

ORIGINAL TO GENERAL FILES

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

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## OFFICE OF DESIGN POLICY & SUPPORT INTERDEPARTMENTAL CORRESPONDENCE

**FILE** P.I. #0008627 **OFFICE** Design Policy & Support  
CSSFT-0008-00(627)  
GDOT District 1 - Gainesville  
Hall County **DATE** May 23, 2012  
CR 1300/Union Church Road @Mulberry River  
Tribe – HRRR

**FROM**  for Brent Story, State Design Policy Engineer

**TO** SEE DISTRIBUTION

**SUBJECT** APPROVED CONCEPT REPORT

Attached is the approved Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Genetha Rice-Singleton, Program Control Administrator  
Bobby Hilliard, State Program Delivery Engineer  
Cindy VanDyke, State Transportation Planning Administrator  
Angela Robinson, Financial Management Administrator  
Glenn Bowman, State Environmental Administrator  
Ben Rabun, State Bridge Engineer  
Andy Casey, State Roadway Design Engineer  
Attn: Miller Fletcher, Design Group Manager  
Kathy Zahul, State Traffic Engineer  
Georgene Geary, State Materials & Research Engineer  
Lisa Myers, State Project Review Engineer  
Jeff Baker, State Utilities Engineer  
Ken Thompson, Statewide Location Bureau Chief  
Bayne Smith, District Engineer  
Robert Mahoney, District Preconstruction Engineer  
Charles Robinson, Project Manager  
BOARD MEMBER - 9th Congressional District

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
PROJECT CONCEPT REPORT**

Project Number: CSSFT-0008-00(627)  
County: Hall  
P. I. Number: 0008627  
Federal Route Number: None  
State Route Number: None  
County Route Number: 1300

CR 1300/Union Church Road at Mulberry Creek – HRRR

Submitted for approval:

DATE 12-5-11

C. Andy Conroy  
State Roadway Design Engineer

DATE 1/10/2012

Bobby Stalward  
State Program/Delivery Engineer

DATE 1/10/12

Cherie Affen  
Project Manager

Recommendation for approval:

DATE \_\_\_\_\_

Program Control Administrator  
Glenn Bowman \*

DATE 2-3-2012

State Environmental Administrator  
Kathy Zahul \*

DATE 1-31-2012

State Traffic Engineer  
Lisa Myers \*

DATE 1-27-2012

Project Review Engineer  
Allen Patrick \*

DATE 1-26-2012

for State Utilities Engineer

DATE \_\_\_\_\_

District Engineer/District Utilities Engineer  
Ben Rabun \*

DATE 2-13-2012

State Bridge Design Engineer

DATE \_\_\_\_\_

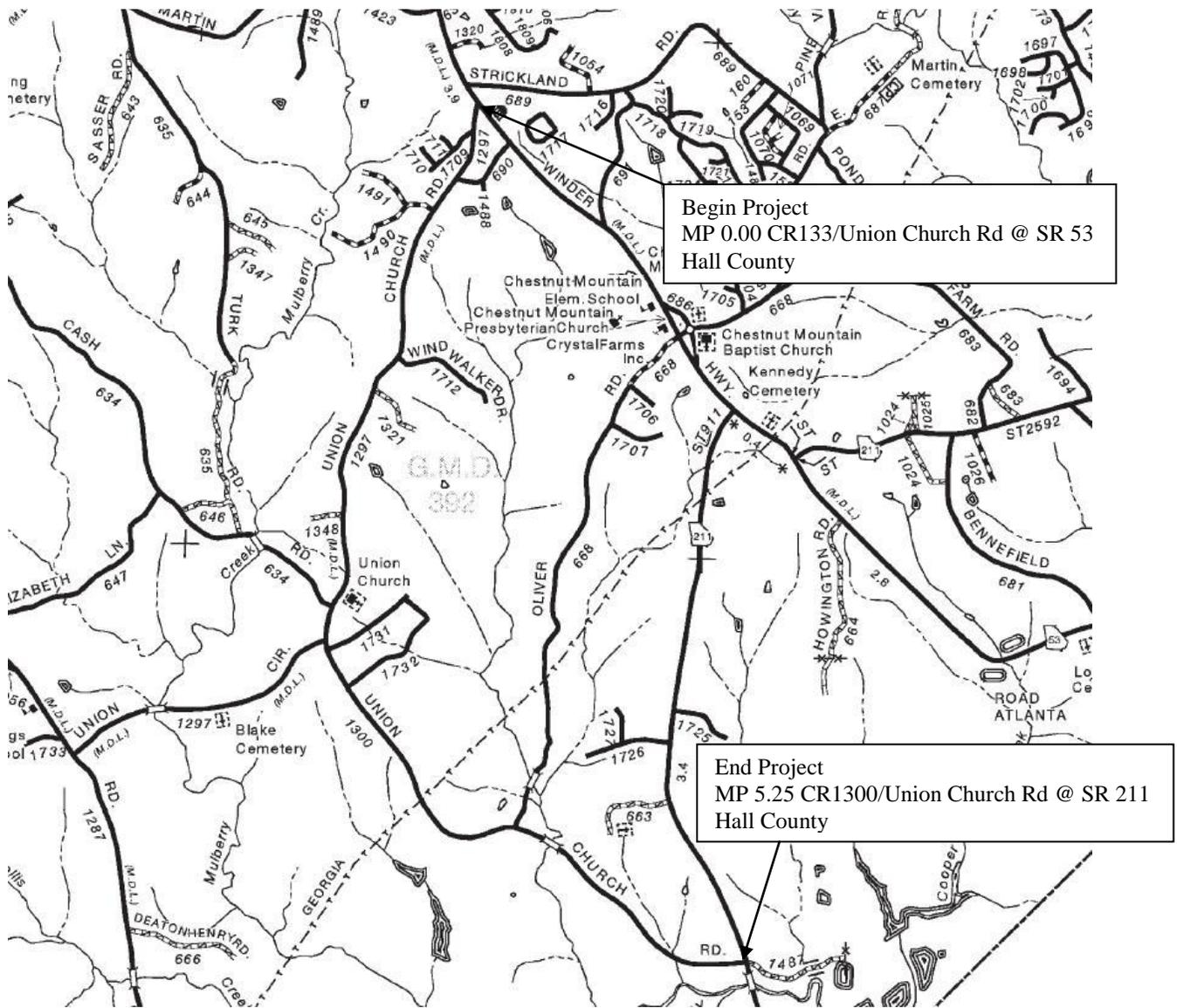
State Transportation Financial Management Administrator

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and/or the State Transportation Improvement Program (STIP).

Cindy Van Dyke \*  
State Transportation Planning Administrator

2-16-2012  
DATE

\* Recommendation on file



Location Map  
CSSFT-0008-00(627) Hall County P.I. No. 0008627  
CR 1300/Union Church Road at Mulberry Creek – HRRR

**Need and Purpose:**

The proposed project will reduce crash frequency and severity along CR 1300/Union Church Road, a rural county road in Hall County, Georgia. In Georgia, nearly 20% of all crashes and more than half of fatalities occur on roads classified as rural major and minor collectors or local roads. Nationally crashes on these route types account for nearly two-thirds of all roadway fatalities. These roadways are often low volume, high speed facilities designed and built prior to the advent of many of the safety features that are standard in today’s roadway design and construction.

The High Risk Rural Roads Program (HRRRP) is a federally funded program with established criteria stating that an eligible roadway must be classified as a rural major or minor collector or a rural local road, have a crash rate for fatalities and incapacitating injuries that exceeds the statewide average for similarly classified routes; or that will likely have increases in traffic volume that are likely to create a crash rate for fatalities and incapacitating injuries that exceeds the statewide average for those functional classes of roadway.

Three years (2005 - 2007) of crash data were analyzed for this route to determine the eligibility of the route for HRRR funding. The analysis resulted in six fatal and injury crashes along CR 1300/Union Church Road. The combination of the fatal and injury crash frequency combined with the ADT for the route resulted in crash rates of 829 crashes per 100 Million Vehicle Miles Traveled (100 MVMT). The statewide crash rate for rural minor collectors is 105 crashes/ 100 MVMT.

Hall County								
Route	Functional Class	1- Killed	2-Serious	3- Visible	4- Complaint	Crash Rate	AVMT	SW Crash Rate
CR 1300	08-Rural NFA Minor Collector-Local	1	0	3	2	829.64	1,570,000	105.35

**Description of proposed project:**

The proposed project begins just south of Hall County's CR 1300 MP 0.0 and extends to just north of MP 5.25, for a net length of 2.46 miles. Construction on CR 1300 will consist of four separate segments. The first segment will begin at MP 1.04 and end at MP 1.38. The second segment will begin at MP 1.90 and end at MP 2.09. The third segment will begin at MP 2.44 and end at MP 2.77. The final segment will begin at MP 3.19 and end at MP 4.79. CR 1300 is classified as a major collector, due to its proximity and role in enabling vehicles to access SR 53 and SR 211. This project proposes to widen the shoulders as well as provide front slopes of 4:1 or flatter in the areas that are deemed geometrically sub-standard where crash frequency has occurred. Roadway curvature will be realigned and superelevation will be corrected to meet design speed. Edge line rumble strips will be added as a countermeasure for reducing roadway departure crashes. Finally, at Mulberry Creek, the triple box culvert will be extended with the addition of guardrail.

**Is the project located in a PM 2.5 Non-attainment area?**  Yes  No

**Is this project located in an Ozone Non-Attainment area?**  Yes  No

*This is a safety project that does not add capacity to the existing facility.*

**PDP Classification:** Major  Minor

**Federal Oversight:** Full Oversight ( ) Exempt ( X ) State Funded ( ) or Other ( )

**Functional Classification:** Rural Minor Collector

**U.S. Route Number(s):** N/A **State Route Number(s):** N/A

**Traffic (AADT):**

**Open Year:** 2425 (2015)

**Design Year:** 3600 (2035)

**Existing design features:**

- Typical Section: Two 12 ft. travel lanes with 2 ft. shoulders
- Posted speed: 45 mph Minimum radius for curve: 532 ft.
- Maximum super-elevation rate for curve: 6%
- Maximum grade: 10%
- Width of right of way: 60 - 80ft.
- Major structures: Triple 10' X 8' Bridge Culvert at Mulberry Creek
- Major interchanges or intersections along the project: None
- Existing length of roadway segment is 5.25 miles.

**Proposed Design Features:**

- Proposed typical section: Two 12 ft. travel lanes with 8 ft. shoulders (4 ft. paved and 4 ft. grassed)
- Proposed Design Speed Mainline: 45 mph
- Proposed Maximum grade Mainline: 10%
- Maximum grade allowable: 8% (Rolling) / 10% (Mountainous)
- Proposed Maximum grade Side Street: N/A
- Maximum grade allowable: 8%
- Proposed Maximum grade driveway: 11 %
- Proposed Minimum radius for curve: 643 ft.
- Proposed Maximum super-elevation rate for curve: 6%
- Right of way
  - Width: 80 ft.
  - Easements: Temporary ( ), Permanent ( X ), Utility ( X ), Other ( ).
  - Type of access control: Full ( ), Partial ( ), By Permit ( X ), Other ( ).
  - Number of parcels: 85 Number of displacements: 0
    - Business: 0
    - Residences: 0
    - Mobile homes: 0
    - Other: 0
- Structures:
  - The triple box culvert located at Mulberry Creek will be extended to provide for the shoulder widening and guardrail placement.
- Traffic control during construction: No detours are anticipated.
- Design Exceptions to controlling criteria anticipated:

	<u>YES</u>	<u>NO</u>	<u>UNDETERMINED</u>
1 DESIGN SPEED:	( )	(X)	( )
2 LANE WIDTH:	( )	(X)	( )
3 SHOULDER WIDTH:	( )	(X)	( )
4 BRIDGE WIDTH:	( )	(X)	( )
5 HORIZONTAL WIDTH:	( )	(X)	( )
6 SUPERELEVATION:	( )	(X)	( )
7 VERTICAL ALIGNMENT:	( )	(X)	( )
8 GRADE:	( )	(X)	( )
9 STOPPING SIGHT DISTANCE:	( )	(X)	( )
10 CROSS SLOPE:	( )	(X)	( )
11 VERTICAL CLEARANCE:	( )	(X)	( )
12 LATERAL OFFSET OBSTRUCTION:	( )	(X)	( )
13 BRIDGE STRUCTURAL CAPACITY:	( )	(X)	( )

- No design variances are anticipated.

- Environmental concerns are as follows:
- Anticipated Level of environmental analysis:
  - Are Time Saving Procedures appropriate? Yes(X) No ( )
- Categorical exclusion anticipated: Yes(X) No ( )
- Utility involvements: TBD
- Public Interest Determination Policy and Procedure Required? Yes ( ) No (X)
- VE Study Anticipated Yes ( ) No (X)

**Project Cost Estimate and Funding Responsibilities:**

	PE	ROW	UTILITY	CST*	MITIGATION
By Whom	GDOT	LOCAL	LOCAL	GDOT	
\$ Amount	\$250,000	\$2,507,000	\$0	\$2,150,000	

\*CST Cost includes: Construction, Engineering and Inspection, and Asphalt Cement Cost Adjustment:

**Project Activities Responsibilities**

- Design: GDOT
- Right-of-Way: LOCAL
- Right-of-Way funding (real property): LOCAL
- Relocation of Utilities: LOCAL
- Letting to contract: GDOT
- Supervision of construction: GDOT
- Providing material pits: Contractor
- Providing detours: N/A
- Environmental studies/Documents/Permits: GDOT
- Environmental Mitigation: GDOT

**Coordination**

- Initial Concept Meeting – Not Required.
- Concept meeting date and brief summary. Held 11/07/11 – See attached minutes.
- P. A. R. meetings, dates and results. Not Required.
- FEMA, USCG, and/or TVA. Not Required.
- Public involvement. None.
- Local government comments. N/A.
- Other projects in the area:
  - The culvert at Mulberry Creek is currently being extended to the south of Union Church Road for the installation of a turn lane.
  - PI 0010848 – CR 1300/Union Church Road – Signing & Marking.
- Other coordination to date: Coordination with Rochester and Associates has been ongoing in regards to the culvert extension.

Project Concept Report Page 7  
Project Number: CSSFT-0008-00(627)  
P.I. Number: 0008627  
County: Hall

**Other alternates considered:** None.

**Comments:** None.

**Attachments:**

1. Cost Estimates:
  - a. Construction including Engineering and Inspection
  - b. Completed Asphalt Price Adjustment forms
  - c. Right-of-Way
  - d. Utilities
2. Typical Section
3. Traffic Diagrams
4. Highway Safety Manual Analysis
5. Concept Meeting Minutes

**Exempt project**

Concur:   
Director of Engineering

Approve:  Date: 5/21/2012  
Chief Engineer

**PROJ. NO.:** CSSFT-0008-00(627)

**P.I. NO.** 0008627

**DATE:** 4/24/2012

<b>Base Construction Cost</b>		\$	1,965,911
E & I	5%	\$	98,296
Construction Contingency		\$	-
<b>Subtotal Construction Cost</b>		\$	2,064,207
Liquid AC Adjustment (50 % cap)		\$	85,773
<b>Total Construction Cost</b>		\$	2,149,979

# DETAILED COST ESTIMATE



**Job: 0008627**

**JOB NUMBER:** 0008627

**FED/STATE PROJECT NUMBER** 0008627

**SPEC YEAR:** 01

**DESCRIPTION:** HALL COUNTY HIGH RISK RURAL ROAD

ITEMS FOR JOB 0008627

**0010 - ROADWAY**

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0045	150-1000	1.000	LS	\$100,000.00	TRAFFIC CONTROL - 5% TOTAL CONST	\$100,000.00
0095	205-0001	17412.000	CY	\$21.20	UNCLASS EXCAV	\$369,160.34
0100	206-0002	11143.000	CY	\$8.52	BORROW EXCAV, INCL MATL	\$94,984.27
0150	207-0203	39.000	CY	\$55.82	FOUND BK FILL MATL, TP II	\$2,176.84
0081	402-1812	231.000	TN	\$72.94	RECYL AC LEVELING, INC BM&HL	\$16,850.19
0085	402-3130	1804.000	TN	\$73.78	RECYL AC 12.5MM SP, GP2, BM&HL	\$133,095.76
0090	402-3190	2404.000	TN	\$72.50	RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL	\$174,298.97
0105	413-1000	1749.000	GL	\$2.16	BITUM TACK COAT	\$3,783.40
0065	500-3101	457.000	CY	\$622.96	CLASS A CONCRETE	\$284,693.20
0010	500-9999	3787.000	CY	\$156.32	CL B CONC, BASE OR PVMT WIDEN	\$591,974.71
0060	511-1000	7330.000	LB	\$1.02	BAR REINF STEEL	\$7,477.99
0030	634-1200	7.000	EA	\$112.56	RIGHT OF WAY MARKERS	\$787.92
0070	641-1200	2460.000	LF	\$15.73	GUARDRAIL, TP W	\$38,703.11
0075	641-5001	12.000	EA	\$699.69	GUARDRAIL ANCHORAGE, TP 1	\$8,396.25
0080	641-5012	12.000	EA	\$1,865.17	GUARDRAIL ANCHORAGE, TP 12	\$22,382.01
<b>SUBTOTAL FOR ROADWAY:</b>						<b>\$1,848,764.96</b>

**0030 - EROSION CONTROL**

Line Number	ITEM	QUANTITY	UNITS	PRICE	DESCRIPTION	AMOUNT
0110	163-0232	7.000	AC	\$593.90	TEMPORARY GRASSING	\$4,157.28
0115	163-0240	191.000	TN	\$257.77	MULCH	\$49,234.20
0120	165-0030	9822.000	LF	\$1.18	MAINT OF TEMP SILT FENCE, TP C	\$11,580.24
0125	171-0030	9822.000	LF	\$3.44	TEMPORARY SILT FENCE, TYPE C	\$33,820.09
0130	700-6910	14.000	AC	\$575.71	PERMANENT GRASSING	\$8,059.88
0135	700-7000	61.000	TN	\$60.47	AGRICULTURAL LIME	\$3,688.56
0140	700-8000	12.000	TN	\$355.30	FERTILIZER MIXED GRADE	\$4,263.54
0145	700-8100	1010.000	LB	\$2.32	FERTILIZER NITROGEN CONTENT	\$2,342.19
<b>SUBTOTAL FOR EROSION CONTROL:</b>						<b>\$117,145.98</b>

**TOTALS FOR JOB 0008627**

<b>ITEMS COST:</b>	<b>\$1,965,910.94</b>
<b>COST GROUP COST:</b>	<b>\$0.00</b>
<b>ESTIMATED COST:</b>	<b>\$1,965,910.94</b>
<b>CONTINGENCY PERCENT:</b>	<b>0.00</b>
<b>ENGINEERING AND INSPECTION:</b>	<b>0.00</b>
<b>ESTIMATED COST WITH CONTINGENCY AND E&amp;I:</b>	<b>\$1,965,910.94</b>

<b>PROJ. NO.</b>	CSSFT-0008-00(627)
<b>P.I. NO.</b>	0008627
<b>DATE</b>	4/24/2012

CALL NO.

