

**TAMPA-HILLSBOROUGH COUNTY
EXPRESSWAY AUTHORITY**

Addendum No. 12

FOR

Request for Proposals (RFP)

East Selmon Slip Ramps Design-Build

RFP O-02520

ADDENDUM NO. 12

PROJECT NAME: East Selmon Slip Ramps Design-Build RFP O-02520

DATE OF ADDENDUM: March 16, 2021

PLEASE NOTE THE FOLLOWING ADDENDUM NO. 12 TO THE RFP:

ATTACHMENTS

The Attachments listed below are hereby incorporated into and made a part of this Request for Proposal (RFP) as though fully set forth herein.

A_001 - Project Advertisement

A_002 - Division I Design-Build Specifications

Division I Special Provisions identified by the Authority for this Project:

A_003.01 - Award and Execution of Contract (SP0030200)

A_003.02 - Public Records (SP0030900)

A_003.03 - Permits and Licenses (No free passes will be issued to the Contractor for use on the Toll Facility)
(SP0070201)

A_003.04 - Preservation of Property for Toll Facilities (SP0071101-tolls)

A_003.05 - Equal Employment Opportunity Requirements (SP0072700)

A_003.06 - Preference to State Residents (SP0072800)

A_003.07 - Legal Requirements and Responsibility to the Public - E-Verify (SP0072900)

A_003.08 - Legal Requirements and Responsibility to the Public - Scrutinized Companies (SP0073000)

A_003.09 - Contaminated Material – Mercury-Containing Devices and Lamps (SP0080409)

A_003.10 - Prosecution and Progress - Damage Recovery (SP0081200)

FDOT Divisions II and III Special Provisions identified by the Authority for this Project:

A_004.01 - Mobilization (SP1010000DB)

A_004.02 - Contractor Quality Control General Requirements (SP1050813DB)

A_004.03 - Structures Foundations (SP4550000DB)

A_004.04 – Value Added Bridge Components (Dev475)

A_005 - City of Tampa Truck Routes

A_006 – THEA General Tolling Requirements

A_007 – Letters of Clarification (pending)

THEA Forms

A_008.01 - Bid Blank, Design Build Major

A_008.02 - Dispute Review Board Three Party Agreement

A_008.03 - Certificate of Insurance

A_008.04 - Insurance Requirements, Coverages, and Limits

A_008.05 - Anticipated SBE Participation Statement

A_008.06 – Schedule of Values

Conceptual Typical Sections

A_009.01 – NOT USED

A_009.02 – Conceptual Slip Ramp Typical Sections (Updated March 15, 2021)

A_010 – Pipe Lining Locations (Updated March 11, 2021)

The RFP Reference Documents are revised as follows:

REFERENCE DOCUMENTS

The following documents are being provided with this RFP. Except as specifically set forth in the body of this RFP, these documents are being provided for reference and general information only. They are not being incorporated into and are not being made part of the RFP, the contract documents or any other document that is connected or related to this Project except as otherwise specifically stated herein. No information contained in these documents shall be construed as a representation of any field condition or any statement of facts upon which the Design-Build Firm can rely upon in performance of this contract. All information contained in these reference documents must be verified by a proper factual investigation. The bidder agrees that by accepting copies of the documents, any and all claims for damages, time or any other impacts based on the documents are expressly waived.

- R_01 - Historic Plans (Updated March 11, 2021)
- R_02 - Concept Plans
- R_03 - Bridge Inspection Reports
- R_04 - Existing Bridge Plans
- R_05 - East Selmon Planning and Feasibility Study
- R_06 - Geotechnical Data
- R_07 - Type 1 Categorical Exclusion (Ramp 3)
- R_08 - Non Major State Action (Ramp 2) (PENDING)
- R_09 - Survey Data
- R_10 – Selmon Expressway Connector MOU
- R_11 – Selmon Expressway and I-75 Interchange MOU
- R_12 – Pipe Video Inspection – Vicinity of Ramp 3
- R_13 – Utility Information
- R_14 – Conceptual Typical Sections
- R_15 – Pre-Bid Meeting Presentation
- R_16 – Existing REL Gate Drawings

Section II is deleted and replaced with the following:

II. Schedule of Events.

Below is the current schedule of the events that will take place in the procurement process. The Authority reserves the right to make changes or alterations to the schedule as the Authority determines is in the best interests of the public. Proposers will be notified sufficiently in advance of any changes or alterations in the schedule. Unless otherwise notified in writing by the Authority, the dates indicated below for submission of items or for other actions on the part of a Proposer shall constitute absolute deadlines for those activities and failure to fully comply by the time stated shall cause a Proposer to be disqualified.

Date	Event
November 12, 2020	Industry Forum at 10:30 AM local time at the THEA office, 1104 East Twiggs Street, Tampa FL 33602.
December 3, 2020	Advertisement; The RFP will be posted on THEA's website at: https://www.tampa-xway.com/procurement/
December 18, 2020	Deadline for all Design-Build firms to submit Questions/Requests for Clarification.
December 29, 2020	Addendum Release (if required).
January 7, 2021	Expanded Letters of Interest (ELOI) for Phase I of the procurement process due in Authority Office by 2:00pm local time. Letters to be submitted to Man Le, Contracts and Procurement Manager (Man.Le@tampa-xway.com).
January 12, 2021	Proposal Evaluators submit Expanded Letter of Interest Scores to Contracting Unit, 2:00pm local time
January 25, 2021	Public Meeting and Board of Directors approval of shortlist at THEA Board Meeting
January 27, 2021	Deadline for all responsive Design-Build firms to affirmatively declare intent to continue to Phase II of the procurement process, 2:00pm local time
January 28, 2021	THEA Contracting Unit updates shortlist of firms continuing to Phase II by 5:00pm local time
January 29, 2021	Mandatory Pre-proposal meeting, facilitated by the Director of Operations and Engineering, at 9:00am local time at the THEA office, 1104 East Twiggs Street Suite 300, Tampa, FL 33602. All Utility Agency/Owners that the Authority contemplates an adjustment, protection, or relocation is possible are to be invited to the mandatory Pre-Proposal meeting.
January 29, 2021	Utility Pre-Proposal Meeting facilitated by the Director of Operations and Engineering, at 10:30am local time at the THEA office, 1104 East Twiggs Street Suite 300, Tampa, FL 33602.
February 10, 2021	Deadline for Design-Build Firm to request participation in One-on-One Alternative Technical Concept Discussion Meeting No. 1. Requests to be submitted to Man Le, Contracts and Procurement Manager (Man.Le@tampa-xway.com).
February 17, 2021	Deadline for Design-Build Firm to submit preliminary list of Alternative Technical Concepts prior to One-on-One Alternative Technical Concept Discussion Meeting No. 1. List shall be submitted to Man Le, Contracts and Procurement Manager (Man.Le@tampa-xway.com).
February 24-25, 2021	One-on-One Alternative Technical Concept Discussion Meeting No. 1. 90 Minutes will be allotted for each Meeting.
March 3, 2021	Deadline for submittal of Alternative Technical Concept Proposals, 2:00pm local time.
March 10, 2021	Final deadline for submission of requests for Design Exceptions or Design Variations.

East Selmon Slip Ramps Design-Build
RFP O-02520

March 17, 2021	Deadline for submittal of questions, for which a response is assured, prior to the submission of the Technical Proposal. All questions shall be submitted to Man Le, Contracts and Procurement Manager (Man.Le@tampa-xway.com).
March 24, 2021	Deadline for the Authority to post responses to the Project website for questions submitted by the Design-Build Firms prior to the submittal of the Technical Proposal. Responses will be posted to the procurement website: https://www.tampa-xway.com/procurement/
April 5, 2021	Technical Proposals due in Authority Office by 2:00p.m. local time
April 6, 2021	Deadline for Design-Build teams to “opt out” of Technical Proposal Page Turn meeting.
April 8, 2021	Technical Proposal Page Turn Meeting. Times will be assigned during the Pre-Proposal Meeting. 60 Minutes will be allotted for this Meeting.
April 13, 2021	Question and Answer Session. Times will be assigned during the pre-proposal meeting. Two hours will be allotted for questions and responses.
April 16, 2021	Deadline for submittal of Written Clarification letter following Question and Answer Session 2:00pm local time
April 20, 2021	Deadline for submittal of questions, for which a response is assured, prior to the submission of the Price Proposal. All questions shall be submitted to Man Le, Contracts and Procurement Manager (Man.Le@tampa-xway.com).
April 27, 2021	Deadline for the Authority to post responses to the Project website for questions submitted by the Design-Build Firms prior to the submittal of the Price Proposal. Responses will be posted to the procurement website: https://www.tampa-xway.com/procurement/
May 4, 2021	Price Proposals due in Authority Office by 11:00am local time.
May 4, 2021	Public announcing of Technical Scores and opening of Price Proposals at 1:30pm local time at the THEA office, 1104 East Twiggs Street Suite 300, Tampa, FL 33602
May 5, 2021	THEA Contracting Unit posts final scores and bid prices to THEA website by 5:00pm local time
May 24, 2021	Public Meeting of Board of Directors to determine intended Award
May 25, 2021	Posting of the Authority’s intended decision to Award
TBD	Anticipated Award Date
TBD	Anticipated Execution Date

Section VII.B., is deleted and replaced with the following:

VII. Technical Proposal Requirements:

B. Submittal Requirements:

The Technical Proposal shall be bound with the information, paper size and page limitation requirements as listed herein. Four printed copies of the Technical Proposal shall be submitted to the Authority prior to the deadline provided in this RFP.

A copy of the written Technical Proposal must also be submitted electronically in PDF format including bookmarks for each section. Bookmarks which provide links to content within the Technical Proposal are allowed. Bookmarks which provide links to information not included within the content of the Technical Proposal shall not be utilized. No macros will be allowed. Minimum font size of ten (10) shall be used. Times New Roman shall be the required font type.

Only upon request by the Authority, provide calculations, studies and/or research to support features identified in the Technical Proposal. This only applies during the Technical Proposal Evaluation phase.

Address and submit seven (7) printed copies of the Technical Proposal (Section 1 and Section 2) to:

Man Le, Contracts and Procurement Manager
Tampa-Hillsborough Expressway Authority
1104 East Twiggs St, Suite 300
Tampa, FL 33602

Submit the PDF of the Technical Proposal via Email to: Man.Le@tampa-xway.com

The minimum information to be included:

Section 1: Project Approach

- Paper size: 8½" x 11". The maximum number of pages shall be ten (10), single-sided, typed pages including text, graphics, tables, charts, and photographs. Double-sided 8½" x 11" sheets will be counted as 2 pages. 11"x17" sheets are prohibited.
- Describe how the proposed design solutions and construction means and methods meet the project needs described in this Request for Proposal. Provide sufficient information to convey a thorough knowledge and understanding of the project and to provide confidence the design and construction can be completed as proposed.
- Provide the term, measurable standards, and remedial work plan for any proposed Value Added features that are not Value Added features included in this RFP, or for extending the Value Added period of a feature that is included in this RFP. Describe any material requirements that are exceeded.
- Provide a Written Schedule Narrative that describes the Design and Construction phases and illustrates how each phase will be scheduled to meet the Project needs required of this Request for Proposal.
- Bar/Gantt charts shall be plotted on double-sided 8 ½" x 11" sheets and included as an Appendix to the technical proposal. Bar/Gantt charts will not be counted in the Section 1 page limit, provided additional information such as graphics and technical proposal text is not included. The bar/Gantt chart shall be sufficiently detailed to assess the proposed contract time.

Section 2: Plans

- Technical Proposal Plans for the proposed improvements shall be submitted on 11"x17" sheets.
- Right of Way Maps and Legal Descriptions (including area in square feet) of any proposed additional Right of Way parcels if applicable and approved through the ATC process. Provide

Technical Proposal Plans in accordance with the requirements of the FDOT Design Manual, except as modified herein.

- Provide a conceptual plan for addressing the wrong-way driving actuated gate and ITS controls.
- The Plans shall complement the Project Approach.
- All plan and profile sheets shall utilize a maximum horizontal scale of 1" = 50'. Drainage maps may utilize larger scales in accordance with the FDM.

Respondents MUST acknowledge receipt of this Addendum/Letter of Clarification by signing, dating and returning the completed Acknowledgement of Receipt of Letter of Addendum/Clarification form **with Respondent's proposal**.

All other items, conditions, and specifications in the procurement document not specifically changed by the Addendum remain unchanged.

Please send all questions to THEA's Procurement Manager, Man Le, via email at Man.Le@tampa-xway.com.

ACKNOWLEDGEMENT OF RECEIPT OF ADDENDUM and/or LETTER OF CLARIFICATION

Were Addenda issued on this Solicitation?

- Yes
- No

Were Letter of Clarification issued on this Solicitation?

- Yes
- No

I (We) hereby acknowledge receipt of the following Addendum/Addenda issued in reference to this solicitation by listing the Addenda by number, date and signing the form:

Addendum _____ Date: _____

Addendum _____ Date: _____

Letter of Clarification _____ Date: _____

Letter of Clarification _____ Date: _____

BIDDER:

By: _____
Authorized Signature

Printed Name of Signer

Title of Signer

Date Signed

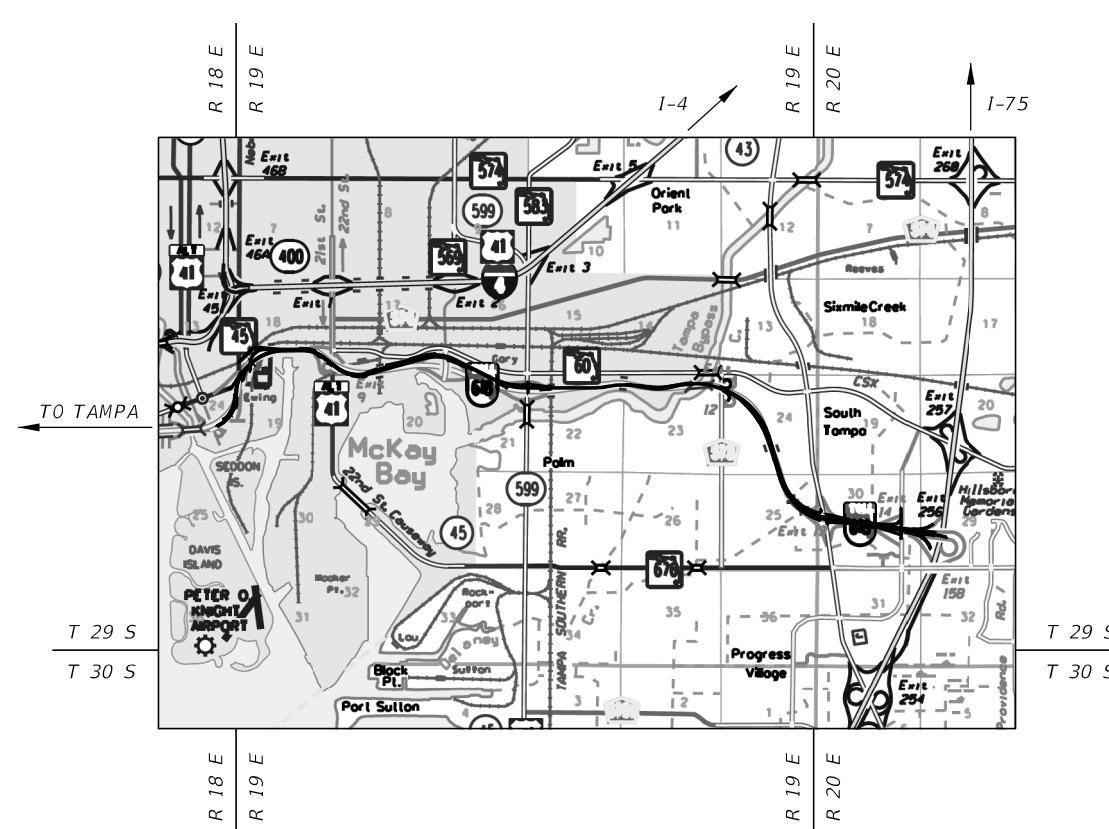
[END OF ACKNOWLEDGMENT OF RECEIPT FORM]

TAMPA HILLSBOROUGH EXPRESSWAY AUTHORITY

SELMON EAST SLIP RAMPS DESIGN-BUILD PROJECT

HILLSBOROUGH COUNTY (10002)

STATE ROAD NO. 618



TYPICAL SECTIONS

SHEET NO.	SHEET DESCRIPTION
1	COVER SHEET
2	BRIDGE NO. 100447 SELMON EXPRESSWAY OVER CSX RR
3	BRIDGE NO. 100489 & 100490 OVER S. FALKENBURG RD
4	SR 618 SLIP RAMP 3 ONTO REVERSIBLE EXPRESS LANES

REVISED MARCH 15, 2021

PROJECT CONTROLS

CONTEXT CLASSIFICATION

- () C1 : NATURAL () C3C : SUBURBAN COMM.
- () C2 : RURAL (x) C4 : URBAN GENERAL
- () C2T : RURAL TOWN () C5 : URBAN CENTER
- () C3R : SUBURBAN RES. () C6 : URBAN CORE
- () N/A : L.A. FACILITY

FUNCTIONAL CLASSIFICATION

- () INTERSTATE () MAJOR COLLECTOR
- (x) FREEWAY/EXPWY. () MINOR COLLECTOR
- (x) PRINCIPAL ARTERIAL () LOCAL
- () MINOR ARTERIAL

HIGHWAY SYSTEM

- () NATIONAL HIGHWAY SYSTEM
- (x) STRATEGIC INTERMODAL SYSTEM
- () STATE HIGHWAY SYSTEM
- () OFF-STATE HIGHWAY SYSTEM

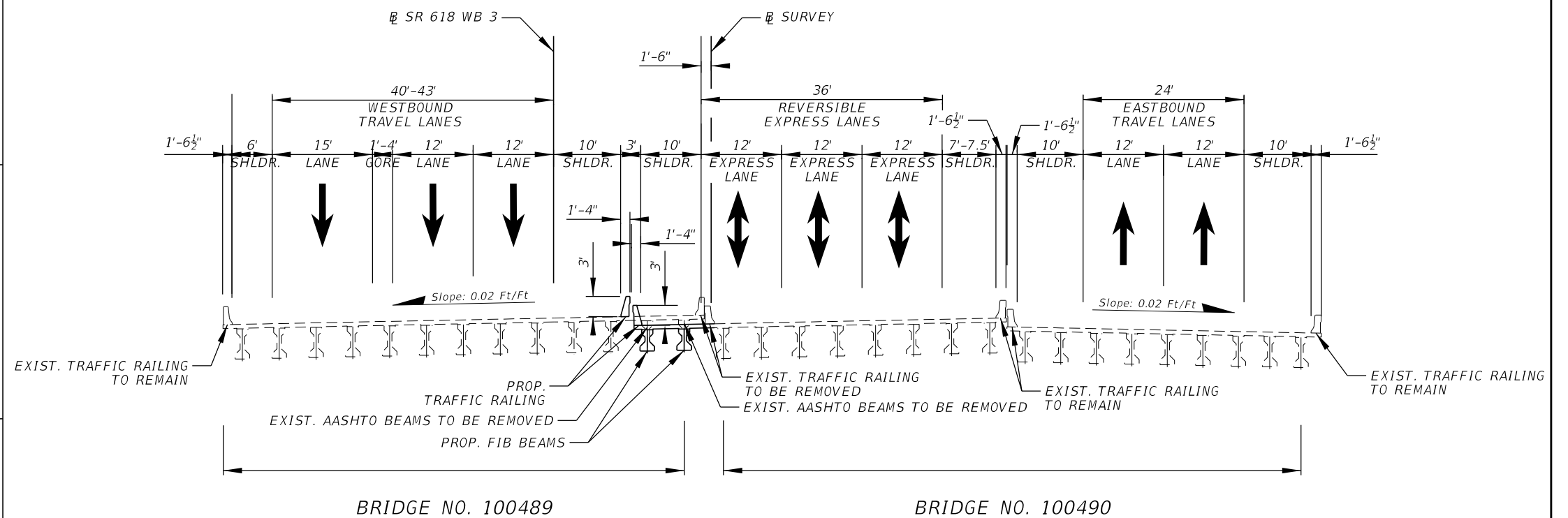
ACCESS CLASSIFICATION

- (x) 1 - FREEWAY
- () 2 - RESTRICTIVE w/Service Roads
- () 3 - RESTRICTIVE w/660 ft. Connection Spacing
- () 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
- () 5 - RESTRICTIVE w/440 ft. Connection Spacing
- () 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
- () 7 - BOTH MEDIAN TYPES

CRITERIA

- (x) NEW CONSTRUCTION / RECONSTRUCTION
- () RESURFACING (LA FACILITIES)
- () RRR (ARTERIALS & COLLECTORS)

TYPICAL SECTION No.



POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

BRIDGE NO. 100489 & 100490
OVER S FALKENBURG RD

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.

REVISION 03/01/2021

PROJECT CONTROLS

CONTEXT CLASSIFICATION

- () C1 : NATURAL () C3C : SUBURBAN COMM.
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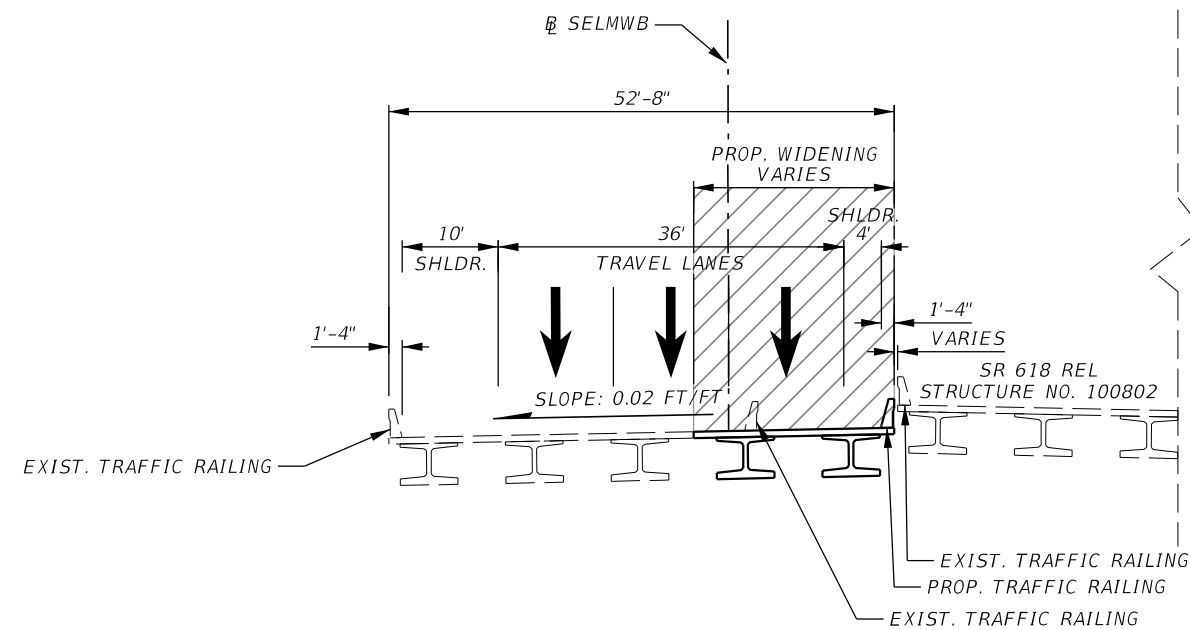
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- () RESURFACING (LA FACILITIES)
- () RRR (ARTERIALS & COLLECTORS)

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No.



**BRIDGE NO. 100447
SELMON EXPRESSWAY OVER CSX RR**

NOT TO SCALE

REVISION 03/11/2021

FINANCIAL PROJECT ID	SHEET NO.

PROJECT CONTROLS

CONTEXT CLASSIFICATION

- () C1 : NATURAL () C3C : SUBURBAN COMM.
- () C2 : RURAL (x) C4 : URBAN GENERAL
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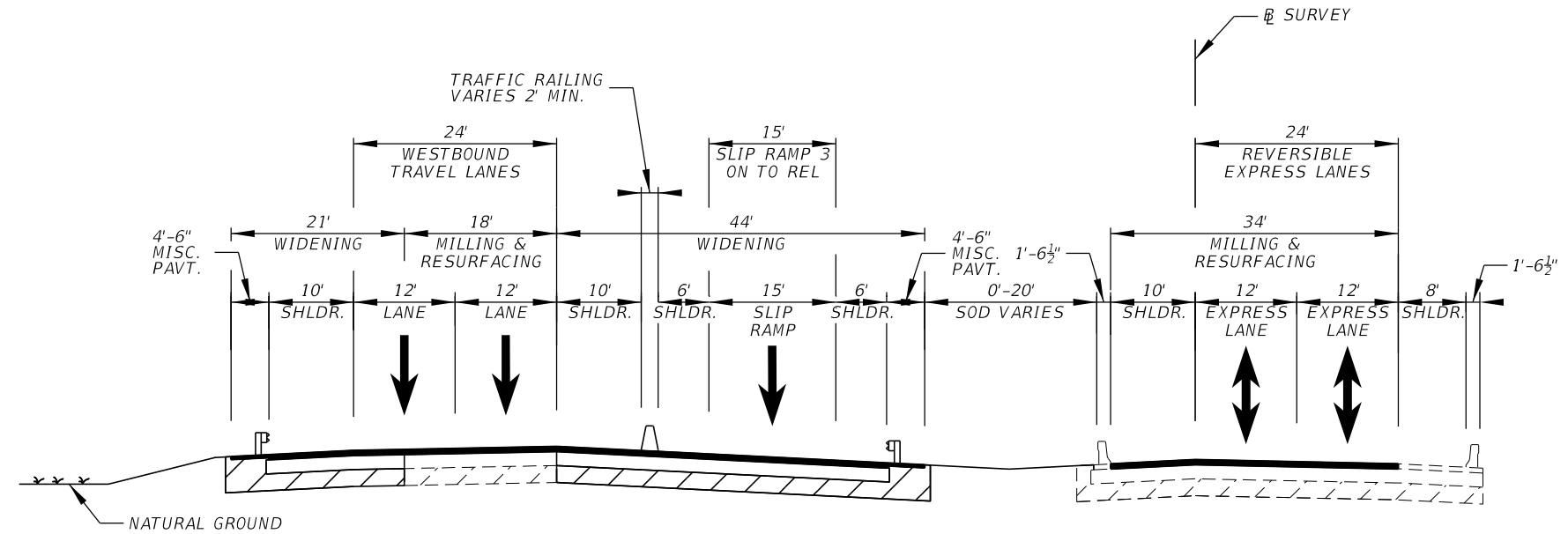
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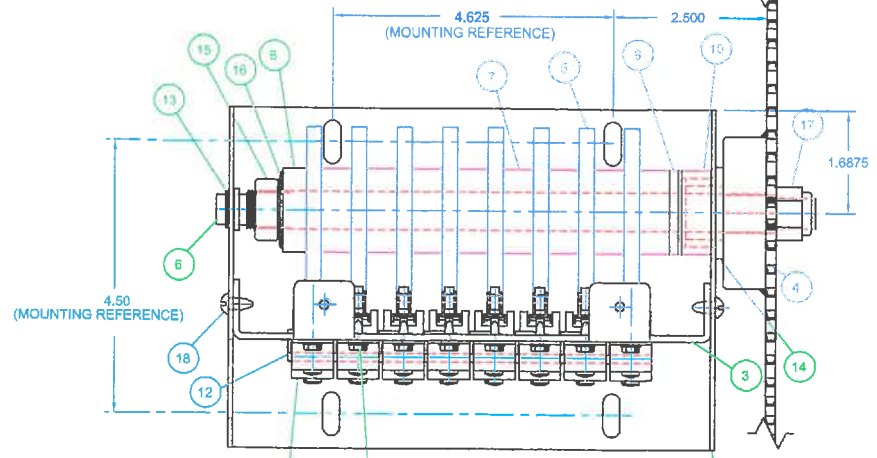
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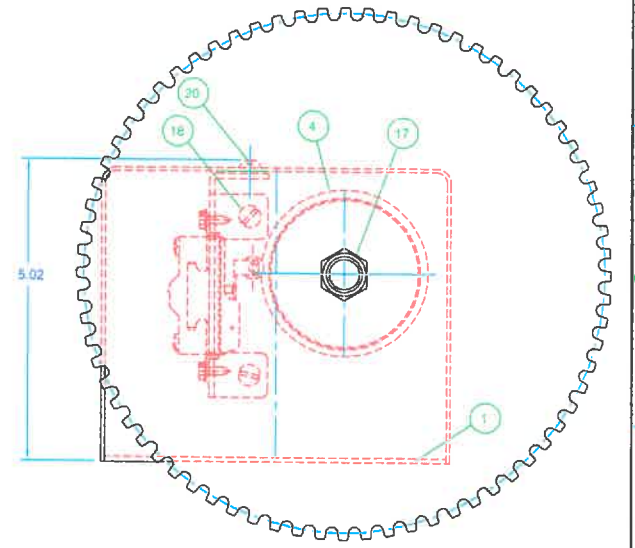
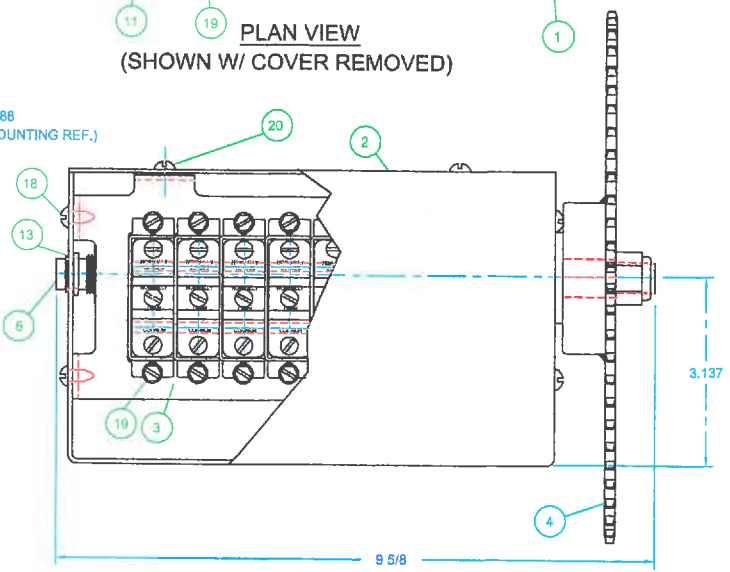
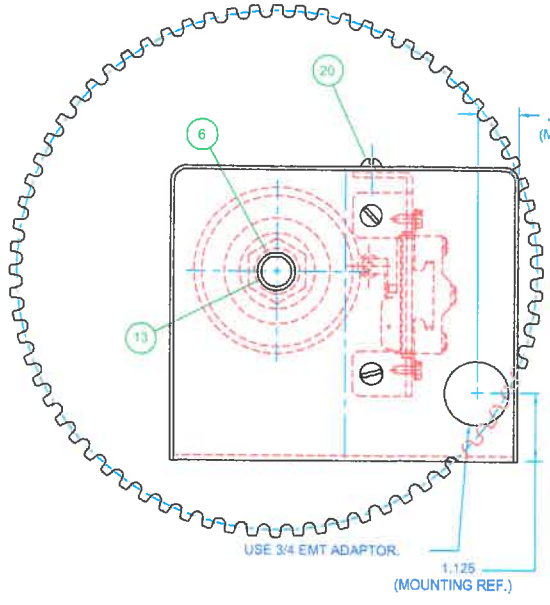
SR 618 SLIP RAMP 3
ONTO REVERSIBLE EXPRESS LANES

NOT TO SCALE

FINANCIAL PROJECT ID	SHEET NO.



PLAN VIEW
(SHOWN W/ COVER REMOVED)



PARTS LIST			
ITEM	QTY	DESCRIPTION	PART #
1	1	BASE	ALS-P001
2	1	COVER	ALS-P002
3	1	MOUNTING BRACKET	ALS-P003
4	1	SPROCKET 72 TOOTH	ALS-P018
5	6	CAM	ALS-P005-1
	2	CAM	ALS-P005-2
6	1	CAM SHAFT	ALS-P006
7	8	CAM BUSHING	ALS-P007
8	1	CAM SPACER	ALS-P008
9	1	THRUST BUSHING	ALS-P009
10	1	SLEEVE	ALS-P010
11	8	SWITCH SPDT MICRO WITH ROLLER ARM	PSW-8Z2RW822A2
12	8	BRACKET, SWITCH MOUNTING ADAPTOR.	PSW-BZ2R17MA1B
13	1	BUSHING 1/2" BORE NYLINER	BRGNY.5X.140
14	1	BUSHING 7/8" BORE BUNTING	BRGBR-FF1102-6
15	1	JAM NUT 5/8-11 SS SAE	NUTSS.62-11-JAM
16	1	BELLEVILLE 5/8" SS WASHER	BWSS.62X1.25
17	1	NUT-NYLON INSERT 1/2"-13	NUTSS.5-13ESNA
18	4	SCREW # 10-32 X 1/4 RHMS SS	BLTSS#10-32X.25
19	16	SCREW # 6-32 X 1/4 RHMS SS	BLTSS#6-32X.25
20	2	SCREW # 10-32 X 3/8 RHMS SS	BLTSS#10-32X.37

NOTES:
1. CAN BE MADE OPPOSITE HAND.

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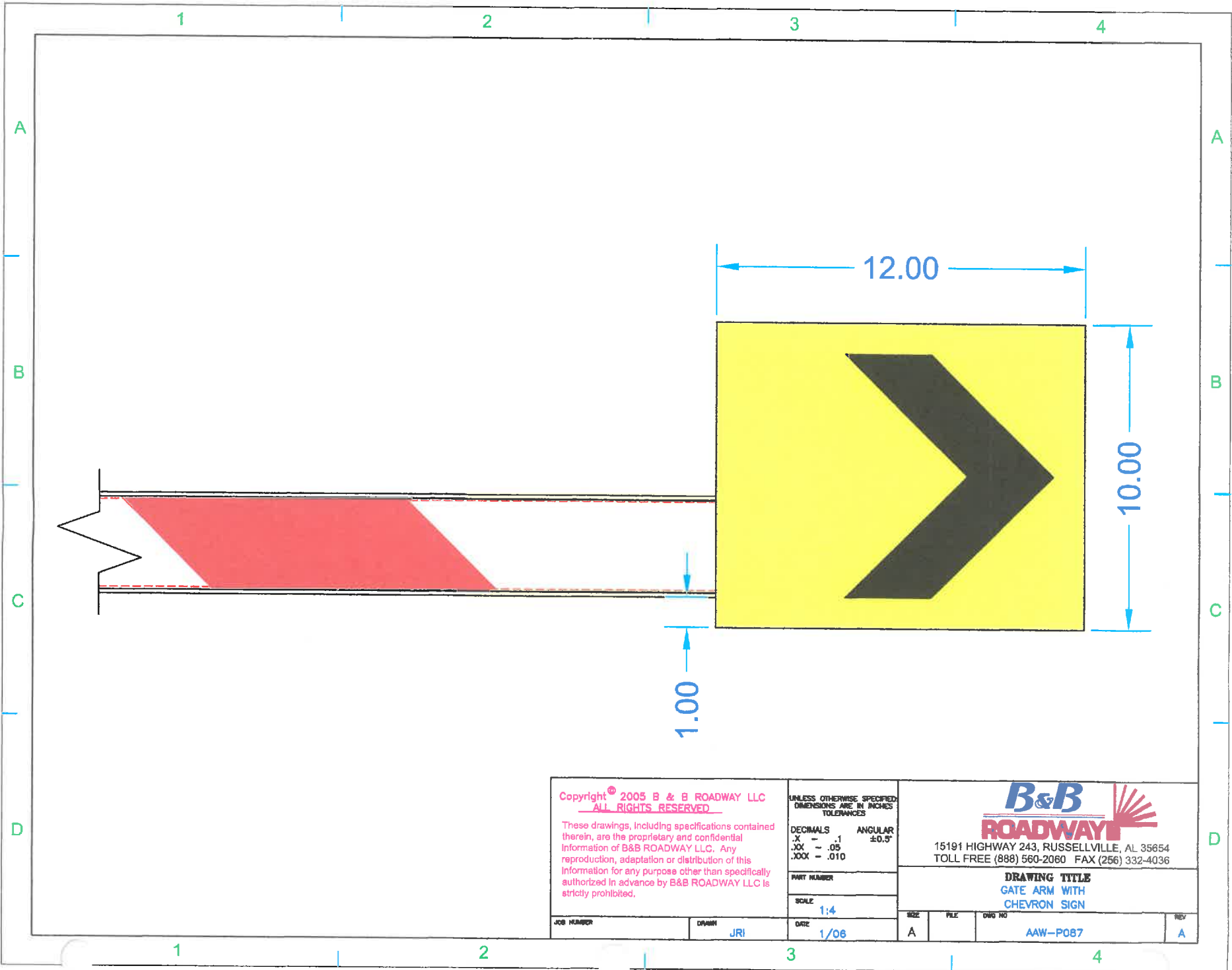
ROADWAY MANUFACTURING

15191 HWY 243
RUSSELLVILLE, AL 35664
PH (888) 560-2060
FAX (256) 332-4036

B	1-00	CDW	DCL	WAS OPPOSITE HAND
A	5-99	DCL		ORIGINAL ISSUE
REV	DATE	DWN	CKD	DESCRIPTION

LIMIT SWITCH FOR VW-5, VR-6 & VR7

JOB #: SCALE: HALF PRINT #: ALS-A004



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UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES

