

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

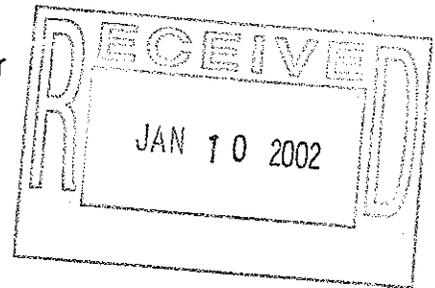
INTERDEPARTMENT CORRESPONDENCE

FILE: STP-0003-00(907) Elbert County
P.I. No.: 0003662-3907
SR 77 @ SR 368 & CR 242/Brewers Bridge Rd.
Safety/Intersection Improvements

OFFICE: Traffic Safety and Design
Atlanta, Georgia
DATE: January 9, 2002

FROM:  Phillip M. Allen, State Traffic Safety & Design Engineer

TO: Larry Dent, District Engineer, Gainesville
Attn: Todd Long



SUBJECT: APPROVED CONCEPT REPORT

Attached is a copy of the approved concept report on the above listed project for your use and further handling.

This project consists of re-aligning CR 242 and SR 368 with SR 77 to provide "T" intersections. Vertical curve on SR 77 south of the existing intersection with SR 368 will be lowered to improve sight distance. A stop and go traffic signal is not warranted.

By copy of this letter, this office is requesting for this project be assigned to Chuck Hasty as Project Manager. The design of this project will be handled under our Consultant Design Contract, STP-0001-00(853).

Should you have any questions, please contact Ken Werho of this office at 404-635-8144.

PMA:KPW:kms

Attachments

- cc: Frank Danchetz
- Tom Turner, w/attach.
- David Mulling, w/attach.
-  w/attach.
- Herman Griffin, w/attach.
- Harvey Keeper, w/attach.
- Joe Garland, w/attach.
- General Files

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

PROJECT CONCEPT REPORT

ELBERT COUNTY

STP-0003-00(907)