<b>INDEX (TYPE)</b>	<b>DATE</b>	<b>INDEX</b>
REG. UNLEADED	Apr-12	
DIESEL		
LIQUID AC		\$ 623.00

Link to Fuel and AC Index:  
<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

**LIQUID AC ADJUSTMENTS**

**PA=(((APM-APL)/APL)]xTMTxAPL**

**Asphalt**

Price Adjustment (PA)				<b>82964.91</b>	\$	<b>82,964.91</b>
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	996.80		
Monthly Asphalt Cement Price month project let (APL)			\$	623.00		
<b>Total Monthly Tonnage of asphalt cement (TMT)</b>				<b>221.95</b>		

<b>ASPHALT</b>	<b>Tons</b>	<b>%AC</b>	<b>AC ton</b>
Leveling	231	5.0%	11.55
12.5 OGFC		5.0%	0
12.5 mm	1804	5.0%	90.2
9.5 mm SP		5.0%	0
25 mm SP		5.0%	0
19 mm SP	2404	5.0%	120.2
	<b>4439</b>		<b>221.95</b>

**BITUMINOUS TACK COAT**

Price Adjustment (PA)				\$	<b>2,808.03</b>	\$	<b>2,808.03</b>
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	\$	996.80			
Monthly Asphalt Cement Price month project let (APL)			\$	623.00			
<b>Total Monthly Tonnage of asphalt cement (TMT)</b>							<b>7.512131513</b>

Bitum Tack

<b>Gals</b>	<b>gals/ton</b>	<b>tons</b>
1749	232.8234	7.51213151

PROJ. NO.

CSSFT-0008-00(627)

CALL NO.

P.I. NO.

0008627

DATE

4/24/2012

**BITUMINOUS TACK COAT (surface treatment)**

Price Adjustment (PA)						<b>0</b>	<b>\$</b>	<b>-</b>
Monthly Asphalt Cement Price month placed (APM)		Max. Cap	60%	\$	996.80			
Monthly Asphalt Cement Price month project let (APL)				\$	623.00			
Total Monthly Tonnage of asphalt cement (TMT)					0			

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf.Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

<b>TOTAL LIQUID AC ADJUSTMENT</b>	<b>\$</b>	<b>85,772.94</b>
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**GEORGIA DEPARTMENT OF TRANSPORTATION  
PRELIMINARY ROW COST ESTIMATE SUMMARY**

Date: 10/25/2011 Project: C5SFT-0008-00(627)  
 Revised: 4/19/2012 County: Hall  
 PI: 0008627

Description: CR 1300 Union Church Road Mulberry Creek  
 Project Termini: CR 1300 Union Church Road Mulberry Creek

Existing ROW: Varies  
 Required ROW: Varies  
 Parcels: 85

**Land and Improvements** \$951,543.75

Proximity Damage	\$0.00
Consequential Damage	\$0.00
Cost to Cures	\$0.00
Trade Fixtures	\$0.00
Improvements	\$90,000.00

Valuation Services \$125,000.00

Legal Services \$544,875.00

Relocation \$170,000.00

Demolition \$0.00

Administrative \$715,000.00

**TOTAL ESTIMATED COSTS** \$2,506,418.75

**TOTAL ESTIMATED COSTS (ROUNDED)** \$2,507,000.00

Preparation Credits	Hours	Signature

Prepared By: Lashone Alexander CG#: 286999 05/02/2012  
 Approved By: Lashone Alexander CG#: 286999 05/02/2012

**NOTE: No Market Appreciation is included in this Preliminary Cost Estimate**

Georgia Department of Transportation  
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSFT-0008-00(627) Hall

0008627

	A	B	C	D
<b>Land and Improvements</b>	<b>Agriculture</b>	<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>
1 Estimate Low (ac)	\$0.00	\$0.00	\$0.00	\$0.00
2 Estimate High (ac)	\$0.00	\$0.00	\$0.00	\$0.00
3 Estimate Used (ac)		\$25,000.00	\$175,000.00	\$0.00
4 Fee Simple Area (ac)	0.00	0.49	0.10	0.00
5 Fee Simple Estimate	\$0.00	\$12,200.00	\$17,500.00	\$0.00
6 Perm Esmt Area (ac)	0.00	12.34	4.12	0.00
7 Perm Esmt Factor	0%	50%	50%	0%
8 Perm Esmt Estimate	\$0.00	\$154,250.00	\$360,412.50	\$0.00
9 Temp Esmt Area (ac)	0.00	0.00	0.00	0.00
10 Temp Esmt Factor	0%	0%	0%	0%
11 Temp Esmt Estimate	\$0.00	\$0.00	\$0.00	\$0.00
12 Proximity Damages	\$0.00	\$0.00	\$0.00	\$0.00
13 Consequential Damages	\$0.00	\$0.00	\$0.00	\$0.00
14 Cost to Cures	\$0.00	\$0.00	\$0.00	\$0.00
15 Improvements	\$0.00	\$45,000.00	\$45,000.00	\$0.00
16 Trade Fixtures	\$0.00	\$0.00	\$0.00	\$0.00
17				
18 PROPERTY TYPE TOTALS	\$0.00	\$211,450.00	\$422,912.50	\$0.00
19	SUB TOTAL PROPERTY TYPES			\$634,362.50
20	Counter Offers and Condemnation Increases			\$317,181.25
21				
22	<b>GRAND TOTAL LANDS AND IMPROVEMENTS</b>			<b>\$951,543.75</b>

Georgia Department of Transportation  
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSFT-0008-00(627) Hall

0008627

	A	B	C	D
<b>Valuation Services</b>	<b>Agriculture</b>	<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>
1 Appraisals (# of Parcels)	0	70	15	0
2 Estimated Fees (per Parcel)	\$0.00	\$1,000.00	\$2,000.00	\$0.00
3 TOTAL APPRAISALS	\$0.00	\$70,000.00	\$30,000.00	\$0.00
4 Sign Estimates	0	0	0	0
5 Estimated Fees	\$0.00	\$0.00	\$0.00	\$0.00
6 TOTAL SIGN ESTIMATES	\$0.00	\$0.00	\$0.00	\$0.00
7 Specialty Reports	0	0	0	0
8 Estimated Fees	\$0.00	\$0.00	\$0.00	\$0.00
9 TOTAL SPECIALTY REPORTS	\$0.00	\$0.00	\$0.00	\$0.00
10 Septic/Well Reports	0	0	0	0
11 Estimated Fees	\$0.00	\$0.00	\$0.00	\$0.00
12 TOTAL SEPTIC/WELL REPORTS	\$0.00	\$0.00	\$0.00	\$0.00
13				
14				
15				
16 TOTAL VALUATION FEES	\$0.00	\$70,000.00	\$30,000.00	\$0.00
17	SUB TOTAL VALUATION SERVICES			\$100,000.00
18	Updates and Incidentals (Min \$2,500 or 25%)			\$25,000.00
19	<b>GRAND TOTAL VALUATION SERVICES</b>			<b>\$125,000.00</b>

Georgia Department of Transportation  
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSFT-0008-00(627) Hall

0008627

	A	B	C	D
	Parcels	Estimated Fees		TOTALS
1	Meeting with Attorney	85	\$125.00	\$10,625.00
2	Preliminary Titles	85	\$200.00	\$17,000.00
3	Closing and Final Title	85	\$300.00	\$25,500.00
4	Recording Fees	85	\$50.00	\$4,250.00
5	Condemnation Filing	13	\$5,000.00	\$65,000.00
6	Litigation Costs	13	\$25,000.00	\$325,000.00
7	Updates and Incidentals	13	\$7,500.00	\$97,500.00
8				
9				
10				
11				
12				
13				
14				
15				
16				
17	<b>GRAND TOTAL LEGAL SERVICES</b>			<b>\$544,875.00</b>

Georgia Department of Transportation  
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSFT-0008-00(627) Hall

0008627

	A	B	C	D
Relocation	Displacements	Estimated Costs		TOTALS
1 Business Displacement		\$15,000.00		\$0.00
2 Residential Tenant		\$20,000.00		\$0.00
3 Residential Owner		\$40,000.00		\$0.00
4 Pro-Rata Taxes	85	\$1,000.00		\$85,000.00
5 Property Pin Replacement	85	\$1,000.00		\$85,000.00
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17		<b>GRAND TOTAL RELOCATION</b>		<b>\$170,000.00</b>

Georgia Department of Transportation  
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSFT-0008-00(627) Hall

0008627

	A	B	C	D
	<b>Demolition</b>	Items/Improvements	Estimated Costs	TOTALS
1	Residential Structures		\$15,000.00	\$0.00
2	Commercial Structures		\$25,000.00	\$0.00
3	Hotels/Apartments		\$60,000.00	\$0.00
4	UST's - Dispensers		\$50,000.00	\$0.00
5	Billboards		\$8,000.00	\$0.00
6	Signs - Light Standards		\$1,500.00	\$0.00
7	Water Vaults		\$15,000.00	\$0.00
8	Gas/Water Service Separation		\$2,500.00	\$0.00
9				
10				
11				
12				
13				
14				
15				
16				
17	<b>GRAND TOTAL DEMOLITION</b>			<b>\$0.00</b>

Georgia Department of Transportation  
Preliminary ROW Cost Estimate Worksheet

Project/County/PI

CSSFT-0008-00(627) Hall

0008627

	A	B	C	D
	Parcels	Man hours per Parcel		TOTALS
1	Pre-Acquisition	85	40	\$170,000.00
2	Acquisition	85	100	\$425,000.00
3	Relocation		50	\$0.00
4	Administrative Appeals	22	50	\$55,000.00
5	Post-Acquisition	13	100	\$65,000.00
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17	<b>GRAND TOTAL INHOUSE</b>			<b>\$715,000.00</b>

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

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**INTERDEPARTMENT CORRESPONDENCE**

**FILE** CSSFT-0008-00(627) Hall Co. **OFFICE** Gainesville  
P.I. No. 0008627  
CR 1300 / Union Church Rd HRRR **DATE** January 10, 2012

**FROM** Jason Dykes   
Assistant District Utilities Engineer

**TO** Charles Robinson, Project Manager

**SUBJECT** PRELIMINARY UTILITY COST (ESTIMATE)

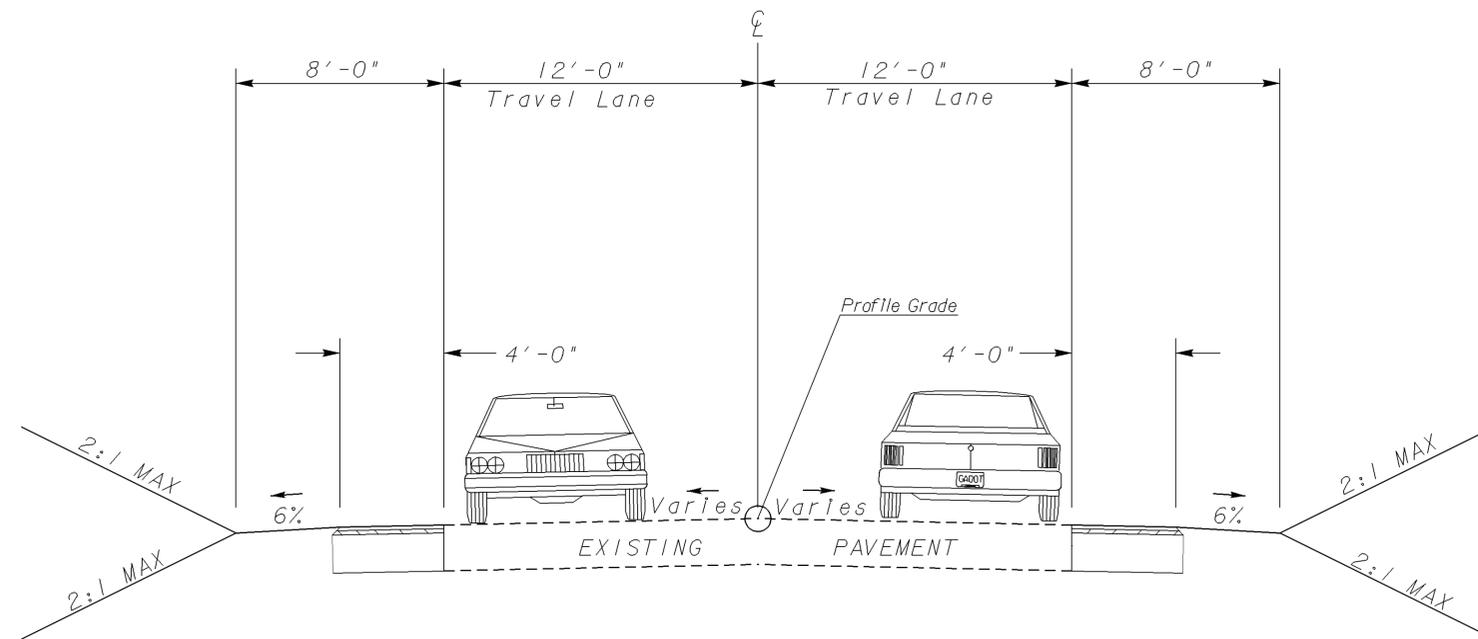
As requested by your office, we are furnishing you with a Preliminary Utility Cost estimate for the subject project.

<u>FACILITY OWNER</u>	<u>REIMBURSABLE</u>	<u>NONREIMBURSABLE</u>
ATLANTA GAS LIGHT	\$0.00	\$83,160.00
AT & T	\$0.00	\$108,504.00
CHARTER COMMUNICATIONS	\$0.00	\$122,760.00
CITY OF GAINESVILLE	\$0.00	\$572,880.00
JACKSON EMC	\$0.00	\$648,000.00
<b>Total</b>	<b>\$0.00</b>	<b>\$1,535,304.00</b>

If you have any questions, please contact Jason Dykes at 770-532-5510.

JAD

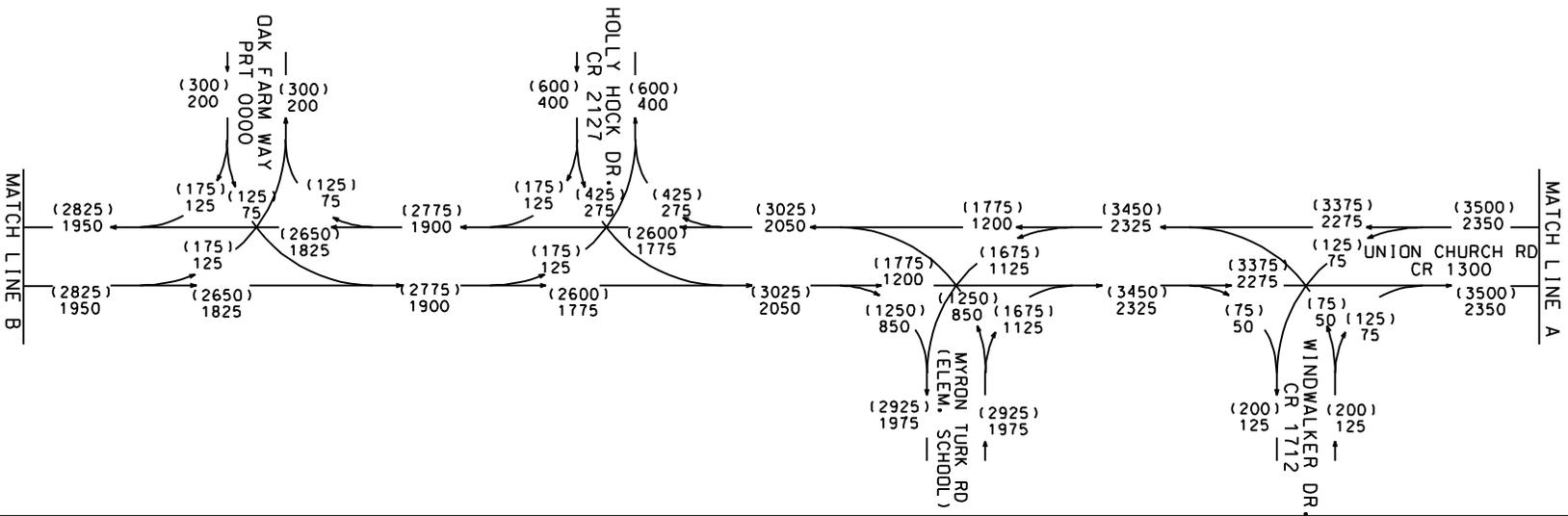
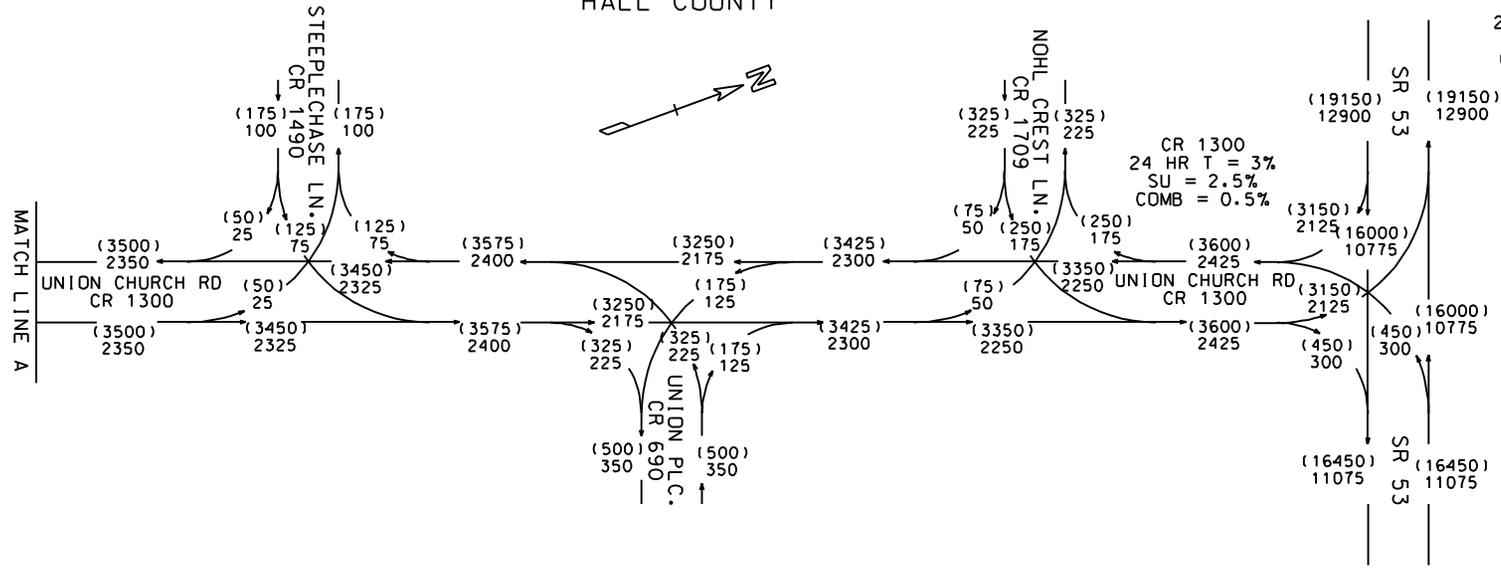
C: Jeff Baker, State Utilities Engineer - via email  
Angie Robinson, Office of Financial Management - via email  
Matt Needham, Area Engineer, - via email  
File