DECIMALS	ANGULAR
.X - .1	±0.5°
.XX - .05	
.XXX - .010	

PART NUMBER

SCALE
 1:4

DATE
 1/06



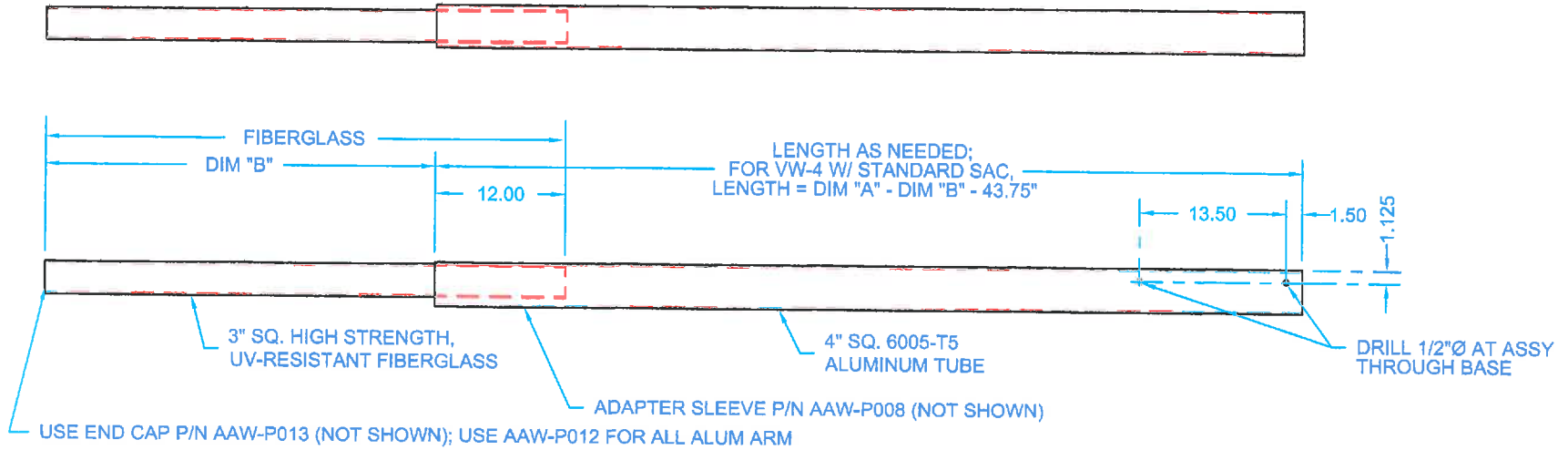
15191 HIGHWAY 243, RUSSELLVILLE, AL 35654
 TOLL FREE (888) 560-2060 FAX (256) 332-4036

DRAWING TITLE
 GATE ARM WITH
 CHEVRON SIGN

JOB NUMBER	DRAWN	DATE	SIZE	FILE	DWG NO	REV
	JRI	1/06	A		AAW-P087	A

EFFECTIVE DATES	DIM "A"	FIBERGLASS LENGTH	DIM "B"	ALUM SECTION LENGTH
THROUGH LATE 2003 ±	ALL	13'	12'	DIM "A" - 15'-4"
LATE 2003 - JUNE 2004	24' & UNDER OVER 24'	7' 13'	6' 12'	DIM "A" - 9'-4" DIM "A" - 15'-4"
JULY 2004 AND AFTER *	ALL	10'	9'	DIM "A" - 12'-4"

* USE REMAINING ODD LENGTH PIECES FOR SIDEWALK ARMS



NOTES:

- DESIGNED FOR USE WITH AAW-P001 SHEAR PIN BASE
- STANDARD FINISH - DIAMOND GRADE REFLECTIVE SHEETING, PRESTRIPED RED & WHITE, REMAINING EXPOSED SURFACES PAINTED WHITE

REV	DATE	DWN	CKD	DESCRIPTION
C	10-06	DCL		ADJUST F/CHANGE IN PIVOT LOCATION
B	7-04	DCL		FIBERGLASS TIP LENGTH
A	5-97	DCL		ORIGINAL ISSUE

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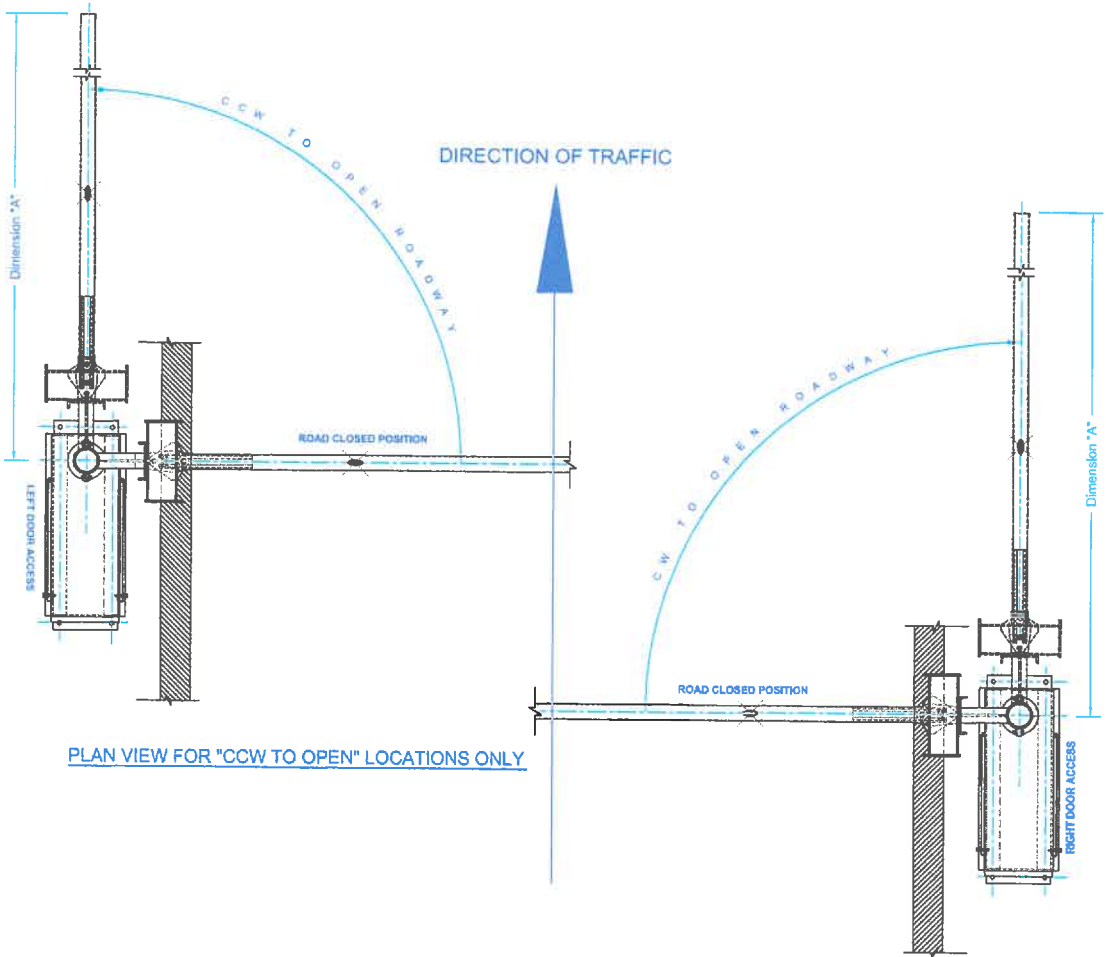
ROADWAY MANUFACTURING

15191 HWY 243
RUSSELLVILLE, AL 35653

PH (205) 332-2060
FAX (205) 332-4036

**ALUMINUM FIBERGLASS
WARNING GATE ARM CONSTRUCTION**

JOB #: SCALE: 1/16 PRINT AAW-A003



PLAN VIEW FOR "CCW TO OPEN" LOCATIONS ONLY

PLAN VIEW FOR "CW TO OPEN" LOCATIONS ONLY

WARNING GATES

NOTES:

1. SEE DWG BH4-1007 (CW TO OPEN) AND BH4-1009 (CCW TO OPEN) FOR INSTALLATION.
2. ROTATIONS TO OPEN ROADWAY AS SPECIFIED IN TABLE BELOW.
3. ALL GATES HAVE 2" MINIMUM CLEARANCE BETWEEN TOP OF BARRIER AND UNDERSIDE OF ARM.
4. ALL GATES DESIGNED TO OPEN AWAY FROM ONCOMING TRAFFIC.

GATES LIST

Gate No	Plan Sheet No.	Plan Location	Electrical Dwg No	Voltage & Phase	Rotation to Open Roadway	Dimension 'A' Arm Length	Number of Lights	Truss Cable
DT-G1	I-7	1601+62	D13	277V/1PH	CW	40'	7	Y
DT-G2	I-7	1602+66	D13	277V/1PH	CW	40'	7	Y
DT-G3	I-7	1603+85	D13	277V/1PH	CW	36'	6	Y
DT-G4	I-7	1604+85	D13	277V/1PH	CW	16'-6"	3	
34-G1	I-15	1692+80	D14	240V/1PH	CCW	20'	3	
34-G2	I-15	1695+53	D14	240V/1PH	CCW	20'	3	
34-G3	I-16	1698+32	D14	240V/1PH	CCW	20'	3	
34-G4	I-16	1704+78	D14	240V/1PH	CW	20'	3	
34-G5	I-17	1707+34	D14	240V/1PH	CW	20'	3	
34-G6	I-17	1708+87	D14	240V/1PH	CW	20'	3	
34-G7	I-17	1712+48	D14	240V/1PH	CW	20'	3	
78-G1	I-38	1917+13	D15	240V/1PH	CCW	20'	3	
78-G2	I-36	1914+50	D15	240V/1PH	CCW	24'	4	
78-G3	I-35	1911+80	D15	240V/1PH	CCW	28'	4	Y
78-G4	I-35	1906+52	D15	240V/1PH	CW	30'	5	Y
78-G5	I-35	1903+05	D15	240V/1PH	CW	26'	4	Y
78-G6	I-34	1899+60	D15	240V/1PH	CW	24'	4	
301-G1	I-38	943+45	D16	240V/1PH	CCW	24'	4	
301-G2	I-39	947+04	D16	240V/1PH	CCW	34'	6	Y
301-G3	I-39	949+70	D16	240V/1PH	CCW	24'	4	
301-G4	I-39	954+92	D16	240V/1PH	CW	24'	4	
301-G5	I-40	957+28	D16	240V/1PH	CW	24'	4	
301-G6	I-40	960+37	D16	240V/1PH	CW	14'	2	
BRN-G1	I-51	2297+90	D17	240V/1PH	CCW	30'	5	Y
BRN-G2	I-51	2297+73	D17	240V/1PH	CW	22'	3	
BRN-G3	I-51	2296+50	D17	240V/1PH	CW	26'	4	Y
BRN-G4	I-51	2293+52	D17	240V/1PH	CW	34'	6	Y
BRN-G5	I-50	1046+50	D17	240V/1PH	CW	40'	7	Y
BRN-G6	I-50	1045+30	D17	240V/1PH	CW	24'	4	Y

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UNLESS OTHERWISE SPECIFIED
 DIMENSIONS ARE IN INCHES
 TOLERANCES
 DECIMALS .1
 ANGULAR ±0.5°
 JOG - .00
 JOOK - .010
 SHEET 1 OF 1
 SCALE

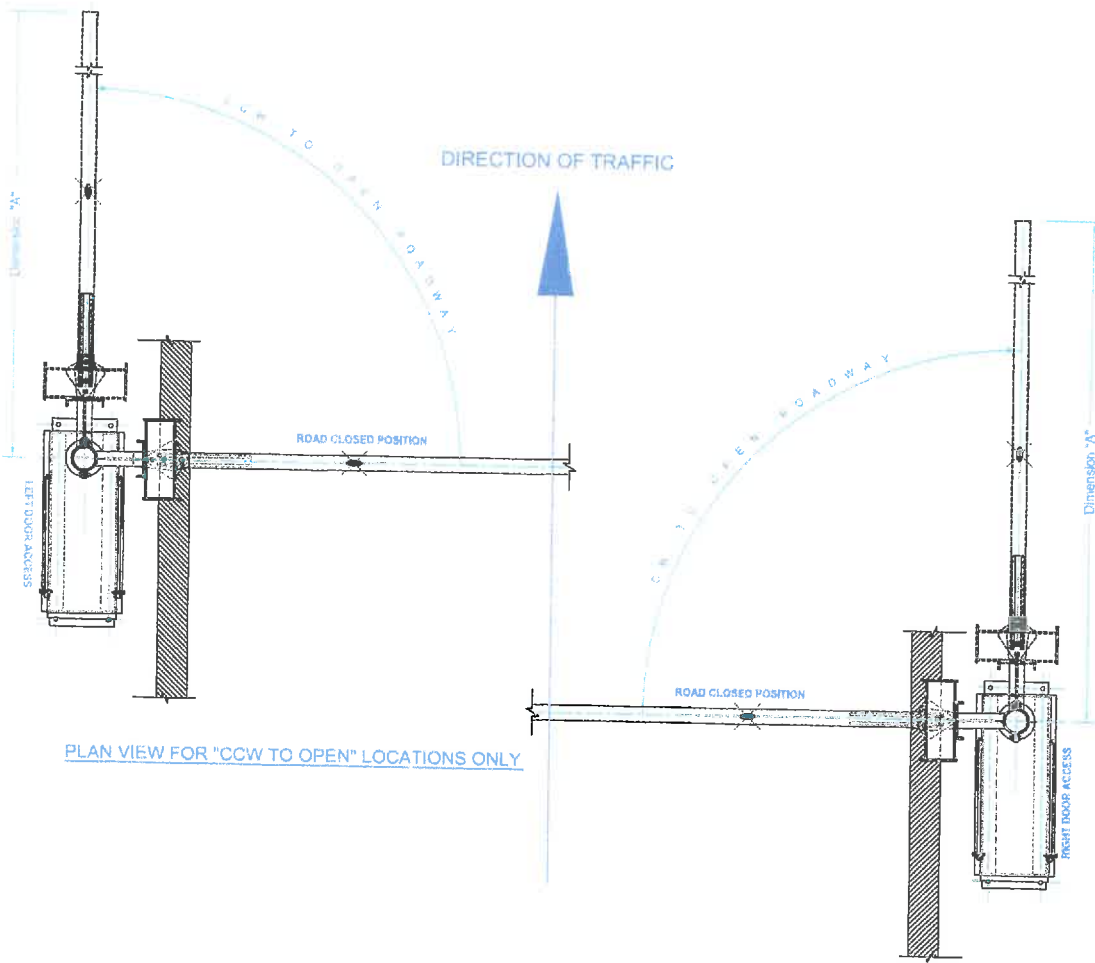
B&B ROADWAY
 15191 HIGHWAY 243, RUSSELLVILLE, AL 35654
 PH (888) 500-2090 FAX (256) 332-4036

DRAWING TITLE
 TAMPA HILLSBOROUGH EXPRESSWAY
 HW-4 TRAFFIC GATES

REV	DESCRIPTION	DATE	BY
1	CHANGED PLATE ARM LENGTH WAS 34	12/19/05	LRC
2	DIRECTION OF ROTATION UPDATED	02/20/06	AHB
3	DRAWING ISSUED	12/19/05	AHB
4	REVISIONS		

PROJ NUMBER	DWG	DATE
BH4-1008	AHB	12/19/05
REV NUMBER	CHECKED	DATE
FL 232	LRC	12/20/05

REV	FILE	DWG NO
B	BH4-1008	BH4-1008



PLAN VIEW FOR "CCW TO OPEN" LOCATIONS ONLY

PLAN VIEW FOR "CW TO OPEN" LOCATIONS ONLY

34TH STREET WARNING GATES

NOTES:

1. SEE DWG BH4-1007 (CW TO OPEN) AND BH4-1008 (CCW TO OPEN) FOR INSTALLATION.
2. ROTATIONS TO OPEN ROADWAY AS SPECIFIED IN TABLE BELOW.
3. ALL GATES HAVE 2" MINIMUM CLEARANCE BETWEEN TOP OF BARRIER AND UNDERSIDE OF ARM.
4. ALL GATES DESIGNED TO OPEN AWAY FROM ONCOMING TRAFFIC.

