

WILLIAMSON COUNTY, TEXAS

CHANGE ORDER NUMBER: 1

1. CONTRACTOR: Austin Traffic Signal

2. Change Order Work Limits: Sta. N/A to Sta. N/A

3. Type of Change (on federal-aid non-exempt projects): Minor (Major/Minor)

4. Reasons: 1A, 3F (3 Max. - In order of Importance - Primary first)

Project:	<u>T1740</u>
Roadway:	<u>Sam Bass Interim Signals</u>
CSJ Number:	

5. Describe the work being revised:

1A. Design Error or Omission. Incorrect PS&E. This Change Order changes the timber poles on south side of the intersection of Great Oaks Drive and Sam Bass Road to steel poles because there is not enough right of way to install guy wire support for timber poles.

3F. County Convenience. Additional work desired by the County. This Change Order adds pedestrian signals to the existing cross walk and changes the locations of signal controller and electric service at the intersection of Great Oaks Drive and Sam Bass Road. This Change Order also adds a new item to trim the existing trees at the intersection of Walsh Ranch Boulevard and Sam Bass Road that are blocking signal heads and traffic detectors.

6. Work to be performed in accordance with Items: See attached.

7. New or revised plan sheet(s) are attached and numbered: Sheet 10,11,14,15,16,18,19,23,35A,35B,35C

8. New Special Provisions/Specifications to the contract are attached: ☐ Yes ☒ No

9. New Special Provisions to Item N/A No. N/A, Special Specification Item N/A are attached.

Each signatory hereby warrants that each has the authority to execute this Change Order (CO).

The contractor must sign the Change Order and, by doing so, agrees to waive any and all claims for additional compensation due to any and all other expenses, additional changes for time, overhead and profit, or loss of compensation as a result of this change <u>3-25-21</u> Date THE CONTRACTOR By <u>[Signature]</u> Typed/Printed Name <u>Edward G. School</u> Typed/Printed Title <u>V.P.</u>	The following information must be provided Time Ext. #: <u>N/A</u> Days added on this CO: <u>0</u> Amount added by this change order: <u>\$28,476.86</u>
--	--

RECOMMENDED FOR EXECUTION:

[Signature] 3/26/21
Project Manager Date

N/A
Design Engineer Date

[Signature] 3/26/2021
Program Manager Date

Design Engineer's Seal:

County Commissioner Precinct 1 Date
☐ APPROVED ☐ REQUEST APPROVAL

County Commissioner Precinct 2 Date
☐ APPROVED ☐ REQUEST APPROVAL

County Commissioner Precinct 3 Date
☐ APPROVED ☐ REQUEST APPROVAL

County Commissioner Precinct 4 Date
☐ APPROVED ☐ REQUEST APPROVAL

[Signature] 4/6/21
County Judge Date
☐ APPROVED

Project # T1740

[illegible]

ORIGINAL + PREVIOUSLY REVISED				NEW		
ITEM	DESCRIPTION	UNIT	UNIT PRICE	ADD or (DEDUCT)		OVERRUN/ UNDERRUN
				QUANTITY	ITEM COST	
618 6046	CONDT (PVC) (SCH 80) (2")	LF	\$25.00	445.00	\$11,125.00	\$625.00
618 6053	CONDT (PVC) (SCH 80) (3")	LF	\$35.00	95.00	\$3,325.00	\$4,025.00
620 6007	ELEC CONDR (NO.8) BARE	LF	\$1.50	250.00	\$375.00	\$120.00
620 6008	ELEC CONDR (NO.8) INSULATED	LF	\$2.00	1,410.00	\$2,820.00	\$260.00
620 6009	ELEC CONDR (NO.6) BARE	LF	\$3.00	75.00	\$225.00	\$75.00
620 6010	ELEC CONDR (NO.6) INSULATED	LF	\$4.00	150.00	\$600.00	\$200.00
624 6002	GROUND BOX TY A (122311)W/APRON	EA	\$900.00	2.00	\$1,800.00	\$1,800.00
624 6010	GROUND BOX TY D (162922)W/APRON	EA	\$1,200.00	4.00	\$4,800.00	\$1,200.00
627 6002	TIMBER POLE (CL 2) 40 FT	EA	\$2,000.00	8.00	\$16,000.00	\$4,000.00
684 6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR)	LF	\$2.00	2,480.00	\$4,960.00	\$300.00
684 6033	TRF SIG CBL (TY A)(14 AWG)(7 CONDR)	LF	\$3.00	595.00	\$1,785.00	\$1,680.00
531-6010	CURB RAMP (TY 7)	EA	\$3,400.00	0.00	\$0.00	\$3,400.00
682-6018	PED SIG SEC (LED) (COUNTDOWN)	EA	\$640.00	0.00	\$0.00	\$1,280.00
686-6007	INS TRF SIG PL AM (S)STR(TY B)(INCL. FOUNDATION)	EA	\$5,400.00	0.00	\$0.00	\$10,800.00
687-6001	PED POLE ASSEMBLY (INCL. FOUNDATION)	EA	\$2,450.00	0.00	\$0.00	\$2,450.00
688-6001	PED DETECT PUSH BUTTON (APS)	EA	\$725.00	0.00	\$0.00	\$1,450.00
688-6003	PED DETECTOR CONTROLLER UNIT	EA	\$3,700.00	0.00	\$0.00	\$3,700.00
684-6079	TRF SIG CBL(TY C)(12 AWG)(2 CONDR)	LF	\$2.50	0.00	\$0.00	\$925.00
SPCL-0001	SURFACE APPLIED DETECTABLE WARNING	LS	\$581.00	0.00	\$0.00	\$581.00
SPCL-0002	TREE TRIMMING W/ TRAFFIC CONTROL	LS	\$3,750.86	0.00	\$0.00	\$3,750.86
TOTALS					\$47,815.00	\$76,291.86
						\$28,476.86

CHANGE ORDER REASON(S) CODE CHART

1. Design Error or Omission	1A. Incorrect PS&E 1B. Other
2. Differing Site Conditions (unforeseeable)	2A. Dispute resolution (expense caused by conditions and/or resulting delay) 2B. Unavailable material 2C. New development (conditions changing after PS&E completed) 2D. Environmental remediation 2E. Miscellaneous difference in site conditions (unforeseeable)(Item 9) 2F. Site conditions altered by an act of nature 2G. Unadjusted utility (unforeseeable) 2H. Unacquired Right-of-Way (unforeseeable) 2I. Additional safety needs (unforeseeable) 2J. Other
3. County Convenience	3A. Dispute resolution (not resulting from error in plans or differing site conditions) 3B. Public relations improvement 3C. Implementation of a Value Engineering finding 3D. Achievement of an early project completion 3E. Reduction of future maintenance 3F. Additional work desired by the County 3G. Compliance requirements of new laws and/or policies 3H. Cost savings opportunity discovered during construction 3I. Implementation of improved technology or better process 3J. Price adjustment on finished work (price reduced in exchange for acceptance) 3K. Addition of stock account or material supplied by state provision 3L. Revising safety work/measures desired by the County 3M. Other
4. Third Party Accommodation	4A. Failure of a third party to meet commitment 4B. Third party requested work 4C. Compliance requirements of new laws and/or policies (impacting third party) 4D. Other
5. Contractor Convenience	5A. Contractor exercises option to change the traffic control plan 5B. Contractor requested change in the sequence and/or method of work 5C. Payment for Partnering workshop 5D. Additional safety work/measures desired by the contractor 5E. Other
6. Untimely ROW/Utilities	6A. Right-of-Way not clear (third party responsibility for ROW) 6B. Right-of-Way not clear (County responsibility for ROW) 6C. Utilities not clear 6D. Other

Williamson County Road Bond Program

Sam Bass Interim Traffic Signals Williamson County Project No. T1740

Change Order No. 1

Reason for Change

This Change Order adjusts bid quantities and adds new items for revisions to the traffic signal installation at the intersection of Great Oaks Drive and Sam Bass Road. The revisions are included in the attached sheets and explained in the paragraphs below. This Change Order also adds a new item to trim the existing trees at Walsh Ranch Boulevard intersection that are blocking signal heads and traffic detectors.

Revision #1: The timber poles on the south side of the intersection of Sam Bass Road and Great Oaks Drive were changed to steel poles with concrete foundations. This change is because there is not enough right of way on the south side to install guy wire support for timber poles.

Revision #2: RFI#7 Adds pedestrian signal elements to maintain the existing cross walk at the intersection of Great Oaks Drive and Sam Bass Road for pedestrian safety.

Revision #3: RFI#8 Changes the location of the signal controller and the electric service at Great Oaks Drive intersection to the northeast corner. The plan locations were in front of a house in the southwest corner and had an aesthetic impact on the adjacent property.

Following is a summary of the new items required for this Change Order:

ITEM	DESCRIPTION	QTY	UNIT
531-6010	CURB RAMP (TY 7)	1.00	EA
682-6018	PED SIG SEC (LED) (COUNTDOWN)	2.00	EA
686-6007	INS TRF SIG PL AM (S)STR(TY B)(INCL. FOUNDATION)	2.00	EA
687-6001	PED POLE ASSEMBLY (INCL. FOUNDATION)	1.00	EA
688-6001	PED DETECT PUSH BUTTON (APS)	2.00	EA
688-6003	PED DETECTOR CONTROLLER UNIT	1.00	EA
684-6079	TRF SIG CBL(TY C)(12 AWG)(2 CONDR)	370.00	LF
SPCL-0001	SURFACE APPLIED DETECTABLE WARNING	1.00	LS
SPCL-0002	TREE TRIMMING W/ TRAFFIC CONTROL	1.00	LS

This Change Order results in a net increase of \$28,476.86 to the Contract amount, for an adjusted Contract total of \$348,342.86. The original Contract amount was \$319,866.00. As a result of this and all Change Orders to-date, the Contract has been increased by \$28,476.86, resulting in an 8.90% net increase in the Contract cost. No additional days will be added to the Contract, as a result of this Change Order.

HNTB Corporation

Lowell D. Choate, P.E.

ESTIMATED QUANTITIES				
ITEM NO.	DESC. CODE	DESCRIPTION	UNIT	QUANTITY
416	6032	DRILL SHAFT (TRF SIG POLE) (36 IN)	LF	28
506	6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	325
506	6041	BIODEG EROSN CONT LOGS (INSTL)(12")	LF	325
531	6010	CURB RAMPS (TY 7)	EA	1
618	6046	CONDT (PVC) (SCH 80) (2")	LF	280
618	6053	CONDT (PVC) (SCH 80) (3")	LF	150
618	6074	CONDT (RM) (3")	LF	70
620	6007	ELEC CONDR (NO.8) BARE	LF	70
620	6008	ELEC CONDR (NO.8) INSULATED	LF	760
620	6009	ELEC CONDR (NO.6) BARE	LF	50
620	6010	ELEC CONDR (NO.6) INSULATED	LF	100
624	6010	GROUND BOX TY D (162922)W/APRON	EA	3
627	6002	TIMBER POLE (CL 2) 40 FT	EA	2
644	6060	IN SM RD SN SUP&AM TYTWT(1)WS(P)	EA	5
644	6076	REMOVE SM RD SN SUP&AM	EA	5
628	6118	ELC SRV TY D 120/240 060(NS)AL(E)TP(O)	EA	1
*	*	TIMBER POLE (CL 2) 30 FT	EA	1
666	6042	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	21
666	6054	REFL PAV MRK TY I (W)(ARROW)(100MIL)	EA	1
666	6078	REFL PAV MRK TY I (W)(WORD)(100MIL)	EA	2
666	6207	REFL PAV MRK TY II (Y) 4" (SLD)	LF	33
666	6224	PAVEMENT SEALER 4"	LF	33
666	6230	PAVEMENT SEALER 24"	LF	21
666	6231	PAVEMENT SEALER (ARROW)	EA	1
666	6232	PAVEMENT SEALER (WORD)	EA	2
677	6001	ELIM EXT PAV MRK & MRKS (4")	LF	15
677	6003	ELIM EXT PAV MRK & MRKS (8")	LF	12
677	6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA	1
677	6009	ELIM EXT PAV MRK & MRKS (DBL ARROW)	EA	1
678	6001	PAV SURF PREP FOR MRK (4")	LF	33
678	6008	PAV SURF PREP FOR MRK (24")	LF	21
678	6009	PAV SURF PREP FOR MRK (ARROW)	EA	1
678	6016	PAV SURF PREP FOR MRK (WORD)	EA	2
680	6003	INSTALL HWY TRF SIG (SYSTEM)	EA	1
**	**	REGULATORY SIGN PANEL (R10-17T, LEFT TURN YIELD ON FLASHING YELLOW ARROW) (30"X36")	EA	2
**	**	REGULATORY SIGN PANEL (R10-12, LEFT TURN YEILD ON GREEN) (30"X30")	EA	2
**	**	CONTROLLER FOUNDATION	EA	1
**	**	SIGNAL CONTROLLER AND CABINET	EA	1
**	**	BROADBAND ANTENNA	EA	1
**	**	DUAL BAND ETHERNET RADIO (2.4/5.8)	EA	1
**	**	CAT5 ETHERNET CABLE (RADIO)	LF	255
**	**	MANAGED HARDENED ETHERNET SWITCH	EA	1
**	**	POWER SUPPLY (FOR SWITCH)	EA	1
**	**	LED RDWY LUMINAIRE (.25KW EQ)	EA	2
**	**	STREET NAME SIGN "Sam Bass Rd" (96"X18")	EA	2
**	**	STREET NAME SIGN "Great Oaks Dr" (108"X18")	EA	2
**	**	MESSENGER CABLE	LF	940
682	6001	VEH SIG SEC (12")LED(GRN)	EA	9
682	6002	VEH SIG SEC (12")LED(GRN ARW)	EA	2
682	6003	VEH SIG SEC (12")LED(YEL)	EA	9
682	6004	VEH SIG SEC (12")LED(YEL ARW)	EA	4
682	6005	VEH SIG SEC (12")LED(RED)	EA	9
682	6006	VEH SIG SEC (12")LED(RED ARW)	EA	2
682	6018	PED SIG SEC (LED)(COUNTDOWN)	EA	2
682	6023	BACK PLATE (12")(3 SEC)	EA	9
682	6024	BACK PLATE (12")(4 SEC)	EA	2
684	6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR)	LF	1575
684	6033	TRF SIG CBL (TY A)(14 AWG)(7 CONDR)	LF	380
684	6079	TRF SIG CBL (TY C)(12 AWG)(2 CONDR)	LF	370
686	6007	INS TRF SIG PL AM (S)STR(TY B)	EA	2
687	6001	PED POLE ASSEMBLY	EA	1
688	6001	PED DETECT PUSH BUTTON (APS)	EA	2
688	6003	PED DETECTOR CONTROLLER UNIT	EA	1
6058	6001	BBU SYSTEM (EXTERNAL BATT CABINET)	EA	1
6292	6001	RADAR PRESENCE DETECTOR	EA	4
***	***	RADAR PRESENCE DETECTOR COMM CABLE	LF	1030
6292	6002	RADAR ADVANCED DETECTION DEVICE	EA	2
***	***	RADAR ADVANCED DETECTOR COMM CABLE	LF	590

