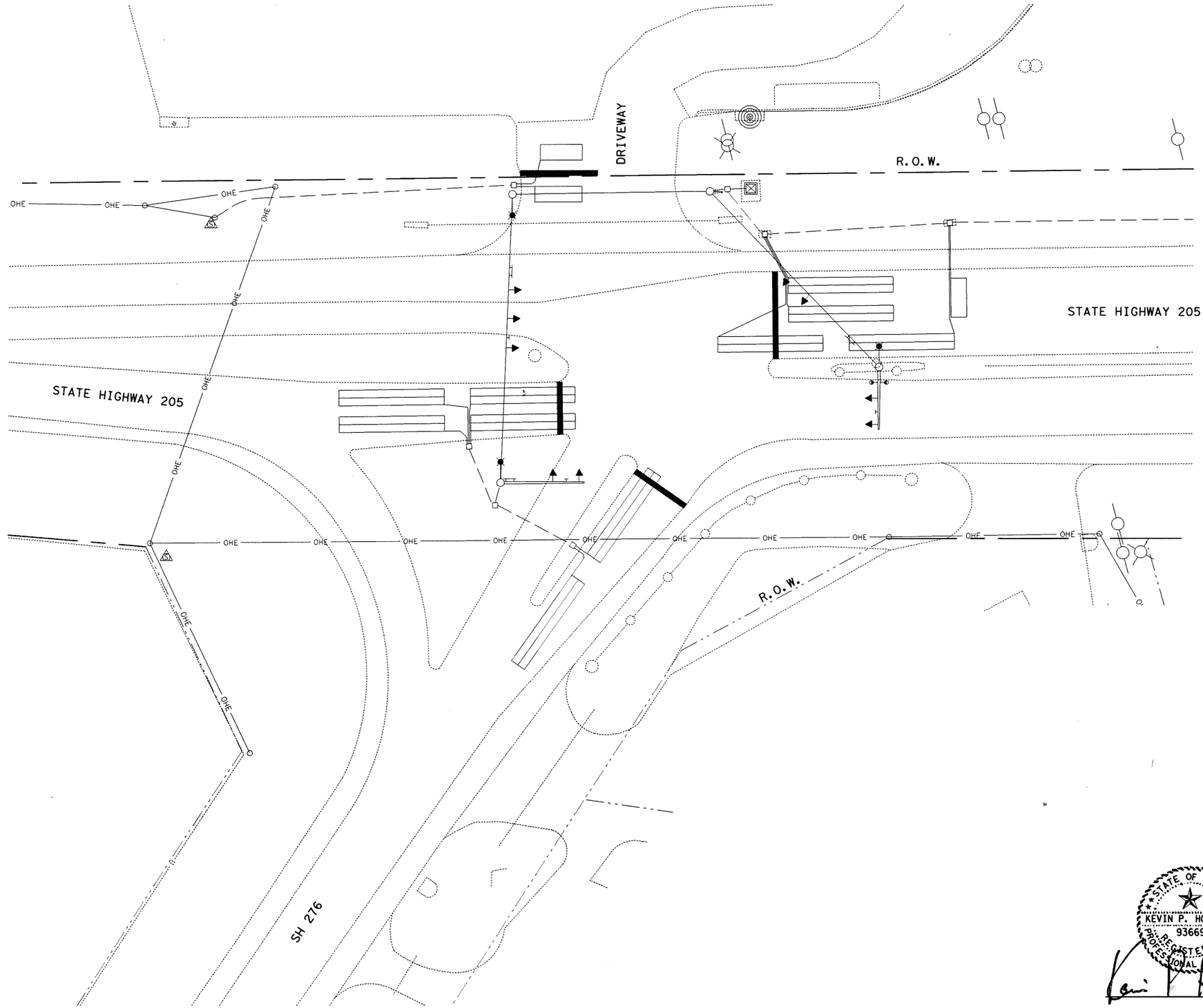


LEGEND

- TYPICAL EXISTING MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TYPICAL EXISTING SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- EXISTING TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- EXISTING CONDUIT
- (1) EXISTING CONDUIT RUN NUMBER
- 1 EXISTING SIGNAL HEAD NUMBER
- (A) EXISTING SIGN LABEL
- (S) EXISTING POWER SOURCE
- EXISTING SIGN PANEL AND POST
- EXISTING OPTICOM
- SSR YAGI ANTENNA

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

EXISTING SIGNAL LAYOUT S GOLIAD (SH 205) AT SH 276

SHEET 1 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	614
CONT.	SECT.	JOB	
0009	12	203	

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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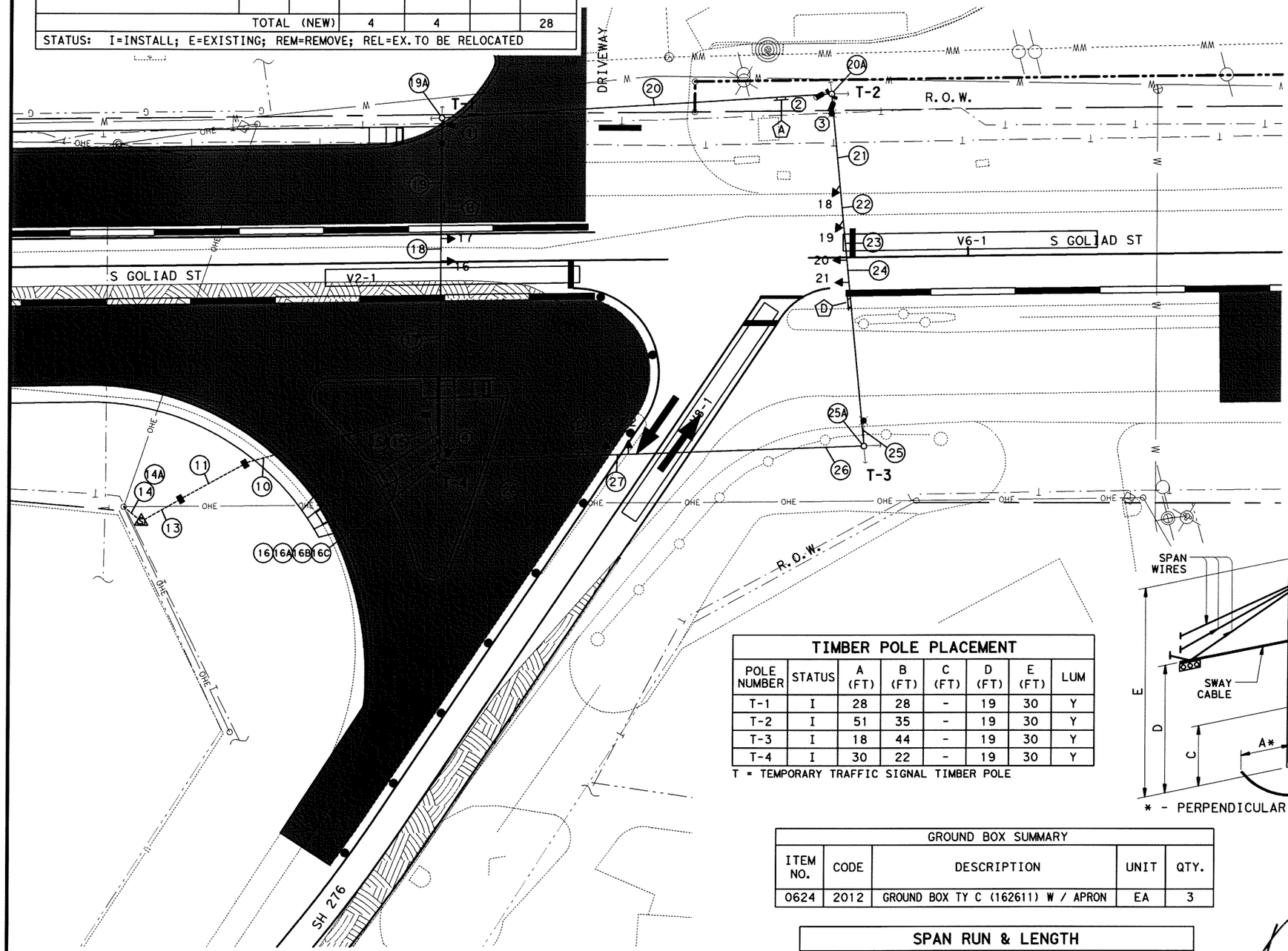
ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS			
			BACKPLATES		LOUVER	VEH. SIGNAL
			3 SEC (EA)	4 SEC (EA)		SEC(EA)
16,18,20,22	H4LT	I		4		16
17,19,21,23	H3	I	4			12
TOTAL (NEW)			4	4		28

STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED

H4LT (R Y G G) SH 16,18,20,22

H3 (R Y G) SH 17,19,21,23



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

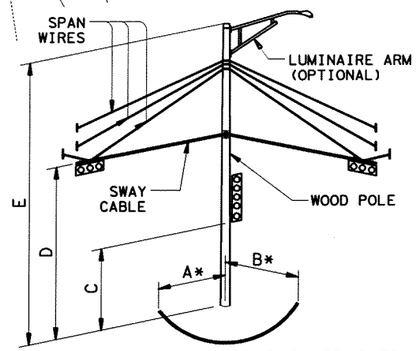
SIGNAL HEAD PLACEMENT DURING CONSTRUCTION

MAX. DISTANCE (7 CNDR.)			
HEAD 16	118′	HEAD 17	8′
HEAD 18	308′	HEAD 19	12′
HEAD 20	8′	HEAD 21	225′
HEAD 22	8′	HEAD 23	74′

TIMBER POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-1	I	28	28	-	19	30	Y
T-2	I	51	35	-	19	30	Y
T-3	I	18	44	-	19	30	Y
T-4	I	30	22	-	19	30	Y

T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE



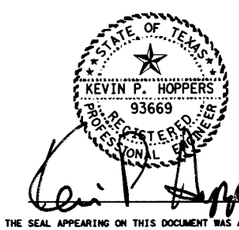
* - PERPENDICULAR TO BACK OF CURB

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162611) W / APRON	EA	3

SPAN RUN & LENGTH

(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
71	8	43	139	32	12	14	8	59	84	8	59
122			139	125					151		



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GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT SH 276

PHASE I

SHEET 2 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	615
CONT.	SECT.	JOB	
0009	12	203	

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT)					CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA)			ITEM 684 SIG CAB (EA)			VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
		1 ½" RM RISER	2" RM RISER	2" PVC TRENCHED	2" PVC BORED	3" RM RISER		NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	TY-A 5 CNDR. CABLE	TY-A 7 CNDR. CABLE	TY-A 10 CNDR. CABLE					
10	I				65		I	2	1	2							65	10
11	I			25			I	2	1	2							25	11
13	I			15			I	2	1	2							15	13
14	I			10			I	2	1	2							10	14
14A	I		20				I	2	1	2							20	14A
15	I			20			I										20	15
15A	I			20			I	2	1	2							20	15A
16	I		10				I	2	1								10	16
16A	I					15	I		1			4		6			15	16A
16B	I		20				I		1	2							20	16B
16C	I	10					I		1	4				1			10	16C
17	AC						I			2		2		4			71	17
18	AC						I			2		1		4			8	18
19	AC						I			2		1		4			43	19
19A	I	10					I		1	4				2			10	19A
20	AC						I			2		1		2			139	20
20A	I	10					I		1	2				2			10	20A
21	AC						I					1					32	21
22	AC						I					1					12	22
23	AC						I										14	23
24	AC						I					1					8	24
25	AC						I					1					59	25
25A	I	10					I		1	2				1			10	25A
26	AC						I			2		1		1			84	26
27	AC						I			2		1		1			8	27
28	AC						I			2		2		1			59	28
TOTAL		40	50	90	65	15		330	526	1816	0	419	0	977	0	0		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 7 CNDR. SPAN T-4/T-1 TO CNTRL.	CABLE 2 7 CNDR. SPAN T-1/T-2 TO CNTRL.	CABLE 3 7 CNDR. SPAN T-2/T-3 TO CNTRL.	CABLE 4 7 CNDR. SPAN T-3/T-4 TO CNTRL.	CNDR. NO.
1	BLACK	SPARE	SPARE	SPARE	SPARE	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 16, 17 R	SH 18, 19 R	SH 20, 21 R	SH 22, 23 R	3
4	GREEN	SH 16, 17 G	SH 18, 19 G	SH 20, 21 G	SH 22, 23 G	4
5	ORANGE	SH 16, 17 Y	SH 18, 19 Y	SH 20, 21 Y	SH 22, 23 Y	5
6	BLUE	SPARE	SPARE	SPARE	SPARE	6
7	WHITE/BLACK	SH 16 ~~G~~	SH 18 ~~G~~	SH 20 ~~G~~	SH 22 ~~G~~	7

ITEM 6626 VIVDS

ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	4
VIVDS COMM. CABLE, LF	978
VIVDS SET UP SYSTEM	1

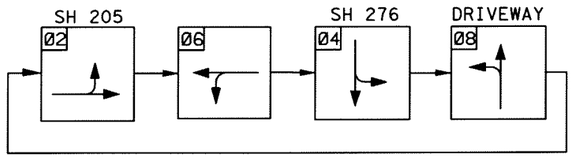
*SUPPLIED BY TXDOT

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-1 TIMBER POLE	27'	STOPBAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
2	T-2 TIMBER POLE	27'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
3	T-2 TIMBER POLE	27'	STOP BAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
4	T-4 TIMBER POLE	27'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2015	VEH SIG SEC (12 IN) INC (GRN ARW)	EA	4
0682	2016	VEH SIG SEC (12 IN) INC (GRN)	EA	8
0682	2018	VEH SIG SEC (12 IN) INC (YEL)	EA	8
0682	2020	VEH SIG SEC (12 IN) INC (RED)	EA	8



NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY FOR THE NEW AN PERMANENT ELECTRICAL SERVICE AND FOR INSTALLATION OF TEMPORARY TIMBER POLES WHERE IN PROXIMITY TO POWER LINES. INSTALL NEW ELECTRICAL SERVICE: TY D (120/240) 060 (NS) SS (E) PS (U) AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH TXDOT STANDARD DETAILS.
2. CONTRACTOR SHALL COORDINATE WITH TXDOT FOR THE TXDOT SPEC 680 SUPPLIED EQUIPMENT TO BE USED DURING THE TEMPORARY PHASE AND TO OBTAIN TXDOT ASSISTANCE AS APPLICABLE. ONCE THE PHASE I TRAFFIC SIGNAL IS APPROVED TO PLACE INTO OPERATION, THE CONTRACTOR MAY, DURING SOME TIME OTHER THAN CONTRACT DESCRIBED PEAK HOURS, SAFELY STOP ALL TRAFFIC AT THE INTERSECTION, TURN OFF THE EXISTING TRAFFIC SIGNAL, AND PLACE THE TEMPORARY TRAFFIC SIGNAL INTO OPERATION.
3. INSTALL ALL TEMPORARY SIGNALS HORIZONTALLY ON SPAN WIRES, A MINIMUM OF 18 FEET ABOVE THE ROADWAY. INSTALL SUFFICIENT TRAFFIC SIGNAL CABLES IN PLACE TO ACCOMMODATE ALL PHASES OF CONSTRUCTION. COIL EXCESS CONDUCTOR AND LASH IT TO THE SPAN WIRE CLEAR OF THE ROADWAY IF THE TRAFFIC SIGNAL HEAD IT WILL SERVE IN A SUBSEQUENT PHASE IS BEYOND CURRENT SIGNAL HEAD LOCATIONS. .
4. EXISTING STREET NAME SIGNING SHALL THEN BE TRANSFERRED FROM THE EXISTING TRAFFIC SIGNAL MOUNTING TO THE TEMPORARY SPAN WIRE INSTALLATION.

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT SH 276

PHASE I

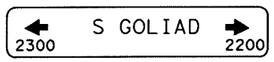
SHEET 3 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

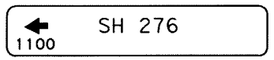
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	616
CONT.	SECT.	JOB	
0009	12	203	

SIGNS SUMMARY								
SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	S GOLIAD	E/REL	SPAN T-1/T-2	15" X VA	-	-	-
B	STREET NAME	SH 276	E/REL	SPAN T-4/T-1	15" X VA	-	-	-
C	STREET NAME	S GOLIAD	E/REL	SPAN T-3/T-4	15" X VA	-	-	-
D	STREET NAME	SH 276	E/REL	SPAN T-2/T-3	15" X VA	-	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE



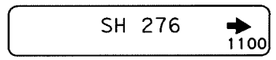
(A)



(B)



(C)



(D)

*ITEM 628 ELECTRICAL SERVICE DATA												
SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION ED(4)(5)(8)-03	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240 060(NS)SS(E)PS(U)	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 6	6.2

* REFER TO STANDARD SHEET ED (8)-03.

STATE OF TEXAS
KEVIN P. HOPPERS
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SH 205

TEMPORARY SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT
SH 276

PHASE I

SHEET 4 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

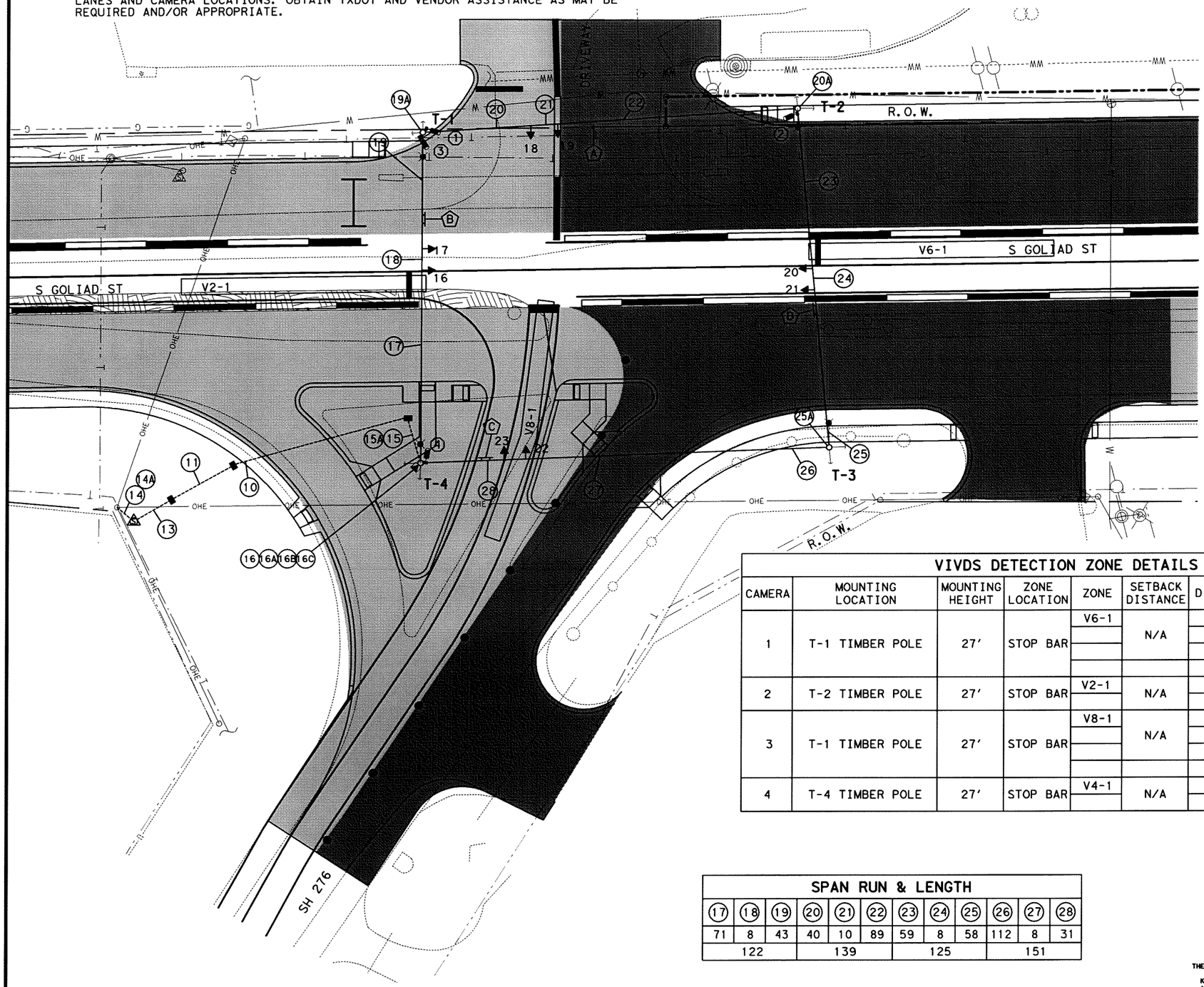
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	616A
CONT.	SECT.	JOB	
0009	12	203	

NOTES:

1. CONTRACTOR SHALL INSTALL SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE 1A. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.

2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.

3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-1 TIMBER POLE	27'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
2	T-2 TIMBER POLE	27'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
3	T-1 TIMBER POLE	27'	STOP BAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
4	T-4 TIMBER POLE	27'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R

SPAN RUN & LENGTH

(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
71	8	43	40	10	89	59	8	58	112	8	31
122			139			125			151		

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

KBR
Engineered by KBR Technical Services, Inc

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT SH 276

PHASE IA

SHEET 5 of 11

STATE OF TEXAS
KEVIN P. HOPPERS
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REGISTERED PROFESSIONAL ENGINEER

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FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

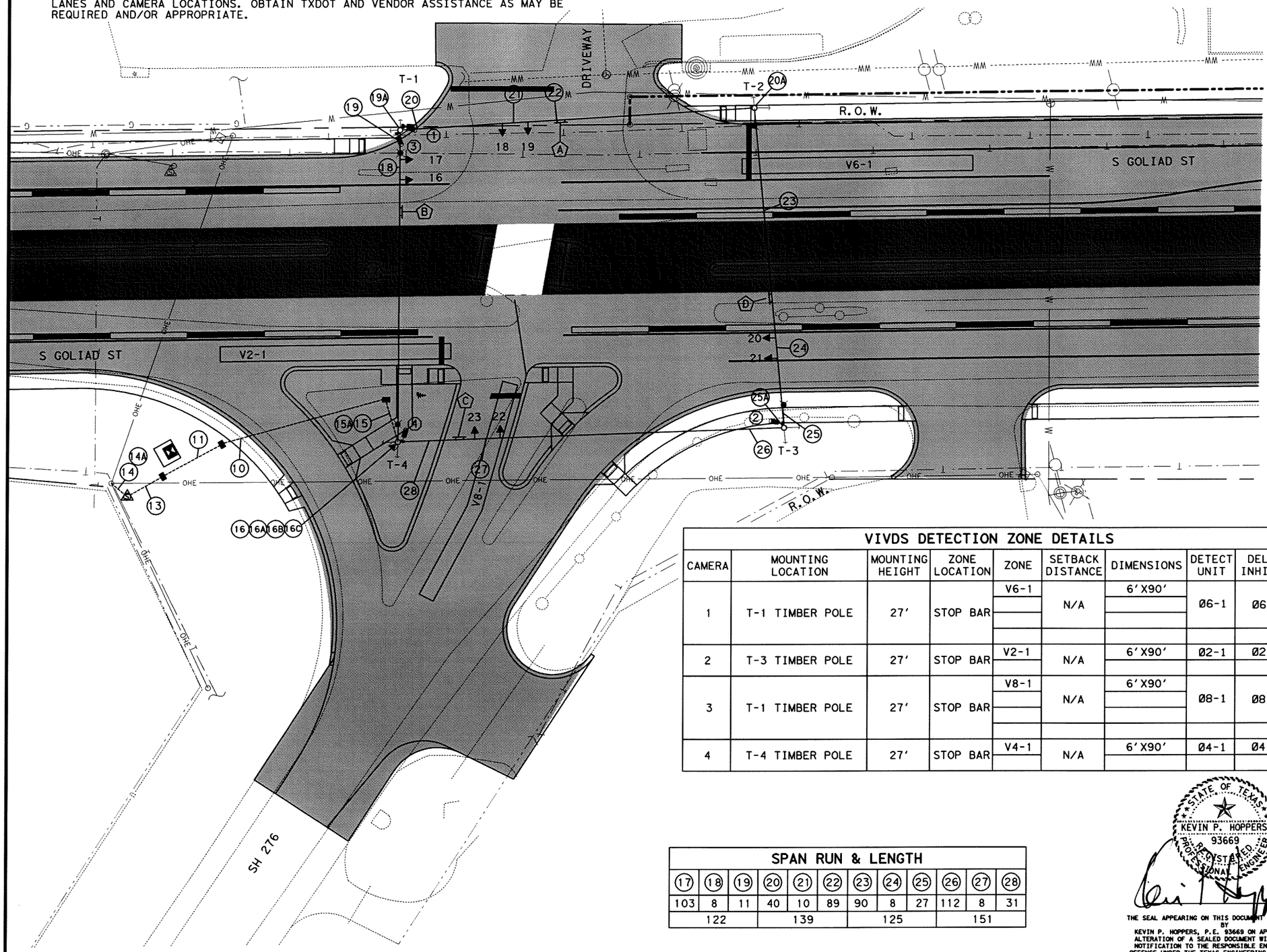
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	617
CONT.	SECT.	JOB	
0009	12	203	

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE II. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.

2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.

3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-1 TIMBER POLE	27'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
2	T-3 TIMBER POLE	27'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
3	T-1 TIMBER POLE	27'	STOP BAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
4	T-4 TIMBER POLE	27'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R

SPAN RUN & LENGTH

(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
103	8	11	40	10	89	90	8	27	112	8	31
122			139			125			151		

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

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SH 205

TEMPORARY SIGNAL LAYOUT
S GOLIAD ST (SH 205)
AT SH 276

PHASE II

SHEET 6 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

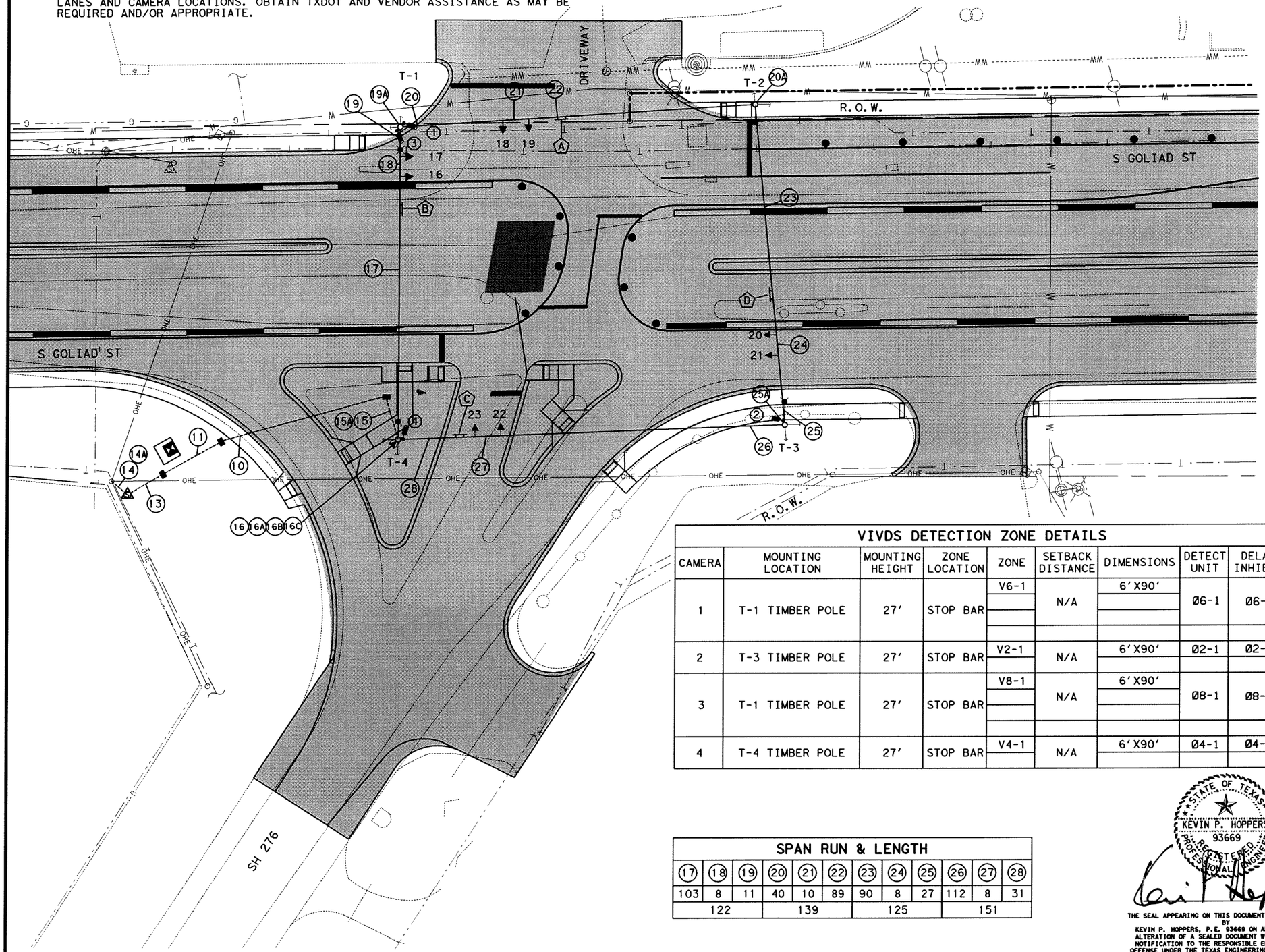
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	618
CONT.	SECT.	JOB	
0009	12	203	

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE IIA. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.

2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.

3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-1 TIMBER POLE	27'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
2	T-3 TIMBER POLE	27'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
3	T-1 TIMBER POLE	27'	STOP BAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
4	T-4 TIMBER POLE	27'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R

SPAN RUN & LENGTH

(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
103	8	11	40	10	89	90	8	27	112	8	31
122			139			125			151		

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1inch = 40 ft.

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SH 205

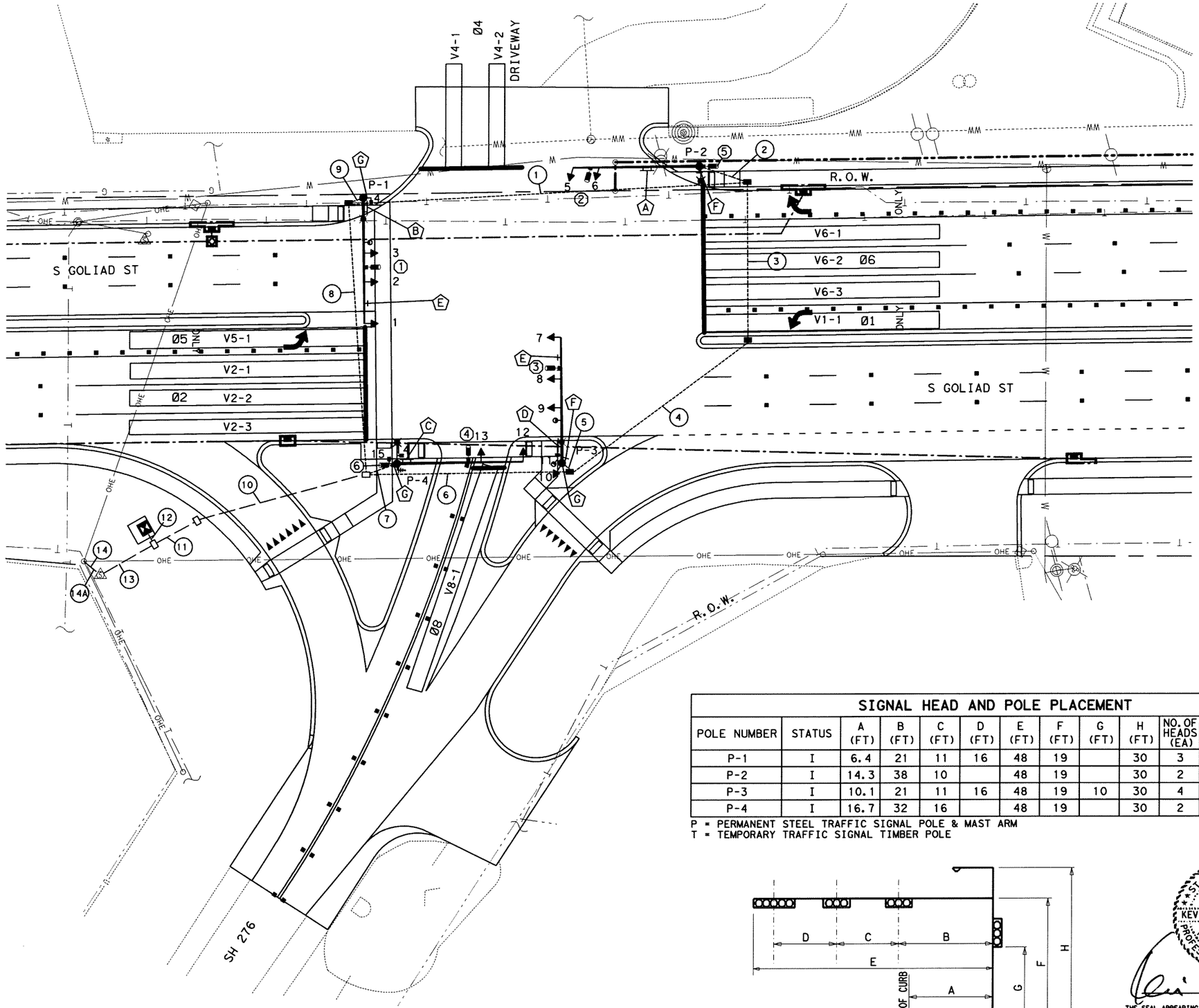
TEMPORARY SIGNAL LAYOUT
S GOLIAD ST (SH 205)
AT SH 276

PHASE IIA

SHEET 7 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	618A
CONT.	SECT.	JOB	
0009	12	203	



LEGEND

- TYPICAL PROPOSED MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- SIGN PANEL AND POST
- OPTICOM
- SSR YAGI ANTENNA

SH 143C OR SH 152A
SH 4,10,11, 14,15

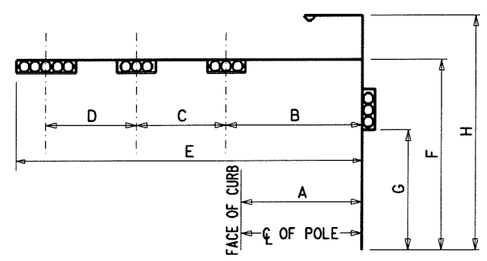
H5LT (R Y G G G) SH 1,7
H3 (R Y G) SH 2,3,6, 8,9,10,13
H4LT (R Y G G) SH 5,12

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

SIGNAL HEAD AND POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	I	6.4	21	11	16	48	19		30	3	Y	36-A
P-2	I	14.3	38	10		48	19		30	2	Y	36-A
P-3	I	10.1	21	11	16	48	19	10	30	4	Y	36-A
P-4	I	16.7	32	16		48	19		30	2	Y	36-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE



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SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT SH 276

FINAL SIGNAL DESIGN

SHEET 8 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	619
CONT.	SECT.	JOB	
0009	12	203	

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 1½" RM RISER	2" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	4" PVC BORED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 5 CNDR. CABLE	10 CNDR. CABLE	20 CNDR. CABLE	ITEM 6266 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 HELIAX CABLE	LENGTH OF RUN (FT)	RUN NO.
1	I				155			I		1								155	1
2	I			20				I		1	2		1		2			25	2
3	I				65			I		1	2		1		2			65	3
4	I				90			I		1	2		1		2			90	4
5	I			5				I		1	4			1	1	2		10	5
6	I				85			I		1	2		1	1	3	2		85	6
7	I			15				I		1	4			1	2		1	20	7
8	I				110			I		1	2			1	1	1		110	8
9	I			5				I		1	2			1	1	1		10	9
10	E						70	I		1	2		1	3	6	3	1	70	10
11	E					30		I		1	2		1	3	6	3	1	30	11
12	E					10		I	2	1			1	3	6	3	1	10	12
13	E		25					I	2	1	2							30	13
14	E		10					I	BY OTHERS									15	14
14A	E	20						I	BY OTHERS									15	14A
TOTAL		0	0	45	505	0	0		80	710	1150	0	375	565	1445	640	130		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

NOTES:

1. REMOVE AND SALVAGE ALL TEMPORARY SIGNAL EQUIPMENT WHEN THE PERMANENT SIGNAL IS PLACED IN OPERATION. RETURN POLE-MOUNTED CABINET AND CONTROLLER TO TXDOT. TXDOT SHALL BE PRESENT WHEN THE SIGNAL IS PLACED IN OPERATION.
2. POWER SERVICE INSTALLED BY CONTRACTOR DURING PREVIOUS CONSTRUCTION PHASE.
3. EXISTING CONDUIT RUN 15 SHOWN IN PREVIOUS CONSTRUCTION PHASE SHALL BE ABANDONED.
4. RE-LOCATE EXISTING CONTROLLER, SPREAD SPECTRUM RADIO, CABINET TO FOUNDATION AS SHOWN ON THE PLANS PER TxDOT SPECIFICATIONS.
5. INSTALL STANDARD GROUND BOXES W/CONCRETE APRONS AS SHOWN.
6. SUPPLY TRAFFIC SIGNAL POLES AND INSTALL ACCORDING TO TxDOT SPECIFICATIONS.
7. CONTRACTOR TO MOUNT EXISTING SSR UNI-ANTENNA TO POLE P-4. FURNISH AND INSTALL SSR HELIAX CABLE.
8. ALL OPTICOM EQUIPMENT SHALL BE RELOCATED FROM EXISTING SIGNALS AND INSTALLED BY THE CONTRACTOR. THE CITY OF ROCKWALL TO PROVIDE NEW OPTICOM CABLE. CONTRACTOR TO COORDINATE WITH MARK POINDEXTER WITH THE CITY FIRE DEPARTMENT AT THE FOLLOWING NUMBER: (972) 771-7770.
9. INSTALL ALL VIVDS EQUIPMENT PER VENDOR AND TxDOT SPECIFICATIONS. RELOCATE VIVDS PROCESSOR AND CAMERA ASSEMBLIES FROM TEMPORARY SIGNAL EQUIPMENT TO PERMANENT SIGNAL EQUIPMENT. ADDITIONAL CAMERA #5 AND #6 WILL BE SUPPLIED BY TxDOT AND INSTALLED BY CONTRACTOR. CONTRACTOR TO SUPPLY VIVDS CABLE.
10. ALL NEW TRAFFIC SIGNAL SIGNING SHALL BE FURNISHED BY THE CONTRACTOR.
11. INSTALL SEPARATE SIGNAL CABLES TO EVERY DEVICE ON EACH POLE (TRAFFIC SIGNAL HEADS, PED HEADS, AND PED BUTTONS) FROM THE TERMINAL BLOCKS IN EACH POLE. ALL EQUIPMENT AND DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS.
12. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

*ITEM 628 ELECTRICAL SERVICE DATA

SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION ED(4)(S)(08)03	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240.060(NS)SS(E)PS(U)	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 6	6.2

* REFER TO STANDARD SHEET ED (8)-03.
POWER INSTALLED DURING A PREVIOUS CONSTRUCTION PHASE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 20 CNDR. FROM P-1 TO CNTRL.	CABLE 2 10 CNDR. FROM P-2 TO CNTRL.	CABLE 3 20 CNDR. FROM P-3 TO CNTRL.	CABLE 4 20 CNDR. FROM P-4 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	SPARE	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 1,2,3 R	SH 5,6 R	SH 7,8,9 R	SH 12,13 R	3
4	GREEN	SH 1,2,3 G	SH 5,6 G	SH 7,8,9 G	SH 12,13 G	4
5	ORANGE	SH 1,2,3 Y	SH 5,6 Y	SH 7,8,9 Y	SH 12,13 Y	5
6	BLUE	Ø4 PED CALL	SPARE	Ø2 PED CALL	Ø2 PED CALL	6
7	WHITE/BLACK	SH 1 ~~G~~	SH 6 ~~G~~	SH 7 ~~G~~	SH 12 ~~G~~	7
8	RED/BLACK	SH 1 ~~Y~~	SPARE	SH 7 ~~Y~~	SH 14 DW	8
9	GREEN/BLACK	SPARE	SPARE	SPARE	SH 14 W	9
10	ORANGE/BLACK	SH 4 DW	SPARE	SH 11 DW	Ø4 PED CALL	10
11	BLUE/BLACK	SH 4 W		SH 11 W	SPARE	11
12	BLACK/WHITE	SPARE		SPARE	SH 15 DW	12
13	RED/WHITE	SPARE		SH 10 R	SH 15 W	13
14	GREEN/WHITE	SPARE		SH 10 G	SPARE	14
15	BLUE/WHITE	SPARE		SH 10 Y	SPARE	15
16	BLACK/RED	SPARE		SPARE	SPARE	16
17	WHITE/RED	SPARE		SPARE	SPARE	17
18	ORANGE/RED	SPARE		SPARE	SPARE	18
19	BLUE/RED	SPARE		SPARE	SPARE	19
20	RED/GREEN	SPARE		SPARE	SPARE	20

STATE OF TEXAS
KEVIN P. HOPPERS
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SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT SH 276

FINAL SIGNAL DESIGN

SHEET 9 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	620
CONT.	SECT.	JOB	
0009	12	203	

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-1 MAST ARM	24'	STOPBAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V6-2		6'X90'		
				V6-3		6'X90'		
				V1-1	N/A	6'X90'	Ø1-1	Ø1-G
2	P-2 MAST ARM	24'	STOPBAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
3	P-3 MAST ARM	24'	STOPBAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V2-2		6'X90'		
				V2-3		6'X90'		
				V5-1	N/A	6'X90'	Ø5-1	Ø5-G
4	P-4 MAST ARM	24'	STOPBAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R
				V4-2		6'X90'		
5	P-2 LUMINAIRE ARM	32'	SETBACK	V6-4	210'	6'X20'	Ø6-2	Ø6-G
				V6-5		6'X20'		
				V6-6		6'X20'		
				V6-7	350'	6'X20'	Ø6-3	Ø6-G
				V6-8		6'X20'		
				V6-9		6'X20'		
6	P-4 LUMINAIRE ARM	32'	SETBACK	V2-4	210'	6'X20'	Ø2-2	Ø2-G
				V2-5		6'X20'		
				V2-6		6'X20'		
				V2-7	350'	6'X20'	Ø2-3	Ø2-G
				V2-8		6'X20'		
				V2-9		6'X20'		

ITEM 682 SIGNAL HEADS

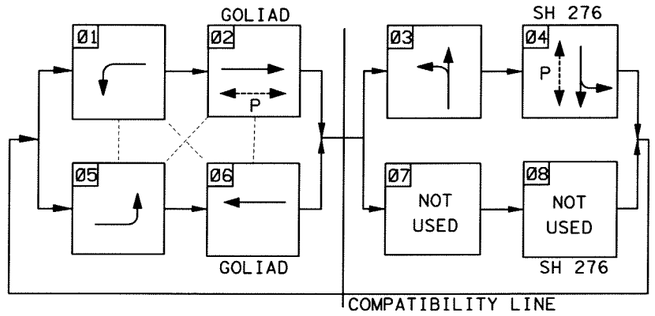
SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS					
			BACKPLATES			LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	4 SEC (EA)	5 SEC (EA)		SEC(EA)	SEC(EA)
1, 7	H5LT	I			2		10	
2, 3, 6, 8, 9, 10, 13	H3	I	7				21	
5, 12	H4LT	I		2			8	
14, 15	143C	I						2
4, 11	152A	I						2
TOTAL (NEW)			7	2	2	0	39	4
STATUS: E=EXISTING; R=EX. TO BE REMOVED; I=INSTALL NEW								

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2014	PED SIG SEC (12 IN) LED (2 IND)	EA	4
0682	2022	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	4
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	11
0682	2024	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	2
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	11
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	11

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	4



ITEM 6006 SSR

ITEM	QUANTITY
*SPREAD SPECTRUM RADIO	1
*RADIO ANTENNA	1
HELIAX CABLE, LF	170

* RE-USE EXISTING SPREAD SPECTRUM RADIO AND ANTENNA.

ITEM 6266 VIVDS

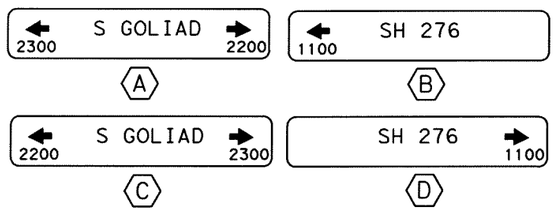
ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	2 [4]
VIVDS COMM. CABLE, LF	1765
VIVDS SET UP SYSTEM	1

* SUPPLIED BY TXDOT
[X] - RELOCATED FROM TEMPORARY SIGNALS
X - NEW CAMERA ASSEMBLIES TO BE INSTALLED BY CONTRACTOR AND FURNISHED BY TxDOT

WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR.		ITEM 684 TYPE A		ITEM 6626 VIVDS CABLE	*OPTICOM CABLE	ITEM 6006 HELIAX CABLE
	NO. 6 XHHW	NO. 12 XHHW	5 CNDR NO. 14	7 CNDR NO. 14		MODEL 138	
P-1		80	100	70	60	60	
P-2		80	125		100		
P-3		80	100	70	60	80	
P-4		80	125		100		40
TOTAL	0	320	445	140	320	140	40

* SUPPLIED BY CITY





SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	S GOLIAD	I	P-2	15" X VA	-	-	-
B	STREET NAME	SH 276	I	P-1	15" X VA	-	-	-
C	STREET NAME	S GOLIAD	I	P-4	15" X VA	-	-	-
D	STREET NAME	SH 276	I	P-3	15" X VA	C	-	-
E	R10-12	LEFT TURN YIELD ON GREEN	I	P-1/P-3	24"X30"	C	-	-
F	R9-3A	NO PEDESTRIANS	I	P-2	18"X18"	C	-	-
G	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-1/P-3 P-4(2)	9"X12"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE



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SH 205

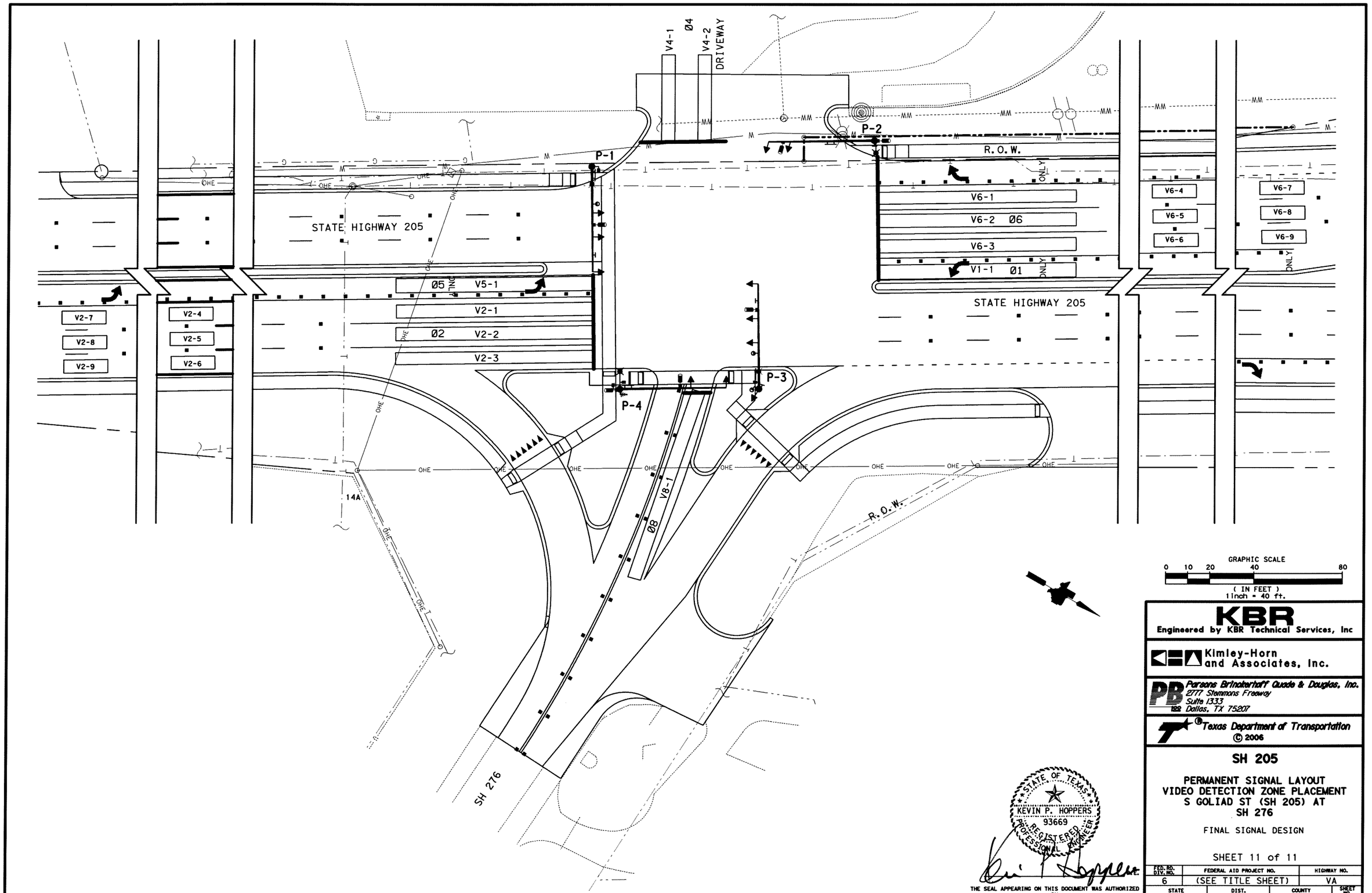
PERMANENT SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT SH 276

FINAL SIGNAL DESIGN

SHEET 10 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	621
CONT.	SECT.	JOB	
0009	12	203	



GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205

PERMANENT SIGNAL LAYOUT
VIDEO DETECTION ZONE PLACEMENT
S GOLIAD ST (SH 205) AT SH 276

FINAL SIGNAL DESIGN

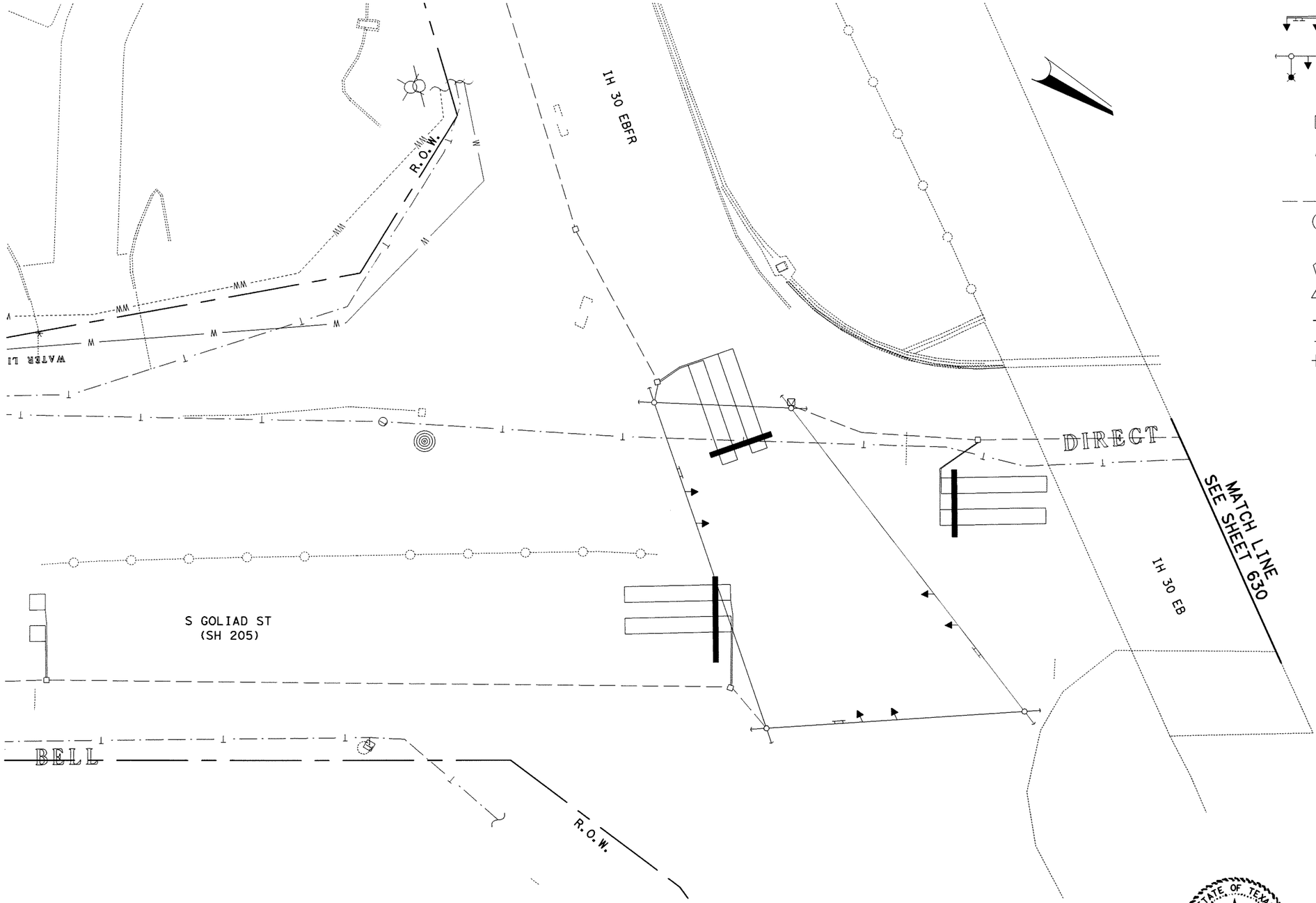
SHEET 11 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	621A
CONT.	SECT.	JOB	
0009	12	203	

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN P. HOPPERS, P.E. 93669 ON APRIL 27, 2006
ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.



LEGEND

- TYPICAL EXISTING MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TYPICAL EXISTING SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- EXISTING TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- EXISTING CONDUIT
- (1) EXISTING CONDUIT RUN NUMBER
- 1 EXISTING SIGNAL HEAD NUMBER
- (A) EXISTING SIGN LABEL
- (S) EXISTING POWER SOURCE
- EXISTING SIGN PANEL AND POST
- EXISTING OPTICOM
- SSR YAGI ANTENNA

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

KBR
Engineered by KBR Technical Services, Inc

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Parsons Brinckerhoff Quade & Douglas, Inc.
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Suite 1333
Dallas, TX 75207

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SH 205

EXISTING SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 EB FRONTAGE ROAD

SHEET 1 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	622
CONT.	SECT.	JOB	
0009	12	203	

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ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS			
			BACKPLATES		LOUVER	VEH. SIGNAL
			3 SEC (EA)	5 SEC (EA)		SEC (EA)
30, 31, 32, 33, 34	H3	I	5			15
29	H5LT	I		1		5
		TOTAL (NEW)	5	1		20

STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	1

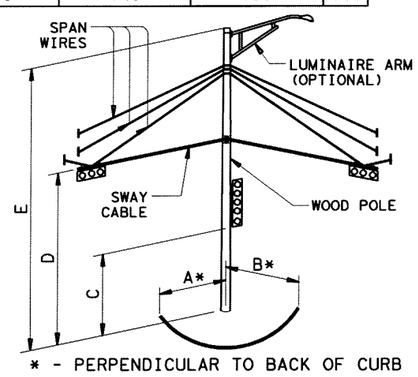
TIMBER POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-1	I	49	56	-	19	30	Y
T-2	I	27	41	-	19	30	Y
T-3	I	50	52	-	19	30	Y
T-4	I	72	46	-	19	30	Y

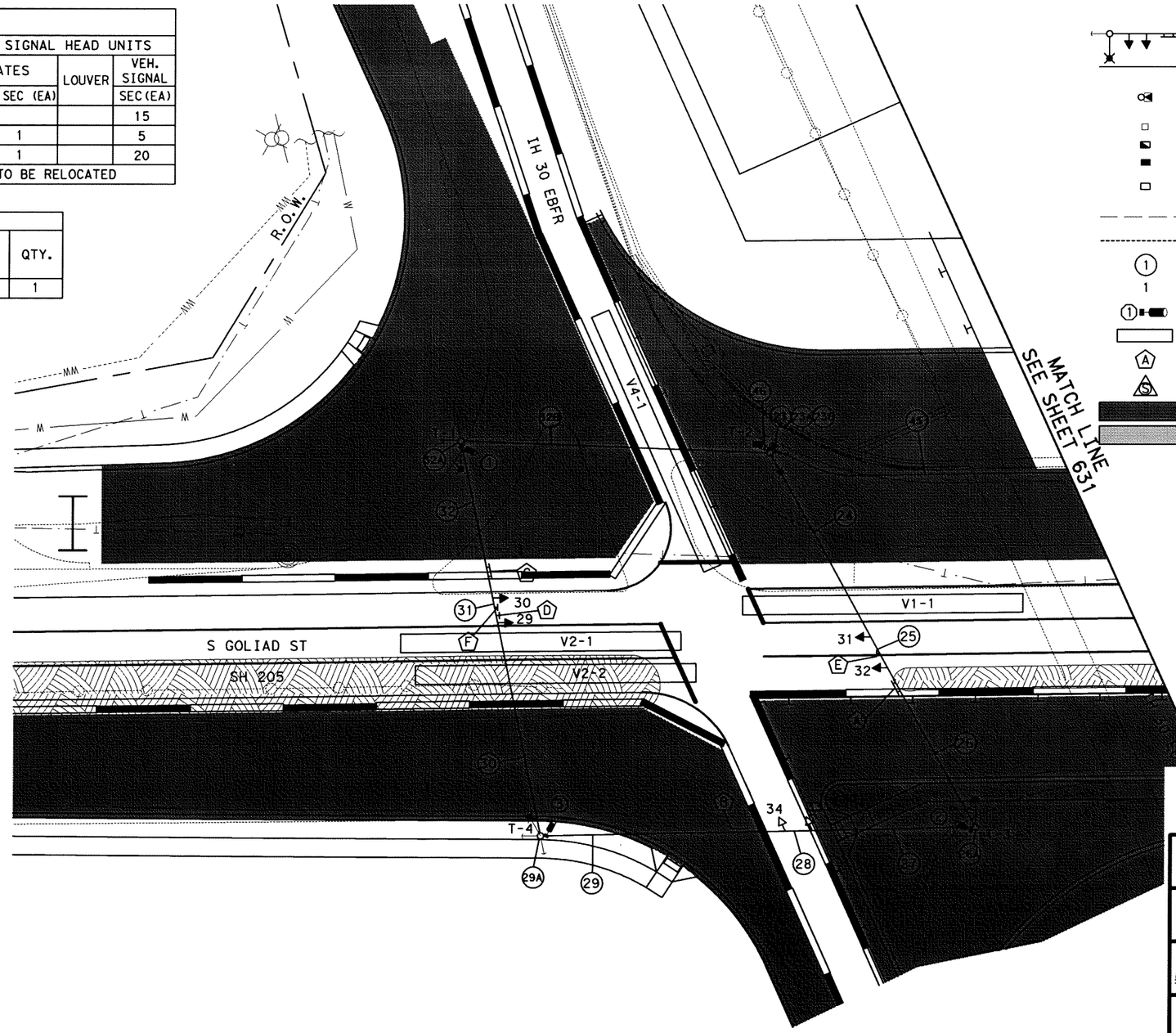
T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE
I=INSTALL; E=EXISTING; REM=REMOVE

SPAN RUN & LENGTH

(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(32B)
68	11	59	53	9	78	70	8	52	100
138			140			130			100



* - PERPENDICULAR TO BACK OF CURB



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

H3 (R Y G)
SH 30, 31, 32, 33, 34

H5LT (R Y Y G G)
SH 29

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH TXDOT FOR THE TXDOT SPEC 680 SUPPLIED EQUIPMENT TO BE USED DURING THE TEMPORARY PHASE AND TO OBTAIN TXDOT ASSISTANCE AS APPLICABLE. ONCE THE PHASE I TRAFFIC SIGNAL IS APPROVED TO PLACE INTO OPERATION, THE CONTRACTOR MAY, DURING SOME TIME OTHER THAN CONTRACT DESCRIBED PEAK HOURS, SAFELY STOP ALL TRAFFIC AT THE INTERSECTION, TURN OFF THE EXISTING TRAFFIC SIGNAL, AND PLACE THE TEMPORARY TRAFFIC SIGNAL INTO OPERATION.
2. INSTALL ALL TEMPORARY SIGNALS HORIZONTALLY ON SPAN WIRES, A MINIMUM OF 18 FEET ABOVE THE ROADWAY. INSTALL SUFFICIENT TRAFFIC SIGNAL CABLES IN PLACE TO ACCOMMODATE ALL PHASES OF CONSTRUCTION. COIL EXCESS CONDUCTOR AND LASH IT TO THE SPAN WIRE CLEAR OF THE ROADWAY IF THE TRAFFIC SIGNAL HEAD IT WILL SERVE IN A SUBSEQUENT PHASE IS BEYOND CURRENT SIGNAL HEAD LOCATIONS.
3. EXISTING STREET NAME SIGNING SHALL THEN BE TRANSFERRED FROM THE EXISTING TRAFFIC SIGNAL MOUNTING TO THE TEMPORARY SPAN WIRE INSTALLATION.

SIGNAL HEAD PLACEMENT DURING CONSTRUCTION

MAX. DISTANCE (5 CNDR.)			
HEAD 32	13′	HEAD 31	121′
HEAD 34	9′	HEAD 33	228′
MAX. DISTANCE (7 CNDR.)			
HEAD 29	11′	HEAD 30	137′

STATE OF TEXAS
KEVIN P. HOPPERS
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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 EB FRONTAGE ROAD

PHASE I

SHEET 2 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	623
CONT.	SECT.	JOB	
0009	12	203	

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT)					CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA)			ITEM 684 SIG CAB (EA)			VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
		1 ½" RM RISER	2" RM RISER	2" PVC TRENCHED	2" PVC BORED	3" RM RISER		NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	TY-A 5 CNDR. CABLE	TY-A 7 CNDR. CABLE	TY-A 10 CNDR. CABLE					
23	I		10				I	2	1	2							10	23
23A	I	20					I		1	2							20	23A
23B	I					15	I		1		2	1		3			15	23B
24	AC						I				2			1			106	24
25	AC						I				2			1			13	25
26	AC						I				1			1			19	26
26A	I	10					I		1	2				1			10	26A
27	AC						I			2	1						75	27
28	AC						I			2	1						9	28
29	AC						I			2							56	29
29A	I	10					I		1	4				1			10	29A
30	AC						I			2				1			70	30
31	AC						I			2		1		1			2	31
32	AC						I			2		1		1			52	32
32A	I	10					I		1	4				1			10	32A
32B	AC						I			2		1		2			100	32B
45	I			100			I	2	1	2							100	45
46	I			10			I	2	1	2							10	46
TOTAL		50	0	110	0	15		240	175	1088	371	169	0	537	0	0		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2015	VEH SIG SEC (12 IN) INC (GRN ARW)	EA	1
0682	2016	VEH SIG SEC (12 IN) INC (GRN)	EA	6
0682	2017	VEH SIG SEC (12 IN) INC (YEL ARW)	EA	1
0682	2018	VEH SIG SEC (12 IN) INC (YEL)	EA	6
0682	2020	VEH SIG SEC (12 IN) INC (RED)	EA	6

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-1 TIMBER POLE	27'	STOPBAR	V1-1	N/A	6'X90'	Ø1-1	Ø1-R
2	T-3 TIMBER POLE	27'	STOPBAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V2-2		6'X90'	Ø2-1	Ø2-R
3	T-4 TIMBER POLE	27'	STOPBAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R

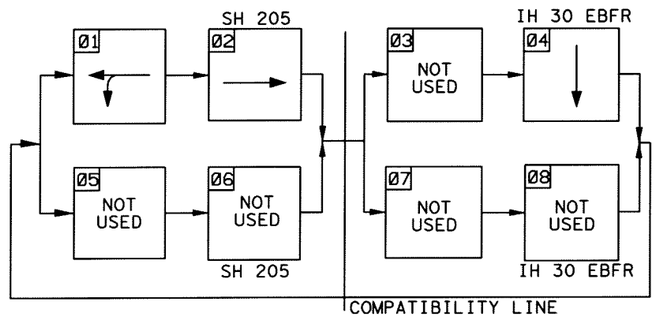
CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 7 CNDR. SPAN T-1/T-4 TO CNTRL.	CABLE 2 5 CNDR. SPAN T-2/T-3 TO CNTRL.	CABLE 3 5 CNDR. SPAN T-3/T-4 TO CNTRL.	CNDR. NO.
1	BLACK	SPARE	SPARE	SPARE	1
2	WHITE	SH COM	SH COM	SH COM	2
3	RED	SH 29, 30 R	SH 31, 32 R	SH 33, 34 R	3
4	GREEN	SH 29, 30 G	SH 31, 32 G	SH 33, 34 G	4
5	ORANGE	SH 29, 30 Y	SH 31, 32 Y	SH 33, 34 Y	5
6	BLUE	SH 29 ~~Y~~			6
7	WHITE/BLACK	SH 29 ~~G~~			7

ITEM 6626 VIVDS

ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	3
VIVDS COMM. CABLE, LF	537
VIVDS SET UP SYSTEM	1

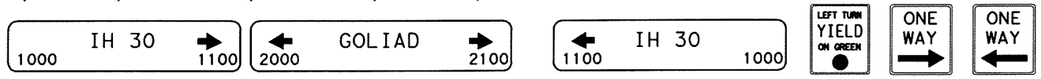
*SUPPLIED BY TXDOT



SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE TWT(1)UA(P)	GROUND MOUNT TYPE TWT(1)UA(T)
A	STREET NAME	IH 30	E/REL	T-2/T-3	-	-	-	-
B	STREET NAME	GOLIAD	E/REL	T-3/T-4	-	-	-	-
C	STREET NAME	IH 30	E/REL	T-4/T-1	-	-	-	-
D	R10-12	LEFT TURN YIELD ON GREEN	E/REL	T-4/T-1	-	C	-	-
E	R6-2R	ONE-WAY SIGN (RIGHT)	E/REL	T-2/T-3	-	C	-	-
F	R6-2L	ONE WAY SIGN (LEFT)	E/REL	T-4/T-1	-	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE



(A) (B) (C) (D) (E) (F)



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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 EB FRONTAGE ROAD

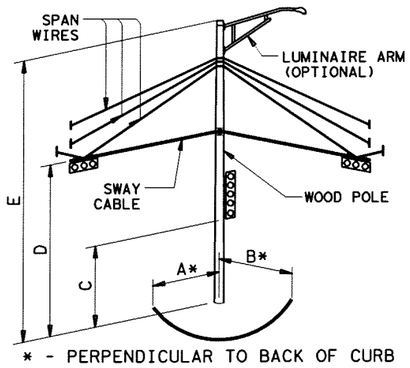
PHASE I

SHEET 3 of 10

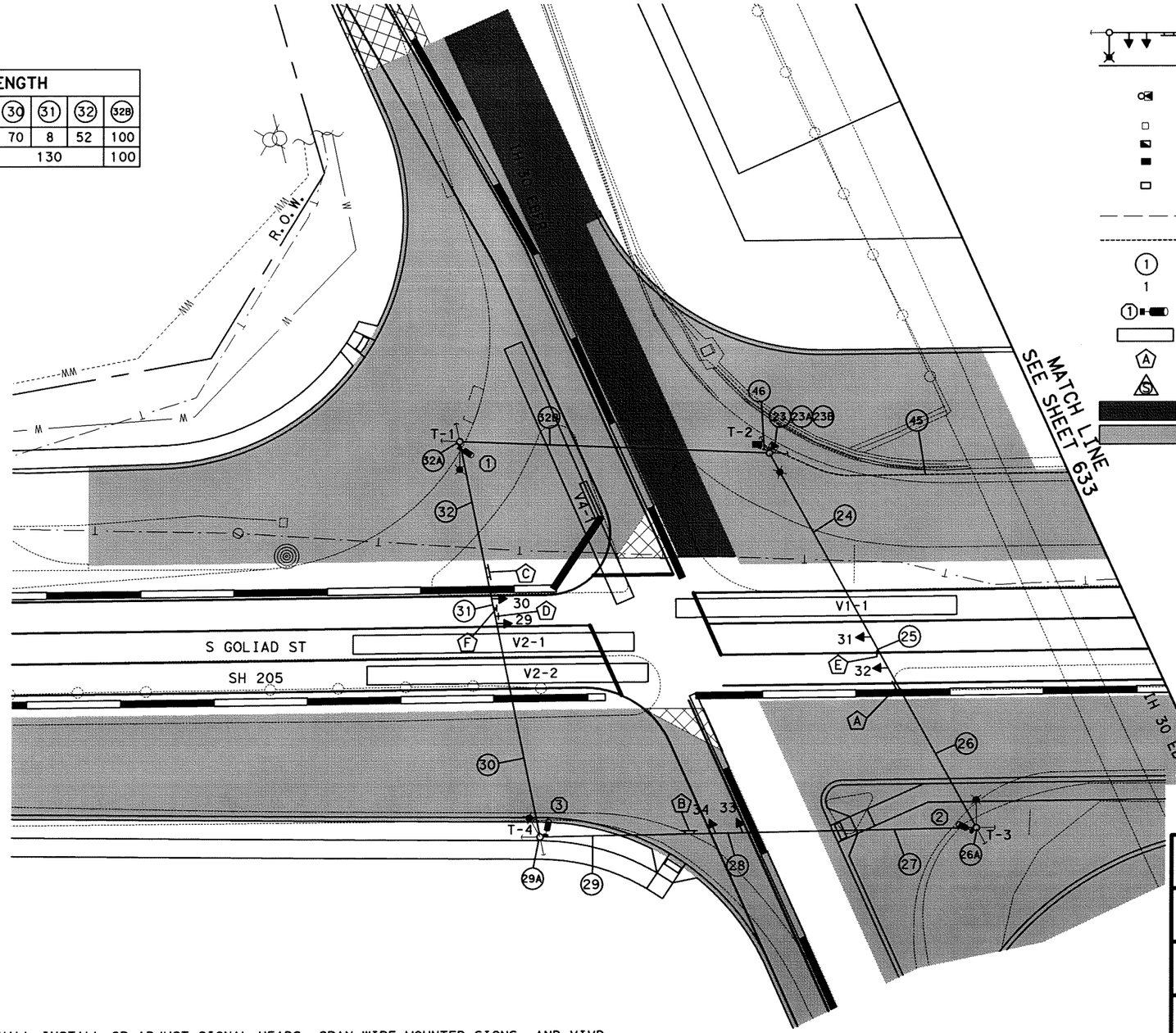
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	624
CONT.	SECT.	JOB	
0009	12	203	

SPAN RUN & LENGTH									
(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(32B)
68	11	59	75	9	56	70	8	52	100
138			140			130			100



* - PERPENDICULAR TO BACK OF CURB



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE 1A. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.

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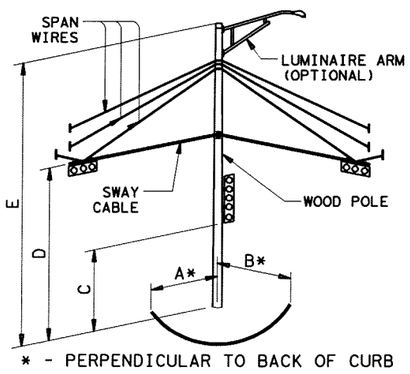
PHASE IA

SHEET 4 of 10

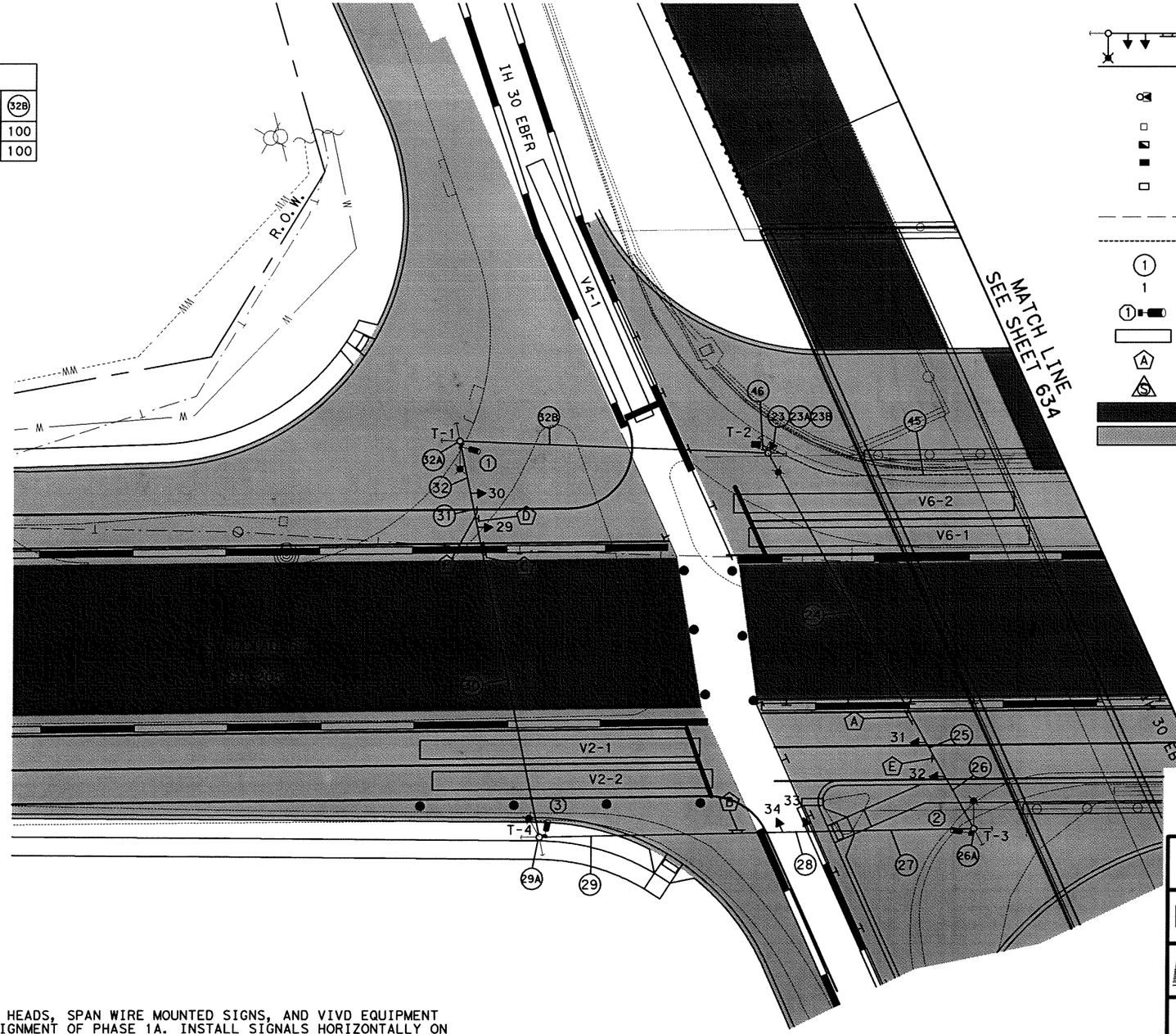
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	625
CONT.	SECT.	JOB	
0009	12	203	

SPAN RUN & LENGTH									
(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(32B)
106	13	19	53	9	78	102	11	17	100
138			140			130			100



* - PERPENDICULAR TO BACK OF CURB



LEGEND

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- CONSTRUCTION PREVIOUS PHASE

H3
(R)(Y)(G)
SH 30, 31, 32, 33, 34

H5LT
(R)(Y)(Y)(G)(G)
SH 29

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

NOTES:

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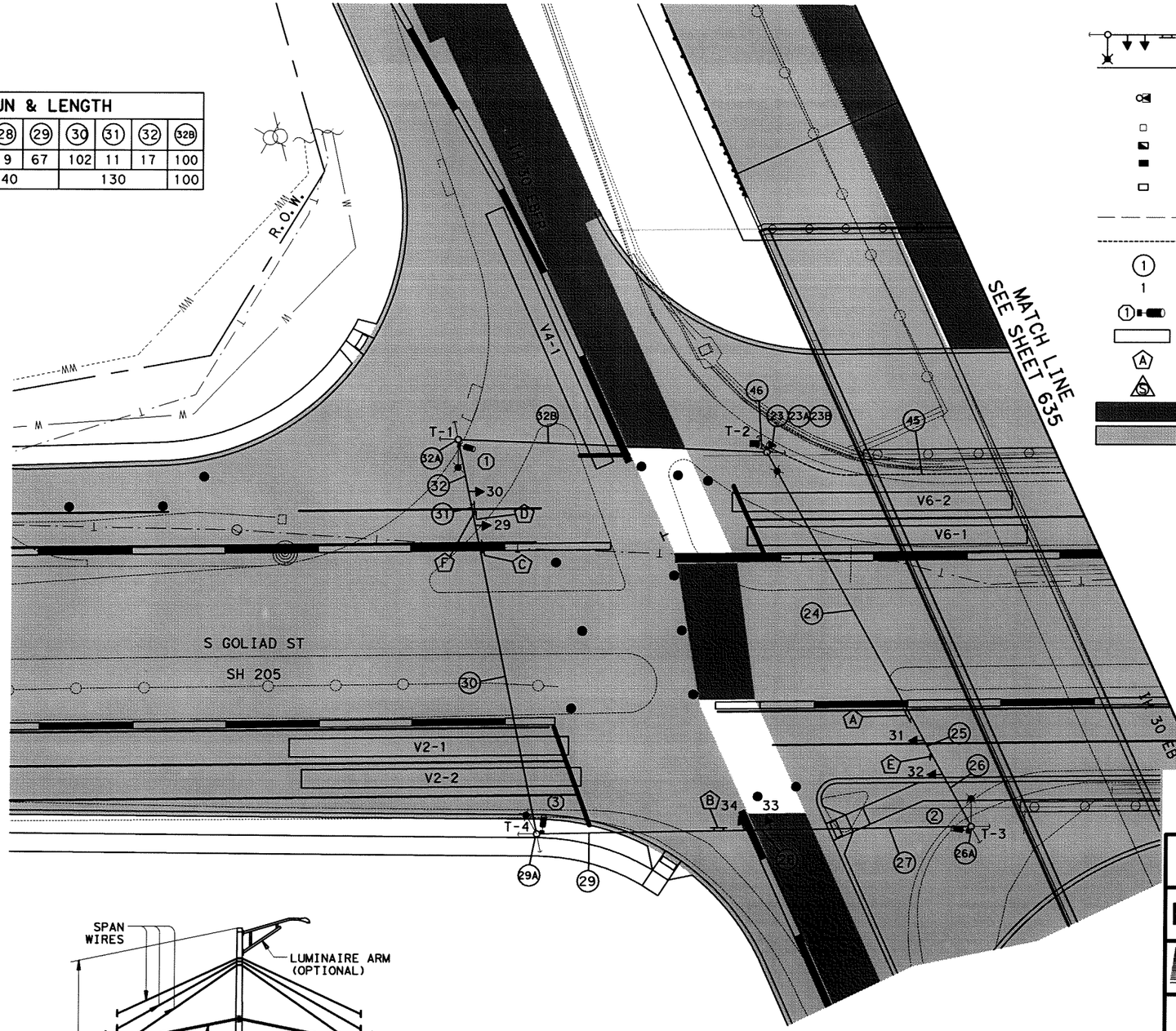
PHASE II

SHEET 5 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	626
CONT.	SECT.	JOB	
0009	12	203	

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(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(32B)
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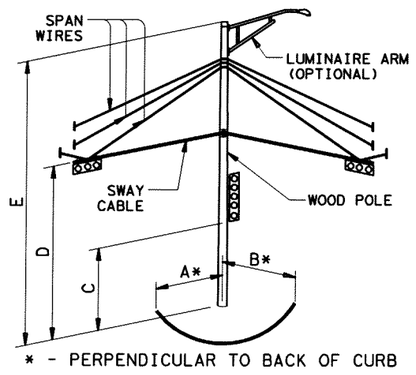
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- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

H3
(R)(Y)(G)
SH 30, 31, 32, 33, 34

H5LT
(R)(Y)(Y)(G)(G)
SH 29

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.



* - PERPENDICULAR TO BACK OF CURB

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 EB FRONTAGE ROAD

PHASE IIA

SHEET 6 of 10

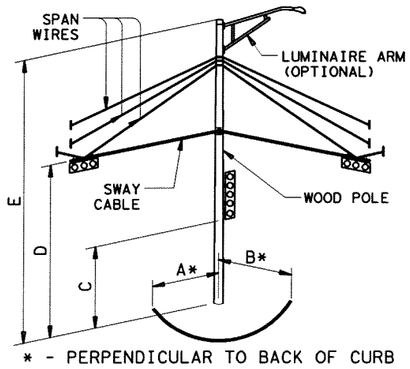
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KEVIN P. HOPPERS
93669
LICENSED PROFESSIONAL ENGINEER
P.E.

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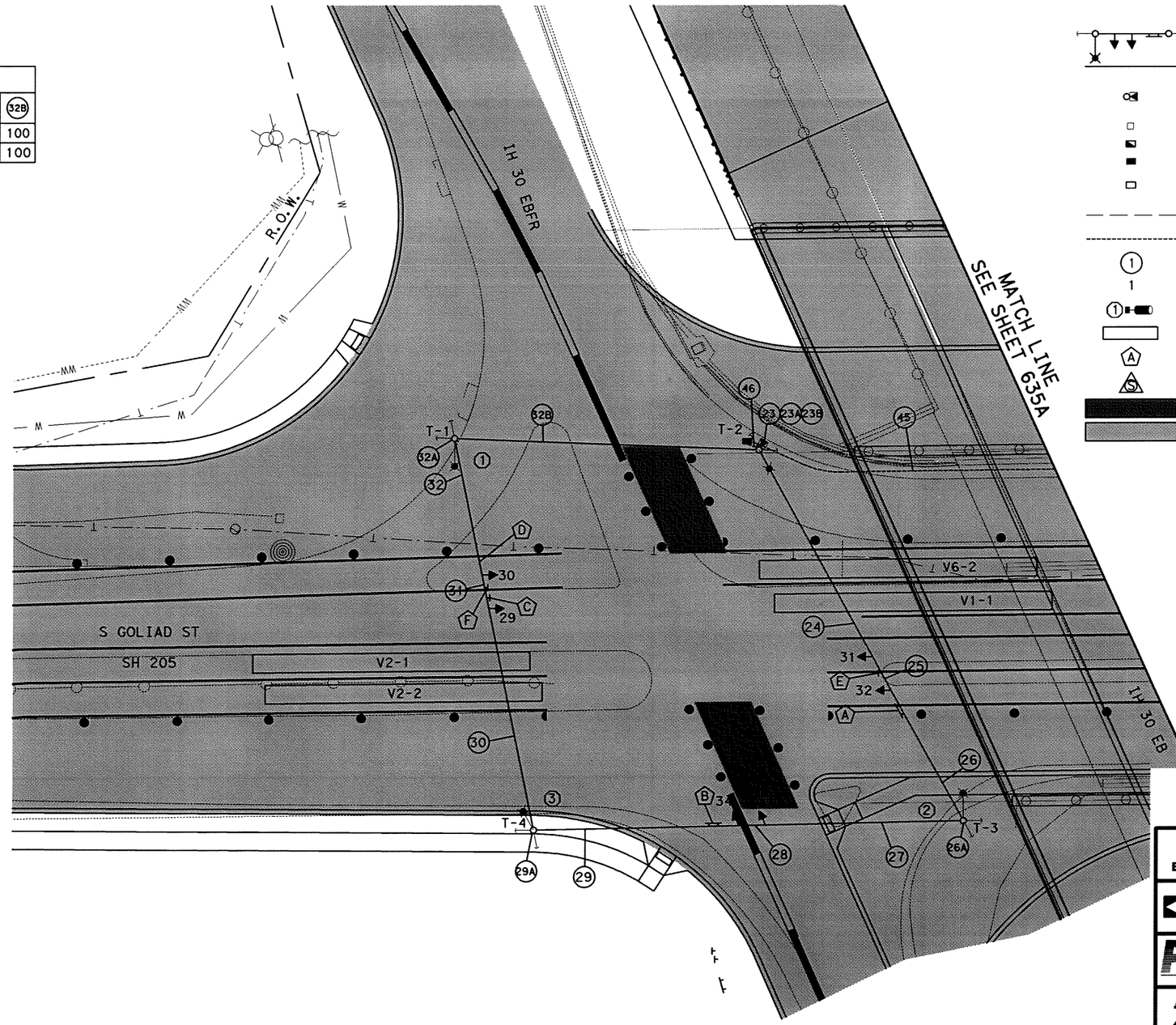
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	627
CONT.	SECT.	JOB	
0009	12	203	

SPAN RUN & LENGTH									
(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(32B)
77	13	48	64	9	67	74	11	45	100
138			140			130			100



* - PERPENDICULAR TO BACK OF CURB



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

H3
(R)(Y)(G)
SH 30, 31, 32, 33, 34

H5LT
(R)(Y)(G)(G)(G)
SH 29

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

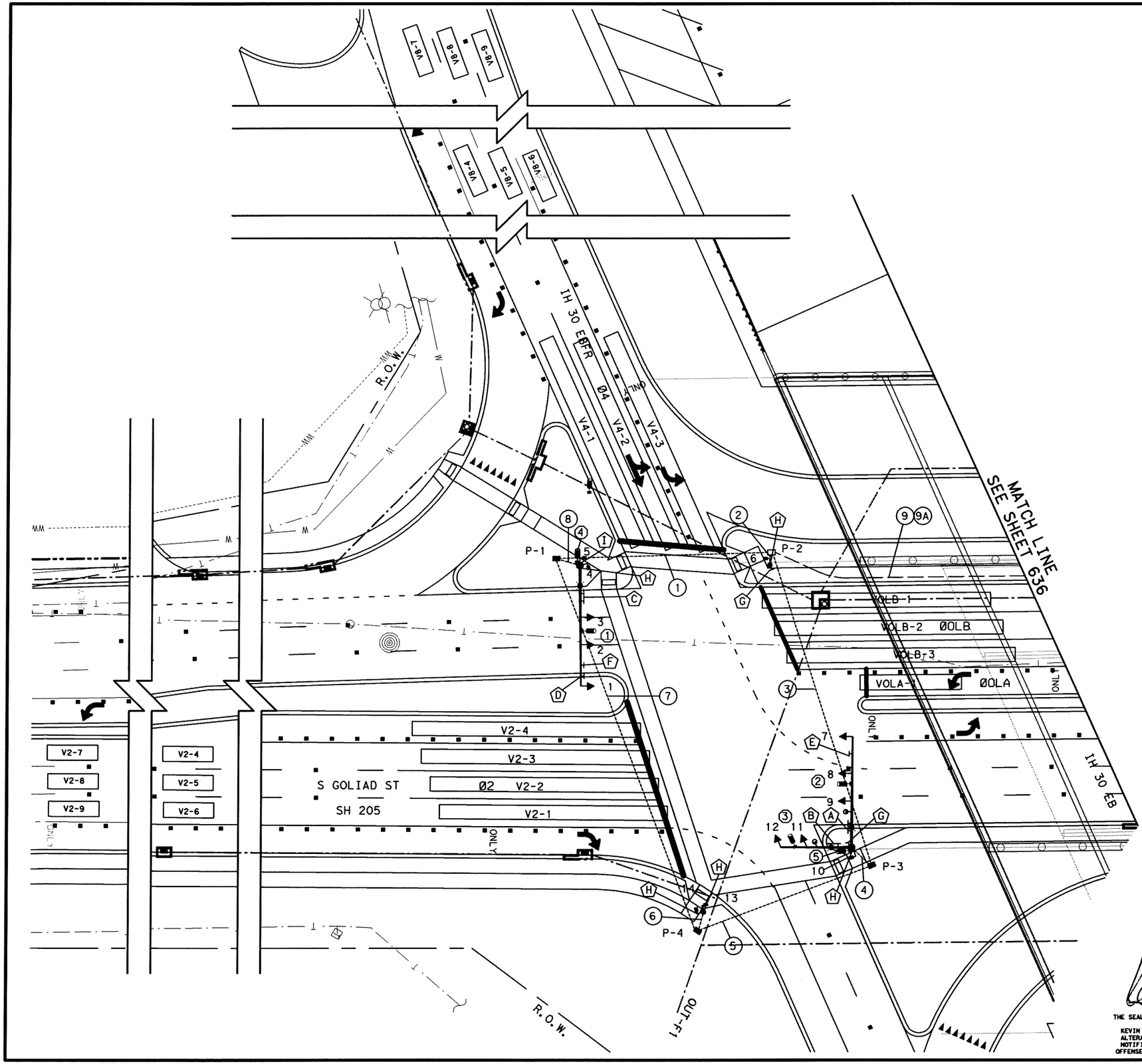
TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 EB FRONTAGE ROAD

PHASE IIB

SHEET 7 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	627A
CONT.	SECT.	JOB	
0009	12	203	



LEGEND

- TYPICAL PROPOSED MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- SIGN PANEL AND POST
- OPTICOM
- SSR YAGI ANTENNA

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 EB FRONTAGE ROAD

FINAL SIGNAL DESIGN

SHEET 8 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	628
CONT.	SECT.	JOB	
0009	12	203	

STATE OF TEXAS
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CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 2" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 10 CNDR. CABLE		20 CNDR. CABLE	ITEM 6266 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	LENGTH OF RUN (FT)	RUN NO.
1	I			90		I		1	2			1	2		90	1
2	I		10			I		1		1					10	2
3	I			135		I		1	2	1		1	3	2	135	3
4	I		15			I		1	2			1	3	2	15	4
5	I			80		I		1		1					80	5
6	I		15			I		1		1					15	6
7	I			165		I		1							165	7
8	I		15			I		1	2			1	2		15	8
9	A	120				REM	2	1							120	9
9A	I				120	I		1	2	2		2	5	2	120	9A
TOTAL			55	470	120			645	750	480	0	495	1260	540		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

* CONTRACTOR TO DIRECTIONAL BORE AROUND NEWLY INSTALLED STORM DRAIN.

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2014	PED SIG SEC (12 IN) LED (2 IND)	EA	6
0682	2022	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	1
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	8
0682	2024	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	1
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	8
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	8

WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR. NO. 6 XHHW	NO. 12 XHHW	ITEM 684 TYPE A 5 CNDR NO. 14	7 CNDR NO. 14	ITEM 6266 VIVDS CABLE	OPTICOM CABLE* MODEL 138
P-1		80	103	68	105	
P-2			10			
P-3		100	243		150	88
P-4				20		
TOTAL	0	180	356	88	255	88

* - CITY SUPPLIED CABLE

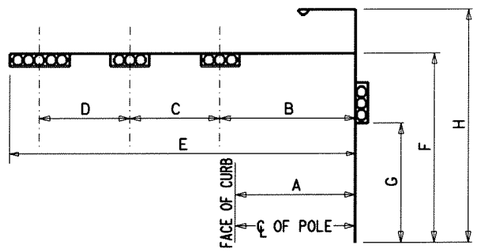
GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	3

ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS BACKPLATES 3 SEC (EA)	5 SEC (EA)	LOUVER	VEH. SIGNAL SEC(EA)	PED. SIGNAL SEC(EA)
1	H5LT	I		1		5	
2, 3, 7, 8, 9, 11, 12	H3	I	7			21	
4, 5, 13, 14	143C	I					4
6, 10	152A	I					2
TOTAL (NEW)			7	1	0	26	6

STATUS: E=EXISTING; R=EX. TO BE REMOVED; I=INSTALL NEW



SIGNAL HEAD AND POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	I	8.6	20.5	11	16.5	48	19		30	3	Y	36-A
P-2	I	14					10					24-A
P-3	I	9.1	18.3	11	14.7	44	19		30	3	Y	36-A
P-3	I	9.1	17.8	10.2		28	19		30	2	Y	36-A
P-4	I	10.4					10					24-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; S=SALVAGE

NOTES:

1. REMOVE AND SALVAGE ALL TEMPORARY SIGNAL EQUIPMENT WHEN THE PERMANENT SIGNAL IS PLACED IN OPERATION. RETURN POLE-MOUNTED CABINET AND CONTROLLER TO TXDOT. TXDOT SHALL BE PRESENT WHEN THE SIGNAL IS PLACED IN OPERATION.
2. INSTALL STANDARD GROUND BOXES W/CONCRETE APRONS AS SHOWN.
3. SUPPLY TRAFFIC SIGNAL POLES AND INSTALL ACCORDING TO TxDOT SPECIFICATIONS.
4. ALL OPTICOM EQUIPMENT SHALL BE RELOCATED FROM EXISTING SIGNALS AND INSTALLED BY THE CONTRACTOR. THE CITY OF ROCKWALL TO PROVIDE NEW OPTICOM CABLE. CONTRACTOR TO COORDINATE WITH MARK POINDEXTER WITH THE CITY FIRE DEPARTMENT AT THE FOLLOWING NUMBER: (972) 771-7770.
5. INSTALL ALL VIVDS EQUIPMENT PER VENDOR AND TxDOT SPECIFICATIONS. RELOCATE VIVDS PROCESSOR AND CAMERA ASSEMBLIES FROM TEMPORARY SIGNAL EQUIPMENT TO PERMANENT SIGNAL EQUIPMENT. ADDITIONAL CAMERA #5 AND #6 WILL BE SUPPLIED BY TxDOT AND INSTALLED BY CONTRACTOR. CONTRACTOR TO SUPPLY VIVDS CABLE.
6. ALL NEW STREET NAME AND TRAFFIC SIGNAL SIGNING SHALL BE FURNISHED BY THE CONTRACTOR.
7. INSTALL SEPARATE SIGNAL CABLES TO EVERY DEVICE ON EACH POLE (TRAFFIC SIGNAL HEADS, PED HEADS, AND PED BUTTONS) FROM THE TERMINAL BLOCKS IN EACH POLE. ALL EQUIPMENT AND DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS.
8. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

SH 143C OR SH 152A



SH 4, 5, 6, 10, 13, 14



SH 1



SH 2, 3, 7, 8, 9, 11, 12

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SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 EB FRONTAGE ROAD

FINAL SIGNAL DESIGN

SHEET 9 of 10

FED.RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	629
CONT.	SECT.	JOB	
0009	12	203	

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 20 CNDR. FROM P-1 TO CNTRL.	CABLE 2 10 CNDR. FROM P-2 TO CNTRL.	CABLE 3 20 CNDR. FROM P-3 TO CNTRL.	CABLE 4 10 CNDR. FROM P-4 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 1, 2, 3 R	SH 6 DW	SH 7, 8, 9 R	SH 13 DW	3
4	GREEN	SH 1, 2, 3 G	SH 6 W	SH 7, 8, 9 G	SH 13 W	4
5	ORANGE	SH 1, 2, 3 Y	Ø2 PED CALL	SH 7, 8, 9 Y	Ø2 PED CALL	5
6	BLUE	Ø4 PED CALL	SPARE	Ø2 PED CALL	SH 14 DW	6
7	WHITE/BLACK	SH 1 ~~G~~	SPARE	SPARE	SH 14 W	7
8	RED/BLACK	SH 1 ~~Y~~	SPARE	SH 10 DW	Ø4 PED CALL	8
9	GREEN/BLACK	SPARE	SPARE	SH 10 W	SPARE	9
10	ORANGE/BLACK	SH 4 DW	SPARE	SH 11, 12 R	SPARE	10
11	BLUE/BLACK	SH 4 W		SH 11, 12 G		11
12	BLACK/WHITE	SPARE		SH 11, 12 Y		12
13	RED/WHITE	Ø5 PED CALL		SPARE		13
14	GREEN/WHITE	SPARE		SPARE		14
15	BLUE/WHITE	SH 5 DW		SPARE		15
16	BLACK/RED	SH 5 W		SPARE		16
17	WHITE/RED	SPARE		SPARE		17
18	ORANGE/RED	SPARE		SPARE		18
19	BLUE/RED	SPARE		SPARE		19
20	RED/GREEN	SPARE		SPARE		20

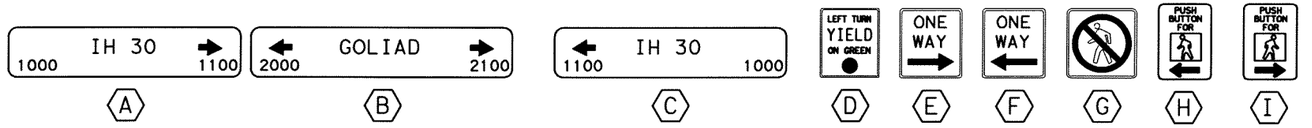
VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-1 MAST ARM	24'	STOPBAR	VOLA-1	N/A	6'X90'	ØOLA-1	ØOLA-G
				VOLB-1	N/A	6'X90'	ØOLB-1	ØOLB-R
				VOLB-2		6'X90'		
				VOLB-3		6'X90'		
2	P-3 MAST ARM	24'	STOPBAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V2-2		6'X90'		
				V2-3		6'X90'		
				V2-4		6'X90'		
3	P-3 MAST ARM	24'	STOPBAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R
				V4-2		6'X90'		
				V4-3		6'X90'		
4	P-1 LUMINAIRE ARM	32'	SETBACK	V4-4	240'	6'X20'	Ø4-2	Ø4-G
				V4-5		6'X20'		
				V4-6		6'X20'		
				V4-7	390'	6'X20'	Ø4-3	Ø4-G
				V4-8		6'X20'		
				V4-9		6'X20'		
5	P-3 LUMINAIRE ARM	32'	SETBACK	V2-4	210'	6'X20'	Ø2-2	Ø2-G
				V2-5		6'X20'		
				V2-6		6'X20'		
				V2-7	350'	6'X20'	Ø2-3	Ø2-G
				V2-8		6'X20'		
				V2-9		6'X20'		

ITEM 6266 VIVDS

ITEM	QUANTITY
VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	0
*VIVDS CAMERA ASSEMBLY	2 [3]
VIVDS COMM. CABLE, LF	1515
VIVDS SET UP SYSTEM	1

*SUPPLIED BY TXDOT
[X]-RELOCATED FROM TEMPORARY SIGNALS
X-NEW CAMERA ASSEMBLIES TO BE INSTALLED BY CONTRACTOR AND FURNISHED BY TxDOT



SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	IH 30	E/REL	P-3		-	-	-
B	STREET NAME	GOLIAD	E/REL	P-3		-	-	-
C	STREET NAME	IH 30	E/REL	P-1		-	-	-
D	R10-12	LEFT TURN YIELD ON GREEN	E/REL	P-1		C	-	-
E	R6-2R	ONE-WAY SIGN (RIGHT)	E/REL	P-3	-	C	-	-
F	R6-2L	ONE WAY SIGN (LEFT)	E/REL	P-1	-	C	-	-
G	R9-3A	NO PEDESTRIANS	I	P-2/P-3	24"X24"	C	-	-
H	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-1(1)/P-2(1) P-3(1)/P-4(2)	9"X12"	C	-	-
I	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-1(1)	9"X12"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE

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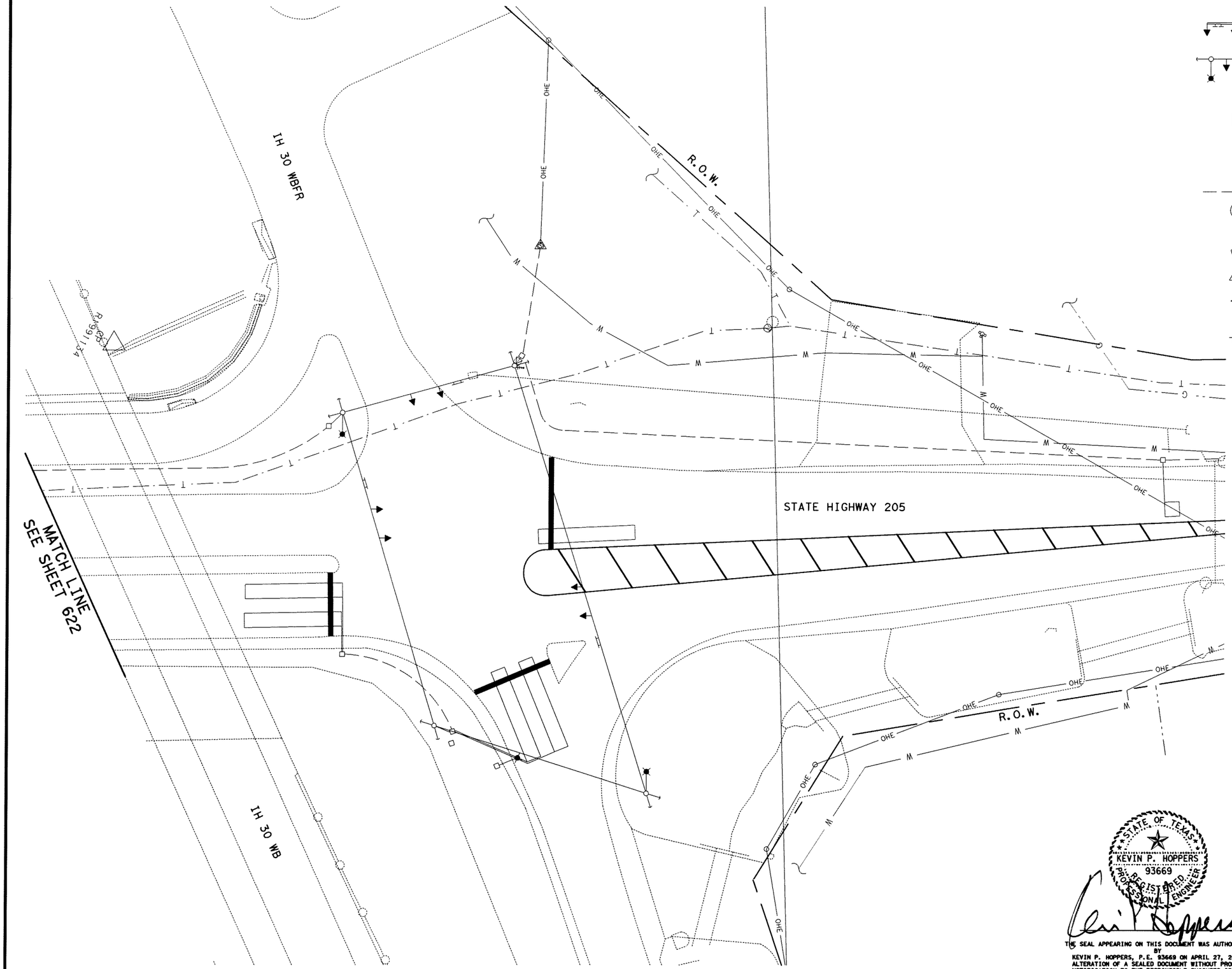
**PERMANENT SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT
IH 30 EB FRONTAGE ROAD**

FINAL SIGNAL DESIGN

SHEET 10 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	629A
CONT.	SECT.	JOB	
0009	12	203	



LEGEND

- TYPICAL EXISTING MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TYPICAL EXISTING SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- EXISTING TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- EXISTING CONDUIT
- (1) EXISTING CONDUIT RUN NUMBER
- 1 EXISTING SIGNAL HEAD NUMBER
- (A) EXISTING SIGN LABEL
- (S) EXISTING POWER SOURCE
- EXISTING SIGN PANEL AND POST
- EXISTING OPTICOM
- SSR YAGI ANTENNA

GRAPHIC SCALE
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(IN FEET)
1 inch = 40 ft.

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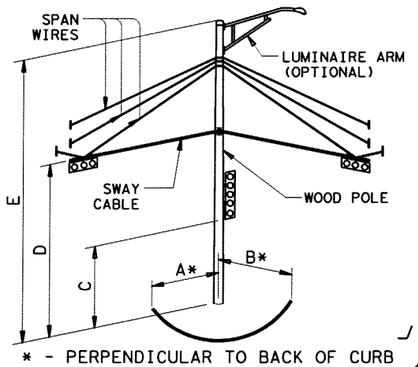
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SHEET 1 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	630
CONT.	SECT.	JOB	
0009	12	203	



* - PERPENDICULAR TO BACK OF CURB

TIMBER POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-5	I	19	30	-	19	30	Y
T-6	I	30	30	-	19	30	Y
T-7	I	17	4	-	19	30	Y
T-8	I	33	9	-	19	30	Y

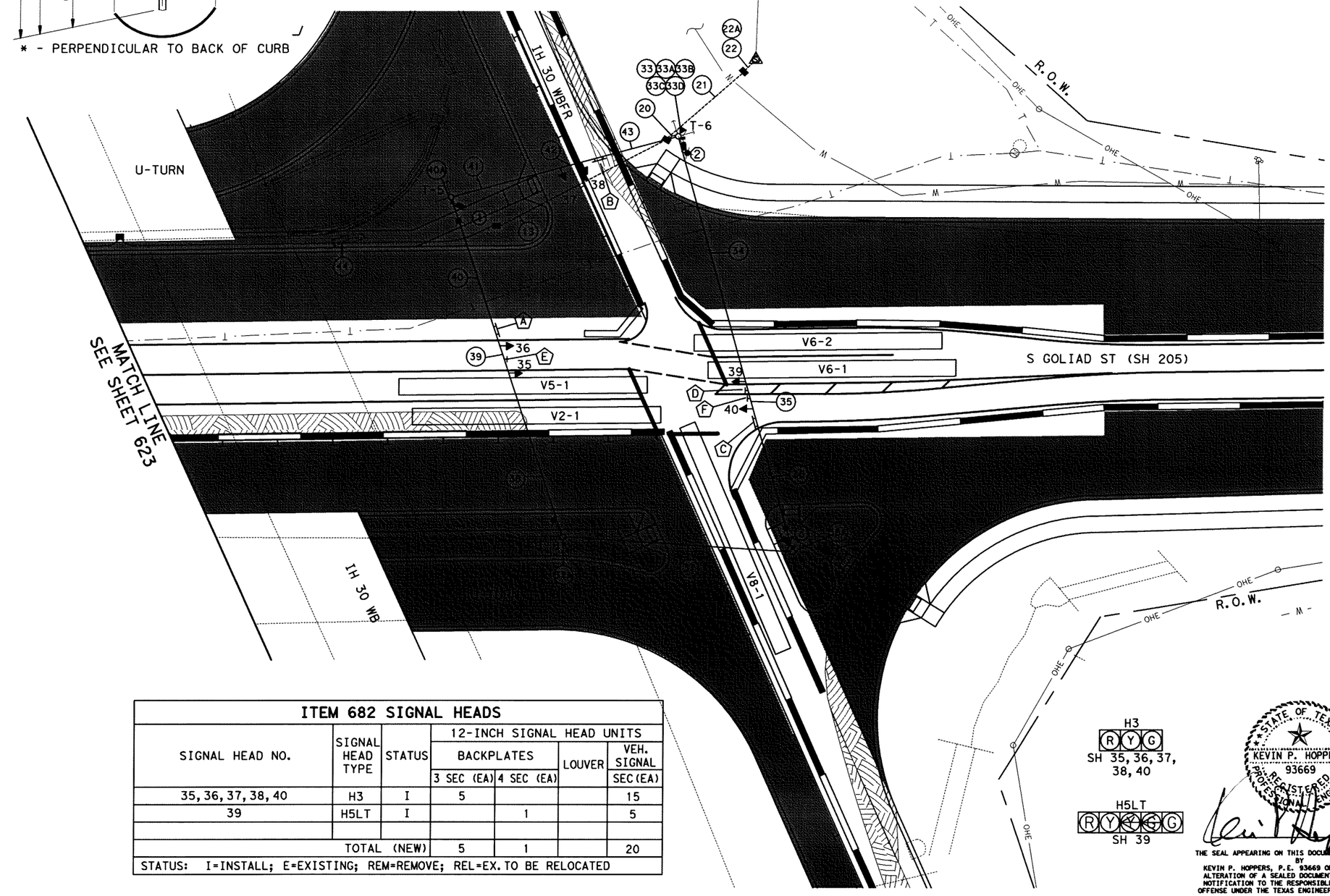
T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE
I=INSTALL; E=EXISTING; REM=REMOVE

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	4

SPAN RUN & LENGTH

(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
93	10	54	84	63	11	57	41	8	36
157			84	131			85		



ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS			
			BACKPLATES		LOUVER	VEH. SIGNAL
			3 SEC (EA)	4 SEC (EA)		SEC (EA)
35, 36, 37, 38, 40	H3	I	5			15
39	H5LT	I		1		5
		TOTAL (NEW)	5	1		20

STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED

H3
R Y G
SH 35, 36, 37, 38, 40

H5LT
R Y Y G G
SH 39

LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

SIGNAL HEAD PLACEMENT DURING CONSTRUCTION

MAX. DISTANCE (5 CNDR.)			
HEAD 35	12′	HEAD 36	157′
HEAD 37	8′	HEAD 38	71′
MAX. DISTANCE (7 CNDR.)			
HEAD 39	138′	HEAD 40	17′

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 WB FRONTAGE ROAD

PHASE I

SHEET 2 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	631
CONT.	SECT.	JOB	
0009	12	203	

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT)					CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA)			ITEM 684 SIG CAB (EA)			VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
											TY-A							
		1 ½" RM RISER	2" RM RISER	2" PVC TRENCHED	2" PVC BORED	3" RM RISER		NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	5 CNDR. CABLE	7 CNDR. CABLE	10 CNDR. CABLE					
13	I			75			I	2	1	2							75	13
20	I			5			I	2	1	4							5	20
21	I			45			I	4	1	4							45	21
22	I		20				I	4	1	4							20	22
22A	I			10			I	4	1	4							10	22A
33	I		10				I	2	1								10	33
33A	I					15	I		1		2	1		3			15	33A
33B	I		20				I		1	2							20	33B
33C	I	10					I		1								10	33C
33D	I	10					I		1	4				1			10	33D
34	AC						I			2		1		1			123	34
35	AC						I			2		1		1			11	35
36	AC						I			2				1			23	36
36A	I	10					I		1	2				1			10	36A
37	AC						I										89	37
37A	I	10					I		1	2							10	37A
38	AC						I			2							63	38
39	AC						I			2	1						11	39
40	AC						I			2	1						57	40
40A	I	10					I		1	4				1			10	40A
41	AC						I			2	1			1			21	41
42	AC						I			2	2			1			8	42
43	AC						I			2	2			1			56	43
44	I			150			I	2	1	2							150	44
TOTAL		50	50	285	0	15		780	325	1526	247	149	0	317	0	0		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE;
RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 5 CNDR.	CABLE 2 5 CNDR.	CABLE 3 7 CNDR.	CNDR. NO.
		SPAN T-8/T-5 TO CNTRL.	SPAN T-5/T-6 TO CNTRL.	SPAN T-6/T-7 TO CNTRL.	
1	BLACK	SPARE	SPARE	SPARE	1
2	WHITE	SH COM	SH COM	SH COM	2
3	RED	SH 35, 36 R	SH 37, 38 R	SH 39, 40 R	3
4	GREEN	SH 35, 36 G	SH 37, 38 G	SH 39, 40 G	4
5	ORANGE	SH 35, 36 Y	SH 37, 38 Y	SH 39, 40 Y	5
6	BLUE			SH 39 ~~Y~~	6
7	WHITE/BLACK			SH 39 ~~G~~	7

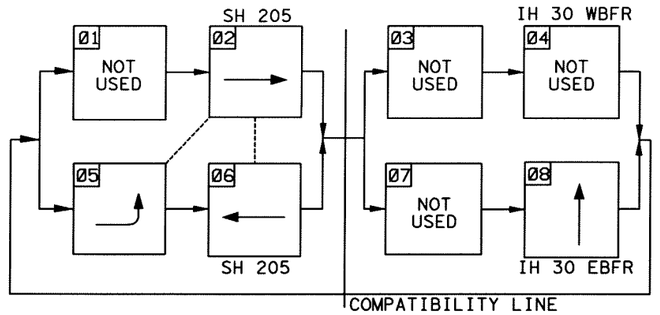
ITEM 6626 VIVDS

ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	3
VIVDS COMM. CABLE, LF	317
VIVDS SET UP SYSTEM	1

*SUPPLIED BY TXDOT

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-5 TIMBER POLE	27'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V6-2		6'X90'		
2	T-6 TIMBER POLE	27'	STOP BAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
3	T-7 TIMBER POLE	27'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V5-1	N/A	6'X90'	Ø5-1	Ø2-G

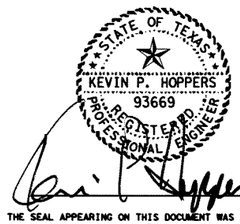


NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY FOR THE NEW AND PERMANENT ELECTRICAL SERVICE AND FOR INSTALLATION OF TEMPORARY TIMBER POLES IF IN PROXIMITY TO POWER LINES. INSTALL NEW ELECTRICAL SERVICE: TY D (120/240) 070 (NS) SS (E) PS (U) AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH TXDOT STANDARD DETAILS.
2. CONTRACTOR SHALL COORDINATE WITH TXDOT FOR THE TXDOT SPEC 680 SUPPLIED EQUIPMENT TO BE USED DURING THE TEMPORARY PHASE AND TO OBTAIN TXDOT ASSISTANCE AS APPLICABLE. ONCE THE PHASE I TRAFFIC SIGNAL IS APPROVED TO PLACE INTO OPERATION, THE CONTRACTOR MAY, DURING SOME TIME OTHER THAN CONTRACT DESCRIBED PEAK HOURS, SAFELY STOP ALL TRAFFIC AT THE INTERSECTION, TURN OFF THE EXISTING TRAFFIC SIGNAL, AND PLACE THE TEMPORARY TRAFFIC SIGNAL INTO OPERATION.
3. INSTALL ALL TEMPORARY SIGNALS HORIZONTALLY ON SPAN WIRES, A MINIMUM OF 18 FEET ABOVE THE ROADWAY. INSTALL SUFFICIENT TRAFFIC SIGNAL CABLES IN PLACE TO ACCOMMODATE ALL PHASES OF CONSTRUCTION. COIL EXCESS CONDUCTOR AND LASH IT TO THE SPAN WIRE CLEAR OF THE ROADWAY IF THE TRAFFIC SIGNAL HEAD IT WILL SERVE IN A SUBSEQUENT PHASE IS BEYOND CURRENT SIGNAL HEAD LOCATIONS.
4. EXISTING STREET NAME SIGNING SHALL THEN BE TRANSFERRED FROM THE EXISTING TRAFFIC SIGNAL MOUNTING TO THE TEMPORARY SPAN WIRE INSTALLATION.

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2015	VEH SIG SEC (12 IN) INC (GRN ARW)	EA	1
0682	2016	VEH SIG SEC (12 IN) INC (GRN)	EA	6
0682	2017	VEH SIG SEC (12 IN) INC (YEL ARW)	EA	1
0682	2018	VEH SIG SEC (12 IN) INC (YEL)	EA	6
0682	2020	VEH SIG SEC (12 IN) INC (RED)	EA	6



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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 WB FRONTAGE ROAD

PHASE I

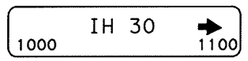
SHEET 3 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	632
CONT.	SECT.	JOB	
0009	12	203	

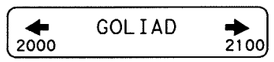
SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	IH 30	E/REL	SPAN T-8 TO T-5	-	-	-	-
B	STREET NAME	GOLIAD	E/REL	SPAN T-5 TO T-6	-	-	-	-
C	STREET NAME	IH 30	E/REL	SPAN T-6 TO T-7	-	-	-	-
D	R10-12	LEFT TURN YIELD ON (GREEN BALL SYMBOL)	E/REL	SPAN T-6 TO T-7	-	C	-	-
E	R6-2R	ONE-WAY SIGN (RIGHT)	E/REL	SPAN T-8 TO T-5	-	C	-	-
F	R6-2L	ONE-WAY SIGN (LEFT)	E/REL	SPAN T-6 TO T-7	-	C	-	-

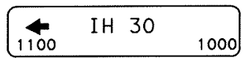
STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE



(A)



(B)



(C)



(D)



(E)

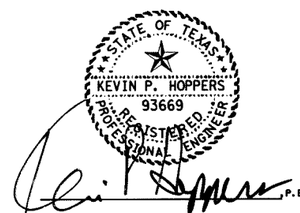


(F)

*ITEM 628 ELECTRICAL SERVICE DATA

SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240 070(NS)SS(E)PS(U) ED(4)(SX.8)-03	1 ½"	3/#4	N/A	2P/70	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 12	7.7

* REFER TO STANDARD SHEET ED(8)-03.



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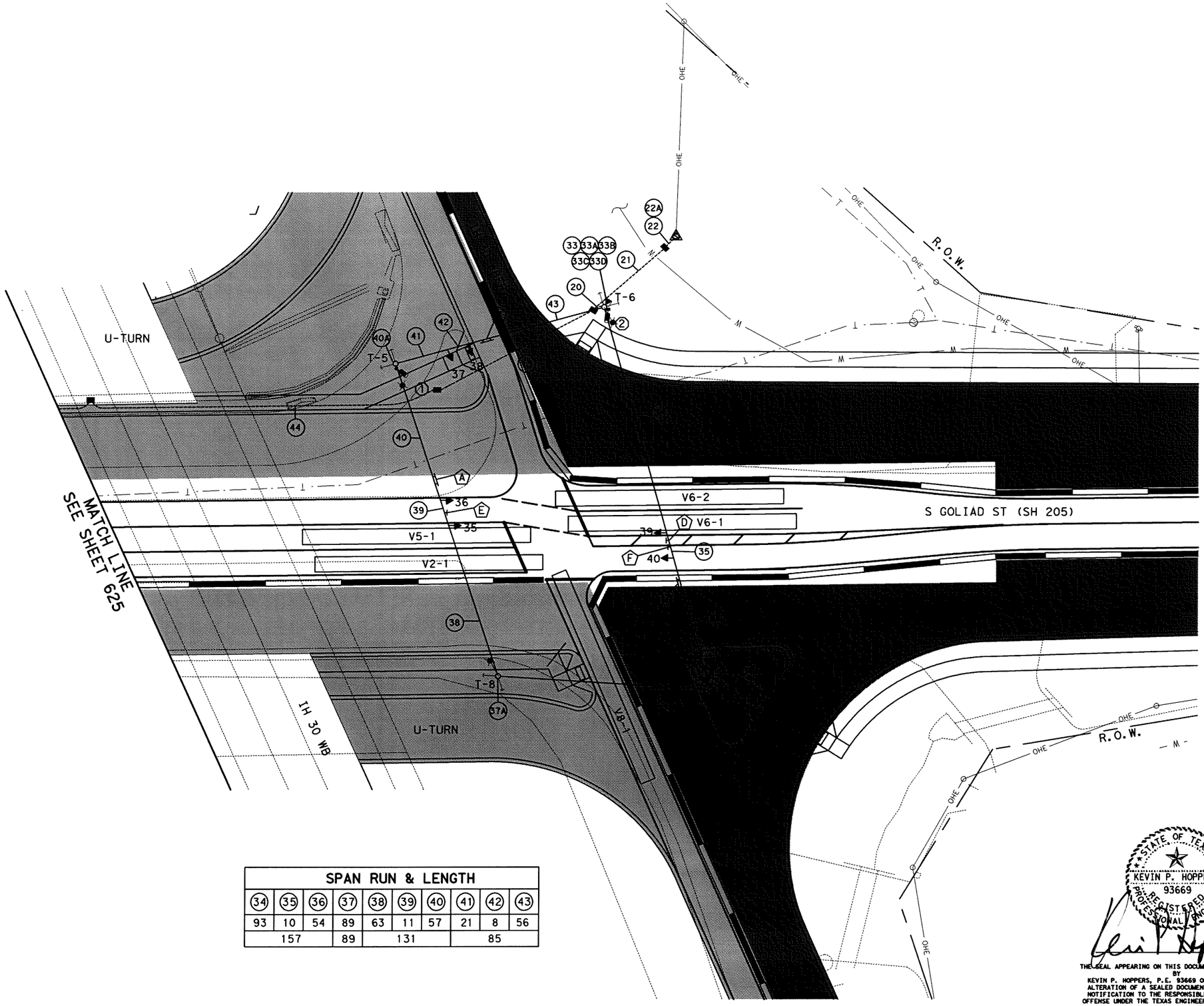
SH 205

TEMPORARY SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT
IH 30 WB FRONTAGE ROAD

PHASE I

SHEET 4 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	632A
CONT.	SECT.	JOB	
0009	12	203	



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

SPAN RUN & LENGTH									
(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
93	10	54	89	63	11	57	21	8	56
157			89	131			85		

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 WB FRONTAGE ROAD

PHASE IA

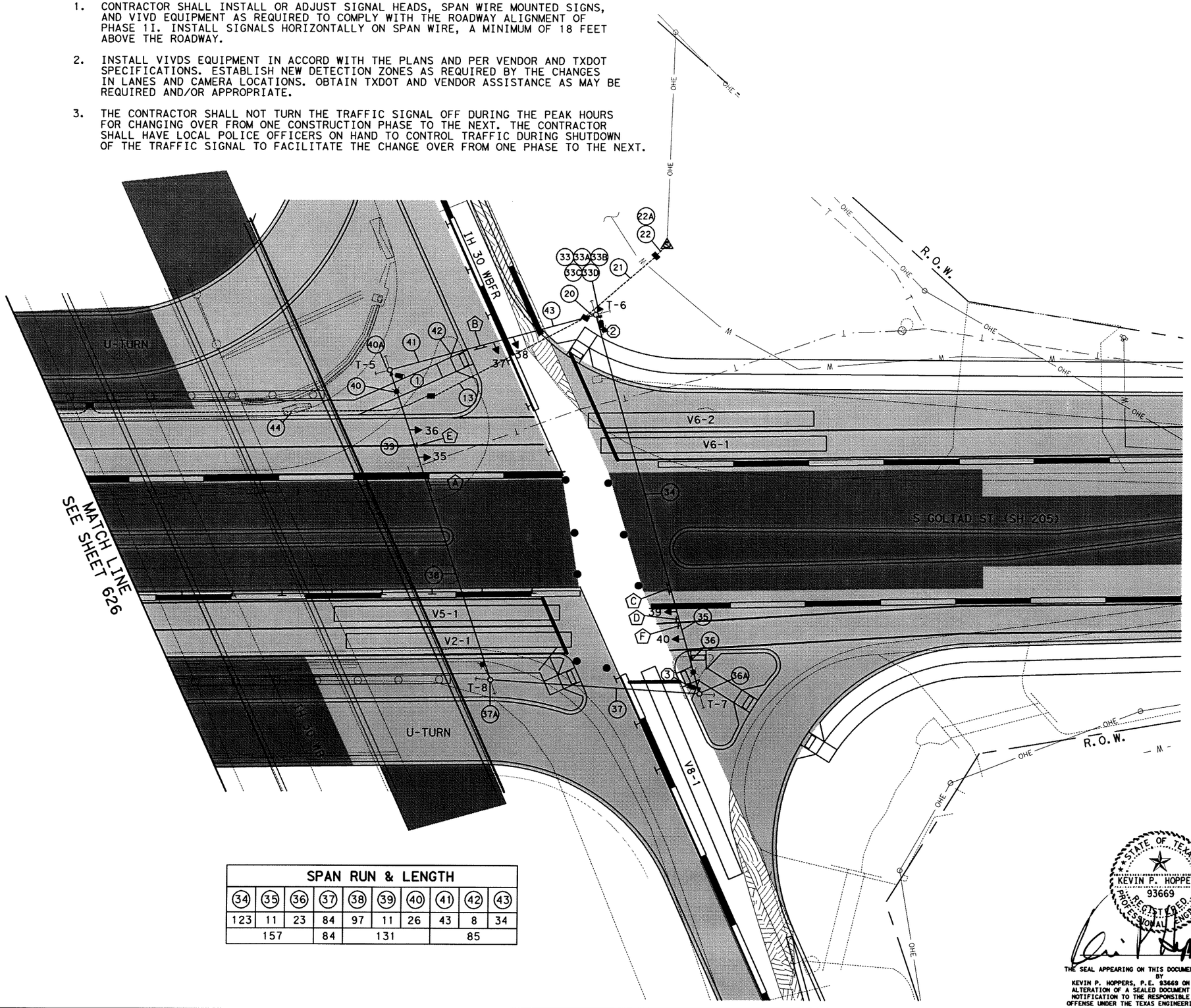
SHEET 5 of 11

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	633
CONT.	SECT.	JOB	
0009	12	203	

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE 1I. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.



SPAN RUN & LENGTH									
(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
123	11	23	84	97	11	26	43	8	34
157			84	131			85		

LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF TEXAS
KEVIN P. HOPPERS
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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 WB FRONTAGE ROAD

PHASE II

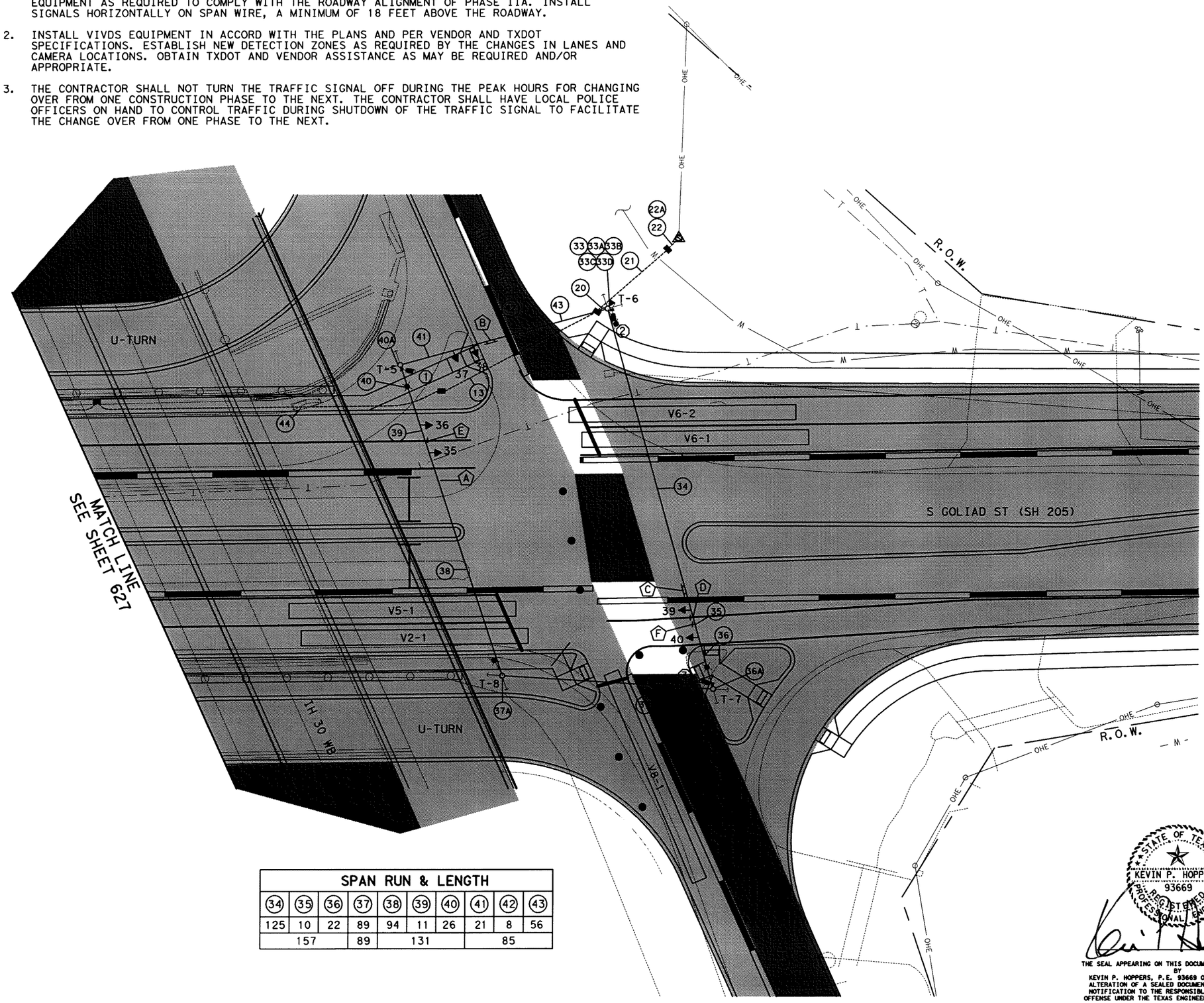
SHEET 6 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	634
CONT.	SECT.	JOB	
0009	12	203	

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE IIA. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

SPAN RUN & LENGTH									
(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
125	10	22	89	94	11	26	21	8	56
157			89	131			85		

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 WB FRONTAGE ROAD

PHASE IIA

SHEET 7 of 11

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

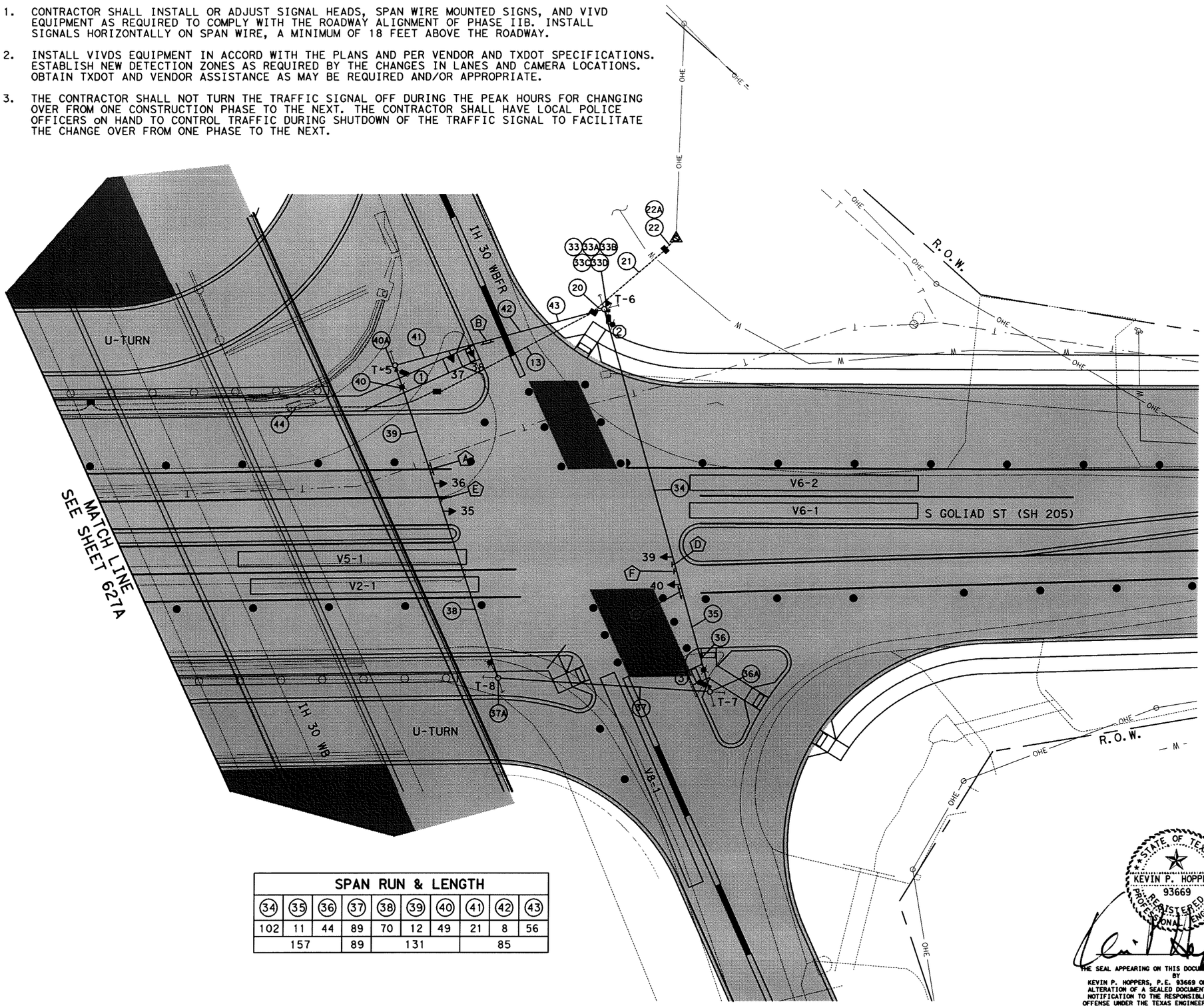
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	635
CONT.	SECT.	JOB	
0009	12	203	

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE IIB. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.

2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.

3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS on HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.



SPAN RUN & LENGTH									
(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
102	11	44	89	70	12	49	21	8	56
157			89	131			85		

LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

KEVIN P. HOPPERS, P.E.

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SH 205

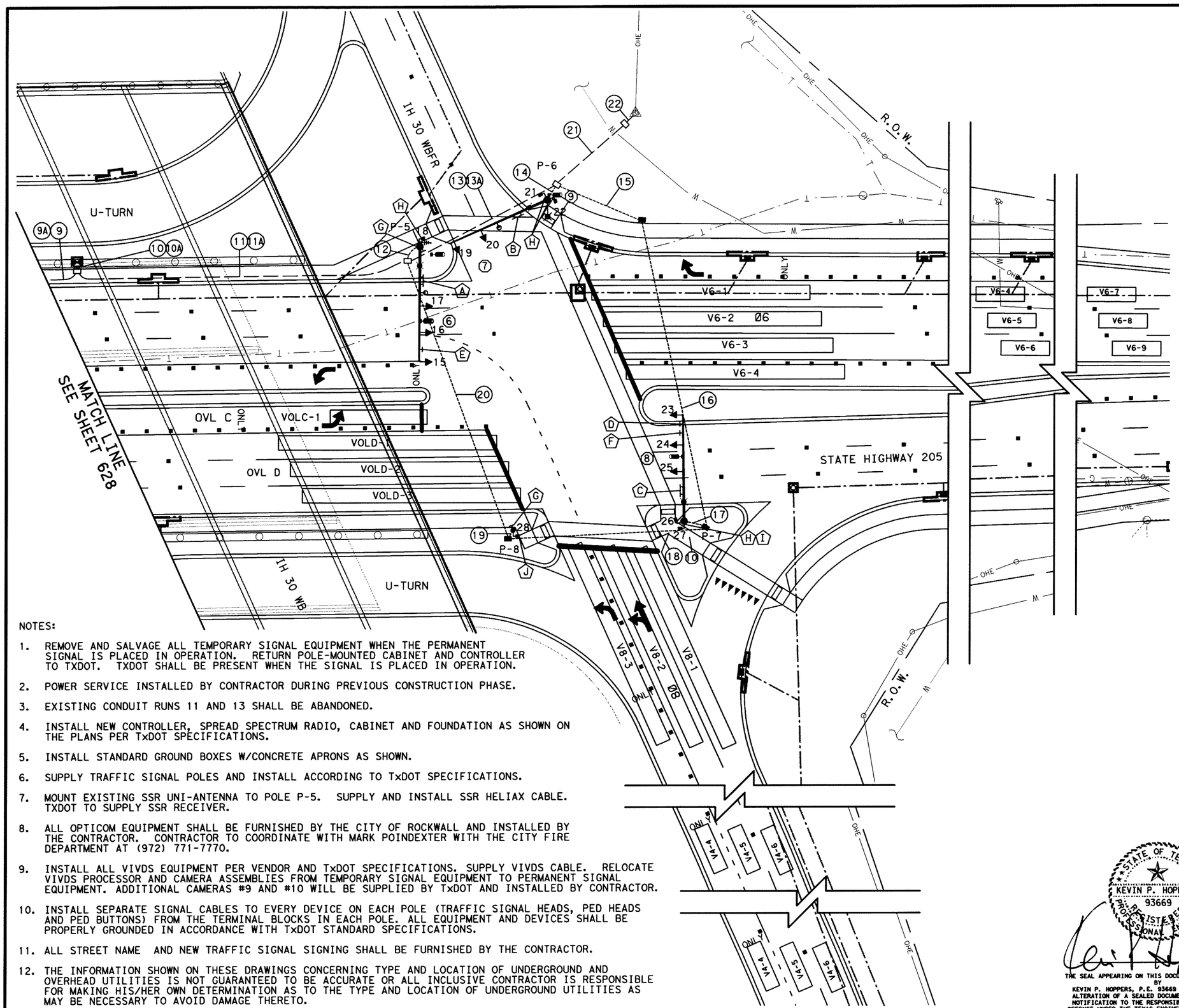
TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 WB FRONTAGE ROAD

PHASE IIB

SHEET 8 of 11

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	635A
CONT.	SECT.	JOB	
0009	12	203	



LEGEND

- TYPICAL PROPOSED MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- SIGN PANEL AND POST
- OPTICOM
- SSR YAGI ANTENNA

NOTES:

1. REMOVE AND SALVAGE ALL TEMPORARY SIGNAL EQUIPMENT WHEN THE PERMANENT SIGNAL IS PLACED IN OPERATION. RETURN POLE-MOUNTED CABINET AND CONTROLLER TO TXDOT. TXDOT SHALL BE PRESENT WHEN THE SIGNAL IS PLACED IN OPERATION.
2. POWER SERVICE INSTALLED BY CONTRACTOR DURING PREVIOUS CONSTRUCTION PHASE.
3. EXISTING CONDUIT RUNS 11 AND 13 SHALL BE ABANDONED.
4. INSTALL NEW CONTROLLER, SPREAD SPECTRUM RADIO, CABINET AND FOUNDATION AS SHOWN ON THE PLANS PER TxDOT SPECIFICATIONS.
5. INSTALL STANDARD GROUND BOXES W/CONCRETE APRONS AS SHOWN.
6. SUPPLY TRAFFIC SIGNAL POLES AND INSTALL ACCORDING TO TxDOT SPECIFICATIONS.
7. MOUNT EXISTING SSR UNI-ANTENNA TO POLE P-5. SUPPLY AND INSTALL SSR HELIAX CABLE. TXDOT TO SUPPLY SSR RECEIVER.
8. ALL OPTICOM EQUIPMENT SHALL BE FURNISHED BY THE CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH MARK POINDEXTER WITH THE CITY FIRE DEPARTMENT AT (972) 771-7770.
9. INSTALL ALL VIVDS EQUIPMENT PER VENDOR AND TxDOT SPECIFICATIONS. SUPPLY VIVDS CABLE. RELOCATE VIVDS PROCESSOR AND CAMERA ASSEMBLIES FROM TEMPORARY SIGNAL EQUIPMENT TO PERMANENT SIGNAL EQUIPMENT. ADDITIONAL CAMERAS #9 AND #10 WILL BE SUPPLIED BY TxDOT AND INSTALLED BY CONTRACTOR.
10. INSTALL SEPARATE SIGNAL CABLES TO EVERY DEVICE ON EACH POLE (TRAFFIC SIGNAL HEADS, PED HEADS AND PED BUTTONS) FROM THE TERMINAL BLOCKS IN EACH POLE. ALL EQUIPMENT AND DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS.
11. ALL STREET NAME AND NEW TRAFFIC SIGNAL SIGNING SHALL BE FURNISHED BY THE CONTRACTOR.
12. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 WB FRONTAGE ROAD

FINAL SIGNAL DESIGN

SHEET 9 of 11

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	636
CONT.	SECT.	JOB	
0009	12	203	

STATE OF TEXAS
KEVIN P. HOPPERS
93669
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CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 2" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 10 CNDR. CABLE	12 CNDR. CABLE	20 CNDR. CABLE	ITEM 6266 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (CITY SUPPLIED)	ITEM 6006 HELIAX CABLE	LENGTH OF RUN (FT)	RUN NO.
10	I				10	I		1		3	2	2	5	2	1	10	10
10A	I				10	I	2	1				2	5	2		10	10A
11	A	150				REM	2	1								150	11
11A	I				150	I	2	1	2	1	2	1	5	2	1	150	11A
12	I		15			I		1	2		1		1	1	1	15	12
13	A	75				REM	2	1								75	13
13A	I			75		I	2	1	2		1		2	1		75	13A
14	I		10			I		1	2		1		2	1		10	14
15	I			45		I		1								45	15
16	I			135		I		1								135	16
17	I		15			I		1	2			1	2			15	17
18	I			85		I		1	2			1	2			85	18
19	I		10			I		1		1						10	19
20	I			130		I		1	2	1		1	2			130	20
21	I		45			I	2	1	2							45	21
22	I	10				I	2	1	2							10	22
TOTAL		10	95	470	170		580	745	1070	320	420	420	1495	440	175		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 12 CNDR. FROM P-5 TO CNTRL.	CABLE 2 12 CNDR. FROM P-6 TO CNTRL.	CABLE 3 20 CNDR. FROM P-7 TO CNTRL.	CABLE 4 10 CNDR. FROM P-8 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 15,16,17 R	SH 19,20 R	SH 23,24,25 R	SH 28 DW	3
4	GREEN	SH 15,16,17 G	SH 19,20 G	SH 23,24,25 G	SH 28 W	4
5	ORANGE	SH 15,16,17 Y	SH 19,20 Y	SH 23,24,25 Y	Ø6 PED CALL	5
6	BLUE	Ø6 PED CALL	Ø6 PED CALL	Ø8 PED CALL	SPARE	6
7	WHITE/BLACK	SPARE	SPARE	SH 1 ~~G~~	SPARE	7
8	RED/BLACK	SH 18 DW	SH 21 DW	SH 1 ~~Y~~	SPARE	8
9	GREEN/BLACK	SH 18 W	SH 21 W	SPARE	SPARE	9
10	ORANGE/BLACK	SPARE	Ø8 PED CALL	SH 26 DW	SPARE	10
11	BLUE/BLACK	SPARE	SH 22 DW	SH 26 W		11
12	BLACK/WHITE	SPARE	SH 22 W	SPARE		12
13	RED/WHITE			Ø2 PED CALL		13
14	GREEN/WHITE			SPARE		14
15	BLUE/WHITE			SH 27 DW		15
16	BLACK/RED			SH 27 W		16
17	WHITE/RED			SPARE		17
18	ORANGE/RED			SPARE		18
19	BLUE/RED			SPARE		19
20	RED/GREEN			SPARE		20

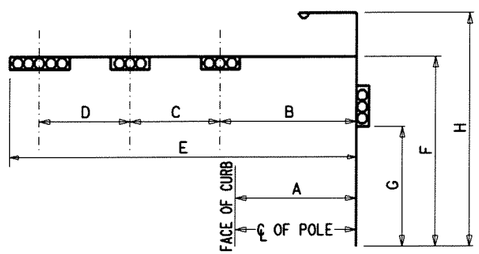
ITEM 682 SIGNAL HEADS

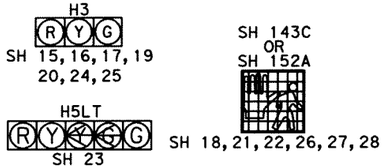
SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS BACKPLATES 3 SEC (EA)	BACKPLATES 5 SEC (EA)	LOUVER	VEH. SIGNAL SEC (EA)	VEH. SIGNAL SEC (EA)
15,16,17,19,20,24,25	H3	I	7			21	
23	H5LT	I		1		5	
21,22,26,27	143C	I					4
18,28	152A	I					2
TOTAL (NEW)			7	1	0	26	6

STATUS: E=EXISTING; R=EX. TO BE REMOVED; I=INSTALL NEW

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2014	PED SIG SEC (12 IN) LED (2 IND)	EA	6
0682	2022	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	1
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	8
0682	2024	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	1
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	8
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	8





WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR. NO. 6 XHHW	NO. 12 XHHW	ITEM 684 TYPE A 5 CNDR NO. 14	7 CNDR NO. 14	ITEM 6266 VIVDS CABLE	OPTICOM CABLE* MODEL 138	ITEM 6006 HELIAX CABLE
P-5		80	174		56	68	35
P-6		80	126		100	52	
P-7		80	103	64	100		
P-8				10			
TOTAL	0	240	403	74	256	120	35

* - CITY SUPPLIED CABLE

SIGNAL HEAD AND POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-5	I	14.8	25	11	12	48	19		30	3	Y	36-A
P-6	I	10.0	30	12		44	19		30	2	Y	36-A
P-7	I	6.9	20	11	13	44	19		30	3	Y	36-A
P-8	I	15.9					10				N	24-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	3

STATE OF TEXAS
KEVIN P. HOPPERS
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SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 WB FRONTAGE ROAD

FINAL SIGNAL DESIGN

SHEET 10 of 11

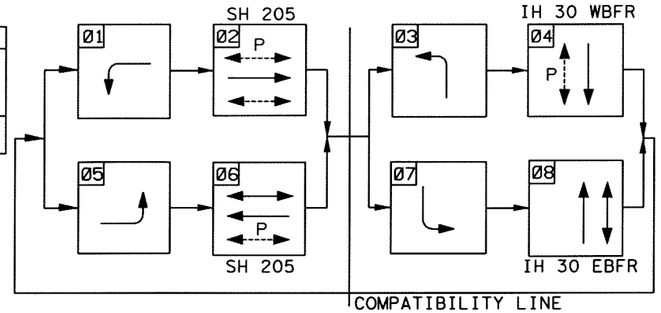
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	637
CONT.	SECT.	JOB	
0009	12	203	

*ITEM 628 ELECTRICAL SERVICE DATA												
SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION ED(4)(5)(8)-03	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240 070(NS)SS(E)PS(U)	1 ½"	3/#4	N/A	2P/70	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 9	7.0

*REFER TO STANDARD SHEET ED(8)-03.

POWER INSTALLED IN PREVIOUS PHASE.



OLA = Ø1 + Ø3
OLB = Ø1 + Ø2 + Ø3
OLC = Ø5 + Ø7
OLD = Ø5 Ø6 + Ø7

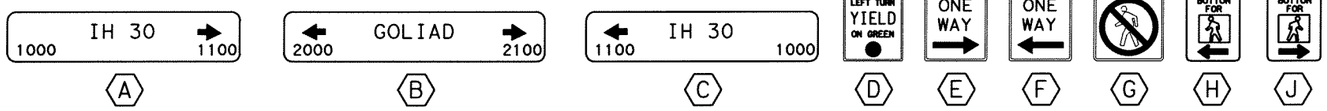
VIVDS DETECTION ZONE DETAILS								
CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
6	P-5 MAST ARM	24'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V6-2		6'X90'		
				V6-3		6'X90'		
				V6-4		6'X90'		
7	P-6 MAST ARM	24'	STOP BAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
				V8-2		6'X90'		
				V8-3		6'X90'		
8	P-7 MAST ARM	24'	STOP BAR	VOLC-1	N/A	6'X90'	ØOLC-1	ØOLC-G
				VOLD-1	N/A	6'X90'	ØOLD-1	ØOLD-R
				VOLD-2		6'X90'		
				VOLD-3		6'X90'		
9	P-6 LUMINAIRE ARM	32'	SETBACK	V6-4	210'	6'X20'	Ø6-2	Ø6-G
				V6-5		6'X20'		
				V6-6		6'X20'		
				V6-7	350'	6'X20'	Ø6-3	Ø6-G
				V6-8		6'X20'		
				V6-9		6'X20'		
10	P-7 LUMINAIRE ARM	32'	SETBACK	V8-4	240'	6'X20'	Ø8-2	Ø8-G
				V8-5		6'X20'		
				V8-6		6'X20'		
				V8-7	390'	6'X20'	Ø8-3	Ø8-G
				V8-8		6'X20'		
				V8-9		6'X20'		

ITEM 6006 SSR	
ITEM	QUANTITY
*SPREAD SPECTRUM RADIO	1
*RADIO ANTENNA	1
HELIAX. CABLE, LF	210

*RE-USE EXISTING SPREAD SPECTRUM UNI-DIRECTIONAL ANTENNA AND RADIO.

ITEM 6266 VIVDS	
ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	2[3]
VIVDS COMM. CABLE, LF	1751
VIVDS SET UP SYSTEM	1

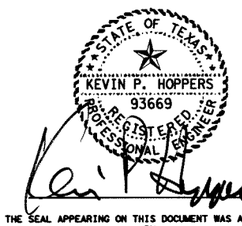
* SUPPLIED BY TXDOT
[X]-RELOCATED FROM TEMPORARY SIGNALS
X-NEW CAMERA ASSEMBLIES TO BE INSTALLED BY CONTRACTOR AND FURNISHED BY TxDOT



Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓙ

SIGNS SUMMARY								
SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	IH 30	E/REL	P-5	-	-	-	-
B	STREET NAME	GOLIAD	E/REL	P-6	-	-	-	-
C	STREET NAME	IH 30	E/REL	P-7	-	-	-	-
D	R10-12	LEFT TURN YIELD ON (GREEN BALL)	E/REL	P-7	-	C	-	-
E	R6-2R	ONE-WAY SIGN (RIGHT)	E/REL	P-5	-	C	-	-
F	R6-2L	ONE WAY SIGN (LEFT)	E/REL	P-7	-	C	-	-
G	R9-3A	NO PEDESTRIANS	I	P-5/P-8	24"X24"	C	-	-
H	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-5(1)/P-6(1) P-7(1)	9"X12"	C	-	-
I	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-7(1)	5"X7"	C	-	-
I	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-8(1)	9"X12"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE



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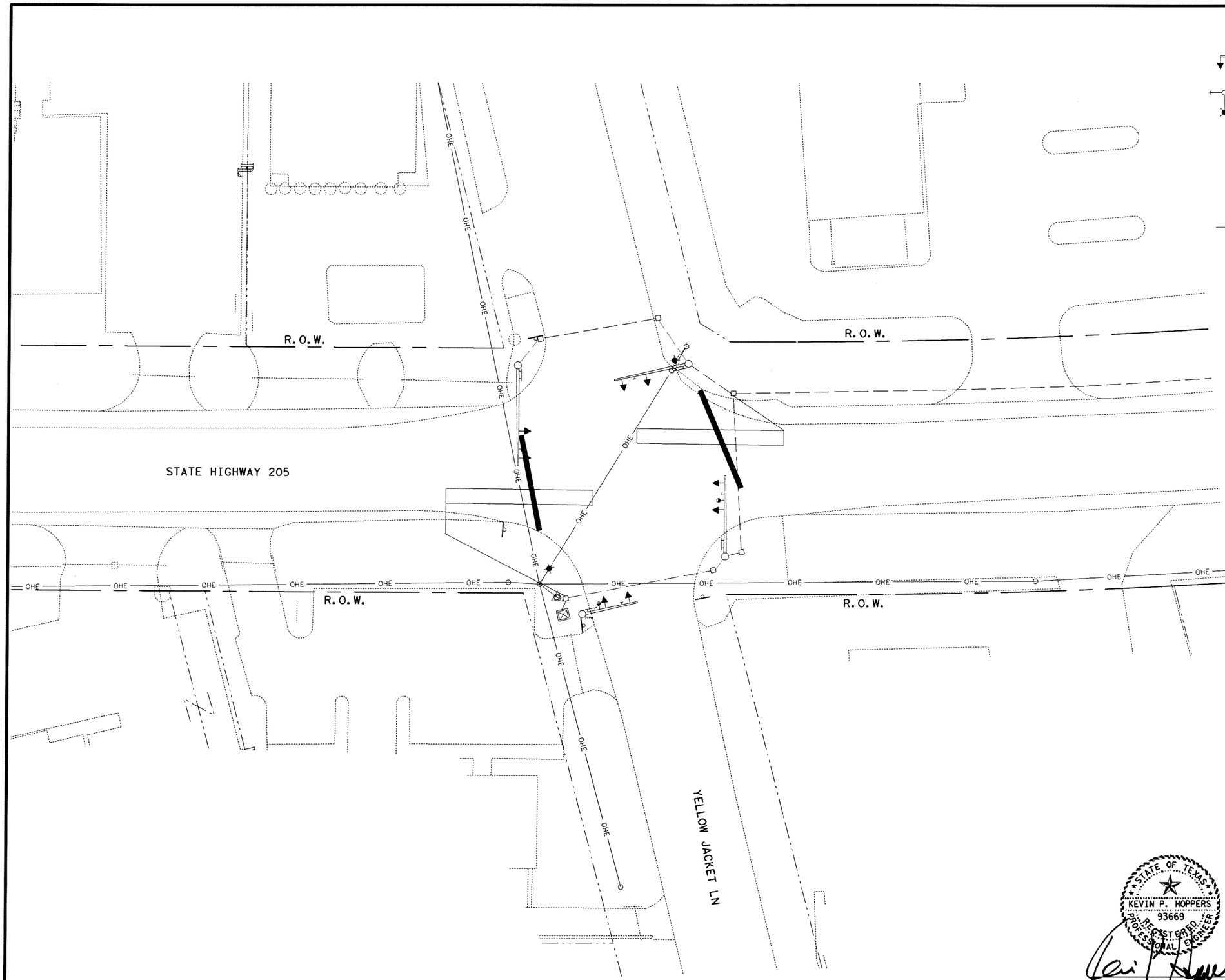
SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT IH 30 WB FRONTAGE ROAD

FINAL SIGNAL DESIGN

SHEET 11 of 11

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	638
CONT.	SECT.	JOB	
0009	12	203	



LEGEND

- TYPICAL EXISTING MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TYPICAL EXISTING SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- EXISTING TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- EXISTING CONDUIT
- (1) EXISTING CONDUIT RUN NUMBER
- 1 EXISTING SIGNAL HEAD NUMBER
- (A) EXISTING SIGN LABEL
- (S) EXISTING POWER SOURCE
- EXISTING SIGN PANEL AND POST
- EXISTING OPTICOM
- SSR YAGI ANTENNA

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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EXISTING SIGNAL LAYOUT SH 205 AT YELLOW JACKET LN.

SHEET 1 OF 10

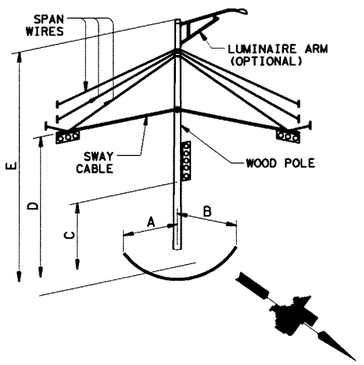
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	639
CONT.	SECT.	JOB	
0009	12	203	

SIGNAL HEAD PLACEMENT DURING CONSTRUCTION			
MAX. DISTANCE (5 CNDR.)			
HEAD 20	96′	HEAD 21	11′
HEAD 24	193′	HEAD 25	10′
HEAD 28	11′	HEAD 29	133′
HEAD 32	9′	HEAD 33	57′
MAX. DISTANCE (10 CNDR.)			
HEAD 22	146′	HEAD 23	146′
HEAD 26	224′	HEAD 27	224′
HEAD 30	103′	HEAD 31	103′
HEAD 34	10′	HEAD 35	10′

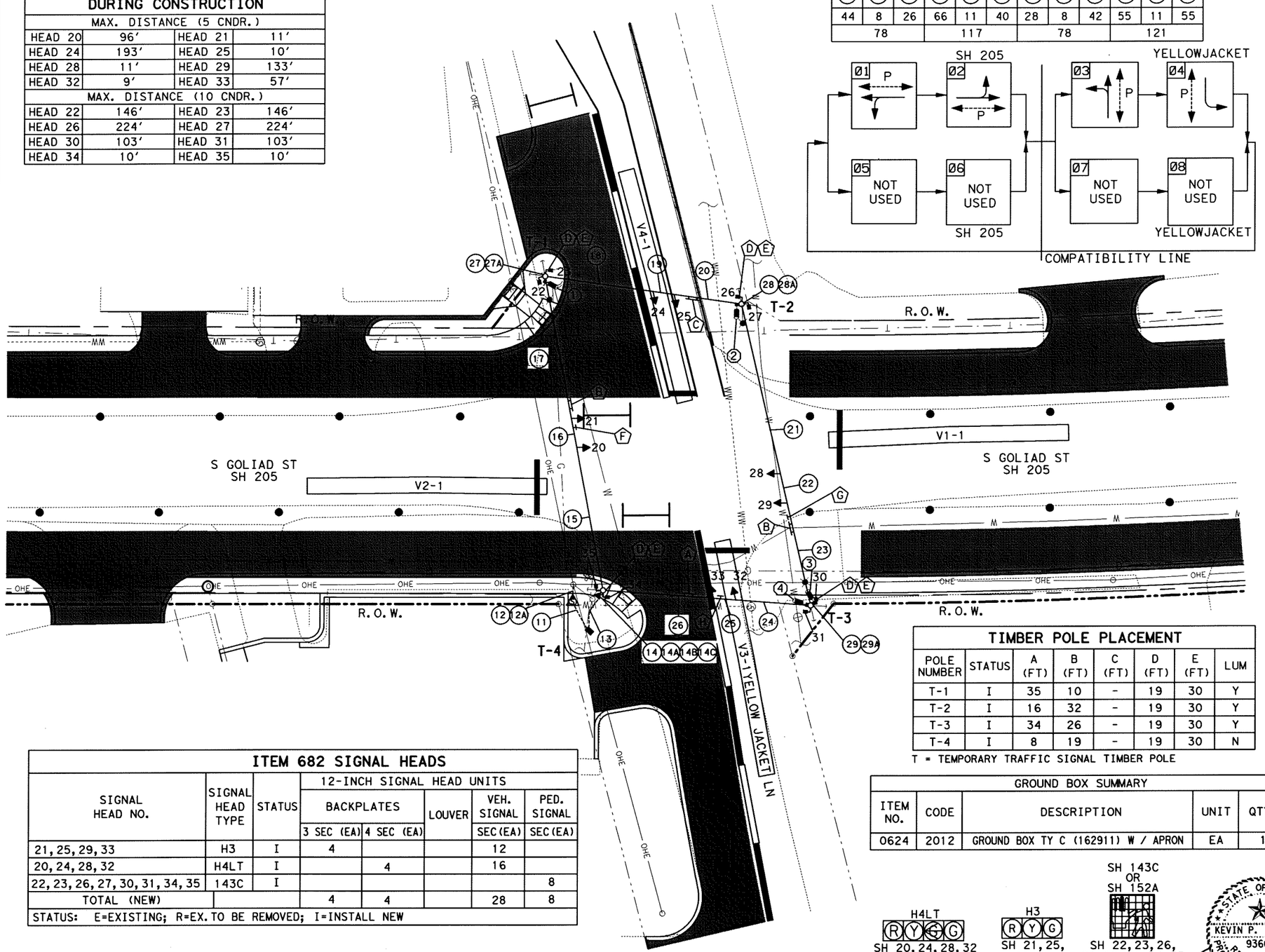
SPAN RUN & LENGTH											
(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(15)	(16)	(17)
44	8	26	66	11	40	28	8	42	55	11	55
78			117			78			121		

LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE



GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.



TIMBER POLE PLACEMENT							
POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-1	I	35	10	-	19	30	Y
T-2	I	16	32	-	19	30	Y
T-3	I	34	26	-	19	30	Y
T-4	I	8	19	-	19	30	N

T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE

ITEM 682 SIGNAL HEADS							
SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS				
			BACKPLATES		LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	4 SEC (EA)		SEC (EA)	SEC (EA)
21, 25, 29, 33	H3	I	4			12	
20, 24, 28, 32	H4LT	I		4		16	
22, 23, 26, 27, 30, 31, 34, 35	143C	I					8
TOTAL (NEW)			4	4		28	8
STATUS: E=EXISTING; R=EX. TO BE REMOVED; I=INSTALL NEW							

GROUND BOX SUMMARY				
ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	1

H4LT (R Y G) SH 20, 24, 28, 32

H3 (R Y G) SH 21, 25, 29, 33

SH 143C OR SH 152A SH 22, 23, 26, 27, 30, 31, 34, 35

*ITEM 628 ELECTRICAL SERVICE DATA											
SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION ED(4)(5)(6)-03	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240 1Ø 60 (NS) SS (E) PS (U)	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 6	6.2

*REFER TO STANDARD SHEET ED(8)-03.