GATES LIST

Gate No	Plan Sheet No.	Plan Location	Electrical Dwg No	Voltage & Phase	Rotation to Open Roadway	Dimension 'A' Arm Length	Number of Lights	Truss Cable
DT-G1	I-7	1604+62	D13	277V/1PH	CW	40'	7	Y
DT-G2	I-7	1602+66	D13	277V/1PH	CW	40'	7	Y
DT-G3	I-7	1603+65	D13	277V/1PH	CW	36'	6	Y
DT-G4	I-7	1604+65	D13	277V/1PH	CW	16'-6"	3	
34-G1	I-15	1692+60	D14	240V/1PH	CCW	20'	3	
34-G2	I-15	1695+53	D14	240V/1PH	CCW	20'	3	
34-G3	I-16	1698+32	D14	240V/1PH	CCW	20'	3	
34-G4	I-16	1704+76	D14	240V/1PH	CW	20'	3	
34-G5	I-17	1707+34	D14	240V/1PH	CW	20'	3	
34-G6	I-17	1709+97	D14	240V/1PH	CW	20'	3	
34-G7	I-17	1712+48	D14	240V/1PH	CW	20'	3	
78-G1	I-36	1917+13	D15	240V/1PH	CCW	20'	3	
78-G2	I-36	1914+50	D15	240V/1PH	CCW	24'	4	
78-G3	I-35	1911+90	D15	240V/1PH	CCW	28'	4	Y
78-G4	I-35	1906+52	D15	240V/1PH	CW	30'	5	Y
78-G5	I-35	1903+05	D15	240V/1PH	CW	28'	4	Y
78-G6	I-34	1899+60	D15	240V/1PH	CW	24'	4	
301-G1	I-38	943+45	D16	240V/1PH	CCW	24'	4	
301-G2	I-38	947+04	D16	240V/1PH	CCW	34'	6	Y
301-G3	I-39	849+70	D16	240V/1PH	CCW	24'	4	
301-G4	I-39	854+92	D16	240V/1PH	CW	24'	4	
301-G5	I-40	857+26	D16	240V/1PH	CW	24'	4	
301-G6	I-40	960+37	D16	240V/1PH	CW	14'	2	
BRN-G1	I-51	2297+90	D17	240V/1PH	CCW	30'	5	Y
BRN-G2	I-51	2297+73	D17	240V/1PH	CW	22'	3	
BRN-G3	I-51	2296+90	D17	240V/1PH	CW	26'	4	Y
BRN-G4	I-51	2293+52	D17	240V/1PH	CW	34'	6	Y
BRN-G5	I-50	1046+60	D17	240V/1PH	CW	40'	7	Y
BRN-G6	I-50	1045+30	D17	240V/1PH	CW	24'	4	

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UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES:
 DECIMALS ANGULAR
 ± .01 ± .01
 FRACTIONS ± .015 ± .010

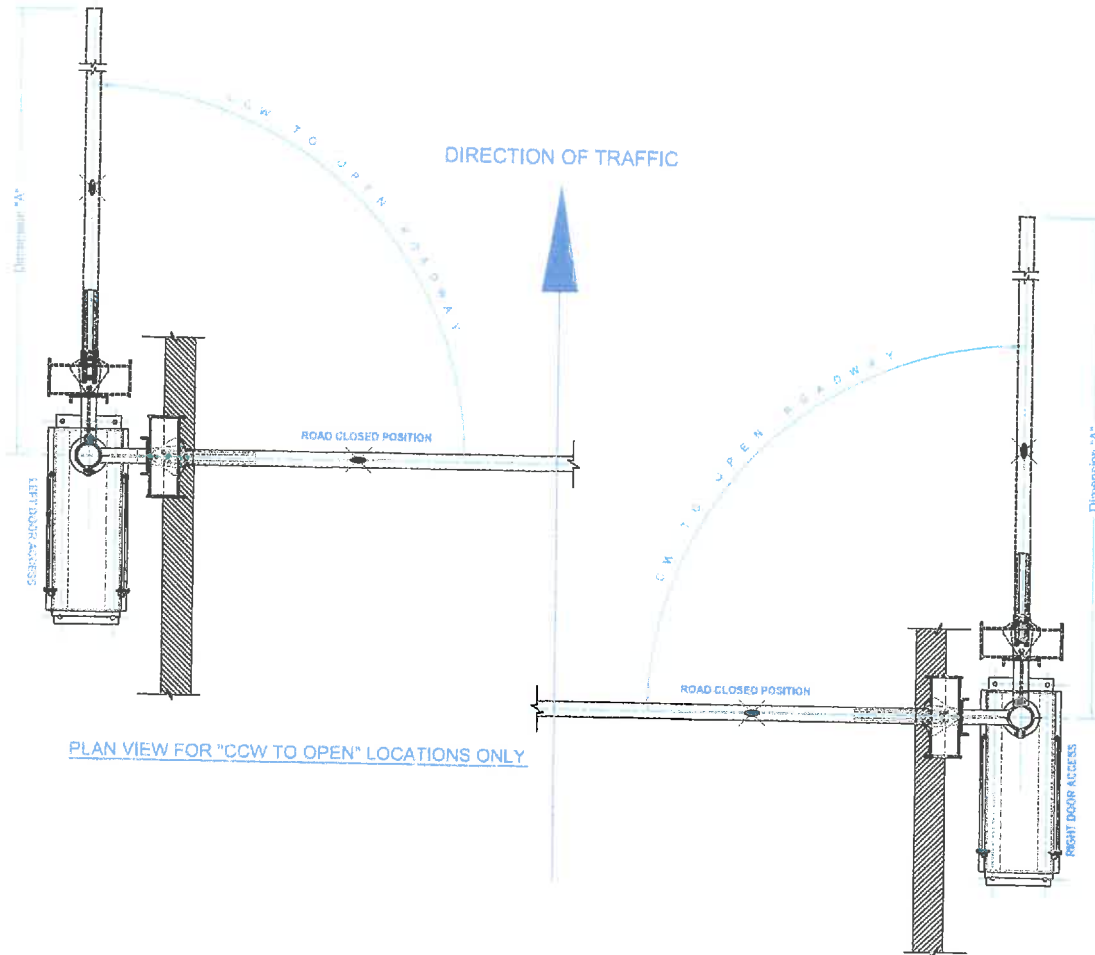
DATE: 12/19/05
 DATE: 12/20/05

B&B ROADWAY
 15191 HIGHWAY 243, RUSSELLVILLE, AL 35854
 PH (888) 560-2060 FAX (256) 332-4038

DRAWING TITLE
 TAMPA HILLSBOROUGH EXPRESSWAY
 HW-4 TRAFFIC GATES

DWG NO: BH4-1008

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	12/19/05
2	REVISED	12/20/05



NOTES:

1. SEE DWG BH4-1007 (CW TO OPEN) AND BH4-1009 (CCW TO OPEN) FOR INSTALLATION.
2. ROTATIONS TO OPEN ROADWAY AS SPECIFIED IN TABLE BELOW.
3. ALL GATES HAVE 2" MINIMUM CLEARANCE BETWEEN TOP OF BARRIER AND UNDERSIDE OF ARM.
4. ALL GATES DESIGNED TO OPEN AWAY FROM ONCOMING TRAFFIC.

GATES LIST

Gate No	Plan Sheet No.	Plan Location	Electrical Dwg No	Voltage & Phase	Rotation to Open Roadway	Dimension 'A' Arm Length	Number of Lights	Truss Cable
DT-G1	I-7	1601+62	D13	277V/1PH	CW	40'	7	Y
DT-G2	I-7	1602+66	D13	277V/1PH	CW	40'	7	Y
DT-G3	I-7	1603+65	D13	277V/1PH	CW	38'	6	Y
DT-G4	I-7	1604+65	D13	277V/1PH	CW	16'-6"	3	
34-G1	I-15	1692+80	D14	240V/1PH	CCW	20'	3	
34-G2	I-15	1695+53	D14	240V/1PH	CCW	20'	3	
34-G3	I-16	1698+32	D14	240V/1PH	CCW	20'	3	
34-G4	I-16	1704+78	D14	240V/1PH	CW	20'	3	
34-G5	I-17	1707+34	D14	240V/1PH	CW	20'	3	
34-G6	I-17	1709+97	D14	240V/1PH	CW	20'	3	
34-G7	I-17	1712+48	D14	240V/1PH	CW	20'	3	
78-G1	I-35	1917+13	D15	240V/1PH	CCW	20'	3	
78-G2	I-35	1914+50	D15	240V/1PH	CCW	24'	4	
78-G3	I-35	1911+90	D15	240V/1PH	CCW	28'	4	Y
78-G4	I-35	1906+52	D15	240V/1PH	CW	30'	5	Y
78-G5	I-35	1903+05	D15	240V/1PH	CW	26'	4	Y
78-G6	I-34	1899+60	D15	240V/1PH	CW	24'	4	
301-G1	I-38	943+45	D16	240V/1PH	CCW	24'	4	
301-G2	I-38	947+04	D16	240V/1PH	CCW	34'	6	Y
301-G3	I-39	949+70	D16	240V/1PH	CCW	24'	4	
301-G4	I-39	954+92	D16	240V/1PH	CW	24'	4	
301-G5	I-40	957+26	D16	240V/1PH	CW	24'	4	
301-G6	I-40	950+37	D16	240V/1PH	CW	14'	2	
BRN-G1	I-51	2297+90	D17	240V/1PH	CCW	30'	5	Y
BRN-G2	I-51	2297+73	D17	240V/1PH	CW	22'	3	
BRN-G3	I-51	2286+50	D17	240V/1PH	CW	26'	4	Y
BRN-G4	I-51	2283+52	D17	240V/1PH	CW	34'	6	Y
BRN-G5	I-50	1046+50	D17	240V/1PH	CW	40'	7	Y
BRN-G6	I-50	1045+30	D17	240V/1PH	CW	24'	4	

**78TH STREET
WARNING GATES**

DATE	BY	CHKD	APP
12/19/09	ASH	ASH	ASH
12/20/09	ASH	ASH	ASH

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WELDER DIMENSIONS SPECIFIED
UNLESS NOTED OTHERWISE
TOLERANCES
DECIMALS - .01
ANGULAR - .50 S
XX - .05
XXX - .10

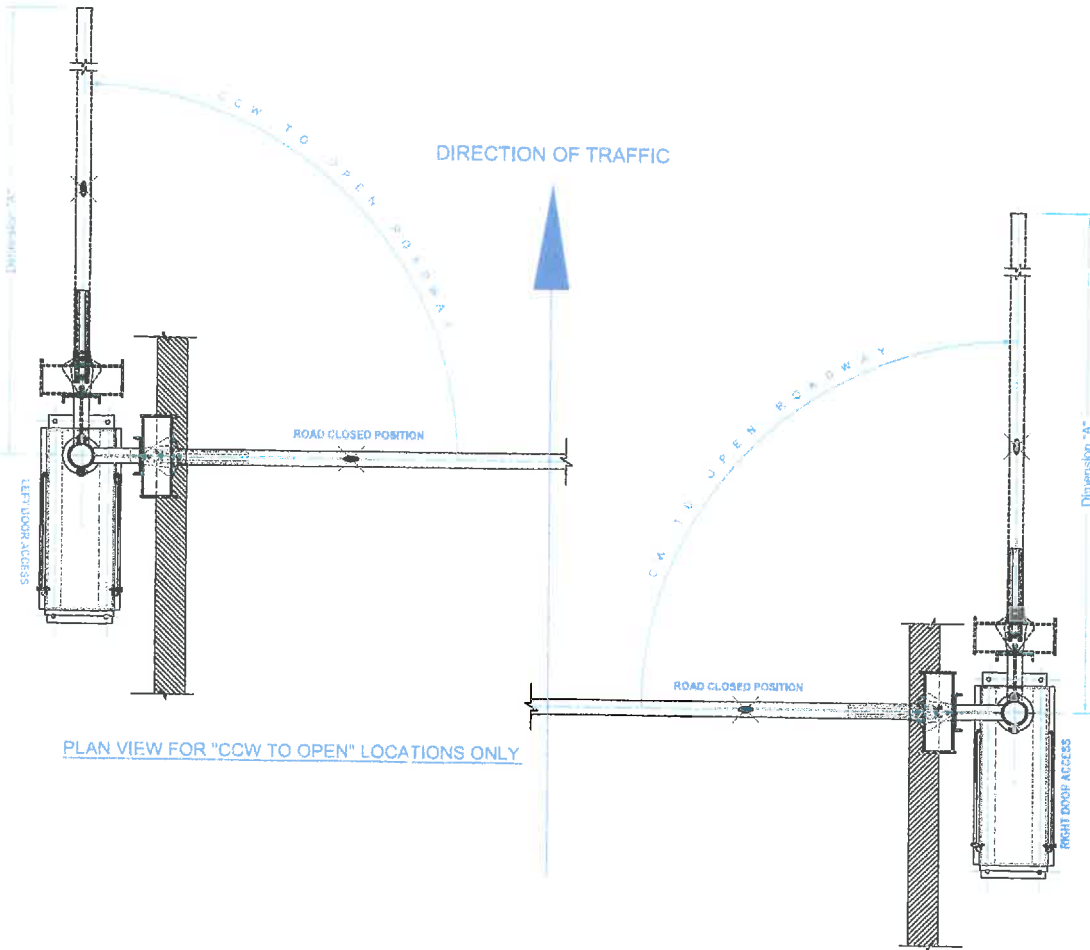
SHEET 01
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PART NUMBER: BH4-1008
DATE: 12/19/09
DRAWN: ASH
CHECKED: LRC

B&B ROADWAY
15191 HIGHWAY 243, RUSSELLVILLE, AL 35854
PH (888) 880-2000 FAX (256) 332-0336

DRAWING TITLE
TAMPA HILLSBOROUGH EXPRESSWAY
I-75-4 TRAFFIC RATES

FILE: BH4-1008
DRAWING NO: BH4-1008



PLAN VIEW FOR "CCW TO OPEN" LOCATIONS ONLY

PLAN VIEW FOR "CW TO OPEN" LOCATIONS ONLY

NOTES:

1. SEE DWG BH4-007 (CW TO OPEN) AND BH4-006 (CCW TO OPEN) FOR INSTALLATION.
2. ROTATIONS TO OPEN ROADWAY AS SPECIFIED IN TABLE BELOW.
3. ALL GATES HAVE 2" MINIMUM CLEARANCE BETWEEN TOP OF BARRIER AND UNDERSIDE OF ARM.
4. ALL GATES DESIGNED TO OPEN AWAY FROM ONCOMING TRAFFIC.

GATES LIST

Gate No	Plan Sheet No.	Plan Location	Electrical Dwg No	Voltage & Phase	Rotation to Open Roadway	Dimension 'A' Arm Length	Number of Lights	Truss Cable
DT-G1	I-7	1601+62	D13	277V/1PH	CW	40'	7	Y
DT-G2	I-7	1602+66	D13	277V/1PH	CW	40'	7	Y
DT-G3	I-7	1603+65	D13	277V/1PH	CW	38'	6	Y
DT-G4	I-7	1604+65	D13	277V/1PH	CW	16'-6"	3	
34-G1	I-15	1692+80	D14	240V/1PH	CCW	20'	3	
34-G2	I-15	1695+53	D14	240V/1PH	CCW	20'	3	
34-G3	I-16	1688+32	D14	240V/1PH	CCW	20'	3	
34-G4	I-16	1704+78	D14	240V/1PH	CW	20'	3	
34-G6	I-17	1707+34	D14	240V/1PH	CW	20'	3	
34-G6	I-17	1709+97	D14	240V/1PH	CW	20'	3	
34-G7	I-17	1712+46	D14	240V/1PH	CW	20'	3	
78-G1	I-35	1917+13	D15	240V/1PH	CCW	25'	3	
78-G2	I-36	1914+50	D15	240V/1PH	CCW	24'	4	
78-G3	I-35	1911+80	D15	240V/1PH	CCW	25'	4	Y
78-G4	I-35	1906+52	D15	240V/1PH	CW	30'	5	Y
78-G5	I-35	1803+05	D15	240V/1PH	CW	26'	4	Y
78-G6	I-34	1859+60	D15	240V/1PH	CW	24'	4	
301-G1	I-38	943+45	D16	240V/1PH	CCW	24'	4	
301-G2	I-39	947+04	D16	240V/1PH	CCW	34'	6	Y
301-G3	I-39	949+70	D16	240V/1PH	CCW	24'	4	
301-G4	I-39	954+82	D16	240V/1PH	CW	24'	4	
301-G5	I-40	957+26	D16	240V/1PH	CW	24'	4	
301-G6	I-40	960+37	D16	240V/1PH	CW	14'	2	
BRN-G1	I-51	2297+90	D17	240V/1PH	CCW	30'	5	Y
BRN-G2	I-51	2297+73	D17	240V/1PH	CW	22'	3	
BRN-G3	I-51	2296+50	D17	240V/1PH	CW	26'	4	Y
BRN-G4	I-51	2293+52	D17	240V/1PH	CW	34'	6	Y
BRN-G5	I-50	1046+50	D17	240V/1PH	CW	40'	7	Y
BRN-G6	I-50	1045+30	D17	240V/1PH	CW	24'	4	

301 WARNING GATES

DATE	BY	CHECKED	DATE
11/29/09	ARH	ARH	11/29/09
11/29/09	ARH	ARH	11/29/09

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES

DECIMALS: 1/16" = .0625"
FRACTIONS: 1/8" = .125"
ANGULAR: AS SHOWN

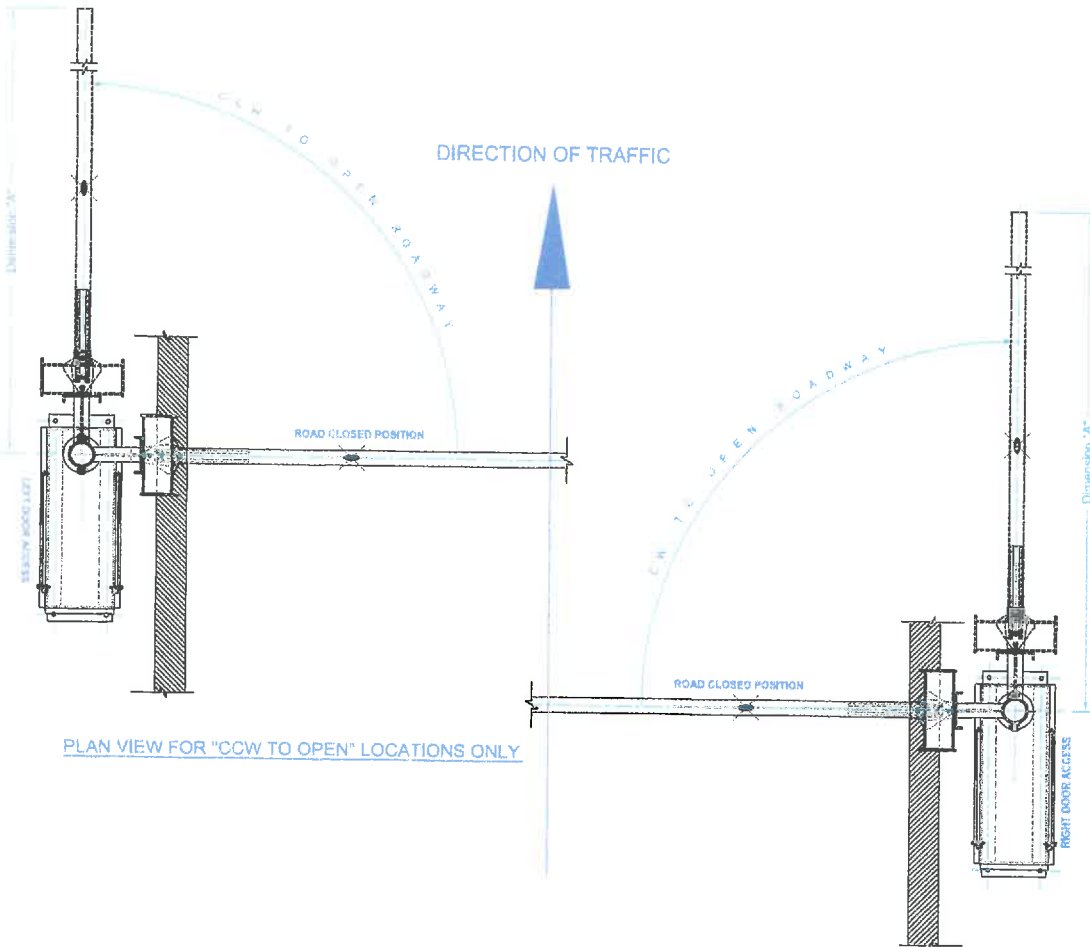
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DATE: 11/29/09

15191 HIGHWAY 243, RUSSELLVILLE, AL 35554
PH (888) 888-2900 FAX (256) 332-4096

DRAWING TITLE
TAMPA HILLSBOROUGH EXPRESSWAY
HW-4 TRAFFIC GATES

NO. FILE NO. DATE
B BH4-008 344-008



PLAN VIEW FOR "CCW TO OPEN" LOCATIONS ONLY

PLAN VIEW FOR "CW TO OPEN" LOCATIONS ONLY

BRANDON WARNING GATES

NOTES:

1. SEE DWG BH4-007 (CW TO OPEN) AND BH4-009 (CCW TO OPEN) FOR INSTALLATION.
2. ROTATIONS TO OPEN ROADWAY AS SPECIFIED IN TABLE BELOW.
3. ALL GATES HAVE 2" MINIMUM CLEARANCE BETWEEN TOP OF BARRIER AND UNDERSIDE OF ARM.
4. ALL GATES DESIGNED TO OPEN AWAY FROM ONCOMING TRAFFIC.

