TAMPA-HILLSBOROUGH COUNTY EXPRESSWAY AUTHORITY

Letter of Clarification No. 2

FOR

Request for Proposal (RFP)

TWIGGS STREET IMPROVEMENTS DESIGN-BUILD PROJECT

RFP O-00820

Letter of Clarification No. 2 ~ RFO No. O-00820

Date of Letter of Clarification: 08/11/2020

To all prospective respondents:
The following responds to questions received on the solicitation reference above:

Question 1:	There exists a fiber optic interconnect cable on this project that will be in conflict with the work. Specifically, an overhead signal interconnect cable enters the project limits from the north on Nebraska Avenue. This cable attaches to the existing joint-use wood signal pole on the northeast corner of Nebraska and Twiggs. (This joint-use pole will be removed by TECO.) The cable then travels overhead eastward to another wood pole, then down this pole and underground to a ground-mounted cabinet under the Expressway. Further, this line may continue eastward to the Twiggs and Meridian signal controller cabinet. This entire run will be in conflict with the widening and the signal work. Is it the responsibility of the DBF to perform the signal interconnect relocation work? If so, please provide information on the size of this cable.
Response 1:	**The 4" conduit interconnect cable is owned by the City of Tampa and it was determined the conflict continues at least until a cabinet located underneath the Selmon Expressway. The Design-Build Firm is responsible for relocating as needed to complete the project.**
Question 2:	The Signal Concept plans detail the use of the directional bore method to install the signalization conduit road crossings of Nebraska and Twiggs. However, there exists numerous underground utilities at this intersection. During recent work on City of Tampa streets, contractors were unable to successfully install conduit road crossings, by the directional bore method, because of numerous utilities under the pavements. Ultimately, the City mandated that only the open-cut method of installation would be acceptable for road crossings. If directional bored, the road crossings on this project will be a high-risk installation. Will THEA and the City of Tampa mandate the open cut installation method to ensure a safe and successful road crossing?
Response 2:	**Directional bore installation is shown conceptually to minimize impacts to the traveling public. The Design-Build Firm shall adhere to all RFP requirements when deciding which installation method to use for the construction of the required conduits.**
Question 3:	On the existing concrete signal pole at Twiggs and Nebraska, there are numerous devices attached to the pole. The attached devices include several cameras, a wireless device, a cabinet and other ITS devices. Please identify this equipment and whether the DBF will be responsible for relocating it to the new mast arm. Also, will the relocation include new cabling? Further, will there be corresponding ITS equipment/hardware, inside of the existing traffic signal controller cabinet, that will also need to be relocated?

Response 3:	**The attached devices are owned by the City of Tampa. The Design-Build Firm is responsible for relocating as needed to complete the project.**
Question 4:	Are the new traffic signal mast arms, signal poles and pedestrian poles to be painted?
Response 4:	**Yes, proposed signal mast arms, poles, and pedestrian poles shall be painted black to City of Tampa preferences due to the proximity to the historic Tampa Union Station.**
Question 5:	Will the new signal mast arms require the decorative bases around the upright, such as was installed on recent City of Tampa projects? (For example, at Ashley and Cass St.)
Response 5:	**No, a decorative base is not required around the uprights.**
Question 6:	The DMS Concept plans depict DMS Sign “A, on Twiggs, to be installed outside of the ROW. Please confirm whether it is the intent to install this DMS outside of the ROW, at this location.
Response 6:	**DMS Sign A is shown conceptually on property maintained by the City of Tampa for the Twiggs Street Parking Garage, which is consistent with the COT report provided in the reference documents. The sign location shall be approved by City of Tampa during final design.**
Question 7:	Can the Authority please provide a full set of the most current concept plans and a full set of Cad files for the project?
Response 7:	**The RFP includes the full set of concept plans in pdf format. All CAD files necessary to regenerate the concept plans have been provided in the reference documents. Please clarify if something additional is being requested for the basis of design.**
Question 8:	Can the Authority please identify the minimum limits of resurfacing for the parking lot improvements?
Response 8:	**The minimum limits of parking lot resurfacing shall be bound by the inside curb line shown in the attached graphic.**

