CITY OF LITTLE ROCK, AR
PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

FIBER OPTIC COMMUNICATIONS &
ADAPTIVE SIGNAL CONTROL TECHNOLOGY (ASCT)
CONSTRUCTION PLANS

UNIVERSITY AVE FROM
I-30 EB RAMP TO CANTRELL RD (STATE HWY 10)

LIST OF PLAN SHEETS
1 TITLE SHEET
2 & 2A NOTES SHEET & SUMMARY OF QUANTITIES
3 KEY LAYOUT SHEET
4-22 COMMUNICATIONS PLAN SHEETS
23-69 INTERSECTION DETAIL SHEETS
70-77 INSTALLATION DETAILS
78-80 MAINTENANCE OF TRAFFIC
<table>
<thead>
<tr>
<th>PAY ITEM NO.</th>
<th>PAY ITEM</th>
<th>UNIT</th>
<th>TOTAL</th>
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<td>CONTROLLER CABINET</td>
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<td>FIBER OPTIC CABLE, SM 16 (LAC)</td>
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<td>711</td>
<td>PULL BOX (FIBER OPTIC)</td>
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<td>5P</td>
<td>FIBER OPTIC DROP CABLE, PRETERMINATED</td>
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<td>FIBER OPTIC TERMINATION CABINET</td>
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<td>FUSION SPLICER FOR FIBER FIBER</td>
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<td>ATCS INTERSECTION MODIFICATION</td>
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<td>ATCS PROCESSING UNIT</td>
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<td>VIDEOD DETECTOR [IF]</td>
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<td>NETWORK CABLE, EXTERIOR, CAT 5E</td>
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<td>5P</td>
<td>ETHERNET SWITCHED 100/1000 HARDENED (8 PORT) (Gig w/ 2 fiber ports)</td>
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<td>ETHERNET SWITCH MULTISPORT LAYER 3</td>
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<td>706</td>
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<td>708</td>
<td>TRAFFIC SIGNAL CABLE (2GC)</td>
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<td>710</td>
<td>NON-METALLIC CONDUIT (FT)</td>
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<td>JACK-PANS BORE CONDUIT</td>
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2. Extend ground equipment grounding conductor (E.G.C.) from ground bar at main breaker to control panel and to first pole. Hold for bond E.G.C. to ground lug of control cabinet and to pole ground. Ensure that only one neutral-to-ground bond exists in the system and that it is at the main breaker.

3. Controller cabinet and layout shall be such that it is not necessary to shut down power or remove load switches in order to easily test or modify detector inputs to the controller.

4. Controller cabinet shall be wired such that during flash operations power to the load switches cannot be fed to controller.

5. All parts of the installation shall be in accordance with the standard specifications for roadway construction, standard drawings and with the manual on uniform traffic control devices, current editions.

6. Controller installed under roadway surfaces shall be installed by pushing or boring methods. If the engineer determines this is not feasible, then a trenching method as shown in the standard drawings may be used with the approval of the engineer.

7. Traffic signal poles shall be galvanized. Black backplates shall be supplied for all signal heads.

8. Pavement markings shown for reference only.

9. All concrete pull boxes shall be (Type 2 H.D.) unless otherwise indicated. All conduit shall be three (3") inch diameter unless specified on plans.

10. Contractor shall notify all existing utility owners before beginning work on this project.

11. Hardware inputs may be determined by supplier. Each detector output shall input the controller through a separate input unless otherwise noted and be programmed to activate the associated phase. Combination (COM) detectors shall also be programmed to provide vehicle count/occupancy data.

12. To determine utility clearances above the traffic signal pole, refer to the pole schedule for vertical shaft height. Where the pole schedule indicates that a luminaire arm will be used, thirty (30) feet should be used to determine utility clearance above the luminaire arm. Where the pole schedule indicates a traffic signal pole without a luminaire arm, a height of twenty-one (21) feet should be used to determine utility clearance above the traffic signal mast arm. An additional six (6") feet should be used directly above video detector at locations shown on the signal plans.

13. Connection of traffic signal display to field wiring shall utilize an approved terminal strip behind hand-side cover over at base of pole. Terminal strip shall provide protection to prevent exposure to the public in the event that pole cover is missing.

14. Controller cabinet layout and orientation shall conform to MSA Standards.

15. One video programming module shall be provided for amping and setup of detectors if the video system cannot be adjusted through hardware and software provided by items within the job.

16. Traffic signal contractor must notify resident engineer or assigned department project inspector each day prior to performing any work. No work on traffic signals will be allowed or approved without this prior notification.

17. Door panel test push buttons shall actuate indicated phases. Detector assignments and/or size panel to work as desired by the Engineering of Little Rock.

18. All system detector racks and associated equipment shall be protected by the main controller cabinet power surge protection.

19. Contractor to install new signal equipment required for adaptive signal system furnished by software supplier. Contractor to replace existing controller, install video detection sensors to supply information to adaptive software.

20. Contractor to replace existing 5 section signal heads with 4 section flashing yellow arrow (FYA) signal heads. Installation of flashing yellow arrows will require controller modification to accommodate new FYA. Contractor is responsible for cabinet modification and any necessary equipment for FYA operation.

21. Existing conduit and pull boxes shall be used to run video detection cables. Any broken or damaged conduit that needs to be replaced shall be approved by the engineer.

22. Contractor to contact the city of little Rock before removing any cables. Contractor may reuse old wiring to pull new cables into existing conduits.

23. Contractor to ensure minimal detection downtime. New video detection shall be installed prior to removing existing detection.

24. Use existing traffic signal cable for new flashing yellow arrow signal installation.

25. Adaptive system to be wired in using spade cables.

26. Advance detection inputs shall be wired to the existing D connector panel in the cabinet and the signal controller shall be configured for the advance detection as system count detectors only (non-call detection).

27. 3 Connector inputs for advanced camera detection to controller are:

   D1 = 2D - SH Advanced
   D3 = 24 - NB Advanced
   D5 & D6 = EB Advanced
   D7 & 28 = WH Advanced
TRAFFIC SIGNAL LEGEND

- Traffic Signal Controller
- Full Box (Fiberoptic)
- Fiber Optic Cable in Conduit
- Overhead Fiber Optic Cable
- Utility Pole
- Mast Arm and Pole
- Utility Fiber Optic Cable Storage 200'
- Utility Fiber Optic Pole Enclosure
- Guying Anchor
- Existing Full Box
- Utility Pole Number
- Preheat

UTILITY POLE ATTACHMENT INFO

<table>
<thead>
<tr>
<th>POLE #</th>
<th>PROPOSED ATTACHMENT HEIGHT</th>
<th>DOWN GUY REQ'D</th>
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<tbody>
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</tr>
<tr>
<td>6</td>
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ADAPTIVE SIGNAL CONTROL
COMMUNICATIONS PLAN

UNIVERSITY AVE. AT 53RD ST.

MAST ARM AND POLE

TRAFFIC SIGNAL LEGEND

- TRAFFIC SIGNAL CONTROLLER
- FULL BOX (FREE OPTIC)
- FOC - FREE OPTIC CABLE IN CONDUIT
- HOC - HIGH OPTIC CABLE (OUTDOOR)
- L - UTILITY POLE
- PCM - PRIMARY POWER CABLE ENTRANCE 200'
- M - MAST ARM AND POLE
- RPC - RETURN POWER CABLE OUTDOOR ENCLOSURE
- T - GUYING MOUNT
- EX - EXISTING FULL BOX
- UX - UTILITY POLE NUMBER
- F - FREEHANG
- S - SIGNAL CABLE IN CONDUIT

UTILITY POLE ATTACHMENT INFO

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<td>16</td>
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Trafﬁc Signal Legend:
- MAST ARM AND POLE
- UTILITY POLE
- ADAPTIVE SIGNAL CONTROLLER
- MAST ARM AND POLE
- UTILITY POLE
- ADAPTIVE SIGNAL CONTROLLER
- MAST ARM AND POLE
- FIBER OPTIC CABLE IN CONDUIT
- OVERHEAD FIBER OPTIC CABLE
- UTILITY POLE
- AERIAL FIBER OPTIC SPLICE ENCLOSURE
- EXISTING PULL BOX
- UTILITY POLE NUMBER
- UTILITY POLE

U n i v e r s i t y A v e.


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<td>22</td>
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CITY OF LITTLE ROCK
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

Adaptive Signal Control Communications Plan

Univ. Ave.