[illegible]

c:\bms\wsp-pb-us-pw-02\wsp-...mai\threyi...vel\imand\d0250868\SAMBASS_WALSH_SoNL_Inter\im_00.dgn

SAM BASS RD AT WALSH RANCH/ ARROWHEAD

REV 3

ESTIMATED QUANTITIES				
ITEM NO.	DESC. CODE	DESCRIPTION	UNIT	QUANTITY
506	6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	325
506	6041	BIODEG EROSN CONT LOGS (INSTL)(12")	LF	325
618	6046	CONDT (PVC) (SCH 80) (2")	LF	190
618	6053	CONDT (PVC) (SCH 80) (3")	LF	60
618	6074	CONDT (RM)(3")	LF	70
620	6007	ELEC CONDR (NO.8) BARE	LF	100
620	6008	ELEC CONDR (NO.8) INSULATED	LF	520
620	6009	ELEC CONDR (NO.6) BARE	LF	50
620	6010	ELEC CONDR (NO.6) INSULATED	LF	100
624	6010	GROUND BOX TY D (162922)W/APRON	EA	2
627	6002	TIMBER POLE (CL 2) 40 FT	EA	4
628	6118	ELC SRV TY D 120/240 060(NS)AL(E)TP(O)	EA	1
*	*	TIMBER POLE (CL 2) 30 FT	EA	1
644	6060	IN SM RD SN SUP&AM TYTWT(1)WS(P)	EA	5
644	6076	REMOVE SM RD SN SUP&AM	EA	2
666	6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	100
666	6042	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	67
666	6054	REFL PAV MRK TY I (W)(ARROW)(100MIL)	EA	1
666	6078	REFL PAV MRK TY I (W)(WORD)(100MIL)	EA	1
666	6207	REFL PAV MRK TY II (Y) 4" (SLD)	LF	320
666	6224	PAVEMENT SEALER 4"	LF	320
666	6226	PAVEMENT SEALER 8"	LF	100
666	6230	PAVEMENT SEALER 24"	LF	67
666	6231	PAVEMENT SEALER (ARROW)	EA	1
666	6232	PAVEMENT SEALER (WORD)	EA	1
677	6007	ELIM EXT PAV MRK & MRKS (24")	LF	21
678	6001	PAV SURF PREP FOR MRK (4")	LF	320
678	6004	PAV SURF PREP FOR MRK (8")	LF	100
678	6008	PAV SURF PREP FOR MRK (24")	LF	67
678	6009	PAV SURF PREP FOR MRK (ARROW)	EA	1
678	6016	PAV SURF PREP FOR MRK (WORD)	EA	1
680	6003	INSTALL HWY TRF SIG (SYSTEM)	EA	1
**	**	REGULATORY SIGN PANEL (R10-12, LEFT TURN YEILD ON GREEN) (30"X36")	EA	2
**	**	REGULATORY SIGN PANEL (R3-5L, LEFT TURN ONLY) (30"X36")	EA	1
**	**	REGULATORY SIGN PANEL (R3-6R, OPTIONAL MOVEMENT LANE CONTROLI) (30"X36")	EA	1
**	**	CONTROLLER FOUNDATION	EA	1
**	**	SIGNAL CONTROLLER AND CABINET	EA	1
**	**	BROADBAND ANTENNA	EA	1
**	**	DUAL BAND ETHERNET RADIO (2.4/5.8)	EA	1
**	**	CAT5 ETHERNET CABLE (RADIO)	LF	200
**	**	MANAGED HARDENED ETHERNET SWITCH	EA	1
**	**	POWER SUPPLY (FOR SWITCH)	EA	1
**	**	LED RDWY LUMINAIRE (.25KW EQ)	EA	2
**	**	STREET NAME SIGN "Sam Bass Rd" (96"X18")	EA	2
**	**	STREET NAME SIGN "Arrowhead Dr/Walsh Ranch Blvd" (96"X24")	EA	1
**	**	STREET NAME SIGN "Walsh Ranch Blvd/Arrowhead Dr" (96"X24")	EA	1
**	**	MESSENGER CABLE	LF	285
682	6001	VEH SIG SEC (12")LED(GRN)	EA	11
682	6002	VEH SIG SEC (12")LED(GRN ARW)	EA	2
682	6003	VEH SIG SEC (12")LED(YEL)	EA	11
682	6004	VEH SIG SEC (12")LED(YEL ARW)	EA	1
682	6005	VEH SIG SEC (12")LED(RED)	EA	11
682	6006	VEH SIG SEC (12")LED(RED ARW)	EA	1
682	6023	BACK PLATE (12")(3 SEC)	EA	11
682	6024	BACK PLATE (12")(4 SEC)	EA	1
684	6031	TRF SIG CBL (TY A)(14 AWG)(5 CONDR)	LF	1055
684	6033	TRF SIG CBL (TY A)(14 AWG)(7 CONDR)	LF	180
6058	6001	BBU SYSTEM (EXTERNAL BATT CABINET)	EA	1
6292	6001	RADAR PRESENCE DETECTOR	EA	4
***	***	RADAR PRESENCE DETECTOR COMM CABLE	LF	590
6292	6002	RADAR ADVANCED DETECTION DEVICE	EA	2
***	***	RADAR ADVANCED DETECTOR COMM CABLE	LF	255

NOTES
* SUBSIDIARY TO ITEM 628; INCLUDED FOR INFORMATION ONLY.
** SUBSIDIARY TO ITEM 680; INCLUDED FOR INFORMATION ONLY.
*** SUBSIDIARY TO ITEM 6292; INCLUDED FOR INFORMATION ONLY.

REVISION DESCRIPTION

1

KMF 09/18/2020

ADDENDUM #1

2

KMF 12/15/2020

ADDENDUM #2

3

KMF 02/05/2021

ADDENDUM #3

REV. NO.

BY

DATE

2/5/2021

K FRIESE & ASSOCIATES, INC.

1120 S. CAPITAL OF TEXAS HWY, II-100, AUSTIN, TX 78746

WILLIAMSON COUNTY

SAM BASS ROAD

QUANTITIES

SAM BASS RD AT WALSH RANCH/ARROWHEAD

K FRIESE + ASSOCIATES

PUBLIC PROJECT ENGINEERING

(PRM # 6535)

wsp

WSP USA, Inc.

1601 S MoPac Expy, Suite 325

Austin, TX 78746

TEL: 737. 703. 3900

TBPE F-2263

W

WILLIAMSON COUNTY

1848

WILLIAMSON COUNTY

SCALE

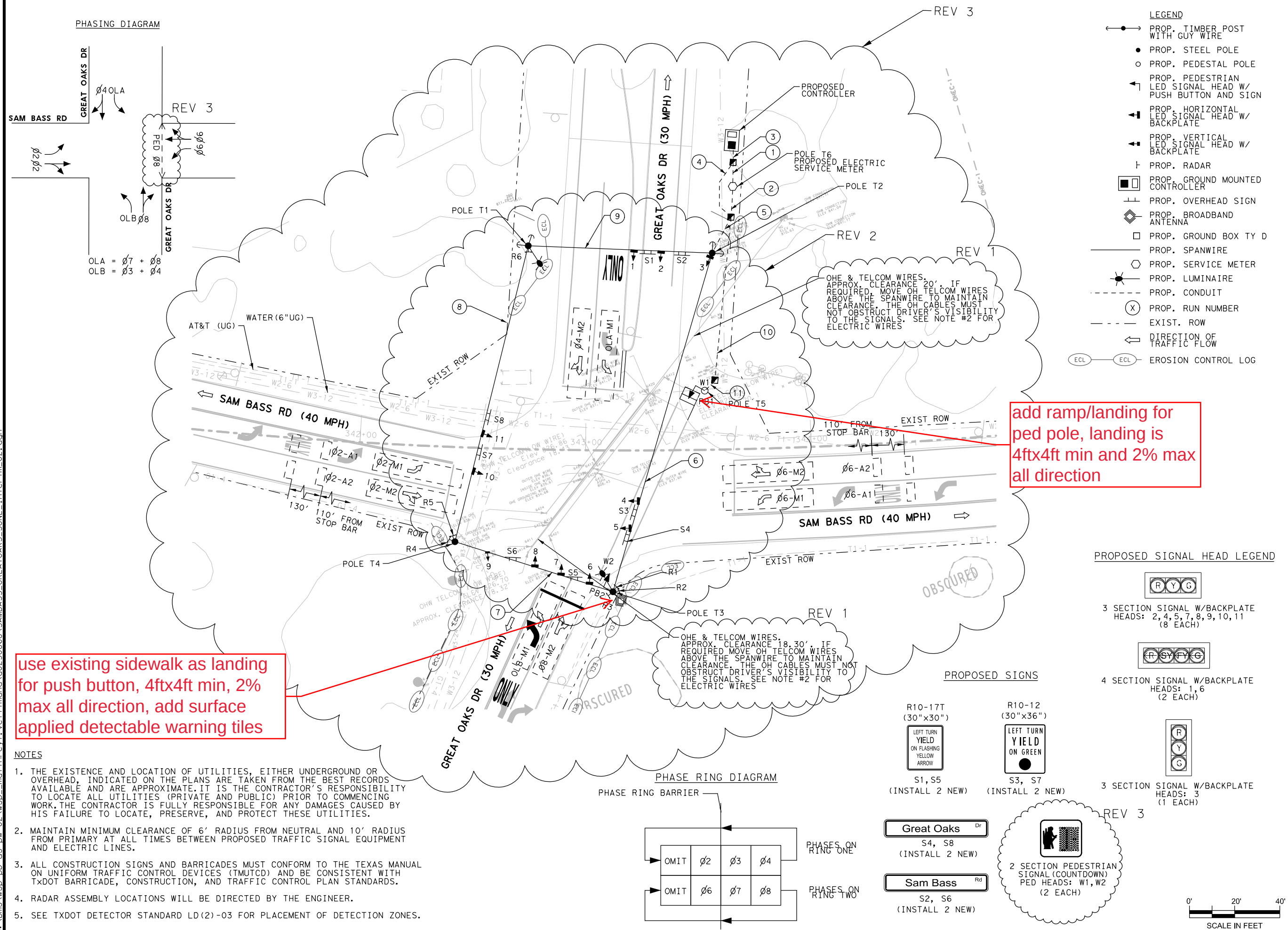
DATE

SHEET NUMBER

2/5/2021

11 OF 60

c:\bms\wsp-pb-us-dw-02\wsp-mat\threvi-vel\imand\0250868\SAMBASS_GREATOAKS_SGNL_Interim_02.dgn



REVISION DESCRIPTION			ADDENDUM #1			ADDENDUM #2			ADDENDUM #3		
REV.	NO.	DATE	BY	DATE	NO.	BY	DATE	NO.	BY	DATE	NO.
1	KMP	09/18/2020									
2	KMP	12/15/2020									
3	KMP	01/15/2021									

STATE OF TEXAS
KULDIP PATEL
135621
PROFESSIONAL ENGINEER
1/15/2021

1120 S. CAPITAL OF TEXAS HWY, IL-100, AUSTIN, TX 78746
WILLIAMSON COUNTY
SAM BASS ROAD
PROPOSED SIGNAL LAYOUT
SAM BASS RD AT GREAT OAKS DR

K FRIESE + ASSOCIATES
PUBLIC PROJECT ENGINEERING
(PRM # 6535)

WSP

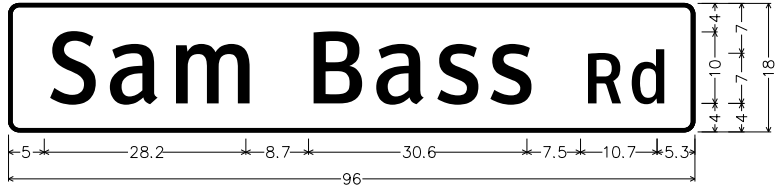
WSP USA, Inc.
1601 S. MoPac Expy., Suite 325
Austin, TX 78746
TEL: 737.703.3900
TBPE F-2263