Question 9:	Can the Authority please provide the required pavement design for the new construction and resurfacing of the parking lot improvements?
Response 9:	**The minimum resurfacing pavement design for the parking lot shall consist of a new 1" layer of Structural Course Type SP (Traffic Level B). The Respondents are notified that existing asphalt thicknesses may also be 1" and therefore the base may be encountered during milling operations. During the pavement design package process, the DB Firm may consider an overlay if necessary to minimize milling depth, provided the vertical clearances and other criteria are not impacted. Sealers and other surface treatments are not allowed. The DB Firm is responsible for preparing a new construction pavement design following the FDOT FPDM for Twiggs Street if they do not utilize the widening/milling and resurfacing pavement designs provided in the RFP. The ESAL calculations used to determine the RFP pavement designs has been attached.**
Question 10:	Can the Authority please provide the concept location and panel details for the overhead sign restricting westbound Twiggs Street traffic from turning left at Nebraska Avenue?
Response 10:	**Provide a 36"x36" R3-2 LED Blank-Out sign attached to the mast arm. The final location on the mast arm and vendor selection is the responsibility of the Design-Build Firm, however approximate location requirements and example cut sheets are attached.**

Bidders MUST acknowledge receipt of this Letter of Clarification by signing, dating and returning the completed Acknowledgement of Receipt of Letter of Clarification/Addendum 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 7this 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]

Attachment to Response 8

Letter of Clarification No. 2

RFP O-00820

CURVE DATA SR45-1
PI STA. = 106+46.41
Δ = 21° 30' 38" (RT)
D = 24° 23' 33"
T = 44.62
L = 88.18
R = 234.89
PC STA. = 106+01.79
PT STA. = 106+89.98

CURSR45-1
PC STA. 106+01.79

R/W LINE
+73.07
55.90' LT.
℄ SURVEY SR 45
+63.32
59.75' LT.
℄ SURVEY SR 45
R/W LINE
N. NEBRASKA AVE.
106
105
104
103
℄ SURVEY SR 45
R/W LINE
RESURFACING LIMIT
BEGIN WIDENING
STA. 18+90.80
R/W LINE
+66.52
40.00' LT.
BEGIN PROJECT
BEGIN MILLING & RESURFACING
STA. 18+05.18
℄ SURVEY TWIGGS ST
N 69° 00' 41" E
17
18
19
20
21
22
R 20
REPLACE CURB RAMP &
DETECTABLE WARNING
+97.31
46.50' LT.
15' SIDEWALK
5
15' SIDEWALK
LA R/W LINE
+86.20
119.02' LT.
CITY OF TAMPA
THEA
1" = 20'
LA R/W LINE
RESURFACING LIMIT
+00.46
43.32' LT.
+16.16
37.63' LT.
R 5
+50.75
29.04' LT.
R 125
+13.84
28.16' LT.
+50.57
37.47' LT.
FENCE TYPE "B"
CONST. TYPE
D CURB
+57.60
27.54' LT.
E. TWIGGS ST.
+20.00
3.50' RT.
REPLACE CURB RAMP &
DETECTABLE WARNING
R 20
+05.11
40.04' RT.
REMOVE EXIST. SIDEWALK
REMOVE DRIVEWAY
REPLACE CURB RAMPS
& DETECTABLE WARNINGS
+60.00
5.50' RT.
+25.51
27.01' RT.
R 25
R 13
+82.33
27.50' RT.
11'
11' SIDEWALK
+69.36
41.35' RT.
EDU
BUILDERS
TAMPA I LLC.
+47.11
40.05' RT.
LA R/W LINE
15' SIDEWALK
RESURFACING LIMIT
R/W LINE
+25.14
39.89' RT.
STA. 18+65.00
℄ SURVEY TWIGGS ST =
STA. 104+25.16
℄ SURVEY SR 45
LA R/W LINE
RESURFACING LIMIT
BEGIN CONSTRUCTION
STA. 12+65.00
CONST.
GUIDERAIL
HILLSBOROUGH CO.
THEA
R 3
R 20
1,025.496 sf
R 7
REMOVE EXIST. CURB
AND PAVEMENT
CONST. TYPE D CURB
LA R/W LINE
N 21° 08' 46" W