1125

1130
**Traffic Signal Legend**

- ☐ Traffic Signal Controller
- ☐ Pull Box (Field Cables)
- ☐ Fiber optic cable in conduit
- ☐ Overhead fiber optic cable
- ☐ Fiber pole
- ☐ New run and pole
- ☐ Fiber optic cable (new) 200'
- ☐ Fiber optic cable splice enclosure
- ☐ Dynamic reroute
- ☐ Existing pull box
- ☐ Existing pole number
- ☐ Pole number

**Utility Pole Attachment Info**

<table>
<thead>
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<tr>
<td>49</td>
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**DEPARTMENT OF PUBLIC WORKS**

**TRAFFIC ENGINEERING DIVISION**

**ADAPTIVE SIGNAL CONTROL COMMUNICATIONS PLAN**

**CITY OF LITTLE ROCK**

**UNIVERSITY AVE. AT 32ND AVE.**

**Mast Arm and Pole**

**Traffic Signal Legend**

- ☐ Traffic Signal Controller
- ☐ Pull Box (Field Cables)
- ☐ Fiber optic cable in conduit
- ☐ Overhead fiber optic cable
- ☐ Fiber pole
- ☐ New run and pole
- ☐ Fiber optic cable (new) 200'
- ☐ Fiber optic cable splice enclosure
- ☐ Dynamic reroute
- ☐ Existing pull box
- ☐ Existing pole number
- ☐ Pole number

**Utility Pole Attachment Info**

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<td>49</td>
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</table>
UNIVERSITY AVE.

**TRAFFIC SIGNAL LEGEND**
- **R** Traffic Signal Controller
- **F** Pull Box (Fiber Optic)
- **A** Aerial Fiber Optic Cable in conduit
- **G** Ground Fiber Optic Cable Exposure Box
- **H** Aerial Fiber Optic Splice Enclosure
- **B** Guying Anchor
- **W** Existing Pull Box
- **X** Existing Pole Number
- **@** Marker

**UTILITY POLE ATTACHMENT INFO**

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**CITY OF LITTLE ROCK**
**DEPARTMENT OF PUBLIC WORKS**
**TRAFFIC ENGINEERING DIVISION**

**ADAPTIVE SIGNAL CONTROL**
**COMMUNICATIONS PLAN**
UTILITY POLE ATTACHMENT INFO

<table>
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<td>64</td>
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UNIVERSITY AVE. AT BERKSHIRE DR.

TRAFFIC SIGNAL LEGEND

- MAST ARM AND POLE
- INSTALL FIBER OPTIC SPLICE ENCLOSURE
- INSTALL AERIAL 72F CABLE (1200 L.F.)
- INSTALL AERIAL 72F CABLE (1520 L.F.)
- INSTALL 12F DROP CABLE (110 L.F.)
- INSTALL FIBER OPTIC CABLE 72F (90 L.F.)
- INSTALL FIBER OPTIC CABLE 72F (135 L.F.)
- INSTALL FIBER OPTIC CABLE 72F (270 L.F.)
- INSTALL FIBER OPTIC CABLE 72F (270 L.F.)

UTILITY POLE ATTACHMENT INFO

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<tr>
<td>71</td>
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CITY OF LITTLE ROCK
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

ADAPTIVE SIGNAL CONTROL
COMMUNICATIONS PLAN

DATE: 5/9/2018

FILMED REVISED DATE: 5/9/2018

FILMED DATE: 12/14/17

TOTAL SHEETS: 80
FED.RD. DIST.NO.: 13
JOB NO.: 67
**Traffic Signal Legend**

- **Traffic Signal Controller**
- **Pull Box (Fiber)**
- **Fiber Optic Cable**
- **Aerial Fiber Optic Cable**
- **Utility Pole**
- **Manhole and Pole**
- **Fiber Optic Cable Storage Box**
- **Fiber Optic Cable Splice Enclosure**
- **Guying Anchor**
- **Existing Pull Box**
- **Pole Number**
- **Utility Pole Number**

**Utility Pole Attachment Info**

<table>
<thead>
<tr>
<th>Pole #</th>
<th>Proposed Attachment Height</th>
<th>Down Guy Req'd</th>
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<td>93</td>
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**Traffic Signal Legend**
- **Traffic Signal Controller**
- **Pull Box (Fiber Optic)**
- **Fiber Optic Cable in Conduit**
- **Fiber Optic Cable**
- **Utility Pole**
- **Utility Pole Number**
- **Aerial Fiber Optic Storage 200’**
- **Aerial Fiber Optic Splice Enclosure**
- **Guying Anchor**
- **Existing Pull Box**
- **Fiber Riser**

**Utility Pole Attachment Info**

<table>
<thead>
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<th>POLE #</th>
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<td>105</td>
<td>18'-1&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>106</td>
<td>16'-3&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>107</td>
<td>17'-5&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>108</td>
<td>17'-5&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>109</td>
<td>18'-11&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>110</td>
<td>18'-5&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>111</td>
<td>20'-9&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>112</td>
<td>22'-6&quot;</td>
<td>NO</td>
</tr>
</tbody>
</table>
TRAFFIC SIGNAL LEGEND

- Traffic Signal Controller
- Pull Box (Fiber Optic)
- FSP - Fiber Optic Splice In Conduit
- O - Overhead Fiber Optic Cable
- U - Utility Pole
- W - Weather Arm and Pole
- A - Aerial Fiber Optic Cable Storage 200'
- E - Aerial Fiber Optic Splice Enclosure
- G - Guying Anchor
- X - Existing Pull Box
- P - Utility Pole Number
- F - Fiber

UTILITY POLE ATTACHMENT INFO

<table>
<thead>
<tr>
<th>POLE #</th>
<th>PROPOSED ATTACHMENT HEIGHT</th>
<th>DOWN GUY REQ'D</th>
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<tbody>
<tr>
<td>113</td>
<td>19'-11&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>114</td>
<td>21'-0&quot;</td>
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<td>115</td>
<td>21'-6&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>116</td>
<td>21'-11&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>117</td>
<td>16'-5&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>118</td>
<td>23'-5&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>119</td>
<td>23'-4&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>120</td>
<td>25'-2&quot;</td>
<td>NO</td>
</tr>
<tr>
<td>121</td>
<td>22'-1&quot;</td>
<td>YES</td>
</tr>
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</table>

CITY OF LITTLE ROCK
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION

ADAPTIVE SIGNAL CONTROL
COMMUNICATIONS PLAN

UNIVERSITY AVE. AT CANTRELL RD.
SIGNAL FACES

PHASING DIAGRAM

TRAFFIC SIGNAL LEGEND

NOTE 1. COMMUNICATIONS PROVIDED FROM EXISTING INFRASTRUCTURE CONTRACTOR TO TEST SYNCHRONIZATION AND MAKE ADJUSTMENTS AS NECESSARY.

NOTE 2. CONTRACTOR TO REMOVE EXISTING STOP LINE VIDE DETECTION EQUIPMENT.

ARTIFICIAL SIGNAL CONTROL INTERSECTION DETAIL SHEET

UNIVERSITY AVE. AT I-30 EB

CITY OF LITTLE ROCK
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING DIVISION
**WIRING DIAGRAM**

**UNIVERSITY AVE AND I-30 WB MAIN**

<table>
<thead>
<tr>
<th>SIGNAL</th>
<th>INTERVAL CHART FOR NORMAL OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACE</td>
<td>E &amp; C</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2-3-1</td>
<td>G</td>
</tr>
<tr>
<td>3-6-5</td>
<td>R</td>
</tr>
<tr>
<td>4-5-7</td>
<td>R</td>
</tr>
</tbody>
</table>

* Denotes green or yellow arrow depending on next phase

** Denotes green or yellow arrow, depending on next phase

*** Denotes flashing yellow arrow or yellow arrow depending on the next phase

---

**ADAPTIVE SIGNAL CONTROL**

**INTERSECTION DETAIL SHEET**

**UNIVERSITY AVE. AT I-30 WB**

---

**CITY OF LITTLE ROCK**
**DEPARTMENT OF PUBLIC WORKS**
**TRAFFIC ENGINEERING DIVISION**

---

**DRAWN BY**
**APPROVED BY**
**SCALE**
**CHECKED BY**
**DATE**
**JOB NO.**
**TOTAL SHEETS**
**REVISION DATE**
**FILMED DATE**

---

**STATE**
**FED.AID PROJ.NO.**
**FED.RD.**
**DIST.NO.**

---

**NOTE:**

- * = Grounded or earth grounding point
- F = Preference input
- Note: " Amp " or "Ohm" refers to kilo-ohm output position. This is used to control input detector number which is programmed to activate the designated phase. Example: 12 = system detector 1, 120 = system detector 2. Channel assignments for detector to be coordinated and configured with Rollins Engineering.
ADAPTIVE SIGNAL CONTROL

INTERSECTION DETAIL SHEET

REPLACE EXISTING 5 SECTION HEAD
INSTALL FYA SIGNAL HEAD

1 - VIDEO DETECTION CABLE
INSTALL IN EXISTING CONDUIT

2 - VIDEO DETECTION CABLE
INSTALL IN EXISTING CONDUIT

4 - VIDEO DETECTION CABLE
INSTALL IN EXISTING CONDUIT

WIRELESS INTERCONNECTIONS
OF FORBING ROAD WESTBOUND
STOP LINE.

