



Huntsville, Alabama

308 Fountain Circle
Huntsville, AL 35801

Cover Memo

Meeting Type: City Council Regular Meeting **Meeting Date:** 1/12/2023

File ID: TMP-2334

Department: Engineering

Subject:

Type of Action: Approval/Action

Resolution authorizing the Mayor to enter into an Agreement between the City of Huntsville and Alabama Department of Transportation for the Installation, Operation and Maintenance of Traffic Control Signals for Memorial Parkway from Mastin Lake Road to Winchester Road, ALDOT Project No. NH-0001(610).

Resolution No.

Does this item need to be published? No

If yes, please list preferred date(s) of publication: N/A

Finance Information:

Account Number: N/A

City Cost Amount: N/A

Total Cost: N/A

Special Circumstances:

Grant Funded: N/A

Grant Title - CFDA or granting Agency: N/A

Resolution #: N/A

Location: (list below)

Address: N/A

District: District 1 ☐ District 2 ☐ District 3 ☐ District 4 ☐ District 5 ☐

Additional Comments:

Agreement between the City and ALDOT for maintenance of traffic signals on SR-1 (Memorial Parkway) associated with improvements between Mastin Lake and Winchester Road for roadway improvements.

RESOLUTION NO. 23-

BE IT RESOLVED by the City Council of the City of Huntsville, Alabama, that the Mayor be, and is hereby authorized, to enter into an agreement between the City of Huntsville and the State of Alabama Department of Transportation for the Installation, Operation and Maintenance of Traffic Control Signals for Memorial Parkway from Mastin Lake Road to Winchester Road, ALDOT Project No. NH-0001(610), in Huntsville, Alabama, on behalf of the City of Huntsville, a municipal corporation in the State of Alabama, which said agreement is substantially in words and figures similar to that document attached hereto and identified as "Agreement between the City of Huntsville and the State of Alabama Department of Transportation for the Installation, Operation and Maintenance of Traffic Control Signals for Memorial Parkway from Mastin Lake Road to Winchester Road, ALDOT Project No. NH-0001(610)." consisting of a total of fourteen (14) pages and the date of January 12, 2023, appearing on the margin of the first page, together with the signature of the President or President Pro Tem of the City Council, and an executed copy of said document being permanently kept on file in the Office of the City Clerk of the City of Huntsville, Alabama.

ADOPTED this the 12th day of January, 2023.

President of the City Council of
the City of Huntsville, Alabama

APPROVED this the 12th day of January, 2023.

Mayor of the City of Huntsville, Alabama

For Official Use Only: ALDOT Agreement Number: _____

Region Tracking Number: _____ Project Number: NH-0001(610)

Region: NR - Guntersville County: MADISON

**STATE OF ALABAMA acting by and through the
ALABAMA DEPARTMENT OF TRANSPORTATION: AGREEMENT for the
INSTALLATION and/or OPERATION and/or MAINTENANCE OF TRAFFIC CONTROL SIGNALS and/or
ROADWAY LIGHTING**

This Agreement, in accordance with resolution number _____ dated (or minutes dated) _____ attached hereto and made part of this Agreement, is made and entered into by and between the Alabama Department of Transportation (herein referred to as STATE) and the CITY OF HUNTSVILLE (herein referred to as **MAINTAINING AGENCY**) for the accomplishment of the following work as hereinafter indicated by the alphabetic letter of "X" marked in the check-boxes below, to wit:

	(A) New Installation	(B) Equipment Upgrade	(C) Complete Removal	(D) Operation	(E) Maintenance
Traffic Control Signal:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Intersection Flashing Signal/Beacon:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roadway Lighting:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The accomplishment of the work indicated by the alphabetic letter of "X" marked in the check-box(es) above and hereinafter signified by the use of the corresponding alphabetic letter A, B, C, D, and/or E as applicable, will be at the following location(s): {Example: AL-3/US-31 @ Main Street [A, D, & E] denotes the installation, operation, and maintenance of the equipment installed} **NOTE** – if more space is needed, please use continuation sheets.

SR-1 / Memorial Pkwy - Traffic Control Signal [A, C, D, & E]

- For the purposes of this Agreement, "equipment and/or associated hardware" shall refer to the equipment and/or associated hardware used to install, upgrade, maintain, and/or operate traffic control signals, intersection flashing signals/beacons, roadway lighting, and/or other as specified in the chart above.
- In the event the work to be accomplished above is identified by (A) and/or (B), the ☒ STATE ☐ MAINTAINING AGENCY will furnish and the ☒ STATE ☐ MAINTAINING AGENCY will install the equipment and/or associated

hardware utilized in the accomplishment of the work. In the event the STATE contributes funds to the work and the MAINTAINING AGENCY will be credited or debited for under-runs or overruns respectively, the "**Exhibit O**" is attached to and made part of this Agreement.

3. The equipment and/or associated hardware shall be installed in accordance with the applicable portions of the:
 - A. Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), current ALDOT approved edition.
 - B. State of Alabama Project Details and Special and Standard Highway Drawings, current year version.
 - C. National Electrical Code, current edition.
 - D. Alabama Department of Transportation (ALDOT) Standard Specifications for Highway Construction, current edition and applicable special provisions.
 - E. Code of Alabama, 1975 (as Amended) with specific reference to:
 - (1) §23-1-113, Municipal Connecting Link Roads – Stipulations and Conditions [specifically sub-paragraphs (6) and (7)].
 - (2) §32-5A-32, Traffic – Control signal legend.
 - (3) §32-5A-33, Pedestrian – Control signals.
 - (4) §32-5A-34, Flashing signals.
 - (5) §32-5A-35, Lane – Direction – Control signals.
4. The STATE shall determine the quantity of the equipment and/or associated hardware to be utilized in the accomplishment of the work identified by (A) and/or (B) above. In the event the MAINTAINING AGENCY furnishes the equipment and/or associated hardware to be utilized in the accomplishment of the work identified by (A) and/or (B) above, the MAINTAINING AGENCY shall ascertain that the type and quality of the equipment and/or associated hardware is in accordance with the STATE's Materials, Sources, and Devices with Special Acceptance Requirements (APL) as maintained by the STATE's Bureau of Materials and Tests.
5. It is the sole responsibility of the MAINTAINING AGENCY to locate and/or relocate any and all utilities in conflict with the installation, upgrade, and/or maintenance of equipment and associated hardware prior to commencing work to install, upgrade, and/or maintain equipment and associated hardware. The MAINTAINING AGENCY will locate and/or relocate such utilities in accordance with all applicable Federal and State laws, regulations, and procedures. Associated utility costs will be at the sole expense of the MAINTAINING AGENCY. In the event utilities are damaged during the installation, upgrade, and/or maintenance of equipment and associated hardware due to failure of the MAINTAINING AGENCY to relocate and/or relocate such utilities, the MAINTAINING AGENCY shall be responsible for providing the funding to pay for any and all associated costs to repair the utilities.
6. Title to any and all equipment and/or associated hardware furnished by the STATE shall remain in the STATE and the STATE is deemed to be the sole owner of such equipment and/or hardware.
7. The equipment and/or associated hardware shall be operated and maintained at the sole expense of the MAINTAINING AGENCY. The MAINTAINING AGENCY agrees to provide electrical energy on a continuing basis as required, beginning at the time of the initial electrical service connection during the construction of the system. The MAINTAINING AGENCY agrees further to maintain the equipment and/or associated hardware in a good state of repair at all times, as required in