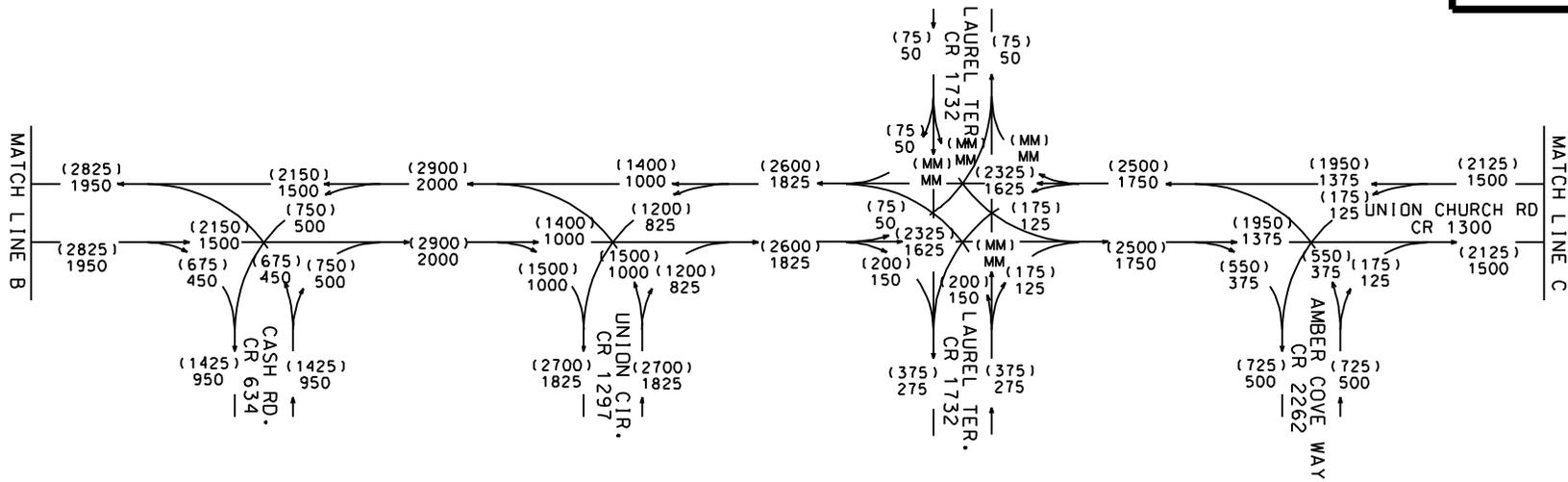
TYPICAL SECTION NO. 1  
 TANGENT SECTION  
 CR 1300/UNION CHURCH ROAD

HALL COUNTY

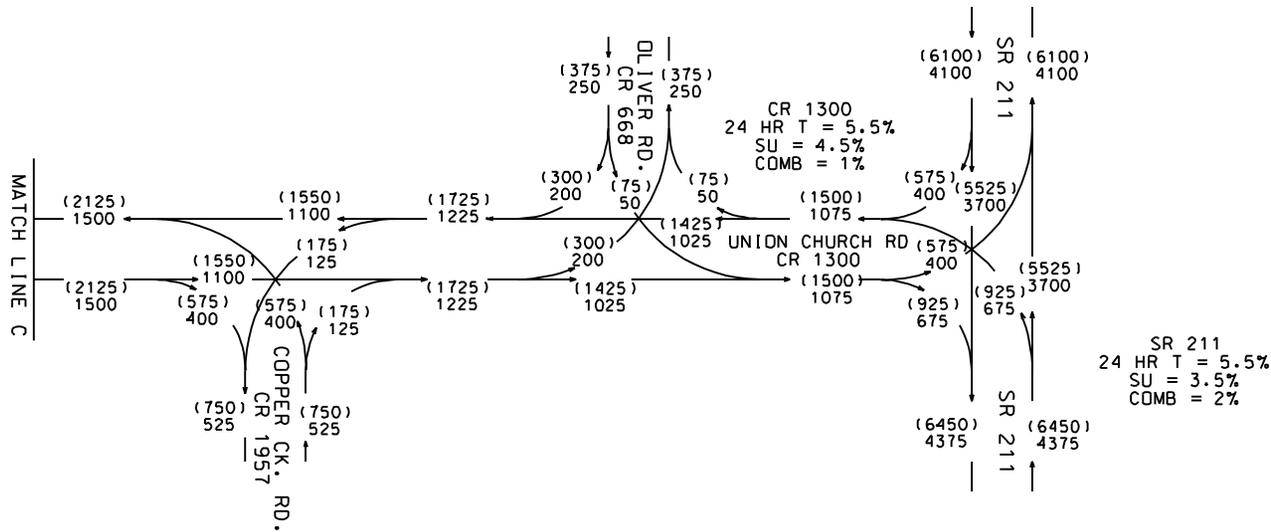
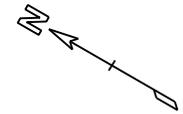
SR 53  
24 HR T = 6%  
SU = 3.5%  
COMB = 2.5%



CSSFT-0008-00(627)  
P.I. # 0008627  
HALL COUNTY  
CR 1300/UNION CH RD  
@ MULBERRY CREEK  
- HRRR  
BUILD 2035 ADT = (000)  
BUILD 2015 ADT = 000  
RFN  
08/11



HALL COUNTY



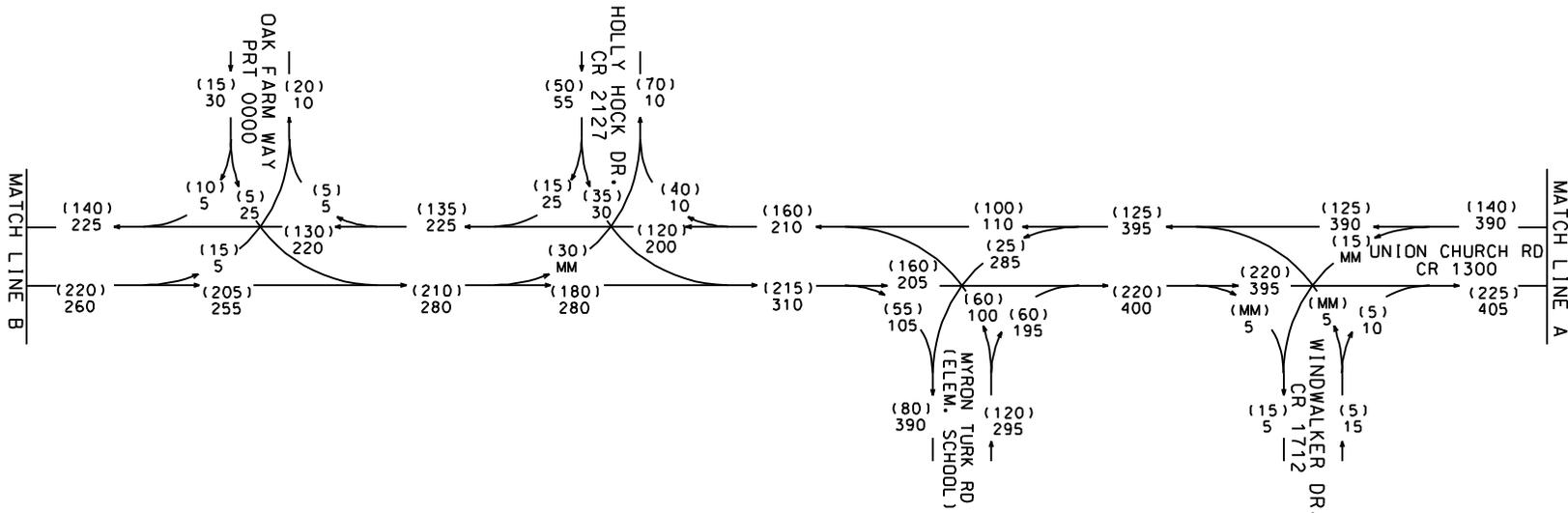
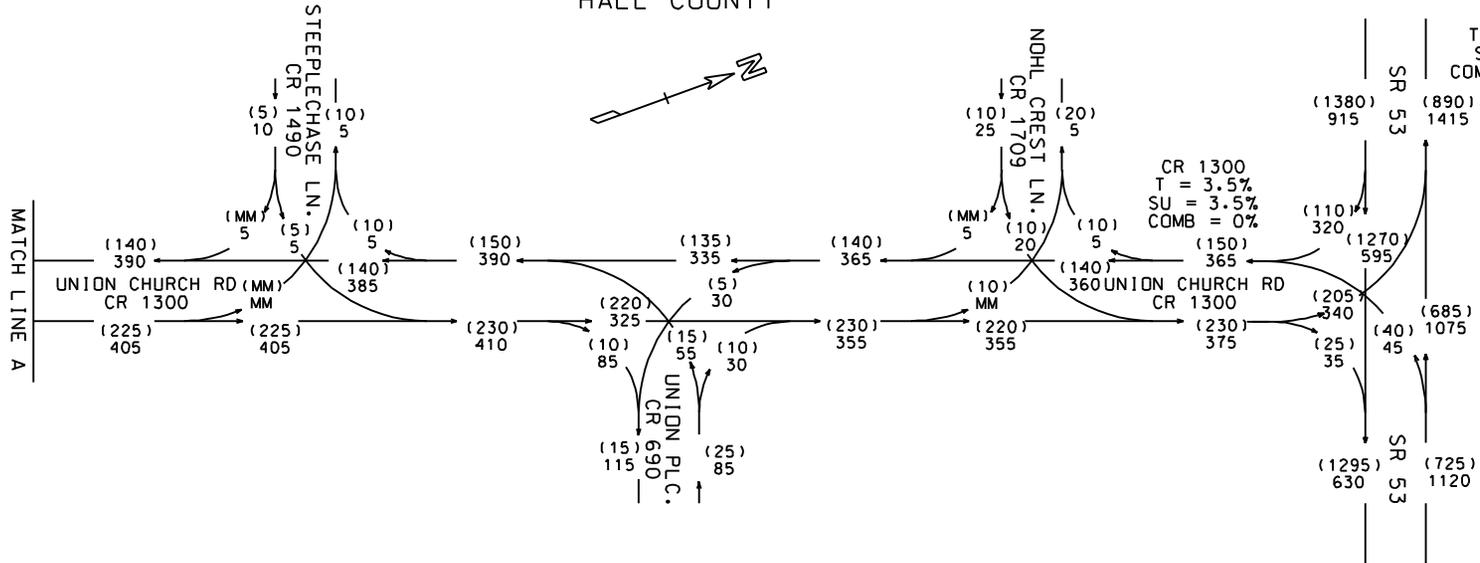
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P.I. # 0008627  
HALL COUNTY

CR 1300/UNION CH RD  
@ MULBERRY CREEK  
- HRRR

BUILD 2035 ADT = (000)  
BUILD 2015 ADT = 000

RFN  
08/11

HALL COUNTY

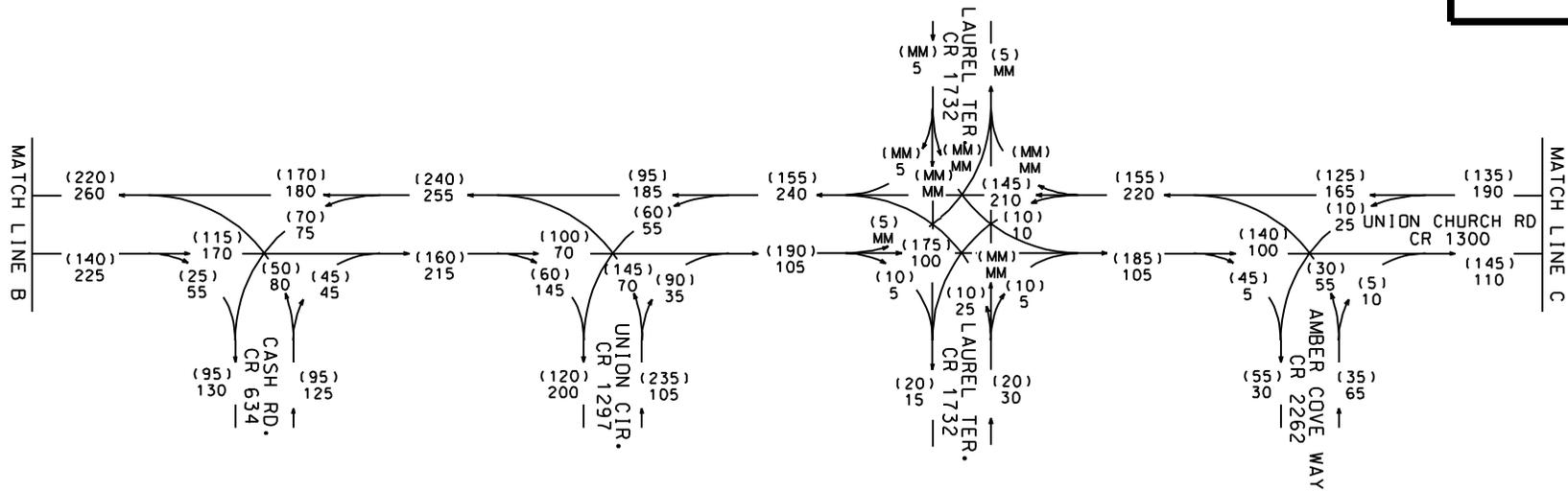


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HALL COUNTY

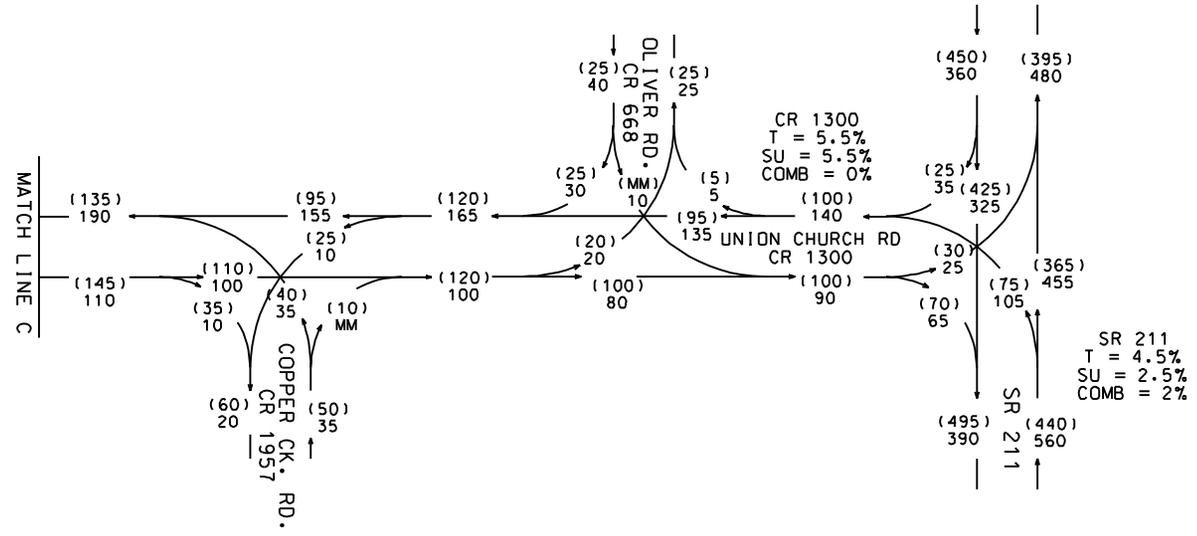
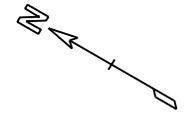
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@ MULBERRY CREEK  
- HRRR