WILLIAMSON COUNTY

SCALE	
DATE	1/15/2021
SHEET NUMBER	14 OF 60

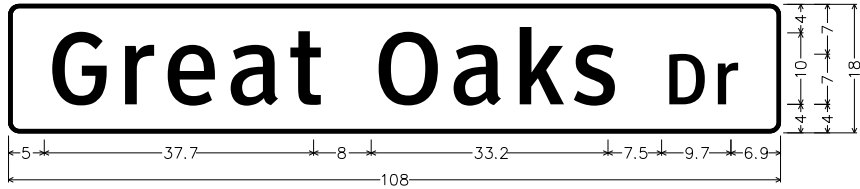
c:\bms\wsp-pb-us-pw-02\wsp-maitheyi-velimand\0250868\SAMBASS_GREATOAKS_SGNL_Interim_03.dgn

PROPOSED SIGN DETAIL



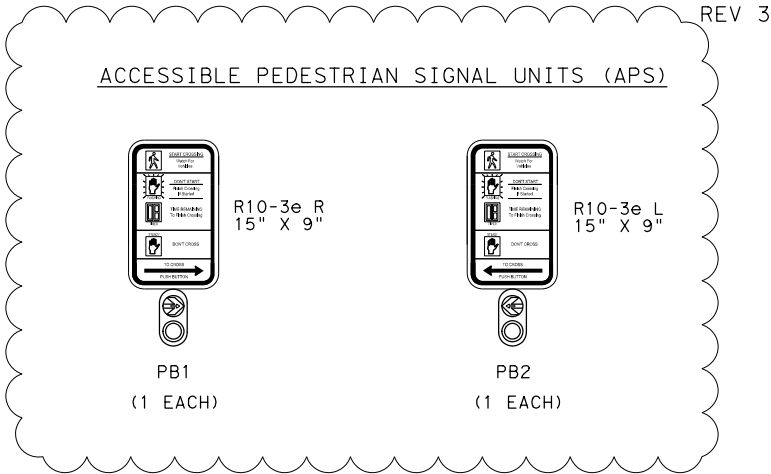
1.5" Radius, 0.5" Border, White on Green;
[Sam Bass] clvhwy3w; [Rd] clvhwy3w;

S2, S6
(2 EACH)



1.5" Radius, 0.5" Border, White on Green;
[Great Oaks] clvhwy3w; [Dr] clvhwy3w;

S4, S8
(2 EACH)

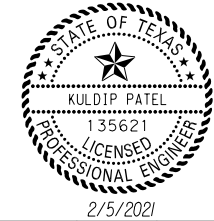


POLE OFFSET SCHEDULE

POLE	TYPE	ALIGNMENT	STATION	OFFSET
POLE T1	TIMBER POLE	SAM BASS RD	342+72.44	90.16' LT
POLE T2	TIMBER POLE	SAM BASS RD	343+57.71	87.11' LT
POLE T3	STEEL POLE	SAM BASS RD	343+12.36	62.61' RT
POLE T4	STEEL POLE	SAM BASS RD	342+43.71	41.91' RT
POLE T5	PEDESTAL POLE	SAM BASS RD	343+53.19	26.22' LT
POLE T6	TIMBER POLE	SAM BASS RD	-	-

RADAR INFORMATION

DETECTION ZONE INFORMATION				
ZONE	LOCATION	RADAR UNIT	SERIAL NUMBER	DATE OF INSTALL
Ø2-M1	POLE T4	R5 (MATRIX)		
Ø2-M2	POLE T4	R5 (MATRIX)		
Ø2-A1	POLE T4	R4 (ADV)		
Ø3-M1	POLE T3	R3 (MATRIX)		
Ø4-M2	POLE T1	R6 (MATRIX)		
Ø6-M1	POLE T3	R1 (MATRIX)		
Ø6-M2	POLE T3	R1 (MATRIX)		
Ø6-A1	POLE T3	R2 (ADV)		
Ø7-M1	POLE T1	R6 (MATRIX)		
Ø8-M2	POLE T3	R3 (MATRIX)		



K FRIESE & ASSOCIATES, INC.
1120 S. CAPITAL OF TEXAS HWY, II-100, AUSTIN, TX 78746
WILLIAMSON COUNTY
SAM BASS ROAD
SIGNING AND PHASING
SAM BASS RD AT GREAT OAKS DR



WILLIAMSON COUNTY

SCALE
DATE 2/5/2021
SHEET NUMBER 15 OF 60

NOT TO SCALE

c:\bms\wsp-pb-us-pw-02\wsp-mait\hreyi-vel\imand\0250868\SAMBASS_CREATOAKS_SGNL_Inter.im_04.dgn

CONDUIT, SPAN AND CONDUCTOR SCHEDULE

PROPOSED CONDUCTOR/CONDUIT SCHEDULE															
RUN No.		LENGTH LF	CONDUITS			NO. 6 AWG (BARE) EA	NO. 6 AWG (INS) EA	LUMINAIRE CABLE		TY A 14 AWG		TY C 14 AWG	6/C RADAR EA	CAT5 ETHERNET CABLE (RADIO) EA	MESSENGER CABLE EA
			2" PVC EA	2" PVC (LUM'S) EA	3" PVC EA			NO. 8 AWG (BARE) EA	NO. 8 AWG (INS) EA	5/C	7/C	2/C			
										(SIGNAL & PED HEAD) EA	SIGNAL CABLE EA	PUSH BUTTON EA			
1		10	2	EA	EA	1	2	EA	EA	EA	EA	EA	EA	EA	EA
2		15		2				2	4						
3		10			5	1	2			7	2	2	6	1	
4		30	2		2					7	2	2	6	1	
5		20	2	2	2			2	4	6	2	1	6	1	
6 (span wire)	T2 to #4	115													
	T2 to #5	130								1					
	T2 to T3	160							2	3	1	1	5	1	2
7 (span wire)	T3 to #6	15									1				
	T3 to #7	25													
	T3 to #8	40								1					
	T3 to #9	60								1					
8 (span wire)	T3 to T4	80											2		2
	T1 to #11	90													
	T1 to #10	105								1					
9 (span wire)	T1 to T4	140													2
	T2 to #3	0													
	T2 to #2	25								1					
	T2 to #1	35									1				
10	T2 to T1	90							2	1			1		2
		80	1							1		1			
11		10	1							1		1			
Total (LF)		1285	210	70	150	20	40	70	640	1420	330	350	1410	220	940

POLE DETAILS & WIRING

WIRING ON POLES									
POLE	TYPE	CONDUCTORS/CABLE IN POLES (LF)							
		NO. 6 AWG (BARE)	NO. 6 AWG (INS)	LUMINAIRE CABLE	TY A 14 AWG		TY C 12 AWG		COND'T (RM) (3")
				NO.8 AWG (INS)	7/C (SIGNAL)	5/C (SIGNAL & PED HEAD)	2/C (PUSH BTN)	6/C RADAR	
								CAT5E (RADIO)	
POLE T1	TIMBER POLE			20					10
POLE T2	TIMBER POLE			80	40	110	5	180	20
POLE T3	STEEL POLE			20				30	10
POLE T4	STEEL POLE								
POLE T5	PEDESTAL POLE					10	5		
POLE T6	TIMBER POLE	30	60						30
TOTAL (LF)		30	60	120	40	120	10	180	70

INSIDE CABINET CHART

WIRING INSIDE CABINET				
CONDUCTORS/CABLE IN CABINET (LF)				
TY A 14 AWG		TY C 14 AWG	6/C RADAR	CAT5E
7/C	5/C	2/C		
(SIGNAL)	(SIGNAL)	(PUSH BTN)		
10	35	10	30	5

CABLE TERMINATION CHART

CABLE TERMINATION CHART									
Conductor Cable	Cable 1 Pole T1 & T2 7/C 14 AWG	Cable 2 Pole T1 & T2 5/C 14 AWG	Cable 3 Pole T1 & T2 5/C 14 AWG	Cable 4 Pole T2 & T3 5/C 14 AWG	Cable 5 Pole T3 & T4 7/C 14 AWG	Cable 6 Pole T3 & T4 5/C 14 AWG	Cable 7 Pole T3 & T4 5/C 14 AWG	Cable 8 Pole T4 & T1 5/C 14 AWG	Cable 9 Pole T5 5/C 14 AWG
Black	SH 1 SYA Ph 3	SH 2, 3 Y Ph 8	PED W1 DW Ped 8	SH 4, 5 Y Ph 2	SH 6 SYA Ph 7	SH 7, 8 Y Ph 4	SH 9 Y Ph 8	SH 10, 11 Y Ph 6	PED W2 DW Ped 8
White	Signal Common	Signal Common	Signal Common	Signal Common	Signal Common	Signal Common	Signal Common	Signal Common	Signal Common
Red	SH 1 RA Ph 3	SH 2, 3 R Ph 8	Spare	SH 4, 5 R Ph 2	SH 6 RA Ph 7	SH 7, 8 R Ph 4	SH 9 R Ph 8	SH 10, 11 R Ph 6	Spare
Green	SH 1 GA Ph 3	SH 2, 3 G Ph 8	Spare	SH 4, 5 G Ph 2	SH 6 GA Ph 7	SH 7, 8 G Ph 4	SH 9 G Ph 8	SH 10, 11 G Ph 6	Spare
Orange	SH 1 FYA Ph 4	Spare	Spare	Spare	SH 6 FYA Ph 8	Spare	Spare	Spare	Spare
Blue	Spare		PED W1 W Ped 8		Spare				PED W2 W Ped 8
White/Black	Spare				Spare				

APS MESSAGE INFORMATION

APS MESSAGE INFORMATION			
APS UNIT #	ACKNOWLEDGEMENT DEFAULT "WAIT"	EXTENDED PRESS MESSAGE	WALK PHASE MESSAGE
		"WAIT TO CROSS (STREET NAME) AT (CROSS STREET NAME)"	"(STREET NAME) WALK SIGN IS ON TO CROSS, (STREET NAME)" OR TONE
W1	YES	SAM BASS AT GREAT OAKS DR	AUSTRALIAN TONE
W2	YES	SAM BASS AT GREAT OAKS DR	AUSTRALIAN TONE

NOTE

IF DURING CONSTRUCTION, SITUATIONS ARISE THAT FORCE TWO APS UNITS TO BE CLOSER THAN 10 FEET FROM EACH OTHER A VERBAL MESSAGE WILL BE REQUIRED. CONTACT INSPECTING ENGINEER FOR APPROVAL.

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE DATA													
POLE	ELECTRICAL SERVICE DESCRIPTION (SEE ED (5)-14)	SERVICE CONDUIT SIZE	SERVICE CONDUCTOR NO./SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL 8D. /LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD	
T6	ELC SRV TY D 120/240 060(NS)AL(E)TP(O)	2"	3 / #6	N / A	2P / 60	30	100	1	T.S.	1P / 50	40	7.2	
								2	LIGHTING	2P / 20	10		



K FRIESE & ASSOCIATES, INC.
1120 S. CAPITAL OF TEXAS HWY, II-100, AUSTIN, TX 78746
WILLIAMSON COUNTY
SAM BASS ROAD
CONDUIT AND CONDUCTOR SCHEDULES
SAM BASS RD AT GREAT OAKS DR