FEDERAL ROUTE NO:
STATE ROUTE NO: 77 & 368
GADOT P.I. NO: 0003907

SEE ATTACHED
LOCATION SKETCH

Date of Report: June 27, 2001

RECOMMENDED: 07/02/01
DATE

Marion Alderson
STATE TRAFFIC OPERATIONS ENGINEER

RECOMMENDED: 7/24/01
DATE

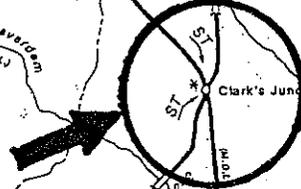
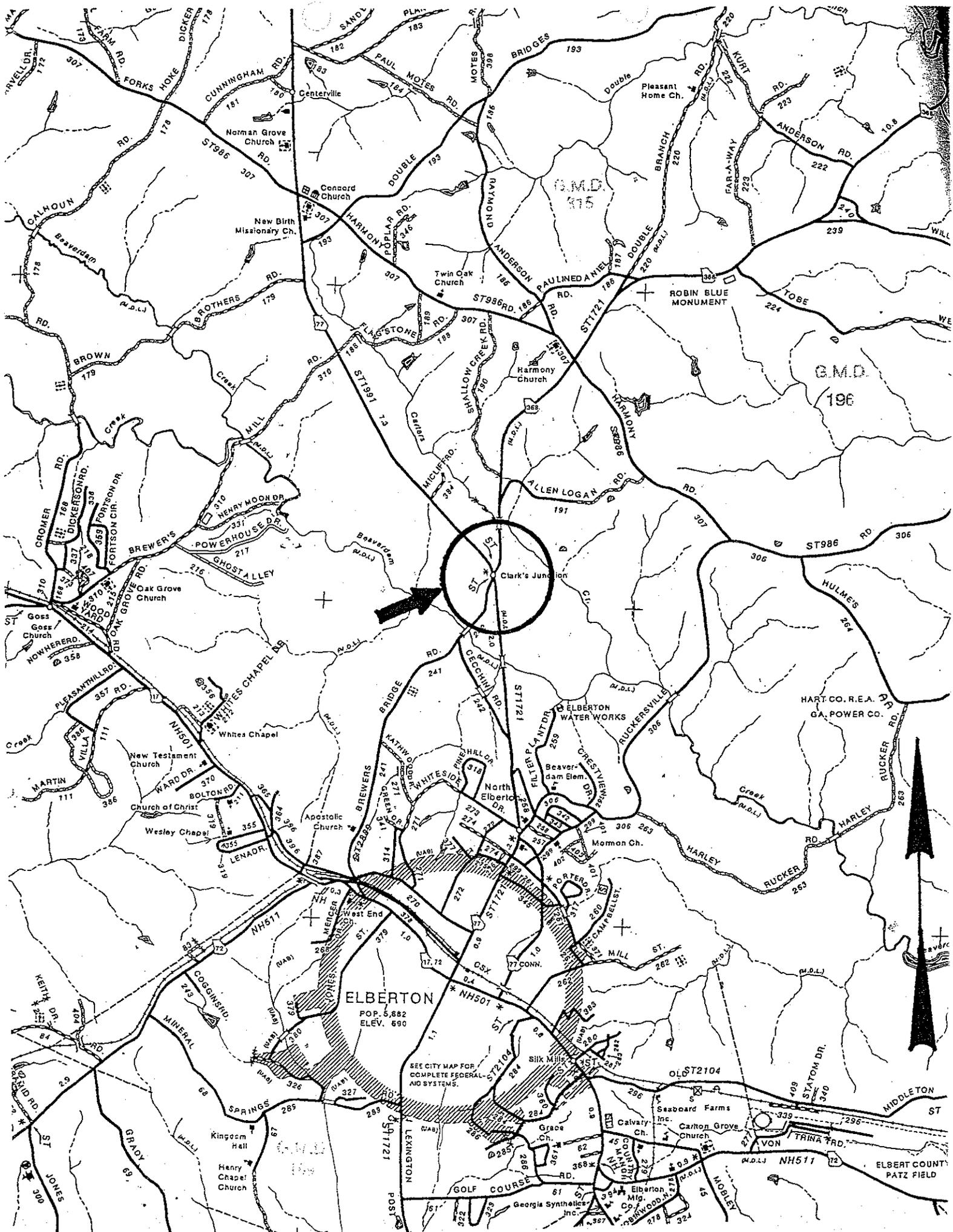
Larry E. Denton
DISTRICT ENGINEER

RECOMMENDED: 8/16/01
DATE

H. J. [Signature]
CHIEF ENGINEER

APPROVED: _____
DATE

Tom Colman
COMMISSIONER



ELBERTON
POP. 5,882
ELEV. 690

SEE CITY MAP FOR
COMPLETE FEDERAL
AID SYSTEMS.

ELBERT COUNTY
PATZ FIELD

PROJECT CONCEPT REPORT

P.I. No.: 0003907

Project No.: STP-0003-00(907) Elbert County

Route No.: S.R. 77/Lexington Highway
 S.R. 368/Double Branch Road
 C.R. 242/Brewers Bridge Road

Location: The intersection of S.R. 77 at S.R. 368 and C.R. 242 is located approximately 3.5 miles North of the city of Elberton and approximately 8 miles South of the Hart County Line on S.R. 77 in Elbert County.

Description: C.R. 242 will be re-aligned and the new intersection with S.R. 77 will occur approximately 1300 feet South of the existing intersection. S.R. 368 will be re-aligned and the new intersection with S.R. 77 will occur approximately 400 feet North of the existing intersection. The vertical curve on S.R. 77 South of the existing intersection with S.R. 368 will be lowered to improve sight distance.

Traffic – Current ADT:

S.R. 77	-----	3,924 (1999 ADT)
S.R. 368	-----	2,300 (1999 ADT)
C.R. 242	-----	550 (1999 ADT)

Existing Typical: SR 77: 3 – 11 ft. travel lanes, one through lane in each direction and left turn lanes for both North and South bound with a 6 ft. shoulder at the intersection on the West side. S.R. 368: 2 – 11 ft. travel lanes, one in each direction, with 3 – 5 ft. grassed shoulders. CR 507: 2 – 11 ft. travel lanes, one in each direction, with 3 – 5 ft. grassed shoulders

Existing Right of Way: S.R. 77 ----- 100' (Estimated)
 S.R. 368 ----- 100' (Estimated)
 C.R. 242 ----- 80' (Estimated)

Existing Traffic Control: Dual intersection signs with flashing yellow beacons and advisory speed plates of 45 mph are located on both approaches of S.R. 77 approximately 700 feet from the intersection of S.R. 368 and C.R. 242. S.R. 368 and C.R. 242 are both controlled with double stop signs and stop bars at the intersection of S.R. 77. Also, three sets of painted rumble strips are used on both routes in advance of the intersection with S.R. 77.