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RFN  
08/11



HALL COUNTY

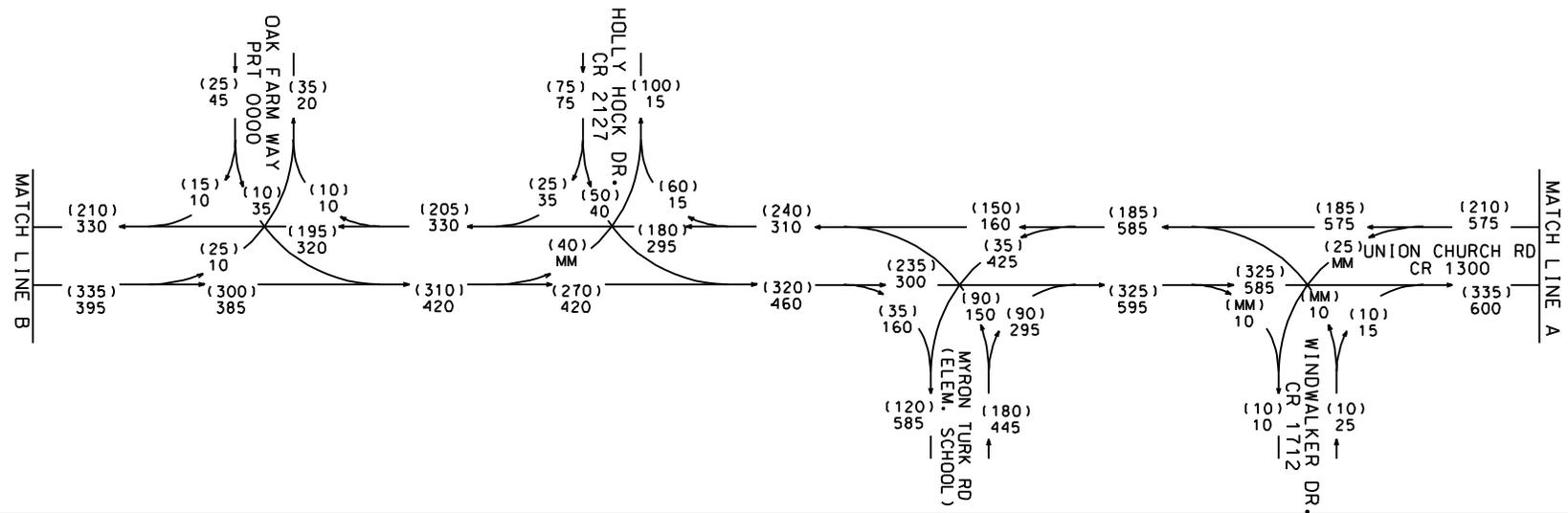
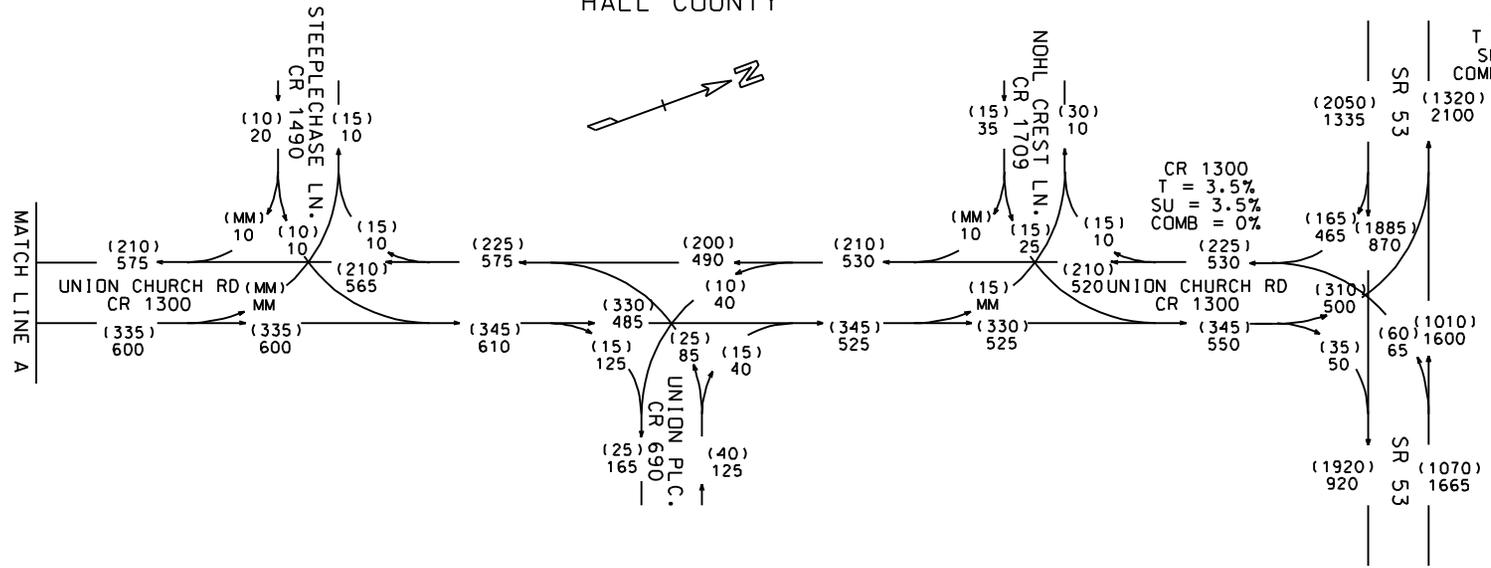


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SR 211  
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P.I. # 0008627  
HALL COUNTY  
CR 1300/UNION CH RD  
@ MULBERRY CREEK  
- HRRR  
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RFN  
08/11

HALL COUNTY

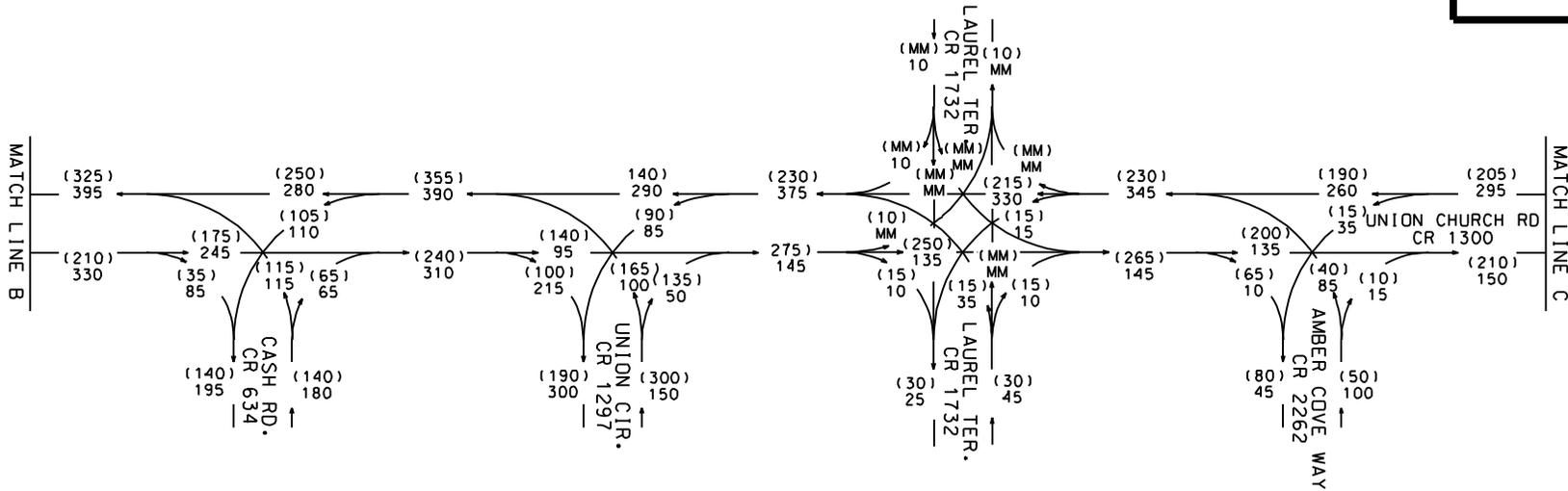


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HALL COUNTY

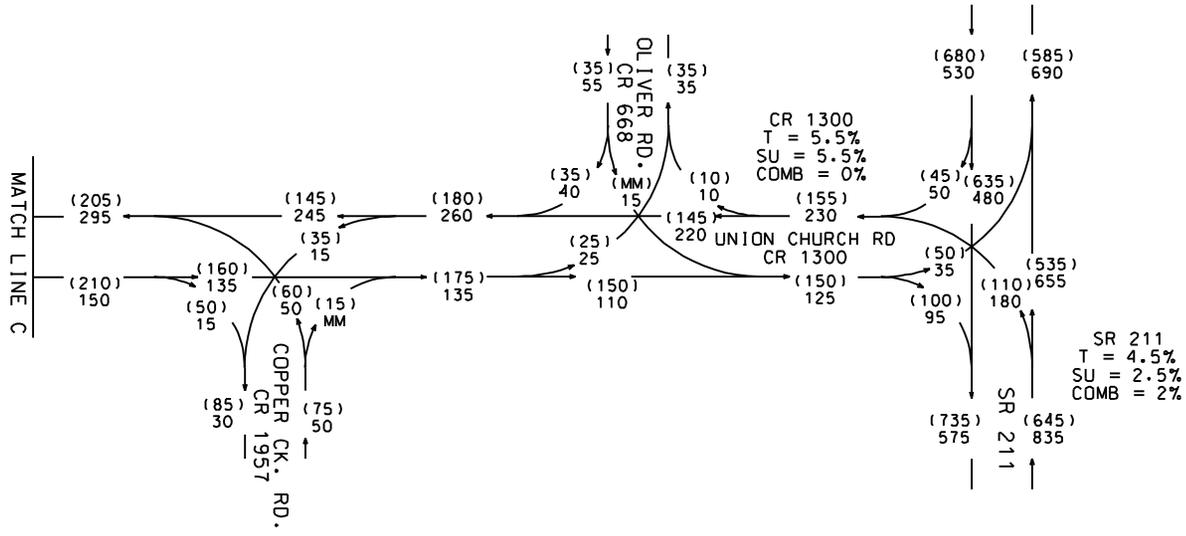
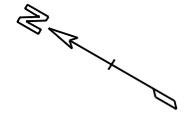
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@ MULBERRY CREEK  
- HRRR

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RFN  
08/11



HALL COUNTY



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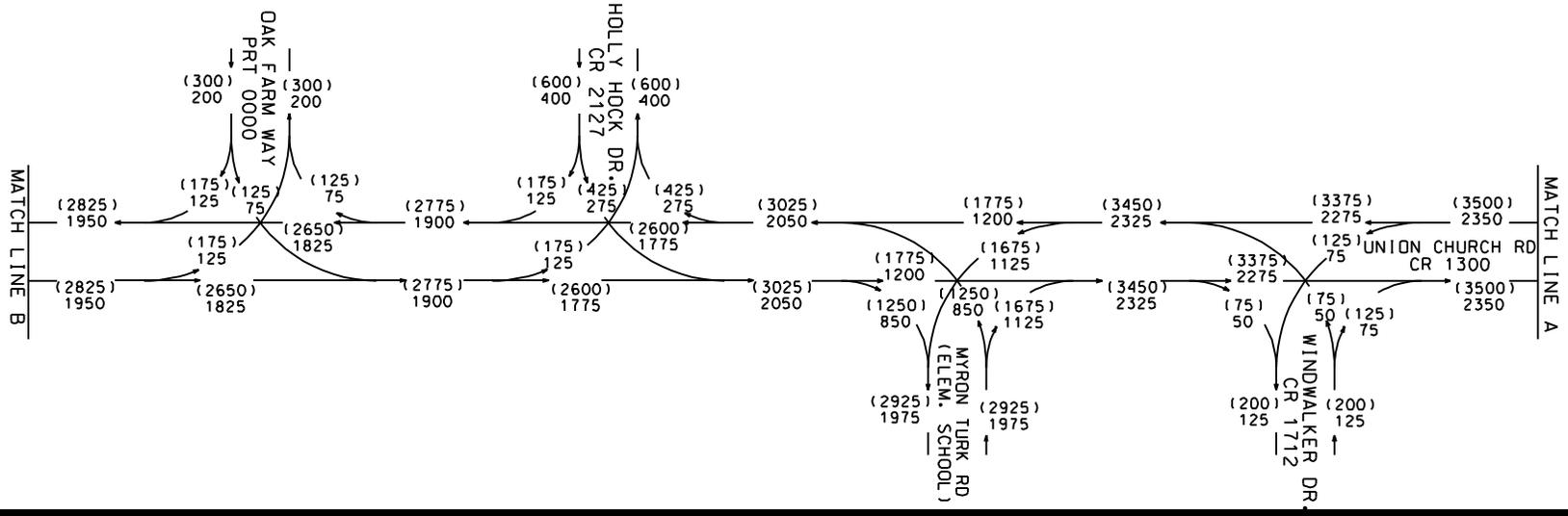
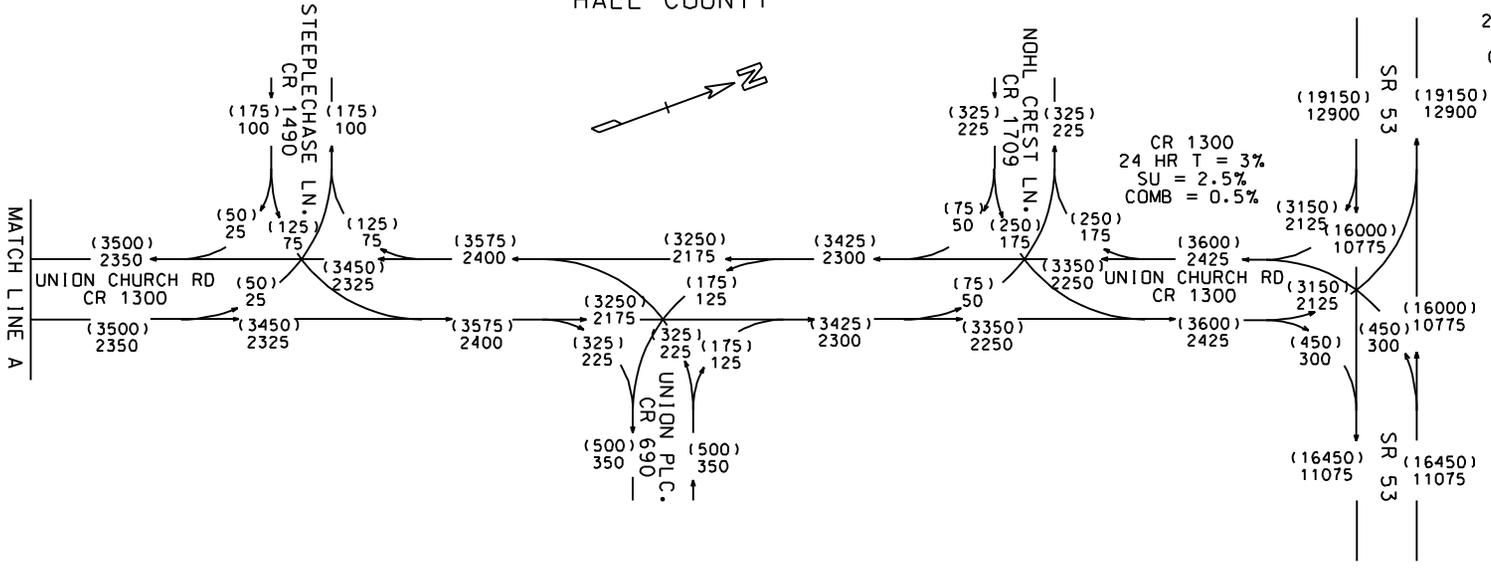
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P.I. # 0008627  
HALL COUNTY  
CR 1300/UNION CH RD  
@ MULBERRY CREEK  
- HRRR  
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08/11

HALL COUNTY

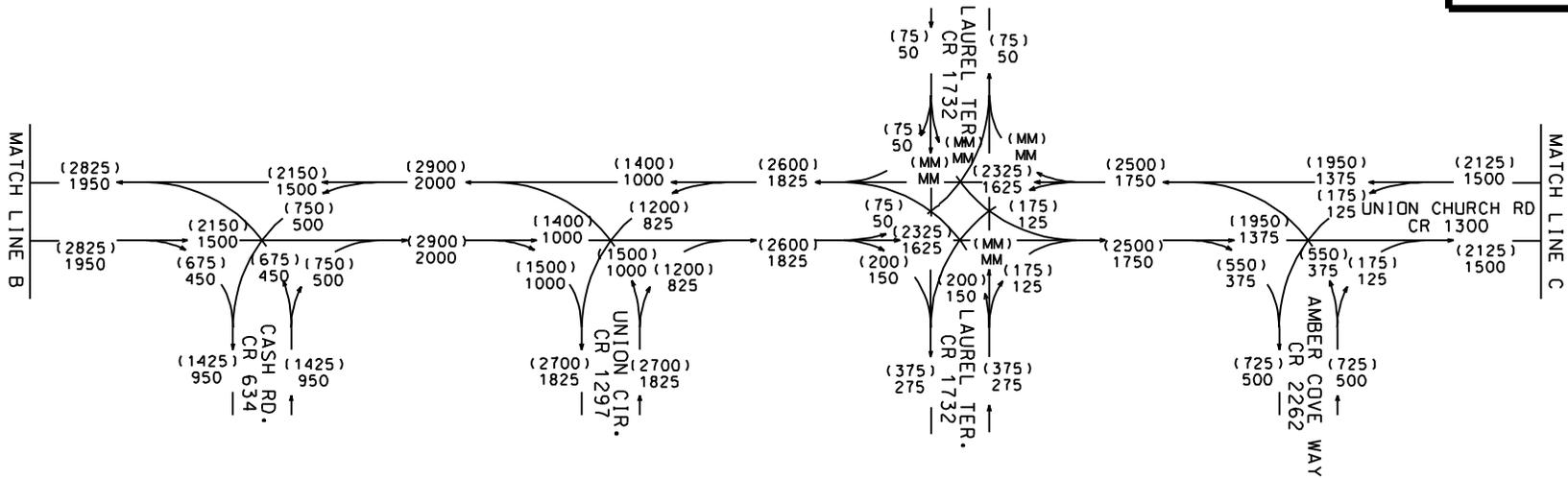


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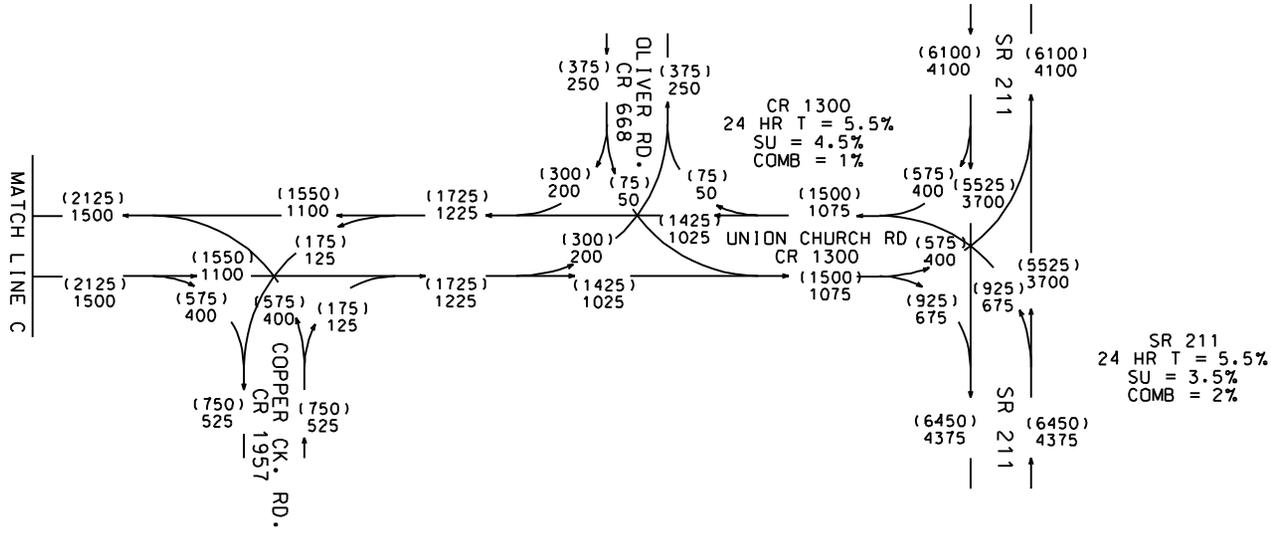
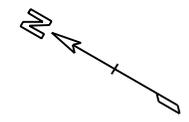
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CSSFT-0008-00(627)  
P.I. # 0008627  
HALL COUNTY  
CR 1300/UNION CH RD  
@ MULBERRY CREEK  
- HRRR  
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RFN  
08/11