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

HNTB CORPORATION
201 N. FRANKLIN STREET, SUITE 1200
TAMPA, FL 33602
PHONE: (813) 402-4150
CERTIFICATE OF AUTHORIZATION NO. 6500

DOUGLAS J. BURKHART, P.E. NO. 40900

TAMPA HILLSBOROUGH EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
TWIGGS ST	HILLSBOROUGH	000918

ROADWAY PLAN (01)
TWIGGS ST

SHEET NO. 4

salfonso 4/16/2020 11:01:12 AM \\tmaw00\pmwork\jobs\50832\TECHPROD\Twiggs Street Design-Build\CADD\0-00918\roa

Attachment to Response 9

Letter of Clarification No. 2

RFP O-00820

18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

PIN #: O-00918
COUNTY: Hillsborough
ROADWAYID: 10000082
PROJECT DESCRIPTION: Design Build RFP for Twiggs Street Improvements from Nebraska Avenue to Meridian Avenue

LOCATION #: 1

LOCATION DESCRIPTION: Twiggs Street from Nebraska Avenue to Meridian Avenue

GROWTH RATE FORMULA

A: Interpolation
B: Enter Growth Rate
C: Enter All AADTs
D: New Facility

If "A" select an interpolation function
If "B" enter rate as decimals (1%=1.01)
If ""C", or "D" continue to next section

Choose A, B, C, or D here: B

Linear Growth Rate ____ %
Compounded Growth Rate ____ %
Decaying Growth Rate ____ %
(select one)

DESIGN INFORMATION

		AADT
Existing Year	2016	18900
Opening Year	2022	22800
Mid-Design Year	2032	29300
Design Year	2042	35800

Note: AADT values have been rounded to the nearest 100

Daily Direction Split (50% or 100%)	50%
Lanes in One Direction	2
T24 values	
Existing to Opening Year	3.00%
Opening to Mid-Year	3.00%
Mid-Year to Design-Year	3.00%

1995 EQUIVALENCY FACTORS |u(1)|

(selected with an X)	FLEXIBLE PAVEMENT SN = 5/THICK		RIGID PAVEMENT SN = 12/THICK	
RURAL FREEWAY:	1.050		1.600	
URBAN FREEWAY:	0.900		1.270	
RURAL HIGHWAY:	0.960		1.350	
URBAN HIGHWAY:	0.890	X	1.220	
OTHER (Enter Factor and X):				

(1) Equivalency Factors are based on Updated Pavement Damage Factors Memorandum, dated July 2, 1998.
Lane Factors developed by Copes equation

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

	Name	Title	Org. Unit or Firm	Date
Prepared by:	Govardhan R Muthyalagari, PE, PTOE	PE No. 65474	HNTB	1/29/2020
	Signature			
Reviewed by:				
	Name	Title	Org. Unit or Firm	Date
	Signature			

18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 1

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

YEARS: *2016 to 2042*

SECTION #: 10000082 **COUNTY:** Hillsborough **PIN #:** O-00918

FLEXIBLE PAVEMENT URBAN HIGHWAY 0.890

SN=5/THICK Design Build RFP for Twiggs Street Improvements from Nebraska Avenue to Meridian Avenue B