accordance with the applicable documents: Manual on Uniform Traffic Control Devices for Streets and Highways and the Alabama Department of Transportation Standard Specifications for Highway Construction and applicable special provisions. Any traffic control signal equipment and/or associated hardware must also be maintained in accordance with any traffic signal operating plan of the STATE which is in effect at the applicable time of the maintenance. If a malfunction of the equipment and/or associated hardware should ever occur, the MAINTAINING AGENCY shall make or cause to be made any repairs immediately. If a malfunction presents a potential hazard to the motoring public and the MAINTAINING AGENCY is unable to repair the equipment and/or associated hardware in a timely manner as determined by the STATE, the MAINTAINING AGENCY agrees that the STATE reserves the right to and may repair the equipment and/or associated hardware, and invoice the MAINTAINING AGENCY for all costs incurred. The MAINTAINING AGENCY agrees to pay the STATE all such costs incurred by the STATE promptly upon receipt of the invoice from the STATE.

- 7a. In instances where ALDOT maintains a fiber-optic trunk line that is used in conjunction with a closed-loop signal system, the MAINTAINING AGENCY shall maintain the fiber-optic cable from the splice point in the trunk line out to the traffic control equipment.
- 8a. Installation requests made by the MAINTAINING AGENCY and identified on page one as "(A) New Installation" with "Traffic Control Signal" marked must follow the Traffic Signal Warrant and Justification procedure as identified in the Alabama Department of Transportation Traffic Signal Design Guide and Timing Manual, latest edition. For any warrant study/analysis which does not satisfy a traffic signal warrant or warrants, the MAINTAINING AGENCY agrees to accept any and all responsibility for any damage or injury that may be caused by or related to the installation, location, operation, sequencing, and/or maintenance of the equipment and/or associated hardware and shall defend, indemnify, and hold harmless the State of Alabama, the Alabama Department of Transportation, and its agents, servants, employees, in their official or individual capacities and/or facilities from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the installation, operation, and maintenance of the equipment and/or associated hardware, or any claim, damage, loss, or expense to the person or property caused. A copy of the warrant study/analysis shall be attached to and made part of this Agreement.

- 8b. Check one:

The ☒ CITY (Incorporated Municipality)

Subject to the limitations on damages applicable to municipal corporations under Alabama Code § 11-47-190(1975), the CITY shall indemnify and hold harmless the State of Alabama, the Alabama Department of Transportation, its officers, officials, agents, servants, and employees from and against (1) claims, damages, losses, and expenses, including but not limited to attorney's fees arising out of, connected with, resulting from, or related to the work performed by the CITY, or its officers, employees, contracts, agents or assigns (2) the provision of any services or expenditure of funds required, authorized, or undertaken by the CITY pursuant to the terms of this Agreement, or (3) any damage, loss, expense, bodily injury, or death, or injury or destruction or tangible property (other than the work itself), including loss of use therefrom, and including but not limited

to attorney's fees, caused by the willful, negligent, careless, or unskillful acts of the CITY, its agents, servants, representatives, or employees, or the misuse, misappropriation, misapplication, or misexpenditure of any source of funding, compensation, or reimbursement by the CITY, its agents, servants, representatives, or employees, or anyone for whose acts the CITY may be liable.

The ☐ COUNTY (County Government or Agency)

The COUNTY shall be responsible at all times for all of the work performed under this agreement and, as provided in Alabama Code § 11-93-2(1975), the COUNTY shall indemnify and hold harmless the State of Alabama, the Alabama Department of Transportation, its officers, officials, agents, servants, and employees.

For all claims not subject to Alabama Code § 11-93-2(1975), the COUNTY shall indemnify and hold harmless the State of Alabama, the Alabama Department of Transportation, its officers, officials, agents, servants, and employees from and against any and all damages, claims, loss, liabilities, attorney's fees or expense whatsoever; or any amount paid in compromise thereof arising out of, connected with, or related to (1) work performed under this Agreement, (2) the provision of any services or expenditure of funds required, authorized, or undertaken by the COUNTY pursuant to the terms of this Agreement, or (3) misuse, misappropriation, misapplication, or misexpenditure of any source of funding, compensation or reimbursement by the COUNTY, its officers, officials, agents, servants, and employees.

The term "hold harmless" includes the obligation of the MAINTAINING AGENCY to pay damages on behalf of the State of Alabama, the Alabama Department of Transportation, and its agents, servants, and/or employees.

9. Complete removal of the equipment and/or associated hardware, hereinabove identified by (C), will be at the sole expense of the ☒ STATE ☐ MAINTAINING AGENCY.
10. The STATE reserves the right to demand the removal of the equipment and/or associated hardware should the STATE determine that the signal is no longer required or deem its condition or operation hazardous. Further, the STATE shall have the right to remove the equipment and/or associated hardware should the MAINTAINING AGENCY fail to do so upon demand by the STATE. The MAINTAINING AGENCY agrees to reimburse the STATE for its costs associated with the removal. Any equipment and/or associated hardware which is deemed by the STATE to be non-uniform or obsolete will be removed and disposed of by the MAINTAINING AGENCY. None of the non-uniform or obsolete equipment and/or associated hardware which has been removed shall be reused on the STATE highway system.
11. If future traffic conditions require changes and/or adjustments to said equipment and/or associated hardware (other than ordinary timing), the MAINTAINING AGENCY shall obtain the approval of the STATE before such changes are implemented and the STATE shall make a determination on whether a new Agreement is required to be submitted for the UPGRADING, OPERATION, and MAINTENANCE of the new equipment and/or associated hardware. All such changes shall be at the sole cost and expense of the MAINTAINING AGENCY.

