GENERAL NOTES

1. GRADE LINE NOTES FINISHED GRADE WHERE SHOWN ON THE PLANS.

2. ALL PIPE LINES, POWER, TELEPHONE AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS AGREEMENT WITH SUCH OWNERS.

3. ANY EQUIPMENT OR APPARATUS TO BE INSTALLED WHICH INTERFERES WITH THE PROPER CONSTRUCTION AND擁有者 MAY BE THE PROPER OF UTILITY SERVICES ORGANIZATIONS SHALL BE MOVED BY THE OWNERS (E.I.E.S.) AS ORDERED.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.L. MAINTENANCE WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUOUS MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE Bid FOR THE VARIOUS JOB ITEMS.

5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 8702 OF THE STANDARDS.

6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCREETNESS SHALL BE USED TO INSURE THAT TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1983 AND THE FOLLOWING SPECIAL SPECIFICATIONS.

NUMBER

ERRATA

ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHM-223, FHM-223 REVISED 1982
FHM-224, SUPPLEMENT TO CONTRACT PROVIDE FEDERAL-AID HIGHWAY CONTRACTS
FHM-225, SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHM-226, SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (U.S.C. 4201)
FHM-227, SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLE
FHM-228, SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHM-229, SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL PROJECTS
FHM-233, SUPPLEMENT - MAKE RATE DETERMINATION

ID-1, ID-2, ID-3, ID-4, ID-5, ID-6

ID-1, CONSTRUCTION CONTROL, IVIES
ID-2, ENGINEERING AND MATERIAL STORAGE ON BRIDGE STRUCTURES
ID-3, WORKER VISIBILITY
ID-4, EDUCATED DAMAGES
ID-5, MAINTENANCE OF TRAFFIC
ID-6, REFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
ID-7, CONCRETE FULL BOX
ID-8, DESIGN AND MATERIAL REQUIREMENTS FOR TRAFFIC SIGNAL MAST ARMS AND POLES
ID-9, REFLECTIVE PAINT MARKING MATERIALS
ID-10, THERMOPLASTIC PAINT MARKING MATERIAL

J08 06298, CIRCUIT BOARD ASSEMBLY
J09 0069, DOCUMENTATION OF PAYMENTS MADE TO DISCONTINUED BUSINESS ENTERPRISES
J09 06299, EDGE CARD VIDEO PROCESSOR
J09 0629, ELECTRICAL CONDUCTORS IN CONVEY
J09 06299, ELECTRICAL CONDUCTORS FOR LUMINARIES
J09 06299, INTERNET BONDING
J09 06299, LED SIGNAL TRAFFIC HEAD
J09 06299, LED SIGNAL TRAFFIC HEAD
J09 06299, LED SIGNAL TRAFFIC HEAD
J09 06299, LED SIGNAL TRAFFIC HEAD
J09 06299, STREET NAME SIGN MAST ARMS MOUNTED
J09 06299, SYSTEM LOCAL CONTROLLER
J09 06299, UTILITY ADJUSTMENTS
J09 06299, VIDEO DETECTOR (COLOR)
### SUMMARY OF QUANTITIES