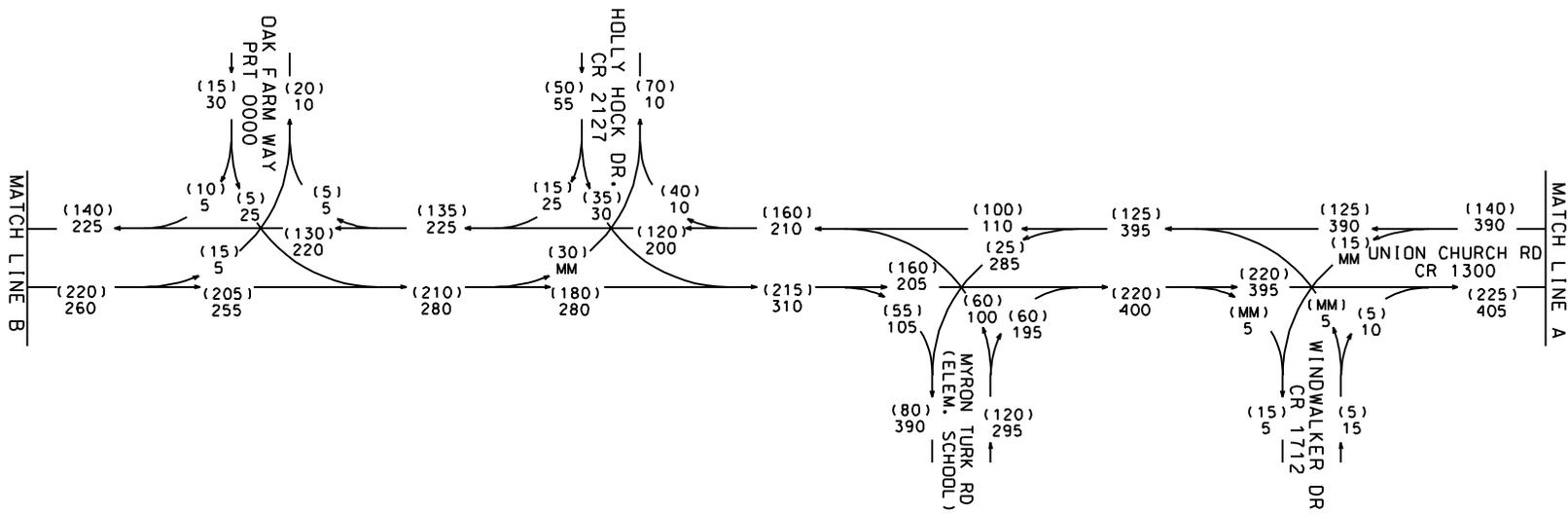
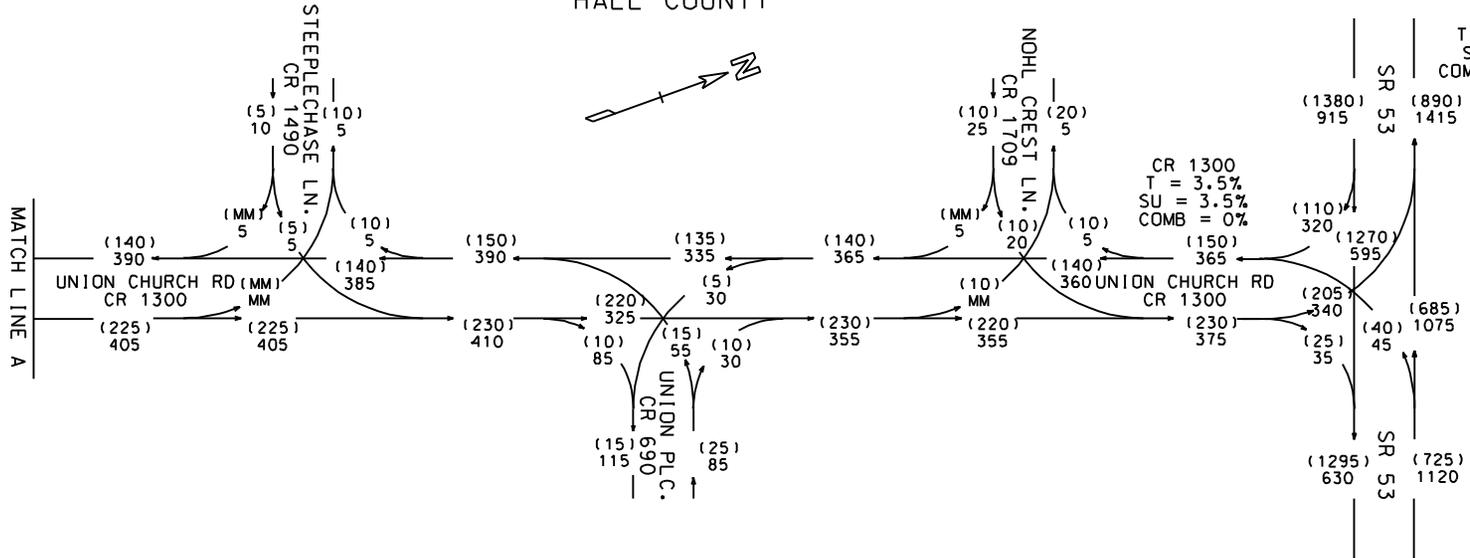


HALL COUNTY



CSSFT-0008-00(627)  
P.I. # 0008627  
HALL COUNTY  
CR 1300/UNION CH RD  
@ MULBERRY CREEK  
- HRRR  
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RFN  
08/11

HALL COUNTY

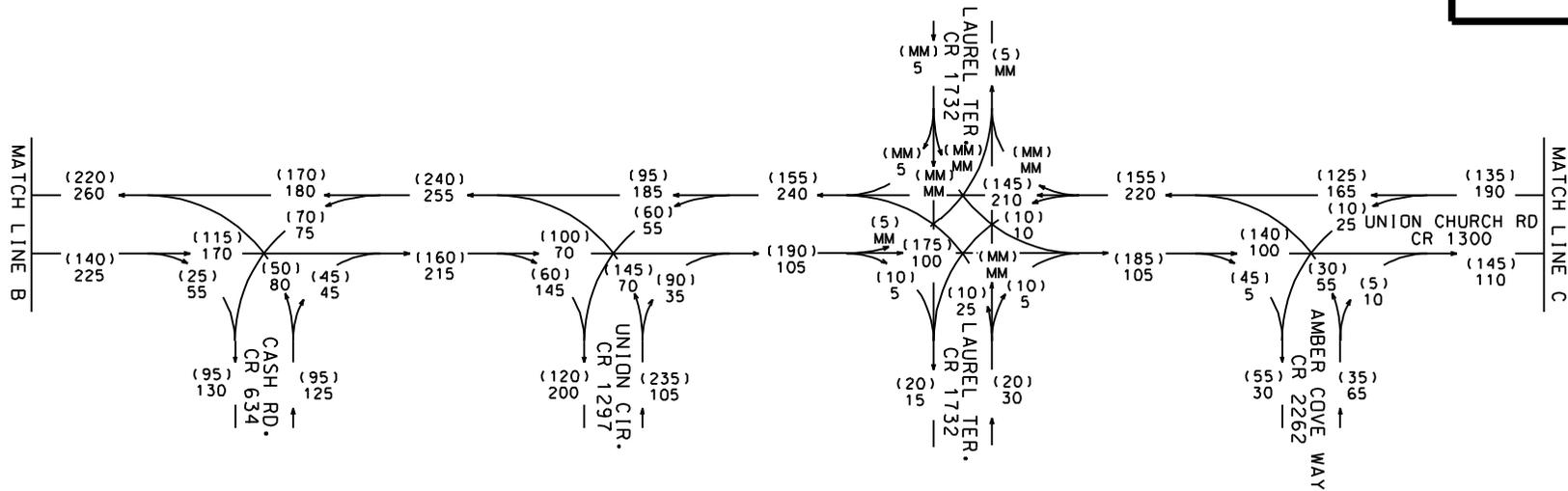


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HALL COUNTY

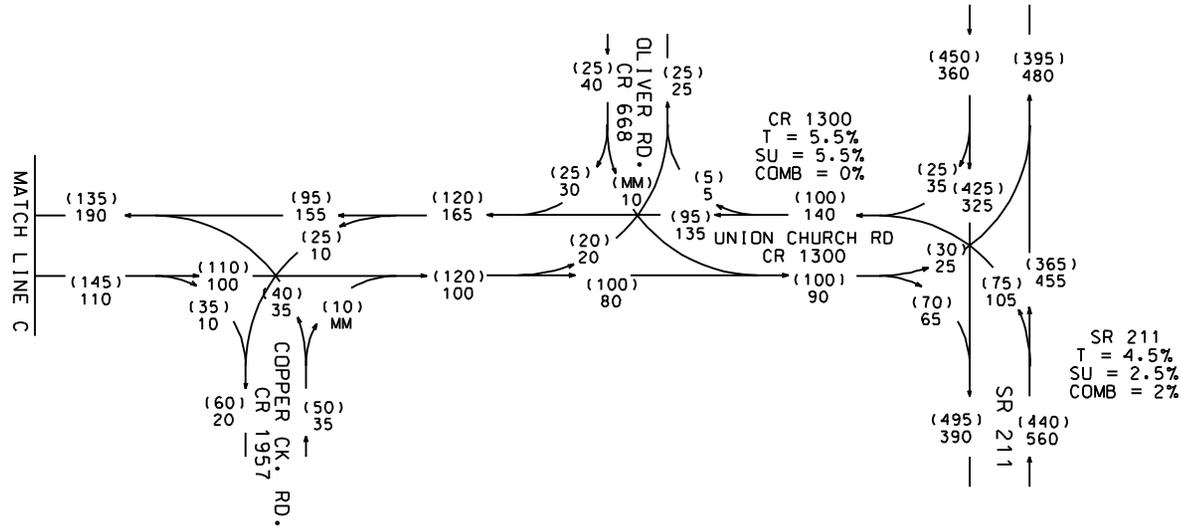
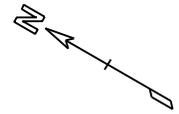
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- HRRR

BUILD 2015 PM DHV = 1000  
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RFN  
08/11

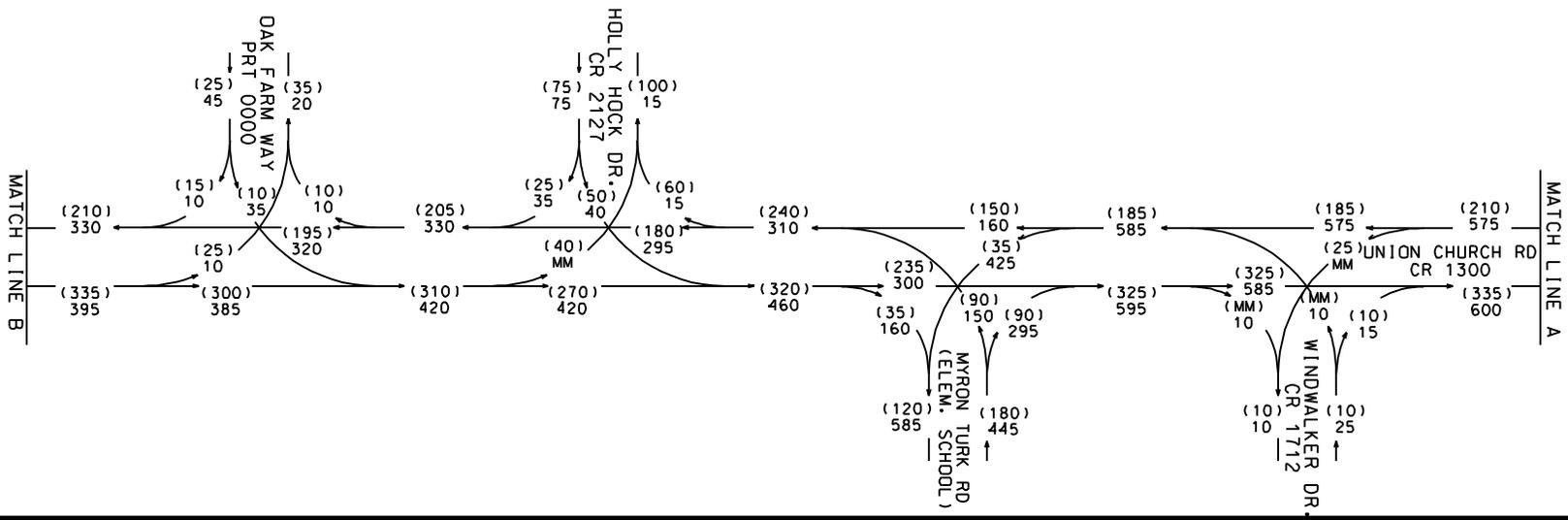
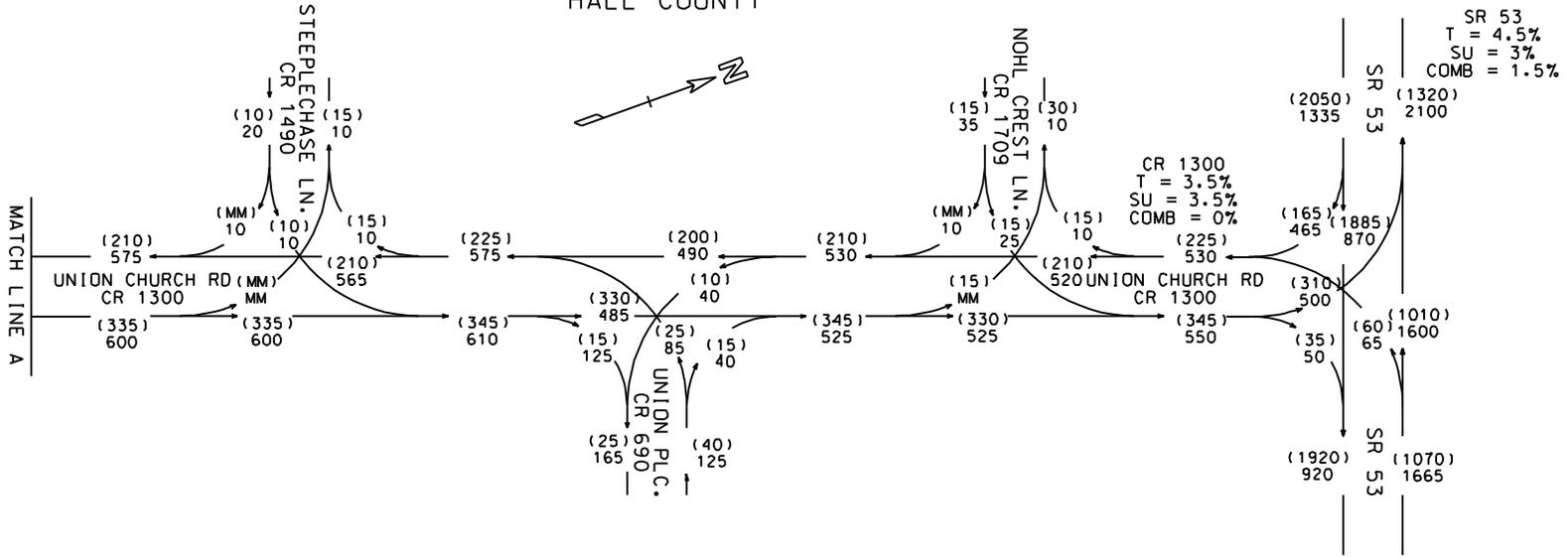


HALL COUNTY



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P.I. # 0008627  
HALL COUNTY  
CR 1300/UNION CH RD  
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BUILD 2015 PM DHV = (000)  
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08/11