12. At such time as a warrant study is conducted on an existing signalized intersection and the results differ from the previous warrant study conducted at that signalized intersection, a new Agreement for Installation and/or Operation and/or Maintenance of Traffic Control Signals and/or Roadway Lighting shall be executed with the MAINTAINING AGENCY.

13. In the event Federal funds are utilized in the accomplishment of the work hereinbefore described, "**Exhibit M**" is attached to and made a part of this Agreement.

14. FUNDS SHALL NOT BE CONSTITUTED AS A DEBT

It is agreed that the terms and commitments contained herein shall not be construed as a debt of the State of Alabama in violation of Article 11, Section 213 of the Constitution of Alabama, 1901, as amended by Amendment Number 26. It is further agreed that if any provision of this Agreement shall contravene any statute or Constitutional Provision or Amendment, then the conflicting provision in this Agreement shall be deemed null and void.

For any and all disputes arising under the terms of this Agreement, the parties hereto agree, in compliance with the recommendations of the Governor and Attorney General, when considering settlement of such disputes, to utilize appropriate forms of non-binding alternative dispute resolution including, but not limited to, mediation by and through the Attorney General's Office of Administrative Hearings or where appropriate, private mediators.

15. The type and number of signal & pedestrian heads per intersection or roadway lighting hardware are as follows: {Example: 5 – 3 sec, 12", red ball, yellow/green left arrow. OPTION: If plans are available to convey information below, just enter "**SEE ATTACHED PLANS**".} **NOTE** – If more space is needed, please use continuation sheets.

SEE ATTACHED PLANS - NH-0001(610)

TYPE OF SIGNAL		CONTROLLER	
<input checked="" type="checkbox"/> Traffic Control	<input type="checkbox"/> Pedestrian Control	Make:	Model #:
<input type="checkbox"/> Flashing	<input type="checkbox"/> Lane Control	<input type="checkbox"/> Fixed Time	<input type="checkbox"/> Two Phase
<input type="checkbox"/> School Flasher	<input type="checkbox"/> Railroad Crossing	<input type="checkbox"/> Semi Actuated	<input type="checkbox"/> Four Phase
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Full Actuated	<input type="checkbox"/> Eight Phase
_____		<input type="checkbox"/> Other: _____	

		SYSTEM <input type="checkbox"/> YES <input type="checkbox"/> NO	

16. In the event the work to be accomplished is identified by (A), (B), and/or (C) and [1] in part or wholly constitutes an interconnected, coordinated, fixed time relationship, signal control operation between two or more intersections (herein referred to as a SYSTEM and hereinabove indicated by the SYSTEM check-box for YES marked in the controller box above), [2] is located within the limits of a SYSTEM, or [3] is within close proximity as to adjoin a SYSTEM, the ☐ STATE ☐ MAINTAINING AGENCY shall substantiate the work identified by (A), (B), and/or (C) to be SYSTEM compatible.
17. By entering into this agreement, the MAINTAINING AGENCY is not an agent of the State, its officers, employees, agents or assigns. The MAINTAINING AGENCY is an independent entity from the State and nothing in this agreement creates an agency relationship between the parties.
18. By signing this contract, the contracting parties affirm, for the duration of this agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of this agreement and shall be responsible for all damages resulting there from.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK. SIGNATURE PAGE TO FOLLOW.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by those officers, officials, and persons thereunto duly authorized, and the Agreement is deemed to be dated and to be effective on the date stated hereinafter as the date of the approval of the Region Engineer.

(Seal of MAINTAINING AGENCY)

Legal Name of MAINTAINING AGENCY

Attest: _____
(Seal or notary signature)

By: _____
Authorized Signature for MAINTAINING AGENCY

Agreement Recommended for approval:

By: _____
Area Traffic Engineer Signature

STATE OF ALABAMA acting by and through the ALABAMA DEPARTMENT OF TRANSPORTATION

The within and foregoing Agreement is hereby approved on this _____ day
of _____, 20_____.

APPROVED:

RECORDED:

By: _____
Region Engineer Signature

By: _____
State Traffic Engineer Signature

Date: _____
(Added to Archive)

Region Tracking Number: _____ Project Number: NH-0001(610)
Region: NR - Guntersville  County: MADISON

7/18/90

EXHIBIT M

CERTIFICATION

This certification is applicable to the instrument to which it is attached whether attached directly or indirectly with other attachments to such instrument.

The prospective participant/recipient, by causing the signing of and the submission of this Federal contract, grant, loan, cooperative agreement, or other instrument as might be applicable under Section 1352, Title 31, U.S. Code, and the person signing same for and on behalf of the prospective participant/recipient each respectively certify that to the best of the knowledge and belief of the prospective participant or recipient and of the person signing for and on behalf of the prospective participant/recipient, that:

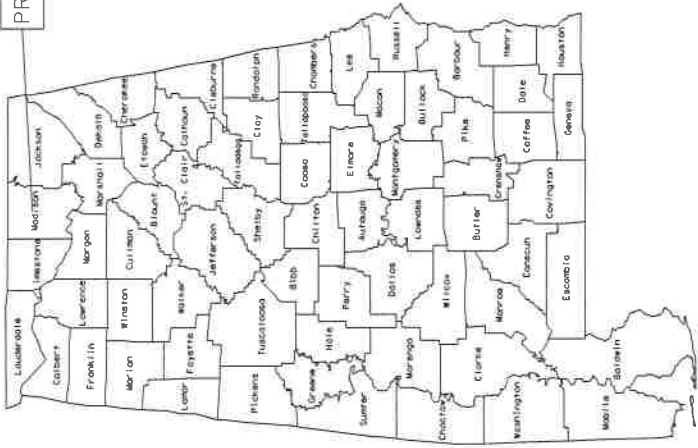
(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the prospective participant/recipient or the person signing on behalf of the prospective participant/recipient as mentioned above, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, or other instrument as might be applicable under Section 1352, Title 31, U.S. Code, the prospective participant/recipient shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant/recipient also agrees by submitting this Federal contract, grant, loan, cooperative agreement or other instrument as might be applicable under Section 1352, Title 31, U.S. Code, that the prospective participant/recipient shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.