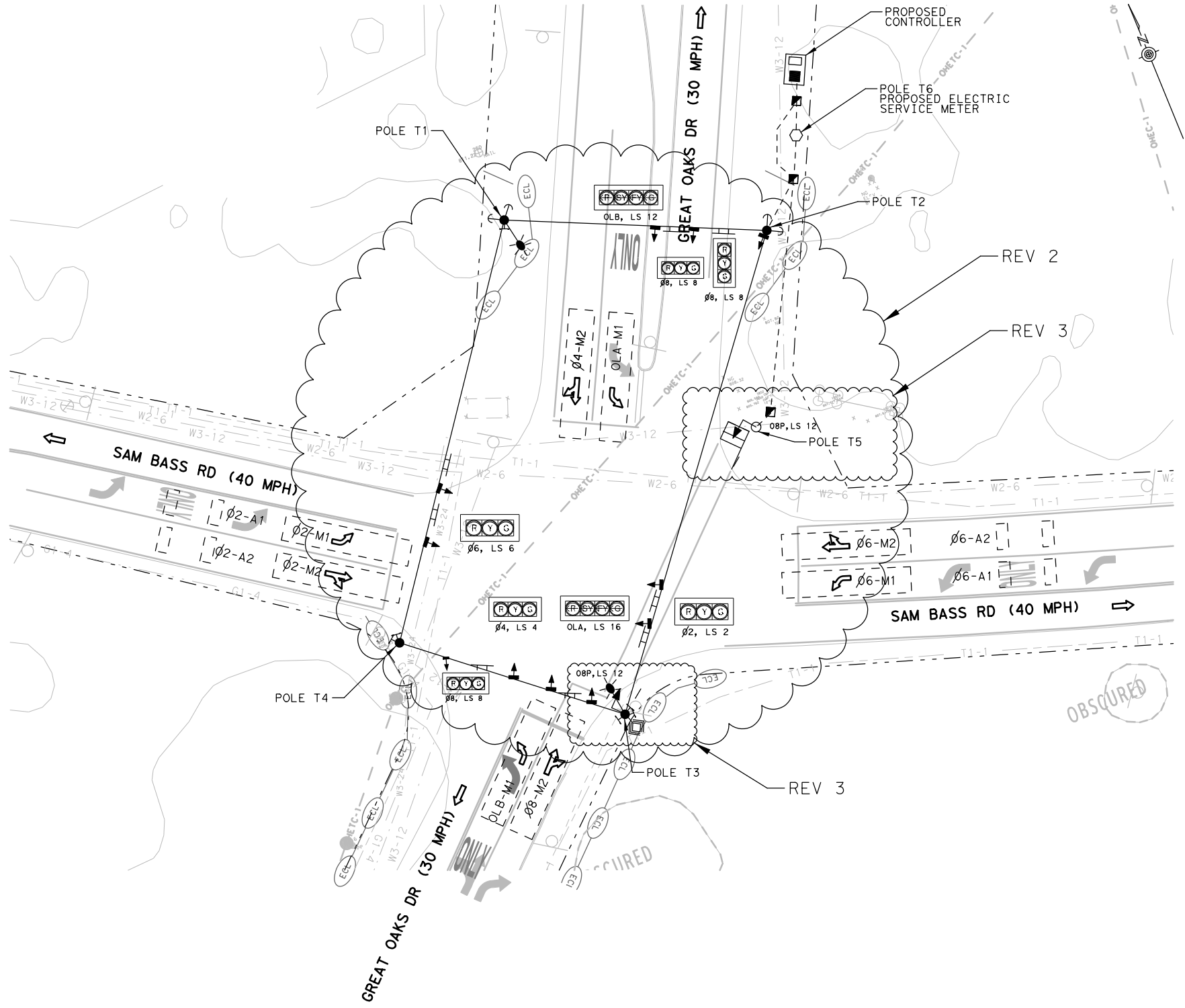
WILLIAMSON COUNTY

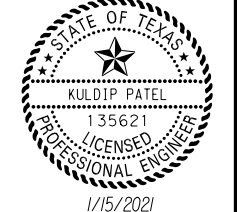
SCALE

DATE 2/5/2021

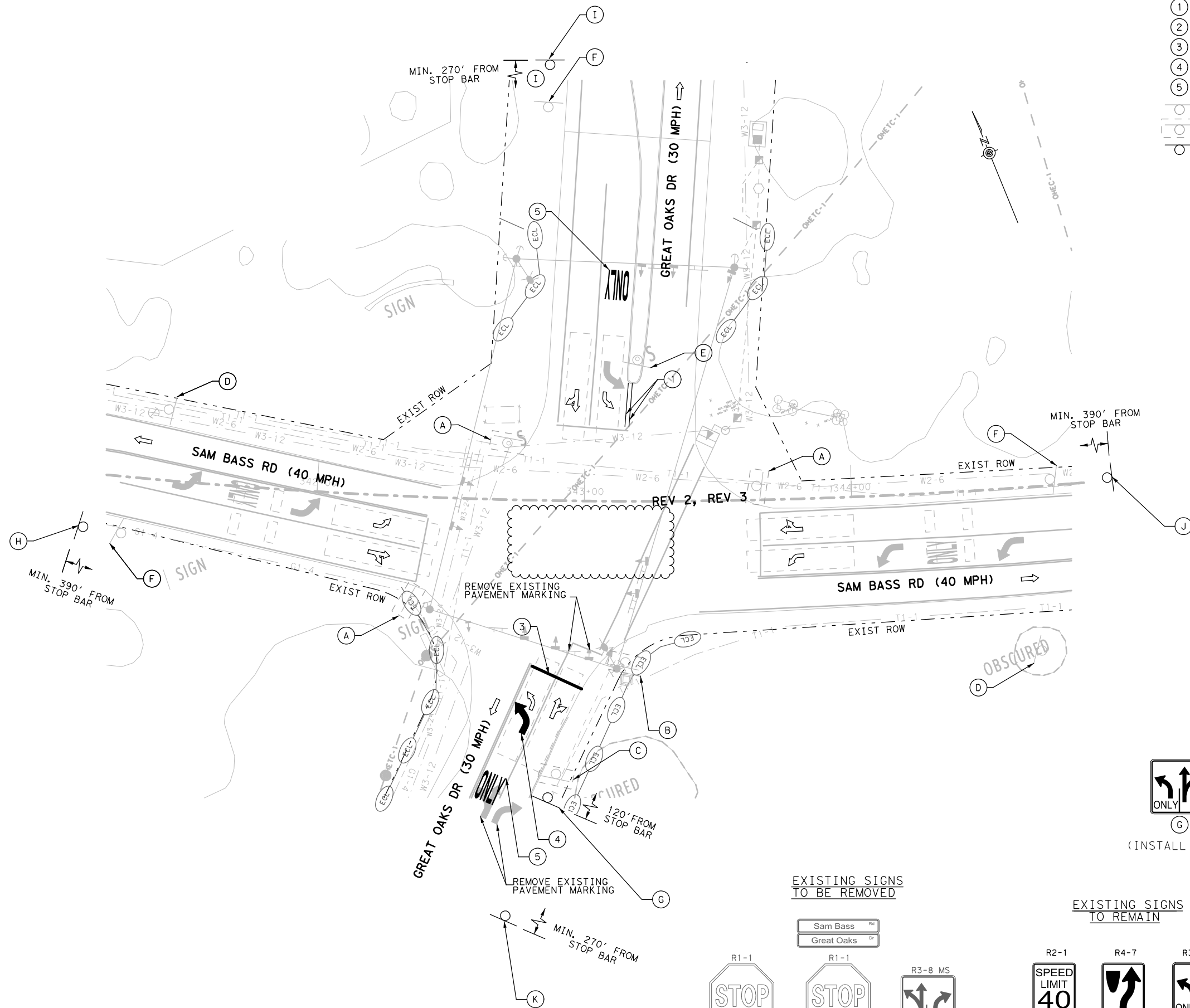
SHEET NUMBER 16 OF 60

c:\bms\wsp-pb-us-pw-02\wsp-mat\threyi-vel\imand\0250868\SAMBASS_GREATOAKS_SGNL_Interim_06.dgn



K FRIESE & ASSOCIATES, INC.		1120 S. CAPITAL OF TEXAS HWY, II-100, AUSTIN, TX 78746	
WILLIAMSON COUNTY		SAM BASS ROAD	
LOAD SWITCH		SAM BASS RD AT GREAT OAKS DR	
			
 WSP USA, Inc. 1601 S MoPac Expy, Suite 325 Austin, TX 78746 TEL: 737.703.3900 TBPE F-2263			
			
WILLIAMSON COUNTY			
SCALE			
DATE	1/15/2021		
SHEET NUMBER	18 OF 60		
REV. NO.	BY	DATE	REVISION DESCRIPTION
1	KMF	09/18/2020	ADDENDUM #1
2	KMF	12/15/2020	ADDENDUM #2
3	KMF	01/18/2021	ADDENDUM #3
			

c:\bms\wsp-pb-us-pw-02\wsp-maitheyi-velimand\0250868\SAMBASS_GREATOAKS_SGNL_Interim-07.dgn



LEGEND

- 1 REF PAV MRK TY I (Y) (4") (SLD)
- 2 REF PAV MRK TY I (W) (8") (SLD)
- 3 REF PAV MRK TY I (W) (24") (SLD)
- 4 REF PAV MRK TY I (W) (ARROW)
- 5 REF PAV MRK TY I (W) (ONLY)
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN

INSTALL NEW SIGNS



(INSTALL 1 NEW)



(INSTALL 4 NEW)

EXISTING SIGNS TO BE REMOVED



EXISTING SIGNS TO REMAIN



REVISION DESCRIPTION	
REV. NO.	DATE
1	KMP/09/18/2020
2	KMP/12/15/2020
3	KMP/01/18/2021

K FRIESE & ASSOCIATES, INC.

1120 S. CAPITAL OF TEXAS HWY, II-100, AUSTIN, TX 78746

WILLIAMSON COUNTY

SAM BASS ROAD

PROPOSED SIGNING & PAVEMENT MARKING

SAM BASS RD AT GREAT OAKS DR

PUBLIC PROJECT ENGINEERING (PRM # 6535)

WSP USA, Inc.
1601 S MoPac Expy, Suite 325
Austin, TX 78746
TEL: 737.703.3900
TBPE F-2263

WILLIAMSON COUNTY

SCALE	DATE
	1/15/2021
SHEET NUMBER	19 OF 60

c:\nbms\wsp-pb-us-pw-02\wsp_maitheyi\velimand\0250868\SAMBASS_WALSH_ScNL_Interim_04.dgn

CONDUIT, SPAN AND CONDUCTOR SCHEDULE

REV 3

PROPOSED CONDUCTOR/CONDUIT SCHEDULE														
RUN No.		LENGTH	CONDUITS			NO. 6 AWG (BARE) EA	NO. 6 AWG (INS) EA	LUMINAIRE CABLE		TY A 14 AWG		6/C RADAR EA	CAT5 ETHERNET CABLE (RADIO) EA	MESSENGER CABLE EA
			2" PVC EA	2" PVC (LUM'S) EA	3" PVC EA			NO. 8 AWG (BARE) EA	NO. 8 AWG (INS) EA	5/C	7/C			
										SIGNAL CABLE	SIGNAL CABLE			
1		15	2	2		1	2	2	4	EA	EA	EA	EA	EA
2		35	2			1	2							
3		25						2	4					
4		10			5					9	2	6	1	
5		10						2	4	9	2	6	1	
6 (span wire)	T3 to #3	15								1				
	T3 to #12	25								1				
	T3 to T2	55							2	1	1	1		1
7 (span wire)	T2 lo #2	20								1				
	T2 to #1	35									1			
	T2 to T1	85												1
8 (span wire)	T4 to #10	35								1				
	T4 to #2	45								1				
	T4 to T1	60										2	1	1
9 (span wire)	T3 to #6	55								1				
	T3 to #7	65								1				
	T3 to T4	85							2	4		4	1	1
TOTAL (LF)			110	80	60	50	100	100	480	835	130	635	165	285

POLE DETAILS & WIRING

		WIRING ON POLES								
POLE	TYPE	CONDUCTORS/CABLE IN POLES (LF)								
		NO. 6	LUMINAIRE CABLE	TY A 14 AWG		6/C RADAR	CAT5E (RADIO)	COND (RM)(3")		
				AWG	5/C				7/C	
										NO.8
(BARE)	(INS)	(INS)	(SIGNAL)	(SIGNAL)						
T2	TIMBER POLE			20					10	
T3	TIMBER POLE				160	40	180	30	20	
T4	TIMBER POLE			20					10	
T5	TIMBER POLE	30	60						30	
TOTALS (LF)		30	60	40	160	40	180	30	70	

INSIDE CABINET CHART

WIRING INSIDE CABINET			
CONDUCTORS/CABLE IN CABINET (LF)			
TY A 14 AWG			
7/C	5/C	6/C RADAR	
(SIGNAL)	(SIGNAL)		
10	40		
		30	

CABLE TERMINATION CHART

CABLE TERMINATION CHART						
Conductor Cable	Cable 1 Pole T1 & T2 7/C 14 AWG	Cable 2 Pole T1 & T2 5/C 14 AWG	Cable 3 Pole T2 & T3 5/C 14 AWG	Cable 4 Pole T3 & T4 7/C 14 AWG	Cable 5 Pole T3 & T4 5/C 14 AWG	Cable 6 Pole T4 & T5 5/C 14 AWG
Black	SH 1 Y Ph 3	SH 2, 7 Y Ph 3	SH 3, 4 Y Ph 2	SH 5 Y Ph 4	SH 6 Y Ph 4	SH 8, 9, 10 Y Ph 6
White	Signal Common	Signal Common	Signal Common	Signal Common	Signal Common	Signal Common
Red	SH 1 R Ph 3	SH 2, 7 R Ph 3	SH 3, 4 R Ph 2	SH 5 R Ph 4	SH 6 R Ph 4	SH 8, 9, 10 R Ph 6
Green	SH 1 GA Ph 3	SH 2, 7 G Ph 3	SH 3, 4 G Ph 2	SH 5 GA Ph 4	SH 6 G Ph 4	SH 8, 9, 10 G Ph 6
Orange	SH 1 G Ph 3	Spare	Spare	SH 5 G Ph 4	Spare	Spare
Blue	Spare			Spare		
White/Black	Spare			Spare		

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE DATA													
POLE	ELECTRICAL SERVICE DESCRIPTION (SEE ED (5)-14)	SERVICE CONDUIT SIZE	SERVICE CONDUCTOR NO./SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL 8D. /LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD	
T5	ELC SRV TY D 120/240 060(NS)AL(E)TP(O)	2"	3 / #6	N / A	2P / 60	30	100	1	T.S.	1P / 50	40	7.2	
								2	LIGHTING	2P / 20	10		

REVISION DESCRIPTION

ADDENDUM #1

ADDENDUM #2

ADDENDUM #3

DATE

REV. NO.

BY

1 KMP 02/18/2020

2 KMP 12/15/2020

3 KMP 01/16/2021

STATE OF TEXAS

KULDIP PATEL

135621

PROFESSIONAL ENGINEER

1/15/2021

K FRIESE & ASSOCIATES, INC.

1120 S. CAPITAL OF TEXAS HWY, II-100, AUSTIN, TX 78746

WILLIAMSON COUNTY

SAM BASS ROAD

CONDUIT AND CONDUCTOR SCHEDULES

SAM BASS RD AT WALSH RANCH/ARROWHEAD

K FRIESE + ASSOCIATES

PUBLIC PROJECT ENGINEERING

(PRM # 6535)

WSP

WSP USA, Inc.