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT YELLOW JACKET LN

PHASE I

SHEET 2 of 10

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	640
CONT.	SECT.	JOB	
0009	12	203	

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT)					CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA)			ITEM 684 SIG CAB (EA)			VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
		1 ½" RM RISER	2" RM RISER	2" PVC TRENCHED	2" PVC BORED	3" RM RISER		NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO.12 XHHW WIRE	TY-A 5 CNDR. CABLE	TY-A 7 CNDR. CABLE	TY-A 10 CNDR. CABLE					
11	I			20			I	2	1								20	11
12	I			10			I	2	1								10	12
12A	I		20				I	2	1								20	12A
13	I			20			I	2	1								20	13
14	I	10					I	2	1								10	14
14A	I					15	I		1		4		3	4			15	14A
14B	I		20				I		1	4							20	14B
14C	I	10					I		1				1				10	14C
15	AC						I			2	2		2	2			55	15
16	AC						I			2	2		2	2			11	16
17	AC						I			2	1		2	2			55	17
18	AC						I			2	1		1	1			57	18
19	AC						I			2	1		1	1			10	19
20	AC						I			2			1	1			11	20
21	AC						I										66	21
22	AC						I				1						11	22
23	AC						I				1						40	23
24	AC						I			2	1		1	2			28	24
25	AC						I			2	2		1	2			8	25
26	AC						I			2	2		1	2			42	26
27	I	10					I		1				1				10	27
27A	I	10					I		1	4				1			10	27A
28	I	10					I		1				1				10	28
28A	I	10					I		1	2				1			10	28A
29	I	10					I		1				1				10	29
29A	I	10					I		1	2				2			10	29A
TOTAL		80	40	50		15		160	185	714	493		483	576		0		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 5 CNDR.	CABLE 3 5 CNDR.	CABLE 5 5 CNDR.	CABLE 7 5 CNDR.	CNDR. NO.
		SPAN T-4/T-1 TO CNTRL.	SPAN T-1/T-2 TO CNTRL.	SPAN T-3/T-2 TO CNTRL.	SPAN T-4/T-3 TO CNTRL.	
1	BLACK	SH 20 G	SH 24 G	SH 28 G	SH 32 G	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 20, 21 R	SH 24, 25 R	SH 28, 29 R	SH 32, 33 R	3
4	GREEN	SH 20, 21 G	SH 24, 25 G	SH 28, 29 G	SH 32, 33 G	4
5	ORANGE	SH 20, 21 Y	SH 24, 25 Y	SH 28, 29 Y	SH 32, 33 Y	5
CNDR. NO.	CONDUCTOR COLOR	CABLE 2 10 CNDR.	CABLE 4 10 CNDR.	CABLE 6 10 CNDR.	CABLE 8 10 CNDR.	CNDR. NO.
		FROM T-1 TO CNTRL.	FROM T-2 TO CNTRL.	FROM T-3 TO CNTRL.	FROM T-4 TO CNTRL.	
1	BLACK	PB COM	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 22 DW	SH 26 DW	SH 30 DW	SH 34 DW	3
4	GREEN	SH 22 W	SH 26 W	SH 30 W	SH 34 W	4
5	ORANGE	04 PED CALL	06 PED CALL	08 PED CALL	02 PED CALL	5
6	BLUE	SH 23 DW	SH 27 DW	SH 31 DW	SH 35 DW	6
7	WHITE/BLACK	SH 23 W	SH 27 W	SH 31 W	SH 35 W	7
8	RED/BLACK	06 PED CALL	08 PED CALL	02 PED CALL	04 PED CALL	8
9	GREEN/BLACK	SPARE	SPARE	SPARE	SPARE	9
10	ORANGE/BLACK	SPARE	SPARE	SPARE	SPARE	10

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-1 TIMBER POLE	27'	STOP BAR	V1-1	N/A	6'X90'	01-1	01-R
2	T-2 TIMBER POLE	27'	STOP BAR	V3-1	N/A	6'X90'	03-1	03-R
3	T-3 TIMBER POLE	27'	STOP BAR	V4-1	N/A	6'X90'	04-1	04-R
4	T-3 TIMBER POLE	27'	STOP BAR	V2-1	N/A	6'X90'	02-1	02-R

ITEM 6626 VIVDS

ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	4
VIVDS COMM. CABLE, LF	586
VIVDS SET UP SYSTEM	1

*SUPPLIED BY TXDOT

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2013	PED SIG SEC (12 IN) INC (2 IND)	EA	8
0682	2015	VEH SIG SEC (12 IN) INC (GRN ARW)	EA	4
0682	2016	VEH SIG SEC (12 IN) INC (GRN)	EA	8
0682	2018	VEH SIG SEC (12 IN) INC (YEL)	EA	8
0682	2020	VEH SIG SEC (12 IN) INC (RED)	EA	8

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT YELLOWJACKET LN

PHASE I

SHEET 3 of 10

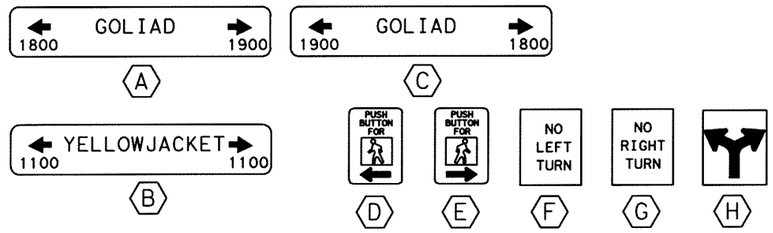
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	641
CONT.	SECT.	JOB	
0009	12	203	

SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	GOLIAD	E/REL	T-3/T-4		-	-	-
B	STREET NAME	YELLOWJACKET	E/REL	T-4/T-1		-	-	-
C	STREET NAME	GOLIAD	E/REL	T-1/T-2		-	-	-
B	STREET NAME	YELLOWJACKET	E/REL	T-2/T-3		-	-	-
D	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	E/REL	T-1/T-2 T-3/T-4	9"X12"	C	-	-
E	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	E/REL	T-1/T-2 T-3/T-4	9"X12"	C	-	-
F	R3-2A	NO LEFT TURN	I	SPAN T-1/T-4	24"X24"	C	-	-
G	R3-1A	NO RIGHT TURN	I	SPAN T-2/T-3	24"X24"	C	-	-
H	R3-8LR	LEFT OR RIGHT TURN ONLY	I	SPAN T-3/T-4	30"X30"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE



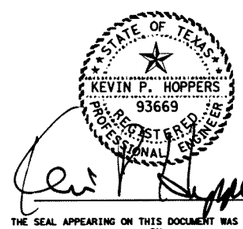
NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY FOR THE NEW AND PERMANENT ELECTRICAL SERVICE AND FOR INSTALLATION OF TEMPORARY TIMBER POLES IF IN PROXIMITY TO POWER LINES. INSTALL NEW ELECTRICAL SERVICE: TY D (120/240) 060 (NS) SS (E) PS (U) AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH TXDOT STANDARD DETAILS.

2. CONTRACTOR SHALL COORDINATE WITH TXDOT FOR THE TXDOT SPEC 680 SUPPLIED EQUIPMENT TO BE USED DURING THE TEMPORARY PHASE AND TO OBTAIN TXDOT ASSISTANCE AS APPLICABLE. ONCE THE PHASE I TRAFFIC SIGNAL IS APPROVED TO PLACE INTO OPERATION, THE CONTRACTOR MAY, DURING SOME TIME OTHER THAN CONTRACT DESCRIBED PEAK HOURS, SAFELY STOP ALL TRAFFIC AT THE INTERSECTION, TURN OFF THE EXISTING TRAFFIC SIGNAL, AND PLACE THE TEMPORARY TRAFFIC SIGNAL INTO OPERATION.

3. INSTALL ALL TEMPORARY SIGNALS HORIZONTALLY ON SPAN WIRES, A MINIMUM OF 18 FEET ABOVE THE ROADWAY. INSTALL SUFFICIENT TRAFFIC SIGNAL CABLES IN PLACE TO ACCOMMODATE ALL PHASES OF CONSTRUCTION. COIL EXCESS CONDUCTOR AND LASH IT TO THE SPAN WIRE CLEAR OF THE ROADWAY IF THE TRAFFIC SIGNAL HEAD IT WILL SERVE IN A SUBSEQUENT PHASE IS BEYOND CURRENT SIGNAL HEAD LOCATIONS.

4. EXISTING STREET NAME SIGNING AND PUSH BUTTON SIGNING SHALL THEN BE TRANSFERRED FROM THE EXISTING TRAFFIC SIGNAL MOUNTING TO THE TEMPORARY SPAN WIRE INSTALLATION.



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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT YELLOWJACKET LN

PHASE I

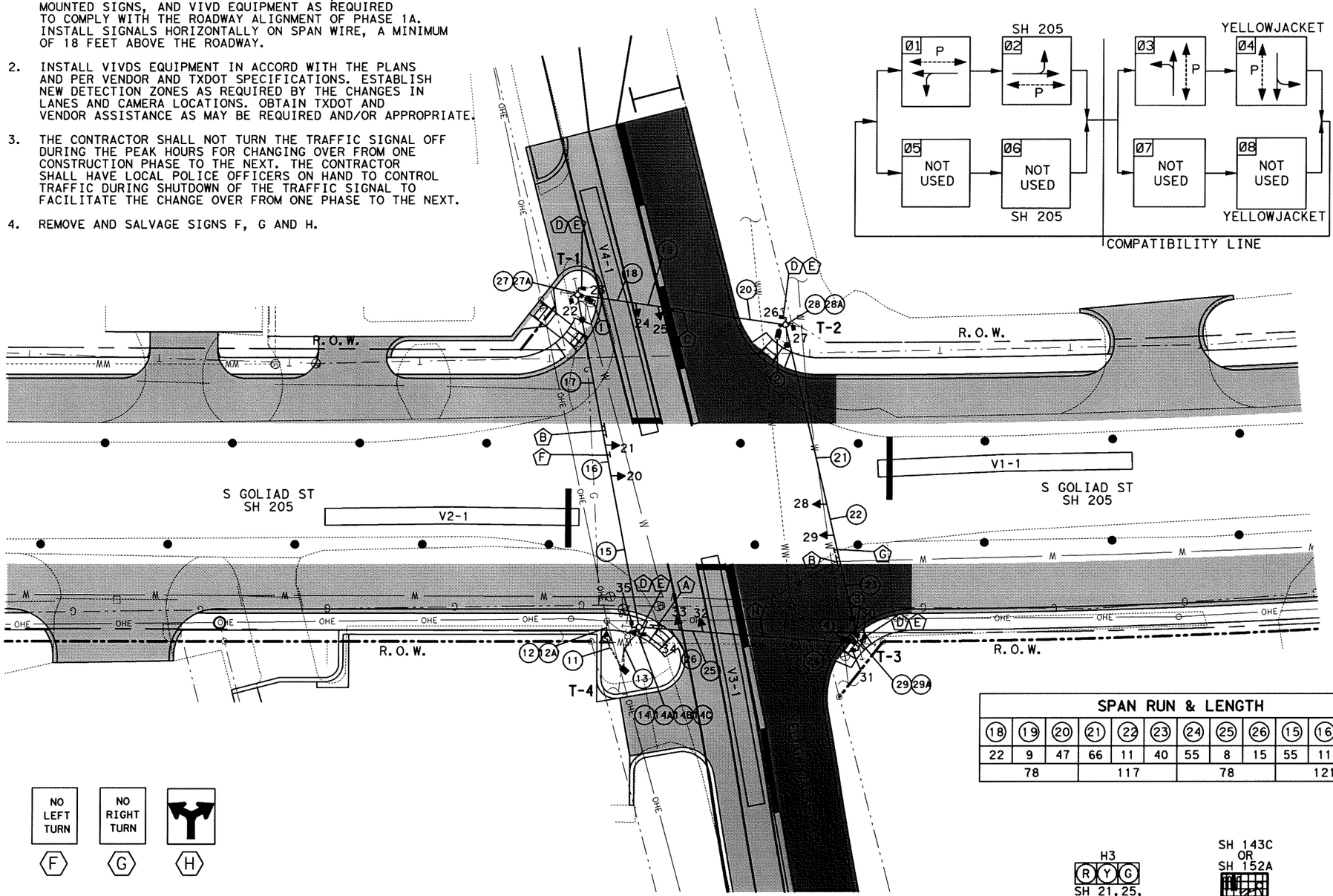
SHEET 4 of 10

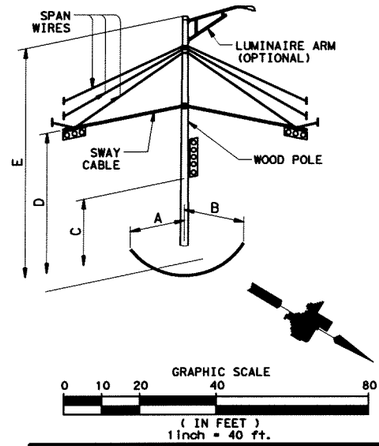
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	641A
CONT.	SECT.	JOB	
0009	12	203	

NOTES:

1. CONTRACTOR SHALL INSTALL SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE 1A. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.
4. REMOVE AND SALVAGE SIGNS F, G AND H.





LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

SPAN RUN & LENGTH											
(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(15)	(16)	(17)
22	9	47	66	11	40	55	8	15	55	11	55
78			117			78			121		

NO LEFT TURN (F) | NO RIGHT TURN (G) | (H)

H3 (R Y G) SH 21, 25, 29, 33

H4LT (R Y G G) SH 20, 24, 28, 32

SH 143C OR SH 152A SH 22, 23, 26, 27, 30, 31, 34, 35

SIGNS SUMMARY								
SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
F	R3-2A	NO LEFT TURN	R	SPAN T-1/T-4	24"X24"	C	-	-
G	R3-1A	NO RIGHT TURN	R	SPAN T-2/T-3	24"X24"	C	-	-
H	R3-8LR	LEFT OR RIGHT TURN ONLY	R	SPAN T-3/T-4	30"X30"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE
*SIGNS A, B, C, D AND E TO REMAIN IN PLACE.

KEVIN P. HOPPERS 93669 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS — P.E.

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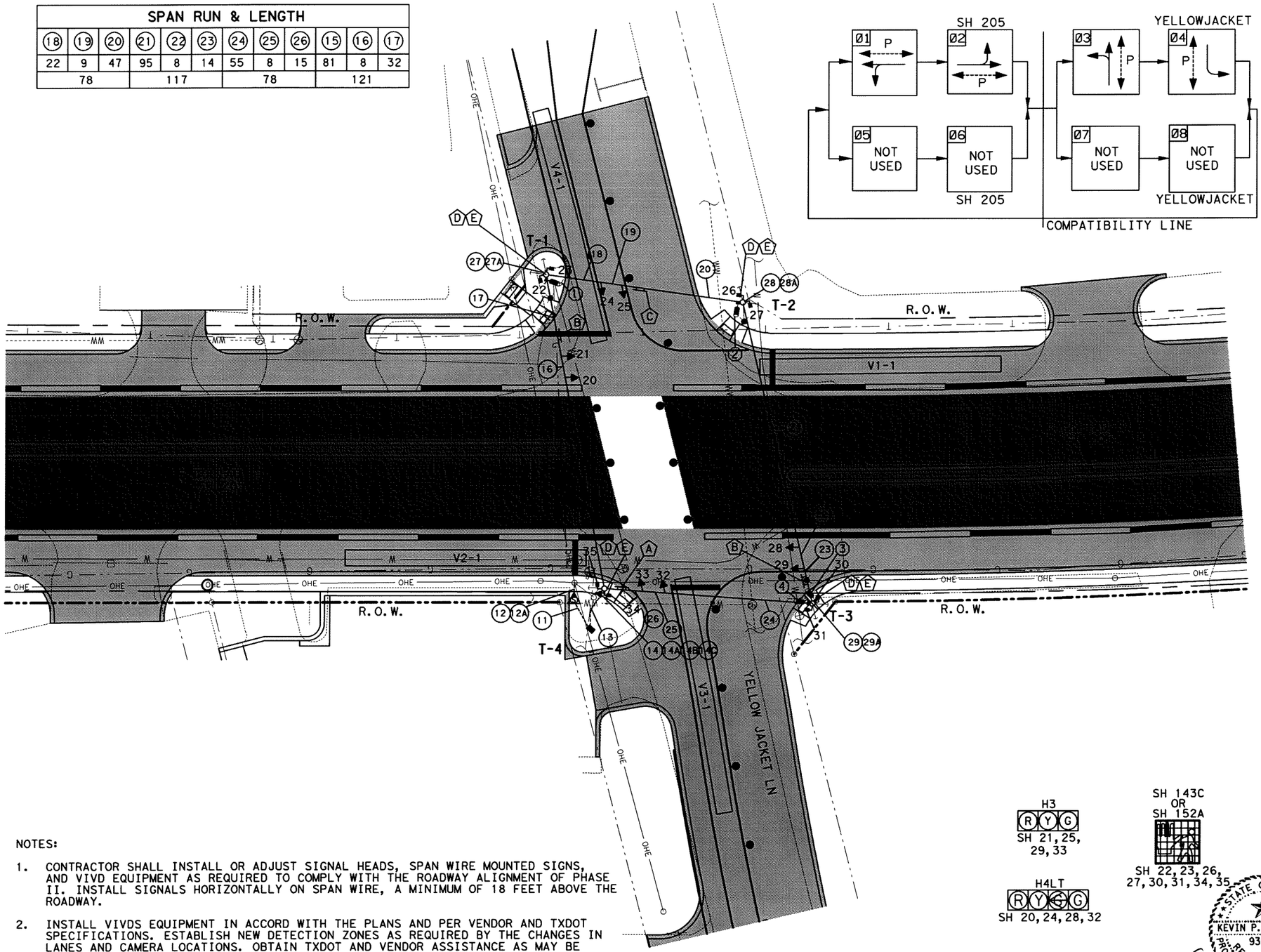
PHASE IA

SHEET 5 of 10

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

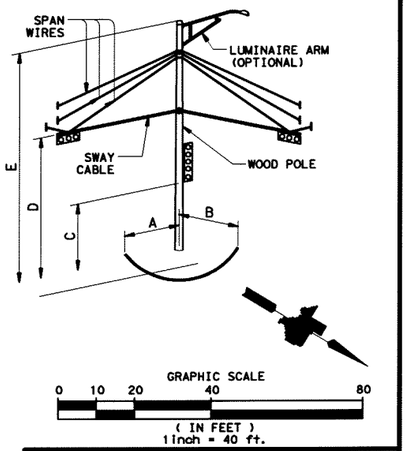
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	642
CONT.	SECT.	JOB	
0009	12	203	

SPAN RUN & LENGTH											
(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(15)	(16)	(17)
22	9	47	95	8	14	55	8	15	81	8	32
78			117			78			121		



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE



GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE II. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.

H3 (R Y G)
SH 21, 25, 29, 33

H4LT (R Y G G)
SH 20, 24, 28, 32

SH 143C OR SH 152A
SH 22, 23, 26, 27, 30, 31, 34, 35

STATE OF TEXAS
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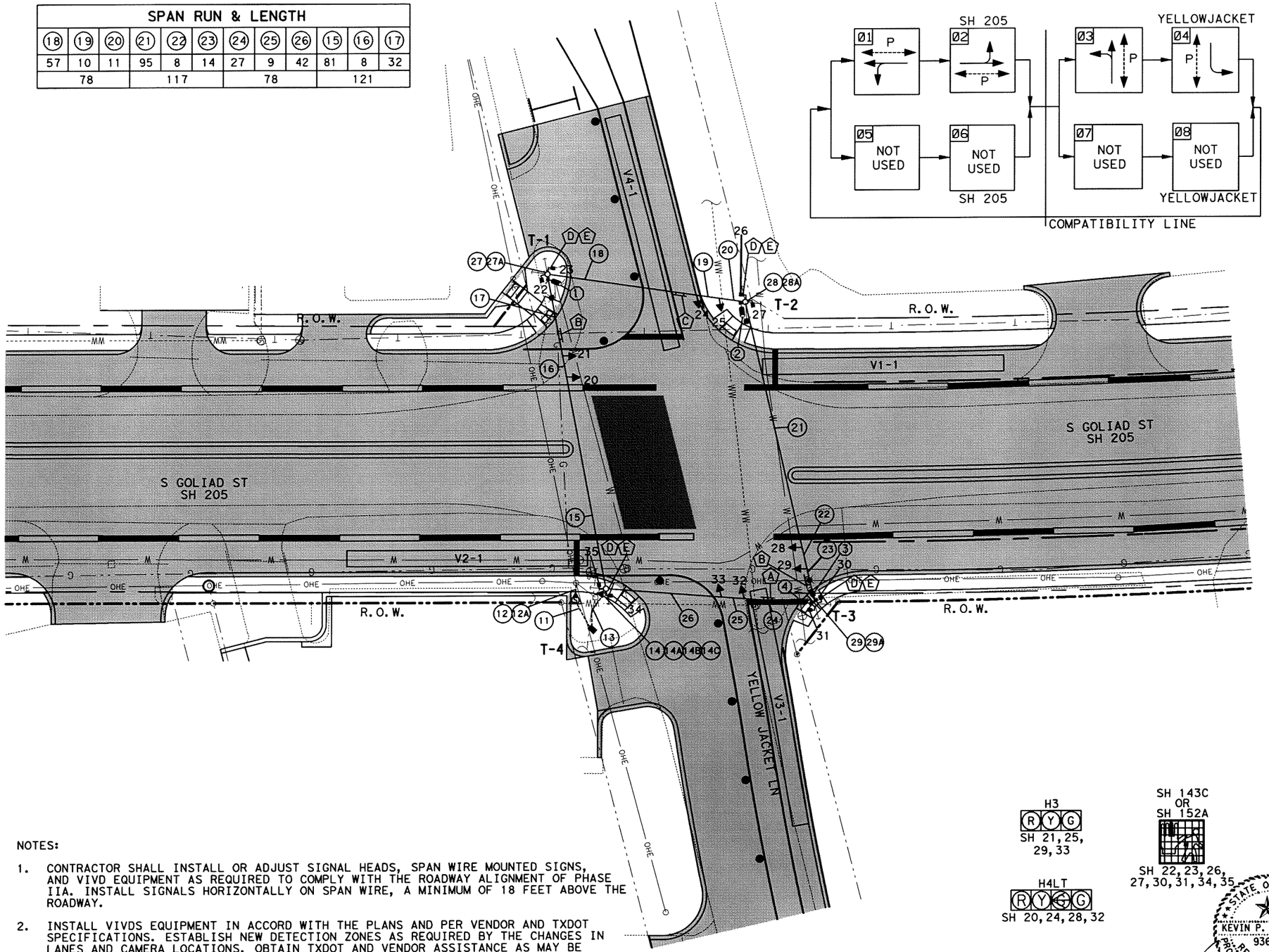
PHASE 2

SHEET 6 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

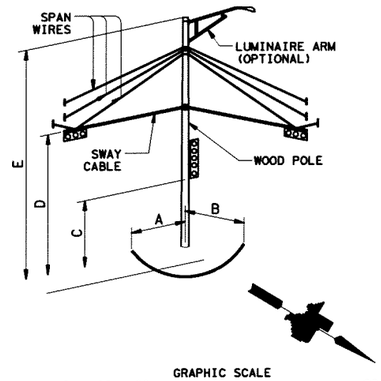
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	643
CONT.	SECT.	JOB	
0009	12	203	

SPAN RUN & LENGTH											
(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(15)	(16)	(17)
57	10	11	95	8	14	27	9	42	81	8	32
78			117			78			121		



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE



GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE IIA. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.

H3
(R)(Y)(G)
SH 21, 25, 29, 33

H4LT
(R)(Y)(G)(G)
SH 20, 24, 28, 32

SH 143C OR SH 152A

SH 22, 23, 26, 27, 30, 31, 34, 35

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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SH 205

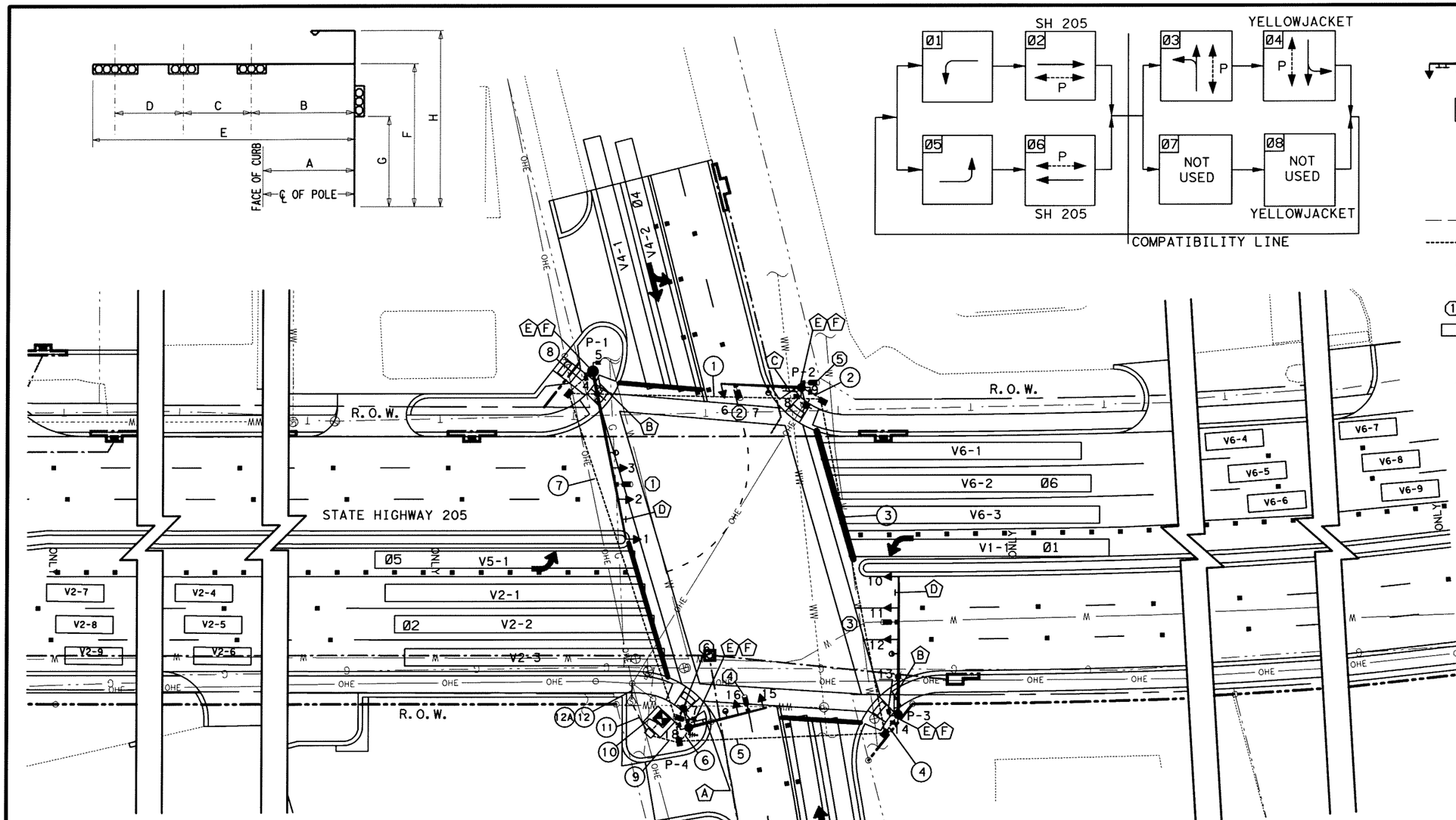
TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT YELLOW JACKET LN

PHASE 2A

SHEET 7 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	644
CONT.	SECT.	JOB	
0009	12	203	



ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS					
			BACKPLATES			LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	4 SEC (EA)	5 SEC (EA)		SEC(EA)	SEC(EA)
2,3,7,11,12,16	H-3	I	6				18	
1,10	H-5LT	I			2	4	10	
6,15	H-4LT	I		2			8	
4,5,8,9,13,14,17,18	143C	I						8
TOTAL (NEW)			6	2	2	4	36	8

STATUS: E=EXISTING; R=EX.TO BE REMOVED; I=INSTALL NEW

SIGNAL HEAD AND POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	I	13.8	35	11	14	60	19		30	3	Y	48-A
P-2	I	10.7	18	10		28	19		30	2	Y	30-A
P-3	I	11.1	18	11	11	48	19		30	3	Y	36-A
P-4	I	8.0	19	9		28	19		30	2	Y	30-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE

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SH 205

PROPOSED SIGNAL LAYOUT
SH 205 AT
YELLOW JACKET LN.

FINAL SIGNAL DESIGN

SHEET 8 of 10

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	645
CONT.	SECT.	JOB	
0009	12	203	

NOTES:

1. REMOVE AND SALVAGE ALL TEMPORARY SIGNAL EQUIPMENT WHEN THE PERMANENT SIGNAL IS PLACED IN OPERATION. RETURN POLE-MOUNTED CABINET AND CONTROLLER TO TXDOT. TXDOT SHALL BE PRESENT WHEN THE SIGNAL IS PLACED IN OPERATION.
2. POWER SERVICE INSTALLED BY CONTRACTOR DURING PREVIOUS CONSTRUCTION PHASE.
3. EXISTING CONDUIT RUN 13 SHOWN IN PREVIOUS CONSTRUCTION PHASE SHALL BE ABANDONED.
4. INSTALL EXISTING CONTROLLER, SPREAD SPECTRUM RADIO, CABINET AND NEW FOUNDATION AS SHOWN ON THE PLANS PER TxDOT SPECIFICATIONS.
5. TO INSTALL STANDARD GROUND BOXES W/CONCRETE APRONS AS SHOWN.
6. SUPPLY TRAFFIC SIGNAL POLES AND INSTALL ACCORDING TO TxDOT SPECIFICATIONS.
7. MOUNT EXISTING SSR UNI-ANTENNA TO POLE P-4. FURNISH AND INSTALL SSR COAXIAL CABLE. USE EXISTING SSR RECEIVER.
8. ALL OPTICOM EQUIPMENT SHALL BE FURNISHED BY THE CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR. COORDINATE WITH MARK POINDEXTER WITH THE CITY FIRE DEPARTMENT AT (972) 771-7770.
9. INSTALL ALL VIVDS EQUIPMENT PER VENDOR AND TxDOT SPECIFICATIONS. RELOCATE VIVDS PROCESSOR AND CAMERA ASSEMBLIES FROM TEMPORARY SIGNAL EQUIPMENT TO PERMANENT SIGNAL EQUIPMENT. ADDITIONAL CAMERAS #5 AND #6 WILL BE SUPPLIED BY TxDOT AND INSTALLED BY CONTRACTOR. SUPPLY VIVDS CABLE.
10. ALL STREET NAME SIGNS SHALL BE RELOCATED FROM SPAN WIRE SIGNAL TO MAST ARM ASSEMBLIES BY THE CONTRACTOR. ALL NEW TRAFFIC SIGNAL SIGNING SHALL BE FURNISHED BY THE CONTRACTOR.
11. INSTALL SEPARATE SIGNAL CABLES TO EVERY DEVICE ON EACH POLE (TRAFFIC SIGNAL HEADS, PED HEADS, AND PED BUTTONS) FROM THE TERMINAL BLOCKS IN EACH POLE. ALL EQUIPMENT AND DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS.
12. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT)					CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA)			ITEM 684 SIG CAB (EA)		ITEM 6266 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
		1 ½" RM RISER	2 " PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED		NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	TY-A 10 CNDR. CABLE	TY-A 20 CNDR. CABLE					
1	I				95		I		1	2		1	2	1		95	1
2	I			15			I		1	2		1	2	1		15	2
3	I				125		I		1							125	3
4	I		15				I		1			1	1	1		15	4
5	I				75		I		1			1	1	1		75	5
6	I			10			I		1	4		1	2	1	1	10	6
7	I				135		I		1	2		2	3	2		135	7
8	I			15			I		1	4		1	1	1		15	8
9	I					15	I		1	2		4	6	4	1	15	9
10	I					10	I	2	1			4	6	4	1	10	10
11	E			15			I	2	1	2						15	11
12	E			10			E									10	12
12A	E	20					E									20	12A
13	A		10				REM	2	1	3						10	13
TOTAL		0	15	40	430	25		70	535	680		595	900	595	35		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE TWT(1)UA(P)	GROUND MOUNT TYPE TWT(1)UA(T)
A	STREET NAME	GOLIAD	I	P-2		-	-	-
B	STREET NAME	YELLOWJACKET	I	P-1		-	-	-
C	STREET NAME	GOLIAD	I	P-4		-	-	-
B	R6-2L	YELLOWJACKET	I	P-3		C	-	-
D	R10-12	LEFT TURN YIELD ON GREEN	I	P-3		C	-	-
E	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-1/P-2 P-3/P-4	9"X12"	C	-	-
F	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-1/P-2 P-3/P-4	9"X12"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE

ITEM 0682 LED SIGNAL INDICATIONS

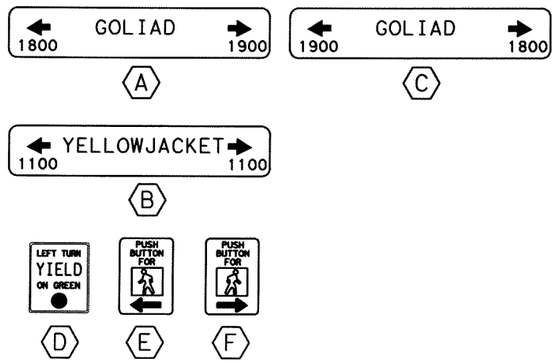
ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2014	PED SIG SEC (12 IN) LED (2 IND)	EA	8
0682	2022	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	4
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	10
0682	2024	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	2
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	10
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	10

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	4

WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR. NO. 6 XHHW	ITEM 620 ELEC. CONDR. NO. 12 XHHW	ITEM 684 TYPE A 5 CNDR NO. 14	ITEM 684 TYPE A 7 CNDR NO. 14	ITEM 6266 VIVDS CABLE	OPTICOM CABLE (CITY SUPPLIED) MODEL 138	ITEM 6006 COAX CABLE
P-1		80	131	80	66	55	
P-2		80	48	48	80	48	
P-3			97	68	49	38	
P-4		80	49	48	80	39	40
TOTAL	0	240	325	244	278	180	40





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SH 205

PERMANENT SIGNAL LAYOUT GOLIAD (SH 205) AT YELLOWJACKET LN

FINAL SIGNAL DESIGN

SHEET 9 of 10

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	646
CONT.	SECT.	JOB	
0009	12	203	

ITEM 6266 VIVDS	
ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	2[4]
VIVDS COMM. CABLE, LF	1178
VIVDS SET UP SYSTEM	1

*-SUPPLIED BY TXDOT
[X]-RELOCATED FROM TEMPORARY SIGNALS
X - NEW CAMERA ASSEMBLIES TO INSTALLED BY CONTRACTOR AND FURNISHED BY TxDOT.

ITEM 6006 SSR	
ITEM	QUANTITY
*SPREAD SPECTRUM RADIO	1
*RADIO ANTENNA	1
COAXIAL CABLE, LF	75

*-RE-USE EXISTING SPREAD SPECTRUM UNI-DIRECTIONAL ANTENNA AND RADIO.

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 20 CNDR. FROM P-1 TO CNTRL.	CABLE 2 20 CNDR. FROM P-2 TO CNTRL.	CABLE 3 20 CNDR. FROM P-3 TO CNTRL.	CABLE 4 20 CNDR. FROM P-4 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 1,2,3 R	SH 6,7 R	SH 10,11,12 R	SH 15,16 R	3
4	GREEN	SH 1,2,3 G	SH 6,7 G	SH 10,11,12 G	SH 15,16 G	4
5	ORANGE	SH 1,2,3 Y	SH 6,7 Y	SH 10,11,12 Y	SH 15,16 Y	5
6	BLUE	Ø4 PED CALL	Ø6 PED CALL	Ø3 PED CALL	Ø2 PED CALL	6
7	WHITE/BLACK	SH 1 ~~G~~	SH 6 ~~G~~	SH 10 ~~G~~	SH 6 ~~G~~	7
8	RED/BLACK	SH 4 DW	SH 8 DW	SH 13 DW	SH 17 DW	8
9	GREEN/BLACK	SH 4 W	SH 8 W	SH 13 W	SH 17 W	9
10	ORANGE/BLACK	SH 1 ~~Y~~	Ø8 PED CALL	SH 10 ~~Y~~	Ø4 PED CALL	10
11	BLUE/BLACK	Ø6 PED CALL	SH 9 DW	Ø2 PED CALL	SH 18 DW	11
12	BLACK/WHITE	SPARE	SH 9 W	SPARE	SH 18 W	12
13	RED/WHITE	SH 5 DW	SPARE	SH 14 DW	SPARE	13
14	GREEN/WHITE	SH 5 W	SPARE	SH 14 W	SPARE	14
15	BLUE/WHITE	SPARE	SPARE	SPARE	SPARE	15
16	BLACK/RED	SPARE	SPARE	SPARE	SPARE	16
17	WHITE/RED	SPARE	SPARE	SPARE	SPARE	17
18	ORANGE/RED	SPARE	SPARE	SPARE	SPARE	18
19	BLUE/RED	SPARE	SPARE	SPARE	SPARE	19
20	RED/GREEN	SPARE	SPARE	SPARE	SPARE	20

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-1 MAST ARM	24'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V6-2		6'X90'		
				V6-3		6'X90'		
				V1-1	N/A	6'X90'	Ø1-1	Ø1-G
2	P-2 MAST ARM	24'	STOP BAR	V3-1	N/A	6'X90'	Ø3-1	Ø3-R
				V3-2		6'X90'		
3	P-3 MAST ARM	24'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V2-2		6'X90'		
				V2-3		6'X90'		
				V5-1	N/A	6'X90'	Ø5-1	Ø5-G
4	P-4 MAST ARM	24'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R
				V4-2		6'X90'		
5	P-2 LUMINAIRE ARM	32'	SETBACK	V6-4	210'	6'X20'	Ø6-2	Ø6-G
				V6-5		6'X20'		
				V6-6		6'X20'		
				V6-7	350'	6'X20'	Ø6-3	Ø6-G
				V6-8		6'X20'		
				V6-9		6'X20'		
6	P-4 LUMINAIRE ARM	32'	SETBACK	V2-4	210'	6'X20'	Ø2-2	Ø2-G
				V2-5		6'X20'		
				V2-6		6'X20'		
				V2-7	350'	6'X20'	Ø2-3	Ø2-G
				V2-8		6'X20'		
				V2-9		6'X20'		

*ITEM 628 ELECTRICAL SERVICE DATA

SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION ED(4)(5X8)-03	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240-060(NS)SS(E)PS(U)	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 6	6.2

*REFER TO STANDARD SHEET ED(8)-03.
POWER INSTALLED IN A PREVIOUS PHASE

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

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SH 205

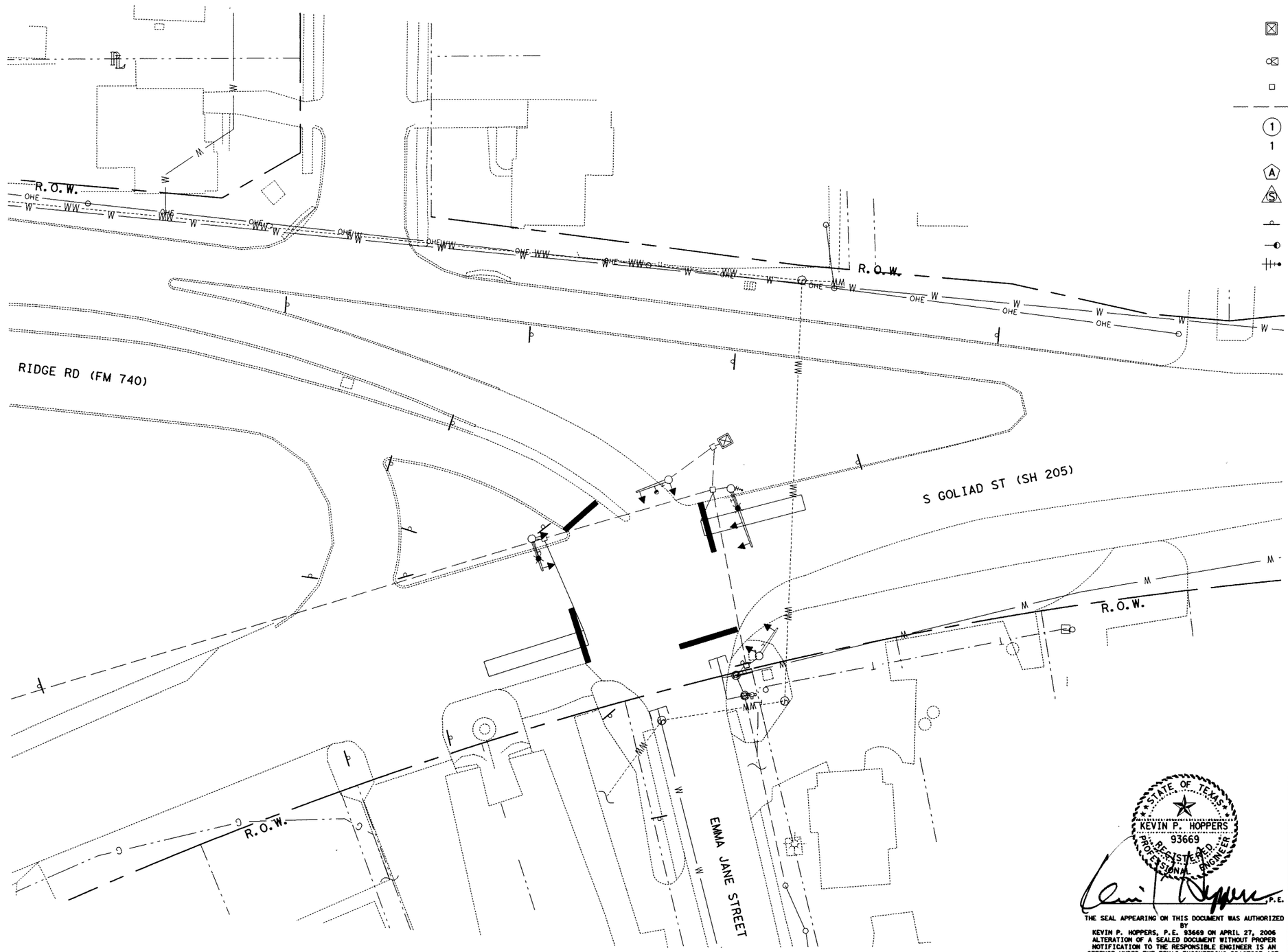
PERMANENT SIGNAL LAYOUT GOLIAD (SH205) AT YELLOWJACKET LN

FINAL SIGNAL DESIGN

SHEET 10 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	647
CONT.	SECT.	JOB	
0009	12	203	



LEGEND

- TYPICAL EXISTING MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TYPICAL EXISTING SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- EXISTING TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- EXISTING CONDUIT
- (1) EXISTING CONDUIT RUN NUMBER
- 1 EXISTING SIGNAL HEAD NUMBER
- (A) EXISTING SIGN LABEL
- (S) EXISTING POWER SOURCE
- EXISTING SIGN PANEL AND POST
- EXISTING OPTICOM
- SSR YAGI ANTENNA

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
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SH 205

EXISTING SIGNAL LAYOUT S GOLIAD ST (SH 205) AT RIDGE RD (FM 740)

EXISTING LAYOUT

SHEET 1 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	648
CONT.	SECT.	JOB	
0451	01	032	

ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS					
			BACKPLATES			LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	4 SEC (EA)	5 SEC (EA)		SEC (EA)	SEC (EA)
21, 27	H5LT	I			2		10	
22, 24, 25, 26, 28, 30	H3	I	6				18	
23	H4LT	I		1			4	
29	V4LT	I		1			4	
TOTAL (NEW)			6	2	2		36	

STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED

SPAN RUN & LENGTH

(30)	(31)	(32)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
126	8	13	60	4	10	11	33	10	39	33	13	68
147			118					49		114		

TIMBER POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-1	I	50.5	9		19	30	Y
T-2	I	47	52		19	30	Y
T-3	I	8	4	15	19	30	Y
T-4	I	6			19		N
T-5	I	10	7		19	30	Y

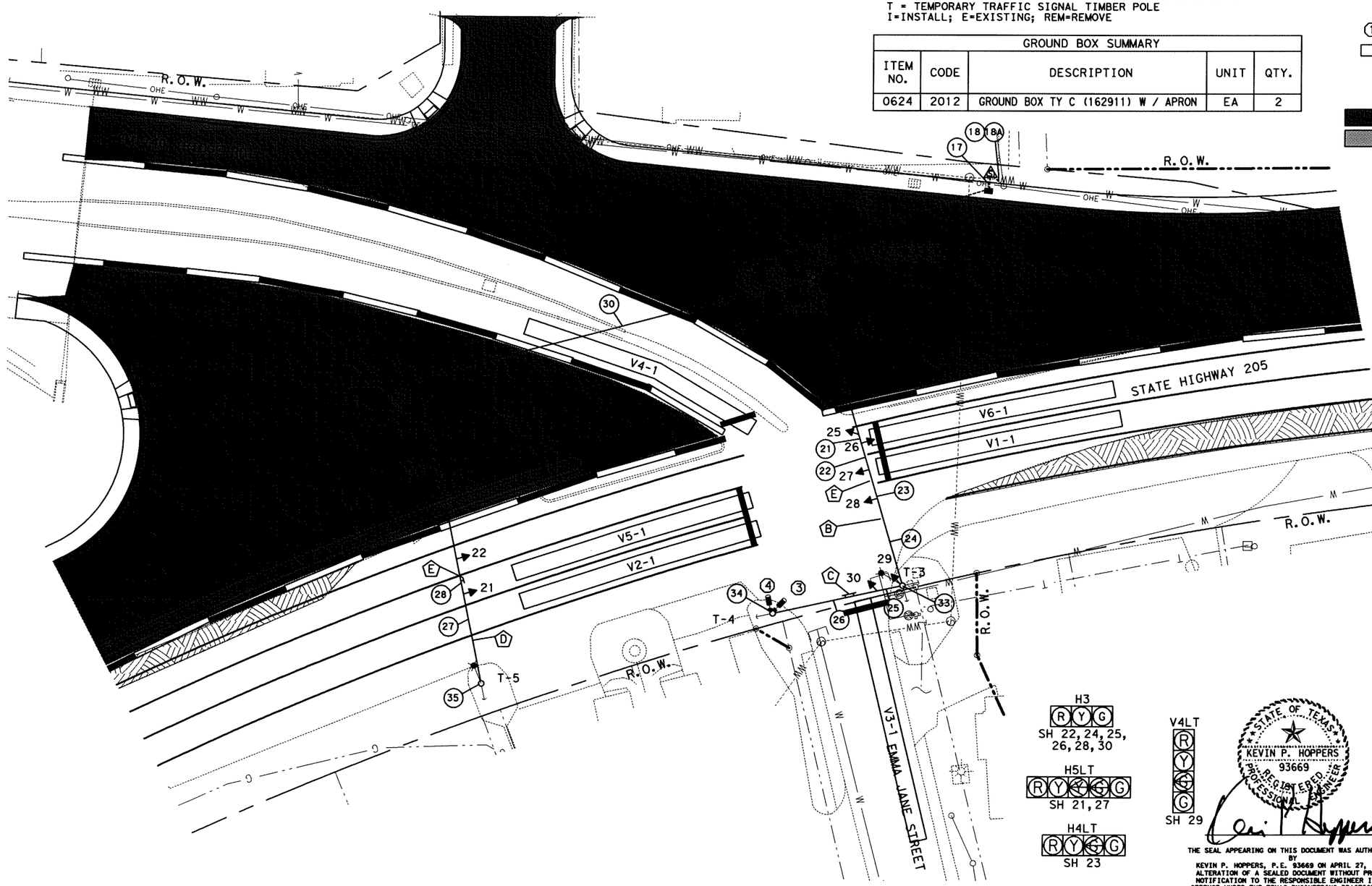
T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE
I=INSTALL; E=EXISTING; REM=REMOVE

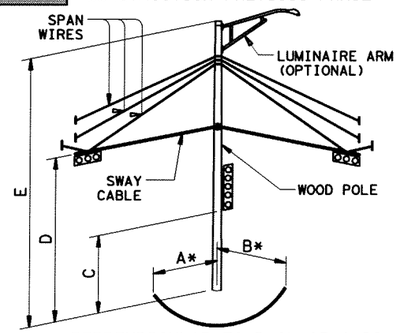
GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	2

LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE





* - PERPENDICULAR TO BACK OF CURB

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT RIDGE RD (FM 740)

PHASE I

SHEET 2 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	649
CONT.	SECT.	JOB	
0451	01	032	

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT)					CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA)			ITEM 684 SIG CAB (EA)			VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
											TY-A							
		1 ½" RM RISER	2" RM RISER	2" PVC TRENCHED	2" PVC BORED	3" RM RISER		NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	5 CNDR. CABLE	7 CNDR. CABLE	10 CNDR. CABLE					
16	I				95		I	2	1	4							95	16
16A	I			28			I	2	1	4							28	16A
17	I			10			I	2	1	4							10	17
18	I			10			I	2	1	4							10	18
18A	I		20				I	2	1	4							20	18A
19	I		10				I	2	1								10	19
19A	I					15	I		1		3	4					15	19A
19B	I	20					I		1	4							20	19B
19C	I	10					I		1	4				2			10	19C
19D	I	10					I		1					5			10	19D
20	AC						I			2	2	2		2			60	20
21	AC						I			2	1	2		2			4	21
22	AC						I			2		2		2			10	22
23	AC						I			2		2		2			11	23
24	AC						I			2		1		2			33	24
25	AC						I					1		2			10	25
26	AC						I							2			39	26
27	AC						I			2							33	27
28	AC						I			2	1						13	28
29	AC						I			2	1						68	29
30	AC						I			2	1			1			100	30
30A	AC						I			2	1	1		1			26	30A
31	AC						I			2	1	2		1			8	31
32	AC						I			2	1	2		1			13	32
33	I	10					I		1	2							10	33
34	I	10					I		1					2			10	34
35	I	10					I		1	2							10	35
36	I	10					I		1	4				1			10	36
TOTAL		80	30	48	95	15		346	268	958	397	341		581	0	0		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

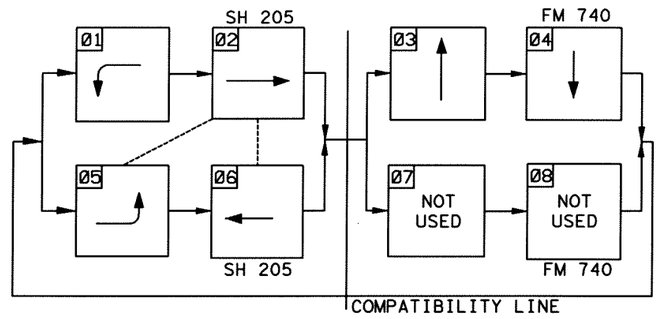
CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 7 CNDR.	CABLE 2* 5 CNDR.	CABLE 3 7 CNDR.	CABLE 4 5 CNDR.	CNDR. NO.
		SPAN T-5/T-1 TO CNTRL.	SPAN T-1/T-2 TO CNTRL.	SPAN T-1/T-2 TO CNTRL.	SPAN T-2/T-3 TO CNTRL.	
1	BLACK	SPARE	SPARE	SPARE	SPARE	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 21, 22 R	SH 25 R	SH 23, 24 R	SH 25 R	3
4	GREEN	SH 21, 22 G	SH 25 G	SH 23, 24 G	SH 25 G	4
5	ORANGE	SH 21, 22 Y	SH 31 Y	SH 23, 24 Y	SH 25 Y	5
6	BLUE	SH 21 ~~Y~~		SPARE		6
7	WHITE/BLACK	SH 21 ~~G~~		SH 23 ~~G~~		7
CNDR. NO.	CONDUCTOR COLOR	CABLE 5 5 CNDR.	CABLE 6 7 CNDR.	CABLE 7 7 CNDR.		CNDR. NO.
		SPAN T-2/T-3 TO CNTRL.	SPAN T-2/T-3 TO CNTRL.	SPAN T-3/T-4 TO CNTRL.		
1	BLACK	SPARE	SPARE	SPARE		1
2	WHITE	SH COM	SH COM	SH COM		2
3	RED	SH 26 R	SH 27, 28 R	SH 29, 30 R		3
4	GREEN	SH 26 G	SH 27, 28 G	SH 29, 30 G		4
5	ORANGE	SH 26 Y	SH 27, 28 Y	SH 29, 30 Y		5
6	BLUE		SH 27 ~~Y~~	SPARE		6
7	WHITE/BLACK		SH 27 ~~G~~	SH 29 ~~G~~		7

*-SIGNAL HEAD #25 WILL BE MOVED FROM SPAN T-2 TO T-3 DURING PHASE II CONSTRUCTION CABLE 2 TO BE CONNECTED TO SIGNAL HEAD #25 AT THIS POINT.

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-2 TIMBER POLE	24'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V5-1	N/A	6'X90'	Ø5-1	Ø5-G
2	T-2 TIMBER POLE	24'	STOP BAR	V3-1	N/A	6'X90'	Ø3-1	Ø3-R
3	T-4 TIMBER POLE	24'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V1-1	N/A	6'X90'	Ø1-1	Ø1-G
4	T-4 TIMBER POLE	24'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R



SIGNAL HEAD PLACEMENT DURING CONSTRUCTION

MAX. DISTANCE (5 CNDR.)			
HEAD 22	230'	HEAD 23	36'
HEAD 24	28'	HEAD 25	75'
HEAD 26	79'	HEAD 28	101'
HEAD 29	144'	HEAD 30	128'
MAX. DISTANCE (7 CNDR.)			
HEAD 21	243'	HEAD 27	89'

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2015	VEH SIG SEC (12 IN) INC (GRN ARW)	EA	4
0682	2016	VEH SIG SEC (12 IN) INC (GRN)	EA	10
0682	2017	VEH SIG SEC (12 IN) INC (YEL ARW)	EA	2
0682	2018	VEH SIG SEC (12 IN) INC (YEL)	EA	10
0682	2020	VEH SIG SEC (12 IN) INC (RED)	EA	10

STATE OF TEXAS
KEVIN P. HOPPERS
93669
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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT FM 740 (RIDGE RD.)

PHASE I

SHEET 3 of 10

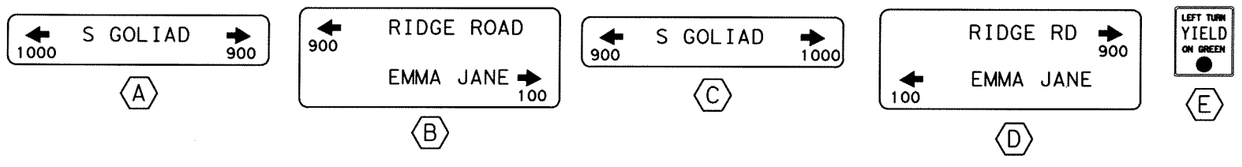
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	650
CONT.	SECT.	JOB	
0451	01	032	

SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	GOLIAD	E/REL	T1-T2	15" X VA	-	-	-
B	STREET NAME	RIDGE ROAD/EMMA JANE	E/REL	T2-T3	30" X VA	-	-	-
C	STREET NAME	GOLIAD	E/REL	T3-T4	15" X VA	-	-	-
D	STREET NAME	RIDGE ROAD/EMMA JANE	E/REL	T5-T1	30" X VA	C	-	-
E	R10-12	LEFT TURN YIELD ON GREEN	E/REL	T2-T3/T5-T1	24"X30"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE



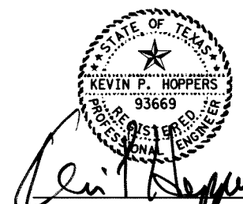
*ITEM 628 ELECTRICAL SERVICE DATA

SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION ED(4)(5)(8)-03	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240 060(NS)SS(E)PS(U)	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 6	6.2

*REFER TO STANDARD SHEET ED(8)-03.

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY FOR THE NEW AND PERMANENT ELECTRICAL SERVICE AND FOR INSTALLATION OF TEMPORARY TIMBER POLES IF IN PROXIMITY TO POWER LINES. INSTALL NEW ELECTRICAL SERVICE: TY D (120/240) 060 (NS) SS (E) PS (U) AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH TXDOT STANDARD DETAILS.
2. CONTRACTOR SHALL COORDINATE WITH TXDOT FOR THE TXDOT SPEC 680 SUPPLIED EQUIPMENT TO BE USED DURING THE TEMPORARY PHASE AND TO OBTAIN TXDOT ASSISTANCE AS APPLICABLE. ONCE THE PHASE I TRAFFIC SIGNAL IS APPROVED TO PLACE INTO OPERATION, THE CONTRACTOR MAY, DURING SOME TIME OTHER THAN CONTRACT DESCRIBED PEAK HOURS, SAFELY STOP ALL TRAFFIC AT THE INTERSECTION, TURN OFF THE EXISTING TRAFFIC SIGNAL, AND PLACE THE TEMPORARY TRAFFIC SIGNAL INTO OPERATION.
3. INSTALL ALL TEMPORARY SIGNALS HORIZONTALLY ON SPAN WIRES, A MINIMUM OF 18 FEET ABOVE THE ROADWAY. INSTALL SUFFICIENT TRAFFIC SIGNAL CABLES IN PLACE TO ACCOMMODATE ALL PHASES OF CONSTRUCTION. COIL EXCESS CONDUCTOR AND LASH IT TO THE SPAN WIRE CLEAR OF THE ROADWAY IF THE TRAFFIC SIGNAL HEAD IT WILL SERVE IN A SUBSEQUENT PHASE IS BEYOND CURRENT SIGNAL HEAD LOCATIONS.
4. EXISTING STREET NAME SIGNING SHALL THEN BE TRANSFERRED FROM THE EXISTING TRAFFIC SIGNAL MOUNTING TO THE TEMPORARY SPAN WIRE INSTALLATION.



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SH 205

TEMPORARY SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT
FM 740 (RIDGE RD.)

PHASE I

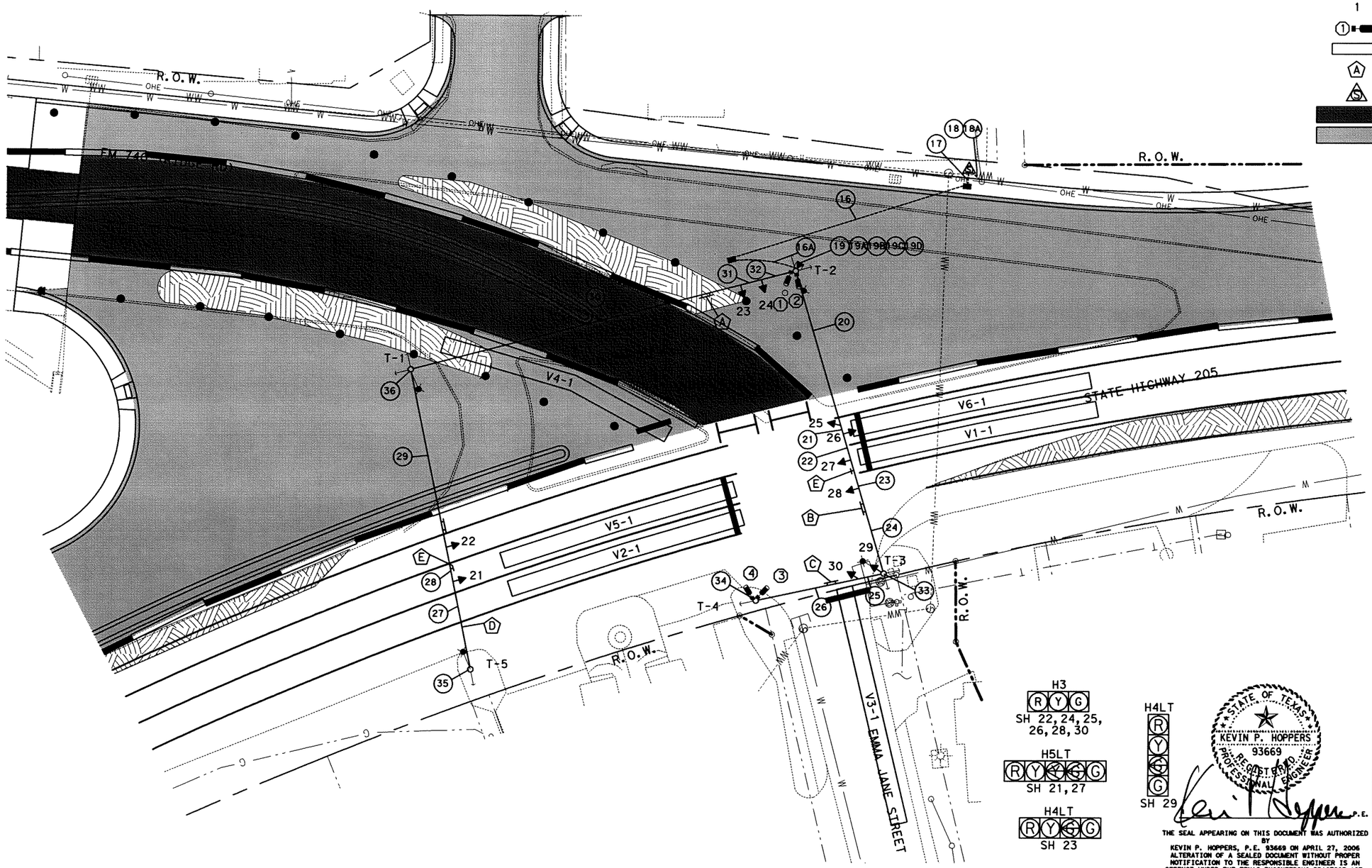
SHEET 4 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	650A
CONT.	SECT.	JOB	
0451	01	032	

NOTES:

1. CONTRACTOR SHALL INSTALL SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE 1A. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT RIDGE RD (FM 740)

PHASE IA

SHEET 5 of 10

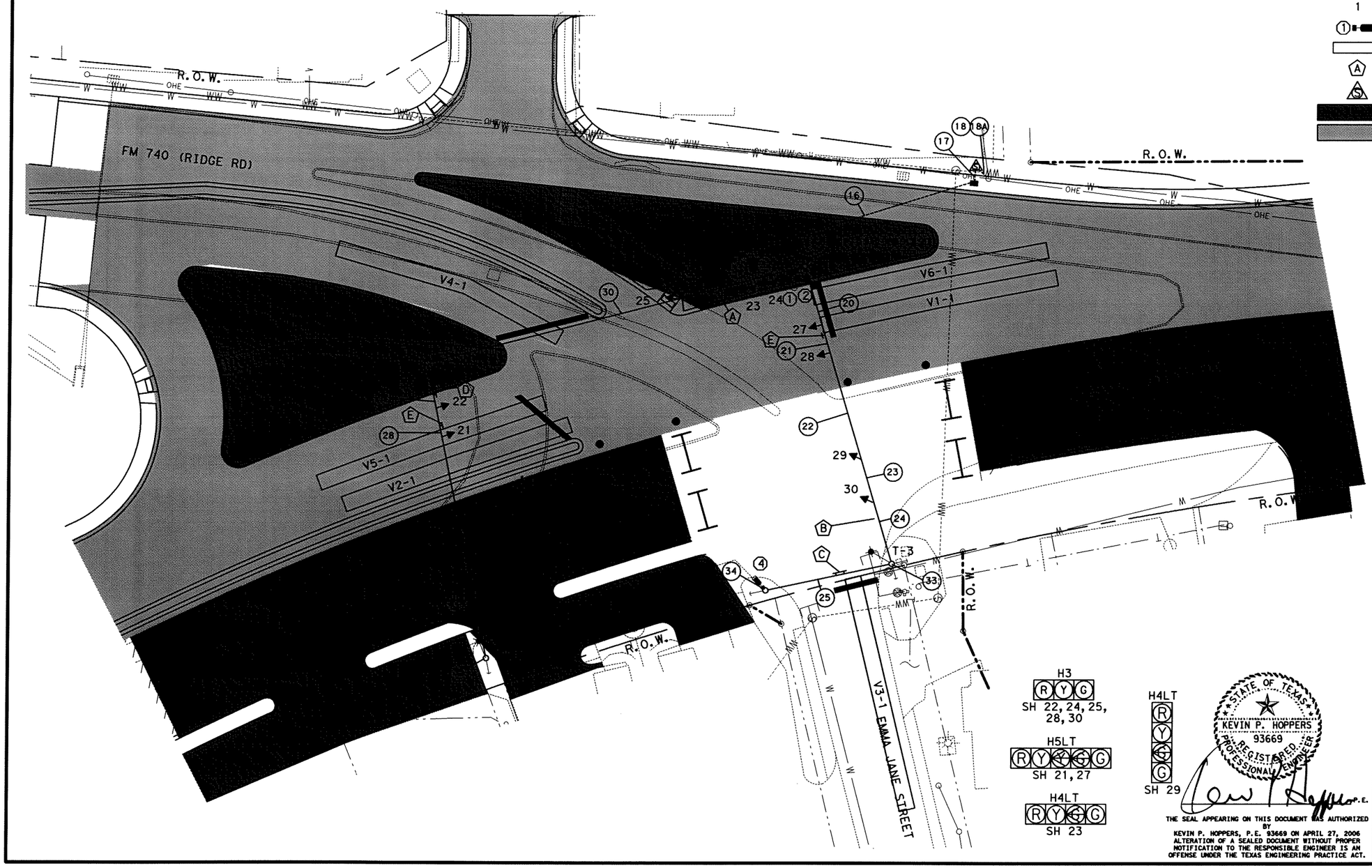
FED.RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	651
CONT.	SECT.	JOB	
0451	01	032	

SPAN RUN & LENGTH												
(30)	(30A)	(31)	(32)	(20)	(21)	(22)	(23)	(24)	(25)	(27)	(28)	(29)
98	28	8	13	23	11	42	17	25	49	85	11	18
147				118					49	114		

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE II. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
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- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
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- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT RIDGE RD (FM 740)

PHASE II

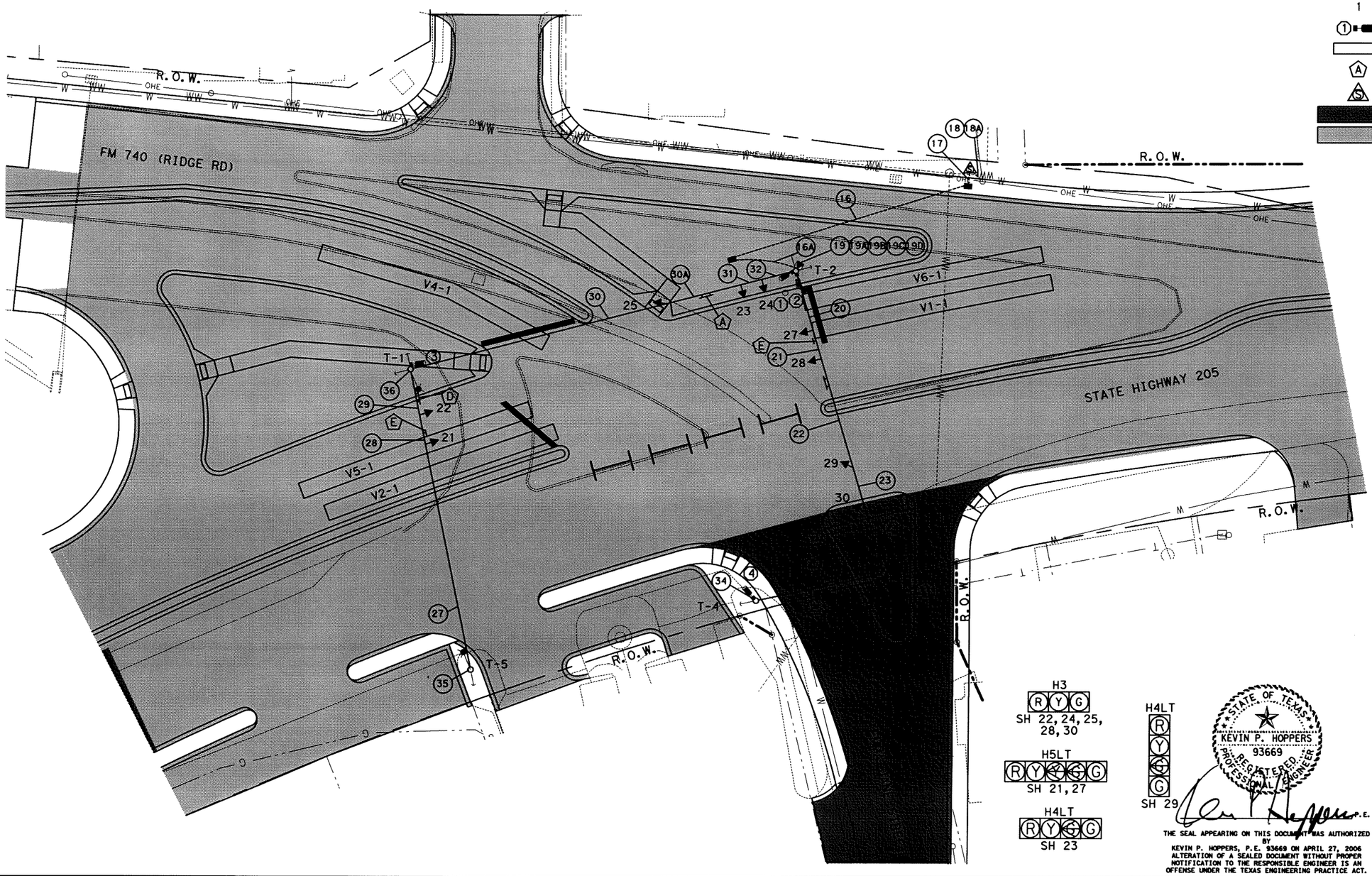
SHEET 6 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	652
CONT.	SECT.	JOB	
0451	01	032	

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE IIA. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.
4. THE SIGNAL HEADS FACING EMMA JANE STREET WILL BE DEACTIVATED AND COVERED OR REMOVED DURING THIS PHASE OF CONSTRUCTION.



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
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- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

H3 (R Y G)
SH 22, 24, 25, 28, 30

H5LT (R Y G G G)
SH 21, 27

H4LT (R Y G G)
SH 23

H4LT (R Y G G)
SH 29

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

KBR
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PB Parsons Brinckerhoff Quade & Douglas, Inc.
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Dallas, TX 75207

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SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT RIDGE RD (FM 740)

PHASE IIA

SHEET 7 of 10

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

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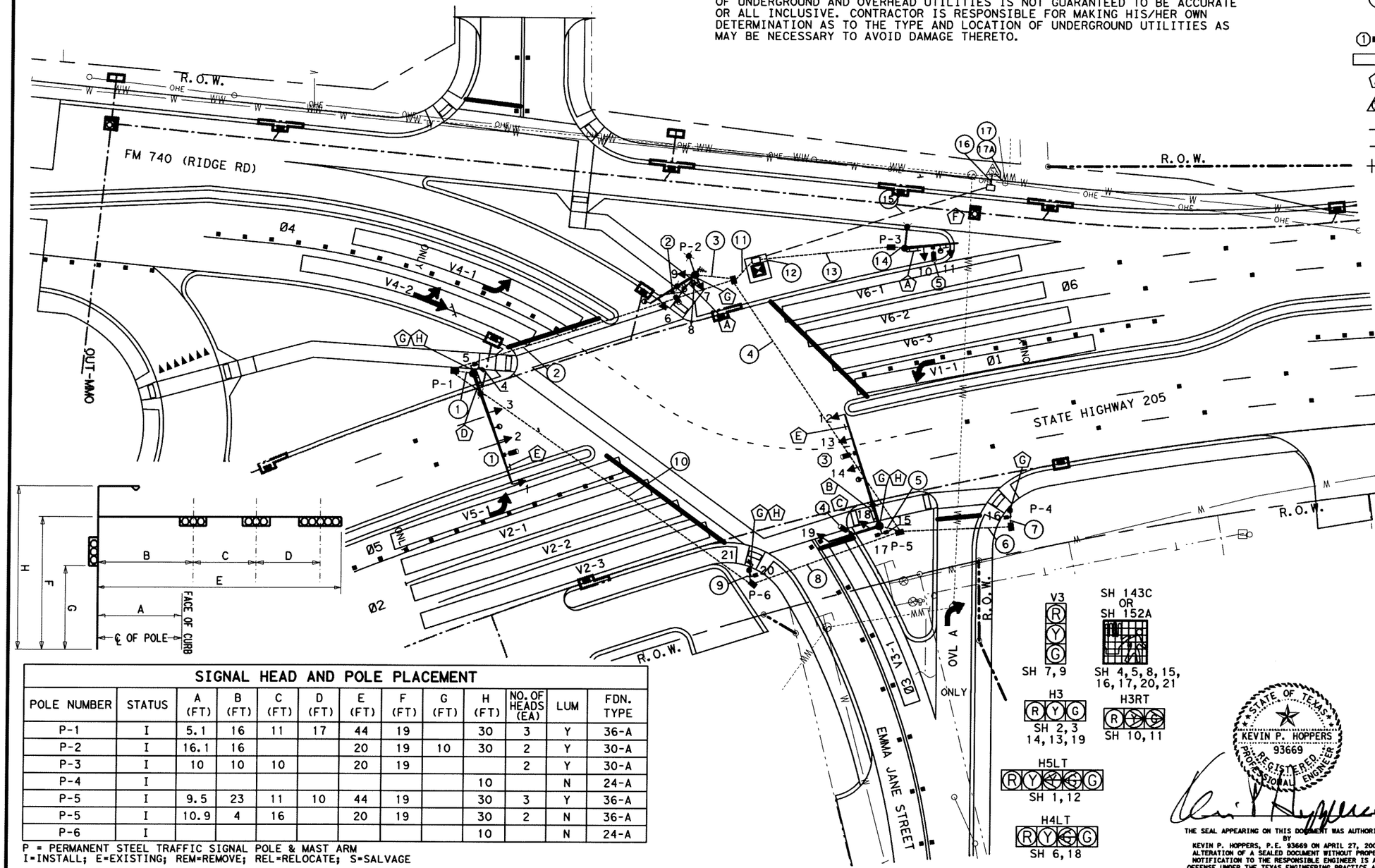
FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	653
CONT.	SECT.	JOB	
0451	01	032	

NOTES:

1. REMOVE AND SALVAGE ALL TEMPORARY SIGNAL EQUIPMENT WHEN THE PERMANENT SIGNAL IS PLACED IN OPERATION. RETURN POLE-MOUNTED CABINET AND CONTROLLER TO TXDOT. TXDOT SHALL BE PRESENT WHEN THE SIGNAL IS PLACED IN OPERATION.
2. POWER SERVICE INSTALLED BY CONTRACTOR DURING PREVIOUS CONSTRUCTION PHASE.
3. EXISTING CONDUIT RUN 18 SHOWN IN PREVIOUS CONSTRUCTION PHASE SHALL BE ABANDONED.
4. INSTALL EXISTING CONTROLLER, SPREAD SPECTRUM RADIO, CABINET AND NEW FOUNDATION AS SHOWN ON THE PLANS PER TxDOT SPECIFICATIONS.
5. INSTALL STANDARD GROUND BOXES W/CONCRETE APRONS AS SHOWN.
6. SUPPLY TRAFFIC SIGNAL POLES AND INSTALL ACCORDING TO TxDOT SPECIFICATIONS.
7. MOUNT EXISTING SSR UNI-ANTENNA TO POLE P-2. CONTRACTOR TO FURNISH AND INSTALL SSR COAXIAL CABLE. USE EXISTING SSR RECEIVER.
8. ALL OPTICOM EQUIPMENT SHALL BE FURNISHED BY THE CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH MARK POINDEXTER WITH THE CITY FIRE DEPARTMENT AT (972) 771-7770.
9. INSTALL ALL VIVDS EQUIPMENT PER VENDOR AND TxDOT SPECIFICATIONS. RELOCATE VIVDS PROCESSOR AND CAMERA ASSEMBLIES FROM TEMPORARY SIGNAL EQUIPMENT TO PERMANENT SIGNAL EQUIPMENT. ADDITIONAL CAMERA #5 WILL BE SUPPLIED BY TxDOT AND INSTALLED BY CONTRACTOR. CONTRACTOR TO SUPPLY VIVDS CABLE.
10. ALL STREET NAME AND NEW TRAFFIC SIGNAL SIGNING SHALL BE FURNISHED BY THE CONTRACTOR.
11. INSTALL SEPARATE SIGNAL CABLES TO EVERY DEVICE ON EACH POLE (TRAFFIC SIGNAL, HEADS, PED HEADS, AND PED BUTTONS) FROM THE TERMINAL BLOCK IN EACH POLE. ALL EQUIPMENT AND DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS.
12. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

LEGEND

- TYPICAL PROPOSED MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- SIGN PANEL AND POST
- OPTICOM
- SSR YAGI ANTENNA



GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

SIGNAL HEAD AND POLE PLACEMENT												
POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	I	5.1	16	11	17	44	19		30	3	Y	36-A
P-2	I	16.1	16			20	19	10	30	2	Y	30-A
P-3	I	10	10	10		20	19			2	Y	30-A
P-4	I								10		N	24-A
P-5	I	9.5	23	11	10	44	19		30	3	Y	36-A
P-5	I	10.9	4	16		20	19		30	2	N	36-A
P-6	I								10		N	24-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; S=SALVAGE

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SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT RIDGE RD (FM 740)

FINAL SIGNAL DESIGN

SHEET 8 of 10

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN P. HOPPERS, P.E. 93669 ON APRIL 27, 2006
ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	654
CONT.	SECT.	JOB	
0451	01	032	

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 20 CNDR. FROM P-1 TO CNTRL.	CABLE 2 20 CNDR. FROM P-2 TO CNTRL.	CABLE 3 10 CNDR. FROM P-3 TO CNTRL.	CABLE 4 10 CNDR. FROM P-4 TO CNTRL.	CABLE 5 20 CNDR. FROM P-5 TO CNTRL.	CABLE 6 10 CNDR. FROM P-6 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	SPARE	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 1,2,3 R	SH 6,7 R	SH 10,11 R	SH 16 DW	SH 12,13,14 R	SPARE	3
4	GREEN	SH 1,2,3 G	SH 6,7 G	SH 10,11 ~~G~~	SH 16 W	SH 12,13,14 G	SH 20 DW	4
5	ORANGE	SH 1,2,3 Y	SH 6,7 Y	SH 10,11 ~~Y~~	Ø2 PED CALL	SH 12,13,14 Y	SH 20 W	5
6	BLUE	Ø4 PED CALL	Ø6 PED CALL	SPARE	SPARE	Ø2 PED CALL	Ø2 PED CALL	6
7	WHITE/BLACK	SH 1 ~~G~~	SH 6 ~~G~~	SPARE	SPARE	SH 12 ~~G~~	SPARE	7
8	RED/BLACK	SH 4 DW	SH 8 DW	SPARE	SPARE	SH 15 DW	SH 21 DW	8
9	GREEN/BLACK	SH 4 W	SH 8 W	SPARE	SPARE	SH 15 W	SH 21 W	9
10	ORANGE/BLACK	SH 1 ~~Y~~	SPARE	SPARE	SPARE	SH 12 ~~Y~~	Ø4 PED CALL	10
11	BLUE/BLACK	Ø6 PED CALL	SPARE			Ø2 PED CALL		11
12	BLACK/WHITE	SPARE	SH 9 R			SH 18,19 R		12
13	RED/WHITE	SH 5 DW	SPARE			SH 17 DW		13
14	GREEN/WHITE	SH 5 W	SPARE			SH 17 W		14
15	BLUE/WHITE	SPARE	SH 9 G			SH 18,19 G		15
16	BLACK/RED	SPARE	SH 9 Y			SH 18,19 Y		16
17	WHITE/RED	SPARE	SPARE			SH 19 ~~G~~		17
18	ORANGE/RED	SPARE	SPARE			SPARE		18
19	BLUE/RED	SPARE	SPARE			SPARE		19
20	RED/GREEN	SPARE	SPARE			SPARE		20

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 2" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 5 CNDR. CABLE	10 CNDR. CABLE	12 CNDR. CABLE	20 CNDR. CABLE	ITEM 6266 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
1	I		10			I		1	4				1	1	1		10	1
2	I			115		I		1	4				1	1	1		115	2
3	I		20			I		1	4		1			1	2	1	20	3
4	I			120		I		1	2		2		1	2	1		120	4
5	I		15			I		1	2				1	2	1		15	5
6	I			45		I		1			1						45	6
7	I	10				I		1			1						10	7
8	I			60		I		1			1						60	8
9	I	10				I		1			1						10	9
10	I			140		I		1									140	10
11	I				15	I		1	2		2		3	4	4	1	15	11
12	I		10		10	I	2	1			3		3	5	5	1	10	12
13	I		55			I		1	4		1			1	1		55	13
14	I	10				I		1	4		1			1	1		10	14
15	E			95		I	2	1	2								95	15
16	E		10			I	2	1	2								10	16
17	E		10			E	BY OTHERS										10	17
17A	E					E	BY OTHERS										20	17A
18	A	10				REM	2	1	3								10	18
TOTAL		30	110	480	25		230	740	1350	0	510	0	335	590	475	45		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

CONTRACTOR TO DIRECTIONAL BORE AROUND NEWLY INSTALLED STORM DRAIN.

(X) - EXISTING OR INSTALLED DURING PREVIOUS PHASE CONDUIT AND CABLES

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	6

WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR. NO. 6 XHHW	NO. 12 XHHW	ITEM 684 TYPE A 5 CNDR NO. 14	7 CNDR NO. 14	ITEM 6087 VIVDS CABLE	OPTICOM CABLE* MODEL 138	ITEM 6006 COAXIAL CABLE
P-1		80	93	64	48	64	
P-2		80	56		40	80	40
P-3			70		40	40	
P-4			10				
P-5		80	125	85	86	64	
P-6			10				
TOTAL	0	240	364	149	214	248	40

* - SUPPLIED BY CITY

*ITEM 628 ELECTRICAL SERVICE DATA

SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION ED(4XSX8)-03	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240. 060(NS)SS(E)PS(U)	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 6	6.2

*REFER TO STANDARD SHEET ED(8)-03.

KEVIN P. HOPPERS 93669 PROFESSIONAL REGISTERED ENGINEER STATE OF TEXAS

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SH 205

PERMANENT SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT RIDGE RD (FM 740)

FINAL SIGNAL DESIGN

SHEET 9 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	655
CONT.	SECT.	JOB	
0451	01	032	

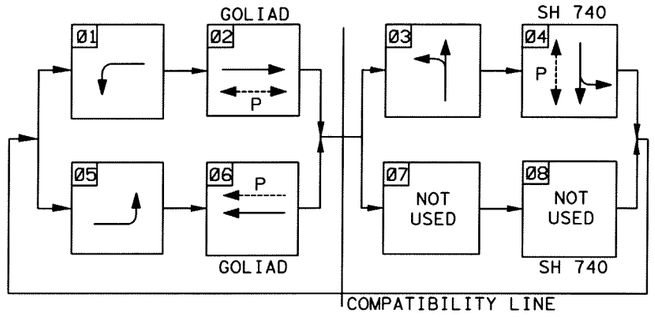
ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS					
			BACKPLATES			LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	4 SEC (EA)	5 SEC (EA)		SEC(EA)	SEC(EA)
1, 12	H5LT	I			2		10	
2, 3, 13, 14, 19	H3	I	5				15	
10, 11	H3RT	I	2				6	
7, 9	V3	I	2				6	
6, 18	V4LT	I		2			8	
4, 5, 15, 17, 20, 21	143C	I						6
8, 16	152A	I						2
TOTAL (NEW)			9	2	2	0	45	8

STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2022	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	6
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	11
0682	2024	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	4
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	11
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	13



OLA = Ø1 + Ø3
(WB TO NB RIGHT TURN ONLY)

ITEM 6266 VIVDS

ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	1[4]
VIVDS COMM. CABLE, LF	804
VIVDS SET UP SYSTEM	1

*-SUPPLIED BY TXDOT
[X]-RELOCATED FROM TEMPORARY SIGNALS
X-NEW CAMERA ASSEMBLIES TO BE INSTALLED BY CONTRACTOR AND FURNISHED BY TxDOT

ITEM 6006 SSR

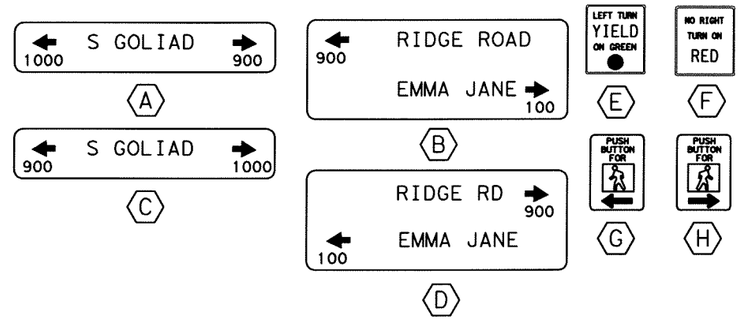
ITEM	QUANTITY
*SPREAD SPECTRUM RADIO	1
SPREAD SPECTRUM ANTENNA	1
COAXIAL CABLE, LF	85

*-SUPPLIED BY TXDOT

SIGNS SUMMARY

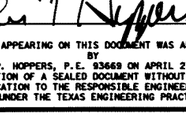
SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	GOLIAD	I	P-2/P-3	30" X VA	-	-	-
B	STREET NAME	RIDGE ROAD/EMMA JANE	I	P-5	30" X VA	-	-	-
C	STREET NAME	GOLIAD	I	P-5	30" X VA	-	-	-
D	STREET NAME	RIDGE ROAD/EMMA JANE	I	P-1	30" X VA	C	-	-
E	R10-12	LEFT TURN YIELD ON GREEN	I	P-3	24"X30"	C	-	-
F	R10-11T	NO RIGHT TURN ON RED	I	P-3	24"X30"	C	-	-
G	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-1/P-2 P-5	9"X12"	C	-	-
G	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-4/P-6	5"X7"	C	-	-
H	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-1/P-5	9"X12"	C	-	-
H	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-6	5"X7"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE



VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-1 MAST ARM	24'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V6-2		6'X90'		
				V6-3		6'X90'		
				V1-1	N/A	6'X90'	Ø1-1	Ø1-G
2	P-2 MAST ARM	24'	STOP BAR	V3-1	N/A	6'X90'	Ø3-1	Ø3-R
3	P-5 MAST ARM	24'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V2-2		6'X90'		
				V2-3		6'X90'		
				V5-1	N/A	6'X90'	Ø5-1	Ø5-G
4	P-5 MAST ARM	24'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R
				V4-2		6'X90'		
5	P-3 MAST ARM	24'	STOP BAR	VOLA-1	N/A	6'X90'	ØOLA-1	ØOLA-R



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SH 205

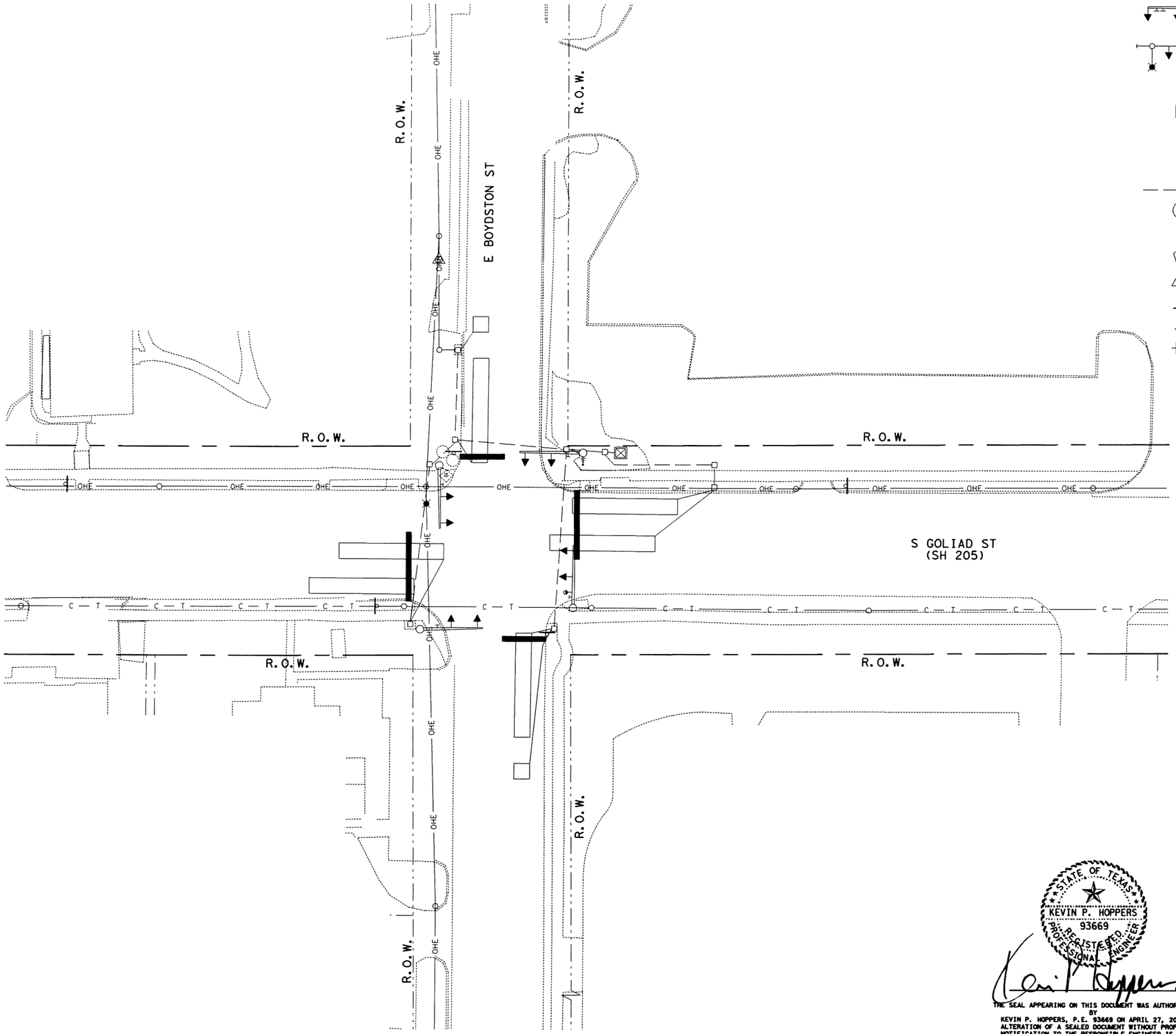
PERMANENT SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT RIDGE RD (FM 740)

FINAL SIGNAL DESIGN

SHEET 10 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	656
CONT.	SECT.	JOB	
0451	01	032	



LEGEND

- TYPICAL EXISTING MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TYPICAL EXISTING SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- EXISTING TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- EXISTING CONDUIT
- (1) EXISTING CONDUIT RUN NUMBER
- 1 EXISTING SIGNAL HEAD NUMBER
- (A) EXISTING SIGN LABEL
- (S) EXISTING POWER SOURCE
- EXISTING SIGN PANEL AND POST
- EXISTING OPTICOM
- SSR YAGI ANTENNA

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

EXISTING SIGNAL LAYOUT S GOLIAD ST (SH 205) AT BOYDSTUN AVE.

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

P.E.

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SHEET 1 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	657
CONT.	SECT.	JOB	
0451	01	032	

ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS					
			BACKPLATES			LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	4 SEC (EA)	5 SEC (EA)		SEC(EA)	SEC(EA)
20, 24, 28, 32	H3	I	4				12	
23, 31	H5LT	I			2		10	
21, 27	H4LT	I		2			8	
21, 22, 25, 26, 29, 30, 33, 34	143C	I						8
TOTAL (NEW)			4	2	2		30	8

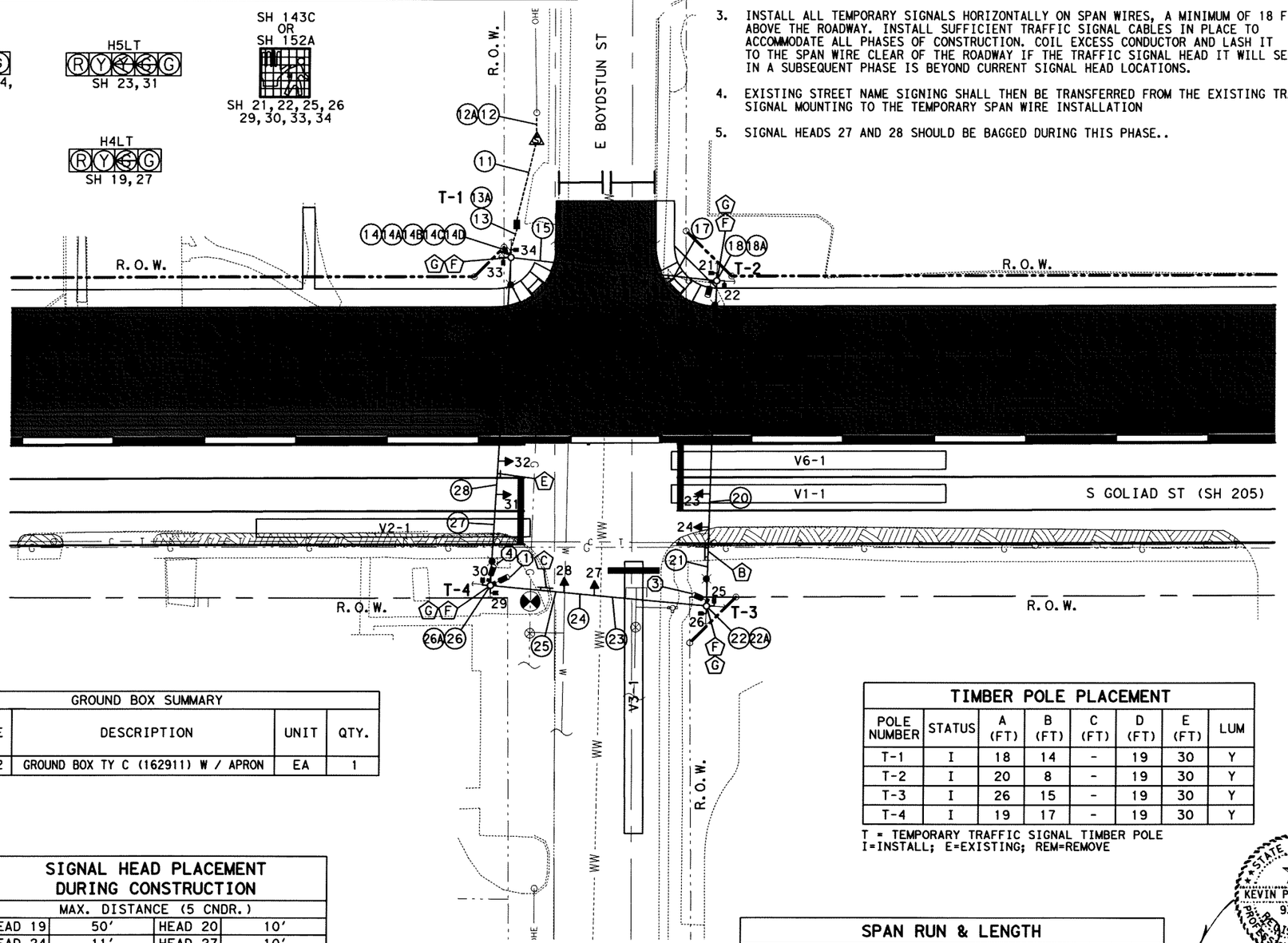
STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED

H3 (R Y G) SH 20, 24, 28, 32

H5LT (R Y Y G G) SH 23, 31

SH 143C OR SH 152A — SH 21, 22, 25, 26 29, 30, 33, 34

H4LT (R Y G G) SH 19, 27

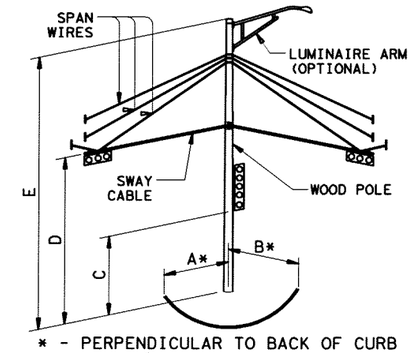


NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY FOR THE NEW AND PERMANENT ELECTRICAL SERVICE AND FOR INSTALLATION OF TEMPORARY TIMBER POLES IF IN PROXIMITY TO POWER LINES. INSTALL NEW ELECTRICAL SERVICE: TY D (120/240) 060 (NS) SS (E) PS (U) AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH TXDOT STANDARD DETAILS.
2. CONTRACTOR SHALL COORDINATE WITH TXDOT FOR THE TXDOT SPEC 680 SUPPLIED EQUIPMENT TO BE USED DURING THE TEMPORARY PHASE AND TO OBTAIN TXDOT ASSISTANCE AS APPLICABLE. ONCE THE PHASE I TRAFFIC SIGNAL IS APPROVED TO PLACE INTO OPERATION, THE CONTRACTOR MAY, DURING SOME TIME OTHER THAN CONTRACT DESCRIBED PEAK HOURS, SAFELY STOP ALL TRAFFIC AT THE INTERSECTION, TURN OFF THE EXISTING TRAFFIC SIGNAL, AND PLACE THE TEMPORARY TRAFFIC SIGNAL INTO OPERATION.
3. INSTALL ALL TEMPORARY SIGNALS HORIZONTALLY ON SPAN WIRES, A MINIMUM OF 18 FEET ABOVE THE ROADWAY. INSTALL SUFFICIENT TRAFFIC SIGNAL CABLES IN PLACE TO ACCOMMODATE ALL PHASES OF CONSTRUCTION. COIL EXCESS CONDUCTOR AND LASH IT TO THE SPAN WIRE CLEAR OF THE ROADWAY IF THE TRAFFIC SIGNAL HEAD IT WILL SERVE IN A SUBSEQUENT PHASE IS BEYOND CURRENT SIGNAL HEAD LOCATIONS.
4. EXISTING STREET NAME SIGNING SHALL THEN BE TRANSFERRED FROM THE EXISTING TRAFFIC SIGNAL MOUNTING TO THE TEMPORARY SPAN WIRE INSTALLATION
5. SIGNAL HEADS 27 AND 28 SHOULD BE BAGGED DURING THIS PHASE..

LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE



* - PERPENDICULAR TO BACK OF CURB

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	1

TIMBER POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-1	I	18	14	-	19	30	Y
T-2	I	20	8	-	19	30	Y
T-3	I	26	15	-	19	30	Y
T-4	I	19	17	-	19	30	Y

T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE
I=INSTALL; E=EXISTING; REM=REMOVE

SIGNAL HEAD PLACEMENT DURING CONSTRUCTION

MAX. DISTANCE (5 CNDR.)			
HEAD 19	50'	HEAD 20	10'
HEAD 24	11'	HEAD 27	10'
HEAD 28	149'	HEAD 32	183'
MAX. DISTANCE (7 CNDR.)			
HEAD 23	153'	HEAD 31	11'

SPAN RUN & LENGTH

(15)	(16)	(17)	(19)	(20)	(21)	(23)	(24)	(25)	(27)	(28)	(29)
35	10	23	70	11	26	37	10	25	30	11	68
68			107			72			109		

STATE OF TEXAS — KEVIN P. HOPPERS — 93669 — REGISTERED PROFESSIONAL ENGINEER

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT E BOYDSTUN ST

PHASE I

SHEET 2 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	658
CONT.	SECT.	JOB	
0451	01	032	

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT)					CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA)			ITEM 684 SIG CAB (EA)			VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
											TY-A							
		1 ½" RM RISER	2" RM RISER	2" PVC TRENCHED	2" PVC BORED	3" RM RISER		NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	5 CNDR. CABLE	7 CNDR. CABLE	10 CNDR. CABLE					
11	I			35			I	2	1								35	11
12	I			15			I	2	1								15	12
12A	I		20				I		1	2							20	12A
13	I			15			I	2	1								15	13
13A	I			15			I		1	2							15	13A
14	I		10				I	2	1								10	14
14A	I					15	I		1		2	2	3	6			15	14A
14B	I		20				I		1	2							20	14B
14C	I	10					I		1				1				10	14C
14D	I	10					I		1	4				1			10	14D
15	AC						I			2	1	1	2	3			35	15
16	AC						I			2	1	1	2	3			10	16
17	AC						I			2		1	2	3			23	17
18	I	10					I		1				2				10	18
18A	I	10					I		1	4				2			10	18A
19	AC						I			2		1	1	1			70	19
20	AC						I			2	1		1	1			11	20
21	AC						I			2			1	1			26	21
22	I	10					I		1				1				10	22
22A	I	10					I		1	2				1			10	22A
23	AC						I										37	23
24	AC						I				1						10	24
25	AC						I				1						25	25
26	I	10					I		1				1				10	26
26A	I	10					I		1	2				2			10	26A
27	AC						I			2	1	1	1	2			30	27
28	AC						I			2	1	1	1	2			11	28
29	AC						I			2	1	1	1	2			68	29
TOTAL		80	50	80	0	15		150	225	798	230	277	447	679	0	0		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 5 CNDR.	CABLE 2 7 CNDR.	CABLE 3 5 CNDR.	CABLE 4 7 CNDR.	CNDR. NO.
		SPAN T-1/T-2 TO CNTRL.	SPAN T-2/T-3 TO CNTRL.	SPAN T-3/T-4 TO CNTRL.	SPAN T-4/T-1 TO CNTRL.	
1	BLACK	SH 19 ~~G~~	SPARE	SH 27 ~~G~~	SPARE	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 19, 20 R	SH 23, 24 R	SH 27, 28 R	SH 31, 32 R	3
4	GREEN	SH 19, 20 G	SH 23, 24 G	SH 27, 28 G	SH 31, 32 G	4
5	ORANGE	SH 19, 20 Y	SH 23, 24 Y	SH 27, 28 Y	SH 31, 32 Y	5
6	BLUE		SH 23 ~~Y~~		SH 31 ~~Y~~	6
7	WHITE/BLACK		SH 23 ~~G~~		SH 31 ~~G~~	7
CNDR. NO.	CONDUCTOR COLOR	CABLE 5 10 CNDR.	CABLE 6 10 CNDR.	CABLE 7 10 CNDR.	CABLE 8 10 CNDR.	CNDR. NO.
		FROM T-2 TO CNTRL.	FROM T-3 TO CNTRL.	FROM T-4 TO CNTRL.	FROM T-1 TO CNTRL.	
1	BLACK	PB COM	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 21 DW	SH 25 DW	SH 29 DW	SH 33 DW	3
4	GREEN	SH 21 W	SH 25 W	SH 29 W	SH 33 W	4
5	ORANGE	Ø6 PED CALL	Ø8 PED CALL	Ø2 PED CALL	Ø4 PED CALL	5
6	BLUE	SH 22 DW	SH 26 DW	SH 30 DW	SH 34 DW	6
7	WHITE/BLACK	SH 22 W	SH 26 W	SH 30 W	SH 34 W	7
8	RED/BLACK	Ø8 PED CALL	Ø2 PED CALL	Ø4 PED CALL	Ø6 PED CALL	8
9	GREEN/BLACK	SPARE	SPARE	SPARE	SPARE	9
10	ORANGE/BLACK	SPARE	SPARE	SPARE	SPARE	10

ITEM 6626 VIVDS

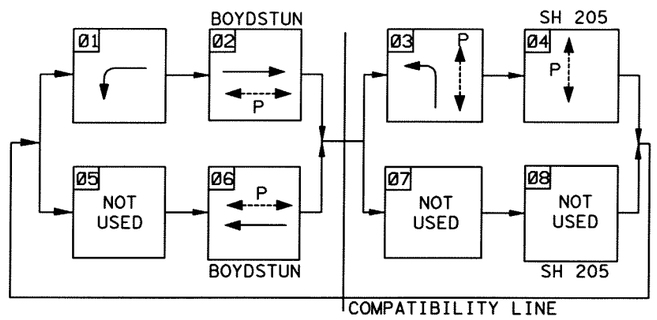
ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	4
VIVDS COMM. CABLE, LF	561
VIVDS SET UP SYSTEM	1

*SUPPLIED BY TXDOT

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-4 TIMBER POLE	27'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V1-1	N/A	6'X90'	Ø1-1	Ø1-G
2	T-2 TIMBER POLE	27'	STOP BAR	V3-1	N/A	6'X90'	Ø3-1	Ø3-R
3	T-3 TIMBER POLE	27'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
4*	T-4 TIMBER POLE	27'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R

* - VIVD CAMERA 4 WILL NOT BE CONNECTED DURING PHASE 1 AND BE USED DURING PHASE 2.



ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2013	PED SIG SEC (12 IN) INC (2 IND)	EA	8
0682	2015	VEH SIG SEC (12 IN) INC (GRN ARW)	EA	4
0682	2016	VEH SIG SEC (12 IN) INC (GRN)	EA	8
0682	2017	VEH SIG SEC (12 IN) INC (YEL ARW)	EA	8
0682	2018	VEH SIG SEC (12 IN) INC (YEL)	EA	8
0682	2020	VEH SIG SEC (12 IN) INC (RED)	EA	8

STATE OF TEXAS
KEVIN P. HOPPERS
93669
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SH 205

TEMPORARY SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT
E BOYDSTUN ST

PHASE I

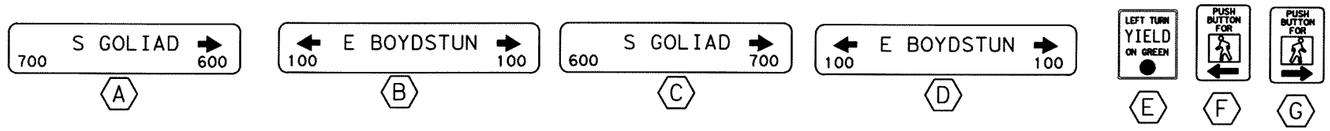
SHEET 3 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	659
CONT.	SECT.	JOB	
0451	01	032	

*ITEM 628 ELECTRICAL SERVICE DATA												
SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION ED(4)(5)(8)-03	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240 060(NS)SS(E)PS(U)	1 1/2"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 6	6.2

*REFER TO STANDARD SHEET ED(8)-03.



SIGNS SUMMARY								
SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	GOLIAD	E/REL	SPAN T-1 TO T-2	15" X VA	-	-	-
B	STREET NAME	BOYDSTUN	E/REL	SPAN T-2 TO T-3	15" X VA	-	-	-
C	STREET NAME	GOLIAD	E/REL	SPAN T-3 TO T-4	15" X VA	-	-	-
D	STREET NAME	BOYDSTUN	E/REL	SPAN T-4 TO T-1	15" X VA	-	-	-
E	R10-12	LEFT TURN YIELD ON GREEN	I	SPAN T-4 TO T-1 SPAN T-2 TO T-3	24"X30"	C	-	-
F	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	T-1/T-2 T-3/T-4	9"X12"	C	-	-
G	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	T-1/T-2 T-3/T-4	9"X12"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE



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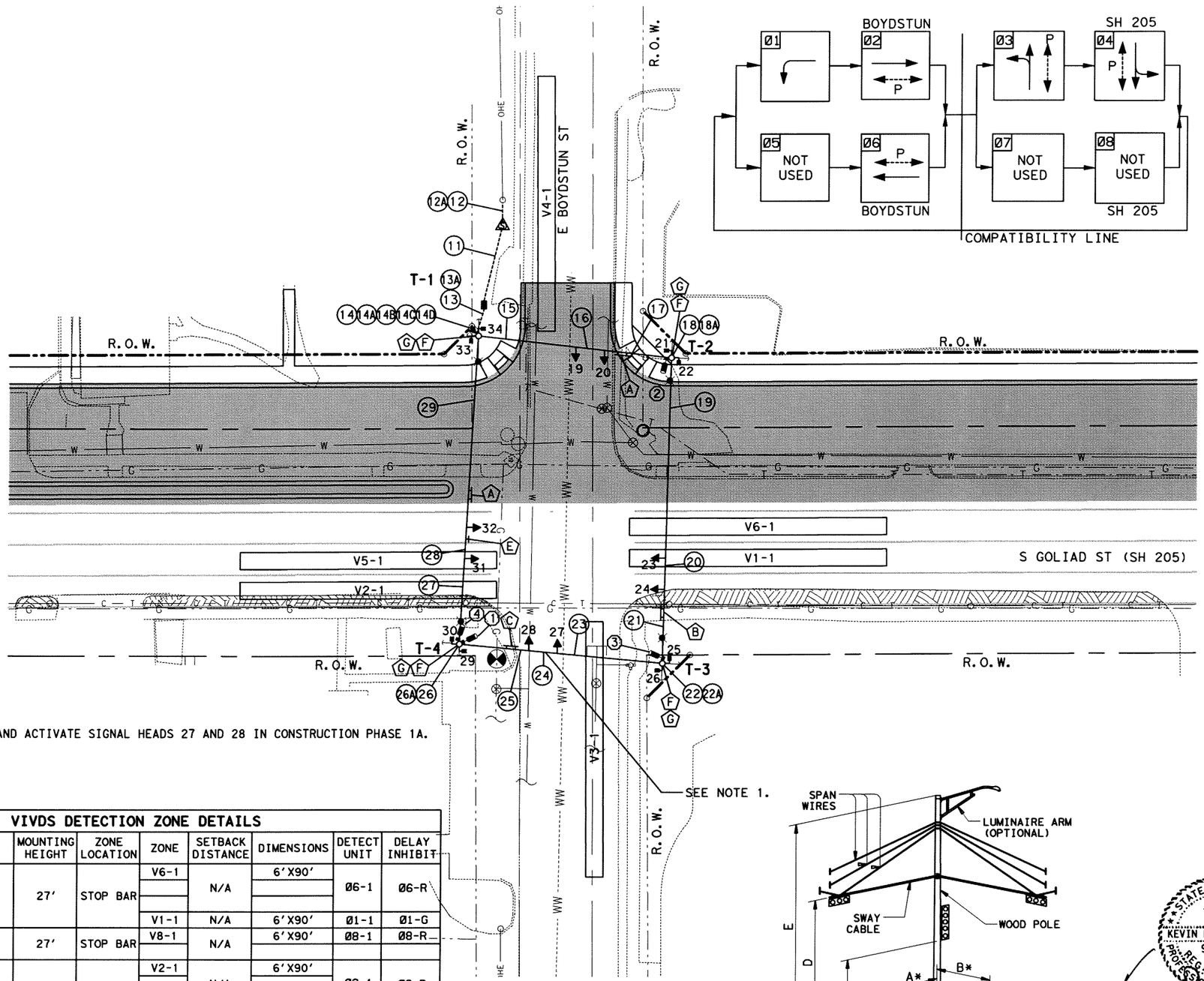
TEMPORARY SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT
E BOYDSTUN ST

PHASE I

SHEET 4 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	659A
CONT.	SECT.	JOB	
0451	01	032	

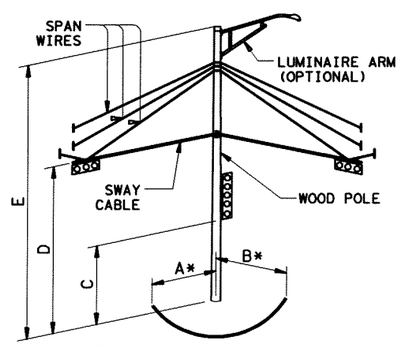


NOTES:

1. REMOVE BAGS AND ACTIVATE SIGNAL HEADS 27 AND 28 IN CONSTRUCTION PHASE 1A.

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-4 TP	27'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V1-1	N/A	6'X90'	Ø1-1	Ø1-G
2	T-2 TP	27'	STOP BAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
3	T-3 TP	27'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V5-1	N/A	6'X90'	Ø5-1	Ø5-G
4	T-4 TP	27'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R



* - PERPENDICULAR TO BACK OF CURB

LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT E BOYDSTUN ST

PHASE IA

SHEET 5 of 10

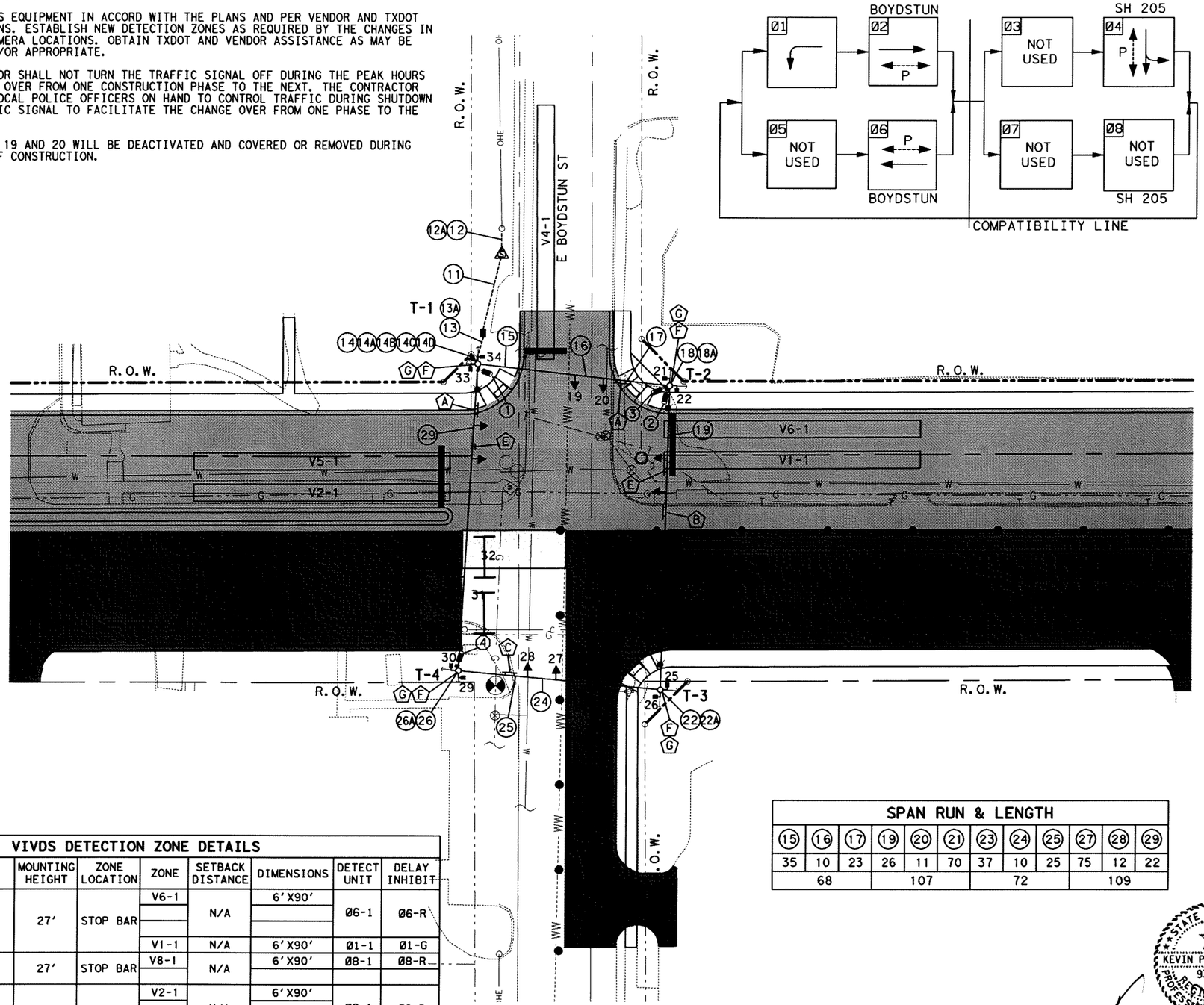
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FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	659B
CONT.	SECT.	JOB	
0451	01	032	

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE II. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT.
4. SIGNAL HEADS 19 AND 20 WILL BE DEACTIVATED AND COVERED OR REMOVED DURING THIS PHASE OF CONSTRUCTION.



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	T-1 TP	27'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V1-1	N/A	6'X90'	Ø1-1	Ø1-G
2	T-2 TP	27'	STOP BAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
3	T-2 TP	27'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V5-1	N/A	6'X90'	Ø5-1	Ø5-G
4	T-4 TP	27'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R

SPAN RUN & LENGTH

(15)	(16)	(17)	(19)	(20)	(21)	(23)	(24)	(25)	(27)	(28)	(29)
35	10	23	26	11	70	37	10	25	75	12	22
68			107			72			109		

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

TEMPORARY SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT
E BOYDSTUN ST

PHASE II

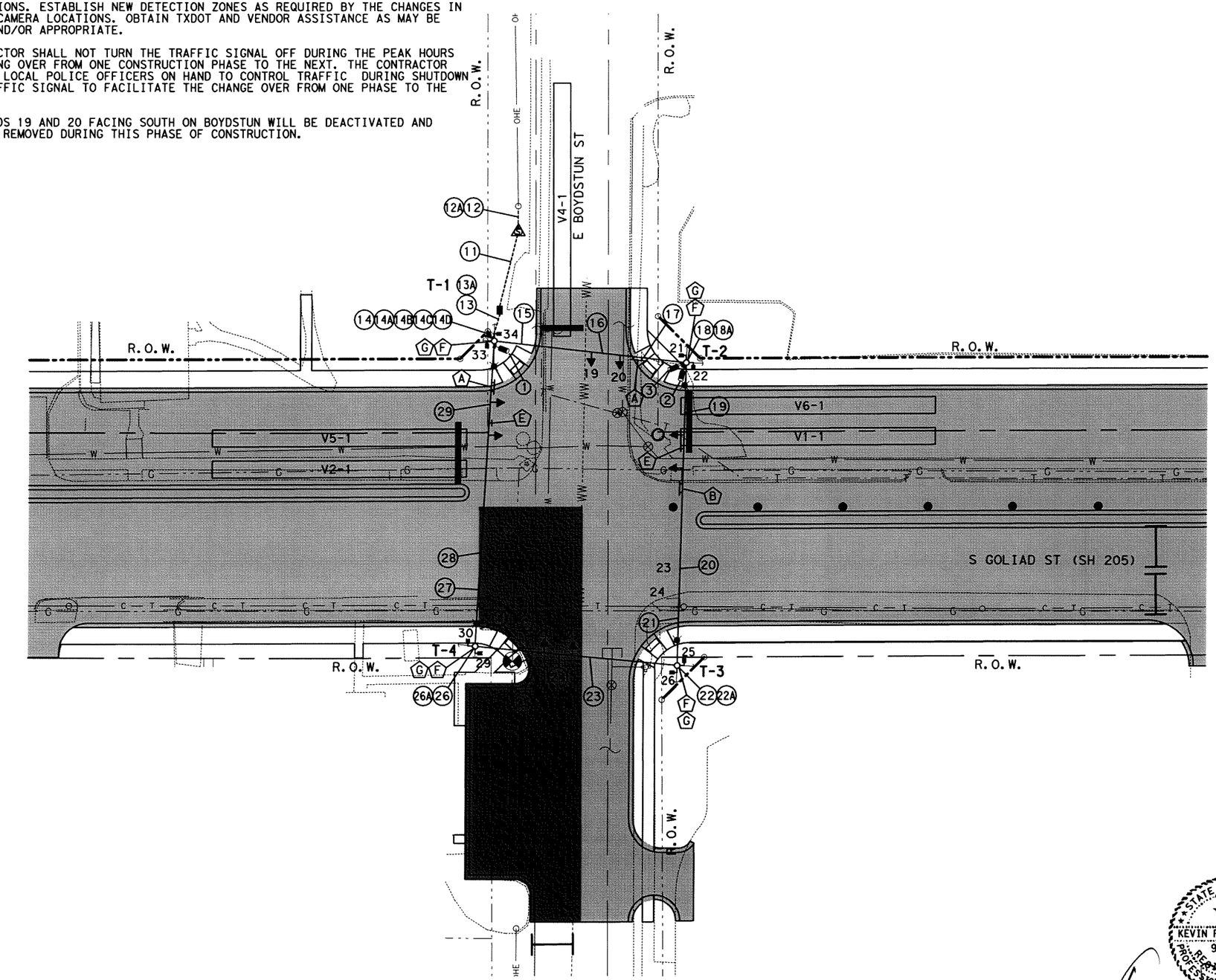
SHEET 6 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	660
CONT.	SECT.	JOB	
0451	01	032	

NOTES:

1. CONTRACTOR SHALL INSTALL OR ADJUST SIGNAL HEADS, SPAN WIRE MOUNTED SIGNS, AND VIVD EQUIPMENT AS REQUIRED TO COMPLY WITH THE ROADWAY ALIGNMENT OF PHASE IIA. INSTALL SIGNALS HORIZONTALLY ON SPAN WIRE, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
2. INSTALL VIVDS EQUIPMENT IN ACCORD WITH THE PLANS AND PER VENDOR AND TXDOT SPECIFICATIONS. ESTABLISH NEW DETECTION ZONES AS REQUIRED BY THE CHANGES IN LANES AND CAMERA LOCATIONS. OBTAIN TXDOT AND VENDOR ASSISTANCE AS MAY BE REQUIRED AND/OR APPROPRIATE.
3. THE CONTRACTOR SHALL NOT TURN THE TRAFFIC SIGNAL OFF DURING THE PEAK HOURS FOR CHANGING OVER FROM ONE CONSTRUCTION PHASE TO THE NEXT. THE CONTRACTOR SHALL HAVE LOCAL POLICE OFFICERS ON HAND TO CONTROL TRAFFIC DURING SHUTDOWN OF THE TRAFFIC SIGNAL TO FACILITATE THE CHANGE OVER FROM ONE PHASE TO THE NEXT
4. SIGNAL HEADS 19 AND 20 FACING SOUTH ON BOYDSTUN WILL BE DEACTIVATED AND COVERED OR REMOVED DURING THIS PHASE OF CONSTRUCTION.



LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
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- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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Engineered by KBR Technical Services, Inc

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SH 205

TEMPORARY SIGNAL LAYOUT S GOLIAD ST (SH 205) AT E BOYDSTUN ST

PHASE IIA

SHEET 7 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	661
CONT.	SECT.	JOB	
0451	01	032	

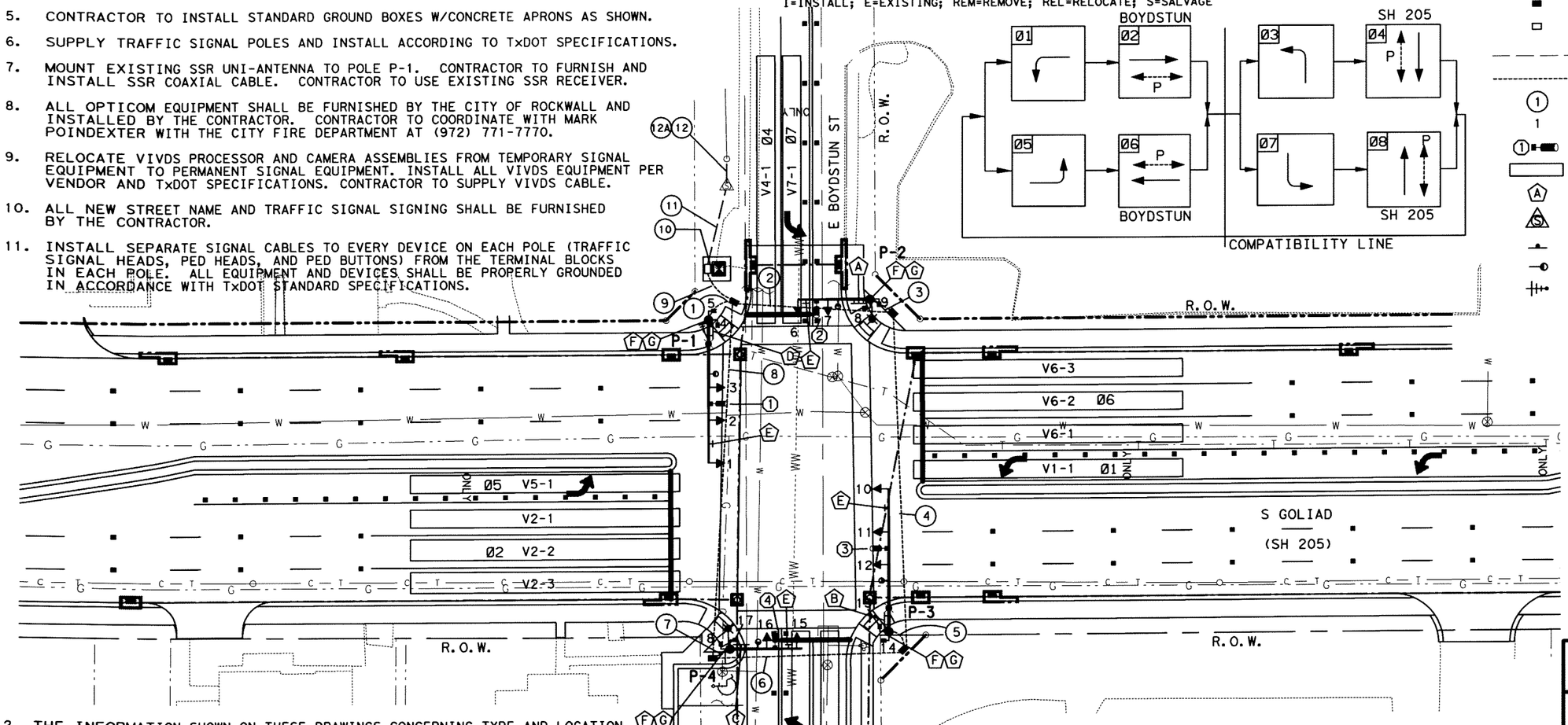
NOTES:

1. REMOVE AND SALVAGE ALL TEMPORARY SIGNAL EQUIPMENT WHEN THE PERMANENT SIGNAL IS PLACED IN OPERATION. RETURN POLE-MOUNTED CABINET AND CONTROLLER TO TXDOT. TXDOT SHALL BE PRESENT WHEN THE SIGNAL IS PLACED IN OPERATION.
2. POWER SERVICE INSTALLED BY CONTRACTOR DURING PREVIOUS CONSTRUCTION PHASE.
3. EXISTING CONDUIT RUN 13 SHOWN IN PREVIOUS CONSTRUCTION PHASE SHALL BE ABANDONED.
4. INSTALL EXISTING CONTROLLER, SPREAD SPECTRUM RADIO, CABINET AND NEW FOUNDATION AS SHOWN ON THE PLANS PER TxDOT SPECIFICATIONS.
5. CONTRACTOR TO INSTALL STANDARD GROUND BOXES W/CONCRETE APRONS AS SHOWN.
6. SUPPLY TRAFFIC SIGNAL POLES AND INSTALL ACCORDING TO TxDOT SPECIFICATIONS.
7. MOUNT EXISTING SSR UNI-ANTENNA TO POLE P-1. CONTRACTOR TO FURNISH AND INSTALL SSR COAXIAL CABLE. CONTRACTOR TO USE EXISTING SSR RECEIVER.
8. ALL OPTICOM EQUIPMENT SHALL BE FURNISHED BY THE CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH MARK POINDEXTER WITH THE CITY FIRE DEPARTMENT AT (972) 771-7770.
9. RELOCATE VIVDS PROCESSOR AND CAMERA ASSEMBLIES FROM TEMPORARY SIGNAL EQUIPMENT TO PERMANENT SIGNAL EQUIPMENT. INSTALL ALL VIVDS EQUIPMENT PER VENDOR AND TxDOT SPECIFICATIONS. CONTRACTOR TO SUPPLY VIVDS CABLE.
10. ALL NEW STREET NAME AND TRAFFIC SIGNAL SIGNING SHALL BE FURNISHED BY THE CONTRACTOR.
11. INSTALL SEPARATE SIGNAL CABLES TO EVERY DEVICE ON EACH POLE (TRAFFIC SIGNAL HEADS, PED HEADS, AND PED BUTTONS) FROM THE TERMINAL BLOCKS IN EACH POLE. ALL EQUIPMENT AND DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS.

SIGNAL HEAD AND POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	I	11	23	11	14	48	19		30	3	Y	36-A
P-2	I	9	14	10		24	19		30	2	Y	30-A
P-3	I	10	22	11	14	48	19		30	3	Y	36-A
P-4	I	5	12	10		24	19		30	2	Y	30-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; S=SALVAGE



LEGEND

- TYPICAL PROPOSED MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- SIGN PANEL AND POST
- OPTICOM
- SSR YAGI ANTENNA

H3 (R Y G) SH 2,3,7, 11,12,16

H5LT (R Y G G G) SH 1,6,10,15

SH 143C OR SH 152A

SH 4,5,8,9, 13,14,17,18

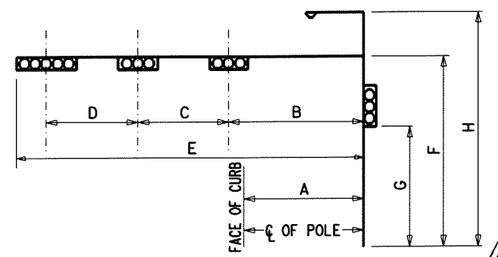
GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

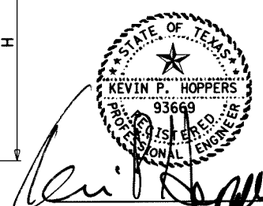
12. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS				
			BACKPLATES		LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	5 SEC (EA)		SEC(EA)	SEC(EA)
1, 6, 10, 15	H5LT	I		4		20	
2, 3, 7, 11, 12, 16	H3	I	6			18	
4, 5, 8, 9, 13, 14, 17, 18	143C	I					8
TOTAL (NEW)			6	4	0	38	8

STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED





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SH 205

PERMANENT SIGNAL LAYOUT S GOLIAD ST (SH 205) AT E BOYDSTUN ST

FINAL SIGNAL DESIGN

SHEET 8 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	662
CONT.	SECT.	JOB	
0451	01	032	

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 20 CNDR. FROM P-1 TO CNTRL.	CABLE 2 20 CNDR. FROM P-2 TO CNTRL.	CABLE 3 20 CNDR. FROM P-3 TO CNTRL.	CABLE 4 20 CNDR. FROM P-4 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 1,2,3 R	SH 6,7 R	SH 10,11,12 R	SH 15,16 R	3
4	GREEN	SH 1,2,3 G	SH 6,7 G	SH 10,11,12 G	SH 15,16 G	4
5	ORANGE	SH 1,2,3 Y	SH 6,7 Y	SH 10,11,12 Y	SH 15,16 Y	5
6	BLUE	Ø4 PED CALL	Ø6 PED CALL	Ø8 PED CALL	Ø2 PED CALL	6
7	WHITE/BLACK	SH 1 ~~G~~	SH 6 ~~G~~	SH 10 ~~G~~	SH 15 ~~G~~	7
8	RED/BLACK	SH 1 ~~Y~~	SH 6 ~~Y~~	SH 10 ~~Y~~	SH 15 ~~Y~~	8
9	GREEN/BLACK	SPARE	SPARE	SPARE	SPARE	9
10	ORANGE/BLACK	SH 4 DW	SH 8 DW	SH 13 DW	SH 17 DW	10
11	BLUE/BLACK	SH 4 W	SH 8 W	SH 13 W	SH 17 W	11
12	BLACK/WHITE	SPARE	SPARE	SPARE	SPARE	12
13	RED/WHITE	Ø6 PED CALL	Ø8 PED CALL	Ø2 PED CALL	Ø4 PED CALL	13
14	GREEN/WHITE	SPARE	SPARE	SPARE	SPARE	14
15	BLUE/WHITE	SH 5 DW	SH 9 DW	SH 14 DW	SH 18 DW	15
16	BLACK/RED	SH 5 W	SH 9 W	SH 14 W	SH 18 W	16
17	WHITE/RED	SPARE	SPARE	SPARE	SPARE	17
18	ORANGE/RED	SPARE	SPARE	SPARE	SPARE	18
19	BLUE/RED	SPARE	SPARE	SPARE	SPARE	19
20	RED/GREEN	SPARE	SPARE	SPARE	SPARE	20

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	4

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 1 ½" RM RISER	2" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 10 CNDR. CABLE	20 CNDR. CABLE	VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
1	I			15			I		1	4		1	1	1	1	15	1
2	I				60		I		1	2		1	1	1		60	2
3	I			15			I		1	2		1	1	1		15	3
4	I				120		I		1							120	4
5	I			15			I		1	2		1	1	1		15	5
6	I				70		I		1	2		1	1	1		70	6
7	I			10			I		1	4		1	1	1		10	7
8	I				125		I		1	2		2	2	2		125	8
9	I					20	I		1	2		4	4	4	1	20	9
10	I					10	I	2	1			4	4	4	1	10	10
11	E			35			I	2	1	2						35	11
12	E						E	BY OTHERS								15	12
12A	E	20					E	BY OTHERS								20	12A
13	A		15				REM	2	1	3						15	13
TOTAL		0	0	55	375	30		90	495	780		555	555	555	45		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2014	PED SIG SEC (12 IN) LED (2 INDICATIONS)	EA	8
0682	2022	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	4
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	10
0682	2024	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	4
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	10
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	10

WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR. NO. 6 XHHW	NO. 12 XHHW	ITEM 684 TYPE A 5 CNDR NO. 14	7 CNDR NO. 14	VIVDS CABLE	OPTICOM CABLE MODEL 138	COAXIAL CABLE
P-1		80	107	68	48	37	30
P-2		80	44	44	39	30	
P-3		80	105	67	48	37	
P-4		80	42	42	37	28	
TOTAL	0	240	298	221	172	132	30

*ITEM 628 ELECTRICAL SERVICE DATA

SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION ED(4)(5)(8)-03	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240 Ø60(NS)SS(E)PS(U)	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 6	6.2

*REFER TO STANDARD SHEET ED(8)-03.

KEVIN P. HOPPERS 93669 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS P.E.

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SH 205

PERMANENT SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT
E BOYDSTUN ST

FINAL SIGNAL DESIGN

SHEET 9 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	663
CONT.	SECT.	JOB	
0451	01	032	

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-1 MAST ARM	24'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V6-2		6'X90'		
				V6-3		6'X90'		
				V1-1	N/A	6'X90'	Ø1-1	Ø1-G
2	P-2 MAST ARM	24'	STOP BAR	V3-1	N/A	6'X90'	Ø3-1	Ø3-G
				V8-1		6'X90'	Ø8-1	Ø8-R
3	P-3 MAST ARM	24'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V2-2		6'X90'		
				V2-3		6'X90'		
				V5-1	N/A	6'X90'	Ø5-1	Ø5-G
4	P-4 MAST ARM	24'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R
				V7-1		6'X90'	Ø7-1	Ø7-G

ITEM 6006 SSR

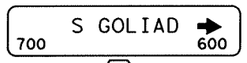
ITEM	QUANTITY
*SPREAD SPECTRUM RADIO	1
RADIO ANTENNA*	1
COAXIAL CABLE, LF	75

*-RE-USE EXISTING SPREAD SPECTRUM UNI-DIRECTIONAL ANTENNA AND RADIO.

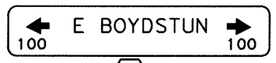
ITEM 6626 VIVDS

ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	4
VIVDS COMM. CABLE, LF	727
VIVDS SET UP SYSTEM	1

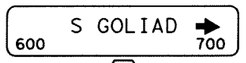
*SUPPLIED BY TXDOT



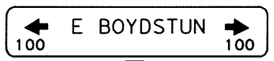
A



B



C



D



E



F



G

SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	GOLIAD	I	P-2		-	-	-
B	STREET NAME	BOYDSTUN	I	P-1		-	-	-
C	STREET NAME	GOLIAD	I	P-4		-	-	-
D	STREET NAME	BOYDSTUN	I	P-3		-	-	-
E	R10-12	LEFT TURN YIELD ON GREEN	I	P-1/P-2			-	-
				P-3/P-4				
F	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	E/REL	P-1/P-2	9"X12"	C	-	-
				P-3/P-4				
G	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	E/REL	P-1/P-2	9"X12"	C	-	-
				P-3/P-4				

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

P.E.

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SH 205

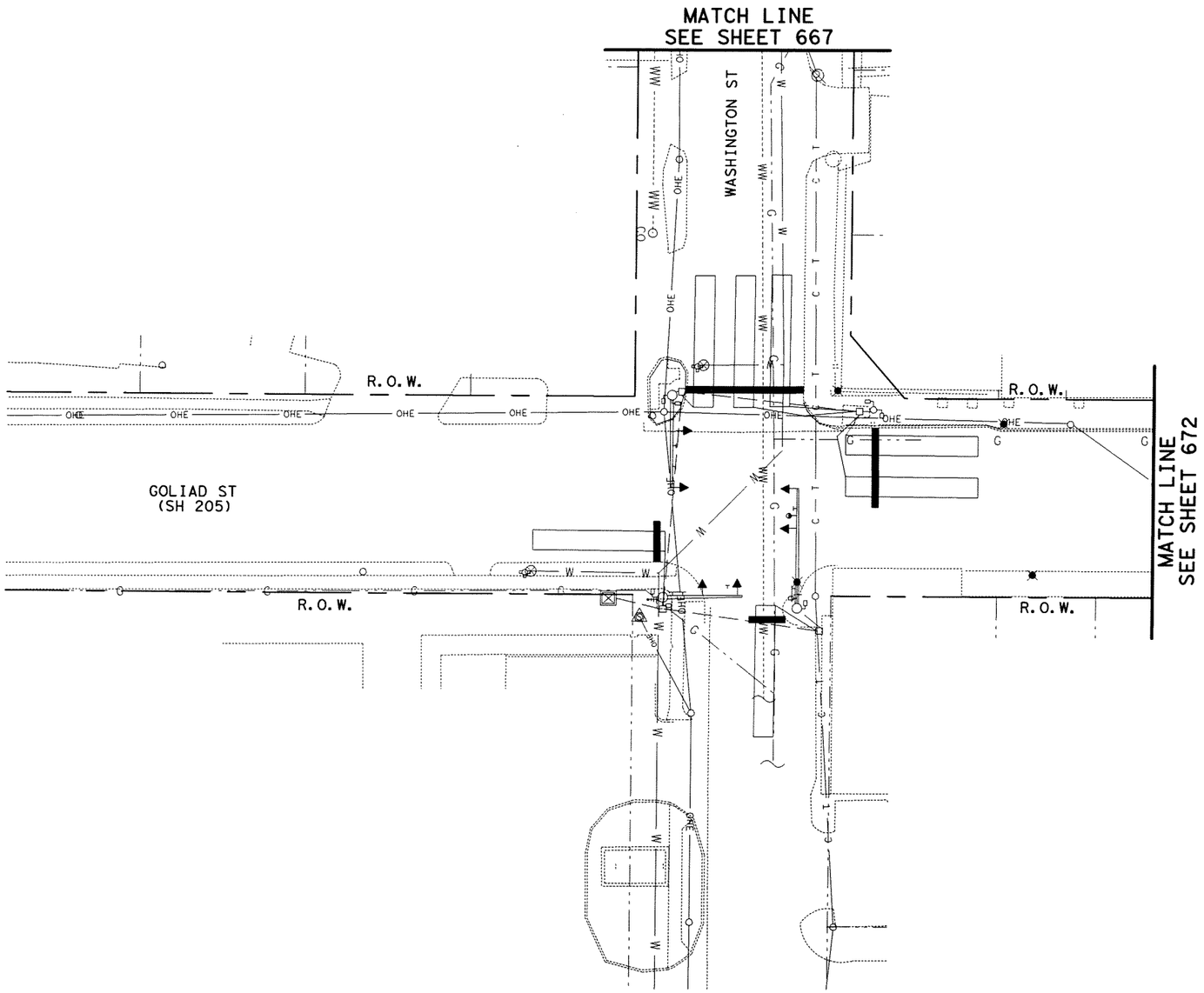
PERMANENT SIGNAL LAYOUT
S GOLIAD ST (SH 205) AT
E BOYDSTUN ST

FINAL SIGNAL DESIGN

SHEET 10 of 10

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	663A
CONT.	SECT.	JOB	
0451	01	032	



LEGEND

- TYPICAL EXISTING MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TYPICAL EXISTING SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- EXISTING TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- EXISTING CONDUIT
- (1) EXISTING CONDUIT RUN NUMBER
- 1 EXISTING SIGNAL HEAD NUMBER
- (A) EXISTING SIGN LABEL
- (S) EXISTING POWER SOURCE
- EXISTING SIGN PANEL AND POST
- EXISTING OPTICOM
- SSR YAGI ANTENNA

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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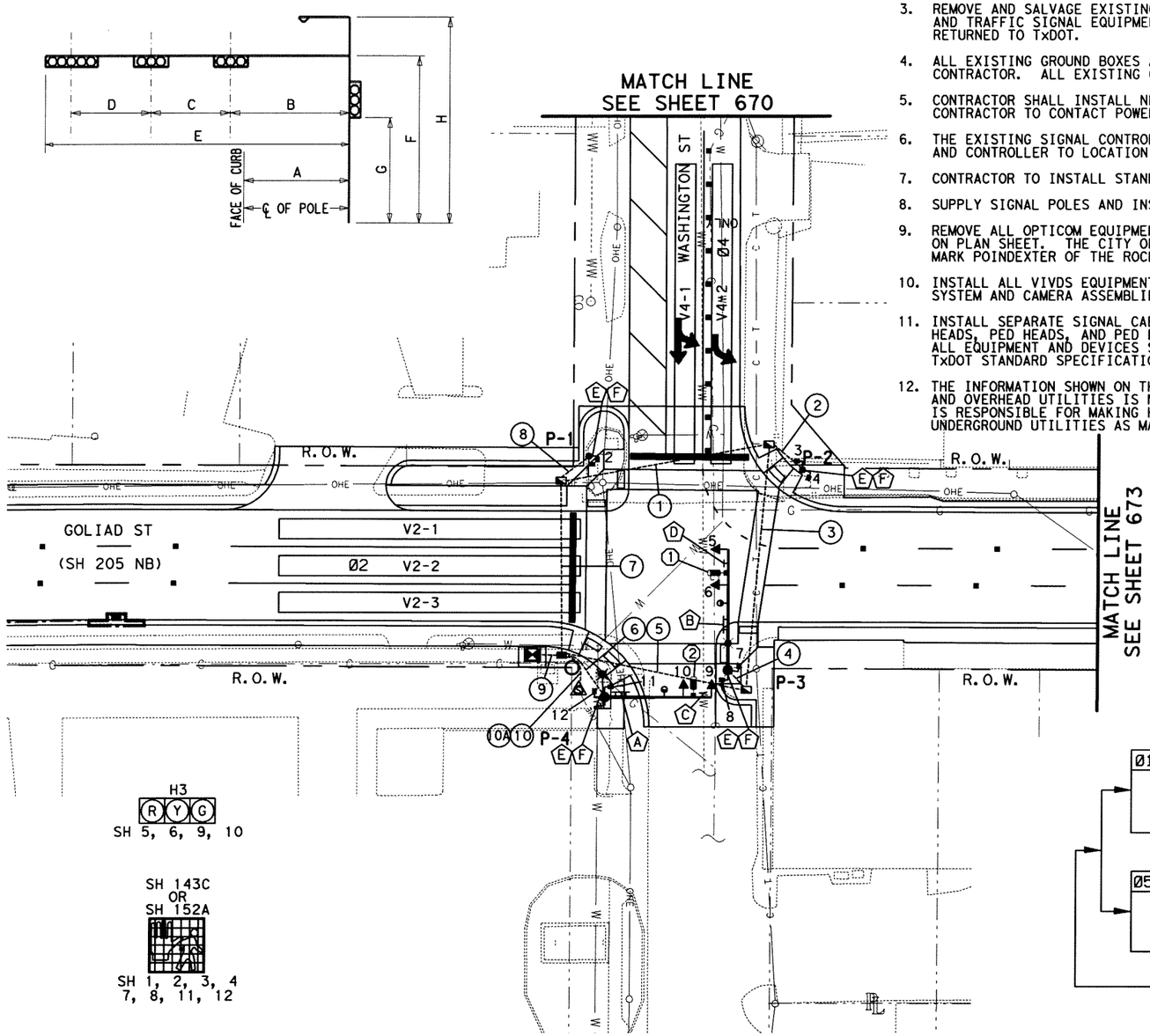
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EXISTING SIGNAL LAYOUT
N GOLIAD ST (SH 205) AT WASHINGTON ST

SHEET 1 of 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	664
CONT.	SECT.	JOB	
0451	01	032	



NOTES:

1. ALL CONSTRUCTION TO OCCUR WHILE SH 205 (GOLIAD) IS CLOSED TO THRU TRAFFIC.
2. REMOVE SSR UNI-DIRECTIONAL ANTENNA FROM EXISTING SIGNAL POLE ON SW CORNER AND MOUNT TO POLE P-4.
3. REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL POLES, MAST ARM ASSEMBLIES AND TRAFFIC SIGNAL EQUIPMENT. ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE RETURNED TO TxDOT.
4. ALL EXISTING GROUND BOXES AND CABLES ARE TO BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL EXISTING CONDUIT RUNS SHALL BE ABANDONED.
5. CONTRACTOR SHALL INSTALL NEW POWER SERVICE TY D (120/240) 060(NS)SS(E)EX(O). CONTRACTOR TO CONTACT POWER COMPANY TO COORDINATE.
6. THE EXISTING SIGNAL CONTROLLER SHALL BE RELOCATED. MOVE EXISTING CABINET AND AND CONTROLLER TO LOCATION OF NEW FOUNDATION PAD AS SHOWN ON THE PLANS.
7. CONTRACTOR TO INSTALL STANDARD GROUND BOXES W/CONCRETE APRONS AS SHOWN.
8. SUPPLY SIGNAL POLES AND INSTALL ACCORDING TO TXDOT SPECIFICATIONS.
9. REMOVE ALL OPTICOM EQUIPMENT FROM EXISTING SIGNAL POLES. REUSE EQUIPMENT AS SHOWN ON PLAN SHEET. THE CITY OF ROCKWALL WILL PROVIDE OPTICOM CABLE. COORDINATE WITH MARK POINDEXTER OF THE ROCKWALL FIRE DEPARTMENT AT (972) 771-7770.
10. INSTALL ALL VIVDS EQUIPMENT PER VENDOR AND TxDOT SPECIFICATIONS. VIVDS PROCESSOR SYSTEM AND CAMERA ASSEMBLIES PROVIDED BY TxDOT.
11. INSTALL SEPARATE SIGNAL CABLES TO EVERY DEVICE ON EACH POLE (TRAFFIC SIGNAL HEADS, PED HEADS, AND PED BUTTONS) FROM THE TERMINAL BLOCKS IN EACH POLE. ALL EQUIPMENT AND DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS.
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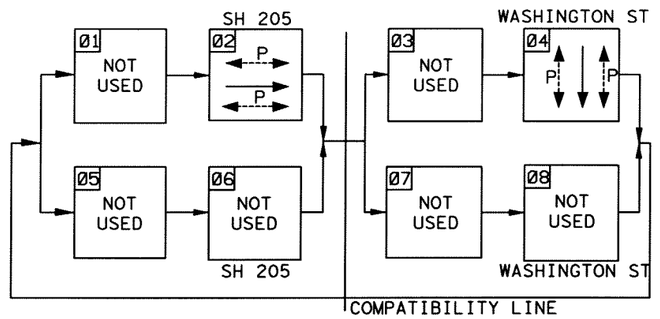
LEGEND

- TYPICAL PROPOSED MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- SIGN PANEL AND POST
- OPTICOM
- SSR YAGI ANTENNA

ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS				
			BACKPLATES		LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	5 SEC (EA)		SEC(EA)	SEC(EA)
5, 6, 9, 10	H3	I	4			12	
1, 2, 3, 4, 7, 8, 11, 12	143C	I					8
TOTAL (NEW)			4	0	0	12	8

STATUS: R=EX. TO BE RELOCATED; I=INSTALL NEW



GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

SIGNAL HEAD AND POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	I	15.5					10				N	24-A
P-2	I	18					10				N	24-A
P-3	I	13	25	10.5		36	19		30	2	Y	36-A
P-4	I	12.5	23.5	8		32	19		30	2	Y	30-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; S=SALVAGE

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN P. HOPPERS, P.E. 93669 ON APRIL 27, 2006
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Engineered by KBR Technical Services, Inc

Kimley-Horn and Associates, Inc.

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
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Dallas, TX 75207

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SH 205

PERMANENT SIGNAL LAYOUT GOLIAD ST (SH 205 NB) AT WASHINGTON ST

FINAL SIGNAL DESIGN

SHEET 2 of 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	665
CONT.	SECT.	JOB	
0451	01	032	

*ITEM 628 ELECTRICAL SERVICE DATA

SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240 060(NS)SS(E)EX(O) ED(4)(5)-03	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 3	5.5

*REFER TO STANDARD SHEET ED(8)-03.

SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	N GOLIAD	E/REL	P-4		-	-	-
B	STREET NAME	WASHINGTON	E/REL	P-3		-	-	-
C	R6-2L	ONE WAY (LEFT)	I	P-4	18"X24"	-	-	-
D	R6-2R	ONE WAY (RIGHT)	I	P-3	18"X24"	-	-	-
E	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	E/REL	P-3/P-4	9"X12"	C	-	-
E	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-1/P-2	5"X7"	C	-	-
F	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	E/REL	P-3/P-4	9"X12"	C	-	-
F	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-1/P-2	5"X7"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT)					CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA)			ITEM 684 SIG CAB (EA)		ITEM 6266 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
		1 ½" RM RISER	1 ½" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED		NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	TY-A 10 CNDR. CABLE	TY-A 20 CNDR. CABLE					
1	I				70		I		1		1					70	1
2	I			20			I		1		1					20	2
3	I				80		I		1							80	3
4	I			15			I		1	2		1	1	1		15	4
5	I				65		I		1	2		1	1	1		65	5
6	I			25			I		1	4		1	1	1	1	25	6
7	I				60		I		1		2					60	7
8	I			20			I		1		1					20	8
9	I					15	I	2	1		2	2	2	2	1	15	9
10	I		15				I	2	1	2						15	10
10A	I	20					I	2	1	2						20	10A
TOTAL		20	15	80	275	15		100	405	330	260	135	135	135	40		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 10 CNDR. FROM P-1 TO CNTRL.	CABLE 2 10 CNDR. FROM P-2 TO CNTRL.	CABLE 3 20 CNDR. FROM P-3 TO CNTRL.	CABLE 4 20 CNDR. FROM P-4 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 1 DW	SH 3 DW	SH 5,6 R	SH 9,10 R	3
4	GREEN	SH 1 W	SH 3 W	SH 5,6 G	SH 9,10 G	4
5	ORANGE	Ø2 PED CALL	Ø2 PED CALL	SH 5,6 Y	SH 9,10 Y	5
6	BLUE	Ø4 PED CALL	Ø4 PED CALL	Ø4 PED CALL	Ø2 PED CALL	6
7	WHITE/BLACK	SPARE	SPARE	SPARE	SPARE	7
8	RED/BLACK	SH 2 DW	SH 4 DW	SH 7 DW	SH 11 DW	8
9	GREEN/BLACK	SH 2 W	SH 4 W	SH 7 W	SH 11 W	9
10	ORANGE/BLACK	SPARE	SPARE	SPARE	SPARE	10
11	BLUE/BLACK			Ø2 PED CALL	Ø4 PED CALL	11
12	BLACK/WHITE			SPARE	SPARE	12
13	RED/WHITE			SH 8 DW	SH 12 DW	13
14	GREEN/WHITE			SH 8 W	SH 12 W	14
15	BLUE/WHITE			SPARE	SPARE	15
16	BLACK/RED			SPARE	SPARE	16
17	WHITE/RED			SPARE	SPARE	17
18	ORANGE/RED			SPARE	SPARE	18
19	BLUE/RED			SPARE	SPARE	19
20	RED/GREEN			SPARE	SPARE	20

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-3 MAST ARM	24'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V2-2		6'X90'		
				V2-3		6'X90'		
2	P-4 MAST ARM	24'	STOPBAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R
				V4-2		6'X90'		

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2014	PED SIG SEC (12 IN) LED (2 INDICATIONS)	EA	8
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	4
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	4
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	4

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2008	GROUND BOX TY A (122311) W / APRON	EA	3
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	1

ITEM 6266 VIVDS

ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	2
VIVDS COMM. CABLE, LF	233
VIVDS SET UP SYSTEM	1

*SUPPLIED BY TXDOT

ITEM 6006 SSR

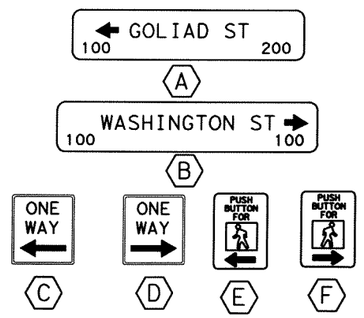
ITEM	QUANTITY
*SPREAD SPECTRUM RADIO	1
*SPREAD SPECTRUM ANTENNA	1
COAXIAL CABLE, LF	70

*RE-USE UNI-DIRECTIONAL SPREAD SPECTRUM RADIO AND ANTENNA

WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR. NO. 6 XHHW	ITEM 620 ELEC. CONDR. NO. 12 XHHW	ITEM 684 TYPE A 5 CNDR NO. 14	ITEM 684 TYPE A 7 CNDR NO. 14	ITEM 6266 VIVDS CABLE	OPTICOM CABLE* MODEL 138	ITEM 6006 COAXIAL CABLE
P-1			20				
P-2			20				
P-3		80	111		49	40	
P-4		80	105		49	38	30
TOTAL	0	160	256	0	98	78	30

* - CITY SUPPLIED CABLE





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SH 205

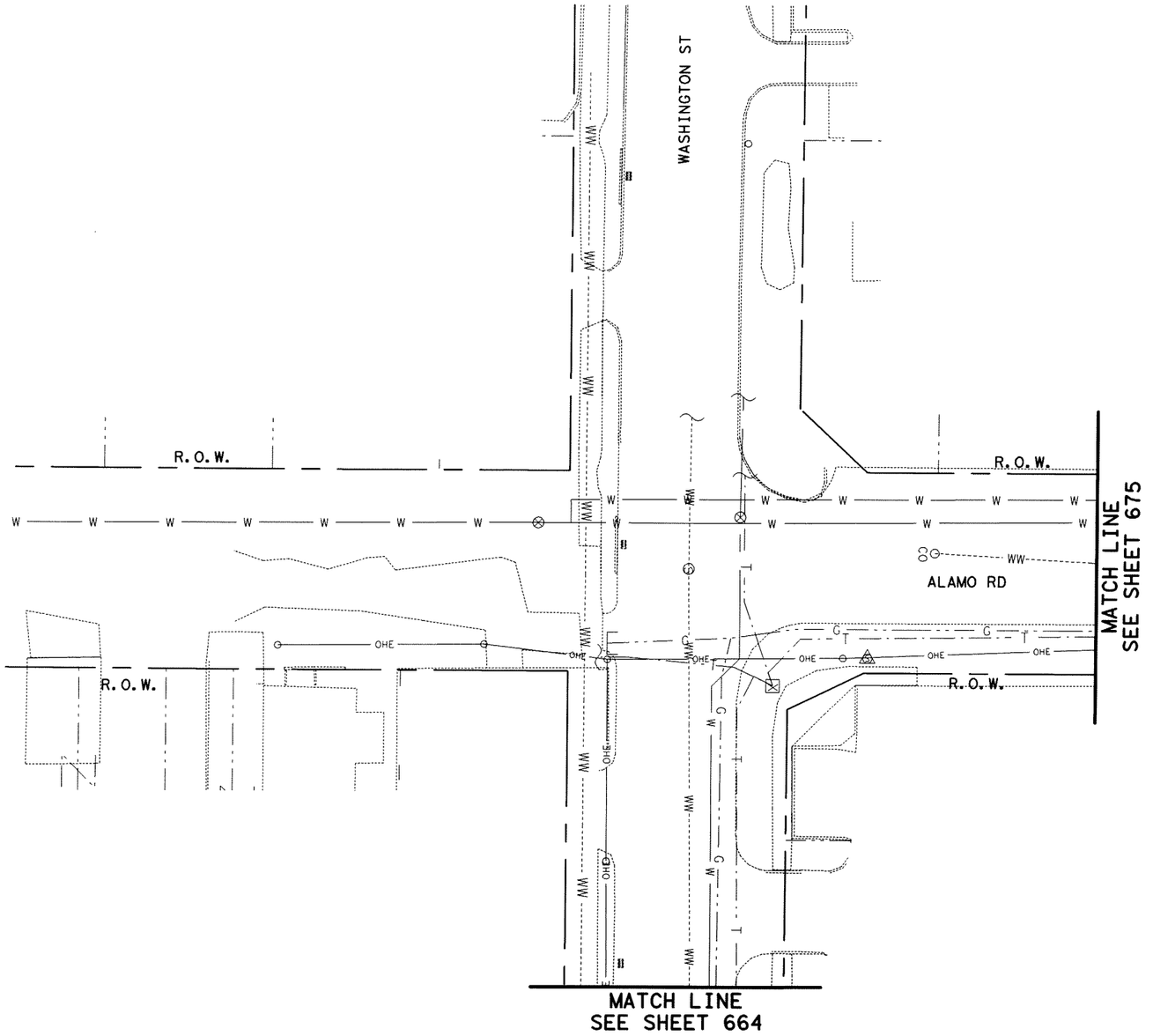
PERMANENT SIGNAL LAYOUT GOLIAD ST (SH 205 NB) AT WASHINGTON ST

FINAL SIGNAL DESIGN

SHEET 3 of 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	666
CONT.	SECT.	JOB	
0451	01	032	



GRAPHIC SCALE

0 10 20 40 80

(IN FEET)
1 inch = 40 ft.

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SH 205

EXISTING SIGNAL LAYOUT
ALAMO RD AT
WASHINGTON ST

SHEET 1 of 5

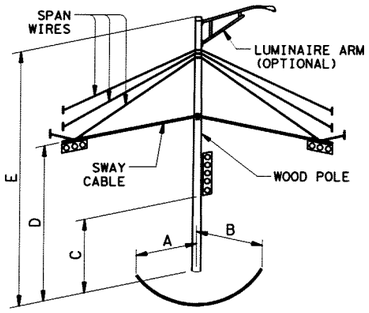
FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	667
CONT.	SECT.	JOB	
0451	01	032	

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

Kevin P. Hoppers P.E.