PROJECT LOCATION



Existing Bridge (None)

Existing and Required Bridge Culverts (None)

Required Bridges (Dual Bridges)

INDEX	STA TO	STA	LENGTH	BIN
1	117+71.42	121+02.42	331.00	021294 (NBR)
	117+71.42	121+02.42	331.00	021204 (SBR)
TOTAL EFFECT			331.00	

Begin Project
Sta. 102+89.73

Begin Work
Sta. 100+00.00

Equations & Exceptions

Sta. 31+36.310 (METRIC) (BK) = Sta. 102+89.73 (U.S. CUST) (AH)
(NO EFFECT)

	FEET	MILES
Total Stationing of Project	9947.40	
Equations & Exceptions	0.00	
Net Length of Project	9947.40	1.883
Net Length of Bridges	331.00	0.062
Net Length of Roadways	9616.40	1.821

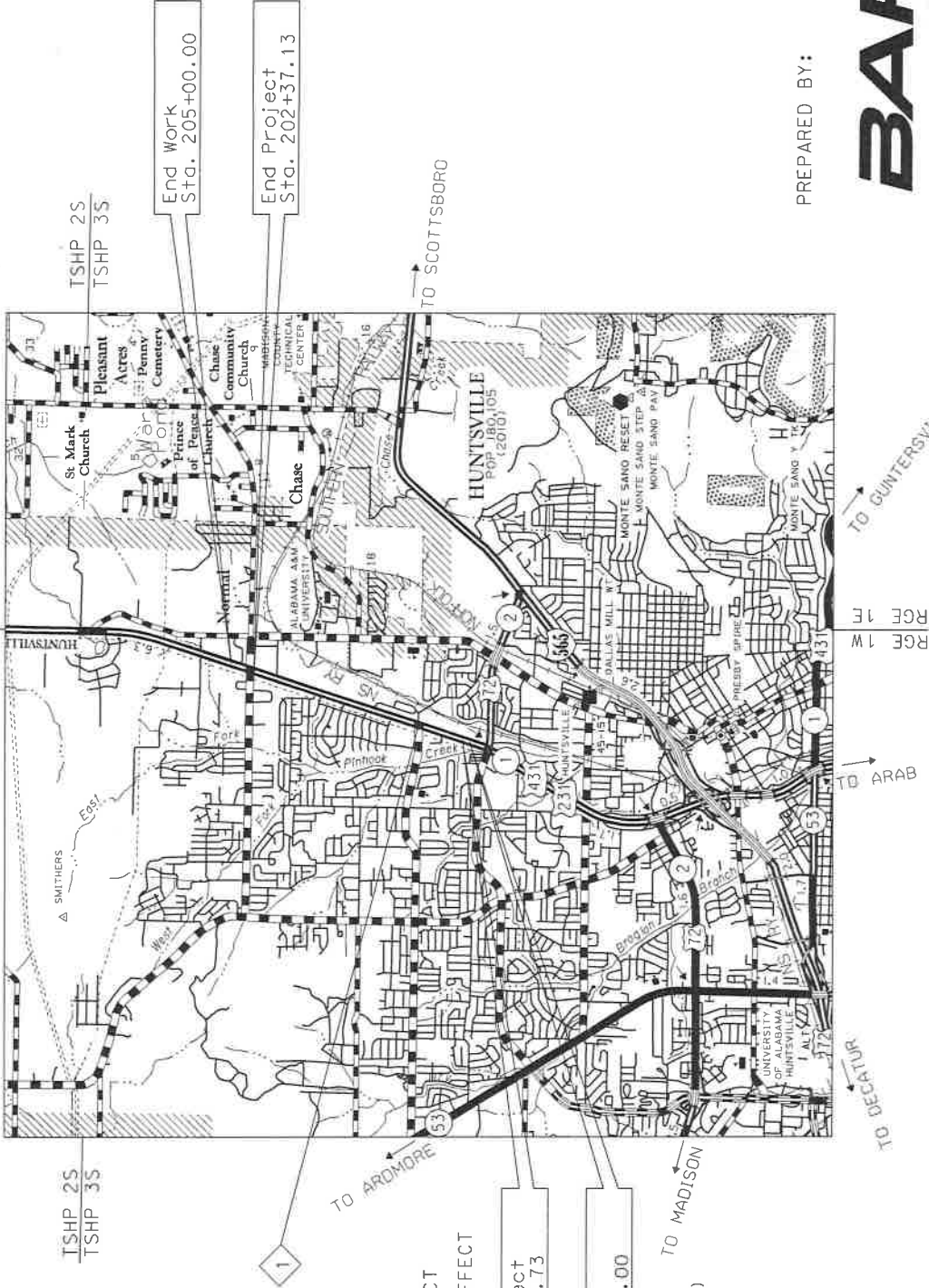
ALABAMA

DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED PROJECT NUMBER

NH-0001(610)

SR-1 (MEMORIAL PARKWAY) FROM 0.31 MI S OF CR-75 (MASTIN LAKE RD) TO CR-65 (WINCHESTER RD) INCLUDING AN OVERPASS AT CR-75 AND ACCESS MANAGEMENT IMPROVEMENTS TO CR-65 GRADE, DRAIN, BASE, PAVE, LIGHTING, SIGNAL, RETAINING WALLS, AND BRIDGES MADISON COUNTY



PREPARED BY:

BARGE
DESIGN SOLUTIONS

3535 Grandview Parkway // Suite 500 // Birmingham, Alabama 35243
PHONE (205) 298-6074 // FAX (205) 298-6075

ENGINEER:
NO:
DATE:

DE SUBMITTAL
PRINTED OCTOBER 7, 2022

STATE	REFERENCE PROJECT NO.	FISCAL YEAR	SHEET NO.	LAST SHEET NO.
AL	NH-0001(610)	2023	1	375
CONTRACT ID NO.				

Preliminary Project No. NHF-8510(009)
Code No. 4321-NH04L-100004927-2

Design Designation

ADT (2022)47,191
ADT (2042)77,328
K9%
D62%
TDHV5%
TADT4%
V (Design Speed)55 MPH
Min. Stopping Sight Dist.425 FT

These plans have been prepared to conform with the Alabama Department of Transportation Standard Specifications for Highway Construction, 2022 Edition.