1601 S MoPac Expy, Suite 325

Austin, TX 78746

TEL: 737.703.3900

TBPE F-2263

WILLIAMSON COUNTY

1940

WILLIAMSON COUNTY

SCALE

DATE

1/15/2021

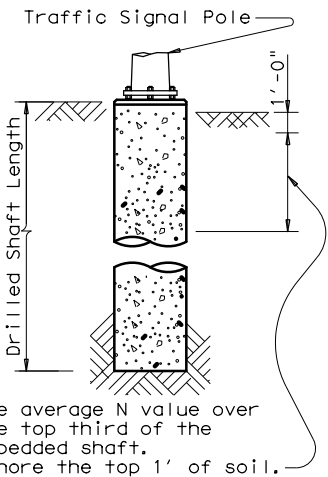
SHEET NUMBER

23 OF 60

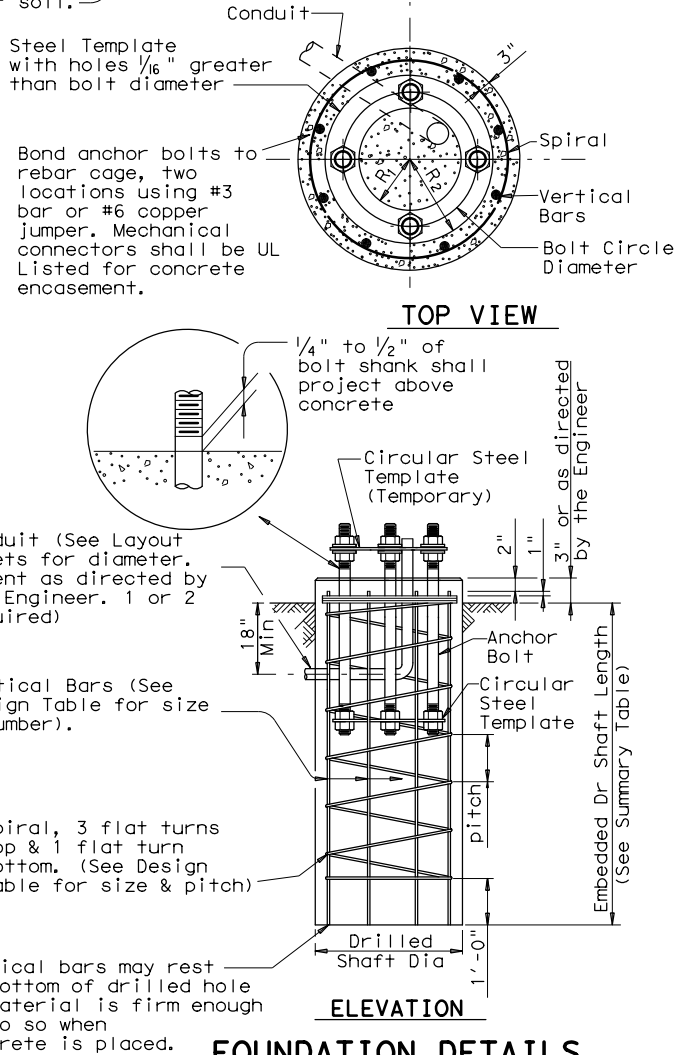
DATE: 2/5/2021 3:41:52 PM
FILE: c:\bms\wsp-pb-us-pw-02\wsp**mai\thre\i.vel\imara\d0259181\26-ts-fd*Great Oaks.dgn

FOUNDATION SELECTION TABLE FOR STANDARD MAST ARM PLUS ILSN SUPPORT ASSEMBLIES (ft)					
		FDN 30-A	FDN 36-A	FDN 36-B	FDN 42-A
80 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH	32'	48'		
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS	24' X 24'			
		28' X 28'			
		32' X 28'	32' X 32'		
			36' X 36'		
			40' X 36'		
			44' X 28'	44' X 36'	
100 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH		36'	44'	
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS		24' X 24'		
			28' X 28'		
			32' X 24'	32' X 32'	
				36' X 36'	
				40' x24'	40' X 36'
					44' x 36'

⑧ Orient anchor bolts orthogonal with the fixed arm direction to ensure that two bolts are in tension under dead load.



⑦ Min dimensions given,
longer bolts are acceptable.



FOUNDATION DETAILS

- ① Anchor bolt design develops the foundation capacity given under Foundation Design Loads.
- ② Foundation Design Loads are the allowable moments and shears at the base of the structure.
- ③ Foundations may be listed separately or grouped according to similarity of location and type. Quantities are for the Contractor's information only.
- ④ Field Penetrometer readings at a depth of approximately 3 to 5 feet may be used to adjust shaft lengths.
- ⑤ If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.
- ⑥ Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

[illegible]

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and interim revisions thereto.

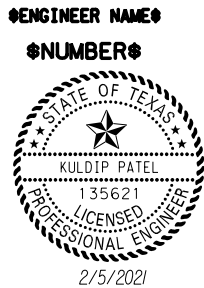
Concrete shall be Class "C".

Threads for anchor bolts and nuts shall be rolled or cut threads of 8UN series up to 2" in diameter or UNC series for all sizes. Bolts and nuts shall have Class 2A and 2B fit tolerances. Galvanized nuts shall be tapped after galvanizing.

Anchor bolts that are larger than 1" in diameter shall conform to "alloy steel" or "medium-strength mild steel" per Item 449, "Anchor Bolts". Anchor bolts that are 1" in diameter or less shall conform to ASTM A36. Galvanize a minimum of the top end and thread length plus 6" for all anchor bolts unless otherwise noted. Exposed washers and exposed nuts shall be galvanized. All galvanizing shall be in accordance with Item 445, "Galvanizing".

Templates and embedded nuts need not be galvanized. Lubricate and tighten anchor bolts when erecting the structure in accordance with Item 449, "Anchor Bolts".

GREAT OAKS DR AT SAM BASS RD



TS-FD-12

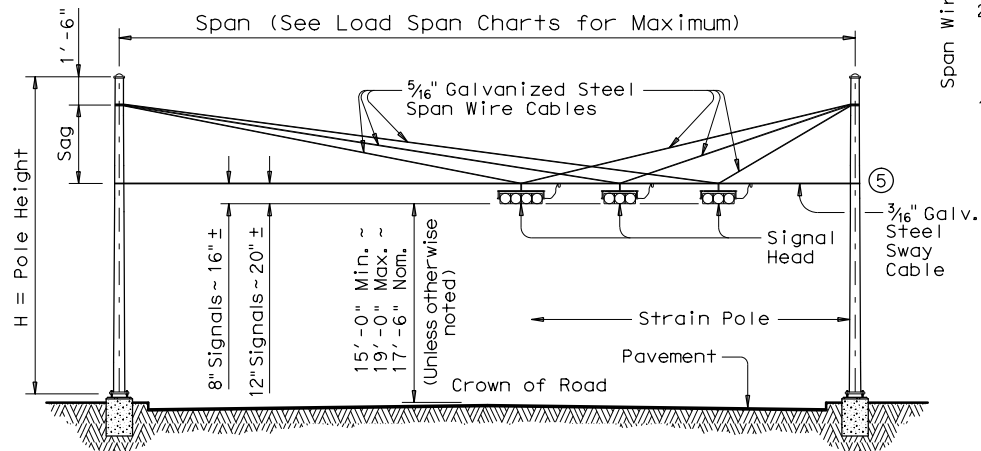
© Tx00T August 1995 REVISIONS 5-96 11-99 1-12		DN: MS		CK: JSY		DW: MAO/MMF		CK: JSY/TEB	
		CONT		SECT		JOB		HIGHWAY	
		DIST		COUNTY		35A			

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

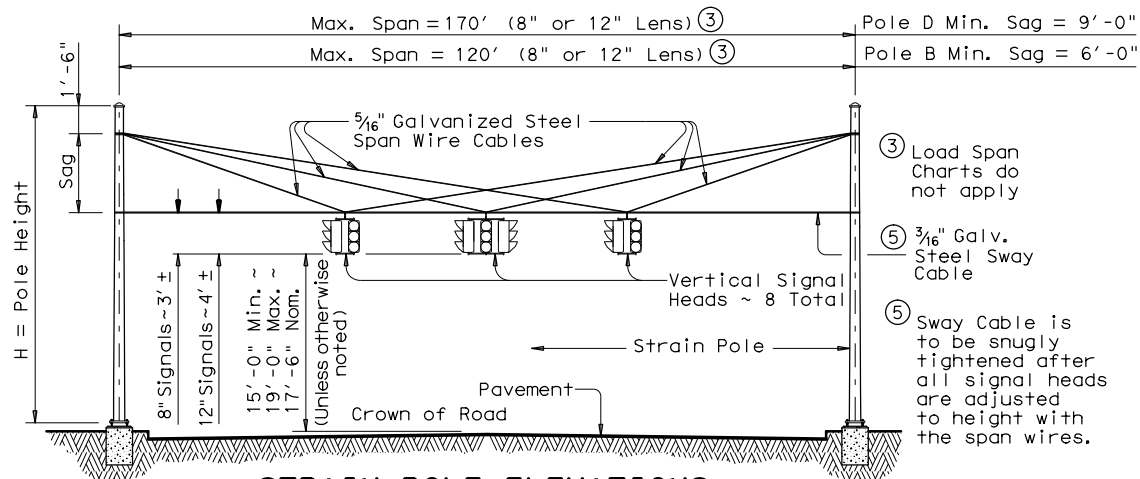
DATE:
FILE:

STRAIN POLE DESCRIPTION	Pole Type	Found- ation Type	Maximum Permissible Span Wire Load (lbs.)
26' Pole	A	36-A	5200
30' Pole	B	36-A	4600
30' Pole with Lum.	B	36-A	4400
30' Pole with 20' Mast Arm	C	36-B	5600
30' Pole with 24' Mast Arm	C	36-B	5500
30' Pole with 28' Mast Arm	C	36-B	5300
30' Pole with 32' Mast Arm	C	36-B	5100
30' Pole with 36' Mast Arm	C	36-B	4900
30' Pole with 20' Mast Arm & Lum.	C	36-B	5300
30' Pole with 24' Mast Arm & Lum.	C	36-B	5200
30' Pole with 28' Mast Arm & Lum.	C	36-B	5000
30' Pole with 32' Mast Arm & Lum.	C	36-B	4800
30' Pole with 36' Mast Arm & Lum.	C	36-B	4500
34' Pole	D	36-B	5600
34' Pole with Lum.	D	36-B	5400

- ② Numbers on Load Span Charts indicate the number of signal heads on the span. The total span wire design load is based on one 5-section head and one or more additional 3-section head(s). Design wind pressures on cables are assumed as 1.0 lb/ft. Weight of span wire cables (one per signal head) is assumed as 0.65 lb/ft which includes an allowance for conductor cables and miscellaneous hardware. The effect of the sway cable on load distribution is ignored as it is assumed to break at design wind conditions. When a pole supports 2 spans, the span wire design loads for both spans should be added vectorially to determine the design load for that pole.

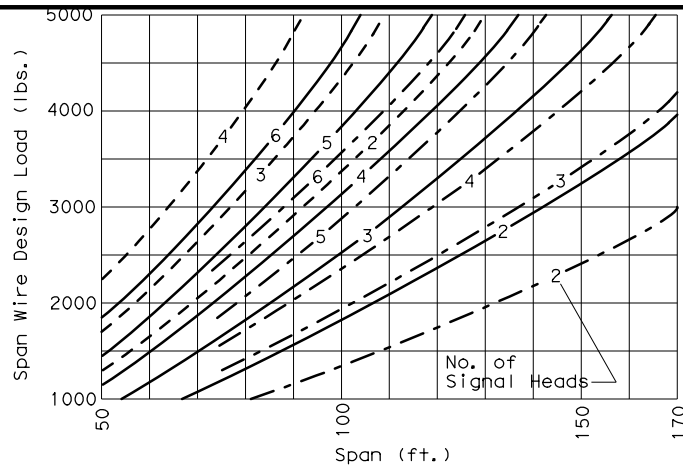


STRAIN POLE ELEVATIONS HORIZONTAL SIGNALS

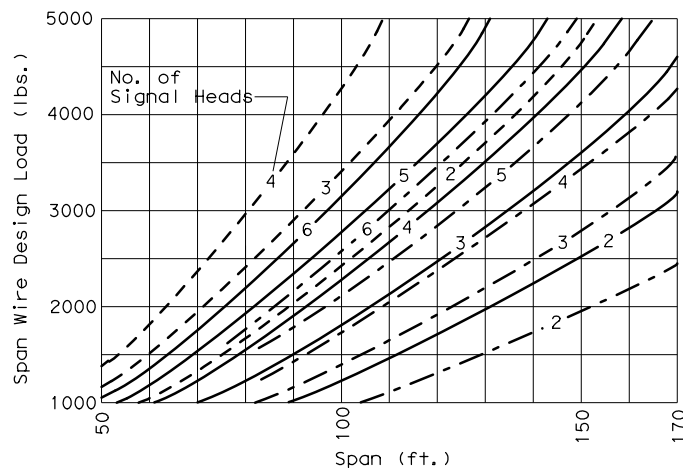


STRAIN POLE ELEVATIONS VERTICAL SIGNALS

(Mast arms are not used with vertical signals)



② SIGNALS WITH 12-INCH LENS



② SIGNALS WITH 8-INCH LENS

Signal Head Type	Wt. Per Head	Wind Area
5-Section, 12" Lens	125 lbs	9.6 sq. ft.
5-Section, 8" Lens	70 lbs	4.8 sq. ft.
3-Section, 12" Lens	75 lbs	5.64 sq. ft.
3-Section, 8" Lens	45 lbs	3.0 sq. ft.