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
<th>QUANTITY</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>MOBILIZATION</td>
<td>1</td>
<td>LS</td>
</tr>
<tr>
<td>604</td>
<td>MAINTENANCE OF TRAFFIC</td>
<td>100</td>
<td>LS</td>
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<tr>
<td>SPA 106</td>
<td>REMOVAL OF PERMANENT PAVEMENT MARKINGS</td>
<td>2763</td>
<td>LIN, FT.</td>
</tr>
<tr>
<td>SPA 107</td>
<td>SYSTEM LOCAL CONTROLLER TS2-TYPE 2,2-L.NET (2 PHASES)</td>
<td>1</td>
<td>EACH</td>
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<tr>
<td>SPA 108</td>
<td>TRAFFIC SIGNAL HEADED (3 SECTION, 1 WAY)</td>
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<td>EACH</td>
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<tr>
<td>T08</td>
<td>TRAFFIC SIGNAL CABLE (2&quot;, 1/4&quot;, A.W.G.)</td>
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<tr>
<td>T08</td>
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<td>GALVANIZED STEEL CONDUIT (1/2&quot;)</td>
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<td>LIN, FT.</td>
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<tr>
<td>T09</td>
<td>NON-METALLIC CONDUIT (1/2&quot;)</td>
<td>15</td>
<td>LIN, FT.</td>
</tr>
<tr>
<td>T09</td>
<td>NON-METALLIC CONDUIT (3&quot;)</td>
<td>9</td>
<td>LIN, FT.</td>
</tr>
<tr>
<td>T09</td>
<td>NON-METALLIC CONDUIT (1&quot;)</td>
<td>174</td>
<td>LIN, FT.</td>
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<tr>
<td>S5A 10</td>
<td>CONCRETE PULL BOX TYPE 2, HDR</td>
<td>2</td>
<td>EACH</td>
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<tr>
<td>S5A 014</td>
<td>TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (4&quot;)</td>
<td>1</td>
<td>EACH</td>
</tr>
<tr>
<td>S5A 015</td>
<td>TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (32&quot;-44&quot;)</td>
<td>1</td>
<td>EACH</td>
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<tr>
<td>S5A 016</td>
<td>REFLECTORIZED PAINT PAVEMENT MARKING WHITE (1&quot;)</td>
<td>300</td>
<td>LIN, FT.</td>
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<td>S5A 017</td>
<td>THERMOPLASTIC PAVEMENT MARKING WHITE (1&quot;)</td>
<td>757</td>
<td>LIN, FT.</td>
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<tr>
<td>S5A 018</td>
<td>THERMOPLASTIC PAVEMENT MARKING WHITE (3&quot;)</td>
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<td>S5A 020</td>
<td>THERMOPLASTIC PAVEMENT MARKING YELLOW (1&quot;)</td>
<td>1840</td>
<td>LIN, FT.</td>
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<td>S5A 021</td>
<td>THERMOPLASTIC PAVEMENT MARKING (CURB)</td>
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<td>EACH</td>
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<tr>
<td>S5A 022</td>
<td>RAISED PAVEMENT MARKERS (TYPE II)</td>
<td>50</td>
<td>EACH</td>
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<tr>
<td>SPA 173</td>
<td>VIDEO DETECTOR (GOLD)</td>
<td>6</td>
<td>EACH</td>
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<tr>
<td>J33</td>
<td>VIDEO CABLE</td>
<td>338</td>
<td>LIN, FT.</td>
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<tr>
<td>SPA 174</td>
<td>VIDEO PROCESSOR, EDGE CARD (2 CAMERA)</td>
<td>4</td>
<td>EACH</td>
</tr>
<tr>
<td>SPA 175</td>
<td>VIDEO PROCESSOR, EDGE CARD EXTENDER</td>
<td>1</td>
<td>EACH</td>
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<tr>
<td>SPA 176</td>
<td>VIDEO EDGE CARD</td>
<td>28</td>
<td>LIN, FT.</td>
</tr>
<tr>
<td>SPA 177</td>
<td>ELECTRICAL CABLES IN-CONDUIT (1&quot;, 1/2&quot;, A.W.G.)</td>
<td>200</td>
<td>LIN, FT.</td>
</tr>
<tr>
<td>SPA 178</td>
<td>ELECTRICAL CABLES IN-CONDUIT (1&quot;, 3/4&quot;, A.W.G., ECC)</td>
<td>50</td>
<td>LIN, FT.</td>
</tr>
<tr>
<td>SPA 179</td>
<td>ELECTRICAL CABLES FOR LUMINARIES</td>
<td>68</td>
<td>LIN, FT.</td>
</tr>
<tr>
<td>SPA 180</td>
<td>LUMINARIES ASSEMBLY</td>
<td>1</td>
<td>EACH</td>
</tr>
<tr>
<td>SPA 181</td>
<td>LOCAL RADIO WITH ANTENNA</td>
<td>1</td>
<td>EACH</td>
</tr>
<tr>
<td>SPA 182</td>
<td>ANTENNA CABLE (TYPE EI)</td>
<td>64</td>
<td>LIN, FT.</td>
</tr>
<tr>
<td>SPA 183</td>
<td>STREET SIGN</td>
<td>1</td>
<td>EACH</td>
</tr>
<tr>
<td>SPA 184</td>
<td>SERVICE POINT, ASSEMBLY (2 CIRCUITS)</td>
<td>1</td>
<td>EACH</td>
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</tbody>
</table>