RAILROAD TRACKS LOCATED 80 FEET EAST
NO BUS STOPS
35 MPH EAST AND WEST APPROACH
45 MPH NORTH AND SOUTH APPROACH
POSTED SPEED LIMIT:

NO SIGHT DISTANCE RESTRICTIONS
NO PARKING
NO FIRE STATION

POSTED SPEED LIMIT
35 MPH
LEAD LOOP
NONE
OFF

POSTED SPEED LIMIT
35 MPH
LEAD LOOP
NONE
OFF

NOTE: 1. COMMUNICATIONS PROVIDED FROM EXISTING VIDEO DETECTION EQUIPMENT.
2. CONTRACTOR TO REMOVE EXISTING STOP LINE VIDEO DETECTION EQUIPMENT.
**WIRING DIAGRAM**

**UNIVERSITY AVE. AT FORBING RD.**

**INTERSECTION DETAIL SHEET**

**UNIVERSITY AVE. AT FORBING RD.**

**ADAPTIVE SIGNAL CONTROL**

**DETECTOR SYSTEM DESCRIPTION**

<table>
<thead>
<tr>
<th>DET. NO.</th>
<th>LOCATION DIRECTION</th>
<th>TYPE DET.</th>
<th>CAR</th>
<th>AMP</th>
<th>PHASE</th>
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<th>DET. NO.</th>
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<th>TUBE LENGTH</th>
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<td>2</td>
<td>2</td>
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<td>-</td>
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<td>G4A</td>
<td>SB TURN LANE</td>
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<td>2</td>
<td>6</td>
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<td>-</td>
<td>CAMERA V1</td>
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<tr>
<td>V4B</td>
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<td>LOCAL</td>
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<td>6</td>
<td>V30</td>
<td>-</td>
<td>CAMERA V1</td>
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<tr>
<td>V4C</td>
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<td>5</td>
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<tr>
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<td>6</td>
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<td>CAMERA V1</td>
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<tr>
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<td>CAMERA V1</td>
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<tr>
<td>U4C</td>
<td>NB ADV</td>
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<td>CAMERA V1</td>
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<td>U4D</td>
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<tr>
<td>U4A</td>
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<td>4</td>
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<td>CAMERA V1</td>
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<tr>
<td>U4B</td>
<td>SB TRAFFIC LANE</td>
<td>LOCAL</td>
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<td>-</td>
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</table>

**DENOTATION OF WIRING**

- **1-20C**: 1-20C
- **2-20C**: 2-20C
- **3-20C**: 3-20C
- **4-20C**: 4-20C
- **1-3C-#14 AWG**: 1-3C-#14 AWG
- **1-CAT 5E**: 1-CAT 5E
- **2-3C-#14 AWG**: 2-3C-#14 AWG
- **2-CAT 5E**: 2-CAT 5E
- **3-3C-#14 AWG**: 3-3C-#14 AWG
- **3-CAT 5E**: 3-CAT 5E
- **5-3C-#14 AWG**: 5-3C-#14 AWG
- **5-CAT 5E**: 5-CAT 5E
- **7-3C-#14 AWG**: 7-3C-#14 AWG
- **7-CAT 5E**: 7-CAT 5E
- **5-20C**: 5-20C

**DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE**

**DENOTES GREEN OR YELLOW OR DEPENDON NEXT PHASE**

**DENOTES Flashing yellow or arrow depending on the next phase**
NOTE 1. COMMUNICATIONS PROVIDED FROM EXISTING WIRELESS TRACKS CONTRACTOR TO TEST BANDWIDTH AND MAKE ADJUSTMENTS AS NECESSARY.

2. CONTRACTOR TO REMOVE EXISTING STOP LINE AND REPLACE WITH VIDEO DETECTION EQUIPMENT.
UNIVERSITY AVE. AT MABELVA PK.

**INTERSECTION DETAIL SHEET**

**PHASING DIAGRAM**

**TRAFFIC SIGNAL LEGEND**

- **D** Traffic Signal Controller
- **J** Junction Box
- **C** Cobra Head Street Lamp
- **T** Traffic Sign
- **V** Video Detector
- **M** Mains Detection Zone

**SIGNAL FACES**

<table>
<thead>
<tr>
<th>Existing</th>
<th>Proposed</th>
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<tbody>
<tr>
<td>1, 2, 3, 4</td>
<td>5, 6, 7</td>
</tr>
<tr>
<td>5, 7, 8, 10</td>
<td>1, 2, 3, 4</td>
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</table>

**POSTED SPEED LIMIT**

- 45 MPH
- 20 MPH
- 20 MPH

**DETECTOR SPACING CHART**

<table>
<thead>
<tr>
<th>Detector</th>
<th>Spacing (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIVERSITY AVE.</td>
<td>30 MPH</td>
</tr>
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</table>

**REVISIONS**

1. The signal receives communications from existing wireless nodes. South of the signal, the contractor to test bandwidth and make adjustments as necessary.

2. Contractor to remove existing stop line video detection equipment.

**ADAPTIVE SIGNAL CONTROL**

- Replace existing 5-section heads
- Install FYA signal head
- Install advanced video detection camera V6
- Install video detection camera V1
- Install video detection camera V2
- Install video detection camera V3
- Remove existing stop line video detection
- No riser assembly required
- Install video detection camera V4
- No new assembly required
- Remove existing stop line video detection
- Install advanced video detection camera V5
- Remove existing stop line video detection
- No riser assembly required
- Install video detection camera V6
- Install video detection camera V7
- Install video detection camera V8
- Install video detection camera V9
- No new assembly required
- Remove existing stop line video detection
- No riser assembly required
- Install video detection camera V10
- Install video detection camera V11
- Install video detection camera V12
- Install video detection camera V13
- No new assembly required
- Remove existing stop line video detection
- No riser assembly required
- Install video detection camera V14

**TRAFFIC ENGINEERING DIVISION**

CITY OF LITTLE ROCK
DEPARTMENT OF PUBLIC WORKS

12/14/17
UNIVERSITY AVE. AND MABELVA PK.

**WIRING DIAGRAM**

1. WIRING DIAGRAM:
   - UNIVERSITY AVE. AND MABELVA PK.
   - DETECTOR SYSTEM DESCRIPTION
   - HARDWARE INPUTS BY SYSTEM
   - PROGRAM ASSIGNMENTS
   - HI WARNING VARIABLES
   - SYSTEM DEPiction
   - COMMENTS
   - PARTS LIST

2. VEHICLE INPUT:
   - V = Vehicle input
   - P = Pedestrian input
   - A = Auxiliary input
   - N = Nontypical input
   - ** = Green arrow
   - *** = Yellow arrow
   - *** = Yellow arrow

3. UNIVERSITY AVE. AND MABELVA PK.
   - SYSTEM CHART FOR NORMAL OPERATION:
   - SIGNAL PHASES
   - SIGNAL TIMES
   - SIGNAL PLANS
   - SIGNAL TIMING
   - SIGNAL TIMING CHART

4. UNIVERSITY AVE. AND MABELVA PK.
   - SYSTEM DEPiction
   - COMMENTS
   - PARTS LIST

5. CITY OF LITTLE ROCK
   - DEPARTMENT OF PUBLIC WORKS
   - TRAFFIC ENGINEERING DIVISION

6. UNIVERSITY AVE. AND MABELVA PK.
   - SYSTEM CHART FOR NORMAL OPERATION:
   - SIGNAL PHASES
   - SIGNAL TIMES
   - SIGNAL PLANS
   - SIGNAL TIMING
   - SIGNAL TIMING CHART

7. UNIVERSITY AVE. AND MABELVA PK.
   - SYSTEM DEPiction
   - COMMENTS
   - PARTS LIST

8. UNIVERSITY AVE. AND MABELVA PK.
   - SYSTEM CHART FOR NORMAL OPERATION:
   - SIGNAL PHASES
   - SIGNAL TIMES
   - SIGNAL PLANS
   - SIGNAL TIMING
   - SIGNAL TIMING CHART

9. UNIVERSITY AVE. AND MABELVA PK.
   - SYSTEM DEPiction
   - COMMENTS
   - PARTS LIST

10. UNIVERSITY AVE. AND MABELVA PK.
    - SYSTEM CHART FOR NORMAL OPERATION:
    - SIGNAL PHASES
    - SIGNAL TIMES
    - SIGNAL PLANS
    - SIGNAL TIMING
    - SIGNAL TIMING CHART

11. UNIVERSITY AVE. AND MABELVA PK.
    - SYSTEM DEPiction
    - COMMENTS
    - PARTS LIST

12. UNIVERSITY AVE. AND MABELVA PK.
    - SYSTEM CHART FOR NORMAL OPERATION:
    - SIGNAL PHASES
    - SIGNAL TIMES
    - SIGNAL PLANS
    - SIGNAL TIMING
    - SIGNAL TIMING CHART