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2016	18900	75	0	0.5	3.00%	0.811	0.890
2017	19500	77	0	0.5	3.00%	0.808	0.890
2018	20200	80	0	0.5	3.00%	0.805	0.890
2019	20800	82	0	0.5	3.00%	0.803	0.890
2020	21500	84	0	0.5	3.00%	0.800	0.890
2021	22100	86	0	0.5	3.00%	0.798	0.890
2022	22800	89	89	0.5	3.00%	0.795	0.890
2023	23400	91	180	0.5	3.00%	0.793	0.890
2024	24100	93	273	0.5	3.00%	0.791	0.890
2025	24700	95	368	0.5	3.00%	0.789	0.890
2026	25400	98	466	0.5	3.00%	0.786	0.890
2027	26000	100	566	0.5	3.00%	0.785	0.890
2028	26700	102	668	0.5	3.00%	0.782	0.890
2029	27300	104	772	0.5	3.00%	0.781	0.890
2030	28000	107	879	0.5	3.00%	0.778	0.890
2031	28600	109	988	0.5	3.00%	0.777	0.890
2032	29300	111	1099	0.5	3.00%	0.775	0.890
2033	29900	113	1212	0.5	3.00%	0.773	0.890
2034	30600	115	1327	0.5	3.00%	0.771	0.890
2035	31200	117	1444	0.5	3.00%	0.769	0.890
2036	31900	120	1564	0.5	3.00%	0.768	0.890
2037	32500	122	1686	0.5	3.00%	0.766	0.890
2038	33200	124	1810	0.5	3.00%	0.764	0.890
2039	33800	126	1936	0.5	3.00%	0.763	0.890
2040	34500	128	2064	0.5	3.00%	0.761	0.890
2041	35200	131	2195	0.5	3.00%	0.760	0.890
2042	35800	133	2328	0.5	3.00%	0.758	0.890

Opening to Mid-Design Year ESAL Accumulation (1000s): 1010

Opening to Design Year ESAL Accumulation (1000s): 2239

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

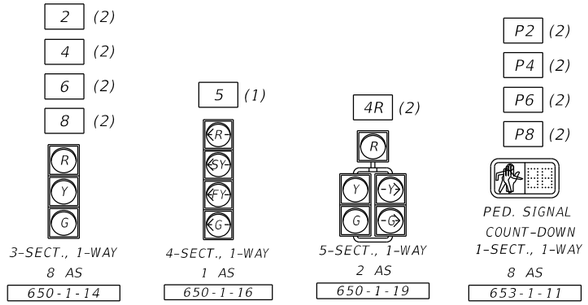
	Name	Title	Org.Unit or F	Date
Prepared by:	Govardhan R Muthyalagari, PE, PTOE	PE No. 65474	HNTB	1/29/2020
	Signature			
Reviewed By:				
	Name	Title	Org.Unit or F	Date
	Signature			

Attachment to Response 10

Letter of Clarification No. 2

RFP O-00820

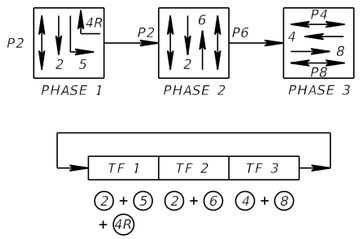
SIGNAL HEAD DETAILS

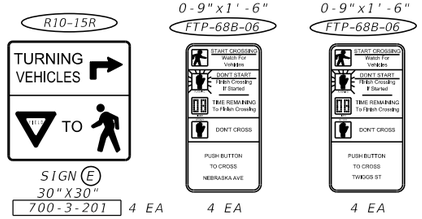


CONTROLLER OPERATION:

1. MAJOR STREET IS NEBRASKA AVE (MOVEMENTS 2, 5 AND 6). MINOR STREET IS TWIGGS ST (MOVEMENTS 4 AND 8).
2. FLASHING OPERATION IS YELLOW FOR NEBRASKA AVE AND RED FOR TWIGGS ST. WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW. ALL OTHER VEHICLE MOVEMENTS SHALL FLASH RED.
3. EACH LEFT TURN MOVEMENT SHALL HAVE CONDUCTORS AVAILABLE FOR PROTECTED AND PERMISSIVE OPERATION.
4. MOVEMENT 5 WILL OPERATE IN PROTECTED/PERMISSIVE MODE.
5. SIGNAL TIMINGS TO BE ADJUSTED BY ENGINEER OF RECORD.
6. CONTROLLER SHALL OPERATE AS AN SOP 11 (MODIFIED).