Existing Major Structures: None.

Statement of Need & Purpose: Accident history for this intersection shows 18 accidents at this location over a three-year period ('96 - '98) with seven being angle intersecting & one rear end. The current 40' offset of State Route 368 and County Road 242 provides for unsafe vehicular movements when crossing State Route 77. The realignment of County Road 242 and State Route 368 and the lowering of the vertical curve on State Route 77 will enhance the operational efficiency of this intersection. To improve the safety and orderly progression of traffic through the intersection, these improvements are recommended.

Bicycle & Pedestrian Considerations: None.

Length: 1.5 miles

<u>Termini:</u>	S.R. 77	S.R. 368	C.R. 242
From M.P.	11.00	0.00	0.00
To M.P.:	11.68	0.30	0.33

PDP Class: Minor Existing

Functional Class: S.R. 77 ----- Rural Minor Arterial
S.R. 368 ----- Rural Minor Arterial
C.R. 242 ----- Rural Local

Max Degree of Curve: +/- 6.0 Degrees

Max Grades: +/- 6.0 %

Design Speed: S.R. 77 -----55 mph
S.R. 368 -----55 mph
C.R. 242 -----50 mph

Proposed Typical Section: S.R. 368: 2 - 12 ft. travel lanes, one in each direction, constructed on a new alignment.
C.R. 242: 2 - 12 ft. travel lanes, one in each direction, constructed on a new alignment.
S.R. 77 3-12 ft. travel lanes and 1-12 ft. turn lane at the intersection with C.R. 242 and at the intersection with S.R. 368.

Proposed major structures: None.

Type Access: By Permit.

Traffic Control During Construction: Existing operation shall be maintained during construction.

Right-of-Way Requirement: The Georgia Department of Transportation shall be responsible for the acquisition of all Required Right of Way for this project.

Utilities: The Georgia Department of Transportation shall be responsible for all Utility adjustments.

Estimated Cost:

<u>Item</u>	<u>Total Amount</u>	
Right-of-way	\$ 0	(By GDOT)
Utilities	\$ 0	(By GDOT)
Estimated LGPA Total	\$0	
Construction	\$ 476,688	
Traffic Signal	\$ 0	
Railroad Equipment	\$ 0	
E & C 10 %	<u>\$ 145,390</u>	
Total Construction	\$ 622,078	

Permits Required: None.

Level of Environmental Analysis: Categorical Exclusion.

Level of Public Involvement: None.

Time Saving Procedures Appropriate: Yes (X) No ()

Design Variances Required: None.

Alternates Considered: The first alternate considered was re-aligning S.R. 368 with C.R. 242 in order to remove the offset between the intersections and align perpendicular, while lowering the vertical curve on S.R. 77 South of the intersection. The second alternate considered was to add flashing yellow beacon lights so that left turning vehicles on S.R. 368 & C.R. 242 would be warned when an approaching vehicle was coming over the vertical curve to the South of the intersection. The second alternate also considered lowering the vertical curve to the South of the intersection.

Comments: A bridge replacement project (BRSLB-2889(1)01) for the C.R. 242 bridge over Beaver Creek is set to be let to construction on June 22, 2001. It is anticipated that no changes would be made to the existing alignment for C.R. 242. This project qualifies for Safety Funds with the operational improvements that are proposed.