GATES LIST

Gate No	Plan Sheet No.	Plan Location	Electrical Dwg No	Volts & Phases	Rotation to Open Roadway	Dimension 'A' Arm Length	Number of Lights	Truss Cable
DT-G1	I-7	1601+62	D13	277V/1PH	CW	40'	7	Y
DT-G2	I-7	1602+66	D13	277V/1PH	CW	40'	7	Y
DT-G3	I-7	1603+66	D13	277V/1PH	CW	38'	6	Y
DT-G4	I-7	1604+65	D13	277V/1PH	CW	16'-6"	3	
34-G1	I-15	1682+60	D14	240V/1PH	CCW	20'	3	
34-G2	I-15	1695+53	D14	240V/1PH	CCW	20'	3	
34-G3	I-16	1698+32	D14	240V/1PH	CCW	20'	3	
34-G4	I-16	1704+75	D14	240V/1PH	CW	20'	3	
34-G5	I-17	1707+34	D14	240V/1PH	CW	20'	3	
34-G6	I-17	1709+97	D14	240V/1PH	CW	20'	3	
34-G7	I-17	1712+48	D14	240V/1PH	CW	20'	3	
78-G1	I-35	1917+13	D15	240V/1PH	CCW	20'	3	
78-G2	I-36	1914+50	D15	240V/1PH	CCW	24'	4	
78-G3	I-35	1911+90	D15	240V/1PH	CCW	28'	4	Y
78-G4	I-35	1906+52	D15	240V/1PH	CW	30'	5	Y
78-G5	I-35	1903+05	D15	240V/1PH	CW	25'	4	Y
78-G6	I-34	1899+60	D15	240V/1PH	CW	24'	4	
301-G1	I-36	943+45	D16	240V/1PH	CCW	24'	4	
301-G2	I-39	947+04	D16	240V/1PH	CCW	34'	6	Y
301-G3	I-39	949+70	D16	240V/1PH	CCW	24'	4	
301-G4	I-39	954+92	D16	240V/1PH	CW	24'	4	
301-G5	I-40	957+26	D16	240V/1PH	CW	24'	4	
301-G6	I-40	960+37	D16	240V/1PH	CW	14'	2	
BRN-G1	I-51	2297+90	D17	240V/1PH	CCW	30'	5	Y
BRN-G2	I-51	2297+73	D17	240V/1PH	CW	22'	3	
BRN-G3	I-51	2296+90	D17	240V/1PH	CW	26'	4	Y
BRN-G4	I-51	2293+52	D17	240V/1PH	CW	34'	6	Y
BRN-G5	I-50	1046+50	D17	240V/1PH	CW	40'	7	Y
BRN-G6	I-50	1045+30	D17	240V/1PH	CW	24'	4	

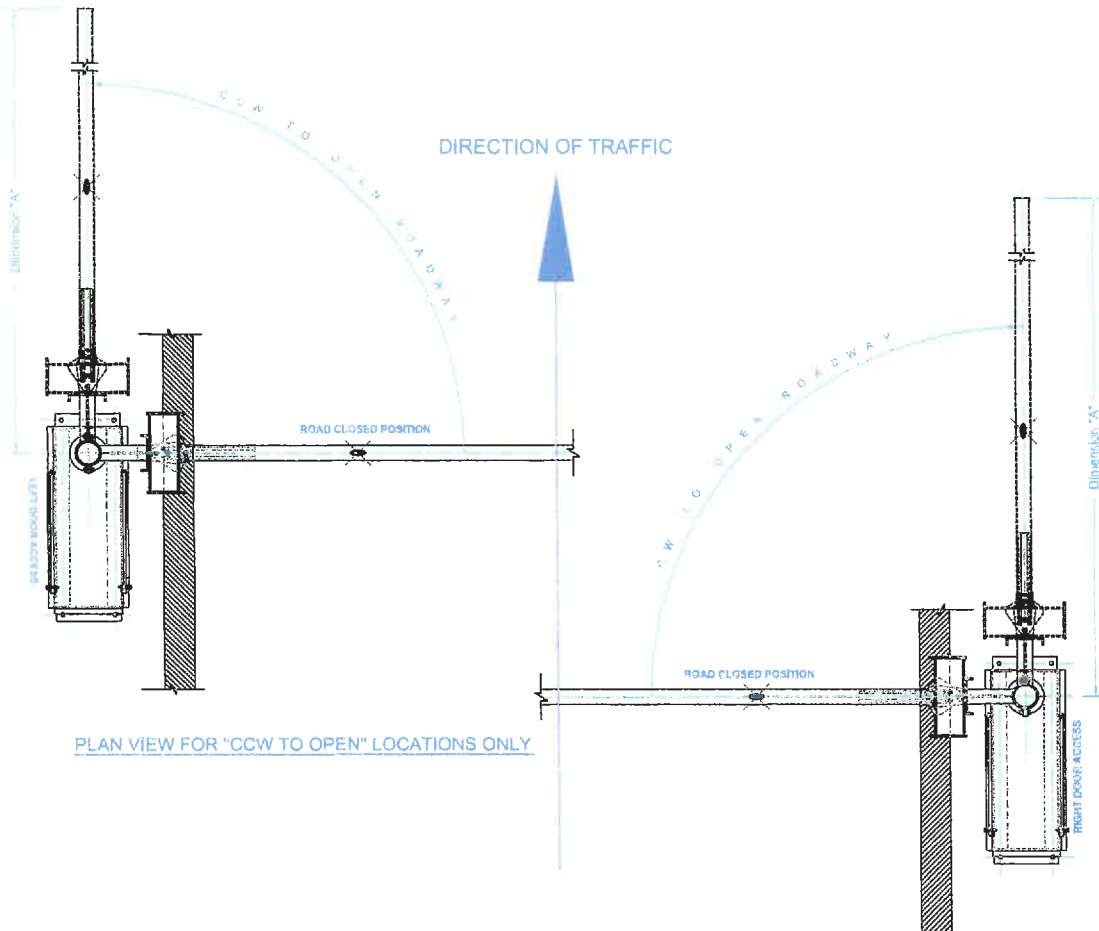
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
 DECIMALS = .1
 FRACTIONS = 1/32
 ANGULARS = 30.0'
 TOLERANCES = .010

15191 HIGHWAY 243, RUSSELLVILLE, AL 35654
 PH (256) 860-2000 FAX (256) 332-4038

DRAWING TITLE
 TAMPA HILLSBOROUGH EXPRESSWAY
 HW-4 TRAFFIC GATES

DATE: 12/19/09	BY: [Signature]	SCALE: 1/8" = 1'-0"
DATE: 12/26/09	BY: [Signature]	SCALE: 1/8" = 1'-0"
DATE: 12/26/09	BY: [Signature]	SCALE: 1/8" = 1'-0"



- NOTES:
1. SEE DWG BH4-007 (CW TO OPEN) AND BH4-009 (CCW TO OPEN) FOR INSTALLATION.
 2. ROTATIONS TO OPEN ROADWAY AS SPECIFIED IN TABLE BELOW.
 3. ALL GATES HAVE 2" MINIMUM CLEARANCE BETWEEN TOP OF BARRIER AND UNDERSIDE OF ARM.
 4. ALL GATES DESIGNED TO OPEN AWAY FROM ONCOMING TRAFFIC.

GATES LIST

Gate No	Plan Sheet No.	Plan Location	Electrical Dwg No	Voltage & Phase	Rotation to Open Roadway	Dimension 'A'	Number of Lights	Truss Cable
DT-G1	I-7	1601+62	D13	277V/1PH	CW	40'	7	Y
DT-G2	I-7	1602+66	D13	277V/1PH	CW	40'	7	Y
DT-G3	I-7	1603+65	D13	277V/1PH	CW	36'	6	Y
DT-G4	I-7	1604+65	D13	277V/1PH	CW	16'-5"	3	
34-G1	I-15	1692+80	D14	240V/1PH	CCW	20'	3	
34-G2	I-15	1695+53	D14	240V/1PH	CCW	20'	3	
34-G3	I-15	1698+32	D14	240V/1PH	CCW	20'	3	
34-G4	I-16	1704+78	D14	240V/1PH	CW	20'	3	
34-G6	I-17	1707+34	D14	240V/1PH	CW	20'	3	
34-G8	I-17	1709+97	D14	240V/1PH	CW	20'	3	
34-G7	I-17	1712+48	D14	240V/1PH	CW	20'	3	
78-G1	I-35	1917+13	D15	240V/1PH	CCW	20'	3	
78-G2	I-35	1914+50	D15	240V/1PH	CCW	24'	4	
78-G3	I-35	1911+90	D15	240V/1PH	CCW	28'	4	Y
78-G4	I-35	1906+52	D15	240V/1PH	CW	30'	5	Y
78-G5	I-35	1903+05	D15	240V/1PH	CW	26'	4	Y
78-G6	I-34	1899+60	D15	240V/1PH	CW	24'	4	
301-G1	I-36	943+45	D16	240V/1PH	CCW	24'	4	
301-G2	I-36	947+04	D16	240V/1PH	CCW	34'	6	Y
301-G3	I-39	949+70	D16	240V/1PH	CCW	24'	4	
301-G4	I-39	954+92	D16	240V/1PH	CW	24'	4	
301-G5	I-40	957+26	D16	240V/1PH	CW	24'	4	
301-G6	I-40	950+37	D16	240V/1PH	CW	14'	2	
BRN-G1	I-51	2297+90	D17	240V/1PH	CCW	30'	5	Y
BRN-G2	I-51	2297+73	D17	240V/1PH	CW	22'	3	
BRN-G3	I-51	2296+50	D17	240V/1PH	CW	26'	4	Y
BRN-G4	I-51	2293+52	D17	240V/1PH	CW	34'	6	Y
BRN-G5	I-50	1045+50	D17	240V/1PH	CW	40'	7	Y
BRN-G6	I-50	1045+30	D17	240V/1PH	CW	24'	4	

DOWNTOWN WARNING GATES

DATE	BY	CHKD	DATE
12/19/05	LRG	LRG	12/19/05
12/20/05	LRG	LRG	12/20/05

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WATER DIVISION SPECIFICATIONS
 DIMENSIONS ARE IN FEET AND INCHES
 TOLERANCES

DECIMALS ANGLES
 X - 1
 XX - 05
 XXX - 010

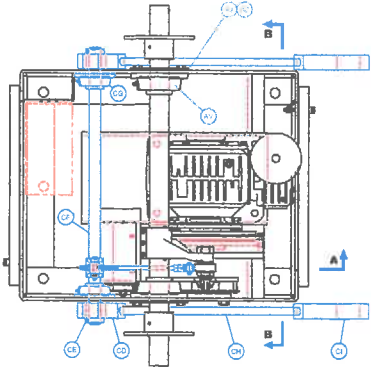
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DATE: 12/19/05
 DATE: 12/20/05

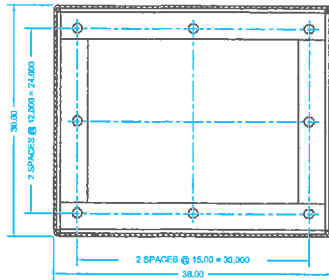
B&B ROADWAY LLC
 15101 HIGHWAY 249, RUSSELLVILLE, AL 36604
 PH (888) 693-0090 FAX (256) 332-4099

DRAWING TITLE
 TAMPA HILLSBOROUGH EXPRESSWAY
 HWY-78 TRAFFIC GATES

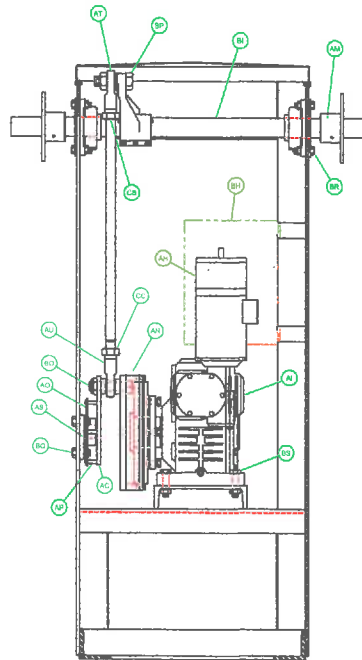
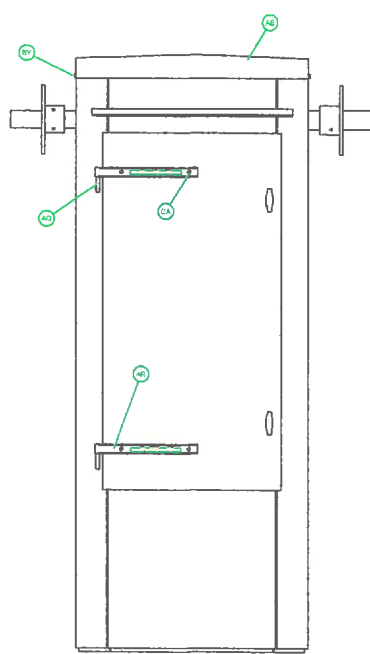
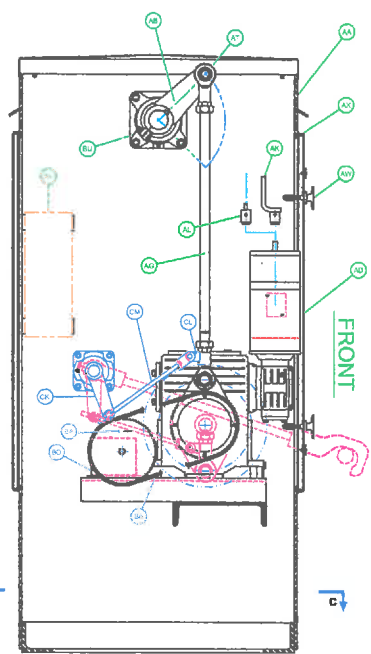
NO.	REV.	DATE	BY	CHKD.
1				



TOP VIEW WITH COVER REMOVED



SECTION C - C
MOUNTING PATTERN



SECTION B - B

INSIDE BARRIER GATES

ITEM QTY	STD PART #	DESCRIPTION
CD 2	BR8-PV16	LOCKBAR HUB
CE 2	MCM06455643	R-HAFT COLLAR, 1" S.S.
CF 1	BR8-P021	R-HAFT LOCKBAR
CG 2	BR8-P018	BEARING LOCKBAR SHAFT
CH 2	BR8-P017	LOCKBAR CONNECTING ROD
CI 2	BR8-P019	LOCKBAR HOOK
CJ 2	NU7-313-MM	1/2"-13 JAM NUT
CK 1	BR8-P023	CONNECTING ARM, SIDE LOCKBARS
CL 1	BR8-P028	LINKAGE CLIP, LOCKBAR CONF. ROD
CM 1	BR8-P030	CRANK CONNECTOR, SIDE LOCKBARS

** - ITEM NOT CLEARLY SHOWN ON DWG

MAJOR PARTS LIST

ITEM QTY	STD PART #	DESCRIPTION
AA 1	BR7-P001	HOUSING
AB 1	BR8-P048	CRANK, MAIN ARM SHAFT
AC 2	BR8-P047	CRANK, AUXILIARY
AD 2	BR8-P008	DOOR
AE 1	BR8-P006	TOP HOUSING
AF 9		LEFT BLANK
AG 7	BR8-P009	ROD, CONNECTING 1.250 4130 HR NEAL OY
AH 1	SEE SPEC'S	MOTOR, PHASE HP & VOLTAGE PER SPECIFICATIONS
AI 1	PXIM-V97-17-145	TRANSMISSION, VHT, 25:1 MTD, UPL, 100%:1 RATIO, 145TQ
AJ 2	BR4-P050	SEAL PLATE
AK 1	BVA-P021	HAND CRANK, MANUAL OPERATION
AL 1	BVA-P022	DRILL CRANK, MANUAL OPERATION
AM 2	BR8-P011	HUB, SIDE ASM MOUNTING
AN 1	BR8-P046	TORQUE LIMITER ASSEMBLY
AO 1	BVS-P008	TRANSMISSION SPROCKET, #35 ROLLER, 72T
AP 4	BVS-P009	SPROCKET SPAGERS
AQ 4	AHV-P031	HINGE BLOCK
AR 4	AHV-P002	HINGE STRAP
AS 1	BRGR1-7-38	BEARING, ALIX, CRANK, BRONZE SPHERICAL
AT 1	BRGR1-1.25-PRH	ROD END, RH SPHERICAL, 1.25"x12
AU 1	BRGR1-1.25-LH1	ROD END, LH SPHERICAL, 1.25"x12
AV 2	BRG2-5-48	MAIN SHAFT BEARING
AW 4	PHW-E3-16-28	LATCH, T-HANDLE KEY LOCKED, COMPLETE ASSY
[X]	PHW-E3-315-50	LATCH, HEX OPERATED, COMPLETE ASSY (NOT SHOWN)
[Y]	PHW-E3-11-29	LATCH, T-HANDLE, COMPLETE ASSY (SHOWN)
[Z]	PHW-E3-215-50	LATCH, ROUND KEY OPERATED, COMPLETE ASSY
AX 12	PGK-ET100L983A	GASKET, BULB-TYPE NEOPRENE DOOR
AY 2	PGK-P015	ARM ASSY MOUNTING PLATE GASKET
AZ 2	PGK-0-353	MAIN ARM SHAFT C-RING
BA 1	ALS-P019	SPROCKET, #35 72T (LIMIT SWITCH)
BB 122	PCH-RLR035	CHAIN, #35 ROLLER
BC 1	PCH-MLR035	MASTERLINK, #35 ROLLER CHAIN
BD 1	ALS-A001	LIMIT SWITCH, 8COT, COMPLETE ASSY INCL COVER
BE 1	PSW-DEE0R081	HAND CRANK SAFETY SWITCH
BF 2	BVA-P024	BRACKET, DOOR SAFETY SWITCH MTD (FOR DPDT)
[G]	BVA-P023	BRACKET, DOOR SAFETY SWITCH MTD (FOR SPDT)
BG 2	PSW-2DM409	SWITCH, DOOR SAFETY
BH 1	PEC-081208	ELECTRICAL ENCLOSURE
BI 1	BR8-P010	SHAFT, MAIN ARM
BJ 1	PKEY-5X4-5BER	KEY, TRANSMISSION SHAFT, 5/8" X 4"
BK 1	PKEY-62X4-5BER	KEY, MAIN ARM SHAFT CRANK, 5/8" X 4.5"
BL 2	PKEY-62X3BER	KEY, HUB, SIDE ARM MTD, 5/8" X 3.5"
BN 2	PHSS-18X2SPR	PHN, UPPER HINGE (2)
BO 1	PHSS-18X2SPR	PHN, LOWER HINGE (2 1/4")
BP 1	BLT1-25-12X5-8	1.25"-12 X 4.75 HEX BOLT, GRADE 8
[C]	NU71-25-12-NY	1.25"-12 NY W/ NYLON INSERT
BR 1	BLT1-25-12X3-8	1.25"-12 X 3.5 HEX BOLT (MAIN ARM CRANK)
[D]	NU71-25-12-NY	1.25"-12 NY W/ NYLON INSERT
BQ 3	BLTGA-75-10X2	3/4"-10 X 2 GALV. HHCS (AUX CRANK BRG)
3	LKWGA-75	3/4" GALV. LOCK WASHER
3	NU7GA-75-10	3/4"-10 GALV. NUT
BR 6	BLTGA-65-11X2	5/8"-11 X 2 GALV. HHCS (MAIN ARM BRG)
6	LKWGA-65	5/8" GALV. LOCK WASHER
6	NU7GA-65-11	5/8"-11 GALV. NUT
BS 4	BLT-75-10X3-8	3/4"-10 X 3 HHCS (DMSN)
4	NU7-75-10	3/4"-10 HEX NUT (DMSN)
4	LKW-75	3/4" LOCKWASHER (DMSN)
BT 1		LEFT BLANK
BT 1		LEFT BLANK
BT 1		LEFT BLANK
BU 5	BLT-15-13X1.2	1/2"-13 X 1.5 HHCS (MAIN ARM CRANK)
3	LKW-15	1/2" LOCK WASHER
3	NU7-15-13	1/2"-13 NUT
BV 4	BLT-5-13X1	1/2"-13 X 1" HHCS (MOTOR)
4	LKW-5	1/2" LOCK WASHER
BW 4	BLT-25-20X2.25	1 1/4"-20 X 2.25 HHCS (CRANK PL)
BX 4	BLT-25-20X.52	1 1/4"-20 X 5/8" HHCS (L.S.)
BY 4	BLTSS-25-20X.75	1 1/4"-20 X 3/4" SS HHCS (TOP COVER)
Z	NU7-25-20-NY	1 1/4"-20 NY W/ NYLON INSERT
BZ 6	BLTSS-25-20X.75	1 1/4"-20 X 3/4" SS HHCS (HINGE BLOCK)
6	LKWSS-25	1 1/4" SS LOCK WASHER
CA 6	BLTSS-25-20X.82	1 1/4"-20 X 5/8" SS HHCS (HINGE STRAP)
6	NU7SS-25-20-NY	1 1/4"-20 SS NY W/ NYLON INSERT
CB 1	NU71-2-12-N	1 1/4"-12 RH JAM NUT
CD 1	NU71-2-12-LH-N	1 1/4"-12 LH JAM NUT