HALL COUNTY

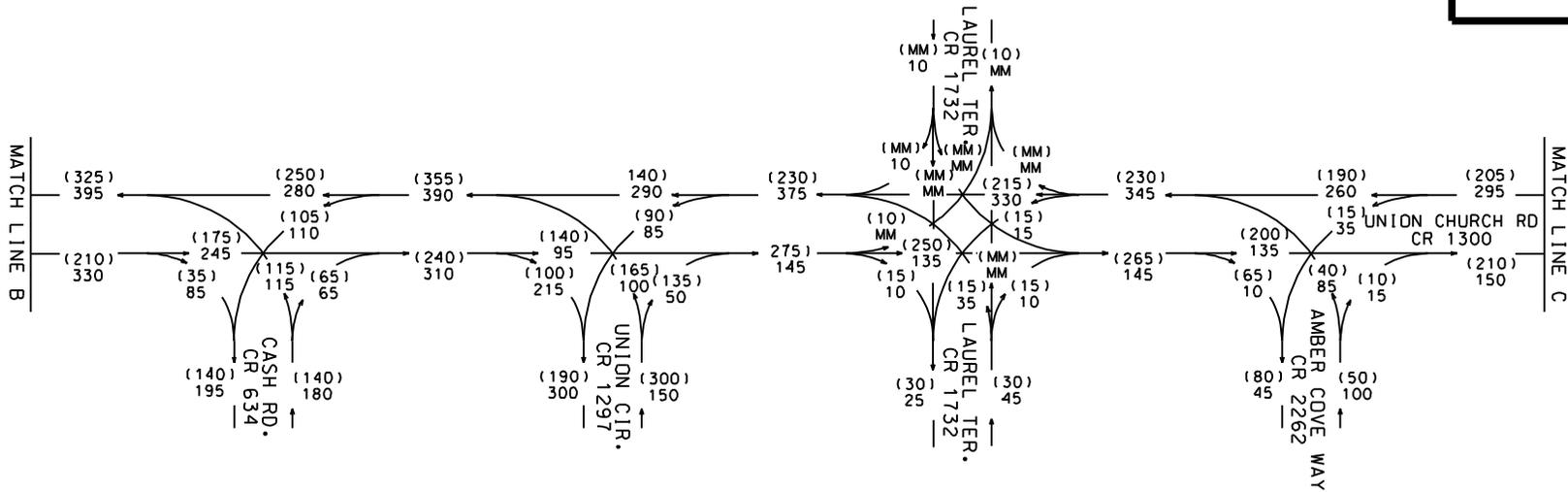


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HALL COUNTY

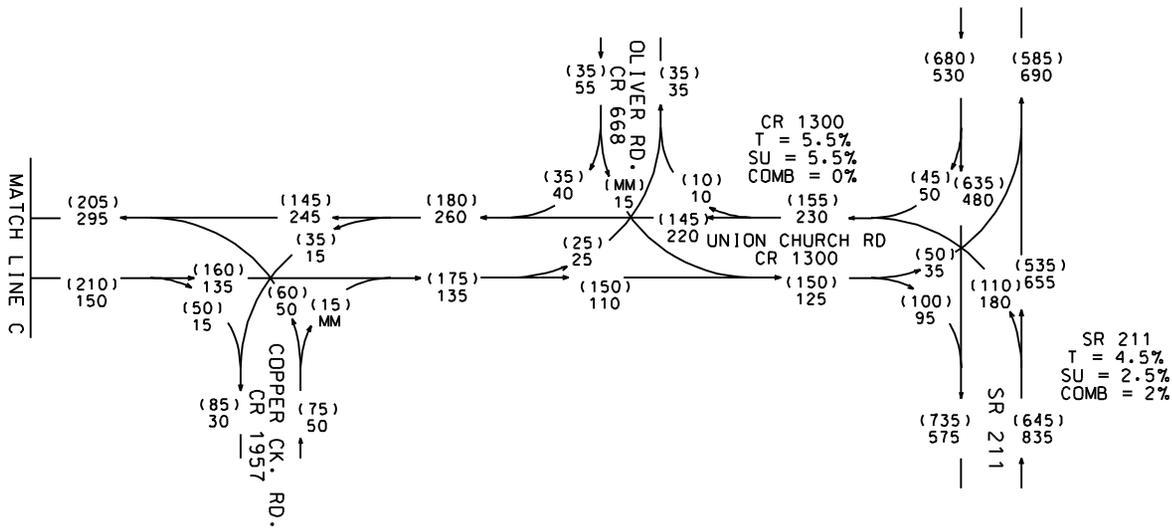
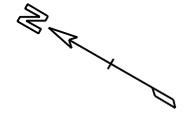
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HALL COUNTY



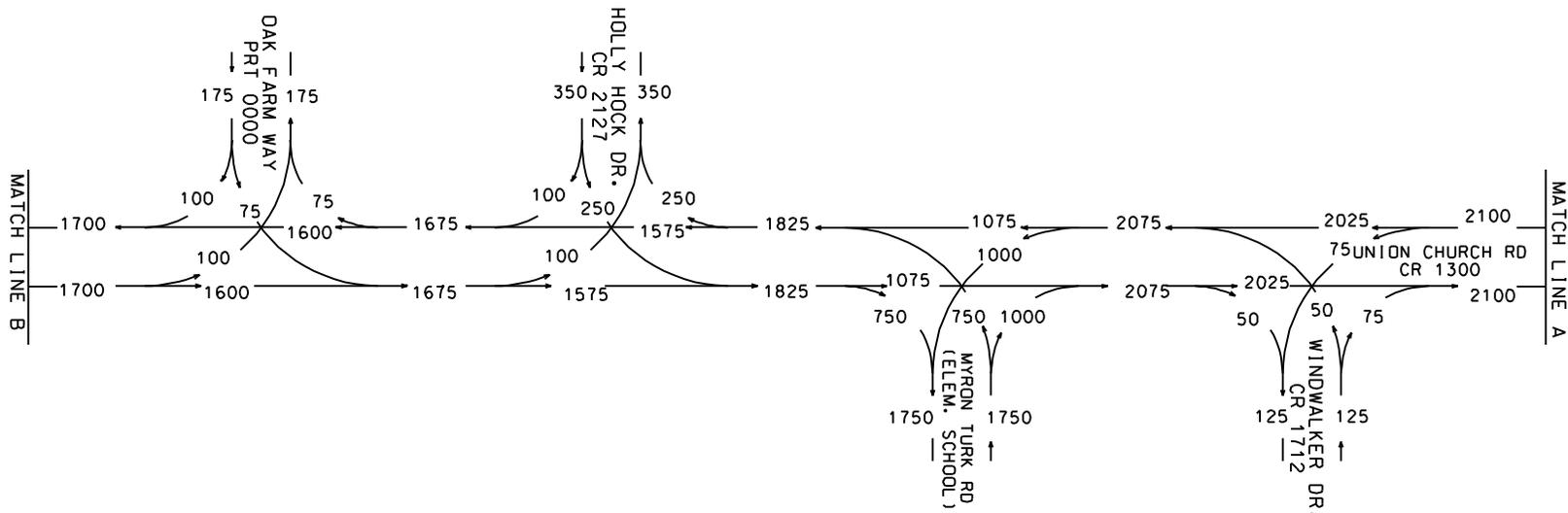
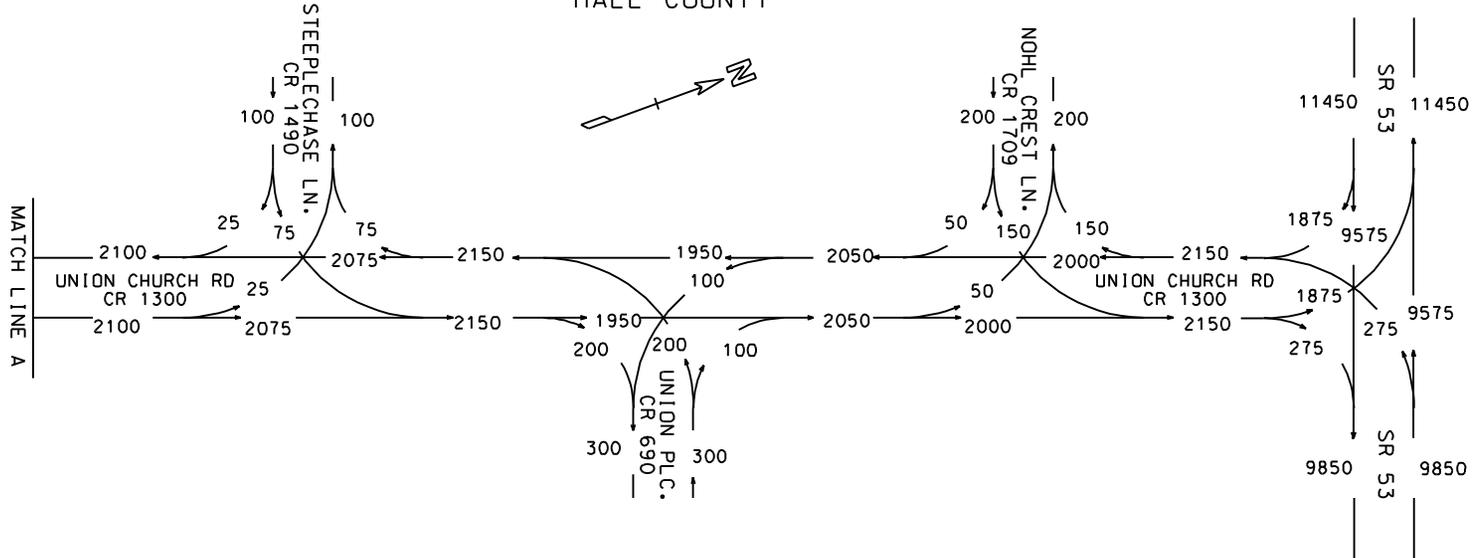
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HALL COUNTY

CR 1300/UNION CH RD  
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- HRRR

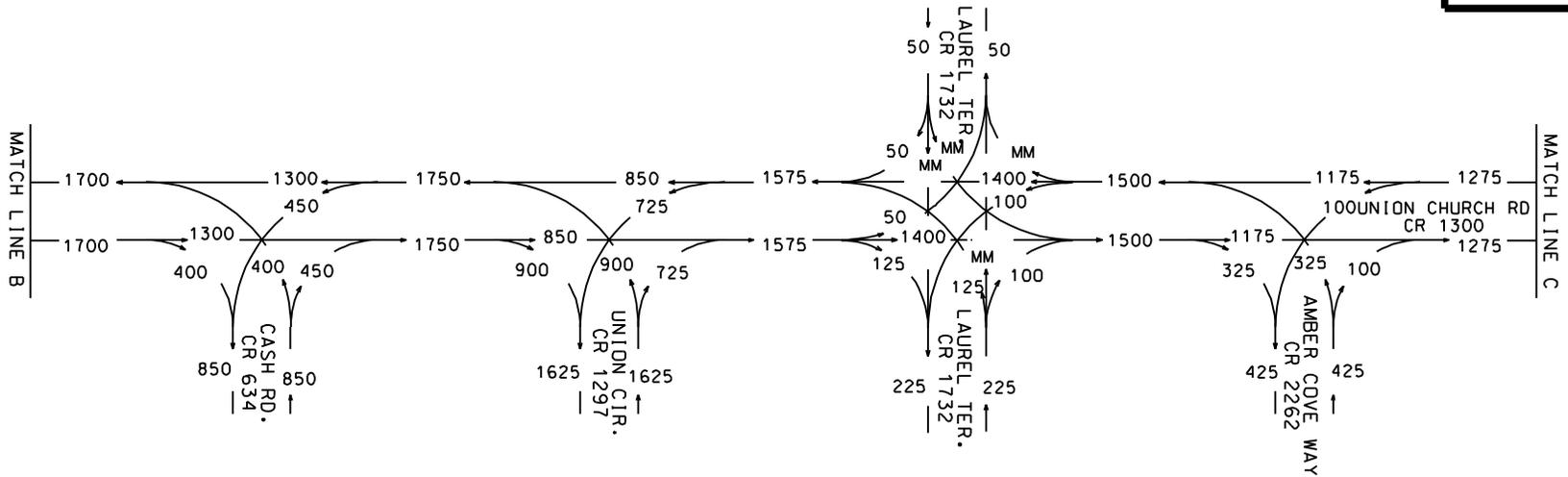
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RFN  
08/11

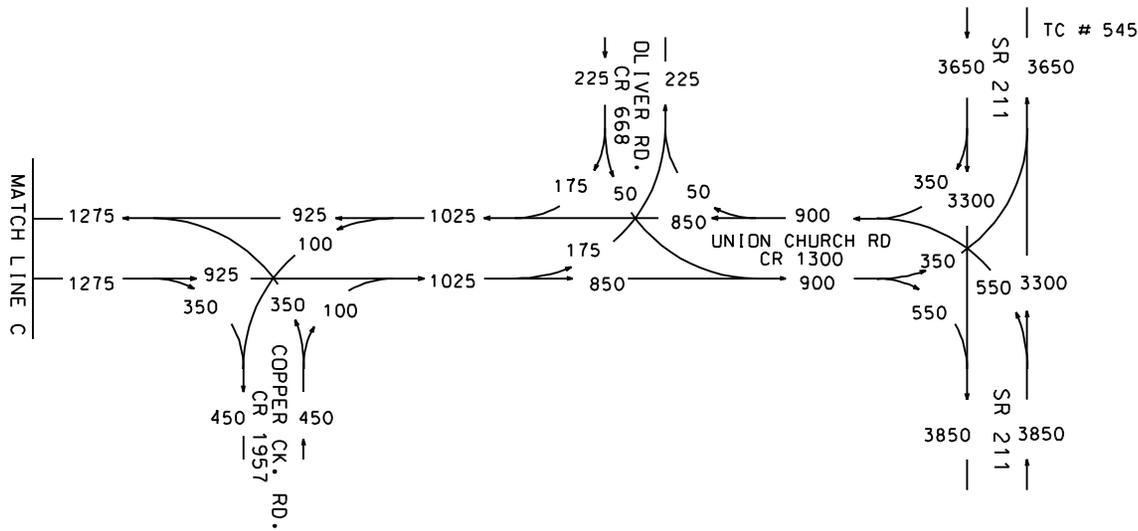
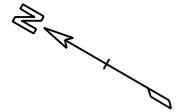
HALL COUNTY



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HALL COUNTY  
CR 1300/UNION CH RD  
@ MULBERRY CREEK  
- HRRR  
EXISTING  
2011

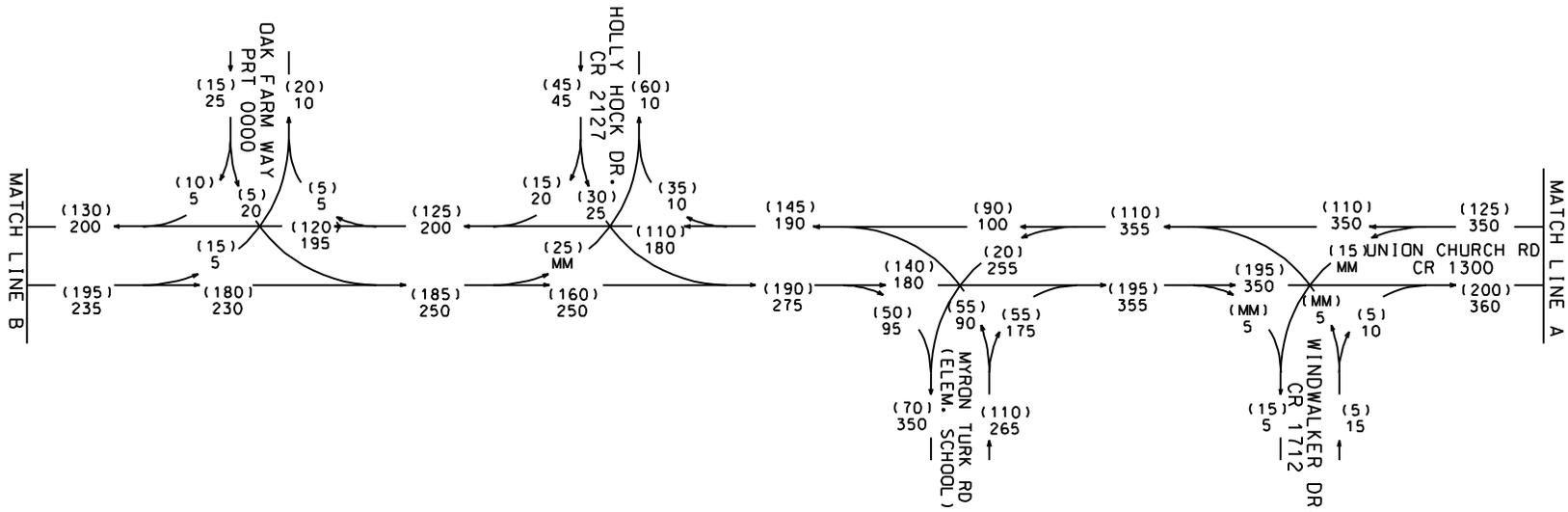
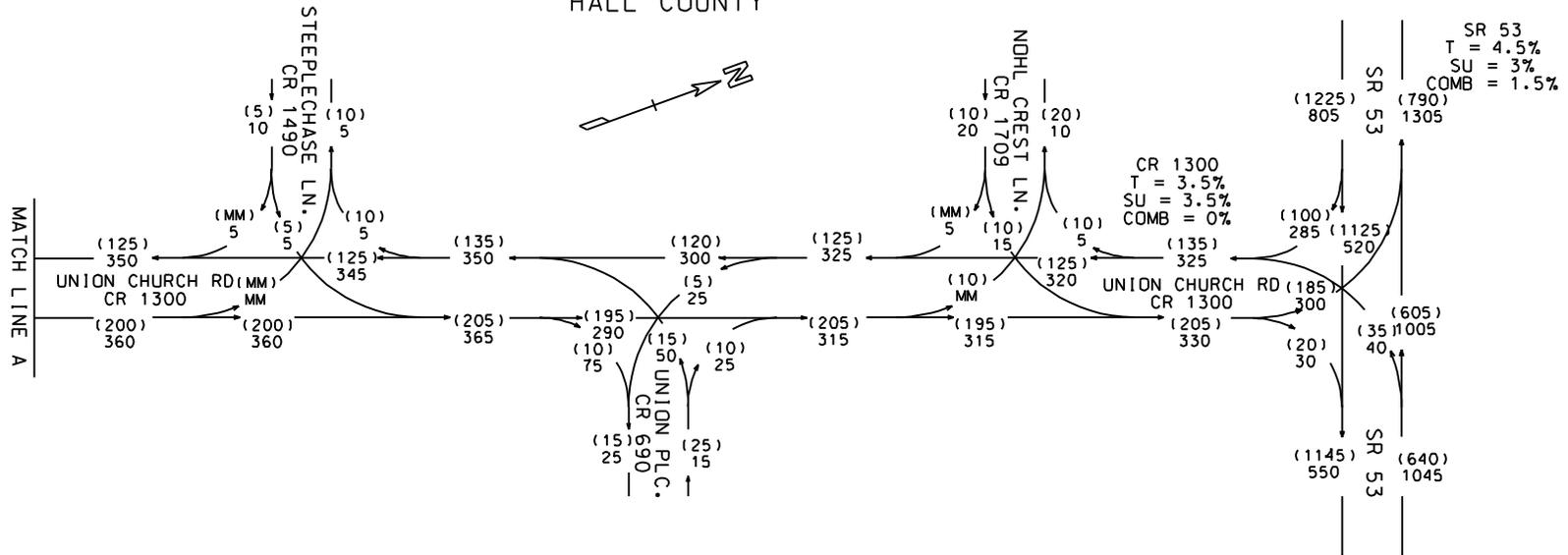


HALL COUNTY



CSSFT-0008-00(627)  
 P.I. # 0008627  
 HALL COUNTY  
 CR 1300/UNION CH RD  
 @ MULBERRY CREEK  
 - HRRR  
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HALL COUNTY