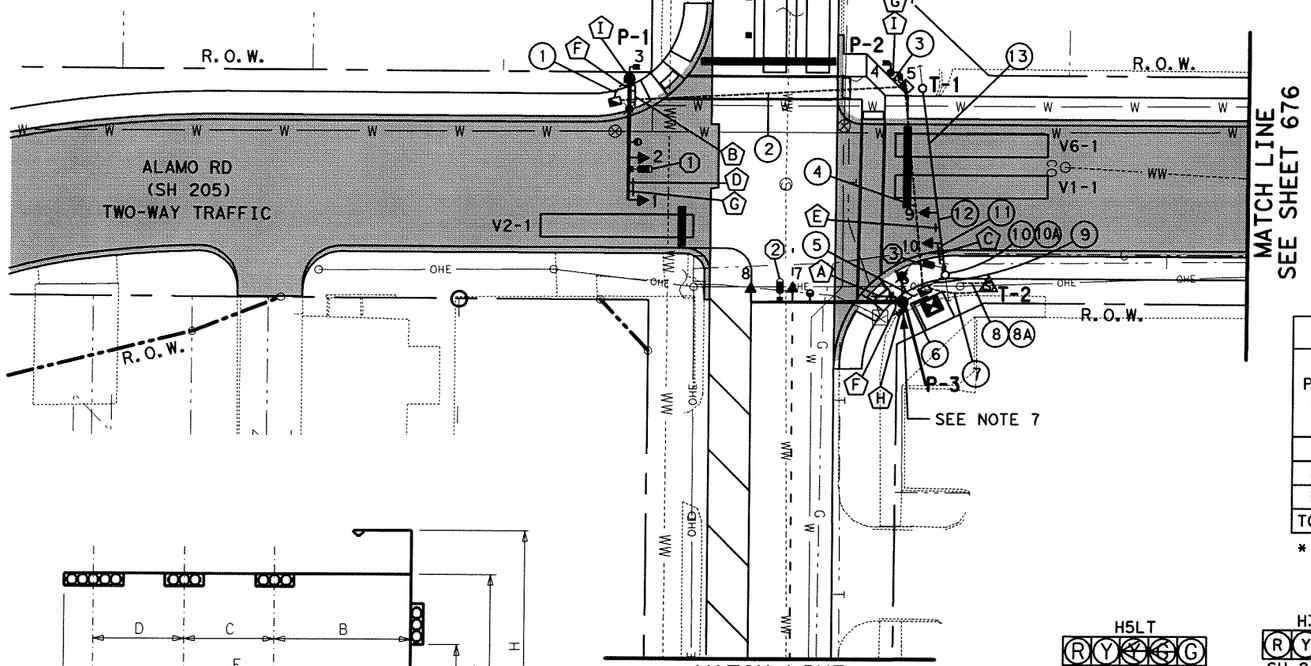
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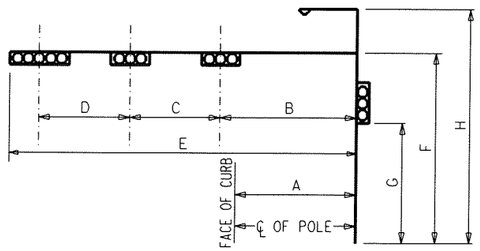


TIMBER POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-1	I	22	9.5		19	30	N
T-2	I	6.5	29		19	30	N

T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE
I=INSTALL; E=EXISTING; REM=REMOVE





NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE POWER COMPANY FOR THE NEW AND PERMANENT ELECTRICAL SERVICE AND FOR INSTALLATION OF TEMPORARY TIMBER POLES WHERE IN PROXIMITY TO POWER LINES. INSTALL NEW ELECTRICAL SERVICE: TY D (120/240) 060 (NS) SS (E) PS (U) AS SHOWN ON THE PLAN AND IN ACCORDANCE WITH TXDOT STANDARD DETAILS.
2. INSTALL FINAL AND TEMPORARY TRAFFIC SIGNAL EQUIPMENT AS SHOWN ON THE PHASE II PLAN.
3. CONTRACTOR SHALL COORDINATE WITH TXDOT FOR THE TXDOT SPEC 680 SUPPLIED EQUIPMENT TO BE USED DURING THE TEMPORARY PHASE AND TO OBTAIN TXDOT ASSISTANCE AS APPLICABLE.
4. INSTALL ALL TEMPORARY SIGNALS ON SPAN WIRES HORIZONTALLY, A MINIMUM OF 18 FEET ABOVE THE ROADWAY.
5. WHEN THIS CONSTRUCTION PHASE IS COMPLETE ALL TEMPORARY EQUIPMENT SHALL BE REMOVED.

LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE
- OPTICOM

SPAN RUN & LENGTH

(11)	(12)	(13)	◯	◯
9	8	33	-	-
50				

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2008	GROUND BOX TY A (122311) W / APRON	EA	3

SIGNAL HEAD PLACEMENT DURING CONSTRUCTION

MAX. DISTANCE (5 CNDR.)			
HEAD 9	16.5′	HEAD 10	8.5′

WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR.		ITEM 684 TYPE A		ITEM 6087 VIVDS CABLE	OPTICOM CABLE*	ITEM 6006 COAXIAL CABLE
	NO. 6 XHHW	NO. 12 XHHW	5 CNDR NO. 14	7 CNDR NO. 14		MODEL 138	
P-1		80	41	52	47	47	
P-2			20				
P-3		80	59		49	44	35
TOTAL	0	160	120	52	96	96	35

* - SUPPLIED BY CITY

H5LT (R Y G G G) SH 1

H3 (R Y G) SH 2, 7, 8, 9, 10

SH 143C OR SH 152A SH 3, 4, 5, 6

SIGNAL HEAD AND POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	I	11.5	21	11		32	19		30	2	Y	30-A
P-2	I	14					10				N	24-A
P-3	I	18	29	11		40	19		30	2	Y	36-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; S=SALVAGE

ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS				
			BACKPLATES		LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	5 SEC (EA)		SEC(EA)	SEC(EA)
2, 7, 8, 9, 10	H3	I	5			15	
1	H5LT	I		1		5	
3, 6	152A	I					2
4, 5	143C	I					2
TOTAL (NEW)			5	1	0	20	4

STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED



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GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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Engineered by KBR Technical Services, Inc

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SH 205

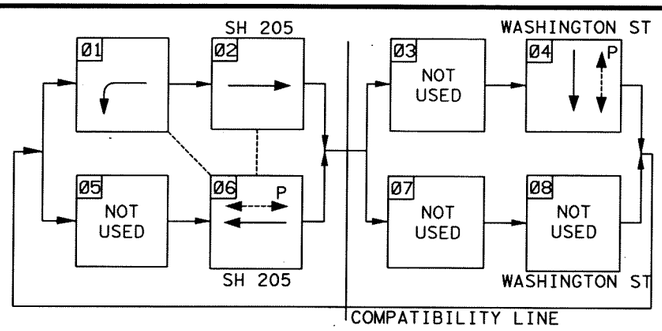
TEMPORARY SIGNAL LAYOUT ALAMO RD (SH 205 SB) AT WASHINGTON ST

PHASE II

SHEET 2 of 5

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	668
CONT.	SECT.	JOB	
0451	01	032	



*ITEM 628 ELECTRICAL SERVICE DATA											
SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	FD(4)(5)(8)-03 120/240 Ø60 (NS) SS(E)PS(U)	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 3	5.5

*REFER TO STANDARD SHEET ED(8)-03.

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-1 MAST ARM	24'	STOP BAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V1-1		6'X90'	Ø1-1	Ø1-G
2	P-3 MAST ARM	24'	STOP BAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R
				V4-2		6'X90'		
3	T-2 WOOD POLE	24'	STOPBAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 10 CNDR. FROM P-1 TO CNTRL.	CABLE 2 10 CNDR. FROM P-2 TO CNTRL.	CABLE 3 10 CNDR. FROM P-3 TO CNTRL.	CABLE 4 5 CNDR. FROM T-2 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	SPARE	1
2	WHITE	SH COM	SPARE	SH COM	SH COM	2
3	RED	SH 1,2 R	SH 4 DW	SH 7,8 R	SH 9,10 R	3
4	GREEN	SH 1,2 G	SH 4 W	SH 7,8 G	SH 9,10 G	4
5	ORANGE	SH 1,2 Y	Ø6 PED CALL	SH 7,8 Y	SH 9,10 Y	5
6	BLUE	Ø6 PED CALL	Ø4 PED CALL	Ø4 PED CALL		6
7	WHITE/BLACK	SH 3 DW	SPARE	SPARE		7
8	RED/BLACK	SH 3 W	SH 5 DW	SH 6 DW		8
9	GREEN/BLACK	SH 1 ~~G~~	SH 5 W	SH 6 W		9
10	ORANGE/BLACK	SH 1 ~~Y~~	SPARE	SPARE		10

ITEM 6266 VIVDS

ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	3
VIVDS COMM. CABLE, LF	331
VIVDS SET UP SYSTEM	1

*SUPPLIED BY TXDOT

ITEM 6006 SSR

ITEM	QUANTITY
*SPREAD SPECTRUM RADIO	1
RADIO ANTENNA	1
COAXIAL CABLE, LF	55

*SUPPLIED BY TXDOT

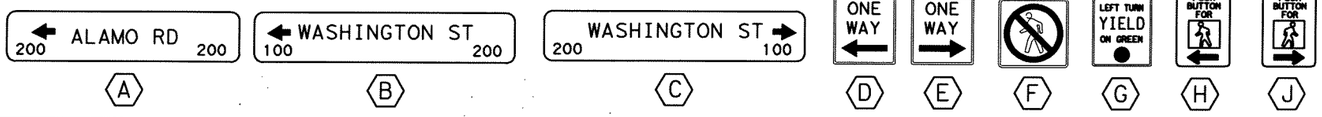
CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 1 ½" RM RISER	2" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 5 CNDR. CABLE	10 CNDR. CABLE	20 CNDR. CABLE	ITEM 6087 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
1	I			12			I		1	2		1		1	1		12	1
2	I				82		I		1	2		1		1	1		82	2
3	I			10			I		1			1					10	3
4	I				60		I		1	2		2		1	1		60	4
5	I			11			I		1	4		1		1	1	1	11	5
6	I					10	I	2	1		1	3		3	2	1	10	6
7	I		22				I	2	1	2							22	7
8	I		12				BY OTHERS										12	8
8A	I	20					BY OTHERS										20	8A
9	I		12				I		1		1			1			12	9
10	I	20					I		1		1			1			20	10
10A	I	10					I							1			10	10A
11	AC						I				1						9	11
12	AC						I				1						8	12
13	AC						I										33	13
TOTAL		50	46	33	142	10		64	239	396	59	265	0	237	185	21		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2014	PED SIG SEC (12 IN) LED (2 INDICATIONS)	EA	4
0682	2022	VEH SIG SEC (12 IN) INC (GRN ARW)	EA	1
0682	2023	VEH SIG SEC (12 IN) INC (GRN)	EA	6
0682	2024	VEH SIG SEC (12 IN) INC (YEL ARW)	EA	1
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	6
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	6



SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE TWT(1)UA(P)	GROUND MOUNT TYPE TWT(1)UA(T)
A	STREET NAME	ALAMO RD	E/REL	P-3	15" X VA	-	-	-
B	STREET NAME	WASHINGTON ST	E/REL	P-1	15" X VA	-	-	-
C	STREET NAME	WASHINGTON ST	E/REL	T-1/T-2	15" X VA	-	-	-
D	R6-2L	ONE-WAY SIGN (LEFT)	I	P-1	18" X 24"	C	-	-
E	R6-2R	ONE-WAY SIGN (RIGHT)	I	T-1/T-2	18" X 24"	C	-	-
F	R9-3A	NO PEDESTRIANS	I	P-1/P-3	18" X 18"	C	-	-
G	R10-12	LEFT TURN YIELD ON GREEN BALL	E/REL	P-1	24"X30"	C	-	-
H	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-2	5"X7"	C	-	-
				P-3	9"X12"			
J	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-2	5"X7"	C	-	-
				P-1	9"X12"			

STATUS: I=INSTALL; E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; SAL=SALVAGE



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SH 205

PERMANENT SIGNAL LAYOUT ALAMO RD (SH 205 SB) AT WASHINGTON ST

PHASE II

SHEET 3 of 5

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	669
CONT.	SECT.	JOB	
0451	01	032	

ITEM 6266 VIVDS	
ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	(1)
*VIVDS CAMERA ASSEMBLY	(3) [1]
VIVDS COMM. CABLE, LF	(331) [52]
VIVDS SET UP SYSTEM	(1)

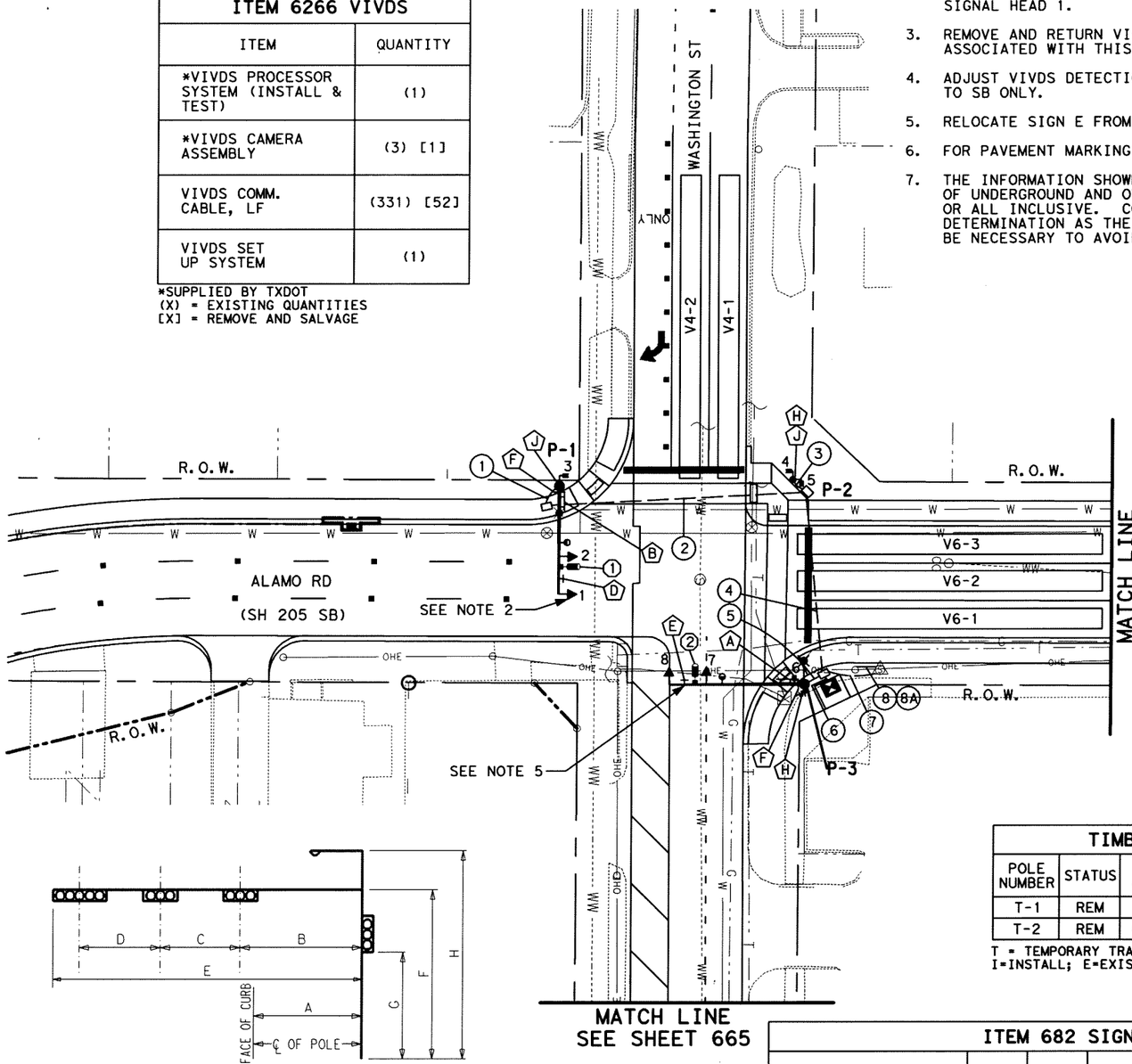
*SUPPLIED BY TXDOT
(X) = EXISTING QUANTITIES
[X] = REMOVE AND SALVAGE

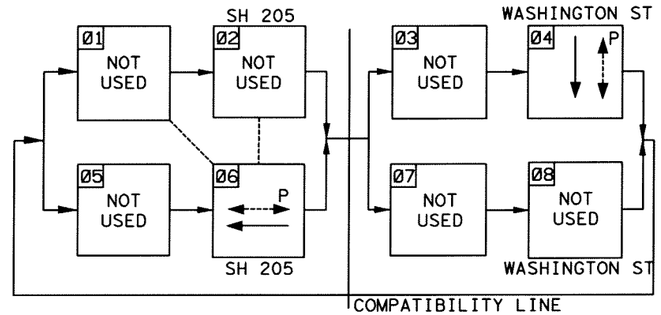
NOTES:

1. REMOVE AND SALVAGE ALL TEMPORARY SPAN WIRE SIGNAL EQUIPMENT AFTER ALL LANES OF TRAFFIC ON ALAMO RD ARE SWITCHED TO SB ONE-WAY.
2. REMOVE AND SALVAGE SIGNAL HEADS 1 AND 10. RELOCATE SIGNAL HEAD 9 TO SIGNAL HEAD 1.
3. REMOVE AND RETURN VIVD CAMERA #3 FROM T-2 TO TXDOT. REMOVE ALL CABLES ASSOCIATED WITH THIS CAMERA.
4. ADJUST VIVDS DETECTION ZONES FOR PHASE 6 PRIOR TO CHANGING ALL LANES TO SB ONLY.
5. RELOCATE SIGN E FROM SPAN WIRE TO P-3. REMOVE AND SALVAGE SIGNS C & G.
6. FOR PAVEMENT MARKING INFORMATION, SEE PAVEMENT MARKING SHEETS.
7. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATION AS THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

LEGEND

- TYPICAL PROPOSED MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- SIGN PANEL AND POST
- OPTICOM
- SSR YAGI ANTENNA





TIMBER POLE PLACEMENT							
POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-1	REM	22	9.5		19	30	N
T-2	REM	6.5	29		19	30	N

T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE
I=INSTALL; E=EXISTING; REM=REMOVE

H3 (R Y G)
SH 1, 2, 7, 8

SH 143C OR SH 152A

SH 3, 4, 5, 6

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

SIGNAL HEAD AND POLE PLACEMENT												
POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	E	11.5	21	11		32	19		30	2	Y	30-A
P-2	E	14					10				N	24-A
P-3	E	18	29	11		40	19		30	2	Y	36-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; S=SALVAGE

ITEM 682 SIGNAL HEADS							
SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS				
			BACKPLATES		LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	5 SEC (EA)		SEC (EA)	SEC (EA)
2, 7, 8	H3	E					
1	H5LT	REM		1		5	
3, 6	152A	E					
4, 5	143C	E					
9	H3	REL					
10	H3	REM	1			3	
TOTAL (REMOVED)			1	1	0	8	0
STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED							

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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SH 205

**PERMANENT SIGNAL LAYOUT
ALAMO RD (SH 205 SB) AT
WASHINGTON ST**

FINAL SIGNAL DESIGN

SHEET 4 of 5

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	670
CONT.	SECT.	JOB	
0451	01	032	

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-1 MAST ARM	24'	STOPBAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V6-2		6'X90'		
				V6-3		6'X90'		
2	P-3 MAST ARM	24'	STOPBAR	V4-1	N/A	6'X90'	Ø4-1	Ø4-R
				V4-2		6'X90'		

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 10 CNDR. FROM P-1 TO CNTRL.	CABLE 2 10 CNDR. FROM P-2 TO CNTRL.	CABLE 3 10 CNDR. FROM P-3 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SPARE	SH COM	2
3	RED	SH 1,2 R	SH 4 DW	SH 7,8 R	3
4	GREEN	SH 1,2 G	SH 4 W	SH 7,8 G	4
5	ORANGE	SH 1,2 Y	Ø6 PED CALL	SH 7,8 Y	5
6	BLUE	Ø6 PED CALL	Ø4 PED CALL	Ø4 PED CALL	6
7	WHITE/BLACK	SH 3 DW	SPARE	SPARE	7
8	RED/BLACK	SH 3 W	SH 5 DW	SH 6 DW	8
9	GREEN/BLACK	SPARE	SH 5 W	SH 6 W	9
10	ORANGE/BLACK	SPARE	SPARE	SPARE	10

CONDUIT AND CABLE CHART

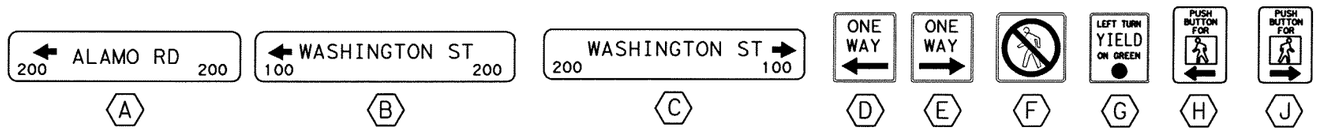
RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 1 ½" RM RISER	2" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 5 CNDR. CABLE	10 CNDR. CABLE	20 CNDR. CABLE	ITEM 6087 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 COAXIAL CABLE	LENGTH OF RUN (FT)	RUN NO.
1	E						E										12	1
2	E						E										82	2
3	E						E										10	3
4	E						E										60	4
5	E						E										11	5
6	E						E/REM				1			1			10	6
7	E						E										22	7
8	E						BY OTHERS										12	8
8A	E						BY OTHERS										20	8A
9	REM		12				REM		1		1			1			12	9
10	REM	20					REM		1		1			1			20	10
10A	REM	10					REM							1			10	10A
11	REM						REM				1						8.5	11
12	REM						REM				1						8	12
13	REM																33	13
TOTAL		30	12	0	0	0		0	32	0	58.5	0	0	52	0	0		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2022	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	[1]
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	[2]
0682	2024	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	[1]
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	[2]
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	[2]

[X] = REMOVE AND SALVAGE



SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE TWT(1)UA(P)	GROUND MOUNT TYPE TWT(1)UA(T)
A	STREET NAME	ALAMO RD	E	P-2		-	-	-
B	STREET NAME	WASHINGTON ST	E	P-1		-	-	-
C	STREET NAME	WASHINGTON ST	REM/SAL	T-1/T-2		-	-	-
D	R6-2L	ONE-WAY SIGN (LEFT)	E	P-1			-	-
E	R6-2R	ONE-WAY SIGN (RIGHT)	REL	P-3			-	-
F	R9-3A	NO PEDESTRIANS	E	P-1/P-3				-
G	R10-12	LEFT TURN YIELD ON GREEN	REM/SAL	P-1			-	-
H	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	E	P-2			-	-
				P-3				
J	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	E	P-2			-	-
				P-1				

STATUS: I=INSTALL; E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; SAL=SALVAGE

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

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SH 205

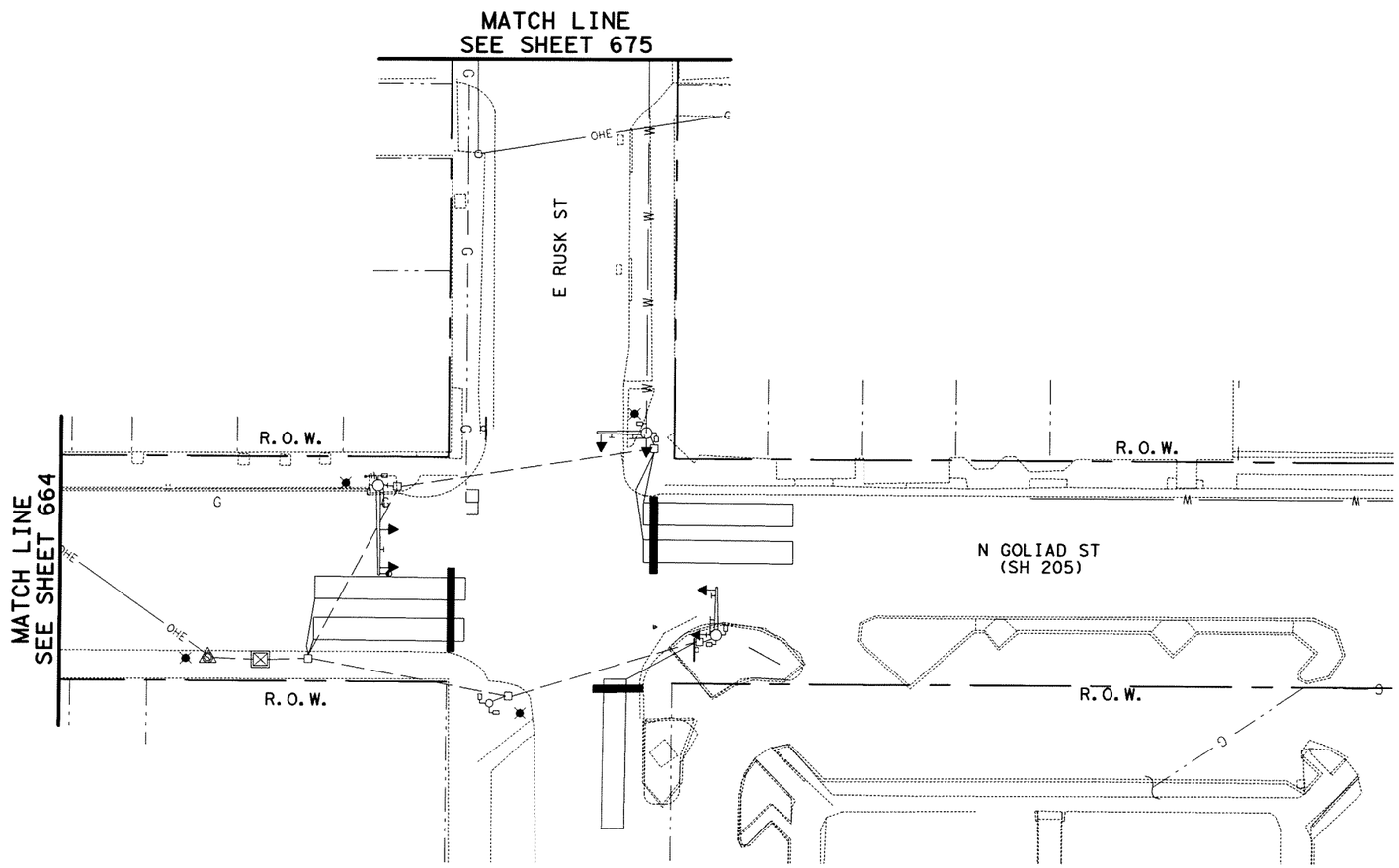
PERMANENT SIGNAL LAYOUT ALAMO RD (SH 205 SB) AT WASHINGTON ST

FINAL SIGNAL DESIGN

SHEET 5 of 5

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	671
CONT.	SECT.	JOB	
0451	01	032	



LEGEND

- TYPICAL EXISTING MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TYPICAL EXISTING SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- EXISTING TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- EXISTING CONDUIT
- (1) EXISTING CONDUIT RUN NUMBER
- 1 EXISTING SIGNAL HEAD NUMBER
- (A) EXISTING SIGN LABEL
- (S) EXISTING POWER SOURCE
- EXISTING SIGN PANEL AND POST
- EXISTING OPTICOM
- SSR YAGI ANTENNA

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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SH 205

EXISTING SIGNAL LAYOUT
N GOLIAD ST (SH 205 NB) AT E RUSK ST

SHEET 1 of 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	672
CONT.	SECT.	JOB	
0451	01	032	

STATE OF TEXAS
KEVIN P. HOPPERS
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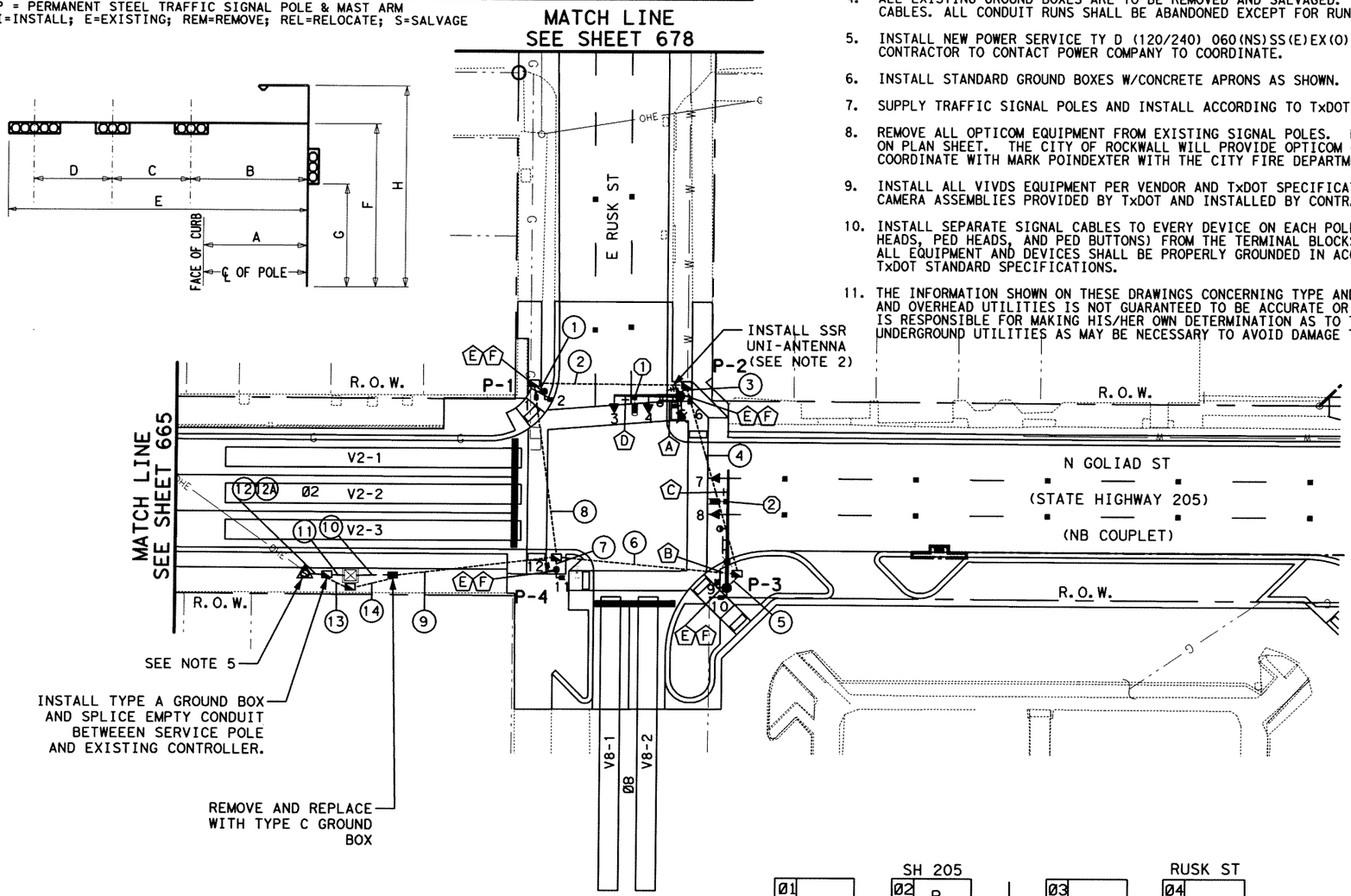
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SIGNAL HEAD AND POLE PLACEMENT

POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	I	3					10				N	24-A
P-2	I	4	9.5	10		20	19		30	2	Y	30-A
P-3	I	8.5	22	11		36	19		30	2	Y	36-A
P-4	I	11					10				N	24-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; S=SALVAGE



NOTES:

1. ALL CONSTRUCTION TO OCCUR WHILE SH 205 (GOLIAD) IS CLOSED TO THRU TRAFFIC.
2. REMOVE SSR UNI-DIRECTIONAL ANTENNA FROM EXISTING SIGNAL POLE ON SW CORNER AND MOUNT TO POLE P-2. SUPPLY AND INSTALL HELIAX CABLE.
3. REMOVE AND SALVAGE EXISTING TRAFFIC SIGNAL POLES, MAST ARM ASSEMBLIES AND TRAFFIC SIGNAL EQUIPMENT. ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE RETURNED TO TxDOT.
4. ALL EXISTING GROUND BOXES ARE TO BE REMOVED AND SALVAGED. DISPOSE OF EXISTING CABLES. ALL CONDUIT RUNS SHALL BE ABANDONED EXCEPT FOR RUNS 11 AND 12..
5. INSTALL NEW POWER SERVICE TY D (120/240) 060(NS)SS(E)EX(O). CONTRACTOR TO CONTACT POWER COMPANY TO COORDINATE.
6. INSTALL STANDARD GROUND BOXES W/CONCRETE APRONS AS SHOWN.
7. SUPPLY TRAFFIC SIGNAL POLES AND INSTALL ACCORDING TO TxDOT SPECIFICATIONS.
8. REMOVE ALL OPTICOM EQUIPMENT FROM EXISTING SIGNAL POLES. REUSE EQUIPMENT AS SHOWN ON PLAN SHEET. THE CITY OF ROCKWALL WILL PROVIDE OPTICOM CABLE. CONTRACTOR TO COORDINATE WITH MARK POINDEXTER WITH THE CITY FIRE DEPARTMENT (972) 771-7770.
9. INSTALL ALL VIVDS EQUIPMENT PER VENDOR AND TxDOT SPECIFICATIONS. VIVDS PROCESSOR AND CAMERA ASSEMBLIES PROVIDED BY TxDOT AND INSTALLED BY CONTRACTOR.
10. INSTALL SEPARATE SIGNAL CABLES TO EVERY DEVICE ON EACH POLE (TRAFFIC SIGNAL HEADS, PED HEADS, AND PED BUTTONS) FROM THE TERMINAL BLOCKS IN EACH POLE. ALL EQUIPMENT AND DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS.
11. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

LEGEND

- TYPICAL PROPOSED MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- SIGN PANEL AND POST
- OPTICOM
- SSR YAGI ANTENNA

H3 (R Y G)
SH 3, 4, 7, 8

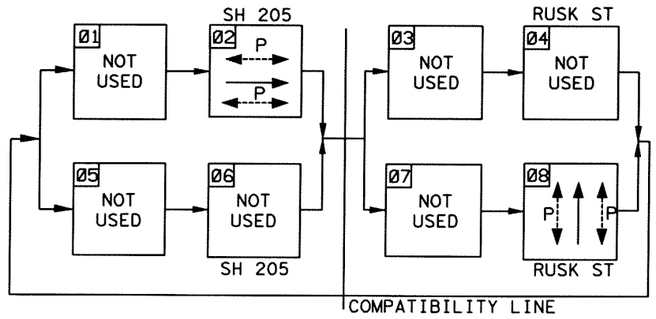
SH 143C OR SH 152A
SH 1, 2, 5, 6
9, 10, 11, 12

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS				
			BACKPLATES		LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	5 SEC (EA)		SEC (EA)	SEC (EA)
3, 4, 7, 8	H3	I	4			12	
1, 2, 5, 6, 9, 10, 11, 12	143C	I					8
TOTAL (NEW)			4	0	0	12	8

STATUS: R=EX. TO BE RELOCATED; I=INSTALL NEW



STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER

KEVIN P. HOPPERS, P.E.

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SH 205

PERMANENT SIGNAL LAYOUT
N GOLIAD ST (SH 205 NB) AT
E RUSK ST

FINAL SIGNAL DESIGN

SHEET 2 of 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	673
CONT.	SECT.	JOB	
0451	01	032	

*ITEM 628 ELECTRICAL SERVICE DATA

SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	ED(4)(5)-03 120/240 060(NS)SS(E)EX(O)	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 3	5.5

*REFER TO STANDARD SHEET ED(8)-03.

SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	N GOLIAD	E/REL	P-2		-	-	-
B	STREET NAME	E RUSK ST	E/REL	P-3		-	-	-
C	R6-2L	ONE WAY (LEFT)	I	P-3	18"X24"	-	-	-
D	R6-2R	ONE WAY (RIGHT)	I	P-2	18"X24"	-	-	-
E	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-2/P-3	9"X12"	C	-	-
E	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-1/P-4	5"X7"	C	-	-
F	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-2/P-3	9"X12"	C	-	-
F	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-1/P-4	5"X7"	C	-	-

STATUS: E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; I=INSTALL; SAL=SALVAGE

CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 1 ½" RM RISER	2" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 10 CNDR. CABLE	20 CNDR. CABLE	ITEM 6266 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 HELIAX CABLE	LENGTH OF RUN (FT)	RUN NO.
1	I			10			I		1		1					10	1
2	I				50		I		1							50	2
3	I			10			I		1	2		1	1	1	1	10	3
4	I				60		I		1	2		1	1	1	1	65	4
5	I			10			I		1	4		1	1	1		10	5
6	I				65		I		1	2		2	2	2	1	65	6
7	I			10			I		1		1					10	7
8	I				60		I		1		1					60	8
9	I			50			I		1	2	2	2	2	2	1	55	9
10	E			10			I		1		2	2	2	2	1	20	10
11	E		5				I	2	1	2						15	11
12	E		5				I	2	1	2						15	12
12a	E	20					I	2	1	2						20	12a
13	I		8				I		1	2						15	13
14	I		12				I		1	2						20	14
TOTAL		0	20	90	235	0		100	440	600	230	365	365	365	215		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 10 CNDR. FROM P-1 TO CNTRL.	CABLE 2 20 CNDR. FROM P-2 TO CNTRL.	CABLE 3 20 CNDR. FROM P-3 TO CNTRL.	CABLE 4 10 CNDR. FROM P-4 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 1 DW	SH 3,4 R	SH 7,8 R	SH 11 DW	3
4	GREEN	SH 1 W	SH 3,4 G	SH 7,8 G	SH 11 W	4
5	ORANGE	Ø8 PED CALL	SH 3,4 Y	SH 7,8 Y	Ø2 PED CALL	5
6	BLUE	Ø2 PED CALL	Ø2 PED CALL	Ø8 PED CALL	Ø8 PED CALL	6
7	WHITE/BLACK	SPARE	SPARE	SPARE	SPARE	7
8	RED/BLACK	SH 2 DW	SH 5 DW	SH 9 DW	SH 12 DW	8
9	GREEN/BLACK	SH 2 W	SH 5 W	SH 9 W	SH 12 W	9
10	ORANGE/BLACK	SPARE	SPARE	SPARE	SPARE	10
11	BLUE/BLACK		Ø8 PED CALL	Ø2 PED CALL		11
12	BLACK/WHITE		SPARE	SPARE		12
13	RED/WHITE		SH 6 DW	SH 10 DW		13
14	GREEN/WHITE		SH 6 W	SH 10 W		14
15	BLUE/WHITE		SPARE	SPARE		15
16	BLACK/RED		SPARE	SPARE		16
17	WHITE/RED		SPARE	SPARE		17
18	ORANGE/RED		SPARE	SPARE		18
19	BLUE/RED		SPARE	SPARE		19
20	RED/GREEN		SPARE	SPARE		20

GROUND BOX SUMMARY

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2008	GROUND BOX TY A (122311) W / APRON	EA	6
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	1

VIVDS DETECTION ZONE DETAILS

CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-3 MAST ARM	24'	STOP BAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V2-2		6'X90'		
				V2-3		6'X90'		
2	P-4 MAST ARM	24'	STOP BAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
				V8-2		6'X90'		

WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR. NO. 6 XHHW	NO. 12 XHHW	ITEM 684 TYPE A 5 CNDR NO. 14	7 CNDR NO. 14	ITEM 6266 VIVDS CABLE	OPTICOM CABLE* MODEL 138	ITEM 6006 HELIAX CABLE
P-1			20				
P-2		80	77		34	30	30
P-3		30	103		46	38	
P-4			20				
TOTAL	0	160	220	0	80	68	30

* - CITY SUPPLIED CABLE

ITEM 0682 LED SIGNAL INDICATIONS

ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2014	PED SIG SEC (12 IN) LED (2 INDICATIONS)	EA	8
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	4
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	4
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	4

ITEM 6266 VIVDS

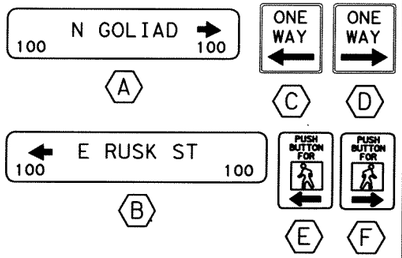
ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	2
VIVDS COMM. CABLE, LF	445
VIVDS SET UP SYSTEM	1

*SUPPLIED BY TXDOT

ITEM 6006 SSR

ITEM	QUANTITY
*SPREAD SPECTRUM RADIO	1
*SPREAD SPECTRUM ANTENNA	1
HELIAX. CABLE, LF	245

*RE-USE UNI-DIRECTIONAL SPREAD SPECTRUM RADIO AND ANTENNA



STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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SH 205

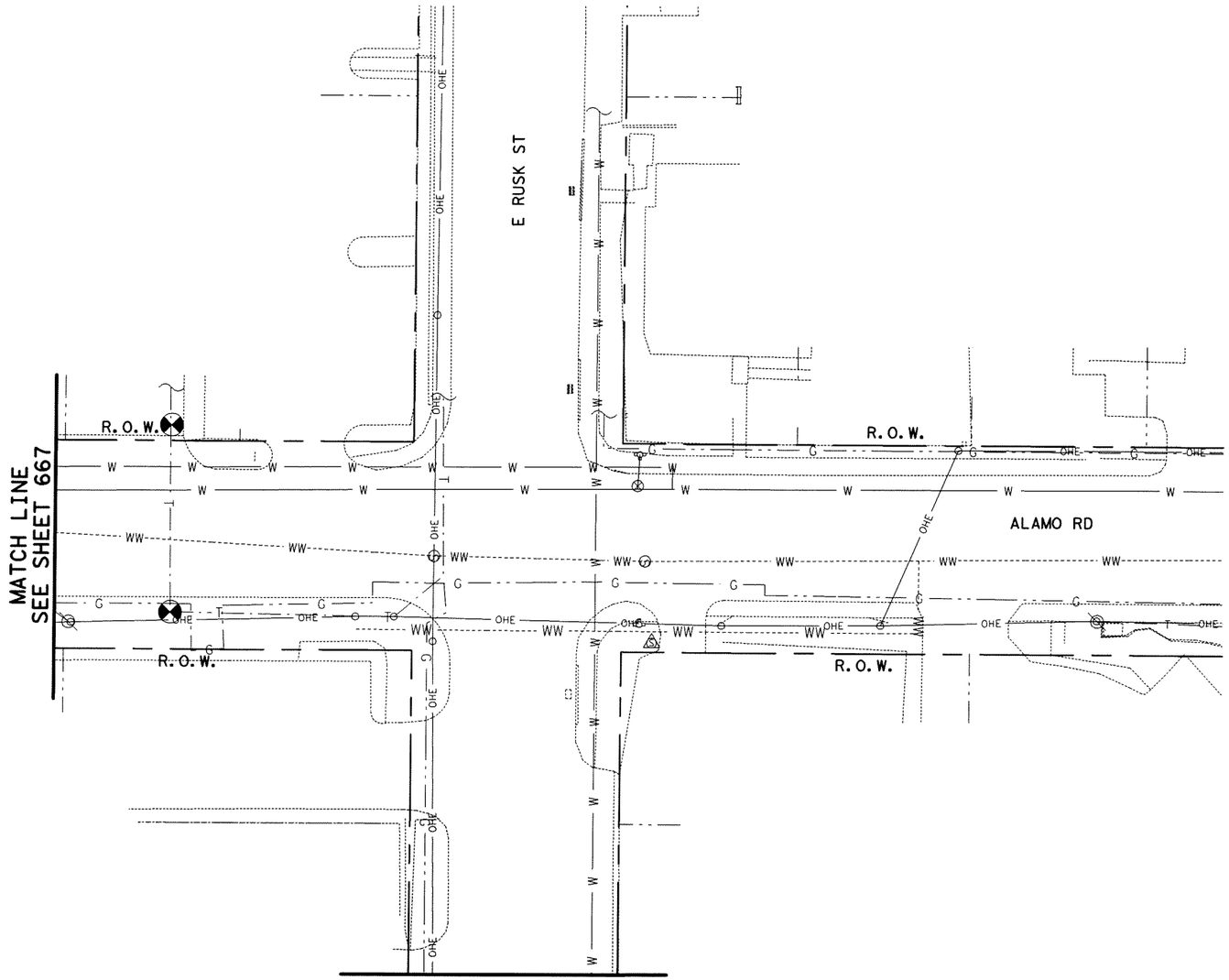
PERMANENT SIGNAL LAYOUT
N GOLIAD ST (SH 205 NB) AT
E RUSK ST

FINAL SIGNAL DESIGN

SHEET 3 of 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	674
CONT.	SECT.	JOB	
0451	01	032	



GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

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EXISTING SIGNAL LAYOUT
ALAMO RD (SH 205 SB) AT
E RUSK ST

SHEET 1 of 6

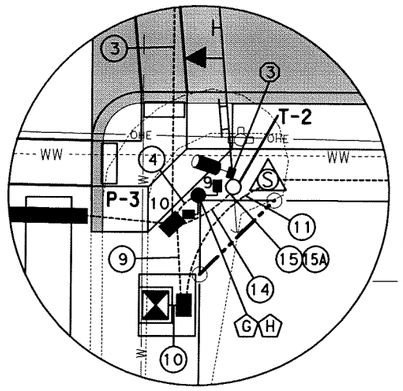
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	675
CONT.	SECT.	JOB	
0451	01	032	

STATE OF TEXAS
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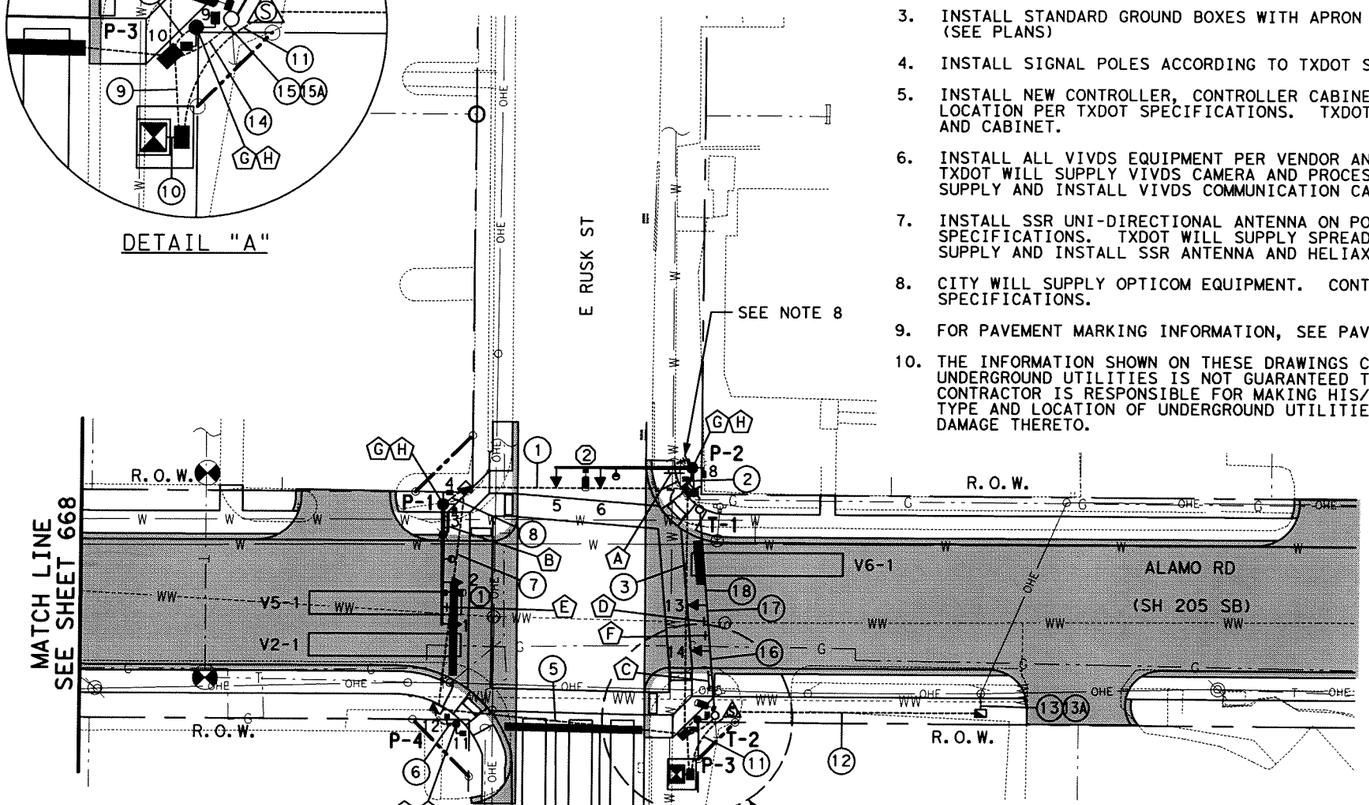


NOTES:

1. SIGNAL CONTRACTOR TO COORDINATE WITH THE UTILITY CONTRACTOR TO VERIFY ANY RELOCATION OF EXISTING OVERHEAD POWER LINES AND WOOD UTILITY POLES. PLACEMENT OF WOOD POLES (T-1/T-2) WILL HAVE TO BE COORDINATED WITH THE UTILITY COMPANY.
2. INSTALL NEW POWER SERVICE TY D (120/240)060(NS)SS(E)PS(U) TO THE NEAREST AVAILABLE UTILITY DROP (SEE PLANS). CONTRACTOR TO CONTACT POWER COMPANY TO COORDINATE.
3. INSTALL STANDARD GROUND BOXES WITH APRON ACCORDING TO TXDOT SPECIFICATIONS. (SEE PLANS)
4. INSTALL SIGNAL POLES ACCORDING TO TXDOT SPECIFICATIONS. (SEE PLANS)
5. INSTALL NEW CONTROLLER, CONTROLLER CABINET, AND FOUNDATION AT SPECIFIED LOCATION PER TXDOT SPECIFICATIONS. TXDOT WILL SUPPLY THE SIGNAL CONTROLLER AND CABINET.
6. INSTALL ALL VIVDS EQUIPMENT PER VENDOR AND TXDOT SPECIFICATIONS (SEE PLANS). TXDOT WILL SUPPLY VIVDS CAMERA AND PROCESSOR SYSTEM. CONTRACTOR WILL SUPPLY AND INSTALL VIVDS COMMUNICATION CABLE.
7. INSTALL SSR UNI-DIRECTIONAL ANTENNA ON POLE P-2 ACCORDING TO TXDOT AND VENDOR SPECIFICATIONS. TXDOT WILL SUPPLY SPREAD SPECTRUM RADIO. CONTRACTOR WILL SUPPLY AND INSTALL SSR ANTENNA AND HELIAX CABLE.
8. CITY WILL SUPPLY OPTICOM EQUIPMENT. CONTRACTOR WILL INSTALL PER VENDORS SPECIFICATIONS.
9. FOR PAVEMENT MARKING INFORMATION, SEE PAVEMENT MARKING SHEETS.
10. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

LEGEND

- TYPICAL SPAN WIRE COMBINATION SIGNAL WITH WOOD POLES, DOWN GUYS, LUMINAIRE, AND SIGNAGE
- POLE MOUNTED TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- WORK AREA
- CONSTRUCTION PREVIOUS PHASE
- OPTICOM

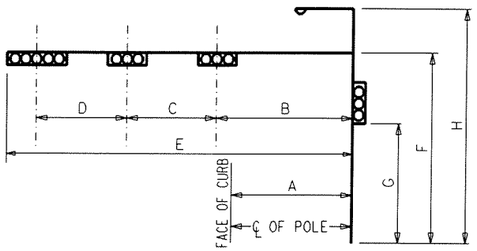


H5LT (R Y G G G) SH 13

H3 (R Y G) SH 1, 2, 5, 6, 14

SH 143C OR SH 152A

SH 3, 4, 7, 8, 9, 10, 11, 12



SPAN RUN & LENGTH				
(16)	(17)	(18)	◯	◯
17	12	25	-	-
54				

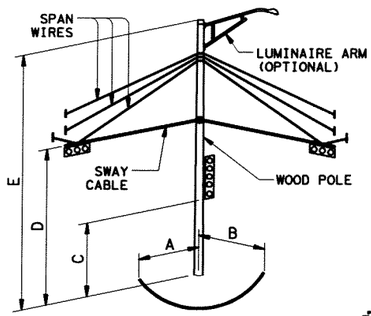
GROUND BOX SUMMARY				
ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0624	2008	GROUND BOX TY A (122311) W / APRON	EA	4
0624	2012	GROUND BOX TY C (162911) W / APRON	EA	2

SIGNAL HEAD PLACEMENT DURING CONSTRUCTION			
MAX. DISTANCE (7 CNDR.)			
HEAD 13	17′	HEAD 14	29′

GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

TIMBER POLE PLACEMENT							
POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-1	I	14	9		19	30	N
T-2	I	12.5	19		19	30	N

T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE
I=INSTALL; E=EXISTING; REM=REMOVE



SIGNAL HEAD AND POLE PLACEMENT												
POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	I	9.5	21	11		32	19		30	2	Y	30-A
P-2	I	12	24	12		36	19		30	2	Y	36-A
P-3	I	13					10				N	24-A
P-4	I	12					10				N	24-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; S=SALVAGE

STATE OF TEXAS
KEVIN P. HOPPERS
93669
PROFESSIONAL REGISTERED ENGINEER

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SH 205

TEMPORARY SIGNAL LAYOUT ALAMO RD (SH 205 SB) AT E RUSK ST

PHASE II

SHEET 2 of 6

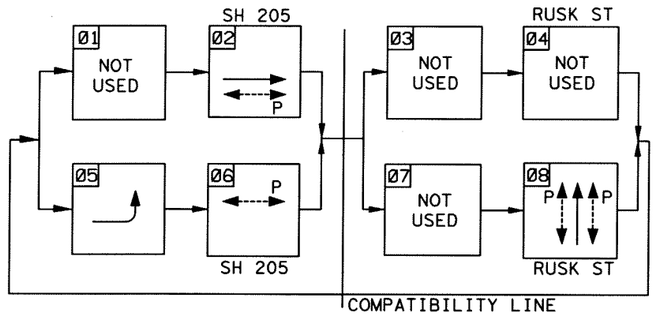
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	676
CONT.	SECT.	JOB	
0451	01	032	

ITEM 0682 LED SIGNAL INDICATIONS				
ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2014	PED SIG SEC (12 IN) LED (2 INDICATIONS)	EA	8
0682	2022	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	1
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	6
0682	2024	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	1
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	6
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	6

*ITEM 628 ELECTRICAL SERVICE DATA												
SERVICE TYPE	ELECTRICAL SERVICE DESCRIPTION	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. / SIZE	SAFETY SWITCH AMPS	MAIN CKT. BRK POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	CIRCUIT DESC.	BRANCH CKT./BRD. POLE/AMPS	BRANCH CIRCUIT AMPS	KVA LOAD
TYPE D	120/240 060(NS)SS(E)PS(U) ED(4)(5)(8)03	1 ½"	3/#6	N/A	2P/60	30	100	1 2	T.S. LIGHTING	1P/50 2P/15	40 3	5.5

*REFER TO STANDARD SHEET ED(8)-03.



CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 1 ½" RM RISER	2 " PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 7 CNDR. CABLE	10 CNDR. CABLE	20 CNDR. CABLE	ITEM 6087 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 HELIAX CABLE	LENGTH OF RUN (FT)	RUN NO.
1	I				64		I		1	2							64	1
2	I			11			I		1	4			1	1	1	1	11	2
3	I				70		I		1	2			1	1	1	1	70	3
4	I			10			I		1			1					10	4
5	I				70		I		1			1	1	1	1		70	5
6	I			12			I		1			1					12	6
7	I				64		I		1				1	1	1		64	7
8	I			12			I		1	2			1	1	1		12	8
9	I					16	I		1	2		2	2	2	2	1	16	9
10	I					10	I	2	1			2	2	2	2	1	10	10
11	I		25				I	2	1	2							25	11
12	I		70				BY OTHERS										70	12
13	I		10				BY OTHERS										10	13
13A	I	20					BY OTHERS										20	13A
14	I		14				I		1		1			1			14	14
15	I	20					I		1		1			1			20	15
15A	I	10					I		1					1			10	15A
16	AC						I				1						17	16
17	AC						I				1						12	17
TOTAL		50	119	45	268	26		70	408	418	63	144	279	323	279	107		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 20 CNDR. FROM P-1 TO CNTRL.	CABLE 2 20 CNDR. FROM P-2 TO CNTRL.	CABLE 3 10 CNDR. FROM P-3 TO CNTRL.	CABLE 4 10 CNDR. FROM P-4 TO CNTRL.	CABLE 5 7 CNDR. FROM T-2 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	PB COM	SH 13 G	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 1,2 R	SH 5,6 R	SH 9 DW	SH 11 DW	SH 13,14 R	3
4	GREEN	SH 1,2 G	SH 5,6 G	SH 9 W	SH 11 W	SH 13,14 G	4
5	ORANGE	SH 1,2 Y	SH 5,6 Y	Ø8 PED CALL	Ø6 PED CALL	SH 13,14 Y	5
6	BLUE	Ø8 PED CALL	Ø6 PED CALL	Ø6 PED CALL	Ø8 PED CALL	SH 13 Y	6
7	WHITE/BLACK	SPARE	SPARE	SPARE	SPARE	SPARE	7
8	RED/BLACK	SH 3 DW	SH 7 DW	SH 10 DW	SH 12 DW		8
9	GREEN/BLACK	SH 3 W	SH 7 W	SH 10 W	SH 12 W		9
10	ORANGE/BLACK	SPARE	SPARE	SPARE	SPARE		10
11	BLUE/BLACK	Ø6 PED CALL	Ø8 PED CALL				11
12	BLACK/WHITE	SPARE	SPARE				12
13	RED/WHITE	SH 4 DW	SH 8 DW				13
14	GREEN/WHITE	SH 4 W	SH 8 W				14
15	BLUE/WHITE	SPARE	SPARE				15
16	BLACK/RED	SPARE	SPARE				16
17	WHITE/RED	SPARE	SPARE				17
18	ORANGE/RED	SPARE	SPARE				18
19	BLUE/RED	SPARE	SPARE				19
20	RED/GREEN	SPARE	SPARE				20

ITEM 682 SIGNAL HEADS

SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS BACKPLATES 3 SEC (EA)	BACKPLATES 5 SEC (EA)	LOUVER	VEH. SIGNAL SEC(EA)	PED. SIGNAL SEC(EA)
13	H5LT	I		1		5	
1, 2, 5, 6, 14	H3	I	5			15	
3, 4, 7, 8, 9, 10, 11, 12	143C	I					8
		TOTAL (NEW)	5	1		20	8

STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED

WIRE INSIDE POLE (FEET)

POLE NO.	ITEM 620 ELEC. CONDR. NO. 6 XHHW	NO. 12 XHHW	ITEM 684 TYPE A 5 CNDR NO. 14	7 CNDR NO. 14	ITEM 6087 VIVDS CABLE	OPTICOM CABLE* MODEL 138	ITEM 6006 COAXIAL CABLE
P-1		80	103		43	34	30
P-2		80	110		48	40	
P-3			20				
P-4			20				
TOTAL	0	160	253	0	91	74	30

* - SUPPLIED BY CITY

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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Suite 1333
Dallas, TX 75207

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SH 205

TEMPORARY SIGNAL LAYOUT ALAMO RD (SH 205 SB) AT E RUSK ST

PHASE II

SHEET 3 of 6

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	677
CONT.	SECT.	JOB	
0451	01	032	

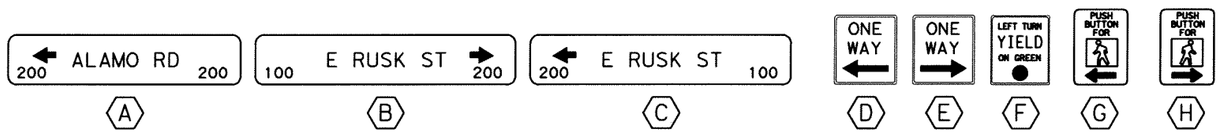
VIVDS DETECTION ZONE DETAILS								
CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-1 MAST ARM	24'	STOPBAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
2	P-2 MAST ARM	24'	STOPBAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
				V8-2		6'X90'		
				V8-3		6'X90'		
3	T-2 WOOD POLE	24'	STOPBAR	V2-1	N/A	6'X90'	Ø2-1	Ø2-R
				V5-1		6'X90'	Ø5-1	Ø5-G

ITEM 6006 SSR	
ITEM	QUANTITY
*SPREAD SPECTRUM RADIO	1
RADIO ANTENNA	1
HELIAX CABLE, LF	107

*SUPPLIED BY TXDOT

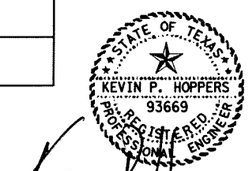
ITEM 6266 VIVDS	
ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	1
*VIVDS CAMERA ASSEMBLY	3
VIVDS COMM. CABLE, LF	323
VIVDS SET UP SYSTEM	1

*SUPPLIED BY TXDOT



SIGNS SUMMARY								
SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE	
							TWT(1)UA(P)	TWT(1)UA(T)
A	STREET NAME	ALAMO RD	I	P-2	15" X VA	-	-	-
B	STREET NAME	RUSK ST	I	P-1	15" X VA	-	-	-
C	STREET NAME	RUSK ST	I	T-1/T-2	15" X VA	-	-	-
D	R6-2L	ONE-WAY SIGN (LEFT)	I	T-1/T-2	18" X 24"	C	-	-
E	R6-2R	ONE-WAY SIGN (RIGHT)	I	P-1	18" X 24"	C	-	-
F	R10-12	LEFT TURN YIELD ON GREEN	I	T-1/T-2	24"X30"	C	-	-
G	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	I	P-3/P-4	5"X7"	C	-	-
				P-1/P-2	9"X12"			
H	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	I	P-3/P-4	5"X7"	C	-	-
				P-1/P-2	9"X12"			

STATUS: I=INSTALL; E=EXISTING; R=REMOVE; REL=RELOCATE; REP=REPLACE; SAL=SALVAGE



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Suite 1333
Dallas, TX 75207

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SH 205

TEMPORARY SIGNAL LAYOUT
ALAMO RD (SH 205 SB) AT
E RUSK ST

PHASE II

SHEET 4 of 6

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		VA
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	677A
CONT.	SECT.	JOB	
0451	01	032	

ITEM 6266 VIVDS	
ITEM	QUANTITY
*VIVDS PROCESSOR SYSTEM (INSTALL & TEST)	(1)
*VIVDS CAMERA ASSEMBLY	(3) [1]
VIVDS COMM. CABLE, LF	(323) [70]
VIVDS SET UP SYSTEM	(1)

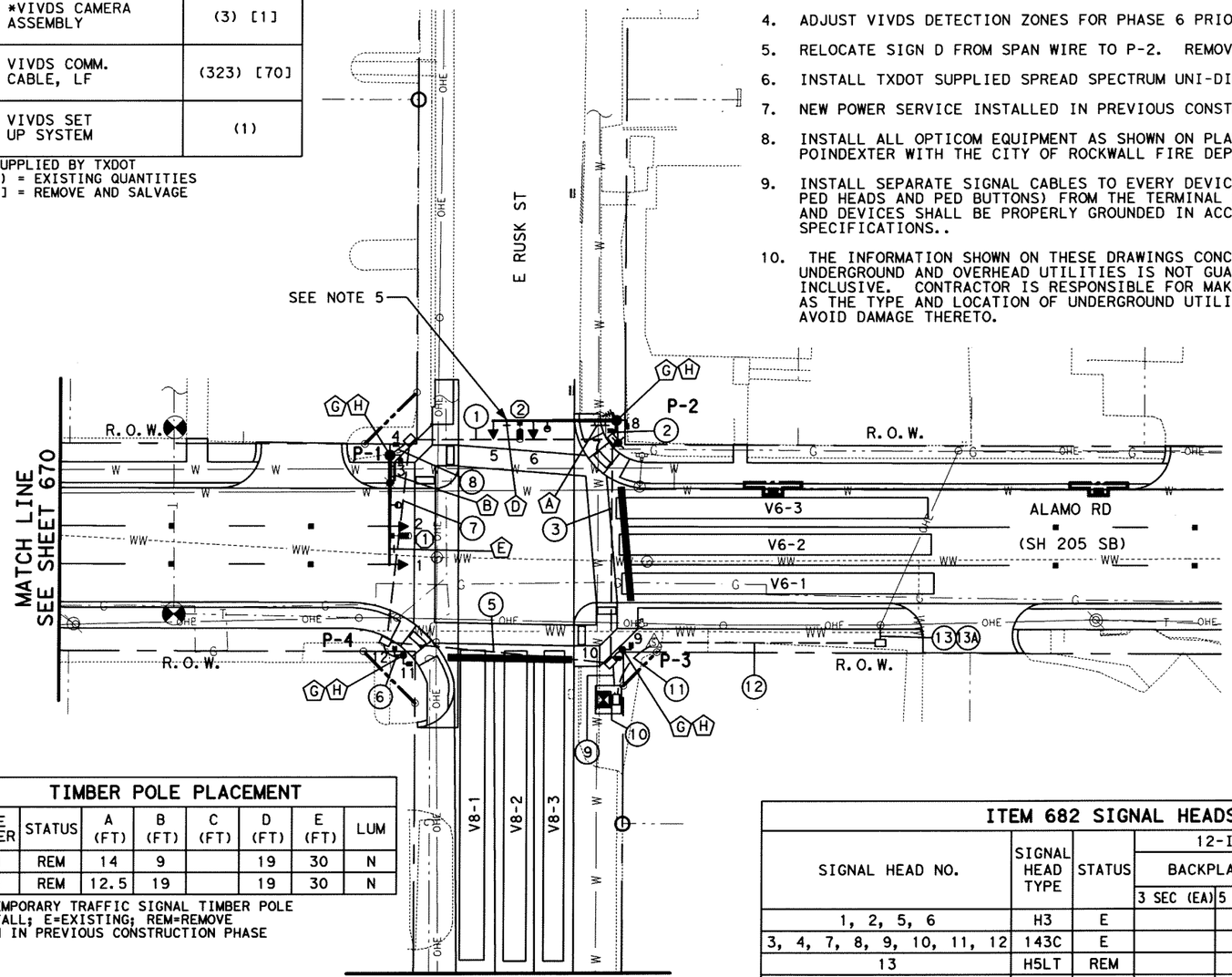
*SUPPLIED BY TXDOT
(X) = EXISTING QUANTITIES
[X] = REMOVE AND SALVAGE

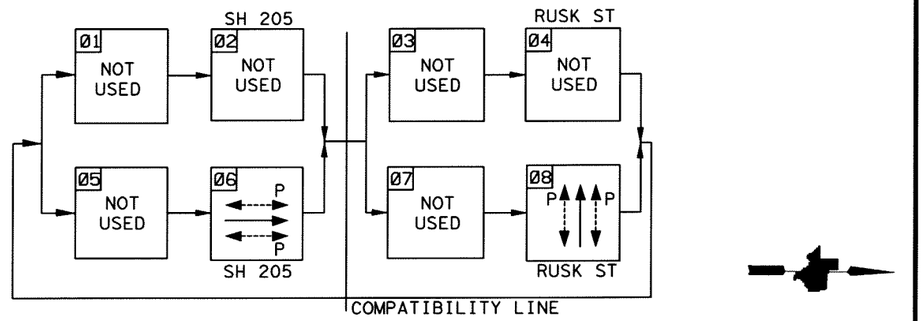
NOTES:

1. REMOVE AND SALVAGE ALL TEMPORARY SPAN WIRE SIGNAL AFTER ALL LANES OF TRAFFIC ON ALAMO RD ARE SWITCHED TO SB ONE-WAY.
2. REMOVE AND SALVAGE SIGNAL HEADS 13 AND 14.
3. REMOVE AND RETURN VIVD CAMERA #3 FROM T-2 TO TXDOT. REMOVE ALL CABLES ASSOCIATED WITH THIS CAMERA.
4. ADJUST VIVDS DETECTION ZONES FOR PHASE 6 PRIOR TO CHANGING ALL LANES TO SB ONLY.
5. RELOCATE SIGN D FROM SPAN WIRE TO P-2. REMOVE AND SALVAGE SIGNS C & F.
6. INSTALL TXDOT SUPPLIED SPREAD SPECTRUM UNI-DIRECTIONAL ANTENNA ON POLE P-2..
7. NEW POWER SERVICE INSTALLED IN PREVIOUS CONSTRUCTION PHASE.
8. INSTALL ALL OPTICOM EQUIPMENT AS SHOWN ON PLANS. COORDINATE WITH MARK POINDEXTER WITH THE CITY OF ROCKWALL FIRE DEPARTMENT TO OBTAIN OPTICOM EQUIPMENT.
9. INSTALL SEPARATE SIGNAL CABLES TO EVERY DEVICE ON EACH POLE (TRAFFIC SIGNAL HEADS, PED HEADS AND PED BUTTONS) FROM THE TERMINAL BLOCKS IN EACH POLE. ALL EQUIPMENT AND DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS..
10. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR MAKING HIS/HER OWN DETERMINATION AS THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

LEGEND

- TYPICAL PROPOSED MAST ARM COMBINATION SIGNAL \ WITH PEDESTRIAN SIGNAL, PUSH BUTTON, LUMINAIRE, AND SIGNAGE
- TRAFFIC SIGNAL CONTROLLER CABINET
- EXISTING GROUND BOX
- GROUND BOX TYPE A W/ APRON
- GROUND BOX TYPE C W/ APRON
- GROUND BOX INSTALLED DURING A PREVIOUS PHASE
- EXISTING CONDUIT
- PROPOSED CONDUIT
- (1) CONDUIT RUN NUMBER
- 1 SIGNAL HEAD NUMBER
- (1) VIVD CAMERA AND LABEL
- VIVDS DETECTION ZONE
- (A) SIGN LABEL
- (S) POWER SOURCE
- SIGN PANEL AND POST
- OPTICOM
- SSR YAGI ANTENNA



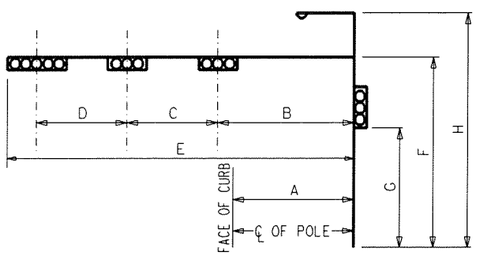


GRAPHIC SCALE
0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

TIMBER POLE PLACEMENT							
POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	LUM
T-1	REM	14	9		19	30	N
T-2	REM	12.5	19		19	30	N

T = TEMPORARY TRAFFIC SIGNAL TIMBER POLE
I=INSTALL; E=EXISTING; REM=REMOVE
*SHOWN IN PREVIOUS CONSTRUCTION PHASE

ITEM 682 SIGNAL HEADS							
SIGNAL HEAD NO.	SIGNAL HEAD TYPE	STATUS	12-INCH SIGNAL HEAD UNITS				
			BACKPLATES		LOUVER	VEH. SIGNAL	PED. SIGNAL
			3 SEC (EA)	5 SEC (EA)		SEC(EA)	SEC(EA)
1, 2, 5, 6	H3	E					
3, 4, 7, 8, 9, 10, 11, 12	143C	E					
13	H5LT	REM		1		1	
14	H3	REM	1				
TOTAL (REMOVED)			1	1		1	
STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=EX. TO BE RELOCATED							



H3 (R Y G) SH 1, 2, 5, 6

SH 143C OR SH 152A

SH 3, 4, 7, 8, 9, 10, 11, 12

SIGNAL HEAD AND POLE PLACEMENT												
POLE NUMBER	STATUS	A (FT)	B (FT)	C (FT)	D (FT)	E (FT)	F (FT)	G (FT)	H (FT)	NO. OF HEADS (EA)	LUM	FDN. TYPE
P-1	E	9.5	21	11		32	19		30	2	Y	30-A
P-2	E	12	24	12		36	19		30	2	Y	36-A
P-3	E	13					10				N	24-A
P-4	E	12					10				N	24-A

P = PERMANENT STEEL TRAFFIC SIGNAL POLE & MAST ARM
I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; S=SALVAGE

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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Dallas, TX 75207

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SH 205

PERMANENT SIGNAL LAYOUT ALAMO RD (SH 205 SB) AT E RUSK ST

FINAL SIGNAL DESIGN

SHEET 5 of 6

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	678
CONT.	SECT.	JOB	
0451	01	032	

ITEM 0682 LED SIGNAL INDICATIONS				
ITEM NO.	CODE	DESCRIPTION	UNIT	QTY.
0682	2022	VEH SIG SEC (12 IN) LED (GRN ARW)	EA	[1]
0682	2023	VEH SIG SEC (12 IN) LED (GRN)	EA	[2]
0682	2024	VEH SIG SEC (12 IN) LED (YEL ARW)	EA	[1]
0682	2025	VEH SIG SEC (12 IN) LED (YEL)	EA	[2]
0682	2027	VEH SIG SEC (12 IN) LED (RED)	EA	[2]

[X] = REMOVE AND SALVAGE

CABLE TERMINATION CHART

CNDR. NO.	CONDUCTOR COLOR	CABLE 1 20 CNDR. FROM P-1 TO CNTRL.	CABLE 2 20 CNDR. FROM P-2 TO CNTRL.	CABLE 3 10 CNDR. FROM P-3 TO CNTRL.	CABLE 4 10 CNDR. FROM P-4 TO CNTRL.	CNDR. NO.
1	BLACK	PB COM	PB COM	PB COM	PB COM	1
2	WHITE	SH COM	SH COM	SH COM	SH COM	2
3	RED	SH 1,2 R	SH 5,6 R	SH 9 DW	SH 11 DW	3
4	GREEN	SH 1,2 G	SH 5,6 G	SH 9 W	SH 11 W	4
5	ORANGE	SH 1,2 Y	SH 5,6 Y	Ø8 PED CALL	Ø6 PED CALL	5
6	BLUE	Ø8 PED CALL	Ø6 PED CALL	Ø6 PED CALL	Ø8 PED CALL	6
7	WHITE/BLACK	SPARE	SPARE	SPARE	SPARE	7
8	RED/BLACK	SH 3 DW	SH 7 DW	SH 10 DW	SH 12 DW	8
9	GREEN/BLACK	SH 3 W	SH 7 W	SH 10 W	SH 12 W	9
10	ORANGE/BLACK	SPARE	SPARE	SPARE	SPARE	10
11	BLUE/BLACK	Ø6 PED CALL	Ø8 PED CALL			11
12	BLACK/WHITE	SPARE	SPARE			12
13	RED/WHITE	SH 4 DW	SH 8 DW			13
14	GREEN/WHITE	SH 4 W	SH 8 W			14
15	BLUE/WHITE	SPARE	SPARE			15
16	BLACK/RED	SPARE	SPARE			16
17	WHITE/RED	SPARE	SPARE			17
18	ORANGE/RED	SPARE	SPARE			18
19	BLUE/RED	SPARE	SPARE			19
20	RED/GREEN	SPARE	SPARE			20

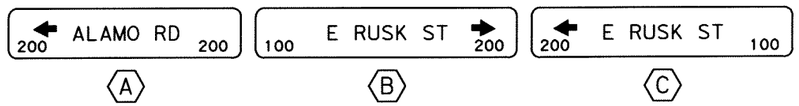
CONDUIT AND CABLE CHART

RUN NO.	CONDUIT STATUS	ITEM 618 SIZE/TYPE CONDUIT (FT) 1 ½" RM RISER	2" PVC TRENCHED	3" PVC TRENCHED	3" PVC BORED	4" PVC TRENCHED	CABLE STATUS	ITEM 620 ELECTRICAL CONDUCTORS (EA) NO. 6 XHHW WIRE	NO. 6 BARE WIRE	NO. 8 XHHW WIRE	ITEM 684 SIG CAB (EA) TY-A 7 CNDR. CABLE	10 CNDR. CABLE	20 CNDR. CABLE	ITEM 6087 VIVDS CABLE (EA)	MODEL 138 (EA) OPTICOM CABLE (SUPPLIED BY CITY)	ITEM 6006 HELIAX CABLE	LENGTH OF RUN (FT)	RUN NO.
1	E						E										64	1
2	E						E										11	2
3	E						E										70	3
4	E						E										10	4
5	E						E										70	5
6	E						E										12	6
7	E						E										64	7
8	E						E										12	8
9	E						E/REM				1			1			16	9
10	E						E/REM				1			1			10	10
11	E						E										25	11
12	E						BY OTHERS										70	12
13	E						BY OTHERS										10	13
13A	E						BY OTHERS										20	13A
14	REM		14				REM		1		1			1			14	14
15	REM	20					REM		1		1			1			20	15
15A	REM	10					REM		1					1			10	15A
16	REM						REM				1						17	16
17	REM						REM				1						12	17
TOTAL REMOVED		30	14	0	0	0		0	44	0	89	0	0	70	0	0		

CONDITION STATUS: E=EXISTING; I=INSTALL; A=ABANDON; AC=AERIAL CABLE; R=RELOCATE; RRC=REMOVE/REINSTALL CABLE; REM=REMOVE; S=SALVAGE

VIVDS DETECTION ZONE DETAILS

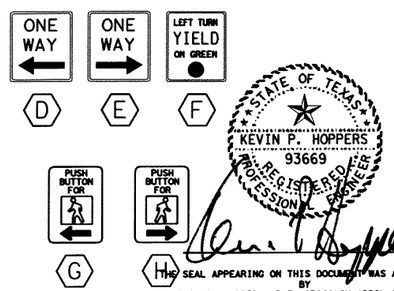
CAMERA	MOUNTING LOCATION	MOUNTING HEIGHT	ZONE LOCATION	ZONE	SETBACK DISTANCE	DIMENSIONS	DETECT UNIT	DELAY INHIBIT
1	P-1 MAST ARM	24'	STOPBAR	V6-1	N/A	6'X90'	Ø6-1	Ø6-R
				V6-2		6'X90'		
				V6-3		6'X90'		
2	P-2 MAST ARM	24'	STOPBAR	V8-1	N/A	6'X90'	Ø8-1	Ø8-R
				V8-2		6'X90'		
				V8-3		6'X90'		



SIGNS SUMMARY

SIGN	SIGN TYPE	SIGN LEGEND	STATUS	SUPPORT	SIGN DIMENSION (in X in)	REFLECTIVE SHEETING	GROUND MOUNT TYPE TWT(1)UA(P)	GROUND MOUNT TYPE TWT(1)UA(T)
A	STREET NAME	ALAMO RD	E	P-2		-	-	-
B	STREET NAME	RUSK ST	E	P-1		-	-	-
C	STREET NAME	RUSK ST	REM/SAL	T-1/T-2		-	-	-
D	R6-2L	ONE-WAY SIGN (LEFT)	REL	P-2			-	-
E	R6-2R	ONE-WAY SIGN (RIGHT)	E	P-1			-	-
F	R10-12	LEFT TURN YIELD ON GREEN	REM/SAL	T-1/T-2			-	-
G	R10-4BL	PUSH BUTTON FOR (WALK SYMBOL) LEFT ARROW	E	P-3/P-4			-	-
				P-1/P-2				
H	R10-4BR	PUSH BUTTON FOR (WALK SYMBOL) RIGHT ARROW	E	P-3/P-4			-	-
				P-1/P-2				

STATUS: I=INSTALL; E=EXISTING; REM=REMOVE; REL=RELOCATE; REP=REPLACE; SAL=SALVAGE



STATE OF TEXAS
KEVIN P. HOPPERS
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SH 205

PERMANENT SIGNAL LAYOUT ALAMO RD (SH 205 SB) AT E RUSK ST

FINAL SIGNAL DESIGN

SHEET 6 of 6

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	VA

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DAL	ROCKWALL	679
CONT.	SECT.	JOB	
0451	01	032	

DRILL SHAFT

ITEM 416

LOCATION	24" SIG (LF)*	30" SIG (LF)	36" SIG (LF)
SH 205 @ Ralph Hall Pkwy	6	11	39
TOTAL	6	11	39

*SUBSIDIARY TO ITEM 687.

CONCRETE SIDEWALK

ITEM 531

LOCATION	RAMP TYPE 10 (EA)	SIDEWALK 4" (SY)
SH 205 @ Ralph Hall Pkwy	2	13
TOTAL	2	13

CONDUIT

ITEM 618

LOCATION	2" PVC TRENCH (LF)	3" PVC TRENCH (LF)	3" PVC BORED (LF)	4" PVC TRENCH (LF)	4" PVC BORED (LF)
SH 205 @ Ralph Hall Pkwy	42	100	166	21	106
TOTAL	42	100	166	21	106

CONDUCTORS

ITEM 620

LOCATION	NO. 6 BARE (LF)	NO. 6 XHHW (LF)	NO. 8 XHHW (LF)	NO. 12 XHHW (LF)
SH 205 @ Ralph Hall Pkwy	435	58	302	80
TOTAL	435	58	302	80

GROUND BOX

ITEM 624

LOCATION	TYPE A W/APRON (EA)	TYPE C W/APRON (EA)
SH 205 @ Ralph Hall Pkwy	1	3
TOTAL	1	3

ELECTRICAL SERVICE

ITEM 628

LOCATION	SERVICE TYPE	UNIT (EA)
SH 205 @ Ralph Hall Pkwy	TY D120/240 070(NS)SS(E)GC(O)	1
TOTAL		1

SMALL SIGN ASSEMBLIES

ITEM 644

LOCATION	TYPE 10BWG(1)SA(P) (EA)	TYPE 10BWG(1)SA(T) (EA)
SH 205 @ Ralph Hall Pkwy	2	3
TOTAL	2	3

REFL PAVEMENT MARKINGS

ITEM 666

LOCATION	TYPE I 6"(W)(DOT) (LF)	TYPE I 12"(W)(SLD) (LF)	TYPE I 24"(W)(SLD) (LF)	TYPE I 4"(Y)(SLD) (LF)	4" SEALER (LF)	6" SEALER (LF)	12" SEALER (LF)	24" SEALER (LF)
SH 205 @ Ralph Hall Pkwy	42	461	154	48	48	42	461	154
TOTAL	42	461	154	48	48	42	461	154

PAV SURF PREP FOR MARKINGS

ITEM 678

LOCATION	4" (LF)	6" (LF)	12" (LF)	24" (LF)
SH 205 @ Ralph Hall Pkwy	48	42	461	154
TOTAL	48	42	461	154

TRAFFIC AND PEDESTRIAN SIGNAL HEADS

ITEM 682

LOCATION	12" BACK PLATE			PED SIG SECTION(LED) 2 IN 1 (EA)	VEHICLE SIGNAL SECTION(12")(LED)(EA)				
	3 SEC (EA)	4 SEC (EA)	5 SEC (EA)		GRN ARW	GRN	YEL ARW	YEL	RED
SH 205 @ Ralph Hall Pkwy	6	2	2	6	4	10	2	10	10
TOTAL	6	2	2	6	4	10	2	10	10

TRAFFIC SIGNAL CABLE

ITEM 684

LOCATION	5 CONDUCTOR TY A, 14 AWG (LF)	7 CONDUCTOR TY A, 14 AWG (LF)	12 CONDUCTOR TY A, 12 AWG (LF)	20 CONDUCTOR TY A, 12 AWG (LF)	OPTICOM CABLE (LF)*
SH 205 @ Ralph Hall Pkwy	277	299	376	282	546
TOTAL	277	299	376	282	546

*SUPPLIED BY CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR.

TRAFFIC SIGNAL POLE ASSEMBLIES

ITEM 686

LOCATION	SINGLE ARM (32') (LUM)(EA)	SINGLE ARM (40') (EA)	SINGLE ARM (48') (EA)
SH 205 @ Ralph Hall Pkwy	1	1	2
TOTAL	1	1	2

PEDESTRIAN SIGNAL POLE

ITEM 687

LOCATION	PEDESTRIAN POLE (EA)
SH 205 @ Ralph Hall Pkwy	1
TOTAL	1

TRAFFIC SIGNAL DETECTORS

ITEM 688

LOCATION	PED DETECT PUSH BTN (EA)
SH 205 @ Ralph Hall Pkwy	6
TOTAL	6

SPREAD SPECTRUM RADIO EQUIPMENT

ITEM 6006

LOCATION	SSR RECEIVER (EA)*	ANTENNA UNI-DIR (EA)*	CABLE COAX (LF)
SH 205 @ Ralph Hall Pkwy	1	1	49
TOTAL	1	1	49

*SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR.

VIDEO IMAGING VEHICLE DETECTION SYSTEM

ITEM 6266

LOCATION	PROCESSOR SYSTEM (EA)*	CAMERA ASSEMBLY (EA)*	SET-UP SYSTEM (EA)*	CAMERA INSTALLATION ACCESSORY (EA)*	CABLE COAX (LF)**
SH 205 @ Ralph Hall Pkwy	1	6	1	6	1148
TOTAL	1	6	1	6	1148

*SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR.

**ADDITIONAL LENGTH IS INCLUDED FOR INSTALLATION (INCLUDE 3 EA OF 16 AWG CONDUCTORS FOR POWER SUPPLY).

CONTROLLER/CABINET & ACCESSARIES

LOCATION	CONTROLLER /CABINET (EA)*
SH 205 @ Ralph Hall Pkwy	1
TOTAL	1

*SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR.

#41 CHANGE ORDER

Texas Department of Transportation
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PROJECT SUMMARY

SH 205(Goliad) @ Ralph Hall Pkwy

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK BKT	TEXAS	DALLAS	ROCKWALL	679AA
CHECK	CONTROL	SECTION	JOB	
	0451	01	032	

DRILL SHAFT

ITEM 416

LOCATION	24" SIG (LF)*	30" SIG (LF)	36" SIG (LF)
SH 205 @ Ralph Hall Pkwy	6	11	39
TOTAL	6	11	39

*SUBSIDIARY TO ITEM 687.

CONCRETE SIDEWALK

ITEM 531

LOCATION	RAMP TYPE 10 (EA)	SIDEWALK 4" (SY)
SH 205 @ Ralph Hall Pkwy	2	13
TOTAL	2	13

CONDUIT

ITEM 618

LOCATION	1 1/4" PVC TRENCH (LF)	1 1/4" RM (LF)	2" PVC TRENCH (LF)	3" PVC TRENCH (LF)	3" PVC BORED (LF)	4" PVC TRENCH (LF)	4" PVC BORED (LF)
SH 205 @ Ralph Hall Pkwy	15	30	203	100	166	21	106
TOTAL	15	30	203	100	166	21	106

CONDUCTORS

ITEM 620

LOCATION	NO. 4 BARE (LF)	NO. 6 BARE (LF)	NO. 6 XHHW (LF)	NO. 8 XHHW (LF)	NO. 12 XHHW (LF)
SH 205 @ Ralph Hall Pkwy	135	596	380	624	80
TOTAL	135	596	380	624	80

GROUND BOX

ITEM 624

LOCATION	TYPE A W/APRON (EA)	TYPE C W/APRON (EA)
SH 205 @ Ralph Hall Pkwy	1	3
TOTAL	1	3

ELECTRICAL SERVICE

ITEM 628

LOCATION	SERVICE TYPE	UNIT (EA)
SH 205 @ Ralph Hall Pkwy	TY D120/240 070(NS)SS(E)PS(U)	1
TOTAL		1

SMALL SIGN ASSEMBLIES

ITEM 644

LOCATION	TYPE 10BWG(1)SA(P) (EA)	TYPE 10BWG(1)SA(T) (EA)
SH 205 @ Ralph Hall Pkwy	2	3
TOTAL	2	3

REFL PAVEMENT MARKINGS

ITEM 666

LOCATION	TYPE I 6"(W)(DOT) (LF)	TYPE I 12"(W)(SLD) (LF)	TYPE I 24"(W)(SLD) (LF)	TYPE I 4"(Y)(SLD) (LF)	4" SEALER (LF)	6" SEALER (LF)	12" SEALER (LF)	24" SEALER (LF)
SH 205 @ Ralph Hall Pkwy	42	461	154	48	48	42	461	154
TOTAL	42	461	154	48	48	42	461	154

PAV SURF PREP FOR MARKINGS

ITEM 678

LOCATION	4" (LF)	6" (LF)	12" (LF)	24" (LF)
SH 205 @ Ralph Hall Pkwy	48	42	461	154
TOTAL	48	42	461	154

TRAFFIC AND PEDESTRIAN SIGNAL HEADS

ITEM 682

LOCATION	12" BACK PLATE			PED SIG SECTION(LED) 2 IN 1 (EA)	VEHICLE SIGNAL SECTION(12")(LED)(EA)				
	3 SEC (EA)	4 SEC (EA)	5 SEC (EA)		GRN ARW	GRN	YEL ARW	YEL	RED
SH 205 @ Ralph Hall Pkwy	6	2	2	6	4	10	2	10	10
TOTAL	6	2	2	6	4	10	2	10	10

TRAFFIC SIGNAL CABLE

ITEM 684

LOCATION	5 CONDUCTOR TY A, 14 AWG (LF)	7 CONDUCTOR TY A, 14 AWG (LF)	12 CONDUCTOR TY A, 12 AWG (LF)	20 CONDUCTOR TY A, 12 AWG (LF)	OPTICOM CABLE (LF)*
SH 205 @ Ralph Hall Pkwy	277	299	376	282	546
TOTAL	277	299	376	282	546

*SUPPLIED BY CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR.

TRAFFIC SIGNAL POLE ASSEMBLIES

ITEM 686

LOCATION	SINGLE ARM (32') (LUM)(EA)	SINGLE ARM (40') (EA)	SINGLE ARM (48') (EA)
SH 205 @ Ralph Hall Pkwy	1	1	2
TOTAL	1	1	2

PEDESTRIAN SIGNAL POLE

ITEM 687

LOCATION	PEDESTRIAN POLE (EA)
SH 205 @ Ralph Hall Pkwy	1
TOTAL	1

TRAFFIC SIGNAL DETECTORS

ITEM 688

LOCATION	PED DETECT PUSH BTN (EA)
SH 205 @ Ralph Hall Pkwy	6
TOTAL	6

SPREAD SPECTRUM RADIO EQUIPMENT

ITEM 6006

LOCATION	SSR RECEIVER (EA)*	ANTENNA UNI-DIR (EA)*	CABLE COAX (LF)
SH 205 @ Ralph Hall Pkwy	1	1	49
TOTAL	1	1	49

*SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR.

VIDEO IMAGING VEHICLE DETECTION SYSTEM

ITEM 6266

LOCATION	PROCESSOR SYSTEM (EA)*	CAMERA ASSEMBLY (EA)*	SET-UP SYSTEM (EA)*	CAMERA INSTALLATION ACCESSORY (EA)*	CABLE COAX (LF)**
SH 205 @ Ralph Hall Pkwy	1	6	1	6	1148
TOTAL	1	6	1	6	1148

*SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR.

**ADDITIONAL LENGTH IS INCLUDED FOR INSTALLATION (INCLUDE 3 EA OF 16 AWG CONDUCTORS FOR POWER SUPPLY).

CONTROLLER/CABINET & ACCESSARIES

LOCATION	CONTROLLER /CABINET (EA)*
SH 205 @ Ralph Hall Pkwy	1
TOTAL	1

*SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR.

61 CHANGE ORDER

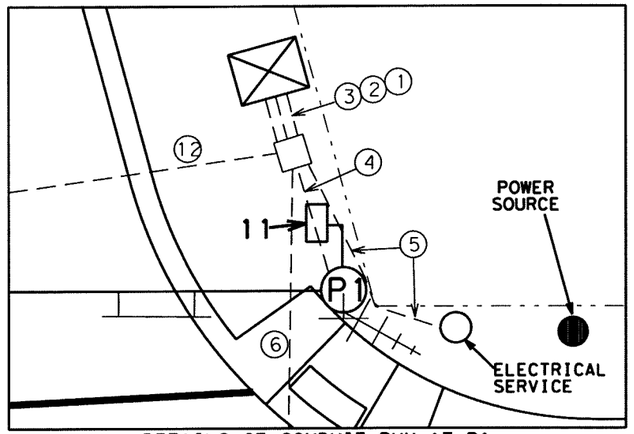
Texas Department of Transportation
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PROJECT SUMMARY

SH 205(Goliad) @ Ralph Hall Pkwy

SHEET 1 OF 1

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK BKT	TEXAS	DALLAS	ROCKWALL	679AB
CHECK	CONTROL	SECTION	JOB	
	0451	01	032	



DETAILS OF CONDUIT RUN AT P1
N.T.S.

NOTE:
1. THE ADDRESS OF THE ELECTRICAL SERVICE FOR TRAFFIC SIGNALS IS 2390 GOLIAD STREET S, CITY OF ROCKWALL. THE PREMISE NUMBER IS 7681998.
2. THE PHONE NUMBER OF TXU IS 972-771-3979.
3. FOR OPTICOM EQUIPMENT, CALL CITY OF ROCKWALL AT 214-926-5845.

0 10 20 30 40 50
SCALE (FT.)

INSTALL FOUNDATION, CABINET, CONTROLLER, OPTICOM AND SSR EQUIPMENT

INSTALL ELC SRV TY D
120/240 070(NS)SS(E)GC(O)

PROPOSED POWER SOURCE (WITHOUT NUMBER)

INSTALL SSR UNI-ANTENNA

WB RALPH HALL PKWY

R.O.W.

SB SH 205(GOLIAD)

NB SH 205(GOLIAD)

Ø1 Ø2 Ø4 Ø5 Ø6 Ø8

ONLY

P1 P2 P3 P4 P5

CHANGE ORDER #41

LEGEND

SSR ANTENNA	(1) CONDUIT RUN NUMBER
	PROPOSED CONDUIT RUN
PROPOSED MAST ARM SIGNAL WITH HEAD NUMBERS, 250 WATT H.P.S. LUMINAIRE, STREET NAME SIGN, AND PED. SIGNAL	PROPOSED TYPE A GROUND BOX
	PROPOSED TYPE C GROUND BOX
	OPTICOM (FURNISHED BY CITY)

STATE OF TEXAS
BOON K. THIAN
86112
REGISTERED PROFESSIONAL ENGINEER

2/21/08
Signature of Registrant & Date, P.E.

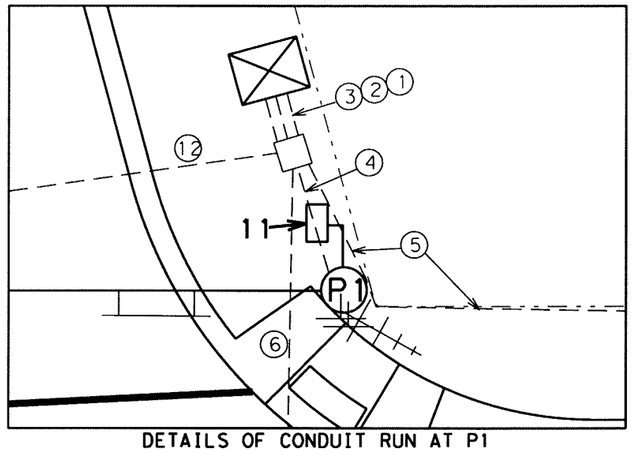
Texas Department of Transportation
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TRAFFIC SIGNAL LAYOUT

SH 205(Goliad) @ Ralph Hall Pkwy

1" = 40' SHEET 1 OF 1

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK BKT	TEXAS	DALLAS	ROCKWALL	67BA
CHECK	CONTROL	SECTION	JOB	
	0451	01	032	



DETAILS OF CONDUIT RUN AT P1
N.T.S.

NOTE:
1. THE ADDRESS OF THE ELECTRICAL SERVICE FOR TRAFFIC SIGNALS IS 2390 GOLIAD STREET S, CITY OF ROCKWALL. THE PREMISE NUMBER IS 7681998.
2. THE PHONE NUMBER OF TXU IS 972-771-3979.
3. FOR OPTICOM EQUIPMENT, CALL CITY OF ROCKWALL AT 214-926-5845.

0 10 20 30 40 50
SCALE (FT.)

INSTALL FOUNDATION, CABINET, CONTROLLER, OPTICOM AND SSR EQUIPMENT

INSTALL ELC SRV TY D
120/240 070(NS)SS(E)PS(U)

PROPOSED POWER SOURCE
(3rd POLE FROM INTERSECTION)

INSTALL SSR
UNI-ANTENNA

Ø4 Ø6 Ø1 Ø5 Ø2 Ø8

WB RALPH HALL PKWY

NB SH 205(GOLIAD)

SB SH 205(GOLIAD)

R.O.W.

ONLY

P1 P2 P3 P4 P5

LEGEND

SSR ANTENNA	(1) CONDUIT RUN NUMBER
	PROPOSED CONDUIT RUN
PROPOSED MAST ARM SIGNAL WITH HEAD NUMBERS, 250 WATT H.P.S. LUMINAIRE, STREET NAME SIGN, AND PED. SIGNAL	PROPOSED TYPE A GROUND BOX
	PROPOSED TYPE C GROUND BOX
	OPTICOM (FURNISHED BY CITY)

61 CHANGE ORDER

STATE OF TEXAS
BOON K. THIAN
86112
REGISTERED PROFESSIONAL ENGINEER

Signature of Registrant & Date 10/24/08, P.E.

Texas Department of Transportation
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TRAFFIC SIGNAL LAYOUT

SH 205(Goliad) @ Ralph Hall Pkwy

1" = 40' SHEET 1 OF 1

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK BKT	TEXAS	DALLAS	ROCKWALL	
CHECK	CONTROL	SECTION	JOB	679BB
	0451	01	032	

CONDUIT RUNS

RUN NO.	CONDUIT TYPE 2" PVC TRENCH (LF)	3" PVC TRENCH (LF)	3" PVC BORED (LF)	4" PVC TRENCH (LF)	4" PVC BORED (LF)	CONDUCTORS NO. 6 XHHW (EA)	NO. 6 BARE (EA)	NO. 8 XHHW (EA)	SIGNAL CABLE TY-A, 12 AWG 12 CNDR CABLE (EA)	SIGNAL CABLE TY-A, 12 AWG 20 CNDR CABLE (EA)	VIVDS COMM. CABLE (COAXIAL) (EA)	OPTICOM COMM. CABLE (COAXIAL) (EA)*	SSR COMM. CABLE (COAXIAL) (EA)	TOTAL LENGTH OF RUN (LF)
1		10				2	1			1	2	1	1	**10**
2		10					1		1	1	2	1		**10**
3		10					1		1	1	2	1		**10**
4		9					1			1	1		1	**9**
5	19					2	1	2						**19**
6				21	106		1	2	1	1	3	2		**127**
7		9					1			1	2	1		**9**
8		5					1	2	1		1	1		**5**
9	11						1		1					**11**
10		23	95				1		1					**118**
11	12						1			1	2	1		**12**
12		24	71				1		1	1	2	1		**95**
TOTAL (LF)	**42**	**100**	**166**	**21**	**106**	**58**	**435**	**302**	**376**	**282**	**687**	**405**	**19**	

*SUPPLIED BY CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR.

LED SIGNAL HEAD DETAILS

POLE #	SIG. HEAD NO.	SIG. HEAD TYPE	12" SIG. INDICATION BACK PLATE 3 SEC (EA)	4 SEC (EA)	5 SEC (EA)	SUMMARY OF LED SIGNAL SECTION (EA) R	Y	G	←Y—	←G—	PED
P1	1	H4		1		1	1	1		1	
P1	2	H3	1			1	1	1			
P2	3	H5LT			1	1	1	1	1	1	
P2	4	H3	1			1	1	1			
P2	5	H3	1			1	1	1			
P3	6	H4		1		1	1	1		1	
P3	7	H3	1			1	1	1			
P5	8	H5LT			1	1	1	1	1	1	
P5	9	H3	1			1	1	1			
P5	10	H3	1			1	1	1			
P1	11	152A									1
P2	12	152A									1
P4	13	143C									1
P4	14	143C									1
P5	15	143C									1
P5	16	143C									1
		TOTAL (EA)	**6**	**2**	**2**	**10**	**10**	**10**	**2**	**4**	**6**

SIGNAL HEADS

H3



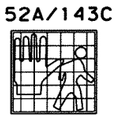
H4LT



H5LT

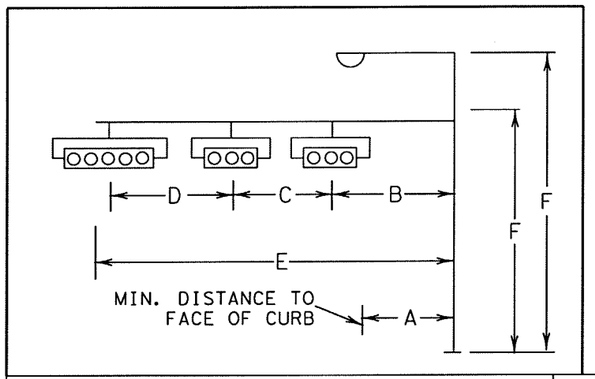


152A/143C



CABLE TERMINATION CHART

CNDR. COLOR	CABLE 1 FR. P-1 TO CNTRL. 20 CNDR.	CABLE 2 FR. P-2 TO CNTRL. 20 CNDR.	CABLE 3 FR. P-3 TO CNTRL. 12 CNDR.	CABLE 4 FR. P-4 TO CNTRL. 12 CNDR.	CABLE 5 FR. P-5 TO CNTRL. 20 CNDR.
BLACK	P.B. COMMON	P.B. COMMON	SPARE	P.B. COMMON	P.B. COMMON
WHITE	S. COMMON	S. COMMON	S. COMMON	S. COMMON	S. COMMON
RED	SH 1,2 Ø8 R	SH 3,4,5 Ø2 R	SH 6,7 Ø4 R	SH 13 Ø2 DW	SH 8,9,10 Ø6 R
GREEN	SH 1,2 Ø8 G	SH 3,4,5 Ø2 G	SH 6,7 Ø4 G	SH 13 Ø2 W	SH 8,9,10 Ø6 G
ORANGE	SH 1,2 Ø8 Y	SH 3,4,5 Ø2 Y	SH 6,7 Ø4 Y	Ø2 PED CALL	SH 8,9,10 Ø6 Y
BLUE	SH 1 Ø8 ←G—	SH 3 Ø5 ←G—	SH 6 Ø4 ←G—	SPARE	SH 8 Ø1 ←G—
WHITE/BLACK	SPARE	SH 3 Ø5 ←Y—	SPARE	SPARE	SH 8 Ø1 ←Y—
RED/BLACK	SH 11 Ø6 DW	SH 12 Ø2 DW	SPARE	SH 14 Ø4 DW	SH 15 Ø4 DW
GREEN/BLACK	SH 11 Ø6 W	SH 12 Ø2 W	SPARE	SH 14 Ø4 W	SH 15 Ø4 W
ORANGE/ BLACK	Ø6 PED CALL	Ø2 PED CALL	SPARE	Ø4 PED CALL	Ø4 PED CALL
BLUE/BLACK	SPARE	SPARE	SPARE	SPARE	Ø6 PED CALL
BLACK/WHITE	SPARE	SPARE	SPARE	SPARE	SH 16 Ø6 W
RED/WHITE	SPARE	SPARE			SH 16 Ø6 DW
GREEN/WHITE	SPARE	SPARE			SPARE
BLUE/WHITE	SPARE	SPARE			SPARE
BLACK/RED	SPARE	SPARE			SPARE
WHITE/RED	SPARE	SPARE			SPARE
ORANGE/RED	SPARE	SPARE			SPARE
BLUE/RED	SPARE	SPARE			SPARE
RED/GREEN	SPARE	SPARE			SPARE



GROUND BOXES	
GROUND BOX TYPE	TOTAL (EA)
TYPE A W/APRON	1
TYPE C W/APRON	3

SIGNAL HEAD & POLE PLACEMENT

POLE NUMBER	A (LF)	B (LF)	C (LF)	D (LF)	E (LF)	F (LF)	LUM-A (EA)	SIGNAL POLE FOUNDATION FDN. TYPE	DRILL SHAFT LENGTH (LF)	CABLE INSIDE POLES SIG. CBL(TY-A / 14AWG) 5 CNDR (LF)	7 CNDR (LF)	LUMINAIRE NO.12 AWG (LF)	VIVDS COMM COAXIAL (LF)	OPTICOM COAXIAL (LF)*	SSR COMM COAXIAL (LF)
P-1	10	26	12	-	40	19	-	36-A	13	45	69	-	62	-	30
P-2	5	19	12	16	48	19	-	36-A	13	88	78	-	140	55	-
P-3	10	19	12	-	32	30	1	30-A	11	50	38	80	53	37	-
P-4	4	-	-	-	-	-	-	24-A	6	-	24	-	-	-	-
P-5	9	22	12	13	48	19	-	36-A	13	94	90	-	146	49	-
TOTAL							**1**		**56**	**277**	**299**	**80**	**401**	**141**	**30**

*SUPPLIED BY CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR.

#41 CHANGE ORDER

STATE OF TEXAS
BOON K. THIAN
86112
REGISTERED PROFESSIONAL ENGINEER

2/21/08
Signature of Registrant & Date, P.E.

Texas Department of Transportation
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TRAFFIC SIGNAL LAYOUT DATA

SH 205 (Goliad) @ Ralph Hall Pkwy

SHEET 1 OF 1

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK BKT	TEXAS	DALLAS	ROCKWALL	679CA
CHECK	CONTROL	SECTION	JOB	
	0451	01	032	

CONDUIT RUNS

RUN NO.	CONDUIT TYPE: 1 1/4" PVC TRENCH (LF)	1 1/4" RM (LF)	2" PVC TRENCH (LF)	3" PVC TRENCH (LF)	3" PVC BORED (LF)	4" PVC TRENCH (LF)	4" PVC BORED (LF)	CONDUCTORS: NO. 4 XHHW (EA)	NO. 6 XHHW (EA)	NO. 6 BARE (EA)	NO. 8 XHHW (EA)	SIGNAL CABLE: TY-A, 12 AWG 12 CNDR CABLE (EA)	TY-A, 12 AWG 20 CNDR CABLE (EA)	VIVDS COMM. CABLE (COAXIAL) (EA)	OPTICOM COMM. CABLE (COAXIAL) (EA)*	SSR COMM. CABLE (COAXIAL) (EA)	TOTAL LENGTH OF RUN (LF)
1				10					2	1			1	2	1	1	**10**
2				10						1		1	1	2	1		**10**
3				10						1		1	1	2	1		**10**
4				9						1			1	1		1	**9**
5			180						2	1	2						**180**
5A	15	30						3									**45**
6						21	106			1	2	1	1	3	2		**127**
7				9						1			1	2	1		**9**
8				5						1	2	1		1	1		**5**
9			11							1		1					**11**
10				23	95					1		1					**118**
11			12							1			1	2	1		**12**
12				24	71					1		1	1	2	1		**95**
TOTAL (LF)	**15**	**30**	**203**	**100**	**166**	**21**	**106**	**135**	**380**	**596**	**624**	**376**	**282**	**687**	**405**	**19**	

*SUPPLIED BY CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR.

CABLE TERMINATION CHART

CNDR. COLOR	CABLE 1 FR. P-1 TO CNTRL. 20 CNDR.	CABLE 2 FR. P-2 TO CNTRL. 20 CNDR.	CABLE 3 FR. P-3 TO CNTRL. 12 CNDR.	CABLE 4 FR. P-4 TO CNTRL. 12 CNDR.	CABLE 5 FR. P-5 TO CNTRL. 20 CNDR.
BLACK	P.B. COMMON	P.B. COMMON	SPARE	P.B. COMMON	P.B. COMMON
WHITE	S. COMMON	S. COMMON	S. COMMON	S. COMMON	S. COMMON
RED	SH 1,2 Ø8 R	SH 3,4,5 Ø2 R	SH 6,7 Ø4 R	SH 13 Ø2 DW	SH 8,9,10 Ø6 R
GREEN	SH 1,2 Ø8 G	SH 3,4,5 Ø2 G	SH 6,7 Ø4 G	SH 13 Ø2 W	SH 8,9,10 Ø6 G
ORANGE	SH 1,2 Ø8 Y	SH 3,4,5 Ø2 Y	SH 6,7 Ø4 Y	Ø2 PED CALL	SH 8,9,10 Ø6 Y
BLUE	SH 1 Ø8 ~~G~~	SH 3 Ø5 ~~G~~	SH 6 Ø4 ~~G~~	SPARE	SH 8 Ø1 ~~G~~
WHITE/BLACK	SPARE	SH 3 Ø5 ~~Y~~	SPARE	SPARE	SH 8 Ø1 ~~Y~~
RED/BLACK	SH 11 Ø6 DW	SH 12 Ø2 DW	SPARE	SH 14 Ø4 DW	SH 15 Ø4 DW
GREEN/BLACK	SH 11 Ø6 W	SH 12 Ø2 W	SPARE	SH 14 Ø4 W	SH 15 Ø4 W
ORANGE/ BLACK	Ø6 PED CALL	Ø2 PED CALL	SPARE	Ø4 PED CALL	Ø4 PED CALL
BLUE/BLACK	SPARE	SPARE	SPARE	SPARE	Ø6 PED CALL
BLACK/WHITE	SPARE	SPARE	SPARE	SPARE	SH 16 Ø6 W
RED/WHITE	SPARE	SPARE			SH 16 Ø6 DW
GREEN/WHITE	SPARE	SPARE			SPARE
BLUE/WHITE	SPARE	SPARE			SPARE
BLACK/RED	SPARE	SPARE			SPARE
WHITE/RED	SPARE	SPARE			SPARE
ORANGE/RED	SPARE	SPARE			SPARE
BLUE/RED	SPARE	SPARE			SPARE
RED/GREEN	SPARE	SPARE			SPARE

LED SIGNAL HEAD DETAILS

POLE #	SIG. HEAD NO.	SIG. HEAD TYPE	12" SIG. INDICATION BACK PLATE 3 SEC (EA)	4 SEC (EA)	5 SEC (EA)	SUMMARY OF LED SIGNAL SECTION (EA) R	Y	G	~~Y~~	~~G~~	PED
P1	1	H4		1		1	1	1		1	
P1	2	H3	1			1	1	1			
P2	3	H5LT			1	1	1	1	1	1	
P2	4	H3	1			1	1	1			
P2	5	H3	1			1	1	1			
P3	6	H4		1		1	1	1		1	
P3	7	H3	1			1	1	1			
P5	8	H5LT			1	1	1	1	1	1	
P5	9	H3	1			1	1	1			
P5	10	H3	1			1	1	1			
P1	11	152A									1
P2	12	152A									1
P4	13	143C									1
P4	14	143C									1
P5	15	143C									1
P5	16	143C									1
		TOTAL (EA)	**6**	**2**	**2**	**10**	**10**	**10**	**2**	**4**	**6**

SIGNAL HEADS

H3



H4LT

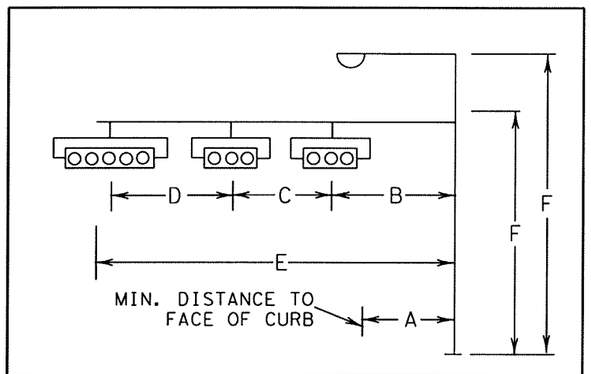


H5LT



152A/143C





GROUND BOXES

GROUND BOX TYPE	TOTAL (EA)
TYPE A W/APRON	1
TYPE C W/APRON	3

SIGNAL HEAD & POLE PLACEMENT

POLE NUMBER	A (LF)	B (LF)	C (LF)	D (LF)	E (LF)	F (LF)	LUM-A (EA)	SIGNAL POLE FOUNDATION: FDN. TYPE	DRILL SHAFT LENGTH (LF)	CABLE INSIDE POLES: SIG. CBL(TY-A / 14AWG) 5 CNDR (LF)	7 CNDR (LF)	LUMINAIRE NO.12 AWG (LF)	VIVDS COMM COAXIAL (LF)	OPTICOM COAXIAL (LF)*	SSR COMM COAXIAL (LF)
P-1	10	26	12	-	40	19	-	36-A	13	45	69	-	62	-	30
P-2	5	19	12	16	48	19	-	36-A	13	88	78	-	140	55	-
P-3	10	19	12	-	32	30	1	30-A	11	50	38	80	53	37	-
P-4	4	-	-	-	-	-	-	24-A	6	-	24	-	-	-	-
P-5	9	22	12	13	48	19	-	36-A	13	94	90	-	146	49	-
TOTAL							**1**		**56**	**277**	**299**	**80**	**401**	**141**	**30**

*SUPPLIED BY CITY OF ROCKWALL AND INSTALLED BY THE CONTRACTOR.

61 CHANGE ORDER

STATE OF TEXAS
BOON K. THIAN
86112
REGISTERED PROFESSIONAL ENGINEER

Signature of Registrant & Date 10/24/08, P.E.

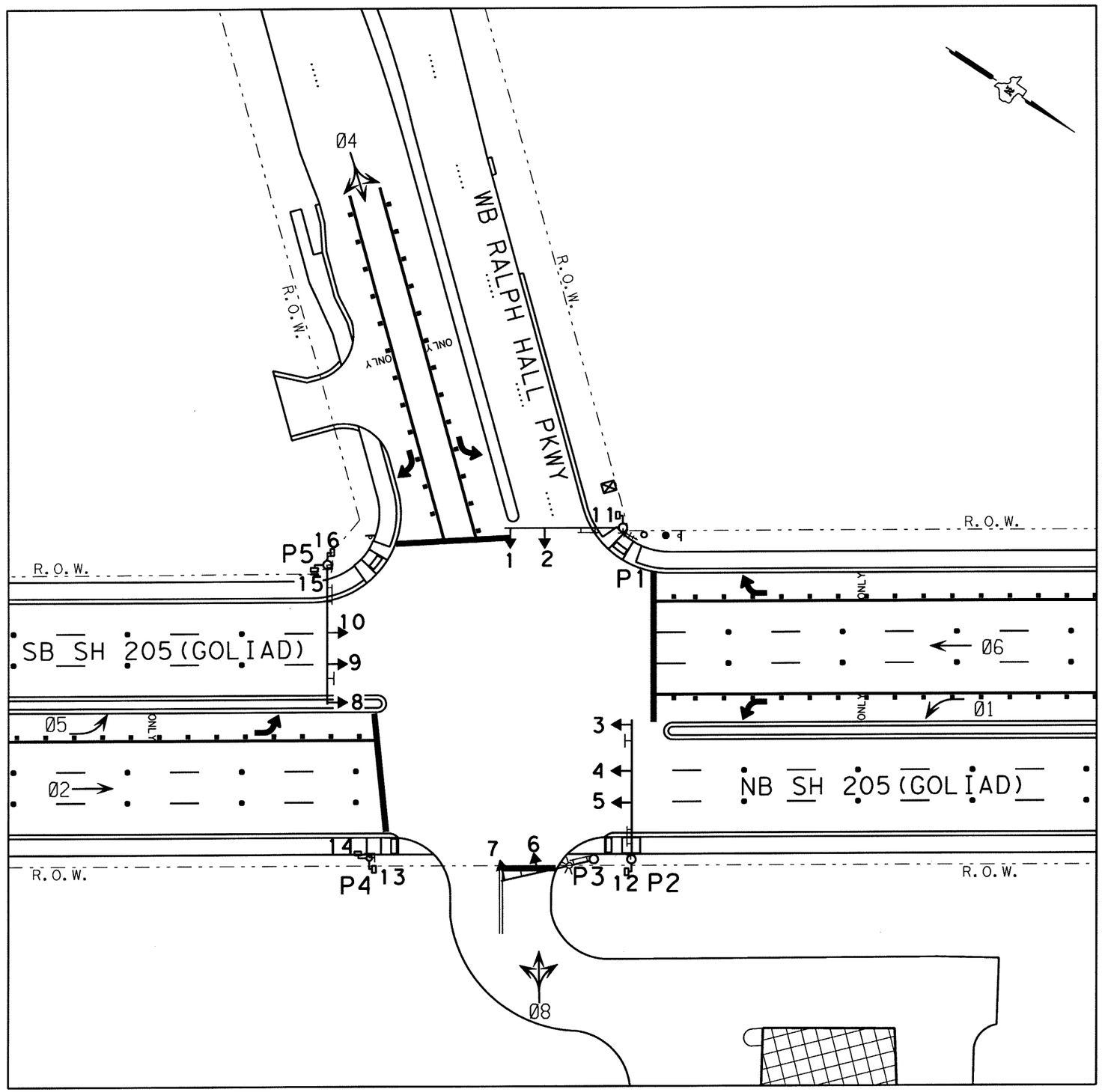
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TRAFFIC SIGNAL LAYOUT DATA

SH 205(Goliad) @ Ralph Hall Pkwy

SHEET 1 OF 1

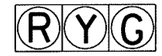
DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
FL	6	(SEE TITLE SHEET)	SH 205
GRAPHICS FL	STATE	DISTRICT / COUNTY	SHEET NO.
CHECK BKT	TEXAS	DALLAS / ROCKWALL	679CB
CHECK	CONTROL	SECTION / JOB	
	0451	01 / 032	



PHASE AND SIGNAL HEAD IDENTIFICATION

SIGNAL HEAD IDENTIFICATION

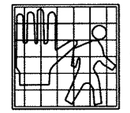
H3



S.H. 2, 4, 5, 7, 9, 10

152A

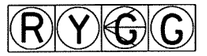
S.H. 11, 12



143C

S.H. 13, 14, 15, 16

H4LT

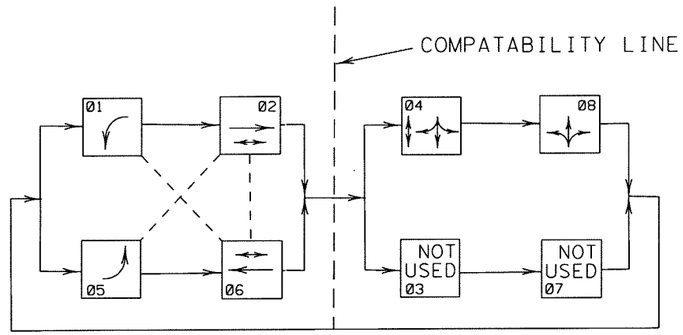


S.H. 1, 6

H5LT



S.H. 3, 8



PHASE SEQUENCE

Ø1 AND Ø5 ARE PROTECTED AND PERMISSIVE LEFT TURNS.

NOTE:
DURING MAINTENANCE FLASH
ALL SIGNAL HEADS SHALL FLASH RED.

DURING EMERGENCY FLASH
ALL SIGNAL HEADS SHALL FLASH RED.

#41 CHANGE ORDER

STATE OF TEXAS
BOON K. THIAN
86112
REGISTERED PROFESSIONAL ENGINEER

2/21/08
Signature of Registrant & Date

Texas Department of Transportation
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TRAFFIC SIGNAL OPERATIONS

SH 205 (Goliad) @ Ralph Hall Pkwy

SHEET 1 OF 1

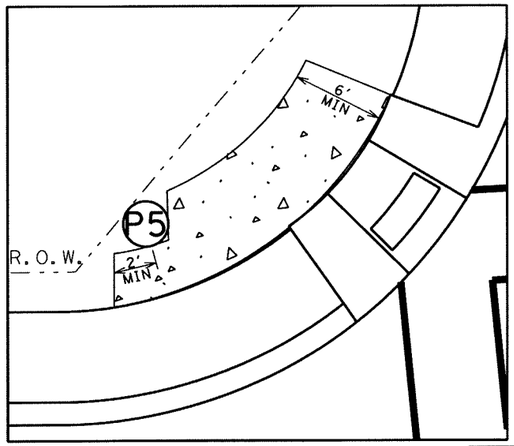
DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK BKT	TEXAS	DALLAS	ROCKWALL	679DA
CHECK	CONTROL	SECTION	JOB	
	0451	01	032	

NOTE:
MARKING LOCATIONS SHOWN ON PLAN ARE DIAGRAMMATIC. PLACE MARKINGS IN CONFORMANCE WITH THE 2006 "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND AS DIRECTED BY THE ENGINEER.

ONLY THE PAVEMENT MARKINGS, SIDEWALK AND RAMPS AS NOTED ARE INCLUDED IN THIS CHANGE ORDER. PLEASE REFER TO ORIGINAL PLANS FOR OTHER PAVEMENT MARKINGS, SIDEWALK AND RAMPS.

INSTALL SIDEWALK AND RAMPS AS DIRECTED BY THE ENGINEER.

0 10 20 30 40 50
SCALE (FT.)



DETAILS OF SIDEWALK AT P1
N.T.S.

EB RALPH HALL PKWY

WB RALPH HALL PKWY

R.O.W.

ONLY

INSTALL 40 LF OF 24" REFL SOLID WHITE PAVEMENT MARKING TY I

INSTALL 13 SY 4" SIDEWALK

INSTALL 160 LF OF 12" REFL SOLID WHITE PAVEMENT MARKING TY I

INSTALL 53 LF OF 24" REFL SOLID WHITE PAVEMENT MARKING TY I

INSTALL 188 LF OF 12" REFL SOLID WHITE PAVEMENT MARKING TY I

P1

P5

6'

INSTALL 42 LF OF 6" REFL DOT WHITE PAVEMENT MARKING TY I

SB SH 205 (GOLIAD)

NB SH 205 (GOLIAD)

INSTALL 42 LF OF 24" REFL SOLID WHITE PAVEMENT MARKING TY I

INSTALL 1 EA OF TYPE 10 RAMP

INSTALL 113 LF OF 12" REFL SOLID WHITE PAVEMENT MARKING TY I

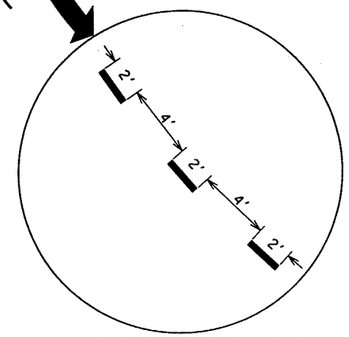
INSTALL 24 LF OF 4" REFL SOLID DOUBLE YELLOW PAVEMENT MARKING TY I TOTAL 48 LF OF 4"

INSTALL 19 LF OF 24" REFL SOLID WHITE PAVEMENT MARKING TY I

P4 P3 P2

1'

INSTALL 1 EA OF TYPE 10 RAMP



DETAILS OF DOT LINE
N.T.S.

LEGEND

PROPOSED SIDEWALK

#41 CHANGE ORDER

STATE OF TEXAS
BOON K. THIAN
86112
REGISTERED PROFESSIONAL ENGINEER

2/21/08
Signature of Registrant & Date ,P.E.

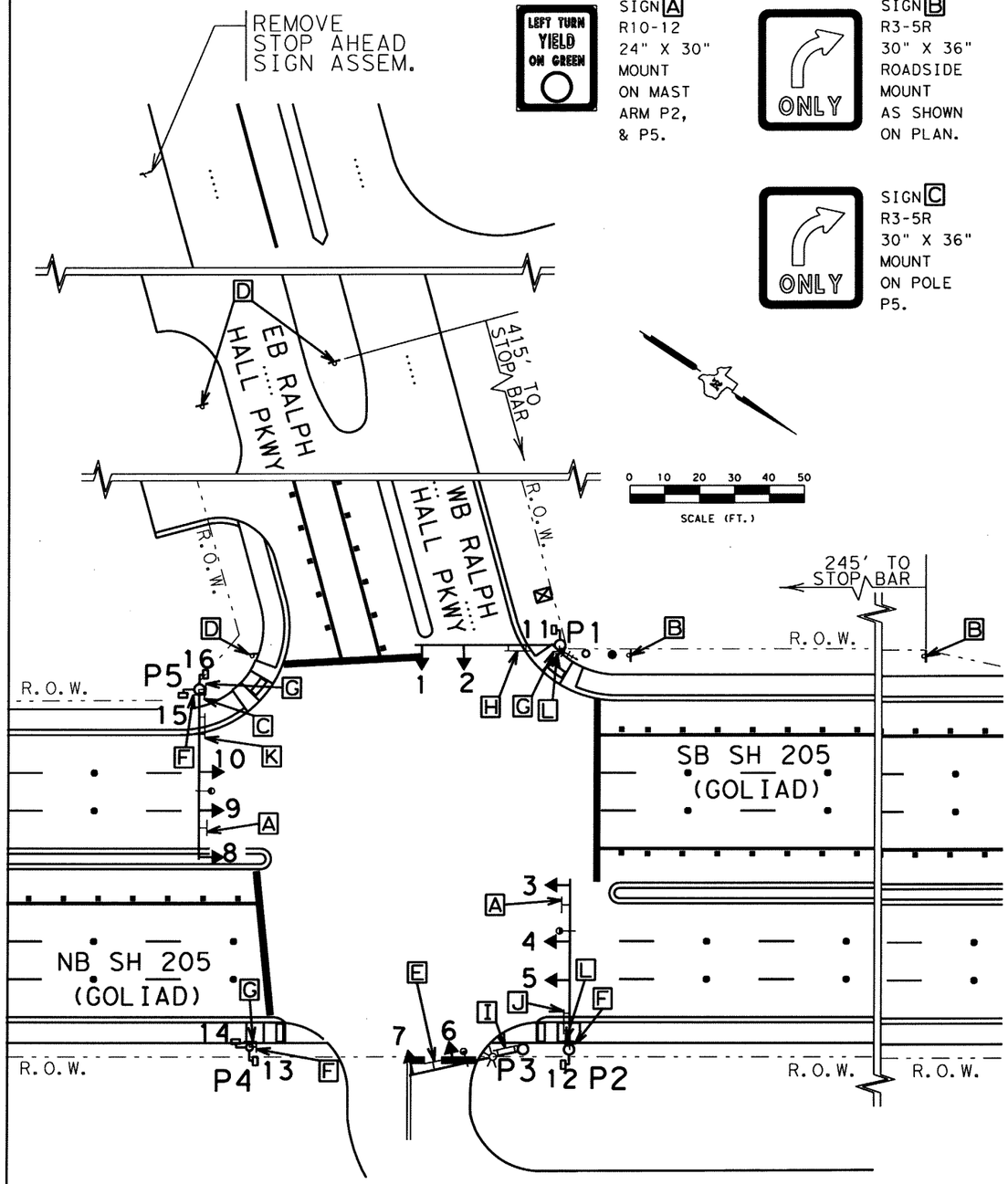
Texas Department of Transportation
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PAVEMENT MARKING LAYOUT

SH 205(Goliad) @ Ralph Hall Pkwy

1" = 40' SHEET 1 OF 1

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK BKT	TEXAS	DALLAS	ROCKWALL	679EA
CHECK	CONTROL	SECTION	JOB	
	0451	01	032	



SIGN A
R10-12
24" X 30"
MOUNT
ON MAST
ARM P2,
& P5.

SIGN B
R3-5R
30" X 36"
ROADSIDE
MOUNT
AS SHOWN
ON PLAN.

SIGN C
R3-5R
30" X 36"
MOUNT
ON POLE
P5.

SIGN D
R3-8VAR
48" X 30"
ROADSIDE
MOUNT
AS SHOWN
ON PLAN.

SIGN E
R3-8RSL
48" X 30"
MOUNT
ON MAST
ARM P3.

SIGN F
R10-4dR
9" X 12"
MOUNT
ON POLE P2,
P4 & P5.

SIGN G
R10-4bL
9" X 12"
MOUNT
ON POLE P1,
P4 & P5.

SIGN H
D3-1A
108" X 15"
MOUNT
ON MAST
ARM P1.

2400 S. Goliad ST 2300

SIGN I
D3-1B
108" X 15"
MOUNT
ON MAST
ARM P3.

2300 S. Goliad ST 2400

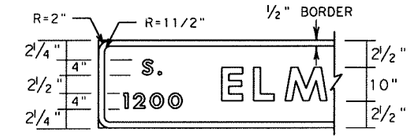
SIGN J
D3-1C
96" X 15"
MOUNT
ON MAST
ARM P2.

1300 Ralph Hall PKWY

SIGN K
D3-1D
84" X 15"
MOUNT
ON MAST
ARM P5.

Ralph Hall PKWY 1300

SIGN L
R9-3a
24" X 24"
MOUNT
ON POLE
P1 & P2.



NOTE: ALL LETTERING SHALL BE CLRVW-2W.

TYPICAL SIGN DETAIL

NOTE:
SIGN LOCATIONS SHOWN ON PLAN ARE DIAGRAMMATIC. PLACE SIGNS IN CONFORMANCE WITH THE 2006 "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND AS DIRECTED BY THE ENGINEER. SIGN BACKGROUNDS WILL BE OF FLAT SURFACE REFLECTIVE SHEETING CONFORMING TO THE SPECIFICATIONS. ALL SIGNS WILL BE TYPE C.

THE SIGN BLANKS OF PROPOSED SIGNS WILL BE ONE PIECE SHEET ALUMINUM ALLOY CONFORMING TO THE ITEM "ALUMINUM SIGNS (TYPE A)" WHEN ATTACHED TO TRAFFIC SIGNAL. THE MINIMUM THICKNESS WILL BE CONSISTENT WITH THE DATA SHOWN ON PLANS.

SIGN LEGENDS WILL BE APPLIED BY THE SCREENING PROCESS AND IN CONFORMANCE WITH THE MANUAL OF STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS.

SIGN B AND D ARE SUBSIDIARY TO ITEM 644. SIGN F AND G ARE SUBSIDIARY TO ITEM 688. ALL OTHER SIGNS ARE SUBSIDIARY TO ITEM 680.

REMOVE STOP & STOP AHEAD SIGN ASSEMBLIES AS SOON AS THE TRAFFIC SIGNALS ARE FUNCTIONAL.

LEGEND

12 / 3 4 — PROPOSED MAST ARM SIGNAL WITH HEAD NUMBERS, 250 WATT H.P.S. LUMINAIRE, STREET SIGN, AND PED. SIGNAL

⊦ OR ⊢ — SMALL SIGN

[A] — SIGN NUMBER

#41 CHANGE ORDER

STATE OF TEXAS
BOON K. THIAN
86112
REGISTERED PROFESSIONAL ENGINEER

Signature of Registrant & Date: 2/26/08

Texas Department of Transportation
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SIGNING LAYOUT

SH 205(Goliad) @ Ralph Hall Pkwy

1" = 40' SHEET 1 OF 1

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS: FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK: BKT	TEXAS	DALLAS	ROCKWALL	679FA
CHECK	CONTROL	SECTION	JOB	
	0451	01	032	

WB RALPH HALL PKWY

EB RALPH HALL PKWY 04-1 (Y)

TRAFFIC SIGNAL CONTROLLER CABINET

06P, LS11, CM11

06P, LS11, CM11

04P, LS10, CM10

08, LS8, CM8

06, LS6, CM6
01, LS1, CM1

SB SH 205(GOLIAD)

(Y) 06-1

(Y) 06-2

(Y) 06-3

(Y) 01-1

NB SH 205(GOLIAD)

05-1 (Y)

02-3 (Y)

02-2 (Y)

02-1 (Y)

02, LS2, CM2
05, LS5, CM5

04, LS4, CM4

04P, LS10, CM10

02P, LS9, CM9

08-1 (Y)

02P, LS9, CM9

#41 CHANGE ORDER

STATE OF TEXAS
BOON K. THIAN
86112
REGISTERED PROFESSIONAL ENGINEER

2/21/08
Signature of Registrant & Date, P.E.

Texas Department of Transportation
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INTERSECTION DISPLAY BOARD

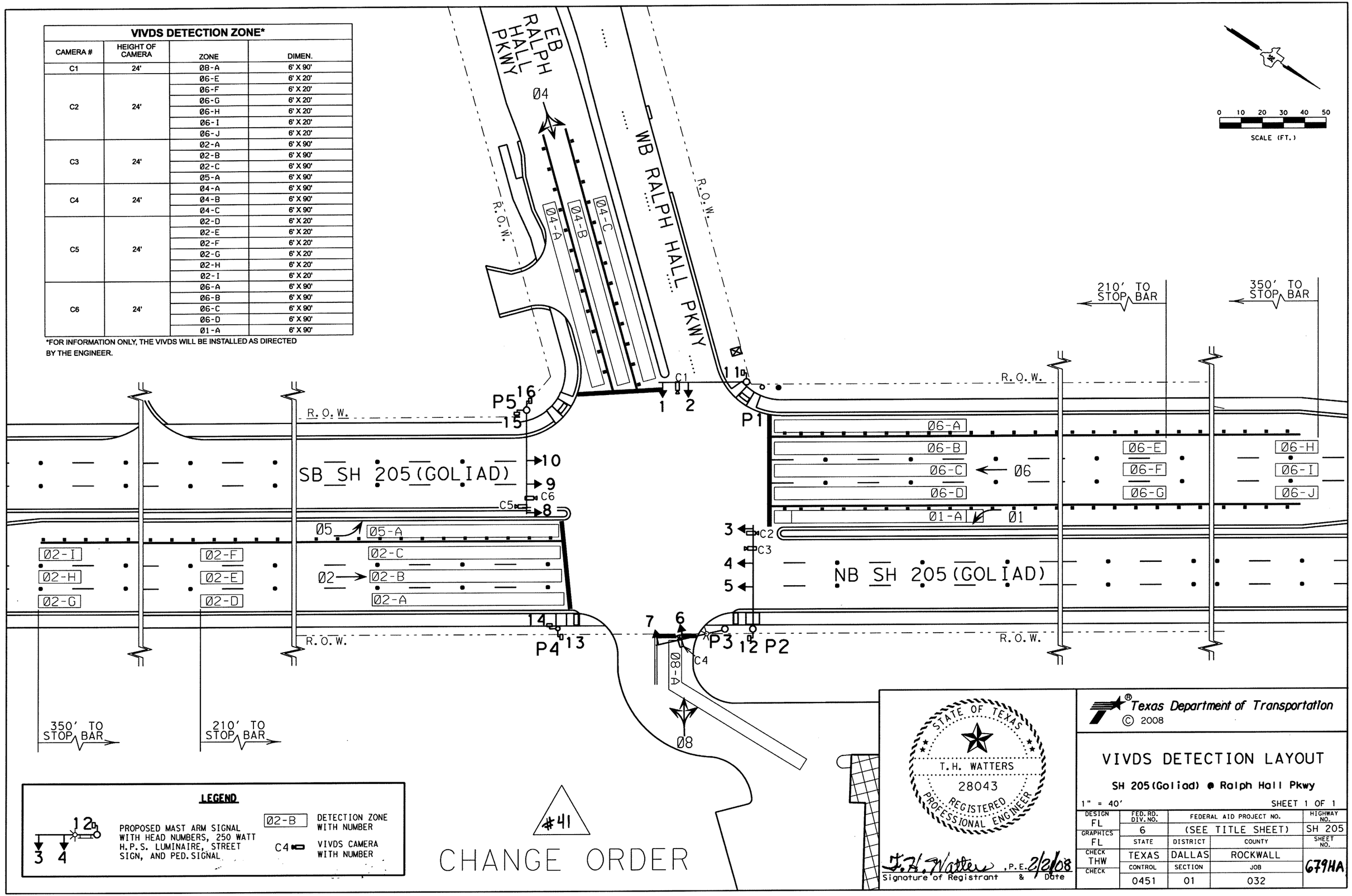
SH 205(Goliad) @ Ralph Hall Pkwy

NOT TO SCALE SHEET 1 OF 1

DESIGN	FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK BKT	TEXAS	DALLAS	ROCKWALL	679GA
CHECK	CONTROL	SECTION	JOB	
	0451	01	032	

VIVDS DETECTION ZONE*			
CAMERA #	HEIGHT OF CAMERA	ZONE	DIMEN.
C1	24'	Ø8-A	6' X 90'
C2	24'	Ø6-E	6' X 20'
		Ø6-F	6' X 20'
		Ø6-G	6' X 20'
		Ø6-H	6' X 20'
		Ø6-I	6' X 20'
		Ø6-J	6' X 20'
C3	24'	Ø2-A	6' X 90'
		Ø2-B	6' X 90'
		Ø2-C	6' X 90'
		Ø5-A	6' X 90'
C4	24'	Ø4-A	6' X 90'
		Ø4-B	6' X 90'
		Ø4-C	6' X 90'
C5	24'	Ø2-D	6' X 20'
		Ø2-E	6' X 20'
		Ø2-F	6' X 20'
		Ø2-G	6' X 20'
		Ø2-H	6' X 20'
		Ø2-I	6' X 20'
C6	24'	Ø6-A	6' X 90'
		Ø6-B	6' X 90'
		Ø6-C	6' X 90'
		Ø6-D	6' X 90'
		Ø1-A	6' X 90'

*FOR INFORMATION ONLY, THE VIVDS WILL BE INSTALLED AS DIRECTED BY THE ENGINEER.



LEGEND

PROPOSED MAST ARM SIGNAL WITH HEAD NUMBERS, 250 WATT H.P.S. LUMINAIRE, STREET SIGN, AND PED. SIGNAL

Ø2-B DETECTION ZONE WITH NUMBER

C4 VIVDS CAMERA WITH NUMBER

#41

CHANGE ORDER

STATE OF TEXAS
T.H. WATTERS
28043
REGISTERED PROFESSIONAL ENGINEER

T.H. Watters, P.E. 2/2/08
Signature of Registrant & Date

Texas Department of Transportation
© 2008

VIVDS DETECTION LAYOUT

SH 205 (Goliad) @ Ralph Hall Pkwy

1" = 40' SHEET 1 OF 1

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
FL	6	(SEE TITLE SHEET)		SH 205
GRAPHICS FL	STATE	DISTRICT	COUNTY	SHEET NO.
CHECK THW	TEXAS	DALLAS	ROCKWALL	679HA
CHECK	CONTROL	SECTION	JOB	
	0451	01	032	

DISCLAIMER
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I. GENERAL REQUIREMENTS FOR ALL ELECTRICAL WORK

The location of all conductors, conduits, junction boxes, ground boxes, and electrical services is diagrammatic only and may be shifted by the Engineer to accommodate local conditions.

Materials shall be new and unused. Materials and installation shall comply with the applicable provisions of the National Electrical Code (NEC), National Electrical Manufacturers Association (NEMA) standards, and shall be Underwriters Laboratories (UL) Listed unless otherwise shown on the plans or specifications or approved by the Engineer in writing. Faulty fabrication or poor workmanship in any material, equipment, or installation shall be justification for rejection. When reference is made to UL, it can be considered to mean a Nationally Recognized Independent Testing Lab (NRTL). Comparable standards of Canadian Standard Association, Electrical Testing Laboratories or Factory Mutual can be equal to the referenced UL standard. Where reference is made to NEMA listed devices, IEC listed devices shall not be considered to be an acceptable equal to a NEMA listed device. Acceptable devices may have both a NEMA and IEC listing.

With the exception of high strength bolts, miscellaneous nuts, bolts and hardware may be stainless steel when plans specify galvanized, provided that bolts are 1/2 inch or less in diameter. The Contractor shall provide the following electrical test instruments as required by the Engineer to confirm compliance with the contract and the NEC. Those test instruments are voltmeter, amp probe, megger (1000 volt DC) and torque wrenches. All meters shall have been properly calibrated within one year. Calibration certification shall be provided to the Engineer upon request. Calibration certification tag shall also be applied to the meter. The Contractor shall operate meters during inspection as requested by the Engineer. Grounding shall be as shown on the plans and in accordance with the NEC. Metallic conduit, light poles, luminaires on bridge structures, and all metal enclosures shall be bonded to the system-grounding conductor. The ground rod in each ground box or junction box at the bridge ends, and in each ground box installed for underpass lighting will also be bonded to the system grounding conductor. The grounding conductor shall be bare or, if insulated, shall be green. Ground rods, connectors, and bonding jumpers will not be paid for separately, but will be subsidiary to the various bid items.

SUBMITTALS:

The contractor shall submit for approval six (6) copies of catalog cut sheets for each of the following three (3) categories.
Category 1. Electrical services including photocell.
Catagory 2. Breakaway disconnects, heat shrink tubing, heat shrink filler tape, GelCaps and ground boxes which will include loading capacity certification.
Category 3. Highmast assembly kits, when applicable. See Item 614 "Highmast Illumination Assemblies". Submittals shall be legible and shall be marked to indicate which product on a cut sheet is to be supplied. Where manufacturers provide warranties and guarantees as a customary trade practice, the Contractor shall furnish to the State such warranties and guarantees.
Any deviation from plans or specifications, including deviations due to plan error should be prominently displayed on the submittal. Any changes not prominently noted in submittal and incorporated into the work without proper authorization will constitute grounds for rejection of that portion of the work.

II. CONDUIT

A. MATERIALS

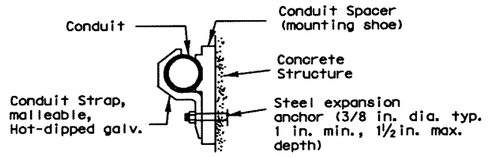
1. Conduit and fittings shall be UL Listed for the intended use shown on plan sheets.
2. Conduit shall be the type shown by descriptive code or shown elsewhere on the plans. Substitution of the various types of conduits will not be permitted. All flexible conduit in rigid metallic conduit (RMC) systems shall be Liquidtight Flexible Metal (LFMC) conduit. All flexible conduit in PVC systems shall be Liquidtight Flexible Non-metallic conduit (LFNC).
3. All exposed conduits shall be RMC, unless otherwise specifically shown on the plans. All metal conduit shall be properly grounded.
4. Couplings, connectors, conduit bodies, grounding bushings, and offset nipples for RMC shall be electro-zinc plated steel or hot dipped galvanized malleable iron, threaded or threadless compression type, rain-tight and shall be UL listed for the intended use.
5. Expansion joints for metal conduit shall be provided with an internal or external bonding jumper and shall be UL listed.
6. Unless otherwise shown on the plans, junction box minimum sizes shall be in accordance with the following table which applies to the greatest number of conductors entering the box through one conduit with no more than four conduits per box. When a mixture of conductor sizes are present, the conductors shall be counted as if all are of the larger size. Situations not applicable to the table shall be sized in accordance with NEC 370-28.

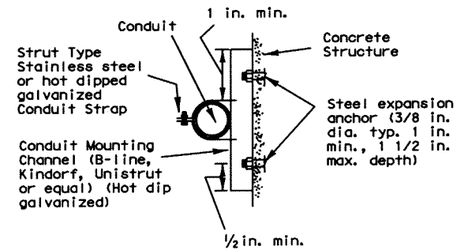
AWG	3 CONDUCTORS	5 CONDUCTORS	7 CONDUCTORS
#1	10" x 10" x 4"	12" x 12" x 4"	16" x 16" x 4"
#2	8" x 8" x 4"	10" x 10" x 4"	12" x 12" x 4"
#4	8" x 8" x 4"	10" x 10" x 4"	10" x 10" x 4"
#6	8" x 8" x 4"	8" x 8" x 4"	10" x 10" x 4"
#8	8" x 8" x 4"	8" x 8" x 4"	8" x 8" x 4"

7. RMC system junction boxes equal to or smaller, in any dimension, than 12 x 12 x 6 (HxWxD), surface mounted and containing conductors #8 or larger, shall be hot dipped galvanized cast iron with minimum wall thickness of 3/16 inch, shall have external mounting lugs, and shall be UL listed Crouse-Hinds Type WAB, OZ/Gedney Type YS or approved equal. Unless otherwise shown elsewhere on the plans, RMC system junction boxes larger than the aforementioned boxes but equal to or smaller, in any dimension, than 18 x 18 x 6 (HxWxD) shall be 14-ga. stainless steel; RMC system junction boxes larger than 18 x 18 x 6 (HxWxD) shall be 12-ga. stainless steel. All metal junction boxes shall be equipped with a threaded hole or lug for grounding. Stainless steel boxes 12 x 12 x 6 and larger need not be UL Listed but shall meet the other requirements of the NEC and shall have ribs, stiffeners, or thicker metal and shall have external mounting feet. Junction boxes with an internal volume of more than 100 cu. in. may be supported by connection of two or more rigid metal conduits, where specifically shown on the plans or where approved by the Engineer.
8. Junction boxes containing only #10 or #12 AWG conductors shall be Crouse Hinds Type GRFX, Appleton Type JBOX, two-gang FD, or similar approved cast iron box. Boxes shall be sized according to NEC Table 370-16(a).
9. IMC and EMT conduit shall not be used unless specifically required by the plan layout sheets. Junction boxes in EMT conduit systems shall be made from galvanized sheeting and shall be UL listed and approved for outdoor use, unless otherwise noted on the plans. Sheet metal junction boxes shall be sized in accordance with the NEC. Junction boxes for IMC conduit systems shall meet the requirements of boxes used with RMC systems.
10. Junction boxes in PVC conduit systems shall be PVC, intended for outdoor use, unless otherwise noted on the plans.
11. Elbows in PVC conduit systems one inch and larger shall be rigid metal, with the exception of traffic signal systems which may have PVC elbows instead of rigid. If any part of the rigid metal elbow is buried less than 18 inches underground the elbow and rigid metal extension shall be grounded. Grounding shall be accomplished by means of a grounding bushing installed on the extension. Unless specifically shown on the plans, rigid metal elbows containing, or entering ground boxes containing only communications conductors, loop detectors, or other low voltage power limited circuits need not be grounded unless a ground wire is present in the conduit or ground box. The rigid metal elbows located in concrete foundations may be extended with PVC conduit and need not be grounded provided that the end of the elbow nearest the end of the conduit run exiting the foundation is at least 2 inches below the concrete. RMC elbows will not be eliminated. RMC elbows will not be paid for directly, but will be subsidiary to various bid items.
12. High-Density Polyethylene (HDPE) conduit shall meet the requirements of Item 622, Duct Cable, except that the HDPE conduit, when bid under Item 618, Conduit, shall not contain factory installed conductors. Fittings for HDPE conduit shall be UL listed as an electrical conduit connector or shall be thermally fused using an electrically heated wound wire resistance welding method. HDPE conduit may be substituted for bored schedule 40 or schedule 80 PVC conduit. When such substitution is made, bored HDPE shall be schedule 40 of the size PVC being replaced. The HDPE conduit shall transition to PVC (or RMC elbow when required) at the bore pit. Size and schedule shall be as shown on the plans. Substituted conduit may not be extended to ground boxes or foundations; RMC elbows shall be installed at ground boxes and foundations. RMC elbows will not be eliminated.
13. All conduit support hardware including straps, nuts, bolts, screws, retaining anchors and washers shall be hot dipped galvanized or stainless steel. Strut type conduit straps shall be stainless steel or hot dipped galvanized. Strut type straps need not be made of malleable type material. Stamped-cadmium plated straps will not be allowed. Straps having only one mounting hole shall not be allowed for use on conduits 2 inches and larger with the exception of electrical service poles where stainless steel standoff straps will be allowed. Two piece conduit straps designed to be used with a mounting shoe shall be installed only with the correctly sized shoe.

B. CONSTRUCTION METHODS

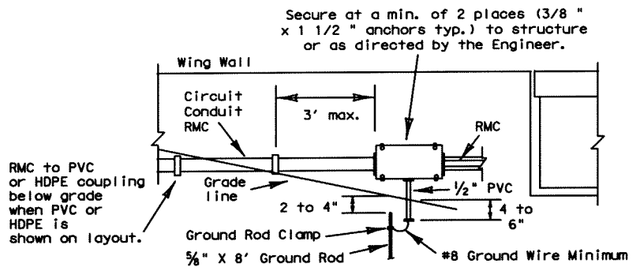
1. Conduit in structures shall have expansion fittings at structure expansion joints. All straight runs of RMC conduit exposed on structures such as bridges shall have expansion joints installed at maximum intervals of 150 feet. Expansion joints shall be installed so they allow for movement of the conduit. Installation of the joint in such a manner that will not allow for movement shall be repaired at no expense to the state. The method of determining the final setting length of the expansion joint shall be provided to the Engineer upon request.
2. Conduit supports shall be spaced at maximum intervals of 5 feet. Conduit spacers shall be used with metal conduit placed on surfaces of concrete structures (See conduit mounting options).
3. Conduit supports shall not be attached directly to prestressed concrete beams except as shown specifically in the plans and approved by the Engineer.
4. Unless otherwise shown on the plans, conduit placed beneath existing roadways, driveways, or sidewalks, or after the base or surfacing operation has begun, shall be accomplished by jacking or boring. The Contractor shall back fill and compact the bore pits to the bottom of the conduit prior to installing connecting conduit or duct cable to prevent bending of the connection.
5. Conduit trenched in the subgrade of new roadways shall be backfilled with excavated material, unless otherwise noted on the plans. Conduit trenched in the sub-base of new roadways shall be backfilled with cement-stabilized base.
6. Open ends of all conduit and raceways shall be fitted with temporary caps or plugs to prevent entry of dirt, debris and rodents during construction. The temporary cap may be constructed of duct tape, but in all cases shall be tightly fixed to the conduit and shall be durable. The contractor shall clean out the conduit and prove it clear in accordance with Standard Specifications Item 618.3 prior to installing any conductors.
7. Conduit entry into the top of enclosures such as safety switches, meter cans, service enclosures, auxiliary enclosures and junction boxes shall be made weatherproof using conduit sealing hubs, or threaded bosses.
8. A bonding jumper shall be installed from each grounding bushing to the nearest grounding rod, grounding lug, and/or equipment grounding conductor. All jumpers shall be the same size as equipment grounding conductor. Conduit used as casing under roadways for duct cable need not be grounded if duct extends full length through the casing. At electrical services, grounding electrode conductor shall be a solid Copper #6 AWG.
9. Metal junction boxes shall be bonded to the grounding conductor in accordance with the NEC.
10. Conduits entering ground boxes shall be placed so that the conduit ends shall be not less than 3 inches nor more than 6 inches from bottom of box (See ground box detail on sheet ED(3).
11. Conduit ends shall be sealed with heat shrink boots with waterproof sealant, urethane foam, or by other methods approved by the Engineer. Sealing shall be done after completion of any required pull tests. Duct tape shall not be used as a permanent conduit sealant. Silicone caulking shall not be used as a sealant.
12. All strut mounting material and hardware shall be hot-dip galvanized or shall be stainless steel. The cut ends of strut and non-galvanized rigid metal conduit threads shall be coated with a zinc rich paint (90% or more zinc content). Zinc rich paint may only be used to touch up galvanized material as allowed under item 445.6 galvanizing. The painting of non-galvanized material with a zinc rich paint shall not be considered as an approved alternative for galvanized materials.
13. All PVC conduit terminations shall be fitted with bushings or bell ends. All metal conduit terminations shall be fitted with a grounding type bushing.





CONDUIT MOUNTING OPTIONS

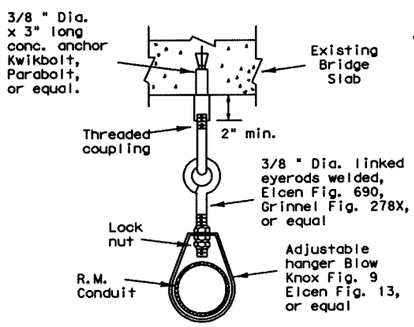
(Attachment to concrete surfaces)
(See para. II.B.2)



TYPICAL CONDUIT ENTRY TO BRIDGE STRUCTURE DETAIL

NOTES

1.) Ground rod clamp to be UL listed for direct burial.
2.) For conduit placed in structure, use flush-mounted box.
3.) Bond junction box and metal conduits to equipment grounding conductor and grounding electrode conductor using listed connector.
4.) Seal all conduits entering the junction box from underground.
5.) Install bell end or bushing on 1/2 " PVC conduit both ends.
6.) Ground rod to be driven within 8 inches of 1/2 inch PVC conduit end.



CONDUIT HANGER DETAIL

(Attachment to horizontal surfaces)
Hangers need not be UL listed for electrical use
ie: plumber pipe hangers are acceptable

5/03 Revision

⚠1 Revised notes.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS-CONDUIT

ED(1)-03

©TxDOT January 1992	DN: KB	CK: JW	DW: DN	CK: GC	NEG NO.:

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
4-98	DAL	6	(SEE TITLE SHEET)	680
12-00	COUNTY		CONTROL / SECTION / JOB	HIGHWAY
3-03	ROCKWALL		0009 / 12 / 203	VA
5-03				

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ED | DATE: | FILE:

LEVELS
1 2 3 4 5 6 7 8 | 9 10 11 12 13 14 15 16 | 17 18 19 20 21 22 23 24 | 25 26 27 28 29 30 31 32 | 33 34 35 36 37 38 39 40 | 41 42 43 44 45 46 47 48 | 49 50 51 52 53 54 55 56 | 57 58 59 60 61 62 63

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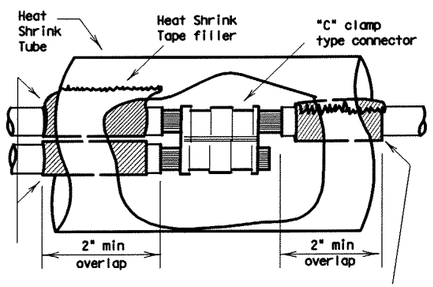
I. ELECTRICAL CONDUCTORS

A. MATERIALS

1. Insulated conductors shall be NEC Type XHHW. Insulated conductors shall be color coded in accordance with the NEC, articles 200, 250, and 310; i.e. Insulation of grounded conductors (neutrals) shall be white. Grounding conductors (ground wires) shall be bare or insulation shall be green. Insulation of ungrounded conductors (hots) shall be any color except green, white, or gray. Identification of conductors #6 American Wire Guage (AWG) and smaller shall be by continuous jacket color. Color coding of electrical conductors #4 AWG and larger shall be either by continuous color jacket or by colored tape. Colored tape marker shall consist of a half-lap of tape covering a 6-inch length of conductor.
2. Where two or more circuits are present in one conduit or enclosure, the conductors of each circuit shall be identified by a permanent non-metallic tag at each accessible location. The tag shall be fastened to the conductors by two plastic straps. Each tag shall indicate circuit number, letter, or other identification shown in the plans.
3. Grounding electrode conductor #6 AWG for bonding to ground rod at electrical service, shall be solid. Connection of conductor to ground rod shall be made using UL Listed connectors designed for such purposes.
4. Heat Shrink Tape filler shall be used to seal the ends of heat shrink tubing around two or more conductors that are insulated with heat shrink tubing. Tape material shall have a minimum dielectric strength of 225 volts per mil and shall be cross-linked butyl rubber. Tape shall be supplied in rolls and shall have a backing (release paper) to prevent the tape from sticking to itself.
5. Heat shrink tubing shall be heavy wall, UL listed for 600 volts or greater and shall have factory applied internal sealant.
6. GelCaps shall be UL listed for 600-volt applications. GelCap shall have see-through elastomer molded cover. Cover shall be filled with high dielectric insulating gel silicone sealant to provide waterseal. Cover shall be held in place by snap-lock, molded clamp made of UV stable polypropylene.
7. Splicing materials, insulating materials, breakaway disconnects, GelCaps and fuse holders will not be paid for directly but shall be subsidiary to various bid items.

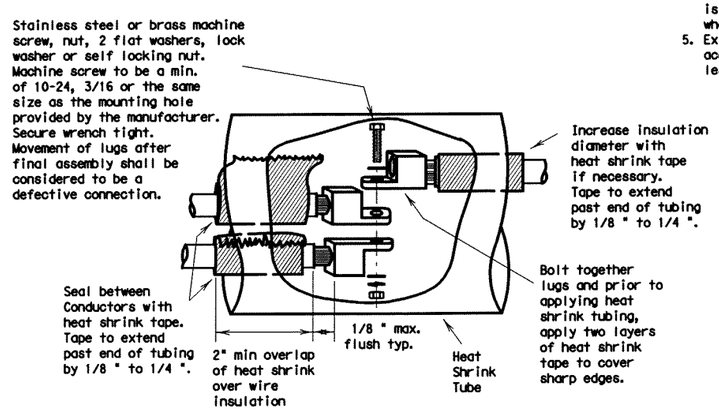
B. CONSTRUCTION METHODS

1. After conductors have been installed in conduit, a pull test shall be made on conductors. When any length of conductor cannot be freely pulled, the Contractor shall make any needed alterations or repairs at no expense to the State.
2. The Contractor shall perform insulation resistance tests in accordance with Item 620, "Electrical Conductors." The Contractor shall coordinate with the Engineer to witness the tests.
3. A sufficient length of conductor for making up connections shall be left in ground boxes (2 feet minimum, 3 feet maximum, to point of splice, 3 feet minimum, 4 feet maximum, when conductor is pulled through with no splice), enclosures, weatherheads and pole bases (1 foot minimum, 1.5 feet maximum).
4. Splices shall be made only in junction boxes, ground boxes, pole bases, or electrical enclosures and shall be made with listed compression or screw type pressure connectors, terminal blocks, bolted lugs, or split bolt connectors. Splices shall be insulated with heavy wall heat shrink tubing or GelCaps and shall be made so as to provide a watertight splice. Heat shrink sleeve shall overlap conductor insulation a minimum of 2 inches on both sides of the splice. Where heat shrink tubing may not shrink sufficiently to provide a watertight seal around the individual conductors, prior to heating the tubing, the Contractor shall increase the diameter of the conductors insulation using heat shrink filler tape to provide a watertight seal between the individual conductors and the heat shrink tubing. Tape shall be visible after completion of all splices. Where filler tape is used but not visible, the Engineer shall approve each individual splice by conducting a physical inspection of each splice. When it appears the tubing has been burned, or overheated the tubing shall be considered to be defective and shall be replaced.
5. GelCaps when used in place of heat shrink method of splicing, shall be sized and installed according to manufacturer's specifications. (Raychem GelCap and GelCap SL or equal.)
6. Wire nuts may be used for #8 AWG or smaller conductors in above-ground junction boxes, but not in pole bases or ground boxes. Wire nuts shall be positioned upright to prevent the accumulation of water. Wire nuts used at these locations shall have factory applied waterproof sealant.
7. Conductors in illumination poles shall be supported by a J-hook in the top of the pole.
8. All conductors bid under Item 620 "Electrical Conductors" shall have breakaway electrical disconnects installed anytime conductors pass through a break-away support device.
9. For terminating the conductors, insulation-jacketing material shall be removed in such a manner as to not nick any of the individual strands of the conductor. When individual conductor strands are removed, the conductor shall be considered to be damaged.
10. When a conductor or cable has been damaged, or fails to pass an insulation resistance test, the conductor shall be replaced.
11. Duct tape, black electrical tape, or wire nuts shall not be used in the repair of a damaged conductor.
12. For terminations, no more than one wire may be installed under a single pressure connector, unless the device is listed for more than one wire.
13. Conductors connected to break-away in line fuse holders must be installed in accordance with the specific manufacturer's installation instructions. Where threaded connections are made, they shall be properly torqued. Where crimp type connections are made, crimps shall be made using properly sized crimping pliers. Proper conductor terminations are critical to the safe operation of break-away devices.
14. Waterproofing boots shall be properly trimmed to fit snugly around the conductor so as to provide a water proof connection. No more than one wire may enter a single opening in any one boot. Water proofing boots must provide the correct number of openings. Where only one wire is to be connected to a boot, the boot may not be a two wire type.



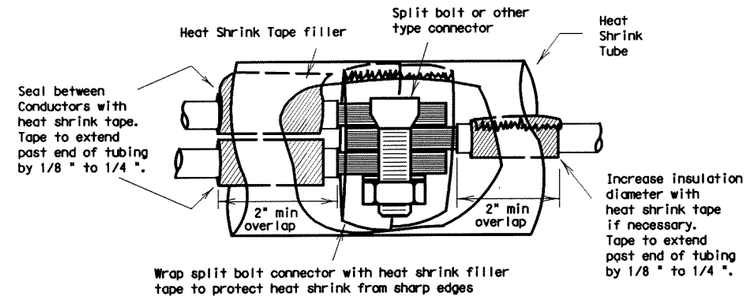
SPLICE OPTION 1

C-CLAMP



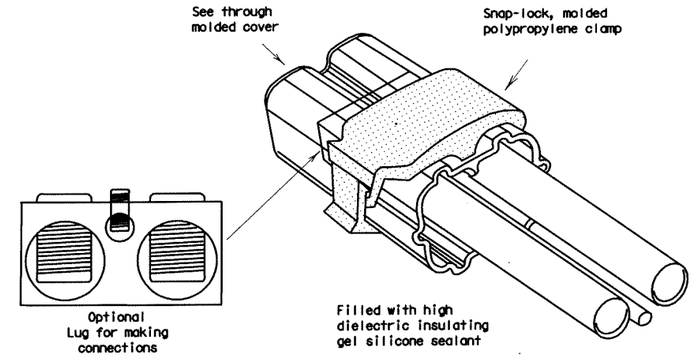
SPLICE OPTION 2

BOLTED WIRE LUGS



SPLICE OPTION 3

SPLIT BOLT



SPLICE OPTION 4

GELCAP

GelCap shall be sized and installed according to manufacturers specifications

15. All conduits that contain circuit wiring of 50 volts or more shall contain an equipment grounding conductor (EGC). Conduit for traffic signals shall have an EGC, with a minimum size of #8 AWG stranded. Unless otherwise shown on the plans, the EGC for all other conduits shall be the same AWG size as the largest current carrying conductor contained in that conduit. The EGC shall be paid for item 620-Electrical Conductors.