13. UNIVERSITY AVE. AND MABELVA PK.
    - SYSTEM DEPiction
    - COMMENTS
    - PARTS LIST

14. UNIVERSITY AVE. AND MABELVA PK.
    - SYSTEM CHART FOR NORMAL OPERATION:
    - SIGNAL PHASES
    - SIGNAL TIMES
    - SIGNAL PLANS
    - SIGNAL TIMING
    - SIGNAL TIMING CHART

15. UNIVERSITY AVE. AND MABELVA PK.
    - SYSTEM DEPiction
    - COMMENTS
    - PARTS LIST
UNIVERSITY AVE AND FIRST ST NW

<table>
<thead>
<tr>
<th>DET LOCATION</th>
<th>DET</th>
<th>TYPE</th>
<th>CAB</th>
<th>RX</th>
<th>RX</th>
<th>PLOT</th>
<th>SYSTEM NUMBER</th>
<th>SYSTEM</th>
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<td>CAMDEN</td>
<td>V3</td>
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</table>

V = Vehicle input
D = System or auxiliary input
P = Pedestrian input

Add Note: 'H' = High or 'L' = Low. This is to indicate input detector number which is programmed to activate the designated phase. Example 1-7C = system detector 1, V10 = system detector 2. Channel assignments for detector to be coordinated and configured with Rhythm Engineering.

WIRING DIAGRAM:

**DENOTES GREEN OR YELLOW ARROWS DEPENDING ON NEXT PHASE**
**DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE**
**DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE**
**Adaptive Signal Control**

- Remove existing detection cable
- Install 2 video detection cables in existing conduit

**University Ave. at Sage Grass Intersection Detail Sheet**

- 5 - Fiber optic cable, 72F
- Install in existing conduit
- 1 - Fiber optic cable, 72F
- Install in existing conduit

**Traffic Signal Legend**

- **D** Traffic signal controller
- **J** Junction box
- **C** Cobra head optic cable
- **M** MAST arm and pole
- **Q** Proposed for signal head
- **E** Existing signal head
- **G** Cobra head street light
- **T** Traffic signal
- **S** Video detector
- **Z** Video detection zone

**Detector Spacing Chart**

<table>
<thead>
<tr>
<th>Location</th>
<th>Detector Speed</th>
<th>Distance from Point of Line</th>
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</thead>
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<tr>
<td>University Ave</td>
<td>55 MPH</td>
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<td>35 MPH</td>
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**CITY OF LITTLE ROCK**

**DEPARTMENT OF PUBLIC WORKS**

**TRAFFIC ENGINEERING DIVISION**
### Detector System Description

<table>
<thead>
<tr>
<th>DET NO.</th>
<th>LOCATION</th>
<th>DIRECTION</th>
<th>TYPE</th>
<th>COMPONENT</th>
<th>NO.</th>
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<th>COMMENTS</th>
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<tbody>
<tr>
<td>V1A</td>
<td>NW LIFT TURF</td>
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<td>2</td>
<td>V1</td>
<td>1</td>
<td>CAMERA V1</td>
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<td>V1B</td>
<td>SE THRU LANE</td>
<td>COMB</td>
<td>2</td>
<td>V5</td>
<td>2</td>
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<tr>
<td>V1C</td>
<td>SE THRU LANE</td>
<td>COMB</td>
<td>2</td>
<td>VIS0</td>
<td>1</td>
<td>VISITOR</td>
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<td>20°</td>
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<tr>
<td>V2B</td>
<td>NW LIFT TURF</td>
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<td>V5</td>
<td>2</td>
<td>CAMERA V5</td>
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<td>VIS0</td>
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<td>VISITOR</td>
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</table>

**Legend:**
- D = Detector Input
- P = Pedestrian Input
- Add - Note: "Any CHP" refers to the rear output position. This is what the controller input detector number which is programmed to actuate the designated phase. Example V1A = system detector 1, V1B = system detector 2. Channel assignments for detection times are coordinated and configured with Rhythm Engineering.

### Wiring Diagram

[Diagram showing wiring connections and detector placements]

### University Ave and Sage Grass

#### Interval Chart for Normal Operation

<table>
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<tr>
<th>SHARK</th>
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<th>3</th>
<th>4</th>
<th>5</th>
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<td>PHASE</td>
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</table>

* Denotes green of yellow arrow depending on next phase
** Denotes green of yellow depending on next phase
*** Denotes flashing yellow arrow or yellow arrow depending on next phase
DETECTOR VIDEO DETECTOR VIDEO DETECTOR VIDEO DETECTOR DETECTOR VIDEO

WIRING DIAGRAM

1-3C-#14 AWG
1-CAT 5E
1-3C-#14 AWG
1-CAT 5E
1-3C-#14 AWG
1-CAT 5E
3-3C-#14 AWG
3-CAT 5E
3-3C-#14 AWG
3-CAT 5E
2-3C-#14 AWG
2-CAT 5E
5-3C-#14 AWG
5-CAT 5E
5-3C-#14 AWG
5-CAT 5E
12/14/17
5/9/2018
5/9/2018
VIDEO DETECTION EQUIPMENT.

NOTE: 1. CONTRACTOR TO REMOVE EXISTING STOP LINE

2. REMOVE EXIST. DETECTION CABLE

3. INSTALL IN EXISTING CONDUIT

4. VIDEO DETECTION CABLE

5. INSTALL VIDEO DETECTION CAMERA V1

6. INSTALL VIDEO DETECTION CAMERA V2

7. INSTALL VIDEO DETECTION CAMERA V3

8. INSTALL VIDEO DETECTION CAMERA V4

9. AERIAL FIBER OPTIC CABLE

10. ON POWER UTILITY POLE

11. INSTALL AERIAL FIBER OPTIC CABLE 72F

12. (SEE SHEET 10 FOR DETAILS)

13. REPLACE EXISTING SIGNAL HEAD

14. INSTALL FYA SIGNAL HEAD

15. REMOVE EXIST. VIDEO DETECTION

16. INSTALL VIDEO DETECTION CAMERA V1

17. INSTALL VIDEO DETECTION CAMERA V2

18. INSTALL VIDEO DETECTION CAMERA V3

19. INSTALL VIDEO DETECTION CAMERA V4

20. SERVICE POINT

21. ELECTRICAL

22. INSTALL NEW CONTROLLER

23. REPLACE EXISTING SIGNAL CABINET

24. AND ETHERNET SWITCH

25. 25 MPH NORTH AND SOUTH APPROACH

26. POSTED SPEED LIMIT:

27. 5/9/2018

28. 5/9/2018

29. NO SIGHT DISTANCE RESTRICTIONS.

30. NO PARKING

31. NO FIRE STATION

32. FIBER INTERCONNECTIONS

33. NO RAILROAD TRACKS

34. NO BUS STOPS

35. 25 MPH

36. 25 MPH

37. NONE

38. 57 FT

39. NONE

40. 57 FT

41. CITY OF LITTLE ROCK

42. DEPARTMENT OF PUBLIC WORKS

43. TRAFFIC ENGINEERING DIVISION

44. ADAPTIVE SIGNAL CONTROL

45. INTERSECTION DETAIL SHEET

46. 1" = 30'
### Detector System Description

<table>
<thead>
<tr>
<th>DET.</th>
<th>VSA</th>
<th>DET.</th>
<th>VSB</th>
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<th>VAA</th>
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</table>

* = Series 1 Auxiliary Input
* = Indicated menu

Add: Note: "Any CHAP" refers to the near output position. This is added to controller input -output which is programmed to activate the designated phase. Example: VP = system detector. VP = system detector. Channel assignments for detection to be coordinated and configured with Whynor Engineering.

### Wiring Diagram

#### WIRING DIAGRAM

![Wiring Diagram](image)

**Notes:**
- [DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE]
- [DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE]
- [DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE]
- [DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE]

### University Ave. and University Dr., Town and Country

#### Signal Phase

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**Notes:**
- [DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE]
- [DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE]
- [DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE]
- [DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE]

---

**CITY OF LITTLE ROCK**
**DEPARTMENT OF PUBLIC WORKS**
**TRAFFIC ENGINEERING DIVISION**

**ADAPTIVE SIGNAL CONTROL**
**INTERSECTION DETAIL SHEET**

---

**DRAWN BY**
**APPROVED BY**
**SCALE**
**CHECKED BY**
**SHEET**
**DATE**
**JOB NO.**
**TOTAL SHEETS**
**FED.AID PROJ.NO.**
**REVISION**
**DATE**
**FILMED**

**CITY OF LITTLE ROCK**
**DEPARTMENT OF PUBLIC WORKS**
**TRAFFIC ENGINEERING DIVISION**

---

**UNIVERSITY AVE. AND UNIVERSITY DR., TOWN AND COUNTRY**

**TABLE:** Internal Chart for Normal Operation

<table>
<thead>
<tr>
<th>SIGNAL PHASE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</table>
SIGNAL FACES

NEW SIGNAL HEADS

EXISTING SIGNAL HEADS

PHASING DIAGRAM

TRAFFIC SIGNAL LEGEND

D TRAFFIC SIGNAL CONTROLLER
J JUNCTION BOX
C CONDUIT
G PROPRIETE FOR SIGNAL HEAD
T CADDA HEAD STREET LAM
T TRAFFIC SIGN
V VIDEO DETECTION
V VIDEO DETECTION ZONE

NOTE 1. CONTRACTOR TO REMOVE EXISTING STOP LINE
VIDEO DETECTION EQUIPMENT.