Attachments: None

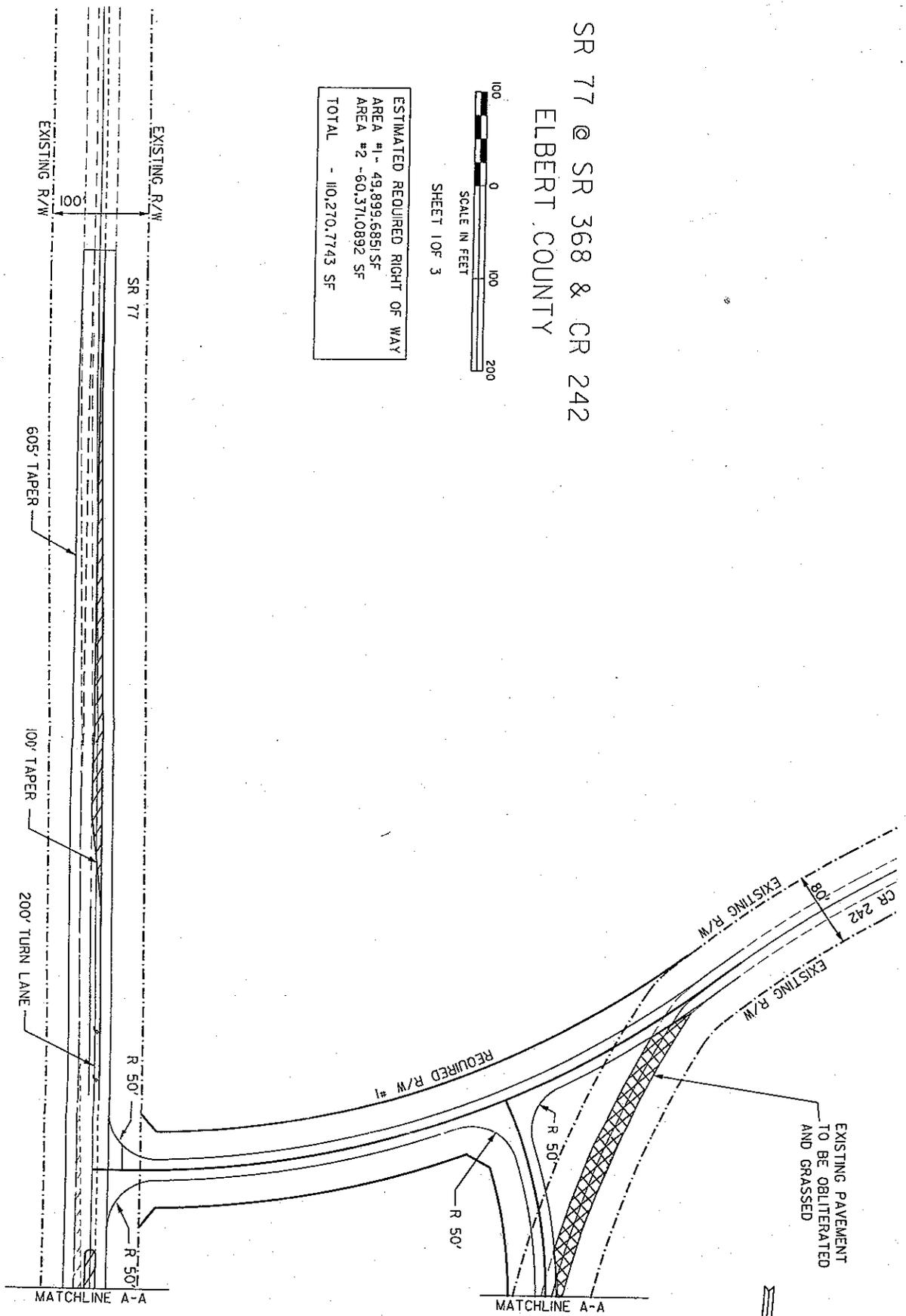
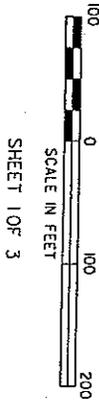
Prepared by Gresham, Smith and Partners on behalf of the Office of Traffic Operations of the Georgia Department of Transportation.