ALABAMA DEPARTMENT OF TRANSPORTATION
Submitted for Approval:
STATE DESIGN ENGINEER
CHIEF ENGINEER
Approved:
TRANSPORTATION DIRECTOR

INDEX TO SHEETS

REFERENCE PROJECT NO NH-0001(610)				FISCAL YEAR 2023	SHEET NO 1A
SHEET NO.	TITLE SHEET	DESCRIPTION	SHEET NO.	DESCRIPTION	
1	INDEX TO SHEETS		58	NB MEM PKWY ACCESS RD CUL-DE-SAC GRADING PLAN SHEET	
1A	INDEX TO SHEETS				
1-B	INDEX TO SPECIAL AND STANDARD DRAWINGS (INCLUDES SHEET 1-B1)		59	OMITTED	
1C - 1-D	PLANS LEGEND SHEETS		60	TRAFFIC CONTROL PLAN - SEQUENCE OF CONSTRUCTION AND LEGEND	
1E	TRAFFIC SIGNAL AND ITS LEGEND		61	TRAFFIC CONTROL PLAN QUANTITIES	
1F - 1-O	PRIMARY SURVEY CONTROL & GEOMETRIC LAYOUT SHEETS		62 - 77	TRAFFIC CONTROL PLAN - LAYOUTS (INCLUDES SHEETS 65A THRU 65-D, 70A THRU 70-D, 71A-B & 75A THRU 75-D)	
2 - 2J	TYPICAL SECTIONS - MEMORIAL PARKWAY (SR-1)		78 - 85	TRAFFIC CONTROL PLAN DETAILS	
2K - 2N	TYPICAL SECTIONS - SIDE ROADS		86 - 89	OMITTED	
2-O	PROJECT NOTES		90	EROSION AND SEDIMENT CONTROL LEGEND	
2P	GENERAL TRAFFIC CONTROL PLAN NOTES		91 - 94-D	EROSION & SEDIMENT CONTROL PLAN - INITIAL PHASE (INCLUDES SHEET 92A)	
2-Q	LIGHTING PROJECT NOTES		95 - 98-D	EROSION & SEDIMENT CONTROL PLAN - INTERMEDIATE PHASE (INCLUDES SHEET 96A)	
2R	TRAFFIC SIGNAL PLAN NOTES		99 - 99H	EROSION & SEDIMENT CONTROL PLAN - FINAL PHASE (INCLUDES SHEET 99A)	
2S	GENERAL SIGNING PLAN NOTES				
2T	OMITTED		100	OMITTED	
2U	SPECIAL PROJECT DETAIL-TYPICAL PLACEMENT OF OVERHEAD SIGN BRIDGE ON ROADWAY		101 - 101BC	BRIDGE PLANS	
2V	OMITTED				
2W	SPECIAL PROJECT DETAIL-INFILTRATION SWALE		102 - 149	OMITTED	
2X	SPECIAL PROJECT DETAIL-REQUIRED UNDERCUT DETAIL				
2Y	SPECIAL PROJECT DETAIL- REQD CSF-36 RETAINING WALL MOUNTED BARRIER DETAIL				
3 - 3U	SUMMARY OF QUANTITIES				
4	PLAN/PROFILE SHEET - MEMORIAL PARKWAY (SR-1) STA. 100+00 TO STA. 114+00		150	HYDRAULIC DATA SHEET	
4A	PROFILE SHEET - NBFR AND SBFR STA. 100+00 TO STA. 114+00		151 - 177	DRAINAGE SECTIONS (INCLUDES SHEET 166A)	
5	PLAN/PROFILE SHEET - MEMORIAL PARKWAY (SR-1) STA. 114+00 TO STA. 128+00		178 - 179	OMITTED	
5A	PROFILE SHEET - NBFR AND SBFR STA. 114+00 TO STA. 128+00		180	SPECIAL PROJECT DETAIL - INLET TYPE "PR"	
5B	PROFILE SHEET - NORTH AND SOUTH U-TURNS		181	SPECIAL PROJECT DETAIL - INLET TYPE S (PARTIAL)	
6	PLAN/PROFILE SHEET - MEMORIAL PARKWAY (SR-1) STA. 128+00 TO STA. 142+00		182	SPECIAL PROJECT DETAIL - INLET TYPE S WITH CONCRETE APRON	
6A	PROFILE SHEET - NBFR AND SBFR STA. 128+00 TO STA. 142+00		183	SPECIAL PROJECT DETAIL - INLET TYPE S (MODIFIED)	
7	PLAN/PROFILE SHEET - MEMORIAL PARKWAY (SR-1) STA. 142+00 TO STA. 156+00		184	SPECIAL PROJECT DETAIL - INLET TYPE E (MODIFIED) DETAILS	
7A	PROFILE SHEET - SBFR STA. 142+00 TO STA. 146+16.17		185	SPECIAL PROJECT DETAIL - JUNCTION BOX (SPECIAL) DETAILS	
8	PLAN/PROFILE SHEET - MEMORIAL PARKWAY (SR-1) STA. 156+00 TO STA. 168+50		186	SPECIAL PROJECT DETAIL - TRENCH DRAIN DETAILS	
9	PLAN/PROFILE SHEET - MEMORIAL PARKWAY (SR-1) STA. 168+50 TO STA. 181+50				
10	PLAN/PROFILE SHEET - MEMORIAL PARKWAY (SR-1) STA. 181+50 TO STA. 194+50		187 - 204	OMITTED	
11	PLAN/PROFILE SHEET - MEMORIAL PARKWAY (SR-1) STA. 194+50 TO END PROJECT		205 - 214	TEST BORING RECORD	
12	PLAN/PROFILE SHEET - MASTIN LAKE ROAD		215 - 219	OVERHEAD SIGN BRIDGE BORINGS	
13	PLAN/PROFILE SHEET - NB MEMORIAL PARKWAY ACCESS ROAD & YORK ROAD CONNECTOR				
13A	PLAN/PROFILE SHEET - LAKEWOOD SPECIAL DITCH		220	ELECTRICAL LEGEND AND ABBREVIATIONS	
14	PROFILE SHEET - RAMPS		220A - 224	REQUIRED ROADWAY LIGHTING PLAN	
15 - 18-D	PAVING LAYOUT SHEETS (INCLUDES SHEET 16A)		225 - 228	REQUIRED SINGLE LINE WIRING DIAGRAM	
19 - 20	OMITTED		229	SPECIAL PROJECT DETAIL-BARRIER WALL LUMINAIRE POLE FOUNDATION DETAILS	
21 - 24-D	STRIPING & SIGNING LAYOUT SHEETS (INCLUDES SHEET 22A)				
25 - 26-B	SIGN FACE DETAILS		230 - 249	OMITTED	
27 - 29A	SIGN CROSS SECTIONS		250 - 331	CROSS SECTIONS - MEMORIAL PARKWAY (SR-1) (INCLUDES SHEET 265A)	
29-B	DETAILS OF TYPICAL SLOPE PAVED MONOLITHIC ISLAND				
30	UTILITY OWNERS		332 - 339	OMITTED	
31 - 40	UTILITY PLAN/PROFILE SHEETS		340 - 345	CROSS SECTIONS - MASTIN LAKE ROAD	
41 - 48	RETAINING WALL PLAN/PROFILES (INCLUDES SHEETS 41A THROUGH 47A)				
49 - 49N	RETAINING WALL TEST BORINGS		346 - 349	OMITTED	
50 - 50H	REMOVE/RETAIN SHEETS		350 - 351	CROSS SECTIONS - NB MEM PKWY ACCESS RD	
51	TRAFFIC SIGNAL LAYOUT US 231 AT MASTIN LAKE		352 - 354	OMITTED	
52 - 56	OMITTED		355 - 356	CROSS SECTIONS - YORK ROAD CONNECTOR	
57	INTERSECTION GRADING PLAN SHEET		357 - 374	OMITTED	
			375	EARTHWORK SUMMARY	