NOTE 2. CONTRACTOR TO REMOVE EXISTING STOP LINE
VIDEO DETECTION EQUIPMENT.

NOTE 3. CONTRACTOR TO REMOVE EXISTING STOP LINE
VIDEO DETECTION EQUIPMENT.

NOTE 4. CONTRACTOR TO REMOVE EXISTING STOP LINE
VIDEO DETECTION EQUIPMENT.
NO SIGHT DISTANCE RESTRICTIONS.

NO PARKING

NO FIRE STATION

FIBER INTERCONNECTIONS

NO RAILROAD TRACKS

UNIVERSITY AVE NORTHBOUND STOP LINE

BUS STOP LOCATED 100 FEET SOUTH OF

25 MPH EAST AND WEST APPROACH

25 MPH NORTH AND SOUTH APPROACH

POSTED SPEED LIMIT:

SIGNAL FACES

PHASING DIAGRAM

Trafic Signal Legend

D Traffic Signal Controller

J Junction Box

C Conduit

A Aerial Fiber Optic Cable

P Proprietary For Signal Head

D Dedicated Signal Head

H Cobra Head Streetlight

T Traffic Sign

V Video Detector

V Video Detection Zone

UNIVERSITY AVE

BROADMOOR DRIVE

WEST 28TH STREET

INSTALL VIDEO DETECTION CAMERA V1

REMOVE EXISTING VIDEO DETECTION CABLE

INSTALL VIDEO DETECTION CAMERA V2

REMOVE EXISTING VIDEO DETECTION CABLE

INSTALL VIDEO DETECTION CAMERA V3

REMOVE EXISTING VIDEO DETECTION CABLE

INSTALL VIDEO DETECTION CAMERA V4

REMOVE EXISTING VIDEO DETECTION CABLE

ON POWER UTILITY POLE

AERIAL FIBER OPTIC CABLE 72F

(SEE SHEET 12 FOR DETAILS)

ON POWER UTILITY POLE

AERIAL FIBER OPTIC CABLE 72F

FROM POWER UTILITY POLE

AERIAL FIBER OPTIC DROP CABLE 12F

(SEE SHEET 12 FOR DETAILS)

SERVICE POINT

ELECTRICAL

INSIDE TRAFFIC SIGNAL CABINET

AND ETHERNET SWITCH

INSTALL NEW CONTROLLER

NOTE: 1. CONTRACTOR TO REMOVE EXISTING STOP LINE

NOTE: 2. REMOVE EXISTING DETECTION CABLE, 1 - VIDEO DETECTION CABLE.

INSTALL IN EXISTING CONDUIT

1 - POWER OVER ETHERNET EXTENDER

INSTALL IN EXISTING PULL BOX

NOTE: 1. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 2. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 3. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 4. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 5. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 6. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 7. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 8. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 9. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 10. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 11. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 12. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 13. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 14. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 15. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 16. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 17. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 18. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 19. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 20. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 21. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 22. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 23. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 24. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 25. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 26. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 27. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

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NOTE: 30. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 31. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 32. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 33. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 34. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 35. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

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NOTE: 37. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 38. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 39. INSTALLATION OF VIDEO DETECTION EQUIPMENT.

NOTE: 40. INSTALLATION OF VIDEO DETECTION EQUIPMENT.
## Wiring Diagram

**Legend:**
- **R** = Red arrow
- **G** = Green or yellow arrow
- **W** = White arrow
- **X** = Crosswalk
- **X** = X-way
- **B** = Bus lane
- **L** = Left turn
- **C** = Center turn
- **R** = Right turn

**Notes:**
- Yellow arrows may be used on main or left-turn phase.
- Green and yellow bars indicate inner and outer stages.
- Inner stages will be assigned to the rightmost lane.
- Outer stages will be assigned to the leftmost lane.
- Inner stages may be used for single-lane operation.
- Yellow bars may be used on main or left-turn phase.
- When all stages of the phase or an entire phase are in the left-turn-only condition, the colored phase will be extinguished except for a yellow bar.

**Legend for Detector/Control:**
- **P3** = P3 signal
- **P6** = P6 signal
- **V3** = Video detection

**Legend for Conventional Signals:**
- **X** = On Street
d- **C** = Center
d- **L** = Left
d- **R** = Right

### Detector System Description

<table>
<thead>
<tr>
<th>DET.</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>MARKED BY</th>
<th>PIN CONFIG.</th>
<th>SYSTEM DETECTION NUMBERS</th>
<th>COMMENTS</th>
<th>WIRE LENGTHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>V3A</td>
<td>N. LEFT TURN</td>
<td>LOCAL</td>
<td>1</td>
<td>V1</td>
<td>1</td>
<td>VIDEO DETECTOR</td>
<td>22&quot;</td>
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<tr>
<td>V3B</td>
<td>S. TURN LANE</td>
<td>LOCAL</td>
<td>2</td>
<td>V2</td>
<td>2</td>
<td>VIDEO DETECTOR</td>
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<td>V3C</td>
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<td>V3</td>
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<td>V3E</td>
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<td>V5</td>
<td>2</td>
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<td>V3F</td>
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<tr>
<td>V3H</td>
<td>S. TURN LANE</td>
<td>LOCAL</td>
<td>8</td>
<td>V8</td>
<td>2</td>
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<td>V9</td>
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<td>S. CENTER LANE</td>
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<td>10</td>
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<td>12</td>
<td>V12</td>
<td>2</td>
<td>VIDEO DETECTOR</td>
<td>22&quot;</td>
</tr>
</tbody>
</table>

**Notes:**
- "Vehicle input" = Vehicle input
- "System or Auxiliary input" = System or Auxiliary input

**Add Note:** "Keep ENA" refers to the main input position. This is to controller input detector number which is programmed to activate the designated phase. Example: V9 = phase detector, V10 = system detector. Channel assignments for detectors to be coordinated and configured with Rhythm Engineering.
**Signal Faces**

- Existing Signal Heads: P1, P2, P3, P4, P5, P6, P7, P8
- Proposed FYA Signal Heads: P1, P2, P3, P4, P5, P6, P7, P8
- New Signal Heads: 1, 6

**Phasing Diagram**

- **Traffic Signal Legend**
  - D: Traffic Signal Controller
  - J: Junction Box
  - C: Aerial Fiber Optic Cable
  - M: MAST ARM AND POLE
  - P: Proposed For Signal Head
  - O: Existing Signal Head
  - S: Cobra Head Street Lamp
  - T: Traffic Sign
  - V: Video Detector
  - Z: Video Detection Zone

**Note:**
- 1. Contractor to remove existing stop line
- 2. Fiber Optic Cable, 72F, Install in existing conduit

- **Fiber Interconnections**
- **No Fire Station**
- **No Parking**
- **No Sight Distance Restrictions**

**Universities Ave Southbound Stop Line**

- Bus stop located 120 feet south of intersection for background drop line.
- No through tracks.