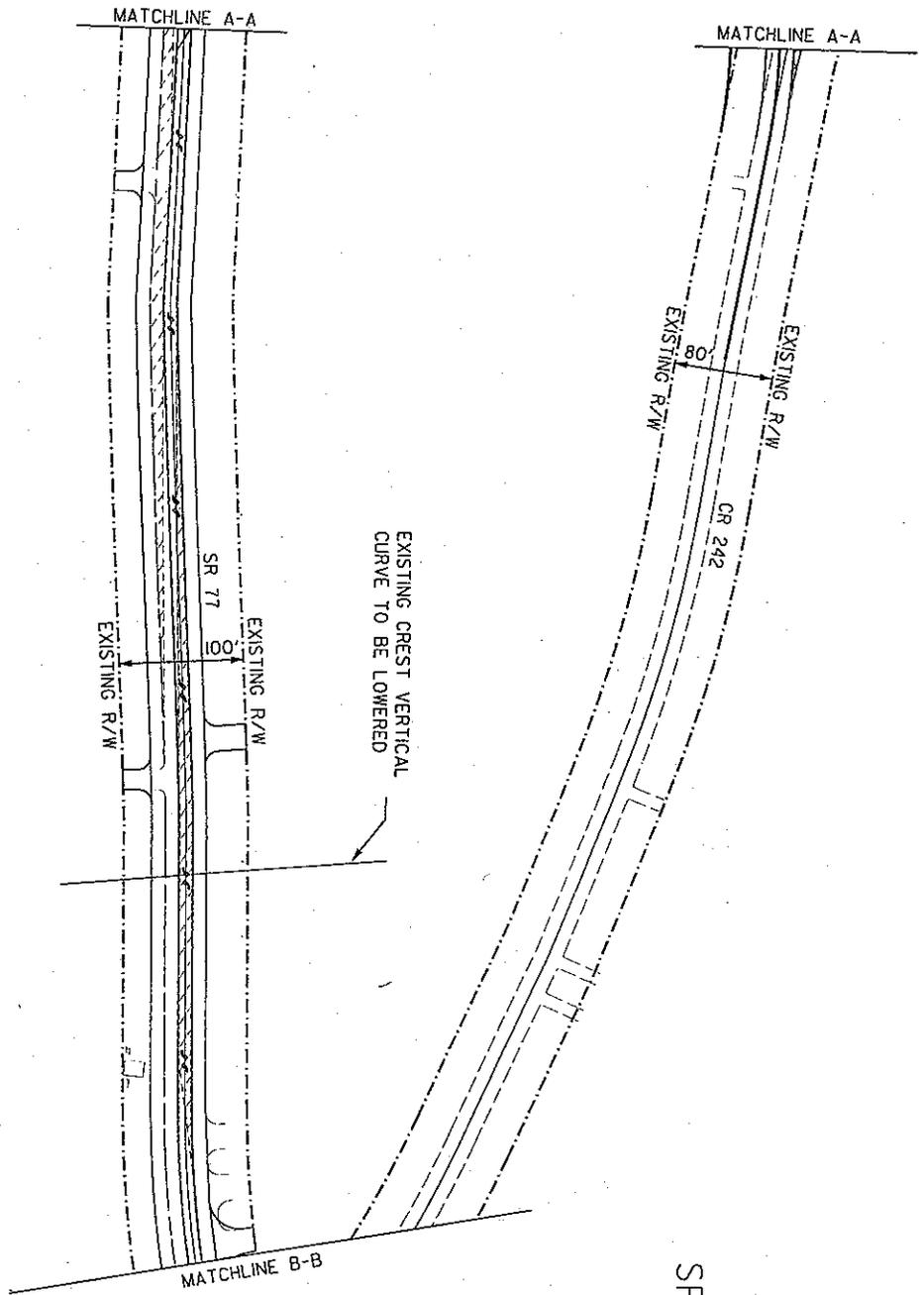


Michael R. Holt, P.E.