RESPONSIBLE PE:		SUPERVISOR:	DESIGNER:	ALABAMA DEPARTMENT OF TRANSPORTATION		NOT TO SCALE		SHEET TITLE	ROUTE
DATE:		DATE:	DATE:	OE		INDEX TO SHEETS		SR-1	

TRAFFIC SIGNAL AND ITS LEGEND

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
NH-0001(610)	2023	1E

ELECTRICAL BOXES		MISCELLANEOUS EQUIPMENT		ABBREVIATIONS	
METALLIC PULL BOX FIBER OPTIC COMMBX TYPE F1 FIBER OPTIC COMMBX TYPE F2 TRAFFIC SIGNAL JUNCTION BOX	EXISTING	REQUIRED	EXISTING	REQUIRED	AMERICAN WIRE GUAGE AWG CLOSED CIRCUIT TELEVISION CCTV CONDUIT..... C CURB AND GUTTER C&G DYNAMIC MESSAGE SIGN DMS EASTBOUND ROADWAY EBR EMERGENCY VEHICLE PREEMPTION EVP END ANCHOR E/A FLASHING BEACON FB GALVANIZED RIGID CONDUIT..... GRC GUARDRAIL GR HIGH DENSITY POLYETHYLENE HDPE HIGHWAY ADVISORY RADIO HAR INDIVIDUAL LOWERING DEVICE ILD INTELLIGENT TRANSPORTATION SYSTEM(S)..... ITS JUNCTION BOX JB LEFT LT LIGHT EMITTING DIODE LED LIGHT POLE LP LUMINAIRE LUM MILEPOST..... MP NORTHBOUND ROADWAY NBR NON-METALLIC CONDUIT NMC PAN TILT ZOOM..... PTZ PRIMARY FIBER DISTRIBUTION UNIT..... PFDU PROPERTY LINE PL PUBLIC ACCESS CAMERA..... PAC PULL BOX..... PB RADIUS R RAILROAD RR RIGHT RT RIGHT OF WAY..... ROW ROADWAY RDWY SECONDARY FIBER DISTRIBUTION UNIT SFDU SCHOOL..... SCH SOUTHBOUND ROADWAY SBR STANDARD DRAWING STD-DWG STATION STA TRAFFIC CONTROL CENTER TCC TRAFFIC SIGNAL OPERATING PLAN TSOP TRANSPORTATION MANAGEMENT CENTER TMC TURNOUT TO VEHICLE DETECTION CAMERA VDC WESTBOUND ROADWAY WBR
CABLE IN CONDUIT					
FIBER OPTIC CABLE IN CONDUIT (UNDERGROUND)	EXISTING	REQUIRED			
FIBER OPTIC CABLE IN CONDUIT (UNDERGROUND WITH CONCRETE)					
FIBER OPTIC CABLE IN CONDUIT (BRIDGE ATTACHED)					
FIBER OPTIC CABLE (AERIAL INSTALLATION)					
INTERCONNECT CABLE IN CONDUIT (UNDERGROUND)					
INTERCONNECT CABLE (AERIAL INSTALLATION)					
CONDUIT					
ENCASEMENT					
OVERHEAD ELECTRIC					
BURIED ELECTRIC					
VEHICULAR DETECTORS					
PRESENCE LOOP DETECTOR	EXISTING	REQUIRED			
QUADRUPOLE LOOP DETECTOR					
6' x 6' LOOP DETECTOR					
VEHICLE DETECTION CAMERA					
VIDEO DETECTION ZONE					
RADAR DETECTION UNIT					
CABINETS					
CABINET	EXISTING	REQUIRED			
CAMERAS					
CCTV CAMERA, FIXED	EXISTING	REQUIRED			
CCTV CAMERA, PTZ					

RESPONSIBLE PE:	SUPERVISOR:	DESIGNER:	ALABAMA DEPARTMENT OF TRANSPORTATION		NOT TO SCALE	SHEET TITLE	ROUTE
			PLAN SUBMITTAL	TRAFFIC DESIGN SECTION			
DATE:	DATE:	DATE:	OE			TRAFFIC SIGNAL AND ITS LEGEND	SR-1

R20141222

SUMMARY OF QUANTITIES

REFERENCE PROJECT NO	FISCAL YEAR	SHEET NO
NH-0001(610)	2023	3-S

REQUIRED TRAFFIC SIGNAL PAY ITEMS				
DESCRIPTION	REMOVAL OF EXISTING TRAFFIC CONTROL UNIT (MEMORIAL AT MASTIN LAKE ROAD)	FURNISHING AND INSTALLING TRAFFIC CONTROL UNIT (FRONTAGE ROADS AT MASTIN LAKE ROAD)	REOD SPECIAL & STANDARD HIGHWAY DRAWINGS	
LOCATION	730A-000	730C-000		
	LUMP SUM	LUMP SUM		
MEMORIAL AT MASTIN LAKE ROAD	1			
FRONTAGE ROADS AT MASTIN LAKE ROAD		1	A, B, C, D, E, F, G, H, I, J, K, L, M	


REQUIRED TRAFFIC SIGNAL PAY ITEMS (EQUIPMENT)