**Detector Spacing Chart**

<table>
<thead>
<tr>
<th>University Ave</th>
<th>Posted Speed</th>
<th>Distance Front of Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 MPH</td>
<td>05</td>
<td>60</td>
</tr>
<tr>
<td>35 MPH</td>
<td>03</td>
<td>30</td>
</tr>
</tbody>
</table>

**University Ave.**

- Sport Pale
- Aerial Fiber Optic Cable
- Service Point Electrical
- Inside Traffic Signal Cabinet
- And Ethernet Switch
- Install new controller
- **FCEED Zone**

**Video Detection Equipment**

- **NOTE:**
  - 1. Contractor to remove existing stop line
  - 2. Fiber Optic Cable, 72F, Install in existing conduit

**Video Detector**

- **Cobra Head Street Light**
- **Traffic Sign**
- **MAST ARM AND POLE**
- **CONDUIT**

**City of Little Rock**

- Department of Public Works
- Traffic Engineering Division

**Adaptive Signal Control Intersection Design Sheet**

- **CITY OF LITTLE ROCK**
- **DEPARTMENT OF PUBLIC WORKS**
- **TRAFFIC ENGINEERING DIVISION**

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<td>05</td>
<td>60</td>
</tr>
<tr>
<td>35 MPH</td>
<td>03</td>
<td>30</td>
</tr>
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<td>DET. ID</td>
<td>LOCATION DIRECTION</td>
<td>TYPE</td>
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<td>--------</td>
<td>--------------------</td>
<td>------</td>
</tr>
<tr>
<td>VSA</td>
<td>NB LEFT TURN</td>
<td>LOCAL</td>
</tr>
<tr>
<td>VSA</td>
<td>SB TRU LANE</td>
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<tr>
<td>VBA</td>
<td>SB TRU LANE</td>
<td>LOCAL</td>
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<tr>
<td>VBA</td>
<td>SB TRU LANE</td>
<td>LOCAL</td>
</tr>
<tr>
<td>VBA</td>
<td>SB TRU LANE</td>
<td>LOCAL</td>
</tr>
<tr>
<td>VBA</td>
<td>SB TRU LANE</td>
<td>LOCAL</td>
</tr>
</tbody>
</table>

V = Vehicle input
P = Pedestrian input

Note: "Long Green" refers to the back output position. This is used to cancel the input detector number which is programmed to actuate the designated phase. Example 1P9 = system detector 1, V10 = system detector 2. Channel assignments for detection is to be coordinated and configured with city engineers.

---

**Wiring Diagram**

---

**Signal Points**

<table>
<thead>
<tr>
<th>POINT</th>
<th>ID</th>
<th>H/A</th>
<th>CUR</th>
<th>IOG</th>
<th>CUR</th>
<th>IMB</th>
<th>CUR</th>
<th>IMB</th>
<th>CUR</th>
<th>IMB</th>
<th>CUR</th>
<th>IMB</th>
<th>CUR</th>
<th>IMB</th>
<th>CUR</th>
<th>IMB</th>
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<tbody>
<tr>
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<td>NW</td>
<td>M6</td>
<td>W7</td>
<td>FW</td>
<td>DW</td>
<td>W6</td>
<td>FW</td>
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<td>W5</td>
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<td>FW</td>
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<td>W5</td>
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<td>DW</td>
<td>W4</td>
<td>FW</td>
<td>DW</td>
<td>W2</td>
</tr>
</tbody>
</table>

**Universal Architectural Diagram**

---

**Legend**

- **"** Denotes Green or Yellow Arrow Depending on Next Phase
- **"** Denotes Green or Yellow Arrow Depending on Next Phase
- **"** Denotes Long Green, Yellow Arrow or Yellow Arrow Depending on the Next Phase

---

**City of Little Rock**

**Department of Public Works**

**Traffic Engineering Division**

**Adaptive Signal Control**

**Intersected Signal Shield**
SIGNAL FACES

NEW SIGNAL HEADS
1, 6

EXISTING SIGNAL HEADS
3, 4, 5, 7
A, 9, 10

PHASING DIAGRAM

NOTE: 1. CONTRACTOR TO REMOVE EXISTING STOP LINE
   VIDEO DETECTION EQUIPMENT.
### Detector System Description

<table>
<thead>
<tr>
<th>DET. #</th>
<th>DET.</th>
<th>TYPE</th>
<th>USAGE</th>
<th>V/IN</th>
<th>LENS</th>
<th>DETECTORS</th>
<th>COMMENTS</th>
<th>TUBE</th>
<th>LENGTH</th>
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<tbody>
<tr>
<td>VVA</td>
<td>NB LEFT TURN</td>
<td>LOCAL 1</td>
<td>V1</td>
<td>5</td>
<td>CAMERA V1</td>
<td>20'</td>
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<td>VVA</td>
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<td>LOCAL 2</td>
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<td>CAMERA V11</td>
<td>20'</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

V = Variable Input
N = Normal Input
P = Precautionary Input

*Note: "NB" refers to the northbound input, "SB" refers to the southbound input.*

### Wiring Diagram

#### University Ave and 19th St

#### Internal Chart for Normal Operation

<table>
<thead>
<tr>
<th>SIGNAL</th>
<th>1A5</th>
<th>1A6</th>
<th>1B5</th>
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<tbody>
<tr>
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</tbody>
</table>

#### Flashing Arrow

* Denotes green or yellow arrow depending on next phase
** Denotes green or yellow ball depending on next phase
*** Denotes flashing yellow arrow or yellow arrow depending on the next phase
VIDEO DETECTION EQUIPMENT.

NOTE: 1. CONTRACTOR TO REMOVE EXISTING STOP LINE

2. INSTALL VIDEO DETECTION CAMERAS V1, V2, V3, V4

3. INSTALL NEW CONTROLLER AND ETHERNET SWITCH

4. INSIDE TRAFFIC SIGNAL CABINET AND ETHERNET SWITCH

INSTALL NEW CONTROLLER

NO SIGHT DISTANCE RESTRICTIONS.
### Adaptive Signal Control

University Ave. at W. 12th St.

**Intersection Details Sheet**

**Wiring Diagram**

- **Signal Face**
  - **125**
  - **156**
  - **256**
  - **365**
  - **385**
  - **457**
  - **457**
  - **4 B R**
  - **4 B R**
  - **4 B 1-3C-14 AWG**
  - **4 B 1-20C**
  - **4 B 1-CAT 5E**
  - **4 B 1-CAT 5E**
  - **4 B 1-CAT 5E**
  - **4 B 1-CAT 5E**
  - **4 B 1-CAT 5E**
  - **4 B 1-CAT 5E**
  - **4 B 1-CAT 5E**
  - **4 B 1-CAT 5E**
  - **4 B 1-CAT 5E**
  - **4 B 1-CAT 5E**

- **Wiring Details**
  - **1-3C-14 AWG**
  - **1-CAT 5E**
  - **1-CAT 5E**
  - **1-CAT 5E**
  - **1-CAT 5E**
  - **1-CAT 5E**
  - **1-CAT 5E**
  - **1-CAT 5E**
  - **1-CAT 5E**
  - **1-CAT 5E**
  - **1-CAT 5E**
  - **1-CAT 5E**

**Notes**
- **N.T.S.**
- **12/14/17**
- **5/9/2018**
- **5/9/2018**

---

**City of Little Rock**

**Department of Public Works**

**Traffic Engineering Division**

**Adaptive Signal Control**

**Intermittent Signal Board**

---

**UNIVERSITY AVENUE AND 12TH ST.**

**WIRING DIAGRAM**

- **END DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**
  - **VIDEO DETECTOR**

**Video Detector**

- **1-3C-14 AWG**
- **1-CAT 5E**
- **1-3C-14 AWG**
- **1-CAT 5E**
- **1-3C-14 AWG**
- **1-CAT 5E**
- **1-3C-14 AWG**
- **1-CAT 5E**
- **1-3C-14 AWG**
- **1-CAT 5E**

---

**DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE**

**DENOTES GREEN OR YELLOW BALL DEPENDING ON EXIT PHASE**

**DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON THE NEXT PHASE**
NOTE: 1. CONTRACTOR TO REMOVE EXISTING STOP LINE
VIDEO DETECTION EQUIPMENT.

VIDEO DETECTION ZONE
EXISTING SIGNAL HEAD
PROPOSED FYA SIGNAL HEAD

TRAFFIC SIGNAL LEGEND
- TRAFFIC SIGNAL CONTROLLER
-JUNCTION BOX
- AERIAL FIBER OPTIC CABLE
- WIRE ARM AND POLE
- PROPOSED FOR SIGNAL HEAD
- EXISTING SIGNAL HEAD
- CONDUIT W/ FIBER LOOP
- TRAFFIC SIGN
- TRAFFIC SIGNAL LEGEND
- VIDEO DETECTOR
- VIDEO DETECTION ZONE

POSTED SPEED LIMIT
AS OWN NORTH AND SOUTH APPROACH
20 MPH EAST AND WEST APPROACH
BUS STOP LOCATED 300 FEET SOUTH OF UNIVERSITY AVE NO SPEED LIMIT
NO STOPPING, NO STANDING, NO FIRE STATION
NO RAILROAD TRACKS
NO RISER ASSEMBLY REQUIRED
NO PARKING
NO SPEED LIMIT RESTRICTIONS

DETECTOR SPACING CHART

<table>
<thead>
<tr>
<th>UNIVERSITY AVE</th>
<th>POSTED SPEED</th>
<th>DISTANCE BOUNDS OF LINE</th>
<th>LEAD LOOP</th>
<th>LAG LOOP</th>
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<tr>
<td>UNIVERSITY AVE</td>
<td>50 MPH</td>
<td>250'</td>
<td>60'</td>
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<tr>
<td>UNIVERSITY AVE</td>
<td>40 MPH</td>
<td>250'</td>
<td>60'</td>
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<td>60'</td>
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5/9/2018
### Detector System Description