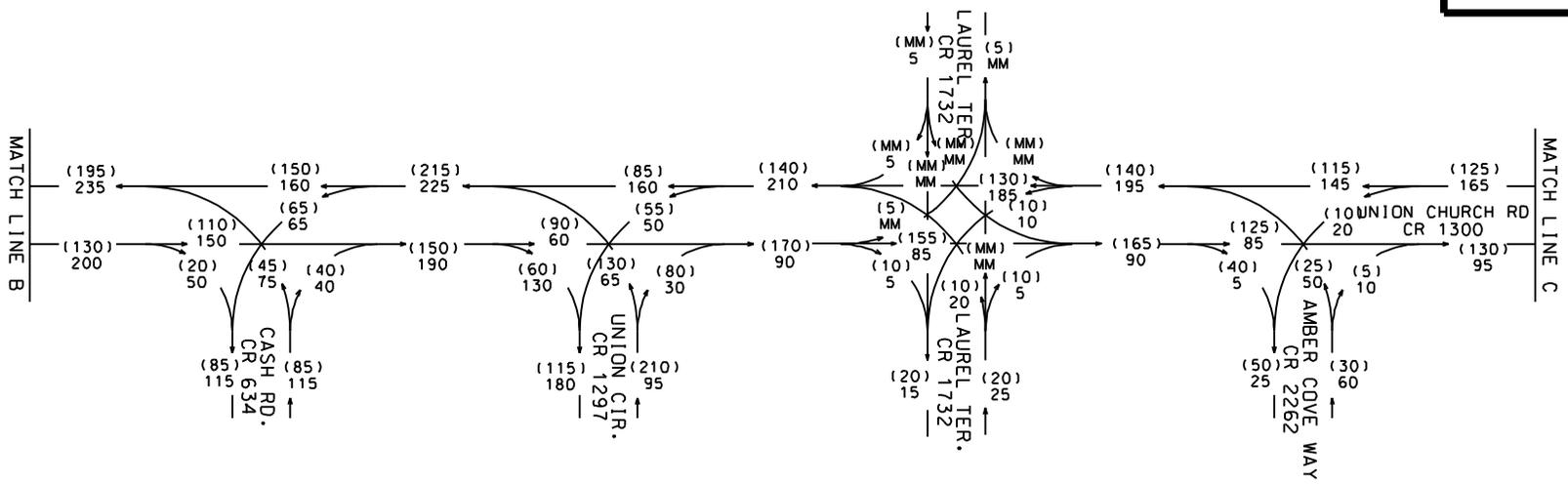


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HALL COUNTY

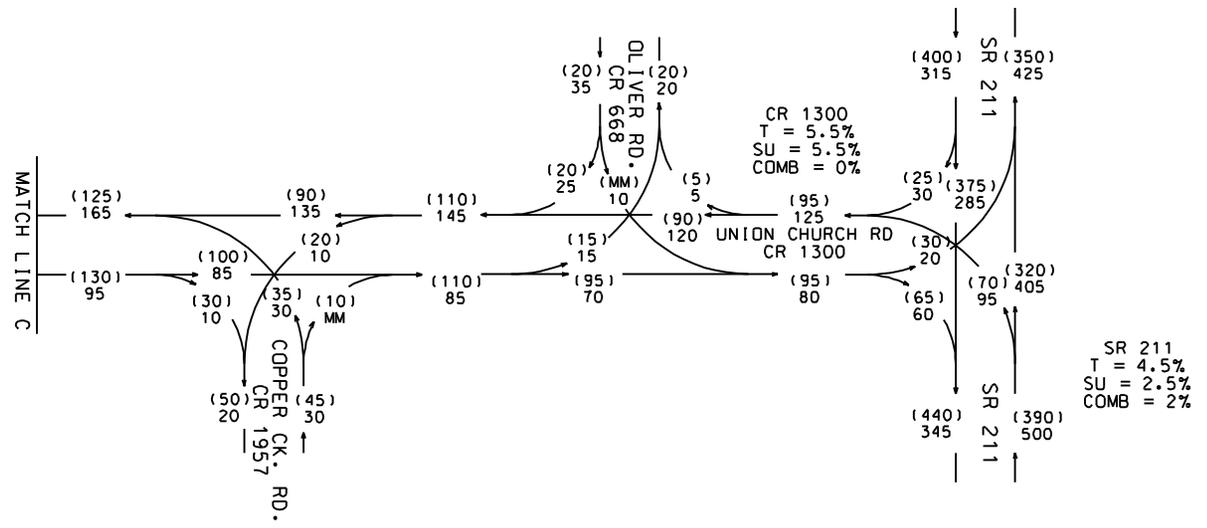
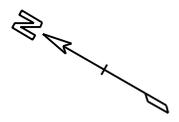
CR 1300/UNION CH RD  
@ MULBERRY CREEK  
- HRRR

EXISTING  
2011 DHV

RFN  
08/11



HALL COUNTY



SR 211  
T = 4.5%  
SU = 2.5%  
COMB = 2%

CSSFT-0008-00(627)  
P.I. # 0008627  
HALL COUNTY  
CR 1300/UNION CH RD  
@ MULBERRY CREEK  
- HRRR  
EXISTING  
2011 DHV  
RFN  
08/11

**HIGHWAY SAFETY MANUAL (HSM) ANALYSIS for CONCEPT REPORTS/REVISED CONCEPT REPORTS**

This Concept Report includes an HSM predicted average crash frequency analysis for the design year ADT using the Manual’s Predictive Method. The HSM uses AADT with the Predictive Method while this analysis uses ADT since AADT is typically not available for GDOT projects. The Predictive Method analysis is based on Safety Performance Functions (SPF) for individual roadway segments and intersections that provide the crash frequency. The HSM often provides information on crash frequency distribution by collision type and severity. Some SPFs include HSM Crash Modification Factors (CMF) that adjust the SPF crash frequency to account for differences between HSM base conditions and project specific conditions such as geometric design features. The HSM includes local calibration factors to further refine predictive average crash frequency. These local factors have not yet been developed by GDOT.

This project has segmented sections of work being performed and therefore has gaps in the stationing that will not be included as part of the HSM analysis. This includes various intersections which happen to be located within these gaps and therefore will also not be included as part of the HSM analysis.

**Project Segment and Intersection Types analyzed**

Segment				Intersection	
ID #	Type	Sta. Begin	Sta. End	ID #	Type
1	2-Lane Undivided Rural	1012+02.16	1012+44.16	N/A	Choose an item.
2	2-Lane Undivided Rural	1012+44.16	1014+11.29	N/A	Choose an item.
3	2-Lane Undivided Rural	1014+11.29	1014+70.41	N/A	Choose an item.
4	2-Lane Undivided Rural	1014+70.41	1017+09.62	N/A	Choose an item.
5	2-Lane Undivided Rural	1017+09.62	1019+62.32	N/A	Choose an item.
6	2-Lane Undivided Rural	1019+62.32	1021+13.50	N/A	Choose an item.
7	2-Lane Undivided Rural	1021+13.50	1024+21.30	N/A	Choose an item.
8	2-Lane Undivided Rural	1024+21.30	1025+81.89	N/A	Choose an item.
9	2-Lane Undivided Rural	1025+81.89	1026+39.70	N/A	Choose an item.
10	2-Lane Undivided Rural	1026+39.70	1027+79.57	N/A	Choose an item.
11	2-Lane Undivided Rural	1027+79.57	1029+56.20	N/A	Choose an item.
12	2-Lane Undivided Rural	1029+56.20	1032+56.97	N/A	Choose an item.
13	2-Lane Undivided Rural	1032+56.97	1033+56.95	N/A	Choose an item.
14	2-Lane Undivided Rural	1033+56.95	1034+34.37	N/A	Choose an item.
15	2-Lane Undivided Rural	1500+49.99	1502+55.79	N/A	Choose an item.
16	2-Lane Undivided Rural	1502+55.79	1504+07.15	N/A	Choose an item.
17	2-Lane Undivided Rural	1504+07.15	1504+20.38	N/A	Choose an item.

Segment				Intersection	
ID #	Type	Sta. Begin	Sta. End	ID #	Type
18	2-Lane Undivided Rural	1504+20.38	1508+13.37	N/A	Choose an item.
19	2-Lane Undivided Rural	1508+13.37	1510+21.69	N/A	Choose an item.
20	2-Lane Undivided Rural	1510+21.26	1513+49.69	N/A	Choose an item.
21	2-Lane Undivided Rural	1513+49.69	1515+05.77	N/A	Choose an item.
22	2-Lane Undivided Rural	1515+05.77	1518+10.56	N/A	Choose an item.
23	2-Lane Undivided Rural	1518+10.56	1525+66.28	N/A	Choose an item.
24	2-Lane Undivided Rural	1525+66.28	1529+20.77	N/A	Choose an item.
25	2-Lane Undivided Rural	1529+20.77	1531+03.27	N/A	Choose an item.
26	2-Lane Undivided Rural	1531+03.27	1534+05.15	N/A	Choose an item.
27	2-Lane Undivided Rural	2000+00.00	2002+26.43	N/A	Choose an item.
28	2-Lane Undivided Rural	2002+26.43	2004+48.43	N/A	Choose an item.
29	2-Lane Undivided Rural	2004+48.43	2005+98.60	N/A	Choose an item.
30	2-Lane Undivided Rural	2005+98.60	2009+77.52	N/A	Choose an item.
31	2-Lane Undivided Rural	2009+77.52	2011+92.67	N/A	Choose an item.
32	2-Lane Undivided Rural	2011+92.67	2013+77.58	N/A	Choose an item.
33	2-Lane Undivided Rural	2013+77.58	2014+64.71	N/A	Choose an item.
34	2-Lane Undivided Rural	2014+64.71	2018+53.45	N/A	Choose an item.

***Section 26 will not be included due to insufficient survey information available to make an accurate assessment of field conditions.***

***This 5.25 mile project, located along CR 1300 in Hall County, was divided into 34 segments. These segments, which included no intersections, were classified and evaluated by the Highway Safety Manual using the rural 2-lane 2-way road criteria. The Highway Safety Manual analysis predicts for the 2035 design year ADT, a total of 5 crashes.***

***This compares to the Highway Safety Manual base condition analysis, which predicts for the 2035 design year ADT, a total of 2 crashes.***

***This slightly higher predicted crash frequency for the proposed roadway segment versus the Highway Safety Manual base roadway segment is due to the following contributing factors: composite shoulders, horizontal curves, grade, driveway density, and the roadside hazard ratings.***

# DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

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## MEETING MINUTES

**SUBJECT:** Concept Team Meeting - P.I. No. 0008627 – HALL COUNTY  
CR 1300/UNION CHURCH ROAD @ MULBERRY CREEK - HRRR

**MEETING LOCATION:** District 1 Office- Main Conference Room - 2505 Athens Highway,  
Gainesville, GA 30507

**MEETING DATE:** November 7, 2011

**ATTENDEES:** See Attached Sign-In Sheet

### DISCUSSION:

Charles Robinson, GDOT Project Manager and Robert Mahoney, GDOT District 1 Preconstruction Engineer opened the meeting by welcoming all attendees, outlining the purpose of the meeting and reviewing the agenda. Charles then asked all attendees to introduce themselves. Charles provided an overview of the schedule that had been set for the project. The project is scheduled to be Let in January 2014.

Fletcher Miller, GDOT Design Group Manager then presented a review concept report to the meeting attendees. The proposed improvements included a culvert extension, guardrail installation, shoulder widening in multiple locations along the corridor and signing and marking.

Landon Perry, GDOT Design Engineer presented the concept layout and discussed the methodology that was used for identification of locations for improvements to the corridor. It was noted at the meeting that the culvert at Mulberry Creek is being extended south of Union Church Road for the installation of a turn lane by a developer. Tara Richards, representative from Rochester and Associates which is the design firm which completed the plans provided detail regarding the project by the developer along with some insight on existing conditions. It was mentioned that a lot of rock has been encountered in the area of this project.

Charles stated that this meeting was informal and encouraged questions and comments throughout the meeting to better assist with the efficient and effective development of the project. The questions and comments from the meeting are as follows:

**The following comments were made with regards to the Concept Report:**

- Clarify the beginning (SR 53) and ending (SR 211) intersecting roadways with CR 1300/Union Church Road on the Location Map (page 2).
- Indicate the nearest adjacent side streets in reference to the location of the beginning and end of the proposed work segments in the Description (page 4).
- Correct SR 53 in the Description (page 4).
- Revise Width of ROW to 60' – 80' in the Existing design features (page 4).
- Indicate that Public Interest Determination Policy and Procedure is **NOT** Required (page 5).

**Fletcher Miller** replied that the corrections to the concept report would be made accordingly.

**Robert Mahoney** (GDOT District 1 Preconstruction) inquired if any geometric corrections to design features were to be proposed.

**Fletcher Miller** (GDOT Roadway Design) indicated that the only geometric corrections proposed were those to the shoulder widths, and that corrections to the horizontal and vertical geometry were determined to cost more than the benefits that would be provided.

It was generally recognized that vehicle speed is a major contribution to vehicle crash history along the corridor. **Fletcher Miller** (GDOT Roadway Design) indicated that the corridor is currently signed with advisory speed signs in locations where the existing design speed does not meet 45 mph.

**Following the review of the Draft Concept Report and the Concept Layout, the following comments were made:**

**Tara Richards** (Rochester & Associates)/**Jody Woodall** (Hall Co.) – Culvert Extension at Mulberry Creek as part of The Village at Deaton Creek Project began the week of October 31<sup>st</sup>. Tara Richards stated that she would provide a copy of the plans to GDOT from the Village at Deaton Creek Project.

**Robert Mahoney** (GDOT District 1 Preconstruction) – The District recommends striping the entire corridor with possible State Aid funding for the areas outside of the proposed work.

**Jody Woodall** (Hall Co.) – Hall County needs a Utilities cost estimate and Charles Robinson provided Jody with a copy of the updated preliminary Right of Way Cost Estimate. Jody asked if the temporary easement could be used for this project to help reduce the right of way costs.

**Charles Robinson** replied that he would consult with the GDOT ROW Office and the Design Office to investigate this request regarding temporary easement further and would provide a response once this question was addressed. Charles Robinson stated that he would provide Hall County with the Preliminary utility cost estimate after it was completed by the GDOT District 1 Utilities Office. Charles also stated Hall County would be responsible for the total amount for the ROW costs associated with this project.

Utilities Comments:

City of Gainesville – Will locate water on right side of proposed alignment. No existing sewer.  
**Tara Richards** (Rochester & Associates) – Sewer as part of The Village at Deaton Creek Project does not cross the road. There is no justification for a sewer crossing to stub out due to rock.

**Benny Bagwell** (Jackson EMC) – Power poles are located on the SW side of the corridor.

Gas – There were no representatives present.

**Chad Cooper** (AT&T) – Buried fiber is located on the project from Union Circle to Eagle Ranch on the left side of the proposed alignment.

**Robert Mahoney** (GDOT District 1 Preconstruction) – Look at lighting from cost benefits analysis.

**Michael Turpeau** (GDOT Traffic Operations) – Consider installing friction coarse before and around the horizontal curves.

**Robert Mahoney** (GDOT District 1 Preconstruction) – Look at “spot” re-surfacing in the horizontal curves with high friction/tire grip. Look at adding work for SE correction.

**Theresa Holder** (GDOT Roadway Design) inquired to the number of impacted ROW parcels.

**Landon Perry** (GDOT Roadway Design) indicated that the preliminary ROW parcels count was 43.

**Robert Mahoney** (GDOT District 1 Preconstruction) –ROW typically requires one year for ROW acquisition based on parcel count.

**Charles Robinson** stated that all comments would be investigated further and addressed as the project further develops based on how the recommendation/comment addresses project justification and whether or not it can be included due to budgetary constraints by both the locals and GDOT.

**GEORGIA DEPARTMENT OF TRANSPORTATION  
MEETING / CONFERENCE RECORD OF ATTENDEES**

**PURPOSE:** Concept Team Meeting - P.I.# 0008627 - Concept Team Meeting  
CR1300/Union Church Road @ Mulberry Creek - High Risk Rural Road  
(HRRR) Project, Hall County