◆ Effective projected design wind area (actual area times drag coefficient)

- Sag = 4'-6" (26' or 30' Pole)
----- Sag = 8'-0" (30' or 34' Pole)
----- Sag = 11'-6" (34' Pole)

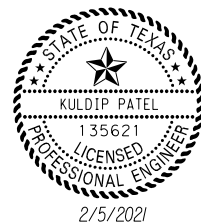
Pole Type	ROUND POLES				POLYGONAL POLES			
	D _B	D _T	(4)thk	H	D _B	D _T	(4)thk	H
A	12.5	8.9	.239	26	13.0	9.0	.239	26
B	13.5	9.3	.239	30	14.0	9.0	.239	30
C	15.5	11.3	.239	30	16.0	11.0	.239	30
D	15.5	10.7	.239	34	16.0	11.0	.239	34

D_B = Pole Base O.D.

D_T = Pole Top O.D.

H = Pole Height

- ④ Thickness shown are minimum, thicker materials may be used.



GREAT OAKS DR AT SAM BASS RD
SHEET 1 OF 2

Texas Department of Transportation
Traffic Operations Division
**TRAFFIC SIGNAL
SUPPORT STRUCTURES
STRAIN POLE ASSEMBLIES**
(80 MPH WIND ZONE)
SP-80(1)-12

© TxDOT March 1996	DN: MS	CK: JSY	DW: BR	CK: JSY
REVISIONS	CONT	SECT	JOB	HIGHWAY
6-96 1-12	DIST	COUNTY	35B	

120A

SHIPPING PARTS LIST

Poles (Without Traffic Signal Arm)

Pole Type	Strain poles with Luminaire			Strain poles without Luminaire		
	Ship each pole with the following hardware attached: handhole at base, pole cap, 2 clamp-on simplex and 1 pipe plug.			Ship each pole with the following hardware attached: handhole at base, pole cap and 1 pipe plug.		
	Description	Designation	Quantity	Description	Designation	Quantity
A				26' Strain Pole	SP 26 A-80	
B	30' Strain Pole	SPL 30 B-80	1	30' Strain Pole	SP 30 B-80	1
D	34' Strain Pole	SPL 34 D-80		34' Strain Pole	SP 34 D-80	

Poles (With Traffic Signal Arm)

Pole Type	Strain poles with Luminaire			Strain poles without Luminaire		
	Ship each pole with the following hardware attached: handhole at base, pole cap, clamp-on simplex and 3 pipe plugs.			Ship each pole with the following hardware attached: handhole at base, pole cap and 3 pipe plugs.		
	Description	Designation	Quantity	Description	Designation	Quantity
C	30' SPw/TS Arm	SPL 30 C-80		30' SPw/TS Arm	SP 30 C-80	

Traffic Signal Arms (For Type C poles)

Nominal Arm Length	Type I Arm (1 Signal)		Type II Arm (2 Signals)		Type III Arm (3 Signals)	
	Ship each Type I Arm with the following hardware attached: 2 CGB Connectors, 1 clamp with bolts and washers		Ship each Type II Arm with the following hardware attached: 1 Bracket Assembly ①, 3 CGB Connectors and 1 clamp with bolts and washers		Ship each Type III Arm with the following hardware attached: 2 Bracket Assemblies ①, 4 CGB Connectors and 1 clamp with bolts and washers	
ft.	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20I-80					
24	24I-80		24 II-80			
28	28I-80		28 II-80			
32			32 II-80		32 III-80	
36			36 II-80		36 III-80	

Anchor Bolt Assemblies (1 per pole)

Anchor Bolt Diameter	Anchor Bolt Length	Quantity
1 3/4"	3'-10"	2
2"	4'-3"	

Templates may be removed for shipment.

Luminaire Arms

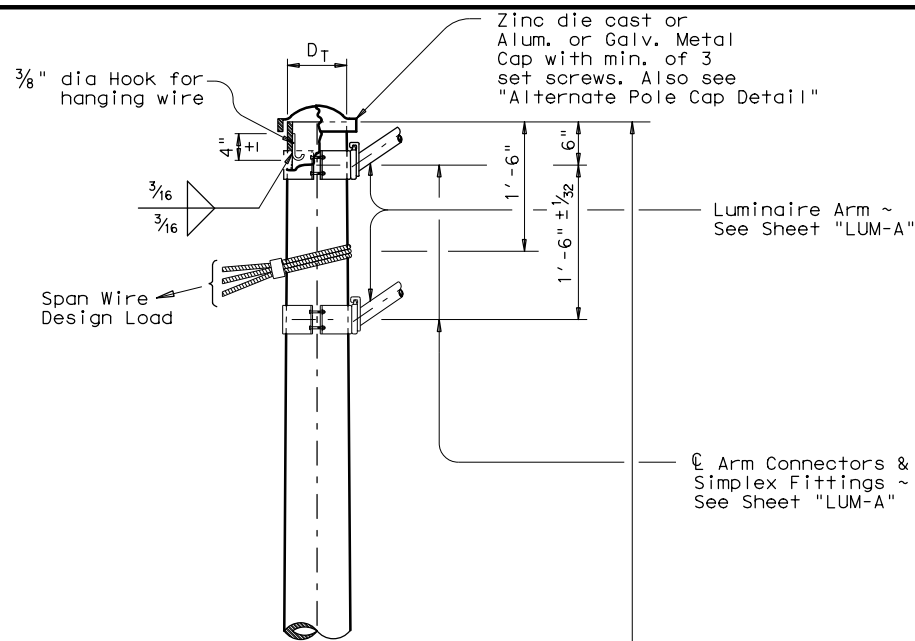
Nominal Arm Length	Quantity
8' Arm	1

Each Anchor Bolt Assembly consists of the following: Top and Bottom templates, 4 anchor bolts, 8 nuts, 8 flat washers, and 4 nut anchor devices (Type 2) per Standard Drawing "TS-FD".

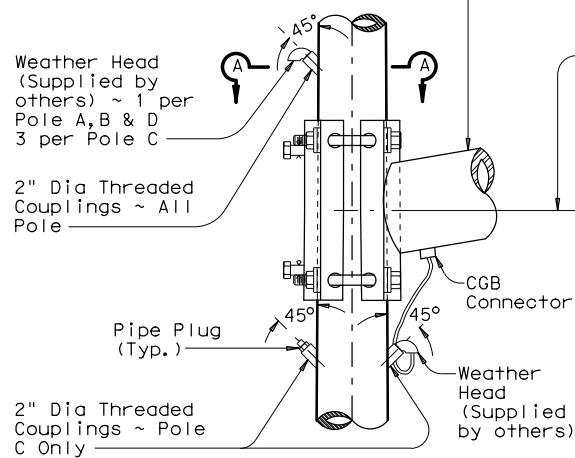
① See Sheet "DMA-80"

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

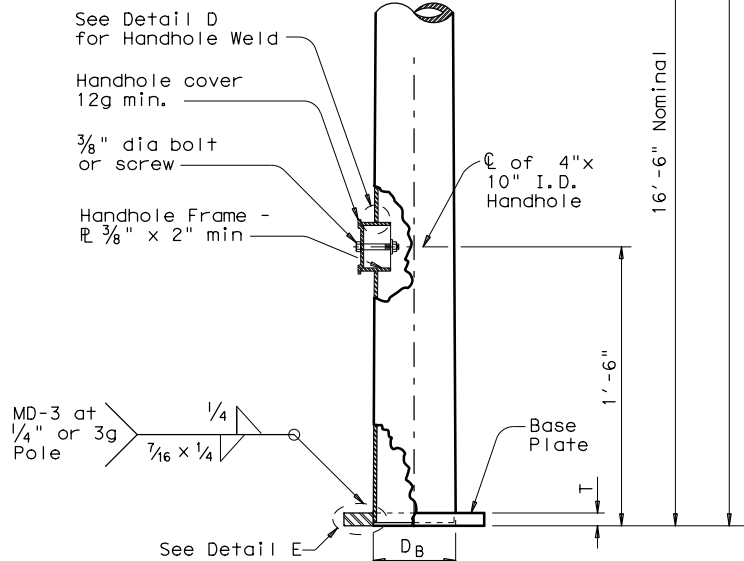
DATE: FILE:



DETAIL A

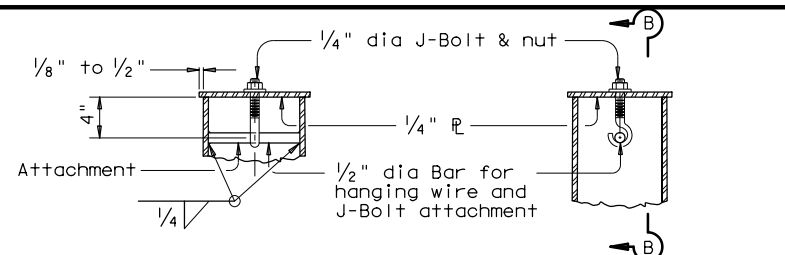


DETAIL B



DETAIL C

POLE ELEVATION



SECTION B-B

ALTERNATE POLE CAP DETAIL

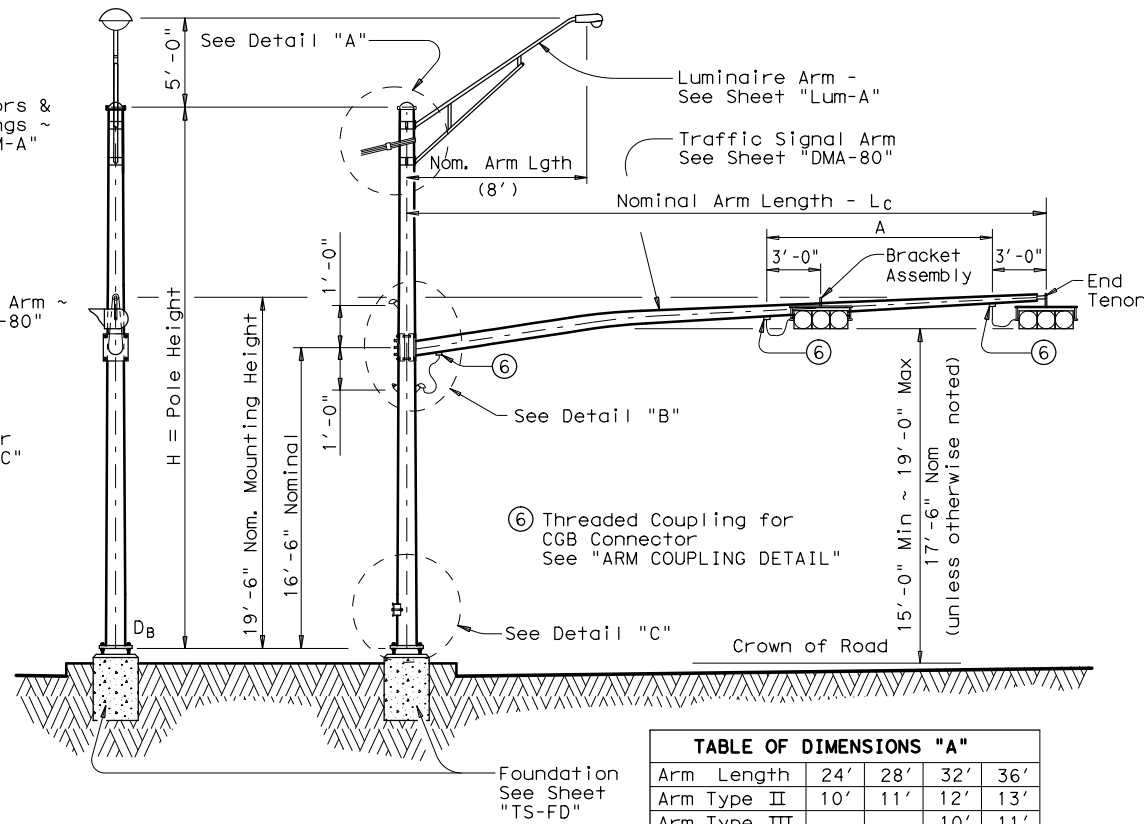
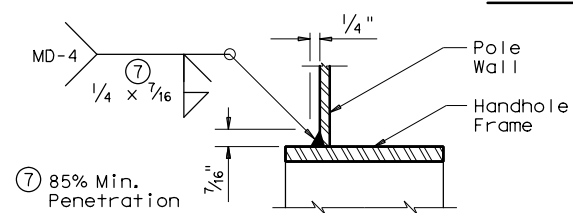
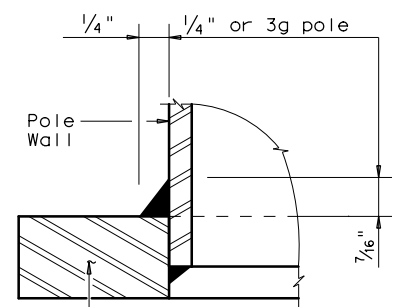


TABLE OF DIMENSIONS "A"				
Arm Length	24'	28'	32'	36'
Arm Type II	10'	11'	12'	13'
Arm Type III			10'	11'

STRUCTURE ASSEMBLY



DETAIL D

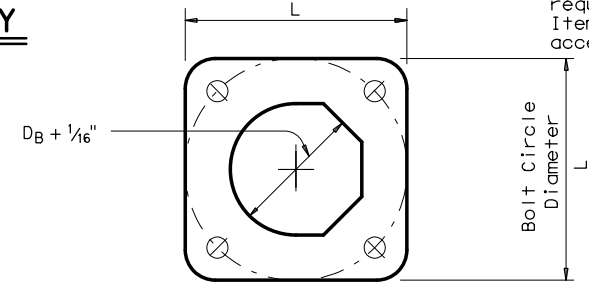


DETAIL E

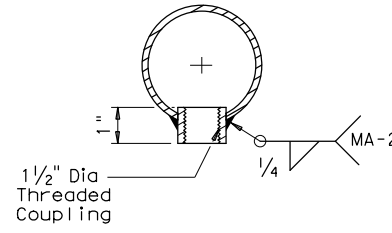
SECTION A-A

(Pole Coupling and Seam Weld Details)

8 60% Min. penetration, except 100% penetration within 6" of circumferential base welds.