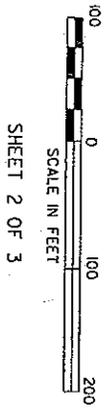
SR 77 @ SR 368 & CR 242
 ELBERT COUNTY

ESTIMATED REQUIRED RIGHT OF WAY	
AREA #1 -	49,899.6851 SF
AREA #2 -	60,371.0892 SF
TOTAL	- 110,270.7743 SF

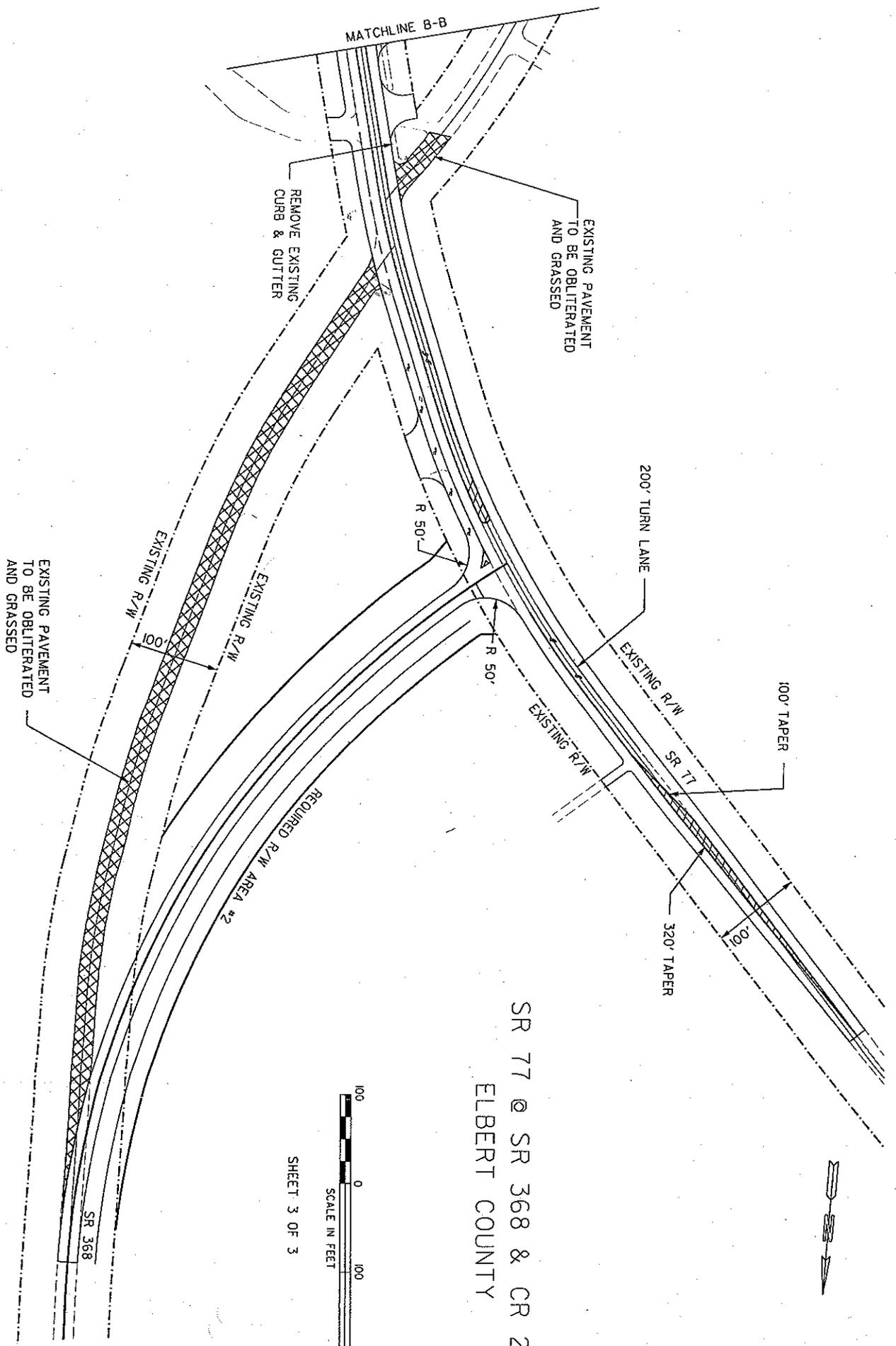




SR 77 @ SR 368 & CR 242
 ELBERT COUNTY



SHEET 2 OF 3



SR 77 @ SR 368 & CR 242
ELBERT COUNTY



SHEET 3 OF 3



**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE SR 77 @ SR 368/CR 242 **OFFICE** Gainesville
DATE February 5, 2001

FROM Joseph M. Garland, District Traffic Engineer

TO Marion Waters III, P.E., State Traffic Engineer
ATTN: Joseph Fletcher

SUBJECT **Intersection Evaluation**
State Route 77 @ State Route 368/County Road 242
Mile Log 11.62, Elbert County

Attached is the information you requested on the intersection of State Route 77 at State Route 368/CR 242 in Elbert County. A summary of the information follows.