S.O.P. 11 MODIFIED

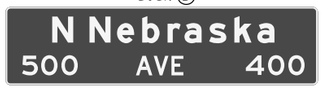




INTERNALLY ILLUMINATED DUAL FACED SIGNS

SIGN (A)

SIGN (B)



700-5-22 2 EA

SIGN (C)

SIGN (D)

700-5-22 2 EA

SPECIAL SYMBOLOGY

V ------- VIDEO DETECTOR

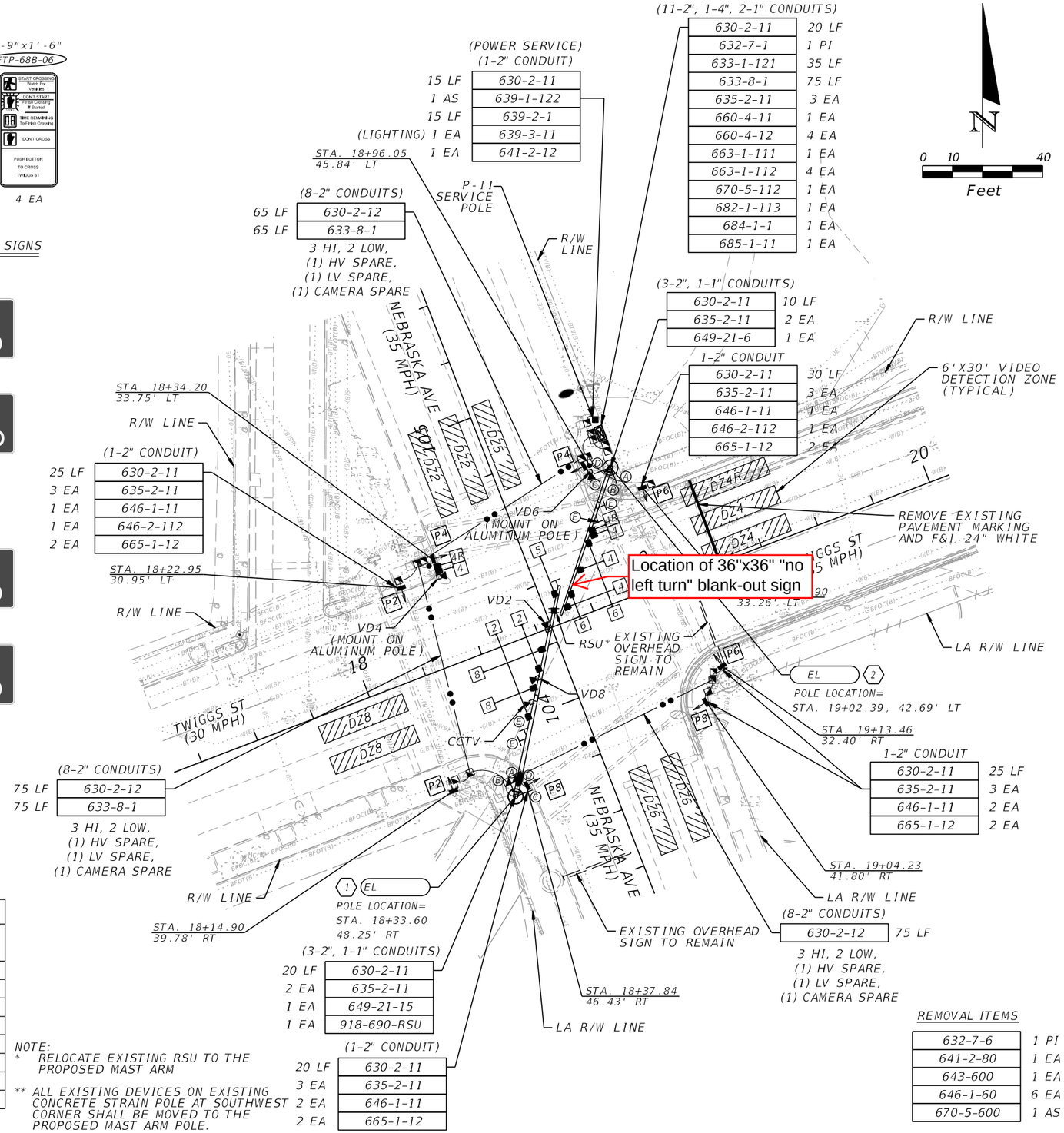
DZ5 --- VIDEO DETECTION ZONE

CONTROLLER TIMINGS

TIMING FUNCTION		1	2	3	4	5	6	7	8
MOVEMENT NUMBER		1	2	3	4	5	6	7	8
TIMING FUNCTION	MINIMUM GREEN		14.0		6.0	6.0	14.0		6.0
	EXTENSION		3.5		3.0	3.0	3.5		3.0
	MAXIMUM GREEN 1		50.0		25.0	20.0	50.0		25.0
	MAXIMUM GREEN 2								
	YELLOW CLEARANCE	4.0	4.0		4.0	4.0	4.0		3.7
	ALL RED		2.1		2.5	2.0	2.1		2.5
	PEDESTRIAN WALK		7.0		7.0		7.0		7.0
	PED. CLEARANCE		17.0		18.0		17.0		18.0
	RECALL		MIN		MIN		MIN		

VIDEO DETECTOR CHART

VIDEO DETECTOR	DETECTION ZONE	DELAY TIME (SECS)
VD 2	DZ 2	
	DZ 5	
VD 4	DZ 4	
	DZ 4R	5
VD 6	DZ 6	
VD 8	DZ 8	



NOTE:

* RELOCATE EXISTING RSU TO THE PROPOSED MAST ARM

** ALL EXISTING DEVICES ON EXISTING CONCRETE STRAIN POLE AT SOUTHWEST CORNER SHALL BE MOVED TO THE PROPOSED MAST ARM POLE.

REMOVAL ITEMS

632-7-6	1 PI
641-2-80	1 EA
643-600	1 EA
646-1-60	6 EA
670-5-600	1 AS

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

TAMPA HILLSBOROUGH EXPRESSWAY AUTHORITY

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	HILLSBOROUGH	

TWIGGS ST AT NEBRASKA AVE SIGNAL CONCEPT

SHEET NO. 1

dhubbard 6/3/2020 1:19:05 PM J:\50832\CADD\Twiggs_Nebraska Signal\PLANSG01.dgn

LED Blank-Out Signs

Various standard and custom graphics, and size options available

Overview