BASE PLATE PLAN



ARM COUPLING DETAIL

MATERIALS	
Round Shafts or Polygonal Shafts 9	ASTM A595 Gr.A, A588, A1008 HSLAS Gr.50 Class 2, A1011 HSLAS Gr.50 Class 2, A572 Gr.50 or A1011 SS Gr.50 10
Plates 9	ASTM A36, A588, or A572 Gr.50
Connection Bolts	ASTM A325 except where noted
Pin Bolts	ASTM A325
Pipe 9	ASTM A53 Gr.B, A501, A1008 HSLAS-F Gr.50, A1011 HSLAS-F Gr.50
Steel Cable	ASTM A475, 7 Wire Utilities Grade
Misc. Hardware	Galvanized steel or stainless steel or as noted

9 ASTM A572, A1008 HSLAS, A1011 HSLAS, A1008 HSLAS-F, A1011 HSLAS-F, or A1011 SS may have higher yield strengths but shall not have less elongation than the grade indicated.

10 ASTM A1011 SS Gr.50 shall also have a minimum elongation of 18 percent in 8 inches or 23 percent in 2 inches. Material thickness in excess of those stipulated under A1011 SS will be acceptable providing the material meets all other A1011 SS requirements and the requirements of this item.

GENERAL NOTES

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals and Interim Specifications thereto. Design Wind Speed equals 80 mph plus a 1.3 gust factor. The maximum permissible span wire design loads tabulated are calculated at a stress load of 1.4 times the basic allowable stress. A simultaneous wind on the pole, mast arm, and luminaire is also included.

See standard sheet "DMA-80" for details of clamp-on traffic signal arms, sheet "MA-C" for traffic signal arm connection details, sheet "LUM-A" for luminaire arm and connection details, and sheet "TS-FD" for anchor bolt and foundation details.

Fabrication shall be in accordance with Item 686, "Traffic Signal Pole Assemblies (Steel)" and with the details, dimensions, and weld procedures shown herein. Weld references call for preapproved weld procedures which the Fabricator must obtain prior to fabrication. Materials, fabrication tolerances, and shipping practices shall meet the requirements of this sheet and Item 686, "Traffic Signal Pole Assemblies (Steel)".

Unless otherwise noted, all parts shall be galvanized in accordance with Item 445, "Galvanizing", after fabrication.

Deviation from the details and dimensions shown herein require submission of shop drawings in accordance with Item 441, "Steel Structures". Alternate designs are not acceptable.

Foundation Type	Anchor Bolt Diameter	Bolt Hole Diameter	Bolt Circle Diameter	Base Pl. Dim. L x T
36-A	1 3/4"	2"	19"	19" x 1 3/4"
36-B	2"	2 1/4"	21"	21" x 2"

SHEET 2 OF 2

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL
SUPPORT STRUCTURES
STRAIN POLE ASSEMBLIES

(80 MPH WIND ZONE)

SP-80(2)-12

© TxDOT March 1996	DN: MS	CK: JSY	DW: BR	CK: JSY
6-96 1-12	REVISIONS	CONT	SECT	JOB
				HIGHWAY
				COUNTY
				35C

120B



REQUEST FOR INFORMATION FORM

RFI NO.: 7 DATE: 12/2/20
PROJECT: Corridor H - Sam Bass - Signals RESPONSE REQUESTED BY
DATE: 12/9/20
TO: HNTB: Eddie Church; Feng Chen

REFERENCE:

PROBLEM: Existing Crosswalk at Sam Bass & Great Oaks.
The new signal plans don't include ped heads and push buttons for this crosswalk. Should they be included?

RECOMMENDED SOLUTION:

If ped heads and push buttons are required, then ATS will issue a change order request for the additional materials.

Austin Traffic Signal
Originator

John Bartleson
Supervisor

RESPONSE:

Yes. Please see attached sheets for the added pedestrian signals at Great Oaks intersection and provide prices for approval.

Feng Chen, PE, HNTB
Responder

2/8/2021
Date

Sign, Date & Return to HNTB via e-mail.

Mail original to: HNTB Corporation
101 E Old Settlers Blvd, Ste 100
Round Rock, Texas 78664

Attachments to RFI: Rev 3 Sheets
Cc:



REQUEST FOR INFORMATION FORM

RFI NO.: 8 DATE: 12/2/20
PROJECT: Corridor H - Sam Bass - Signals RESPONSE REQUESTED BY
DATE: 12/9/20
TO: HNTB: Eddie Church

REFERENCE:

PROBLEM: Possible aesthetics issues with current service & cabinet location.
Plans are fine as is, but the property owner on the proposed cabinet & service corner may have issues with these items in the ROW in front of their house.

RECOMMENDED SOLUTION:

Relocate cabinet to SE corner and service to NE corner. There is an adequate point of service at that location. Cabinet can be placed next to the existing sidewalk on the SE. Minor overrun of the #6 power cable would be required for this configuration. The overrun can be eliminated if a location for the cabinet can be found on the NE corner.

Austin Traffic Signal
Originator

John Bartleson
Supervisor

RESPONSE:

The designer agrees to move controller cabinet and service pole to the NE corner of Great Oaks / Sam Bass intersection. Please see attached sheets for the proposed new locations. The controller pad and service pole shall be installed within the County's right of way.

Feng Chen, PE, HNTB
Responder

2/8/2021
Date

Sign, Date & Return to HNTB via e-mail.

Mail original to: HNTB Corporation
101 E Old Settlers Blvd, Ste 100
Round Rock, Texas 78664

Attachments to RFI: Rev.3 Sheets
Cc:

AUSTIN TRAFFIC SIGNAL CONSTRUCTION COMPANY, INC.

P.O. Box 130
Round Rock, Texas 78680

Ph. (512) 255-9951
Fax (512) 255-0146

CHANGE ORDER PROPOSAL

December 21, 2020

PROJECT: CORRIDOR H-SAM BASS ROAD INTERIM SIGNAL PROJECT
PRECINCT NUMBER 1

Item No.	Bid Item Description	Unit of Measure	Approx. Quantities	Unit Bid Price	Amount
1	DRILL SHAFT 36 INCH X 13 FOOT	EA	2	\$3,700.00	\$7,400.00
2	STRAIN POLE - USED- 30 FOOT	EA	2	\$1,700.00	\$3,400.00
Total Bid Amount					\$10,800.00

Pole plus foundation: \$5400 EACH

Edward Schroeder 512-255-9951 ext 114

AUSTIN TRAFFIC SIGNAL CONSTRUCTION COMPANY, INC.

12/21/2020 0:00

CHANGE ORDER- USED STRAIN POLES

PROJECT: CORRIDOR H-SAM BASS ROAD INTERIM SIGNAL PROJECT

Labor, Material & Equipment Breakout

QTY	UNIT	Materials	Unit price	Amount
2.00	SHAFTS	CONCRETE & REBAR	\$975.00	\$1,950.00
2.00	SETS	ANCHOR BOLTS	\$614.00	\$1,228.00
2.00	EA	STRAIN POLE- 30 FT USED	\$250.00	\$500.00
MATERIAL COST				\$3,678.00

QTY	UNIT	Labor classification	AVERAGE DIRECT RATE	Amount
70.16	HR	UTILITY LABOR	\$20.00	\$1,403.26
DIRECT LABOR COST				\$1,403.26

QTY	UNIT	EQUIPMENT	Rate	Amount
4.00	HR	BUCKET TRUCK	\$42.53	\$170.12
6.00	HR	DRILL TRUCK	\$188.75	\$1,132.50
4.00	HR	BOOM TRUCK	\$67.23	\$268.92
2.00	HR	1 TON TRUCK	\$13.85	\$27.70
EQUIPMENT COST				\$1,599.24

QTY	UNIT	SUBCONTRACTOR	RATE	Amount
5.00	HR	VACUUM EXCAVATION	\$350.00	\$1,750.00
SUB CONTRACTOR COST				\$1,750.00

Total Material	\$3,678.00
Total Labor	\$1,403.26
Total Equipment	\$1,599.24
Total Sub Contractor	\$1,750.00
25% Profit on Material	\$919.50
25 % Profit on Labor	\$350.82
55% Labor Burden	\$771.79
15 % Profit on Equipment	\$239.89
5 % Profit on SubContractor	\$87.50

TOTAL	\$10,800.00
--------------	--------------------



Ed Schroeder <eschroeder@atscc.com>

Re: ANCHOR BOLT PRICE

1 message

Brian Madden <brian@maddenbolt.com>
To: Ed Schroeder <eschroeder@atscc.com>

485.00 ea set
129.00 ft

Stock.

614 x 2 = 1228.00

Brian Madden
President

Madden Bolt Corp.
Madden Galvanizing LLC
Ph: 713-939-9999
Email: Brian@maddenbolt.com
www.maddenbolt.com

Thu, Dec 3, 2020 at 2:15 PM

On Dec 3, 2020, at 1:59 PM, Ed Schroeder <eschroeder@atscc.com> wrote:

36-A

Edward Schroeder

Office 512-255-9951



On Thu, Dec 3, 2020 at 1:58 PM Brian Madden <brian@maddenbolt.com> wrote:
Are these the city of Austin bolts or 36-A?

If they are the city bolts can please remind me of the bolt circle? Haven't made those in a long time.



AUSTIN TRAFFIC SIGNAL CONSTRUCTION CO INC
4615 PRIEM LN
Pflugerville, TX, 78660

Badger Contact Info: 60 Ironhorse Dr.
Hutto, TX 78634

Ticket Number: TKT-120120-232208

Ticket Date: 12-01-2020

Job Number: SR0000157756

Paper Ticket #:

Job Name: Decker lane and city top blvd

PO/WO #:

Site Location: decker lane and city top blvd Austin, TX,
78724

AFE/JOB #: Verbal PO 2011469

Phone: 512 8486034

Requesters Name:

Cost Centre/GL:

Major/Minor:

Rig/Well Pad #:

Job Name:

User/Approver ID:

Other Order #:

This is not an invoice

Total subject to change based on taxes, fees and other charges.

Item	Item Description	Unit #	Quantity	Rate	UOM	Amount
Badger Hydrovac With Operator		785	8	\$235.00	HR	\$1880.00
Additional Operator		785	8	\$50.00	HR	\$400.00
Supply Water		785	1	\$55.00	EA	\$55.00
Support Truck		785	1	\$150.00	DAY	\$150.00
Disposition		785	1	\$175.00	EA	\$175.00
Fluctuating Fuel Recovery		785				\$139.65
Notes:						Ticket Total: \$2799.65

Approved By:

350.00 / HP

Approver Name:

Approver Phone #:



www.equipmentwatch.com

Rental Rate Blue Book®

July 2, 2014

On-Highway Flatbed Trucks

Miscellaneous Models

Size Class:

Gross Vehicle Weight 33,001 - 45,000 GVW

Configuration for On-Highway Flatbed Trucks

Power Mode	Diesel	Axle Configuration	6X4
Maximum Gross Vehicle Weight	45,000 lbs	Horsepower	380.0

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	\$2,975.00	\$835.00	\$210.00	\$32.00	\$41.95	\$58.85
Adjustments						
Region (Texas: 91.4%)	(\$255.85)	(\$71.81)	(\$18.06)	(\$2.75)		
Model Year (2004: 86.4%)	(\$369.80)	(\$103.79)	(\$26.10)	(\$3.98)		
Ownership (100%)	-	-	-	-		
Operating (100%)					-	
Total:	\$2,349.35	\$659.40	\$165.84	\$25.27	\$41.95	\$55.30

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	51%	\$1,517.25 / mo
Overhaul (ownership)	30%	\$892.50 / mo
CFC (ownership)	6%	\$178.50 / mo
Indirect (ownership)	13%	\$386.75 / mo
Fuel (operating) @ \$3.98	71%	\$29.64 / hr

Revised Date: 2nd Half 2014



Rental Rate Blue Book®

August 25, 2016

Reedrill TEXOMA TAURUS

Truck Mounted Vertical Earth Drills

Size Class:

Kelly Bar Size 7" (O.D.) & Over

Weight:

78,000 lbs.

Drill for upper

Configuration for TEXOMA TAURUS

Power Mode	Diesel	Average Drill Depth	180 in
Horsepower	196.0		

Equipment Notes: Rates do not include augers. NOTE: The average rates listed for vertical earth drills are representative of typical rigs. Actual costs will vary widely according to specific setups and equipment usage.

Manufacturer Notes: Rates for all REEDRILL models include an 8' wide 8X4 carrier rated at 80,000 lbs GVW with a 230 horsepower Detroit diesel engine and 10-speed transmission.