C. TEMPORARY WIRING

1. Temporary conductors and electrical equipment to provide power for utilization equipment, shall be installed in accordance with the NEC article 305. All temporary wiring materials and methods shall comply with the standard sheets. All power outlets for portable electrical equipment, power tools, ice machines, ice storage bins and refrigerators located outdoors at grade, supplied from a utility power source, shall be provided with a ground fault circuit interrupter.
2. Residual current protective devices (GFCI) may be any one of the following: molded cord and plug set, receptacle, or circuit breaker type.
3. Where wire nuts are approved for temporary wiring, they shall be of the self-sealing type.
4. All conductor splices must be contained within a listed enclosure, ground box or the splices will be more than ten feet above grade vertically and more than five feet horizontally from any metal structure. Where temporary conductors are installed in any area that is likely to be subjected to vehicle traffic, or mobile construction equipment, the vertical clearance to ground shall be at least 18 feet when measured at the lowest point. Where power conductors are to be supported by a span wire, the span wire shall be properly grounded.
5. Existing conduit containing service conductors uncovered during the construction process shall be repaired in a timely manner in accordance with the NEC. Existing non-metallic conduit exposed during construction shall not be left exposed above grade, or with less than eighteen inches of cover, without protective methods approved by the Engineer.

DN: CK: DW: CK:

LEVELS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

ED DATE: ACC: FILE:

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS-CONDUCTORS

ED(2)-03

©TxDOT January 1992	DN-KB	CK-JW	DW-DN	CK-GC	RES NO.:

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT			SHEET
10-93	DAL	6	(SEE TITLE SHEET)			681
4-98	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
12-00	ROCKWALL		0009	12	203	VA
3-03						

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II. GROUND RODS

A. MATERIALS

1. All ground rods installed at electrical services, including supplemental lightning protection ground rods specified by the plans in other locations such as pole bases, shall be copper clad and UL listed. Rods shall be a minimum diameter of 5/8 inch. The length shall be a minimum of 8 feet. Larger diameter or longer length rods may be called for in some specific locations, see the individual plans sheets.
2. Ground rod clamps shall be listed to be in direct contact with the soil. Where concrete encasement is required, the clamp shall be listed for concrete encasement.

B. CONSTRUCTION METHODS

1. Ground rods installed in locations such as pole bases, to provide supplemental lightning protection need not be totally in contact with the soil. Where called for in the plans, rods may be encased in soil or concrete or any combination of soil and concrete. When concrete encased, the connection of the conductor to the rod shall be readily accessible for inspection or repairs. When driven into the soil the upper end shall be between 2 to 4 inches below finished grade. Ground rods shall not be placed in the same drilled hole as a timber pole.
2. Ground rods shall be installed such that the end imprinted with the rod's part number is installed as being the upper end.
3. Non-conductive coatings such as concrete splatter shall be removed from the rod at the clamp location.
4. Routing of lightning protection ground rod wires shall be run as short and straight as possible. Where bends are required they shall have a minimum radius of four inches.
5. Unless specifically called for by the plans, conduits used for ground rod wires shall be non-metallic. Where metal conduits are specified, a grounding bushing and properly sized bonding jumper shall be provided and properly installed on each end.
6. Where rocky soil or a solid rock bottom is encountered when driving a ground rod and the horizontal trench placement method is the only viable solution, written authorization from the Engineer must be obtained.

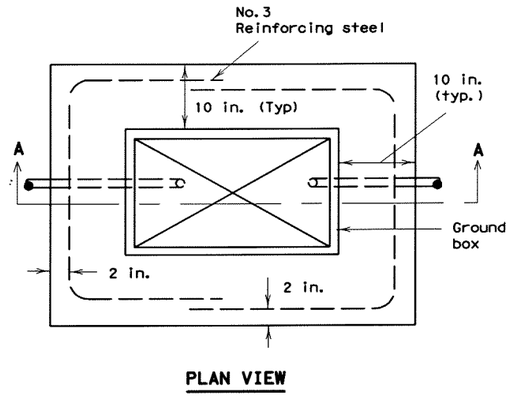
III. GROUND BOX

A. MATERIALS

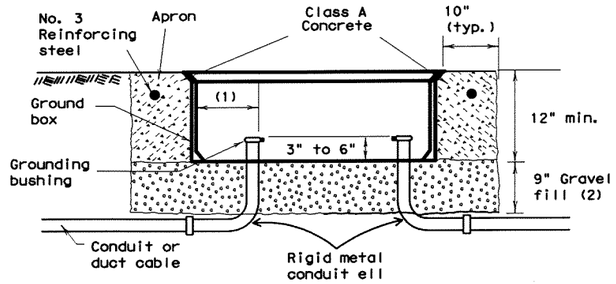
1. Ground boxes 16x30x24 inches (WxLxD) or smaller shall be polymer concrete of the type required by the descriptive code shown elsewhere. Larger ground boxes shall be as shown elsewhere in the plans.
2. All ground boxes and covers shall be permanently marked either by impress or by permanent ink, with manufacturer's model number and manufacturer's name or logo.
3. Covers shall be bolted down, and bolt holes in the box shall be arranged to drain dirt.
4. Ground box Types A, B, C, D & E shall meet the following requirements:
   a. Ground boxes and covers be manufactured from polymer concrete reinforced with continuous strands of woven or stitched borosilicate fiberglass cloth. The polymer concrete shall be made from catalyzed polyester resin, sand and aggregate, and shall have a minimum compressive strength of 11,000 psi. Polymer concrete containing chopped fiberglass or fiberglass reinforced plastic is not acceptable.
   b. Minimum inside dimensions shall be as follows (width x length x depth):
      Type A shall be 11.5 inches x 21 inches x 10 inches, (122311)
      Type B shall be 11.5 inches x 21 inches x 20 inches, (122322)
      Type C shall be 15.25 inches x 28.25 inches x 10 inches, (162911)
      Type D shall be 15.25 inches x 28.25 inches x 20 inches, (162922)
      Type E shall be 11.5 inches x 21 inches x 16 inches, (122317)
   c. Bottom edge of box or extension shall be footed with a minimum 1 1/4 inch flange.
   d. Ground boxes shall withstand 600 lbs. per sq. ft. applied over the entire sidewall with less than 1/4 inch deflection per foot length of box. Ground boxes and covers shall withstand a test loading of 20,000 lbs. over a 10 inch by 10 inch area centered on the cover with less than 1/2 inch deflection. Ground boxes and covers shall meet Western Underground Standards 3.6. Manufacturer shall supply certification by an independent laboratory or sealed by a Texas-Licensed Professional Engineer.
   e. Covers shall be 2 inch (naminal) thick polymer concrete. All hardware shall be stainless steel. Cover shall be secured with two 1/2 inch stainless steel bolts. Bolts shall be self-retaining and shall withstand a minimum of 70 ft-lbs. torque and shall have a minimum 750 lbs. straight pull out strength. Nuts shall be floating and shall provide a minimum of 1/2 inch movement from the center of the nut. Covers shall be skid resistant, minimum 0.5 coefficient of friction. Covers shall be interchangeable between manufacturers and shall conform to the dimensions shown herein. Unless otherwise approved by the Engineer, cover shall be legibly imprinted with the following words in minimum 1 inch letters:
      Ground Boxes containing wiring for traffic signals shall be labeled, Danger High Voltage Traffic Signal.
      Ground boxes containing wiring for illumination systems shall be labeled, Danger High Voltage Illumination.
      Ground boxes containing wiring for traffic management systems shall be labeled, Danger High Voltage Traffic Management.
      Ground boxes containing wiring for sign illumination systems shall be labeled, Danger High Voltage Sign Illumination.
      Ground boxes containing wiring for traffic signals that also contain illumination, powered by the signal electrical service, shall be labeled, Danger High Voltage Traffic Signal.

B. CONSTRUCTION METHODS

⚠ 1. Ground boxes shall be set on a 9 inch (minimum) bed of aggregate from 3/4 " up to 2" in size. Aggregate shall be in place prior to setting box and conduits shall be capped. Any gravel or dirt in conduit shall be removed.
2. When required by Item descriptive code, construction of an apron encasing a ground box including concrete and reinforcing steel shall not be paid for directly but shall be subsidiary to the ground box. Reinforcing steel may be field bent. Concrete for aprons shall be considered miscellaneous concrete for testing purposes. Aprons shall be cast in place.
3. Conduit holes may be cut in the walls of type B & D boxes at least 18 inches beneath the cover.
4. If, within the limits of this project, the Contractor must utilize an existing ground box equipped with a metal cover, the Contractor shall bond the cover to the grounding conductor with a 3 foot long flexible stranded jumper the same size as the grounding conductor. Connection of bonding jumper to metal ground cover shall not be paid for directly but shall be subsidiary to various bid items. The box(es) must be clearly shown on the plans with plan notes fully describing the work required.
5. If there are other ground boxes with metal Covers within the project limits but not involved in the contract, the Engineer may direct the Contractor to ground the covers, designating and identifying the specific boxes in writing. This work will be paid for separately.
6. Termination to metal ground box covers shall be made using a tank ground type lug.



PLAN VIEW



SECTION A - A

APRON FOR GROUND BOXES

(Where required)

(1) Final position of end of conduit shall not exceed one-half the distance to the side of box opposite the conduit entry.
(2) Place gravel "under" the box. not "in" the box. Gravel should not encroach on the interior volume of the box.
(3) Install bushing on the upper end of all ells.
(4) Where a ground rod is present in the ground box, connect it to any and all equipment grounding conductors using a listed connector.
(5) Maintain sufficient space between all conduits so as to allow for proper installation of bushings.
(6) All conduits shall be installed in a neat and workmanlike manner.
(7) All conduits installed in the ground box shall be sealed after completion of conductor installation and any required pull tests. Silicone shall not be used as sealant.

PLAN VIEW

END

SIDE

GROUND BOX COVER

GROUND BOX COVER DIMENSIONS								
BOX	DIMENSIONS (INCHES)							
SIZE	H	I	J	K	L	M	N	P
A, B & E	23 1/4	23	13 3/4	13 1/2	9 7/8	5 1/8	1 3/8	2
C & D	30 1/2	30 1/4	17 1/2	17 1/4	13 1/4	6 3/4	1 3/8	2

5/03 Revision

⚠ Revised notes.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS- GROUND BOXES

ED(3)-03

©TxDOT January 1992	DN: KB	CK: JW	DW: DN	CK: GC	MCG NO.:

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT			SHEET
4-98 12-00 3-03 5-03	DAL	6	(SEE TITLE SHEET)			682
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0009	12	203	VA

LEVELS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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ELECTRICAL SERVICES NOTES

All work, materials, services, and incidentals, whether or not specifically shown on the plans, which may be necessary for a complete and proper electrical service installation as specified in the plans to obtain electrical power shall be paid for, performed, furnished and installed by the Contractor. The Contractor shall contact the Utility for metering and shall comply with all Utility requirements.

Primary line extensions, connection charges, meter charges, and other charges by the Utility company to provide power to the location shown, when required, shall be paid for under force account work. The costs associated with these charges shall be approved by the Engineer prior to engaging the Utility company to do the work. The Contractor shall consult with the appropriate Utility to determine costs and requirements, and shall coordinate the Utility's work as approved by the Engineer. The Contractor shall be reimbursed only the amount billed by the Utility. No additional amount for supervision of the Utility's work will be paid.

Materials shall be new and unused, materials and installation shall comply with the applicable provisions of the National Electrical Code (NEC) and National Electrical Manufacturers Association (NEMA) standards and shall be Underwriters Laboratories (UL) Listed. Electrical Service conduits, conductors, disconnects, contactors, circuit breaker panel sizes, and branch circuit breakers, shall be as shown in the Electrical Service Data elsewhere in the plans. Faulty fabrication or poor workmanship in any material, equipment, or installation shall be justification for rejection.

The Contractor shall submit for approval no less than six (6) copies of catalog cut sheets on electrical service materials. Submittals shall be legible and shall be marked to indicate which product on a cut-sheet is to be supplied. Where manufacturers provide warranties and guarantees as a customary trade practice, Contractor shall furnish to the State such warranties or guarantees.

The Contractor shall provide locks keyed with Master #2195 for all lockable electrical enclosures. Keys and locks become property of the State. Unless otherwise approved by the Engineer, enclosures shall not be energized until locks are provided and all bolts are installed.

Circuit directories, where provided, shall be filled out. All breakers and components in shop built panels and enclosures shall be labeled with duo-colored plastic labels. Letters shall be a minimum 3/8 " in height.

Enclosures with external disconnects that de-energize all equipment inside the enclosure, need not have dead front trim, except that incoming line terminations shall be protected from incidental contact.

When galvanized is specified for nuts, screws, bolts or miscellaneous hardware, stainless steel may be used. All wiring and components shall be rated for 75 degrees C. Minimum size for service entrance conductors shall be #6 XHHW.

I. Safety Switch. A safety switch, placed ahead of the meter, shall only be used when specified by the Utility and when shown on the Electrical Service Data. The switch shall be UL Listed, heavy duty type, 600 volt, unfused, with a UL type 3R enclosure and equipped with a solid neutral (s/n) assembly. The switch shall be padlockable in the "on" position.

II. Service Type. Electrical service types A, C, D, and T shall be as schematically detailed on ED(4) or ED(5). Other service types shall be as detailed elsewhere on the plans.

III. Branch Circuit Breakers. Circuit breakers shall be thermal magnetic and have a minimum interrupting capacity of 10,000 amps and a voltage rating compatible with their use. Circuit breakers shall be sized as shown in the electrical service data. Circuit breakers in panelboards and load centers shall be full size and designed exclusively for the panelboard or load center in use. Tandem and half-width breakers shall not be used. All circuit breakers shall be permanently and clearly marked identifying the circuit or device supplied. Circuit breakers shall be UL Listed to UL489.

IV. Circuit Breaker Panelboard. Panelboards shall be UL Listed. Panelboards shall have copper busses, a minimum of 6 one-pole spaces or as required in the electrical service data, and when required will be rated for service equipment. Enclosure shall meet or exceed UL type 3R classification. Panelboards shall have a threaded hub conduit entry for conduit entering the top of the enclosure. Circuit breakers shall be bolt-in type only.

V. Circuit Breaker Load Center. Load centers shall be UL Listed.
Load centers for type T services may have copper or aluminum busses, all other load centers will be copper bus only. Load center will have a minimum of 4 one-pole spaces, and shall be rated for service equipment. Enclosure shall meet UL type 3R classification. Load centers shall have a threaded hub conduit entry for conduit entering the top of the enclosure. Circuit breakers shall be plug-in type only. Load centers for type T services shall accomodate a maximum of 6 one-pole breakers.

VI. Separate or Auxiliary Enclosure. Separate enclosures for HOA, photocell and lighting contactors for types D & T Services shall be a UL Listed assembly with outer door. Interior shall have dead front trim. HOA switch operator shall extend through the dead front trim. Photocell shall be mounted inside the enclosure as described in paragraph XIII when required by descriptive code. Separate enclosures shall meet the construction requirements of paragraph VIII. E, except that separate enclosure shall not have external operating handle, need not have a data pocket and door may latch at only one point. All equipment may be located in one enclosure instead of two, when approved by the Engineer.

VII. Where a Type D or T service is provided, laminated "as built" drawings are required as shown on ED(5) VIII E; shall be delivered before completion of the work, to the Engineer in lieu of placement within these smaller enclosures. Conduit may not enter the back wall of a service enclosure penetrating the equipment mounting panel. Provide grounding bushings on all metal conduits, terminate bonding jumper to grounding bus. Grounding bushing is not required when the end of the metal conduit is fitted with a conduit sealing hub or threaded boss such as a meter base.

EXPLANATION OF ELECTRICAL SERVICE DESCRIPTIVE CODE

ELEC SERV TY X (XXX/XXX) XXX (XX) XX (X) XX (X)

Example: ELEC SERV TY A(240/480)100(NS)SS(E)GC(O)

Schematic Type

Service Voltage (V / V)

Disconnect Amp Rating
(000 indicates main lug only)

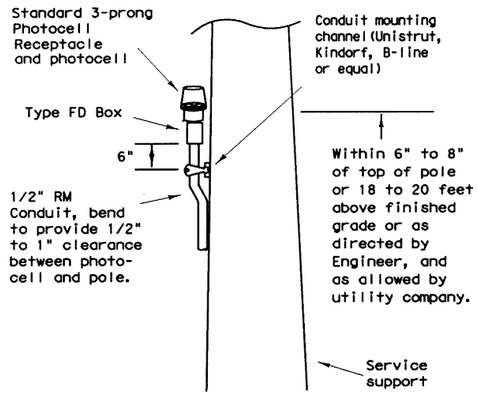
SS= Safety switch ahead of meter
NS= No switch ahead of meter and/or no meter required

Enclosure Type
GS= Galvanized steel (see ED(5)VIII,D)
SS= Stainless steel
AL= Aluminum

Photocell Mounting Location
T= Top of pole
E= Inside service/separate enclosure
L= Luminaire mounted
N= None

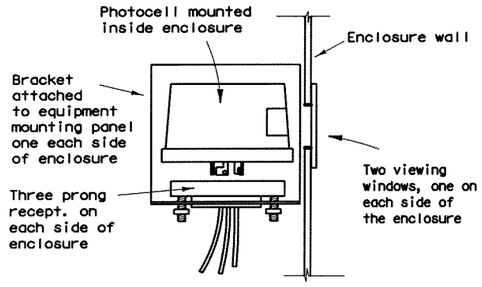
Service Support Type
GC= Granite concrete
OC= Other concrete
TP= Timber pole
SP= Steel pole
SF= Steel frame
OT= Pole by others or paid for separately
EX= Existing pole
TS= Switch gear to be placed on traffic signal pole
RT= Rectangular structural tubing
PS= Pedestal Service (see ED(5)VIII,G)

O= Overhead service
U= Underground service



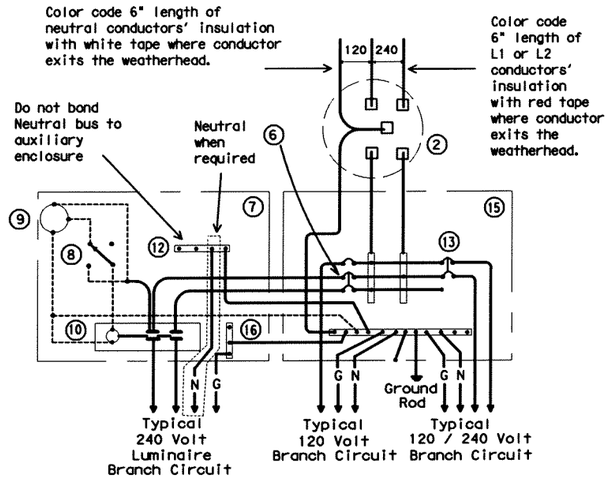
TOP MOUNTED PHOTOCELL

Conduit support spacing 3 feet from enclosure; 5 feet max.



ENCLOSURE MOUNTED PHOTOCELL

For photocell specifications see ED(5),XIII.



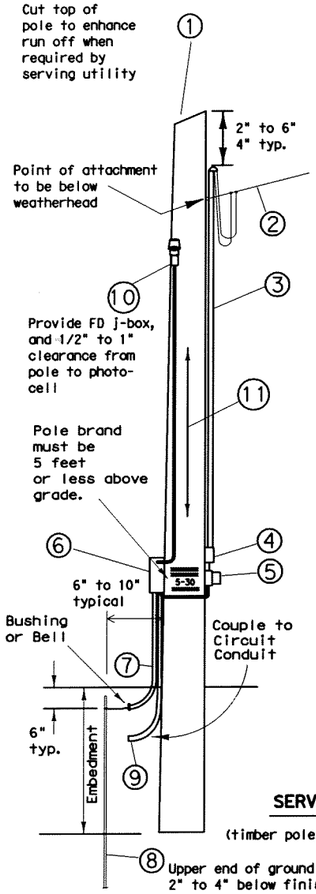
SCHEMATIC TYPE T
120/240 VOLTS - THREE WIRE

Install photocell and lighting contactor when shown on Electrical Service Data.

SCHEMATIC LEGEND

1 - omitted
2 - Meter (when required)
3 - Service Assembly Enclosure
4 - Main Disconnect Breaker (Not Used)
5 - Omit
6 - Circuit Breaker, 15 Amp typical for control circuit wiring
7 - Auxiliary Enclosure
8 - Control Station ("H-O-A" Switch)
9 - Photo Electric Control (enclosure-mounted shown)
10 - Lighting Contactor
11 - Power Distribution Terminal Blocks (Not Used)
12 - Neutral Bus required when 120 v. lights are controlled by lighting contactor
13 - Branch Circuit Breaker (See Electrical Service Data)
14 - Circuit Breaker Panelboard (Not Used)
15 - Load Center
16 - Ground Bus

——— Power Wiring
– – – Control Wiring
——N—— Neutral Conductor (when required-to serve 120 v. loads only)
——G—— Equipment grounding conductor-always required



1 - Class 5 pole, height as required
2 - Service drop from utility company (attached below weatherhead)
3 - Service conduit and service entrance conductors(RMC) (See Electrical Service Data)
4 - Safety switch (when required)
5 - Meter (when required)
6 - Service enclosure
7 - No. 6 bare grounding electrode conductor in 1/2 " PVC to ground rod - extend 1/2 " PVC 6" underground.
8 - 5/8 " x 8' Copper clad ground rod - drive ground rod completely underground unless otherwise approved by the Engineer.
9 - RM conduit - same size as branch circuit conduit.
10 - Photocell and conduit - if top mounted. (See Electrical Service Data)
11 - When required by the serving utility provide bare #6 awg copper conductor. Run wire from pole top to butt wrap or copper butt plate. Protect conductor to a height of 8 ft above finish grade.

LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

(If applicable)

- Liquidtight flexible metal conduit, may be used when meter and service enclosure are mounted 90 to 180 degrees to each other. Size shall be same as service entrance conduit.
- LFMC shall not exceed 3 ft. and shall be securely supported within one ft. of each end. No strap required for LFMC shorter then 12"
- Each end of LFMC must have a grounding bushing or be terminated with a grounding fitting.
- A neutral conductor must be installed within the LFMC.
- Bend in liquidtight flexible metal conduit shall not exceed 180 degrees.
- A pull test is required on all installed conductors, at least six inches of free conductor movement shall be demonstrated to the satisfaction of the Engineer.

SERVICE SUPPORT TYPE TP (O)

(timber pole, overhead service, typical arrangement)

TIMBER POLE NOTES

1. Conduit and electrical conductors attached to the electrical service pole and underground within 12 inches of service pole shall not be paid for directly but shall be subsidiary to the service pole.
2. Pole top mounted photocell, install on north side of pole or in service enclosure as required. See Electrical Service Data.
3. Attach meter and service equipment with stainless steel or galvanized channel (Unistrut, Kindorf, or equal). Gain pole as required to provide flat surfaces for each strut. Paint ends of galvanized channel with zinc rich paint. Gain depth 5/8" max. Gain height 1 7/8" max. Strut to be 1" max. deep, and 1 5/8" wide max. Secure each strut section to timber pole with two galvanized or SS lag bolts, 1/4" diameter min. by 1 1/2" length min. Place flat cut galvanized or SS washer on each lag bolt. Gain pole in a neat and workmanlike manner.
4. Embedment depth shall be as required in Item 627 Treated Timber Poles.
5. Poles trimmed for excess length shall be trimmed from the top end only.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS- SERVICE SCHEMATICS AND SUPPORT-TYPE TP (OVERHEAD)

ED(4)-03

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DN: KB	CK: JW	DW: DN	CK: GC	REQ NO.:

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
12-00	DAL	6	(SEE TITLE SHEET)	683
3-03	COUNTY		CONTROL / SECTION / JOB	HIGHWAY
	ROCKWALL		0009 / 12 / 203	VA

ED
LEVELS
DATE:
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CK:
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SERVICE ENCLOSURE NOTES

VIII. Service Assembly Enclosures. All service assemblies and enclosures shall be UL Listed for the intended purpose.

A. Shop built or shop assembled service assemblies (all types except Type T and Type D without lighting contactor or enclosure mounted photo cell) and all auxilliary equipment enclosures mounted with service equipment and paid for as part of Item 628, "Electrical Services", shall be built or assembled by a UL Listed Industrial Control Panel shop and shall have a unique serial numbered UL Label with the words "LISTED ENCLOSED INDUSTRIAL CONTROL PANEL". The same or an additional label shall have the name, location, and phone number of the shop, the UL file number of the shop, the shop order or drawing number, date of manufacture or assembly, and the line voltage. The service assembly enclosure shall also be labeled "SUITABLE ONLY FOR USE AS SERVICE EQUIPMENT".

B. Conduit entries into the top of enclosures shall have threaded hub. Conduit entries through the equipment mounting back plate will not be allowed.

C. All service enclosure front doors shall be permanently labeled "DANGER HIGH VOLTAGE". Label shall be a self sticking type, intended for outdoor installation. Lettering style, layout and colors of red, black and white shall be as required by OSHA. Label letters shall be 1 to 1 1/2 inches high or as high as the enclosure door width will permit for smaller services. Separate or auxiliary lighting enclosures need not be OSHA labeled when mounted in the same viewing plane as the service enclosure front door. Where only one type of load is served by the service, the service door shall be marked using duo-colored plastic labels or self adhesive vinyl weather resistant labels, minimum of 1 inch high; applied in a neat and workmanlike manner. On the label will be the service number shown on the plans as well as identifying the load served specifically (i.e. lighting, landscaping, signals, traffic management or other wording as directed by the Engineer). Safety switches need not be OSHA labeled unless specifically required by the serving utility.

D. Type GS enclosures will only be allowed for service Types D and T without an enclosure mounted photocell and/or lighting contactor and the Type C panelboard. This spec will allow an "off the shelf" product meeting these specifications to be used. Type GS enclosures shall be made from pre-galvanized steel sheeting, hot dipped galvanized steel, or powder coat painted steel unless shown differently on the plans. Steel enclosures shall be painted inside and outside; galvanized enclosures may be painted. Unless otherwise approved by the Engineer, painted enclosures shall be gray, beige, white or light green. Panelboard/loadcenter enclosures shall meet UL type 3R requirements, shall have a dead front trim, and an outer padlockable door preventing unauthorized persons from operating contained equipment. Galvanized steel is no longer allowed for Types A, C, or custom-built D or T enclosures. If GS is shown in the descriptive code for any of these, an AL shall be provided.

E. Type AL enclosures for service Types A and C shall meet UL type 3R requirements and shall also meet additional requirements of this paragraph. The enclosure shall have both a main disconnect remote operator handle and a door latch handle. Die-cast handles are not acceptable. The main disconnect remote operator shall be flange-mounted, shall interlock the door when in the "on" position, and shall be padlockable in both the "on" or "off" positions. Door latch shall latch at two or more points, operate by a handle separate from disconnect switch and be capable of being locked. Door closure clamps will not be allowed. Lock must be keyed to Master #2195. All the enclosures shall have either a continuous stainless steel piano hinge with stainless steel pin or enclosures less than 30 inches may have two heavy duty hinges, those over 30 inches must have three. Heavy duty two and three point hinges shall have a 0.185 inch minimum diameter electro-zinc plated steel pin or a stainless steel pin. Two point hinged doors shall be rated for 56 lbs of loading. Three point hinged doors shall be rated for 70 lbs of loading. The door shall have an attached data pocket constructed of either thermoplastic or metal. Pocket shall be 12" x 12", unless that size will not fit in enclosure. The pocket shall then be as large as possible, as approved by the Engineer, and mechanically attached with stainless steel nuts and bolts, or stainless steel or aluminum rivets. Enclosure shall include an equipment mounting panel installed inside the enclosure on collar studs or tapped bosses, and constructed of a minimum 12 guage galvanized steel. Equipment mounting panels shall not be painted. Enclosure shall have factory installed external mounting feet. Enclosure door shall be capable of opening at least 130 degrees, with arm or other approved means to hold the door open. Only the enclosure exterior will be primed and painted. Paint color shall be beige or gray and shall be powder coat paint as shown below. Condensation drainage shall be provided in the bottom of the enclosure before leaving the factory. The Contractor shall prepare and submit a schematic drawing unique to an individual service. The approved drawing shall be laminated and placed in the document pocket of the service at the time of shipment to the job site. All applicable wiring diagrams and plan sheet layouts for all equipment and branch breaker circuits supplied by that service shall also be laminated and placed in the document pocket prior to shipping. Type AL enclosures for Type D and T services with enclosure mounted photocell and/or lighting contactor shall have the loadcenter interior mounted in an enclosure with properly adapted dead front trim. Types D and T shall not have a loadcenter exterior "can" mounted inside another enclosure meeting these specifications. (Do not put one enclosure inside another enclosure). Types D and T with enclosure mounted photocell and/or lighting contactor shall meet the additional requirements of this paragraph except that remote-operating handle will not be provided.

F. Type SS enclosures for Type A and C shall meet all the requirements above for their respective type AL. Type SS enclosures for D and T shall meet all the requirements above for their respective type AL. Stainless Steel shall not be painted.

G. PS enclosure shall be as detailed and specified on ED(8). Galvanized steel will not be allowed for any pedestal service. If GS is shown in the descriptive code an AL will be provided.

IX. Powder Coat Paint. Powder coating shall be either a polyester thermosetting resin, a zinc rich primer with a TGIC (triglycidyl isocyanurate) powder overcoating, or a zinc-rich epoxy powder, applied by either electrostatic spray or fluidized bed immersion, high temperature oven cured, high density, low gloss, 4 mil thick (minimum), coating. Adhesion shall meet the 5A or 5B classifications of ASTM D3359. Finish shall be uniform in appearance and free of scratches.

X. Main Disconnect. Main disconnect device shall be a circuit breaker, as specified in the Electrical Service Data, shall be two or three pole, and rated for the voltage and amperage specified. Circuit breaker shall be an UL Listed thermal-magnetic circuit breaker controlled by flange-mounted remote operator in the service assembly enclosure when required. Circuit breakers shall have a minimum interrupting rating of 10,000 Amps. When the utility company provides a transformer larger than 50 KVA, Contractor shall verify that the available fault current is less than the circuit breaker amps interrupting capacity (AIC) rating and shall provide documentation from the Utility to the Engineer. Documentation shall be submitted at the same time as other electrical submittals. Circuit breaker shall be UL Listed to UL489. No backfed breakers will be allowed for use as a main disconnect.

XI. Control Circuit. Control circuit protection shall be 15 amp circuit breaker.

XII. Control Station ("H-O-A" Switch). Control station shall be a maintained-contact, three position selector switch in an UL type enclosure. Switch shall be rated 600 volts and shall be fitted with "Hand-Off-Auto" legend.

XIII. Photo Electric Control. Photo electric control shall consist of a photocell, internal lightning arrester, and relay or bimetallic switch mounted inside a weatherproof enclosure with standard 3-prong twist lock photocell plug and receptacle. The enclosure shall be made of poly-acrylic with clear acrylic window. Enclosure chassis shall be molded thermosetting plastic. The photocell shall have a polyethylene gasket, and shall have a hermetically sealed cadmium sulfide cell. The arrester shall have an enclosed type expulsion arrester rated 2.0 kV sparkover with 5,000 amps follow-through. Relay or switch shall be time delay type with normally closed contacts. Photo electric control shall be rated a minimum of 1800 VA, voltage as required. Enclosure mounted photocells shall be the same as above except that the photocell shall be mounted inside the enclosure. The enclosure shall have two acrylic paned windows, or other material approved by the Engineer, one on each side of the enclosure. Each window shall be rectangular approximately one inch by two inches, round 2 inch diameter, or as otherwise approved by the Engineer. Bracket and photocell's receptacle will be mounted inside enclosure next to each window. Except for window side, 2" of clearance is required on all sides of photocell for ease of replacement. The photocell's receptacle is held in place by two mounting screws on bracket and located next to each window of the enclosure. The 3-prong twist lock photocell shall be mounted in a position to receive light from the window closest to the photocell. The photocell shall be mounted in a position to receive light from one window. Top of pole mounted photocells shall be mounted as shown on ED(4). The Contractor shall be responsible for proper operation of the photo-electric control. The Contractor shall move and/or adjust or shield the photocell from stray or ambient nighttime light or shall make any other adjustments required for proper operation. The photocell shall face North when practicable. Unless otherwise shown on the plans, the photocell shall turn on the illumination system at 1.0 +(-) 0.5 footcandle and turn off the illumination at two footcandles higher than turn on.

XIV. Lighting Contactor. Lighting contactor shall be a UL Listed NEMA rated lighting contactor, two-pole or multipole as required, electrically held type designed to control high pressure sodium lighting loads, with silver alloy double break contacts rated at 240 volts, 480 volts or 600 volts as required. Lighting contactor shall not be the DIN rail mounted type.

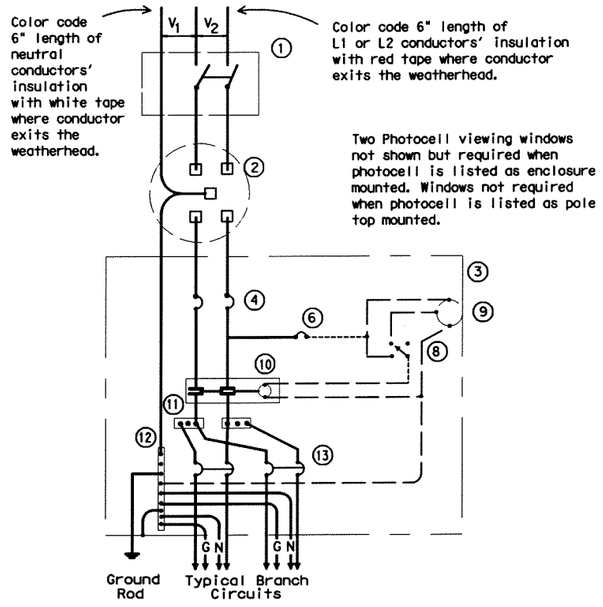
XV. Power Distribution Terminal Blocks. Power distribution terminal blocks shall be rated for 600 volts and shall be used for line side connections to branch circuit breakers where more than one circuit breaker is required. Lugs on blocks shall be properly sized for conductors being used. Only one conductor shall be placed under each lug.

XVI. Neutral/Ground Bus. Neutral/ground bus shall be a factory made bus permanently bonded to the enclosure with properly sized lugs for grounding and neutral conductors.

SCHEMATIC LEGEND

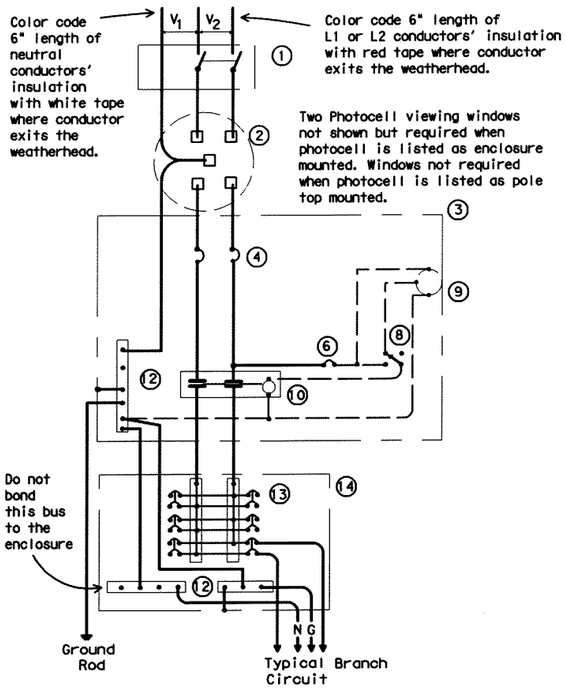
1 - Safety Switch (when required)
2 - Meter (when required)
3 - Service Assembly Enclosure
4 - Main Disconnect Breaker (See Electrical Service Data)
5 - Omit
6 - Circuit Breaker, 15Amp
7 - Auxiliary Enclosure
8 - Control Station ("H-O-A" Switch)
9 - Photo Electric Control (enclosure-mounted shown)
10 - Lighting Contactor
11 - Power Distribution Terminal Blocks
12 - Neutral/Ground Bus
13 - Branch Circuit Breaker (See Electrical Service Data)
14 - Circuit Breaker Panelboard (See Electrical Service Data)
(If Type C is shown as AL or SS on descriptive code, this is the service assembly enclosure only. Panelboard enclosure is GS unless otherwise noted.
15 - Load Center

——— Power Wiring
– — – — Control Wiring
——N—— Neutral Conductor (when required) serve 120 v. loads only)
——G—— Equipment grounding conductor-always required



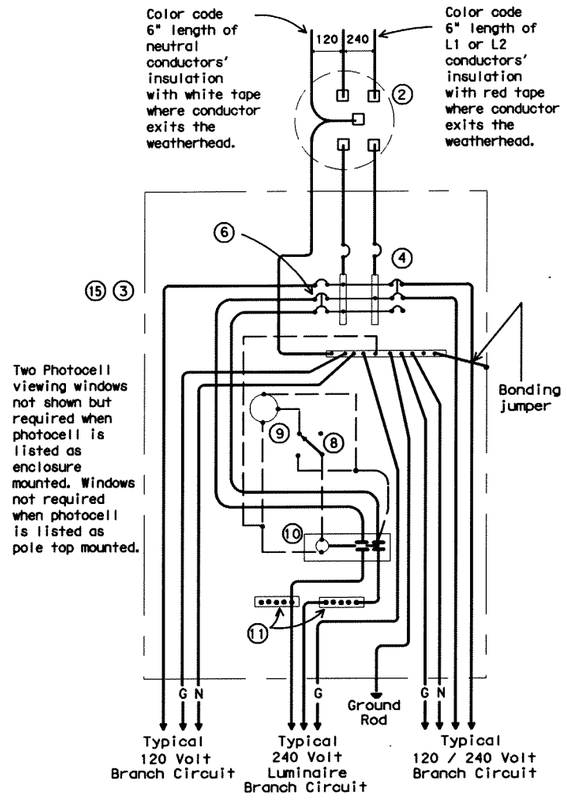
SCHEMATIC TYPE A
THREE WIRE

Maximum feeder circuit size (High Mast Poles): 100 amps for two pole 480V, 125 amps for one or two pole 120V or 240V. Maximum branch circuit size: 50 amps.



SCHEMATIC TYPE C
THREE WIRE

Maximum feeder circuit size (High Mast Poles): 100 amps for two pole 480V, 125 amps for one or two pole 120V or 240V. Maximum branch circuit size: 50 amps.



SCHEMATIC TYPE D
120/240 VOLTS - THREE WIRE

Install photocell and lighting contactor when shown on Electrical Service Data. See Type D service notes.

TYPE D SERVICE NOTES

Photocell and lighting contactor shall be located either in the same UL type 3R enclosure with load center or, if approved by Engineer, in separate enclosure. There shall be a window on each side of enclosure to allow operation of photocell. Both photocell contactor and breaker area shall have dead front trim. Enclosure, except for RT and PS supports, shall not exceed 36 inches in height or 16 inches in width unless approved by the Engineer. Ty D load center with lighting controls or TY D separate lighting control enclosure shall have power distribution blocks for a minimum of 4, #8 conductors per phase.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS- SERVICE ENCLOSURE & NOTES

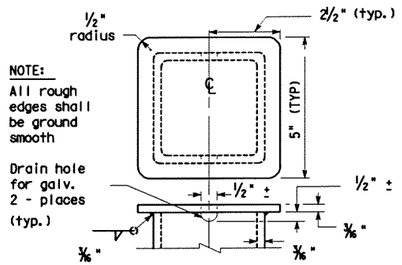
ED(5)-03

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REVISIONS 12-00 3-03	STATE DISTRICT DAL	FEDERAL AID PROJECT 6	(SEE TITLE SHEET)				SHEET 684
COUNTY ROCKWALL		CONTROL 0009	SECTION 12	JOB 203	HIGHWAY VA		

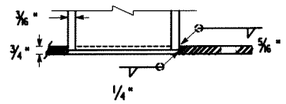
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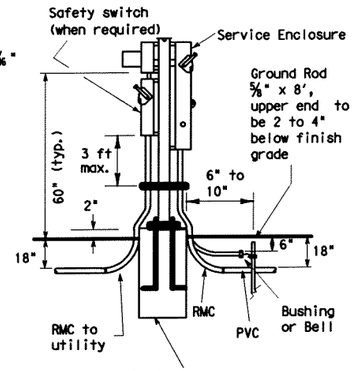


TOP OF POLE
TYPE SF & SP

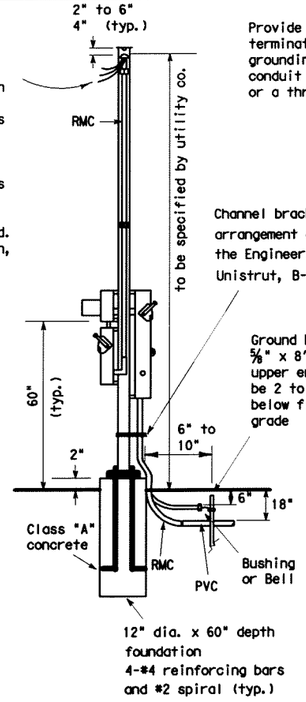


BOTTOM OF POLE
TYPE SF & SP

Color code 6" of grounded neutral conductors insulation with white tape where conductor exits the weatherhead. Color code 6" of L1 or L-2 Hot-ungrounded conductors insulation with red tape where conductor exits the weatherhead. Conductor free length, 12" min., 18" max.

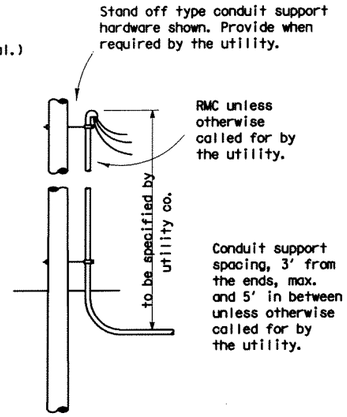


SERVICE SUPPORT
TYPE SP (U)
UNDERGROUND SERVICE
WITH SAFETY SWITCH

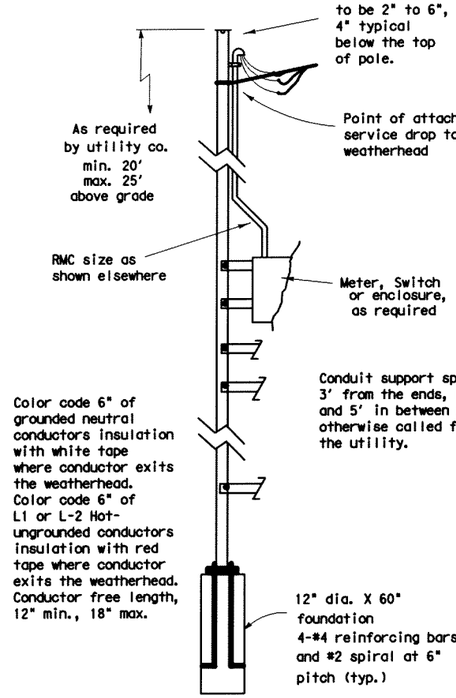


SERVICE SUPPORT
TYPE SP (O)
OVERHEAD SERVICE
WITH SAFETY SWITCH

Provide grounding bushings on all metal conduits, terminate bonding jumpers(min. #6 AWG. Copper) to grounding bus. Grounding bushing not required when conduit end is fitted with a conduit sealing hub or a threaded type of boss such as a meter hub.



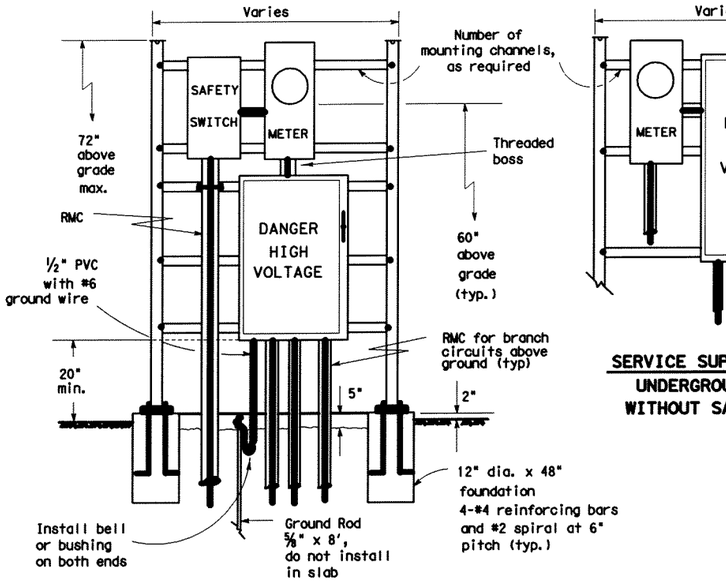
UNDERGROUND RISER
AT UTILITY POLE
(for underground service)



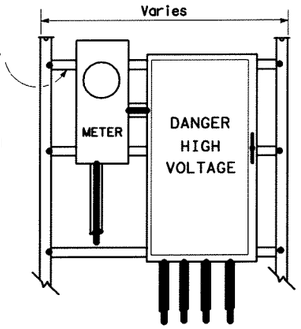
SERVICE SUPPORT TYPE SF (O)
OVERHEAD SERVICE

NOTES:

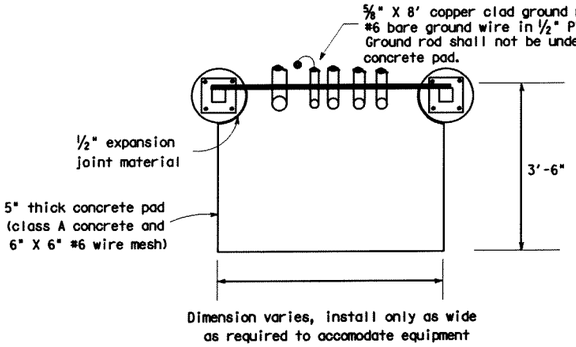
1. Support Type SP and SF: Fabricated from 4" x 4" x 3/16 " square structural tubing, ASTM A500 Grade A or G or equal. Base plate shall be 3/4 " plate, ASTM A36 or equal. All equipment and conduit shall be mounted on galvanized channel strut, 1 1/2 " x 1 5/8 " x 12 guage galvanized steel channel (Unistrut, Kindorf, B-line or equal) clamped with channel hardware, bolted or welded to vertical member as approved by the Engineer.
2. Paint field cut ends of all channels with zinc-rich paint.
3. All Steel Poles (SP and SF) shall be hot-dip galvanized after fabrication. Poles for overhead service shall be fitted with eyebolt or similar fitting, as approved by the utility company, for attachment of sevice drop to the pole.
4. All conduit and conductors attached to the electrical service and within 12 inches of the electrical service will not be paid for directly, but shall be subsidiary to the electrical service. All conduit and conductors from the utility company pole to the point 12 inches from the electrical service, including conduit and conductors required for the utility pole riser when furnished by the Contractor, will be paid for separately.
5. All mounting hardware and installation details of services shall be in accordance with utility company specifications.
6. Anchor bolts for underground service supports shall be 3/4" x 18" x 4" (dia. x length x hook length). Anchor bolts for overhead services shall be 3/4" x 56" x 4". Anchor bolts shall be provided with leveling nuts.
7. Conduit for grounding electrode conductor (ground rod wire) shall be 1/2" PVC. All other conduit on electrical services shall be rigid metal conduit. Service entrance conduit size shall be as shown elsewhere. Conduit for branch circuit entry to enclosure shall be the same size as that shown on the layout sheets for branch circuit conduit. Rigid metal conduit shall extend to the rigid metal elbow and then be coupled to the type conduit shown on the layout for that particular branch circuit. RMC shall have grounding bushings in enclosures.
8. If pole is painted, each separate painted piece shall have a bonding jumper attached to a tapped hole.
9. Sheet metal screws are not allowed for bonding. Provide 1/4-20 machine screws. Remove all non-conductive material at contact points. Terminate bonding jumper using listed device. Bonding jumper min. #6 AWG Copper. Make up all threaded bonding connections wrench tight.
10. Conduits entering enclosure from underground shall be sealed at both ends. Silicone sealant will not be allowed.
11. Ground rod clamp to be UL listed for direct burial.
12. Service entrance conductors shall exit separately bushed non-metallic openings in weatherhead.
13. Free conductor at weatherhead to be 12 in. min., 18 in. max., or as required by utility. Color code grounded-neutral conductor with white tape covering 6 in. of conductor. Color code L1 or L2 Hot un-grounded conductor with red tape covering 6 in. of conductor. Service drop and service entrance conductors must not contact metal pole in such a manner as to result in abrasion of insulated conductors.
14. Conduit support spacing to be max. 3 ft. from ends, and max. 5 ft. in between.
15. Shop drawings are not required for service support structure unless specifically stated elsewhere or as directed by the Engineer.
16. Service enclosure to be labeled as specified on ED(5) VIII C.
17. Liquidtight flexible metal conduit (LFMC) may be used between the meter and service enclosure when they are mounted 90 to 180 degrees to each other. LFMC shall be the same size as service entrance conduit. LFMC shall not exceed 3 ft. and shall be securely supported within one foot of each end. LFMC shorter then 12" need not be strapped. Each end of LFMC must have a grounding bushing or be terminated with a grounding fitting. A neutral conductor must be installed within the LFMC. Bend in LFMC shall not exceed 180 degrees.
    A pull test is required on all installed conductors, at least six inches of free conductor movement shall be demonstrated to the satisfaction of the Engineer.



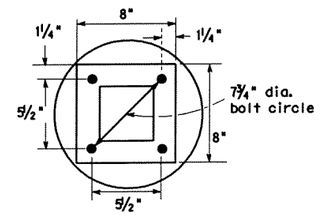
SERVICE SUPPORT TYPE SF (U)
UNDERGROUND SERVICE
WITH SAFETY SWITCH
(Typical Arrangement)



SERVICE SUPPORT TYPE SF (U)
UNDERGROUND SERVICE
WITHOUT SAFETY SWITCH



SERVICE SUPPORT TY SF (O) & SF (U)
TOP VIEW



BASE PLATE DETAIL
TYPE SF & SP

5/03 Revision
⚠ Revised notes.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS- SERVICE SUPPORT TYPES SF & SP

ED(6)-03

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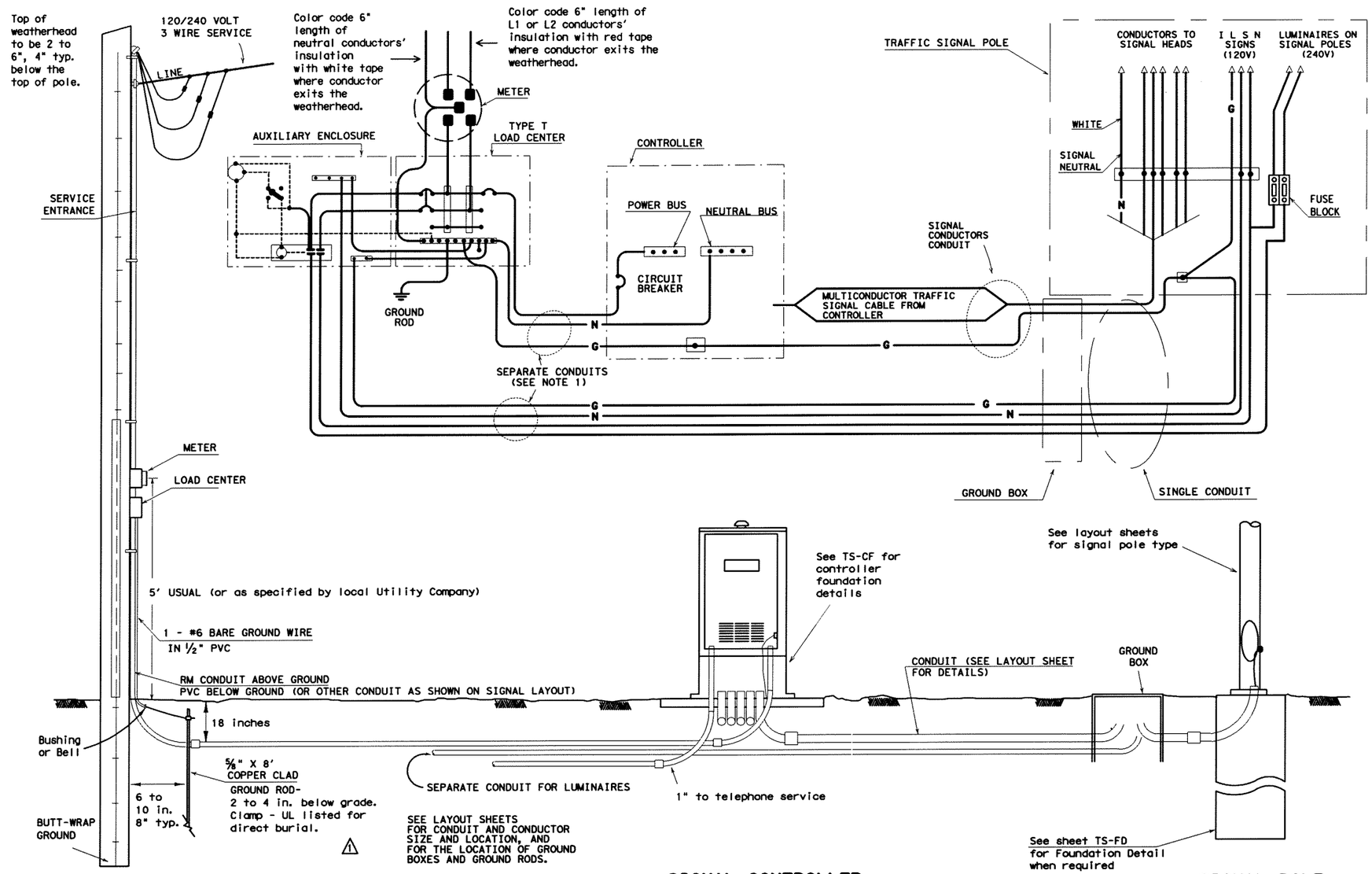
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4-98	DAL	6	(SEE TITLE SHEET)			685
12-00	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
3-03	ROCKWALL		0009	12	203	VA
5-03						

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FILE: ed58mplc/usr/d580504
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NOTES:

1. Luminaire conductors shall not be looped through controller cabinet.
2. Electrical system to include an equipment grounding conductor noted here as "G". All exposed metal parts are to be bonded to grounding conductor.
3. Photocell, when required, shall be mounted at top of pole or in enclosure as shown on ED(4) and ED(5) and as required by descriptive code.
4. Roadway lighting fixtures, when required, shall be in accordance with the material and construction methods of the Item, "Roadway Illumination Assemblies" except for the test period for proper operation of the luminaires. Installed roadway lighting luminaires and internally lighted street name signs shall be tested for proper operation as a part of the associated traffic signal system.
5. Internally lighted street name signs (ILSN), when required, shall be in accordance with the Item "Internally Lighted Street Name Signs". Because of the electrical isolation of ILSN hinges, a #12 green grounding conductor shall be run to the ILSN fixture.
6. Install ground rod at alternate location when directed by the Engineer. Maintain a minimum of 8 ft in contact with the earth.
7. Liquidtight flexible metal conduit (LFMC), may be used when meter and service enclosure are mounted 90 to 180 degrees to each other. LFMC shall be same size as service entrance conduit. LFMC shall not exceed 3 ft. and shall be securely supported within one foot of each end. No strap required for a LFMC shorter than 12". Each end of LFMC must have a grounding bushing or be terminated with a grounding fitting. A neutral conductor must be installed within the LFMC. Bend in liquidtight flexible metal conduit shall not exceed 180 degrees.
8. Minimum embedment depth as per Item 627 Treated Timber Poles.
9. Pole to be set plumb.
10. Back fill thoroughly tamped in 6 in. lifts. Place 6 inches additional backfill above grade around pole base to allow for settling, as per Item 627.
11. Excess pole length shall be trimmed from the top at a slope to aid water run off.
12. Gain pole two places for each meter, service, separate or auxiliary enclosure. See ED(4) for details.
13. All illumination and power conductors to be pull tested and megged. Do not meg traffic signal cable.
14. Enclosures are to be locked, and ground box covers are to be bolted before power is applied to the circuit.
15. Conduits entering top of enclosures to be fitted with conduit sealing hub or threaded boss, such as meter hub. Off-set nipple, when required, shall not be zinc-die-pressure cast. All metal conduits not connected to conduit sealing hub, or threaded boss must have a grounding bushing. Terminate bonding jumper to ground bus. All conduits entering enclosures shall be sealed. Silicone shall not be allowed.



ELECTRICAL SERVICE

(TYPE T TIMBER POLE SHOWN AS EXAMPLE, SEE ELECTRICAL DETAILS, LAYOUT SHEETS, AND ELECTRICAL SERVICE DATA SHEET FOR SERVICE REQUIRED AND FOR DETAILS.)

SIGNAL CONTROLLER

SIGNAL POLE

Unless shown elsewhere in the plans, electrical service data for Types D and T shall be as follows.

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE DESCRIPTION(SEE ED(4))	SERVICE CONDUIT SIZE (RMC)	SERVICE CONDUCTORS NO./SIZE	SAFETY SWITCH AMPS	MAIN DISCONNECT CKT. BRK. POLE/AMP	TWO-POLE CONTACTOR AMPS ***	PANELBD./ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	BRANCH CKT. BRK. POLE/AMPS	KVA LOAD
TY D (120/240)070(NS)AL(E)**(*)	1¼ ⚠1	3/#4	N/A	2P/70	30	100	T.S. Lighting	1P/50 2P/15	<7.1
TY T (120/240)000(NS)GS(E)**(*)	1¼ ⚠1	3/#4	N/A	None	30	70	T.S. Lighting	1P/50 2P/15	<7.1

*** Eliminate photocell, contactor and seperate enclosure if lighting, or internally lighted signs are not required by plans
** See descriptive code in estimate for service support type.
* See descriptive code in estimate for overhead or underground service.

5/03 Revision
⚠1 Revised notes.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS- TYPICAL TRAFFIC SIGNAL SYSTEM DETAILS

ED(7)-03

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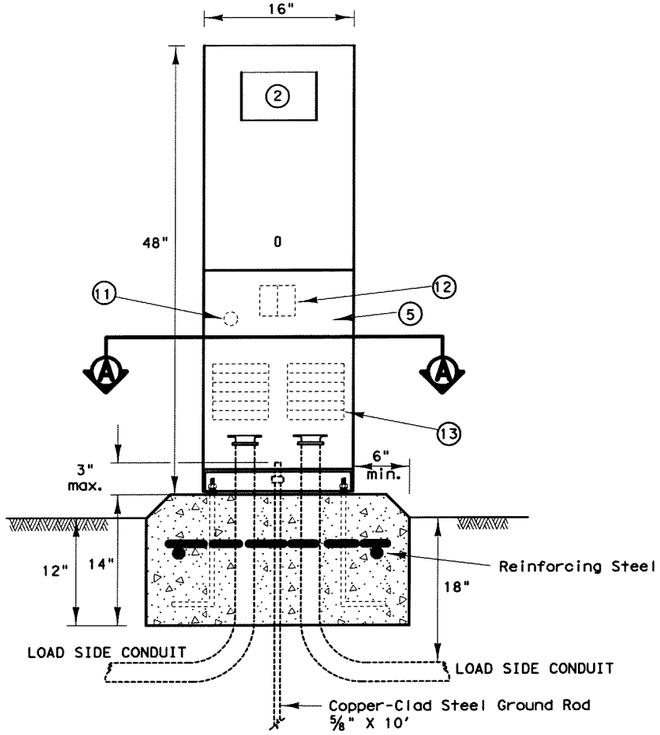
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4-98	DAL	6	(SEE TITLE SHEET)	686
12-00	COUNTY		CONTROL SECTION JOB	HIGHWAY
3-03	ROCKWALL		0009 12 203	VA
5-03				

LEVELS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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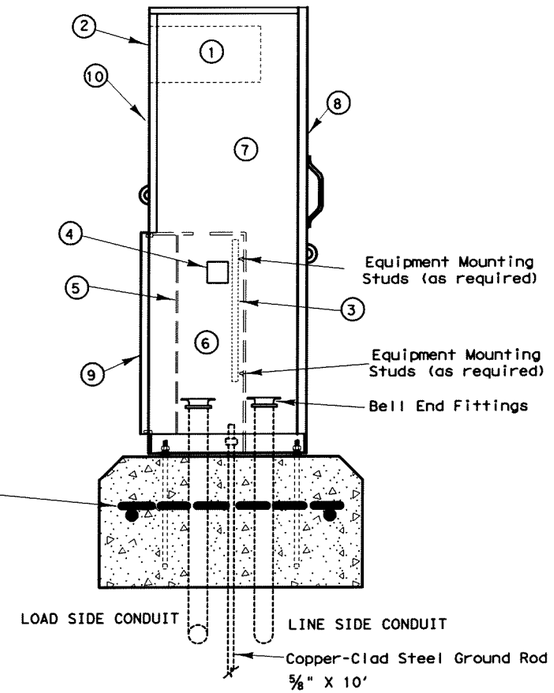
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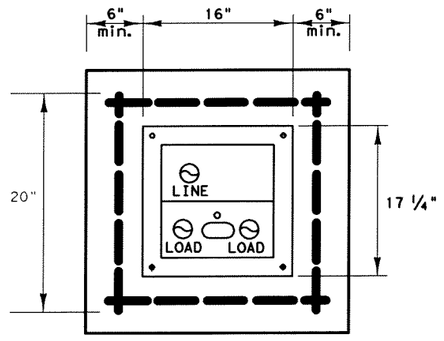
Note: Ells in foundation are rigid metal, size called for on the plans. Extension conduits from these ells may be PVC, provided ends of rigid metal conduits are more than 2 in. below top of concrete foundation. Where extension conduits are metal, grounding bushing must be installed and a bonding jumper properly terminated.

FRONT VIEW

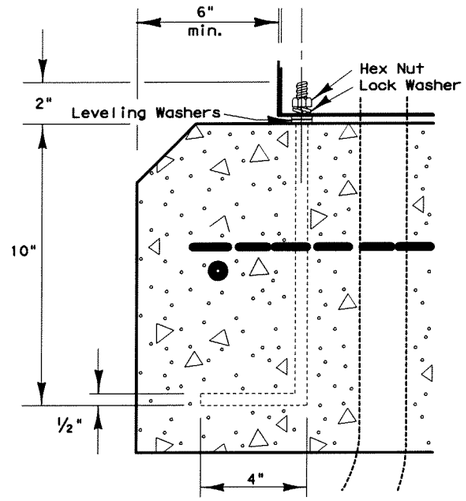
Ty C shown, Ty A similar except that Ty A shall have individual circuit breakers mounted on a equipment mounting panel. CB Handles shall protrude through hinged deadfront trim.



SIDE VIEW



SECTION A-A



ANCHOR BOLT DETAIL

GENERAL NOTES

1. The pedestal service shall be UL type 3R, and shall be constructed of a minimum of 12 guage stainless steel or aluminum as required by descriptive code. Stainless steel shall not be painted. For aluminum, the finish shall be an electrostatic applied poly-urethane baked on powder, light green in color, or color as shown elsewhere and as approved by the Engineer. The front of the interior dead front trim shall be permanently labeled, "Danger High Voltage" with OSHA style label. The exterior of the pedestal service door shall be permanently labeled with a placard as to its use (i.e. Roadway Lighting, Traffic Signals, etc.). Placard shall be neat and professional in appearance. Lettering shall be 1" minimum height.
2. Utility Access Door shall have stainless steel piano hinge and provisions for padlocking.
3. Pedestal door shall have stainless steel piano hinge and stainless steel latch with provisions for padlocking.
4. Meter Access shall be hinged and capable of padlocking.
5. All mounting hardware and installation details of services shall be in accordance with utility company specifications. The Contractor is responsible for contacting the local utility company and obtaining their approval of pedestal details prior to making submittal to the Department and prior to constructing the electrical pedestal service. Any changes required by the utility company shall be noted on the submittals.
6. Meter Socket shall be a minimum of 100 amp rating and shall comply with the local utility requirements.
7. Photoelectric Control shall meet the requirements as shown on ED(5). Shield to control stray light is allowable. The Contractor shall be responsible for proper operation of the photo-electric control. The Contractor shall move and/or adjust or shield the photocell from stray or ambient nighttime light or shall make any other adjustments required for proper operation. The photocell shall face North when practicable. Unless otherwise shown on the plans, the photocell shall turn on the illumination system at 1.0 +(-) 0.5 foot-candle and turn off the illumination system at two footcandles higher than turn on.
8. The Control Station (H-O-A Switch) shall be as shown on ED(5) except that H-O-A Switch operating handle shall protrude through hinged deadfront trim and NEMA 1 enclosure will not be required.
9. Concrete for pedestal service foundation shall be class A or C and shall be in accordance with Item 420, "CONCRETE STRUCTURES", except that concrete will not be paid for directly but shall be considered subsidiary to Item 628, "ELECTRICAL SERVICES".
10. Reinforcing steel shall be #4 rebar in accordance with Item 440, "REINFORCING STEEL".
11. Anchor bolts shall be A36M55 in accordance with Item 449, "ANCHOR BOLTS". Anchor bolts shall be 1/2 inch x 12 inches x 4 inches (dia. x length x hook length).
12. All conduit and conductors attached to the pedestal service and within 12 inches of the pedestal service will not be paid for directly, but shall be subsidiary to the pedestal service. All service conduit and conductors from the utility company transformer to a point 12 inches from the pedestal service shall be paid for separately. Service conduit shall be the size and type as shown in the Electrical Service Data.
13. Dimensions may vary to accomodate required equipment, utility company requirements, or manufacturer's standard equipment dimensions. The Contractor shall submit to the Engineer for approval, six (6) copies of brochures and/or drawings of the pedestal service to be supplied, including actual dimensions, and a paint color sample.
14. A separate enclosure as shown on ED(4) or ED(5) for photocell shall not be used for pedestal services. Photocell shall be installed as shown here.
15. The pedestal door shall have a mechanically attached data pocket on the inside. Pocket shall be either metal or thermoplastic and shall measure at least 12 inches by 12 inches. The Contractor shall prepare and submit a schematic drawing unique to an individual service. The approved drawing shall be laminated and placed in the document pocket of the service at the time of shipment to the job site. All applicable wiring diagrams and plan sheet layouts for all equipment and branch breaker circuits supplied by that service shall also be laminated and placed in the document pocket prior to shipping.
16. ⚠ Ground rod clamp to be UL listed for direct burial. All non-conductive coating to be removed from ground rod at clamp location. Ground rod wire to be #6 AWG solid copper. Metal conduit ells to have grounding bushing and bonding jumpers correctly installed.
17. All conduits entering enclosures from underground must be sealed. Silicone shall not be allowed.
18. All conductors shall be megged and pull tested. Traffic signal cable not to be megged after connection, as electronics will be damaged.
19. Top of concrete foundation to be finished in a neat and workman like manner. If leveling washers are used, no more than 1/8 in. height shall be used at any one corner. Maximum dip or rise in foundation is not to exceed 1/8 in per foot. When properly installed, top of service enclosure shall read level front to back and side to side within 1/4 in. Rocking or movement of the service enclosure shall be repaired by the contractor at no cost to the state.
20. Liquidtight flexible metal conduit shall not be allowed on PS type services.

LEGEND

1. METER SOCKET, (when required)
2. METER SOCKET WINDOW, (when required)
3. EQUIPMENT MOUNTING PANEL
4. PHOTO ELECTRIC CONTROL WINDOW, (when required)
5. HINGED DEADFRONT TRIM
6. LOAD SIDE CONDUIT AREA
7. LINE SIDE CONDUIT AREA
8. UTILITY ACCESS DOOR, with handle
9. PEDESTAL DOOR
10. HINGED METER ACCESS
11. CONTROL STATION (H-O-A Switch)
12. MAIN DISCONNECT
13. BRANCH CIRCUIT BREAKERS

5/03 Revision

⚠ Revised notes.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS
ELECTRICAL SERVICE SUPPORT
PEDESTAL SERVICE TYPE PS

ED(8)-03

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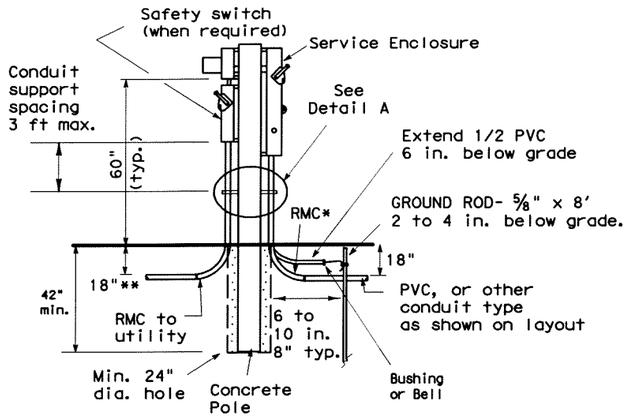
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12-00 3-03 5-03	DAL	6	(SEE TITLE SHEET)	687

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0009	12	203	VA

LEVELS
ED 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 628 63

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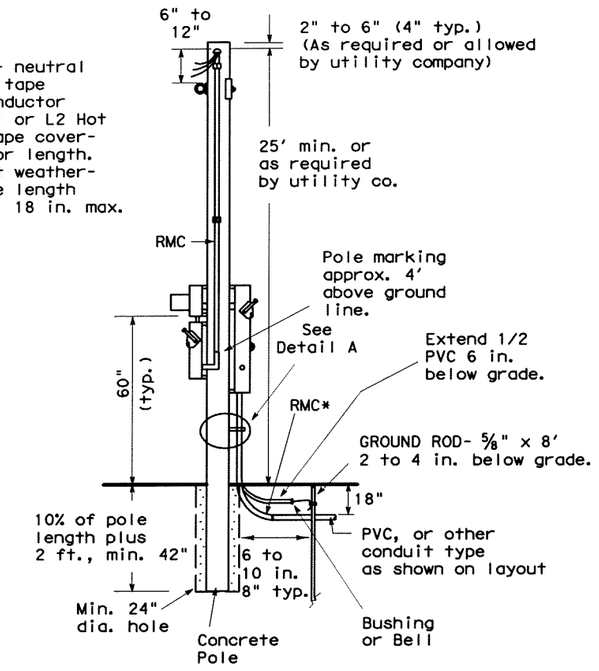
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CONCRETE SERVICE SUPPORT

(Underground)

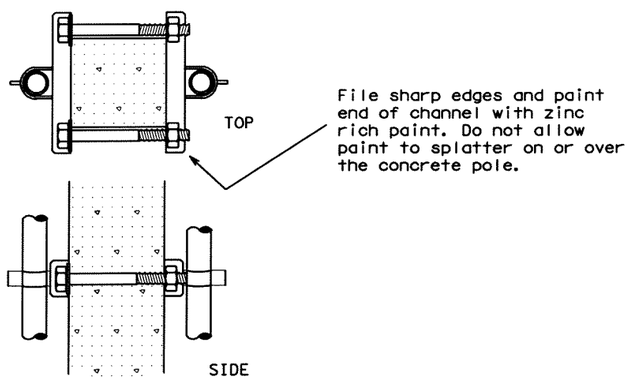
Color code grounded - neutral conductor with white tape covering 6 in. of conductor length. Color code L1 or L2 Hot conductor with red tape covering 6 in. of conductor length. Where conductors exit weatherhead, conductors free length shall be 12 in. min., 18 in. max.



CONCRETE SERVICE SUPPORT

(Overhead)

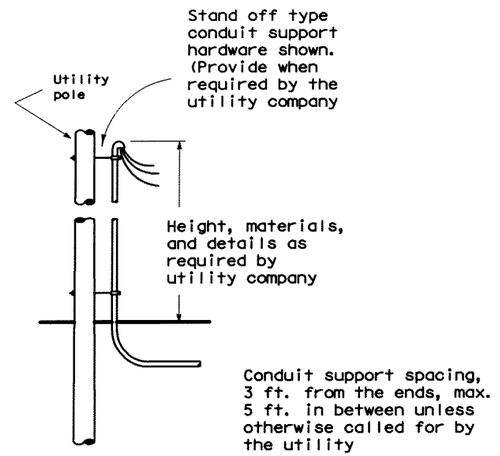
*same size as branch circuit conduit shown on layout sheets.
** or as required by utility company.



DETAIL A

Channel bracket or other arrangement approved by the Engineer. (Kindorf, Unistrut, B-line or equal)

Note: Attach channels with stainless steel concrete anchors (max. 1" depth), square U-bolts or back to back channel with long bolts, or other secure mounting as approved by the Engineer. Bolts galvanized in accordance with ASTM A153. Channel shall be galvanized.



UTILITY POLE CONNECTIONS

(When underground service is required by descriptive code and utility is overhead.)

NOTES:

Electrical service support structures bid as type GC or OC shall be concrete poles and shall meet the following specifications.

1. Poles shall be prestressed concrete and suitable for direct embedment into the ground without special foundations.
2. Poles bid as type "GC" shall be a granite concrete mixture consisting of gray Portland cement with exposed pink granite aggregate. Poles bid as type "OC" shall be other concrete mixture as shown elsewhere on the plans or as directed by the Engineer.
3. Poles greater than 10 ' shall be square in cross-section, with chamfered corners, and shall have a standard taper of 0.162 inch per foot. Cross sectional dimensions shall not deviate by more than 3/8 inch. Poles 10' or less may be tapered .162"/ft or may be non-tapered. The allowable tolerance shall be plus 3 inches and -2 inches in the overall length. The width of the bottom face of the pole as it is cast may be less than the top face. All small cavities shall be cleaned, saturated with water and then filled with mortar. A small cavity is defined as one larger than 1/4 inch but smaller than 3/4 inch in diameter, and less than 3/8 inch deep. Larger non-structural cavities and spalls shall be repaired by opening side of the damaged area on a 1 to 1 slope using a mechanical grinder, cleaning thoroughly and filling with a high-strength non-shrink concrete repair material. Poles with other defects may be repaired only upon authorization of and using the method prescribed by the Engineer.
4. The end of each steel reinforcing strand in the tip and butt shall be burned back to a minimum depth of 1/2 inch. The holes left by the removal of the strand shall be thoroughly cleaned of any loose residue. The holes shall then be completely filled with non-shrink grout and smoothed evenly with tip or butt surface.
5. Prestressing strands shall have a minimum concrete cover of 1 1/4 inch.
6. A straight line joining the edge of the pole at the butt and the edge of the pole at the top shall not be distant from the surface of the pole at any point by more than 3/8 inch for each 10 feet of length.
7. The chloride content of the concrete mix, including all ingredients shall be 0.4 pounds per cubic yard, or less.
8. Concrete used in poles shall have a compressive strength at transfer of not less than 4,000 PSI, and a 28-day compressive strength of not less than 7,000 PSI.
9. Materials shall comply with the latest version of the following standards:
   a) Portland Cement - ASTM C105
   b) Admixtures - ASTM C494
   c) Aggregates - ASTM C33 or C330
   d) Reinforcing Bars - ASTM A615
   e) Cold-Drawn Spiral Wire - ASTM A82
   f) Prestressing Strand, 270K - ASTM A416
10. Poles greater than 10' shall have a 4 inch tip and 3/8 inch strands. Poles 10' or less shall have a 5 inch min. tip and 3/8 inch strands. Pole shall have a load capacity of greater than 1188 lbs. applied 2 ft. below tip.
11. Poles shall be capable of withstanding single point pick up from the horizontal position when lifting from a point 30% of the overall length down from the tip.
12. All poles shall be marked by imprinting on one face. Marking shall indicate manufacturer's name, year of manufacture, length and name or type of pole. Marking shall be located approximately 4 ft. above ground line.
13. Dunnage points, two-point pickup locations for handling pole in horizontal position, and one-point pickup locations for use in raising the pole to a vertical position and handling in setting operation shall be marked on the pole with durable ink or paint or cast into the pole. These marks shall be small but conspicuous.
14. Poles shall be embedded 42 inches or 10% of length plus 2 ft. into the ground whichever is greater.
15. When required by utility company for overhead services, poles longer than 10 feet shall have a #6 solid ground wire running the entire length exiting within 6 inches from the top and bottom of the pole. The Contractor shall connect the bottom to a butt wrap or butt plate grounding device.
16. All conduit and conductors attached to the service support and within 12 inches of the service support will not be paid for directly, but shall be subsidiary to the electrical service. All conduit and conductors from the utility company pole to a point 12 inches from the service support, including conduit and conductors required for the utility pole riser when furnished by the Contractor, will be paid for separately.
17. All mounting hardware and installation details of services shall be in accordance with utility company specifications.
18. All conduit on service supports shall be rigid metal conduit except the conduit for grounding electrode conductor (ground rod wire) shall be 1/2 inch PVC. Service entrance conduit size shall be as shown elsewhere. Conduit for branch circuit entry to enclosure shall be the same size as that shown on the layout sheets for branch circuit conduit. Rigid metal conduit shall extend a minimum of six inches underground and then coupled to the type conduit shown on the layout for that particular branch circuit. RMC shall have grounding bushings in enclosures.
19. Backfill shall be in accordance with Item 400 except for measurement and payment. Backfilling will not be paid for directly but shall be subsidiary to the various bid items.
20. Liquid tight flexible metal conduit (LFMC), may be used when meter and service enclosure are mounted 90 to 180 degrees to each other. LFMC shall not exceed 3 ft. and shall be securely supported within one ft. of each end. Each end of LFMC must have a grounding bushing or be terminated with a grounding fitting. A neutral conductor must be installed within the LFMC. Bend in LFMC shall not exceed 180 degrees. LFMC may not be installed on utility company owned poles. A pull test is required on all installed conductors, at least six inches of free conductor movement shall be demonstrated to the satisfaction of the Engineer.
21. Contractor may order concrete service support structures with 3/4" hole near top of pole for eye bolt type bracket. Eye bolt bracket may be installed as means of overhead service drop anchoring point by utility. Pole may also be center drilled in the field for installation of eye bolt bracket. When used, install bracket 6" to 12" below weatherhead.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS- SERVICE SUPPORT TYPES GC AND OC

ED(9)-03

©TxDOT April 1998	BM-KB	CK-JW	DW-DN	CK-GC	HES NO.
REVISIONS 12-00 3-03	STATE DISTRICT: DAL	FEDERAL REGION: 6	FEDERAL AID PROJECT: (SEE TITLE SHEET)		SHEET: 688
	COUNTY: ROCKWALL	CONTROL: 0009	SECTION: 12	JOB: 203	HIGHWAY: VA

DN: CK: DW: CK:
DATE: ACC: FILE:
LEVELS

I. DUCT CABLE

A. Duct cable shall be placed by the open trench method at a minimum depth of 18 inches. Bends in duct cable shall be made in the manner recommended by the manufacturer; minimum bending radius shall be 20 inches for 1 1/2 inch duct and 26 inches for 2 inch duct. Unless otherwise approved by the Engineer in writing, duct cable shall be 2 inch diameter. Handling of duct cable reels and installation of duct shall be as recommended by the manufacturer. Duct for duct cable is designed as a conduit system and shall be considered as such in NEC interpretations. Conductors shall not be spliced within a duct. Duct entering a ground box or foundation shall be coupled to a RMC elbow.

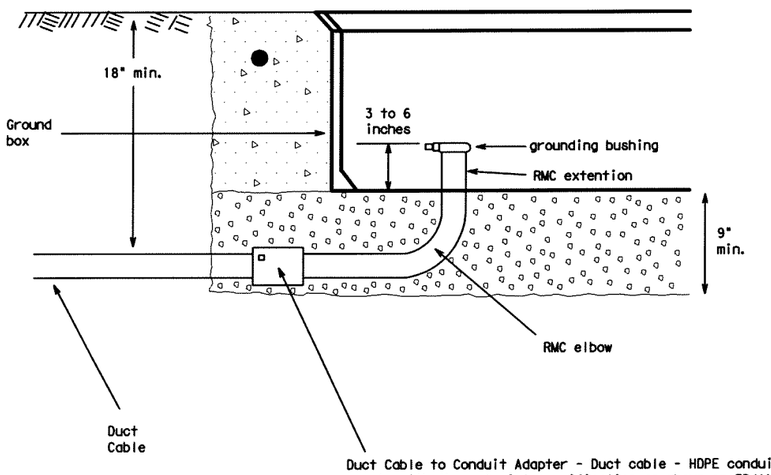
B. Duct cable shall have factory installed conductors. AWG size of electrical conductors shall be as called for in the plans or as required by the National Electrical Code. Conduit bid as High Density Polyethylene (HDPE) conduit shall meet the requirements of duct cable except that the conduit shall be supplied without factory installed conductors. HDPE conduit may be substituted for duct cable. After HDPE conduit is installed, conductors shall be installed. AWG size of electrical conductors shall be as called for in the plans.

C. Duct cable shall be extended through conduit casings in one continuous length without connection to the casing.

D. After duct cable has been installed, a pull test will be made on conductors. If conductors cannot be freely pulled, Contractor shall replace or otherwise adjust installation to free up the conductors. Duct cable ends shall be sealed with foam electrical conduit sealant or with heat-shrinking material after pull test is completed.

E. Sufficient clearance shall be left between each conduit ell so the bonding bushings may be correctly installed. Conduit cover is shown as 18 inches minimum, where run under a road, the minimum cover requirement is 24 inches.

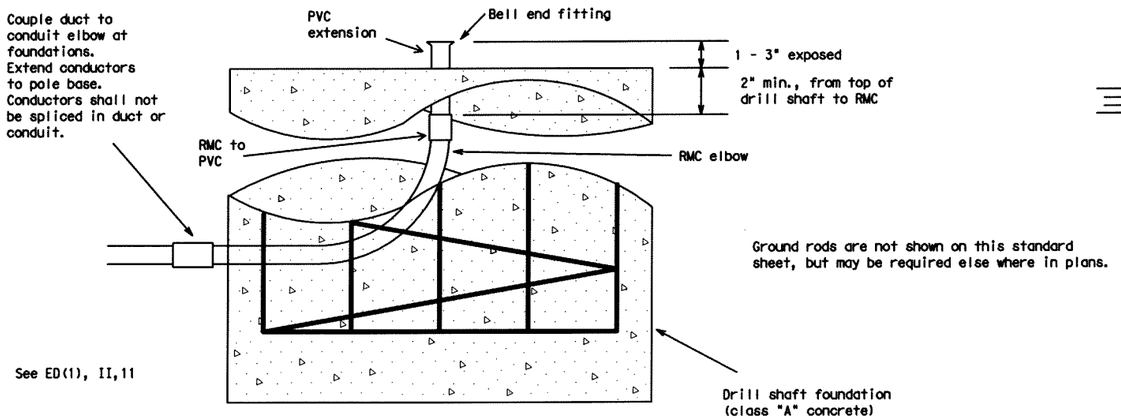
F. All duct splices shall be by means of UL listed fittings, threaded duct with PVC threaded connector or UL listed tiewrap fitting or central Fusamatic electrically heated fusing conduit coupling installed in accordance with the manufacturer's instructions and approved by the Engineer. Glue on connectors, water pipefittings and heat shrink tubing splices will not be allowed.



When the upper end of an RMC Ell does not enter the ground box, it may be extended with a Sch-40 PVC conduit nipple and bell end, provided there is 18" of cover over all parts of the elbow. If not, a rigid extension and ground bushing is required.

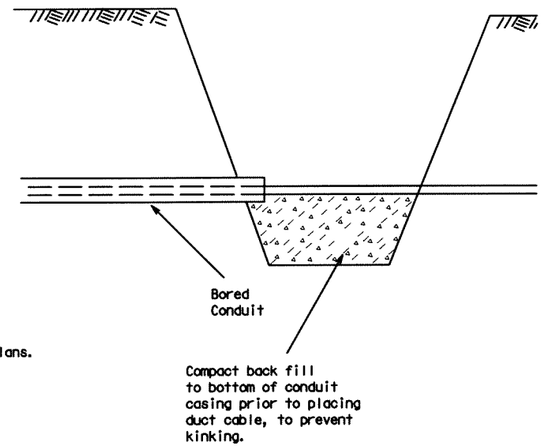
Gravel bed is to be a min. of 9 inches deep, placed under and not in the ground box. Gravel shall not encroach into the interior of the box.

DUCT CABLE AT GROUND BOX

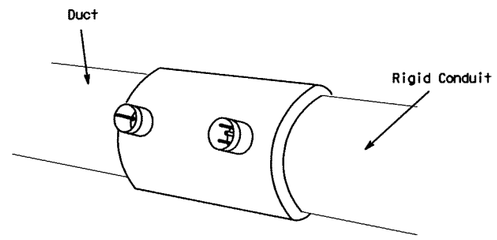


Ground rods are not shown on this standard sheet, but may be required else where in plans.

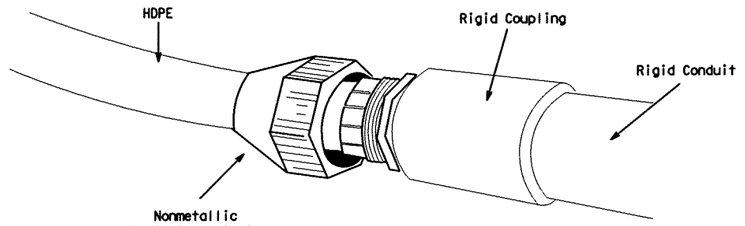
DUCT CABLE AT FOUNDATION



BORE PIT DETAIL



Central Fuseamatic
Electrically Heated Fusing
Conduit Coupling



EXAMPLES OF PROPER CONNECTIONS

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LEVELS D
1 2 3 4 5 6 7 8 9
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS- DUCT CABLE

ED(10)-03

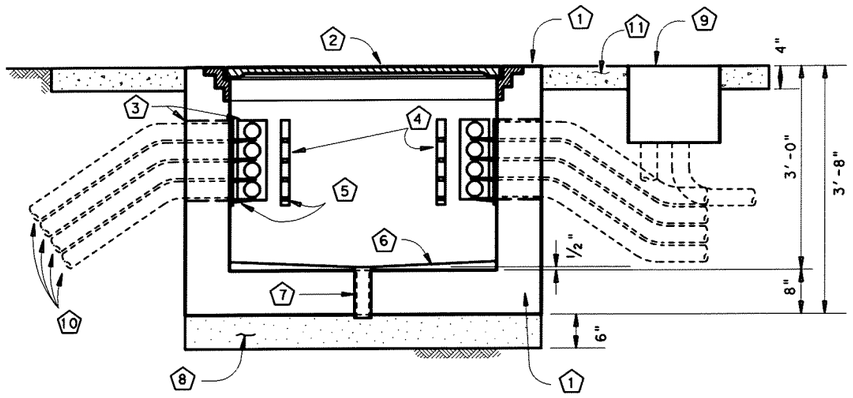
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BM- KB	CK- JW	DW- DN	CK- GC	MES NO.:

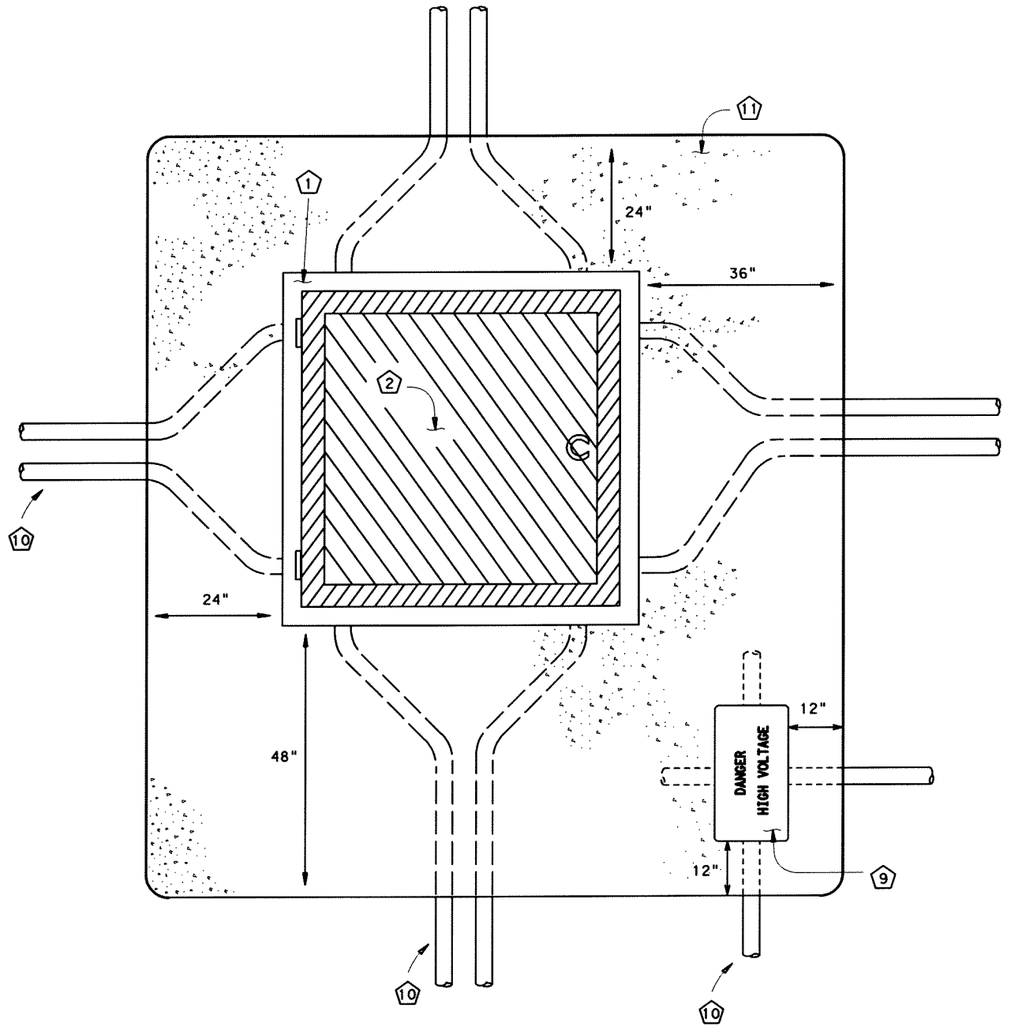
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12-00 3-03	DAL	6	(SEE TITLE SHEET)	689

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0009	12	203	VA

DISCLAIMER
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TYPICAL VERTICAL SECTION



TYPICAL PLAN VIEW

1. Concrete ground box Type J - shall be 48" by 48" inside dimension and shall have AASHTO HS 20 wheel loading structural design. Fabricator shall submit shop drawings sealed by a Texas Licensed Structural Engineer. Shop drawings and calculations shall be for the box and lid as a unit.
2. Lid and ring shall be cast from Gray Iron in accordance with AASHTO M306, and shall be suitable for HS 20 loading or better. Proof-load testing certification in accordance with AASHTO M 306 shall be submitted. Lid shall have type T hinges and type G handles, and shall have a safety device to prevent accidental closing once the lid has been opened. Lid shall be cast with "TxDOT CONNUMICATIONS" in one inch lettering on top. Lid and ring shall be supplied together, and shall have no sharp edges. Shop drawings shall be submitted. (Neenah Foundry R-6662-TH, or equal.)
3. 18" by 9" knockout in concrete
4. Cable rack - Joslyn J5124, Chance C203-1124 or equivalent
5. Cable rach hooks - Joslyn J5131A, Chance C203-1131 or equivalent
6. Concrete drain invert, ½" pitch from center to walls
7. 3" drain
8. Filter material - Grade 3 aggregate or finer. See ITEM 302
9. RPM ground box, as called for in layouts, for electrical power conductors and traffic signal cables. See ED(3) for ground box details
10. Conduits (See layouts for number, details, specifications, and sizes)
11. Concrete riprap apron, Bid as ITEM 432. 1 cubic yard minimum

GENERAL NOTES

1) Illumination, traffic signal and other conductors carrying full voltages (50 volts or greater) shall not enter the communications ground box, but shall be run into an adjacent RPM ground box, as shown in the detail.
2) Conductors in the Type J ground box shall be laid on the racks and secured in place with plastic ties. At no time shall any conductor be run through the center of the box. Contractor shall arrange conduit runs so cables shall enter and exit the box without violating the required bend radius or running throught the center of the box.
3) Riprap shown is the minimum required. Riprap shall extend to protect all conduits with less than the minimum allowed ground cover.
4) Conduits shall not extend inside the box more than 1", including the required bell end fitting or bushing. Conduits shall be securely grounted in place with Portland cement completely filling the knockout window around the conduits.
5) Rigrap and boxes shall be cast flat with a maximum slope of 0.25% (3" over 10').
6) Payment - concrete ground box Type J shall be bid as ITEM 628. RPM ground box and riprap shall be bid separately.

DISPLAYED ACC:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

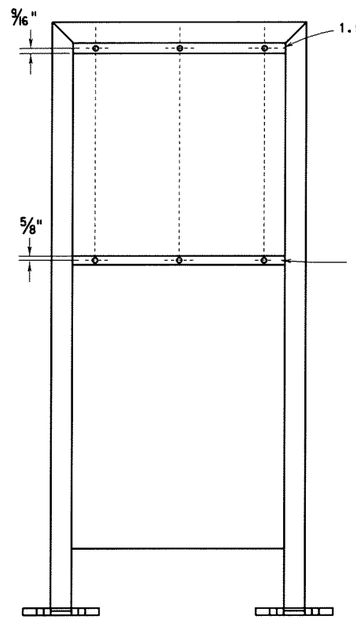
Texas Department of Transportation
Traffic Operations Division

CONCRETE GROUND BOX (TYPE J) FOR TRAFFIC MANAGEMENT SYSTEMS

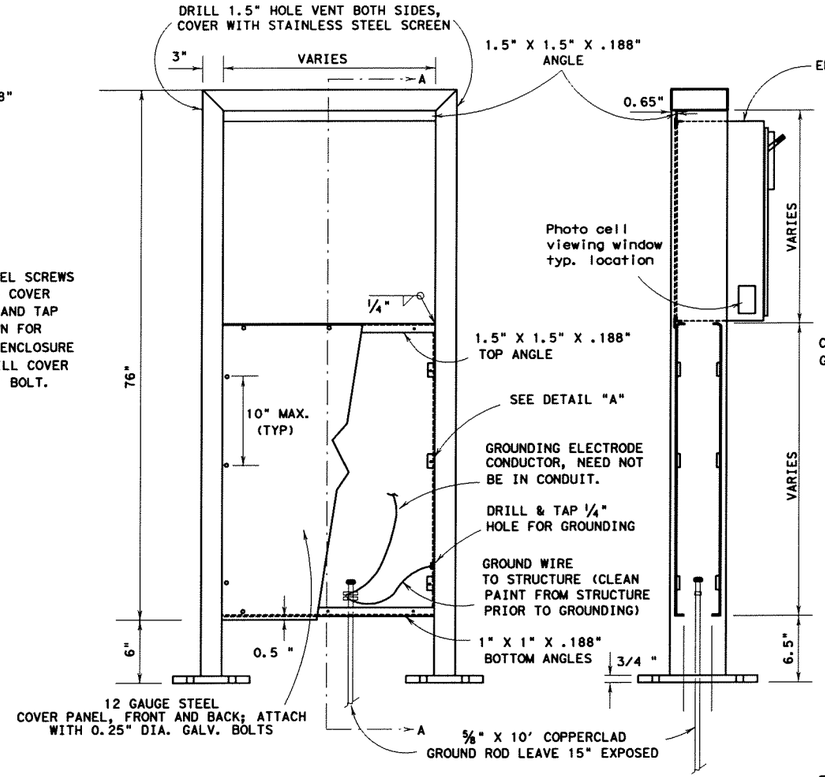
ED(11)-03

©TxDOT July 2000		DN-JM	CK-	DW-DN	CK-JM	MSS NO.:
REVISIONS 9-00 12-00 3-03	STATE DISTRICT	COUNTY DESIGN	FEDERAL AID PROJECT			SHEET
	DAL	6	(SEE TITLE SHEET)			690
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0009	12	203	VA

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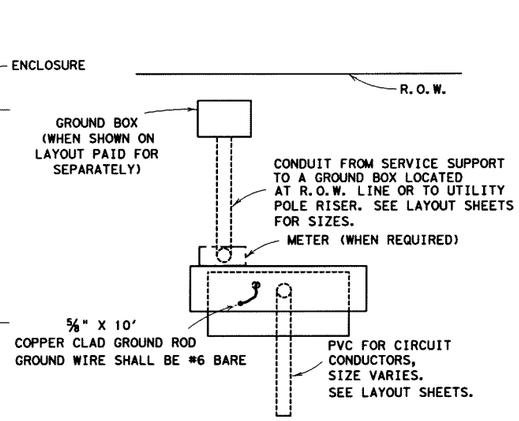


BACK ELEVATION VIEW

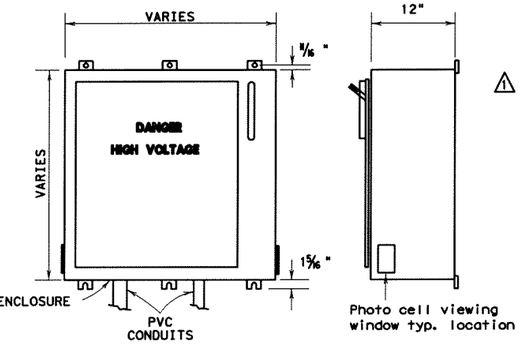


FRONT ELEVATION VIEW

SECTION A-A



PLAN VIEW



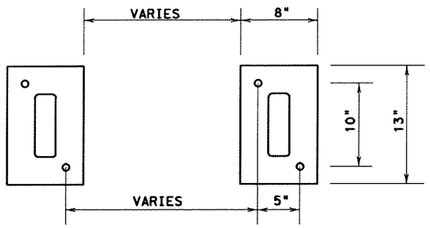
FRONT

RIGHT SIDE

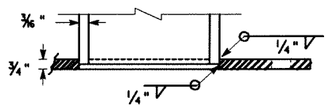
ENCLOSURE

GENERAL NOTES:

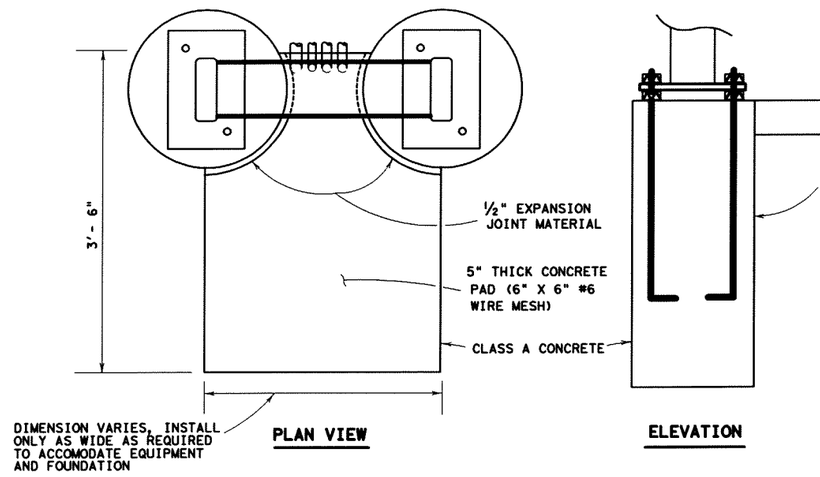
1. Structure shall be designed in accordance with latest issue of AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS." Structures shall be designed for 80 mph wind load with 1.3 gust factor. Shop drawings shall include ASTM material designations. Shop drawings shall be submitted for the electrical service support in accordance with Item 441, "STEEL STRUCTURES." Catalog cut sheets shall be submitted for the enclosure and equipment.
2. The structure shall be galvanized. Twelve gauge sheet covers and enclosure may be made from pre-galvanized sheeting. When shown elsewhere on the plans, structure and outside of enclosure may be painted in lieu of galvanizing.
3. Structure mounting dimensions may vary to match enclosure provided.
4. All conduit and conductors attached to the electrical service and within 12" of the electrical service will not be paid for directly, but shall be subsidiary to the electrical service. All conduit and conductors from the utility company pole to a point 12" from the electrical service, including conduit and conductors required for the utility pole riser, when furnished by the Contractor, will be paid for separately.
5. All conduits entering enclosures from underground to be sealed. Silicone will not be allowed.
6. All PVC conduits to be fitted with a bell end or bushing.
7. Support structure to be bonded to the ground rod using a #6 AWG Copper Bonding jumper to be terminated with a listed eyelet type connector connected to a 1/4-20 SS machine screw-bolt. Sheet metal screws will not be allowed for bonding. All threaded bonding connections shall be made up wrench tight. All non- conductive materials to be removed from contact surfaces.
8. Service enclosures to be labeled and stecilled see ED(5) VIII C.
9. ⚠ Ground rod clamp to be UL listed for direct burial.
10. Photo cell viewing window location on each side of the service enclosure to be clear of obstruction and provide a clear line of sight view and allow for the proper light level sensing by the photo cell.
11. Liquidtight flexible metal conduit may not be used on type RT(U) service supports.



BASE PLAN VIEW



BOTTOM OF POLE



PLAN VIEW

ELEVATION

DETAIL A

FOUNDATION

STRUCTURE DATA	
TUBULAR POLE MEMBER SIZE	ANCHOR BOLTS DIA. X LENGTH X HOOK
8" X 3"X 3/16"	5/8" X 16" X 4"

COMPONENT	ASTM
TUBING MEMBERS	A500 GRADE A
BASE PLATES	A36
ANCHOR BOLTS	A307 or A36

5/03 Revision

⚠ Revised notes.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

ELECTRICAL DETAILS- ELECTRICAL SERVICE SUPPORT TYPE RT (U)

ED(12)-03

©TxDOT January 1992	DN: KB	CK: JW	DW: DN	CK: GC	REQ NO.:
REVISIONS 4-98 12-00 3-03 5-03	STATE DISTRICT: DAL	FEDERAL REGION: 6	FEDERAL AID PROJECT: (SEE TITLE SHEET)		SHEET: 691
	COUNTY: ROCKWALL		CONTROL: 0009	SECTION: 12	JOB: 203	HIGHWAY: VA

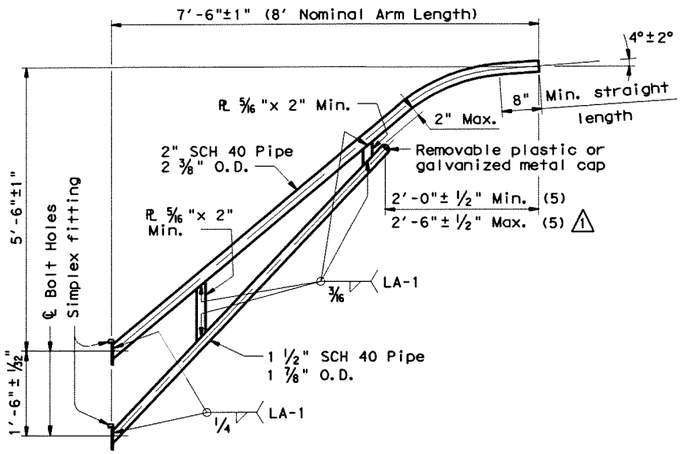
71M

LEVELS C D
DN: LR
CK: CW
DW: DN
CK: MT
DATE:
ACC: d58np1c/usr/d580504
FILE:

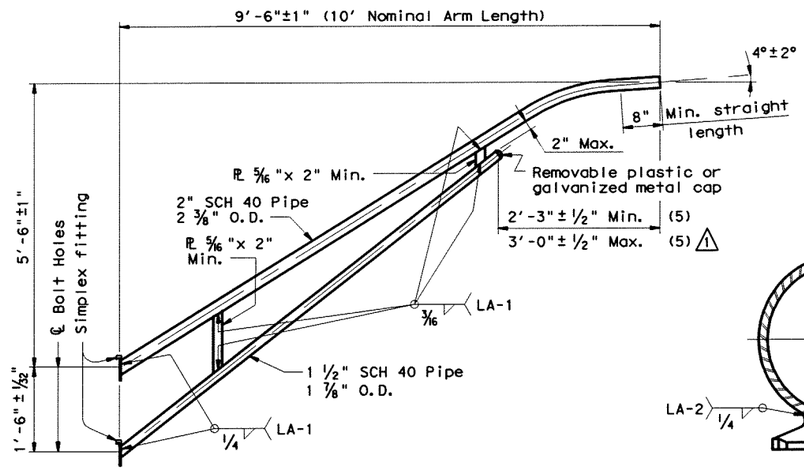
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LEVELS DISPLAYED																ACC:
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
49	50	51	52	53	54	55	56	57	58	59	60	62	63			

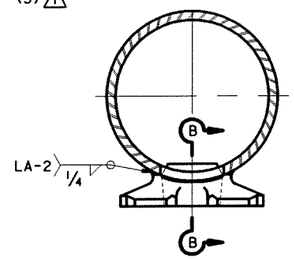
(LV=1,2 for English; 1,3 for Metric)



8-FOOT LUMINAIRE ARM



10-FOOT LUMINAIRE ARM



DIRECT ATTACHMENT DETAIL

MATERIALS	
Pole or Arm Simplex	ASTM A27 GR 65-35 or A148 GR 80-50 or A576 GR 1021 (4) or A36 (Arm only)
Arm Pipes	ASTM A53 GR A or B or A500 GR B or A501 or A595 (2) or A715 GR 50
Arm Plates (3)	ASTM A36 or A572 GR50 (1) or A595 GR A or A588
Misc.	ASTM designations as noted

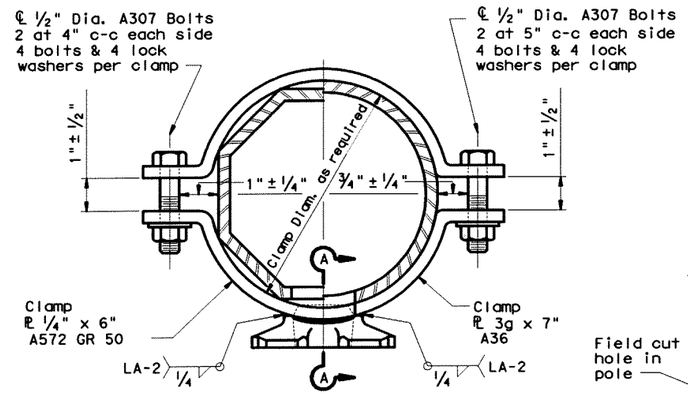
(1) ASTM A36M50 steel as described in Item 442 "Metal for Structures" may be used in lieu of A 572 GR 50.

(2) If A595 GR A material is used, arm need not be cold worked to A595 requiremants, but material must have 40 ksi minimum yield prior to fabrication.

(3) Either of the materials listed for pates may be used where the drawings do not specify a particular ASTM designation.

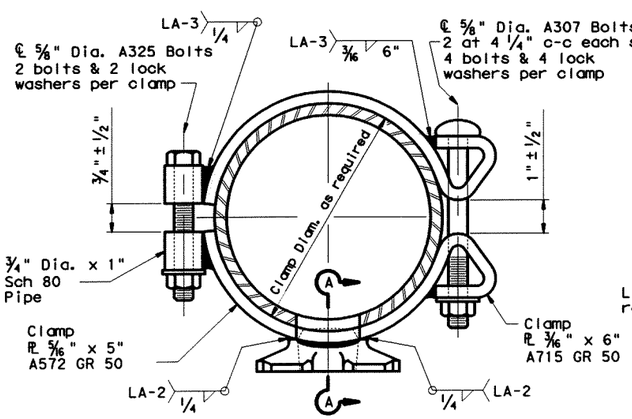
(4) A576 must be suitable for forging and also meet minimum tensile strength of 65 ksi, minimum yield of 35 ksi, and elongation in 2 inches of 22 percent.

(5) Dimensional limits are given to show acceptable variation in design. All of a Fabricator's production of a particular arm length shall have the same dimensions within specified tolerances.



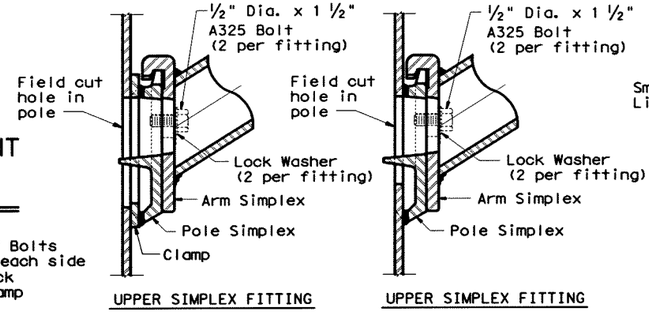
CLAMP ATTACHMENT DETAIL NO. 1 (HALF SECTION)

CLAMP ATTACHMENT DETAIL NO. 2 (HALF SECTION)



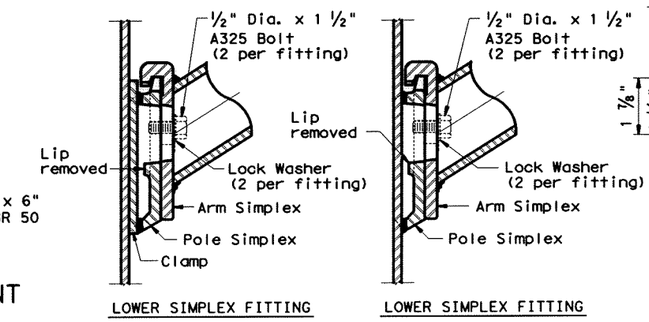
CLAMP ATTACHMENT DETAIL NO. 3 (HALF SECTION)

CLAMP ATTACHMENT DETAIL NO. 4 (HALF SECTION)



UPPER SIMPLEX FITTING

UPPER SIMPLEX FITTING

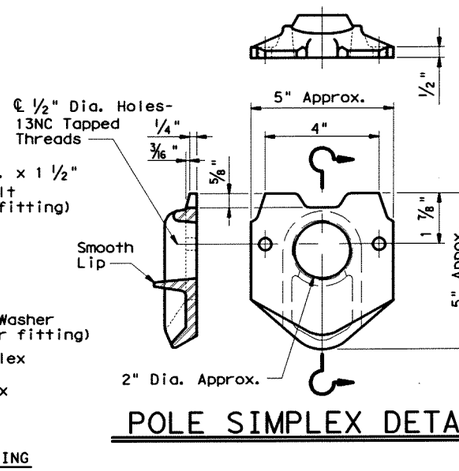


LOWER SIMPLEX FITTING

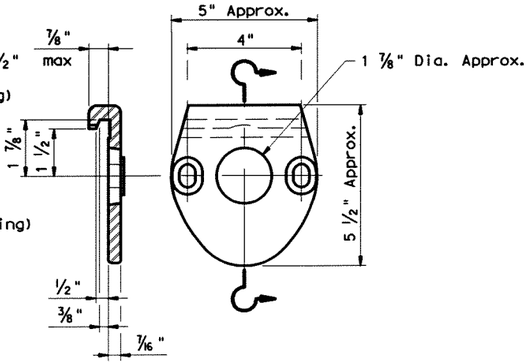
SECTON A-A

LOWER SIMPLEX FITTING

SECTON B-B



POLE SIMPLEX DETAIL



ARM SIMPLEX DETAIL

⚠1 1-99 - minor typo correction

GENERAL NOTES:

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals and Interim Revisions thereto. Design Wind Speed equals 90 mph plus a 1.3 gust factor. Arms are designed to support a 75 lb. luminaire having an effective projected area (actual area times drag coefficient) of 1.5 sq. ft.

Materials and fabrication shall be in accordance with the Specificatons 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. In the absense of specified Fabricaton tolerances, dimensions shall be within the tolerances generally obtainable in normal fabrication practice.

Unless otherwise noted, all parts shall be galvanized after fabrication in accordance with the Specifications.

Special designs require submission of shop drawings in accordance with the item "Steel Structures".

Each pole simplex fitting shall be supplied with 2 A325 bolts and 2 lock washers of the size specified. The bolts and lock washers shall be secured to the pole with the other hardware items called for in the plans. When clamp attachment is specified, the Fabricator shall ship the clamp assembly securely attached to the pole at the location shown on the plans.

If clamp assemblies are ordered without poles, the Fabricator shall ship one upper and one lower clamp assembly together in a single package, including all nuts and washers required for the clamps and simplex fittings.

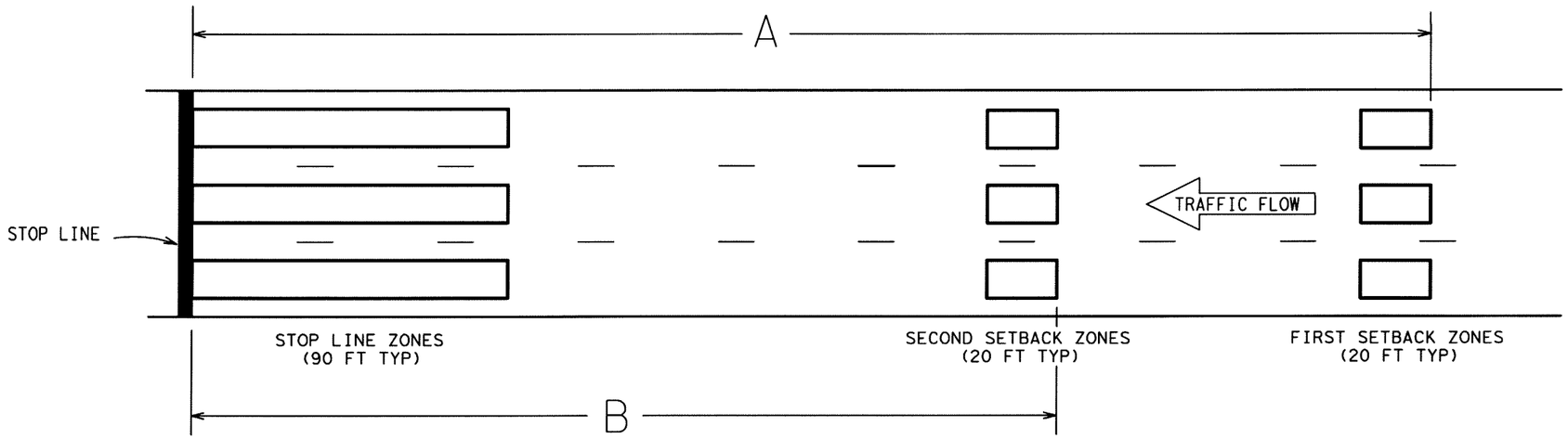
Texas Department of Transportation
Traffic Operations Division

STANDARD ASSEMBLY DRAWINGS FOR LUMINAIRE SUPPORT STRUCTURES

ARM DETAILS

LUM-A-99

FILE: lum-a.dgn	DN: LEH	CK: JSY	DW: LTT	CK: TEB	STD:
©TxDOT August 1995	DIST	FED REG	FEDERAL AID PROJECT •		SHEET
REVISIONS	DAL	6	(SEE TITLE SHEET)		692
5-96	COUNTY		CONTROL	SECT	JOB	HIGHWAY
1-99	DALLAS		0009	12	283	VA



APPROACH SPEED LIMIT (MPH)	DISTANCE [2] BETWEEN CAMERA AND STOP LINE (FT)	DISTANCE [1] A (FT)	CAMERA HEIGHT (FT)									
			24	28	32	36	40	24	28	32	36	40
			DISTANCE B (FT)					EXTENSION ON 2ND DET. ZONE (SEC.)				
60	80	470	280	295	305	310	315	0.0	0.0	0.0	0.5	0.5
	150	470	270	285	295	300	310	0.0	0.0	0.0	0.0	0.5
55	80	430	255	265	275	280	285	0.0	0.0	0.0	0.5	0.5
	150	430	245	255	265	275	280	0.0	0.0	0.0	0.0	0.5
50	80	390	235	245	250	255	260	0.0	0.0	0.5	0.5	0.5
	150	390	220	230	240	245	250	0.0	0.0	0.0	0.0	0.5
45	80	350	210	215	220	225	230	0.0	0.0	0.5	0.5	0.5
	150	350	190	200	210	215	220	0.0	0.0	0.0	0.0	0.5

1. Distances shown are based on a 20' detection zone and a 1.0 second passage time setting.
2. Distance between the camera and the stop line, as measured parallel to the direction of travel.

DALLAS DISTRICT STANDARD

Texas Department of Transportation
©2004
Dallas District

VIDEO DETECTION ZONE PLACEMENT

VDZ-04 (DAL)

©TxDOT September 2004 DNC - THW CKC - CDB DNC - BES CKC - TRF-Aus.

REVISIONS	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
	6	(SEE TITLE SHEET)		VA
	STATE	DISTRICT	COUNTY	SHEET NO.
	TEXAS	DAL	ROCKWALL	693
	CONTROL	SECTION	JOB	
	0009	12	203	

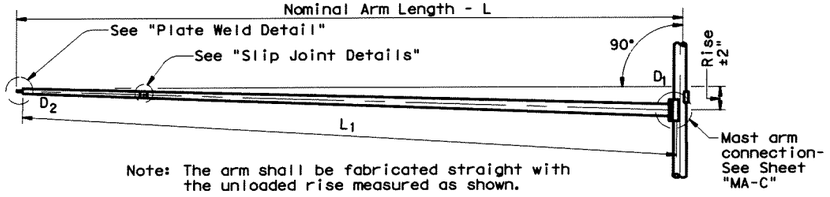
Arm Length	ROUND POLES					POLYGONAL POLES					Foundation Type
	D_B	D_{19}	D_{24}	D_{30}	① thk	D_B	D_{19}	D_{24}	D_{30}	① thk	
ft.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	
20	10.5	7.8	7.1	6.3	.179	11.5	8.5	7.7	6.8	.179	30-A
24	11.0	8.3	7.6	6.8	.179	12.0	9.0	8.2	7.3	.179	30-A
28	11.5	8.8	8.1	7.3	.179	12.5	9.5	8.7	7.8	.179	30-A
32	12.5	9.8	9.1	8.3	.179	12.0	9.0	8.2	7.3	.239	30-A
36	12.0	9.3	8.6	7.8	.239	12.5	9.5	8.7	7.8	.239	36-A
40	12.0	9.3	8.6	7.8	.239	13.5	10.5	9.7	8.8	.239	36-A
44	12.5	9.8	9.1	8.3	.239	14.0	11.0	10.2	9.3	.239	36-A
48	13.0	10.3	9.6	8.8	.239	15.0	12.0	11.2	10.3	.239	36-A

Arm Length	ROUND ARMS					POLYGONAL ARMS				
	L_1	D_1	D_2	① thk	Rise	L_1	D_1	② D_2	① thk	Rise
ft.	ft.	in.	in.	in.		ft.	in.	in.	in.	
20	19.1	6.5	3.8	.179	1'-9"	19.1	7.0	3.5	.179	1'-8"
24	23.1	7.5	4.3	.179	1'-10"	23.1	7.5	3.5	.179	1'-9"
28	27.1	8.0	4.2	.179	1'-11"	27.1	8.0	3.5	.179	1'-10"
32	31.0	9.0	4.7	.179	2'-1"	31.0	9.0	3.5	.179	2'-0"
36	35.0	9.5	4.6	.179	2'-4"	35.0	10.0	3.5	.179	2'-1"
40	39.0	9.5	4.1	.239	2'-8"	39.0	9.5	3.5	.239	2'-3"
44	43.0	10.0	4.1	.239	2'-11"	43.0	10.0	3.5	.239	2'-6"
48	47.0	10.5	4.1	.239	3'-4"	47.0	11.0	3.5	.239	2'-9"

D_B = Pole Base O.D.
D_{19} = Pole Top O.D. with no Luminaire and no ILSN
D_{24} = Pole Top O.D. with ILSN w/out Luminaire
D_{30} = Pole Top O.D. with Luminaire
D_1 = Arm Base O.D.
D_2 = Arm End O.D.
L_1 = Shaft Length
L = Nominal Arm Length

① Thickness shown are minimums, thicker materials may be used.

② D_2 may be increased by up to 1" for polygonal arms.



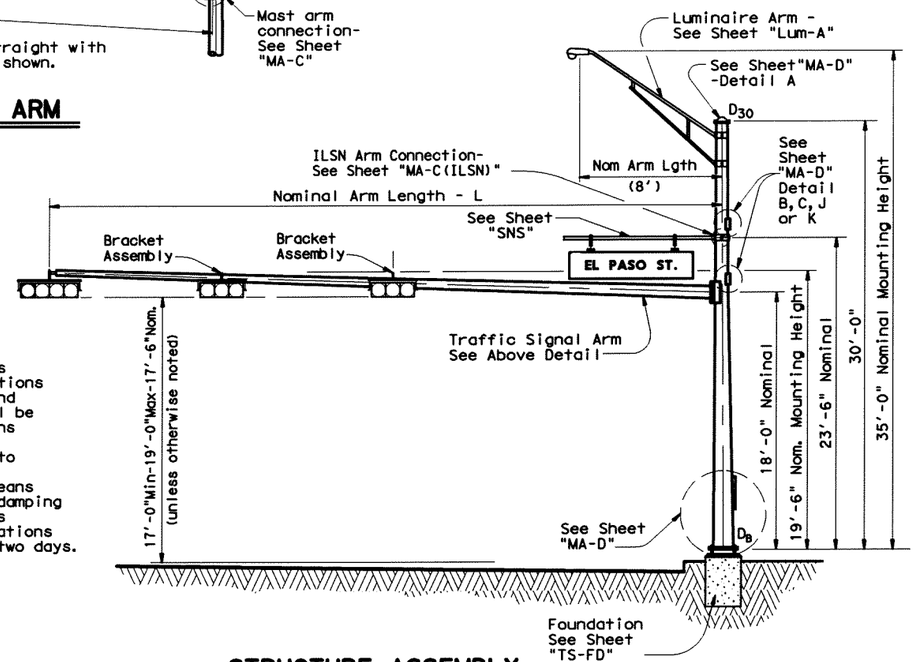
Note: The arm shall be fabricated straight with the unloaded rise measured as shown.

TRAFFIC SIGNAL ARM

(Fixed Mount)

VIBRATION WARNING

Mast Arms of approximately 40' or longer are subject to possible harmonic vertical vibrations in light wind conditions due to unusual combinations of signal numbers, weights or positions, arm-wind orientation, and arm-pole stiffness. Arms shall be visually inspected in 5 to 20 mph wind conditions after signal head installation and, if vertical movements with a total excursion (max positive to max negative) of more than approximately 8" are observed at arm tip, damping devices or other means shall be fitted to the arm(s). The necessary damping device(s) or other remedial measures shall be as recommended by the fabricator. Excessive vibrations shall not be allowed to continue for more than two days.



STRUCTURE ASSEMBLY

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN P. HOPPERS, P.E. 93669 ON MARCH 23, 2006
ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

SHIPPING PARTS LIST

Ship each pole with the following attached: enlarged hand hole, pole cap, fixed-arm connection bolts and washers and any additional hardware listed in the table.

Nominal Arm Length	30' Poles With Luminaire		24' Poles With ILSN		19' Poles With No Luminaire and No ILSN	
	Above hardware plus: One (or two if ILSN attached) small hand hole, clamp-on simplex		Above hardware plus one small hand hole		See note above	
ft	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20L-80	3	20S-80		20-80	1
24	24L-80	2	24S-80		24-80	
28	28L-80	3	28S-80		28-80	
32	32L-80	3	32S-80		32-80	
36	36L-80	4	36S-80		36-80	
40	40L-80		40S-80		40-80	
44	44L-80	5	44S-80		44-80	
48	48L-80	9	48S-80		48-80	

Traffic Signal Arms (1 per Pole) Ship each arm with the listed equipment attached

Nominal Arm Length	Type I Arm (1 Signal) 1 Bracket Assembly		Type II Arm (2 Signals) 2 Bracket Assemblies		Type III Arm (3 Signals) 3 Bracket Assemblies	
ft	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20I-80	3				
24	24I-80		24II-80	2		
28	28I-80		28II-80	3		
32			32II-80	3	32III-80	
36			36II-80	4	36III-80	
40			40II-80		40III-80	
44			44II-80	1	44III-80	4
48					48III-80	9

Luminaire Arms (1 per 30' pole)

Nominal Arm Length	Quantity
8' Arm	28

ILSN Arm (Max. 2 per pole) Ship with clamps, bolts and washers

Nominal Arm Length	Quantity
7' Arm	
9' Arm	

Anchor Bolt Assemblies (1 per pole)

Anchor Bolt Diameter	Anchor Bolt Length	Quantity
¾"	1'-6"	11
1 ½"	3'-4"	9
1 ¾"	3'-10"	18

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

Templates may be removed for shipment.

MODIFICATIONS

(A) REMOVED BRACKET ASSEMBLY OPTIONS A AND B
(B) REMOVED CGB CONNECTORS
(C) REMOVED TENON DETAIL
(D) REQUIRE MEASUREMENT OF POLE HEIGHT
(E) MIN. AND MAX. SIGNAL HEAD HEIGHT DISTANCE

11/99 Revision

⚠ Changed to Facilitate new terminal strip enclosure

Texas Department of Transportation

TRAFFIC SIGNAL SUPPORT STRUCTURES

SINGLE MAST ARM ASSEMBLY

(80 MPH WIND ZONE)

SMA-80(1)-99 (DAL)

FILE: SMA-80.DGN	DN: MS	CK: JSY	DW: MMF	CK: JSY
©TxDOT 2001	DIST	FED REG	FEDERAL AID PROJECT NO. •	SHEET
REVISIONS 5-96 11-99	DAL	6	(SEE TITLE SHEET)	694
	COUNTY		CONTROL SECT JOB	HIGHWAY
	ROCKWALL		0009 12 203	VA

1224

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LEVELS DISP=0 ACC: d48nplqt/usr/d482517 LV=1,2 for English 1,3 for Metric

1	2	3		5	6	7	8	9	10	11	12	13	14	15	16
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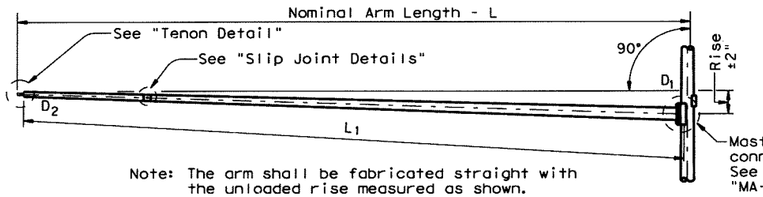
Arm Length	ROUND POLES					POLYGONAL POLES					Foundation Type
	D_B	D_{19}	D_{24}	D_{30}	① thk	D_B	D_{19}	D_{24}	D_{30}	① thk	
ft.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	
20	10.5	7.8	7.1	6.3	.179	11.5	8.5	7.7	6.8	.179	30-A
24	11.0	8.3	7.6	6.8	.179	12.0	9.0	8.2	7.3	.179	30-A
28	11.5	8.8	8.1	7.3	.179	12.5	9.5	8.7	7.8	.179	30-A
32	12.5	9.8	9.1	8.3	.179	12.0	9.0	8.2	7.3	.239	30-A
36	12.0	9.3	8.6	7.8	.239	12.5	9.5	8.7	7.8	.239	36-A
40	12.0	9.3	8.6	7.8	.239	13.5	10.5	9.7	8.8	.239	36-A
44	12.5	9.8	9.1	8.3	.239	14.0	11.0	10.2	9.3	.239	36-A
48	13.0	10.3	9.6	8.8	.239	15.0	12.0	11.2	10.3	.239	36-A

Arm Length	ROUND ARMS					POLYGONAL ARMS				
	L_1	D_1	D_2	① thk	Rise	L_1	D_1	② D_2	① thk	Rise
ft.	ft.	in.	in.	in.		ft.	in.	in.	in.	
20	19.1	6.5	3.8	.179	1'-9"	19.1	7.0	3.5	.179	1'-8"
24	23.1	7.5	4.3	.179	1'-10"	23.1	7.5	3.5	.179	1'-9"
28	27.1	8.0	4.2	.179	1'-11"	27.1	8.0	3.5	.179	1'-10"
32	31.0	9.0	4.7	.179	2'-1"	31.0	9.0	3.5	.179	2'-0"
36	35.0	9.5	4.6	.179	2'-4"	35.0	10.0	3.5	.179	2'-1"
40	39.0	9.5	4.1	.239	2'-8"	39.0	9.5	3.5	.239	2'-3"
44	43.0	10.0	4.1	.239	2'-11"	43.0	10.0	3.5	.239	2'-6"
48	47.0	10.5	4.1	.239	3'-4"	47.0	11.0	3.5	.239	2'-9"

D_B = Pole Base O.D.
D_{19} = Pole Top O.D. with no Luminaire and no ILSN
D_{24} = Pole Top O.D. with ILSN w/out Luminaire
D_{30} = Pole Top O.D. with Luminaire
D_1 = Arm Base O.D.
D_2 = Arm End O.D.
L_1 = Shaft Length
L = Nominal Arm Length

① Thickness shown are minimums, thicker materials may be used.

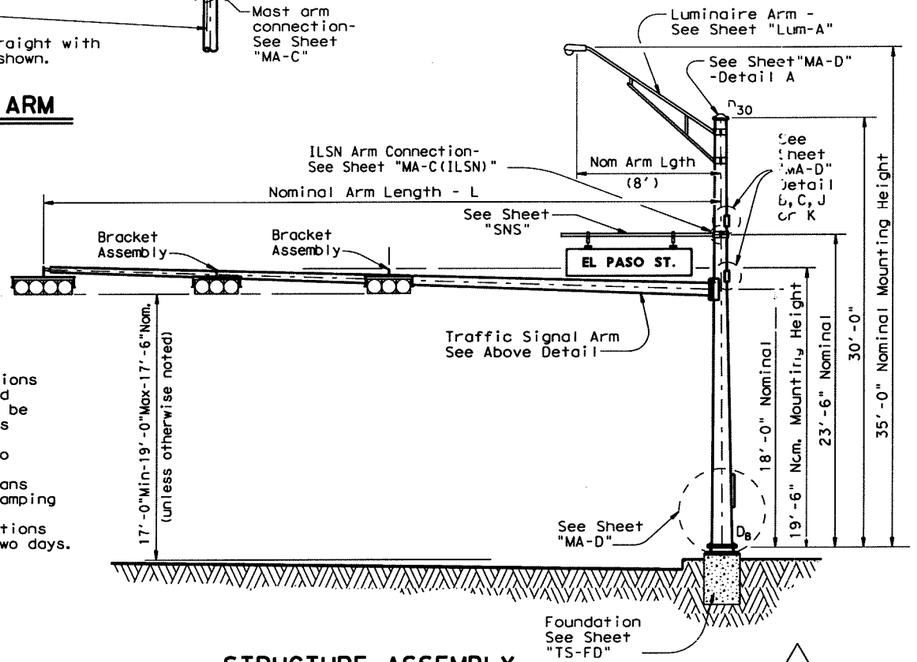
② D_2 may be increased by up to 1" for polygonal arms.



Note: The arm shall be fabricated straight with the unloaded rise measured as shown.

TRAFFIC SIGNAL ARM

(Fixed Mount)



STRUCTURE ASSEMBLY

VIBRATION WARNING

Mast Arms of approximately 40' or longer are subject to possible harmonic vertical vibrations in light wind conditions due to unusual combinations of signal numbers, weights or positions, arm-wind orientation, and arm-pole stiffness. Arms shall be visually inspected in 5 to 20 mph wind conditions after signal head installation and, if vertical movements with a total excursion (max positive to max negative) of more than approximately 8" are observed at arm tip, damping devices or other means shall be fitted to the arm(s). The necessary damping device(s) or other remedial measures shall be as recommended by the fabricator. Excessive vibrations shall not be allowed to continue for more than two days.

SHIPPING PARTS LIST

Ship each pole with the following attached: enlarged hand hole, pole cap, fixed-arm connection bolts and washers and any additional hardware listed in the table.

Nominal Arm Length	30' Poles With Luminaire		24' Poles With ILSN		19' Poles With No Luminaire and No ILSN	
	Above hardware plus: One (or two if ILSN attached) small hand hole, clamp-on simplex		Above hardware plus one small hand hole		See note above	
ft	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20L-80	3	20S-80		20-80	1
24	24L-80	2	24S-80		24-80	
28	28L-80	3	28S-80		28-80	
32	32L-80	△ 4	32S-80		32-80	
36	36L-80	4	36S-80		36-80	
40	40L-80		40S-80		40-80	△ 1
44	44L-80	5	44S-80		44-80	
48	48L-80	9	48S-80		48-80	△ 2

Traffic Signal Arms (1 per Pole) Ship each arm with the listed equipment attached

Nominal Arm Length	Type I Arm (1 Signal)		Type II Arm (2 Signals)		Type III Arm (3 Signals)	
	1 Bracket Assembly		2 Bracket Assemblies		3 Bracket Assemblies	
ft	Designation	Quantity	Designation	Quantity	Designation	Quantity
20	20I-80	3				
24	24I-80		24II-80	2		
28	28I-80		28II-80	3		
32			32II-80	△ 4	32III-80	
36			36II-80	4	36III-80	
40			40II-80	△ 1	40III-80	
44			44II-80	1	44III-80	4
48			48II-80		48III-80	△ 11

Luminaire Arms (1 per 30' pole)

Nominal Arm Length	Quantity
8' Arm	△ 29

④ Supply Option "A" unless otherwise noted

ILSN Arm (Max. 2 per pole) Ship with clamps, bolts and washers

Nominal Arm Length	Quantity
7' Arm	
9' Arm	

Anchor Bolt Assemblies (1 per pole)

Anchor Bolt Diameter	Anchor Bolt Length	Quantity
¾"	1'-6"	△ 12
1 ½"	3'-4"	△ 10
1 ¾"	3'-10"	△ 21

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

Templates may be removed for shipment.

MODIFICATIONS

- (A) REMOVED BRACKET ASSEMBLY OPTIONS A AND B
- (B) REMOVED CGB CONNECTORS
- (C) REMOVED TENON DETAIL
- (D) REQUIRE MEASUREMENT OF POLE HEIGHT
- (E) MIN. AND MAX. SIGNAL HEAD HEIGHT DISTANCE

△1 11/99 Revision

Changed to Facilitate new terminal strip enclosure

#41 CHANGE ORDER

SHEET 1 OF 2

Texas Department of Transportation

TRAFFIC SIGNAL SUPPORT STRUCTURES

SINGLE MAST ARM ASSEMBLY

(80 MPH WIND ZONE)

SMA-80(1)-99 (DAL)

FILE: SMA-80.DGN	DN: MS	CK: JSY	DW: MMF	CK: JSY
©TxDOT 2008	DIST	FED REG	FEDERAL AID PROJECT NO.	SHEET
REVISIONS 5-96 11-99	DALLAS	6	(SEE TITLE SHEET)	694A
	COUNTY	CONTROL	SECT JOB	HIGHWAY
	ROCKWALL	0451	01 032	SH 205

122A

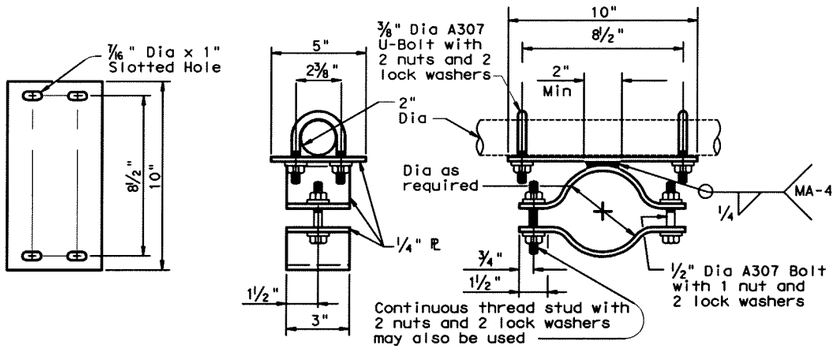
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LEVELS DISPLAYED
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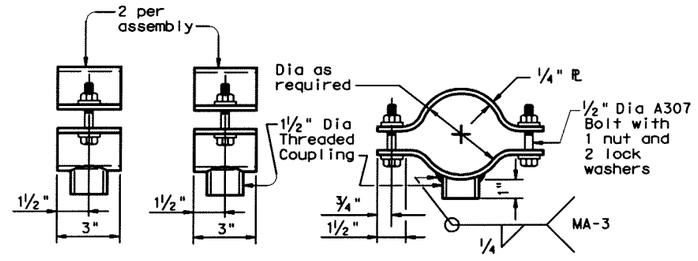
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LV-1,2 for English 1,3 for Metric

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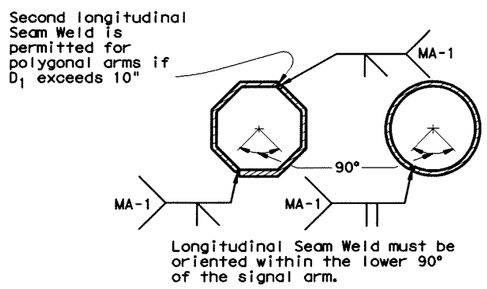
BRACKET ASSEMBLY DETAILS OPTION A



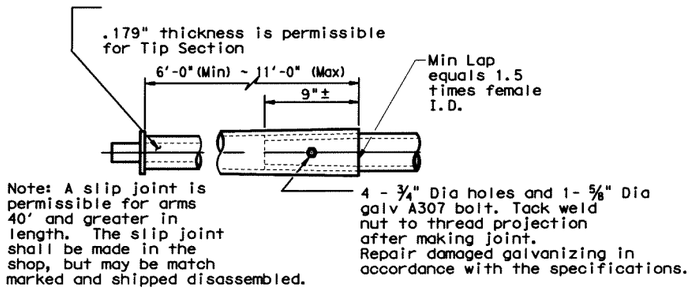
BRACKET ASSEMBLY DETAILS OPTION B

Stainless steel bands and cast bracket as in "Astro-Brac" with 1½" Dia Threaded Coupling.

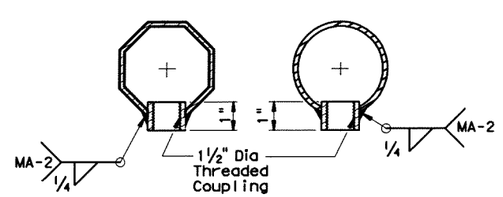
BRACKET ASSEMBLY OPTION C



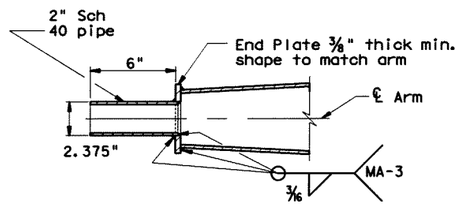
ARM WELD DETAIL



SLIP JOINT DETAIL



COUPLING DETAILS



TENON DETAIL

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.

Poles are designed to support one 8'-0" luminaire arm, one 9'-0" internally lighted street name sign and one traffic signal arm with a length as tabulated. The specified luminaire load applied at the end of the luminaire arm equals 75 lbs vertical dead load plus the horizontal wind load on an effective projected area of 1.5 sq ft. The specified internally lighted street name sign load applied 4.5 ft from the centerline of the pole equals 85 lbs vertical dead load plus horizontal wind load on an effective projected area of 11.5 sq ft. The specified signal load applied at the end of the traffic signal arm equals 180 lbs vertical dead load plus the horizontal wind load on an effective projected area of 32.4 sq ft (actual area times drag coefficient).

See Standard Sheet "MA-D" for pole details, "MA-C" for traffic signal arm connection details, "MA-C (ILSN)" for internally lighted street name sign arm connection details, "LUM-A" for luminaire arm and connection details, "SNS" for internally lighted street name sign details, and "TS-FD" for anchor bolt and foundation details. See "MA-C" for material specifications.

Fabrication shall be in accordance with the Specifications 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. Miscellaneous welds which do not call for preapproved weld procedures are nevertheless subject to rejection for poor workmanship. Materials, fabrication tolerances, and shipping practices shall meet the requirements of this sheet and the Specifications.

Unless otherwise noted, all parts shall be galvanized in accordance with the Specifications.

Special design require submission of shop drawings in accordance with the item "Steel Structures".

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES

SINGLE MAST ARM ASSEMBLY

(80 MPH WIND ZONE)

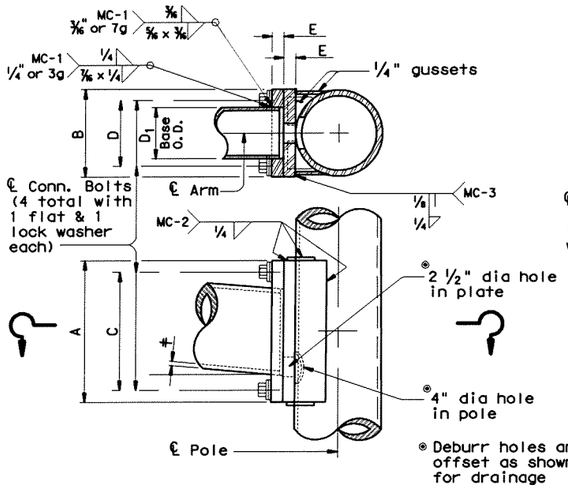
SMA-80(2)-96

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©TxDOT August 1995	DIST	FED REG	FEDERAL AID PROJECT #	SHEET
REVISIONS 5-96	DAL	6	(SEE TITLE SHEET)	695
	COUNTY		CONTROL	SECT	JOB	HIGHWAY
	ROCKWALL		0009	12	283	VA

LEVELS DISABLED
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33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
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LV=1,2 for English 1,3 for Metric

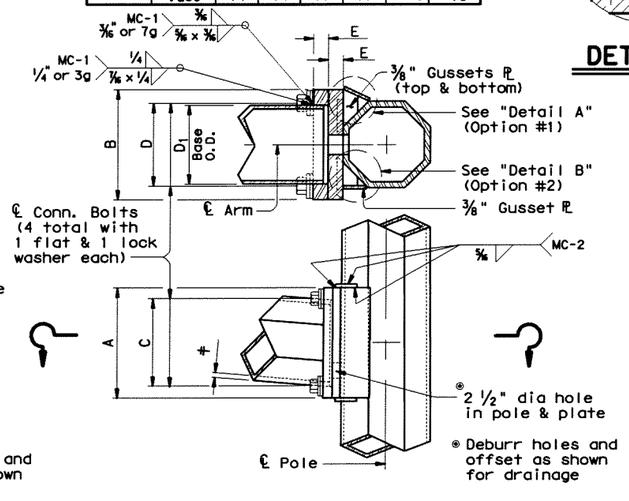
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ARM SIZE D_1 in.	ARM SIZE ∓ in.	A in.	B in.	C in.	D in.	E in.	CONN BOLT DIA in.
6.5	.179	12	9	9	6	1	1
7.5	.179	13	9	10	6	1	1
8.0	.179	14	10	11	7	1 ¼	1 ¼
9.0	.179	16	11	13	8	1 ¼	1 ¼
9.5	.179	17	12	14	9	1 ¼	1 ¼
9.5	.239	18	12	15	9	1 ¼	1 ¼
10.0	.239	18	12	15	10	1 ½	1 ½
11.0	.239	18	13	15	10	1 ½	1 ½

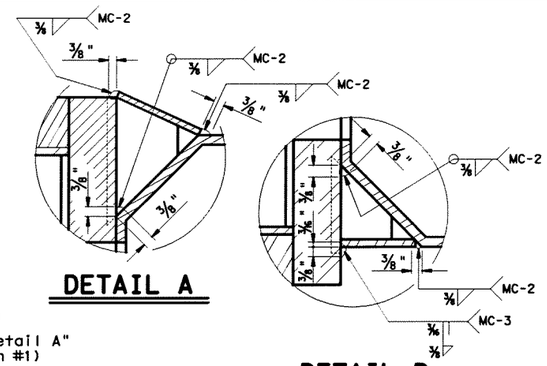


FIXED MOUNT DETAIL 1

ARM SIZE D_1 in.	ARM SIZE ∓ in.	A in.	B in.	C in.	D in.	E in.	CONN BOLT DIA in.
7.0	.179	11	11	8	8	1 ¼	1 ¼
7.5	.179	11	11	8	8	1 ¼	1 ¼
8.0	.179	11	11	8	8	1 ¼	1 ¼
9.0	.179	13	13	10	10	1 ¼	1 ¼
10.0	.179	13	13	10	10	1 ¼	1 ¼
9.5	.239	13	13	10	10	1 ¼	1 ¼
10.0	.239	14	14	11	11	1 ½	1 ½
11.0	.239	14	14	11	11	1 ½	1 ½
11.5	.239	14	14	11	11	1 ½	1 ½



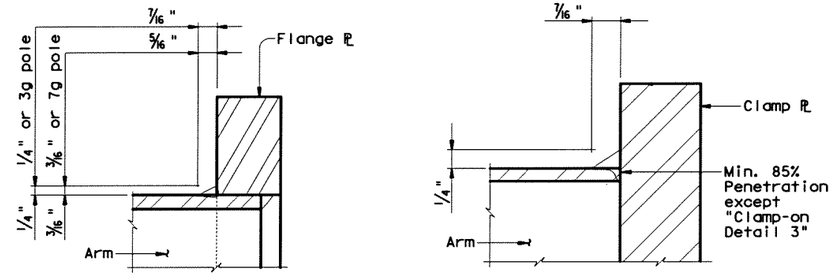
FIXED MOUNT DETAIL 2



MATERIALS	
Round Shafts or Polygonal Shafts	ASTM A595 GR A, ASTM A570 GR 50, ASTM A607 GR 50, ASTM A572 GR 50 or A36M50
Plates (1)	ASTM A36 OR A572 GR 50 or A595(2) or A36M50
Connection Bolts	ASTM A325 except where noted
Pin Bolts	ASTM A325
Pipe	ASTM A53 GR A or B, or A501
Misc. Hardware	Galvanized steel or stainless steel or as noted

(1) Any of the materials listed for plates may be used where the drawings do not specify a particular Grade designation.

(2) If A595 material is used, it need not be cold worked to A595 requirments, but material must have 40 ksi minimum yield prior to fabrication.



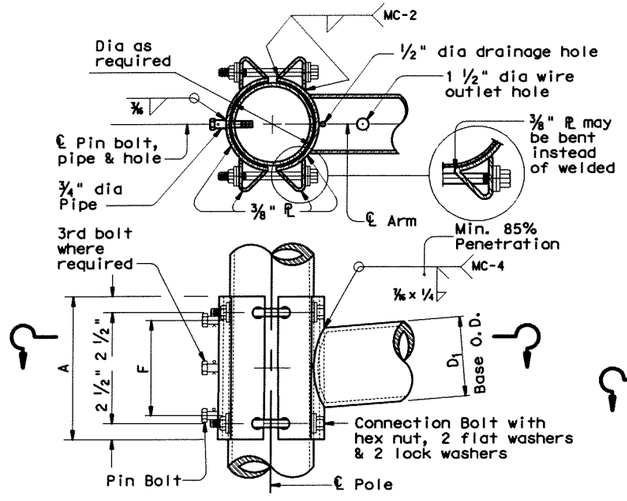
FIXED MOUNT ARM

CLAMP-ON ARM

ARM BASE WELD DETAILS

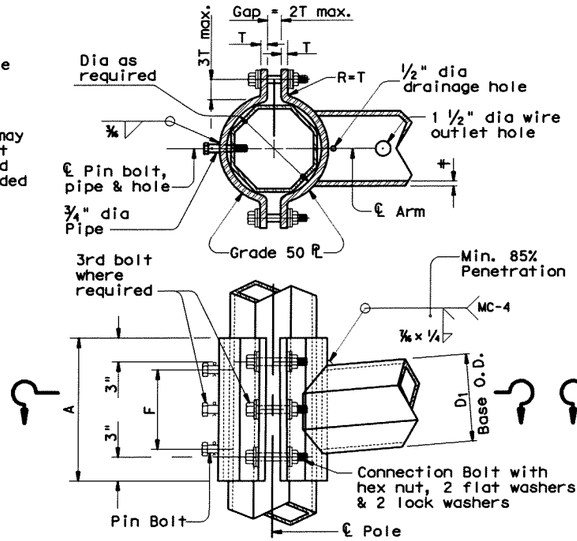
ARM SIZE D_1 in.	ARM SIZE ∓ in.	A in.	F in.	CONN. BOLTS No. ea.	CONN. BOLTS Dia in.	PIN BOLTS No. ea.	PIN BOLTS Dia in.
6.5	.179	12	8	4	∗ ⅞	2	⅝
7.5	.179	14	8	4	1	2	⅝
8.0	.179	14	8	4	1	2	⅝
9.0	.179	16	10	4	1	2	⅝
9.5	.179	18	12	4	1 ¼	3	⅝
9.5	.239	18	12	4	1 ¼	3	⅝
10.0	.239	18	12	4	1 ¼	3	⅝

∗1" Dia connection bolts are permissible



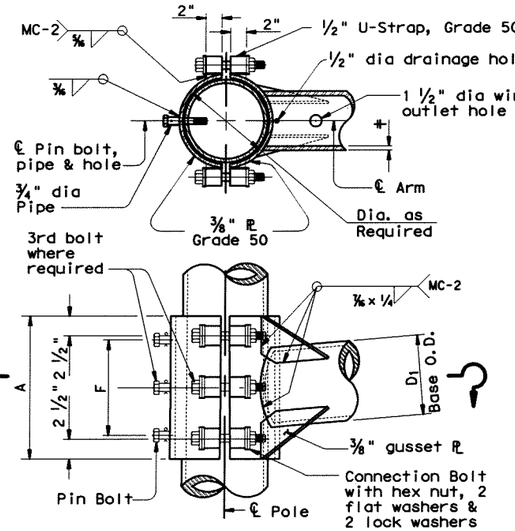
CLAMP-ON DETAIL 1

ARM SIZE D_1 in.	ARM SIZE ∓ in.	A in.	F in.	T in.	CONN. BOLTS No. ea.	CONN. BOLTS Dia in.	PIN BOLTS No. ea.	PIN BOLTS Dia in.
7.0	.179	12	8	¾	4	¾	2	⅝
7.5	.179	14	8	¾	4	¾	2	⅝
8.0	.179	14	8	¾	4	¾	2	⅝
9.0	.179	16	10	⅞	4	1	2	⅝
10.0	.179	18	10	⅞	4	1	2	⅝
9.5	.239	18	10	1	6	1	3	⅝
10.0	.239	18	10	1	6	1	3	⅝



CLAMP-ON DETAIL 2

ARM SIZE D_1 in.	ARM SIZE ∓ in.	A in.	F in.	CONN. BOLTS No. ea.	CONN. BOLTS Dia in.	PIN BOLTS No. ea.	PIN BOLTS Dia in.
6.5	.179	12	8	4	1	2	⅝
7.5	.179	14	8	4	1	2	⅝
8.0	.179	14	8	4	1	2	⅝
9.0	.179	16	10	4	1	2	⅝
9.5	.179	18	12	6	1	3	⅝
9.5	.239	18	12	6	1	3	⅝
10.0	.239	18	12	6	1	3	⅝



CLAMP-ON DETAIL 3

GENERAL NOTES:

Clamp-on details are used for the second arm on dual mast arm assemblies. A Maximum 1 ½" wide vertical slotted hole may be cut in the front clamp plate to facilitate drainage during galvanizing. The slot shall be centered behind the arm and shall be no longer than the arm diameter minus 1"

Fixed mount details are used for single mast arm assemblies and for the first arm on dual mast arm assemblies.

Where duplicate parts occur on a detail, welds shown for one part shall apply to all similar parts on the detail.

Pin bolts are required to prevent rotation of clamp-on arms under design wind forces.

NOTE:

Pin bolts shall be A325 with threads excluded from the shear plane. Pin bolt and ¾" dia pipe shall have ⅜" dia holes for a ⅛" dia galvanized cotter pin. Back clamp plate shall be furnished with a ¾" dia hole for each pin bolt. An 11/16" dia hole for each pin bolt shall be field drilled through the pole after arm orientations have been approved by the Engineer.

Texas Department of Transportation
Traffic Operations Division

STANDARD ASSEMBLY FOR TRAFFIC SIGNAL SUPPORT STRUCTURES

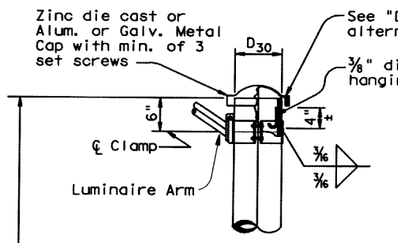
MAST ARM CONNECTIONS

MA-C-96

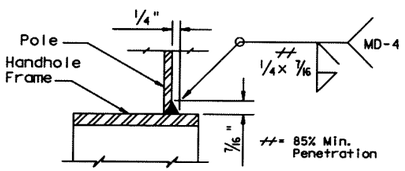
FILE: MA-C.DGN	DN: MS	CK: JSY	DW: MMF	CK: JSY
©TxDOT August 1995	DIST	FED REG	FEDERAL AID PROJECT	SHEET
REVISIONS 5-96	DAL	6	(SEE TITLE SHEET)	696
	COUNTY		CONTROL SECT	JOB HIGHWAY
	ROCKWALL		0009 12	283 VA

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
ACC: d48hplq:/usr/d482517
LV=1.2 for English 1.3 for Metric

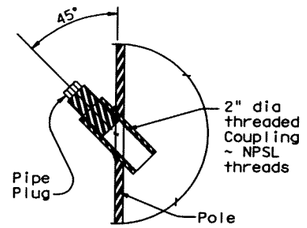
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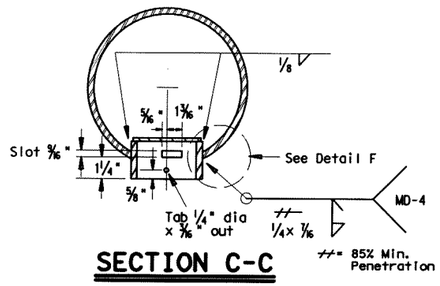
DETAIL A
(for pole with luminaire)



DETAIL E

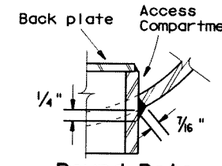


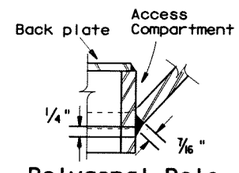
COUPLING DETAIL



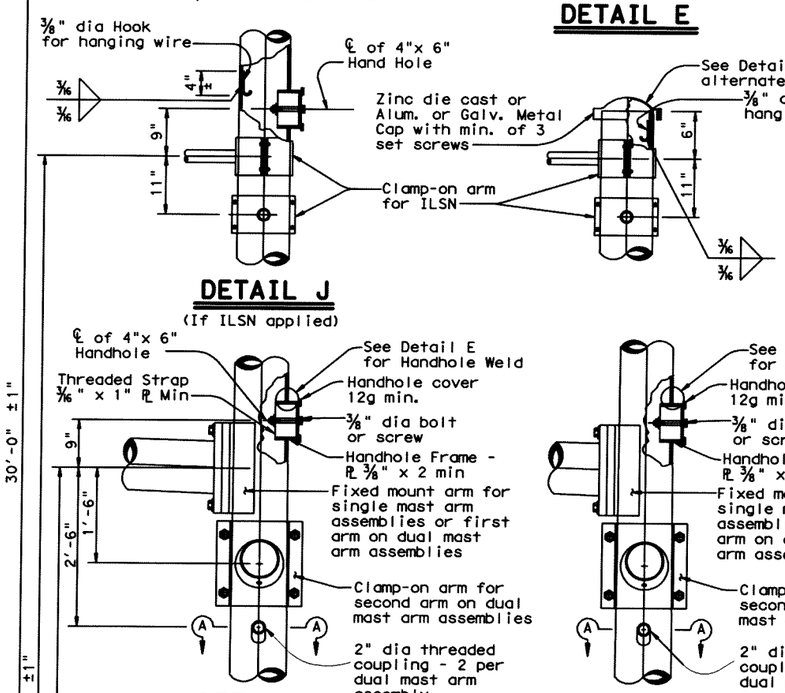
SECTION C-C

Opening for access compartment shall be no more than 1/16 inch wider than the access compartment itself.

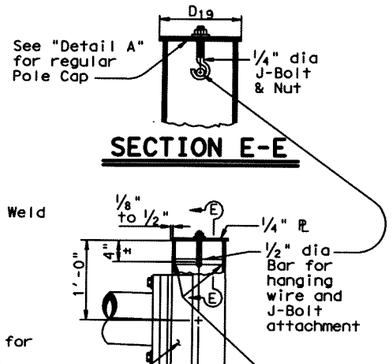




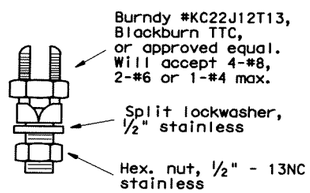
DETAIL F



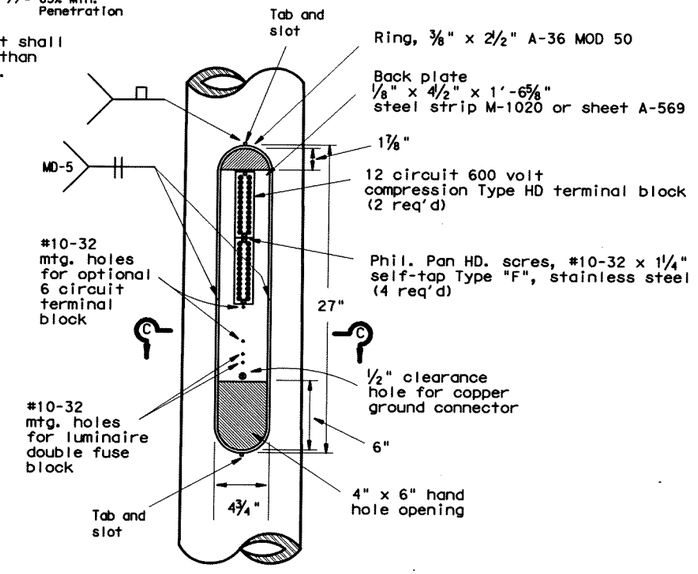
DETAIL J
(If ILSN applied)



SECTION E-E

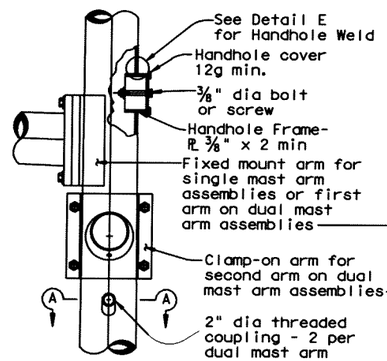


COPPER GROUND CONNECTOR

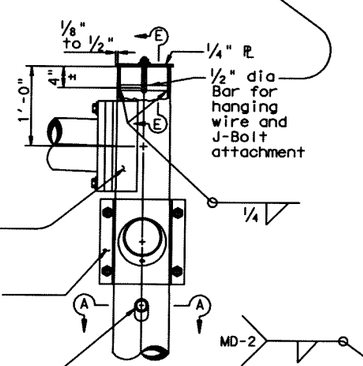


ACCESS COMPARTMENT

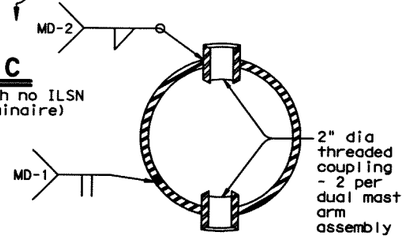
DETAIL B
(for 30' pole with luminaire and ILSN sign)



DETAIL K
(for 24' pole with ILSN sign and no luminaire)

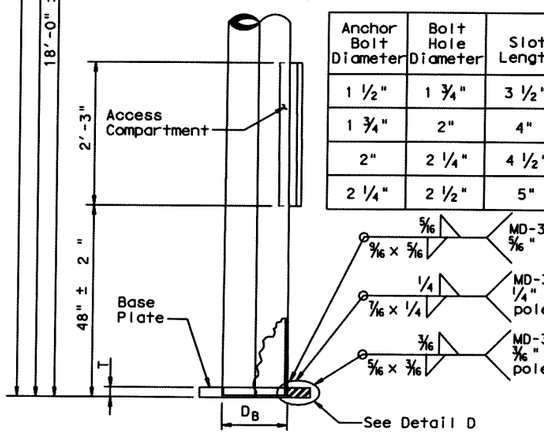


DETAIL C
(for 19' pole with no ILSN sign and no luminaire)

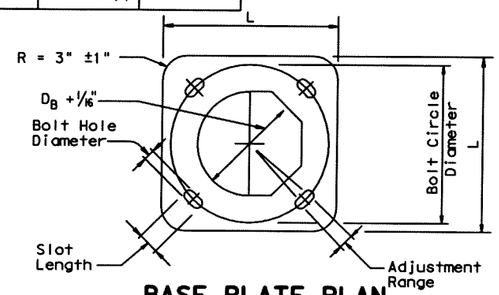


SECTION A-A

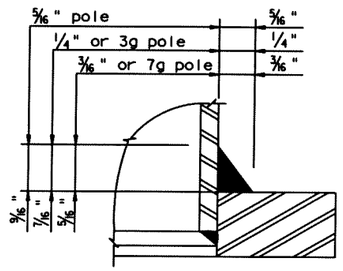
Anchor Bolt Diameter	Bolt Hole Diameter	Slot Length	Bolt Circle Diameter	Base PL Dim. L x T	Adjust. Range
1 1/2"	1 3/4"	3 1/2"	17"	18" x 1 1/2"	13.4°
1 3/4"	2"	4"	19"	20" x 1 3/4"	13.5°
2"	2 1/4"	4 1/2"	21"	22" x 2"	13.6°
2 1/4"	2 1/2"	5"	23"	24" x 2 1/4"	13.7°



POLE ELEVATION



BASE PLATE PLAN



DETAIL D

1. The cover shall be one piece formed from ABS plastic, shall be a pearl gray color, and shall be suitable for exposure to harsh sunlight and extreme weather. Cover shall latch with two screw latches and shall fit tightly to the enclosure ring to create a rainproof seal. Latch screws shall be 1/4-20 stainless flat socket head screws with tamper proof feature.
2. The pole manufacturer shall provide with each pole a separate kit consisting of: one cover with two latching assemblies, two terminal strips (Marathon #985GP12CU or approved equal), four #10-32 x 1¼" self tapping type "F" stainless steel pan head screws, and one ground connector (Blackburn TTC, Burndy KC22J12T13, or Ilsco SSS-5). The traffic signal contractor shall install the kit items in the field.
3. The screw hole spacing on the enclosure back plate shall be for two Marathon #985GP12 terminal strips, one Marathon #985GP06CU terminal strip, and one Bussmann #BM6032B fuse block. ⚠
4. Install one Bussmann #BM6032B, Littelfuse #L60030M-2C, or Ferraz-Shawnut #30352 fuse block for poles where luminaires are to be installed.