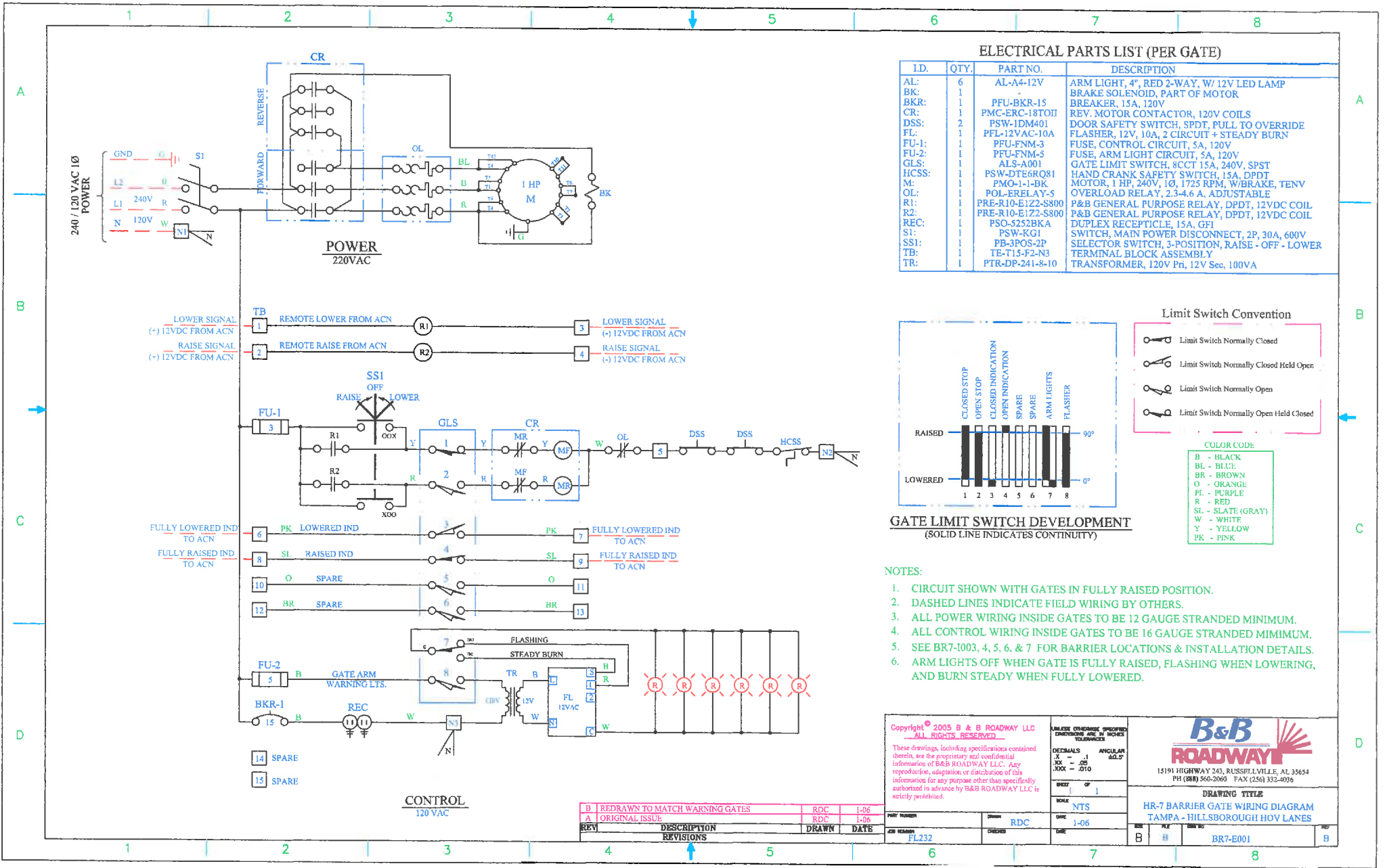
** - OPTIONAL ITEM
** - ITEM NOT CLEARLY SHOWN ON DWG

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VR-7 BARRIER ASSEMBLY
LOWER LOCKBAR ARRANGEMENT

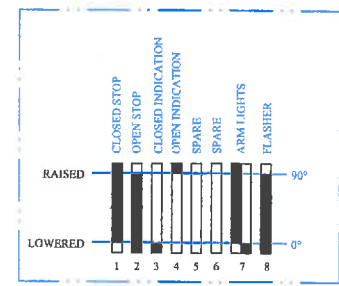
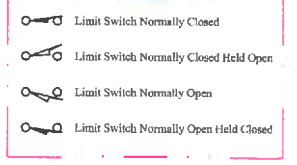
REV	DATE	BY	CHKD
1			
2			
3			
4-06			
1/10			
RC			
BR7-A04			



ELECTRICAL PARTS LIST (PER GATE)

I.D.	QTY.	PART NO.	DESCRIPTION
AL:	6	AL-A4-12V	ARM LIGHT, 4", RED 2-WAY, W/ 12V LED LAMP
BK:	1	-	BRAKE SOLENOID, PART OF MOTOR
BKR:	1	PFU-BKR-15	BREAKER, 15A, 120V
CR:	1	PMC-ERC-18TOH	REV. MOTOR CONTACTOR, 120V COILS
DSS:	2	PSW-1DM401	DOOR SAFETY SWITCH, SPDT, PULL TO OVERRIDE
FL:	1	PFL-12VAC-10A	FLASHER, 12V, 10A, 2 CIRCUIT + STEADY BURN
FU-1:	1	PFU-FNM-3	FUSE, CONTROL CIRCUIT, 5A, 120V
FU-2:	1	PFU-FNM-5	FUSE, ARM LIGHT CIRCUIT, 5A, 120V
GLS:	1	ALS-A001	GATE LIMIT SWITCH, 8CCT 15A, 240V, SPST
HCSS:	1	PSW-DTE6RQ81	HAND CRANK SAFETY SWITCH, 15A, DPDT
M:	1	PMO-1-1-BK	MOTOR, 1 HP, 240V, 1Ø, 1725 RPM, W/BRAKE, TENV
OL:	1	POL-ERELAY-5	OVERLOAD RELAY, 2.3-4.6 A, ADJUSTABLE
R1:	1	PRE-R10-E1Z2-S800	P&B GENERAL PURPOSE RELAY, DPDT, 12VDC COIL
R2:	1	PRE-R10-E1Z2-S800	P&B GENERAL PURPOSE RELAY, DPDT, 12VDC COIL
REC:	1	PSO-5252BKA	DUPLEX RECEPTACLE, 15A, GFI
S1:	1	PSW-KG1	SWITCH, MAIN POWER DISCONNECT, 2P, 30A, 600V
SS1:	1	PB-3POS-2P	SELECTOR SWITCH, 3-POSITION, RAISE - OFF - LOWER
TB:	1	TE-T15-F2-N3	TERMINAL BLOCK ASSEMBLY
TR:	1	PTR-DP-241-8-10	TRANSFORMER, 120V Pri, 12V Sec, 100VA

Limit Switch Convention



GATE LIMIT SWITCH DEVELOPMENT
(SOLID LINE INDICATES CONTINUITY)

COLOR CODE

B	- BLACK
BL	- BLUE
BR	- BROWN
O	- ORANGE
PL	- PURPLE
R	- RED
SL	- SLATE (GRAY)
W	- WHITE
Y	- YELLOW
PK	- PINK

NOTES:

1. CIRCUIT SHOWN WITH GATES IN FULLY RAISED POSITION.
2. DASHED LINES INDICATE FIELD WIRING BY OTHERS.
3. ALL POWER WIRING INSIDE GATES TO BE 12 GAUGE STRANDED MINIMUM.
4. ALL CONTROL WIRING INSIDE GATES TO BE 16 GAUGE STRANDED MINIMUM.
5. SEE BR7-1003, 4, 5, 6, & 7 FOR BARRIER LOCATIONS & INSTALLATION DETAILS.
6. ARM LIGHTS OFF WHEN GATE IS FULLY RAISED, FLASHING WHEN LOWERING, AND BURN STEADY WHEN FULLY LOWERED.

B	REDRAWN TO MATCH WARNING GATES	RDC	1-06
A	ORIGINAL ISSUE	RDC	1-06
REV	DESCRIPTION	DRAWN	DATE
	REVISIONS		

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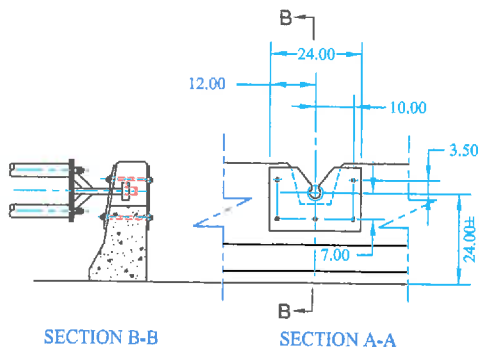
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DRAWING NO.	1		
SCALE	NTS		
DWG	J-06		
DATE			
REV	B	DATE	
REV	H	DATE	

DRAWING TITLE
HR-7 BARRIER GATE WIRING DIAGRAM
TAMPA - HILLSBOROUGH HOV LANES

15191 HIGHWAY 243, RUSSELLVILLE, AL 35654
PH (888) 560-2060 FAX (256) 332-4036

FL232

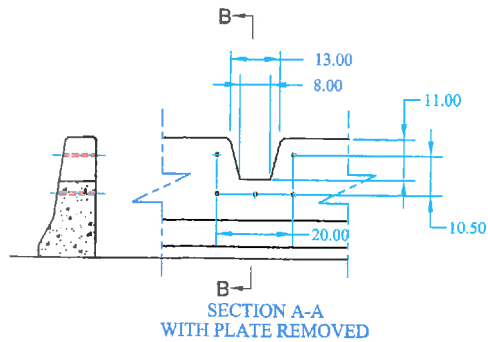
WIRING DIAGRAM BARRIER GATES



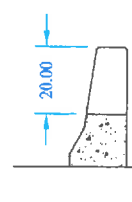
SECTION B-B

SECTION A-A

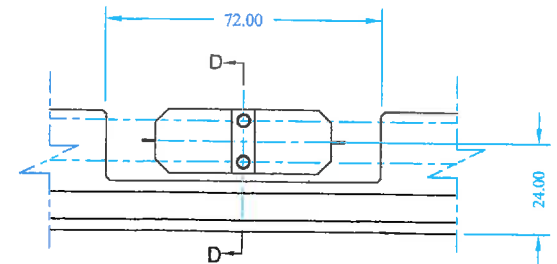
SUGGESTED CUTOUT IN PARAPET WALL
FOR FEMALE LOCK RECEIVER PLATE. SCALE 1.5X



SECTION A-A
WITH PLATE REMOVED

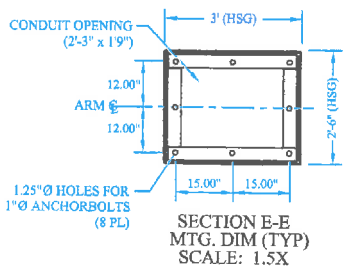
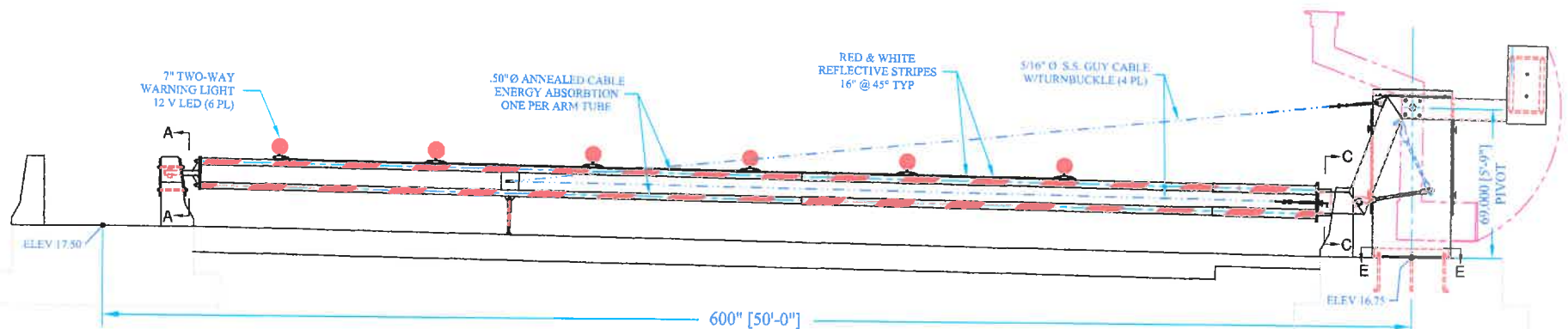


SECTION D-D
SCALE: 1.5X



SECTION C-C

SUGGESTED CUTOUT IN PARAPET WALLS
FOR ARM & TRUSS CABLE CLEARANCE



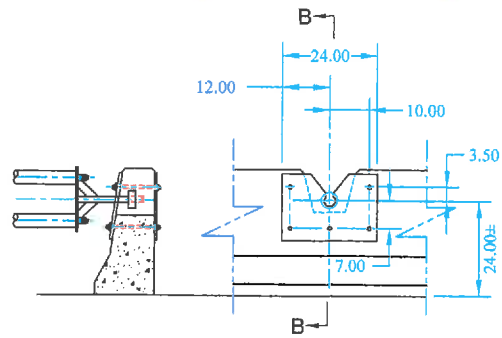
SECTION E-E
MTG. DIM (TYP)
SCALE: 1.5X

TYPE I RESISTANCE BARRIER
LOCATION: STA 1602 + 21.50 (1 RQD)

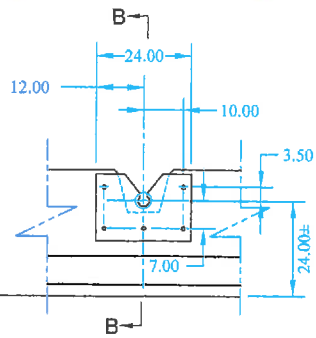
DOWNTOWN

PRELIMINARY

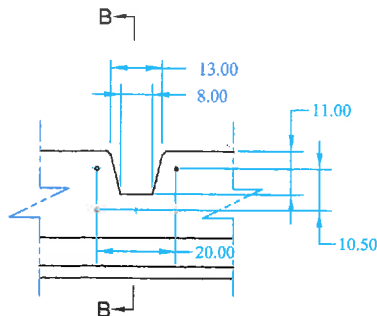
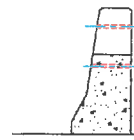
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DECIMALS	ANGULAR	DRAWING TITLE		
1/8" - .1	30.0°	VR-7 RESISTANCE BARRIER INSTALLATION		TAMPA - HILLSBOROUGH HOV LANES BR7-1003
1/16" - .005	15.0°	DRAWING NUMBER		
1/32" - .001	7.5°	DATE		REV
1/64" - .0005	3.75°	12-05		B
1/128" - .0002	1.875°	DRAWN BY		B
		CHECKED BY		A
		DATE		
		JOB NUMBER		
		FL232		