* ONE ADDITIONAL VIDEO DETECTOR AND ONE ADDITIONAL VIDEO PROCESSOR, EDGE CARD PROVIDED FOR FUTURE USE.
COORDINATES

<table>
<thead>
<tr>
<th>POINT</th>
<th>NORTHING</th>
<th>EASTING</th>
<th>ELEVATION</th>
<th>STATION HWY 270/ HWY 270B</th>
<th>OFFSET</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>1</td>
<td>970066.665</td>
<td>104957.988</td>
<td>328.01</td>
<td>10I+28.40</td>
<td>32.26' LT</td>
<td>1/2&quot; REBAR WITH 2&quot; ALUMINUM CAP</td>
</tr>
<tr>
<td>2</td>
<td>970053.964</td>
<td>104483.968</td>
<td>357.09</td>
<td>10I+49.45</td>
<td>45.81' RT</td>
<td>1/2&quot; REBAR WITH 2&quot; ALUMINUM CAP</td>
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<tr>
<td>3</td>
<td>970068.876</td>
<td>104396.3448</td>
<td>328.22</td>
<td>97+3.07</td>
<td>51.03' RT</td>
<td>1/2&quot; REBAR WITH 2&quot; ALUMINUM CAP</td>
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<tr>
<td>100</td>
<td>968552.5878</td>
<td>1004504.8573</td>
<td>455.3</td>
<td>-</td>
<td>-</td>
<td>GPS 2600B RTK ELEV</td>
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<tr>
<td>01</td>
<td>968863.3946</td>
<td>1002804.0281</td>
<td>455.09</td>
<td>-</td>
<td>-</td>
<td>GPS 2600B RTK ELEV</td>
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<tr>
<td>900</td>
<td>970056.5329</td>
<td>103952.6062</td>
<td>324.70</td>
<td>97+38.98</td>
<td>105.02' RT</td>
<td>CHLD SPOE TOP CENTER HW</td>
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<tr>
<td>901</td>
<td>970053.7977</td>
<td>1035041.4826</td>
<td>357.72</td>
<td>10I+0.45</td>
<td>34.84' RT</td>
<td>ALUM CAP IN BR ABUTMENT</td>
</tr>
<tr>
<td>999</td>
<td>970040.9532</td>
<td>1032068.0844</td>
<td>366.70</td>
<td>-</td>
<td>-</td>
<td>BRASS CAP IN S END HW</td>
</tr>
</tbody>
</table>

HORIZONTAL DATUM – BASED ON AHD GPS POINTS 2600B & 2600BA
VERTICAL DATUM – BASED ON AHD GPS POINTS 2600B & 2600BA
BASE OF BEAVERS – GCR SOUTH BASED ON AHD GPS POINTS 2600B & 2600BA
ALL COORDINATES ARE GROUND

CENTERLINE POINTS

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>TYPE</th>
<th>STATION</th>
<th>NORTHING</th>
<th>EASTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>8000</td>
<td>PC</td>
<td>HWY 270B</td>
<td>98+50.45</td>
<td>970895.7888</td>
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<tr>
<td>8002</td>
<td>PI</td>
<td>HWY 270B</td>
<td>102+0.23</td>
<td>970647.8850</td>
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<tr>
<td>8002</td>
<td>POE</td>
<td>HWY 270B</td>
<td>103+0.26</td>
<td>970556.3880</td>
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<tr>
<td>8003</td>
<td>PT</td>
<td>HWY 270</td>
<td>107+22.30</td>
<td>970568.4354</td>
</tr>
</tbody>
</table>

SCALE = 1" = 20' RTK
DRAFTED BY JFD

**POLE DIMENSIONS**

<table>
<thead>
<tr>
<th>POLE</th>
<th>MAST ARM LENGTH</th>
<th>MAST ARM ANGLE FROM HORIZONTAL</th>
<th>MAST ARM ORIENTATION FROM HORIZONTAL</th>
<th>VERTICAL SHIFTS LENGTH</th>
<th>MAST ARM LENGTH</th>
<th>MAST ARM ORIENTATION FROM HORIZONTAL</th>
<th>STATION MARK</th>
<th>OFFSET</th>
<th>NORTHING</th>
<th>EASTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>32 ft</td>
<td>90 degrees</td>
<td>20 degrees</td>
<td>30.0'</td>
<td>80.0'</td>
<td>20 degrees</td>
<td>MALVERN</td>
<td>102-27.65</td>
<td>19706012858</td>
<td>Q0466B4886</td>
</tr>
<tr>
<td>B</td>
<td>42 ft</td>
<td>90 degrees</td>
<td>20 degrees</td>
<td>30.0'</td>
<td>80.0'</td>
<td>20 degrees</td>
<td>80.0'</td>
<td>103-32.65</td>
<td>19705224003</td>
<td>Q050BE4835</td>
</tr>
</tbody>
</table>

*MAST ARM LENGTH ALLIORS FOR FUTURE LEFT TURN SIGNAL HEAD*

---

**PHASING DIAGRAM**

**SIGNAL FACES**

2" LENSES

- R
- Y
- G
- "1, 2, 3, 4, 5, 6, 7, 8, 9"

**LEGEND**

- TYPE 2 PULL BOX
- TYPE 1 PULL BOX
- SIGNAL HEAD
- CONTROL BOX
- SIGNAL POLE, MAST ARM, AND LUMAIRE, ARM
- NMC - NON METALLIC CONDUIT
- VFD DETECTOR
- ANTVI