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<th>DIRECTION</th>
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<th>SYSTEM DET.</th>
<th>COMMENTS</th>
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<td>COMPL</td>
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<tr>
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<td>COMPL</td>
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<td>6</td>
<td>V10</td>
<td>2</td>
<td>2</td>
<td>Camera v1</td>
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<tr>
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<td>6</td>
<td>V10</td>
<td>2</td>
<td>2</td>
<td>Camera v1</td>
<td>29</td>
</tr>
<tr>
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<td>LOCAL</td>
<td>4</td>
<td>6</td>
<td>VB201</td>
<td>1</td>
<td>Camera v4</td>
<td>23</td>
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<tr>
<td>V2N</td>
<td>SI ANN</td>
<td>LOCAL</td>
<td>5</td>
<td>5</td>
<td>VB201</td>
<td>2</td>
<td>Camera v5</td>
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<td>VB201</td>
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<td>LOCAL</td>
<td>7</td>
<td>10</td>
<td>V15</td>
<td>5</td>
<td>Camera v7</td>
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<td>V2N</td>
<td>BB LEFT</td>
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<td>15</td>
<td>5</td>
<td>V120</td>
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<td>Camera v16</td>
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**UNIVERSITY AVE. AT I-630 EB INTERSECTION DETAIL SHEET**

#### Wiring Diagram

- **Wiring Diagram**
  - **Video Detector**: Video Detector
  - **Camera**: Camera
  - **AWG**: AWG
  - **CAT 5E**: CAT 5E

#### Signal Phase Table

<table>
<thead>
<tr>
<th>PHASE</th>
<th>INTERVAL</th>
<th>OPERATIONAL DESCRIPTION</th>
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<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>3</td>
<td>R</td>
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<td>F1-W</td>
<td>F1-W</td>
</tr>
<tr>
<td>6</td>
<td>F2-V</td>
<td>F2-V</td>
</tr>
</tbody>
</table>

* Denotes Green or Yellow Arrow depending on next phase
** Denotes Green or Yellow only depending on not phase
*** Denotes Flashing Yellow Arrow or Yellow arrow during on next phase
UNIVERSITY AVE AND I-630 WB

WIRING DIAGRAM

- Diagram showing wiring connections and signal components.

**Notes:**
- Denotes green or yellow arrow depending on next phase.
- Denotes green or yellow signal depending on next phase.
- Denotes flashing yellow arrow or yellow arrow depending on next phase.

---

**Diagram Legend:**
- V: Vehicle input
- P: Pedestrian input
- S: System input

**System Connections:**
- N.T.S.
- 061468

**Dates:**
- 5/9/18
- 12/14/17

---

**Wiring Details:**
- Video Detector: 1-20C, 3-3C-#14 AWG, 3-CAT 5E
- Control: 1-CAT 5E, 1-3C-#14 AWG

---

**City of Little Rock Department of Public Works Traffic Engineering Division**

**Adaptive Signal Control Intersection Details**
SIGNAL FACES

PHASING DIAGRAM

TRAFFIC SIGNAL LEGEND

TRAFFIC SIGNAL CONTROL

NOTE: 1. CONTRACTOR TO REMOVE EXISTING STOP LINE
     VIDEO DETECTION EQUIPMENT.

UNIVERSITY AVE. AT ST. VINCENT CIR.

INSTALL VIDEO DETECTION CAMERA V1
(SEE SHEET 17 FOR DETAILS)

INSTALL VIDEO DETECTION CAMERA V2
(SEE SHEET 17 FOR DETAILS)

REMOVAL EXIST. DETECTION CABLE
2 - VIDEO DETECTION CABLES
INSTALL IN EXISTING CONDUIT

REMOVAL EXIST. VIDEO DETECTION
INSTALL VIDEO DETECTION CAMERA V3

REMOVAL EXIST. VIDEO DETECTION
NO RISER ASSEMBLY REQUIRED
INSTALL VIDEO DETECTION CAMERA V4

NO SIGHT DISTANCE RESTRICTIONS.
NO PARKING
NO FIRE STATION
FIBER INTERCONNECTIONS
NO RAILROAD TRACKS
NO BUS STOPS
25 MPH EAST AND WEST APPROACH
40 MPH NORTH AND SOUTH APPROACH
POSTED SPEED LIMIT:
**University Ave and St. Vincent**

**Wiring Diagram**

- **Signal Details**
  - **Direction**
  - **Phase**
  - **Current for Normal Operation**
  - **Flash Rate**

- **Video Detection**

**Video Detector**

- **Wiring Schematic**
  - **Cables**
  - **Connectors**

**City of Little Rock**

**Department of Public Works**

**Traffic Engineering Division**

**Adaptive Signal Control**

**Intersection Detail Sheet**

**Video Detection**

- **Wire Connections**
  - **Cables**
  - **Connectors**

**Notes**

- **Denotes Green or Yellow Arrow Depending on Next Phase**
- **Denotes Green or Yellow Ball Depending on Next Phase**
- **Denotes Yellow Arrow on/or Yellow Arrow Depending on Next Phase**

**City of Little Rock**

**Department of Public Works**

**Traffic Engineering Division**

**Adaptive Signal Control**

**Intersection Detail Sheet**

**Video Detection**

- **Wire Connections**
  - **Cables**
  - **Connectors**

**Notes**

- **Denotes Green or Yellow Arrow Depending on Next Phase**
- **Denotes Green or Yellow Ball Depending on Next Phase**
- **Denotes Yellow Arrow on/or Yellow Arrow Depending on Next Phase**
SIGNAL FACES

PHASING DIAGRAM

TRAFFIC SIGNAL LEGEND

- Traffic Signal Controller
- Junction Box
- Aerial Fiber Optic Cable
- Existing Signal Head
- Cobra Head Street Lamp
- Traffic Sign
- Video Detector
- Video Detection Zone

NOTE: Contractor to remove existing video detection equipment.

ADAPTIVE SIGNAL CONTROL

- Replace existing 5 section head
- Install FYA signal head

UNIVERSITY AVE. AT UNIVERSITY MALL INTERSECTION DETAIL SHEET

- Remove exist. detection cable
- 1 - Video detection cable
- Install in existing conduit

- Remove exist. video detection
- Install video detection camera V2

- Remove exist. video detection
- Install video detection camera V3

(SEE SHEET 18 FOR DETAILS)

- 1 - Fiber optic cable, 72F
- Install in existing conduit

NO SIGHT DISTANCE RESTRICTIONS.

NO PARKING

NO FIRE STATION

FIBER INTERCONNECTIONS

NO RAILROAD TRACKS

NORTHBOUND STOP LINE

250 FEET SOUTH OF UNIVERSITY AVE

UNIVERSITY AVE SOUTHBOUND STOP LINE & BUS STOPS LOCATED 250 FEET NORTH OF

40 MPH NORTH AND SOUTH APPROACH

POSTED SPEED LIMIT:

12/14/17

VIDEO DETECTOR

COBRA HEAD STREET LIGHT

TRAFFIC SIGN

MAST ARM AND POLE

TRAFFIC SIGNAL LEGEND

- Traffic Signal Controller
- Junction Box
- Aerial Fiber Optic Cable
- Existing Signal Head
- Cobra Head Street Lamp
- Traffic Sign
- Video Detector
- Video Detection Zone

NOTE: Contractor to remove existing video detection equipment.

ADAPTIVE SIGNAL CONTROL

- Replace existing 5 section head
- Install FYA signal head

UNIVERSITY AVE. AT UNIVERSITY MALL INTERSECTION DETAIL SHEET

- Remove exist. detection cable
- 1 - Video detection cable
- Install in existing conduit

- Remove exist. video detection
- Install video detection camera V2

- Remove exist. video detection
- Install video detection camera V3

(SEE SHEET 18 FOR DETAILS)

- 1 - Fiber optic cable, 72F
- Install in existing conduit

NO SIGHT DISTANCE RESTRICTIONS.