DESCRIPTION	METAL TRAFFIC SIGNAL POLE FOUNDATION	METAL TRAFFIC SIGNAL STRAIN POLE	VEHICLE LOOP DETECTOR	TRAFFIC SIGNAL JUNCTION BOX	VEHICULAR SIGNAL HEAD, 12 INCH, 3 SECTION, TYPE LED	PEDESTALIAN SIGNAL HEAD, TYPE LED	MISCELLANEOUS EQUIPMENT, PEDESTALIAN PUSH BUTTON	MISCELLANEOUS PEDESTALIAN AND FOUNDATION	CONTROLLER ASSEMBLY, TYPE NEMA, 16 CHANNELS	ELECTRICAL POWER SERVICE ASSEMBLY W/WOOD POLE	REOD SPECIAL & STANDARD HIGHWAY DRAWINGS
	730E-000 EACH 6	730G-001 EACH 6	730J-010 EACH 12	730K-000 EACH 11	730P-022 EACH 14	730P-100 EACH 14	730Q-001 EACH 12	730Q-005 EACH 5	730R-041 EACH 1	730T-010 EACH 1	A, B, C, D, E, F, G, H, I, J, K, L, M
FRONTAGE ROADS AT MASTIN LAKE ROAD											
TOTAL	6	6	12	11	14	14	12	5	1	1	

REQUIRED TRAFFIC SIGNAL PAY ITEMS (EQUIPMENT)

	LOOP DETECTOR LEAD-IN CABLE	1", METALLIC, CONDUIT	1", NON-METALLIC, CONDUIT	2", NON-METALLIC, CONDUIT	3", NON-METALLIC, CONDUIT	6" ELECTRICAL CONDUIT, 1 LINE, TYPE 5 INSTALLATION	6" ELECTRICAL CONDUIT, 3 LINES, TYPE 5 INSTALLATION	8" ELECTRICAL CONDUIT, 1 LINE, TYPE 5 INSTALLATION	REOD SPECIAL & STANDARD HIGHWAY DRAWINGS
	730H-001 LIN FT 4160	730L-002 LIN FT 15	730L-003 LIN FT 50	730L-005 LIN FT 667	730L-007 LIN FT 54	756A-028 LIN FT 155	756A-043 LIN FT 97	756A-057 LIN FT 25	A, B, C, D, E, F, G, H, I, J, K, L, M
FRONTAGE ROADS AT MASTIN LAKE ROAD									
TOTAL	4160	15	50	667	54	155	97	25	

REQUIRED SPECIAL & STANDARD HIGHWAY DRAWINGS	
A. SHS-8	H. TSD-730-10
B. TSD-730-1	I. TSD-730-11
C. TSD-730-2	J. TSD-730-13
D. TSD-730-2A	K. TSOP-29
E. TSD-730-4	L. SHS-7
F. TSD-730-9	M. TSD-730-14
G. TSD-730-9A	

RESPONSIBLE PE:	SUPERVISOR:	DESIGNER:	PLAN SUBMITTAL	 ALABAMA DEPARTMENT OF TRANSPORTATION	NOT TO SCALE	SHEET TITLE	ROUTE
						REOD SIGNAL ITEMS	
DATE:	DATE:	DATE:	OE				

TRAFFIC SIGNAL LAYOUT US 231 AT MASTIN LAKE

REFERENCE PROJECT NO
NH-0001(610)

FISCAL YEAR
2023

SHEET NO
51

PAY ITEM 730C-000	
ESTIMATED EQUIPMENT AND MATERIALS SCHEDULE (LUMP SUM)	
3/8 IN. MESSENGER CABLE	
1/4 IN. TETHER CABLE	
SIGNS WITH HARDWARE	
IMSA 20-1 SIGNAL CABLE	
MISCELLANEOUS HARDWARE	

SUPPORTING STRUCTURES		
POLE NUMBER	POLE LENGTH (APPROX) (FT)	OFFSET (FT)
1	28	120+24.73
2	28	120+24.73
3	28	119+10.74
4	8	119+14.66
5	8	118+92.94
6	8	119+80.55
7	8	119+63.66
8	28	119+64.04
9	28	118+43.22
10	28	118+43.16
11	8	119+58.13

SBFR

REQUIRED SIGNAL HEADS

1

2

3

4

5

6

7

8

1

2

3

4

5

6

7

8

1

2

3

4

5

6

7

8

1, 3, 5, 7 2, 4, 6, 8 P2, P6, P4

VEHICLE DETECTOR SCHEDULE					
DETECTOR NUMBER	PHASE	AMP #	CHANNEL #	SIZE	LOOP TURNS
L1	1	1	2	6' X50'	2-4-2
L2	2	2	1	6' X50'	2
L3	3	3	2	6' X50'	2-4-2
L4	4	4	1	6' X50'	2
L4A	4	4	1	6' X50'	2
L5	5	2	2	6' X50'	2-4-2
L6	6	1	1	6' X50'	2
L6A	6	1	1	6' X50'	2
L7	7	4	2	6' X50'	2-4-2
L7A	7	4	2	6' X50'	2-4-2
L8	8	3	1	6' X50'	2
L8A	8	3	1	6' X50'	2

LOCATION/ COMMENTS

AT STOPLINE

AT STOPLINE

AT STOPLINE

AT STOPLINE

AT STOPLINE

AT STOPLINE

AT STOPLINE

AT STOPLINE

AT STOPLINE

AT STOPLINE

AT STOPLINE

REQUIRED SIGNS

SIGN "A"

LEFT ON GREEN ARROW ONLY

R10-5

SIGN "B"

R10-3R

R10-3L

SIGN "C"

D3-1

Mem'l Parkway

SIGN "C"