SECTION B-B



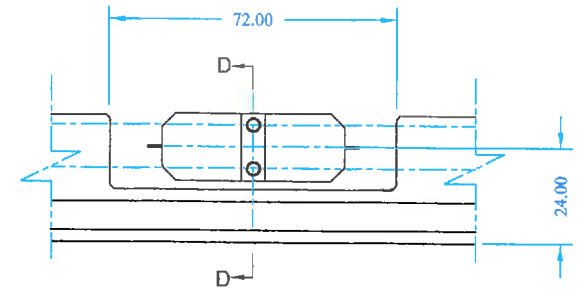
SECTION A-A



SECTION A-A
WITH PLATE REMOVED



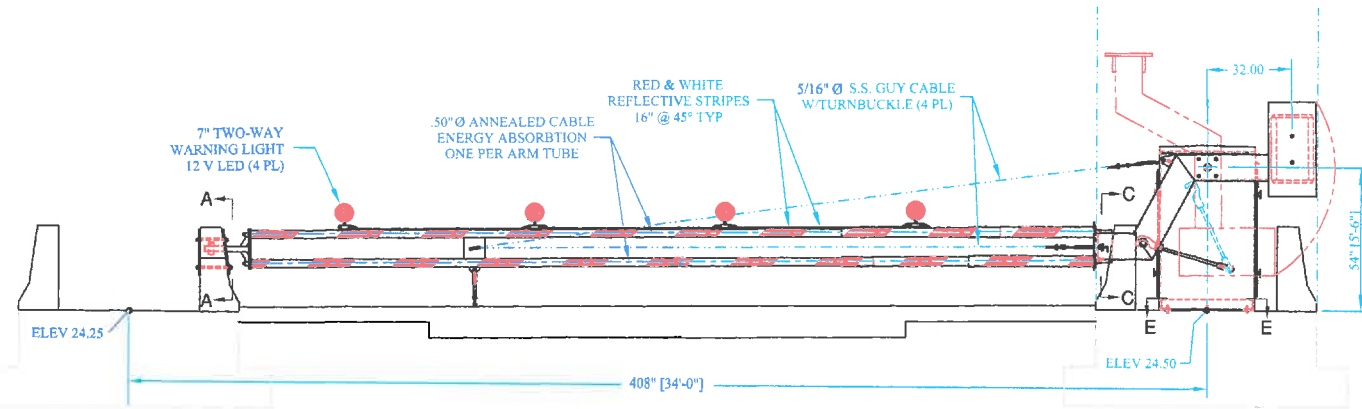
SECTION D-D
SCALE: 1.5X



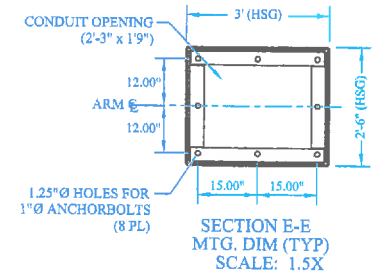
SECTION C-C

SUGGESTED CUTOUT IN PARAPET WALL
FOR FEMALE LOCK RECEIVER PLATE, SCALE 1.5X

SUGGESTED CUTOUT IN PARAPET WALLS
FOR ARM, TRUSS CABLE, & COUNTERWEIGHT CLEARANCE



TYPE II RESISTANCE BARRIER
LOCATION: STA 703 + 58.44 (1 RQD)

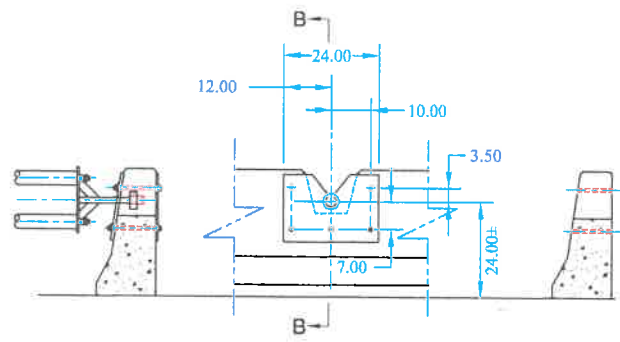


SECTION E-E
MTG. DIM (TYP)
SCALE: 1.5X

PRELIMINARY

34TH STREET GATE

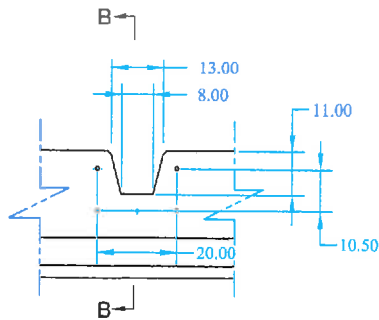
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DRAWING TITLE VR-7 RESISTANCE BARRIER INSTALLATION TAMPA - HILLSBOROUGH HOV LANES		SHEET OF 1 SCALE 1/48 DATE 12-05 JOB NUMBER FL232 CHECKED RDC DATE		
PART NUMBER BR-1004		DATE 12-05		DRAWN BY BR-71004



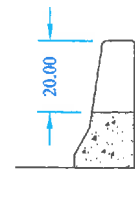
SECTION B-B

SECTION A-A

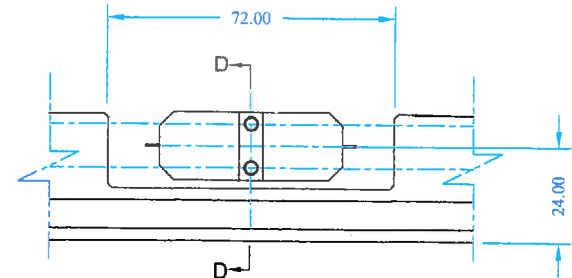
SUGGESTED CUTOUT IN PARAPET WALL
FOR FEMALE LOCK RECEIVER PLATE. SCALE 1.5X



SECTION A-A
WITH PLATE REMOVED

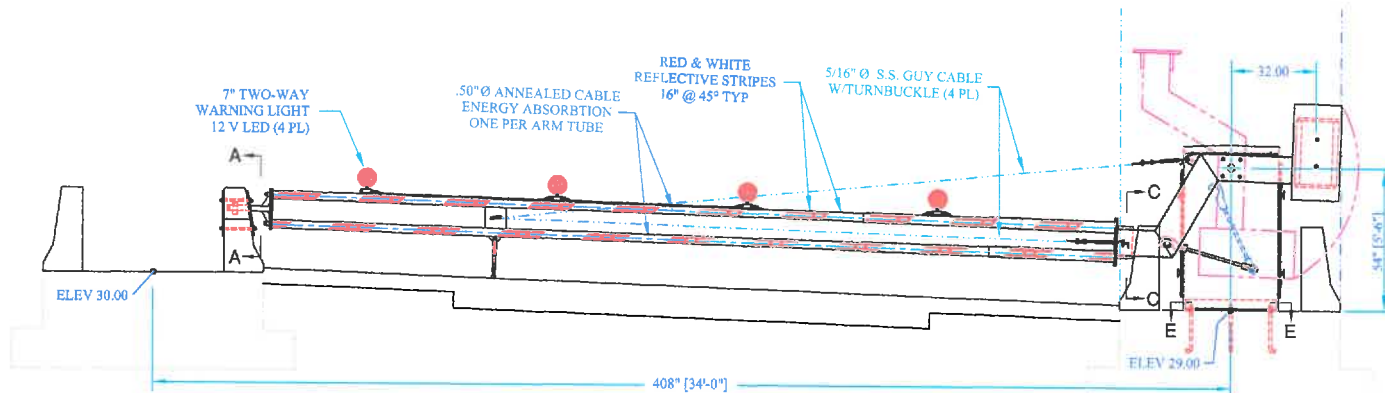


SECTION D-D
SCALE: 1.5X

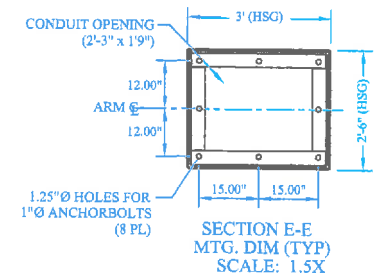


SECTION C-C

SUGGESTED CUTOUT IN PARAPET WALLS
FOR ARM, TRUSS CABLE, & COUNTERWEIGHT CLEARANCE




TYPE II RESISTANCE BARRIER
LOCATION: STA 909 + 07.71

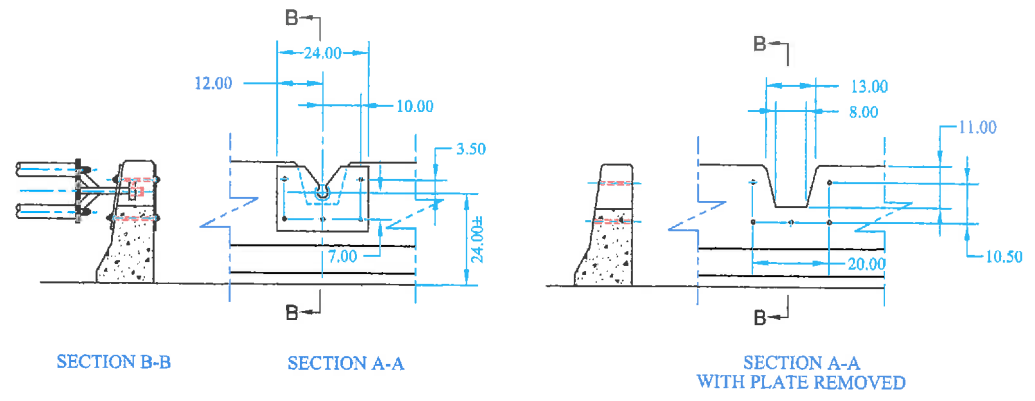
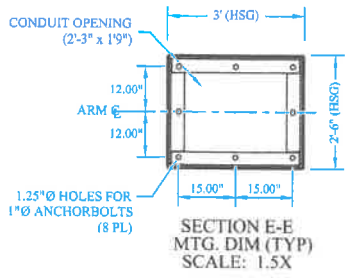


SECTION E-E
MTG. DIM (TYP)
SCALE: 1.5X

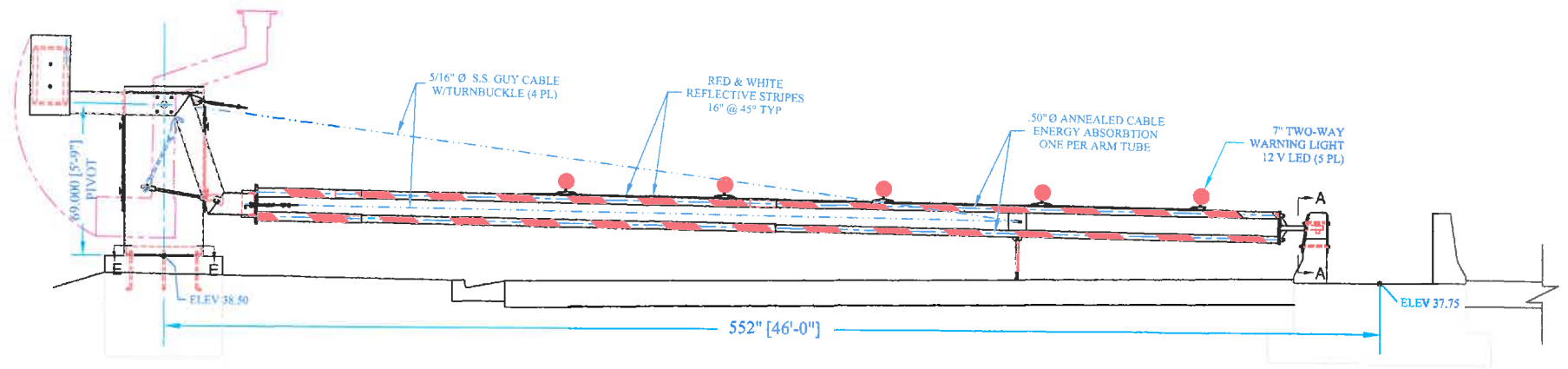
PRELIMINARY

78TH STREET GATE

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DATE 12-05	DRAWN RDC	SCALE 1/48	JOB NO. BR7-1005		REV B
APP. NUMBER FL232	CHECKED	DATE	REV B	REV B	REV A



SUGGESTED CUTOUT IN PARAPET WALL FOR FEMALE LOCK RECEIVER PLATE. SCALE 1.5X

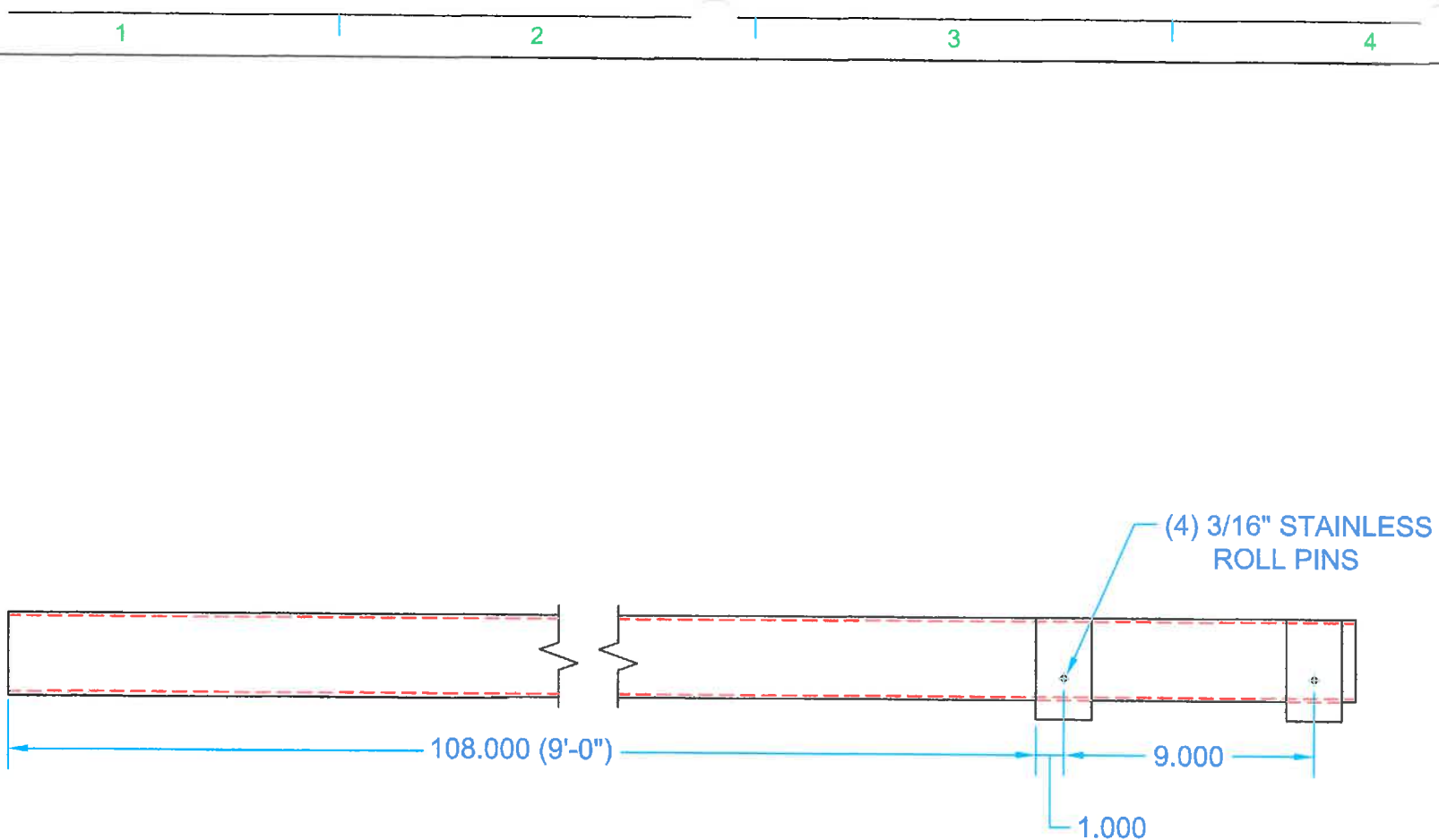


TYPE III RESISTANCE BARRIERS
LOCATION: STA 1294 + 32.00 (1 RQD)

PRELIMINARY

BRANDON GATE

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JOB NUMBER FL232		DATE 12-05	SCALE 1/50	DRAWING TITLE VR-7 RESISTANCE BARRIER INSTALLATION TAMPA - HILLSBOROUGH HOV LANES	
DESIGNED RDC	CHECKED	DATE	BY B	REV B	NO. TO BR7-1007



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UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES

DECIMALS	ANGULAR
.X - .1	±0.5°
.XX - .05	
.XXX - .010	

PART NUMBER

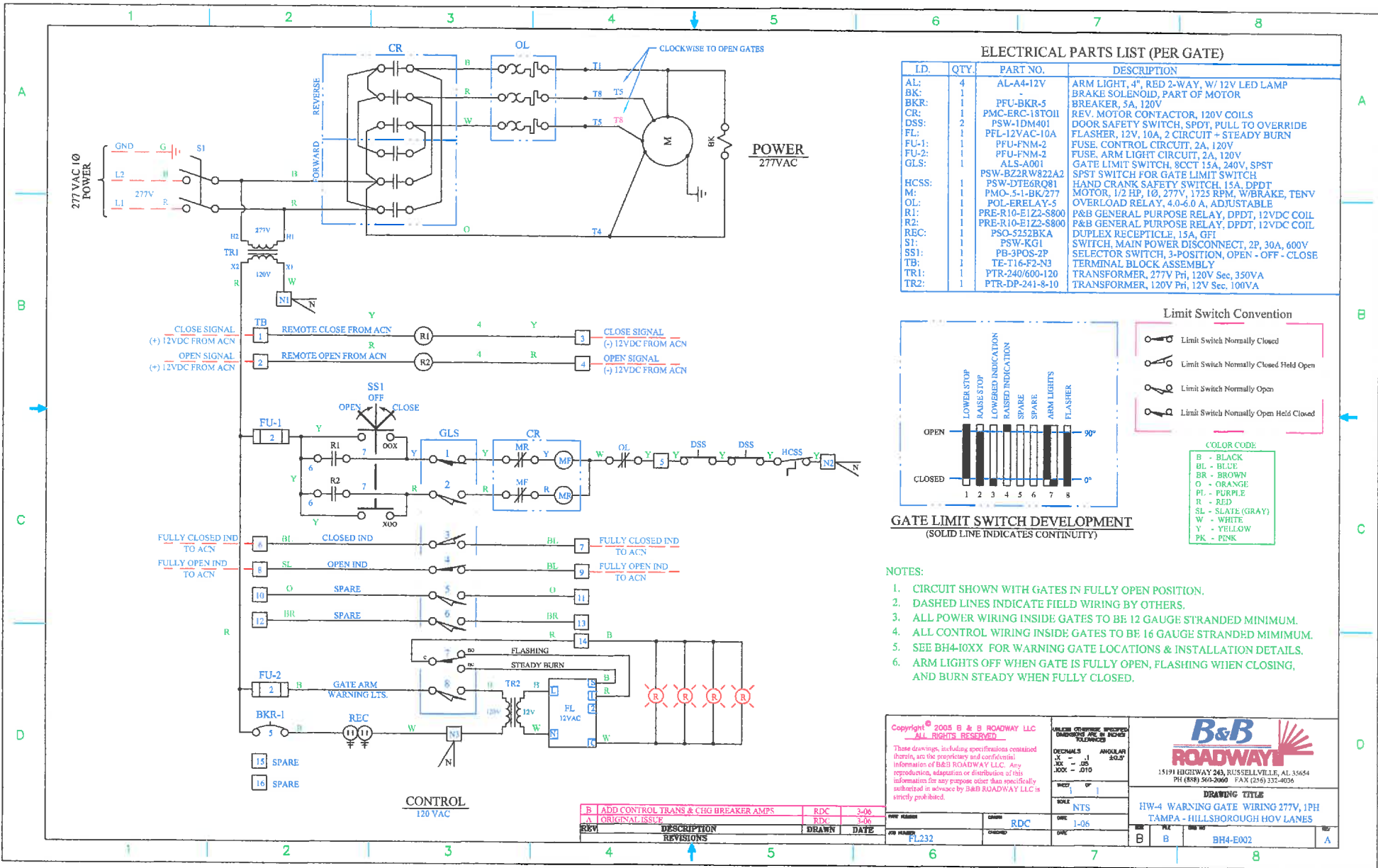
SCALE



15191 HIGHWAY 243, RUSSELLVILLE, AL 35654
 TOLL FREE (888) 560-2060 FAX (256) 332-4036

DRAWING TITLE
 FIBERGLASS ARM
 WITH ADAPTER SLEEVES

JOB NUMBER	DRAWN JRI	DATE 1/06	SIZE A	FILE	DWG NO	REV
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ELECTRICAL PARTS LIST (PER GATE)