McCain's LED Blank-Out Signs are an excellent way to provide clearly visible information to motorists, even in direct sunlight, ideal for reinforcing traffic signals and minimizing undesirable motorist movements. Blank-out signs are a superior alternative to static warning and regulatory signs due to their increased visibility, creating a safer driving environment. McCain offers both custom and standard signs that conform to the Manual on Uniform Traffic Control Devices (MUTCD) standards. In addition, the enclosures for McCain's LED Blank-Out Signs meet NEMA 3R standards.

Benefits

- Symbols conform to MUTCD sign standards, and fonts to Highway Gothic, "D"
- Automatic dimming responds to ambient light reducing energy consumption
- LED strings are staggered to maintain symbol integrity if one LED should fail
- Modern design with LED's mounted on modular circuit boards
- Assemblies can be removed and replaced with simple hand tools for easy maintenance
- Door is easy to open and fully sealed with the same flange design as standard traffic cabinets

Product Description

McCain LED Blank-Out Signs are a valuable tool for effective traffic control. The signs high-quality, rugged LED design are easily turned on when providing more traffic information to motorists is required.

Red, white, or amber ultra-bright LED's are mounted onto modular printed circuit boards (PCB's) for easy maintenance. Signs interiors are readily accessible through a full front-access door and all subassemblies can be readily removed and replaced with simple hand tools.

A photocell and dimming circuitry allow for the automatic adjustment of the sign's luminosity under all environmental conditions. A solid state power supply and sign control relay make these signs extremely versatile.