DAL Revision:
Modified access compartment height.

10-03 Revision
⚠ Revised notes, and removed detail.

STANDARD PLANS
Texas Department of Transportation

TRAFFIC SIGNAL SUPPORT STRUCTURES MAST ARM POLE DETAILS

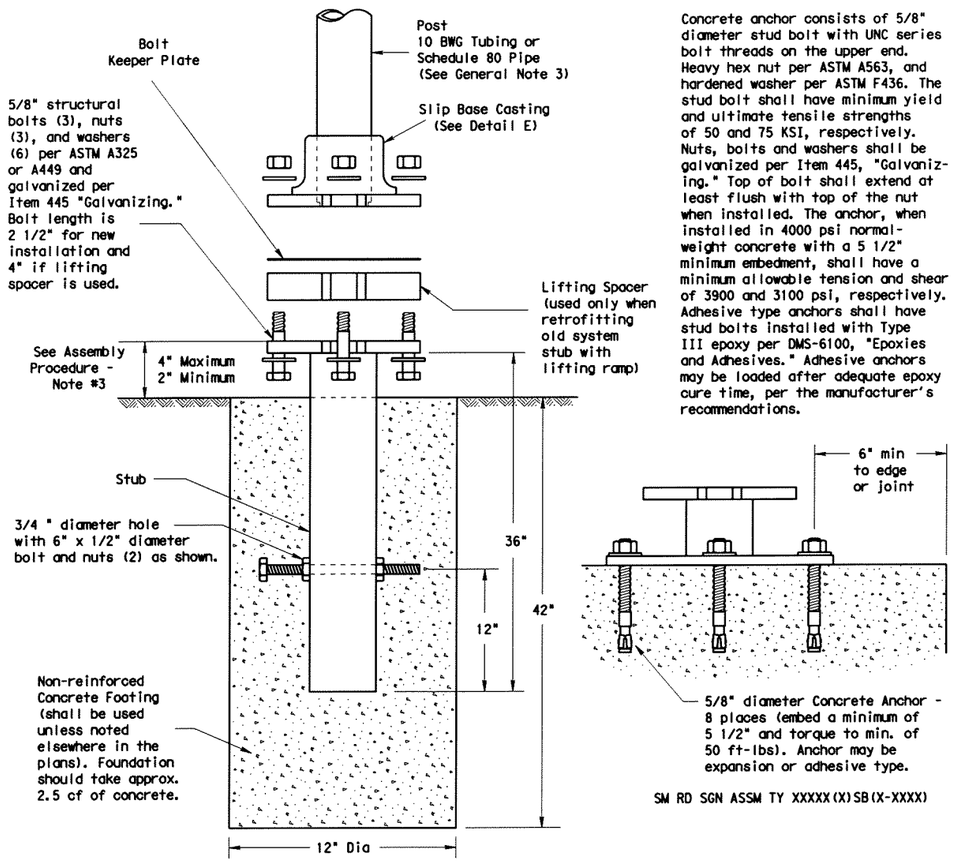
MA-D-03(DAL)

©TxDOT 2001			DN: MS	CK: JSY	DW: FDN	CK: CAL
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT NO.			SHEET
7-96	DAL	6	(SEE TITLE SHEET)			697
8-99						
10-00	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
10-03	ROCKWALL		0009	12	203	VA

LE SPLAYED ACC:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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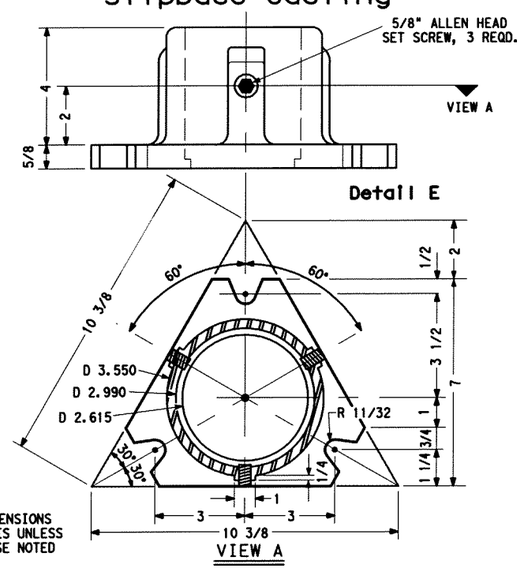
Dallas District Triangular Slipbase System



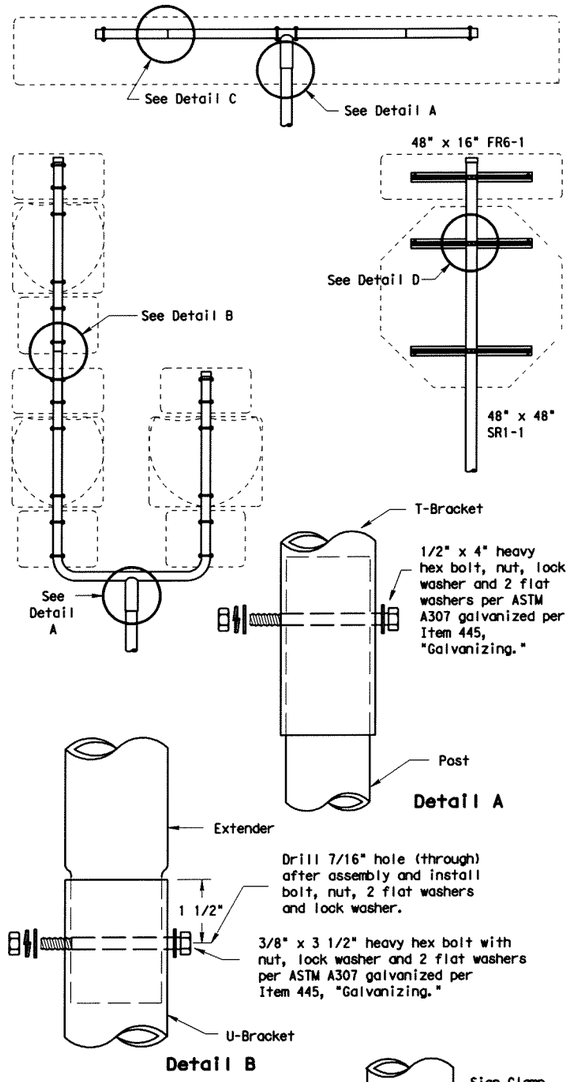
Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time, per the manufacturer's recommendations.

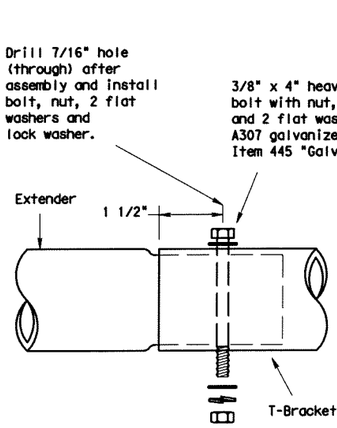
SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

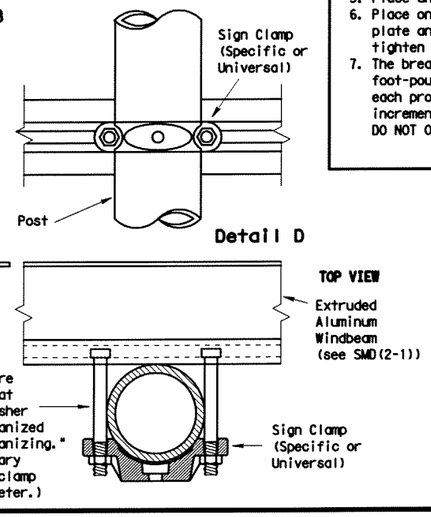
Slipbase Casting



ALL DIMENSIONS ARE INCHES UNLESS OTHERWISE NOTED







GENERAL NOTES:

1. Finished components, except posts (10 BWG Tubing and Schedule 80 Pipe) and clamps, shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
2. Except for posts (10 BWG Tubing and Schedule 80 Pipe), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the TxDOT Traffic Standards Engineer, or the Traffic Operations Division website. The website address is: http://www.dot.state.tx.us/insdtdot/orgchart/trf/trfeng/
3. Material used as post with this system shall conform to the following specifications:
   10 BWG Tubing (2.875" outside diameter)
   - 0.134" nominal wall thickness
   - Seamless or electric-resistance welded steel tubing or pipe
   - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   - Other steels may be used if they meet the following:
     - 55,000 PSI minimum yield strength
     - 70,000 PSI minimum tensile strength
     - 20% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
   - Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
   - Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.

   Schedule 80 Pipe (2.875" outside diameter)
   - 0.276" nominal wall thickness
   - Steel tubing per ASTM A500 Gr C
   - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
     - 46,000 PSI minimum yield strength
     - 62,000 PSI minimum tensile strength
     - 21% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
   - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
   - Galvanization per ASTM A123
4. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: ftp://ftp.dot.state.tx.us/pub/txdot-info/amd/cserve/standard/traffic/slip.pdf
5. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation

1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. Thoroughly wet and mix concrete in a container. Place concrete into hole until it is approximately flush with the ground.
3. Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground. The upper value assures that an impacting vehicle should not snag on the footing. The lower value provides clearance for assembly.
4. Plumb the stub by using a torpedo level on the slip plate. Allow concrete adequate time to set.

Support

1. Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be plumb and straight.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.
3. Slide the slipbase casting onto the lower end of the sign support.
4. Drive a chisel or a flat-blade screwdriver into the cut on the locking collar to slightly pry the collar open. Slide the collar onto the end of the pipe so the edge of the pipe is between the face of the locking collar and the end of the edge bevel. A dead-blow hammer may be useful in positioning the collar correctly. Remove the tool used to pry the collar open. Torque the allen bolt to 60 foot-pounds (720 inch-pounds). DO NOT OVERTIGHTEN.
5. Place and align bolt keeper plate on slip plate and lift assembled sign and support into position.
6. Place one washer on each bolt and insert them through keeper plate and the notches on the slip plate and casting. After inserting each bolt, place one washer and a nut on the bolt and hand-tighten all three.
7. The breakaway features of this system will work when all three bolts are tightened between 40 to 80 foot-pounds (480 to 960 inch-pounds). The Engineer shall determine the appropriate bolt torque for each project. Tighten all bolts by working around the support in approximately 10 foot-pound increments to assure a balanced tension in the bolts. All three bolts shall be torqued the same. DO NOT OVERTIGHTEN.

MODIFICATIONS

MODIFIED SLIP BASE CASTING FROM SINGLE ROLL PIN TO MULTIPLE SET SCREWS TO PREVENT SIGN ROTATION.

LEVELS DISPLAYED

| | | |

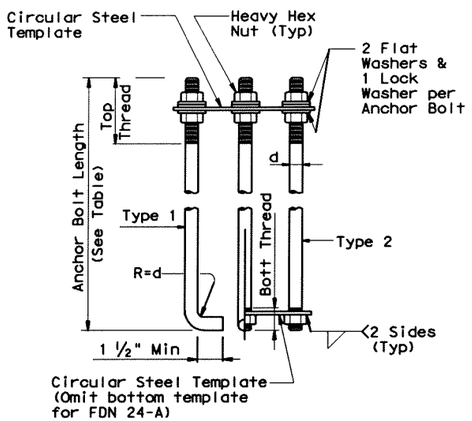
FOUNDATION DESIGN TABLE

FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		DRILLED SHAFT LENGTH-ft ④, ⑤, ⑥			ANCHOR BOLT DESIGN ①				FOUNDATION DESIGN LOAD ②		TYPICAL APPLICATION
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft			ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips	
				10	15	40							
24-A	24"	4- #5	#2 at 12"	5.7	5.3	4.5	¾"	36	12 ¾"	1	10	1	Pedestal pole, pedestal mounted controller.
30-A	30"	8- #9	#3 at 6"	11.3	10.3	8.0	1 ½"	55	17"	2	87	3	Mast arm assembly. (see Selection Table)
36-A	36"	10- #9	#3 at 6"	13.2	12.0	9.4	1 ¾"	55	19"	2	131	5	Mast arm assembly. (see Selection Table) 30' strain pole with or without luminaire.
36-B	36"	12- #9	#3 at 6"	15.2	13.6	10.4	2"	55	21"	2	190	7	Mast arm assembly. (see Selection Table) Strain pole taller than 30' & strain pole with mast arm
42-A	42"	14- #9	#3 at 6"	17.4	15.6	11.9	2 ¼"	55	23"	2	271	9	Mast arm assembly. (see Selection Table)

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' ⚠1	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	⚠1	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'

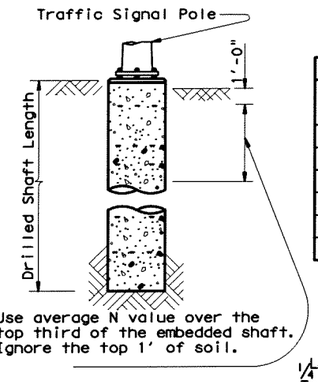
EXAMPLE:
1. For 80mph design wind speed, foundation 30-A can support up to a 32' arm with another arm up to 28'
2. For 100mph design wind speed, foundation 36-A can support a single 36' mast arm.



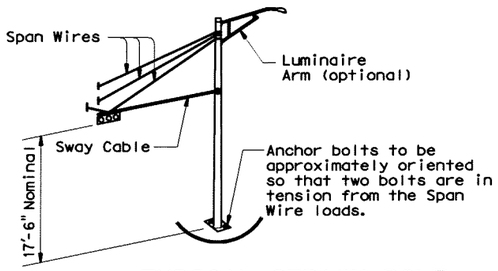
HOOKED ANCHOR (TYPE 1) NUT ANCHOR (TYPE 2)

ANCHOR BOLT ASSEMBLY

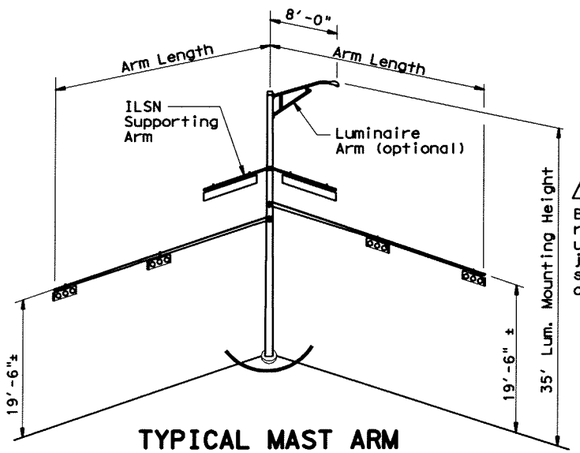
INSTALLATION PROCEDURE:
Threads of anchor bolts shall be coated with pipe joint compound prior to installation of upper nuts when erecting pole. After pole is plumbed and in permanent alignment, the exposed threads of painted bolts shall be cleaned and an additional coating of zinc-rich paint applied to seal the bolt thread-nut joint.



Use average N value over the top third of the embedded shaft. Ignore the top 1' of soil.



TYPICAL STRAIN POLE ASSEMBLY



TYPICAL MAST ARM ASSEMBLY

NOTES:

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 seperately 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.

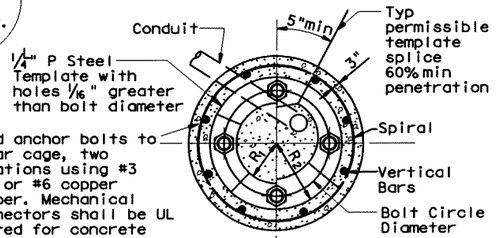
⑤ If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.

⑥ Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

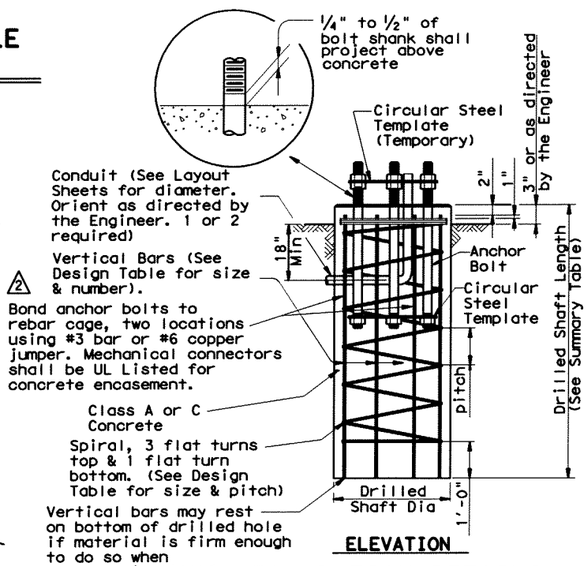
ANCHOR BOLT & TEMPLATE SIZES

BOLT DIA IN.	⑦ BOLT LENGTH	TOP THREAD	BOTT THREAD	BOLT CIRCLE	R2	R1
¾"	1'-6"	3"	—	12 ¾"	7 ⅛"	5 ⅝"
1 ½"	3'-4"	6"	2"	17"	10"	7"
1 ¾"	3'-10"	7"	2 ¼"	19"	11 ¼"	7 ¾"
2"	4'-3"	8"	2 ½"	21"	12 ½"	8 ½"
2 ¼"	4'-9"	9"	3"	23"	13 ¾"	9 ¼"

⑦ Min dimensions given, longer bolts are acceptable.



TOP VIEW



ELEVATION

FOUNDATION DETAILS

FOUNDATION SUMMARY TABLE ③

LOCATION

LOCATION IDENTIFICATION	AVG. N BLOW /ft.	FDN TYPE	NO. EA	DRILLED SHAFT LENGTH ⑥ (FEET) 24-A	30-A	36-A	36-B	42-A
SH 205@SH 276	10	36-A	4			56		
SH 205@ IH30EBFR	10	24-A	2	12				
	10	36-A	2			28		
SH 205@ IH30WBFR	10	24-A	1	6				
	10	36-A	3			42		
SH 205@ YELLOW JACKET	10	30-A	2		24			
	10	36-A	1			14		
SH 205@ FM740	10	24-A	2	12				
	10	30-A	2		24			
	10	36-A	2			28		
SH 205@ BOYDSTUN	10	30-A	2		24			
	10	36-A	2			28		
SH 205NB@ RUSK	10	24-A	2	12				
	10	30-A	1		12			
	10	36-A	1			14		
SH 205NB@ WASHINGTON	10	24-A	2	12				
	10	30-A	1		12			
	10	36-A	1			14		
SH 205SB@ RUSK	10	24-A	2	12				
	10	30-A	1		12			
	10	36-A	1			14		
SH 205SB@ RUSK	10	24-A	2	12				
	10	30-A	1		12			
	10	36-A	1			14		
TOTAL DRILLED SHAFT LENGTHS				78	96	252		

GENERAL NOTES:

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

Reinforcing steel shall conform to Item 440. Concrete shall be Class A or C.

Threads for anchor bolts and nuts shall be rolled or cut threads of unified national coarse thread series except for A193B7 bolts which shall have 8 pitch thread series. Bolts and nuts shall have Class 2A and 2B fit tolerances. Galvanized nuts shall be tapped after galvanizing.

Anchor bolts that are 1" in diameter or less shall conform to ASTM A36. Anchor bolts larger than 1" in diameter shall conform to A36M55 in accordance with the Item, "Anchor Bolts" or ASTM A193B7 or A687. Galvanize or coat with zinc-rich paint a minimum of the upper 14 inches of all anchor bolts unless otherwise noted. Exposed nuts shall be galvanized or coated with zinc-rich paint. Washers shall be galvanized. Templates and embeded nuts need not be galvanized.

STATE OF TEXAS — KEVIN P. HOPPERS — 93669 — PROFESSIONAL ENGINEER — REGISTERED

P.E.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN P. HOPPERS, P.E. 93669 ON MARCH 23, 2006 ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

11/99 Revision

⚠1 Changed to Facilitate new terminal strip enclosure

⚠2 Changed from ground rod to UFER ground

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL POLE FOUNDATION

TS-FD-99

© TxDOT August 1995	DN: MS	CK: JSY	DW: MAO/MMF	CK: JSY/TEB
REVISIONS 5-96 11-99	STATE DISTRICT: DAL	FEDERAL REGION: 6	FEDERAL AID PROJECT: (SEE TITLE SHEET)	SHEET: 699
COUNTY: ROCKWALL	CONTROL: 0009	SECTION: 12	JOB: 203	HIGHWAY: VA

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LEVELS DISPLAYED | ACC: d48hplqr/usr/d482517 | LV=1,2 for English 1,3 for Metric | 16263

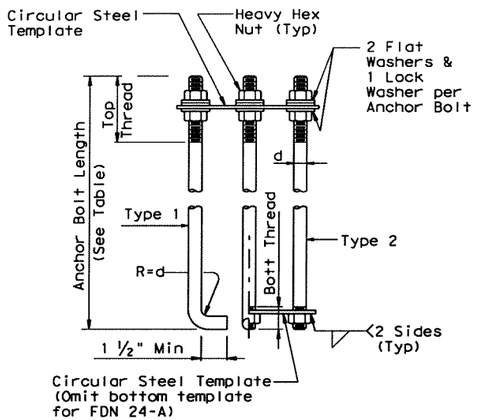
FOUNDATION DESIGN TABLE

FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		DRILLED SHAFT LENGTH-ft ④, ⑤, ⑥			ANCHOR BOLT DESIGN ①				FOUNDATION DESIGN LOAD ②		TYPICAL APPLICATION
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft 10	15	40	ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips	
24-A	24"	4- #5	#2 at 12"	5.7	5.3	4.5	¾"	36	12 ¾"	1	10	1	Pedestal pole, pedestal mounted controller.
30-A	30"	8- #9	#3 at 6"	11.3	10.3	8.0	1 ½"	55	17"	2	87	3	Mast arm assembly. (see Selection Table)
36-A	36"	10- #9	#3 at 6"	13.2	12.0	9.4	1 ¾"	55	19"	2	131	5	Mast arm assembly. (see Selection Table) 30' strain pole with or without luminaire.
36-B	36"	12- #9	#3 at 6"	15.2	13.6	10.4	2"	55	21"	2	190	7	Mast arm assembly. (see Selection Table) Strain pole taller than 30' & strain pole with mast arm
42-A	42"	14- #9	#3 at 6"	17.4	15.6	11.9	2 ¼"	55	23"	2	271	9	Mast arm assembly. (see Selection Table)

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' ⚠1	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	⚠1	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'

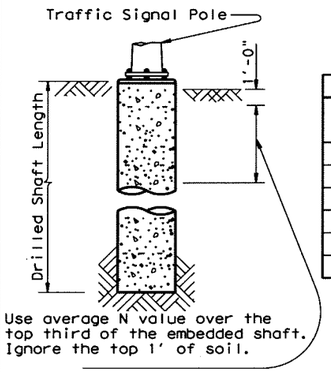
EXAMPLE:
1. For 80mph design wind speed, foundation 30-A can support up to a 32' arm with another arm up to 28'
2. For 100mph design wind speed, foundation 36-A can support a single 36' mast arm.

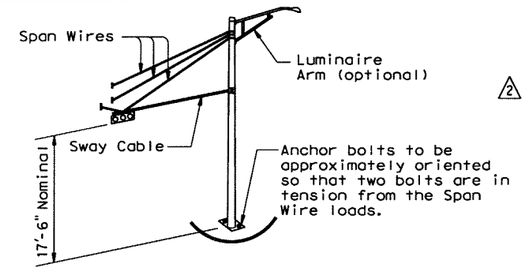


HOOKED ANCHOR (TYPE 1) NUT ANCHOR (TYPE 2)

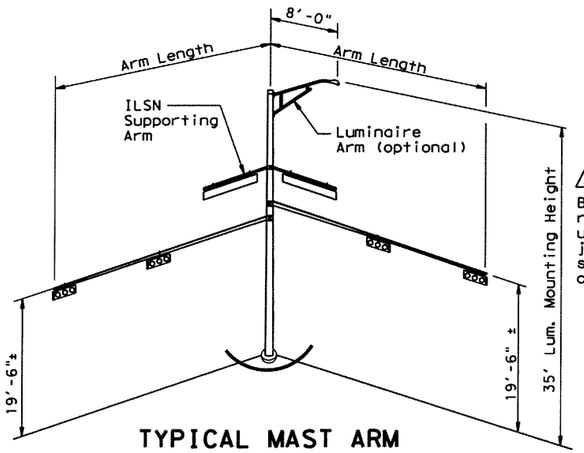
ANCHOR BOLT ASSEMBLY

INSTALLATION PROCEDURE:
Threads of anchor bolts shall be coated with pipe joint compound prior to installation of upper nuts when erecting pole. After pole is plumbed and in permanent alignment, the exposed threads of painted bolts shall be cleaned and an additional coating of zinc-rich paint applied to seal the bolt thread-nut joint.





TYPICAL STRAIN POLE ASSEMBLY



TYPICAL MAST ARM ASSEMBLY

NOTES:

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 seperately or grouped according to similarity of location and type. Quantities are for the Contractor's information only.

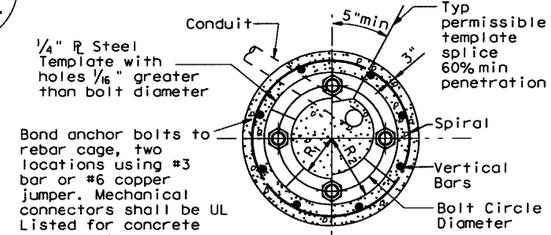
④ Field Penetrometer readings at a depth of approximately 3 to 5 feet may be used to adjust shaft lengths.

⑤ If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.

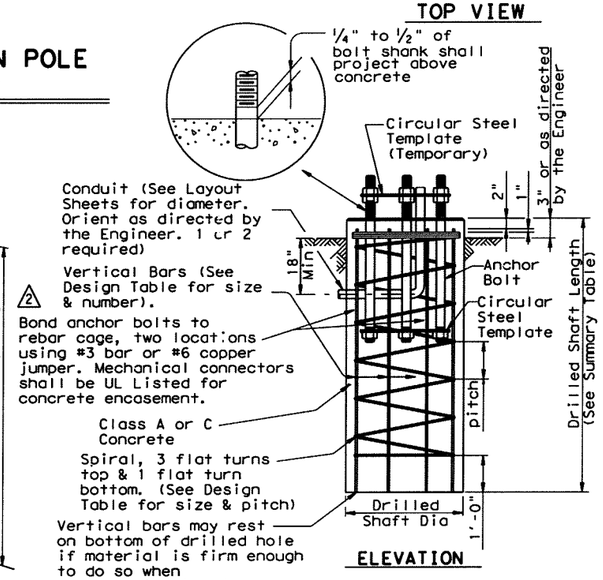
⑥ Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

ANCHOR BOLT & TEMPLATE SIZES						
BOLT DIA IN.	⑦ BOLT LENGTH	TOP THREAD	BOTT THREAD	BOLT CIRCLE	R2	R1
¾"	1'-6"	3"	—	12 ¾"	7 ⅛"	5 ⅝"
1 ½"	3'-4"	6"	2"	17"	10"	7"
1 ¾"	3'-10"	7"	2 ¼"	19"	11 ¼"	7 ¾"
2"	4'-3"	8"	2 ½"	21"	12 ½"	8 ½"
2 ¼"	4'-9"	9"	3"	23"	13 ¾"	9 ¼"

⑦ Min dimensions given, longer bolts are acceptable.



TOP VIEW



ELEVATION

FOUNDATION DETAILS

FOUNDATION SUMMARY TABLE ③

LOCATION IDENTIFICATION	AVG. N BLOW /ft.	FDN TYPE	NO. EA	DRILLED SHAFT LENGTH ⑥ (FEET) 24-A	30-A	36-A	36-B	42-A
SH 205 @ SH 276	10	36-A	4			56		
SH 205 @ IH 30 EBFR	10	24-A	2	12				
	10	36-A	2			28		
SH 205 @ IH 30 WBFR	10	24-A	1	6				
	10	36-A	3			42		
SH 205 @ YELLOW JACKET	10	30-A	2		24			
	10	36-A	1			14		
SH 205 @ FM 740	10	24-A	2	12				
	10	30-A	2		24			
	10	36-A	2			28		
SH 205 @ BOYDSTUN	10	30-A	2		24			
	10	36-A	2			28		
SH 205 NB @ RUSK	10	24-A	2	12				
	10	30-A	1		12			
	10	36-A	1			14		
SH 205 SB @ RUSK	10	24-A	2	12				
	10	30-A	1		12			
	10	36-A	1			14		
SH 205 @ WASHINGTON	10	24-A	2	12				
	10	30-A	1		12			
	10	36-A	1			14		
⚠ SH 205 @ RALPH HALL	10	24-A	1	6				
	10	30-A	1		11			
	10	36-A	3			39		
TOTAL DRILLED SHAFT LENGTHS				72	119	277		

GENERAL NOTES:

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

Reinforcing steel shall conform to Item 440. Concrete shall be Class A or C.

Threads for anchor bolts and nuts shall be rolled or cut threads of unified national coarse thread series except for A193B7 bolts which shall have 8 pitch thread series. Bolts and nuts shall have Class 2A and 2B fit tolerances. Galvanized nuts shall be tapped after galvanizing.

Anchor bolts that are 1" in diameter or less shall conform to ASTM A36. Anchor bolts larger than 1" in diameter shall conform to A36M55 in accordance with the Item, "Anchor Bolts" or ASTM A193B7 or A687. Galvanize or coat with zinc-rich paint a minimum of the upper 14 inches of all anchor bolts unless otherwise noted. Exposed nuts shall be galvanized or coated with zinc-rich paint. Washers shall be galvanized. Templates and embeded nuts need not be galvanized.

#41
CHANGE ORDER
11/99 Revision
⚠1 Changed to Facilitate new terminal strip enclosure
⚠2 Changed from ground rod to UFER ground

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL POLE FOUNDATION

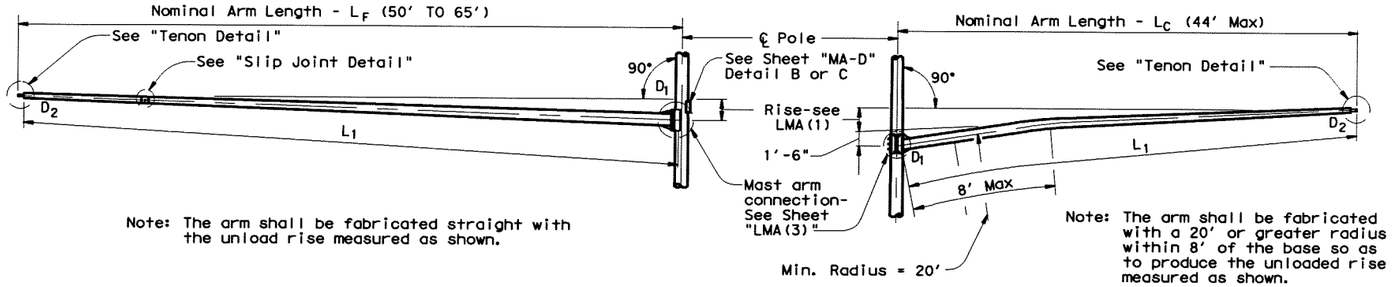
TS-FD-99

© TxDOT 2008			Dw - MS	Ck - JSY	Dw - MAO/MMF	Ck - JSY/TEB
REVISIONS 5-96 11-99	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT NO.			SHEET
	DALLAS	6	(SEE TITLE SHEET)			699A
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0451	01	032	SH 205

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Note: The arm shall be fabricated straight with the unload rise measured as shown.

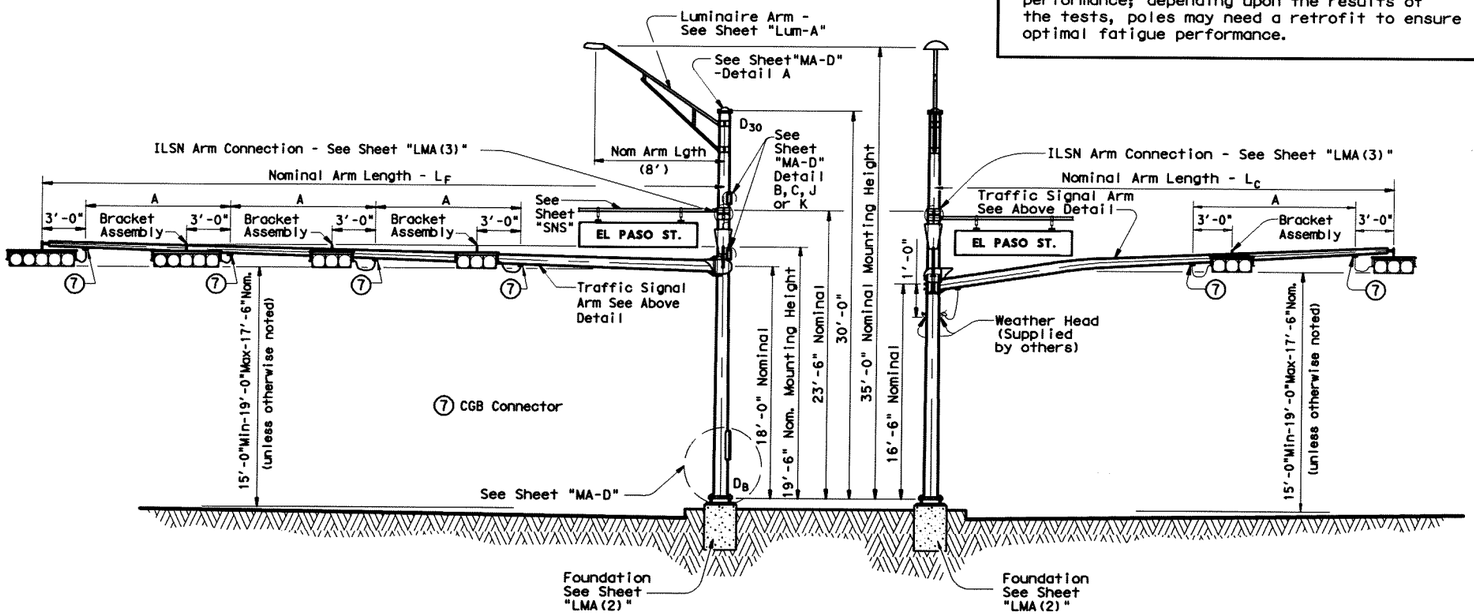
Note: The arm shall be fabricated with a 20' or greater radius within 8' of the base so as to produce the unloaded rise measured as shown.

FIXED MOUNT TRAFFIC SIGNAL ARM

CLAMP-ON TRAFFIC SIGNAL ARM

(If required, See DMA-80 or DMA-100 Standard Sheets for Clamp-on Arm Details)

Design also conforms to NCHRP Report 412 for fatigue resistance except that there are no stiffeners at the base plate. TxDOT is conducting tests to determine if stiffeners at the base plate will or will not result in optimal performance; depending upon the results of the tests, poles may need a retrofit to ensure optimal fatigue performance.



ELEVATION (Showing fixed mount arm)

STRUCTURE ASSEMBLY

ELEVATION (Showing clamp mount arm)

TABLE OF DIMENSIONS "A"										
Arm Length	24'	28'	32'	36'	40'	44'	50'	55'	60'	65'
Arm Type II	10'	11'	12'	13'						
Arm Type III			10'	11'	12'	12'				
Arm Type IV							12'	12'	12'	12'

VIBRATION WARNING

Mast Arms of approximately 40'-0" or longer are subject to possible harmonic vertical vibrations in light wind conditions due to unusual combinations of signal numbers, weights or positions, arm-wind orientation, and arm-pole stiffness.

Arms shall be visually inspected in 5 to 20 mph wind conditions after signal head installation and, if vertical movements with a total excursion (max positive to max negative) of more than approximately 8" are observed at arm tip, damping devices or other means shall be fitted to the arm(s).

The necessary damping device(s) or other remedial measures shall be as recommended by the fabricator. Excessive vibrations shall not be allowed to continue for more than two days.

If damping plate is used, the size shall be 16" x 66". The plate must be installed directly above traffic light located nearest the free end.

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 can be either 100 mph or 80 mph plus a 1.3 gust factor. If clamp-on traffic signal is required, designs are based on an arm included angle of 90 degrees or more. Angles of less than approximately 75 degrees will require a special design.

Poles are designed to support one 8'-0" luminaire arm, two 9'-0" internally lighted street name signs and two traffic signal arms with limited length combinations. The specified luminaire load applied at the end of luminaire arm equals 75 lbs vertical dead load plus the horizontal wind load on an effective projected area of 1.5 sq ft. The specified internally lighted street name sign applied 4'-6" from the centerline of the pole equals 85 lbs vertical dead load plus the horizontal wind load on an effective projected area of 11.5 sq ft. For 50 ft. to 65 ft. fixed-mount mast arm the specified signal load applied at the end of the traffic signal arm equals 310 lbs vertical dead load plus the horizontal wind load on an effective projected area of 52.0 sq ft. (actual area times drag coefficient). For clamp-on mast arm, the specified signal load applied at the end of the traffic signal arms equals 180 lbs vertical dead load plus the horizontal wind load on an effective projected area of 32.4 sq ft. (actual area times drag cofficient).

Except as noted in sheets 1 thru 3 of 3, also refer to Standard Sheet "MA-D" for pole details, "LUM-A for luminaire arm and connection details, "SNS" for internally lighted street name sign details, and "TS-FD" for anchor bolt and foundation details.

Fabrication shall be in accordance with the Specifications 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. Miscellaneous welds which do not call for preapproved weld procedures are nevertheless subject to rejection for poor workmanship. Material, fabrication tolerances, and shipping practices shall meet the requirements of this sheet and the Specifications.

Unless otherwise noted, all parts shall be galvanized in accordance with the Specifications.

Special designs require submission of shop drawings in accordance with the item "Steel Structures".

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES
LONG MAST ARM ASSEMBLY (50 TO 65 FT) (80 AND 100 MPH WIND ZONE)
LMA(1)-01

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DN: JSY	CK: ARC	DW: TGG	CK: JSY

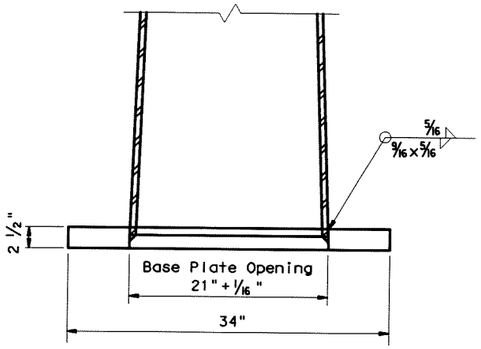
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
4-20-01	DAL	6	(SEE TITLE SHEET)	700

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0009	12	203	VA

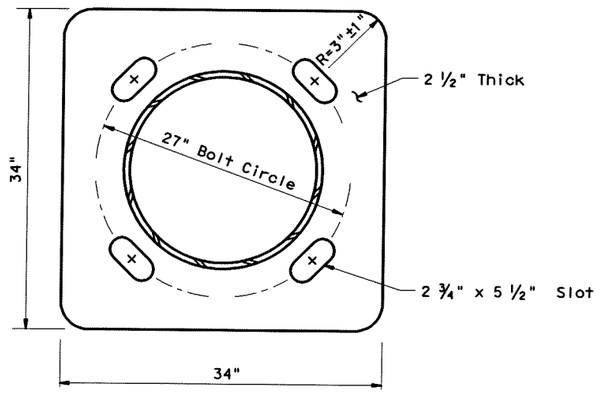
131A

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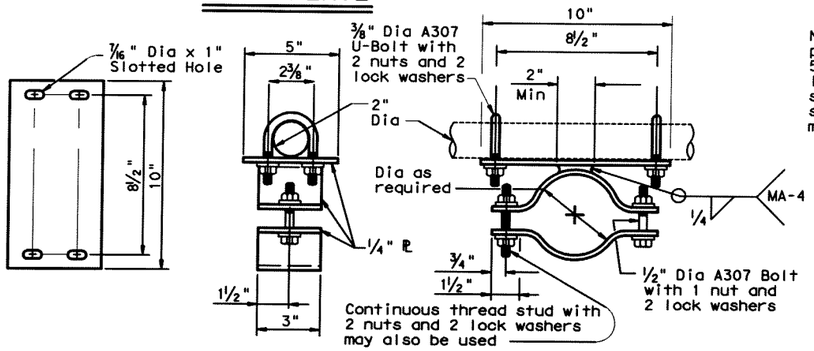
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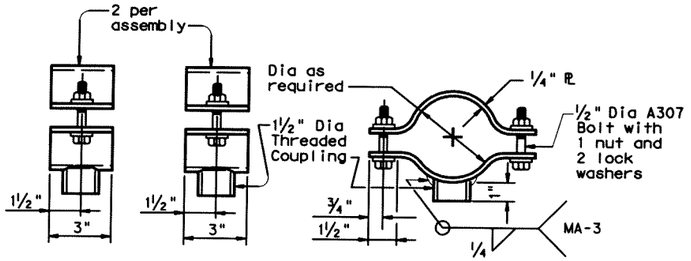
POLE CONNECTION TO BASE PLATE



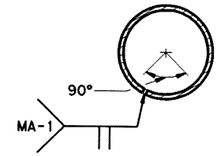
BASE PLATE



BRACKET ASSEMBLY DETAILS OPTION A

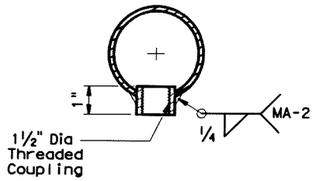


BRACKET ASSEMBLY DETAILS OPTION B

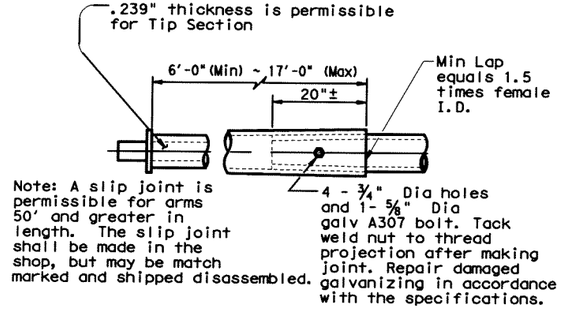


Longitudinal Seam Weld must be oriented within the lower 90° of the signal arm.

ARM WELD DETAIL

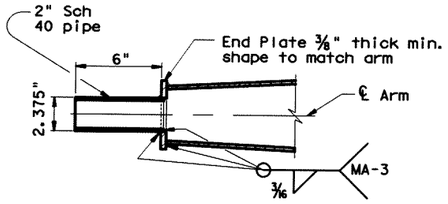


COUPLING DETAIL



Note: A slip joint is permissible for arms 50' and greater in length. The slip joint shall be made in the shop, but may be match marked and shipped disassembled.

SLIP JOINT DETAIL



TENON DETAIL

Stainless steel bands and cast bracket as in "Astro-Brac" with 1 1/2" Dia Threaded Coupling.

BRACKET ASSEMBLY OPTION C

Arm Length	ROUND POLES					Foundation Type
	D_B	D_{19}	D_{24}	D_{30}	① thk	
ft.	in.	in.	in.	in.	in.	
50', 55' 60', 65'	21.0	18.3	17.6	16.8	.3125	48-A

Arm Length	ROUND ARMS				
	L_1	D_1	D_2	① thk	Rise (±2")
ft.	ft.	in.	in.	in.	
50	49	18.5	11.7	.3125	3'- 3"
55	54	18.5	11.0	.3125	3'- 7"
60	59	18.5	10.3	.3125	3'-11"
65	64	18.5	9.6	.3125	4'- 4"

D_B = Pole Base O.D.
D_{19} = Pole Top O.D. with no Luminaire and no ILSN
D_{24} = Pole Top O.D. with ILSN w/out Luminaire
D_{30} = Pole Top O.D. with Luminaire
D_1 = Arm Base O.D.
D_2 = Arm End O.D.
L_1 = Shaft Length
L' = Nominal Arm Length

① Thickness shown is minimum, thicker materials may be used.

ANCHOR BOLT & TEMPLATE SIZE						
Bolt Dia in	Length ‡	Top Thread	Bottom Thread	Bolt Circle	R_2	R_1
2 1/2"	5'-3"	10"	3"	27"	16"	11"

‡ Min dimension given, longer bolts are acceptable.

① Anchor bolt design develops the foundation capacity given under Foundation Design Laods.

② Foundation Design Loads are the allowable moments and shears at the base of the structure.

③ Field Penetrometer readings at a depth of approximately 3 to 5 feet may be used to adjust shaft lengths.

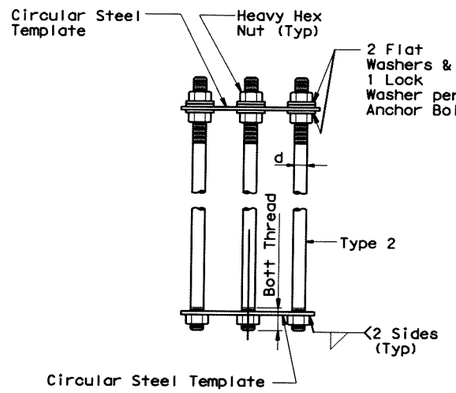
④ If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.

⑤ Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

FOUNDATION DESIGN TABLE

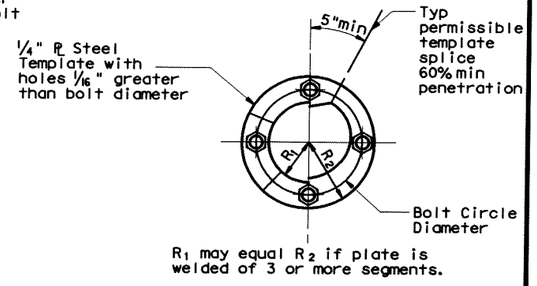
FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		DRILLED SHAFT LENGTH-ft ③, ④, ⑤			ANCHOR BOLT DESIGN ①				FOUNDATION DESIGN LOAD ②		TYPICAL APPLICATION
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft			ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips	
				10	15	40							
48-A	48"	20 #9	#4 at 6"	21.9	19.5	14.7	2 1/2"	55	27"	2	490	10	Mast arm assembly.

SEE SHEET "TS-FD" FOR ADDITIONAL DETAILS.



NUT ANCHOR (TYPE 2)

ANCHOR BOLT ASSEMBLY



R_1 may equal R_2 if plate is welded of 3 or more segments.

TEMPLATE DETAIL

LEN SPLAYED ACC:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60		626	3	

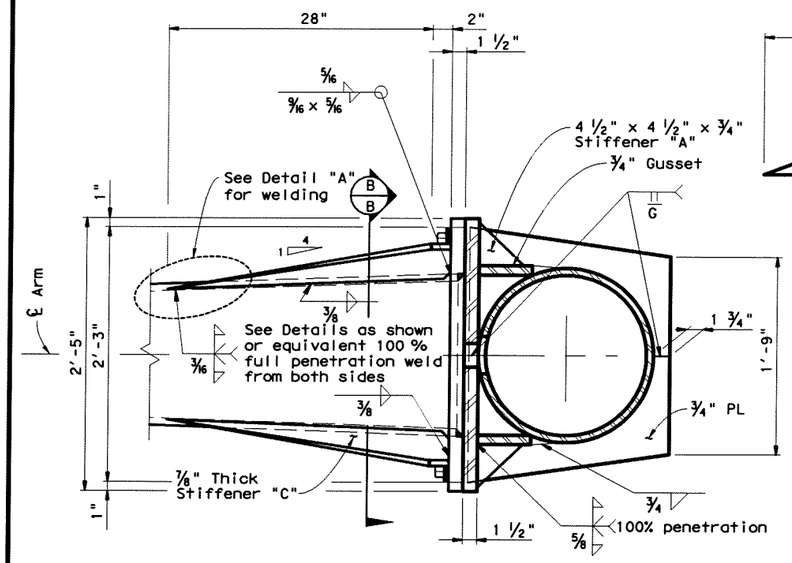
STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL SUPPORT STRUCTURES
LONG MAST ARM ASSEMBLY (50 TO 65 FT) (80 AND 100 MPH WIND ZONE)
LMA(2)-01

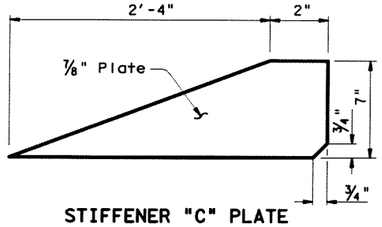
©TxDOT July 2000			DN: JSY	CK: ARC	DW: TGG	CK: JSY
REVISIONS 4-20-01	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT			SHEET
	DAL	6	(SEE TITLE SHEET)			701
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0009	12	203	VA

1318

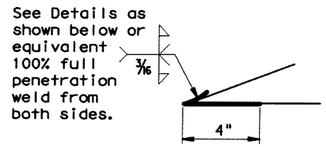
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SECTION A-A

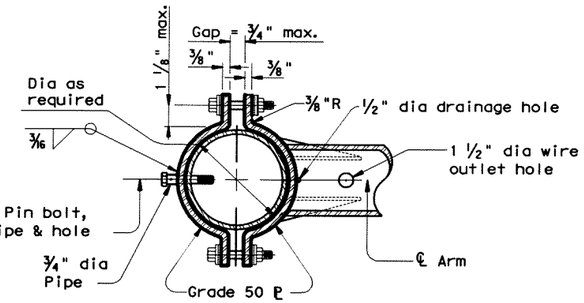


STIFFENER "C" PLATE

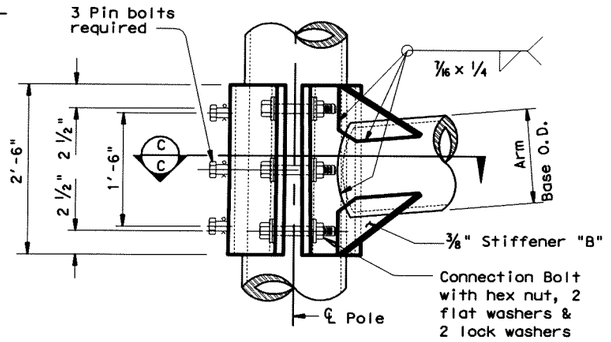


Only 4" length at tip of Stiffener "C" requires full penetration weld. Smooth weld radius to connect Stiffener . Others only require fillet weld.

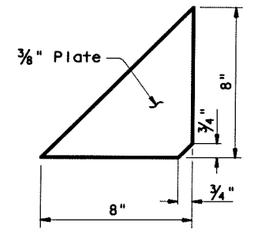
DETAIL "A"



SECTION C-C



ELEVATION

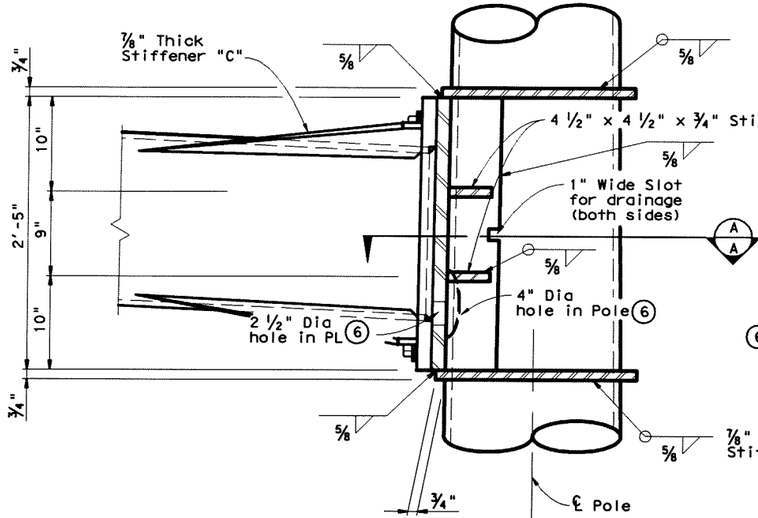


STIFFENER "B" PLATE

MATERIALS	
Round Shafts or Polygonal Shafts	ASTM A595 GR A, ASTM A570 GR 50, ASTM A607 GR 50, ASTM A572 GR 50 or A36M50
Plates (1)	ASTM A36 OR A572 GR 50 or A595(2) or A36M50
Connection Bolts	ASTM A325 except where noted
Pin Bolts	ASTM A325
Pipe	ASTM A53 GR A or B, or A501
Misc. Hardware	Galvanized steel or stainless steel or as noted

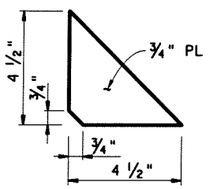
(1) Any of the materials listed for plates may be used where the drawings do not specify a particular Grade designation.

(2) If A595 material is used, it need not be cold worked to A595 requirments, but material must have 40 ksi minimum yield prior to fabrication.

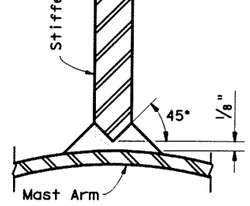


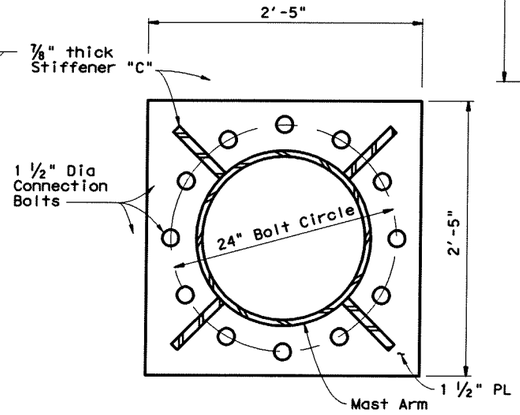
(6) Deburr holes and offset as shown for drainage

ELEVATION

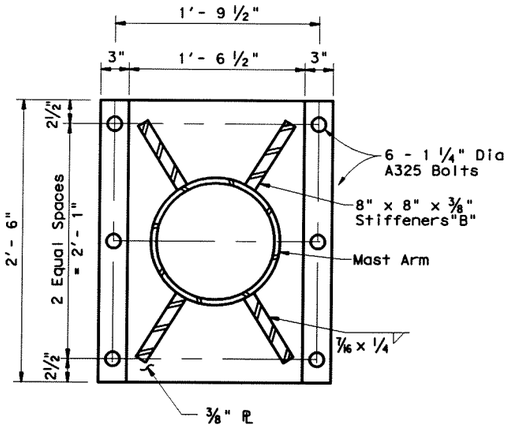


STIFFENER "A" PLATE





SECTION B-B



MAST ARM AND ILSN ARM TO POLE

CLAMP-ON DETAIL

GENERAL NOTES:

Clamp-on details are used for the second arm on dual mast arm assemblies. A Maximum 1 1/2" wide vertical slotted hole may be cut in the front clamp plate to facilitate drainage during galvanizing. THe slot shall be centered behind the arm and shall be no longer than the arm diameter minus 1".

Fixed mount details are used for single mast arm assemblies and for the first arm on dual mast assemblies.

Where duplicate parts occur on a detail, welds shown for one part shall apply to all similar parts on the detail.

Pin bolts are required to prevent rotation of clamp-on arms under design wind forces.

| LETTERS | | | | | | | SPLAYED | | | | | | |

DISCLAIMER
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Shipping Parts List

Ship each pole with the following attached: enlarged hand hole, pole cap, fixed arm connection bolts and washers, and any additional hardware listed in the table.

Nominal Arm Length	30' Poles with Luminaire: See note above plus: one (or two if ILSN attached) small hand hole, clamp-on simplex		24' Poles with ILSN: See note above plus one small hand hole		19' Poles with no Luminaire and no ILSN: See note above	
Single Mast Arm						
Lf ft.	Designation	Quantity	Designation	Quantity	Designation	Quantity
50	50L		50S		50	
55	55L		55S		55	
60	60L	1	60S		60	
65	65L		65S		65	

Dual Mast Arm

Lf ft.	Lc ft.	Designation	Quantity	Designation	Quantity	Designation	Quantity
50	20	5020L		5020S		5020	
	24	5024L		5024S		5024	
	28	5028L		5028S		5028	
	32	5032L		5032S		5032	
	36	5036L		5036S		5036	
	40	5040L		5040S		5040	
	44	5044L		5044S		5044	
55	20	5520L		5520S		5520	
	24	5524L		5524S		5524	
	28	5528L		5528S		5528	
	32	5532L		5532S		5532	
	36	5536L		5536S		5536	
	40	5540L		5540S		5540	
	44	5544L		5544S		5544	
60	20	6020L		6020S		6020	
	24	6024L		6024S		6024	
	28	6028L		6028S		6028	
	32	6032L		6032S		6032	
	36	6036L		6036S		6036	
	40	6040L		6040S		6040	
	44	6044L		6044S		6044	
65	20	6520L		6520S		6520	
	24	6524L		6524S		6524	
	28	6528L		6528S		6528	
	32	6532L		6532S		6532	
	36	6536L		6536S		6536	
	40	6540L		6540S		6540	
	44	6544L		6544S		6544	

Shipping Parts List

Traffic Signal Arms (Fixed Mount) (1 per pole)
Ship each arm with listed equipment attached

Nominal Arm Length ft.	Type IV Arm (4 Signals) * 3 Bracket Assembly * and 4 CGB Connectors: Designation	Quantity
50	50IV	
55	55IV	
60	60IV	1
65	65IV	

Luminaire Arms (1 per 30' pole)

Nominal Arm Length	Quantity
8' Arm	1

ILSN Arm (Max. 2 per pole) Ship with clamps, bolts and washers

Nominal Arm Length	Quantity
7' Arm	
9' Arm	

Traffic Signal Arms (80 MPH Clamp-On Mount) (1 per pole) Ship each arm with listed equipment attached

Nominal Arm Length ft.	Type I Arm (1 Signal) 2 CGB connector and 1 clamp w/bolts and washers: Designation	Quantity	Type II Arm (2 Signals) * 1 Bracket Assembly * and 3 CGB connectors, and 1 clamp w/bolts and washers: Designation	Quantity	Type III Arm (3 Signals) * 2 Bracket Assembly * and 4 CGB connectors, and 1 clamp w/bolts and washers: Designation	Quantity
20	20I-80					
24	24I-80		24II-80			
28	28I-80		28II-80			
32			32II-80		32III-80	
36			36II-80		36III-80	
40					40III-80	
44					44III-80	

Traffic Signal Arms (100 MPH Clamp-On Mount) (1 per pole) Ship each arm with listed equipment attached

Nominal Arm Length ft.	Type I Arm (1 Signal) 2 CGB connector and 1 clamp w/bolts and washers: Designation	Quantity	Type II Arm (2 Signals) * 1 Bracket Assembly * and 3 CGB connectors, and 1 clamp w/bolts and washers: Designation	Quantity	Type III Arm (3 Signals) * 2 Bracket Assembly * and 4 CGB connectors, and 1 clamp w/bolts and washers: Designation	Quantity
20	20I-100					
24	24I-100		24II-100			
28	28I-100		28II-100			
32			32II-100		32III-100	
36			36II-100		36III-100	
40					40III-100	
44					44III-100	

Anchor Bolt Assemblies (1 per pole)

Anchor Bolt Diameter	Anchor Bolt Length	Quantity
2 1/2 "	5' - 3"	1

Each anchor bolt assembly consists of the following: Top and bottom templates, 4 anchor bolts, 8 nuts, 8 flat washers, 4 lock washers and 4 nut anchor devices (type 2) per Standard Drawing "TS-FD".
Templates may be removed for shipment.

Foundation Summary Table **

Location Ident.	Avg. N Blow/ft.	No. Each	Drill Shaft *** Length (feet) 48-A
SW CORNER OF SH 205 AND YELLOW JACKET	10	1	22
Total Drill Shaft Length			22

Notes
* Supply Option "A" unless otherwise noted
** Foundations may be listed separately or grouped according to similarity of location and type. Quantities are for the Contractor's information only.
*** Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

Abbreviations
Lf= Fixed Arm Length
Lc= Clamp-on Arm Length (44' Max.)

STATE OF TEXAS
KEVIN P. HOPPERS
93669
REGISTERED PROFESSIONAL ENGINEER
P.E.

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KEVIN P. HOPPERS, P.E. 93669 ON MARCH 23, 2006
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STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

LONG MAST ARM ASSEMBLY PARTS LIST

LMA(4)-01

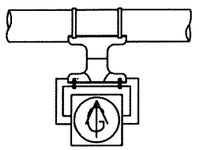
©TxDOT November 2000 DN: JK CK: GRB DW: FDN CK: CAL

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
4-20-01	DAL	6	(SEE TITLE SHEET)	703

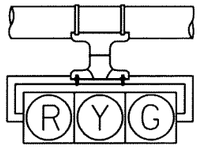
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ROCKWALL	0009	12	203	VA

1310

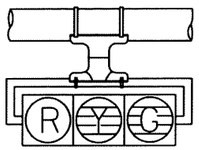
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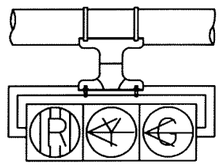
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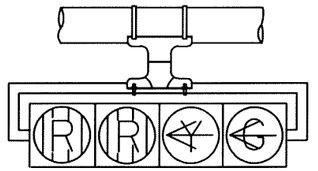
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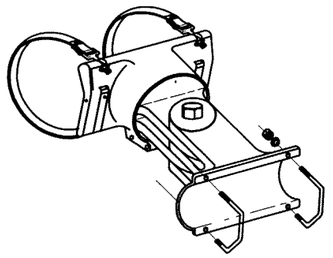
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H3LLT

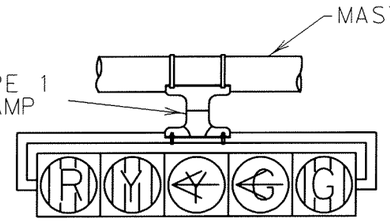


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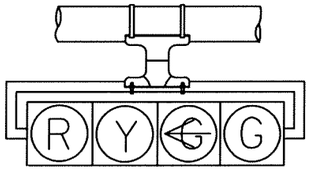


TYPE 2 CLAMP KIT

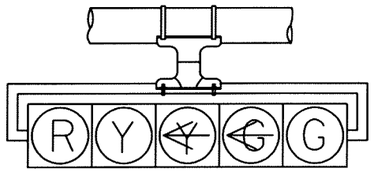
SHALL BE INSTALLED WHEN ROTATION ABOUT THE HORIZONTAL AND VERTICAL AXES ARE NEEDED.



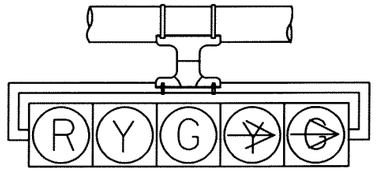
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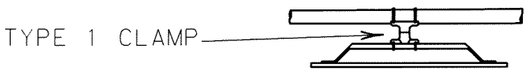
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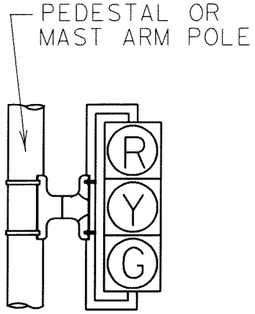


H5RT

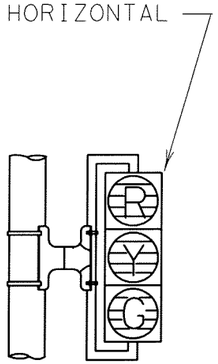


ONE (1) CLAMP SHALL BE USED ON SIGNS LESS THAN OR EQUAL TO 10'-0" IN LENGTH.

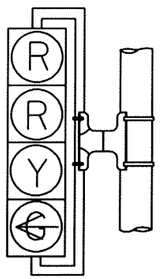
TWO (2) CLAMPS SHALL BE USED ON SIGNS GREATER THAN 10'-0" IN LENGTH.



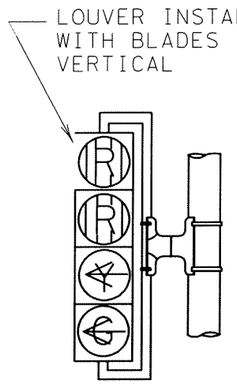
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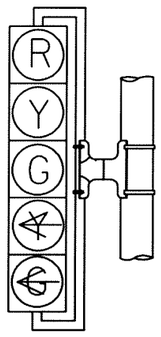
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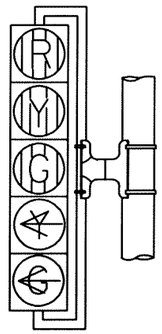
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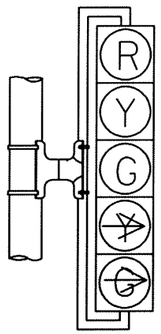
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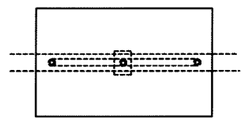
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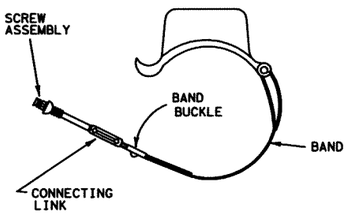
V5LLT



V5RT



SIGN OR DAMPENING DEVICE ATTACHMENT FOR MAST ARMS



TYPE 1 AND 2 CLAMPS

NOTES:

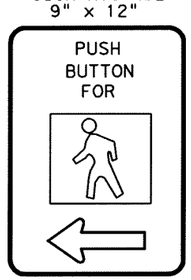
1. VEHICLE SIGNAL HEADS SHALL BE MOUNTED WITH TYPE 1 CLAMP AND APPROPRIATE TUBING.
2. ALL POLE MOUNTED VEHICLE HEADS SHALL BE INSTALLED ON THE AWAY-FROM-TRAFFIC SIDE OF THE PEDESTAL OR MAST ARM POLE.
3. ALL DAMPING DEVICES SHALL BE 18" TO 2' WIDE BY 4' IN LENGTH.

© TXDOT 2005

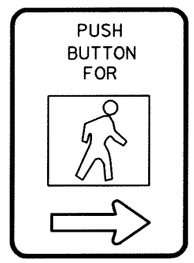
DALLAS DISTRICT STANDARD

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		704
STATE	STATE DIST.	COUNTY	
TEXAS	DAL	ROCKWALL	
CONT.	SECT.	JOB	HIGHWAY NO.
0009	12	203	VA

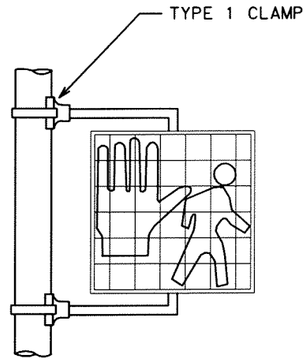
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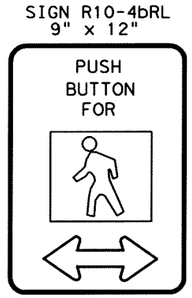
PEDESTRIAN PUSHBUTTON
SIGN DETAILS



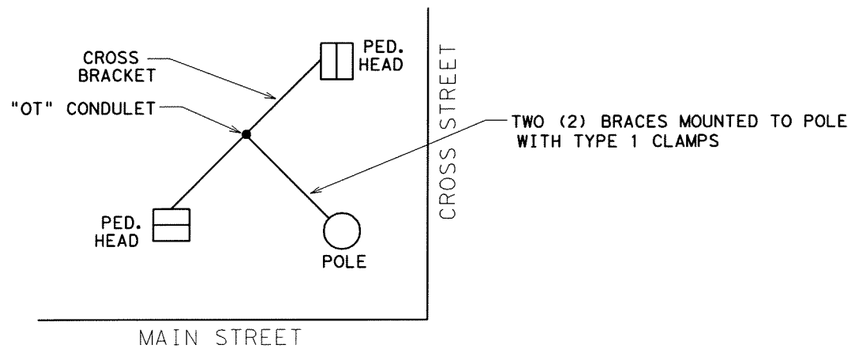
PEDESTRIAN PUSHBUTTON
SIGN DETAILS



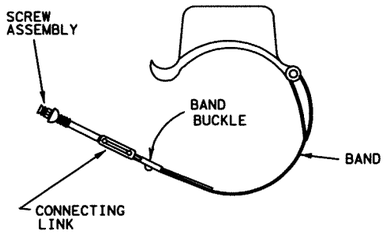
PEDESTRIAN SIGNAL HEAD MOUNTING
FOR ONE PEDESTRIAN SIGNAL HEAD
152A



PEDESTRIAN PUSHBUTTON
SIGN DETAILS



PEDESTRIAN SIGNAL HEAD MOUNTING
FOR TWO PEDESTRIAN SIGNAL HEADS
143C



TYPE 1 CLAMP

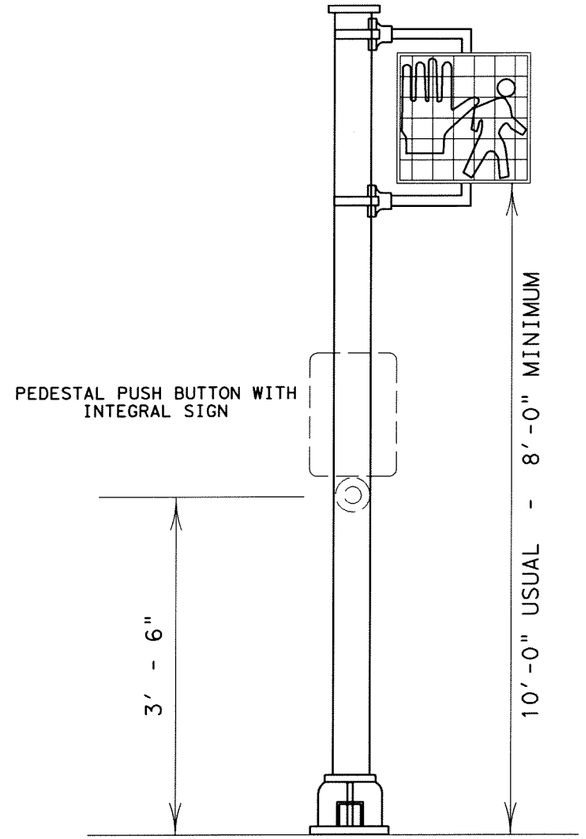
⚠1 NOTE: CLAM SHELL MOUNTING HARDWARE MAY BE USED INSTEAD OF MOUNTING HARDWARE SHOWN ABOVE, AS APPROVED BY THE ENGINEER.
ICC P/N 4805 OR McCAIN QUICKMOUNT OR APPROVED EQUAL.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH TYPE 1 CLAMPS AND APPROPRIATE TUBING.
2. ALL PEDESTRIAN SIGNAL HEADS SHALL BE INSTALLED ON THE AWAY-FROM-TRAFFIC SIDE OF THE PEDESTAL OR MAST ARM POLE.
3. ALL WIRING FOR PEDESTRIAN SIGNALS SHALL BE TOTALLY ENCLOSED WITHIN THE SIGNAL MOUNTING HARDWARE.
4. ALL PEDESTRIAN SIGNAL HEADS AND PUSH BUTTON SIGNS SHALL DISPLAY THE SYMBOLIZED MESSAGES SHOWN ABOVE.

NOTE:

THE POLE ON THIS DRAWING IS SHOWN AS AN EXAMPLE ONLY. POLES OF SIMILAR DESIGN FOR ANY CROSS SECTION WHICH MEET THE SPECIFICATIONS AND REQUIREMENTS SHOWN ON THESE DRAWINGS AND ARE APPROVED BY THE ENGINEER WILL BE DEEMED ACCEPTABLE.



PEDESTAL POLE

⚠1 ALTERNATIVE MOUNTING METHOD revised 12-92.

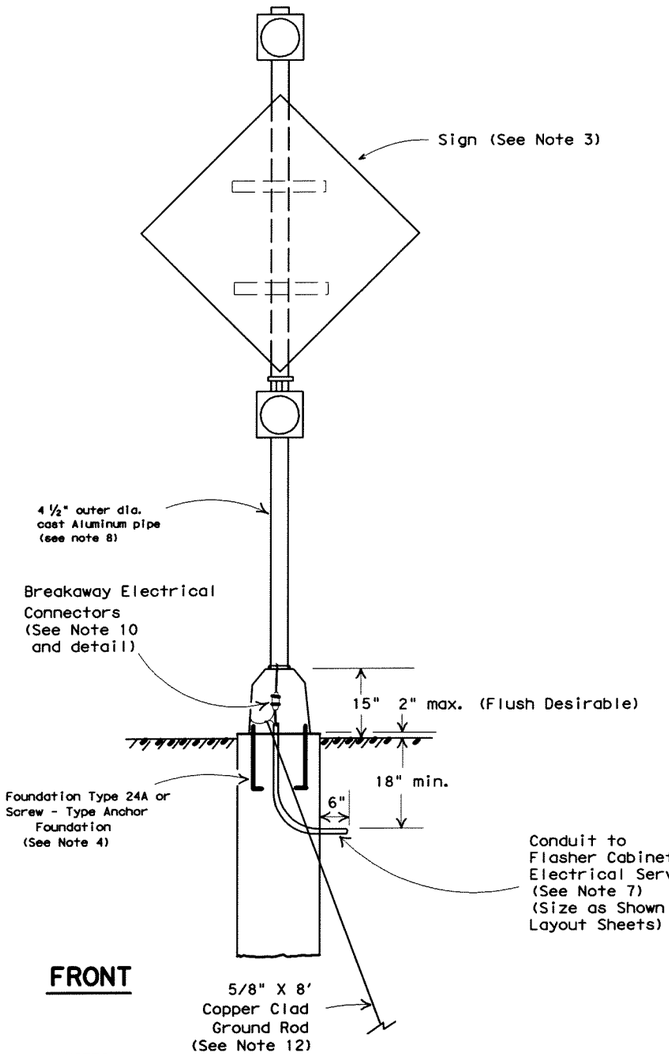
DALLAS DISTRICT STANDARD

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		705
STATE	STATE DIST.	COUNTY	
TEXAS	DAL	ROCKWALL	
CONT.	SECT.	JOB	HIGHWAY NO.
0009	12	203	VA

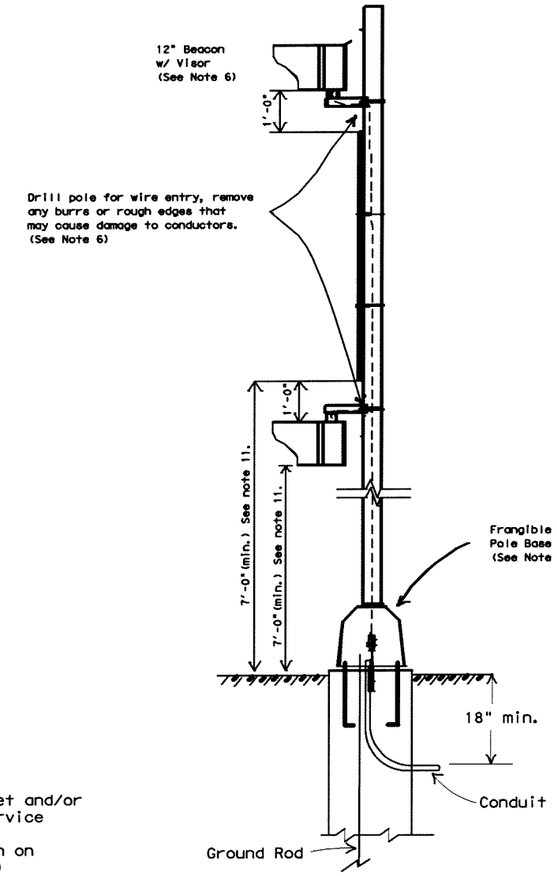
PEDESTRIAN SIGNAL HEAD IDENTIFICATION

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.

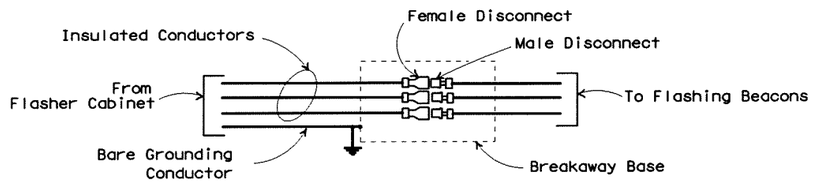
LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 65 75 85 96 06 16 26 36
DATE:
ACC: d58npic/usr/d580504
FILE:
DN: LR
CK: CW
DW: DN
CK: MT



FRONT



SIDE



BREAKAWAY ELECTRICAL CONNECTORS

NOTES:

1. Details show a typical warning sign with two flashing beacon heads, other arrangements are possible. When only one beacon is required, install the upper beacon.
2. See Item 685, "Roadside Flashing Beacon Assemblies" for further requirements.
3. See SMD standard sheets for lateral and vertical clearances and sign mounting details. Install signs as shown on the sign layout sheets.
4. Use either a Screw-In Type Anchor Foundation or 24 in. Drill Shaft Foundation as shown elsewhere in the plans. When plans require 24 in. Drill Shaft Foundation, see standard sheet TS-FD. Install the Screw-In Type Anchor Foundation as shown. On slope, install one edge at ground level. In addition installation of a separate ground rod will be required as shown.
5. When used, provide one of the following Screw-In Type Anchor foundations:
   A. B. Chance Co., model C11242NG4VP; Component Products, Inc., model CPI-SLSF-5TX; Pelco Products, Inc., models PB-5359, PB-5360 or PB 5375; or Approved equal.
6. Install beacon heads as shown here, as shown elsewhere on the plans, or as directed. Use hardware specifically designed for mounting beacon heads on poles.
7. Conduit in foundation and within 6 in. of foundation is subsidiary to the Item 685, "Roadside Flashing Beacon Assemblies."
8. Unless otherwise shown on the plans, pole shaft shall be one piece, schedule 40 Aluminum pipe, ASTM B429 or B221 (Alloy 6061-T6 only). Aluminum conduit will not develop the necessary strength and will not be allowed.
9. Per manufacturer's recommendations, engage all threads on the pedestal pole base and pipe unless the pipe is fully seated into base. In high winds, use a pole and base collar assembly to add strength and prevent loosening of connection.
10. Provide non-fused watertight breakaway electrical connectors for breakaway poles. (Bussmann HET, Littelfuse LET, Ferraz-Shawmut FEBN, or approved equal).
11. Provide clearance as shown above the sidewalk or pavement grade at the edge of the road. When a bottom beacon is not used, mount the sign at least 7 ft. above the sidewalk or pavement grade at the edge of the road.
12. Make connections to ground rods according to NEC. Ground rod clamps shall be listed for their intended purpose.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

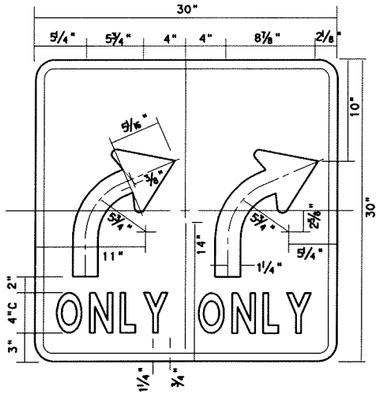
ROADSIDE FLASHING BEACON ASSEMBLY

RFBA-04

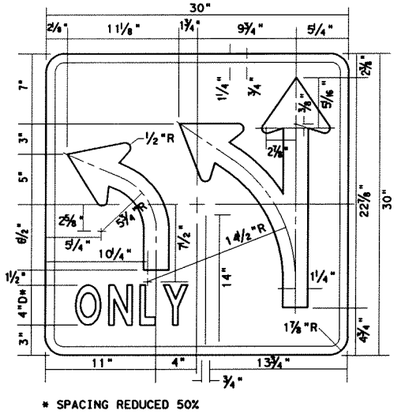
©TxDOT January 1992

DN: KB	CK: HW	DW:	CK: CAL

REVISIONS	DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
5-93	DAL	6	(SEE TITLE SHEET)	706
10-93				
4-98	COUNTY		CONTROL SECTION JOB	HIGHWAY
12-04	ROCKWALL		0009 12 203	VA

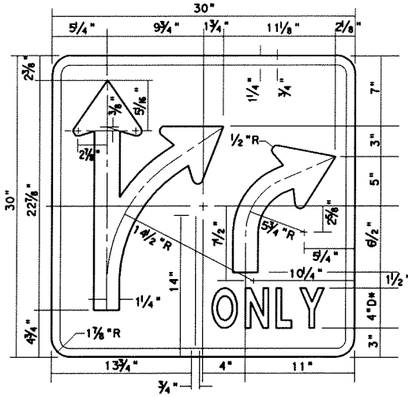


R3-8RR
30"x 30"

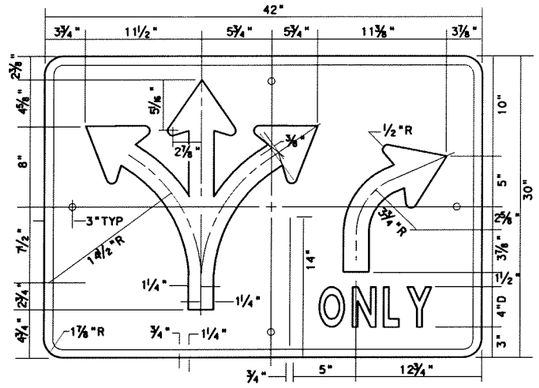


* SPACING REDUCED 50%

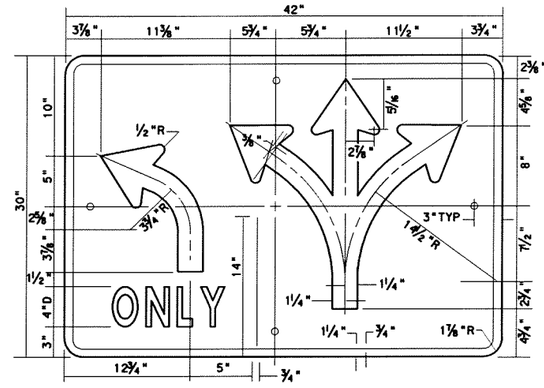
R3-8L
30"x 30"



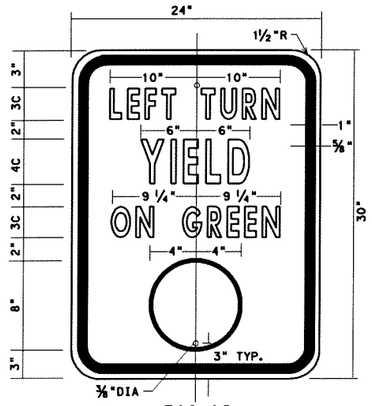
R3-8R
30"x 30"



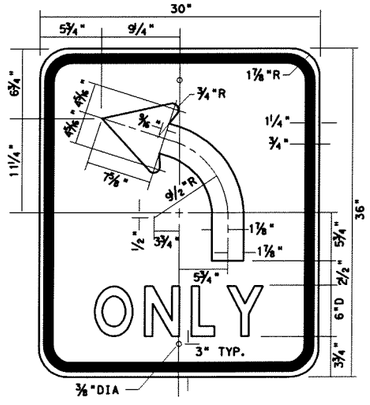
R3-8R(SPL)
42"x 30"



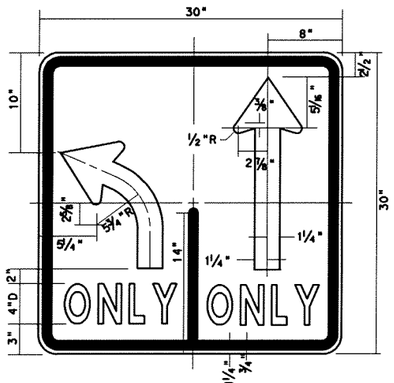
R3-8L(SPL)
42"x 30"



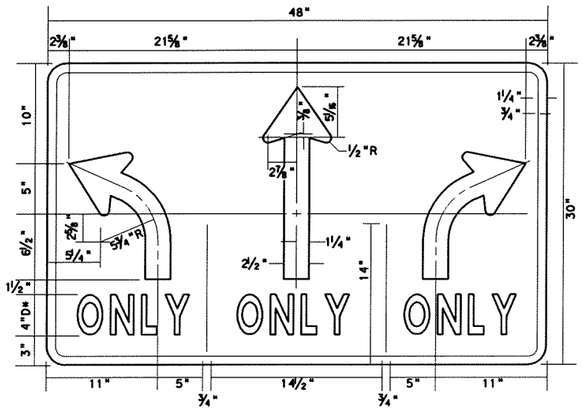
R10-12
24"x 30"
LEGEND BLACK (NON-REFLECTIVE)
BACKGROUND WHITE (REFLECTIVE)
CIRCULAR GREEN (REFLECTIVE)



R3-5L
R3-5R (RT. ARROW)
30"x 36"

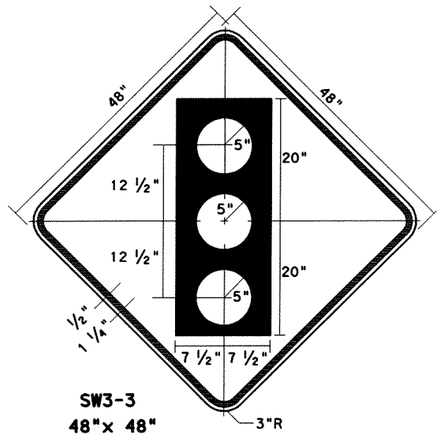


R3-8LS
30"x 30"



R3-8RSL
48"x 30"

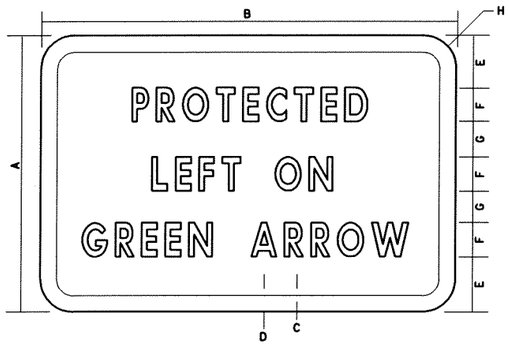
*SPACING REDUCED 50%



SW3-3
48"x 48"

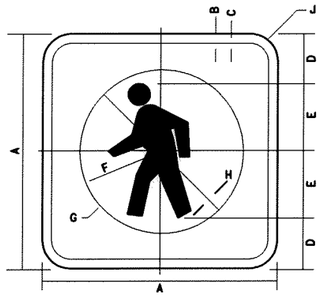
COLORS

SYMBOL & LEGEND- BLACK (NON-REFL.)
TOP CIRCLE - RED (REFL.)
BOTTOM CIRCLE - GREEN (REFL.)
BACKGROUND - YELLOW (REFL.)
TYPE C REFLECTIVE SHEETING



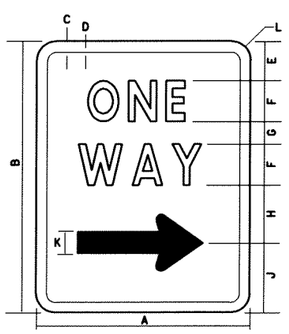
SIGN NO.	SIGN	DIMENSIONS (INCHES)							
		A	B	C	D	E	F	G	H
R10-9	STD.	12	18	3/8	3/4	2	2 C	1	1 1/2
SR10-9S	EXPWY.	18	30	3/8	3/4	3	3 C	1 1/2	1 1/2
SR10-9	FRWY.	24	36	5/8	1	4	4C*	2	1 1/2

* - REDUCE SPACING 40%

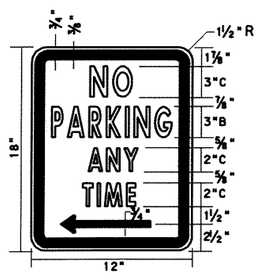


CIRCLE AND DIAGONAL - RED
SYMBOL & BORDER - BLACK
BACKGROUND - WHITE

SIGN NO.	SIGN	DIMENSIONS (INCHES)								
		A	B	C	D	E	F	G	H	J
R9-3a	STD.	18	1	5/8	3 1/2	5 1/2	6 3/8	7 7/8	1 1/2	1 1/2
ER9-3a	EXPWY.	24	1	5/8	4 1/2	7 1/2	8 1/2	10 1/2	2	1 1/2
FR9-3a	FRWY.	30	1 1/4	3/4	5 3/4	9 1/4	10 5/8	13 3/8	2 1/2	1 7/8



SIGN NO.	SIGN	DIMENSIONS (INCHES)										
		A	B	C	D	E	F	G	H	J	K	L
R6-2	STD.	18	24	1	5/8	2 1/2	5D	1 1/2	4 1/2	5 1/2	2 1/4	1 1/2
SR6-2	SPEC.	24	30	1	5/8	3	6D	1 7/8	6 1/16	7 1/16	3	1 1/2



R7-1L
R7-1R (RT ARROW)
R7-1LR (DBL ARROW)
12"x 18"

GENERAL NOTES:

ALPHABETS AND LATERAL SPACING BETWEEN LETTERS AND NUMERALS SHALL CONFORM WITH THE FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", LATEST EDITION AND ANY APPROVED CHANGES THERETO. LATERAL SPACING OF TEXT SHALL BE SUCH AS TO PROVIDE A BALANCED APPEARANCE.

SIGN BACKGROUNDS SHALL BE OF FLAT SURFACE REFLECTIVE SHEETING CONFORMING WITH THE SPECIFICATIONS (TYPE A) UNLESS OTHERWISE SPECIFIED IN THE PLANS.

SIGN LEGENDS SHALL BE APPLIED BY THE SCREENING PROCESS.

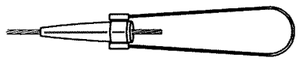
THE SIGN BLANKS SHALL BE ONE PIECE 5/8 INCH THICK PLYWOOD (TYPE A) CONFORMING TO THE SPECIFICATIONS UNLESS ATTACHED TO SIGNAL POLES.

THE SIGN BLANKS SHALL BE ONE PIECE SHEET ALUMINUM ALLOY 0.080 INCH THICK CONFORMING TO THE ITEM "ALUMINUM SIGNS (TYPE A)" WHEN ATTACHED TO SIGNAL POLES.

SIGNS

DALLAS DISTRICT STANDARD

FED.RD. DIV.NO.	STATE PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		707
STATE	STATE DIST.NO.	COUNTY	
TEXAS	DAL	ROCKWALL	
CONT.	SECT.	JOB	HIGHWAY NO.
0009	12	203	VA

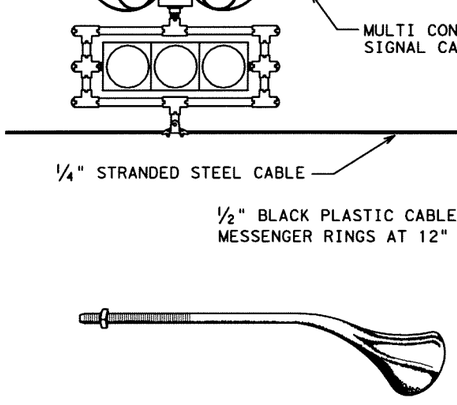


COMPRESSION FITTING

SOURCES:
RELIABLE ELECTRIC NO. 5264
FARGO NO. OR EQUAL

LUMINAIRE ARM

SOURCES:
CROUSE HINDS NO. 106-R82
JOSLYN NO. J75100B OR EQUAL

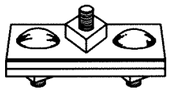


THIMBLEYE BOLT (Angle Type)

SOURCES:
JOSLYN NO. J80 SERIES
McGRAW EDISON DG4F OR EQUAL

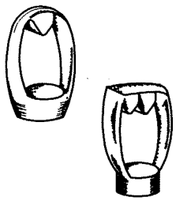
LIFT PLATE

SOURCES:
JOSLYN J7886
McGRAW EDISON DG4M-2 OR EQUAL



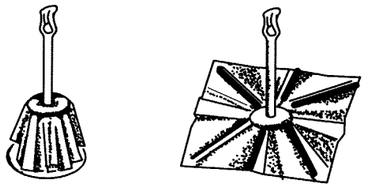
GUY CLAMP (3-Bolt)

6" HEAVY GUY CLAMP WITH 3-5/8" BOLTS OR RELIABLE ELECTRIC STRANDVISE WITH FLEXIBLE BAIL (NO. 5264) OR FARGO STRANDVISE OR EQUAL



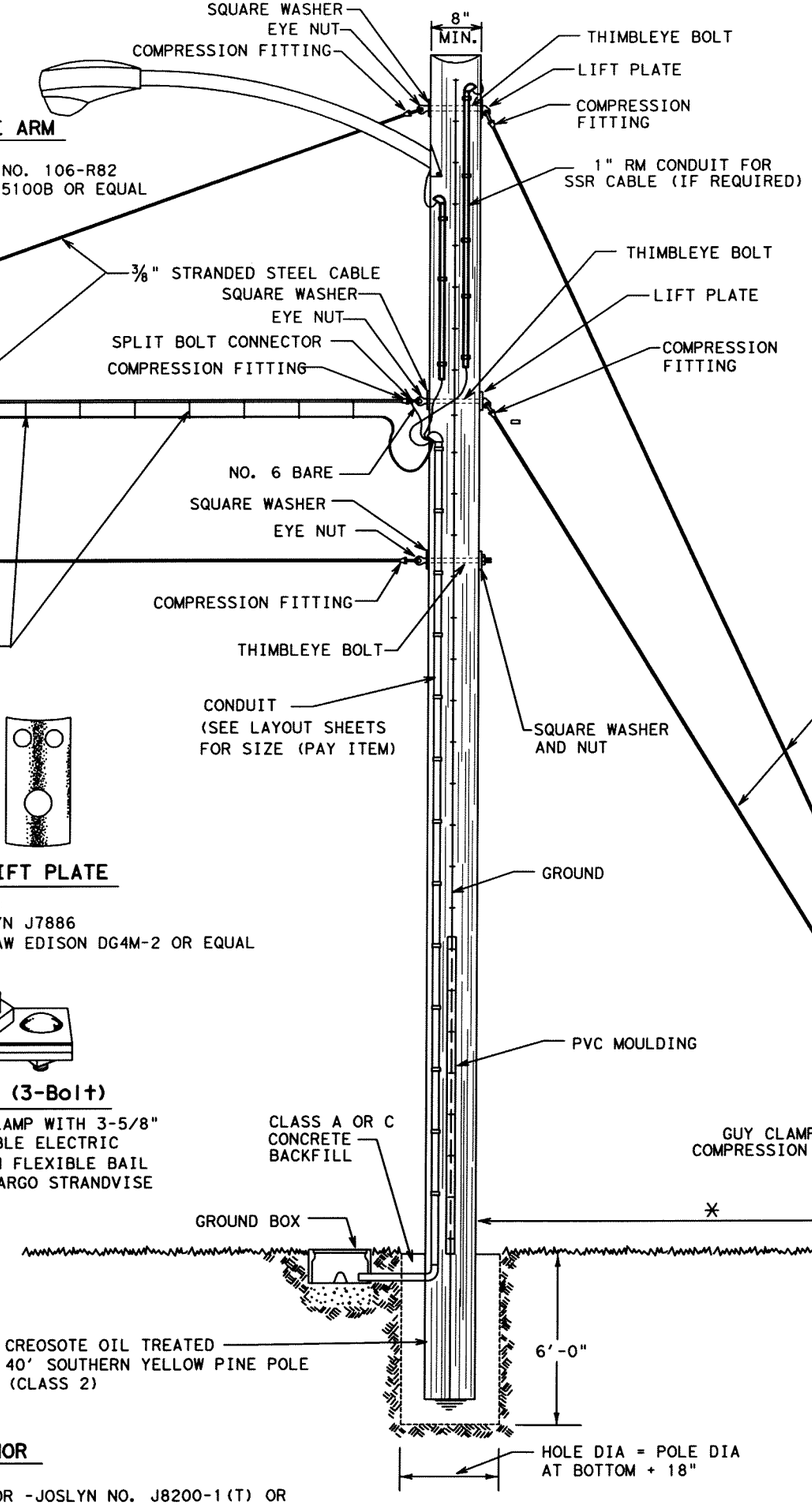
EYE NUTS (Twineye & tripleye)

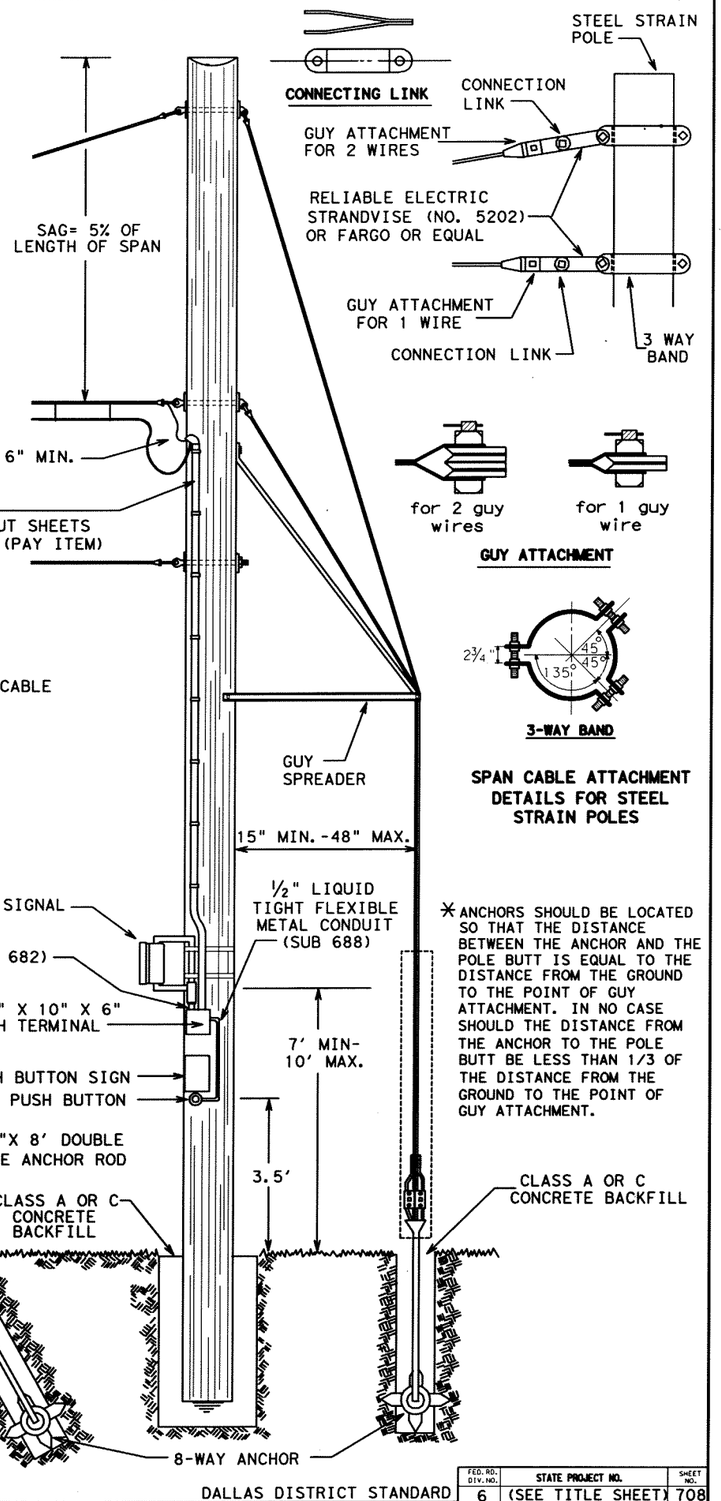
SOURCES:
JOSLYN NO. J12593
McGRAW EDISON DGISE OR EQUAL



8-WAY ANCHOR

SOURCES:
8-WAY ANCHOR -JOSLYN NO. J8200-1(T) OR
6-WAY ANCHOR-McGRAW EDISON DA6E1 OR EQUAL





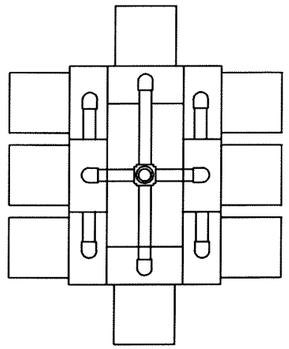
SPAN CABLE ATTACHMENT DETAILS FOR STEEL STRAIN POLES

* ANCHORS SHOULD BE LOCATED SO THAT THE DISTANCE BETWEEN THE ANCHOR AND THE POLE BUTT IS EQUAL TO THE DISTANCE FROM THE GROUND TO THE POINT OF GUY ATTACHMENT. IN NO CASE SHOULD THE DISTANCE FROM THE ANCHOR TO THE POLE BUTT BE LESS THAN 1/3 OF THE DISTANCE FROM THE GROUND TO THE POINT OF GUY ATTACHMENT.

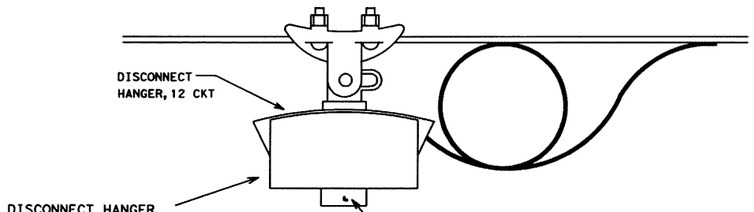
DALLAS DISTRICT STANDARD

CONSTRUCTION DETAILS FOR SPAN WIRE MOUNTED SIGNALS

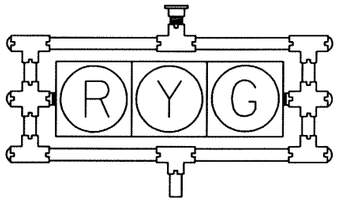
FED. RD. DIV. NO.	STATE PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		708
STATE	STATE DIST. NO.	COUNTY	
TEXAS	DAL	ROCKWALL	
CONT.	SECT.	JOB	HIGHWAY NO.
0009	12	203	VA



TOP

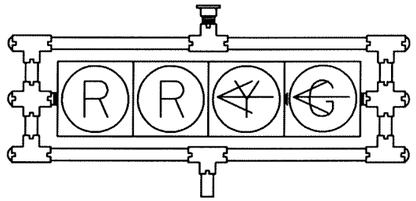


DISCONNECT HANGER MODIFICATION



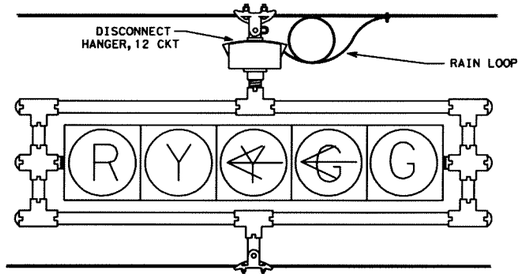
SH 3H

TYPICAL SPAN WIRE
HORIZONTAL MOUNT
INSTALLATION



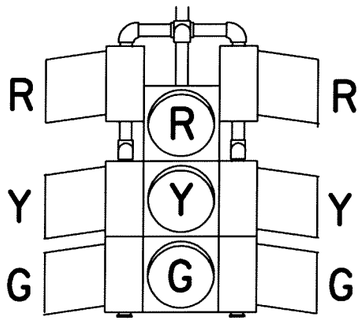
SH 4H

TYPICAL SPAN WIRE
HORIZONTAL MOUNT
INSTALLATION

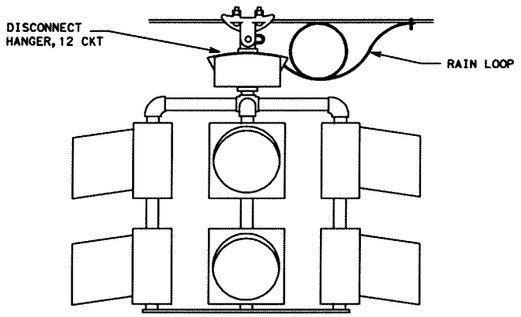


SH 5H

TYPICAL SPAN WIRE
HORIZONTAL MOUNT
INSTALLATION



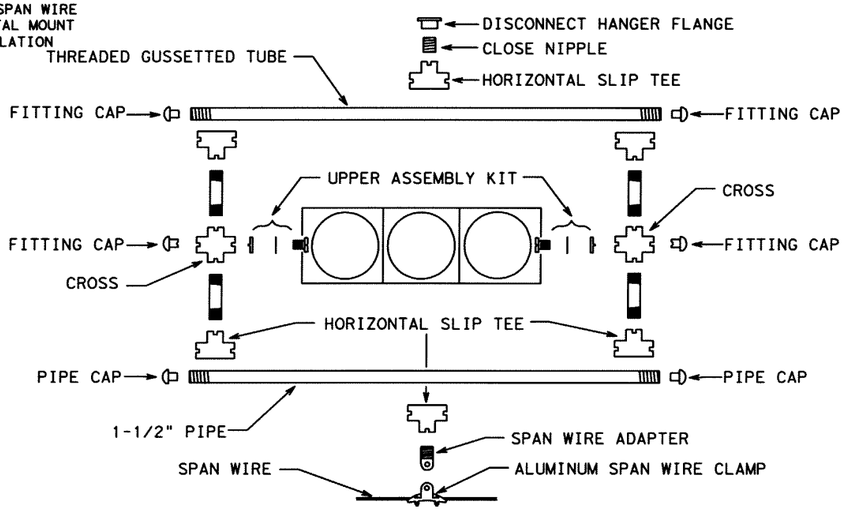
SIDES



TYPICAL
FLASHING BEACON
INSTALLATION

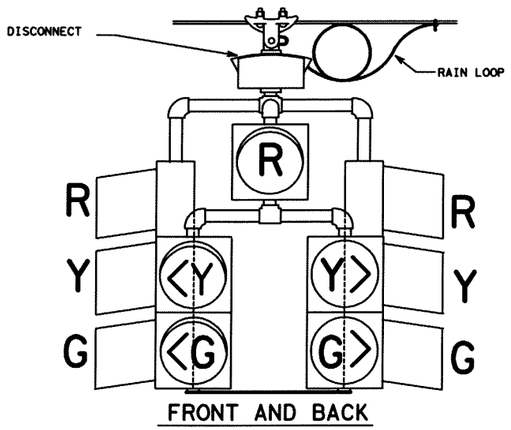


PEDESTRIAN PUSHBUTTON
SIGN DETAILS

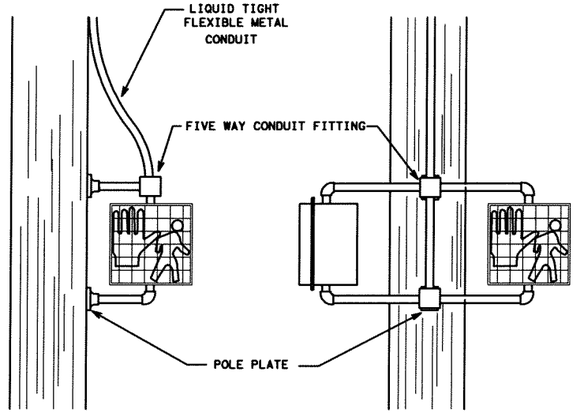


BOTTOM TETHERED, SPAN WIRE SIGNAL HARDWARE ASSEMBLY

(BACK PANEL NOT SHOWN)

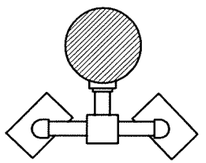


FRONT AND BACK

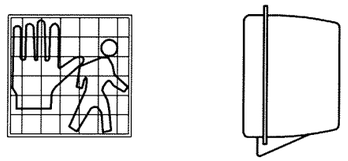


SH 152A
ONE-WAY
ADJUSTABLE FACE SIGNAL FOR
WOOD POLE MOUNTING

SH 143C
TWO-WAY
ADJUSTABLE FACE SIGNAL FOR
WOOD POLE MOUNTING



SH 143C
PLAN VIEW

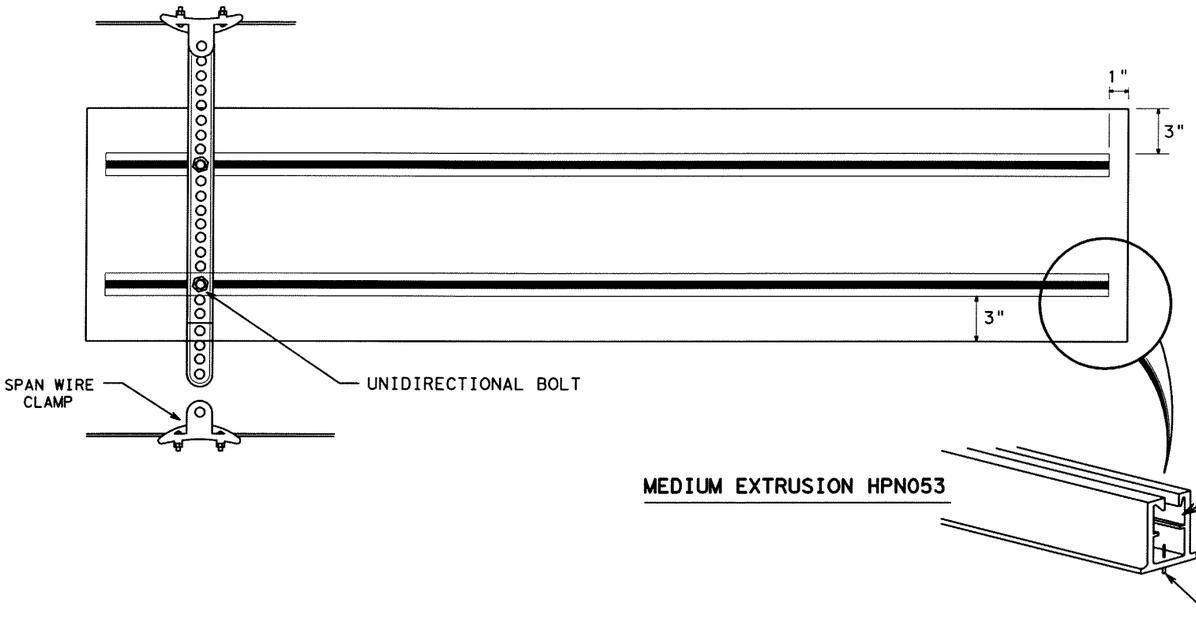


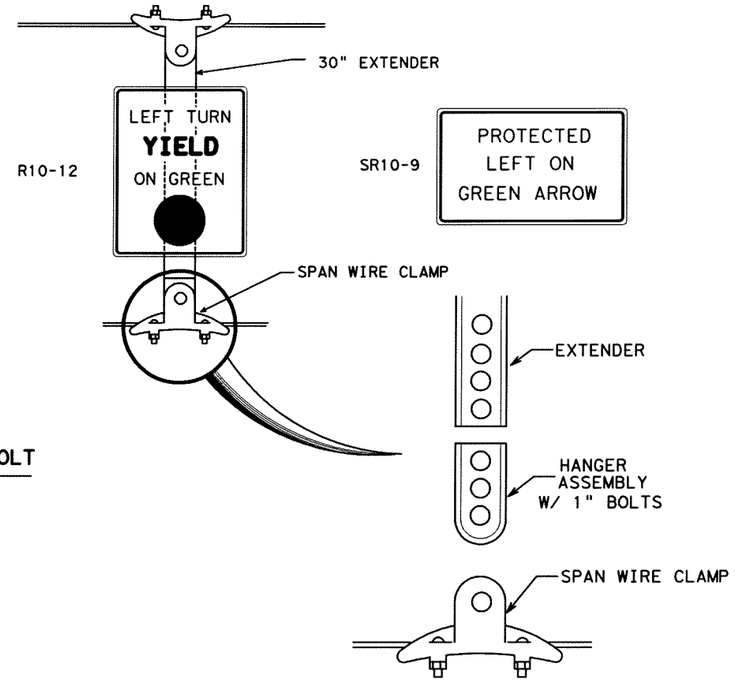
"EGGCRATE" VISOR PEDESTRIAN SIGNAL
WITH ONE-PIECE REFLECTOR

DALLAS DISTRICT STANDARD

FED. RD. DIV. NO.	STATE PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		709
STATE	STATE DIST. NO.	COUNTY	
TEXAS	DAL	ROCKWALL	
CONT.	SECT.	JOB	HIGHWAY NO.
0009	12	203	VA

SIGNAL HEADS FOR SPAN WIRE INSTALLATION

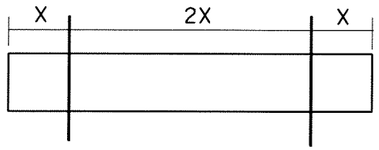




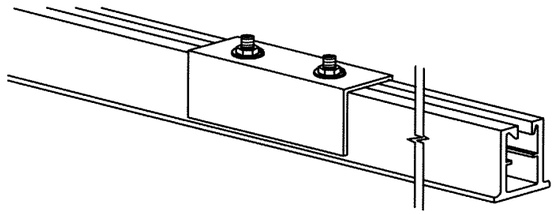
HANGER ASSEMBLY DETAILS

NOTES: 1. FOR SIGNS LESS THAN 5'-0" ONE VERTICAL SUPPORT IS REQUIRED PER SIGN. TWO VERTICAL SUPPORTS SHALL BE USED FOR SIGNS LONGER THAN 5'-0"

2. FOR STREET NAME SIGNS, EXTRUDED ALUMINUM SHALL BE MOUNTED FOR HORIZONTAL SUPPORT AS SHOWN.

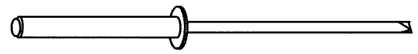


SIGN LENGTH	X
5'-6"-6'-0"	1'-6"
6'-6"-7'-0"	1'-9"
7'-6"-8'-0"	2'-0"
8'-6"-9'-0"	2'-3"
9'-6"-10'-0"	2'-6"
10'-6"-11'-0"	2'-9"
11'-6"-12'-0"	3'-0"
12'-6"-13'-0"	3'-3"



5" ALUMINUM COUPLING

6061-T6



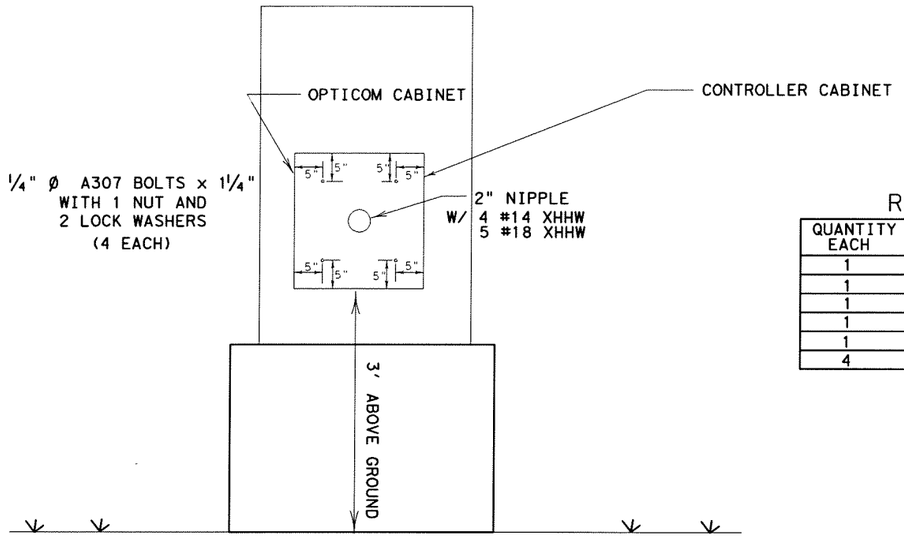
ALUMINUM RIVET

NOTE: ALUMINUM RIVETS SHALL BE USED TO ATTACH THE SIGN TO THE EXTRUDED ALUMINUM. SPACINGS OF RIVETS SHALL BE 6" O.C.

SIGNS FOR SPAN WIRE INSTALLATION

DALLAS DISTRICT STANDARD

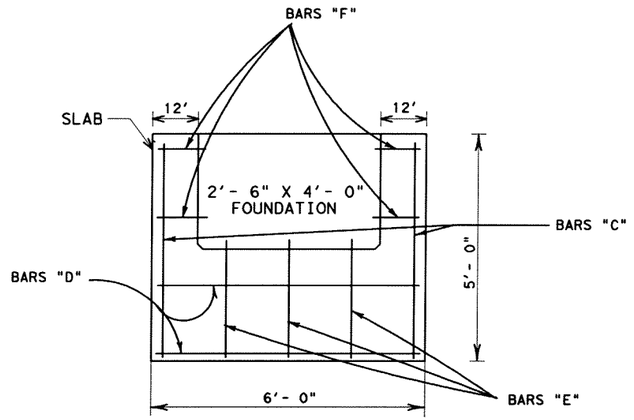
FED.RD. DIV. NO.	STATE PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		710
STATE	STATE DIST. NO.	COUNTY	
TEXAS	DAL	ROCKWALL	
CONT.	SECT.	JOB	HIGHWAY NO.
0009	12	203	VA



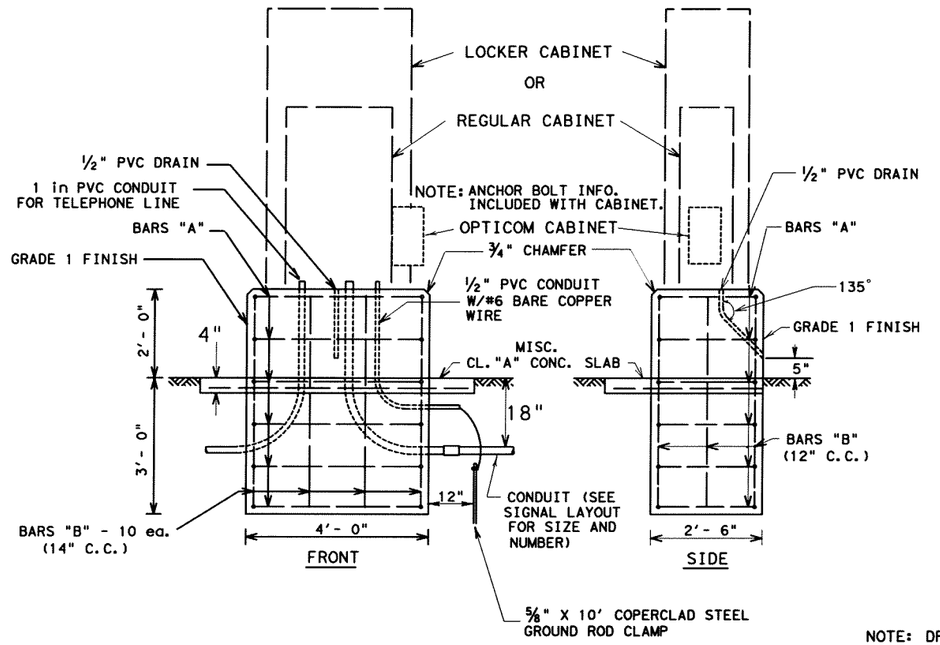
FRONT VIEW OF OPTICOM CABINET

REQUIRED WIRE FOR OPTICOM

QUANTITY EACH	WIRE TYPE	COLOR	DESCRIPTION
1	#14	BLACK	120 VAC FOR OPTICOM
1	#14	BLACK	120 VAC FOR FAN & CABINET LIGHT
1	#14	WHITE	AC NEUTRAL
1	#14	GREEN	CHASSIS GROUND
1	#18	GRAY	LOGIC GROUND
4	#18	BLUE	PREEMPT COMMANDS



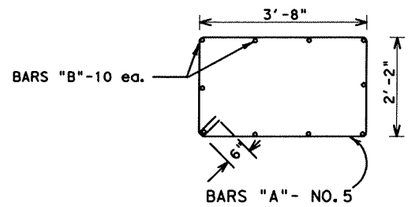
TOP



NOTE: DRAIN SHALL BE FLUSH WITH CONCRETE FOUNDATION

BAR	NO. BARS	SIZE	LENGTH	SPACING
A	6	5	12'-8"	11" C.C.
B	10	5	4'-8"	VAR.
C	2	3	4'-8"	16.5" C.C.
D	2	3	5'-8"	18" C.C.
E	3	3	2'-8"	16.5" C.C.
F	4	3	1'-2"	18" C.C.

PROVIDE 2" MIN. COVER FOR TOP AND SIDES



NOTES:

1. DRAIN SHALL BE FLUSH WITH CONCRETE FOUNDATION
2. CONDUIT FOR TELEPHONE LINE SHALL BE STUBBED OUT 18" BELOW GROUND AND 12" FROM THE FOUNDATION. THE FOUNDATION SHALL BE STAMPED ON THE LEFT SIDE WITH "TEL" TO INDICATE THE LOCATION OF THE CONDUIT.

CONTROLLER FOUNDATION DETAIL

CONTROLLER FOUNDATION DETAILS

DALLAS DISTRICT STANDARD

FED. RD. DIV. NO.	STATE PROJECT NO.		SHEET NO.
6	(SEE TITLE SHEET)		711
STATE	STATE DIST.	COUNTY	
TEXAS	DAL	ROCKWALL	
CONT.	SECT.	JOB	HIGHWAY NO.
0009	12	203	VA

GENERAL NOTES:

1. ALL CONDUITS, GROUND BOXES, JUNCTION BOXES, LIGHTING FIXTURES AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE TEXAS DOT STANDARDS, NATIONAL ELECTRIC CODE, AND APPLICABLE LOCAL CODES WHERE THEY EXIST. GROUND BOXES ARE TO BE INSTALLED PER TEXAS DOT STANDARD DRAWING ED(3)-03.

2. CONDUIT RUNS ARE SHOWN DIAGRAMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EXISTING EQUIPMENT, ROADWAYS AND STRUCTURAL CONDITIONS.

3. SEAL CONDUITS ENTERING TRANSFORMER BASES, GROUND BOXES AND JUNCTION BOXES FOR LIGHTING WITH WITH A PERMANENTLY SOFT, NON-TOXIC DUCT SEAL THAT MUST NOT ADVERSELY AFFECT OTHER PLASTIC MATERIALS OR CORRODE METALS. FOAM TO BE INSTALLED WITHIN CONDUITS ONLY AND NOT WITHIN TRANSFORMER BASES, GROUND BOXES OF PULL BOXES.

4. ABANDON ALL EXISTING DUCT CABLE IN PLACE FOR EXISTING CIRCUITS.

5. FOR UNDERPASS LIGHTING DETAILS REFER TO TEXAS DOT STANDARD DRAWINGS RID(UP)-07

RUN	ITEM 618 CONDUIT (LF)			ITEM 620 CONDUCTORS (# - LF)				CIRCUIT
	2" PVC SCH 40	2" PVC SCHED 40 (BORE)	1" RMC	#6 BARE	#6 XHHW	#12 BARE	#12 XHHW	
1	73			1 - 73	2 - 146			1, 2
2		34		1 - 34	2 - 68			1, 2
3	53			1 - 53	2 - 106			1, 2
4	28			1 - 28	2 - 56			1
5		204		1 - 204	2 - 408			1
6	353			1 - 353	2 - 706			1
7	53			1 - 53	2 - 106			1
8	418			1 - 418	2 - 836			1
9		39		1 - 39	2 - 78			1
10	78			1 - 78	2 - 156			1
11	228			1 - 228	2 - 456			1
12	228			1 - 228	2 - 456			1
13		154		1 - 154	2 - 308			1
14	178			1 - 178	2 - 356			1
15	228			1 - 228	2 - 456			1
16	48			1 - 48	2 - 96			1
17	213			1 - 213	2 - 426			1
18	53			1 - 53	2 - 106			1
19		34		1 - 34	2 - 68			1
20	53			1 - 53	2 - 106			1
21			15			1 - 15	2 - 30	1
22			25			1 - 25	2 - 50	1
23			25			1 - 25	2 - 50	1
24			25			1 - 25	2 - 50	1
25			15			1 - 15	2 - 30	1
26			15			1 - 15	2 - 30	1
27			15			1 - 15	2 - 30	1
28			15			1 - 15	2 - 30	1
29			150			1 - 150	2 - 300	1
30			25			1 - 25	2 - 50	1
31			25			1 - 25	2 - 50	1
32			25			1 - 25	2 - 50	1
33			15			1 - 15	2 - 30	1
34			15			1 - 15	2 - 30	1
35			15			1 - 15	2 - 30	1
36			15			1 - 15	2 - 30	1
TOTALS	2285	465	435	2750	5500	435	870	

LEGEND:

- GROUND BOX TYPE A
- EXISTING ILLUMINATION ASSSEMBLY TO BE REMOVED
- NEW ILLUMINATION ASSSEMBLY
- BORED CONDUIT
- EMBEDDED CONDUIT
- EXPOSED CONDUIT
- LIQUIDTIGHT FLEXIBLE METAL CONDUIT
- JUNCTION BOX
- UNDERPASS LIGHTING FIXTURE

ELECTRICAL SERVICE DATA									
ELECTRICAL SERVICE DESCRIPTION	SERVICE CONDUIT	SERVICE CONDUCTORS NO./SIZE	SAFETY SWITCH AMPS	MAIN DISCONNECT CKT. BRK. POLE/AMP	TWO POLE CONTACTOR AMPS	PANELBOARD / LOAD CENTER AMP RATING (MIN)	CKT NUMBER	BRANCH CKT. BRK. POLE/AMPS	KVA LOAD
ELEC SERV TY A (240/480) 60 (NS) SS (T) GC (0)	2	3/#4	N/A	60	20	N/A	1	2P/20	< 5
							2	2P/20	

EXISTING TO BE REMOVED POLE DATA CHART				
POLE	TYPE	LOCATION	DRILL SHAFT FND 30" (FT)	REMOVE (EA)
X-1	EXISTING	EXISTING	EXISTING	1
X-2	EXISTING	EXISTING	EXISTING	1
X-3	EXISTING	EXISTING	EXISTING	1
X-4	EXISTING	EXISTING	EXISTING	1
X-5	EXISTING	EXISTING	EXISTING	1
X-6	EXISTING	EXISTING	EXISTING	1
X-7	EXISTING	EXISTING	EXISTING	1

NEW POLE DATA CHART				
POLE	TYPE	LOCATION	ITEM 416 DRILL SHAFT FND 30" (FT)	ITEM 432 RIPRAP (CY)
1-1	(TY SA) 40T-8 (.25KW)S	30+53	8	0.35
1-2	(TY SA) 40T-8 (.25KW)S	31+27	8	0.35
1-3	(TY SA) 40T-8 (.25KW)S	32+80	8	0.35
1-4	(TY SA) 40T-8 (.25KW)S	33+41	8	0.35
1-5	(TY SA) 40T-8 (.25KW)S	35	8	0.35
1-6	(TY SA) 40T-8 (.25KW)S	35+61	8	0.35
1-7	(TY SA) 40T-8 (.25KW)S	37+20	8	0.35
1-8	(TY SA) 40T-8 (.25KW)S	29+89	8	0.35
1-9	(TY SA) 40T-8 (.25KW)S	28+92	8	0.35

1- Change Order #14

STATE OF TEXAS
PAUL J. LUTKEVICH
89793
LICENSED
PROFESSIONAL ENGINEER
1 OCT 2007

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Dallas, TX 75207

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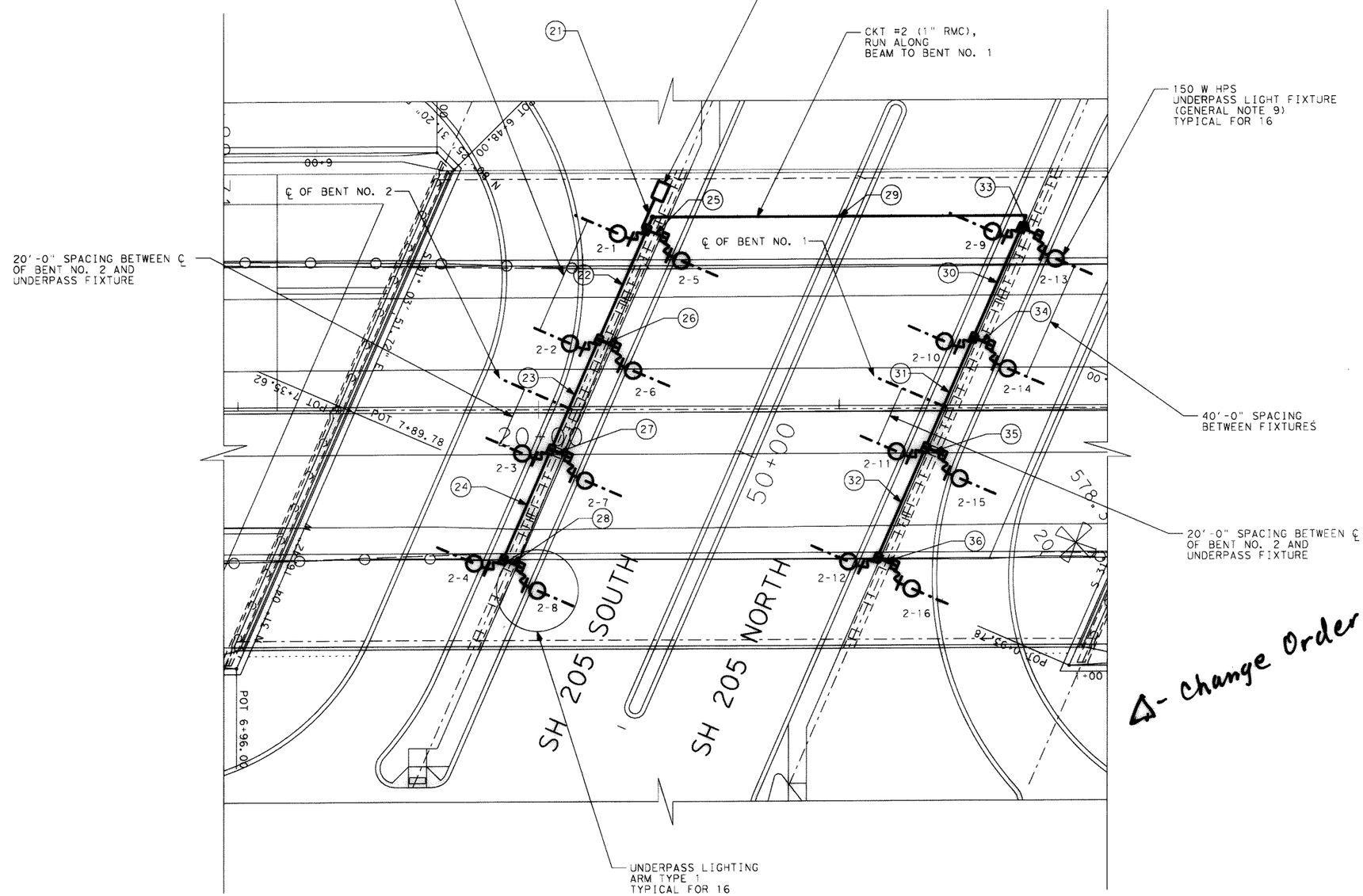
SH 205

GENERAL NOTES, ABBREVIATION AND SYMBOLS SHEET

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	711
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGNSPECSLEVS
$DATE$ $SYTIME$



PLAN
SCALE: 1" = 20'-0"

NOTES:

1. REFER TO SHEET 1 FOR GENERAL NOTES, LIGHTING SCHEDULE, ELECTRICAL SERVICE SCHEDULE AND CONSTRUCTION NOTES.

Δ- Change Order #14

STATE OF TEXAS
PAUL J. LUTKEVICH
89793
LICENSED
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1 Oct 2007

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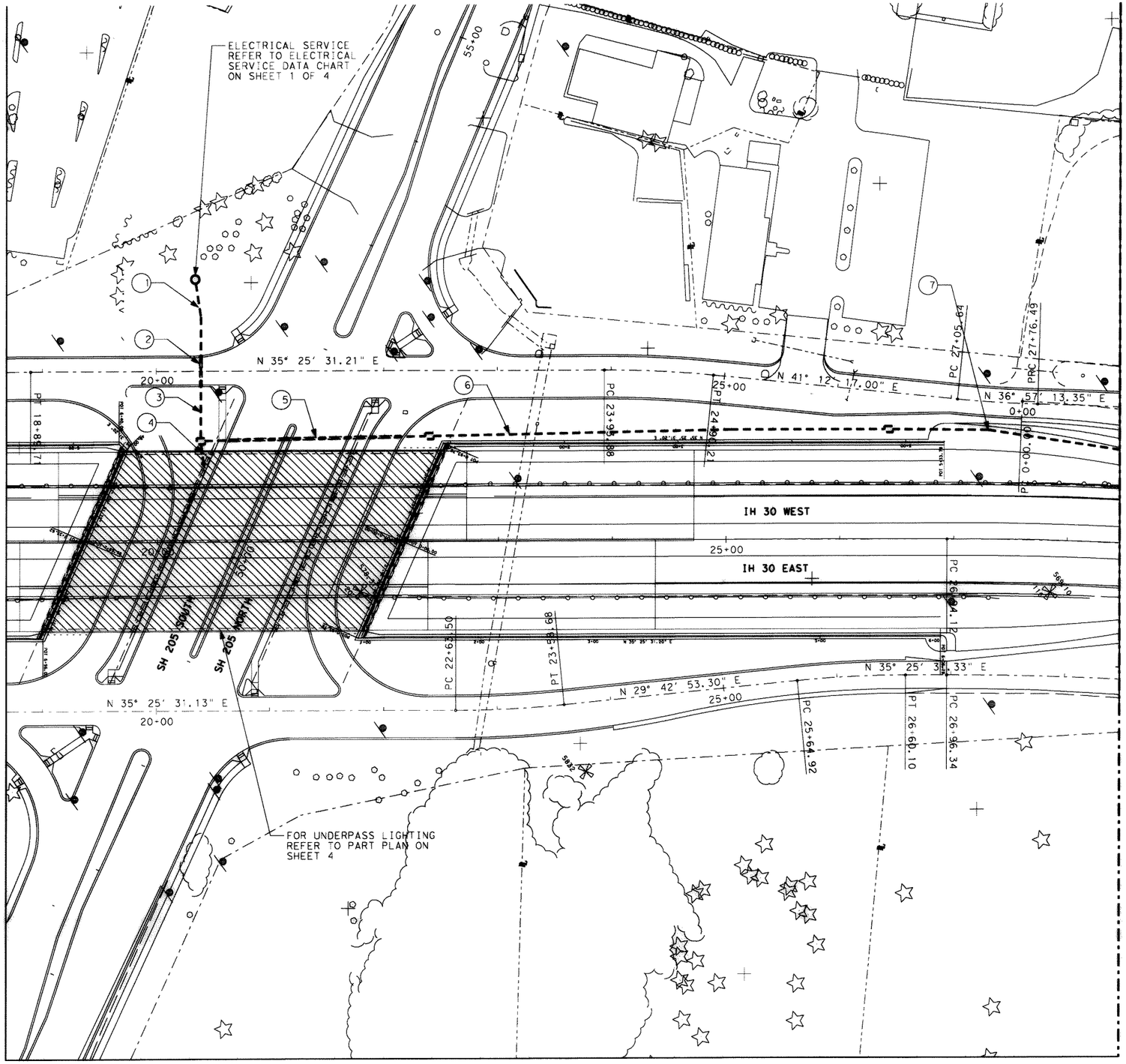
SH 205

UNDERPASS LIGHTING PART PLAN

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	7H
CONT.	SECT.	JOB	8B
0451	01	032, ETC	

$DGNSPEC$LEV$ $SYTIME$
$DATE$



PLAN
SCALE: 1" = 100'-0"

MATCHLINE: REFER TO ROADWAY LIGHTING SHEET 2 OF 2

NOTES:

1. REFER TO SHEET 1 FOR GENERAL NOTES, LIGHTING SCHEDULE, ELECTRICAL SERVICE SCHEDULE AND CONSTRUCTION NOTES.

A - Change Order #14

STATE OF TEXAS
PAUL J. LUTKEVICH
89793
LICENSED
PROFESSIONAL ENGINEER
10 OCT 2007

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SH 205

ROADWAY LIGHTING

SHEET 1 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	714
CONT.	SECT.	JOB	
0451	01	032, ETC	CC

DGNSPECLEV
$DATE$ $SYTIME$

MATCHLINE: REFER TO ROADWAY LIGHTING SHEET 1 OF 2



PLAN
SCALE: 1" = 100'-0"

NOTES:

1. REFER TO SHEET 1 FOR GENERAL NOTES, LIGHTING SCHEDULE, ELECTRICAL SERVICE SCHEDULE AND CONSTRUCTION NOTES.

Δ- Change Order #14

STATE OF TEXAS
PAUL J. LUTKEVICH
89793
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10 OCT 2007

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SH 205

ROADWAY LIGHTING

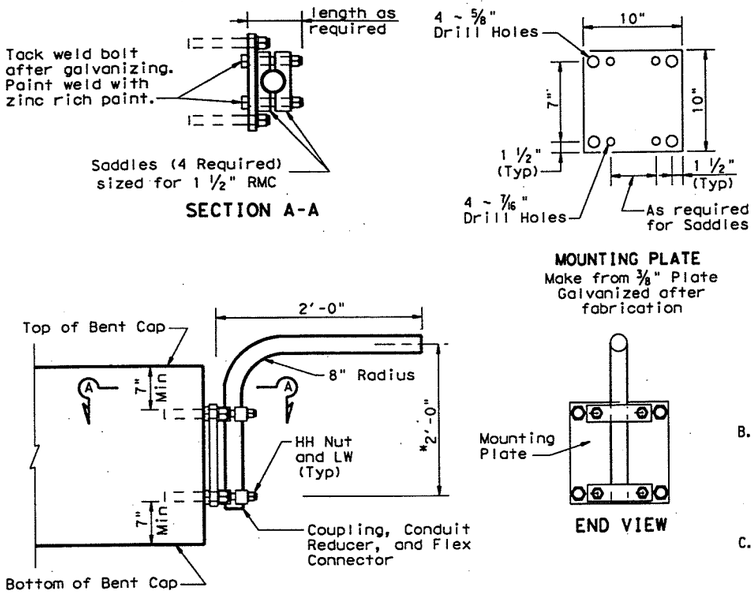
SHEET 2 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	711 PD
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGNSPECLEV $SYTIME$
$DATE$

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UNDERPASS LIGHTING ARM TYPE 1

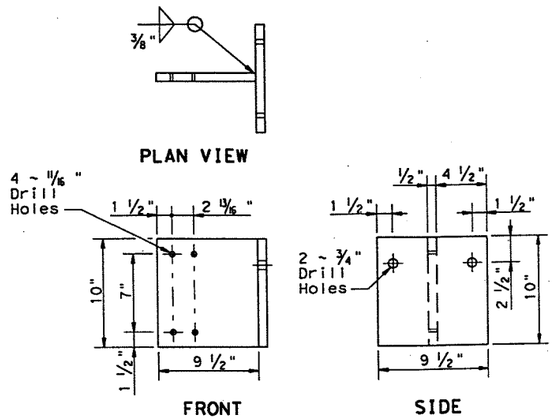
NOTES:

A. ALL 150 watt H.P.S. LUMINAIRES
1. Luminaire locations, conduit and conductor sizes and routing are typical and diagrammatic only. See project layout sheets for specific details.
2. Conduit will be paid for under Item 618, "Conduit" and conductors will be paid for under Item 620, "Electrical Conductor," unless otherwise shown on the plans. See lighting layout sheets.
3. Install a ground rod and attach to the equipment grounding conductor in all ground boxes containing conduit that extends above grade 6 in. or more. Install grounding bushings and properly bond RMC in these boxes.
4. Adjust conduit in saddles to place fixture height and orientation as required. See fixture orientation detail and layout sheet. Where practicable, place luminaires so the bottom of luminaire is above the bottom of the beam, maximum of 3 in. (See detail UNDER PASS LIGHTING ARM TYPE 2)
5. Use ASTM A-153 galvanized bolts, nuts and washers.
6. Fabrication of brackets and support arms will not be paid for directly but is subsidiary to Item 610, "Roadway Illumination Assemblies."
7. Install a Heavy Duty, 480 volt or 600 volt, 30 amp fused disconnect switch or breaker with a NEMA 3R enclosure, in circuits to switch underpass luminaires, as shown on plans or a min. of 1 per bridge circuit. Mount disconnect or breaker 10 ft. (min) above grade on columns or bent caps as approved by the Department. Modify switch to allow padlocking in the "ON" and "OFF" positions, and install 20 amp time-delay fuses or inverse-time circuit breakers. Furnishing and installing disconnect switches or circuit breakers for underpass lighting fixtures will not be paid for directly but is subsidiary to the various bid items of the contract.

B. TYPE 1
1. Provide 1½ in. rigid metal conduit (1.90" O.D., 0.145" wall) Type 1 arm shaft.
2. Use ⅜ in. bolt or stud expansion anchors for Type 1 mounting. Ensure a 3000 lb. (min.) pull-out for each anchor. Provide 4 in. (min) embedment. Use lock washers.
3. Attach conduit to plate with 4 saddles, four-3/8 in. diameter (min.) bolts, hex head nut and lock washer.

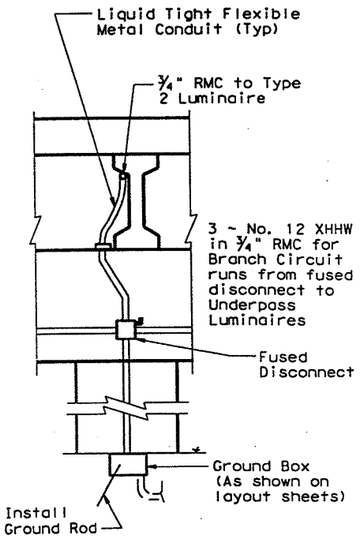
C. TYPE 2
1. Provide 2 in. rigid metal conduit (2.375" O.D., 0.154" wall) Type 2 arm shaft. Reduce conduit length for Type C concrete beams. Field cutting and threading will be permitted. Paint cut and threaded areas with zinc rich paint after conduit is connected to adjacent fitting.
2. Connecting conduit may be strapped to tapered section only of precast beams as shown. Anchor as approved by the Engineer. Maximum anchor depth is 1 in.
3. Indiscriminate drilling into precast concrete beams may result in reduced beam strength. Use drilling location and method as directed by the Engineer. See location of underpass lighting mounting bracket detail. The locations shown in the table are such that reinforcing strands will not be damaged.

NOTE: Conduit on columns, caps, and slab is shown surface mounted. For new columns and caps, embed PVC conduit in concrete. Bond and ground metal junction boxes and conduit.

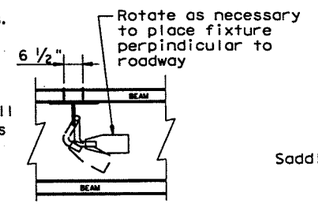


BRACKET DETAIL

Make from ½" plate (ASTM A-36) Galvanize after fabrication, ASTM A-123

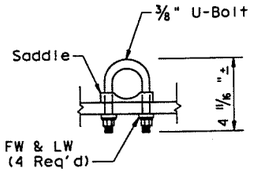


U/P (SPL-CO) (.15 KW)S(TYPE 2)

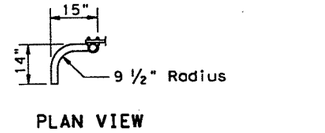


FIXTURE ORIENTATION

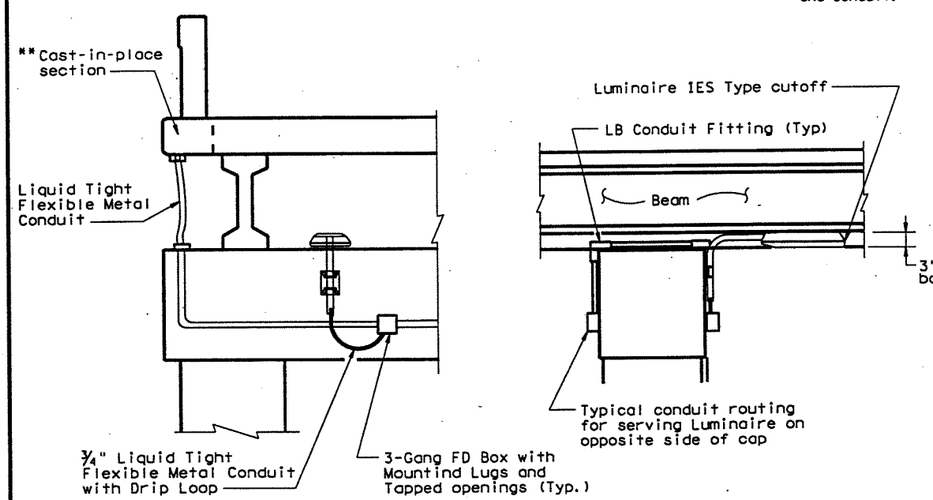
Plan View



CLAMP DETAIL (2 Req'd)

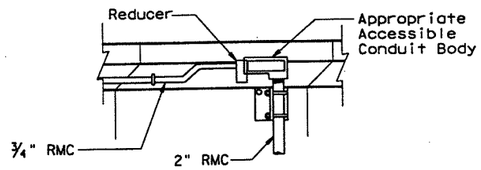


PLAN VIEW

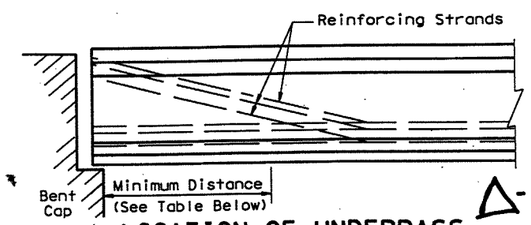


U/P (SPL-CO) (.15 KW)S(TYPE 1)

If bridge has pre-cast panels under deck, run circuit under deck edge.

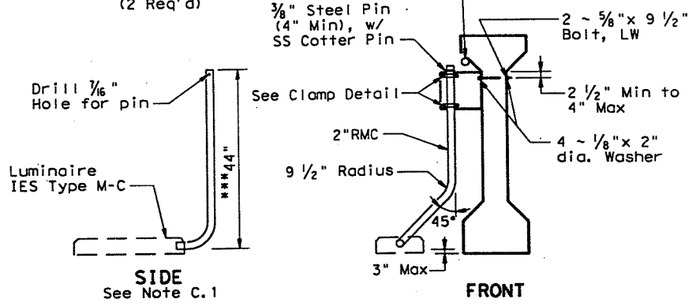


CONDUIT CONNECTION PROFILE



LOCATION OF UNDERPASS LIGHT MOUNTING BRACKET

LOCATION OF UNDERPASS LIGHT MOUNTING BRACKET TABLE	
SPAN LENGTH	MINIMUM DISTANCE
≤ 50'	10'-0"
50'- 70'	15'-0"
70'- 90'	20'-0"
> 90'	25'-0"



UNDERPASS LIGHTING ARM TYPE 2

Δ- Change Order #14

Texas Department of Transportation
Traffic Operations Division

ROADWAY ILLUMINATION DETAILS

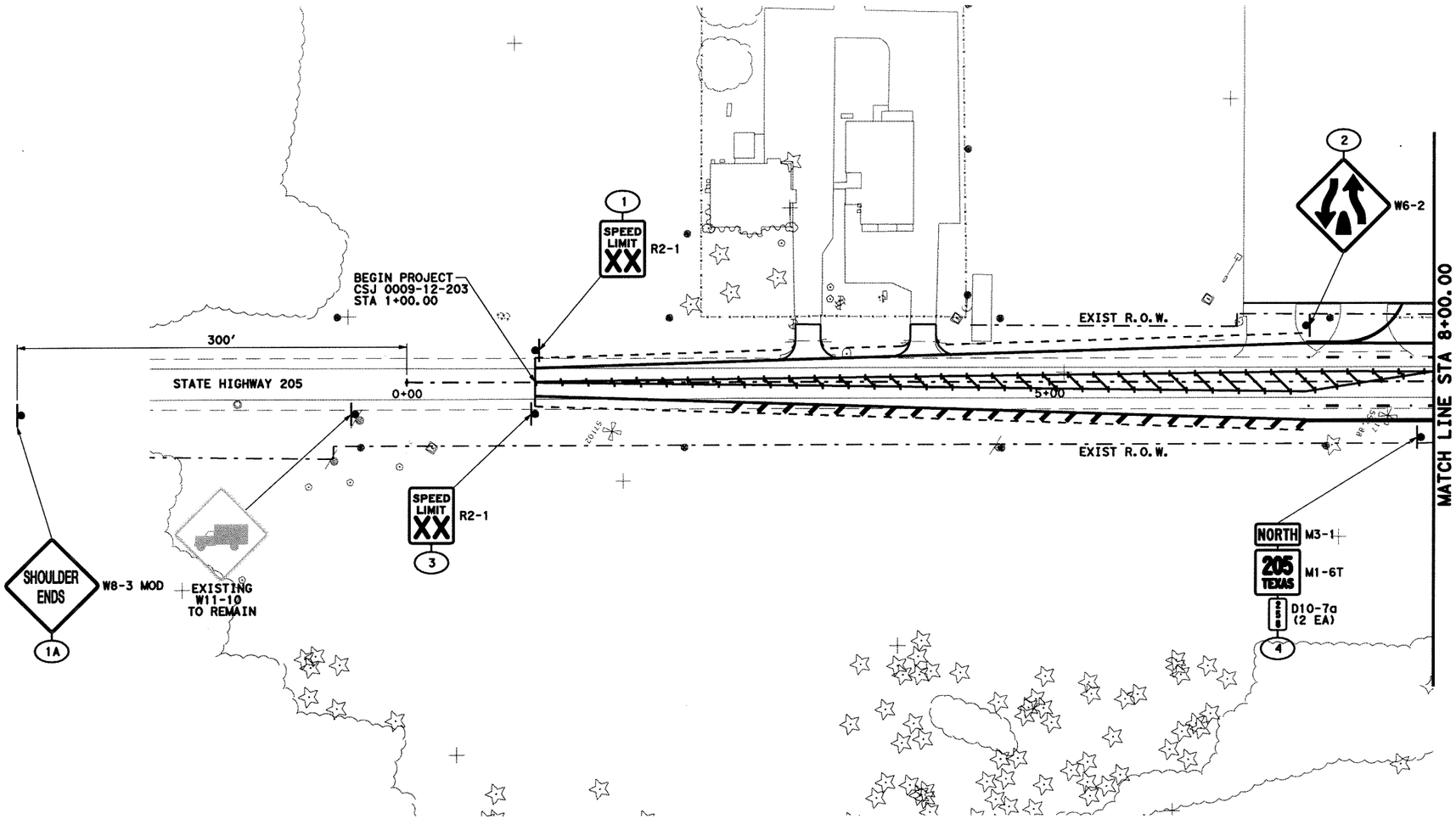
(UNDERPASS LIGHT FIXTURES)

RID(UP)-07

FILE: rid-07.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT January 2007	DIST	FEDERAL AID PROJECT		SHEET
REVISIONS	18	(SEE TITLE SHEET)		71EE
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	ROCKWALL	0451	01	032	SH 205

72D

LEVELS DISPLAYED 1 2 62 ACC: 04 JAN 2007



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

Richard T. Grice

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Suite 1333
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SH 205

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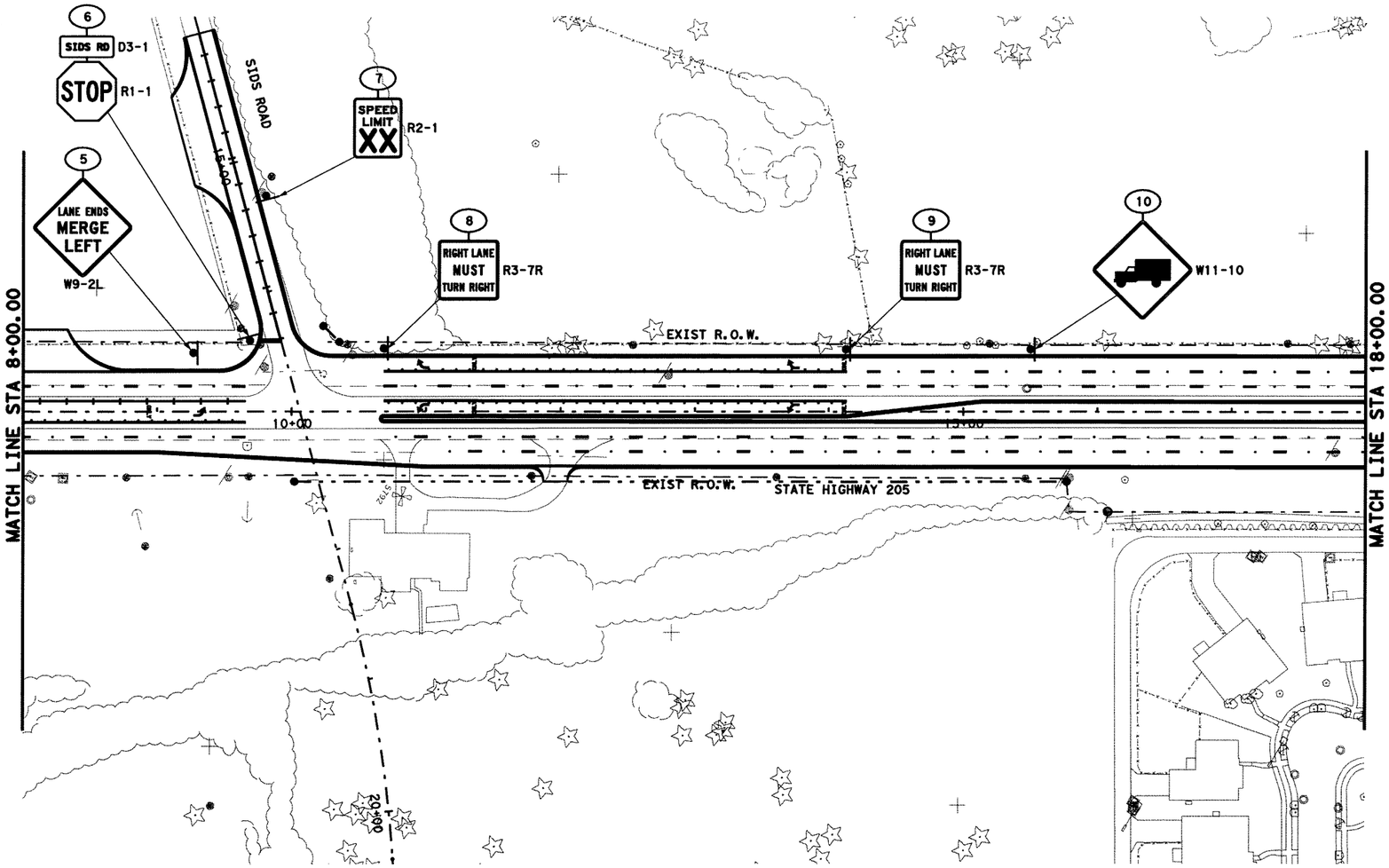
STATE HIGHWAY 205
STA 0+00 TO 8+00

SHEET 1 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	712
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:30



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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STATE OF TEXAS
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3-14-06

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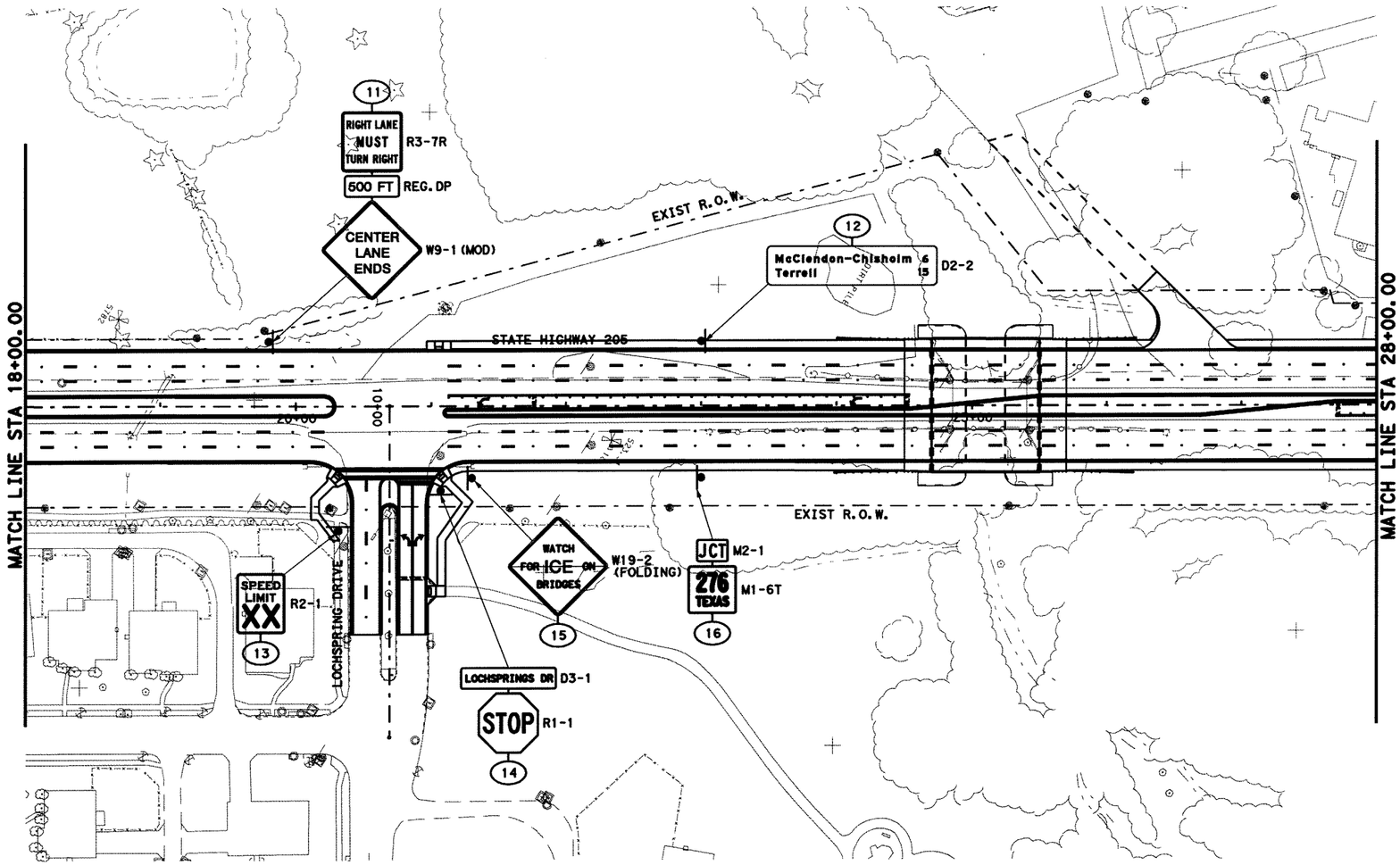
STATE HIGHWAY 205
STA 8+00 TO 18+00

SHEET 2 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	713
CONT.	SECT.	JOB	
0451	01	032, ETC	

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0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
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STATE OF TEXAS
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3-14-06

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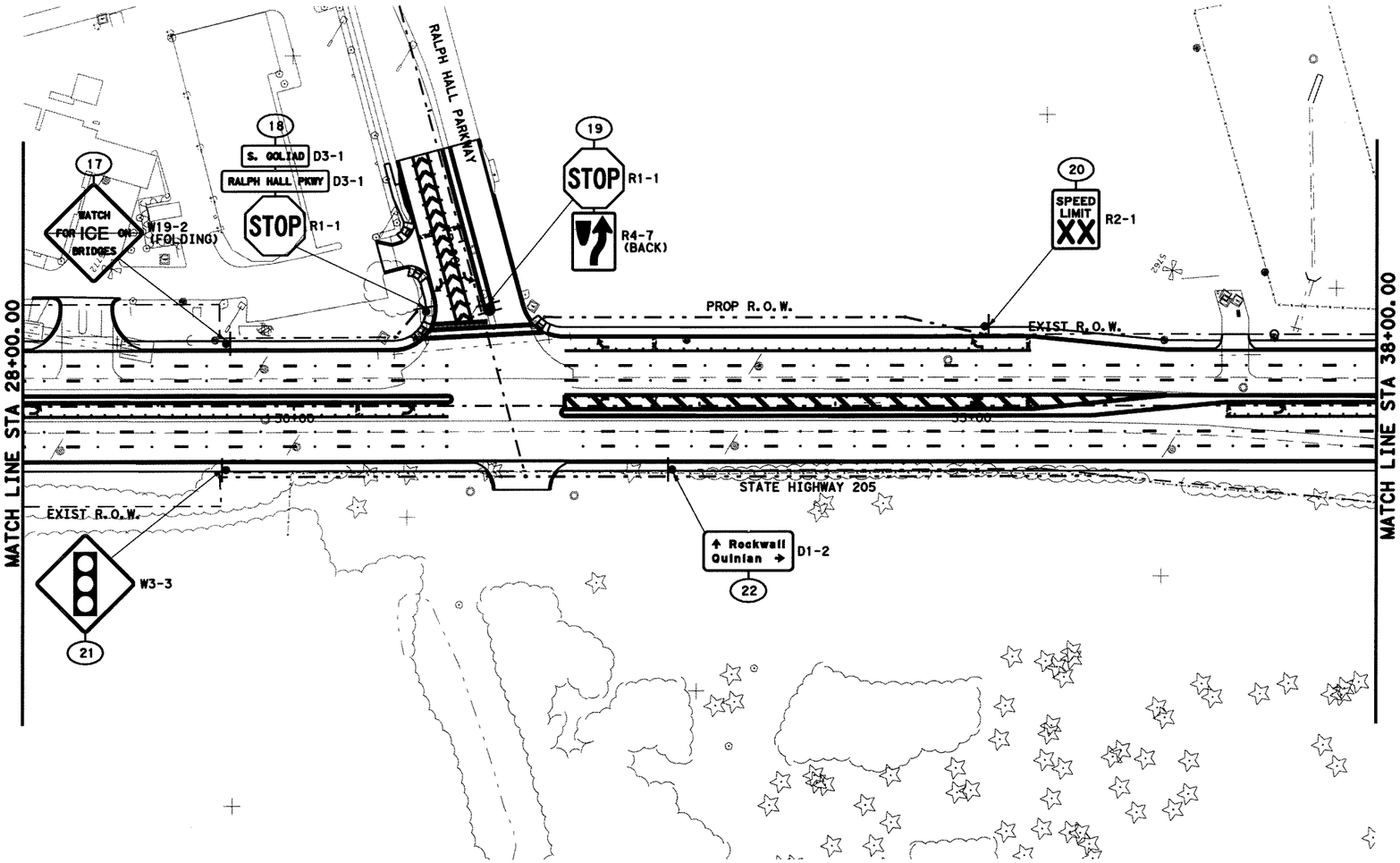
STATE HIGHWAY 205
STA 18+00 TO 28+00

SHEET 3 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	714
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:31



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.