NO PARKING

NO FIRE STATION

FIBER INTERCONNECTIONS

NO RAILROAD TRACKS

NORTHBOUND STOP LINE

250 FEET SOUTH OF UNIVERSITY AVE

UNIVERSITY AVE SOUTHBOUND STOP LINE & BUS STOPS LOCATED 250 FEET NORTH OF

40 MPH NORTH AND SOUTH APPROACH

POSTED SPEED LIMIT:

12/14/17

VIDEO DETECTOR

COBRA HEAD STREET LIGHT

TRAFFIC SIGN

MAST ARM AND POLE

TRAFFIC SIGNAL LEGEND

- Traffic Signal Controller
- Junction Box
- Aerial Fiber Optic Cable
- Existing Signal Head
- Cobra Head Street Lamp
- Traffic Sign
- Video Detector
- Video Detection Zone
## Detector System Description

<table>
<thead>
<tr>
<th>DET/LOC</th>
<th>LOCATION</th>
<th>DIRECTION</th>
<th>TYPE</th>
<th>INLET</th>
<th>OUTPUT</th>
<th>LOCAL</th>
<th>ON/OFF</th>
<th>SYSTEM DIST.</th>
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<th>COMMENTS</th>
<th>ITEM LENGTH</th>
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<td>V1</td>
<td>2</td>
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<td>V12</td>
<td>2</td>
<td>CAMERA V3</td>
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</tbody>
</table>

V = Vehicle input
B = Button or Auxiliary input
P = Pedestrian input

Add: Note: The system ID refers to the unique identifier assigned to each system, which is used to identify and distinguish each system from the others. This system is configured with Rhythm Engineering.
1. Contractor to remove existing stop line and existing equipment.
2. Existing in-sync equipment to be returned to the City.

NOTE: 1. CONTRACTOR TO REMOVE EXISTING STOP LINE AND EXISTING EQUIPMENT.
2. EXISTING INSYNC EQUIPMENT TO BE RETURNED TO THE CITY.
## UNIVERSITY AVE AND MARKHAM ST

### WIRING DIAGRAM

#### UNIVERSITY AVE AND MARKHAM ST

**Table: UNIVERSITY AVE AND MARKHAM ST**

| WORK | SEQ | VOL | CUR | UN | CR | ON | OFF | UN | CUR | ON | OFF | UN | CUR | ON | OFF | UN | CUR | ON | OFF | UN | CUR | ON | OFF |
|------|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1    | 1   | G+  | *   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 2    | 2   | G+  | *   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 3    | 3   | R   | G   | *  | R  | R  | R  | R  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  |
| 4    | 4   | R   | G   | *  | R  | R  | R  | R  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  | G  |
| 5    | 5   | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 6    | 6   | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 7    | 7   | R   | R   | R   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 8    | 8   | R   | R   | R   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 9    | 9   | G-  | *   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 10   | 10  | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 11   | 11  | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 12   | 12  | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 13   | 13  | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 14   | 14  | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 15   | 15  | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 16   | 16  | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 17   | 17  | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |
| 18   | 18  | R   | R   | G   | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  | R  |

#### FLASH LED

- **G** - Green
- **R** - Red
- **G-** - Green Flash
- **R-** - Red Flash

**Legend:**
- **1-7C** - 1 to 7 Channel
- **1-CAT 5E** - 1 Channel CAT 5E
- **1-20C** - 1 Channel 20C Wire
- **1-3C-#14 AWG** - 1 Channel 3C, #14 AWG Wire

---

**Note:** Yellow arrow denotes open yellow wire depending on next phase, yellow arrow denotes closed yellow wire depending on next phase.
**UNIVERSITY AVE AT C ST**

**WIRING DIAGRAM**

- **1-20C**
- **1-3C-#14 AWG**
- **1-CAT 5E**
- **1-3C-#14 AWG**
- **1-CAT 5E**
- **4-20C**
- **1-3C-#14 AWG**
- **1-CAT 5E**
- **1-3C-#14 AWG**
- **1-CAT 5E**
- **1-3C-#14 AWG**
- **1-CAT 5E**
- **1-3C-#14 AWG**
- **1-CAT 5E**
- **1-3C-#14 AWG**
- **1-CAT 5E**
- **4-3C-#14 AWG**
- **4-CAT 5E**
- **2-3C-#14 AWG**
- **2-CAT 5E**

**NOTES:**
- **N.T.S.**
- **061468**
- **12/14/17**

---

**DETECTOR SYSTEM DESCRIPTION**

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<th>DET. NO.</th>
<th>LOCATION</th>
<th>DET.</th>
<th>TYPE</th>
<th>CAN</th>
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<th>WIR</th>
<th>FMS</th>
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<td>V7</td>
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<td>CAMINAV 7</td>
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**INFORMAL CHART FOR NORMAL OPERATION**

- **G**
- **R**

**FLUSH**

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<th><strong>0-3C-#14 AWG</strong></th>
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**ADAPTIVE SIGNAL CONTROL**

**UNIVERSITY AVE AT C ST**

**CITY OF LITTLE ROCK**

**DEPARTMENT OF PUBLIC WORKS**

**TRAFFIC ENGINEERING DIVISION**

**ADAPTIVE SIGNAL CONTROL INTERSECTION DETAIL SHEET**
1. Contractor to remove existing stop line video detection equipment.
2. Phasing of work to move traffic signal controlled equipment to be coordinated with the engineer of Little Rock.

NOTE: 1. CONTRACTOR TO REMOVE EXISTING STOP LINE VIDEO DETECTION EQUIPMENT.
2. PHASING OF WORK TO MOVE TRAFFIC SIGNAL CONTROLLED EQUIPMENT TO BE COORDINATED WITH THE ENGINEER OF LITTLE ROCK.

NOTE: 1. CONTRACTOR TO REMOVE EXISTING STOP LINE VIDEO DETECTION EQUIPMENT.
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AERIAL ENTRANCE FOR STEEL POLE INTO BASE MOUNTED CABINET (EXTERNAL SPLICE)

AERIAL ENTRANCE FOR EMBEDDED STEEL, CONCRETE, OR WOOD POLE INTO BASE MOUNTED CABINET (EXTERNAL SPLICE)

TYPICAL OVERHEAD SPLICE

FIBER INSTALLATION DETAILS

1. CONSULT FOR FIBER OPTIC CABLE REQUIRED TO ATTACH LARGE RECIPROCAL MOUNTING MOUNTS TO CABINET MOUNTING MOUNTS.

2. ALL SPLICE CLOSURES TO CONTAIN SUPPLEMENTAL SPRING PRESS TO ENSURE STABILITY OR STRESS TO MAINTAIN WEARABLE STRESS FOR EACH DROP CABLE.

3. ALL SPLICE TO BE FUSION UNLESS OTHERWISE NOTED.
Underground entrance into base mounted cabinet (internal splice=MAX. 12 fiber splices)

General Notes:
1. Consider for fiber optic cable design to utilize local conduit run. Inspect current runs & verify with site drawings.
2. All underground splices to be made to conform with design. All conduits are to be pre-wired with splice closures in maintenance spool at 12 feet per each cable.
3. All splices to be made with corrosion resistant materials.
4. All splices to be tested under pressure test.
TOTAL SHEETS: 80
NO. SHEET: 74
STATE: ARK.
FED. AID PROJ. NO.: 67
DATE FILMED: 5/9/2018
FED. RD. DIST. NO.:
JOB NO.:

FIBER INSTALLATION DETAILS 3

TYPICAL CABLE CONTINUATION-SAME MESSENGER CABLE

TYPICAL POLE ATTACHMENT FOR STEEL POLE

TYPICAL POLE ATTACHMENT FOR SQUARE CONCRETE POLE

CABLE LAshed TO OVERHEAD MESSENGER CABLE

MINIMUM CLEARANCE TO TELEPHONE TELEVISION OR ELECTRICAL CABLE

AERIAL SPLICE DETAIL

AERIAL SLACK BRACKET DETAIL

ALTERNATE CABLE CONTINUATION-SEPARATE MESSENGER CABLE

TYPICAL POLE ATTACHMENT DETAIL FOR MESSENGER HEAD END OR TURNS

COMMUNICATIONS CABLE - LEAD ALL CABLES WITH COMMUNICATIONS CABLE EXCEPT IF MORE THAN ONE CABLE. LEAD EACH CABLE TO A CABLE MANGER.

ALTERNATE CABLE CONTINUATION-SEPARATE MESSENGER CABLE

TYPICAL CABLE LASHING DETAIL

TYPICAL POLE ATTACHMENT DETAIL FOR STEEL POLE

TYPICAL POLE ATTACHMENT FOR SQUARE CONCRETE POLE

CABLE LAshed TO OVERHEAD MESSENGER CABLE
9. INSTALL USING ALL REQUIREMENTS AS STATED BY THE MANUFACTURER.
<table>
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<td>STOP</td>
<td>Red octagon with white border</td>
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<tr>
<td>VEL</td>
<td>Diamond with white lettering</td>
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<tr>
<td>SPEED LIMIT 50</td>
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<td>XX M.P.H.</td>
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<td>ROAD CLOSED</td>
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<td>ROAD CLOSED XX MILES AHEAD</td>
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<td>ROAD CLOSED TO THRU TRAFFIC</td>
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<td>ROAD WORK NEXT XX MILES</td>
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<td>DETOUR</td>
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<td>ROAD WORK WITHIN WORK ZONE</td>
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**Notes:**
- Symbols should be used in accordance with the MUTCD.
- Use bold letters for high contrast.
- Use standard traffic control symbols for construction zones.