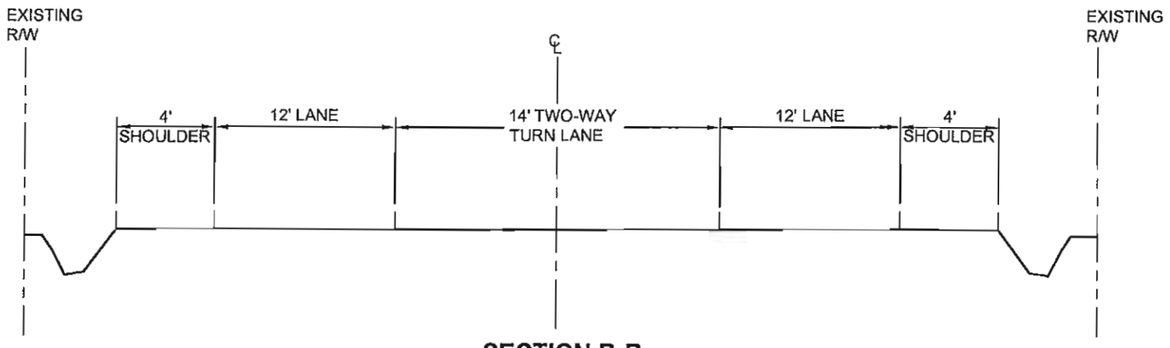
N

0 100'

SCALE IN FEET

Figure 8a
SR 503, INTERIM IMPROVEMENT





SECTION B-B

LEGEND

- EXISTING ROW/PROPERTY LINES
- PROPOSED ROW
- PROPOSED EDGE OF PAVEMENT
- PROPOSED STRIPING

Woodland
Transportation Infrastructure Strategic Plan

Parametrix DATE: Nov 17, 2008 FILE: PO2398006F-66

N

0 100'

SCALE IN FEET

Figure 8b
SR 503, INTERIM IMPROVEMENT