STATE OF TEXAS
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3-14-06

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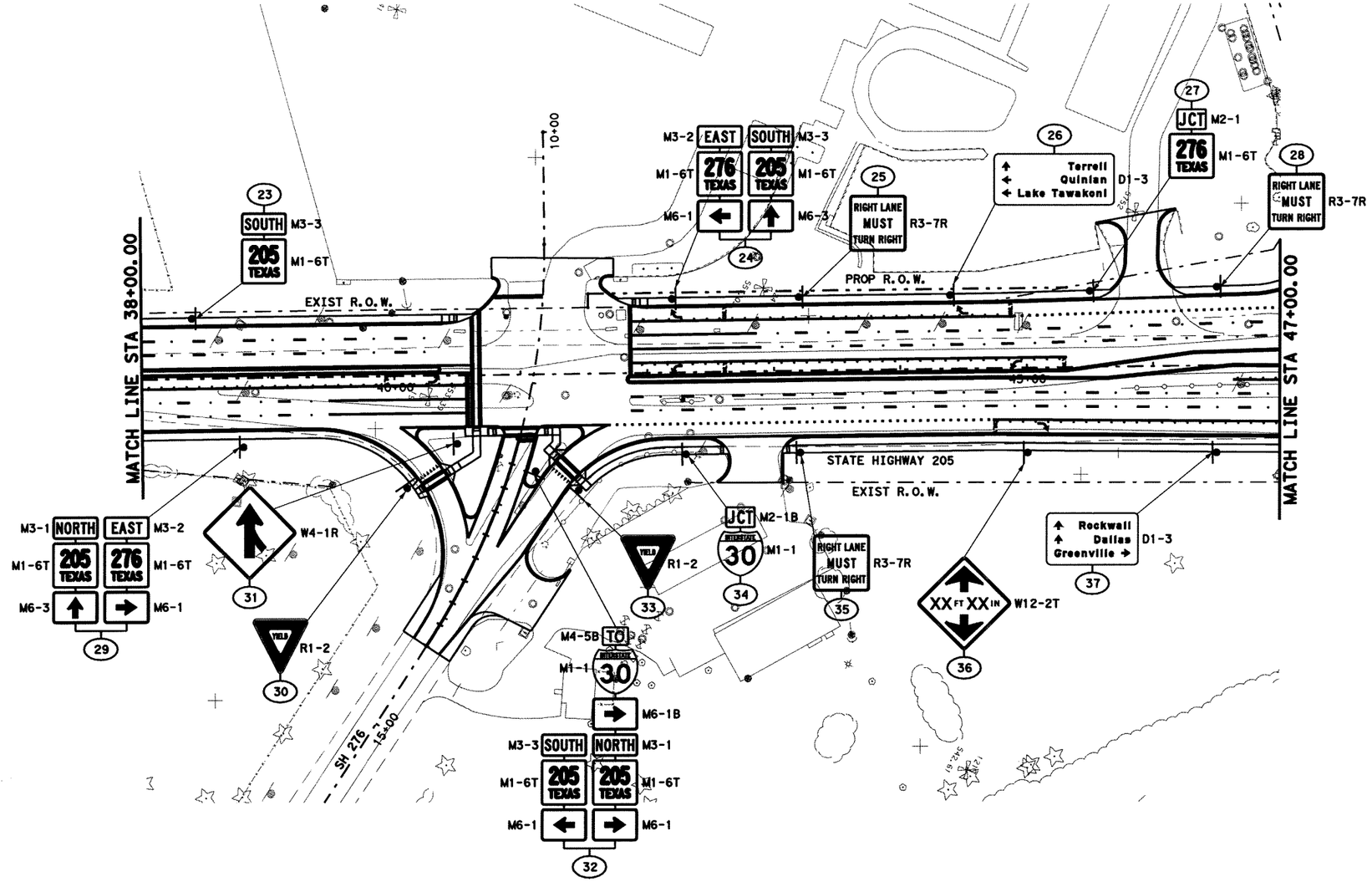
STATE HIGHWAY 205
STA 28+00 TO 38+00

SHEET 4 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	715
CONT.	SECT.	JOB	
0451	01	032, ETC	

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0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.

STATE OF TEXAS
RICHARD T. GRICE
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REGISTERED
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3-14-06

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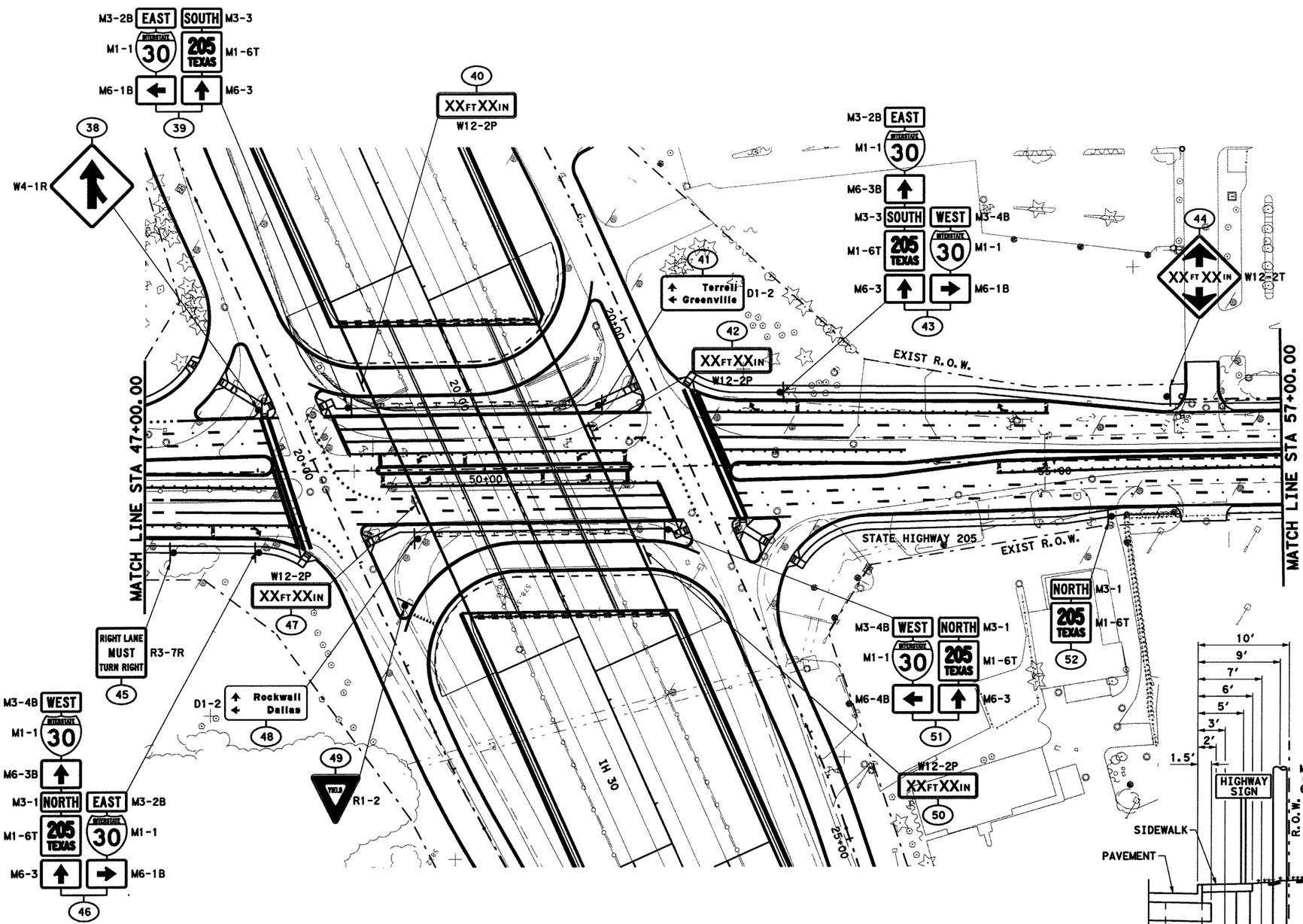
STATE HIGHWAY 205
STA 38+00 TO 47+00

SHEET 5 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	716
CONT.	SECT.	JOB	
0451	01	032, ETC	

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10 FT PARKWAY TYPICAL SECTION
NOT TO SCALE

0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.
3. SEE IH 30 SIGNING PLAN SHEET 2 OF 3 FOR ADDITIONAL SIGNS IN THIS AREA.

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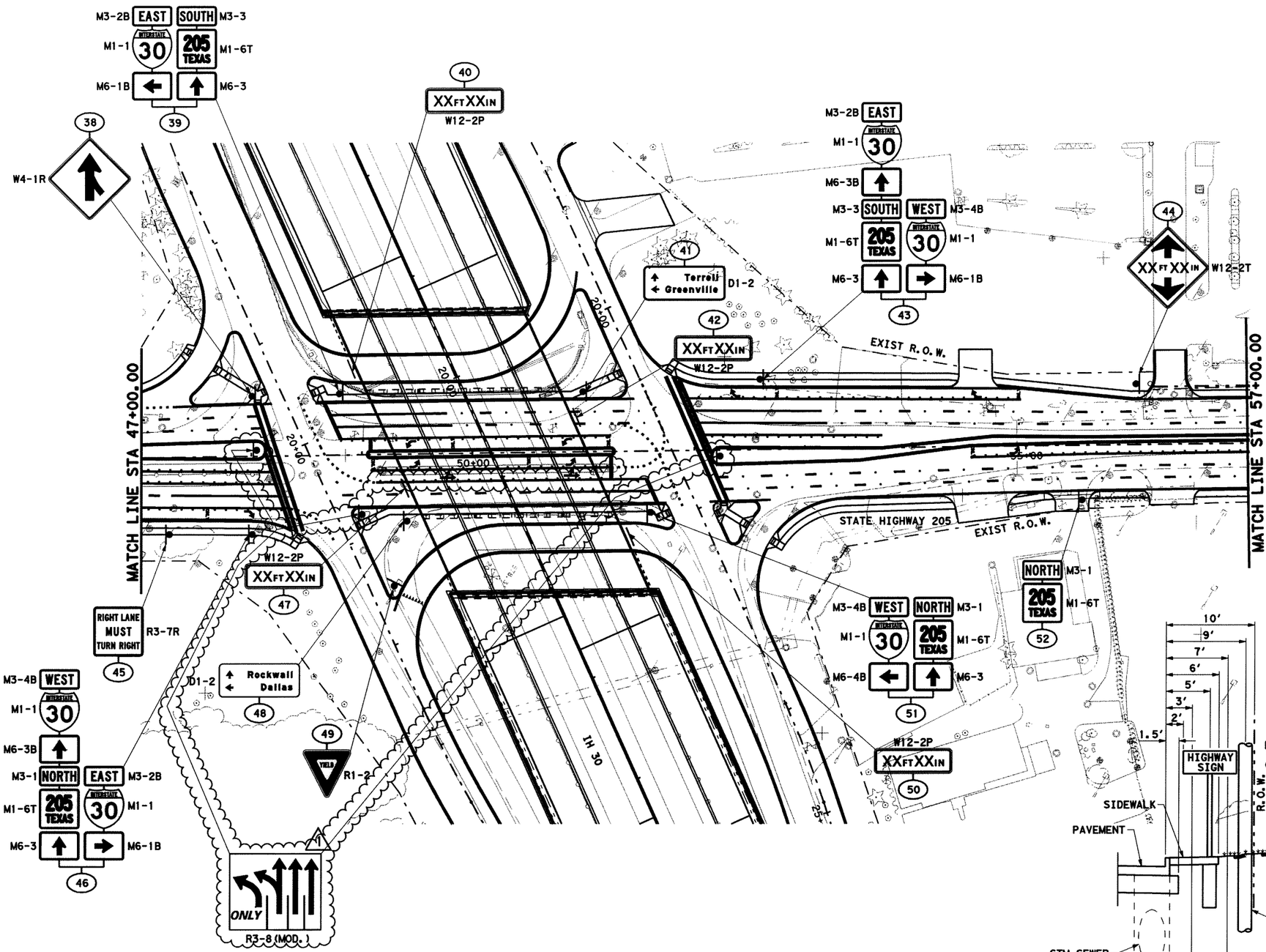
STATE HIGHWAY 205
STA 47+00 TO 57+00

SHEET 6 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	717
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:31



10 FT PARKWAY TYPICAL SECTION
NOT TO SCALE

0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.
3. SEE IH 30 SIGNING PLAN SHEET 2 OF 3 FOR ADDITIONAL SIGNS IN THIS AREA.

1 ADDED SHARED LEFT/THRU LANE BY RTG - 05-21-2009

5-27-09

STATE OF TEXAS
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TBPE ID 2263

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SIGNING

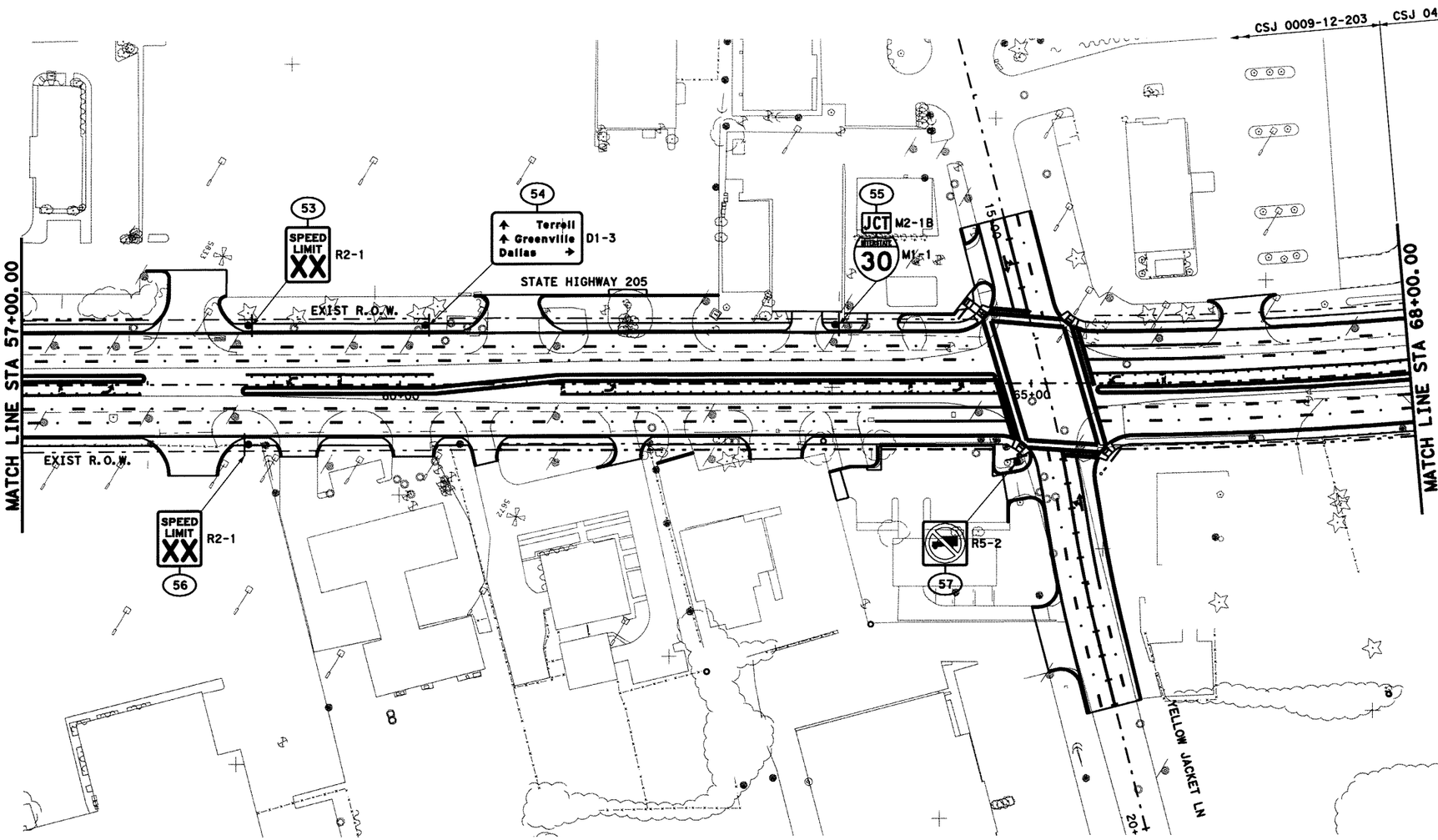
STATE HIGHWAY 205
STA 47+00 TO 57+00

SHEET 6 OF 17

FED. NO. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	717
CONT.	SECT.	JOB	
0451	01	032, ETC	

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0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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STATE OF TEXAS
RICHARD T. GRICE
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3-14-06

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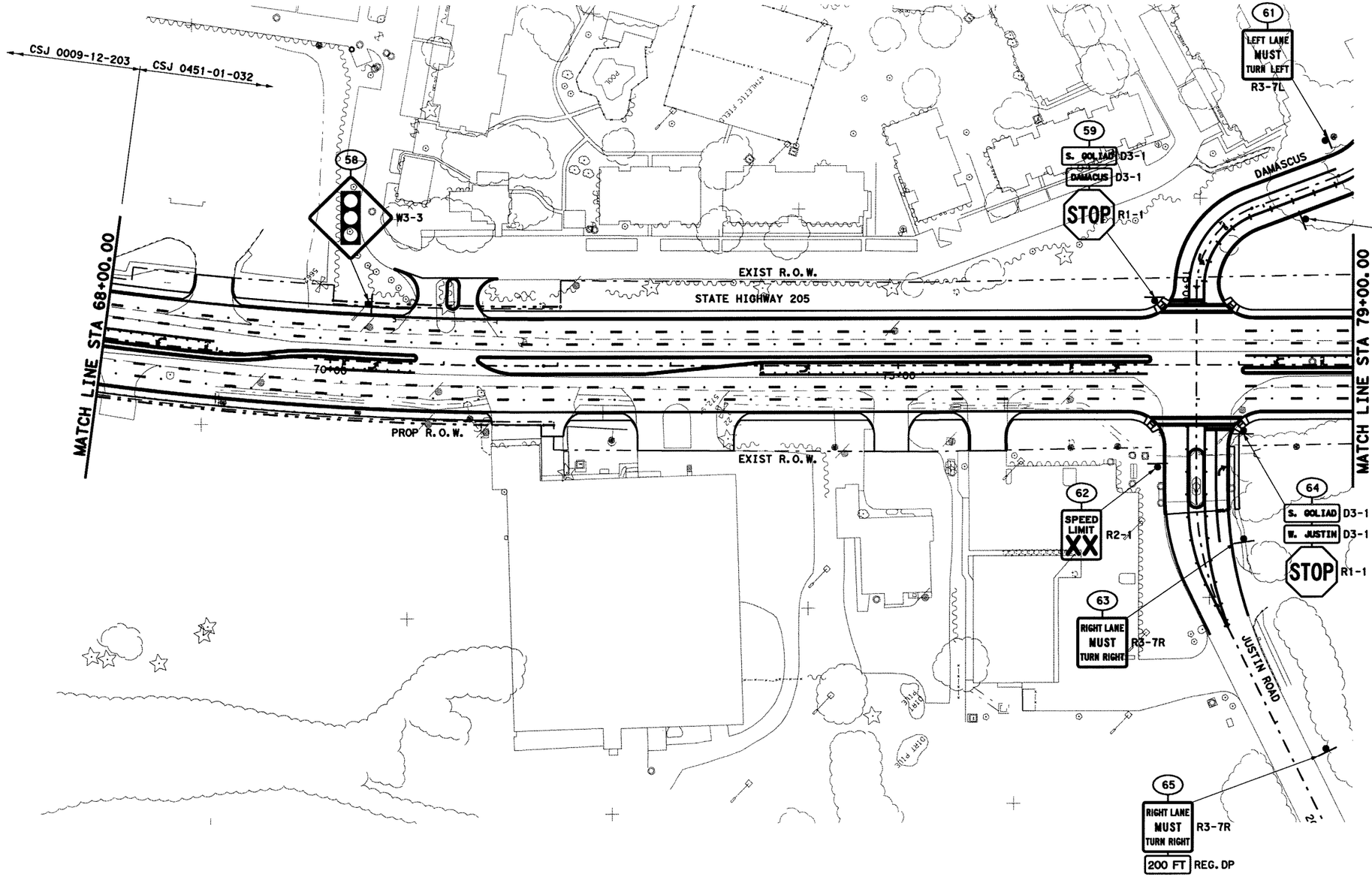
STATE HIGHWAY 205
STA 57+00 TO 68+00

SHEET 7 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	718
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:31



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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STATE OF TEXAS
RICHARD T. GRICE
37520
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3-14-06

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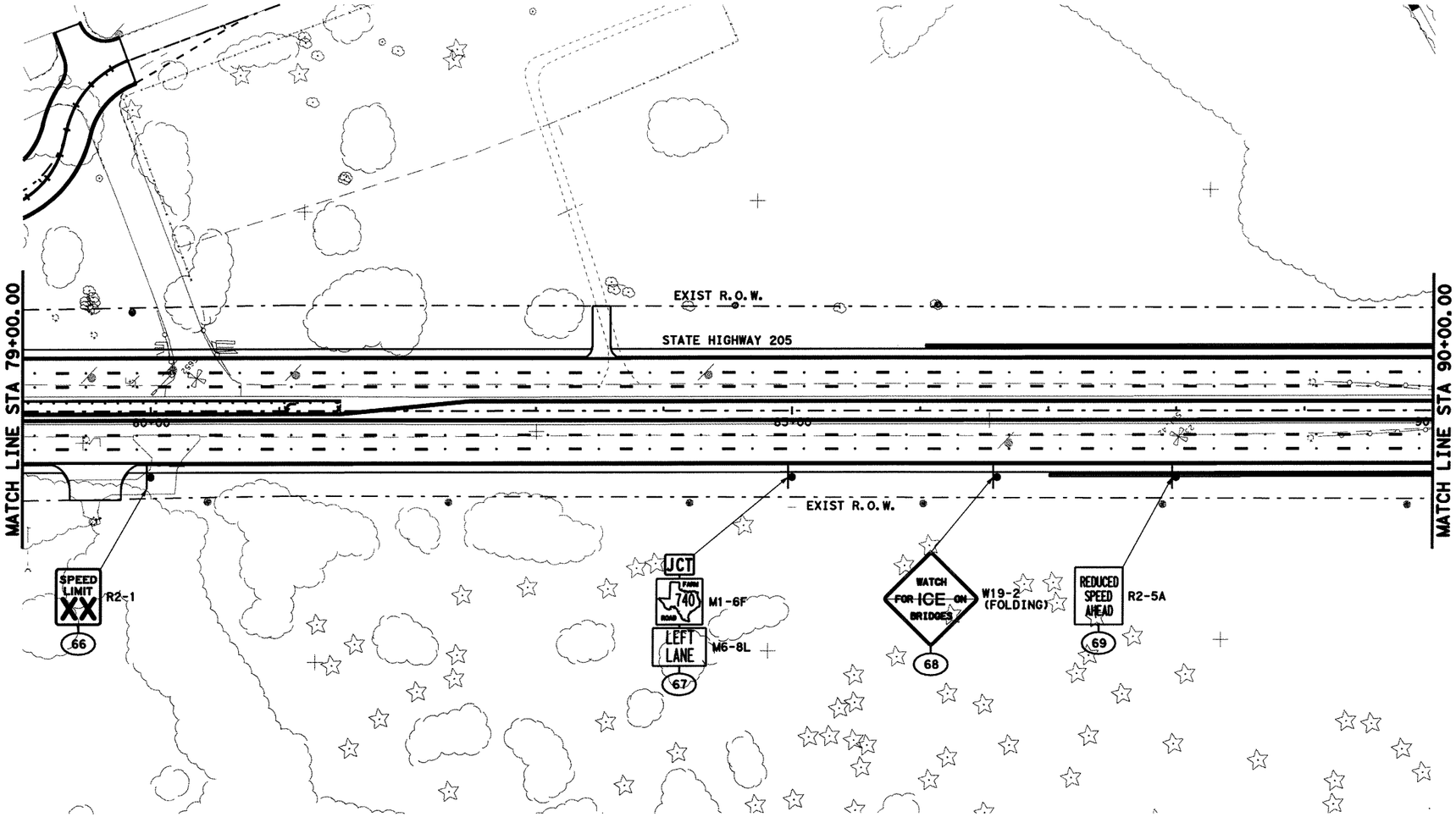
STATE HIGHWAY 205
STA 68+00 TO 79+00

SHEET 8 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	719
CONT.	SECT.	JOB	
0451	01	032, ETC	

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0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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STATE OF TEXAS
RICHARD T. GRICE
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3-14-06

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Dallas, TX 75207

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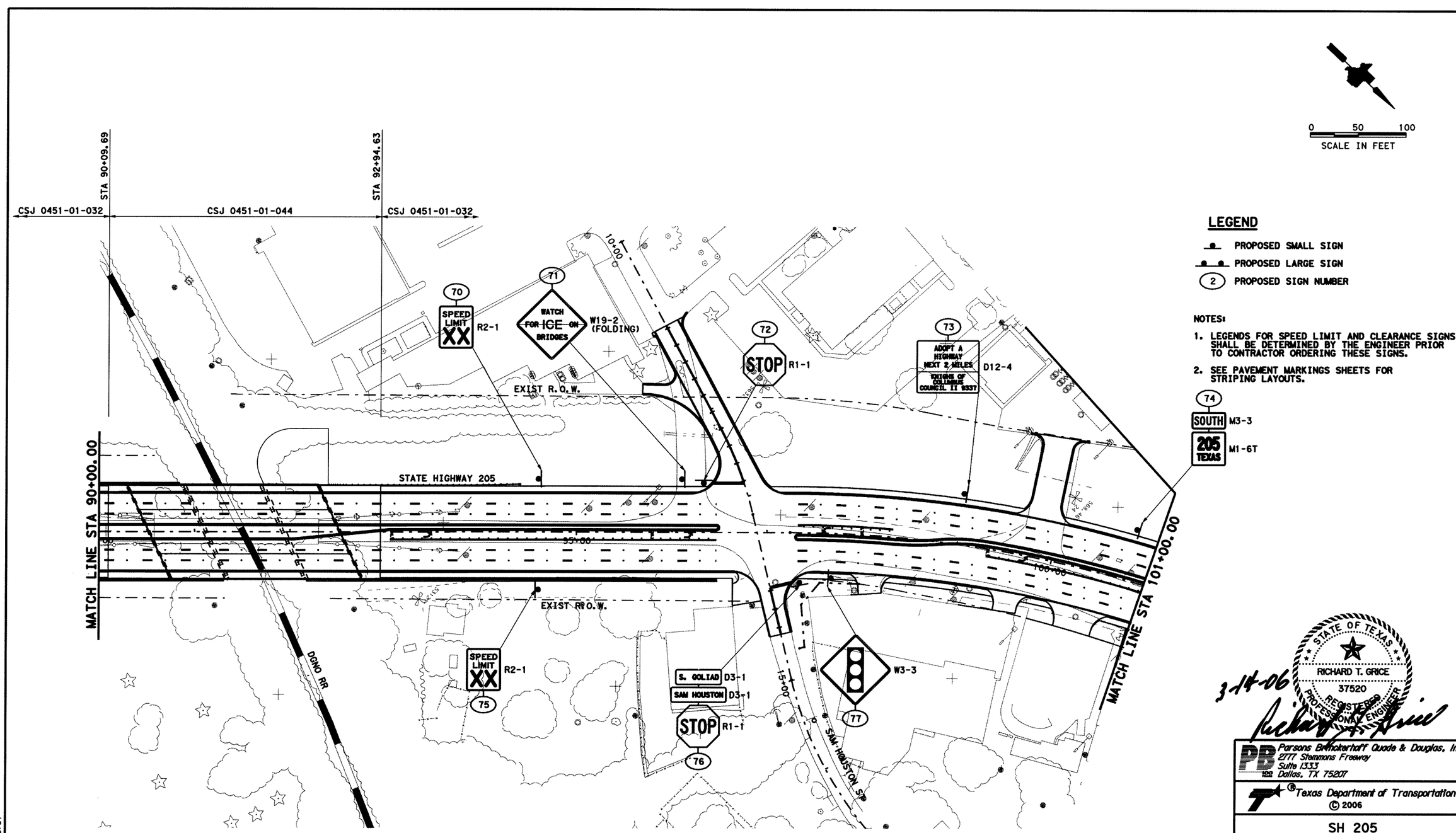
STATE HIGHWAY 205
STA 79+00 TO 90+00

SHEET 9 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	720
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:31



LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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STATE OF TEXAS
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3-14-06

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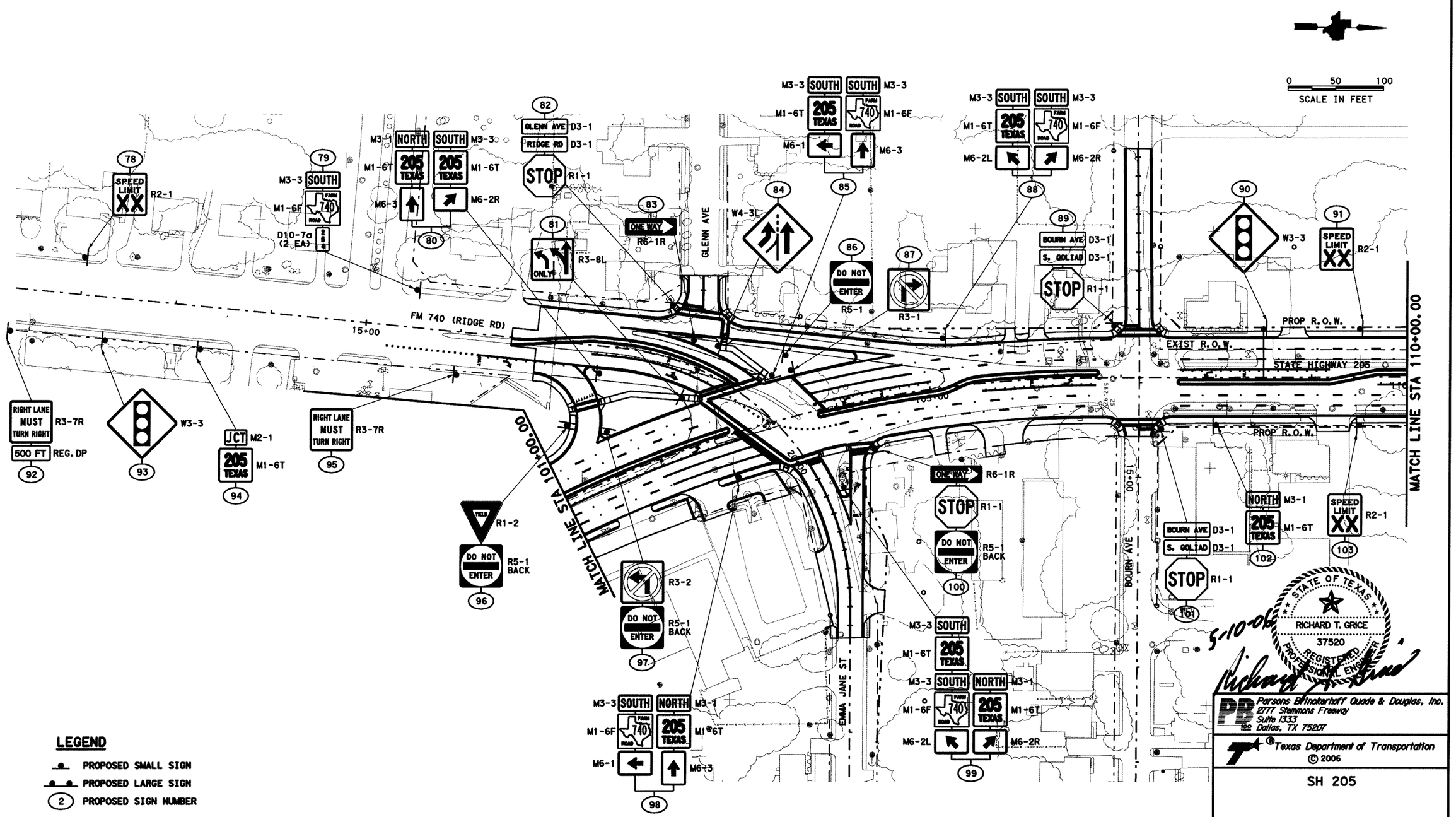
STATE HIGHWAY 205
STA 90+00 TO 101+00

SHEET 10 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	721
CONT.	SECT.	JOB	
0451	01	032, ETC	

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LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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5/9/2006 Plotted 09-MAY-2006 09:12

STATE OF TEXAS
RICHARD T. GRICE
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REGISTERED PROFESSIONAL ENGINEER
5-10-06

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Dallas, TX 75207

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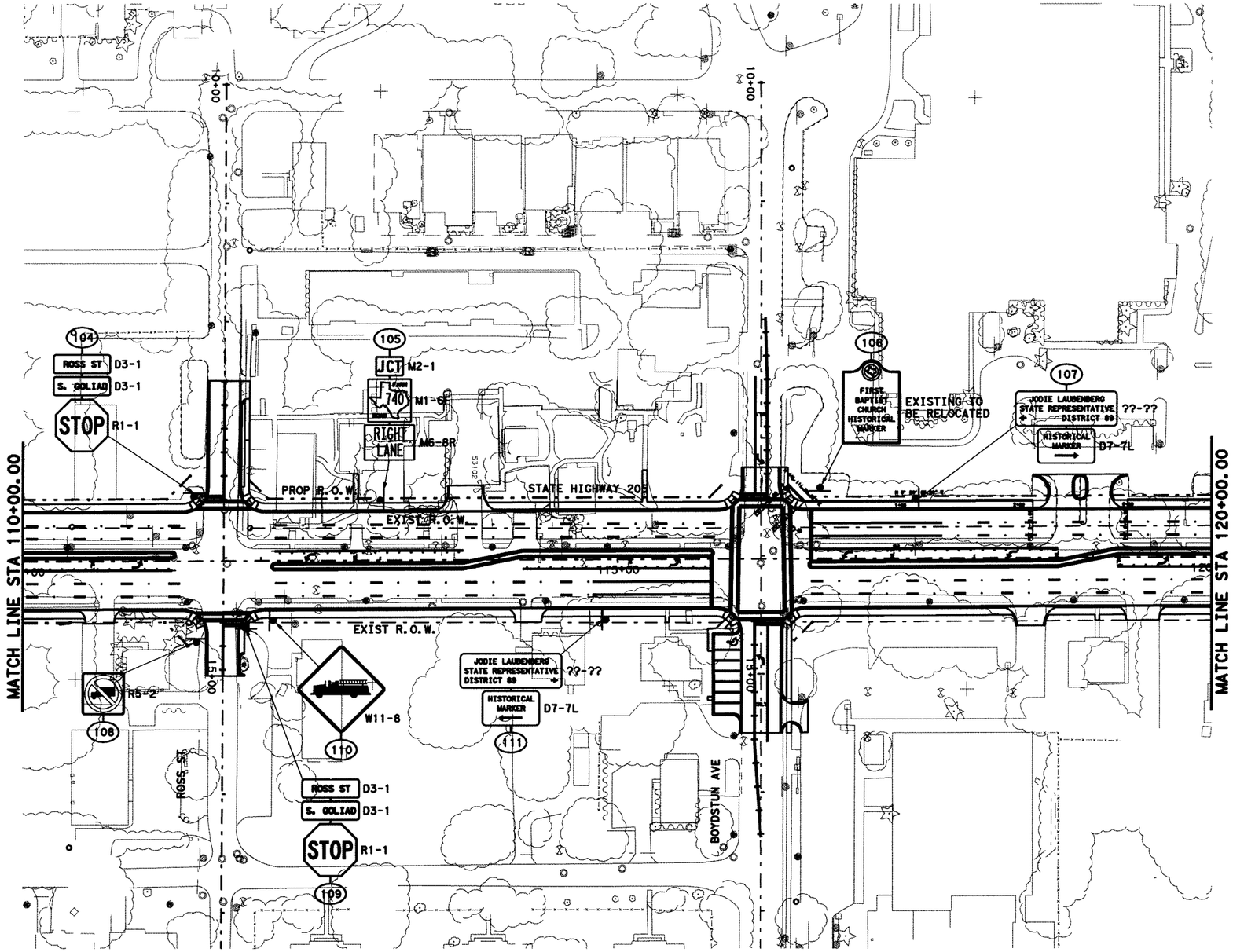
SIGNING

STATE HIGHWAY 205
STA 101+00 TO 110+00

SHEET 11 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	722
CONT.	SECT.	JOB	
0451	01	032, ETC	



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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STATE OF TEXAS
RICHARD T. GRICE
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REGISTERED PROFESSIONAL ENGINEER

3-14-06

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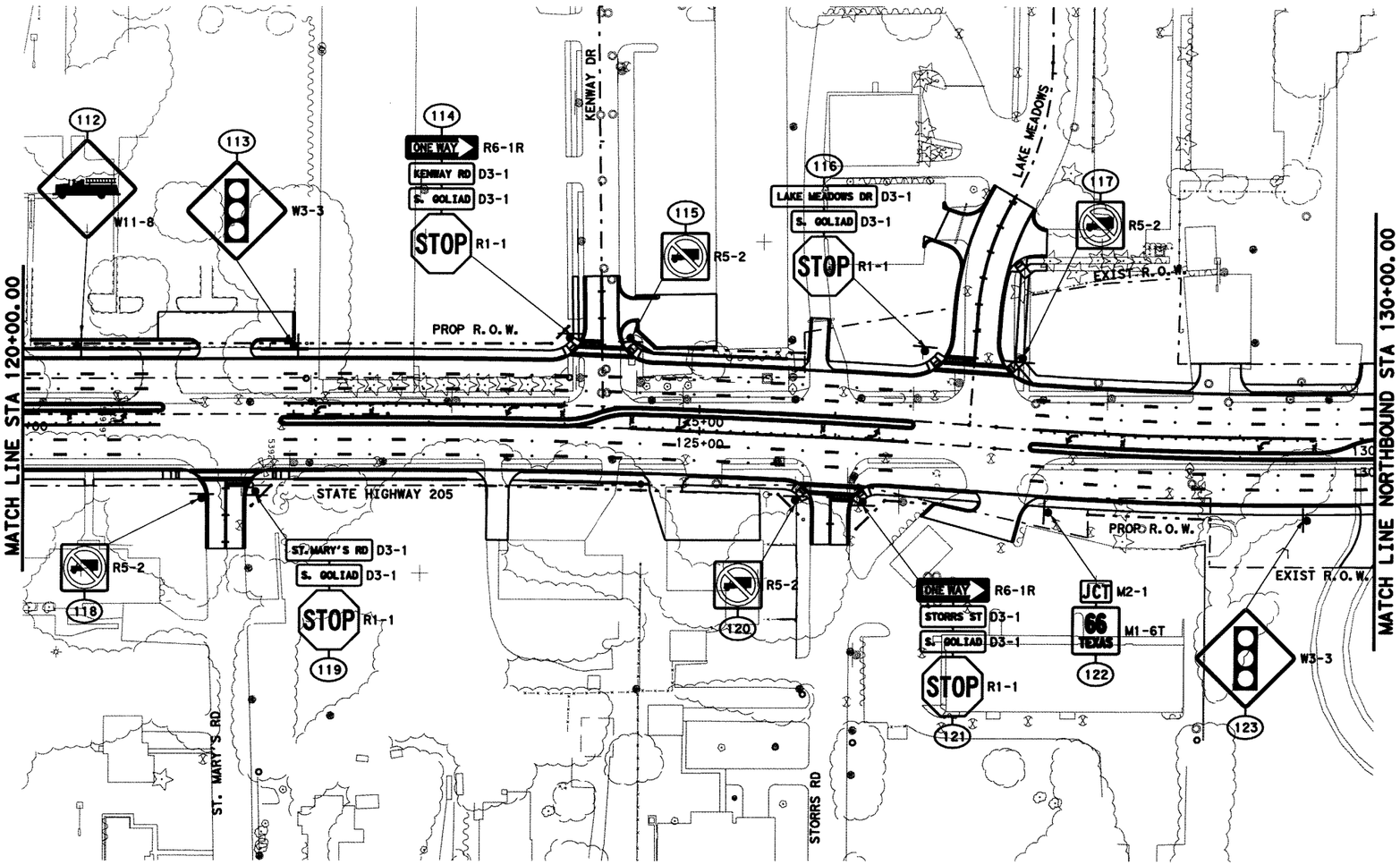
STATE HIGHWAY 205
STA 110+00 TO 120+00

SHEET 12 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	723
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:31



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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STATE OF TEXAS
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3-14-06

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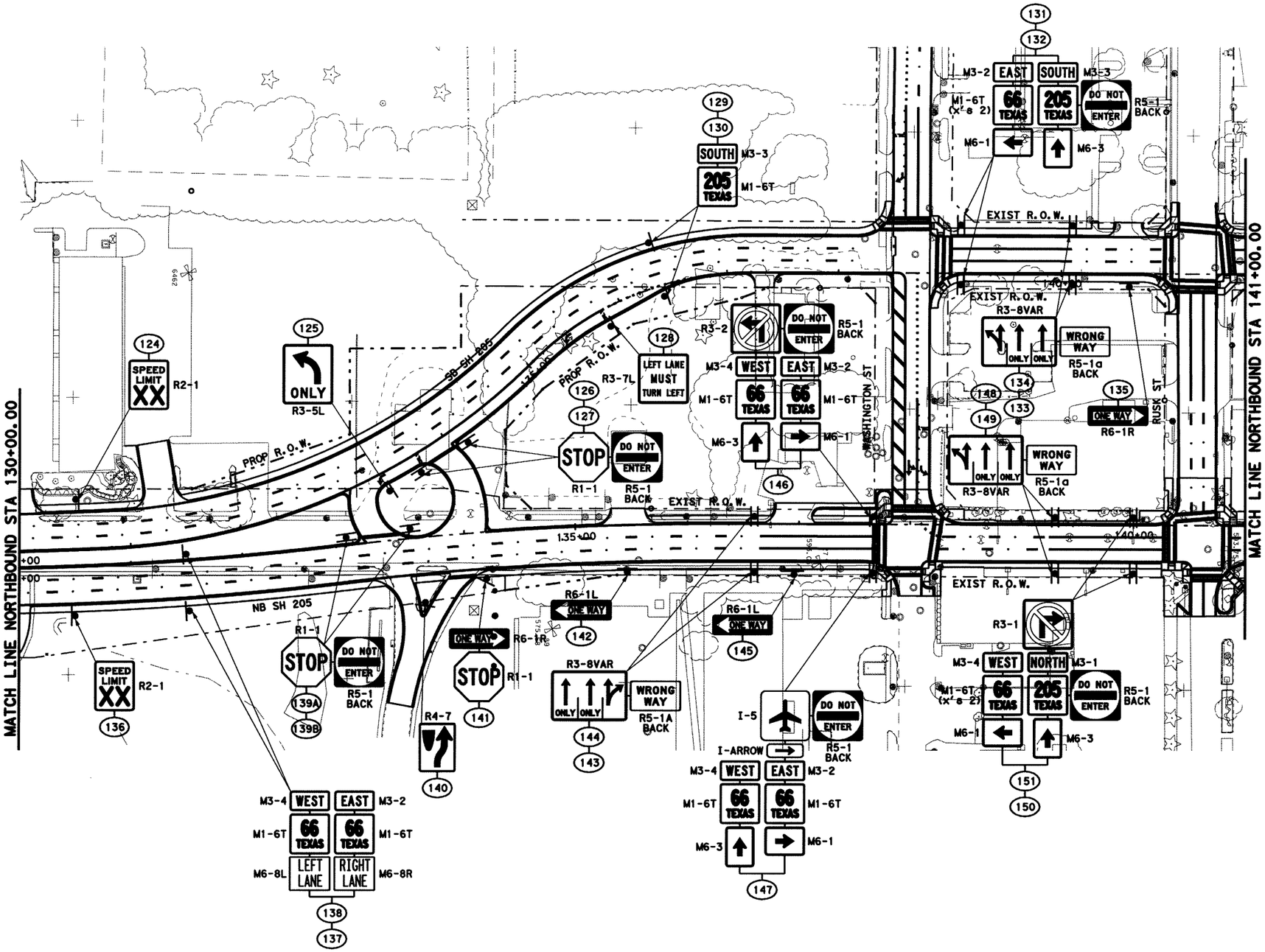
STATE HIGHWAY 205
STA 120+00 TO 130+00

SHEET 13 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	724
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:32



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

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Dallas, TX 75207

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SH 205

SIGNING

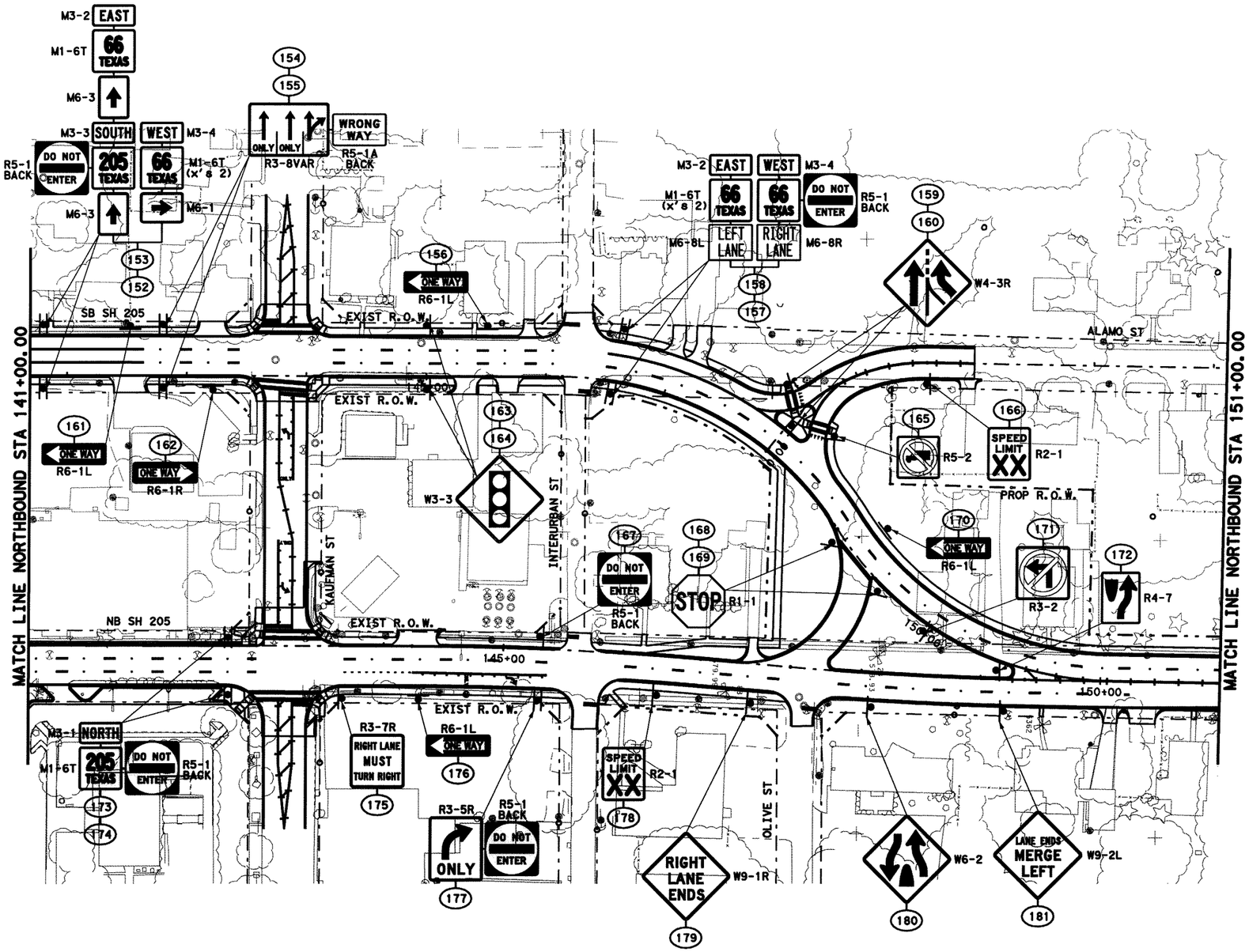
STATE HIGHWAY 205
STA 130+00 TO 141+00

SHEET 14 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	725
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:32



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SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.

5-10-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

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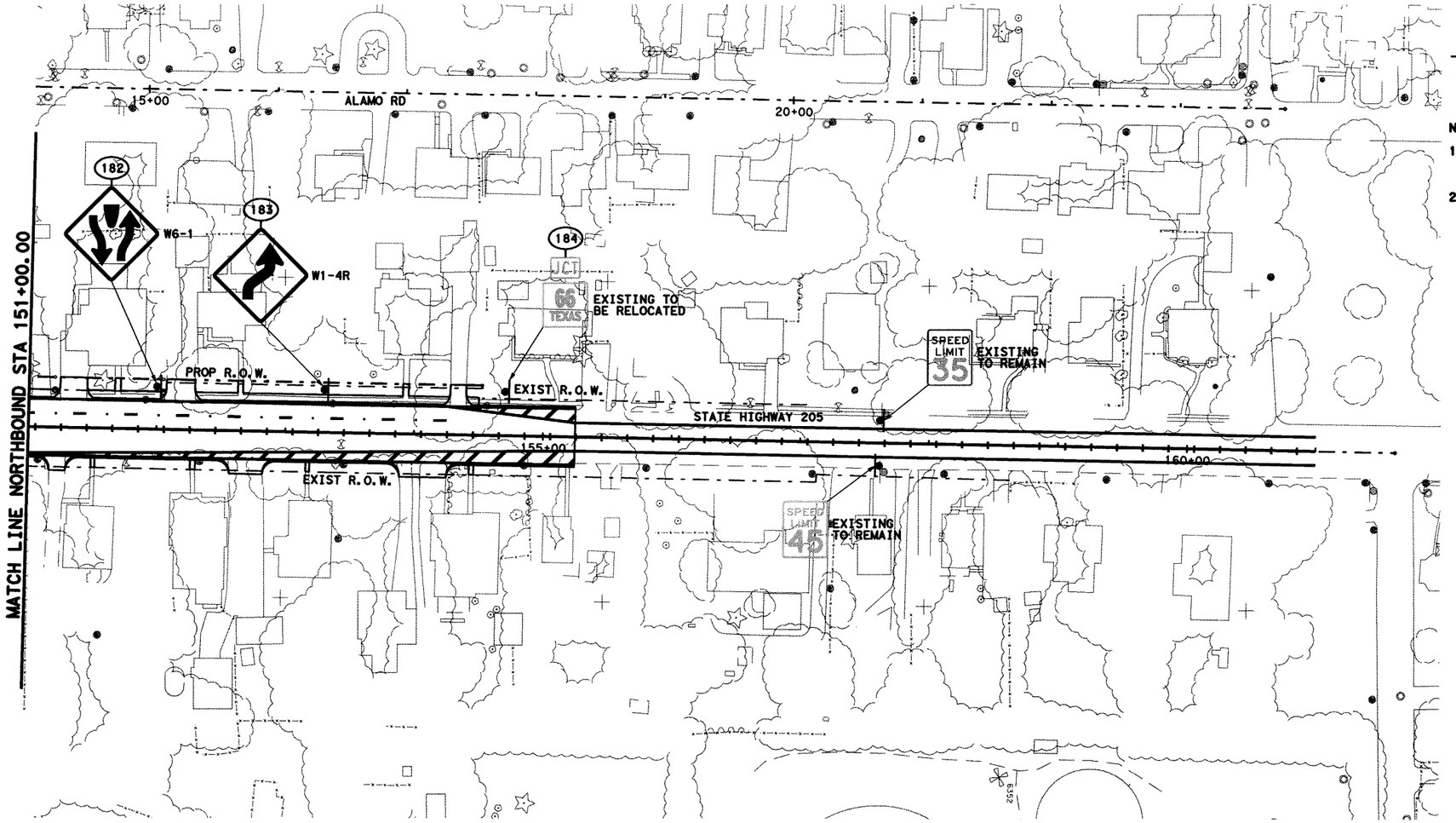
STATE HIGHWAY 205
STA 141+00 TO 151+00

SHEET 15 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	726
CONT.	SECT.	JOB	
0451	01	032, ETC	

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SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

3-14-06

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SH 205

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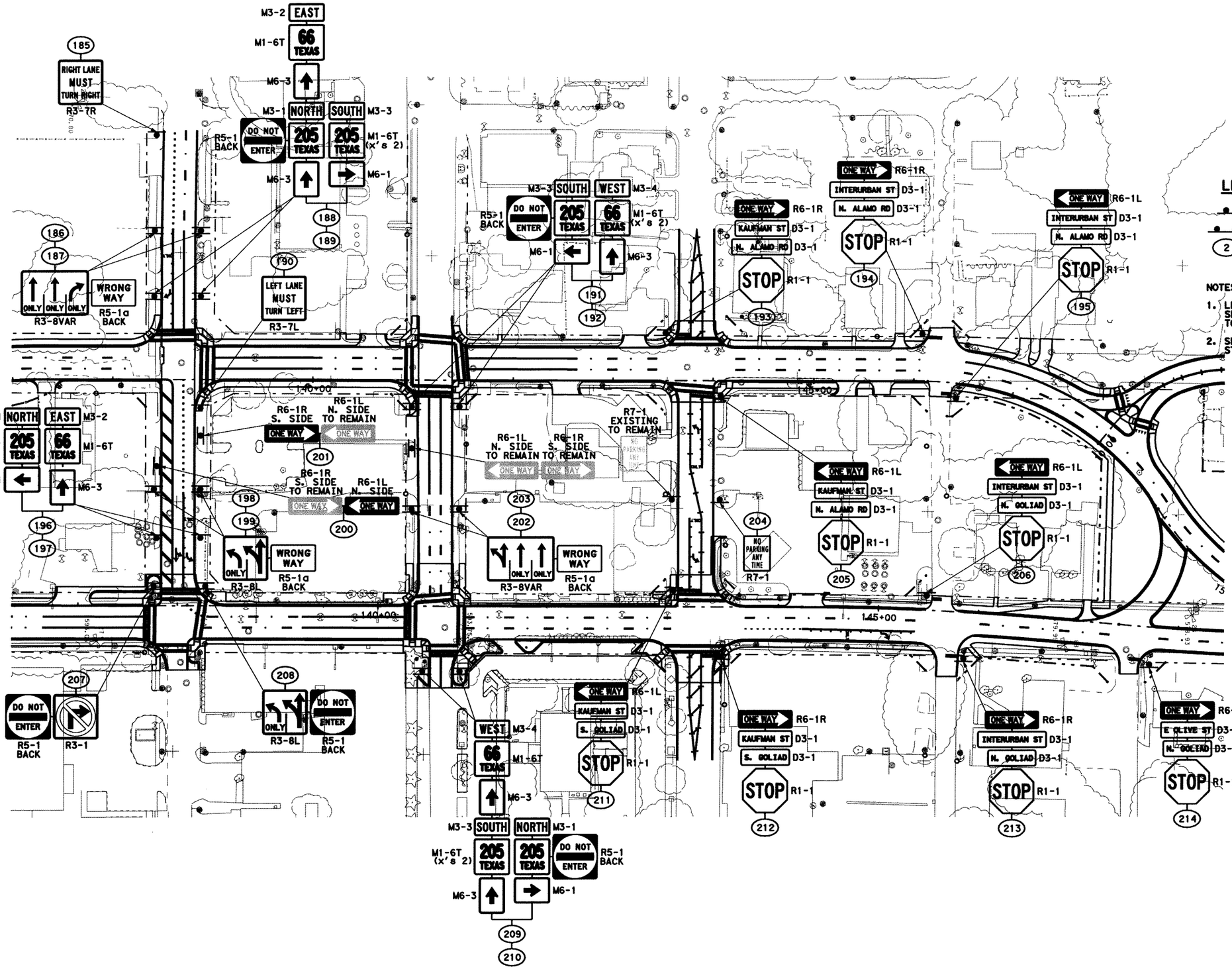
STATE HIGHWAY 205
STA 151+00 TO END OF PROJECT

SHEET 16 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	727
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:32



3-14-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

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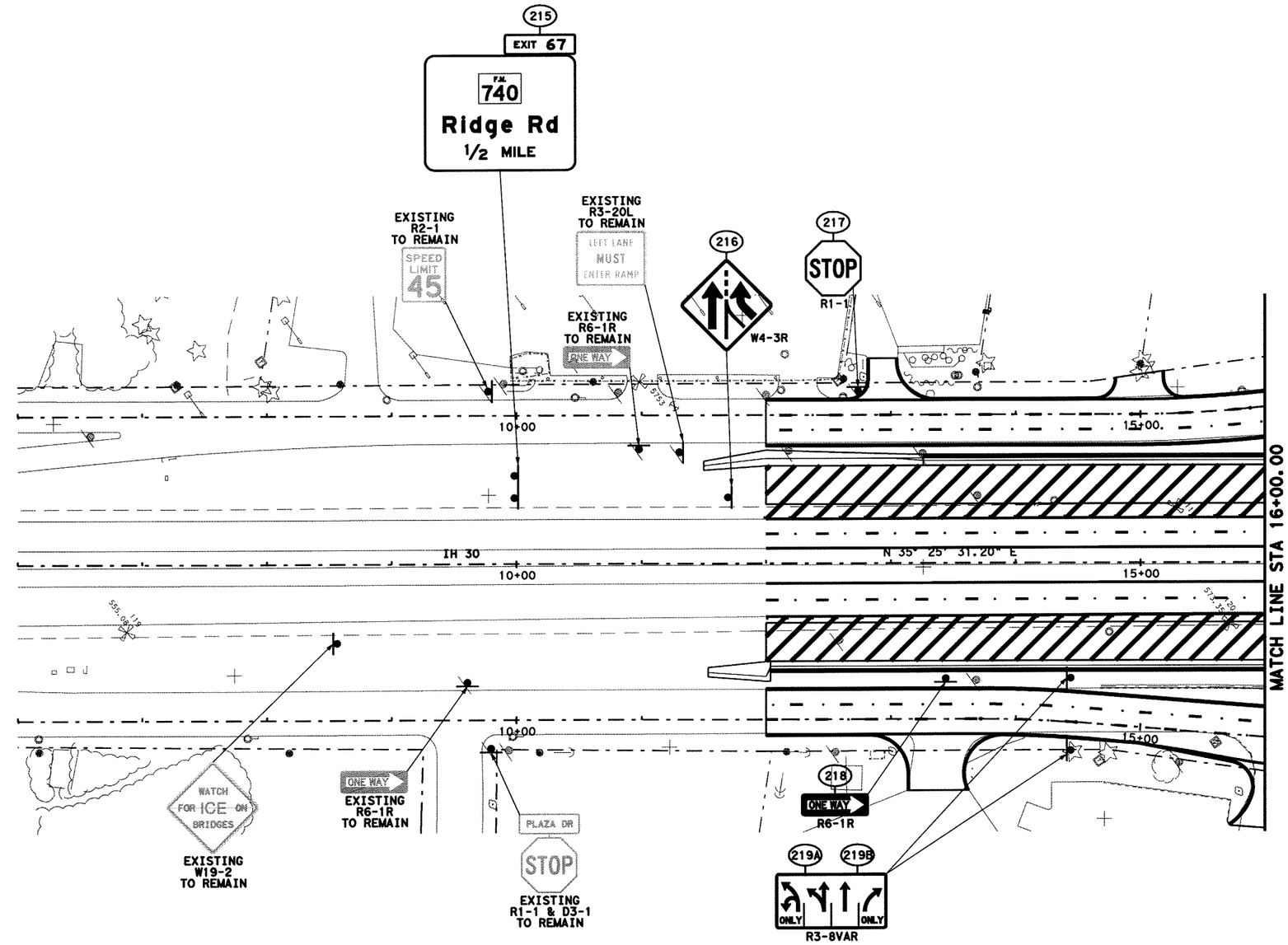
WASHINGTON STREET - RUSK STREET
KAUFMAN STREET - INTERURBAN STREET

SHEET 17 OF 17

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	728
CONT.	SECT.	JOB	
0451	01	032, ETC	

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0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

3-14-06

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SH 205

SIGNING

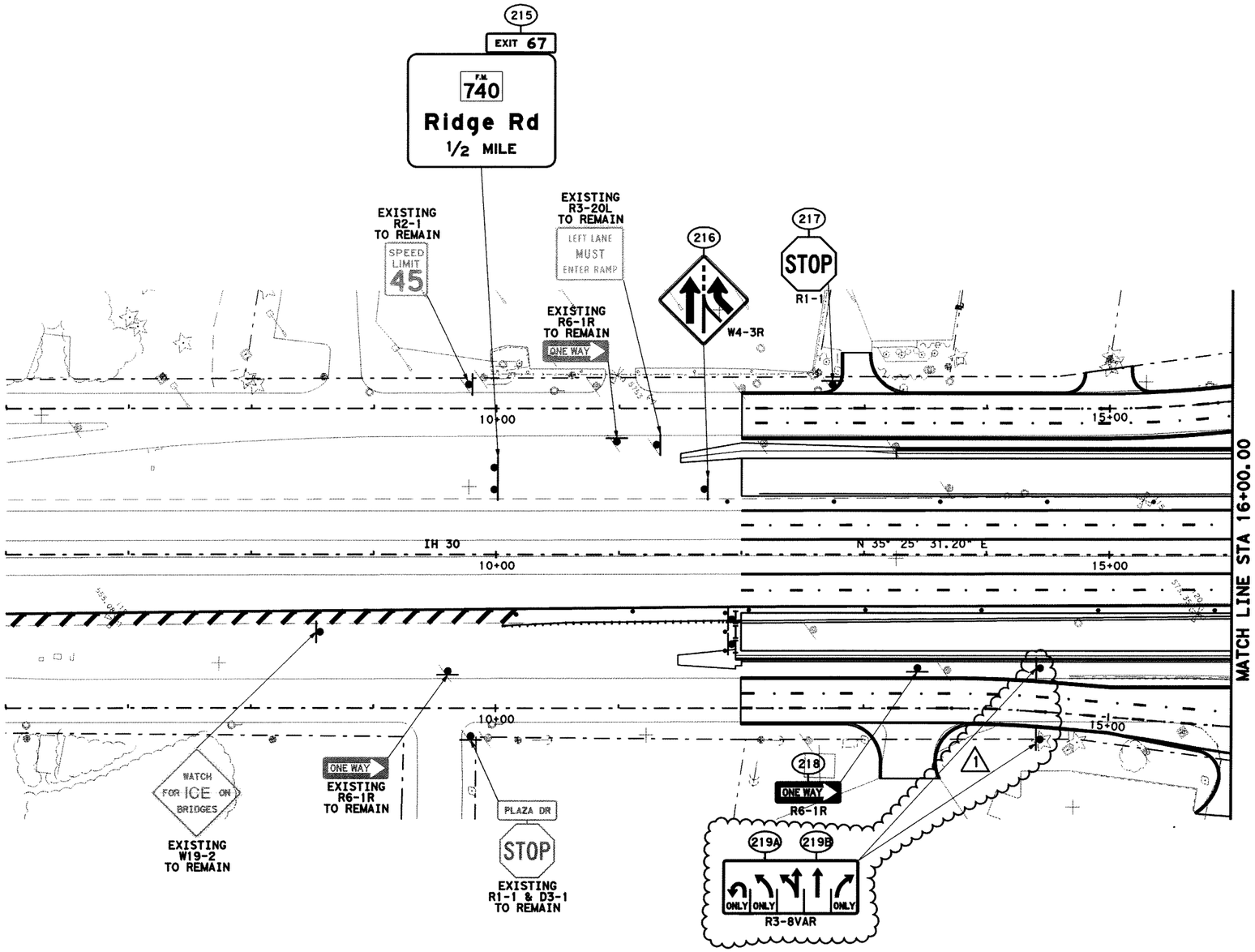
INTERSTATE HIGHWAY 30
STA 6+00 TO 16+00

SHEET 1 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	729
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:48



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.

1 ADDED U-TURN BAYS ON EB & WB FRONTAGE ROAD BY RTG -05/21/2009

5-27-09

STATE OF TEXAS
RICHARD T. GRICE
37520
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2777 Stemmons Freeway
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SH 205

SIGNING

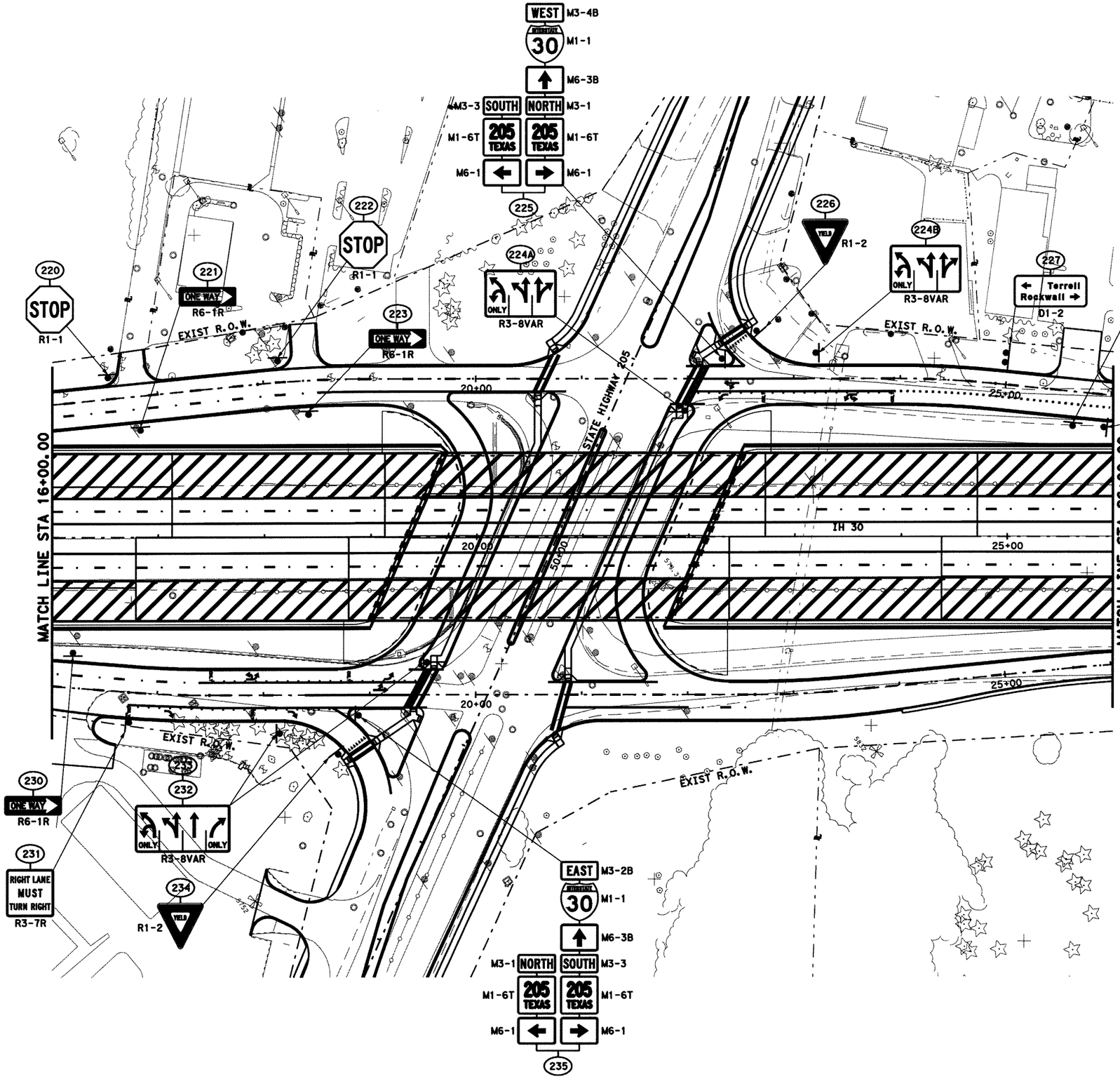
INTERSTATE HIGHWAY 30
STA 6+00 TO 16+00

SHEET 1 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	729A
CONT.	SECT.	JOB	
0451	01	032, ETC	

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5/27/2009 Plotted 27-MAY-2009 16:42



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.
3. SEE SH 205 SIGNING PLAN SHEET 6 OF 17 FOR ADDITIONAL SIGNS IN THIS AREA.

STATE OF TEXAS
RICHARD T. GRICE
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3-14-06

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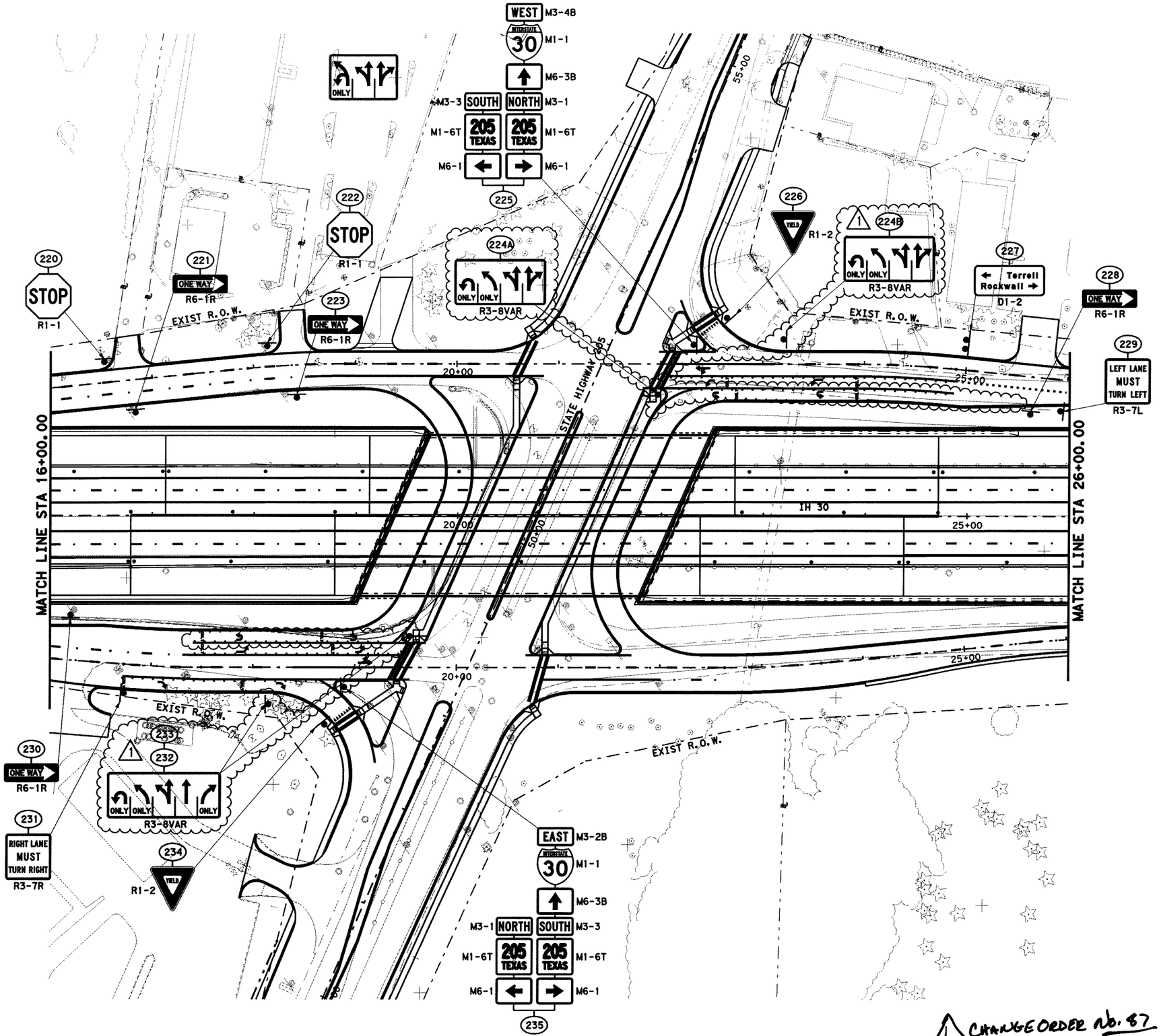
INTERSTATE HIGHWAY 30
STA 16+00 TO 26+00

SHEET 2 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	730
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:32



LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

1. LEGENDS FOR SPEED LIMIT AND CLEARANCE SIGNS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO CONTRACTOR ORDERING THESE SIGNS.
2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.
3. SEE SH 205 SIGNING PLAN SHEET 6 OF 17 FOR ADDITIONAL SIGNS IN THIS AREA.

1 ADDED U-TURN BAYS ON EB & WB FRONTAGE ROAD BY RTG -05/21/2009

5-27-09

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

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Suite 1333
Dallas, TX 75207
TBPE ID 2263

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SH 205

SIGNING

INTERSTATE HIGHWAY 30
STA 16+00 TO 26+00

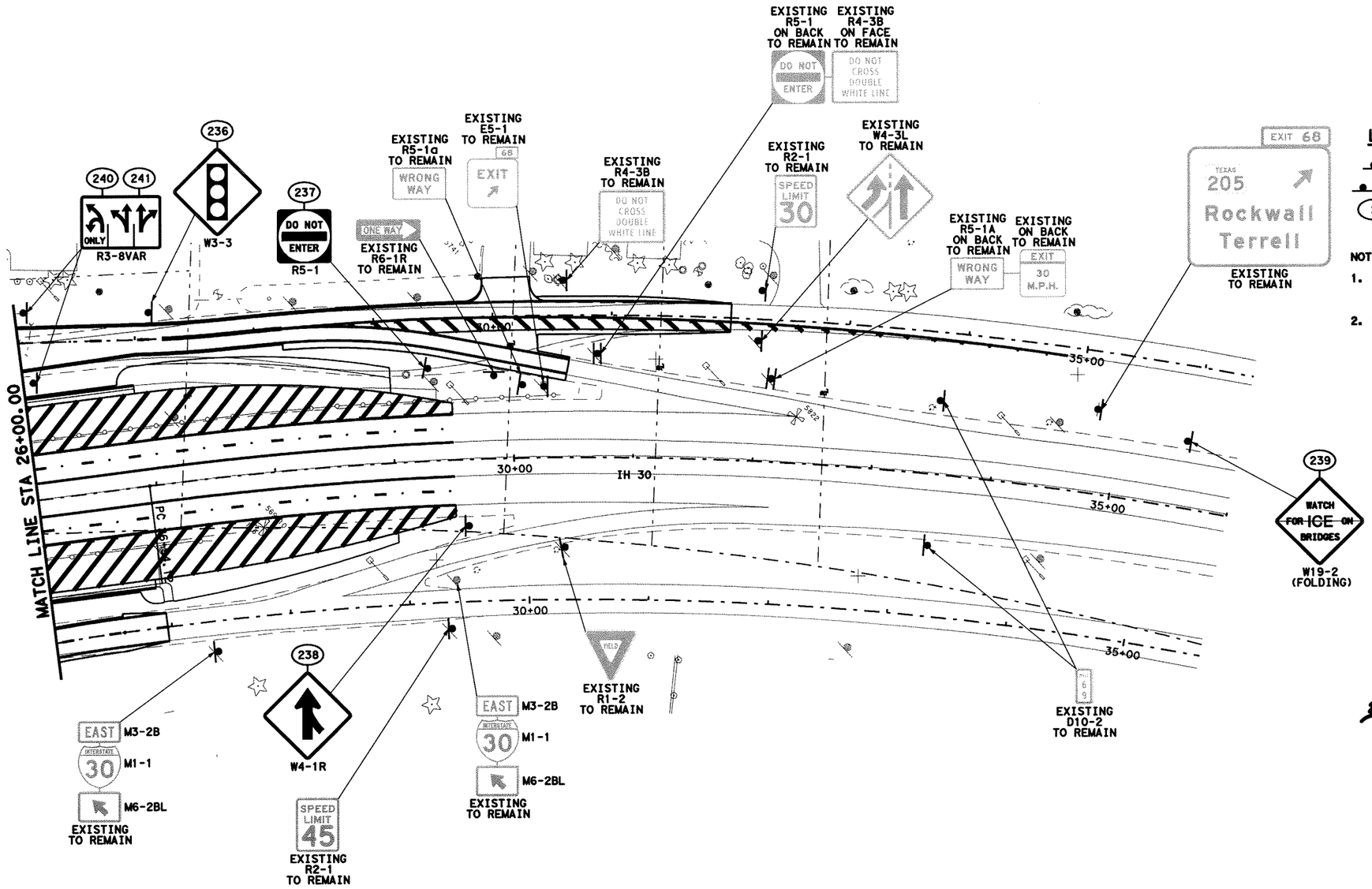
SHEET 2 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	730A
CONT.	SECT.	JOB	
0451	01	032, ETC	

1 CHANGE ORDER No. 87

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5/27/2009 Plotted 27-MAY-2009 16:42



0 50 100
SCALE IN FEET

LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

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SH 205

SIGNING

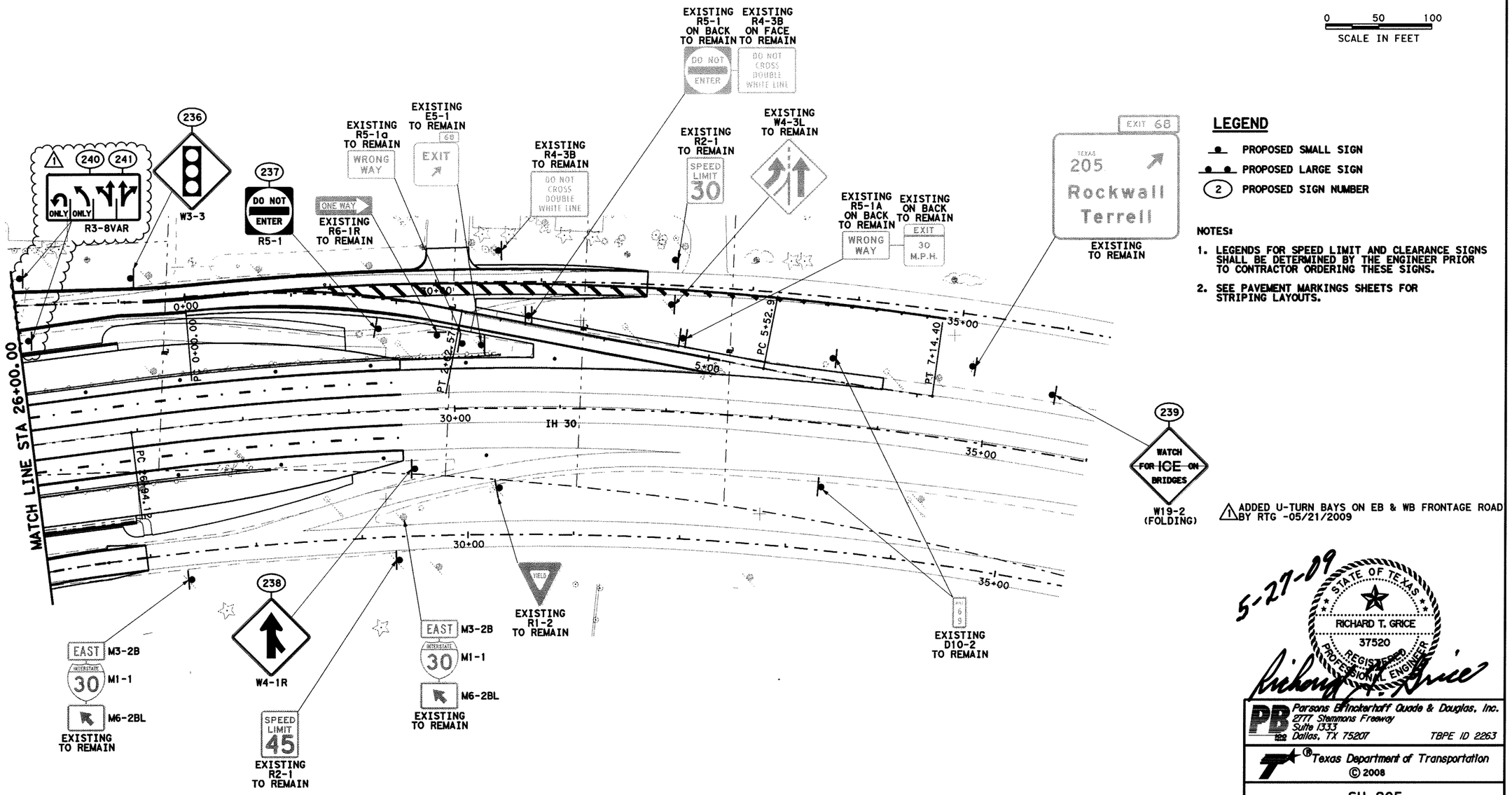
INTERSTATE HIGHWAY 30
STA 26+00 TO 36+00

SHEET 3 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	731
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/14/2006 Plotted 14-MAR-2006 13:32



LEGEND

- PROPOSED SMALL SIGN
- PROPOSED LARGE SIGN
- (2) PROPOSED SIGN NUMBER

NOTES:

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2. SEE PAVEMENT MARKINGS SHEETS FOR STRIPING LAYOUTS.

⚠1 ADDED U-TURN BAYS ON EB & WB FRONTAGE ROAD BY RTG -05/21/2009

5-27-09

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

Richard T. Grice

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Suite 1333
Dallas, TX 75207
TBPE ID 2263

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SH 205

SIGNING

INTERSTATE HIGHWAY 30
STA 26+00 TO 36+00

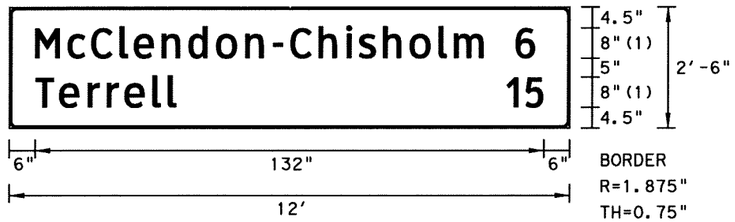
SHEET 3 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	731A
CONT.	SECT.	JOB	
0451	01	032, ETC	

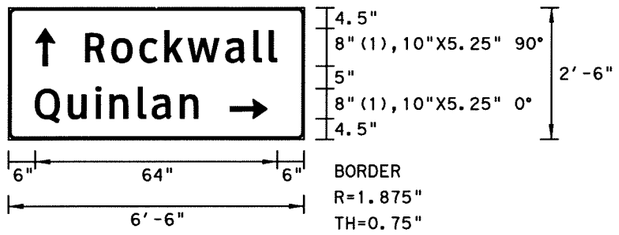
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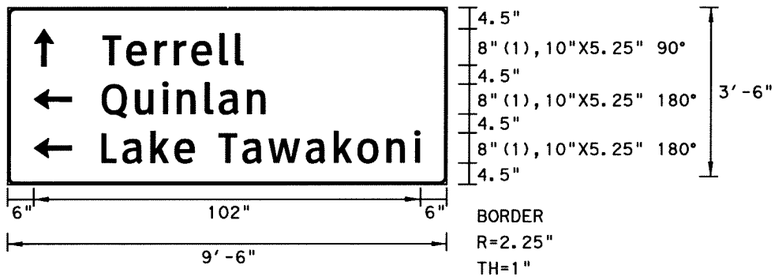
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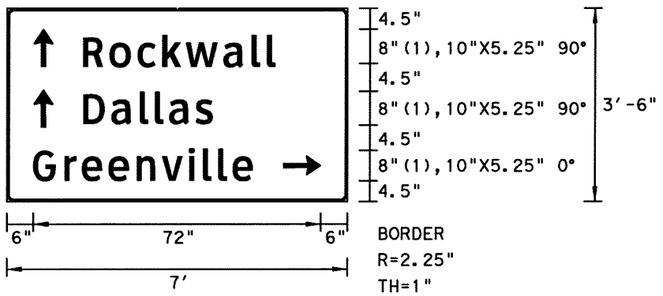
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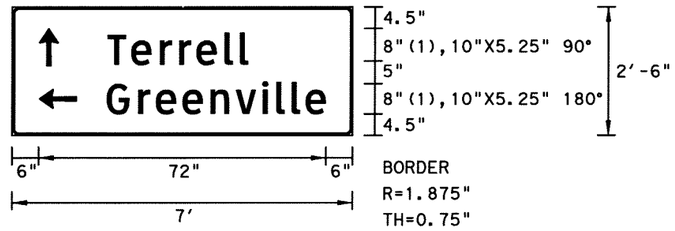
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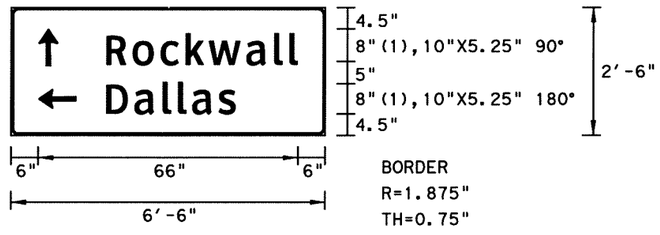
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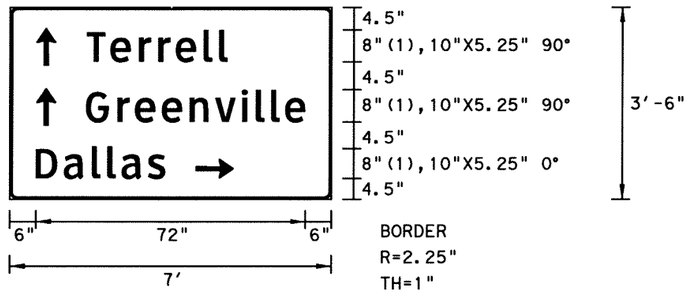
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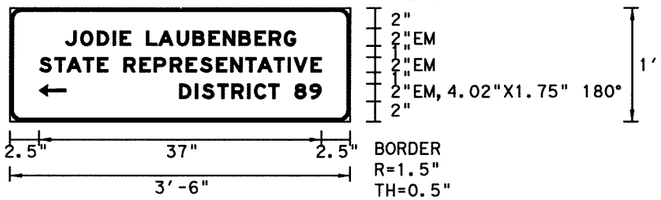
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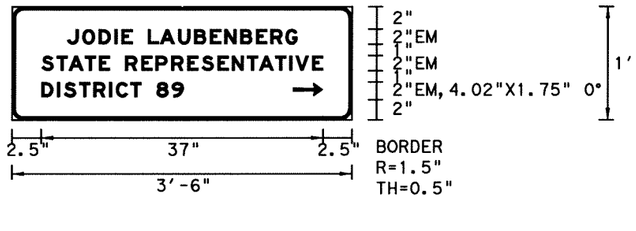
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#54



BACKGROUND: GREEN BORDER: WHITE

#107



BACKGROUND: GREEN BORDER: WHITE

#111

3-14-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Richard T. Grice

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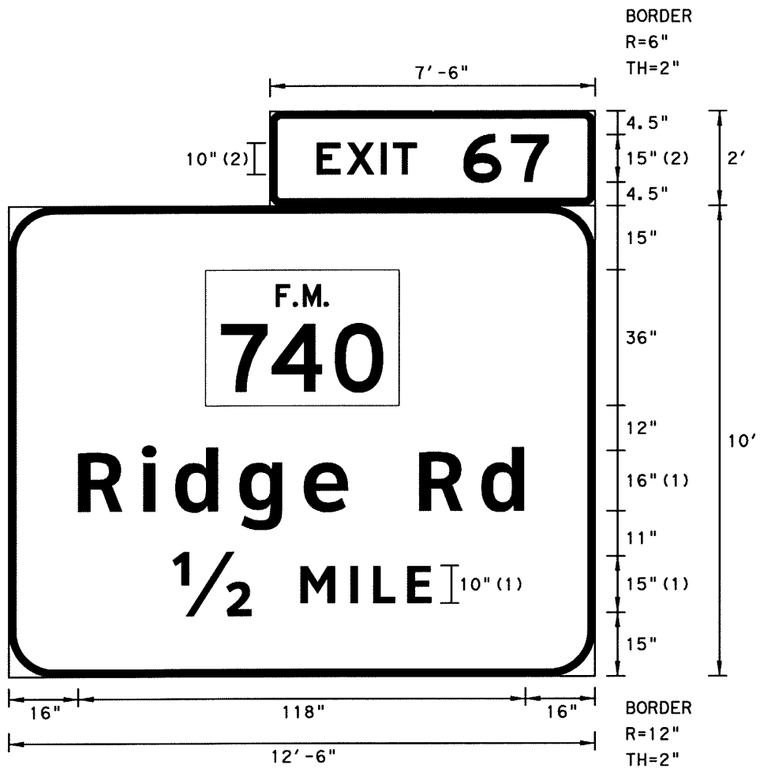
SIGN DETAILS

SHEET 1 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

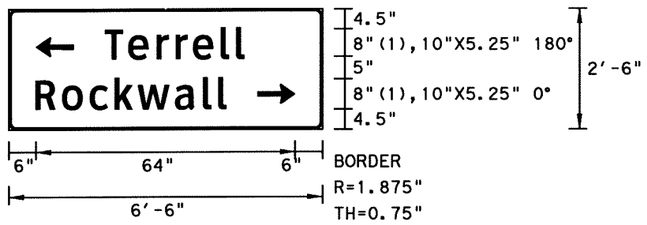
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	732
CONT.	SECT.	JOB	
0451	01	032, ETC	

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#215



BACKGROUND: GREEN BORDER: WHITE
FONT: (1) ClearviewHwy-3-W

#227

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

3-14-06

Richard T. Grice

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Suite 1333
Dallas, TX 75207

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SH 205

SIGN DETAILS

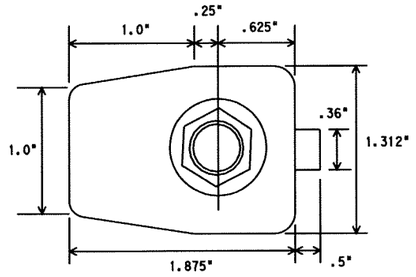
SHEET 2 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

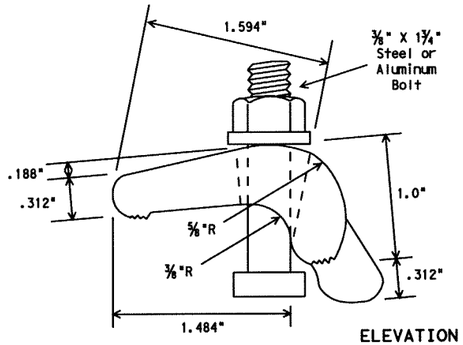
STATE	DIST.	COUNTY	SHEET NO.
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CONT.	SECT.	JOB	
0451	01	032, ETC	

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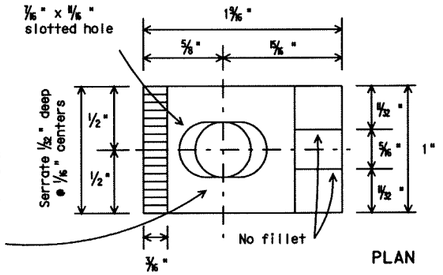


PLAN



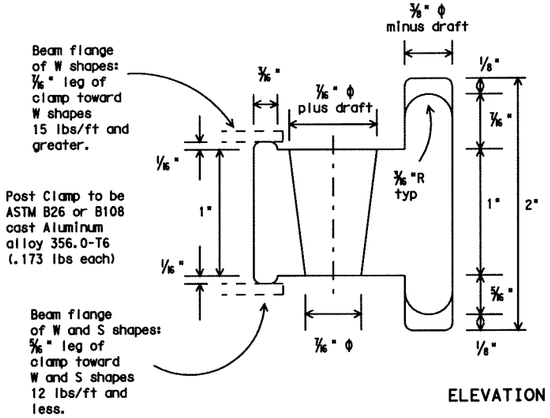
ELEVATION

ALTERNATE POST CLAMP DETAIL



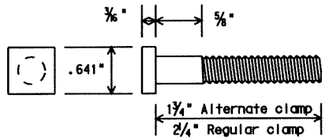
NOTE: centerline of hole for 3/8" diameter squarehead bolt x 2 1/4" long with a flat washer and self-locking nut, or lock washer and hex. nut. Bolt head dimensions shall be in accordance with ANSI B 18.2.1 as referred to in the AISC Manual of steel construction. Bolt assembly shall be galvanized.

PLAN



ELEVATION

POST CLAMP DETAIL



POST CLAMP BOLT DETAIL

WIND BEAM TABLES

For sign widths not in whole foot increments, select next larger sign width from tables for maximum wind beam spacing.

Example: Sign Code = 120, Sign Width = 14'6" ⟶ select 15' Sign Width
Max. Wind Beam Spacing = 3'0"

CODE

SIGN TYPE 1 3 0
- 1 — Wind Design Zone
- 3 — Series No. (Zero Denotes Plywood) (1 Denotes Aluminmum)
- 0 — No. of Posts

ZONE 1 (Types 100)

	Two Posts (120)							Three Posts (130)									
Sign Width (W)	4' thru 12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'	24'	25'	26'	27'	28'
Max. Wind Beam Spacing	4'-0"	3'-8"	3'-4"	3'-0"	2'-8"	2'-4"	2'-0"	4'-0"	3'-9"	3'-6"	3'-3"	3'-0"	2'-9"	2'-6"	2'-3"	2'-0"	

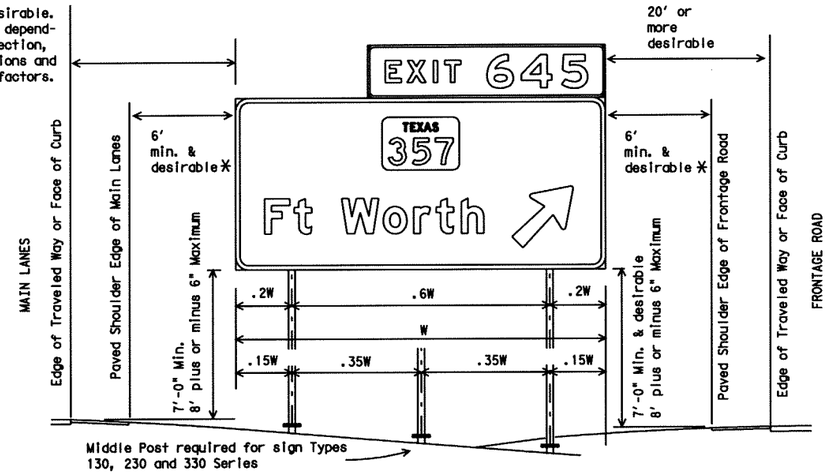
ZONE 2 (Types 200)

	Two Posts (220)			Three Posts (230)			
Sign Width (W)	4' thru 16'	17'	18'	19' thru 24'	25'	26'	27'	28'
Max. Wind Beam Spacing	4'-0"	3'-9"	3'-6"	4'-0"	3'-9"	3'-6"	3'-3"	3'-0"

ZONE 3 (Types 300)

	Two Posts (320)	Three Posts (330)
Sign Width (W)	4' thru 18'	19' thru 28'
Max. Wind Beam Spacing	4'-0"	4'-0"

30' or more desirable. May be reduced depending on cross section, viewing conditions and other related factors.



TYPICAL SIGN INSTALLATION AND LOCATION

LATERAL CLEARANCE NOTES:

Lateral clearances of signs mounted on median side of main lanes are the same as shown above where space will permit.

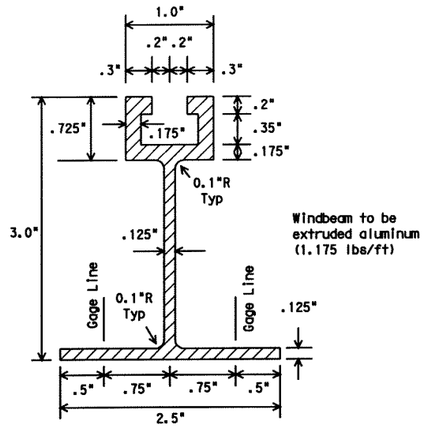
Where a sign is to be located behind guardrail, an allowable minimum clearance of two feet may be used, measured from the face of the guardrail to the near edge of sign.

* - 6' minimum and desirable may be used only in areas of limited lateral clearance and when approved by the Engineer.

POST SPACING NOTES:

Post spacing on a two post sign may vary a maximum of plus or minus 10% of total sign width to fit field conditions.

Post spacing on a three post sign may vary a maximum of plus 5% of total sign width to fit field conditions.



WINDBEAM CROSS SECTION

SIGN SUPPORTS SHALL NOT BE SPLICED EXCEPT AS SHOWN ELSEWHERE ON SMD STANDARDS

SPECIFICATION REFERENCE TABLE
MATERIALS AND TESTS DIVISION SPECIFICATIONS
SIGN HARDWARE D-9-7120

GENERAL NOTES:

1. Design conforms with AASHTO Specifications for the design and construction of structural supports for highway signs.
2. Materials and fabrication shall conform to the requirements of the Department material specifications.
3. Structural steel shall be high strength steel (HS) in accordance with the Item 442, "Metal For Structures."
4. Parts shall be saw cut either before galvanizing and the galvanized cut cleaned of zinc build-up, or saw cut after galvanizing and the cut surface treated with zinc-based solder or zinc-rich paint in accordance with ASTM A780. (Cut surface will not be treated until plate is installed and all bolts fully tightened.)
5. Exit number panel shall be mounted to the right hand side of the parent sign for right exits and to the left for left hand exits. The number panel shall be mounted with two uprights so its right edge is even with the right edge of the parent sign or vice-versa for left hand exits.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

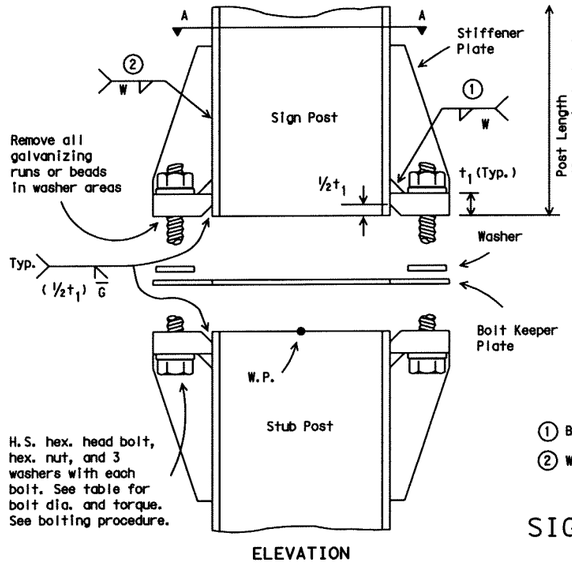
SIGN MOUNTING DETAILS- LARGE ROADSIDE SIGNS STRUCTURE

SMD(2-1)-98

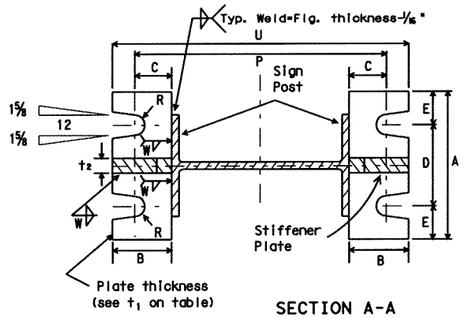
©TxDOT August 1995	DN: LR	CK: MT	DW: DN	CK: -	REG NO.:
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
6-96	DAL	6	(SEE TITLE SHEET)		734
1-97	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
4-98	ROCKWALL		0451	01	032	SH205

27A

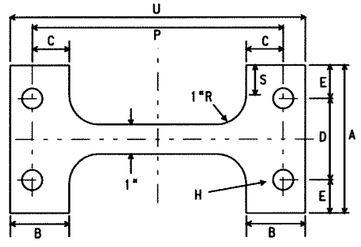
LEVELS DISPLAYED ACC:
1 2 3 4 5 6 7 8 9 10 11 12 21 31 41 51 6
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63



ELEVATION

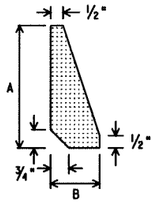


SECTION A-A



H= Bolt dia. + ⅛"

BOLT KEEPER PLATE
30 Ga galv. sheet steel



① Back up weld to be made before installing stiffener plate

② Weld W may be continued across clips to seal joint

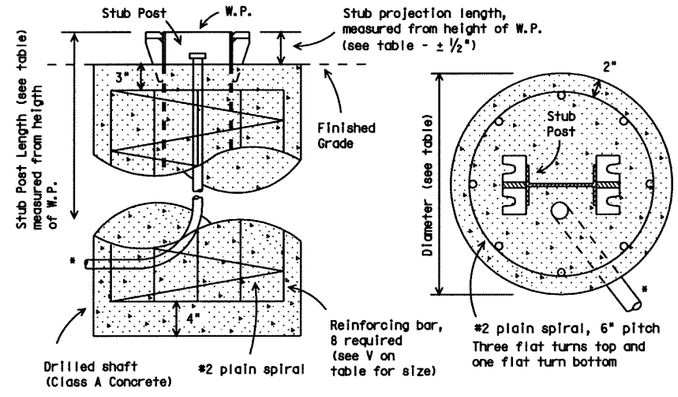
SIGN POST AND STUB POST

(For W Shapes)

STIFFENER PLATE DETAIL

Steel Plate (thickness = t_2)

(See table for dimensions)

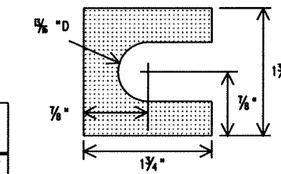


ELEVATION

PLAN

FOUNDATION DETAIL

*Note: For signs with electrical apparatus, see ED(10) for conduit required in founation.



SHIM DETAIL

Furnish two .012"+ thick and two .032"+ thick shims per post. Shims shall be fabricated from brass shim stock or strip conforming to ASTM B36.

BOLTING PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

1. Assemble sign post, BOLT KEEPER PLATE and stub post with bolts and three flat washers per bolt as shown.
2. Shim as required to plumb post.
3. Tighten all bolts the maximum possible with a 12 to 15 inch wrench to clean bolt threads and to bed washers and shims.
4. Loosen each bolt in sequence and retighten bolts in a systematic order to the prescribed torque. Do not overtighten.
5. To prevent nut loosening, burr threads of bolt at junction with nut using a center punch.

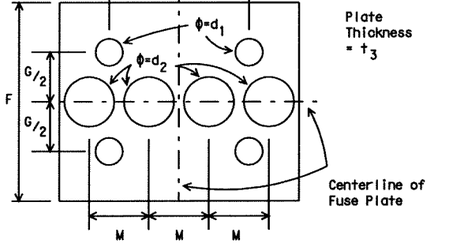
Dimensions / Post Size	Base Connection Data Table: Bolt Size & Torque	A	B	C	D	E	t_1	t_2	W	R
W6x9	⅝"ϕ x 2¾" 440-450 inch pounds 36-38 foot pounds	5"	2"	1¼"	2¾"	1⅛"	¾"	½"	¼"	11/32"
W6x12										
W6x15										
W8x18										
W8x21	¾"ϕ x 3½" 740-750 inch pounds 62-63 foot pounds	6"	2¼"	1⅜"	3½"	1¼"	1"	¾"	5/16"	13/32"
W10x22										
W10x26										
W12x26										
S3x5.7	½"ϕ x 2½" 440-450 inch pounds 36-38 foot pounds	See Detail Below								
S4x7.7										

Post Size	Perforated Fuse Plate Data Table: F	G	J	K	M	d_1	d_2	t_3	Bolt Dia.	Wt. (ea.) (lbs.)	Bolt length
W6x9	4¼"	2"	4"	2¼"	1"	9/16"	¾"	¼"	½"	1.01	1½"
W6x12	5"	2½"	6"	3½"	1½"	11/16"	1¼"	⅜"	⅝"	2.51	2¼"
W6x15	5"	2½"	5¼"	2¾"	1¼"	11/16"	1⅜"	⅜"	⅝"	2.26	2¼"
W8x18	5½"	2½"	5¼"	2¾"	1¼"	13/16"	1"	½"	¾"	3.35	2¼"
W8x21	6"	3"	5¾"	2¾"	1⅜"	13/16"	1⅛"	½"	¾"	4.03	2¼"
W10x22	6"	3"	6½"	3½"	1⅝"	13/16"	1 5/16"	½"	¾"	4.47	2¼"
W10x26	3¾"	1½"	2⅝"	1½"	⅝"	9/16"	⅜"	¼"	½"	0.60	1½"
W12x26											
S3x5.7											
S4x7.7											

Post Size	Bolt Keeper Data: P	S	U
W6x9	8⅜"	1"	9⅞"
W6x12	8½"		10"
W6x15	8½"		10"
W8x18	10⅝"		12⅛"
W8x21	11"	1½"	12¾"
W10x22	12⅞"		14⅝"
W10x26	13⅜"		14⅞"
W12x26	15"		16¾"
S3x5.7	See Detail Below		
S4x7.7			

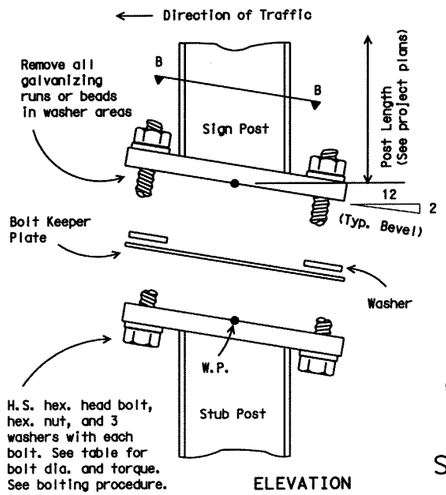
Post Size	Foundation Data: Stub length	Stub projection	Dr. Shaft diameter	Bar V Size
W6x9	2'-0"	3"	24"	#5
W6x12	2'-0"	3"		#5
W6x15	2'-6"	3"		#6
W8x18	2'-6"	3"		#7
W8x21	3'-0"	2½"		#8
W10x22	3'-0"	2½"		#9
W10x26	3'-0"	2½"		#10
W12x26	3'-0"	2½"		#11
S3x5.7	3'-3½"	3½"	12"	Non-reinforced ③
S4x7.7				

③ Foundation design shall be Type G Mount, see SMD (TY G).

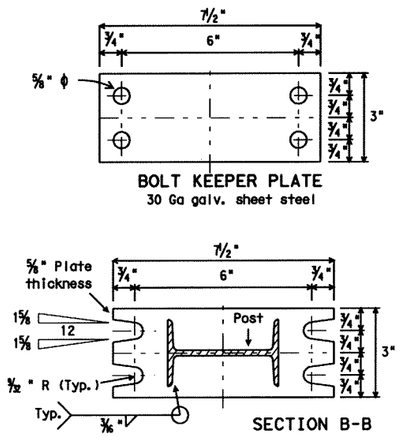


PERFORATED FUSE PLATE DETAIL

Use H.S. hex head bolts, hex head nut and bevel or flat washer (where req'd) under nut. All holes shall be drilled. All plate cuts shall preferably be saw cuts. However; flame cutting will be permitted provided all edges are ground. Metal projecting beyond the plane of the plate face will not be permitted. Steel fuse plates shall conform to the requirements of ASTM A36. ASTM A572 Grade 50 or ASTM A588 may be substituted for A36 at the option of the fabricator. Mill test reports shall be submitted for Fuse Plates. Steel used shall have an ultimate tensile strength not to exceed 80 KSI.



ELEVATION

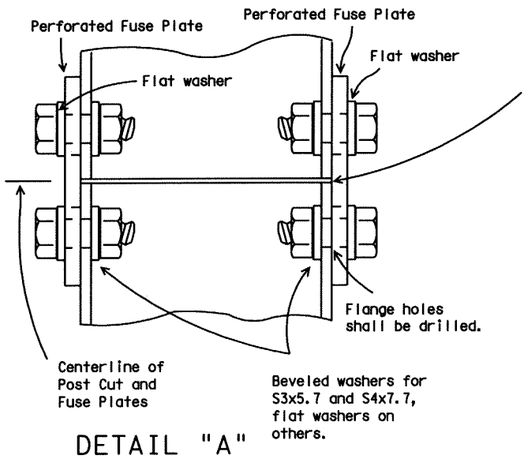


BOLT KEEPER PLATE
30 Ga galv. sheet steel

SECTION B-B

SIGN POST AND STUB POST

(For S4x7.7 and S3x5.7)



DETAIL "A"

Parts shall be saw cut either before galvanizing and the galvanized cut cleaned of zinc build-up, or saw cut after galvanizing and the cut surface treated with zinc-based solder or zinc-rich paint in accordance with ASTM A780. (Cut surface will not be treated until plate is installed and all bolts fully tightened.)

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

SIGN MOUNTING DETAILS- LARGE ROADSIDE SIGNS FOUNDATION & STUB

SMD (2-2) -98

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DN: LR	CK: -	DW: DN	CK: -	MEG NO.:

REVISIONS
4-98

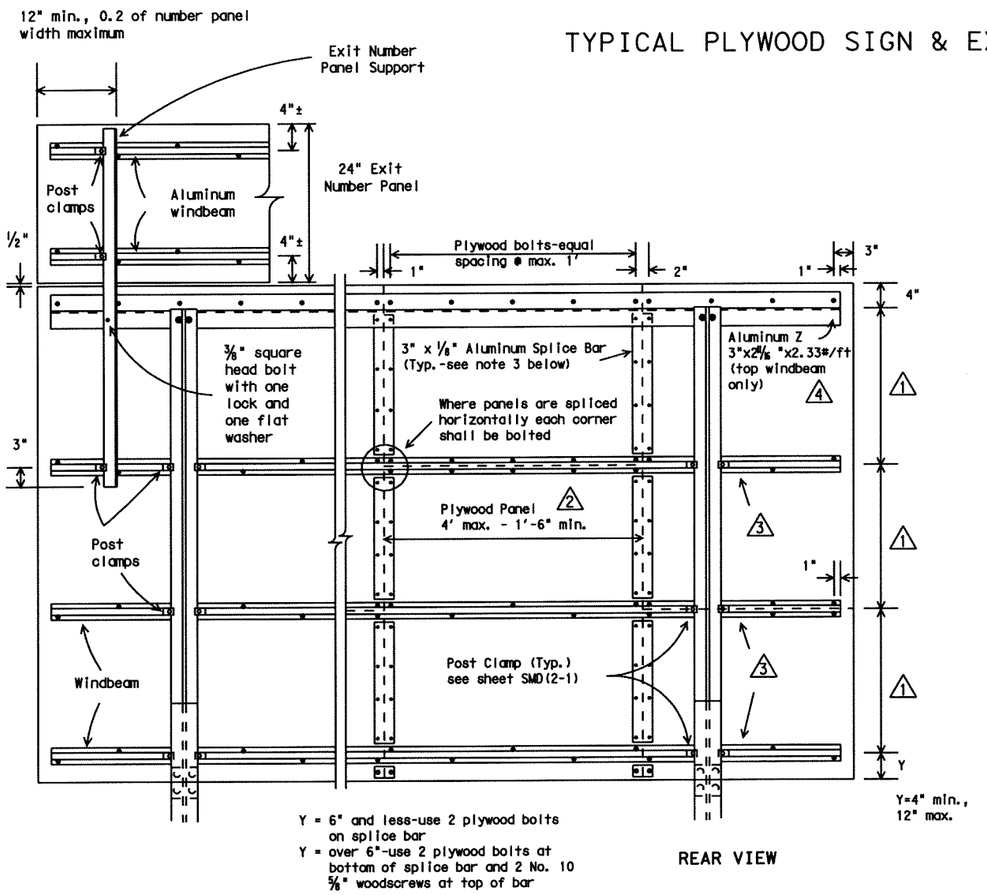
STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
DAL	6	(SEE TITLE SHEET)	735

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

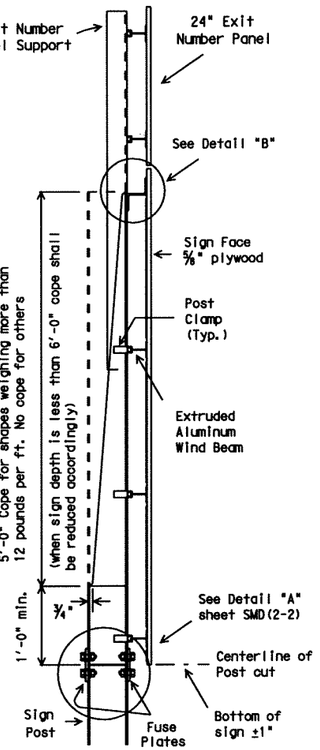
27B

LEVEL: PLAYED
DN: LR
CK: CW
DW: DN
CK: MT
DATE:
ACC: d58hplc/usr/d580504
FILE:

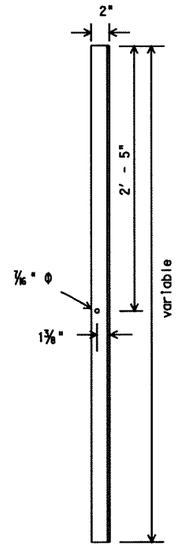
TYPICAL PLYWOOD SIGN & EXIT PANEL ASSEMBLY DETAILS



REAR VIEW

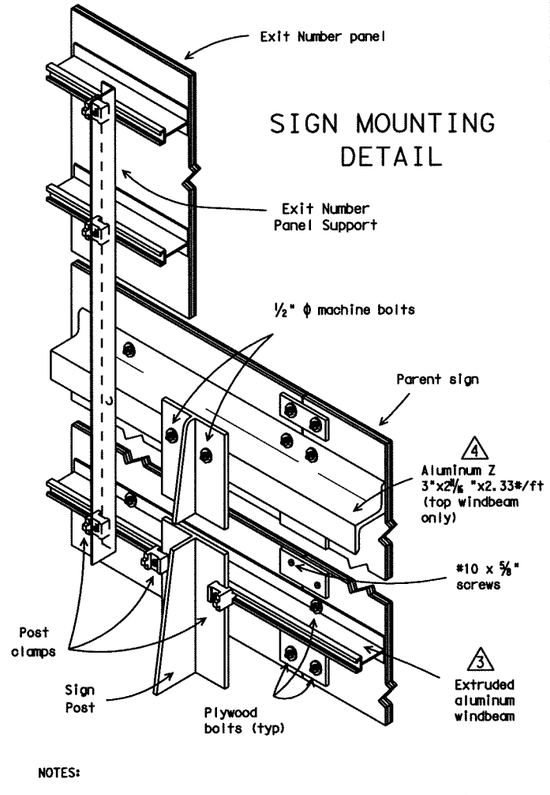


SIDE VIEW



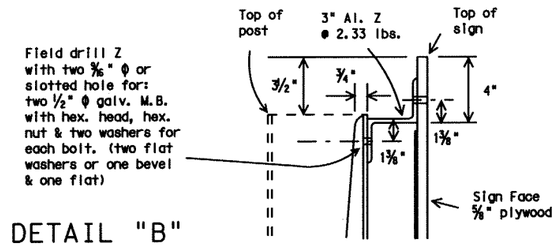
L3" x 2" x ¼" Steel Upright or L3" x 2" x ⅜" Aluminum Upright or 3" Windbeam

EXIT NUMBER PANEL SUPPORT



NOTES:

1. Exit number panel shall be mounted to the right hand side of the parent sign for right exits and to the left for left hand exits. The number panel shall be mounted with two uprights so its right edge is even with the right edge of the parent sign or vice-versa for left hand exits.
2. Exit number panel support shall be symmetrical about number panel centerline.
3. Exit number panel support shall be of ASTM A36 structural steel galvanized after fabrication, or ASTM B221 aluminum alloy 6061-T6.
4. All bolts, nuts and washers shall be galvanized per ASTM Designation: B695 Class 50, or A153 Class C or D.
5. When splice bars are required to fabricate the number panel, the splice bar detail as shown for the parent sign is to be used. Splice bars on number panel need not align with those on parent sign.
6. Posts, parent sign panels and exit number panels shall comply with notes on sheets SMD(2-1) and SMD(2-2).
7. Signs (such as exit number panels) attached above a parent sign shall be made of the same type material as the parent sign.
8. Exit number panel support and other connection hardware required to fasten exit number panel to parent sign shall be subsidiary to the sign blank.



DETAIL "B"

NOTES:

1. A tolerance of plus or minus ¼inch will be permitted in the plan dimensions for fabrication of each single increment sign panel when necessary for squaring. A tolerance of plus or minus ¼inch will be permitted for each increment of a multi-increment sign panel where necessary to secure square, tight-fitting joints.
2. Plywood bolts shall be ⅝" x 1½" elevator type steel with flat or slightly hemispherical head and ¾" minimum thread length. The head shall have a minimum diameter of ⅞" and a minimum of two fins on the underside. Each bolt shall be provided with one ⅝" steel hex nut, one ⅝" steel flat washer, and one ⅝" steel lock washer. Bolts, nuts and washers shall be galvanized in accordance with ASTM Designation: B695, Class 50, or A153 Class C or D.
3. Splice bars shall be secured with ⅝" long x #10 round head, stainless steel wood screws spaced at 6" maximum along double row spacing with the exception at extreme ends of splice bars, along outside edge of sign, where plywood bolts shall be used as shown. A maximum of one horizontal joint per vertical section will be permitted using a ⅛" gap between panels.
4. Splices shall be kept to a minimum. Panels 4'x8' or larger shall be used to the maximum extent possible in the fabrication of any sign. Signs or sign sections which cannot be fabricated from at least a 4'x8' panel shall be of one piece construction.

1. Approximately equal spacing, fabricator may vary spacing for least interference with message and to utilize wind beam for horizontal splice. Wind beam spacing will not exceed the maximum shown in table on sheet SMD(2-1). Staggered arrangement of horizontal splices as shown is preferred. However, a single horizontal joint across the sign face is permissible.
2. For signs 4'-0" or less in height the plywood panel may exceed 4'-0" in width.
3. Extruded aluminum wind beams shall be continuous with no splices. (see sheet SMD(2-1).
4. Aluminum Z will be provided unless stated otherwise in the plans. If noted elsewhere in the plans, 1.175 lb/ft extruded aluminum windbeam may be used.

LEVEL LAYED DATE: FILE: ACC: d58hplc/usr/d580504
DN: LR CK: CW DW: DN CK: MT

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

SIGN MOUNTING DETAILS-LARGE ROADSIDE SIGNS, PLYWOOD

SMD(2-3)-95

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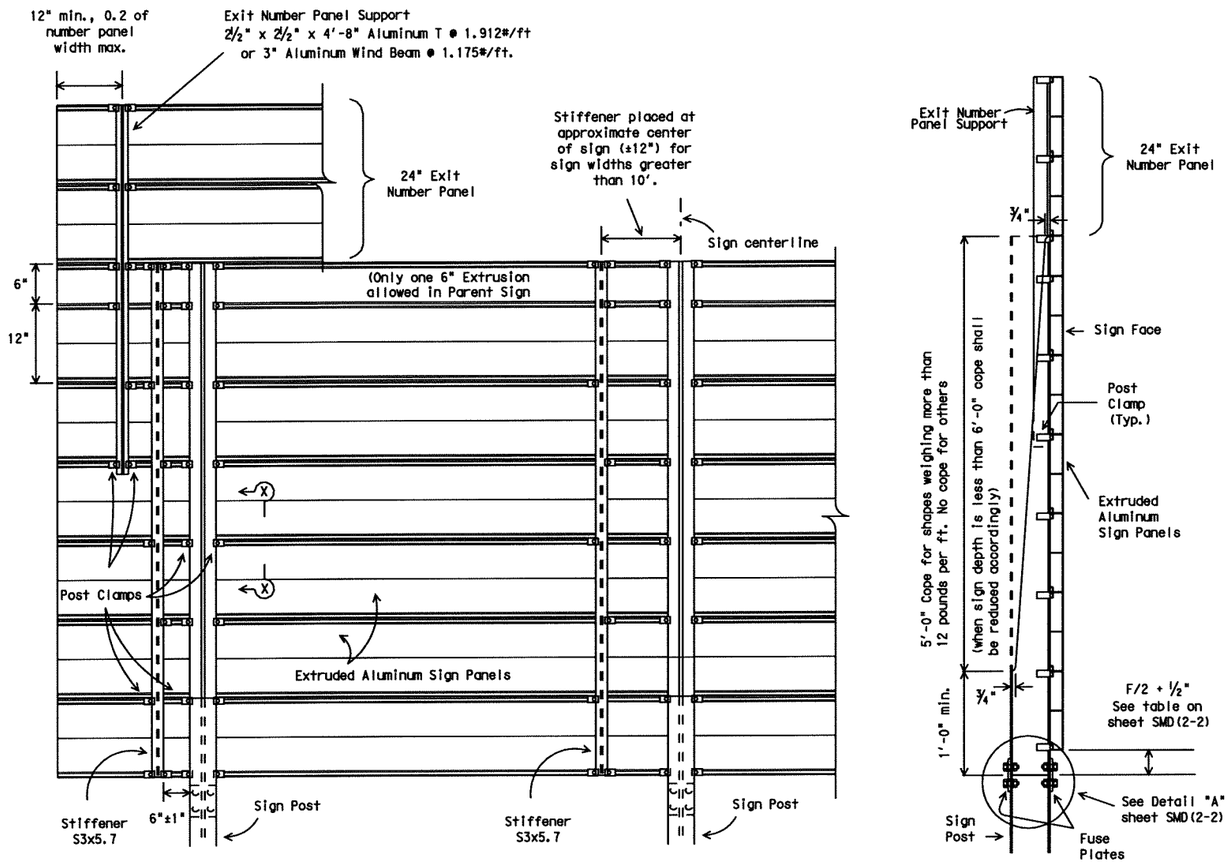
DN: LR	CK: -	DW: DN	CK: -	MSG NO.:

REVISIONS

STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
DAL	6	(SEE TITLE SHEET)	736

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

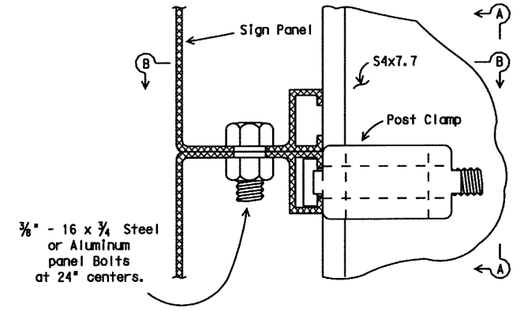
27C



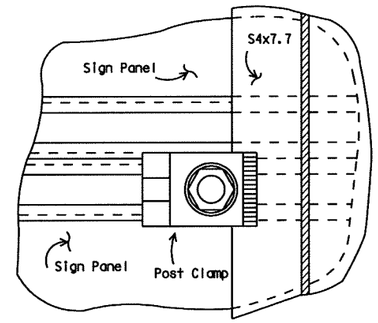
REAR VIEW

SIDE VIEW

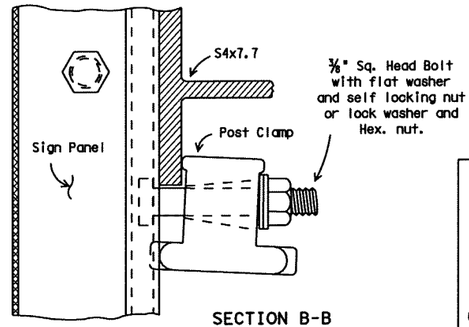
PARENT SIGN & EXIT PANEL MOUNTING DETAILS



SECTION X-X



SECTION A-A



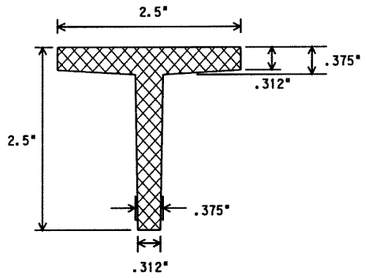
SECTION B-B

PANEL CONNECTION DETAILS

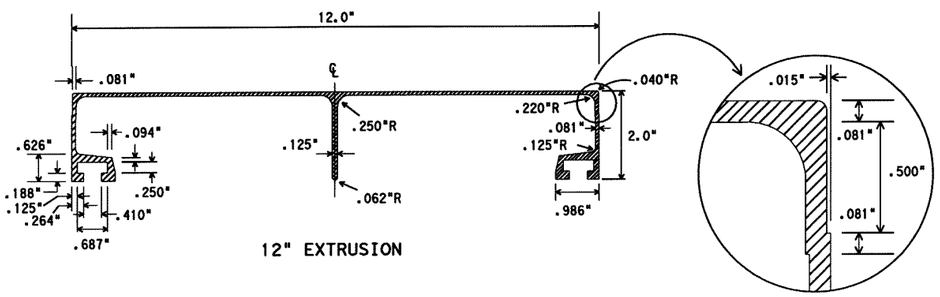
SPECIFICATION REFERENCE TABLE MATERIALS AND TESTS DIVISION SPECIFICATIONS	
ALUMINUM SIGN BLANKS	D-9-7110
SIGN HARDWARE	D-9-7120

GENERAL NOTES:

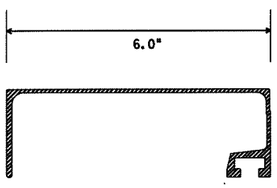
1. Exit number panel shall be mounted to the right hand side of the parent sign for right exits and to the left for left hand exits. The number panel shall be mounted with two uprights so its right edge is even with the right edge of the parent sign or vice-versa for left hand exits.
2. Exit number panel support shall be symmetrical about number panel centerline.
3. Exit number panel support shall be ASTM A36 structural steel galvanized after fabrication, or ASTM B221 aluminum alloy 6061-T6.
4. All bolts, nuts and washers shall be galvanized per ASTM Designation: B695 Class 50, or A153 Class C or D.
5. When splice bars are required to fabricate the number panel, the splice bar detail as shown for the parent sign on sheet SMD(2-1) is to be used. Splice bars on number panel need not align with those on parent sign.
6. Posts, parent sign panels and exit number panels shall comply with notes on sheets SMD(2-1) and SMD(2-2).
7. Signs (such as exit number panels) attached above a parent sign shall be made of the same type material as the parent sign.
8. Exit number panel support and other connection hardware required to fasten exit number panel to parent sign shall be subsidiary to the sign blank.



ALUMINUM T SECTION



12" EXTRUSION



6" EXTRUSION

ALUMINUM SIGN PANEL EXTRUSION DETAILS

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

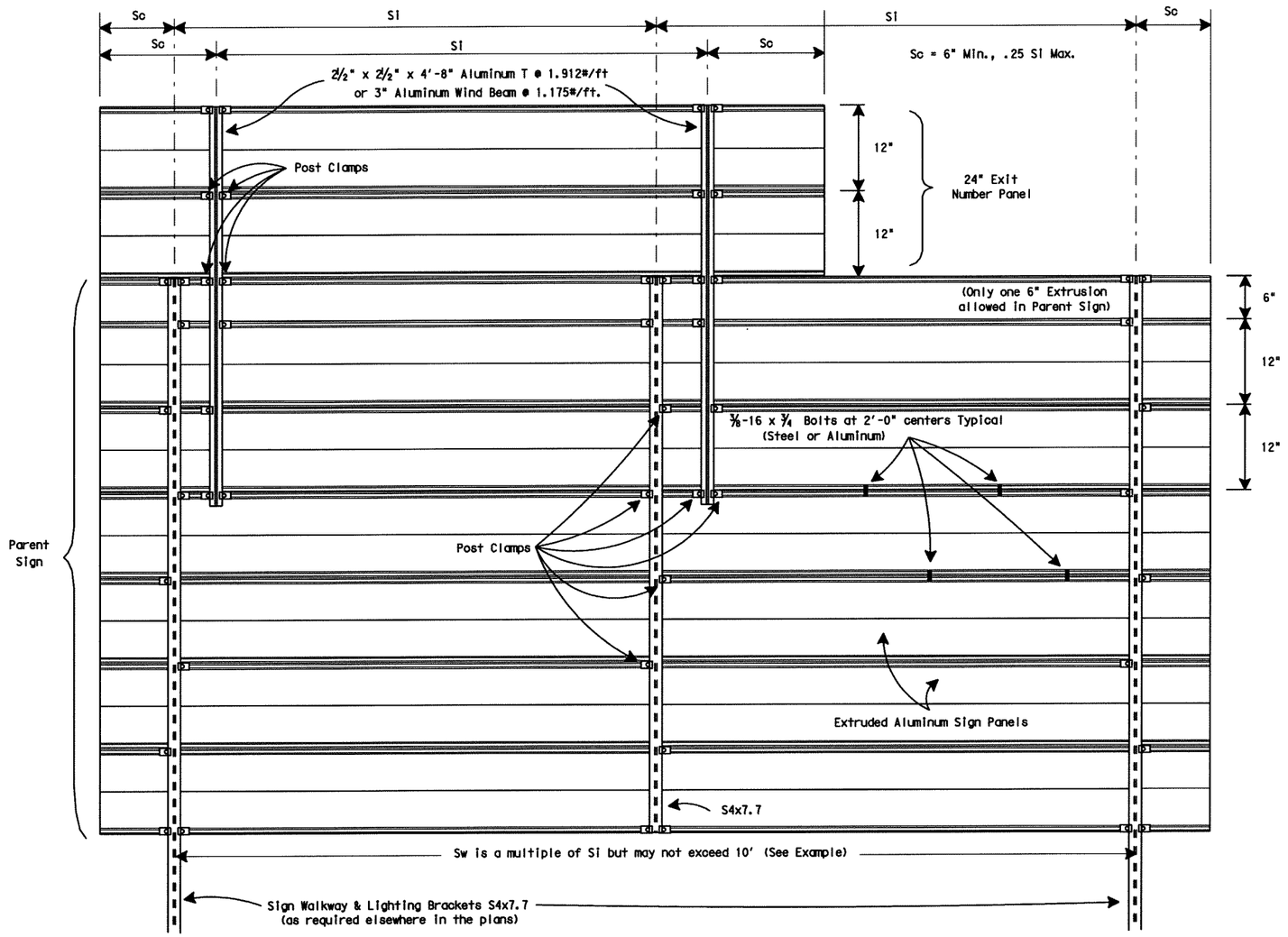
SIGN MOUNTING DETAILS- LARGE ROADSIDE SIGNS, EXTRUDED ALUMINUM

SMD(2-4)-95

©TxDOT August 1995	DN: LR	CK: -	DW: DN	CK: -	REC NO.:
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
	DAL	6	(SEE TITLE SHEET)		737
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0451	01	032	SH205

27D

DN: LR CK: CW DW: DN CK: MT
DATE:
ACC: d58np1c/usr/d580504
FILE:
LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63



REAR VIEW

EXAMPLES (FOR DETERMINING Sl and Sw)

NO.	ZONE	"d"	EXIT PANEL	WALKWAY	Sl	Sw	COMMENT
1	1	15.0	YES	YES	4.5	9.0	Sw=2x(Sl)
2	2	14.0	YES	NO	7.5	7.5	Sw = Sl
3	1	15.0	NO	NO	8.5	8.5	Sw = Sl
4	3	14.0	NO	YES	10.0	10.0	Sw = Sl

Values shown for Sl are maximum values. Sl may be varied for different sign lengths and Truss mounting conditions. Sw should not exceed two times Sl(Max.) or 10 feet.

MAXIMUM SIGN SUPPORT SPACING "Sl" (FEET)

"d" Deepest Sign in Group (Ft.)	EXTRUDED ALUMINUM SIGN PANELS															
	WITH EXIT NUMBER PANELS								WITHOUT EXIT NUMBER PANELS							
	WITH WALKWAYS				WITHOUT WALKWAYS				WITH WALKWAYS				WITHOUT WALKWAYS			
	WIND ZONE				WIND ZONE				WIND ZONE				WIND ZONE			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
15	4.5	7	8	10	5	7	8	10	7	8	9	10	8.5	10	10	10
14	6	7.5	9.5	10	6	7.5	9.5	10	8	9	10	10	10	10	10	10
13	7.5	9	10	10	7.5	9	10	10	9	10	10	10	10	10	10	10
12	8.5	10	10	10	8.5	10	10	10	10	10	10	10	10	10	10	10
11 or less	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

LEVELS as PLANED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

DATE:
ACC: d58nplc/usr/d5800504
FILE:

DN: LR
CK: GW
DW: DN
CK: MT

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

SIGN MOUNTING DETAILS-OVERHEAD SIGNS EXTRUDED ALUMINUM

SMD(2-5)-95

©TxDOT December 1995

DN: LR	CK: -	DW: DN	CK: -	MSG NO.:

REVISIONS

STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
DAL	6	(SEE TITLE SHEET)	738

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

27E

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ACC:

LEVELS DISPLAYED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

SIGN SUPPORT DESCRIPTIVE CODES

(Descriptive Codes correspond to project estimate and quantities sheets)

SM RD SGN ASSM TY XXXXX(X)XX(X-XXXX)

Post Type

FRP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))
TWT = Thin-Walled Tubing (see SMD(TWT))
10BWG = 10 BWG Tubing (see SMD(SLIP-1) to SMD(SLIP-3))
S80 = Schedule 80 Pipe (see SMD(SLIP-1) to SMD(SLIP-3))

Number of Posts (1 or 2)

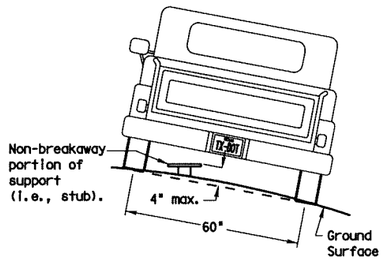
Anchor Type

UA = Universal Anchor - Concreted (see SMD(FRP) and SMD(TWT))
UB = Universal Anchor - Bolted down (see SMD(FRP) and SMD(TWT))
WA = Wedge Anchor - (see SMD(TWT))
SA = Slipbase - Concreted (see SMD(SLIP-1) to SMD(SLIP-3))
SB = Slipbase - Bolted Down (see SMD(SLIP-1) to SMD(SLIP-3))

Sign Mounting Designation

P = Prefab. "Plain" (see SMD(SLIP-1) to (3), SMD(TWT), SMD(FRP))
T = Prefab. "T" (see SMD(SLIP-1) to (3), SMD(TWT))
U = Prefab. "U" (see SMD(SLIP-1) to (3))
IF REQUIRED
1EXT or 2EXT = Number of Extensions (see SMD(SLIP-1) to (3), SMD(TWT))
BM = Extruded Wind Beam (see SMD(SLIP-1) to (3))
WC = 1.12 #/ft Wing Channel (see SMD(SLIP-1) to (3))
EXAL = Extruded Aluminum sign panels (see SMD(SLIP-3))

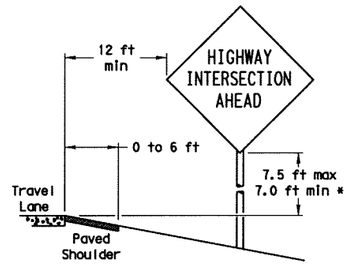
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



To avoid vehicle underoarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel paths).

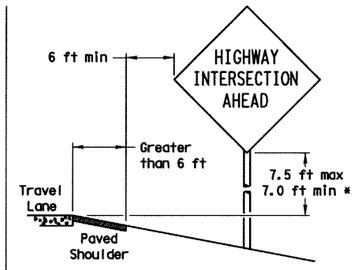
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

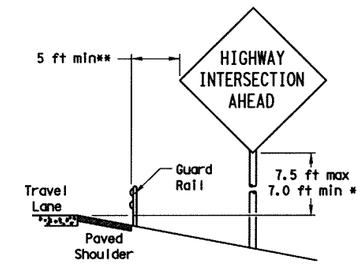
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



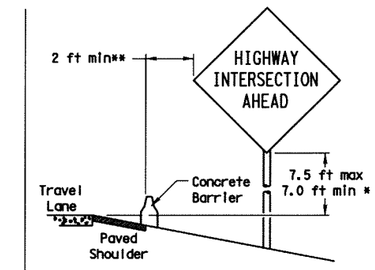
GREATER THAN 6 FT. WIDE

When the shoulder is greater than 6 ft in width, the sign must be placed at least 6 ft. from the edge of the shoulder.

BEHIND BARRIER



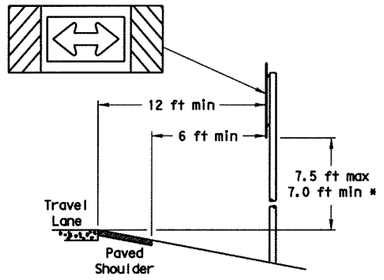
BEHIND GUARDRAIL



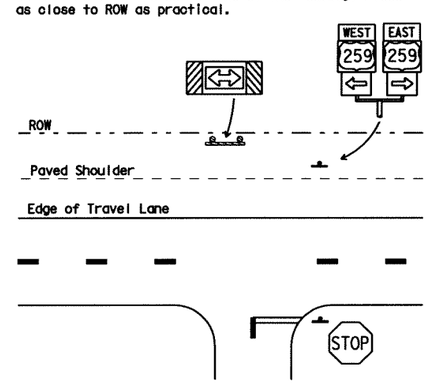
BEHIND CONCRETE BARRIER

**Sign clearance based on distance required for proper guard rail or concrete barrier performance.

T-INTERSECTION



When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



* Signs shall be mounted using the following condition that results in the greatest sign elevation:

(1) a minimum of 7 to a maximum of 7.5 feet above the edge of the travel lane or

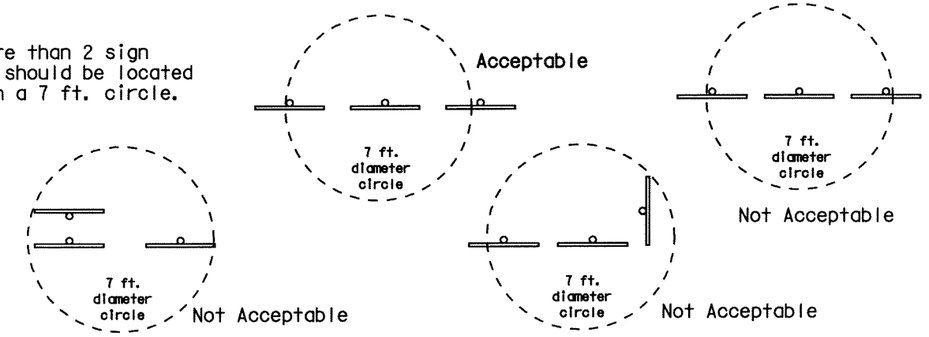
(2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

The maximum values may be increased when directed by the Engineer.

See the Traffic Operations Division website for detailed drawings of sign clamps, Texas Universal Triangular Slipbase System components and Wedge Anchor System components.

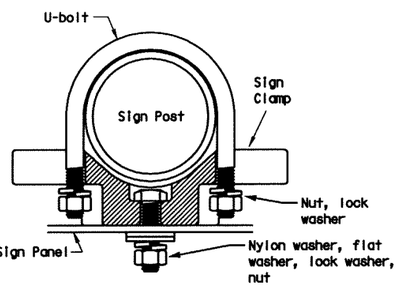
The website address is:
ftp://ftp.dot.state.tx.us/pub/txdot-info/amd/oserve/standard/traffic/slip.pdf

No more than 2 sign posts should be located within a 7 ft. circle.



TYPICAL SIGN ATTACHMENT DETAIL

Single Signs

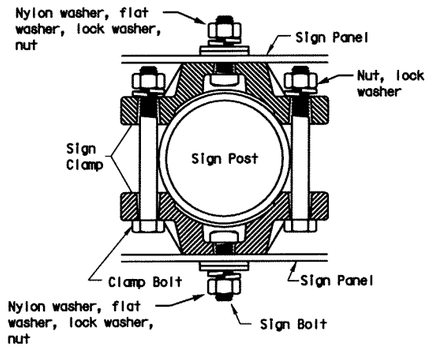


Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum and 1 3/4 inch for plywood signs.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

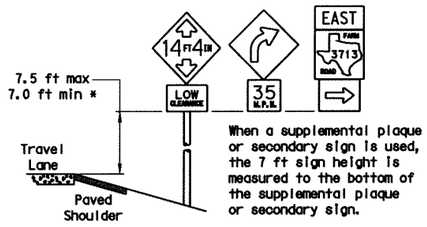
Sign clamps may be either the specific size clamp or the universal clamp.

Back-to-Back Signs



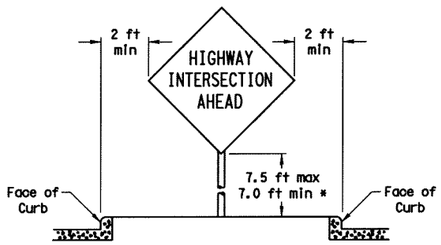
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



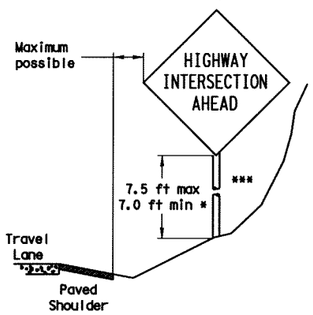
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

MEDIANS



RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

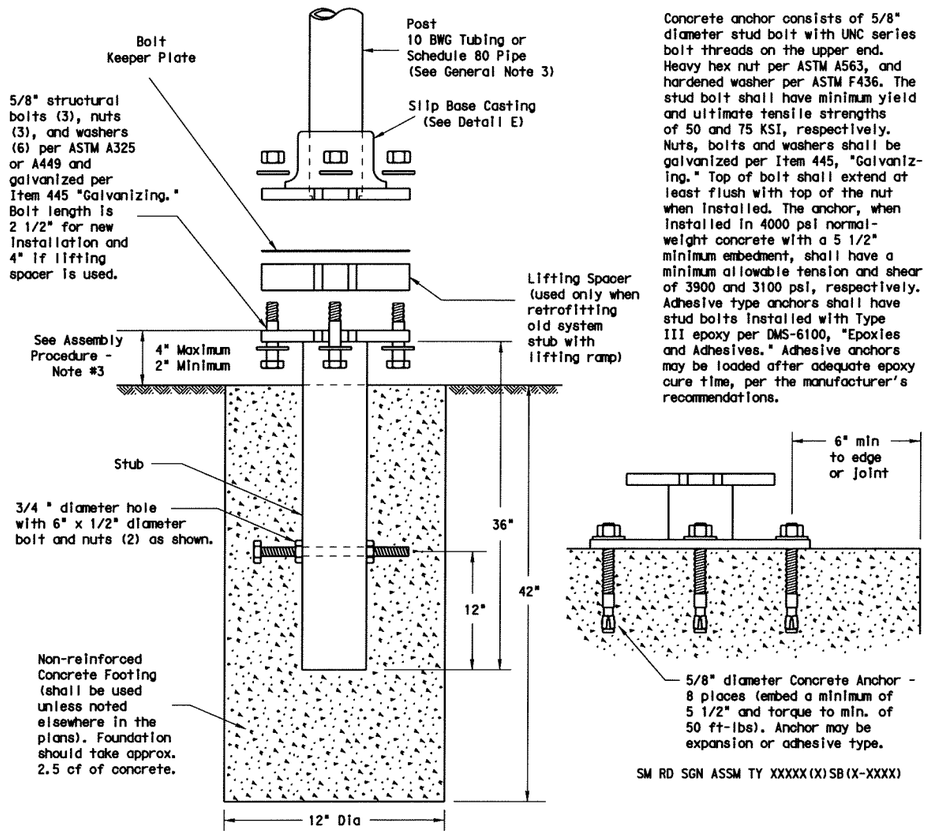
SMD(GEN)-02

©TxDOT July 2002		DN: BAS	CK: GRB	DW: FDN	CK: CAL
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
	DAL	6	(SEE TITLE SHEET)		739
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0451	01	032	SH205

26A

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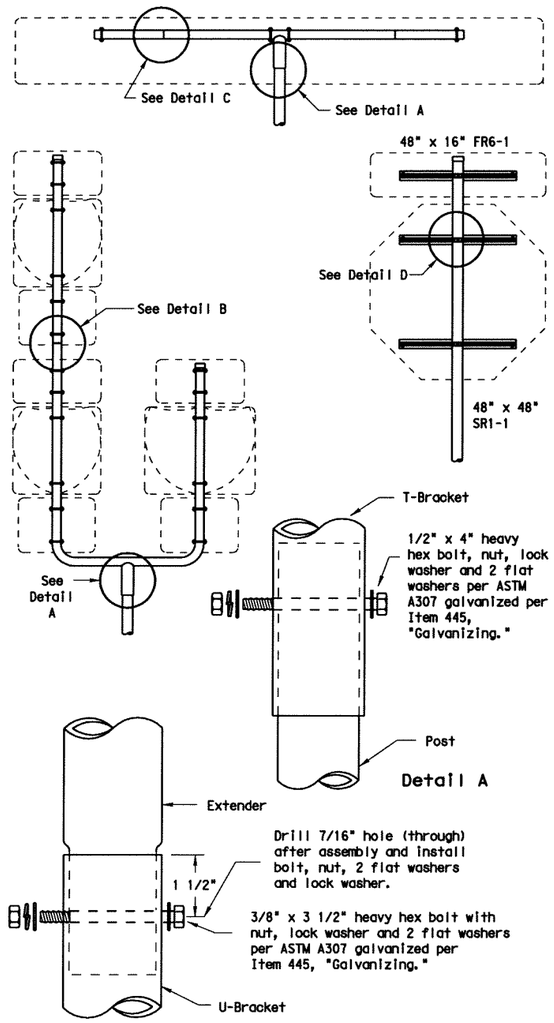
Dallas District Triangular Slipbase System



SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time, per the manufacturer's recommendations.

SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)



Detail B

GENERAL NOTES:

1. Finished components, except posts (10 BWG Tubing and Schedule 80 Pipe) and clamps, shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
2. Except for posts (10 BWG Tubing and Schedule 80 Pipe), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the TxDOT Traffic Standards Engineer, or the Traffic Operations Division website. The website address is: http://www.dot.state.tx.us/insdtdot/orgchart/trf/trfeng/
3. Material used as post with this system shall conform to the following specifications:
   10 BWG Tubing (2.875" outside diameter)
   - 0.134" nominal wall thickness
   - Seamless or electric-resistance welded steel tubing or pipe
   - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   - Other steels may be used if they meet the following:
     - 55,000 PSI minimum yield strength
     - 70,000 PSI minimum tensile strength
     - 20% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
   - Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
   - Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.

   Schedule 80 Pipe (2.875" outside diameter)
   - 0.276" nominal wall thickness
   - Steel tubing per ASTM A500 Gr C
   - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
     - 46,000 PSI minimum yield strength
     - 62,000 PSI minimum tensile strength
     - 21% minimum elongation in 2"
   - Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
   - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
   - Galvanization per ASTM A123
4. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: ftp://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/standard/traffic/slip.pdf
5. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

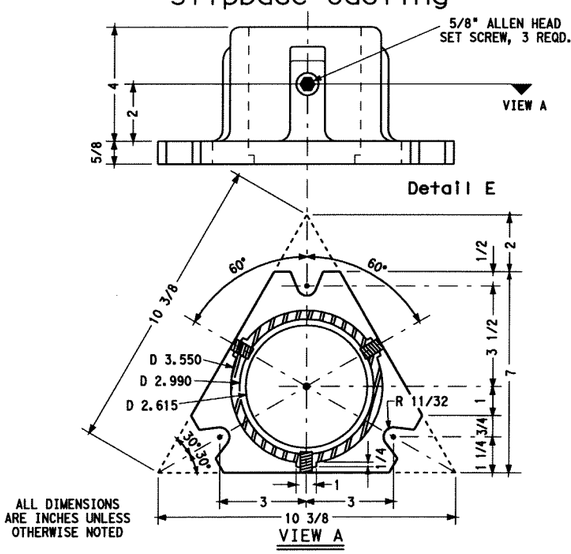
Foundation

1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. Thoroughly wet and mix concrete in a container. Place concrete into hole until it is approximately flush with the ground.
3. Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground. The upper value assures that an impacting vehicle should not snag on the footing. The lower value provides clearance for assembly.
4. Plumb the stub by using a torpedo level on the slip plate. Allow concrete adequate time to set.

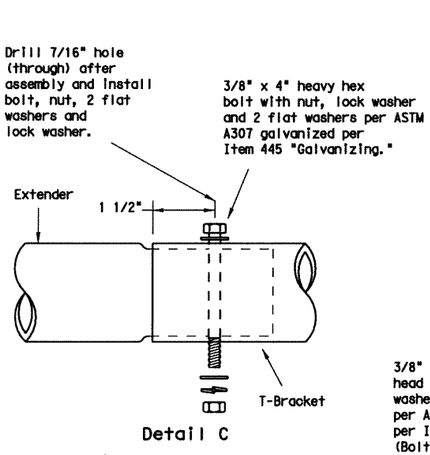
Support

1. Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be plumb and straight.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.
3. Slide the slipbase casting onto the lower end of the sign support.
4. Drive a chisel or a flat-blade screwdriver into the cut on the locking collar to slightly pry the collar open. Slide the collar onto the end of the pipe so the edge of the pipe is between the face of the locking collar and the end of the edge bevel. A dead-blow hammer may be useful in positioning the collar correctly. Remove the tool used to pry the collar open. Torque the allen bolt to 60 foot-pounds (720 inch-pounds). DO NOT OVERTIGHTEN.
5. Place and align bolt keeper plate on slip plate and lift assembled sign and support into position.
6. Place one washer on each bolt and insert them through keeper plate and the notches on the slip plate and casting. After inserting each bolt, place one washer and a nut on the bolt and hand-tighten all three.
7. The breakaway features of this system will work when all three bolts are tightened between 40 to 80 foot-pounds (480 to 960 inch-pounds). The Engineer shall determine the appropriate bolt torque for each project. Tighten all bolts by working around the support in approximately 10 foot-pound increments to assure a balanced tension in the bolts. All three bolts shall be torqued the same. DO NOT OVERTIGHTEN.

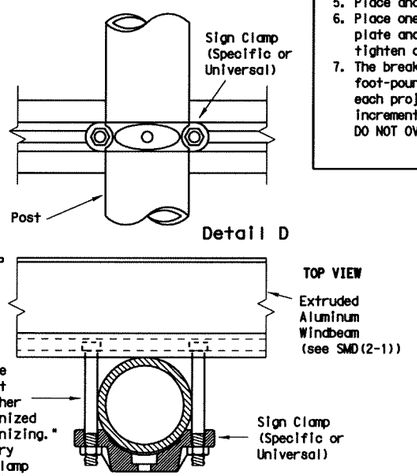
Slipbase Casting



ALL DIMENSIONS ARE INCHES UNLESS OTHERWISE NOTED



Splices shall only be allowed behind the sign substrate.



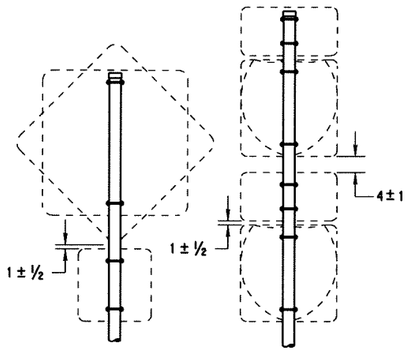
MODIFICATIONS

MODIFIED SLIP BASE CASTING FROM SINGLE ROLL PIN TO MULTIPLE SET SCREWS TO PREVENT SIGN ROTATION.

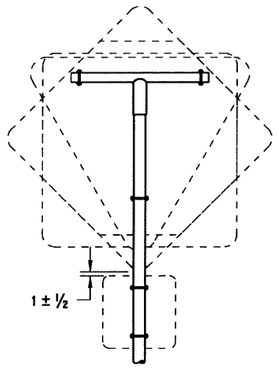
LEVELS DISPLAYED
ACC:

| | | |

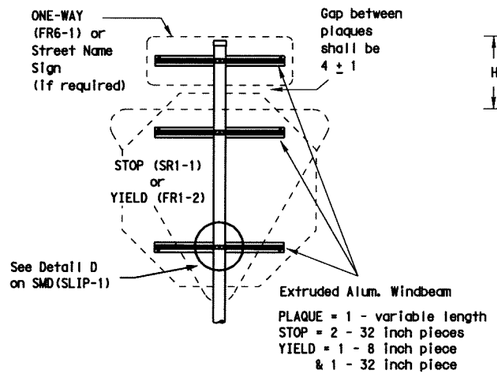
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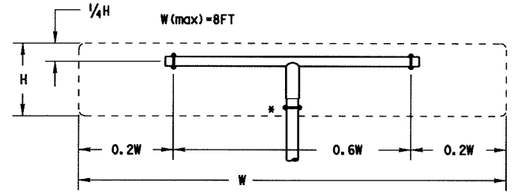
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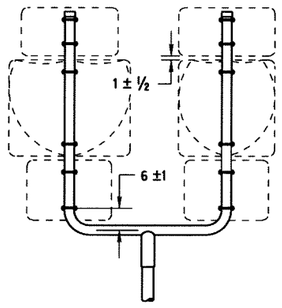
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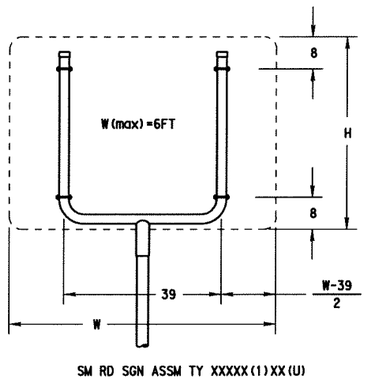
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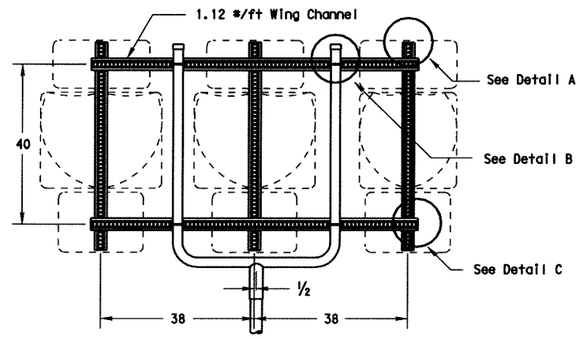
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(* - See Note 13)



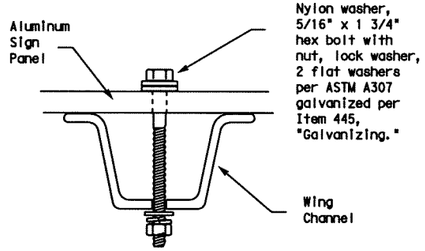
SM RD SGN ASSM TY XXXXX(1)XX(U)



SM RD SGN ASSM TY XXXXX(1)XX(U)

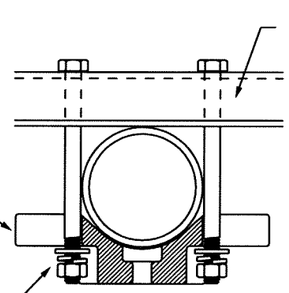


SM RD SGN ASSM TY XXXXX(1)XX(U-WC)
(See Note 12)



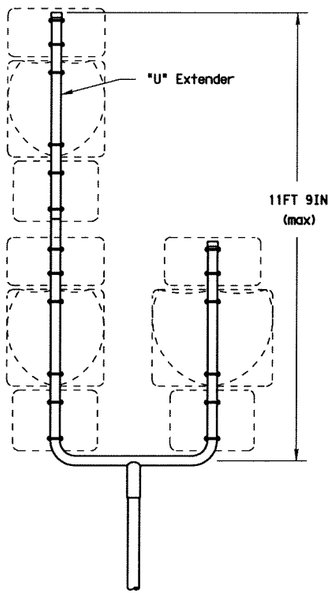
Top View

Detail A

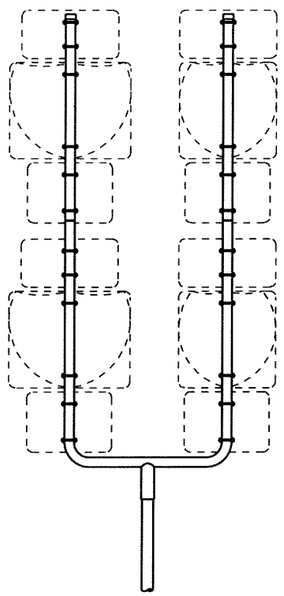


Top View

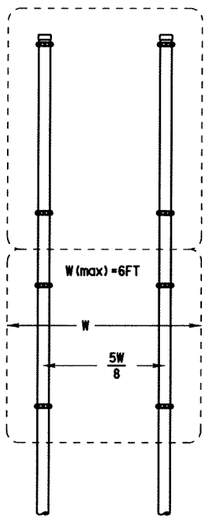
Detail B



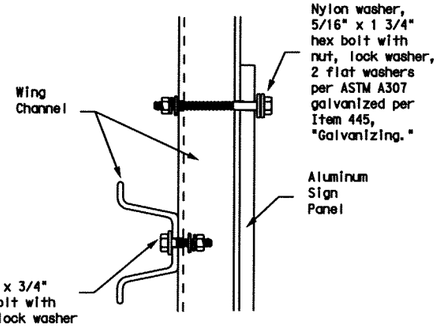
SM RD SGN ASSM TY S80(1)XX(U-1EXT)



SM RD SGN ASSM TY S80(1)XX(U-2EXT)



SM RD SGN ASSYM TY XXXXX(2)XX(P)



Side View

Detail C

GENERAL NOTES:

1.

SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Plywood signs shall conform to Departmental Material Specification DMS-7100 and shall be 5/8 inches thick.
6. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
7. For horizontal rectangular signs, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
8. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
9. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
10. Excess pipe, winged channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
11. The Engineer may allow the use of an expanded foam foundation. A list of approved suppliers of expanding foam may be obtained from the Traffic Operations Division (TRF) or from the TRF website. The website address is: http://www.dot.state.tx.us/insdtdot/orgchart/trf/trfeng/
12. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
13. Additional sign clamp required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.

REQUIRED SUPPORT

	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (SR1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (FR1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (FR6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (SS1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (SS2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 1.0 1.1 1.2 2.1 2.2 3.1 4.1 6.1 6
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-2)-02

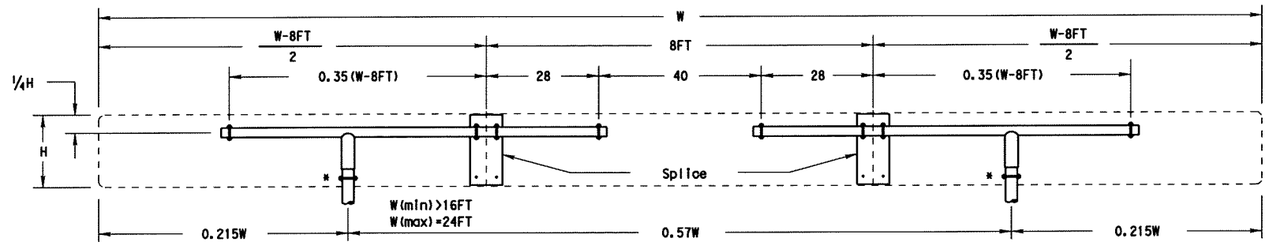
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DN: BAS	CK: GRB	DW: FDN	CK: CAL

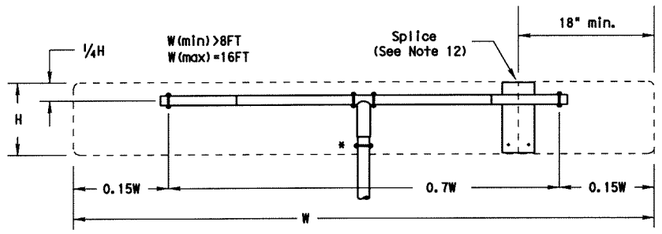
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
	DAL	6	(SEE TITLE SHEET)	741

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

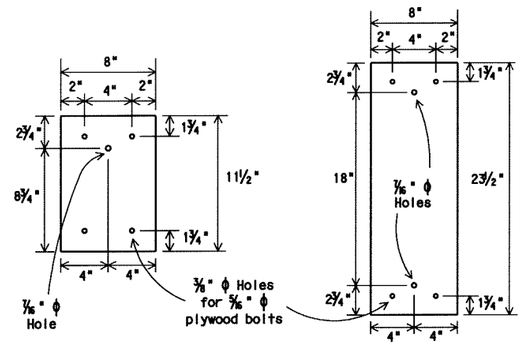
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SM RD SGN ASSM TY XXXXX(2)XX(T-2EXT)
(* - See Note 13)

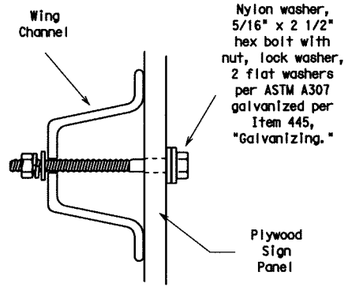


SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)
(* - See Note 13)

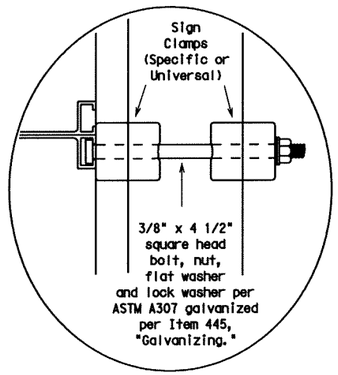


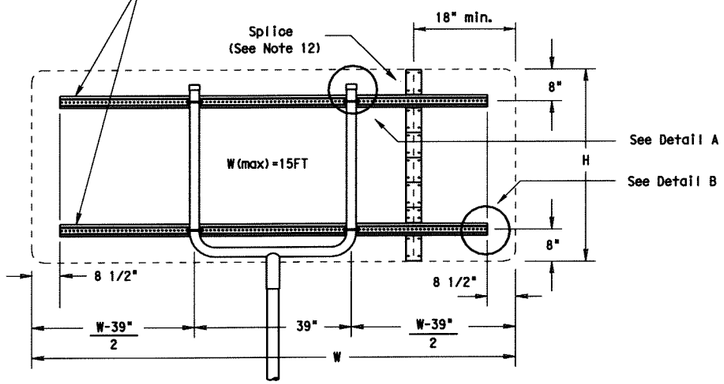
Splice Plates

Splice plates shall be 1/8 " steel plate (ASTM A36) or 1/8 " aluminum plate (ASTM B209 ALLOY 6061-T6 or 5052-H38). Steel shall be galvanized in accordance with ASTM A123.

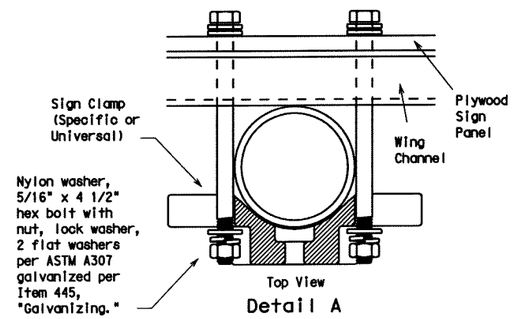


Side View
Detail B

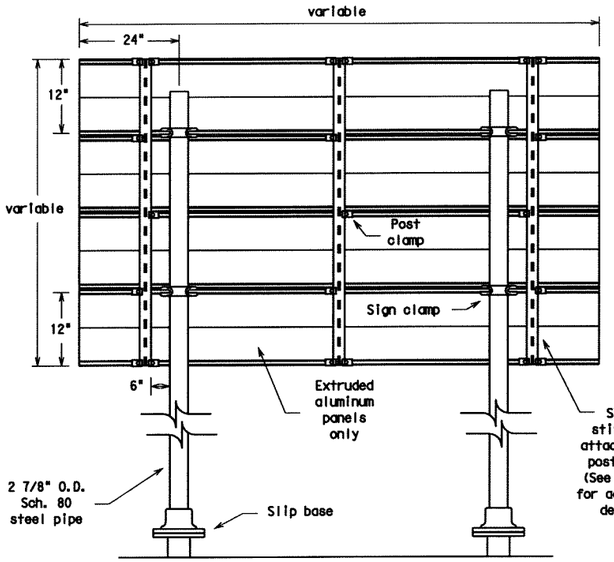




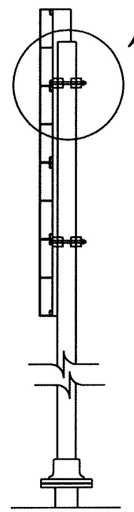
SM RD SGN ASSM TY XXXXX(1)XX(U-XX)



Detail A



Typical Extruded Aluminum Sign Mount
SM RD SGN ASSM TY S80(2)XX(P-EXAL)



GENERAL NOTES:

SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

1. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
2. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
3. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
4. Plywood signs shall conform to Departmental Material Specification DMS-7100 and shall be 5/8 inches thick.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, winged channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. The Engineer may allow the use of an expanded foam foundation. A list of approved suppliers of expanding foam may be obtained from the Traffic Operations Division (TRF) or from the TRF website. The website address is: http://www.dot.state.tx.us/insdtdot/orgchart/trf/trfeng/
11. Sign blanks shall be the sizes and shapes shown on the plans. Unless otherwise shown, no panel on multi-panel plywood signs shall have a dimension less than 18 inches. Plywood signs 4 feet by 8 feet or smaller in either dimension shall be of one piece construction.
12. Additional sign clamp required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.

REQUIRED SUPPORT

	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (SR1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (FR1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (FR6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (SS1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (SS2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64

ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-3)-02

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DN: BAS	CK: GRB	DW: FDN	CK: CAL

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
	DAL	6	(SEE TITLE SHEET)	742

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

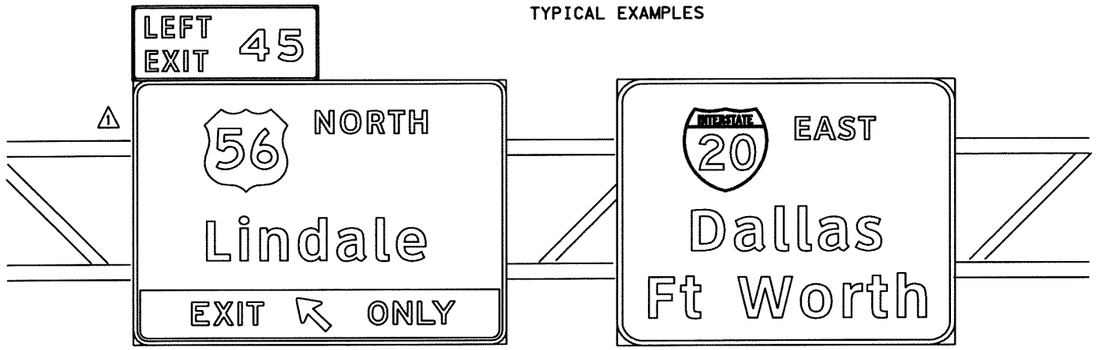
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LEVELS DISPLAYED

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	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

REQUIREMENTS FOR OVERHEAD GUIDE SIGNS

TYPICAL EXAMPLES



DEPARTMENT MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
VINYL NON-REFLECTIVE DECAL SHEETING	DMS-8320

OVERHEAD GUIDE SIGNS AND EXIT NUMBER PANELS

USAGE	COLOR	SIGN SHEETING
BACKGROUND	ALL	TYPE D (NON-FLUORESCENT PRISMATIC) (Type VIII or Type IX only)
LEGEND & BORDERS	WHITE	TYPE D (NON-FLUORESCENT PRISMATIC) (Type VIII or Type IX only)
LEGEND & BORDERS	BLACK	VINYL NON-REFLECTIVE DECAL SHEETING

GENERAL NOTES:

1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Black legends shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
   White legends shall use the Clearview Alphabet.
   The following Clearview fonts shall be used to replace the existing FHWA lettering, when not specified in the SHSD or in the plans.

B	CV-1W
C	CV-2W
D	CV-3W
E	CV-4W
Emod	CV-5WR
F	CV-6W

3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. Black legend shall be applied by screening process or cut-out vinyl non-reflective decal sheeting to background sheeting, or combination thereof.
5. White legends shall be applied by screening process with transparent colored ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof.
6. Dimensions shown for borders and corner radii on parent sign are nominal. Borders may vary in width as much as 1/2 inch. Corner radii above 3 inches may vary in radius as much as 1 inch. Borders and corner radii must be of matching widths. The sign area outside the corner radius need not be trimmed or rounded.
7. Sign substrate shall be any material that meets the Department Material Specification requirements for permanent sign substrates. Exit Number Panels attached above the parent sign shall be made with the same substrate and sheeting as the parent sign.
8. Requirements for attachments are found on Standard Plan Sheet TSR(2).
9. Mounting details for overhead sign shall be as detailed elsewhere in the plans or the supplier's choice, subject to approval by the engineer.
10. Background sheeting shall be applied to the extruded aluminum panels per sheeting manufacturer's recommendations. Sheeting shall overlap each extrusion's horizontal edge and will not be allowed to bridge the horizontal gap between extrusions.

REQUIREMENTS FOR LARGE GROUND-MOUNTED GUIDE SIGNS

TYPICAL EXAMPLES



DEPARTMENT MATERIAL SPECIFICATIONS	
PLYWOOD SIGN BLANKS	DMS-7100
ALUMINUM SIGN BLANKS	DMS-7110
FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
VINYL NON-REFLECTIVE DECAL SHEETING	DMS-8320

LARGE GROUND-MOUNTED SIGNS AND EXIT NUMBER PANELS

USAGE	COLOR	SIGN SHEETING
BACKGROUND	ALL	TYPE C (HIGH SPECIFIC INTENSITY)
LEGEND & BORDERS	WHITE	TYPE D (NON-FLUORESCENT PRISMATIC) (Type VIII or Type IX only)
LEGEND & BORDERS	BLACK	VINYL NON-REFLECTIVE DECAL SHEETING

GENERAL NOTES:

1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Black legends shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
   White legends shall use the Clearview Alphabet.
   The following Clearview fonts shall be used to replace the existing FHWA lettering, when not specified in the SHSD or in the plans.

B	CV-1W
C	CV-2W
D	CV-3W
E	CV-4W
Emod	CV-5WR
F	CV-6W

3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. Black legend shall be applied by screening process or cut-out vinyl non-reflective decal sheeting to background sheeting, or combination thereof.
5. White legends shall be applied by screening process or cut-out white sheeting applied to green background sheeting.
6. Dimensions shown for borders and corner radii on parent sign are nominal. Borders may vary in width as much as 1/2 inch. Corner radii above 3 inches may vary in radius as much as 1 inch. Borders and corner radii must be of matching widths. The sign area outside the corner radius need not be trimmed or rounded.
7. Sign substrate shall be any material that meets the Department Material Specification requirements for permanent sign substrates. Exit Number Panels attached above the parent sign shall be made with the same substrate and sheeting as the parent sign.
8. Requirements for attachments are found on Standard Plan Sheet TSR(2).
9. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.
10. Background sheeting shall be applied to the extruded aluminum panels per sheeting manufacturer's recommendations. Sheeting shall overlap each extrusion's horizontal edge and will not be allowed to bridge the horizontal gap between extrusions.

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

ftp://ftp.dot.state.tx.us/pub/txdot-info/trf/shsd/Navigate.pdf

12/03 Revision

1 Modify location of shield.

2 Modify sign

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TYPICAL SIGN REQUIREMENTS

TSR(1)-03

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REVISIONS 12-03	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
	DAL	6	(SEE TITLE SHEET)	742A

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

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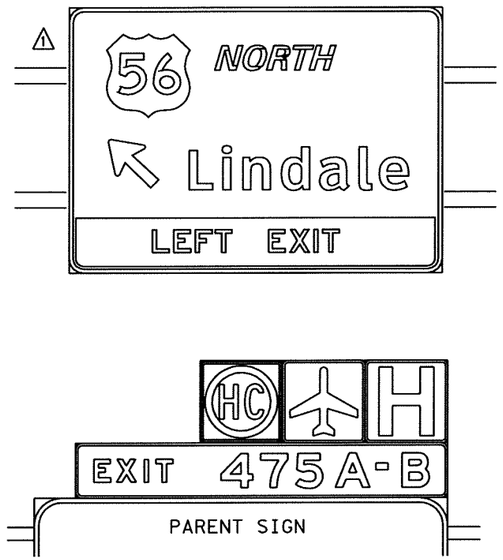
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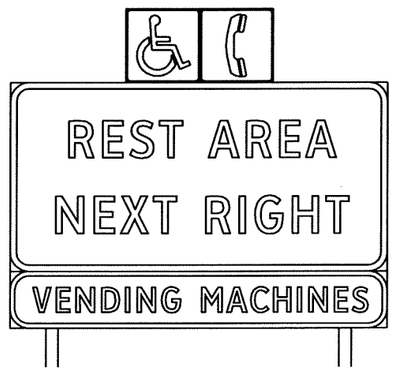
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ACC:

REQUIREMENTS FOR ATTACHMENTS TO GUIDE SIGNS

TYPICAL EXAMPLES





DEPARTMENT MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
VINYL NON-REFLECTIVE DECAL SHEETING	DMS-8320

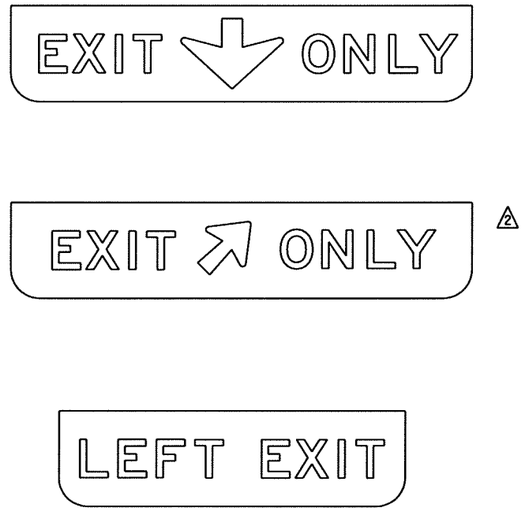
USAGE	COLOR	SIGN SHEETING
BACKGROUND	ALL	TYPE D (NON-FLUORESCENT PRISMATIC) (Type VIII or Type IX only)
LEGEND & BORDERS	WHITE	TYPE D (NON-FLUORESCENT PRISMATIC) (Type VIII or Type IX only)
LEGEND & BORDERS	BLACK	VINYL NON-REFLECTIVE DECAL SHEETING

GENERAL NOTES:

1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Route Marker legends (ie. IH, US, SH and FM shields) shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. Black legend shall be applied by screening process or cut-out vinyl non-reflective decal sheeting to white background sheeting, or combination thereof.
5. White legends shall be applied by screening process with transparent colored ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof.
6. Colored legends shall be applied by screening process with transparent colored ink, transparent colored overlay film or colored sheeting to white background sheeting, or combination thereof.
7. Attachments should be one piece sheet aluminum alloy (Type A). Route Markers and other attachments to the parent sign face shall be 0.063 inch thick. General Service Plaques shall be 0.080 inch thick and Routing Plaques shall be 0.100 inch thick. Direct applied attachments may be used when approved by the Engineer.
8. The priority for Routing Plaques shall be (left to right) Hazardous Cargo, Airport then Hospital. See examples for mounting location.
9. Mounting details of attachments to parent signs face are shown on Standard Plan Sheet TSR(6). Mounting details of attachments above and below parent sign are shown in the "SMD series" Standard Plan Sheets.

REQUIREMENTS FOR EXIT ONLY AND LEFT EXIT PANELS

TYPICAL EXAMPLES



DEPARTMENT MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
VINYL NON-REFLECTIVE DECAL SHEETING	DMS-8320

OVERHEAD EXIT PANELS

USAGE	COLOR	SIGN SHEETING
BACKGROUND	YELLOW	TYPE D (NON-FLUORESCENT PRISMATIC) (Type VIII or Type IX only)
LEGEND	BLACK	VINYL NON-REFLECTIVE DECAL SHEETING

GENERAL NOTES:

1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD). Individual panel sizes may be adjusted during plan preparation to fit actual parent sign sizes if necessary.
2. Exit Panel legends shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets E Series.
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. Black legend shall be applied by screening process or cut-out vinyl non-reflective decal sheeting to yellow background sheeting, or combination thereof.
5. Panels should be 0.063 inch thick sheet aluminum alloy (Type A). Direct applied attachment may be used when approved by the Engineer.
6. Mounting details for Exit Only Panels are shown on Standard Plan Sheet TSR(6).

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

ftp://ftp.dot.state.tx.us/pub/txdot-info/trf/shsd/Navigate.pdf

12/03 Revision

1 Modify location of shield.

2 Change to new standard

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TYPICAL SIGN REQUIREMENTS

TSR(2)-03

© TxDOT October 2003			DN: - BAS	CK: - GRB	DW: - FDN	CK: - CAL
REVISIONS 12-03	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT			SHEET
	DAL	6	(SEE TITLE SHEET)			742B
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0451	01	032	SH205

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LEVELS DISPLAYED

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63		

ACC:

REQUIREMENTS FOR E SERIES STANDARD GUIDE SIGNS

TYPICAL EXAMPLES





DEPARTMENT MATERIAL SPECIFICATIONS	
PLYWOOD SIGN BLANKS	DMS-7100
ALUMINUM SIGN BLANKS	DMS-7110
FLAT SURFACE REFLECTIVE SHEETING	DMS-8300

GROUND-MOUNTED SIGNS

USAGE	COLOR	SIGN SHEETING
BACKGROUND	ALL	TYPE C (HIGH SPECIFIC INTENSITY)
LEGEND & BORDERS	WHITE	TYPE D (NON-FLUORESCENT PRISMATIC) (Type VIII or Type IX only)

GENERAL NOTES:

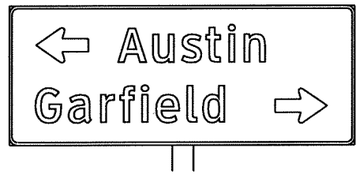
1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD). Individual panel sizes may be adjusted during plan preparation to fit actual parent sign sizes if necessary.
2. White legends shall use the Clearview Alphabet.
   The following Clearview fonts shall be used to replace the existing Federal Highway Administration (FHWA) Standard Highway Alphabets, when not specified in the SHSD, or in the plans.

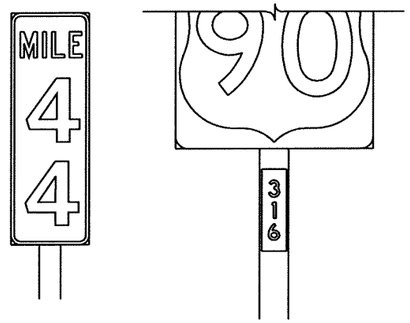
B	CV-1W
C	CV-2W
D	CV-3W
E	CV-4W
Emod	CV-5WR
F	CV-6W

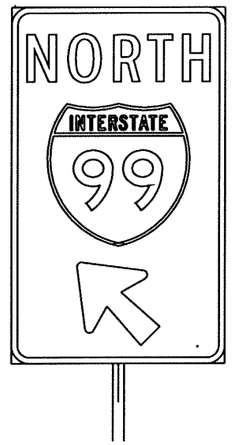
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. White legends shall be cut-out white sheeting applied to colored background sheeting.
5. Dimensions shown for borders and corner radii are nominal. Borders may vary in width as much as 1/2 inch. Corner radii above 3 inches may vary in radius as much as 1 inch. Borders and corner radii must be of matching widths. The sign area outside the corner radius need not be trimmed or rounded.
6. Sign substrate shall be any material that meets the Department Material Specification requirements for permanent sign substrates. Exit Number Panels attached above the parent sign shall be made with the same substrate and sheeting as the parent sign.
7. Requirements for attachments are found on Standard Plan Sheet TSR(2).
8. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.

REQUIREMENTS FOR GREEN D AND I SERIES GUIDE SIGNS ⚠

TYPICAL EXAMPLES







DEPARTMENT MATERIAL SPECIFICATIONS	
PLYWOOD SIGN BLANKS	DMS-7100
ALUMINUM SIGN BLANKS	DMS-7110

Square Ft.	Min. Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

FLAT SURFACE REFLECTIVE SHEETING	DMS-8300

GROUND-MOUNTED SIGNS

USAGE	COLOR	SIGN SHEETING
BACKGROUND	ALL	TYPE C (HIGH SPECIFIC INTENSITY)
LEGEND & BORDERS	WHITE	TYPE D (NON-FLUORESCENT PRISMATIC) (Type VIII or Type IX only)

GENERAL NOTES:

1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. White legends shall use the Clearview Alphabet.
   The following Clearview fonts shall be used to replace the existing Federal Highway Administration (FHWA) Standard Highway Alphabets, when not specified in the SHSD, or in the plans.

B	CV-1W
C	CV-2W
D	CV-3W
E	CV-4W
Emod	CV-5WR
F	CV-6W

3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. White legends shall be cut-out white sheeting applied to green background sheeting.
5. Dimensions shown for borders and corner radii are nominal. Borders may vary in width as much as 1/2 inch. Corner radii above 3 inches may vary in radius as much as 1 inch. Borders and corner radii must be of matching widths. The sign area outside the corner radius need not be trimmed or rounded.
6. Sign substrate shall be any material that meets the Department Material Specification requirements for permanent sign substrates.
7. Requirements for attachments are found on Standard Plan Sheet TSR(2).
8. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

ftp://ftp.dot.state.tx.us/pub/txdot-info/trf/shsd/Navigate.pdf

12/03 Revision

⚠ Added I Series to title

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TYPICAL SIGN REQUIREMENTS

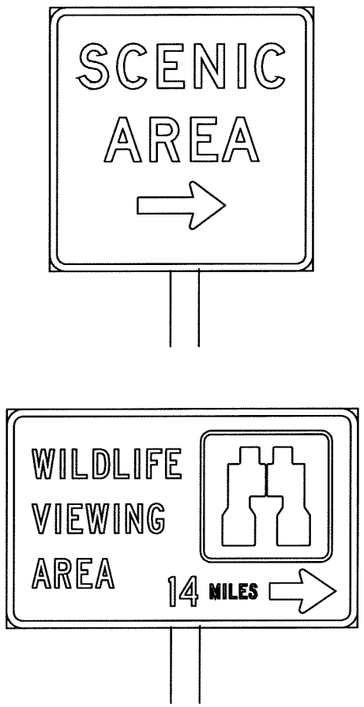
TSR(3)-03

©TxDOT October 2003		DN: BAS	CK: GRB	DW: FDN	CK: CAL
REVISIONS 12-03	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
	DAL	6	(SEE TITLE SHEET)		742C
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0451	01	032	SH205

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REQUIREMENTS FOR BLUE AND BROWN D SERIES GUIDE SIGNS

TYPICAL EXAMPLES



DEPARTMENT MATERIAL SPECIFICATIONS

PLYWOOD SIGN BLANKS	DMS-7100
ALUMINUM SIGN BLANKS	DMS-7110

Square Ft.	Min. Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

FLAT SURFACE REFLECTIVE SHEETING	DMS-8300

GROUND-MOUNTED SIGNS

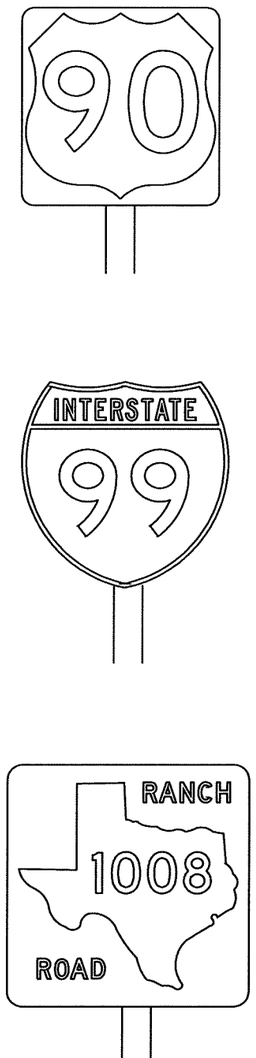
USAGE	COLOR	SIGN SHEETING
BACKGROUND	ALL	TYPE C (HIGH SPECIFIC INTENSITY)
LEGEND & BORDERS	WHITE	TYPE C (HIGH SPECIFIC INTENSITY)

GENERAL NOTES:

1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Blue and brown D-series signs shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. White legends shall be applied by screening process with transparent colored ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof.
5. Dimensions shown for borders and corner radii are nominal. Borders may vary in width as much as 1/2 inch. Corner radii above 3 inches may vary in radius as much as 1 inch. Borders and corner radii must be of matching widths. The sign area outside the corner radius need not be trimmed or rounded.
6. Sign substrate shall be any material that meets the Department Material Specification requirements for permanent sign substrates.
7. Requirements for attachments are found on Standard Plan Sheet TSR(2).
8. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.

REQUIREMENTS FOR INDEPENDENT MOUNTED ROUTE MARKERS

TYPICAL EXAMPLES



DEPARTMENT MATERIAL SPECIFICATIONS

PLYWOOD SIGN BLANKS	DMS-7100
ALUMINUM SIGN BLANKS	DMS-7110
FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
VINYL NON-REFLECTIVE DECAL SHEETING	DMS-8320

USAGE	COLOR	SIGN SHEETING
BACKGROUND	ALL	TYPE C (HIGH SPECIFIC INTENSITY)
LEGEND & BORDERS	WHITE	TYPE C (HIGH SPECIFIC INTENSITY)
LEGEND & BORDERS	BLACK	VINYL NON-REFLECTIVE DECAL SHEETING

GENERAL NOTES:

1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Route Marker legends (ie. IH, US, SH and FM shields) shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. Black legend shall be applied by screening process or cut-out vinyl non-reflective decal sheeting to white background sheeting, or combination thereof.
5. White legends shall be applied by screening process with transparent colored ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof.
6. Independent mounted Route Marker sign blanks, for 24 inch markers shall be 0.080 inch thick, 36 inch markers shall be 0.100 inch thick, one piece sheet aluminum alloy (Type A).
7. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

ftp://ftp.dot.state.tx.us/pub/txdot-info/trf/shsd/Navigate.pdf

LEVELS DISPLAYED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TYPICAL SIGN REQUIREMENTS

TSR(4)-03

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REVISIONS 12-03	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT			SHEET
	DAL	6	(SEE TITLE SHEET)			742D
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0451	01	032	SH205

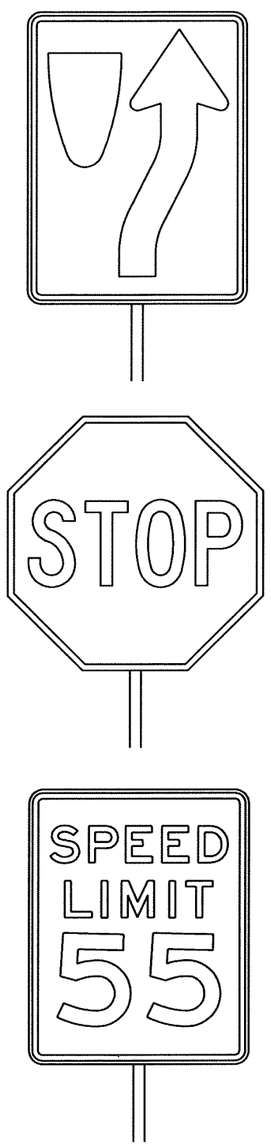
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LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

ACC:

REQUIREMENTS FOR REGULATORY SIGNS

TYPICAL EXAMPLES



DEPARTMENT MATERIAL SPECIFICATIONS

PLYWOOD SIGN BLANKS	DMS-7100
ALUMINUM SIGN BLANKS	DMS-7110

Square Ft.	Min. Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
VINYL NON-REFLECTIVE DECAL SHEETING	DMS-8320

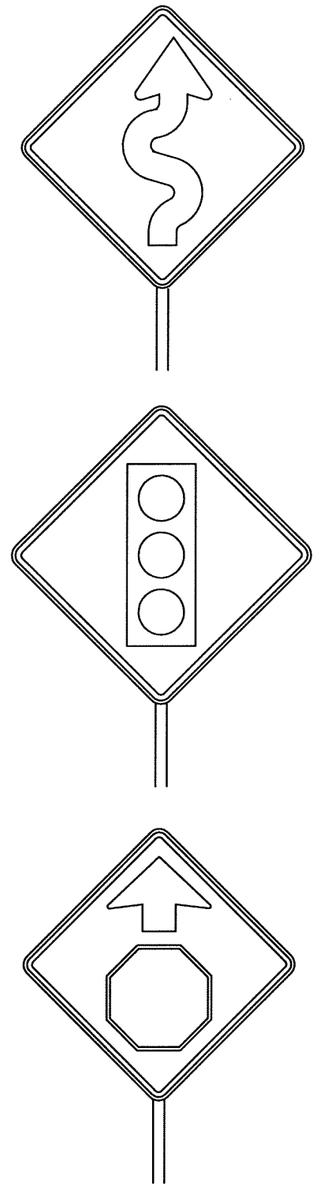
USAGE	COLOR	SIGN SHEETING
BACKGROUND	ALL	TYPE C (HIGH SPECIFIC INTENSITY)
LEGEND & BORDERS	WHITE	TYPE C (HIGH SPECIFIC INTENSITY)
LEGEND & BORDERS	BLACK	VINYL NON-REFLECTIVE DECAL SHEETING

GENERAL NOTES:

1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Regulatory sign legends shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. Black legend shall be applied by screening process or cut-out vinyl non-reflective decal sheeting to white background sheeting, or combination thereof.
5. White legends shall be applied by screening process with transparent colored ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof.
6. Colored legends shall be applied by screening process with transparent colored ink, transparent colored overlay film or colored sheeting to white background sheeting, or combination thereof.
7. Sign substrate shall be any material that meets the Department Material Specification requirements for permanent sign substrates.
8. Requirements for attachments are found on Standard Plan Sheet TSR(2).
9. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.

REQUIREMENTS FOR WARNING SIGNS

TYPICAL EXAMPLES



DEPARTMENT MATERIAL SPECIFICATIONS

ALUMINUM SIGN BLANKS	DMS-7110

Square Ft.	Min. Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
VINYL NON-REFLECTIVE DECAL SHEETING	DMS-8320

USAGE	COLOR	SIGN SHEETING
BACKGROUND	YELLOW	TYPE E (FLUORESCENT PRISMATIC)
LEGEND & BORDERS	BLACK	VINYL NON-REFLECTIVE DECAL SHEETING
LEGEND	ALL OTHER	TYPE D (NON-FLUORESCENT PRISMATIC) (Type VIII or Type IX only)

GENERAL NOTES:

1. Signs to be furnished, should be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Warning sign legends shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legends shall provide a balanced appearance when spacing is not shown.
4. Black legend shall be applied by screening process or cut-out vinyl non-reflective decal sheeting to background sheeting, or combination thereof.
5. Colored legends shall be applied by screening process with transparent colored ink, transparent colored overlay film or colored sheeting to white background sheeting, or combination thereof.
6. Requirements for attachments are found on Standard Plan Sheet TSR(2).
7. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

ftp://ftp.dot.state.tx.us/pub/txdot-info/trf/shsd/Navigate.pdf

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TYPICAL SIGN REQUIREMENTS

TSR(5)-03

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DN: BAS	CK: GRB	DW: FDN	CK: CAL

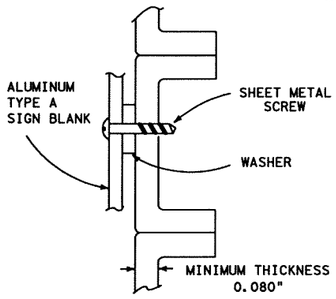
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
12-03	DAL	6	(SEE TITLE SHEET)	742E

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

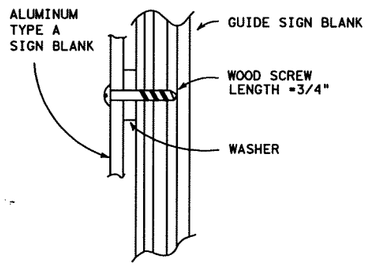
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TYPICAL ATTACHMENT OF ROUTE MARKERS AND "EXIT ONLY" PANELS TO GUIDE SIGNS

SCREW ATTACHMENT

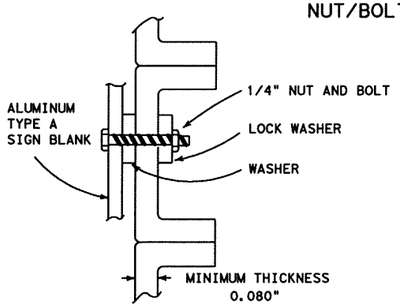


ALUMINUM GUIDE SIGNS
(EXTRUDED ALUMINUM PANELS)

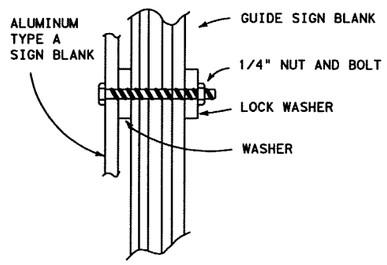


PLYWOOD GUIDE SIGN
(5/8" PLYWOOD)

NUT/BOLT ATTACHMENT

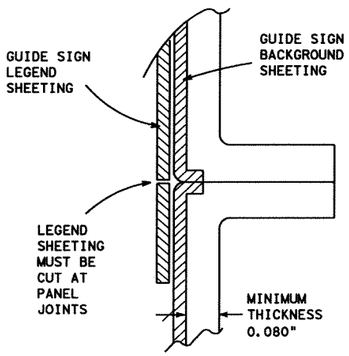


ALUMINUM GUIDE SIGNS
(EXTRUDED ALUMINUM PANELS)



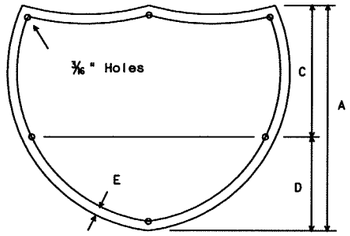
PLYWOOD GUIDE SIGN
(5/8" PLYWOOD)

DIRECT ATTACHMENT



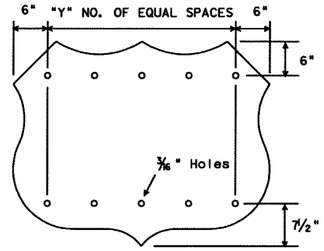
GUIDE SIGN LEGEND
(APPLIED DIRECTLY TO EXTRUDED ALUMINUM PANELS)

SIGN BLANK PUNCHING DETAILS FOR ROUTE MARKERS WHEN ATTACHED TO GUIDE SIGN



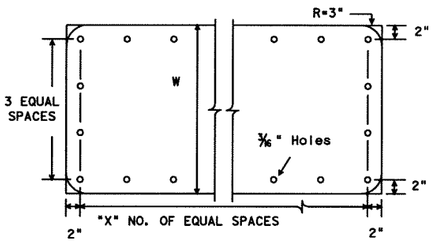
INTERSTATE ROUTE MARKERS

A	C	D	E
36	21	15	1 1/2
48	28	20	1 3/4



U.S. ROUTE MARKERS

Sign Size	"Y"
24x24	2
30x24	3
36x36	3
45x36	4
48x48	4
60x48	5

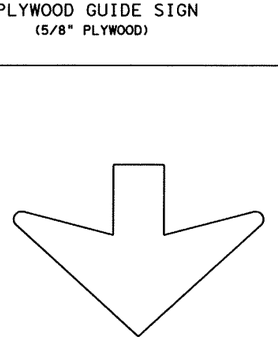


STATE ROUTE MARKERS

No. of Digits	W	X
4	24	4
4	36	5
4	48	6
3	24	3
3	36	4
3	48	5

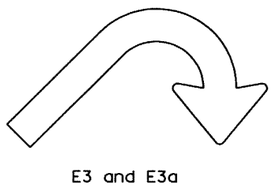
⚠1 ARROW DETAILS

for Large Ground-Mounted and Overhead Guide Signs

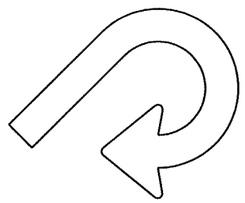


Type C
"Down" arrow

TYPE	LETTER SIZE
A-1	10.67" U/L and 10" Caps
A-2	13.33" U/L and 12" Caps
A-3	16" U/L
B-1	10.67" U/L and 10" Caps
B-2	13.33" U/L and 12" Caps
B-3	16" U/L



E3 and E3a



E4 and E4a

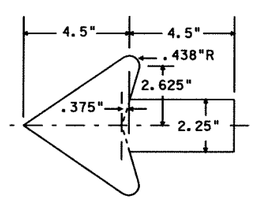
CODE	USED ON SIGN NO.
E-3 & E-4	E5-3 and E5-4
E-3a & E-4a	E5-3a and E5-4a

Arrow dimensions are shown in the "Standard Highway Sign Designs for Texas" manual.

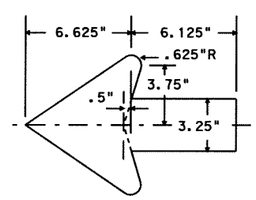
The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.
ftp://ftp.dot.state.tx.us/pub/txdot-info/trf/shsd/Navigate.pdf

ARROW DETAILS

for Distance and Destination Signs



Standard 2.25" arrow to be used with 6 inch letters.



Standard 3.25" arrow to be used with 8 inch letters.

12/03 Revision

⚠1 Modify details of arrows.

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TYPICAL SIGN REQUIREMENTS

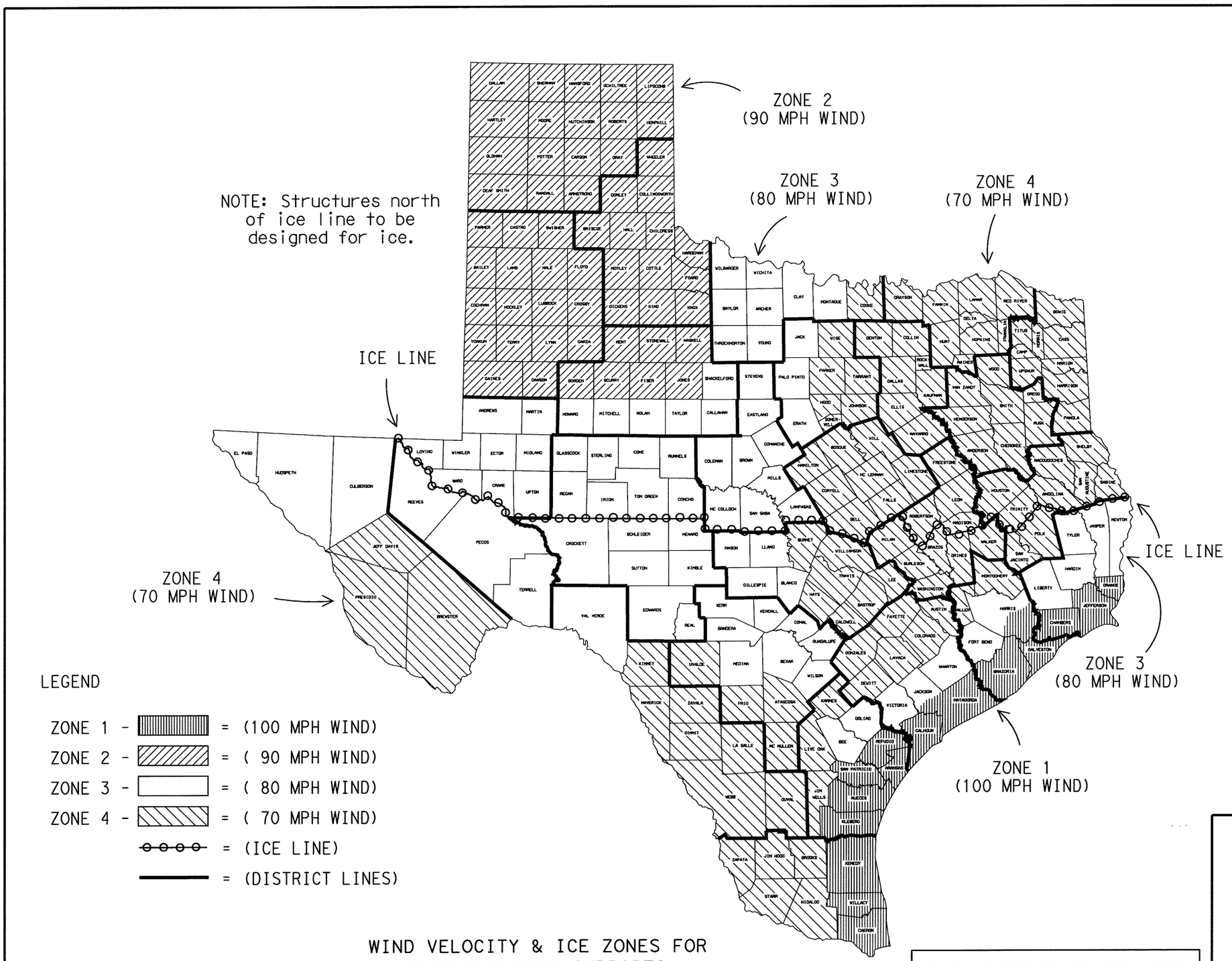
TSR(6)-03

© TxDOT October 2003	DN: - BAS	CK: - GRB	DW: - FDN	CK: - CAL

REVISIONS 12-03	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
	DAL	6	(SEE TITLE SHEET)	742F

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

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.



FOR HARRIS CO. ONLY
Zone line is just North of US 90, around on the North, West and South sides of IH 610 and down the West side of SH 288.

FOR JACKSON CO. ONLY
Zone line is just North of SH 616.

WIND VELOCITY & ICE ZONES FOR OVERHEAD SIGN SUPPORTS

Based on 50 Year Mean Recurrence Interval of Fastest Mile Wind Velocity at 33 feet height.

THIS SHEET TO BE INCLUDED IN ALL P.S.&E.'s WITH OVERHEAD SIGN SUPPORTS

LEVELS DISPLAYED
1 2 4 5 6 7 8 9 10 11 12 31 41 51 61
17 18 19 20 21 22 32 42 62 72 82 93 103 113 123
33 43 53 63 73 83 94 104 114 124 134 144 154 164 174 184
49 50 51 52 53 54 55 56 57 59 60 61 62 63
DATE:
ACC: d58hp1c/usr/d580504
FILE:
DN: LR
CK: CW
DW: DN
CK: MT

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

WIND VELOCITY AND ICE ZONES

WV & IZ-96

© TxDOT April 1996

DN: -	CK: -	DW: DN	CK: MT	MSG NO.:

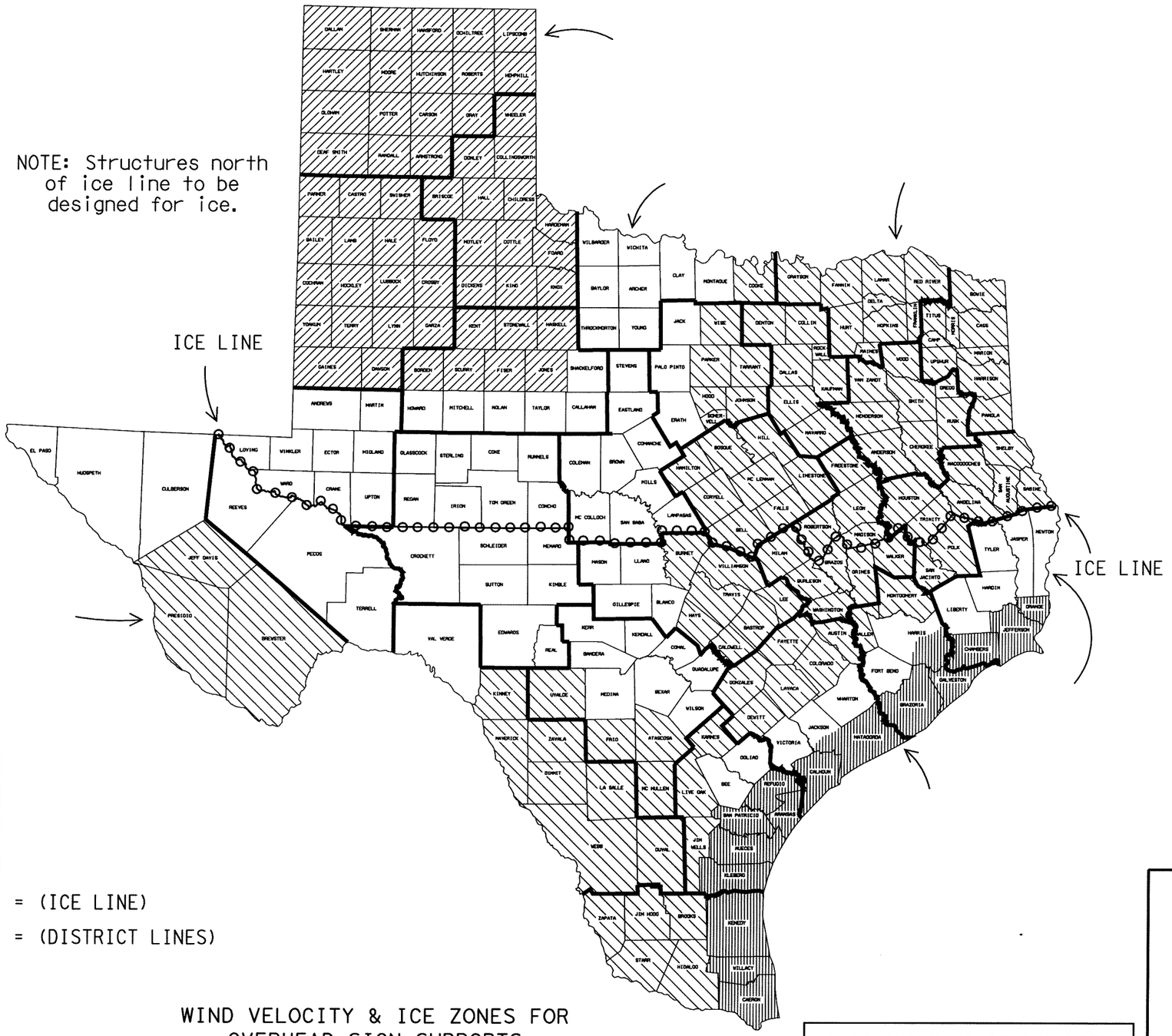
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
	DAL	6	(SEE TITLE SHEET)	742G

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

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.

NOTE: Structures north of ice line to be designed for ice.

ICE LINE



ICE LINE

FOR HARRIS CO. ONLY
Zone line is just North of US 90, around on the North, West and South sides of IH 610 and down the West side of SH 288.

FOR JACKSON CO. ONLY
Zone line is just North of SH 616.

LEGEND

= (ICE LINE)

= (DISTRICT LINES)

WIND VELOCITY & ICE ZONES FOR OVERHEAD SIGN SUPPORTS

Based on 50 Year Mean Recurrence Interval of

THIS SHEET TO BE INCLUDED IN ALL P.S.&E.'s WITH OVERHEAD SIGN SUPPORTS

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

WIND VELOCITY AND ICE ZONES

©TxDOT April 1996

DN: -	CK: -	DW: DN	CK: MT	MSG NO.:

REVISIONS

STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
DAL	6	(SEE TITLE SHEET)	742H

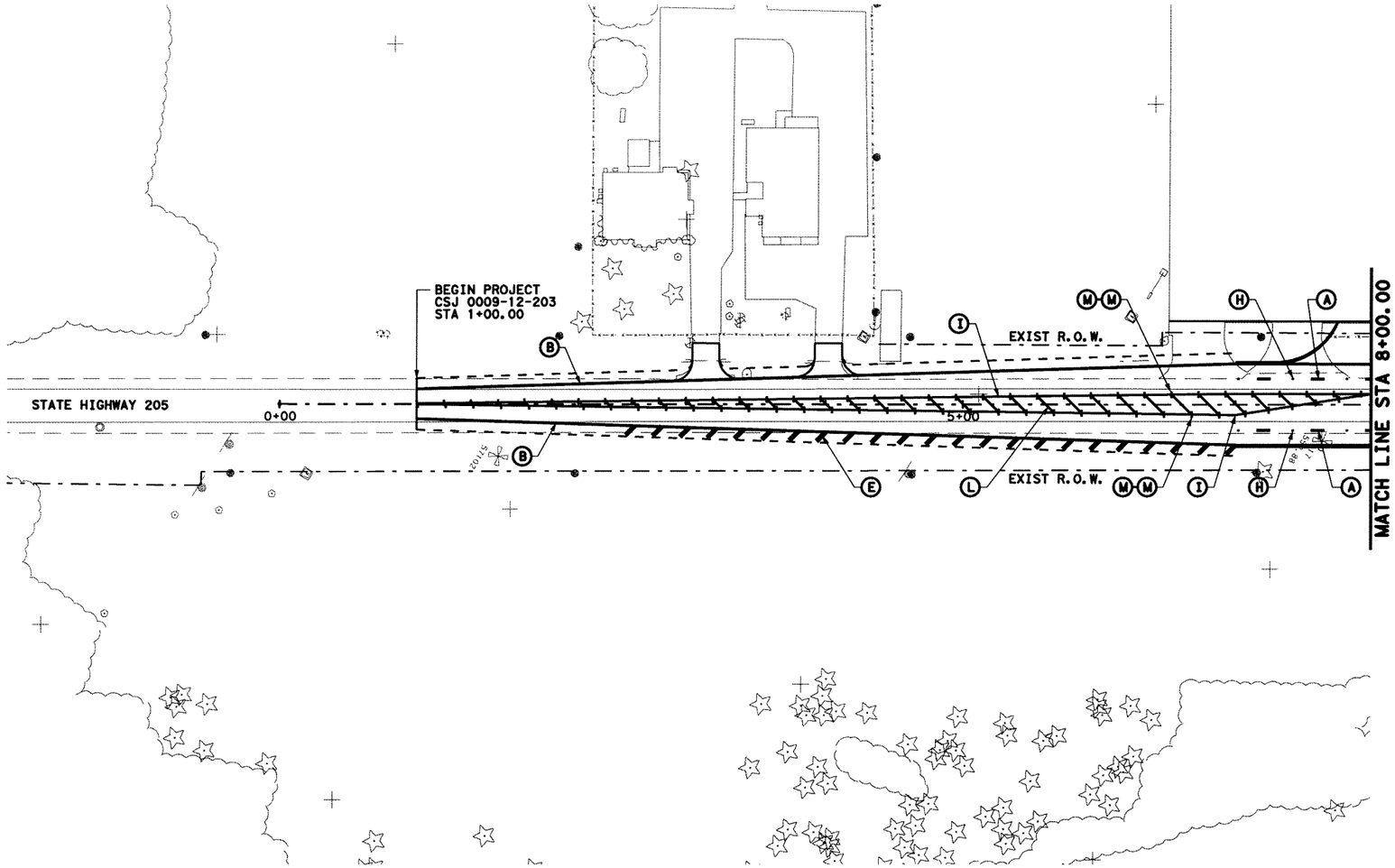
COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

30

LEVELS DISPLAYED
1 2 | 4 5 6 7 8 9 10 11 12 13 14 15 16
1 7 8 11 19 20 21 22 23 24 25 26 27 28 29 30 31 32 41 42 43 44 45 46 47 48
3 33 43 53 63 73 83 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123
495 515 525 535 545 555 565 7 596 616 626 3

DATE:
ACC: d58hp1c/usr/d580504
FILE:

DN: LR
CK: CW
DW: DN
CK: MT



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

3-14-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

PAVEMENT MARKINGS

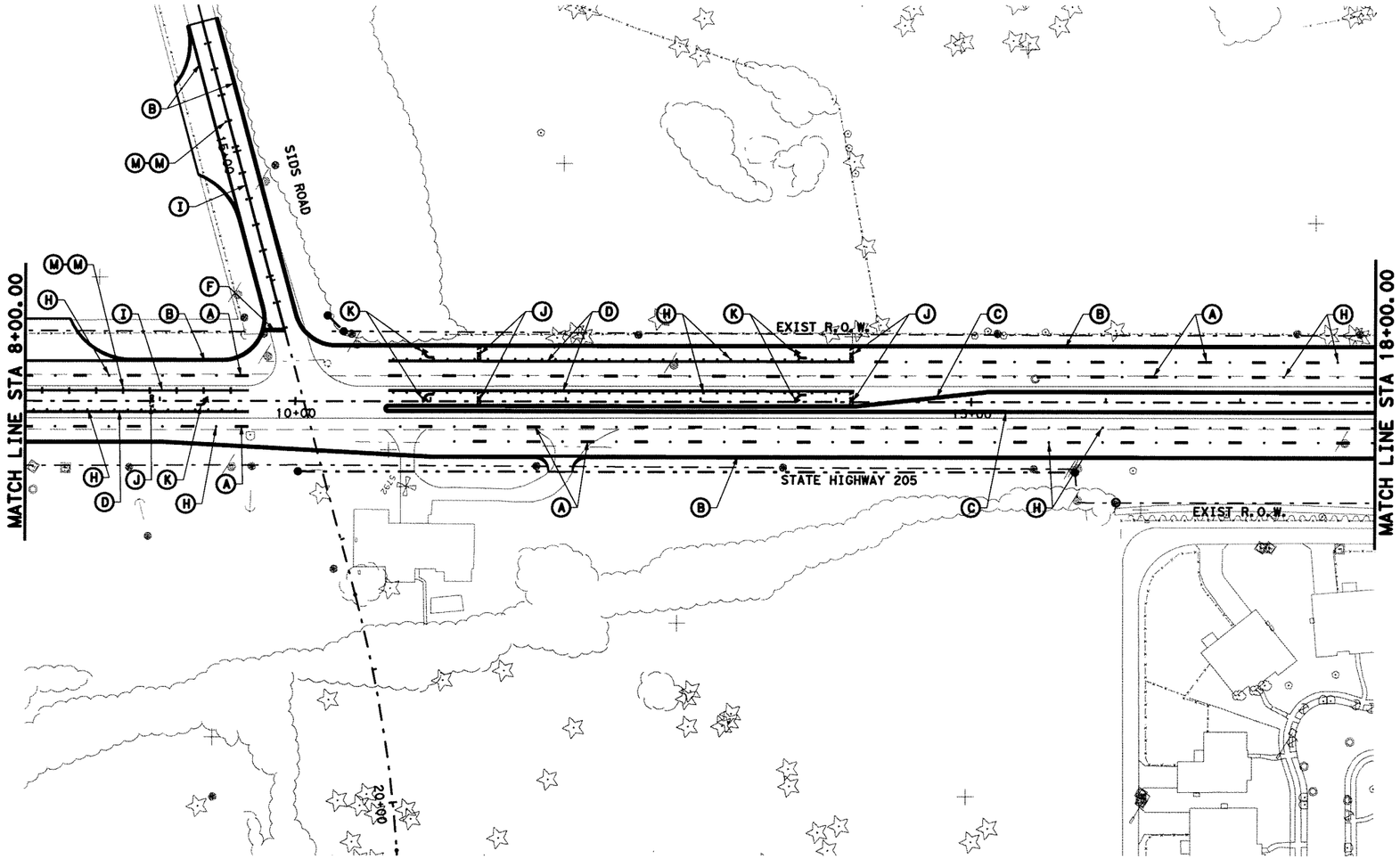
STATE HIGHWAY 205
STA 0+00 TO 8+00

SHEET 1 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	743
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\2451ast01.dgn, ON=EO-621
3/14/2006 Plotted 14-MAR-2006 07:33



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36" (YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL
ENGINEER

3-14-06

Richard T. Grice

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205

PAVING MARKINGS

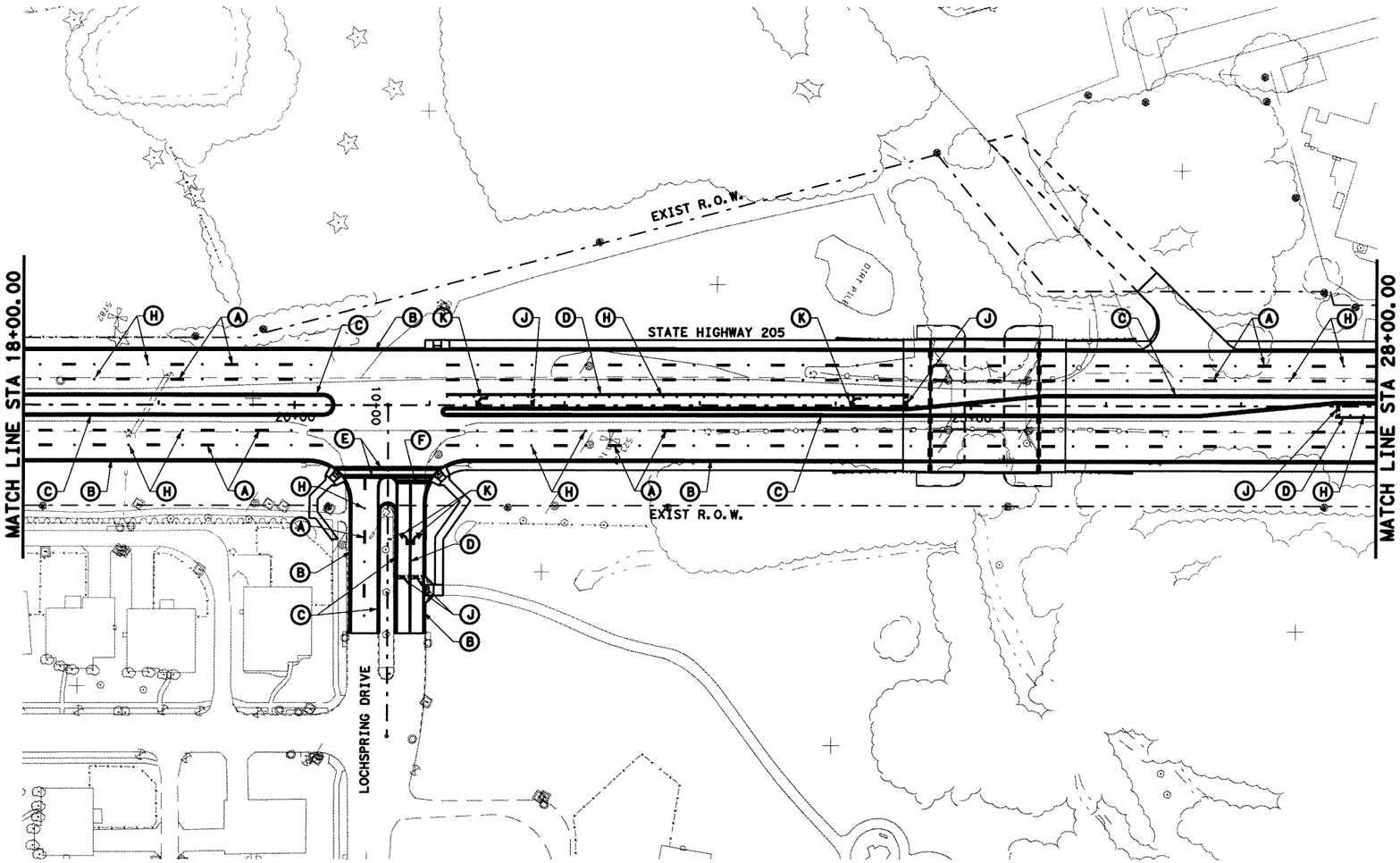
STATE HIGHWAY 205
STA 8+00 TO 18+00

SHEET 2 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	744
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/13/2006 Plotted 13-MAR-2006 09:01



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

Richard T. Grice

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205

PAVEMENT MARKINGS

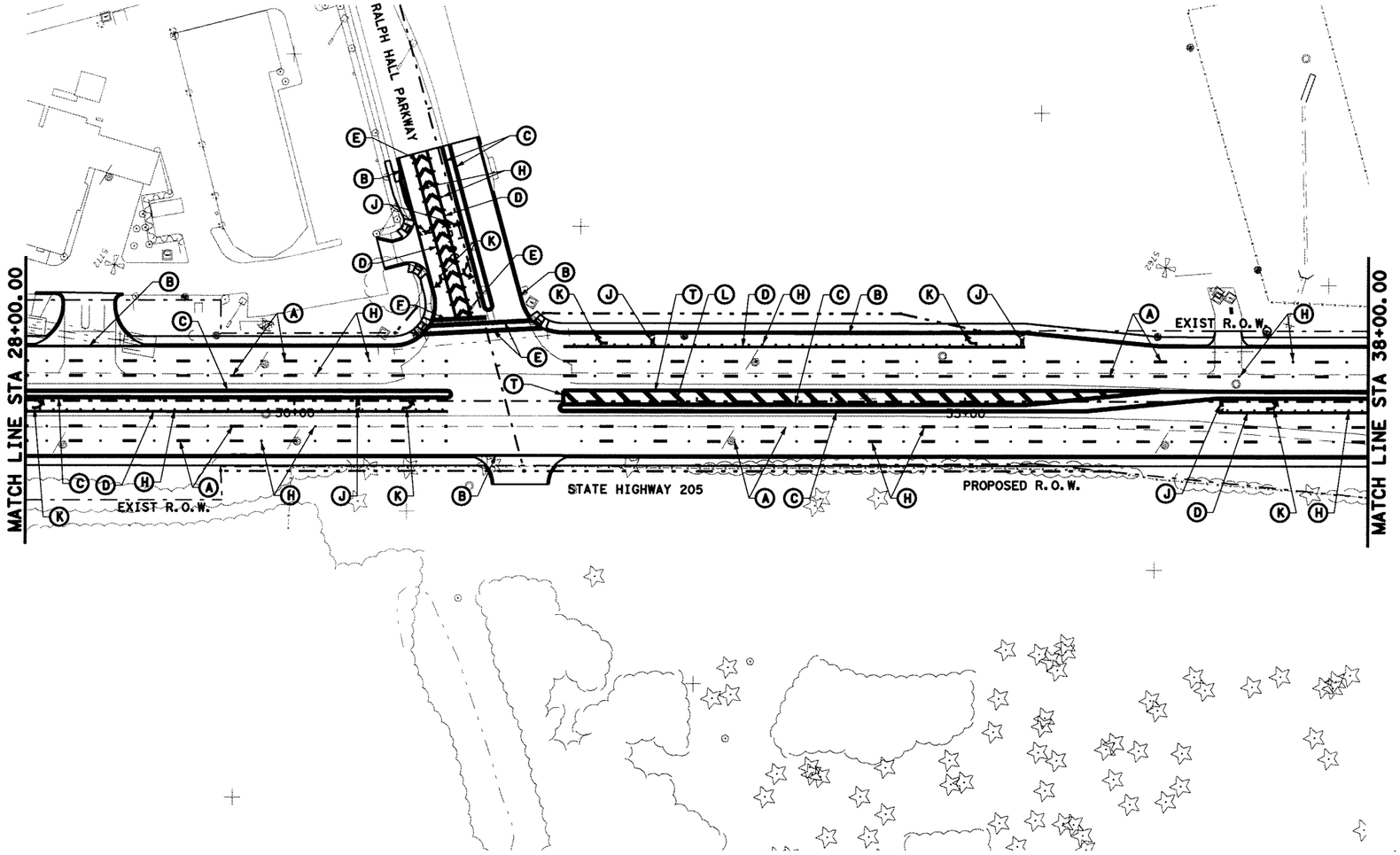
STATE HIGHWAY 205
STA 18+00 TO 28+00

SHEET 3 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	745
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/13/2006 Plotted 13-MAR-2006 09:01



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205

PAVEMENT MARKINGS

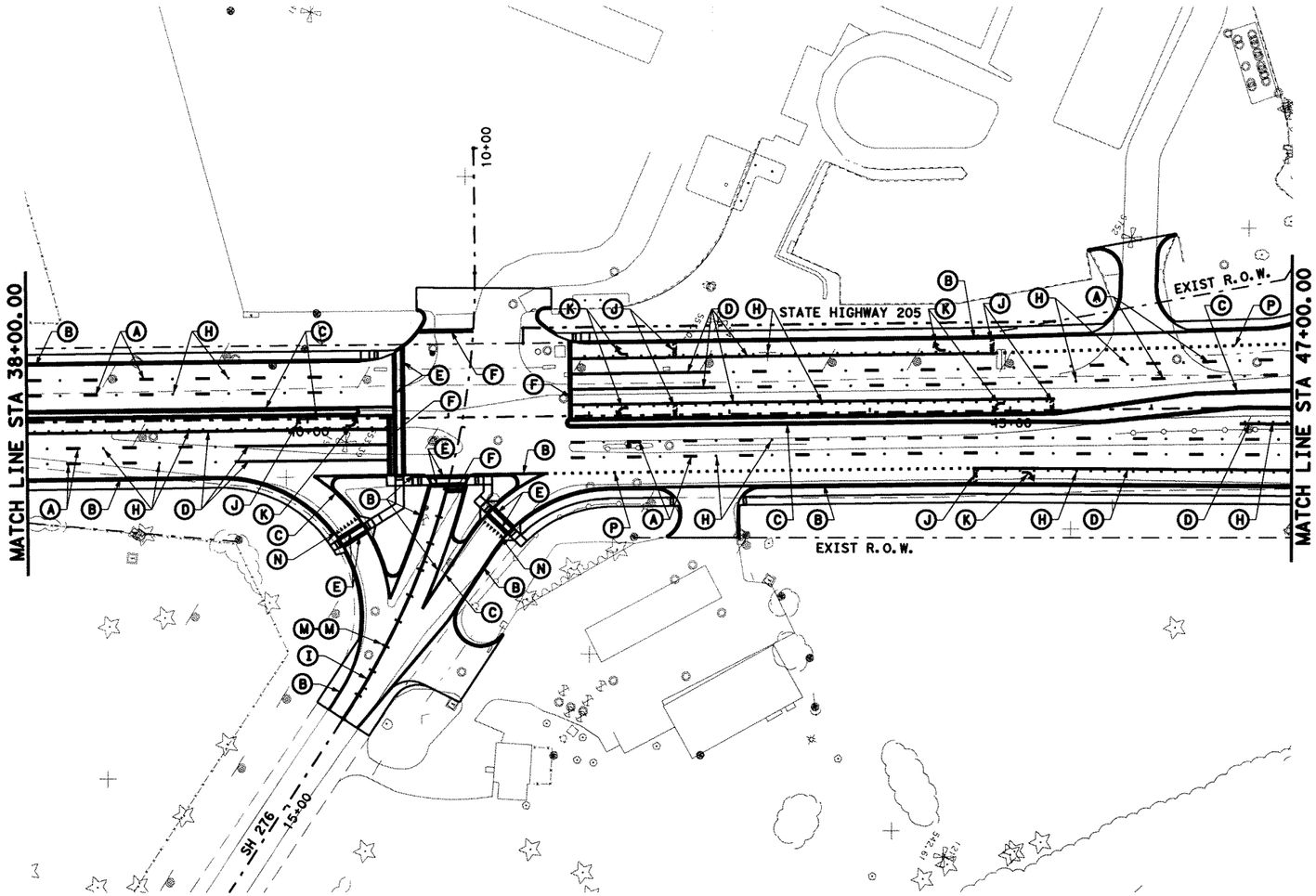
STATE HIGHWAY 205
STA 28+00 TO 38+00

SHEET 4 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	746
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\22451ast04.dgn, ON=[0-62]
3/13/2006 Plotted 13-MAR-2006 09:01



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

Richard T. Grice

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

PAVEMENT MARKINGS

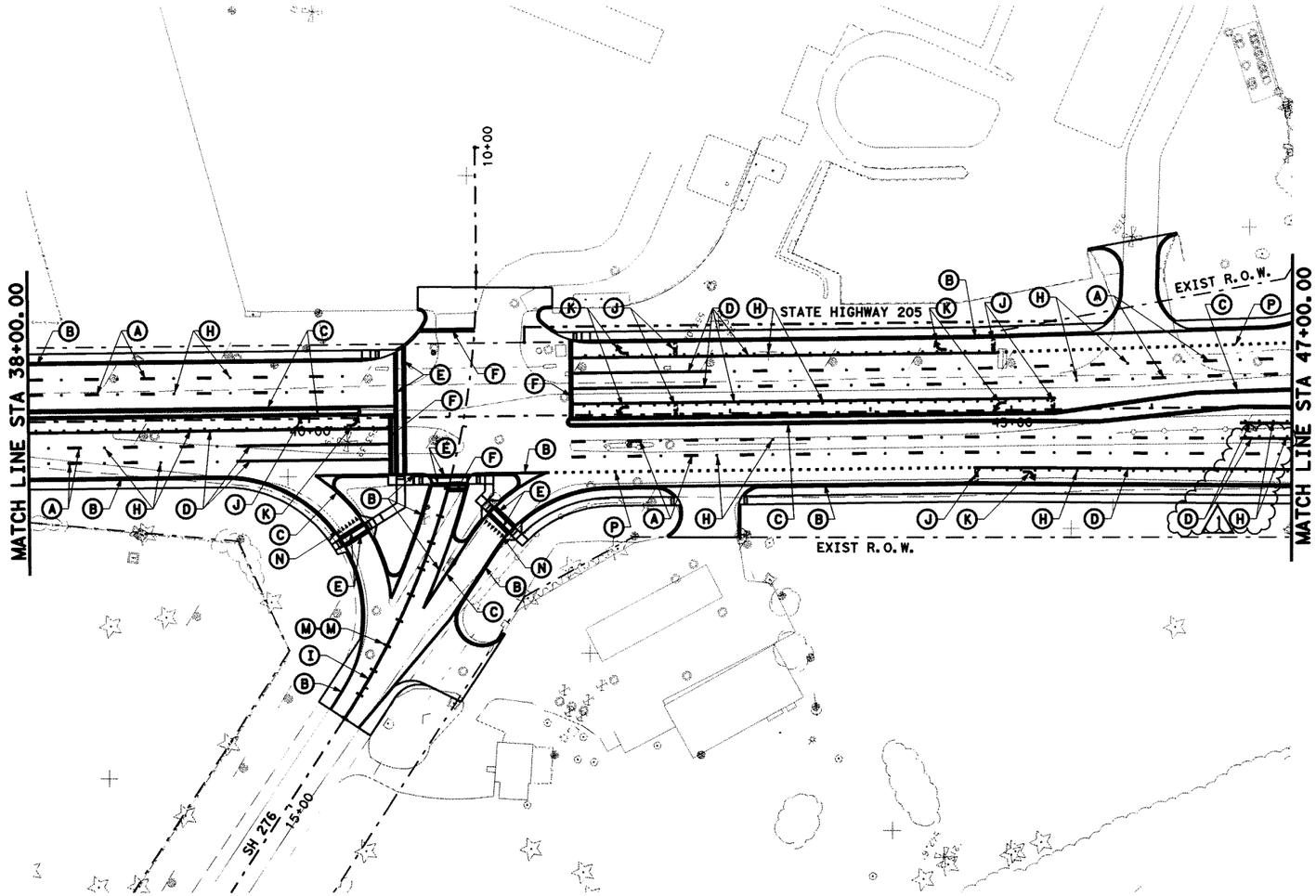
STATE HIGHWAY 205
STA 38+00 TO 47+00

SHEET 5 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	747
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\2451ast05.dgn, ON=[0-62]
3/13/2006 Plotted 13-MAR-2006 09:01



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36" (YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

1 ADDED SHARED LEFT/THRU LANE BY RTG - 05-21-2009

5-27-09

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

Richard T. Grice

PB 1898 Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207
TBPE ID 2263

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SH 205

PAVEMENT MARKINGS

STATE HIGHWAY 205
STA 38+00 TO 47+00

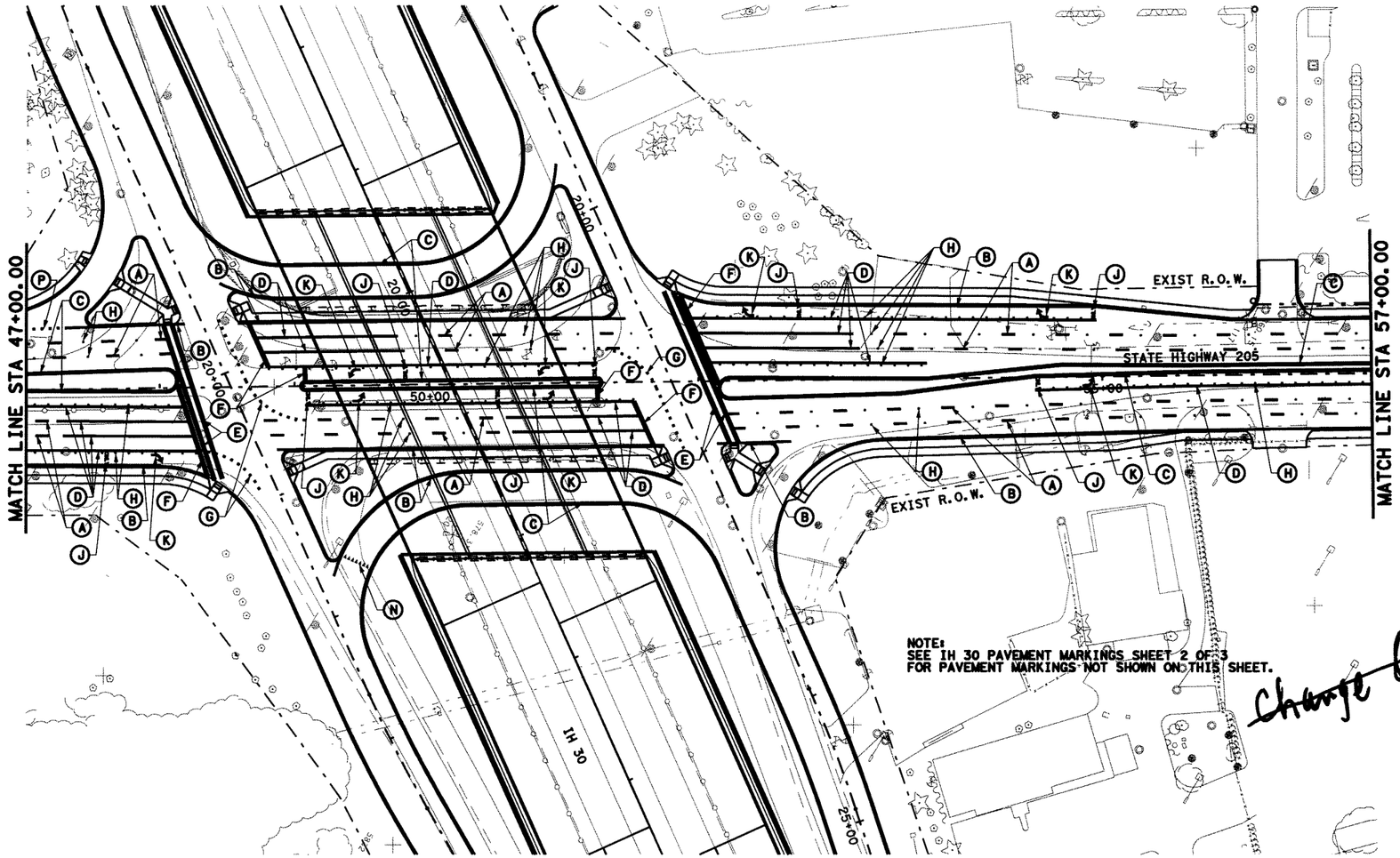
SHEET 5 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	747A
CONT.	SECT.	JOB	
0451	01	032, ETC	

1 CHANGE ORDER No 87

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5/27/2009 Plotted 27-MAY-2009 16:42



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL)(Y)(4")(SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y)(8")(SLD)

Change Order #87

3-14-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205

PAVEMENT MARKINGS

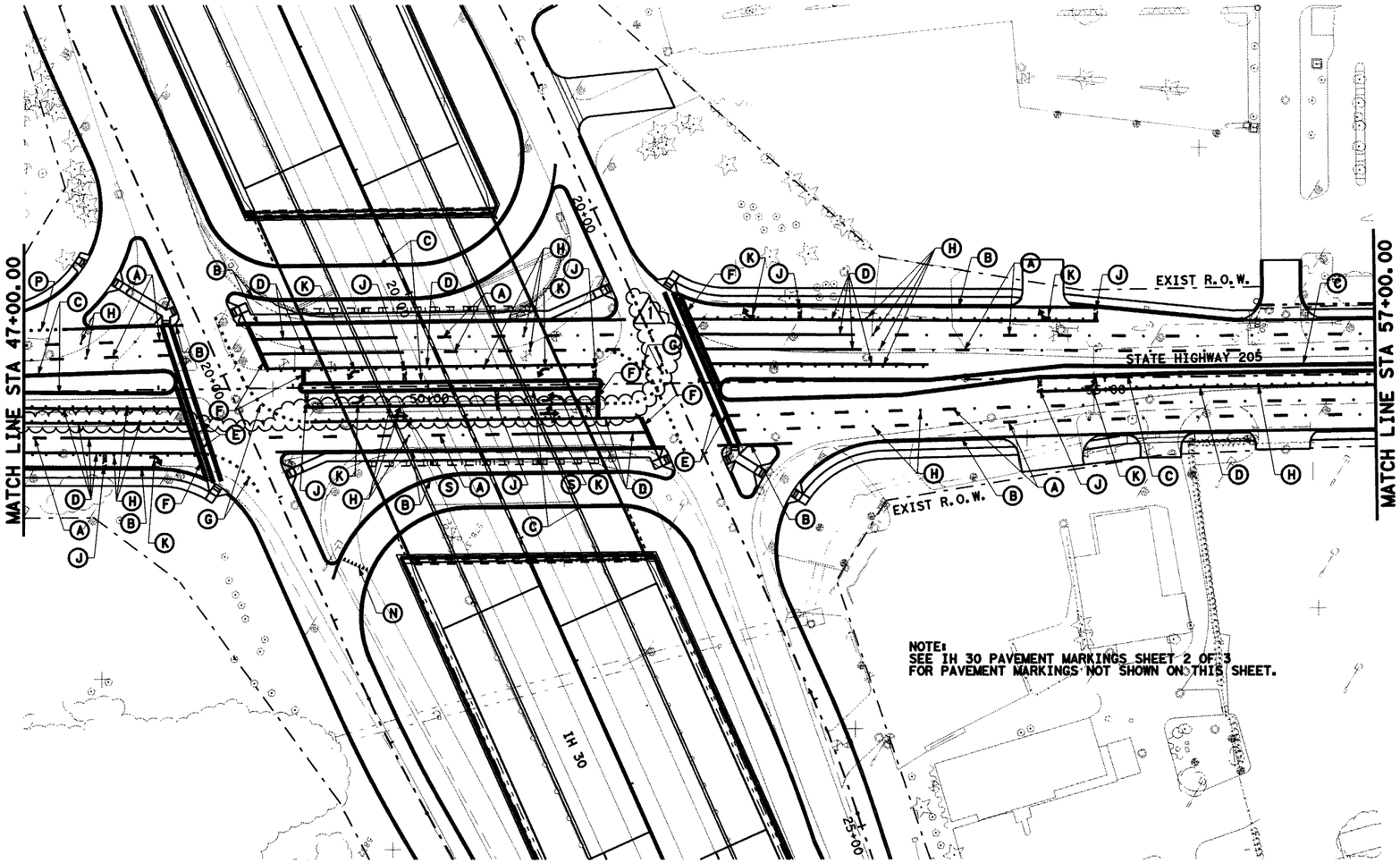
STATE HIGHWAY 205
STA 47+00 TO 57+00

SHEET 6 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	748
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\2451ast06.dgn, ON=[0-62]
3/13/2006 Plotted 13-MAR-2006 09:01



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL)(Y)(4")(SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y)(8")(SLD)

1 ADDED SHARED LEFT/THRU LANE BY RTG - 05-21-2009

5-27-09

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

Richard T. Grice

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207
TBPE ID 2263

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PAVEMENT MARKINGS

STATE HIGHWAY 205
STA 47+00 TO 57+00

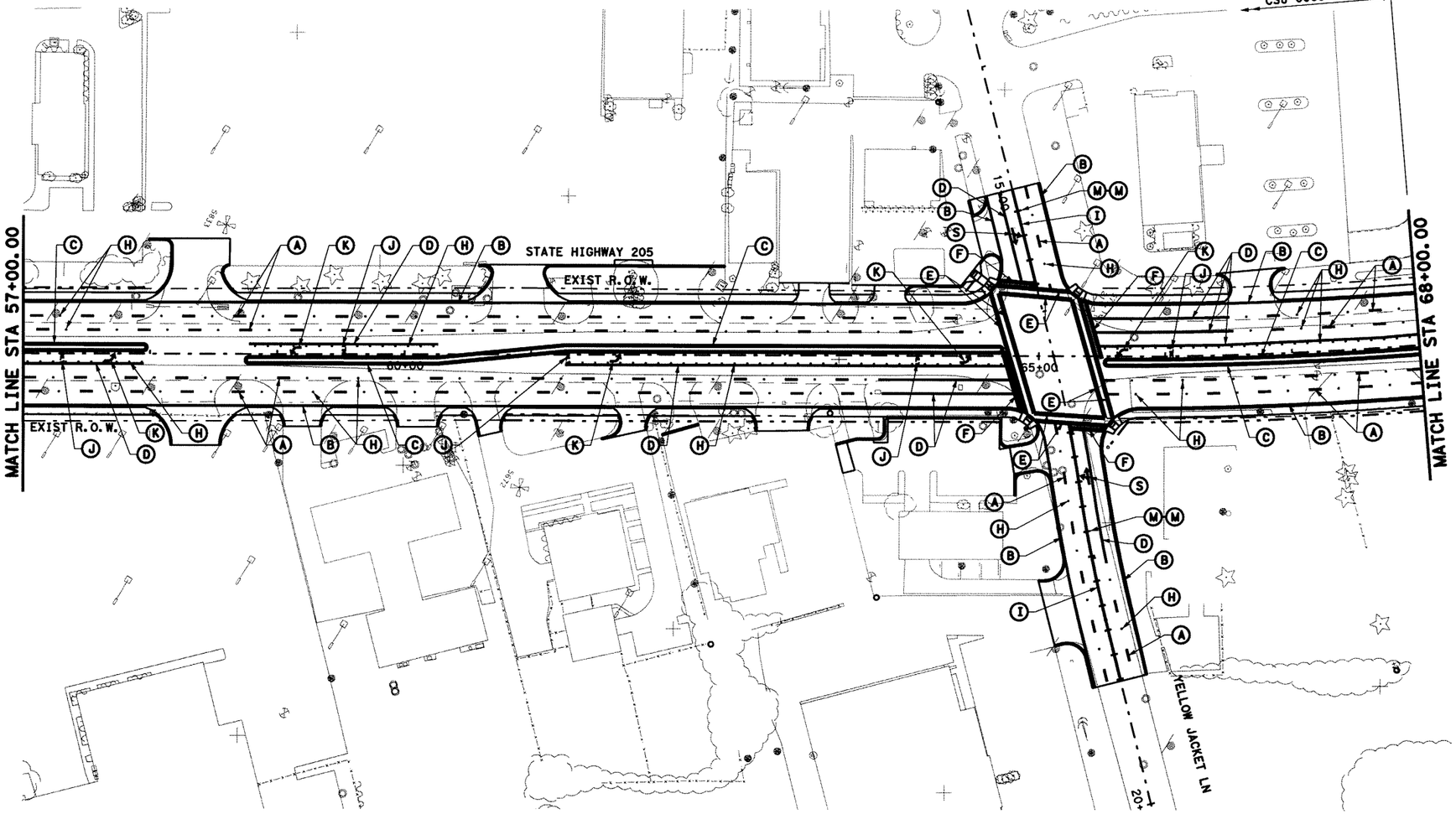
SHEET 6 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	748
CONT.	SECT.	JOB	
0451	01	032, ETC	

1 Change Order No. 87

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5/27/2009 Plotted 27-MAY-2009 16:43



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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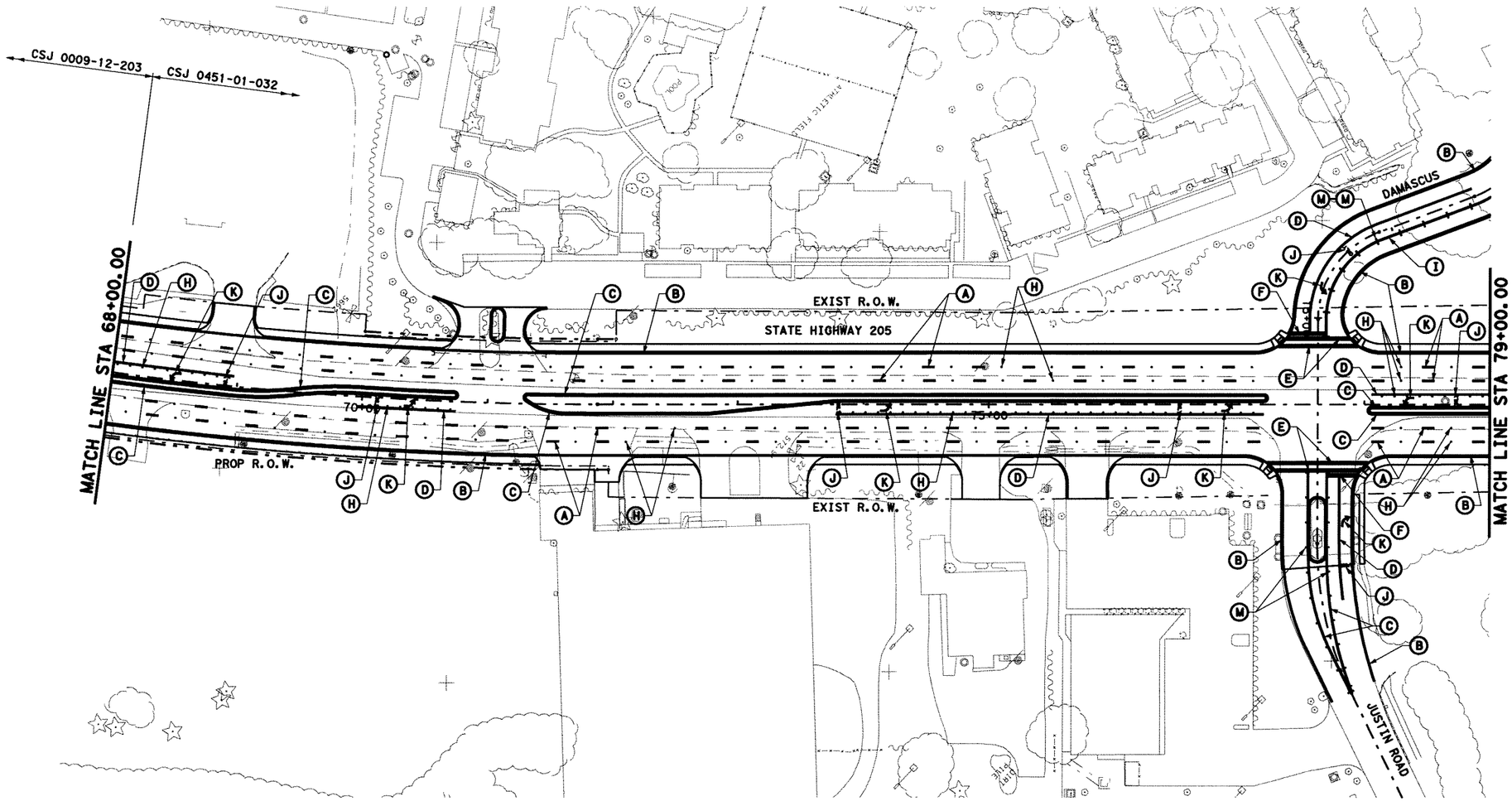
STATE HIGHWAY 205
STA 57+00 TO 68+00

SHEET 7 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	749
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\2451ast07.dgn, ON=[0-62]
3/13/2006 Plotted 13-MAR-2006 09:02



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

3-14-06

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
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Dallas, TX 75207

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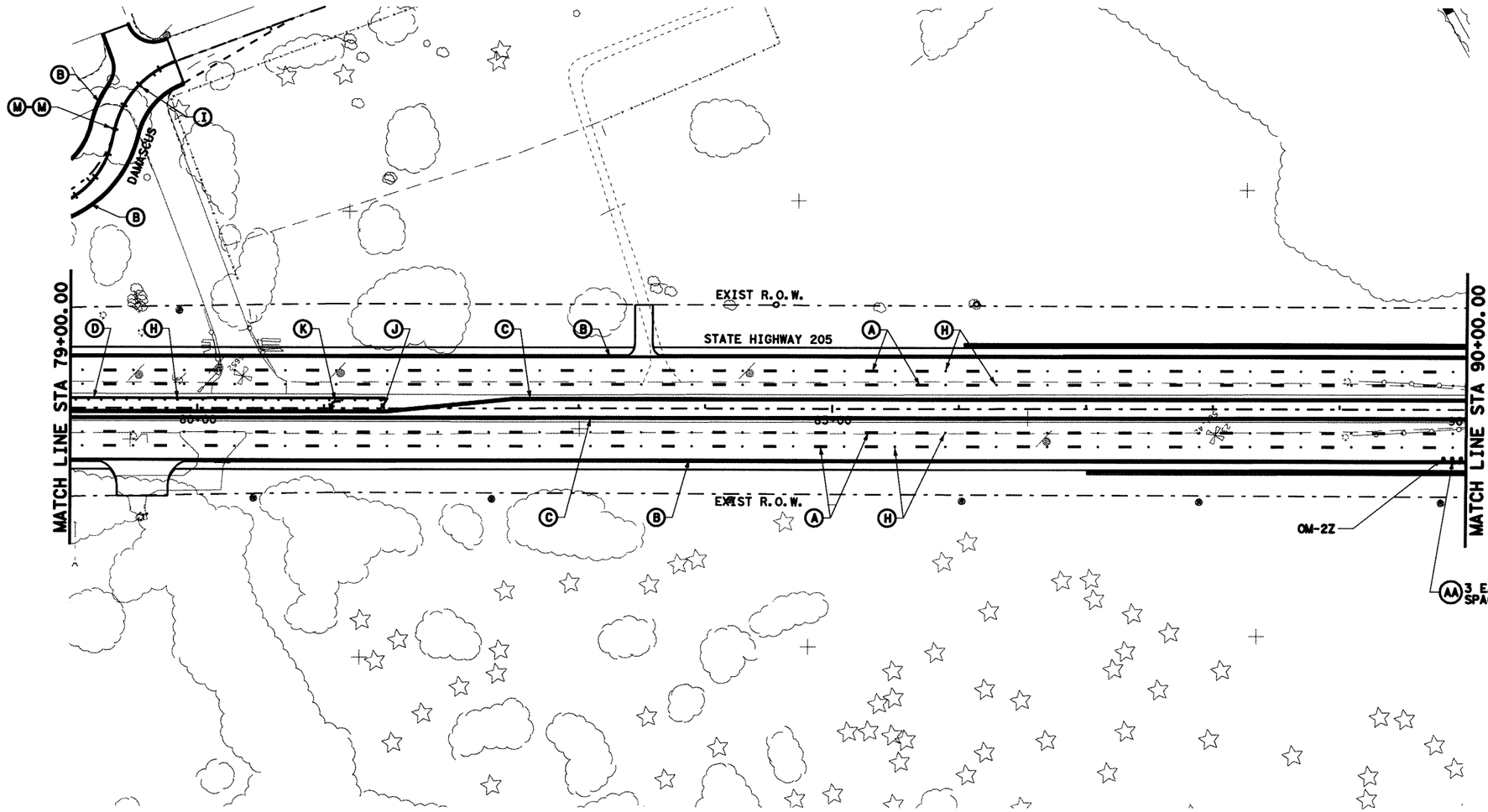
STATE HIGHWAY 205
STA 68+00 TO 79+00

SHEET 8 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	750
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/13/2006 Plotted 13-MAR-2006 09:02



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)
- (AA) DELINEATOR (D-SW) SZ 1
- (BB) BARRIER REFLECTOR (TY C-W)
- (CC) BARRIER REFLECTOR (TY C-Y) (BI)

5-19-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

Richard T. Grice

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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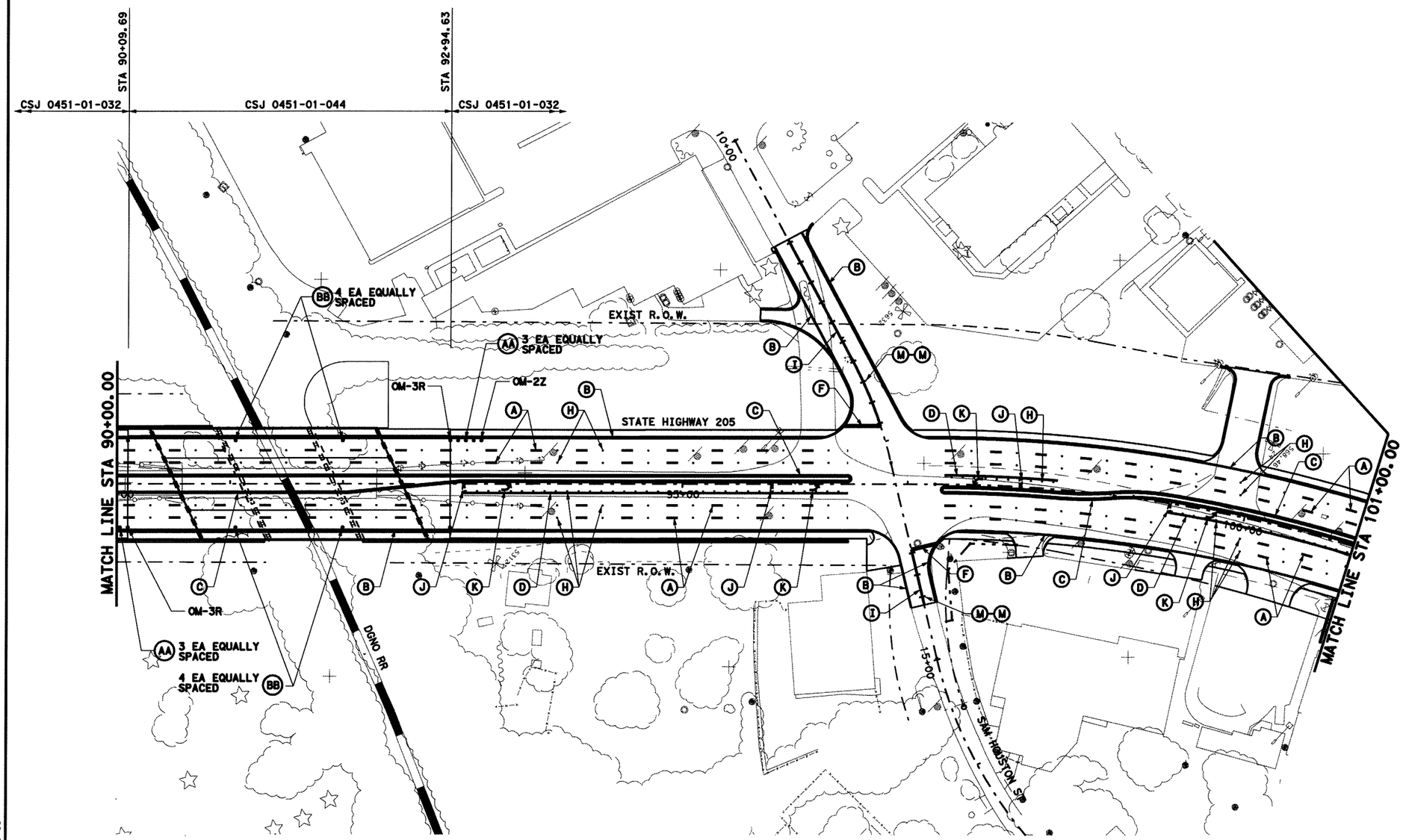
STATE HIGHWAY 205
STA 79+00 TO 90+00

SHEET 9 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	751
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Working\22451ost09.dgn, ON=[0-62]
5/19/2006 Plotted 19-MAY-2006 09:08



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)
- (AA) DELINEATOR (D-SW) SZ 1
- (BB) BARRIER REFLECTOR (TY C-W)
- (CC) BARRIER REFLECTOR (TY C-Y) (BI)

5-19-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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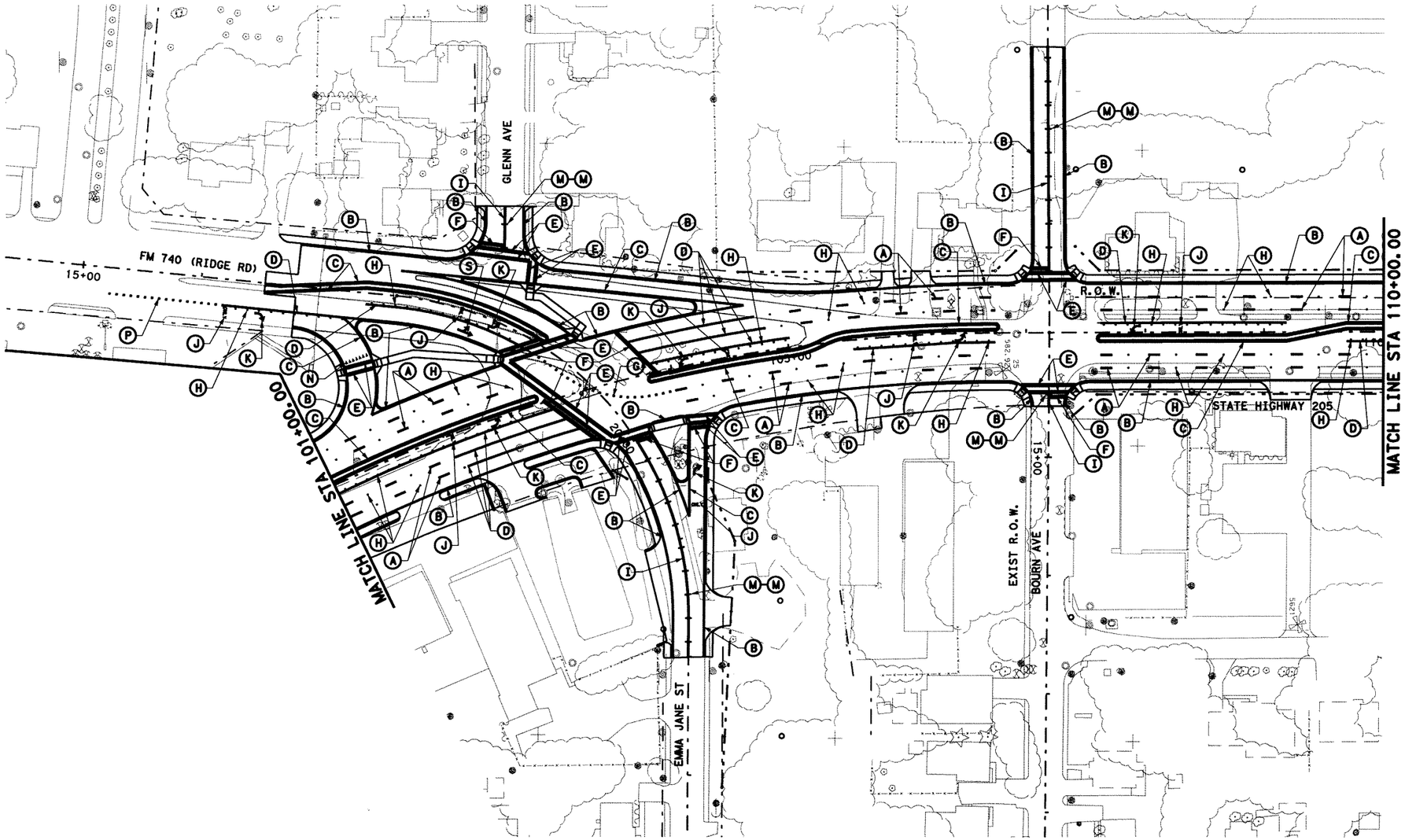
STATE HIGHWAY 205
STA 90+00 TO 101+00

SHEET 10 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	752
CONT.	SECT.	JOB	
0451	01	032, ETC	

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5/19/2006 Plotted 19-MAY-2006 09:08



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
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Dallas, TX 75207

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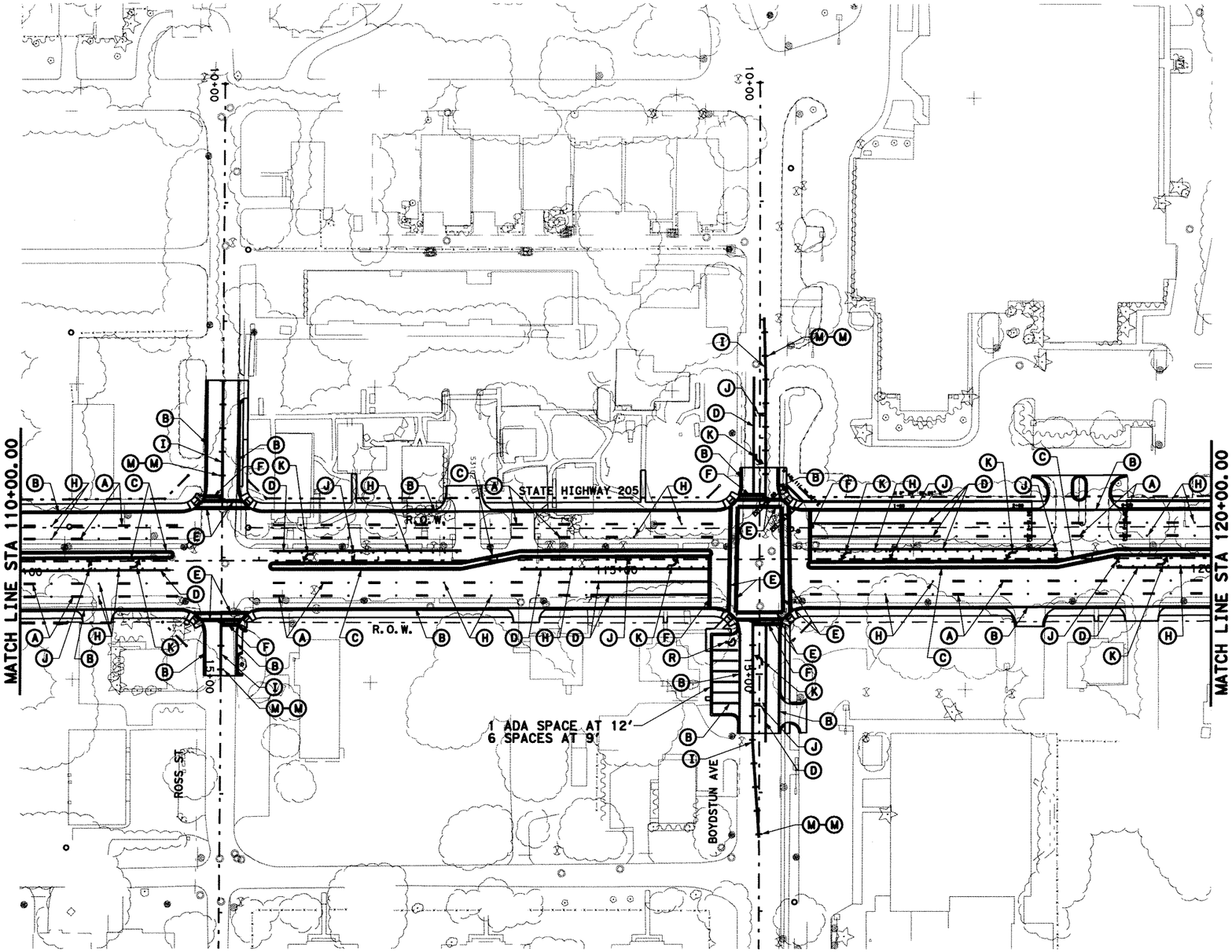
STATE HIGHWAY 205
STA 101+00 TO 110+00

SHEET 11 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	753
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/13/2006 Plotted 13-MAR-2006 09:02



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL)(Y)(4")(SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y)(8")(SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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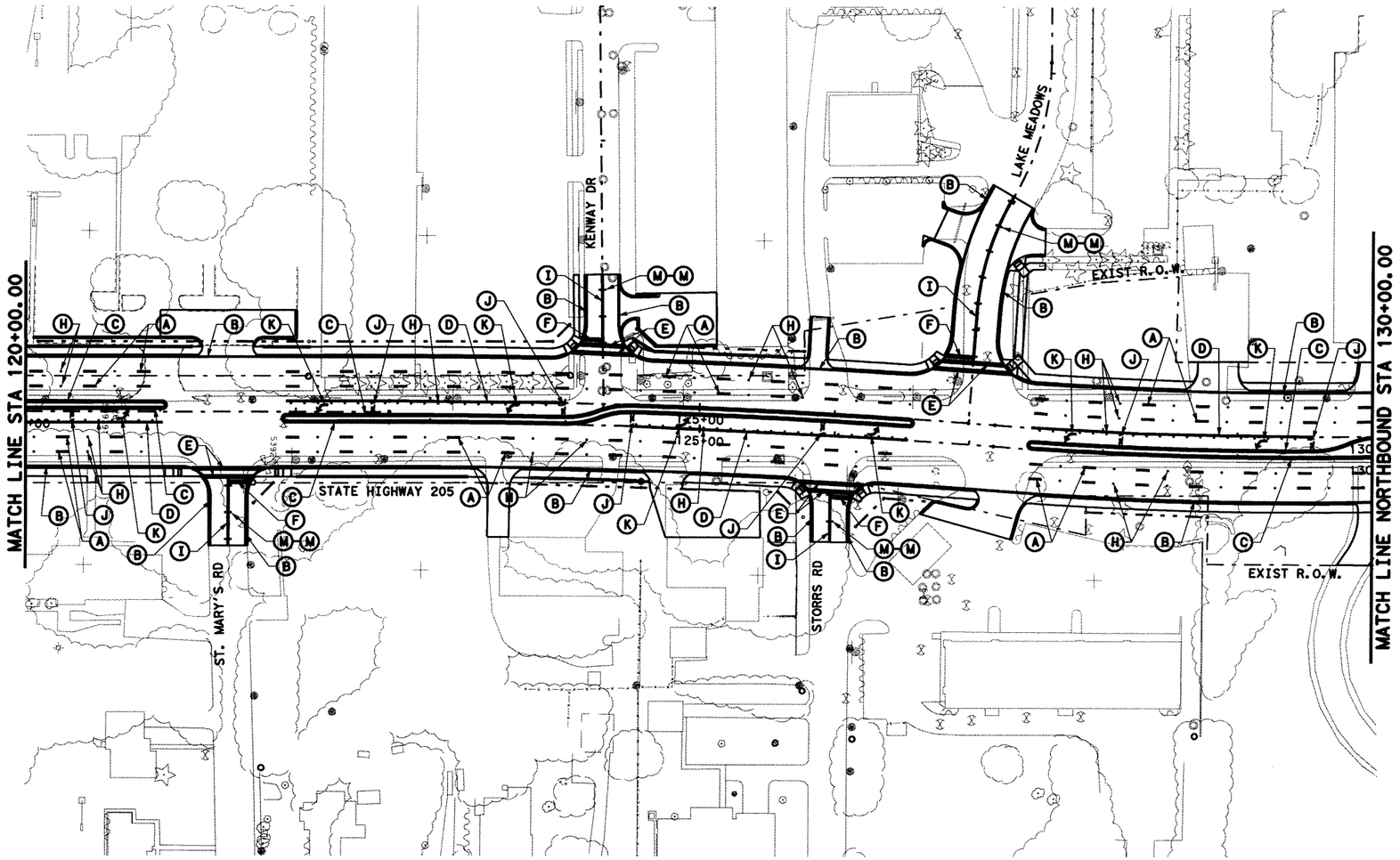
STATE HIGHWAY 205
STA 110+00 TO 120+00

SHEET 12 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	754
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\2451cst12.dgn, ON=[0-62]
3/13/2006 Plotted 13-MAR-2006 09:02



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL)(Y)(4")(SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y)(8")(SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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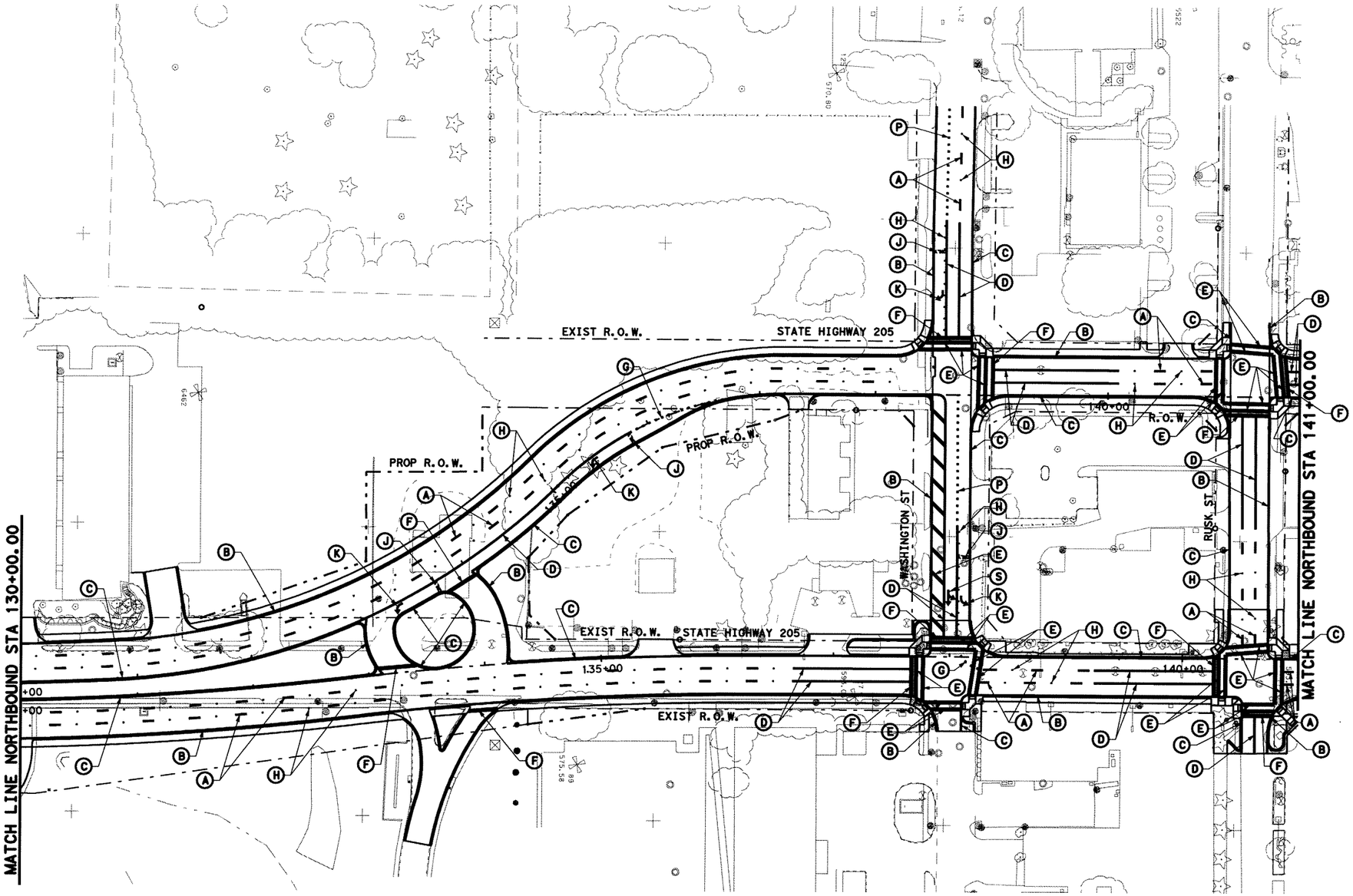
STATE HIGHWAY 205
STA 120+00 TO 130+00

SHEET 13 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	755
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\2451sst13.dgn, ON=[0-62]
3/13/2006 Plotted 13-MAR-2006 09:02



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

3-14-06

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SH 205

PAVEMENT MARKINGS

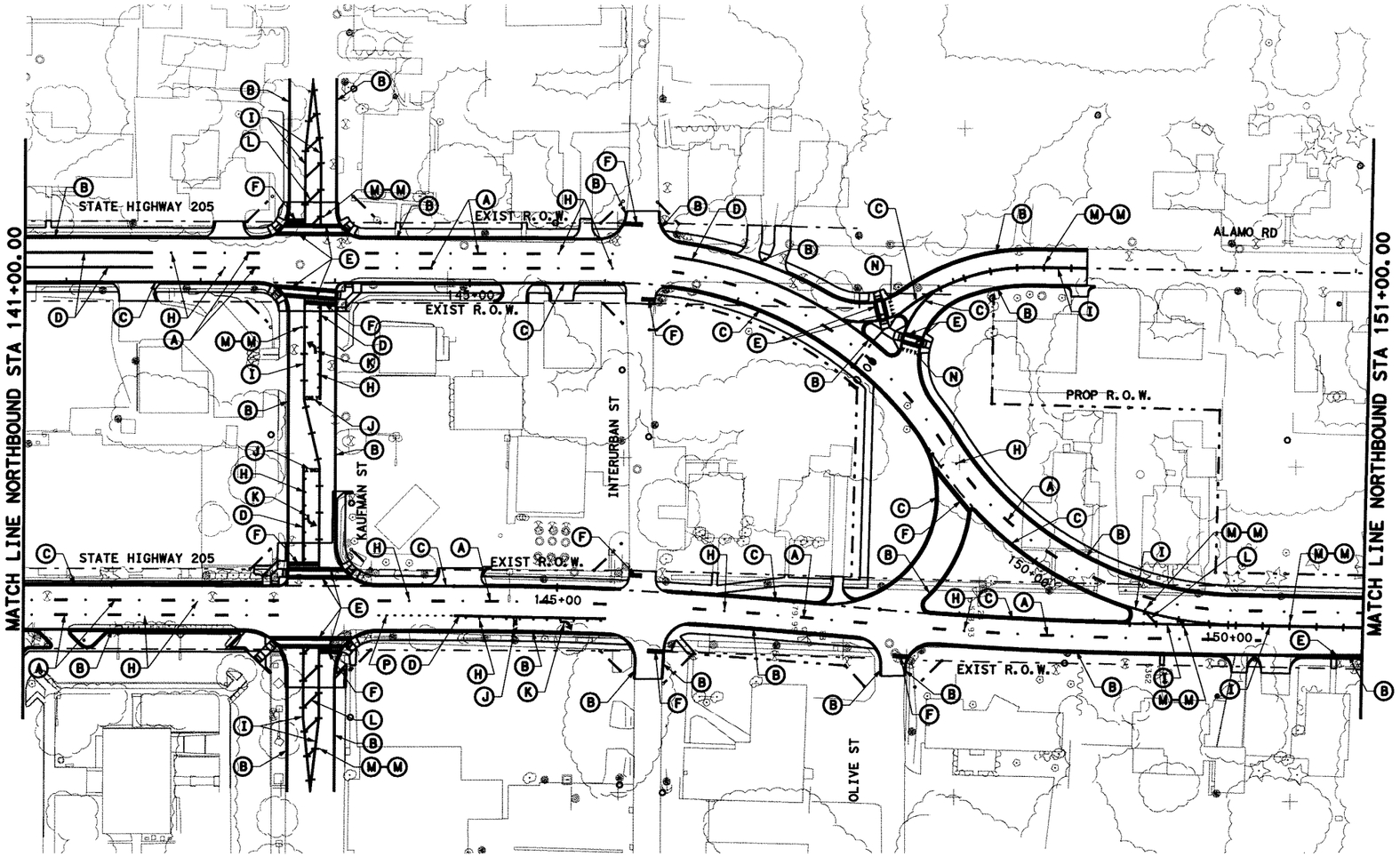
STATE HIGHWAY 205
STA 130+00 TO 141+00

SHEET 14 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	756
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\24514at14.dgn, ON=10-621
3/13/2006 Plotted 13-MAR-2006 09:02



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
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3/14/06

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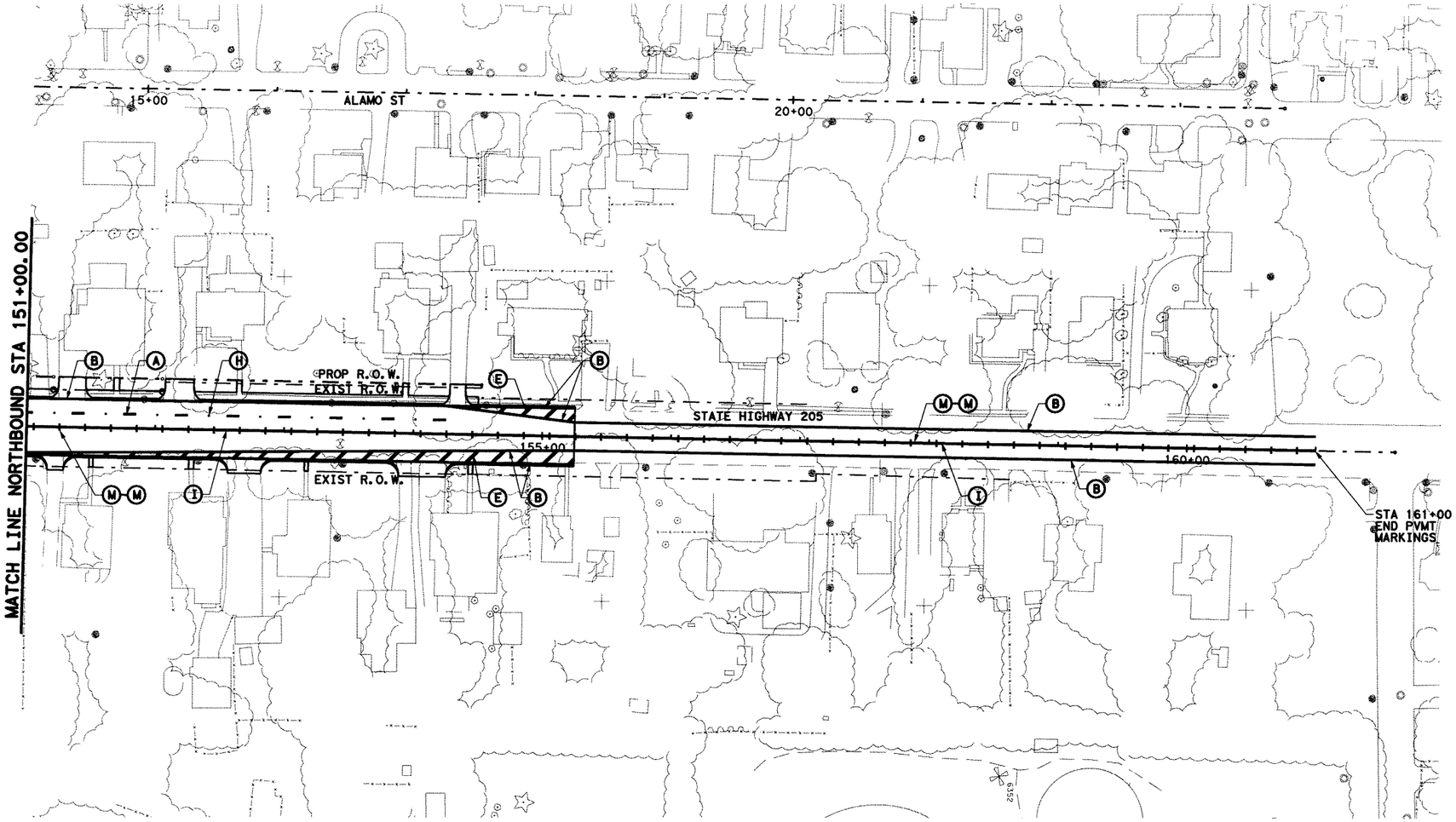
STATE HIGHWAY 205
STA 141+00 TO 151+00

SHEET 15 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	757
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\2451sht15.dgn, ON=[0-62]
3/13/2006 Plotted 13-MAR-2006 09:02



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

3-14-06

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PAVEMENT MARKINGS

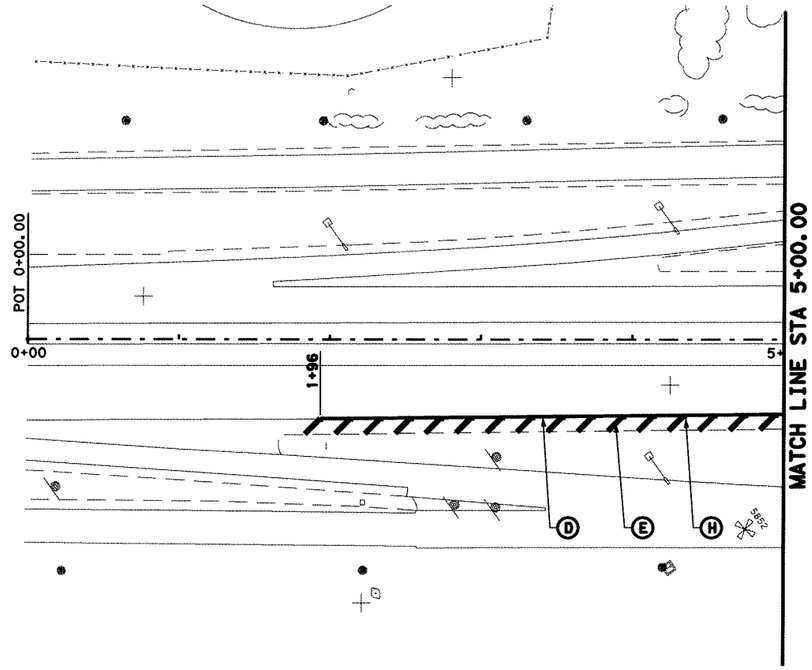
STATE HIGHWAY 205
STA 151+00 TO END OF PROJECT

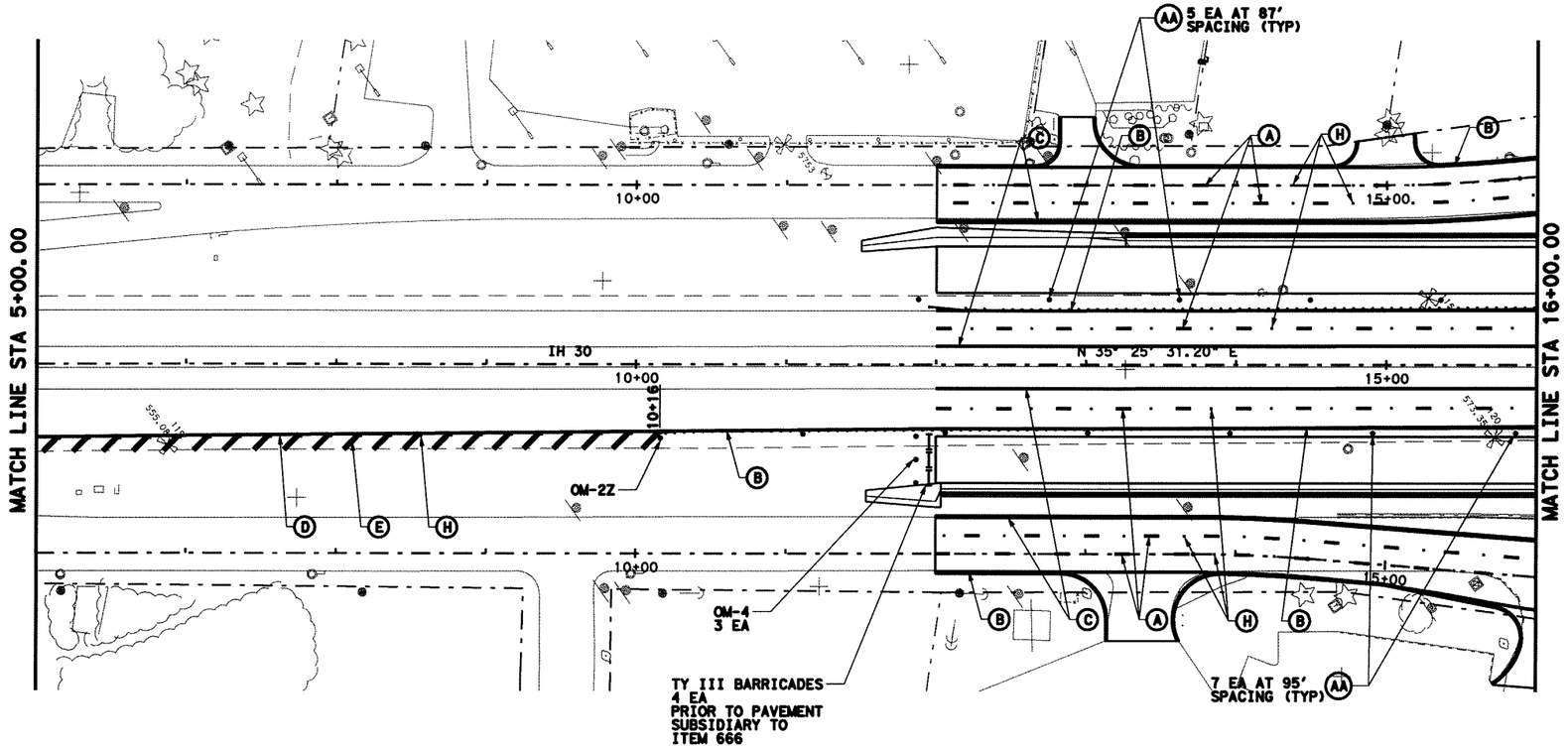
SHEET 16 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	758
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\22451C-SH205\Markings\22451at16.dgn, ON=10-621
3/13/2006 Plotted 13-MAR-2006 09:02





0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36" (YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)
- (AA) DELINEATOR (D-SW) SZ 1
- (BB) BARRIER REFLECTOR (TY C-W)
- (CC) BARRIER REFLECTOR (TY C-Y) (BI)

5-19-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Richard T. Grice

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PAVEMENT MARKINGS

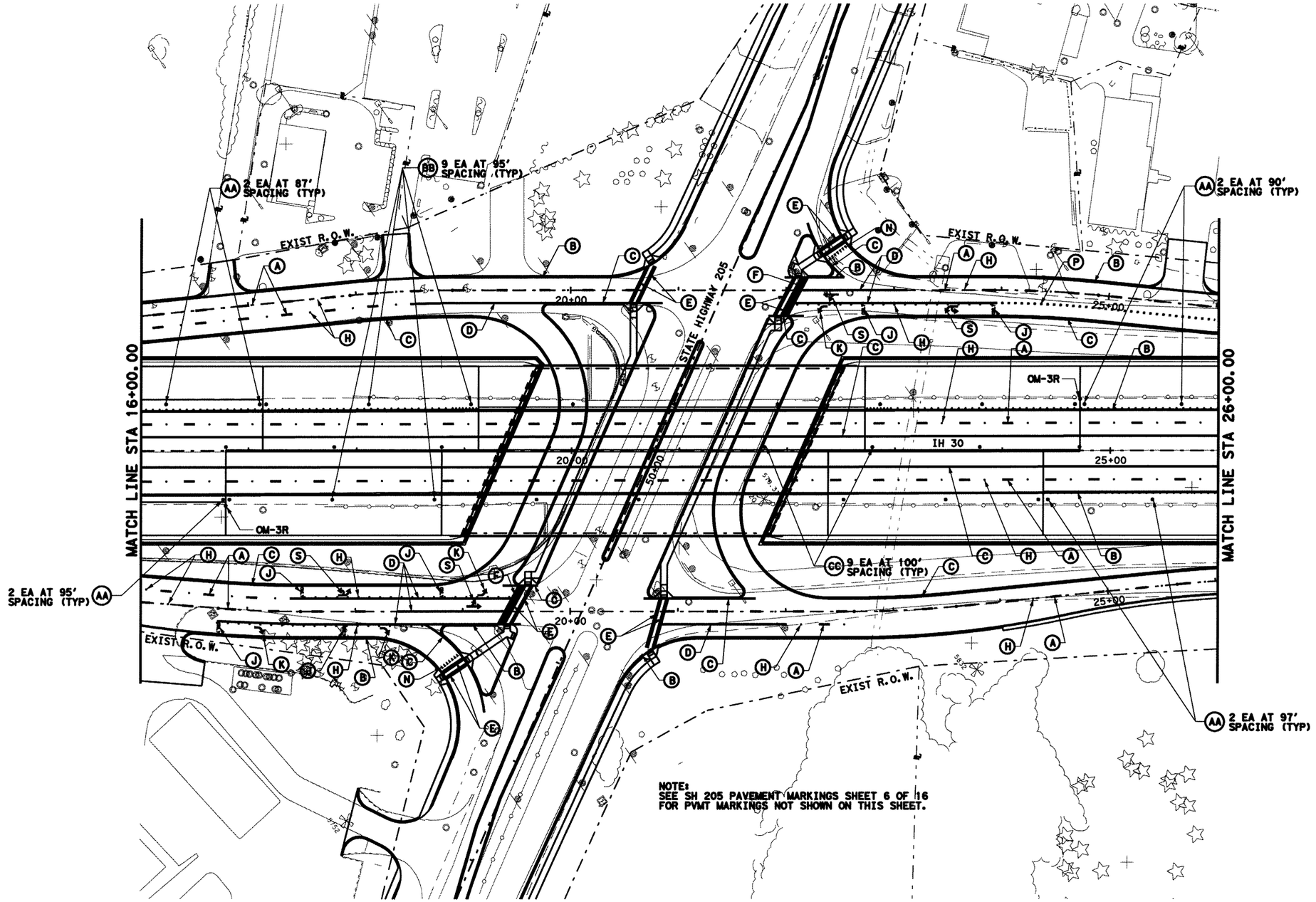
INTERSTATE HIGHWAY 30
STA 6+00 TO 16+00

SHEET 1 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	759
CONT.	SECT.	JOB	
0451	01	032, ETC	

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5/19/2006 Plotted 19-MAY-2006 09:08



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)
- (AA) DELINEATOR (D-SW) SZ 1
- (BB) BARRIER REFLECTOR (TY C-W)
- (CC) BARRIER REFLECTOR (TY C-Y) (BI)

5-19-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

PB 122 Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
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SH 205

PAVEMENT MARKINGS

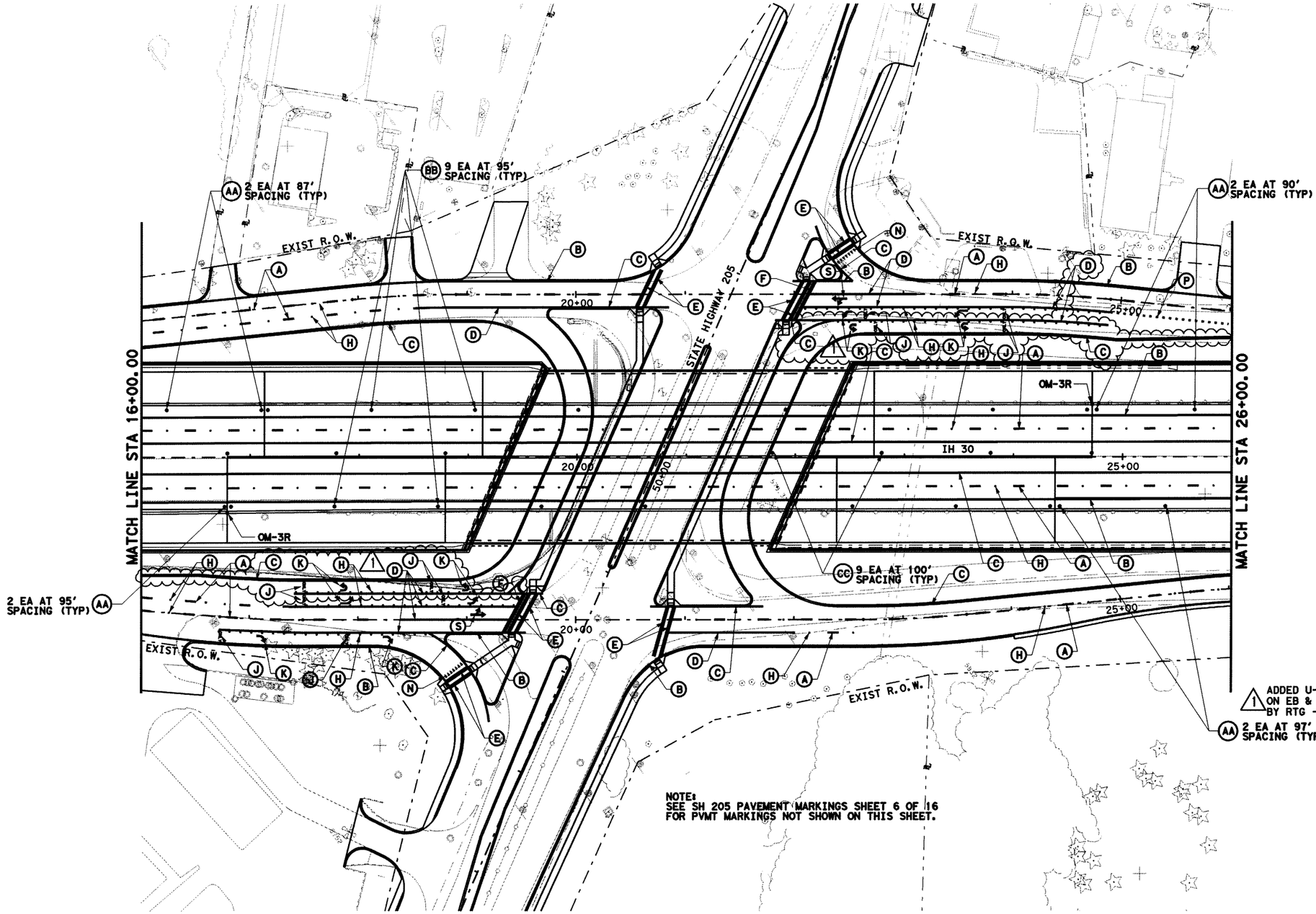
INTERSTATE HIGHWAY 30
STA 16+00 TO 26+00

SHEET 2 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	760
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\224510-SH205\Markings\2451ot19.dgn, ON=EO-621
5/19/2006 Plotted 19-MAY-2006 09:08



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36" (YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)
- (AA) DELINEATOR (D-SW) SZ 1
- (BB) BARRIER REFLECTOR (TY C-W)
- (CC) BARRIER REFLECTOR (TY C-Y) (BI)

1 ADDED U-TURN BAYS ON EB & WB FRONTAGE ROADS BY RTG -05/21/2009

5-27-09

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED PROFESSIONAL ENGINEER

Richard T. Grice

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207 TBPE ID 2263

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SH 205

PAVEMENT MARKINGS

INTERSTATE HIGHWAY 30
STA 16+00 TO 26+00

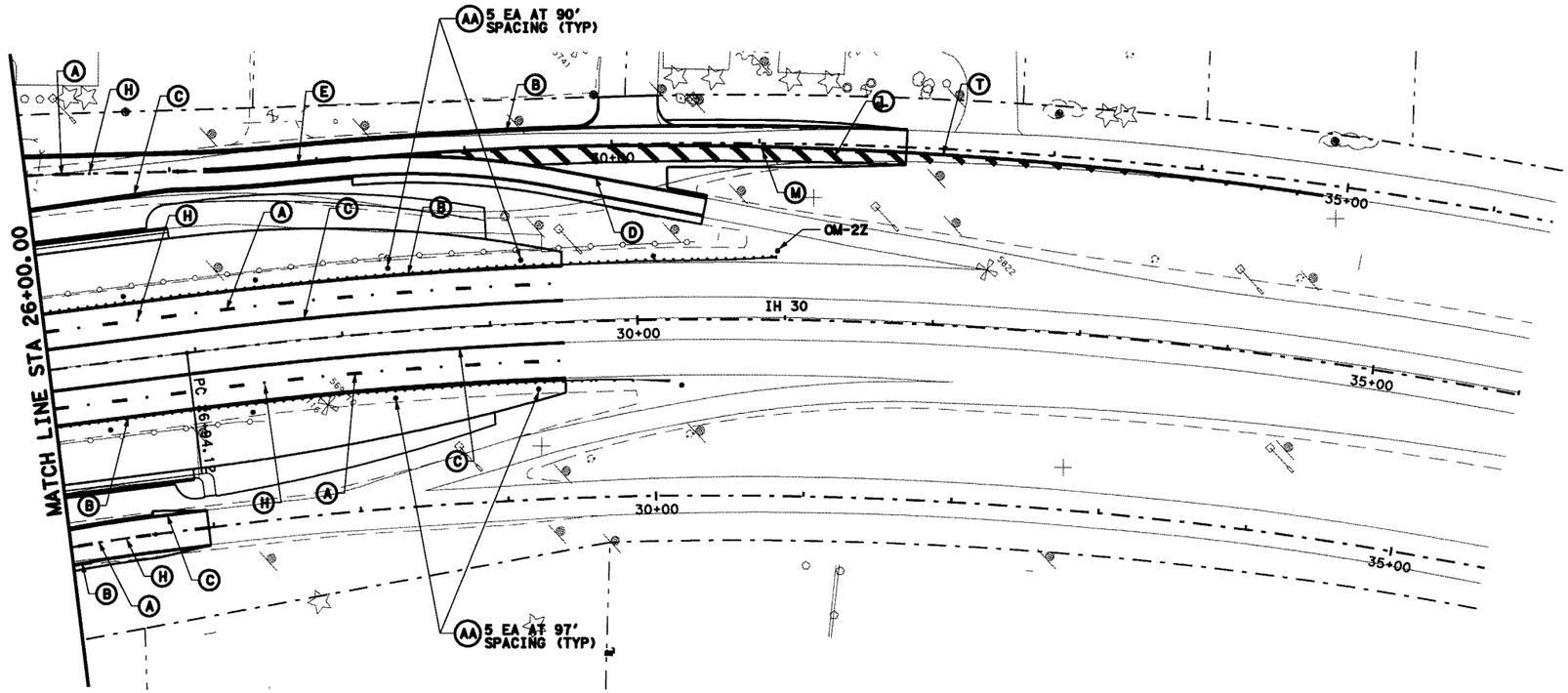
SHEET 2 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	760A
CONT.	SECT.	JOB	
0451	01	032, ETC	

1 Change Order No. 87

DGN=G:\JOBS\22451C-SH205\Markings\2451ct19REV1.dgn, ON=10-621
5/27/2009 Plotted 27-MAY-2009 16:43



0 50 100
SCALE IN FEET

LEGEND

- (A) REFL. PAV. MRK. TY I (W) (6") (BROKEN)
- (B) REFL. PAV. MRK. TY I (W) (6") (SLD)
- (C) REFL. PAV. MRK. TY I (Y) (6") (SLD)
- (D) REFL. PAV. MRK. TY I (W) (8") (SLD)
- (E) REFL. PAV. MRK. TY I (W) (12") (SLD)
- (F) REFL. PAV. MRK. TY I (W) (24") (SLD)
- (G) REFL. PAV. MRK. TY I (W) (6") (DOT)
- (H) REFL. PAV. MRKR. TY II-C-R
- (I) REFL. PAV. MRK. TY I (DBL) (Y) (4") (SLD)
- (J) REFL. PAV. MRK. TY I (WORD)
- (K) REFL. PAV. MRK. TY I (ARROW)
- (L) REFL. PAV. MRK. TY I (Y) (12") (SLD)
- (M) REFL. PAV. MRKR. TY II-A-A
- (N) REFL. PAV. MRK. 36"(YLD TRI)
- (P) REFL. PAV. MRK. TY I (W) 12" (LNDP)
- (R) REFL. PAV. MRK. TY I (W) (SYMBOL)
- (S) REFL. PAV. MRK. TY I (DBL ARROW)
- (T) REFL. PAV. MRK. TY I (Y) (8") (SLD)
- (AA) DELINEATOR (D-SW) SZ 1
- (BB) BARRIER REFLECTOR (TY C-W)
- (CC) BARRIER REFLECTOR (TY C-Y) (BI)

5-19-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

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SH 205

PAVEMENT MARKINGS

INTERSTATE HIGHWAY 30
STA 26+00 TO 36+00

SHEET 3 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

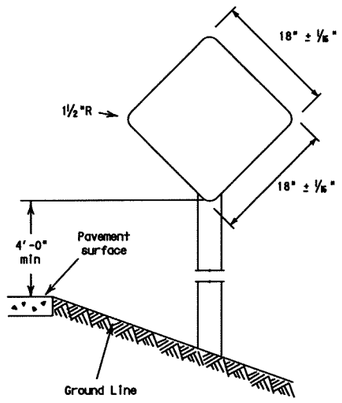
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	761
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=G:\JOBS\224510-SH205\Markings\2451ost20.dgn, ON=[0-62]
5/19/2006 Plotted 19-MAY-2006 09:08

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.

OBJECT MARKERS

TYPES 1 and 4

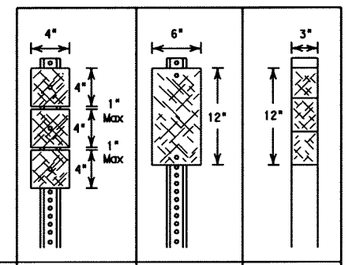


TYPE 1
18" x 18"
Yellow Type E Sheeting

TYPE 4
18" x 18"
Red Type D Sheeting

Use Sign blank 0.080" thick sheet aluminum conforming to ASTM B-209 Alloy 6061-T6. Use reflective sheeting in accordance with DMS 8300.

TYPE 2



Number of Reflectors	X	Y	Z
Post	WC	WC	FLX/RCR

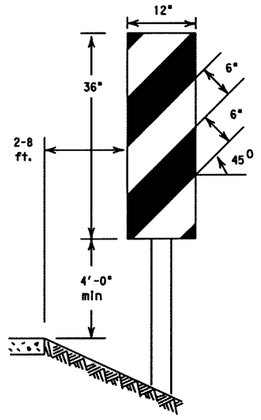
ALL TYPE 2 OBJECT MARKERS ARE YELLOW

WC-wing channel post (1.12 lbs/ft) per ASTM A 1011 SS Gr 50

FLX/RCR-flexible post (driveable and surface mount) or recycled rubber

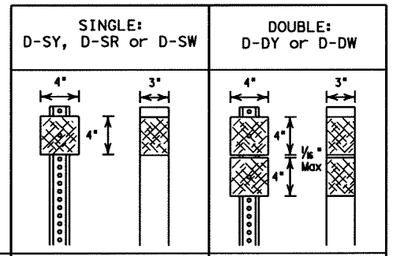
Typically used on bridge rail approach ends, some bridge abutments and at bridge rail exits on two-lane, two-way roadways

TYPE 3



Use Sign blank .080" thick sheet aluminum conforming to ASTM B-209 Alloy 6061-T6. Use reflective sheeting in accordance with DMS 8300, Type E. Use at bridges with no approach rails.

DELINEATORS



Number of Reflectors	S		D	
Post	WC	FLX/RCR	WC	FLX/RCR

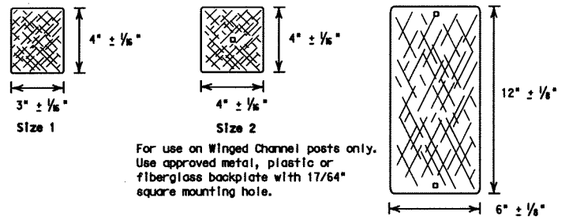
Length of post may vary to meet field conditions.

REFLECTOR UNITS: W-white, R-red or Y-yellow

WC-wing channel post (1.12 lbs/ft) per ASTM A 1011 SS Gr 50

FLX/RCR-flexible post (driveable and surface mount) or recycled rubber.

REFLECTOR UNIT SIZES

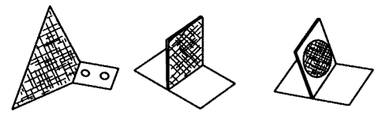


For use on Winged Channel posts only. Use approved metal, plastic or fiberglass backplate with 17/64" square mounting hole.

For use on Winged Channel posts only. Use approved metal, plastic or fiberglass backplate with 17/64" square mounting hole.

REFLECTIVE SHEETING
Yellow - DMS 8300, Type E White - DMS 8300, Type D
Red- - DMS 8300, Type D

TYPE C BARRIER REFLECTORS



REFLECTIVE SHEETING
Yellow - DMS 8300, Type E
White - DMS 8300, Type D

Mounting holes - 17/64 "

A Type A or B reflector unit (per DMS 8600) attached to a bracket to facilitate the mounting of the reflector on concrete traffic barrier, railing, metal beam guard fence (MBGF) or other locations shown on the plans. A list of approved Type C reflectors can be found at:

ftp://ftp.dot.state.tx.us/pub/txdot-info/amd/mpl/typodein.pdf

D & OM DESCRIPTIVE CODES

INSTL DEL ASSM (D-XX) SZ X (XXX) XXX (XX)

- **Number of Reflectors**
  - S = Single
  - D = Double
- **Color of Reflectors**
  - W = White
  - Y = Yellow
- **Reflector Unit Size**
  - 1 or 2
- **Type of Post**
  - WC = Wing Channel Post
  - FLX = Flexible Post
  - RCR = Recycled Rubber
  - TYC = Type C Barrier Reflector
- **Type of Installations**
  - GND = Ground Mount
  - CTB = Concrete Barrier Mount (Type C only)
  - GF1, GF2, GF3 = Guard Fence Attachment
  - SRF = Surface Mount
  - SLF = Self Righting
- **Direction**
  - IF REQUIRED
  - BI = Bi-Directional
  - BR = Bi-Directional with red on back

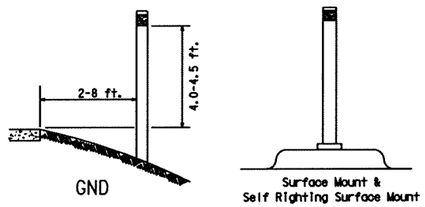
INSTL OM ASSM (OM-XX) (XXX) XXX (XX)

- **Type of Object Marker**
  - 1, 2, 3, or 4
- **Number of Reflectors**
  - X = 3 each Size 2 reflector units (Type 2 only)
  - Y = 1 Size 3 reflector unit (Type 2 only)
  - Z = 3 each Size 1 reflector units (Type 2 only)
  - L = Left Side (Type 3 Object Marker only)
  - R = Right Side (Type 3 Object Marker only)
- **Type of Post**
  - WC = Wing Channel Post
  - FLX = Flexible Post
  - RCR = Recycled Rubber
  - TWT = Thin Walled Tubing
- **Type of Mount**
  - GND = Ground Mount
  - WP = Wedge Anchor Plastic System
  - SRF = Surface Mount
  - SLF = Self Righting
  - WS = Wedge Anchor Steel System
- **Direction**
  - IF REQUIRED
  - BI = Bi-Directional

LEVELS DISPLAYED / ACC:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	ACC:
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63		

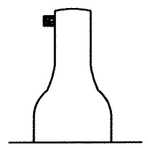
TYPES OF INSTALLATIONS



GND

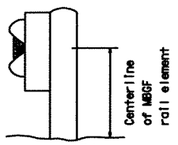
Surface Mount & Self Righting Surface Mount

SLF & SRF

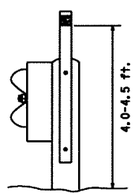


Concrete Barrier

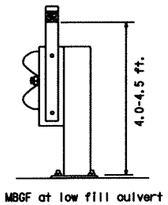
CTB
(Type C only)



GF1
(Type C only)



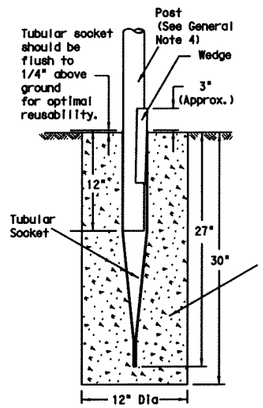
GF2



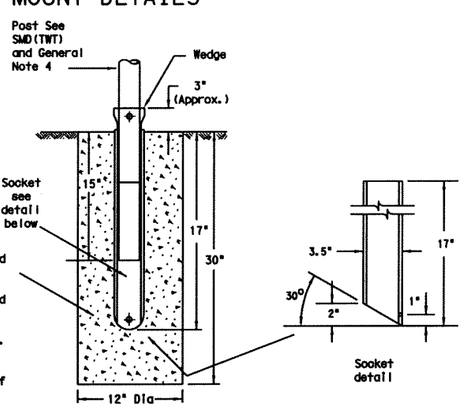
MBGF at low fill culvert

GF3

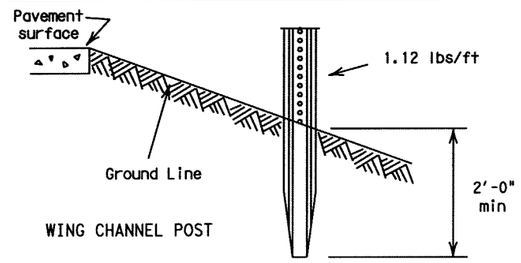
GROUND MOUNT DETAILS



WEDGE ANCHOR STEEL SYSTEM



WEDGE ANCHOR PLASTIC SYSTEM



WING CHANNEL POST

NOTE: Wing Channel post option is to be used for Type 2 Object Markers and delineators only

GENERAL NOTES

1. Place delineators on a section of roadway the same distance from the edge of pavement.
2. Where a restriction prevents consistent placement from the pavement edge, place the affected object markers in line with the innermost edge of the obstruction.
3. When object markers are more than 8 ft from the edge of the pavement, it may not be possible to maintain a height of 4.0-4.5 ft. If this is the case, place the object markers as close to the desired height as possible.
4. Install all delineators, object markers and barrier reflectors in accordance with the manufacturer's recommendation.

DEPARTMENTAL MATERIAL SPECIFICATIONS

FLEXIBLE DELINEATOR & OBJECT MARKER POSTS (DRIVEABLE & SURFACE MOUNT TYPES)	DMS-4400
FLAT SURFACE REFLECTIVE SHEETING	DMS-8300
DELINEATORS AND OBJECT MARKERS	DMS-8600

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

DELINEATOR & OBJECT MARKER INSTALLATION AND MATERIAL DESCRIPTION D & OM(1)-04

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DW: DAS	CK: GRB	DW: FDN	CK: CAL

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
	DAL	6	(SEE TITLE SHEET)	762

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

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LEVELS DISPLAYED
ACC:

USES OF DELINEATORS

Type of Road or Condition		Condition for use: Required (shall be used)	Recommended (should be used)	Optional (may be used)	Prohibited (cannot be used)	Delineator Spacing
Freeways or Expressways	Tangent	D-SW on right or raised pavement markers				200-530 ft
	Curve	D-SW on right				see Table
	Ramp	D-SW on one side See Note 1 *	On outside of interchange ramp curves			
Other Than Freeways or Expressways	Tangent			D-SW on right or left side	D-SY or D-DY on left side of two-way roads	200-530 ft
	Curve					see Table
Acceleration and Deceleration Lanes			D-DW or D-DY			100 ft spacing
Crossovers			D-DY on left side of through road on far side of crossover			
Wrong-way				D-SR for wrong-way traffic		
Pavement Narrowing (lane merge)				D-SW (right) or D-SY (left) adjacent to affected lane for full length of transition See Note 2 **		
Truck escape ramps			D-SR on both sides of ramp			50 ft spacing
With guard fence, bridge rail, or concrete barrier						100 ft use min. of 3

General Notes: Unless indicated otherwise, the color of a delineators must conform to the color of the pavement edge line on the side of the road where the delineators are placed. Barrier markers can be used to replace required delineators. DS-R can be mounted on the back side of existing delineator posts.

* 1. Delineation required on one side either SY or SW.

** 2. Minimum of 3.

When degree of curve or radius is not known

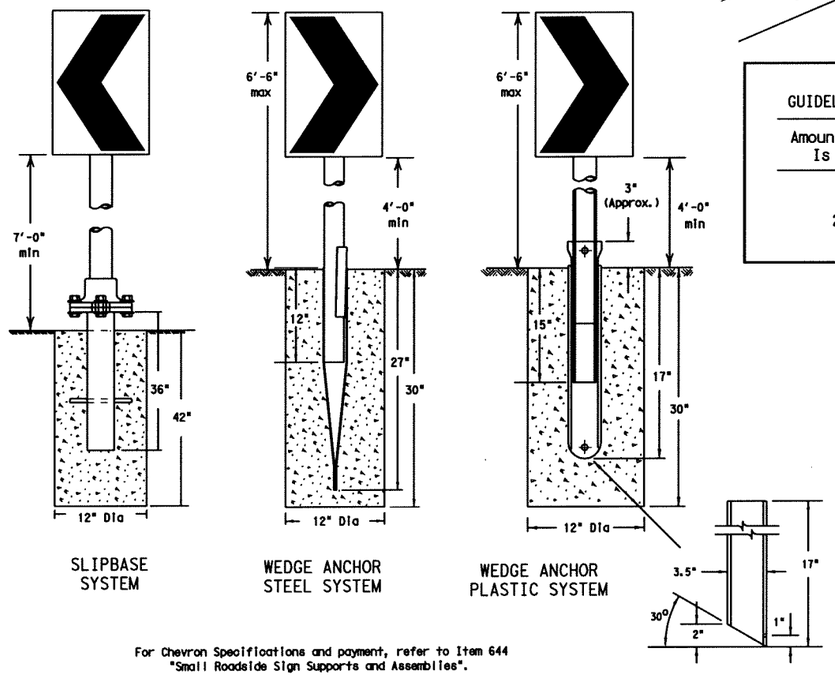
Advisory Speed (MPH)	Spacing in Curve	Spacing in Strtawy	Chevron Spacing in Curve
	A	2xA	B
65	130	260	
60	110	220	
55	100	200	160
50	85	170	160
45	75	150	160
40	70	140	120
35	60	120	120
30	55	110	80
25	50	100	80
20	40	80	80
15	35	70	40

If the degree of curve is not known, delineator spacing may be determined based on the Advisory Speed of the curve. Use the delineator curve spacing for each Advisory Speed (MPH).

When degree of curve or radius is known

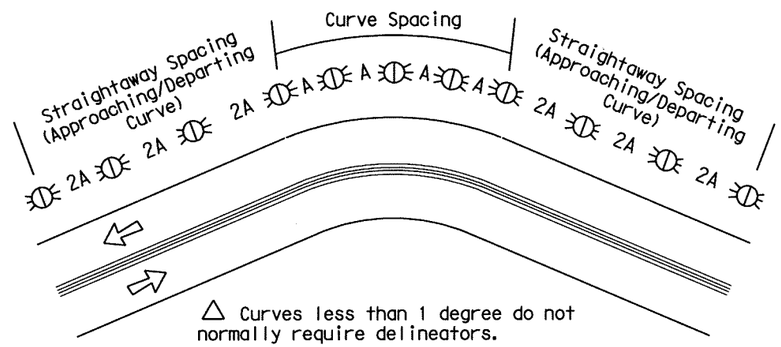
Degree of Curve	Feet: Radius of Curve	Spacing in Curve	Spacing in Strtawy	Chevron Spacing in Curve
		A	2A	B
1	5730	225	450	
2	2865	160	320	
3	1910	130	260	
4	1433	110	220	
5	1146	100	200	160
6	955	90	180	160
7	819	85	170	160
8	716	75	150	160
9	637	75	150	120
10	573	70	140	120
11	521	65	130	120
12	478	60	120	120
13	441	60	120	120
14	409	55	110	80
15	382	55	110	80
16	358	55	110	80
19	302	50	100	80
23	249	40	80	80
29	198	35	70	40
38	151	30	60	40
57	101	20	40	40

Curve delineator approach and departure spacing should include 3 delineators spaced at 2A. This spacing should be used during design preparation or when the degree of curve is known.