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	\$14,080.00	\$3,940.00	\$985.00	\$150.00	\$53.45	\$133.45
Adjustments						
Region (100%)	-	-	-	-		
Model Year (100%)	-	-	-	-		
Ownership (100%)	-	-	-	-		
Operating (100%)					-	
Total:	\$14,080.00	\$3,940.00	\$985.00	\$150.00	\$53.45	\$133.45

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	55%	\$7,744.00 / mo
Overhaul (ownership)	24%	\$3,379.20 / mo
CFC (ownership)	10%	\$1,408.00 / mo
Indirect (ownership)	11%	\$1,548.80 / mo
Fuel (operating) @ \$2.78	38%	\$20.22 / hr

Revised Date: 1st Half 2016

Rental Rate Blue Book®

Miscellaneous 4X2 25KGVW DSL

On-Highway Truck Tractors

Size Class:
19,501 - 26,000 GVW
Weight:
8793 lbs



Configuration for 4X2 25KGVW DSL

Axle Configuration	4X2	Horsepower	200.0
Maximum Gross Vehicle Weight	25000.0 lbs	Power Mode	Diesel

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$1,815.00	USD \$510.00	USD \$130.00	USD \$20.00	USD \$22.14	USD \$32.45
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2020: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$1,815.00	USD \$510.00	USD \$130.00	USD \$20.00	USD \$22.14	USD \$32.45

Non-Active Use Rates

Hourly

Standby Rate	USD \$6.29
Idling Rate	USD \$25.30

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	43%	USD \$780.45/mo
Overhaul (ownership)	38%	USD \$689.70/mo
CFC (ownership)	7%	USD \$127.05/mo
Indirect (ownership)	11%	USD \$199.65/mo
Fuel (operating) @ USD 3.07	68%	USD \$14.99/hr

Revised Date: 1st half 2020

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for EDWARD SCHROEDER
(ed@atscc.com)

BUCKET TRUCK UPPER UNIT

Rental Rate Blue Book®

May 20, 2020

Miscellaneous BB1A40

Articulating Boom Aerial Lifts For Truck Mounting

Size Class:

31 - 40 ft

Weight:

3340 lbs


Configuration for BB1A40

Boom Configuration	Overcenter	Material Handling	No
Maximum Platform Height	31.0 - 40.0 ft	Platform Capacity (1 Man)	312.0 lbs

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$1,250.00	USD \$350.00	USD \$88.00	USD \$13.00	USD \$2.98	USD \$10.08
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2020: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$1,250.00	USD \$350.00	USD \$88.00	USD \$13.00	USD \$2.98	USD \$10.08

Non-Active Use Rates

	Hourly
Standby Rate	USD \$5.54
Idling Rate	USD \$7.10

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	63%	USD \$787.50/mo
Overhaul (ownership)	22%	USD \$275.00/mo
CFC (ownership)	7%	USD \$87.50/mo
Indirect (ownership)	8%	USD \$100.00/mo

Fuel cost data is not available for these rates.

Revised Date: 1st half 2020

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for EDWARD SCHROEDER (ed@atscc.com)

CREW TRUCK 1 TON

Rental Rate Blue Book®

March 17, 2017

Miscellaneous 4X2 1 195 CREW DSL

On-Highway Light Duty Trucks

Size Class:
100 - 199 HP
 Weight:
4,800 lbs.



Configuration for 4X2 1 195 CREW DSL

Power Mode	Diesel	Horsepower	195
Axle Configuration	4X2	Ton Rating	1
Cab Type	Crew		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	\$950.00	\$265.00	\$66.00	\$10.00	\$8.45	\$13.85
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2017: 100%)	-	-	-	-		
Ownership (100%)	-	-	-	-		
Operating (100%)					-	
Total:	\$950.00	\$265.00	\$66.00	\$10.00	\$8.45	\$13.85

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	57%	\$541.50/mo
Overhaul (ownership)	28%	\$266.00/mo
CFC (ownership)	5%	\$47.50/mo
Indirect (ownership)	10%	\$95.00/mo
Fuel (operating) @ 2.36	65%	\$5.52/hr

Revised Date: 2nd Half 2016

The equipment represented in this report has been exclusively prepared for EDWARD SCHROEDER (ed@atscc.com)

www.equipmentwatch.com

All prices shown in US dollars (\$)

Rental Rate Blue Book®

May 20, 2020

Ford LTS-8000 (6X4) (disc. 1998)

On-Highway Truck Tractors

Size Class:

33,001 - 45,000 GVW

Weight:

12500 lbs



Configuration for LTS-8000 (6X4) (disc. 1998)

Horsepower **210.0** Power Mode **Diesel**

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$2,205.00	USD \$620.00	USD \$155.00	USD \$23.00	USD \$26.77	USD \$39.30
Adjustments						
Region (100%)	-	-	-	-		
Model Year (1998: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$2,205.00	USD \$620.00	USD \$155.00	USD \$23.00	USD \$26.77	USD \$39.30

Non-Active Use Rates

Hourly

Standby Rate	USD \$7.64
Idling Rate	USD \$28.27

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	43%	USD \$948.15/mo
Overhaul (ownership)	38%	USD \$837.90/mo
CFC (ownership)	7%	USD \$154.35/mo
Indirect (ownership)	11%	USD \$242.55/mo
Fuel (operating) @ USD 3.07	59%	USD \$15.74/hr

Revised Date: 1st half 2020

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for EDWARD SCHROEDER (ed@atscc.com)

BOOM TRUCK UPPER UNIT

Rental Rate Blue Book®

May 20, 2020

National Crane 325-32

Articulated Cranes For Truck Mounting

Size Class:

24,001 - 30,000 lbs

Weight:

16550 lbs



Configuration for 325-32

Lift Capacity	30000.0 lbs	Maximum Boom Length	384.0 in
Power Mode	PTO		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$3,345.00	USD \$935.00	USD \$235.00	USD \$35.00	USD \$8.92	USD \$27.93
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2020: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$3,345.00	USD \$935.00	USD \$235.00	USD \$35.00	USD \$8.92	USD \$27.93

Non-Active Use Rates

Hourly

Standby Rate	USD \$11.97
Idling Rate	USD \$19.01

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	46%	USD \$1,538.70/mo
Overhaul (ownership)	36%	USD \$1,204.20/mo
CFC (ownership)	8%	USD \$267.60/mo
Indirect (ownership)	9%	USD \$301.05/mo

Fuel cost data is not available for these rates.

Revised Date: 1st half 2020

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for EDWARD SCHROEDER (ed@atscc.com)

AUSTIN TRAFFIC SIGNAL CONSTRUCTION COMPANY, INC.

P.O. Box 130
Round Rock, Texas 78680

Ph. (512) 255-9951
Fax (512) 255-0146

March 9, 2021

CHANGE ORDER PROPOSAL

PROJECT: T1740 CORRIDOR H
HIGHWAY: SAM BASS RD
COUNTY: WILLIAMSON

Item-code		Desc. Code	Bid Item Description	Unit of Measure	Approx. Quantities	Unit Bid Price	Amount
Item No.							
531		6010	CURB RAMP (TY 7)	EA	1	\$3,400.00	\$3,400.00
682		6018	PED SIG SEC (LED) (COUNTDOWN)	EA	2	\$640.00	\$1,280.00
687		6001	PED ASSEMBLY (INCL. FOUNDATION)	EA	1	\$2,450.00	\$2,450.00
688		6001	PED DETECT PUSH BUTTON (APS)	EA	2	\$725.00	\$1,450.00
686		6003	PED DETECTOR CONTROLLER UNIT	EA	1	\$3,700.00	\$3,700.00
684		6079	TRF SIG CBL (TY C) (12 AWG) (2 CONDR)	LF	370	\$2.50	\$925.00
SPCL		0001	SURFACE APPLIED DETECTABLE WARNING TILES	LS	1	\$581.00	\$581.00
690			TREE TRIMMING w TRAFFIC CONTROL	LS	1	\$3,750.86	\$3,750.86

Total Bid Amount

\$17,536.86

Contact Edward Schroeder 512-255-9951 ext 114

AUSTIN TRAFFIC SIGNAL CONSTRUCTION COMPANY, INC.

3/9/2021 0:00

PROJECT: T1740 CORRIDOR H
HIGHWAY: SAM BASS RD
COUNTY: WILLIAMSON

Labor, Material & Equipment Breakout

QTY	UNIT	Materials	Unit price	Amount
1.00	LS	MATERIAL	\$5,880.00	\$5,880.00
MATERIAL COST				\$5,880.00

QTY	UNIT	Labor classification	AVERAGE DIRECT RATE	Amount
133.98	HR	UTILITY LABOR	\$24.68	\$3,306.73
DIRECT LABOR COST				\$3,306.73

QTY	UNIT	EQUIPMENT	Rate	Amount
8.00	HR	KUBOTA	\$23.19	\$185.52
8.00	HR	3/4 TON P.U.	\$14.57	\$116.56
EQUIPMENT COST				\$302.08

QTY	UNIT	SUBCONTRACTOR	RATE	Amount
8.00	LS	SUBCONTRACTOR	\$560.00	\$560.00
1.00	LS	SUBCONTRACTOR	\$2,976.88	\$2,976.88
SUB CONTRACTOR COST				\$3,536.88

Total Material	\$5,880.00
Total Labor	\$3,306.73
Total Equipment	\$302.08
Total Sub Contractor	\$3,536.88
25% Profit on Material	\$1,470.00
25 % Profit on Labor	\$826.68
55% Labor Burden	\$1,818.70
15 % Profit on Equipment	\$45.31
5 % Profit on SubContractor	\$176.84
SUB TOTAL	\$17,363.23
BOND @ 1%	\$173.63
TOTAL	\$17,536.86

SUB TOTAL DIRECT COST	\$13,025.69
PROFIT AND BURDEN	\$4,511.17
TOTAL	\$17,536.86



Brents Tree Service, Inc.
P.O. Box 5357
Round Rock, TX 78683
(512) 310-8789
Fax (512) 388-9953

show

3025578

Customer Address:

Austin Traffic Signal Construction
SAMBASS/WALKER RANCH

John Bartleson 512 844-7628

Email: JBartleson@ATSCC.com

Estimate/Invoice:

Date: 3-9-21

Prepared By: Will 801-1535

Start Date:

Completion Date:

Referred by: Neighbors

PAT KNOX

West bound

large oak

OPEN for view / lights

cut back @ "Ditch" - up

Austin Traffic
To provide:
RRPD - direct
Traffic

2- OAKS

EAST bound

cut back limbs blocking
lights @ Top lights / + hanging signal lights
line clearance + included

The Bitterness of Poor Quality Lingers Long After
the Sweet Taste of a Low Price is Forgotten.

We don't claim to be the cheapest, but we do go above and beyond your
expectations with our service and quality. We want to "wow" you. Call
Ruben Cuevas at our Customer Care Department @ 512-310-8789.
All feedback is welcome and thank you.

Tree Trimming Fees:	\$ 2750.-
Hauling & Dump Fees:	\$ included
Tax:	\$ 226.88
Total Estimate:	\$ 2976.88

PAYMENT DUE UPON COMPLETION

THANK YOU! YOUR BUSINESS IS APPRECIATED



VISIT US AT:
www.brentstreeservice.com
facebook.com/brentstreeservice

Rental Rate Blue Book®

April 5, 2017

Kubota L45

Tractor-Loader-Backhoes

Size Class:

Under 12'

Weight:

7,173 lbs.


Configuration for L45

Loader Bucket Capacity--Heaped	N/A	Power Mode	Diesel
Net Horsepower	42.5 hp	Drive	4WD

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	\$2,110.00	\$590.00	\$150.00	\$23.00	\$11.20	\$23.19
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2017: 100%)	-	-	-	-		
Ownership (100%)	-	-	-	-		
Operating (100%)					-	
Total:	\$2,110.00	\$590.00	\$150.00	\$23.00	\$11.20	\$23.19

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	33%	\$696.30/mo
Overhaul (ownership)	49%	\$1,033.90/mo
CFC (ownership)	7%	\$147.70/mo
Indirect (ownership)	11%	\$232.10/mo
Fuel (operating) @ 2.36	35%	\$3.90/hr

Revised Date: 2nd Half 2016

The equipment represented in this report has been exclusively prepared for EDWARD SCHROEDER (ed@atscc.com)

Rental Rate Blue Book®

March 17, 2017

Miscellaneous 4X2 3/4 165 CREW GAS

On-Highway Light Duty Trucks

Size Class:

100 - 199 HP

Weight:

4,700 lbs.

Model Image

Configuration for 4X2 3/4 165 CREW GAS

Power Mode	Gasoline	Horsepower	165
Axle Configuration	4X2	Ton Rating	3/4
Cab Type	Crew		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	\$780.00	\$220.00	\$55.00	\$8.00	\$10.15	\$14.58
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2017: 100%)	-	-	-	-		
Ownership (100%)	-	-	-	-		
Operating (100%)					-	
Total:	\$780.00	\$220.00	\$55.00	\$8.00	\$10.15	\$14.58

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	57%	\$444.60/mo
Overhaul (ownership)	28%	\$218.40/mo
CFC (ownership)	5%	\$39.00/mo
Indirect (ownership)	10%	\$78.00/mo
Fuel (operating) @ 2.34	72%	\$7.34/hr

Revised Date: 2nd Half 2016

The equipment represented in this report has been exclusively prepared for EDWARD SCHROEDER (ed@atscc.com)