LED Blank-Out Signs

Standard Features

- Conforms to applicable MUTCD standards
- LED's mounted on modular PCB's
- LED strings with no more than 4 LED's per string, are staggered to maintain symbol integrity if an LED fails
- Non-glare, high-impact, gray acrylic window
- Automatic dimming adjusts to ambient light level
- Can withstand temperatures ranging from -37° C to 74° C and humidity from 0 to 95% (non-condensing)
- 7" sun visor
- Screened weep holes
- Reliable FR4 PCB's, black solder mask, conformal coated

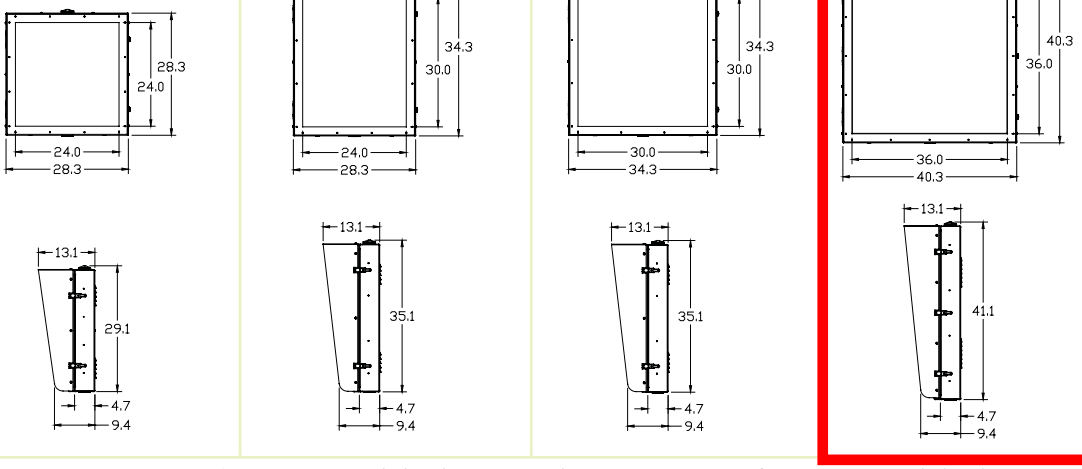
Assemblies

- Modular message circuit boards (with LED's)
- Solid state power supply
- LED interface board (dimmer)
- Photocell
- Control relay
- Field connection terminal block

Options

- Small format available in pedestrian housings
- Adjustable flashing circuit
- Custom messages and symbols
- Several sizes available

General Specifications

Window Dimensions:	24" x 24"	24" x 30"	30" x 30"	36" x 36"
Overall Dimensions[1]:	28" x 28" x 6" (13" incl. visor)	28" x 34" x 6" (13" incl. visor)	34" x 34" x 6" (13" incl. visor)	40" x 40" x 6" (13" incl. visor)
Available Messages (MUTCD or Caltrans designations shown where applicable):	No Right Turn Symbol (R3-1) No Left Turn Symbol (R3-2) Right Turn Only Words (R41) Left Turn Only Words (R42) No U-Turn Symbol (R3-4)	Bus Symbol & Word (RA-020)	No Right Turn Symbol (R3-1) No Left Turn Symbol (R3-2) Trolley Symbol (W10-7)	Use 2 (or 3) Lanes Words Do Not Enter Words No Right Turn, Words (R16b)
Housing:	Material: 5052-H32 marine-grade aluminum, 0.125" thick; Finish: Black powder coat (custom colors available)			
Access:	Front, hinged door with padlock hasp			
LED Type / Colors:	Red: 630 nm λ and amber: 591 nm λ, high intensity, AlInGaPI White: x=0.31, y=0.31, high intensity, InGaN			
Sign Viewing Angle:	Red & white LED's: 23°, amber LED's: 30°			
Power Supply:	Solid state, 95 - 125 VAC input, 12-15 VDC output, >95% power factor			
Power Consumption:	35 W - 105 W (varies per message)			
Ventilation:	Ventilation louvers provided on back of housing, includes washable filter			
Weight:	48 lbs	60 lbs	65 lbs	94 lbs
Front & Side View[2]:				

[1] Dimensions rounded to the nearest inch

[2] Dimensions rounded to the nearest 0.1"

To learn more about McCain's Integrated Traffic Solutions, please contact info@mccain-inc.com or call (760) 727-8100

McCain®

2365 OAK RIDGE WAY // VISTA, CALIFORNIA 92081 // USA // WWW.MCCAIN-INC.COM