---

**DESIGN PARAMETERS**

**POSTED SPEED LIMIT:**
- 45 MPH EAST & WEST APPROACHES
- 45 MPH SOUTH APPROACH
- NO BUS STOPS
- NO RAILROAD TRACKS
- NO PARKING
- NO FIRE STATION
- 2" MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)

**LOCATION:** HWY 270 E. & F. MALVERN AVE.

**COUNTY:** DARLAND

**DISTRICT:** 6G

**Scales:** AS SHOWN DRAWN BY: JPD

---

**SCALE IN FEET**

1 UNIT = 1 FOOT

**DATE:** 08/10/04

**FILE NAME:** Q0612P-105b.png
CONDUIT ENTRY TO EXISTING POLE BASE

EXISTING POLE BASE

ANCHOR BASE

ELECTRICAL CONDUIT

EGC BONDED TO GROUND LUG ON POLE
AND OTHER EGC CONDUCTORS

ANCHOR BASE

LEVELING NUT

Chip Out, Regrout

OUTGOING PGB TO NEXT POLE GROUND

GROUND ROD

CONDUIT ENTRY TO EXISTING CONTROLLER CABINET

EXIST, CONTROLLER CABINET

WIRE AS SHOWN ON PLANS

EXIST, CONTROLLER CABINET

CONCRETE BASE

Type "HD" Concrete Pull Box Detail

Type "C" Concrete

ROOF SURFACE

Notes:
- All reinforcing bars are Grade 60 HRB.
- 6 reinforcing bars are to be tied together.
- Note: All reinforcing bars to be Grade 60.

2" CLEAR FROM TOP TO A tolerence +/- 0.5"
Ground Rod A 10' x 1/4" ground rod shall be installed in the pull box for each pole and the controller. Payment for the ground rod and ground wire shall be included in Item 701. The pull box and conductor box shall be paid for separately.

Service Ground is typically tied to neutral at the Main Breaker. As such, controller ground is NOT tied to Neutral at secondary Breaker or in controller cabinet.

NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY)

Electrical service typically falls into two categories: MAIN BREAKER NEAR CONTROLLER CABINET and MAIN BREAKER NOT NEAR CONTROLLER CABINET. The Contractor's and the City's or County's responsibility varies according to these details.

1. ALL SITUATIONS: Electrical service shall be provided by the City/County to a service pole with external Rejntight breaker (MAIN BREAKER) at a mutually acceptable point within the right-of-way. Service point includes galvanized steel conduit to a point 10' below ground line, two circuits, main breaker, power isolation assembly where required, meter loop if required by local utility, electrical conductors and weatherhead. Service wire and wiring from the controller to main breaker is provided by the Contractor as a part of this contract. Service wire and wiring from main breaker and connection to utility is the responsibility of the City/County.

2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: The main breaker assembly, galvanized steel conduit, weatherhead and wire above main breaker and connection to the utility shall be provided by City/County. Contractor shall provide as part of contract Secondary Breaker, conduit, wire and wiring to the main breaker.

3. MAIN BREAKER NEAR CONTROLLER CABINET: All components of the service point with the exception of the wire and wiring above the main breaker shall be furnished and installed by the Contractor. Wiring from Main Breaker including connection to the utility, is the responsibility of the City/County. If meter loop is required, meter base and hardware is provided by the City/County and installed by the Contractor.

MAIN BREAKER NEAR CONTROLLER CABINET
SECURITY NOT REQUIRED

MAIN BREAKER WIRING (TYPICAL)

NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY)

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NOTE: WHERE LEFT TURN HEAD (HEAD 1 OR 2) AND C2 IS NOT CALLED FOR ON PLAN, A MINIMUM LENGTH OF 5'-0" IS STILL ALLOWED FOR FIGURE PATTERN D2. THE HEADS SHALL BE ALIGNED WITH THROUGH LAKES AS SHOWN ON DETAILS.

---

GENERAL NOTES:

1. FOUR SECTION "PROTECTED/PERMISSIVE" LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

2. THREE SECTION "PROTECTED" LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

3. WHEN IT IS NECESSARY TO PLACE RINGS OTHER THAN AS SHOWN ON PLAN SHEET "D", RESULTING IN MUST ARM EXTENDING MORE THAN TWO FEET PAST 5' TO THE LEFT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, THE MUST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER. RULE 13-6.1.1 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR INSTALLING THE MUST ARM IF ADDITIONAL COMPLIANCE IS REQUIRED.

4. SIGNAL HEAD SPACING SHALL NOT EXCEED EIGHT (8'-0") FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.

5. ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.

6. MAXIMUM ELEVATING HEIGHT OF SIGNAL PADS LOCATED BETWEEN 45 FEET AND 85 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 407.1 OF Z05-MA70.