**LOCATION:** District 1 Office- Main Conference Room - 2505 Athens Highway,  
Gainesville, GA 30507

**DATE:** 11/7/2011 **TIME:** 9:00 a.m.

**MODERATOR:** Charles A. Robinson

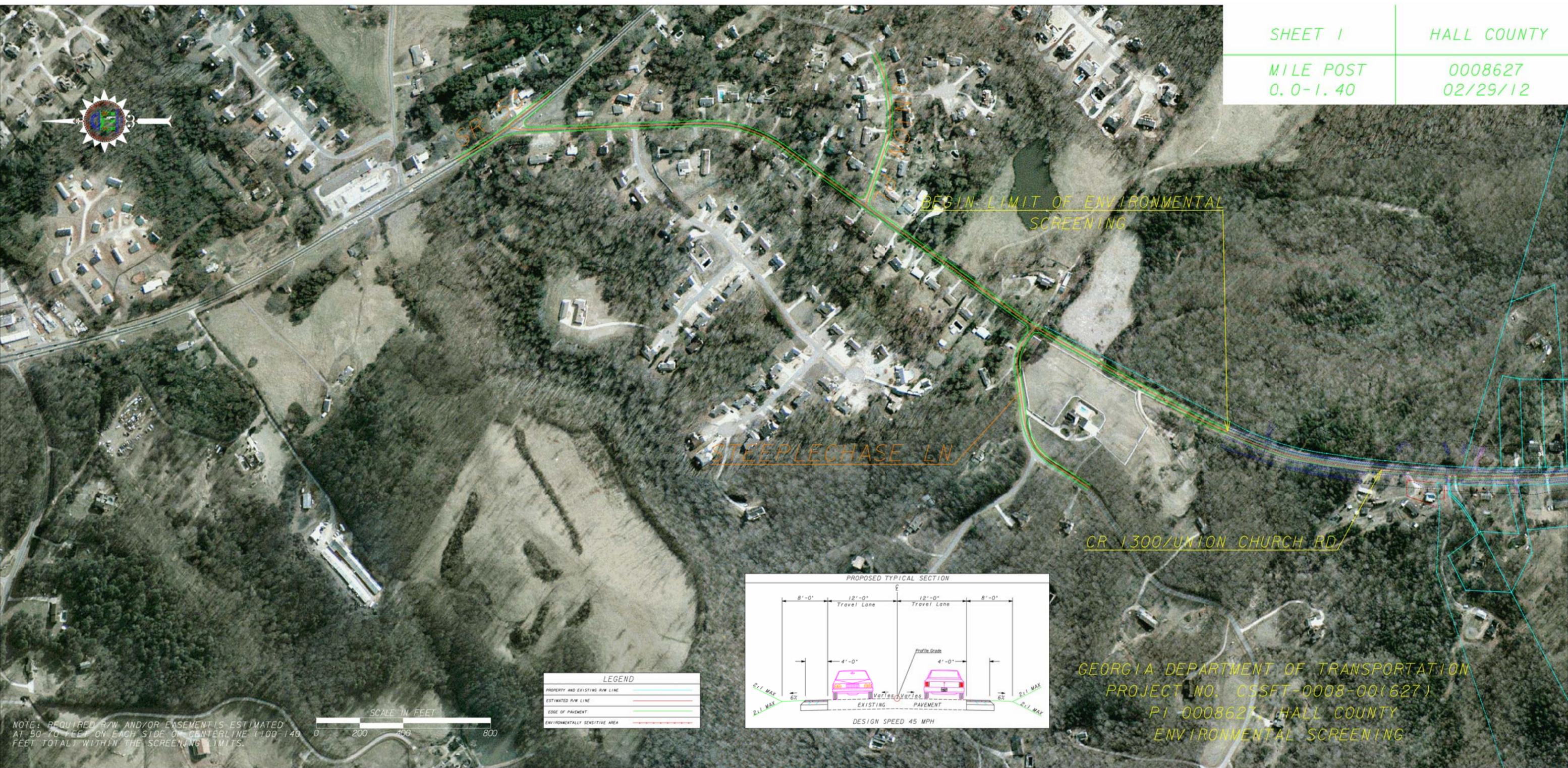
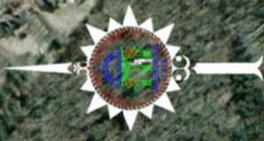
	NAME	ORGANIZATION	PHONE NO.	GDOT suffix: @dot.ga.gov E-MAIL ADDRESS
1	Charles A. Robinson	GDOT	404-631-1439	chrobinson@dot.ga.gov
2	FLETCHER MILLER	GDOT-ROADWAY DESIGN	404-631-1652	fmler@dot.ga.gov
3	MICHAEL D. TURPEAU JR	GDOT TRAFFIC OPS	(404)635-8142	mturpeau@dot.ga.gov
4	Chad Cooper	ATT	770-535-0617	cc5565@att.com
5	Benny Bagwell	JACKSON EMC	770-538-2511	bbagwell@jacksonemc.com
6	TARA RICHARDS	RAI	678-450-5139	trichards@rachel-asso.com
7	Landon Perry	GDOT	404-631-1548	lperry@dot.ga.gov
8	KEVIN MCINTURFF	HALL CO.	770-531-6800	KMCINTURFF@HALLCOUNTY.ORG
9	JODY WOODALL	HALL Co	770-531-6800	JWOODALL@HALLCOUNTY.ORG
10	Jarrett Nash	Gainesville	770 538 4978	JNash@gainesville.org
11	MATT TARVER	GAINESVILLE	770 538 4977	mtarver@gainesville.org
12	ROBERT MAHONEY	GDOT	770-532-5510	RMahoney@dot.ga.gov
13	Nabil Raad	GDOT	404-635-8126	nraad@dot.ga.gov
14	TODD SUMPTION	GDOT	770- <del>708</del> <sup>532</sup> -5038	TSUMPTION@DOT.GA.GOV
15	Theresa R. Holder	GDOT	404-631-1604	tholder@dot.ga.gov
16	Scott Puckett	Hall Co.	770-531-6800	spuckett@hallcounty.org
17	Jason Dykes	GDOT UTILITIES	770-532-5510	JDYKES@DOT.GA.GOV
18	Brent Cook	GDOT - Dist Traffic Engineer	770-532-5563	bcook@dot.ga.gov

SHEET 1

HALL COUNTY

MILE POST  
0.0-1.40

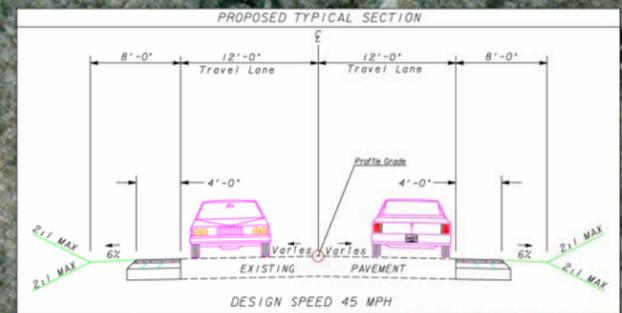
0008627  
02/29/12



BEGIN LIMIT OF ENVIRONMENTAL  
SCREENING

STEEPLECHASE LN

CR 1300/UNION CHURCH RD



LEGEND	
PROPERTY AND EXISTING R/W LINE	
ESTIMATED R/W LINE	
EDGE OF PAVEMENT	
ENVIRONMENTALLY SENSITIVE AREA	



NOTE: REQUIRED R/W AND/OR EASEMENTS ESTIMATED AT 50-70 FEET ON EACH SIDE OF CENTERLINE (100-140 FEET TOTAL) WITHIN THE SCREENING LIMITS.

GEORGIA DEPARTMENT OF TRANSPORTATION  
PROJECT NO. CSSFT-0008-00(627)  
PI 0008627, HALL COUNTY  
ENVIRONMENTAL SCREENING

SHEET 2

HALL COUNTY

MILE POST  
1.40-2.62

0008627  
02/29/12



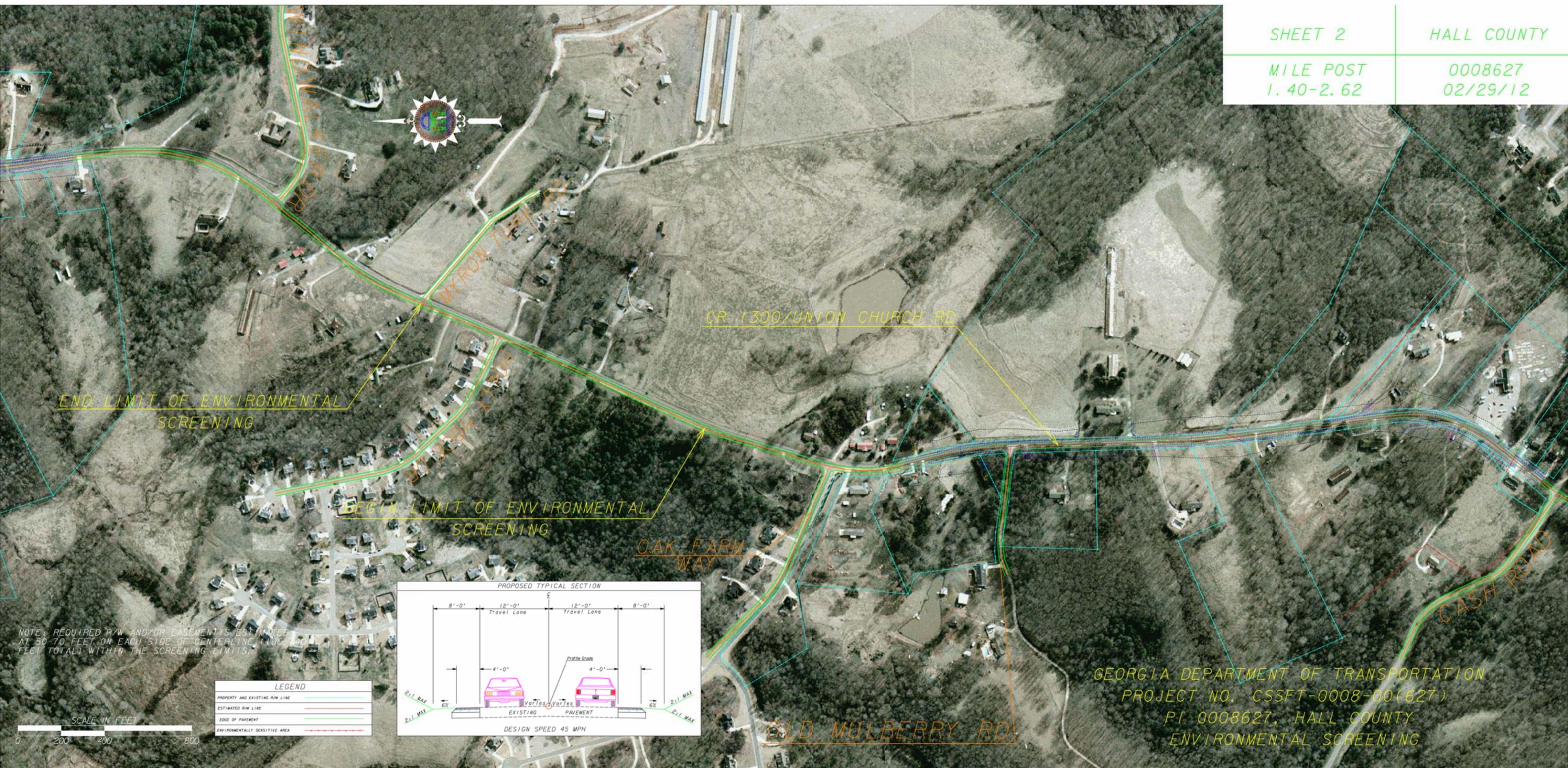
GEORGIA DEPARTMENT OF TRANSPORTATION  
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 PI 0008627, HALL COUNTY  
 ENVIRONMENTAL SCREENING

SHEET 2

HALL COUNTY

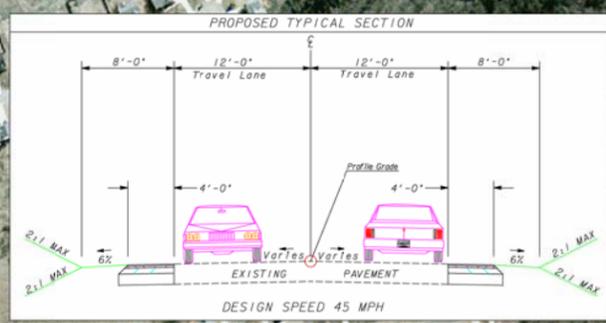
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0008627  
02/29/12



NOTE: REQUIRED R/W AND/OR EASEMENT IS ESTIMATED AT 50-70 FEET ON EACH SIDE OF CENTERLINE (100-140 FEET TOTAL) WITHIN THE SCREENING LIMITS.

LEGEND	
PROPERTY AND EXISTING R/W LINE	
ESTIMATED R/W LINE	
EDGE OF PAVEMENT	
ENVIRONMENTALLY SENSITIVE AREA	

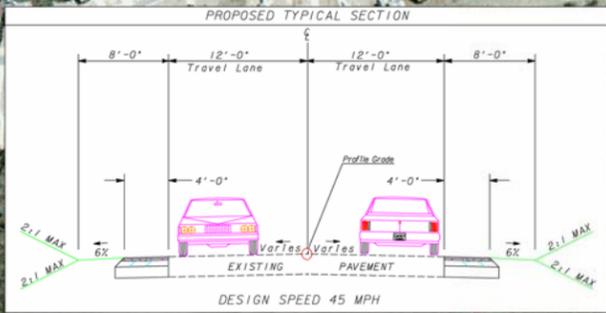


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PROJECT NO. CSSFT-0008-00(627)  
PI 0008627, HALL COUNTY  
ENVIRONMENTAL SCREENING

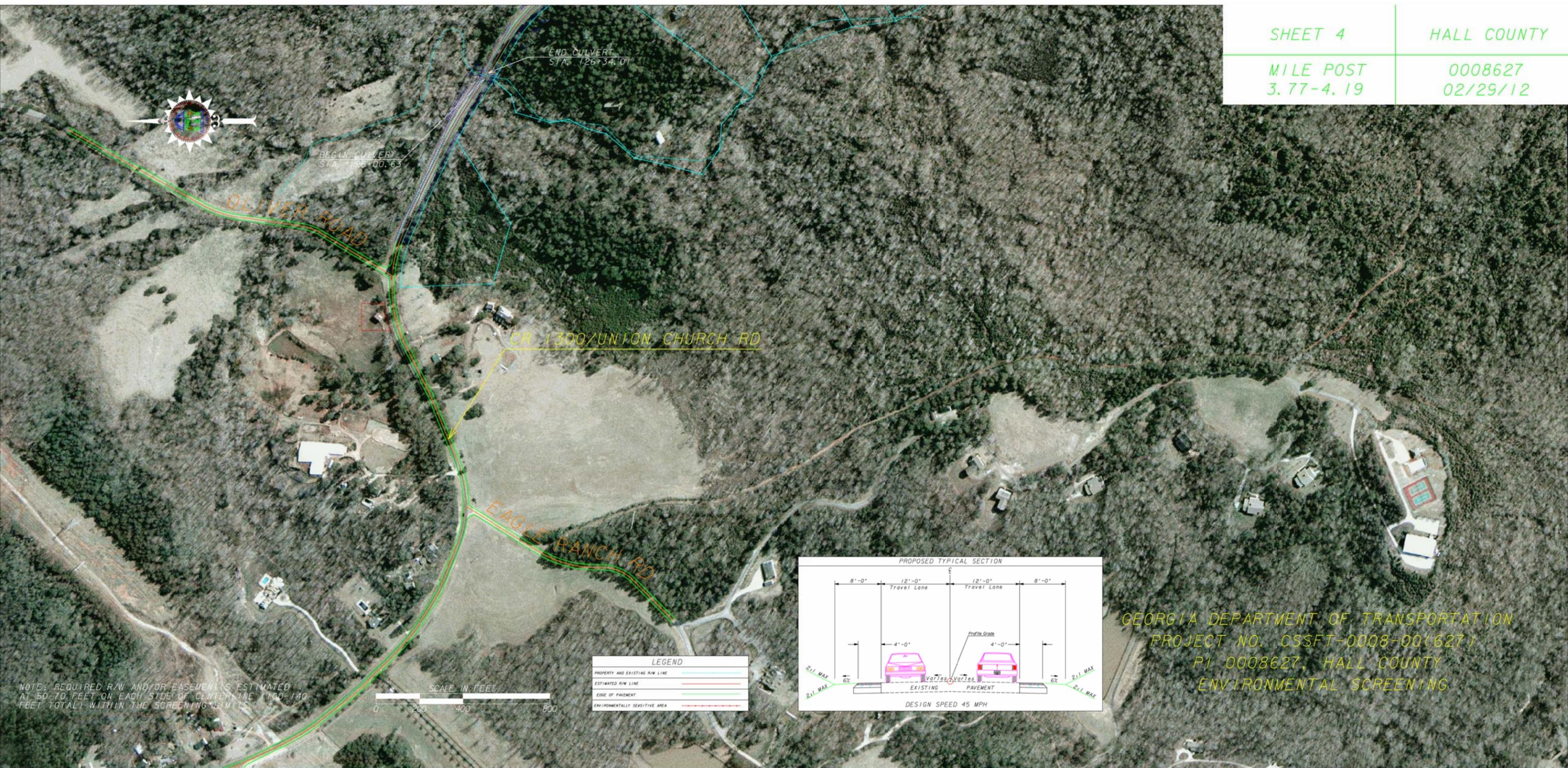


NOTE: REQUIRED R/W AND/OR EASEMENTS ESTIMATED AT 50-70 FEET ON EACH SIDE OF CENTERLINE (100-140 FEET TOTAL) WITHIN THE SCREENING LIMITS.

LEGEND	
PROPERTY AND EXISTING R/W LINE	
ESTIMATED R/W LINE	
EDGE OF PAVEMENT	
ENVIRONMENTALLY SENSITIVE AREA	



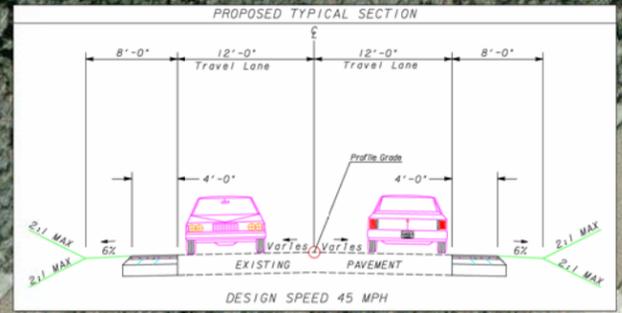
GEORGIA DEPARTMENT OF TRANSPORTATION  
PROJECT NO. CSSFT-0008-00(627)  
PI 0008627, HALL COUNTY  
ENVIRONMENTAL SCREENING



NOTE: REQUIRED R/W AND/OR EASEMENTS ESTIMATED AT 50 TO FEET ON EACH SIDE OF CENTERLINE (100-140 FEET TOTAL) WITHIN THE SCREENING LIMITS.



LEGEND	
PROPERTY AND EXISTING R/W LINE	
ESTIMATED R/W LINE	
EDGE OF PAVEMENT	
ENVIRONMENTALLY SENSITIVE AREA	



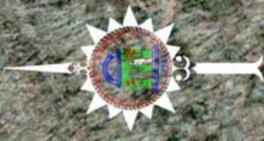
GEORGIA DEPARTMENT OF TRANSPORTATION  
PROJECT NO. CSSFT-0008-00(627)  
PI 0008627, HALL COUNTY  
ENVIRONMENTAL SCREENING

SHEET 5

HALL COUNTY

MILE POST  
4.19-5.16

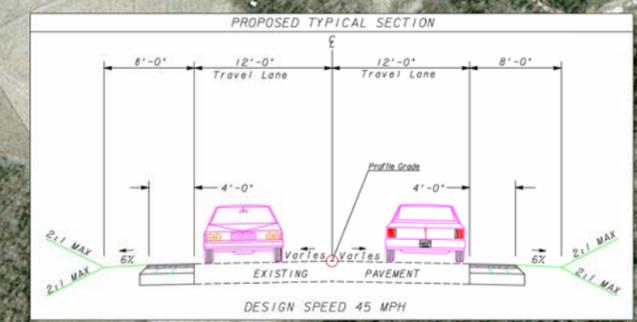
0008627  
02/29/12



END LIMIT OF ENVIRONMENTAL  
SCREENING

CR 1300/UNION CHURCH RD

LEGEND	
PROPERTY AND EXISTING R/W LINE	
ESTIMATED R/W LINE	
EDGE OF PAVEMENT	
ENVIRONMENTALLY SENSITIVE AREA	



NOTE: REQUIRED R/W AND/OR EASEMENTS ESTIMATED AT 50-70 FEET ON EACH SIDE OF CENTERLINE (100-140 FEET TOTAL) WITHIN THE SCREENING LIMITS.



GEORGIA DEPARTMENT OF TRANSPORTATION  
PROJECT NO. CSSFT-0008-00(627)  
PI 0008627, HALL COUNTY  
ENVIRONMENTAL SCREENING