D3-1

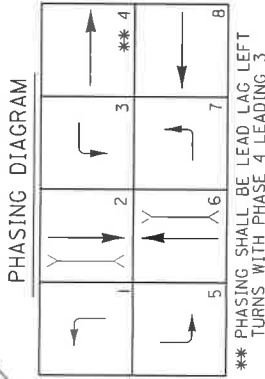
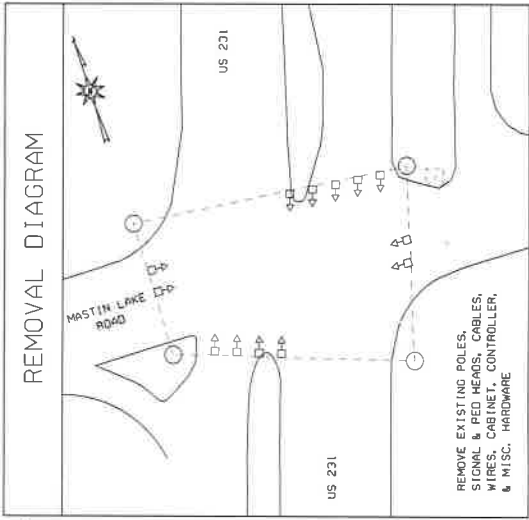
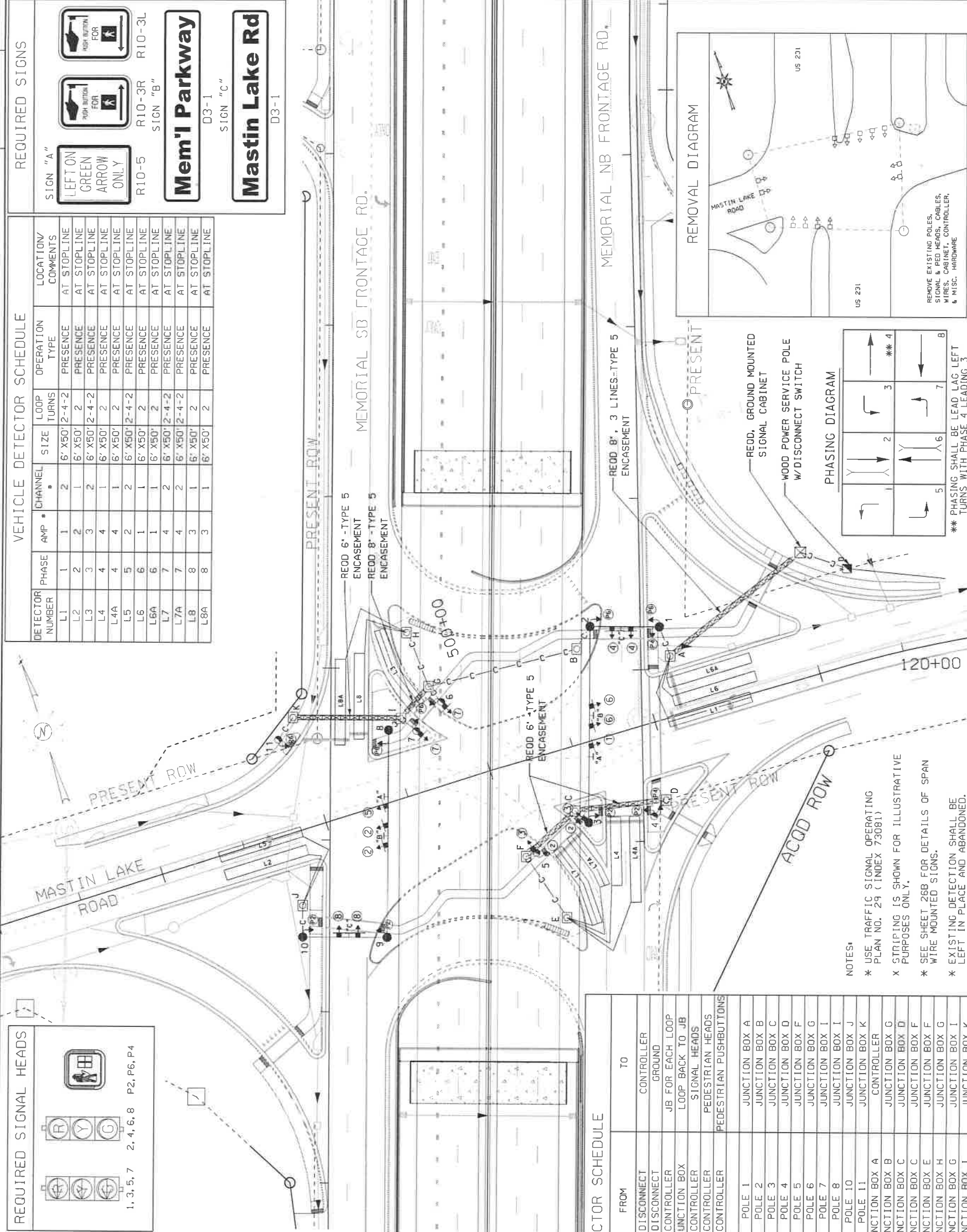
Mastin Lake Rd

- NOTES:
- * USE TRAFFIC SIGNAL OPERATING PLAN NO. 29 (INDEX 73081)
 - * STRIPING IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.
 - * SEE SHEET 26B FOR DETAILS OF SPAN WIRE MOUNTED SIGNS.
 - * EXISTING DETECTION SHALL BE LEFT IN PLACE AND ABANDONED.

CONDUIT	CONDUCTOR	FROM	TO
1-1"	3-1c/*6 AWG 1c/*6 AWG	DISCONNECT DISCONNECT	CONTROLLER GROUND
	2c/*12 AWG Shld IMSA 50-2 *12 AWG LOOP WIRE	CONTROLLER JUNCTION BOX	JB FOR EACH LOOP LOOP BACK TO JB
	4c/*14 AWG IMSA 20-1	CONTROLLER	SIGNAL HEADS
	3c/*14 AWG IMSA 20-1	CONTROLLER	PEDESTRIAN HEADS
	2c/*14 AWG IMSA 20-1	CONTROLLER	PEDESTRIAN PUSHBUTTONS
3-3"		POLE 1	JUNCTION BOX A
3-2"		POLE 2	JUNCTION BOX B
2-2"		POLE 3	JUNCTION BOX C
2-2"		POLE 4	JUNCTION BOX D
2-2"		POLE 5	JUNCTION BOX F
2-2"		POLE 6	JUNCTION BOX G
2-2"		POLE 7	JUNCTION BOX I
2-2"		POLE 8	JUNCTION BOX I
2-2"		POLE 10	JUNCTION BOX J
2-2"		POLE 11	JUNCTION BOX K
3-3"		JUNCTION BOX A	CONTROLLER
3-2"		JUNCTION BOX B	JUNCTION BOX G
2-2"		JUNCTION BOX C	JUNCTION BOX D
2-2"		JUNCTION BOX C	JUNCTION BOX F
2-2"		JUNCTION BOX E	JUNCTION BOX F
2-2"		JUNCTION BOX H	JUNCTION BOX G
3-2"		JUNCTION BOX G	JUNCTION BOX I
2-2"		JUNCTION BOX I	JUNCTION BOX K

CONDUIT AND CONDUCTOR SCHEDULE

CONST US 231



ALABAMA DEPARTMENT OF TRANSPORTATION

PLAN SUBMITTAL

OE

DESIGNER:

DATE:

SUPERVISOR:

DATE:

HORIZ



SCALE (FEET)

SHEET TITLE

TRAFFIC SIGNAL LAYOUT
US 231 AT MASTIN LAKE

ROUTE

SR-1