INFORMATION

Topography:

State Route 77 is a rural arterial route that consists of two through lanes northbound and one lane southbound. The passing lane extends to the north of the intersection approximately 800 feet.

State Route 368 accesses State Route 77 from the east crossing on an acute angle to CR 242/Brewers Bridge Road which also accesses at a matching acute angle. State Route 368 is a direct route to Iva, South Carolina and also serves as an access to Richard B. Russell State Park, and numerous homes. CR 242/Brewers Bridge is a cut-through from State Route 17 to avoid the City of Elberton.

Existing Traffic Control:

State Route 77 is controlled by an advance-flashing beacon with advisory speed plates (45 MPH) located on each side of the said intersection. General guide signs control this corridor at the location.

State Route 368/CR 242 are controlled by a stop condition with rumble strips in advance of the intersection on both approaches. The stop signs are double indicated on State Route 368 and CR 242/Brewers Bridge.

Vehicular Volumes:

The AADT on State Route 77 at State Route 368/CR 242 is 3924.

State Route 368 has an AADT of 1908, and no counts were available on CR 242/Brewers Bridge.

Vehicular Speeds:

The posted speed limit on State Route 77 is 55 MPH. The existing vehicle speed is well above the legal operating speed.

The posted speed limit on State Route 368 is 55 MPH. The speed limit on CR 242/Brewers is 50 MPH. The both approaches are a stop condition, and there was no observed speeding.

Delay:

The only observed delay was on State Route 368 during the AM Afternoon, and PM peak hours. It revealed vehicles on the State Route 368 experienced 1 to 2 minutes of delay. Typically three to five vehicles queued on State Route 368.

Accident History:

A Collision diagram is attached that shows 5 accidents were reported at the intersection. Of the 5 accidents only 1 was an angle intersecting accident that is considered correctable by a traffic signal. A collision diagram showing the last 12 months of traffic wrecks at this location is included. (See Appendix)

Warrant Analysis:

There were no warrants met at this time. The warrant analysis was run using peak hour counts.

Conclusions:

Due to the information offered above signalization is not warranted at this time. We conclude that the passing lane be striped out into a left-turn lanes for both approaches of State Route 77. This would help with stopping sight distance by making traffic on State Route 77 merge to one lane of traffic and slow down traffic speeding to make the passing movement. There will be plenty of passing chances between Elberton and this location; approximately two miles of passing lane will be left in place.

Recommendations:

It is recommended that the passing lane be striped out to a left-turn lane in both directions of State Route 77. Also, the warning signs need to be upgraded to high-intensity sheeting and diamond grade sheeting on all red series signs on State Route 77, 368, and CR 242. We also recommend refurbishing the rumble-strips on State Route 368 and CR 242/Brewers Bridge. We request a safety project be implemented to lower the vertical curve to the south of the intersection and better align the intersections of SR 368 and CR 242.

DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC AND SAFETY
ACCIDENTS LISTING