ID.	QTY.	PART NO.	DESCRIPTION
AL:	4	AL-A4-12V	ARM LIGHT, 4", RBD 2-WAY, W/ 12V LED LAMP
BK:	1	BK-BKR-5	BRAKE SOLENOID, PART OF MOTOR
BKR:	1	PFU-BKR-5	BREAKER, 5A, 120V
CR:	1	PMC-ERC-18T011	REV. MOTOR CONTACTOR, 120V COILS
DSS:	2	PSW-1DM401	DOOR SAFETY SWITCH, SPDT, PULL TO OVERRIDE
FL:	1	PFL-12VAC-10A	FLASHER, 12V, 10A, 2 CIRCUIT - STEADY BURN
FU-1:	1	PFU-FNM-2	FUSE, CONTROL CIRCUIT, 2A, 120V
FU-2:	1	PFU-FNM-2	FUSE, ARM LIGHT CIRCUIT, 2A, 120V
GLS:	1	ALS-A001	GATE LIMIT SWITCH, 8CCT 15A, 240V, SPST
HCSS:	1	PSW-B22RW822A2	SPST SWITCH FOR GATE LIMIT SWITCH
M:	1	PSW-DTE6RQ081	HAND CRANK SAFETY SWITCH, 15A, DPDT
OL:	1	PMO-5-1-BK/277	MOTOR, 1/2 HP, 1Ø, 277V, 1725 RPM, W/BRAKE, TENV
R1:	1	POL-ERELAY-5	OVERLOAD RELAY, 4.0-6.0 A, ADJUSTABLE
R2:	1	PRE-R10-E1Z2-S800	P&B GENERAL PURPOSE RELAY, DPDT, 12VDC COIL
REC:	1	PRE-R10-E1Z2-S800	P&B GENERAL PURPOSE RELAY, DPDT, 12VDC COIL
SS1:	1	PSO-3252BKA	DUPLEX RECEPTACLE, 15A, GFI
S1:	1	PSW-RG1	SWITCH, MAIN POWER DISCONNECT, 2P, 30A, 600V
SE1:	1	PB-3POS-2P	SELECTOR SWITCH, 3-POSITION, OPEN - OFF - CLOSE
TB:	1	TE-T16-F2-N3	TERMINAL BLOCK ASSEMBLY
TR1:	1	PTR-240/600-120	TRANSFORMER, 277V Pri, 120V Sec, 350VA
TR2:	1	PTR-DP-241-8-10	TRANSFORMER, 120V Pri, 12V Sec, 100VA

Limit Switch Convention

- Limit Switch Normally Closed
- Limit Switch Normally Closed Held Open
- Limit Switch Normally Open
- Limit Switch Normally Open Held Closed

Gate Limit Switch Development (SOLID LINE INDICATES CONTINUITY)

COLOR CODE

- B - BLACK
- BL - BLUE
- BR - BROWN
- O - ORANGE
- PL - PURPLE
- R - RED
- SL - SLATE (GRAY)
- W - WHITE
- Y - YELLOW
- PK - PINK

- NOTES:**
- CIRCUIT SHOWN WITH GATES IN FULLY OPEN POSITION.
 - DASHED LINES INDICATE FIELD WIRING BY OTHERS.
 - ALL POWER WIRING INSIDE GATES TO BE 12 GAUGE STRANDED MINIMUM.
 - ALL CONTROL WIRING INSIDE GATES TO BE 16 GAUGE STRANDED MINIMUM.
 - SEE BH4-10XX FOR WARNING GATE LOCATIONS & INSTALLATION DETAILS.
 - ARM LIGHTS OFF WHEN GATE IS FULLY OPEN, FLASHING WHEN CLOSING, AND BURN STEADY WHEN FULLY CLOSED.

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 PH (888) 560-2060 FAX (256) 332-4036

DRAWING TITLE
 HW-4 WARNING GATE WIRING 277V, 1PH
 TAMPA - HILLSBOROUGH HOV LANES

REVISIONS

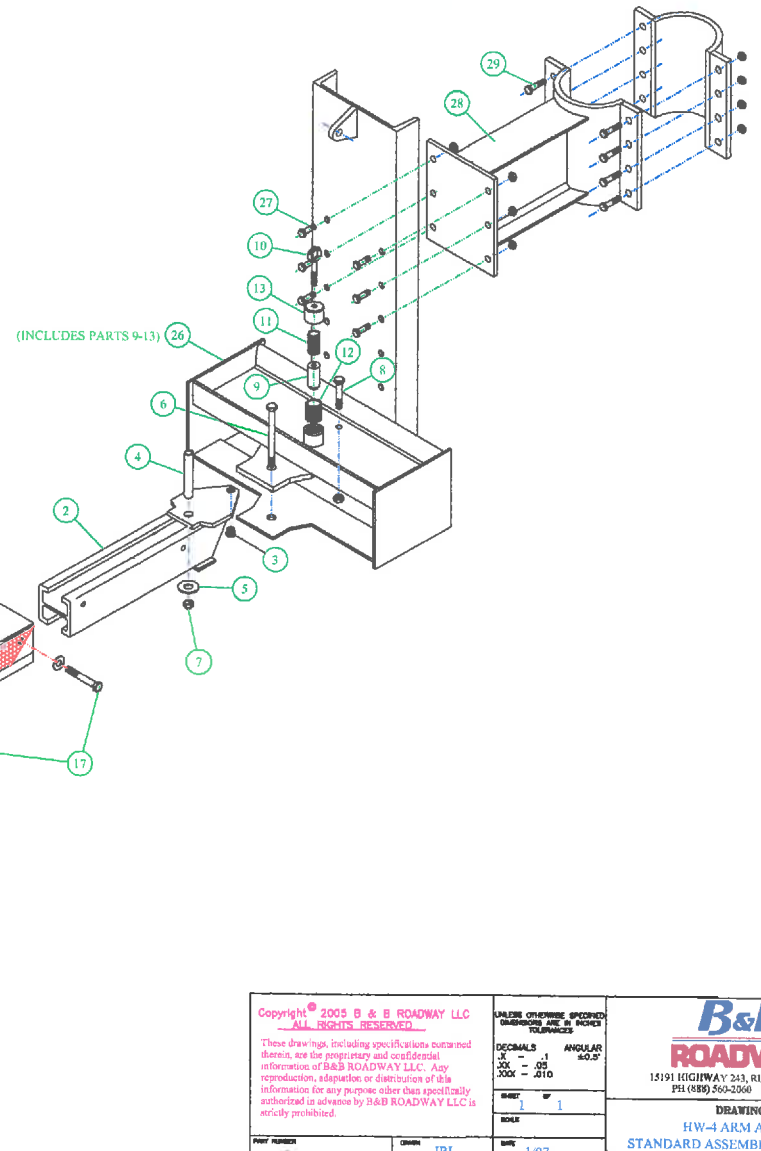
REV	DESCRIPTION	DRAWN	DATE
B	ADD CONTROL TRANS & CHG BREAKER AMPS	RDC	3-06
A	ORIGINAL ISSUE	RDC	2-06

DATE 1-06
JOB NO PL232
SCALE NTS
DATE 1-06

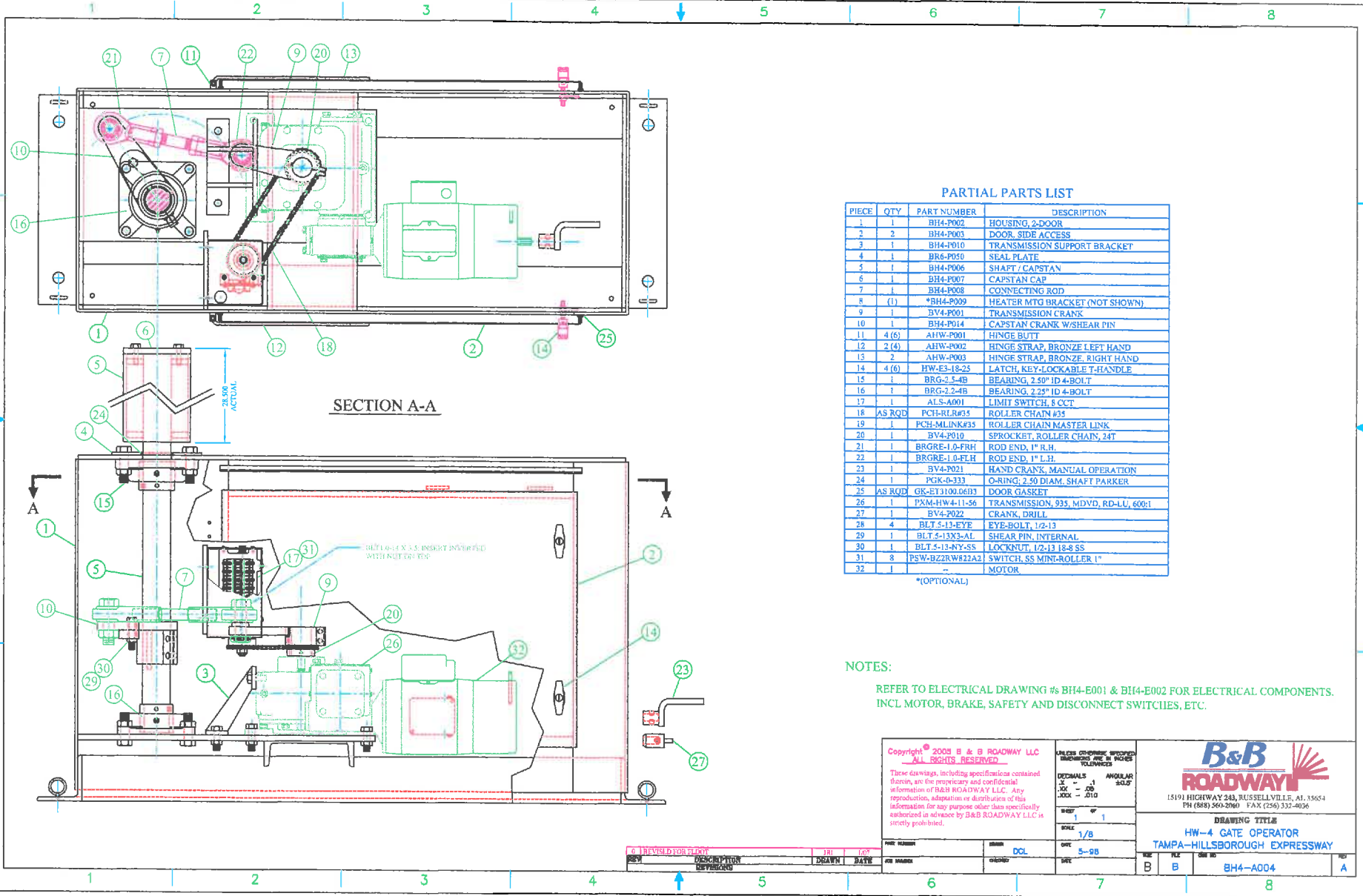
WIRING DIAGRAM WARNING GATES

PARTS LIST			
PIECE	QTY	PART NUMBER	DESCRIPTION
1	1	AAW-P049	ARM CAPSTAN MOUNT
2	1	AAW-P050	ARM BASE
3	1	AAW-P051	SHEAR PIN BUSHING
4	1	AAW-P052	PIVOT SLEEVE
5	1	BR-BZ-???	BEARING, BRONZE THRUST
6	1	BLTSS-5-13X6	SS HEX BOLT & NYLOCKNUT, 1/2"-13 x 6" LONG
7	1	NUTSS-5-13ESNA	SS NYLOCK NUT, 1/2-13
8	1	AAW-A037	GROOVED SHEAR PIN ASSEMBLY
9	1	AAW-P053	LATCH PIN
10	1	BLTGA-25X2EYE	EYE BOLT
11	1	HW-LC058GH-S	SS SPRING, .540" OD x 2" LONG
12	1	PINISS-5x2	SS PIPE NIPPLE, 1/2" NPT X 2"
13	1	AAW-P054	SS CAP
14	4	BLTSS 3/8-16x3.5	SS HEX BOLT, NUT & LKWASHER, 3/8"-16 x 3.5"
15	*	-	ARM SECTION, 4" SQ. ALUM. TUBE (LGTH. AS SPECIFIED)
16	*	-	ARM SECTION, 3" SQ. FRP TUBE (LENGTH AS SPECIFIED)
17	2	-	SS HEX BOLT, NYLOCKNUT & (2) FLWASHER, 1/2"-13 x 5"
18	2	AAW-P008	ARM ADAPTER SLEEVE
19	*	AAW-P013	ARM END CAP, 3" TUBE
	*	AAW-P012	ARM END CAP, 4" TUBE
20	*	ALT-A4-"V"	ARM LIGHT, 4"Ø, 2-WAY, (SPECIFY VOLTAGE)
	*	ALT-C4-"V"	ARM LIGHT, 4"Ø, 2-WAY CAST ALUM, (SPECIFY VOLTAGE)
	*	ALT-L7-"V"	ARM LIGHT, 7"Ø, 2-WAY, (SPECIFY VOLTAGE)
21	*	ALF-P001	L4 LIGHT MOUNTING PLATE
	*	ALF-P002	L7 LIGHT MOUNTING PLATE
22	*	-	REFLECTIVE SHEETING (AS SPECIFIED)
23	2	-	SS HEX BOLT, NYLOCK NUT & 2 FLWASHER, 3/8"-16 x 4.5"
24	*	-	SS PAN HEAD SCREW #8-32x1/2" (4 ROD. PER LIGHT)
25	*	-	SS SHEET METAL SCREW #10x1/2" (4 ROD. PER LT. & CAP)
26	1	AAW-P006	CROSS MEMBER ASSEMBLY (INCLUDES PARTS 9-13)
27	6	-	SS HEXBOLT, NYLOCKNUT, LKWASHER, 1/2"-13 x 1-1/4"
28	1	AAW-P007	CLAMP BASE
29	8	-	SS HEXBOLT, NYLOCKNUT, LKWASHER, 1/2"-13 x 1-3/4"

* QUANTITY VARIES



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DECIMALS	ANGULAR			
XX - .1	90.0°			
XXX - .05	30.0°			
XXXX - .010				
SHEET 1 OF 1		DATE 1/07		
DRAWN JRI		CHECKED		
JOB NUMBER		DATE		
DRAWING TITLE		REV		
HW-4 ARM ASSEMBLY		REV 01		
STANDARD ASSEMBLY WITH L4 LIGHTS		REV 01		
AAW-A030		REV 01		



PARTIAL PARTS LIST

PIECE	QTY	PART NUMBER	DESCRIPTION
1	1	BH4-P002	HOUSING, 2-DOOR
2	2	BH4-P003	DOOR, SIDE ACCESS
3	1	BH4-P010	TRANSMISSION SUPPORT BRACKET
4	1	BR6-P050	SEAL PLATE
5	1	BH4-P006	SHAFT / CAPSTAN
6	1	BH4-P007	CAPSTAN CAP
7	1	BH4-P008	CONNECTING ROD
8	(1)	*BH4-P009	HEATER MTG BRACKET (NOT SHOWN)
9	1	BV4-P001	*TRANSMISSION CRANK
10	1	BH4-P014	CAPSTAN CRANK W/SHEAR PIN
11	4(6)	AHW-P001	HINGE BUTT
12	2(4)	AHW-P002	HINGE STRAP, BRONZE LEFT HAND
13	2	AHW-P003	HINGE STRAP, BRONZE RIGHT HAND
14	4(6)	HW-E3-18-25	LATCH, KEY-LOCKABLE T-HANDLE
15	1	BRG-2.5-4B	BEARING, 2.50" ID 4-BOLT
16	1	BRG-2.2-4B	BEARING, 2.25" ID 4-BOLT
17	1	ALS-A001	LIMIT SWITCH, 8 CCT
18	AS RQD	PCH-RLR#35	ROLLER CHAIN #35
19	1	PCH-MLINK#35	ROLLER CHAIN MASTER LINK
20	1	BV4-P010	SPROCKET, ROLLER CHAIN, 24T
21	1	BRGRE-1.0-FRH	ROD END, 1" R.H.
22	1	BRGRE-1.0-FLH	ROD END, 1" L.H.
23	1	BV4-P021	HAND CRANK, MANUAL OPERATION
24	1	PKG-O-333	O-RING, 2.50 DIAM, SHAFT PARKER
25	AS RQD	GK-ET100.0613	DOOR GASKET
26	1	PAM-HW4-11-36	TRANSMISSION, 935, MDVD, RD-LU, 600:1
27	1	BV4-P022	CRANK, DRILL
28	4	BLT-5-11-EYE	EYE-BOLT, 1/2-13
29	1	BLT-5-13-2-AL	SHEAR PIN, INTERNAL
30	1	BLT-5-13-NY-SS	LOCKNUT, 1/2-13 18-8 SS
31	8	PSW-BZ2RW822A2	SWITCH, SS MINI-ROLLER 1"
32	1	-	MOTOR

*[OPTIONAL]

NOTES:

REFER TO ELECTRICAL DRAWING #S BH4-E001 & BH4-E002 FOR ELECTRICAL COMPONENTS. INCL MOTOR, BRAKE, SAFETY AND DISCONNECT SWITCHES, ETC.

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DRAWING TITLE HW-4 GATE OPERATOR TAMPA-HILLSBOROUGH EXPRESSWAY		SHEET 1 OF 1 SCALE 1/8 DATE 5-98	
PREPARED BY: [] CHECKED BY: [] DESIGNED BY: []	DRAWN BY: [] DATE: []	TITLE: DCL DATE: []	FILE NO: B SHEET NO: B DRAWING NO: BH4-A004