DATE	TIME	COU	TP	RD	N	MILE	F	I-V	I-C	TP	I	RD	TYPE	ACCIDENT	D1	D2	VEHICLE MANEUVER	VEHICLE MANEUVER
02/28/96	13:00	105	SR	77	11.48	0	00	00	00	SR	368	SIDESWIPE SAME DIR	N	N	N	STRAIGHT	CHANGING LANES	
07/10/96	14:23	105	SR	77	11.48	0	00	00	00	SR	368	SIDESWIPE OPP DIR	E	N	N	STRAIGHT	STRAIGHT	
01/10/96	18:13	105	SR	77	11.48	0	00	00	00	SR	368	SIDESWIPE OPP DIR	N	S	N	STRAIGHT	TURNING LEFT	
02/06/96	12:25	105	SR	77	11.48	0	00	00	00	SR	368	ANGLE INTERSECTING	S	W	W	STRAIGHT	STRAIGHT	
01/28/96	11:55	105	SR	77	11.48	0	00	00	00	SR	368	HEAD ON	N	W	W	TURNING RIGHT	STOPPED	
12/10/96	13:00	105	SR	77	11.48	0	00	00	00	SR	368	REAR END	W	W	W	STOPPED	BACKING	
01/27/96	19:54	105	SR	77	11.48	0	00	01	00	SR	368	ANGLE INTERSECTING	E	N	N	STRAIGHT	STRAIGHT	
05/11/96	20:14	105	SR	77	11.48	0	00	00	00	SR	368	ANGLE INTERSECTING	N	W	W	STRAIGHT	TURNING LEFT	
03/14/96	17:30	105	SR	77	11.48	0	00	00	00	SR	368	STRUCK OBJECT	E	0	0	STRAIGHT	STRAIGHT	

REPORT TOTALS..... ACCIDENTS: 9 FATALITIES: 0 INJ-VISIBLE: 0 INJ-COMP: 1

PAGE TOTALS..... ACCIDENTS: 9 FATALITIES: 0 INJ-VISIBLE: 0 INJ-COMP: 1

DEPARTMENT OF TRANSPORTATION
 OFFICE OF TRAFFIC AND SAFETY
 ACCIDENTS LISTING

DATE	TIME	COU	TP	RD	N	MILE	F	I-V	I-C	TP	I	RD	TYPE	ACCIDENT	D1	D2	VEHICLE	MANEUVER
11/14/97	15:45	105	SR	77	11.48	0	00	00	SR	368	STRUCK	OBJECT	S	0	TURNING	LEFT		
10/12/97	4:25	105	SR	77	11.48	0	00	00	SR	368	STRUCK	OBJECT	N	0	STRAIGHT			
11/01/97	19:26	105	SR	77	11.48	0	00	00	SR	368	ANGLE	INTERSECTING	E	N	TURNING	LEFT	STRAIGHT	
06/11/97	5:41	105	SR	77	11.48	0	00	00	SR	368	ANGLE	INTERSECTING	N	E	STRAIGHT		CHANGING	LANES
07/08/97	10:54	105	SR	77	11.48	0	00	00	SR	368	STRUCK	OBJECT	W	0	TURNING	LEFT		

REPORT TOTALS..... ACCIDENTS: 5 FATALITIES: 0 INJ-VISIBLE: 0 INJ-COMP: 0

PAGE TOTALS..... ACCIDENTS: 5 FATALITIES: 0 INJ-VISIBLE: 0 INJ-COMP: 0

DEPARTMENT TRANSPORTATION
OFFICE OF T. FIC AND SAFETY
ACCIDENTS LISTING

DATE	TIME	COU	TP	RD	N	MILE	F	I-V	I-C	TP	I	RD	TYPE	ACCIDENT	D1	D2	VEHICLE	MANEUVER	VEHICLE	MANEUVER
04/28/98	5:02	105	SR	77	11.48	0	00	02	SR	368	SR	368	ANGLE INTERSECTING	W	N	0	TURNING LEFT	STRAIGHT	STRAIGHT	
04/01/98	1:30	105	SR	77	11.48	0	00	00	SR	368	SR	368	STRUCK OBJECT	W	0	0	STRAIGHT	STRAIGHT	STRAIGHT	
07/26/98	18:30	105	SR	77	11.48	0	00	00	SR	368	SR	368	ANGLE INTERSECTING	W	S	0	TURNING LEFT	STRAIGHT	STRAIGHT	
04/15/98	15:03	105	SR	77	11.48	0	00	00	SR	368	SR	368	SIDESWIPE SAME DIR	S	S	0	TURNING LEFT	PASSING	PASSING	

REPORT TOTALS..... ACCIDENTS: 4 FATALITIES: 0 INJ-VISIBLE: 0 INJ-COMP: 2
PAGE TOTALS..... ACCIDENTS: 4 FATALITIES: 0 INJ-VISIBLE: 0 INJ-COMP: 2