For Chevron Specifications and payment, refer to Item 644 "Small Roadside Sign Supports and Assemblies".

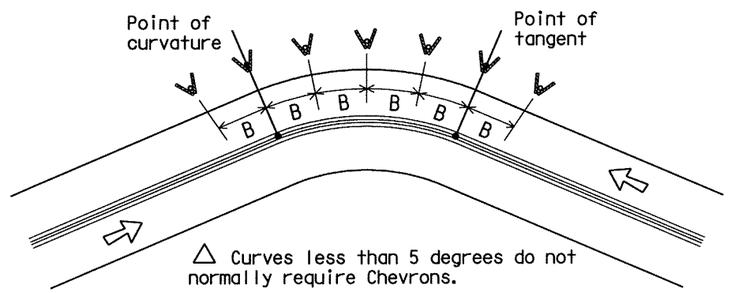
Suggested Spacing for Highway Delineators on Horizontal Curves △



△ Curves less than 1 degree do not normally require delineators.

Suggested Spacing for Chevrons on Horizontal Curves △

The Chevron may be used to provide additional emphasis and guidance for a change in horizontal alignment. A Chevron may be used as a supplement to delineation.



△ Curves less than 5 degrees do not normally require Chevrons.

GUIDELINES FOR USE OF WARNING DEVICES AT CURVES WITH ADVISORY SPEED LIMITS

Amount by which Advisory Speed Is less than Posted Speed	Warning Devices Needed
0 to 14 MPH	RPMs
15 to 24 MPH	RPMs and Delineators
25 MPH or greater	RPMs and Chevrons

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TYPICAL DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

D & OM(2)-04

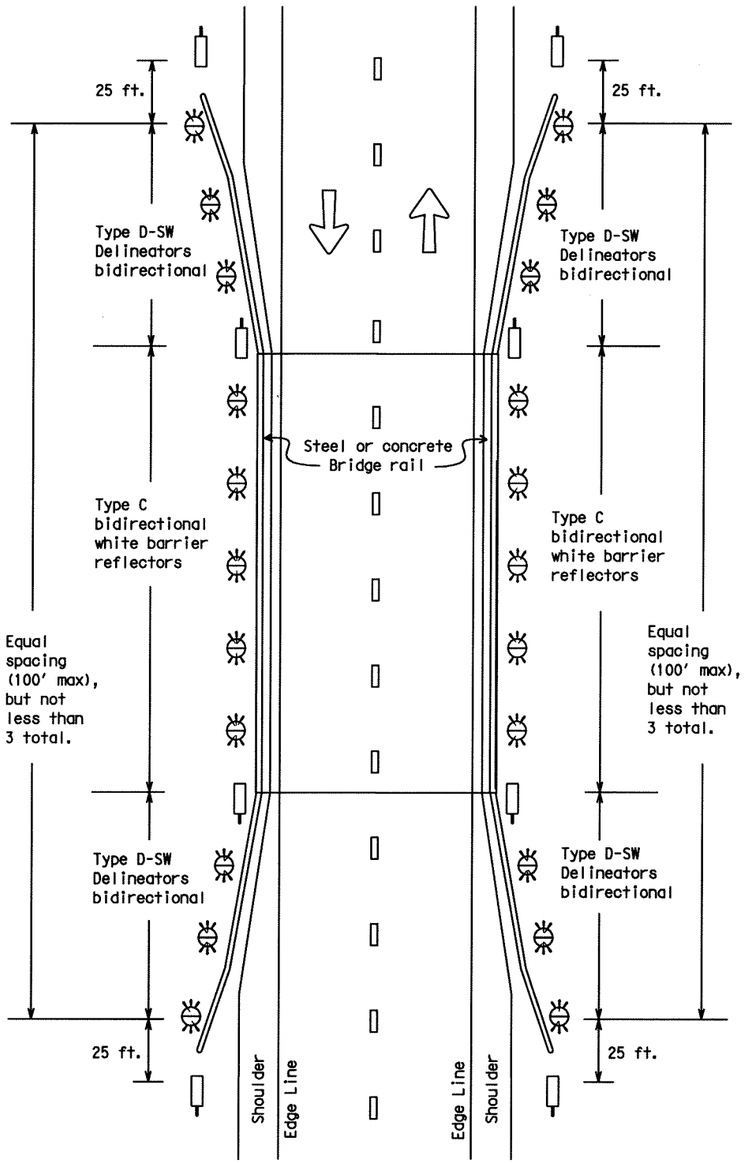
©TxDOT August 2004	DN: DAS	CK: GRB	DW: FDN	CK: CAL
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
	DAL	6	(SEE TITLE SHEET)	762A
	COUNTY		CONTROL / SECTION / JOB	HIGHWAY
	ROCKWALL		0451 / 01 / 032	SH205

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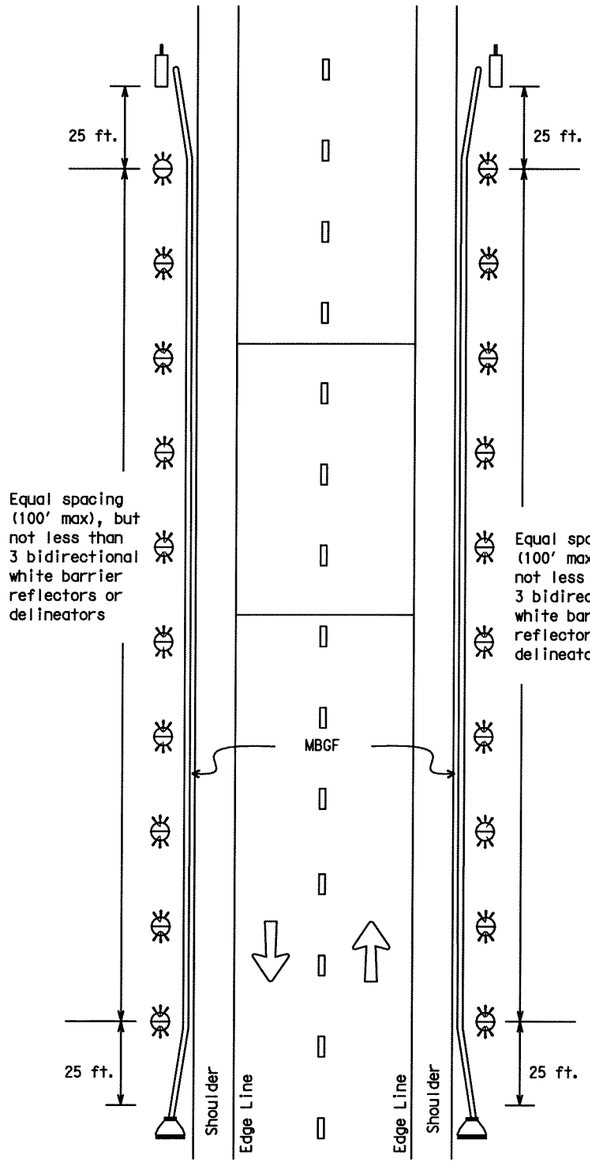
LEVELS DISPLAYED

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ACC:	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

Two-way, Two lane Roadway with Reduced Width Approach Rail

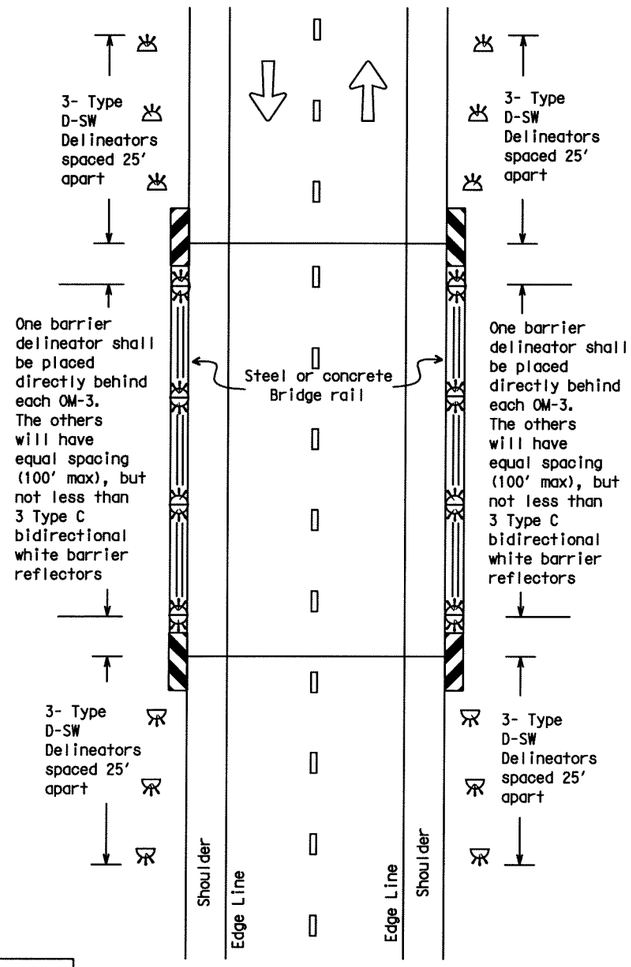


Two-way, Two lane Roadway with Metal Beam Guard Fence (MBGF)



Terminal Ends include OB-3F.
There is no need to install an OM-2 in front of terminal.

Two-way, Two lane Roadway Bridge with No Approach Rail



LEGEND

- Bidirectional Delineator
- Delineator
- OM-3
- OM-2
- Terminal End

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

D & OM(3)-04

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REVISIONS				

STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
DAL	6	(SEE TITLE SHEET)	762B

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

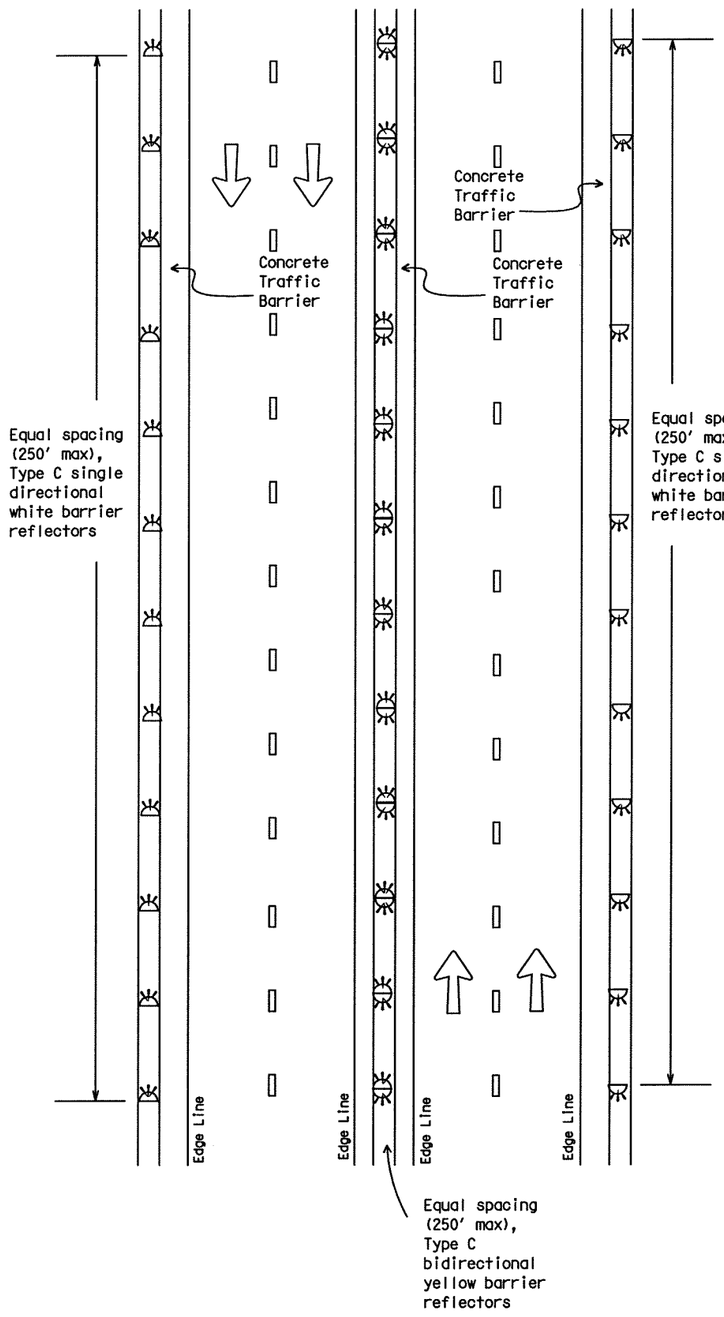
20C

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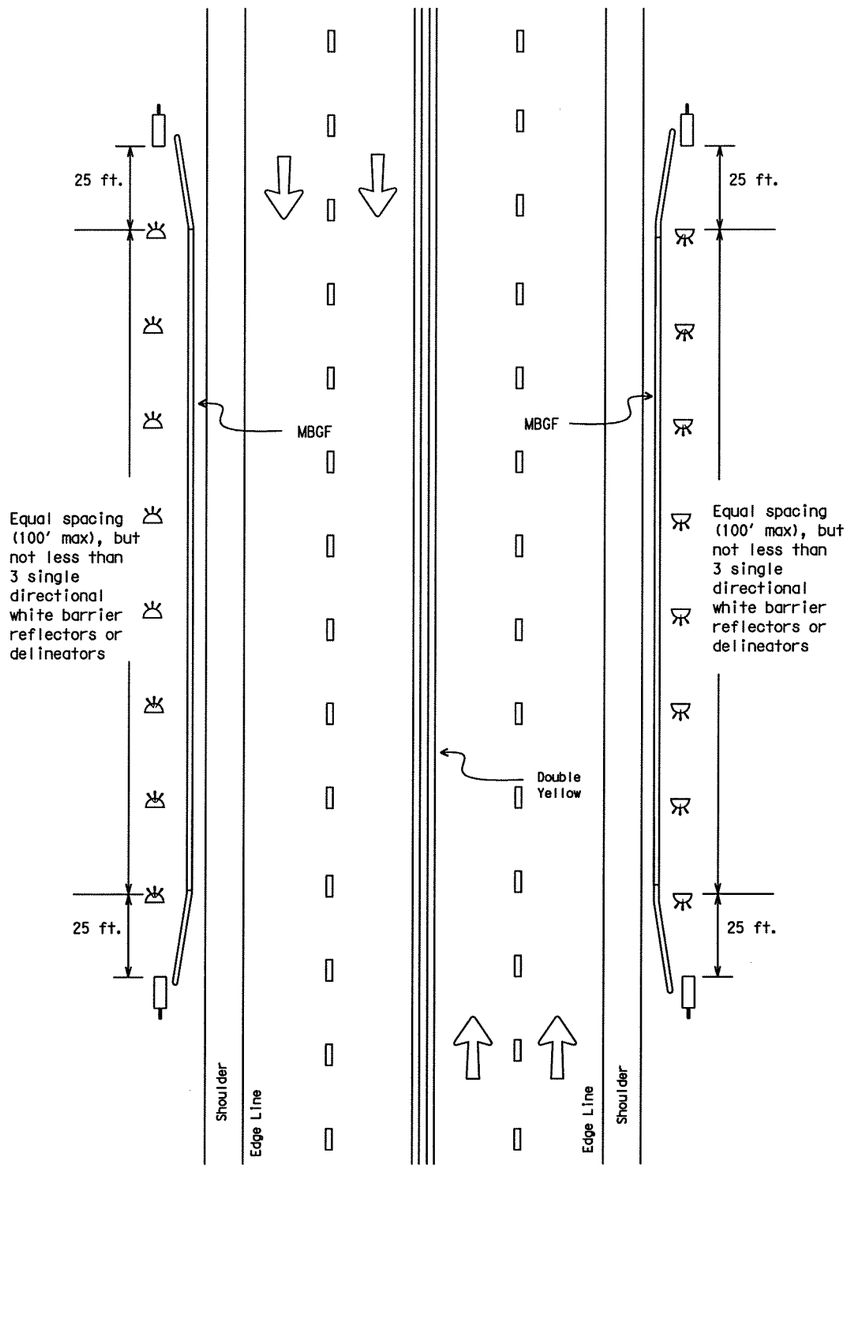
LEVELS DISPLAYED
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17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 1

ACC:

Continuous Concrete Barrier



Multi-lane Undivided, Two-way Roadway with Metal Beam Guard Fence (MBGF)



LEGEND
- Bidirectional Delineator
- Delineator
- OM-3
- OM-2

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

D & OM(4)-04

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REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
	DAL	6	(SEE TITLE SHEET)	763

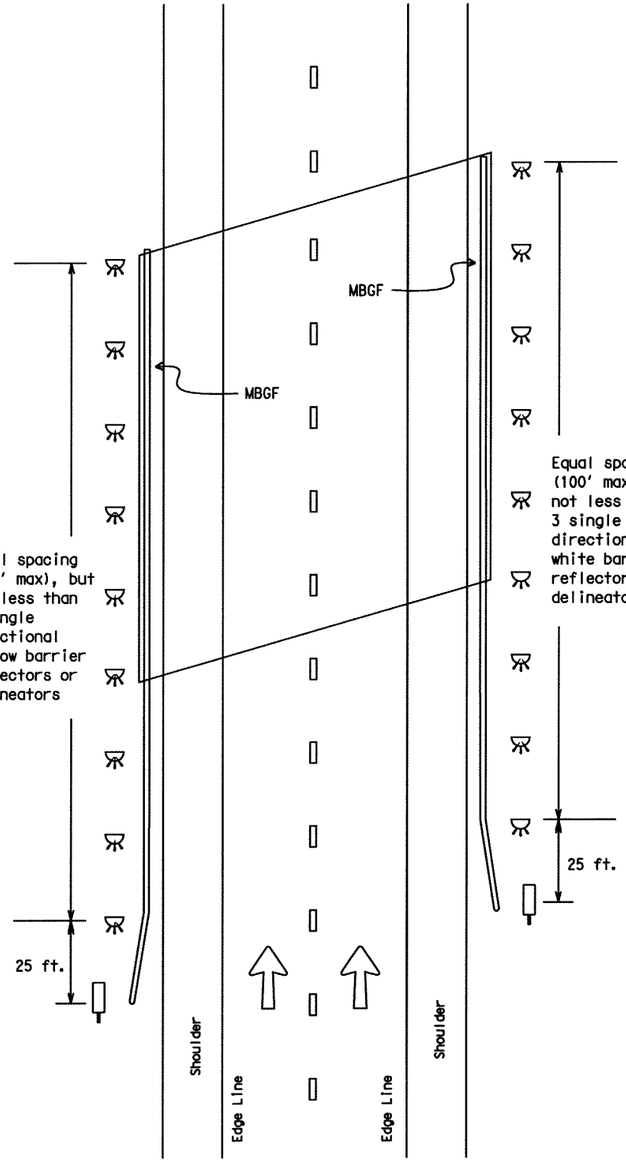
COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

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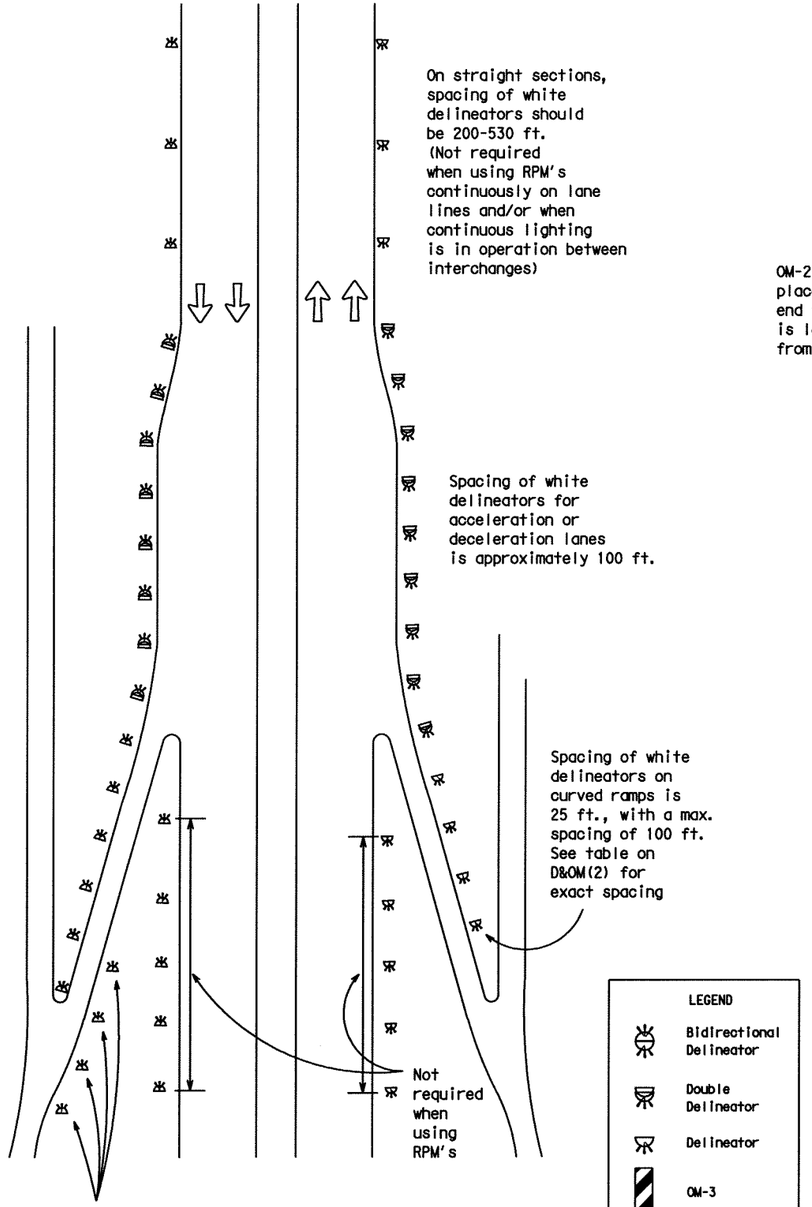
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ACC:

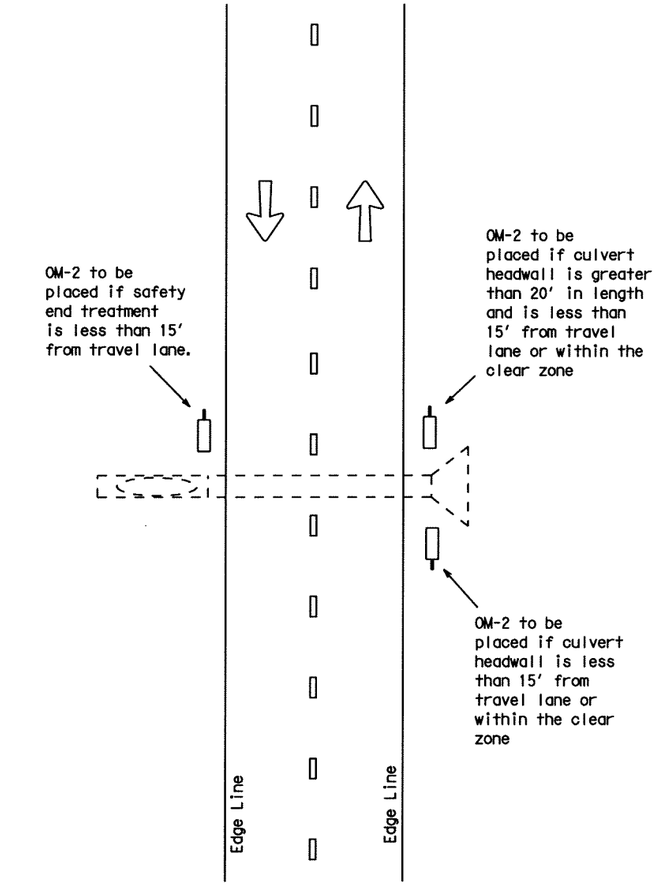
Divided Roadway with Metal Beam Guard Fence



Freeway Delineation including Ramps



For Culverts without MBGF



LEGEND
- Bidirectional Delineator
- Double Delineator
- Delineator
- OM-3
- OM-2

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

DELINEATOR & OBJECT MARKER PLACEMENT DETAILS

D & OM(5)-04

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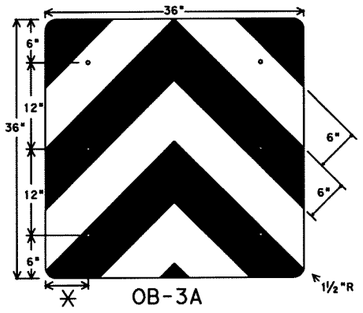
DN: DAS	CK: GRB	DW: FDN	CK: CAL

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
	DAL	6	(SEE TITLE SHEET)	764

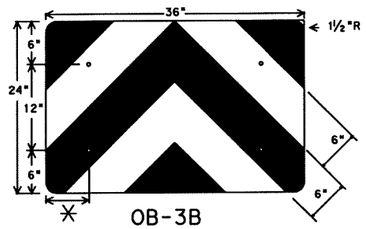
COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

20E

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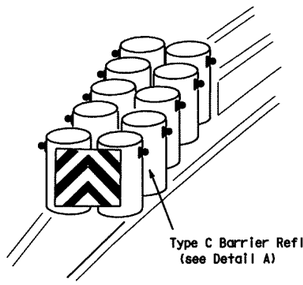


OB-3A



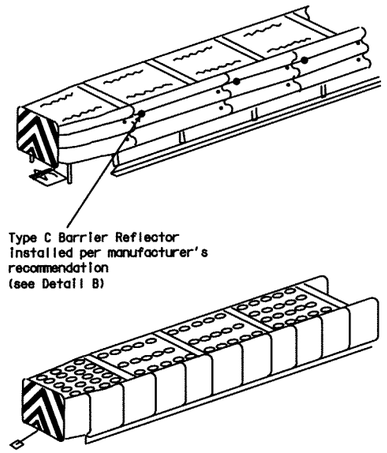
OB-3B

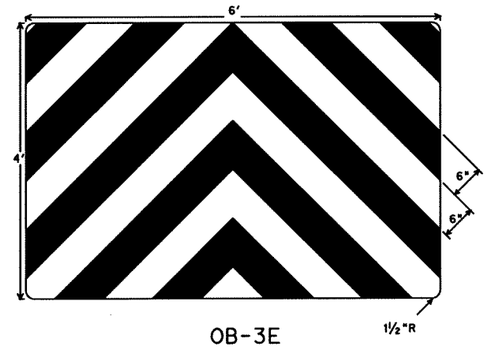
✳ adjust to fit attenuator per manufacturer's recommendation, or as directed by the Engineer.



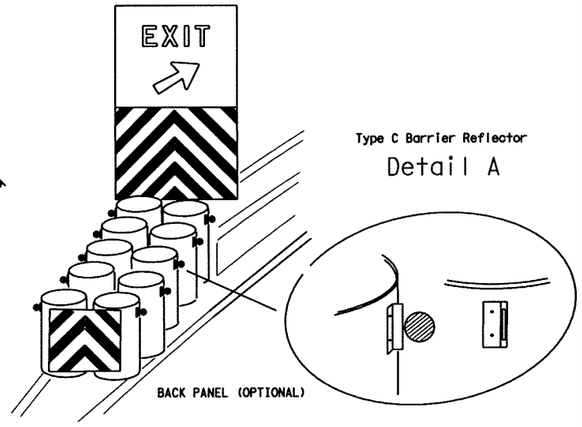
Object Marker blank to be 0.08" thick sheet aluminum conforming to ASTM B-209 Alloy 6061-T6 aluminum as per Specification DMS 7110.

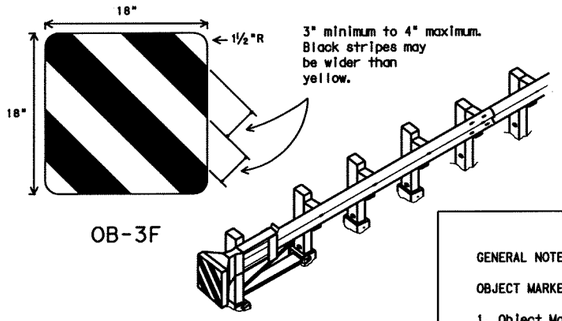
Mounting should be flush with top of VIA. Minimum size 36" x 24".





OB-3E





OB-3F

TYPICAL GUARDRAIL END TREATMENT

GENERAL NOTES:

1. Back panel will be mounted independent of the attenuator. The minimum mounting height is flush with the top of the attenuator.
2. Attenuator may have additional yellow reflective and black striping, and/or reflectors placed on sides. CHEVRONS (W1-8) may be erected to delineate roadway curvature beyond the attenuator. These additional devices will be installed if required elsewhere in the plans.
3. Mount Back Panel per details on SMD Standards, or as detailed elsewhere in the plans.

GENERAL NOTES:

OBJECT MARKERS

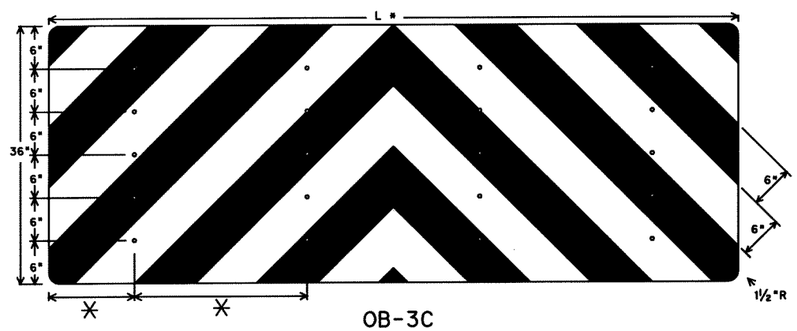
1. Object Markers shall conform to the Texas MUTCD and meet the color and reflectivity requirement of Department Material Specification DMS 8300, Type C. Background shall be yellow reflective and Chevron shall be black.
2. OB-3F is intended for use only with guardrail terminal ends. OM-BF may be fabricated from adhesive backed reflective sheeting applied directly to guardrail end treatment, or applied directly to an "end cap" as per the manufacturer's recommendation. Direct applied sheeting shall provide a smooth surface and have no wrinkles, air bubbles, cuts or tears.
3. Size may be reduced to fit smaller devices, however, the minimum size shall be:
   (a) 24 x 24 inch for attenuators, and
   (b) 18 x 18 inches for guardrail end treatments.
4. Pop rivets, screws, or nuts and bolts may be used to attach object markers and reflectors. Holes, slots or other openings may be cut or drilled through object markers to allow cable or other attachments.
5. When traffic passes only on one side of attenuator, only the OM-3 marker should be installed. OM-3 should be installed per the requirements of D & OM Standards with a minimum mounting height of 18 inches.

TYPE C REFLECTORS

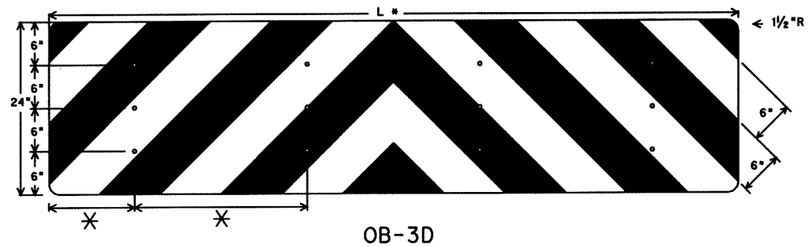
1. Type C delineators shall consist of a Type A or Type B reflector unit (per DMS 8600) attached to a bracket to facilitate delineator mounting on attenuators, guardrails and concrete traffic barriers.
2. Type C reflectors may also be used to delineate side of attenuator, guardrail and concrete traffic barrier.
3. Type C reflectors shall meet the requirements of DMS 8600.

A list of approved Type C Delineators can be found at:

ftp//ftp.dot.state.tx.us/pub/txdot-info/amd/mpl/typecdein.pdf



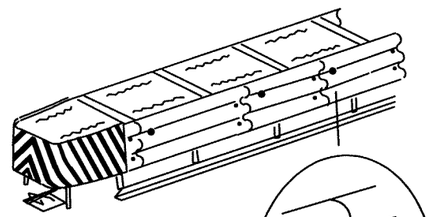
OB-3C



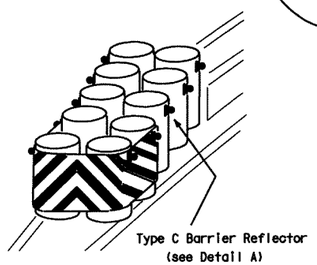
OB-3D

✳ spacing adjusted to attach through centerline of drum, per attenuator manufacturers recommendation, or as directed by the Engineer.

Mounting should be flush with top of attenuator. Minimum size 96" x 24".



Type C Barrier Reflector
Detail B



LEVELS DISPLAYED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

ACC:

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

DELINEATORS & OBJECT MARKERS FOR VEHICLE IMPACT ATTENUATORS

D & OM(VIA)-04

© TxDOT December 1989

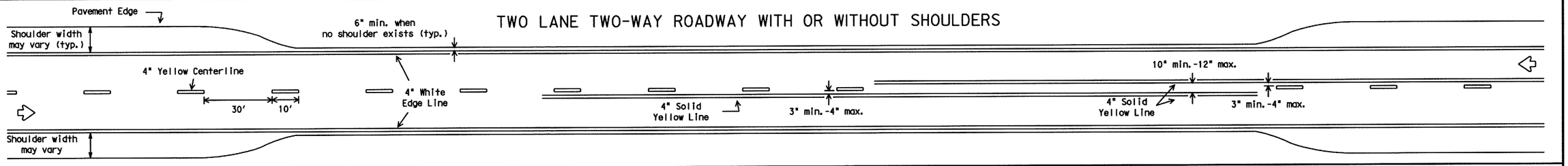
DN: LR	CK:	DW: DN	CK:	MSG NO.:

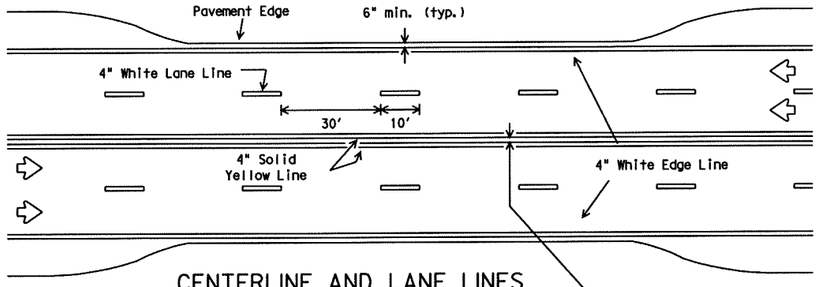
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT				SHEET
4-92	DAL	6	(SEE TITLE SHEET)				765
8-95	COUNTY		CONTROL	SECTION	JOB	HIGHWAY	
4-98	ROCKWALL		0451	01	032	SH205	
8-04							

20F

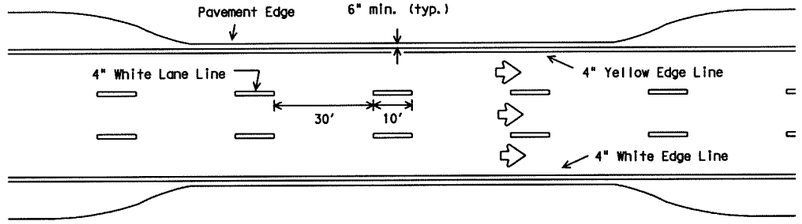
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TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

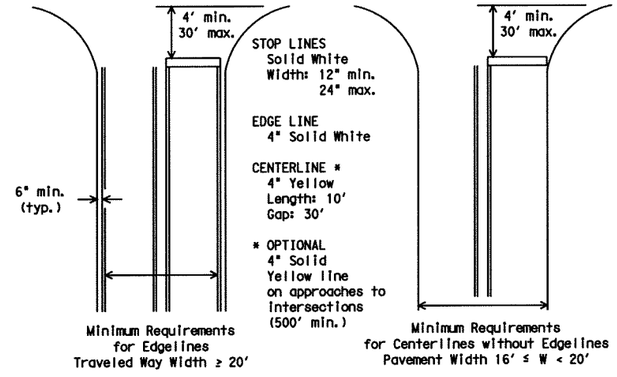




CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



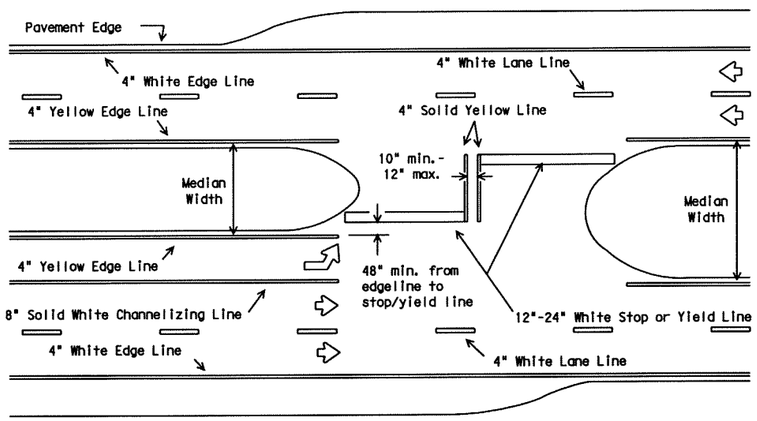
EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

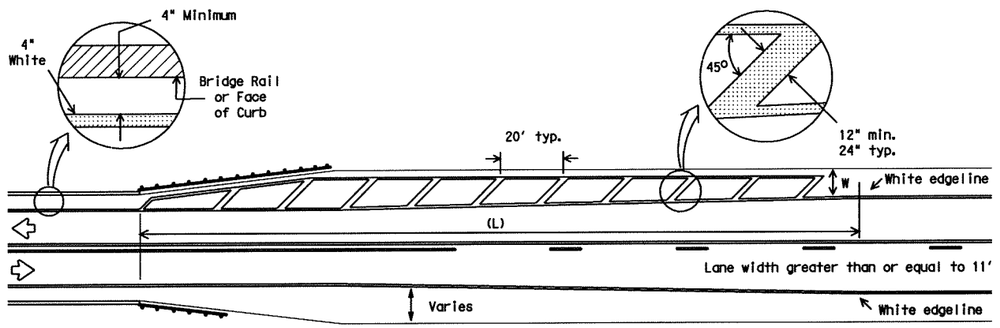
Based on Traveled Way and Pavement Widths for Undivided Highways

FOUR LANE DIVIDED ROADWAY INTERSECTIONS



All medians shall be field measured to determine the location of necessary striping. Stop/Yield bars and centerlines shall be placed when the median width is greater than 30 ft. The median width is defined as the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes. The median width might be different between intersections, interchanges and of opposite approaches of the same intersection. The narrow median width will be the controlling width to determine if markings are required.

ROADWAYS WITH REDUCED SHOULDER WIDTHS ACROSS BRIDGE OR CULVERT



NOTES:

1. No-passing zone on bridge approach is optional but if used, it shall be a minimum 500 feet long.
2. For crosshatching length (L) see Table 1.
3. The width of the offset (W) and the required crosshatching width is the full shoulder width in advance of the bridge.
4. The crosshatching should be required if the shoulder width in advance of the bridge is 4 foot or wider and any reduction in shoulder width across the bridge occurs.
5. For guard fence details, refer elsewhere in the plans.

TABLE 1 - TYPICAL LENGTH (L)

Posted Speed *	Formula
30, 35, 40	$L = \frac{WS^2}{60}$
45, 50, 55, 60, 65, 70	L=WS

* 85th Percentile Speed may be used on roads where traffic speeds normally exceed the posted speed limit. Crosshatching length should be rounded up to nearest 5 foot increment.

L=Length of Crosshatching (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

EXAMPLES:

An 8 foot shoulder in advance of a bridge reduces to 4 feet on a 70 MPH roadway. The length of the cross-hatching should be:

$L = 8 \times 70 = 560$ ft.

A 4 foot shoulder in advance of a bridge reduces to 2 feet on a 40 MPH roadway. The length of the cross-hatching should be:

$L = 4(40)^2 / 60 = 106.67$ ft. rounded to 110 ft.

GENERAL NOTES:

Edgeline striping shall be as shown in the plans or as directed by the Engineer. The edgeline should typically be placed a minimum of 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edgelines are not required in curb and gutter sections of roadways.

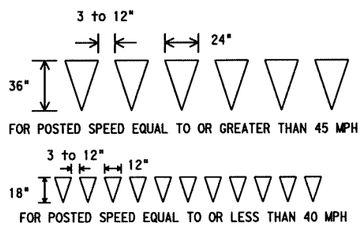
The traveled way includes only that portion of the roadway used for vehicular travel and not the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the inside of edgeline to inside of edgeline of a two lane roadway.

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

SPECIFICATION REFERENCE TABLE

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECT.)	DMS-4200
EPOXY	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130

YIELD LINES



STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-03

©TxDOT November 1978	DN: BAS	CK: GRB	DW: FDN	CK: CAL	MEC NO.:

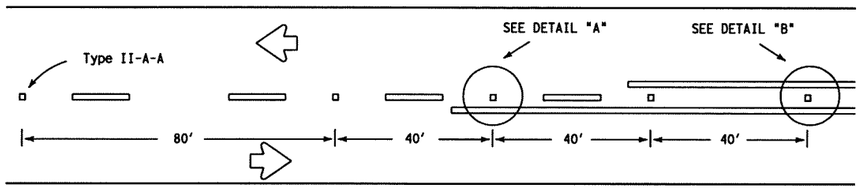
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
8-95	DAL	6	(SEE TITLE SHEET)	766
5-00				
8-00	COUNTY		CONTROL / SECTION / JOB	HIGHWAY
3-03	ROCKWALL		0451 / 01 / 032	SH205

22A

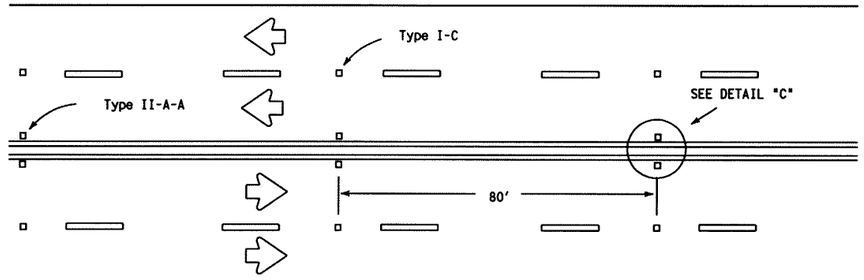
LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
ACC:

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REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

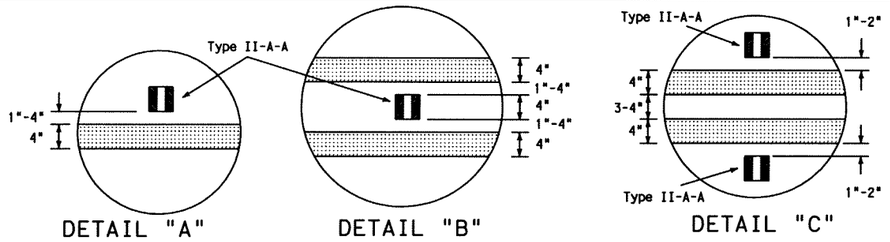


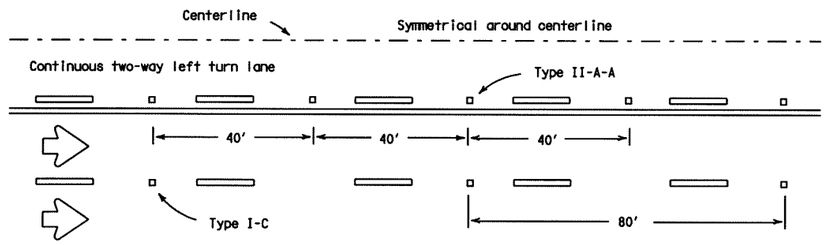
CENTERLINE FOR ALL TWO LANE ROADWAYS



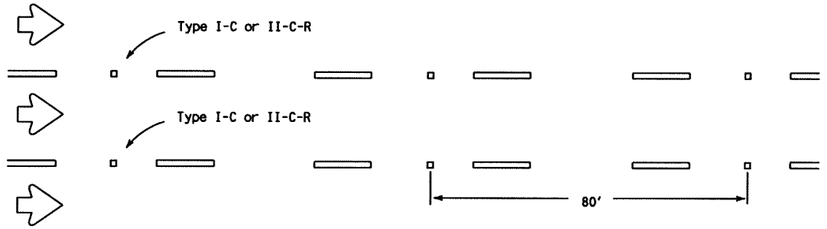
CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY HIGHWAYS

Raised pavement marker Type I-C, clear face toward normal traffic, shall be placed on 80-foot centers.





CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

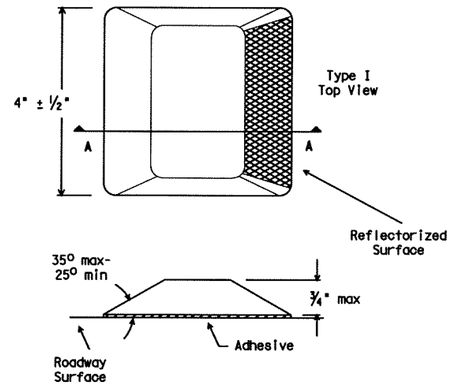
Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.

As required by the Engineer or shown elsewhere in the plans, Type II-C-R or Type I-C markers may be placed on 40-foot centers for the below listed conditions:

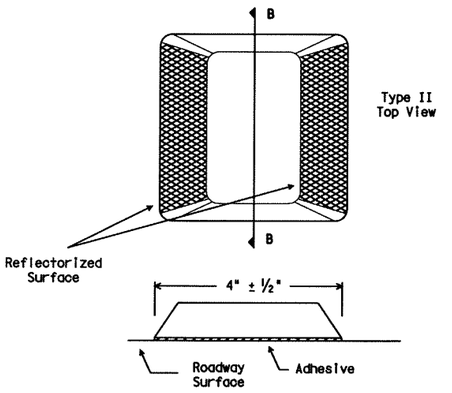
1. horizontal curves,
2. continuously illuminated sections,
3. high volume roadways
4. or roadways where safety concerns exist.

RAISED PAVEMENT MARKERS

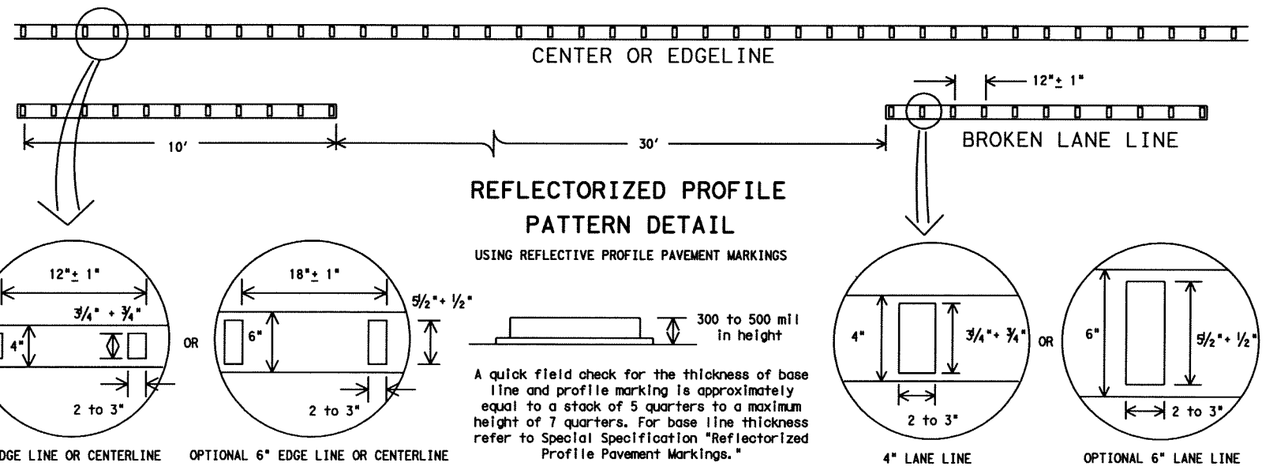
(REFLECTORIZED)



SECTION A



SECTION B



REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

A quick field check for the thickness of base line and profile marking is approximately equal to a stack of 5 quarters to a maximum height of 7 quarters. For base line thickness refer to Special Specification "Reflectorized Profile Pavement Markings."

GENERAL NOTES:

All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.

On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

SPECIFICATION REFERENCE TABLE

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECT.)	DMS-4200
EPOXY	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

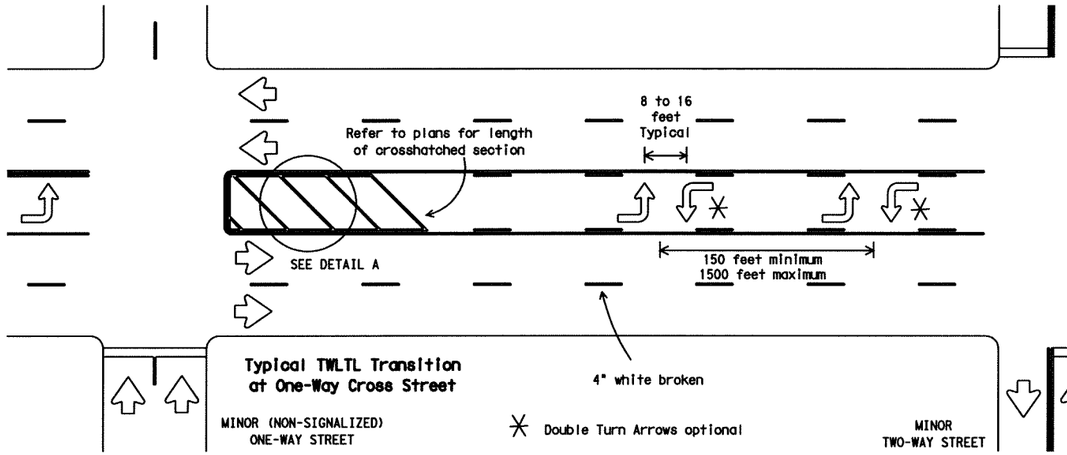
ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

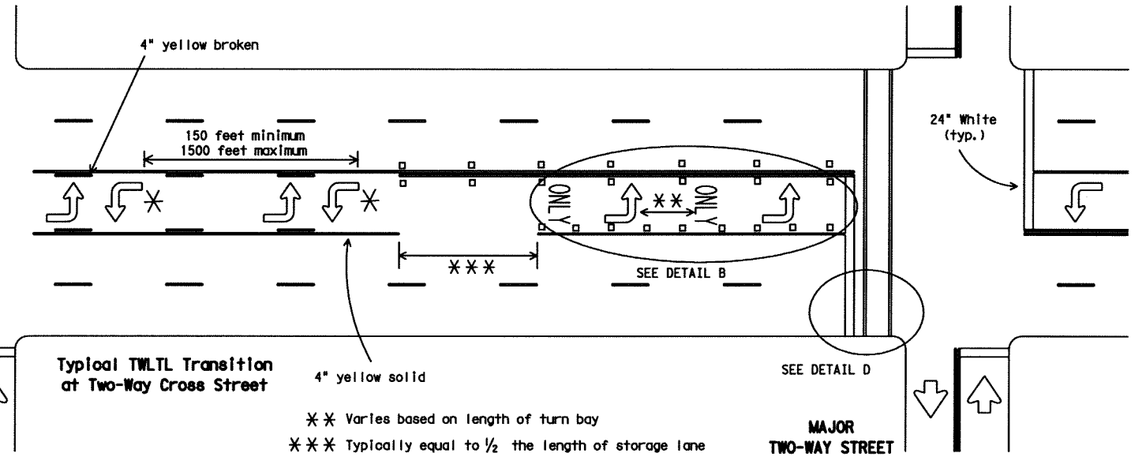
POSITION GUIDANCE USING RAISED MARKERS
REFLECTORIZED PROFILE MARKINGS
PM(2)-00A

©TxDOT April 1977		DN: BAS	CK: GRB	DW: FDN	CK: CAL
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
10-86	DAL	6	(SEE TITLE SHEET)		767
4-92					
5-00	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
8-00	ROCKWALL		0451	01	032	SH205

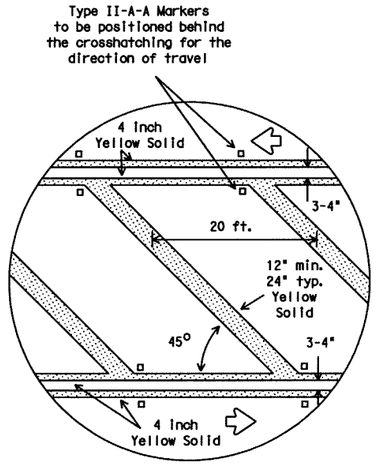
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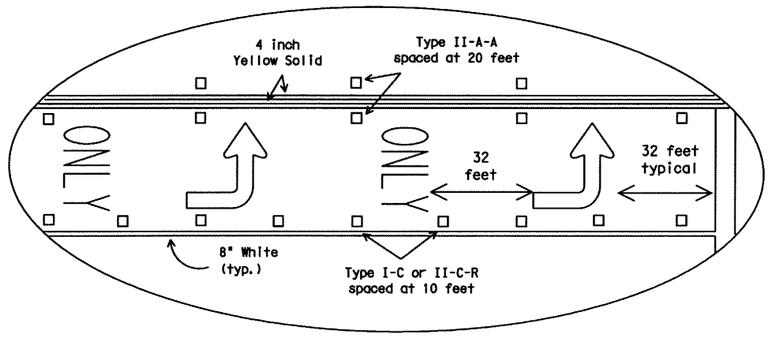
Typical TWLTL Transition at One-Way Cross Street



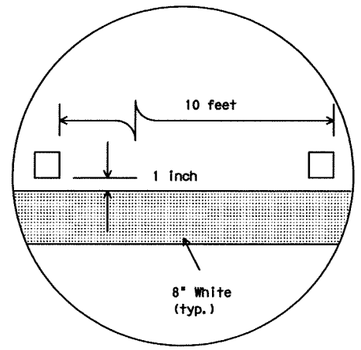
Typical TWLTL Transition at Two-Way Cross Street



DETAIL A

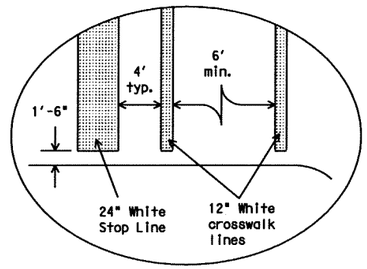


DETAIL B



DETAIL C

Raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes.
Raised pavement marker Type II-C-R with divided highways and raised medians.



DETAIL D

Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

GENERAL NOTES

Refer elsewhere in plans for additional RPM placement and details.

Details for words and arrows as shown on other sheets.

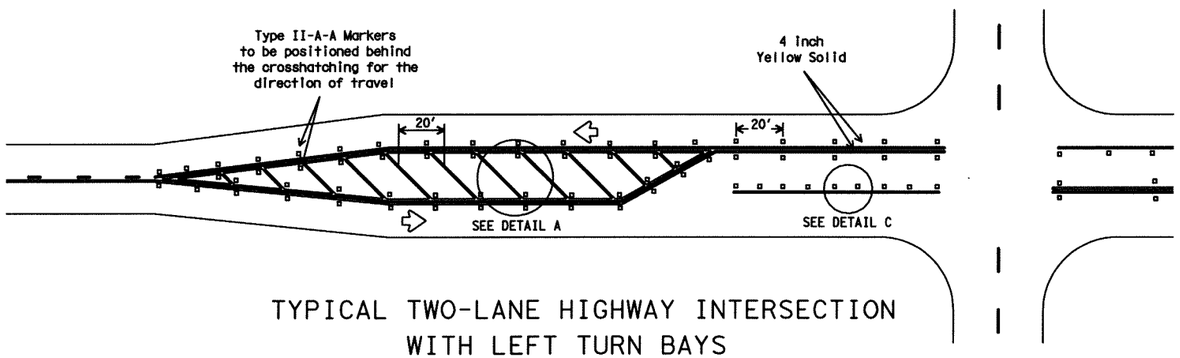
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

For a left turn bay, two sets of words and arrows shall be used if the length of the bay is equal to or greater than 180 feet. The bottom of the first ONLY shall be placed at the beginning of the turn bay lane line as shown above.

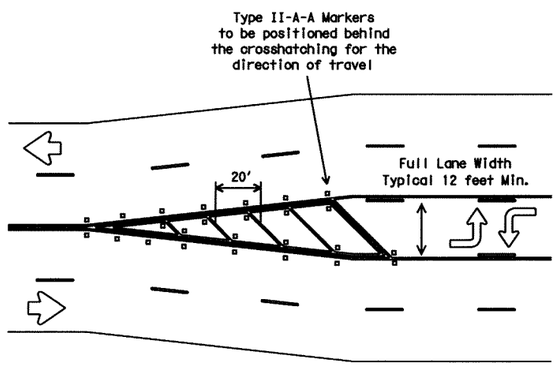
Other crosswalk paterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used.

SPECIFICATION REFERENCE TABLE

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECT.)	DMS-4200
EPOXY	DMS-6100
BITUMINOUS ADHESIVE FOR PAVE. MKS.	DMS-6130



TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS



TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 21 31 41 51 61
17 18 19 20 21 22 23 24 25 32 33 34 35 42 43
23 45 56 57 58 59 60 61 62 63 64 71 72 73 74
90 91 92 95 96 97 98 99 100 101 102 103 104 105 106 107 108
ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

PAVEMENT MARKINGS FOR TWO-WAY LEFT TURN LANES DIVIDED HIGHWAYS AND RURAL LEFT TURN BAYS

PM(4)-03

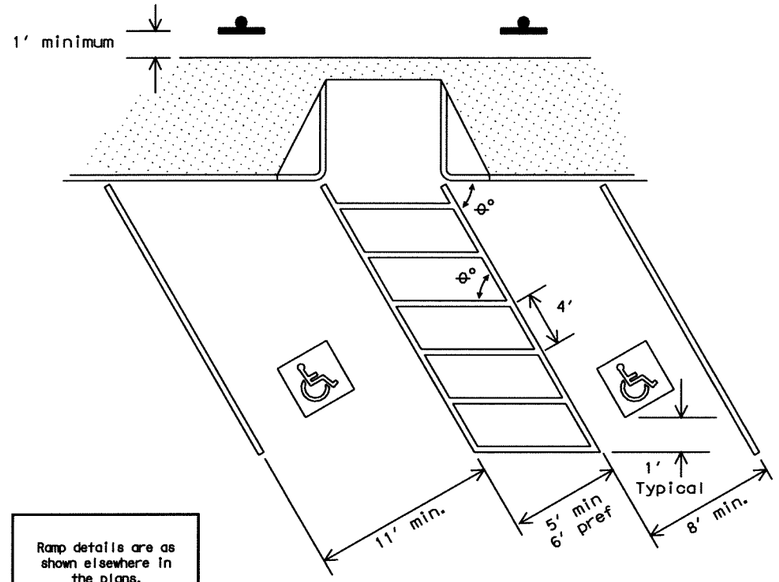
©TxDOT April 1998

DN: BAS	CK: GRB	DW: FDN	CK: CAL	MEG NO.:

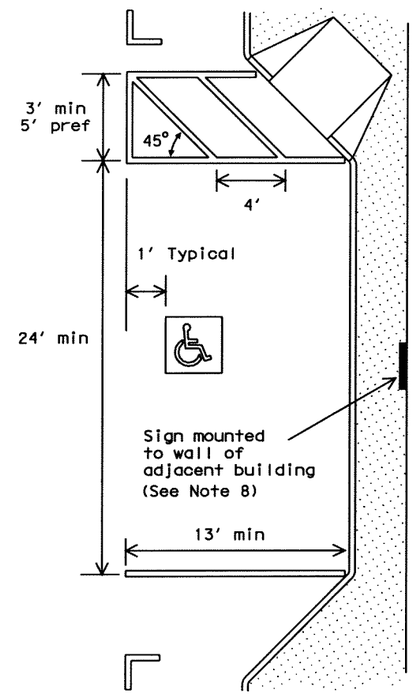
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT				SHEET
5-00	DAL	6	(SEE TITLE SHEET)				768
8-00	COUNTY		CONTROL	SECTION	JOB	HIGHWAY	
3-03	ROCKWALL		0451	01	032	SH205	

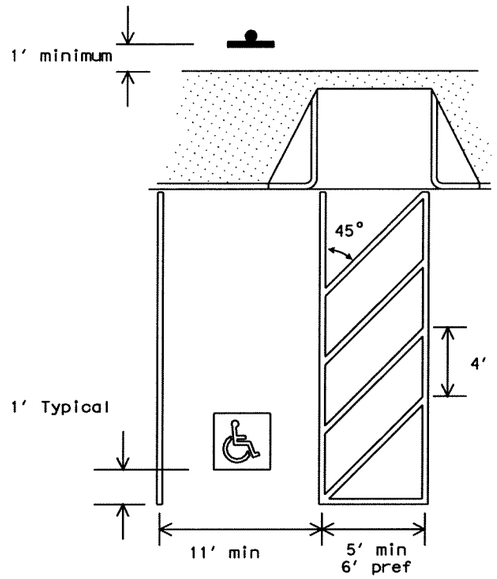
22D

TYPICAL ACCESSIBLE PARKING SPACE DIMENSIONS

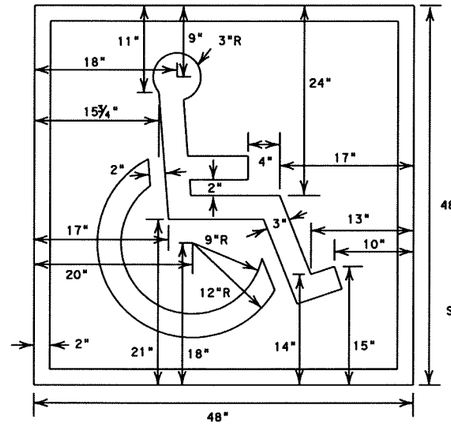


Ramp details are as shown elsewhere in the plans.



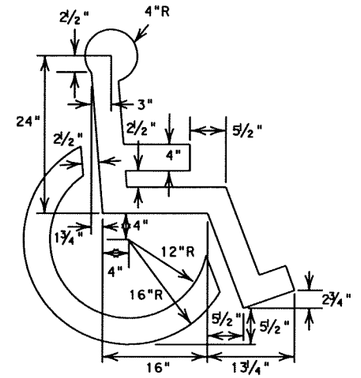


PAVEMENT MARKINGS



With Background

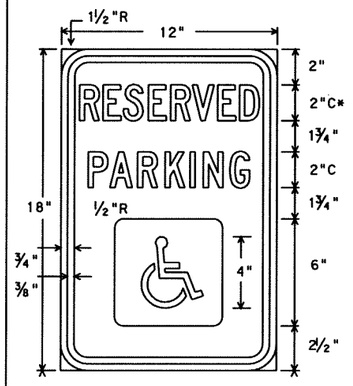
SYMBOL & BORDER: WHITE
BACKGROUND: BLUE



Symbol Only

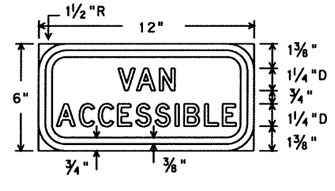
SYMBOL: BLUE OR WHITE

HANDICAPPED PARKING SIGN



R7-8a

LEGEND AND BORDER: GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND: WHITE



R7-8 plaque

LEGEND AND BORDER: GREEN
BACKGROUND: WHITE

SPECIFICATION REFERENCE TABLE	
MATERIALS AND TESTS DIVISION SPECIFICATIONS	
ALUMINUM SIGN BLANKS	D-9-7110
REFLECTIVE SHEETING, TYPE C (HIGH SPECIFIC INTENSITY)	D-9-8300

GENERAL SIGN NOTES:

The Alphabets and lateral spacing between letters and numerals shall conform with the Texas "Manual on Uniform Traffic Control Devices for Streets and Highways", latest edition, and any approved changes thereto. Lateral spacing of text shall provide a balanced appearance. All materials shall conform to Department Specifications.

Legend shall be applied by screening process of black and/or transparent colored ink, cut-out black vinyl non-reflective decal sheeting and/or reflective sheeting or combination thereof. Background shall be white reflective sheeting (Type C).

Sign blanks shall be one piece 0.08 inch thick sheet aluminum alloy (Type A), unless otherwise noted elsewhere in the plans.

GENERAL NOTES:

1. All parking space limit lines shall be 4" solid white lines.
2. Aisle markings shown are examples only. Other methods to indicate a NO PARKING area are acceptable. Aisle markings shall be white.
3. Dimensions of limit lines, aisle markings, and symbol (with or without background) may vary + 10%.
4. Pavement marking symbols (with background):
   a) are REQUIRED unless stated elsewhere in the plans,
   b) should be placed toward the far end of the parking spaces so as to be visible to motorists in the travel lane,
   c) may be painted or prefabricated material, and
   d) shall be 30" x 30" minimum.
5. With approval of the Engineer, prefabricated pavement marking symbols with background of other dimensions exceeding the 30" x 30" minimum may be used. Alternative designs shall include a proportion sized symbol of accessibility, and shall conform to the illustrated colors for background, symbol and border.
6. An R7-8 sign:
   a) shall be REQUIRED for each accessible parking space,
   b) shall NOT be placed between two accessible parking spaces,
   c) shall NOT be placed in a location that restricts movement of wheelchairs within the adjacent sidewalk, and
   d) shall have a minimum mounting height of 7 feet. If mounted to wall or located so as not to be near pedestrian traffic minimum mounting height may be 7 feet.
7. Post mounted signs should be placed approximately 1 foot (or greater) behind the curb to prevent damage from vehicle overhang.
8. Signs may be mounted directly to an adjacent wall of a building when post mounting is impractical.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

PAVEMENT MARKINGS AND SIGNING FOR ACCESSIBLE PARKING

PM(AP)-98

© TxDOT August 1995

DN: LR/MT	CK: -	DW: DN	CK: -	MSG NO.:

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
4-98	DAL	6	(SEE TITLE SHEET)	769

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
ROCKWALL	0451	01	032	SH205

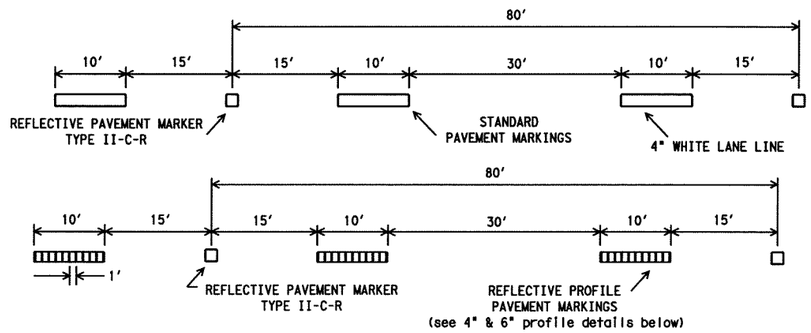
22F

LEVEL	PLAYED	DATE:	ACC: d58hp1c/usr/d580504	FILE:	DN: LR CK: CW DW: DN CK: MT
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16					
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32					
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48					
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63					

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LEVELS DISPLAYED
ACC:

TRAFFIC LANE LINES PAVEMENT MARKING DETAILS

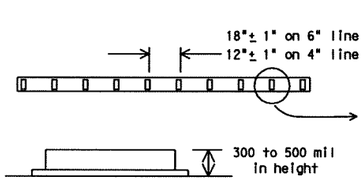


PAVEMENT MARKERS (REFL) TYPE II-C-R SHOULD BE SPACED ON 80' CENTERS WITH THE CLEAR FACE TOWARD NORMAL TRAFFIC AND THE RED FACE TOWARD WRONG WAY TRAFFIC. AS REQUIRED BY THE ENGINEER OR SHOWN ELSEWHERE IN THE PLANS, TYPE II-C-R MAY BE PLACED ON 40 FOOT CENTERS FOR THE BELOW LISTED CONDITIONS:

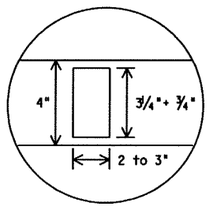
1. horizontal curves,
2. continuously illuminated sections,
3. high volume roadways
4. or roadways where safety concerns exist.

EDGELINE PAVEMENT MARKINGS

EDGELINES SHOULD TYPICALLY BE 4" WIDE AND THE MATERIALS SHALL BE AS SPECIFIED IN THE PLANS. IF RAISED PROFILE PAVEMENT MARKINGS ARE USED SEE DETAILS BELOW.

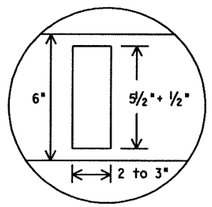


REFLECTIVE PROFILE PAVEMENT MARKINGS



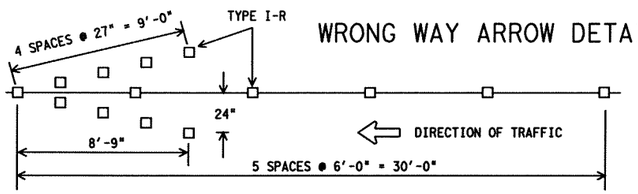
STANDARD 4" PROFILE DETAIL

OR



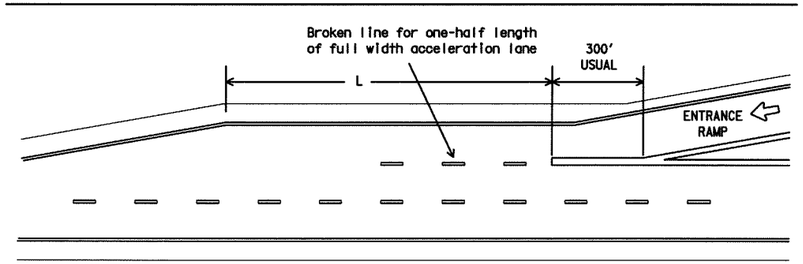
OPTIONAL 6" PROFILE DETAIL

WRONG WAY ARROW DETAIL

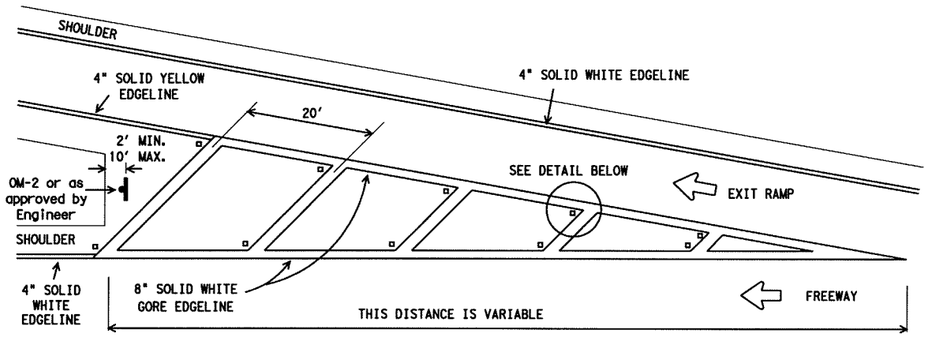


ALL RAISED MARKERS IN THE WRONG WAY ARROW SHALL BE TYPE I-R REFLECTORIZED PAVEMENT MARKERS WITH THE REFLECTORIZED SURFACE FACING THE WRONG WAY TRAFFIC. TYPE II-C-R SHALL NOT BE USED.

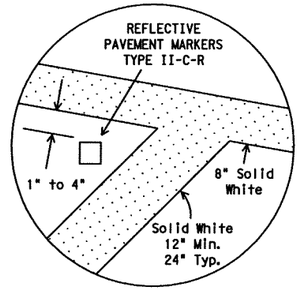
REFLECTORIZED WRONG WAY ARROWS, NOT TO EXCEED TWO, MAY BE PLACED ON EXIT RAMPS. LOCATION OF THE ARROWS SHALL BE AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.



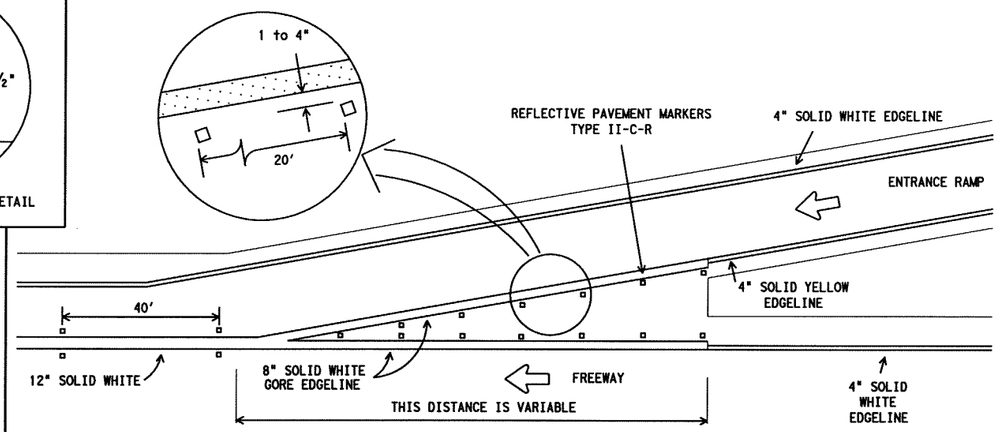
PARALLEL ACCELERATION LANE



THE SHAPE OF THE GORE MARKING WILL VARY DEPENDING ON THE RAMP DESIGN AND WILL BE AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. OM-2 OR SURFACE MOUNT OBJECT MARKER MOUNTING HEIGHT IS 36 INCHES.

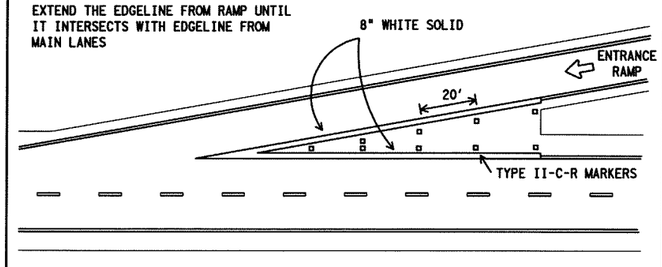


TYPICAL EXIT RAMP GORE MARKING



TYPICAL ENTRANCE RAMP GORE MARKING

EXTEND THE EDGELINE FROM RAMP UNTIL IT INTERSECTS WITH EDGELINE FROM MAIN LANES



TAPERED ACCELERATION LANE

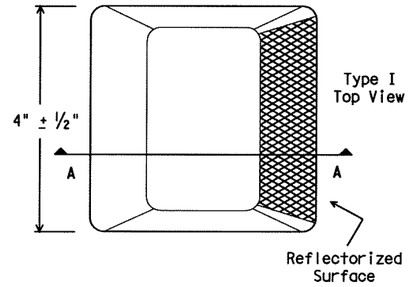
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

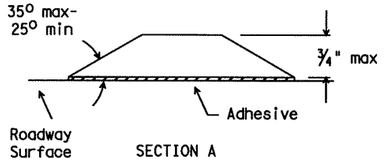
SPECIFICATION REFERENCE TABLE
MATERIAL SPECIFICATIONS

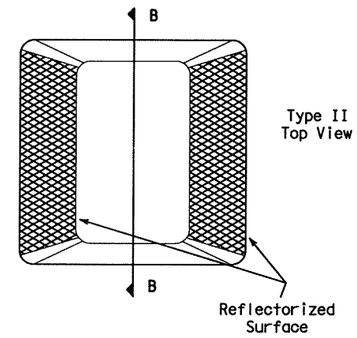
PAVEMENT MARKERS (REFLECT.)	DMS-4200
EPOXY	DMS-6100
BITUMINOUS ADHESIVE FOR PAVE. MKS.	DMS-6130

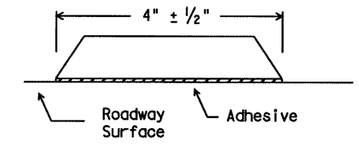
RAISED PAVEMENT MARKERS

(REFLECTORIZED)









SECTION B

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

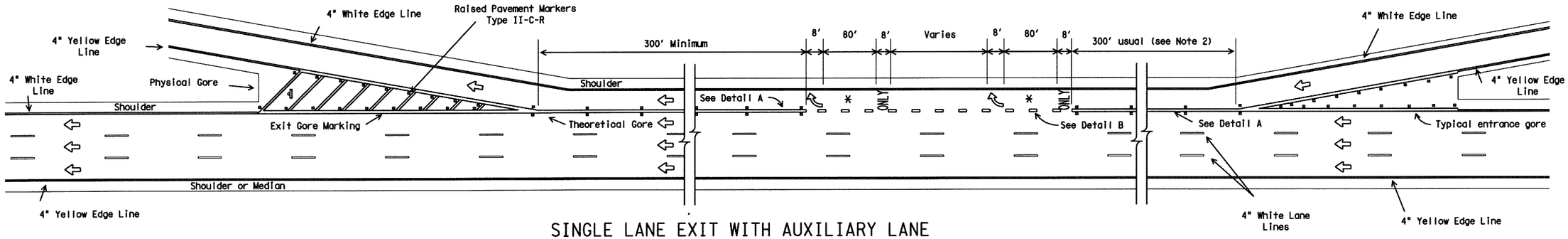
TYPICAL STANDARD FREEWAY PAVEMENT MARKINGS WITH RAISED PAVEMENT MARKERS

FPM(1)-00A

©TxDOT May 1974		DN: BAS	CK: GRB	DW: FDN	CK: CAL	
REVISIONS 12-90 4-92 5-00 8-00	STATE DISTRICT: DAL	FEDERAL REGION: 6	FEDERAL AID PROJECT: (SEE TITLE SHEET)			SHEET: 770
	COUNTY: ROCKWALL		CONTROL: 0451	SECTION: 01	JOB: 032	HIGHWAY: SH205

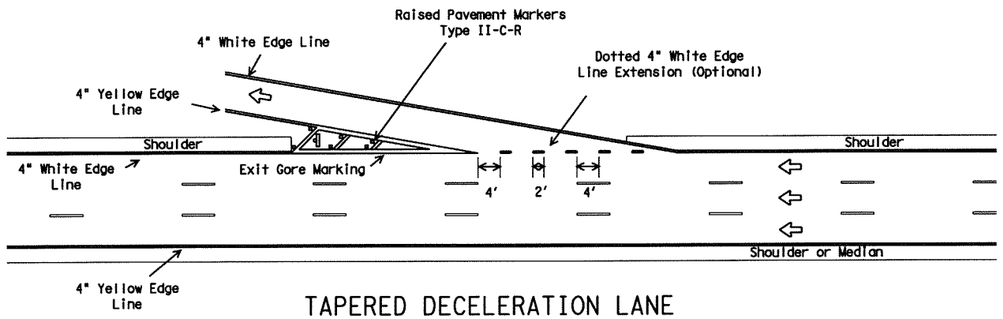
23A

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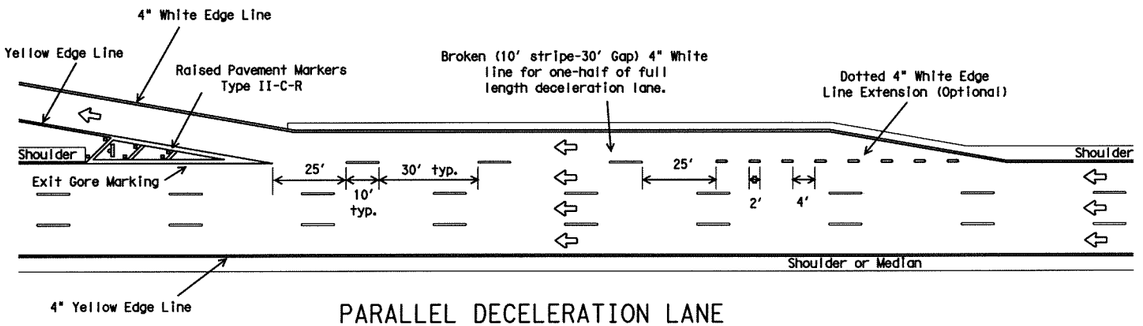


SINGLE LANE EXIT WITH AUXILIARY LANE

(See Note 5)



TAPERED DECELERATION LANE



PARALLEL DECELERATION LANE

LEGEND

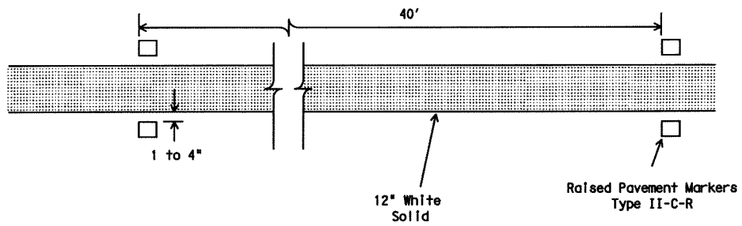
- OM-2, or approved surface mount object marker installed 2 to 10 feet from Physical Gore. Mounting height is approximately 36 inches.
- Denotes direction of traffic.
- Pavement marking arrows (white).
- Arrow markings are optional, however "ONLY" is required if arrow is used.

GENERAL NOTES:

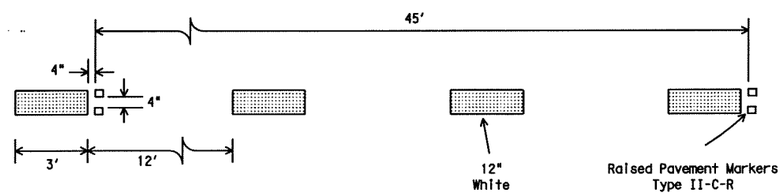
1. Pavement markings shall be white except as otherwise noted.
2. Length of 12" white line may vary depending on location.
3. Lane drop markings are to be used to separate lanes that are required to go in different directions.
4. A lane drop (EXIT ONLY) condition is typically when the nearest entrance ramp is greater than 2000 feet upstream of the exit ramp, measured from theoretical gore of entrance ramp to theoretical gore of exit ramp.
5. All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

SPECIFICATION REFERENCE TABLE

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECT.)	DMS-4200
EPOXY	DMS-6100
BITUMINOUS ADHESIVE FOR PAVE. MKS.	DMS-6130



DETAIL A



DETAIL B

LEVELS DISPLAYED

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63		

ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

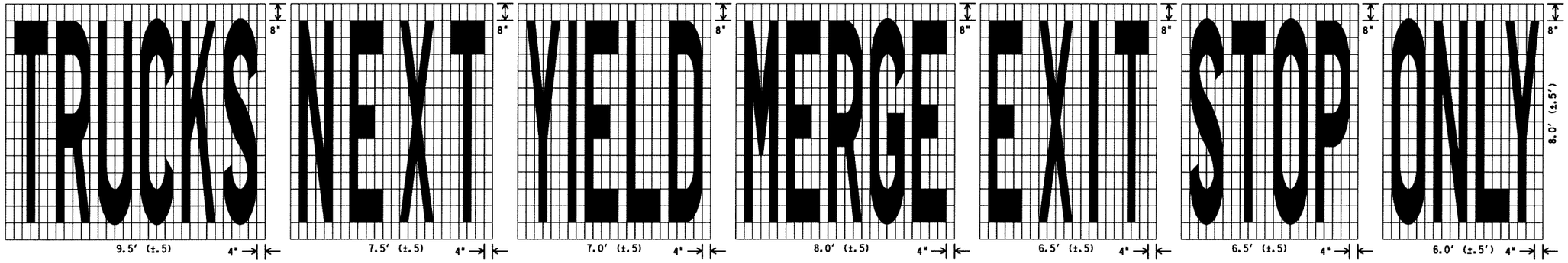
TYPICAL STANDARD FREEWAY PAVEMENT MARKINGS ENTRANCE AND EXIT RAMPS

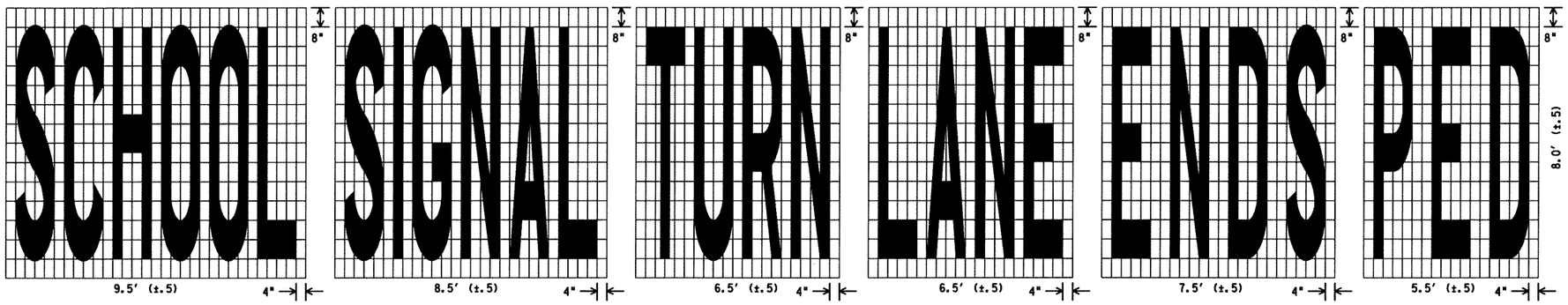
FPM(2)-00A

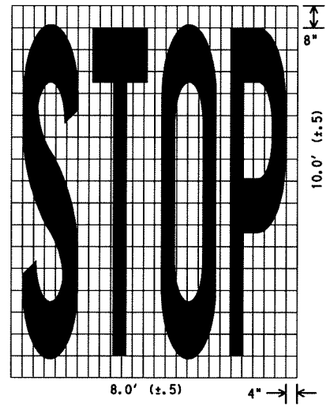
©TxDOT February 1977

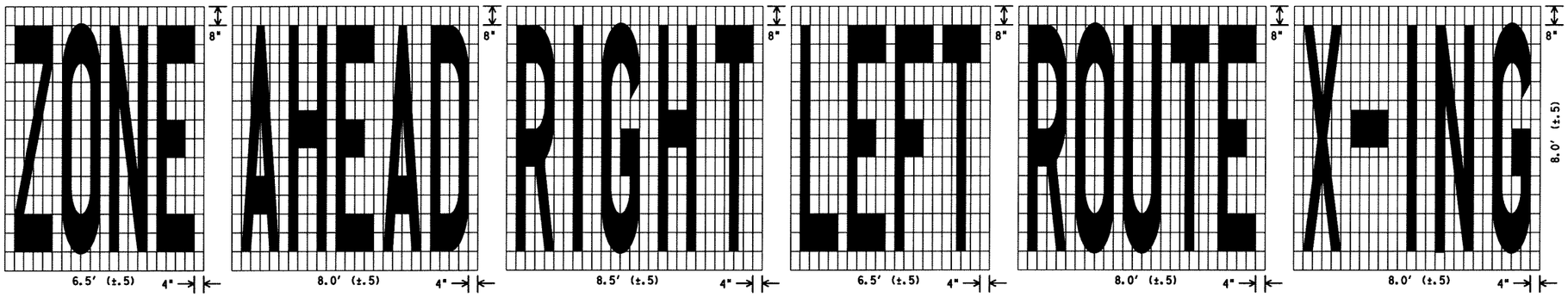
DN: BAS	CK: GRB	DW: FDN	CK: CAL

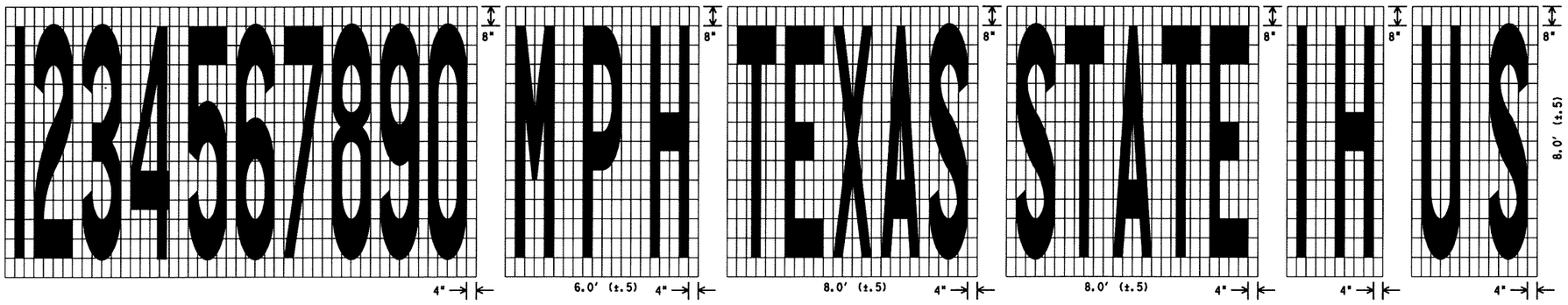
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
4-92	DAL	6	(SEE TITLE SHEET)	771
8-95				
5-00	COUNTY		CONTROL / SECTION / JOB	HIGHWAY
8-00	ROCKWALL		0451 / 01 / 032	SH205











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LEVELS DISPLAYED

1	2	3	4	5	6	7	8	9	10	11	12	31	61	51	6	
17	18	19	20	21	22	23	24	25	26	27	28	29	53	13	152	
33	34	35	56	37	58	39	40	41	42	43	44	45	54	64	748	
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ACC:

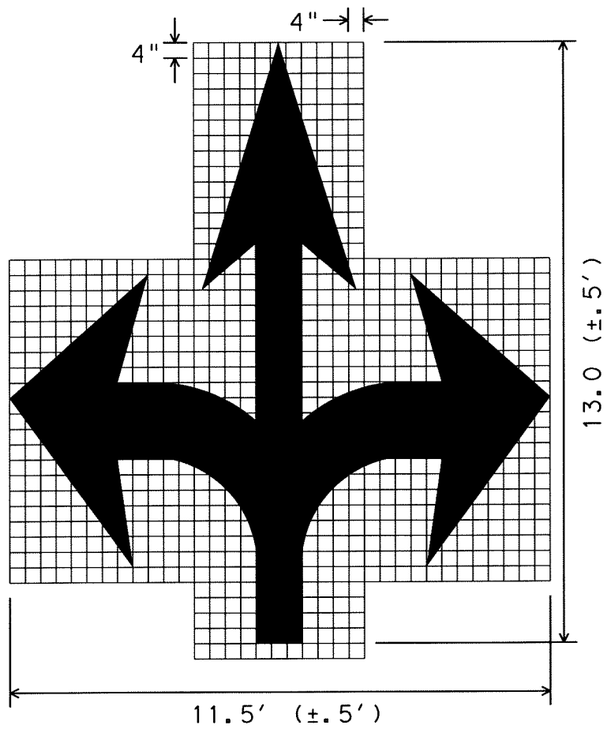
STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

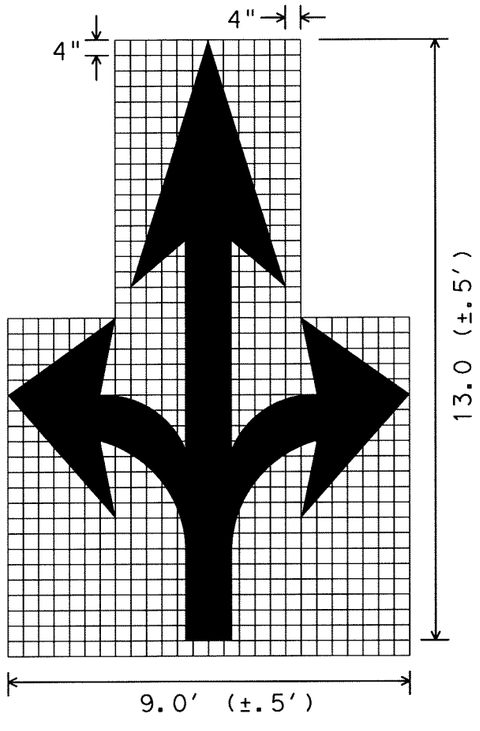
STANDARD PAVEMENT MARKINGS (WORDS)

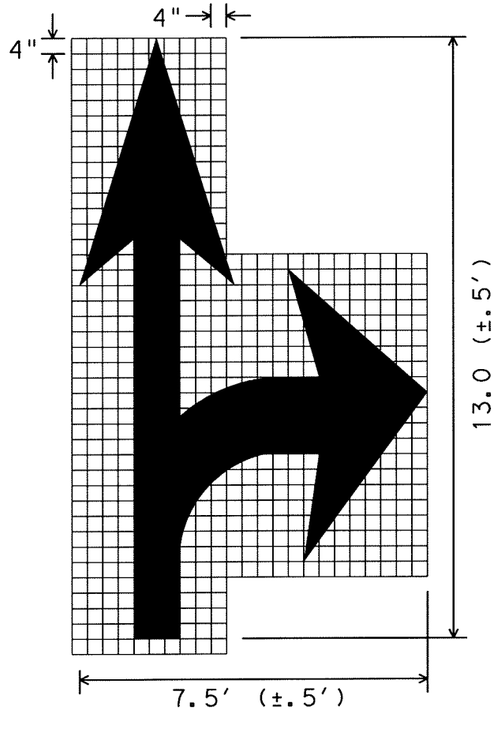
PM(5)-01

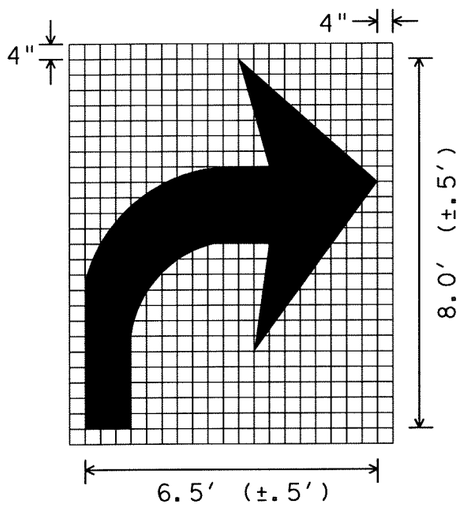
© TxDOT March 2001			DN: -	CK: - GRB	DW: FDN	CK: - CAL
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT			SHEET
	DAL	6	(SEE TITLE SHEET)			771A
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY
	ROCKWALL		0451	01	032	SH205

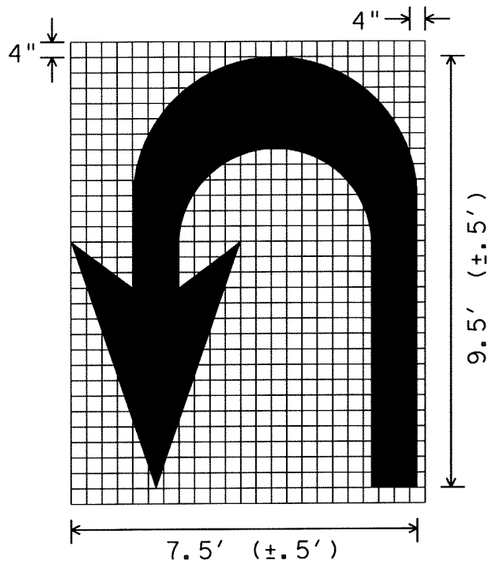
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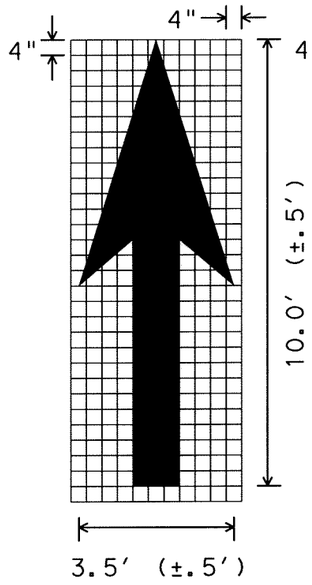


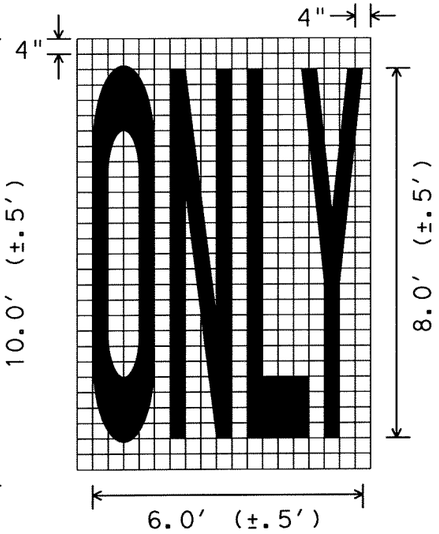












GENERAL NOTES;

1. Minimum 8 foot white markings should be used, unless otherwise noted. If message consists of more than one word, it should be placed with first word nearest the driver.
2. These details are standard size for normal installation; sizes may be reduced approximately one-third for low speed urban conditions; larger sizes may be needed for freeways, above average speed conditions or other critical locations.
3. The longitudinal space between markings should be at least four times the height of the markings, on low speed roads, but should not exceed ten times the height under any condition.
4. Markings considered appropriate for use when warranted include the following:
   - A. Regulatory
     - STOP
     - RIGHT (LEFT) TURN ONLY
     - 25 MPH
     - SYMBOL ARROWS
   - B. Warning
     - STOP AHEAD
     - SIGNAL AHEAD
     - SCHOOL
     - SCHOOL X-ING
     - PED X-ING
     - R X R (see RCPM standard)
   - C. Guide
     - US XXX
     - ROUTE XXX
     - STATE XXX
     - Other words or symbols may be necessary under certain conditions
5. Uncontrolled use of pavement markings can result in driver confusion. Word and symbol markings should be no more than three lines.
6. The word "STOP" shall not be used on the pavement unless accompanied by a Stop line and Stop sign. The word "STOP" shall not be placed on the pavement in advance to a stop line, unless every vehicle is required to stop at all times.
7. Pavement markings should generally be no more than one lane in width, with School messages being the exception. For details of School and School crossing pavement markings, refer to Part VII of the "Texas Manual on Uniform Traffic Control Devices".
8. Spacing between letters should be approximately 4 inches. The width of letters may vary depending on the width of the travel lanes.
9. Lane-Use arrow markings may be used to convey either guidance or mandatory messages. Arrows used to convey a mandatory movement must be accompanied by standard signs and the pavement marking word "ONLY".
10. Pavement markings are to be located as specified elsewhere in the plans.

SPACING BETWEEN LINES OF PAVEMENT MARKINGS	
MPH	SPACING
≤ 45	MINIMUM 4 TIMES THE LETTER HEIGHT
> 45	MINIMUM - 4 TIMES THE LETTER HEIGHT MAXIMUM - 10 TIMES THE LETTER HEIGHT

LEVELS DISPLAYED

| | | |

A. GENERAL SITE DATA

1. PROJECT LIMITS: *From 1000' South of Silds Road to 1000' North of Interurban Street.*

Project Coordiates: 7,016,651.1948 N ; 2,600,468.8776 E Begin Project
7,030,226.6476 N ; 2,594,621.7746 E End Project

2. PROJECT SITE MAPS:

- *Project Location Map: The Title Sheet*
- *Drainage Patterns: Drainage Area Maps*
- *Slopes Anticipated After Major Gradings or Areas of Soil Disturbance: Typical Sections*
- *Location of Erosion and Sediment Controls: SW3P Site Maps*
- *Surface Waters and Discharge Locations: Drainage and Culvert Layouts*
- *Project Specific Locations: To be specified by the Project Field Office during construction and located in the Project SW3P File. Reference item #10 below.*

3. PROJECT DESCRIPTION:

For the construction of widen existing facility from 2 to 6 lanes divided consisting of grading, paving, structures, drainage, striping and signing.

4. MAJOR SOIL DISTURBING ACTIVITIES:

Soil disturbing activites include preparing the right-of-wy, grading, excavation, embankment, structures, erosion and sediment controls, topsoil and seeding.

5. EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER:

(Provide description of soil types, condition, vegetative cover and percentage)

6. TOTAL PROJECT AREA: *60.88* Acres

7. TOTAL AREA TO BE DISTURBED: *60.88* Acres (100 %)

8. WEIGHTED RUNOFF COEFFICIENT

BEFORE CONSTRUCTION: *0.60*
AFTER CONSTRUCTION: *0.70*

9. NAME OF RECEIVING WATERS:

Buffalo Creek flows into East Fork above S. Mesquite Creek which in turn feeds the East Fork Trinity River.

10. PROJECT SW3P FILE:

For projects disturbing one acre or more, TxDOT will maintain a SW3P file at the project field office which contains the following: Index Sheet, TCEQ N.O.I., TCEQ Signature Authority, TCEQ Fee Payment Form, TPDES Storm Water Program or Construction Site Notice, TPDES Permit Coverage Notice, SW3P Inspector Qualification Statements, Inspection and Maintenance Reports, Required Location Maps, Stored Materials List specifying associated control measures, and the Appendix, which contains the TPDES Construction General Permit Language and the Contractor's PSL Permits.

B. EROSION AND SEDIMENT CONTROLS

1. SOIL STABILIZATION PRACTICES: (Select T = Temporary or P = Permanent, as applicable)

T	TEMPORARY SEEDING		PRESERVATION OF NATURAL RESOURCES
	MULCHING (Hay or Straw)		FLEXIBLE CHANNEL LINER
	BUFFER ZONES	P	RIGID CHANNEL LINER
	PLANTING		SOIL RETENTION BLANKET
P	SEEDING	P	COMPOST MANUFACTURED TOPSOIL
P	SODDING		OTHER: *(Specify Practice)*

2. STRUCTURAL PRACTICES: (Select T = Temporary or P = Permanent, as applicable)

T	SILT FENCES
	EROSION CONTROL COMPOST LOGS
	EROSION CONTROL COMPOST BERMS (Low Velocity)
T	ROCK FILTER DAMS
	DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
	DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
	DIVERSION DIKE AND SWALE COMBINATIONS
	PIPE SLOPE DRAINS
P	PAVED FLUMES
T	ROCK BEDDING AT CONSTRUCTION EXIT
	TIMBER MATTING AT CONSTRUCTION EXIT
P	CHANNEL LINERS
	SEDIMENT TRAPS
	SEDIMENT BASINS
	STORM INLET SEDIMENT TRAP
P	STONE OUTLET STRUCTURES
P	CURBS AND GUTTERS
P	STORM SEWERS
P	VELOCITY CONTROL DEVICES
	OTHER: *(Specify Practice)*

3. STORM WATER MANAGEMENT:

1. Storm water drainage will be provided by ditches, inlets, and storm water systems which carry drainage within the R.O.W. to the lows within the roadway and project site which drains to natural facilities.

2. Other permanent erosion controls include hydraulic design to limit structure outlet velocities and grading design generally consisting of 4 :1 or flatter slopes with permanent vegetative cover.

4. STORM WATER MANAGEMENT ACTIVITIES: (Sequence of Construction)

1. Prepare ROW and install perimeter controls including silt fence and rock filter dams as specified on the SW3P plans.

2. Construct structures and paving within project limits.

3. When all construction activity is complete and the site is stabilized and approved by the engineer, remove all temporary structural controls and reseed any areas disturbed by their removal.

5. NON-STORM WATER DISCHARGES:

Filter non-storm water discharges, or hold in retention basins, before being allowed to mix with storm water. These discharges consist of non-polluted ground water, spring water, foundation and/or footing drain water; and water used for dust control, pavement washing and vehicle washwater containing no detergents.

C. OTHER REQUIREMENTS & PRACTICES

1. MAINTENANCE:

Maintain all erosion and sediment controls in good working order. Perform any necessary repairs at the earliest date possible but no later than 7 calendar days after the surrounding exposed ground has dried sufficiently to prevent further damage from heavy equipment. Stabilize disturbed areas on which construction activities have ceased, temporarily or permanently, within 14 calendar days unless they are scheduled to and do resume within 21 calendar days. The areas adjacent to creeks and drainageways have priority followed by devices protecting storm sewer inlets.

2. INSPECTION:

A TxDOT inspector will perform a regularly scheduled SW3P inspection every 7 calendar days. An inspection and Maintenance Report, signed by the TxDOT inspector and the Contractor, will be filed for each inspection. Revise and/or repair each BMP control device in accordance with the current inspection and Maintenance Report and item #1 above.

3. WASTE MATERIALS:

On a regular basis, or as may be directed, collect all waste materials, trash and debris from the construction site and deposit into a metal dumpster having a secure cover and which meets all state and local city solid waste management requirements. Empty the dumpster as required by regulation, or as may be directed, at a local approved landfill site. Do not bury construction waste on the construction project site.

4. HAZARDOUS WASTE & SPILL REPORTING:

As a minimum, any products in the following categories are considered to be hazardous: Paints, Acids, Solvents, Fuels, Asphalt Products, Chemical Additives for Soil Stabilization, and Concrete Curing Compounds or Additives. When storing hazardous material on the project site, or at a Project Specific Location, take all practicable precaution to prevent and/or contain any spillage of these materials. In the event of a spill, contact the spill coordinator immediately.

5. SANITARY WASTE:

Use a licensed sanitary waste management contractor to collect all sanitary waste from portable units as may be required by local regulation, or as directed.

6. OFFSITE VEHICLE TRACKING:

On a regular basis, or as may be directed, dampen haul roads for dust control and stabilize construction entrances/exits. Provide for a motorized broom or vacuum type sweeper to be avilable on a weekly basis, or as may be directed, to remove sediment from paved roadways abutting or transversing the project site.

7. MANAGEMENT PRACTICES:

1. Construct disposal areas, stockpiles and haul roads in a manner that will minimize and control the amount of sediment that may enter receiving waters. Do not locate disposal areas in any wetland, waterbody or streambed.
2. Locate construction staging areas and vehicle maintenance areas in a manner to minimize the runoff of pollutants.
3. When working in or near a wetland, install and maintain operating soil erosion and sediment controls at all times during construction and isolate the work from the wetland.
4. Clear all waterways as soon as practicable of temporary embankment, temporary bridges, matting, falsework, piling, debris or other obstructions placed during construction operations that are not a part of the finished work.

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STATE OF TEXAS
MASSOUD GHOBADIMANESH
68234
REGISTERED PROFESSIONAL ENGINEER

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Signature of Registrant & Date, P.E. 3/22/06

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DALLAS DISTRICT ENVIRONMENTAL

STORM WATER POLLUTION PREVENTION PLAN (SW3P)

TEMPLATE REVISION DATE: 02-08-05

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
MM	6			SH 205
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
AW	TEXAS	DALLAS	ROCKWALL	772
CHECK	CONTROL	SECTION	JOB	
LTR	0451	01	032	
CHECK				
LTR				

During the planning phase of project development the following environmental permits, issues and commitments have been developed during coordination with resource agencies, local governmental entities and the general public. Any change orders and/or deviations from the final design must be reported to the Engineer prior to the commencement of construction activities, as additional environmental clearances may be required.

I. Clean Water Act, Section 402 National Pollutant Discharge Elimination System
(Addresses MS4 requirements for project)

The Contractor must adhere to the provisions of Article 7.19 Section B and Article 506 of TxDOT's "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges" and any special provisions when applicable.

☐ No Action Required ☑ Required Action

Action No.	Waters of the US/Station # R/L of Centerline	Commitment
1. Project disturbs more than 5 acres surface area; TxDOT coordination with TCEQ required for CGP and must file NOI	Entire project	Comply with TPDES: Contractor must implement and maintain a SW3P. See SW3P Plan Sheets, BMP's and details.

II. Clean Water Act, Section 401 and 404 Compliance

The Contractor must adhere to the provisions of Article 7.19 Section C (and Section F when applicable) of TxDOT's "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges" and any special provisions when applicable. Filling, dredging or excavating in any water bodies, rivers, creeks, streams, wetlands or wet areas is prohibited unless specified in the USACE permit and approved by the Engineer.

☐ No Permit Required ☑ 404 Permit and 401 Certification Required

The Contractor must adhere to all of the terms and conditions associated with the following permit(s):

Permit	Required Action	Waters of the US	Applicable Plan Sheet Title
NWP 14	Comply with Conditions of permit and all general conditions (no USACE coordination required)	Unnamed tributary at Justin Road	

Best Management Practices for applicable 401 General Conditions:

General Condition 3 - Categories I and II BMPs required

Category I (Erosion Control)

- ☑ Temporary Vegetation
- ☑ Mulch
- ☐ Interceptor Swale
- ☐ Erosion Control Compost
- ☐ Compost Filter Berms and Socks
- ☐ Blankets, Matting
- ☐ Sod
- ☐ Diversion Dike
- ☐ Mulch Filter Berms and Socks
- ☐ Compost Blankets

Category II (Sedimentation Control)

- ☐ Sand Bag Berm
- ☑ Silt Fence
- ☐ Triangular Filter Dike
- ☐ Stone Outlet Sediment Traps
- ☐ Erosion Control Compost
- ☐ Compost Filter Berms and Socks
- ☑ Rock Berm
- ☐ Straw Bale Dike
- ☐ Brush Berms
- ☐ Sediment Basins
- ☐ Mulch Filter Berms and Socks
- ☐ Compost Blankets

General Condition 9 - Category III BMPs required

Category III (Post-Construction TSS Control)

- ☐ Retention/Irrigation
- ☐ Extended Detention Basin
- ☑ Vegetative Filter Strips
- ☐ Grassy Swales
- ☐ Erosion Control Compost
- ☐ Compost Filter Berms and Socks
- ☐ Constructed Wetlands
- ☐ Wet Basins
- ☐ Vegetation-Lined Ditches
- ☐ Sand Filter Systems
- ☐ Mulch Filter Berms and Socks
- ☐ Compost Blankets

Revised 3/29/2006

III. Cultural Resources

Refer to Article 7.19 Section A (and Section F when applicable) of TxDOT's "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges" and any special provisions as applicable In the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer Immediately.

☑ No Action Required ☐ Required Action

Action No.	Station # R/L of Centerline	Commitment

IV. Vegetation Resources

☐ No Action Required ☑ Required Action

Action No.	Station # R/L of Centerline	Commitment
1. Approx. 0.5 acre urban vegetation including some mature trees would be removed	Entire project	Three (3) mitigation areas are designated along the project: Area 1 - SW corner of intersection of Union Pacific Railroad and SH 205 along SH 205 in front of the Rockwall Cemetary Area 2 - SW corner of intersection of SH 205 and Ridge Road (FM 740) on existing ROW in front of the Ridge Road Center Area 3 - SE corner of intersection of Denison St. and SH 205 outside of the proposed sidewalk in front of the new Rockwall City Hall (See Landscape Development Plan Sheets)
2.	Entire project	Permanent soil erosion control features would be constructed as soon as feasible during the early stages of construction through proper seeding and/or sodding techniques. Distrubed areas would be restored and stabilized as soon as the construction schedule permits. Temporary sodding would be considered where large areas of disturbed ground would be left bare for a considerable length of time. Use only native plants for landscaping and in seed mixtures where practicable.

V. Federal Listed, and Proposed Threatened and Endangered Species, Critical Habitat, State Listed Species, Candidate Species and Migratory Birds

☐ No Action Required ☑ Required Action

Species Potentially within Project Area w/ Description	Habitat Description
1. Timber/canebrake rattlesnake (According to the October 2005 environmental assessment). Description: triangular-shaped head, rattle on tail, dark cross-bands, or predominantly black, up to 60 inches long.	Swamps, floodplains, upland woodlands, riparian zones, abandoned farmland; prefers dense ground cover, i.e. grapevines or palmetto.

Source: USFWS, TPWD and survey of project area.

Special Notes

1. Possible migratory bird species include the whooping crane and wood stork.
2. Excluding clearing activities during the primary season, March through August, for migratory bird species will help minimize impacts to this group.

Action

1. If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer and District Environmental Coordinator at (214) 320-6157 immediately.
2. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests.
3. If caves or sinkholes are discovered, cease work in the immediate area, and contact the Engineer and District Environmental Coordinator immediately.

VI. Hazardous Materials or Contamination Issues

The Contractor must adhere to the provisions of Articles 6.10 and 7.13 of TxDOT's "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges" and any special provisions when applicable. If potentially hazardous material and/or contaminated media (i.e. soil, groundwater, surface water, sediment, building materials) are unexpectedly encountered during construction, and especially near old Railroad R.O.W., cease work in the immediate area and contact the Engineer Immediately.

☑ No Action Required ☐ Required Action

Action No.	Station # R/L of Centerline	Commitment

Sites of Concern (Name and Address)	Database Type	Priority of Concern (Risk, Location & Gradient to Project)	Regulatory Status

Special Notes:

There are 29 regulatory agency listings of sites of concern found during database review; 14 of the 29 sites have documented soil contamination; 6 of the14 with soil contamination have caused groundwater contamination; 3 of those 6 are active sites and are currently undergoing corrective actions.

The Total Station #4527 is an operating fuel station, located adjacent to the proposed ROW, with a corrective action plan in place since July 25, 1996. The next active site with groundwater impacts is NAPA Auto Parts, located adjacent to the proposed ROW, which is undergoing monitoring. The final active site is the One Stop #46 which is not located adjacent to the proposed ROW and would not be affected by ROW acquisition. This site has caused groundwater impacts within 500 feet of a surface water body that is used as a public water source and has had a corrective action plan in place since October 3, 1996. Arch's Car Care located at 1306 South Goliad Street had an incomplete assessment performed that indicated no apparent receptors had been impacted. All other contamination sites have received final concurrence and are closed cases.

Although there may be no actions required, the contractor must be aware of the potential to encounter hazardous materials and/or contaminated media due to the proximity of any listed sites and must adhere to the stated provisions in italics.

VII. Other Environmental Issues

☑ No Action Required ☐ Required Action

Action No.	Station # R/L of Centerline	Commitment

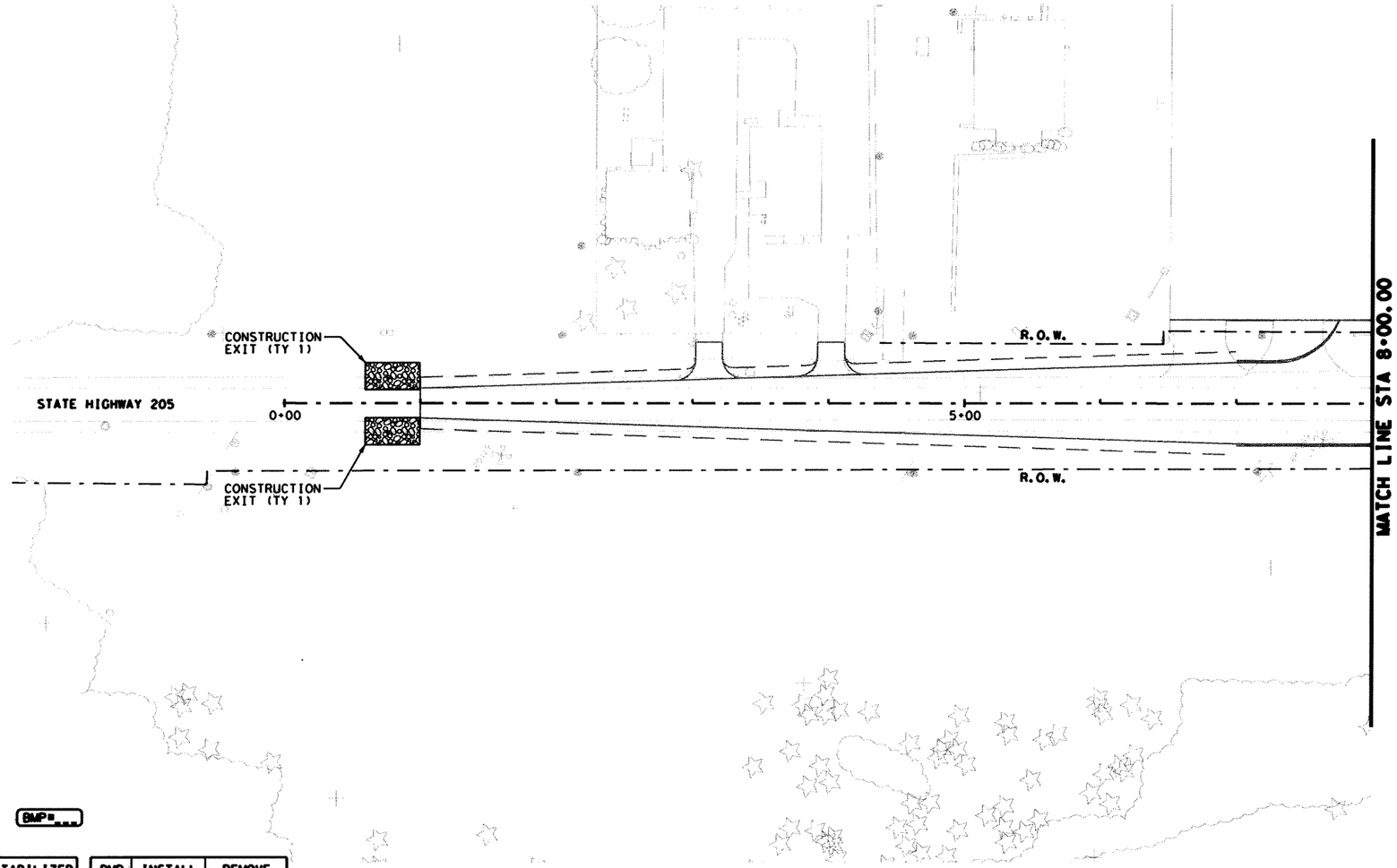
List of Abbreviations

BMP: Best Management Practice
CGP: Construction General Permit
FEMA: Federal Emergency Management Agency
FHWA: Federal Highway Administration
MOA: Memorandum of Agreement
MOU: Memorandum of Understanding
MS4: Municipal Separate Stormwater Sewer System
NOI: Notice of Intent
NOT: Notice of Termination
NWP: Nationwide Permit
PCN: Pre-Construction Notification
SW3P: Storm Water Pollution Prevention Plan
TCEQ: Texas Commission on Environmental Quality
TPDES: Texas Pollutant Discharge Elimination System
TPWD: Texas Parks and Wildlife Department
TxDOT: Texas Department of Transportation
T&E: Threatened and Endangered Species
USFWS: U.S. Fish and Wildlife Service

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Dallas District (DAL)

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			SH 205
STATE	DISTRICT	COUNTY	
TEXAS	DALLAS	ROCKWALL	
CONTROL	SECTION	JOB	SHEET NO.
0451	01	032, etc.	773



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SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFD — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-IN — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
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BMP=___

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

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March 22, 06

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REGISTERED PROFESSIONAL ENGINEER

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SH 205
ROCKWALL COUNTY

SW3P

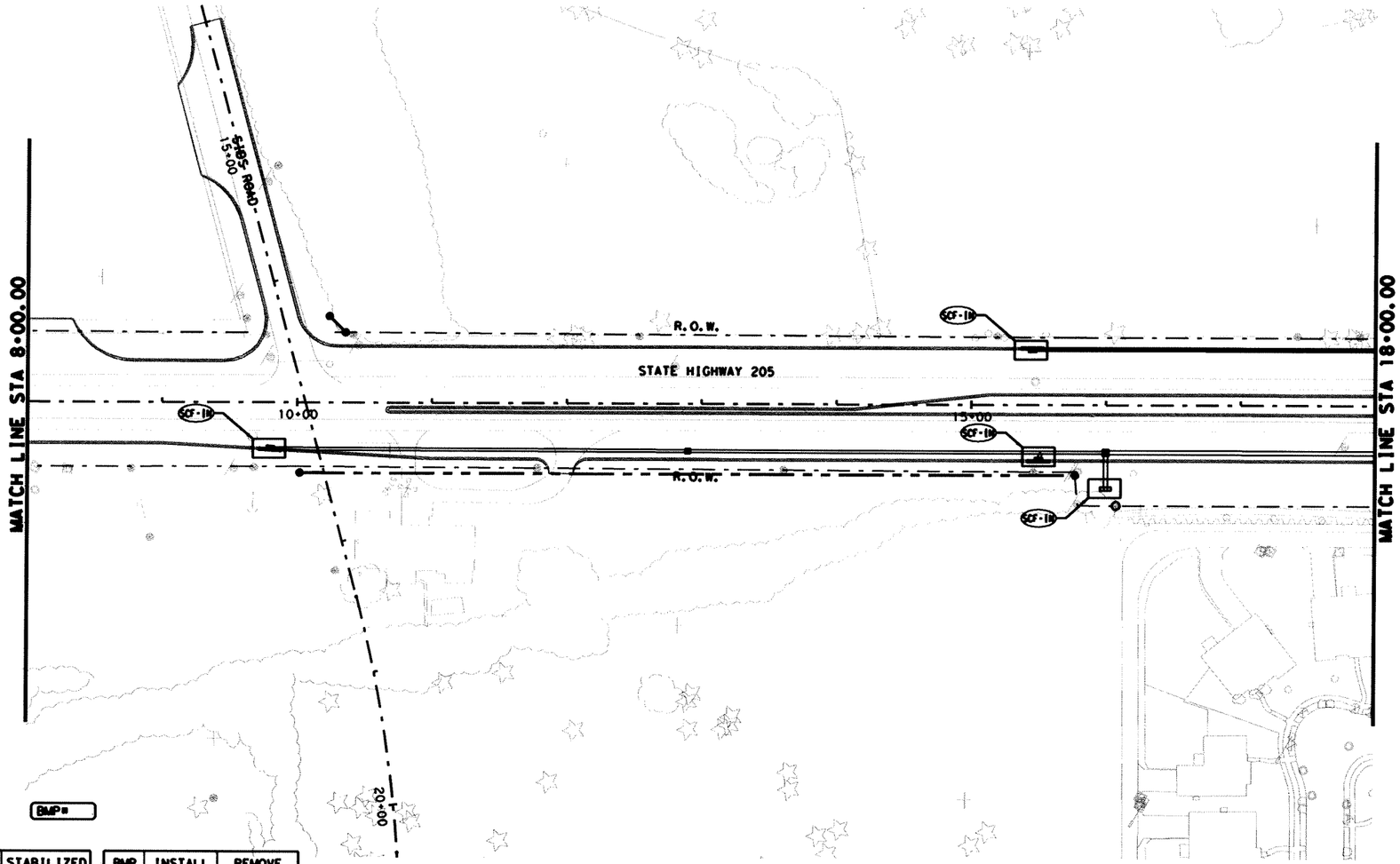
SITE PLAN
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SHEET 1 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	774
CONT.	SECT.	JOB	
0451	01	032	

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SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFD(2) — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1B — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

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AREA #	DISTURBED DATE	STABILIZED DATE

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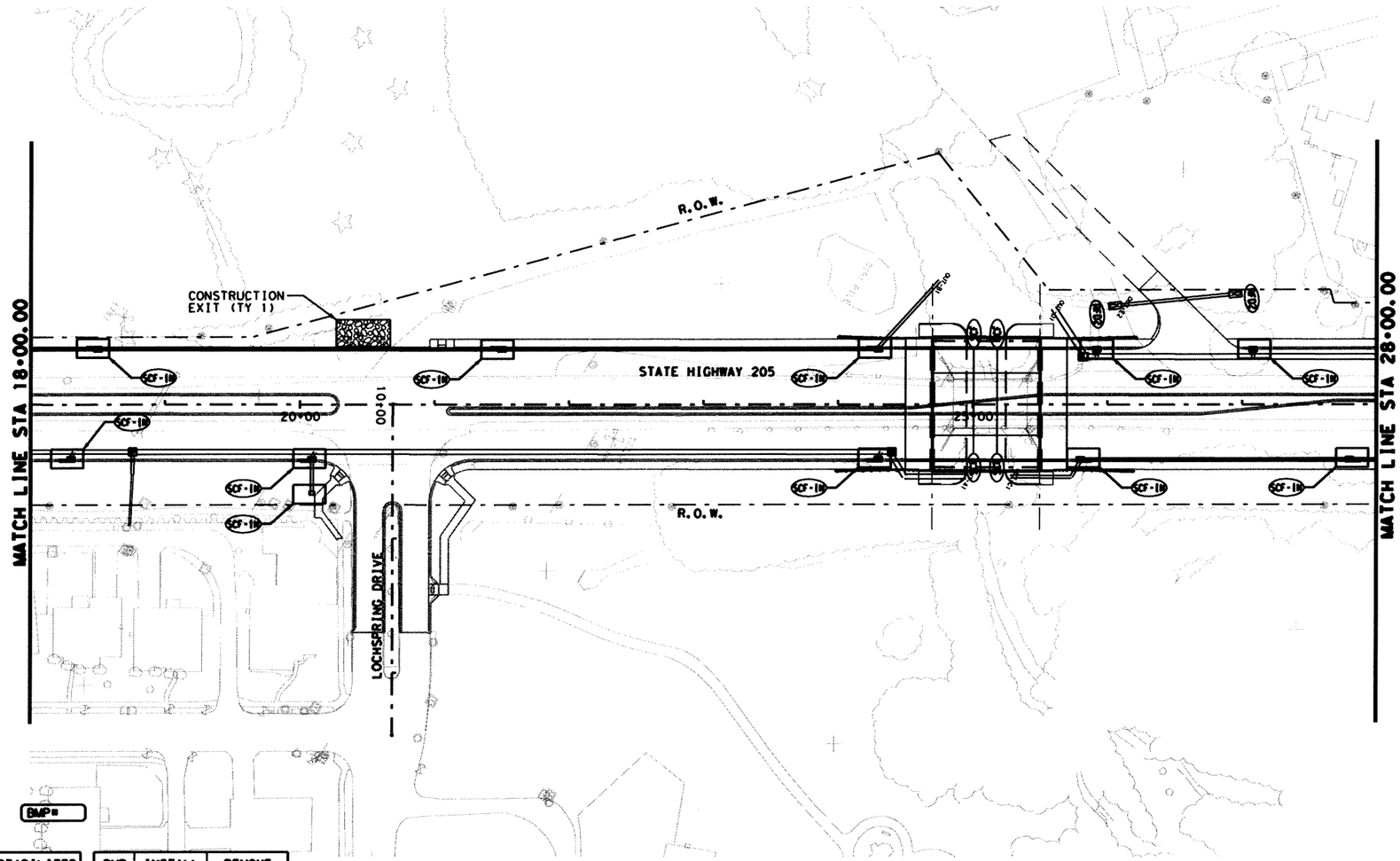
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SITE PLAN
STA 8+00 TO 18+00

SHEET 2 OF 16

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			SH 205
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	775
CONT.	SECT.	JOB	
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SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFDB — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
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BMP# LF

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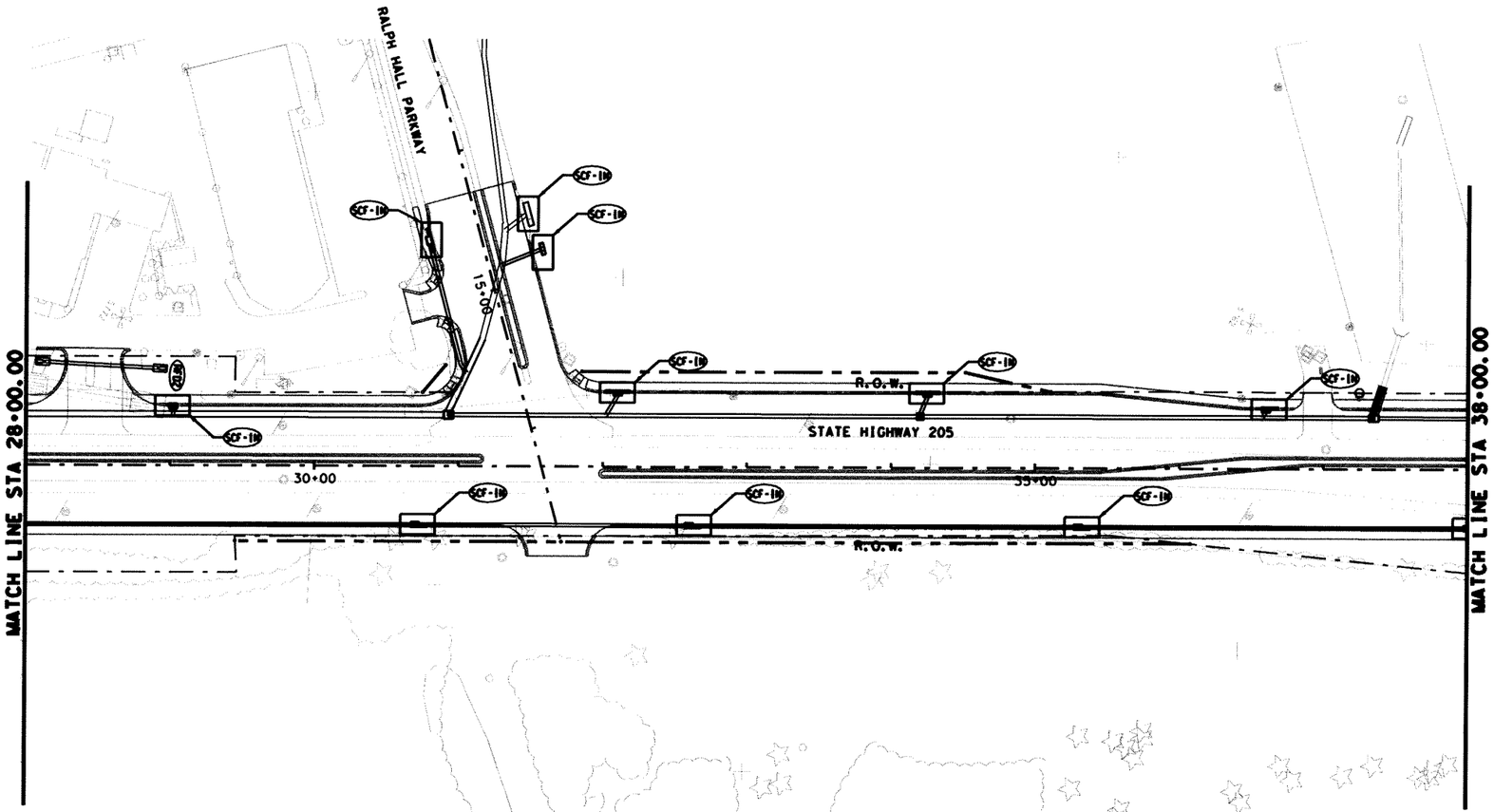
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SHEET 3 OF 16

F.D. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	776
CONT.	SECT.	JOB	
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SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1B — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

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BMP #	INSTALL DATE	REMOVE DATE

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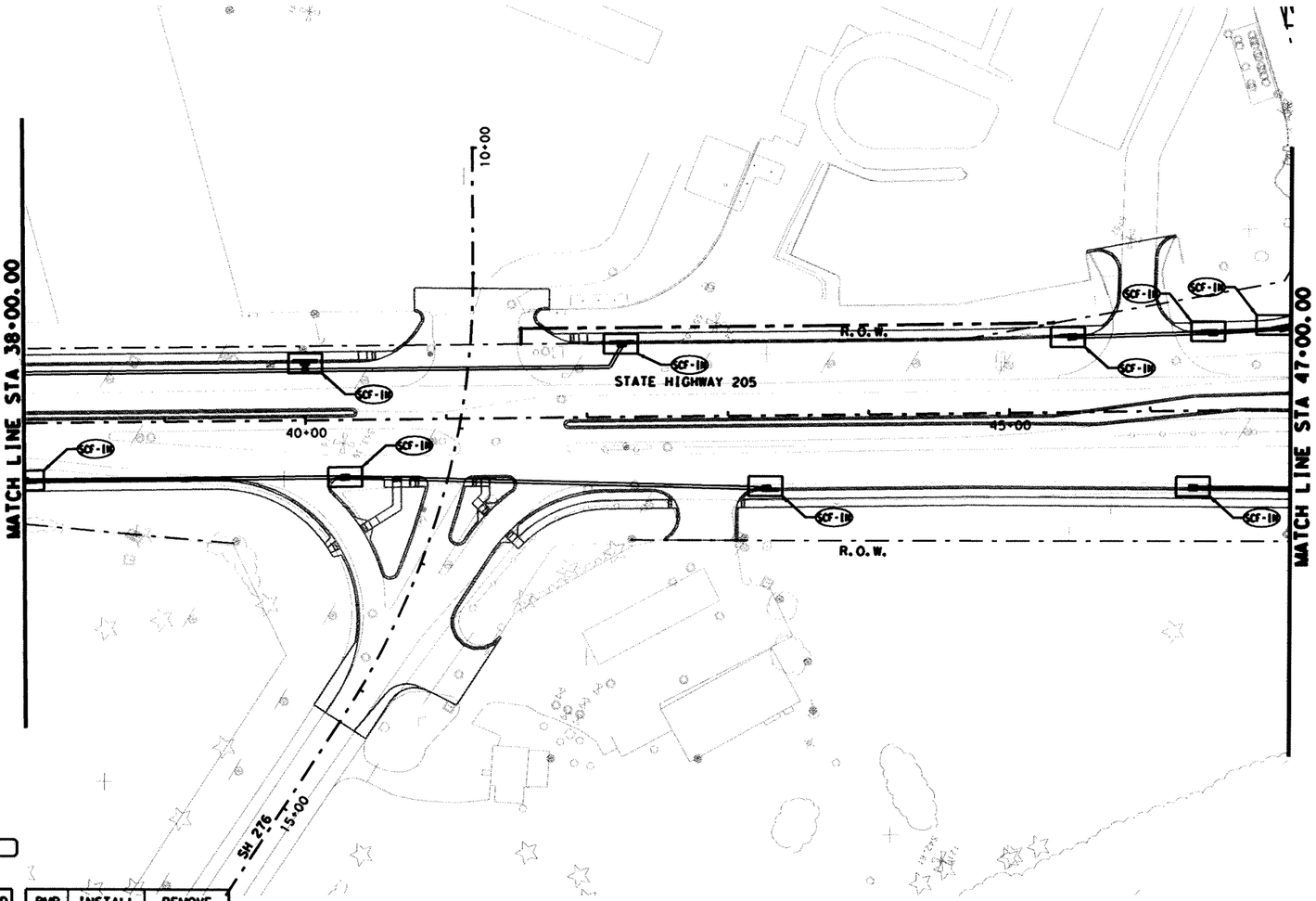
SW3P

SITE PLAN
STA 28+00 TO 38+00

SHEET 4 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			SH 205
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	777
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SCALE IN FEET

LEGEND:

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AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

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March 22, 06

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SW3P

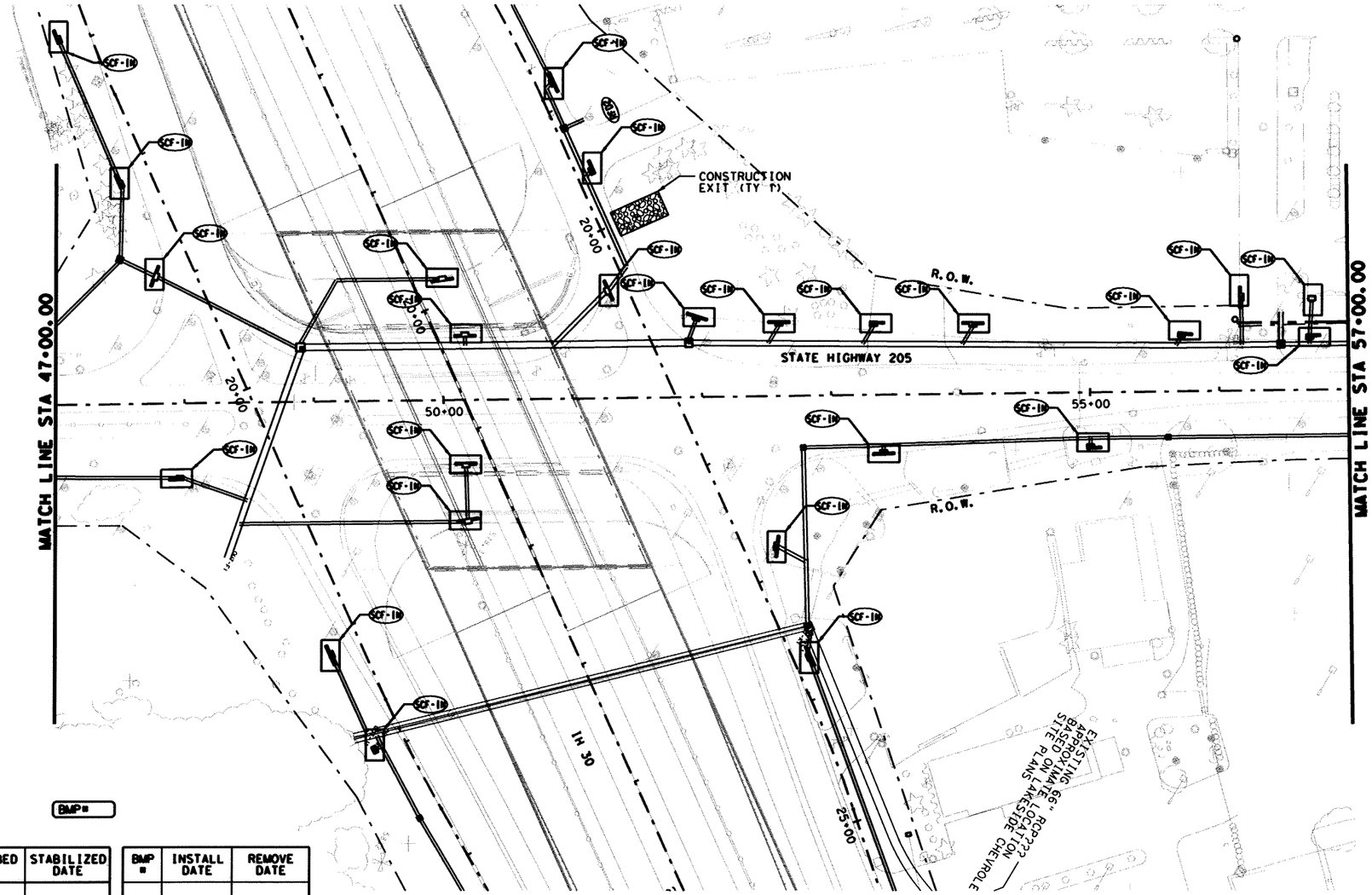
SITE PLAN
STA 38+00 TO 47+00

SHEET 5 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	778
CONT.	SECT.	JOB	
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SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFD(2) — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1(8) — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
1. LOCATIONS OF EROSION CONTROL DEVICES ARE APPROXIMATIONS. ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
3. ALL INLETS AND JUNCTION BOXES WITHIN THE PROJECT LIMITS OR AFFECTED BY CONSTRUCTION DEBRIS SHALL BE PROTECTED AT ALL TIMES.
4. EROSION CONTROL DEVICE INSTALLATION, MAINTENANCE, AND REMOVAL SHALL BE IN ACCORDANCE WITH TxDOT STANDARDS FOR EROSION CONTROL.

BMP# LF

BMP#

AREA#

AREA#

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

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STATE OF TEXAS — MASSOUD GHOBADIMANESH 68234 — REGISTERED PROFESSIONAL ENGINEER

March 22, 06

LTRA Lina T. Ramey & Associates, Inc.
400 N. St. Paul
Dallas, Texas 75201

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205
ROCKWALL COUNTY

SW3P

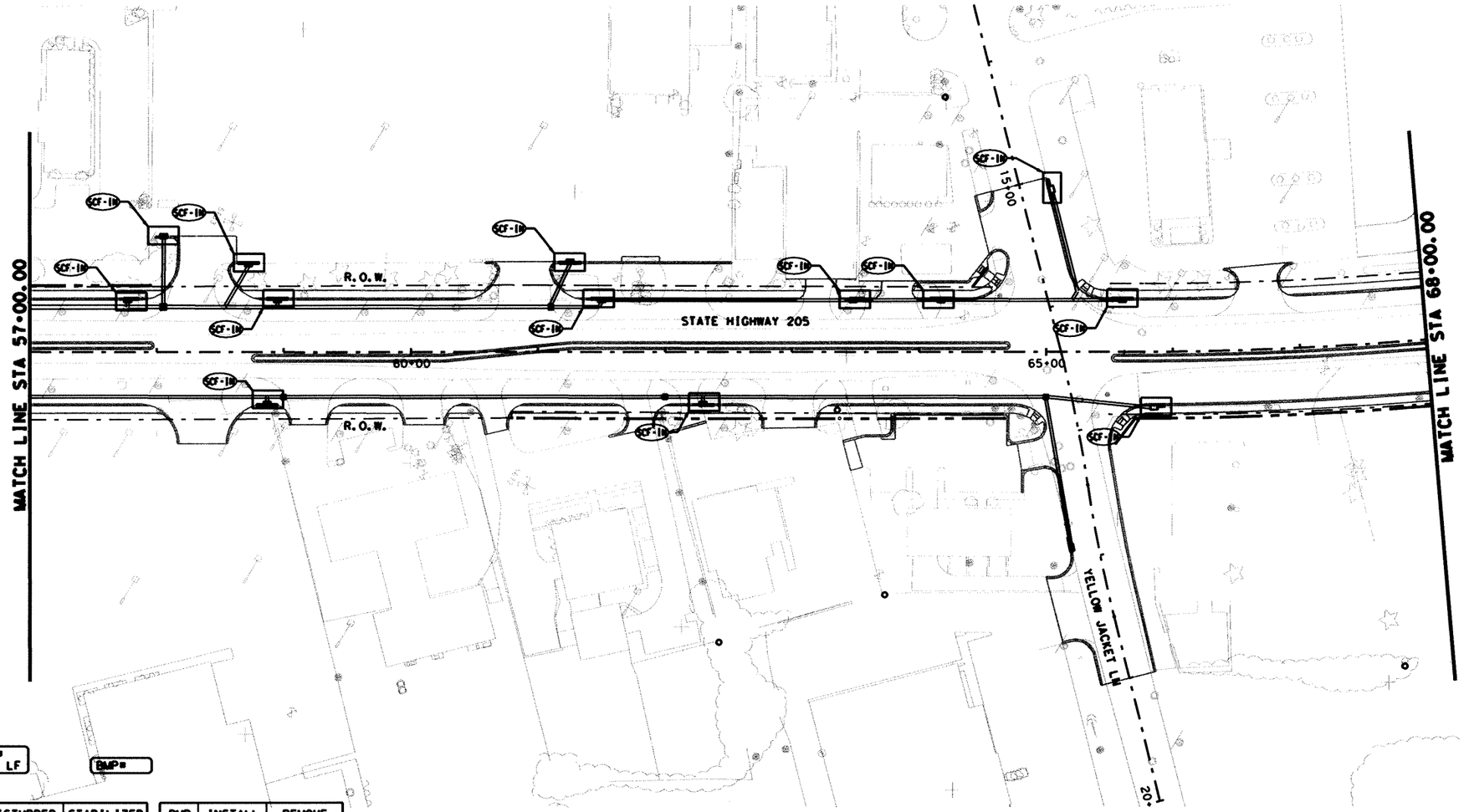
SITE PLAN
STA 47+00 TO 57+00

SHEET 6 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	779
CONT.	SECT.	JOB	
0451	01	032	

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0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFDF — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1B — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
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STATE OF TEXAS — MASSOUD GHOBADIMANESH — 68234 — REGISTERED PROFESSIONAL ENGINEER

March 22, 06

BMP# LF

BMP#

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

AREA#

AREA#

Lina T. Ramey & Associates, Inc.
400 N. St. Paul
Dallas, Texas 75201

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205
ROCKWALL COUNTY

SW3P

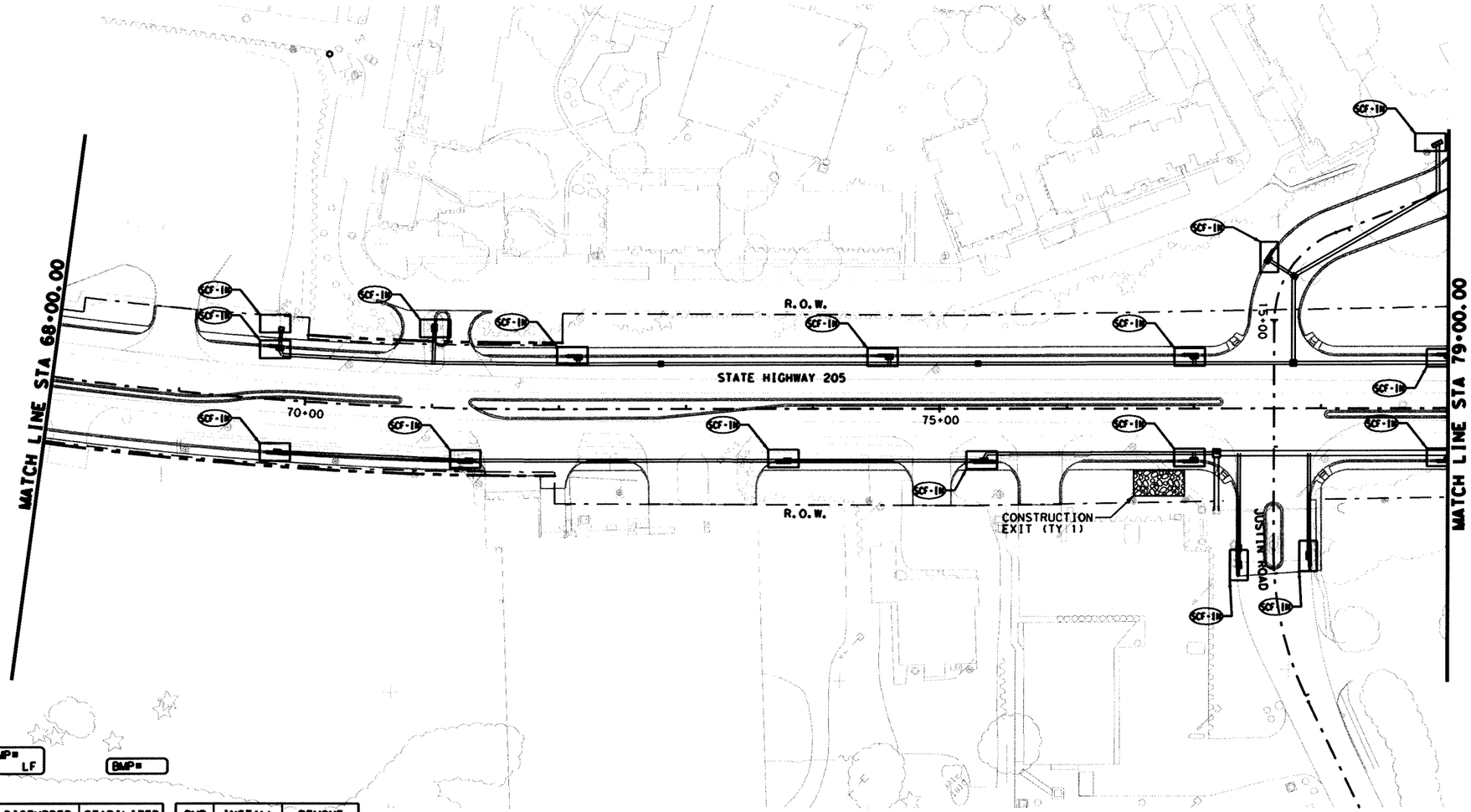
SITE PLAN
STA 57+00 TO 68+00

SHEET 7 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	780
CONT.	SECT.	JOB	
0451	01	032	

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3/22/2006 19:54:56



0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFD — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1® — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
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BMP= LF

BMP=

AREA=

AREA=

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

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ROCKWALL COUNTY

SW3P

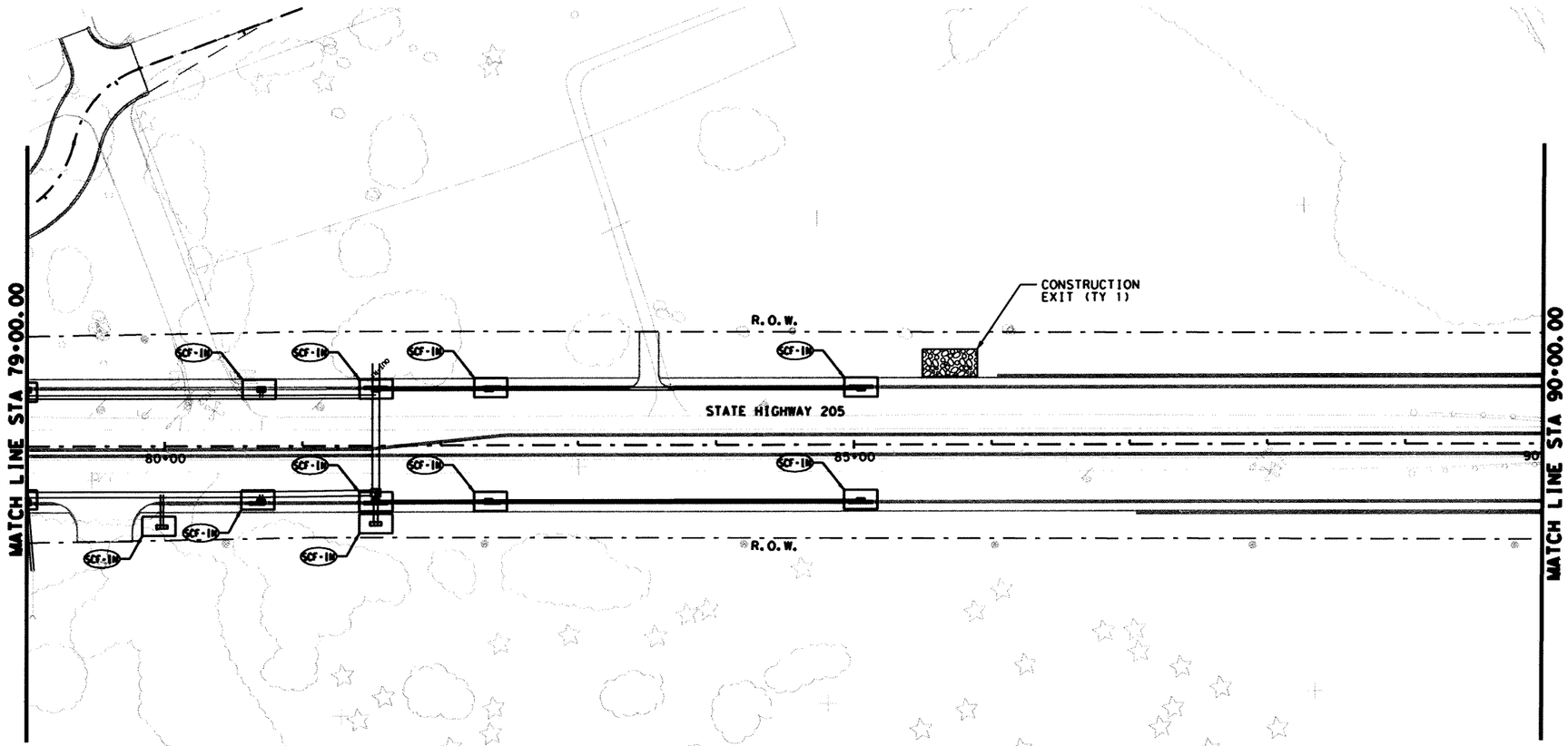
SITE PLAN
STA 68+00 TO 79+00

SHEET 8 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	781
CONT.	SECT.	JOB	
0451	01	032	

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3/22/2006 19:55:01



0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFDB — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-IB — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
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BMP= LF

BMP=

AREA=

AREA=

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

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MASSOUD GHOBADIMANESH
68234
REGISTERED PROFESSIONAL ENGINEER

March 22, 06

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SW3P

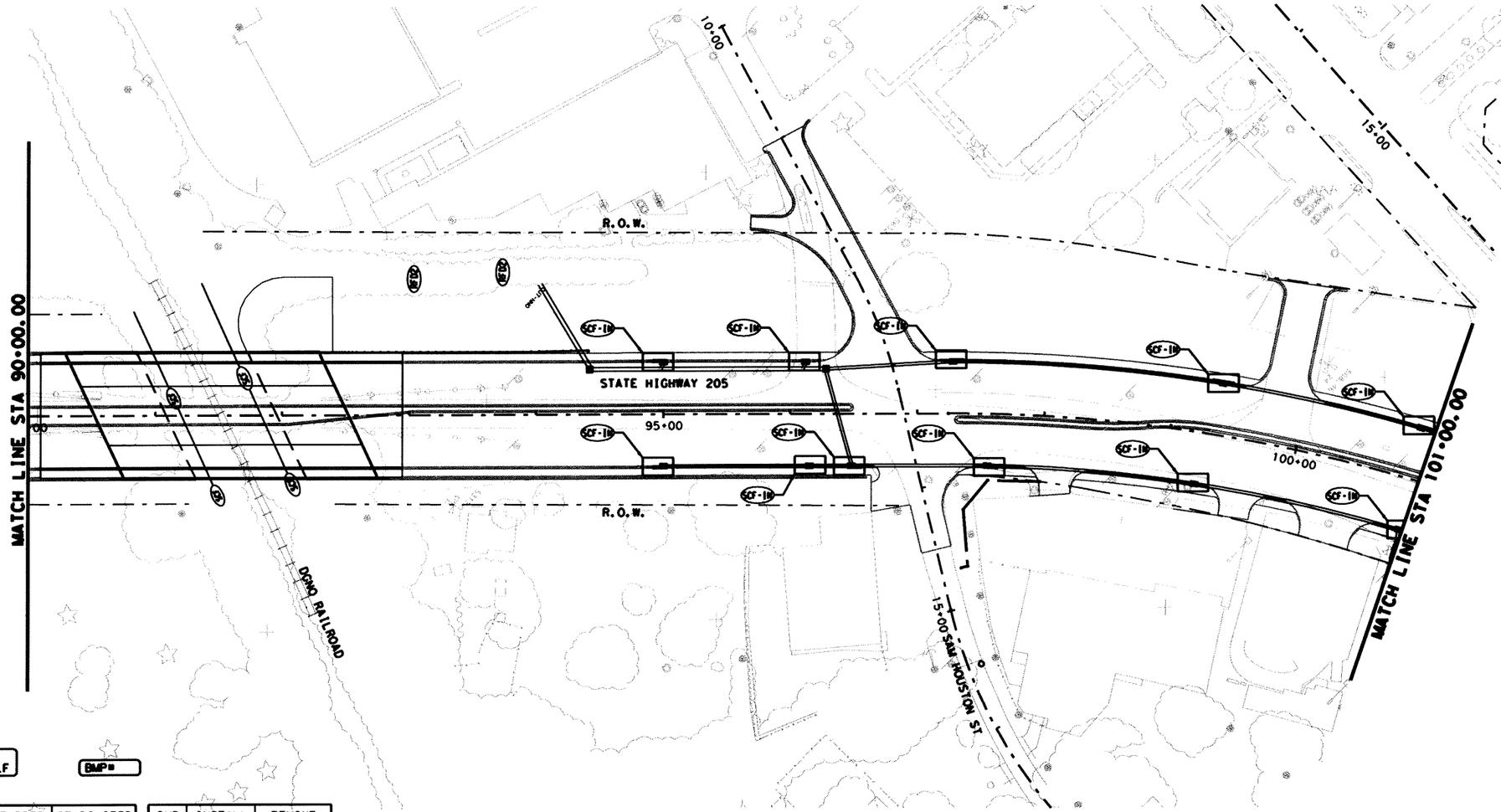
SITE PLAN
STA 79+00 TO 90+00

SHEET 9 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	782
CONT.	SECT.	JOB	
0451	01	032	

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0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- NFDC — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1B — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

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BMP= LF

BMP=

AREA=

AREA=

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

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SH 205
ROCKWALL COUNTY

SW3P

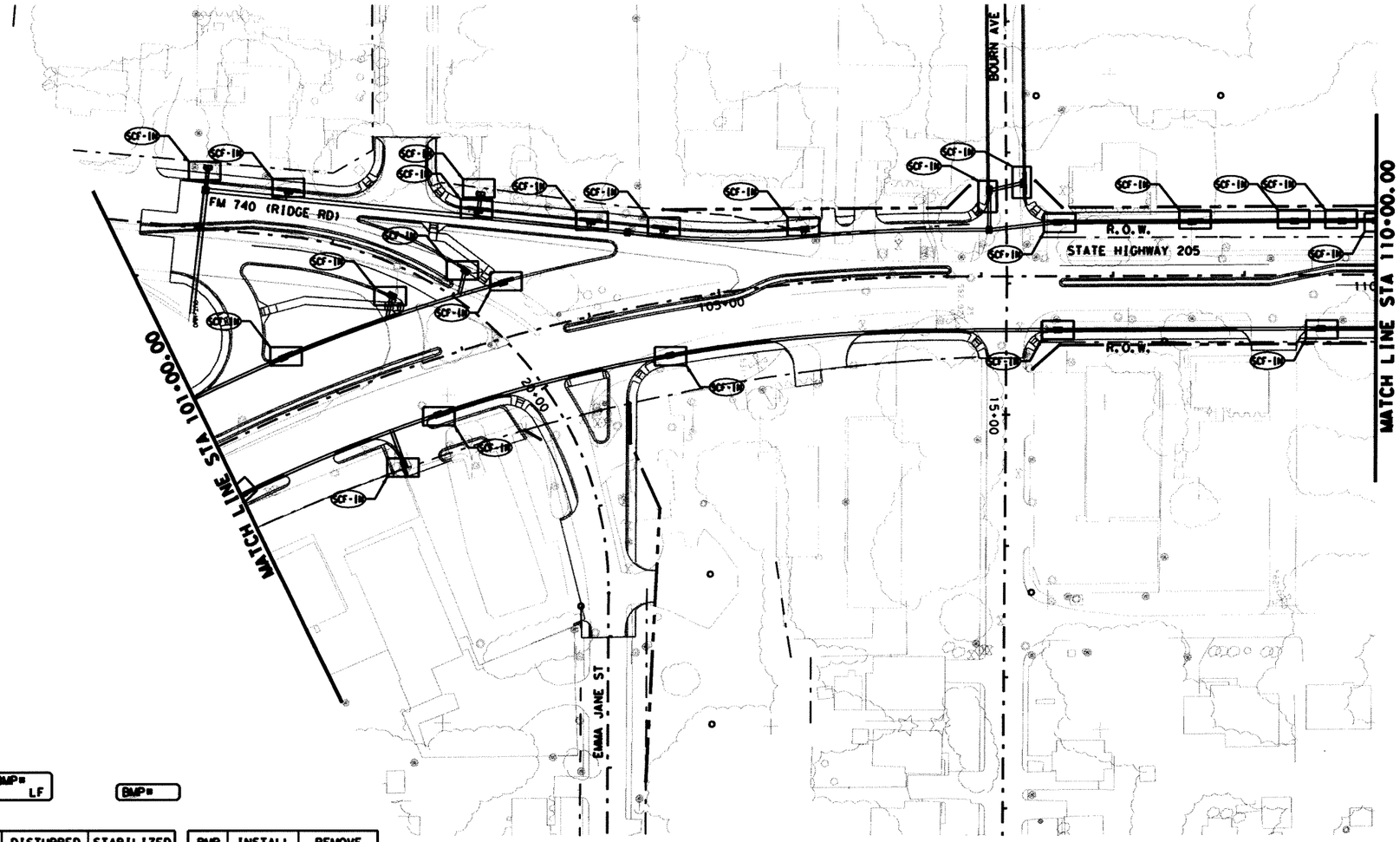
SITE PLAN
STA 90+00 TO 101+00

SHEET 10 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	783
CONT.	SECT.	JOB	
0451	01	032	

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0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFDZ — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1B — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
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BMP# LF

BMP#

AREA#

AREA#

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

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STATE OF TEXAS
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March 22, 06

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SH 205
ROCKWALL COUNTY

SW3P

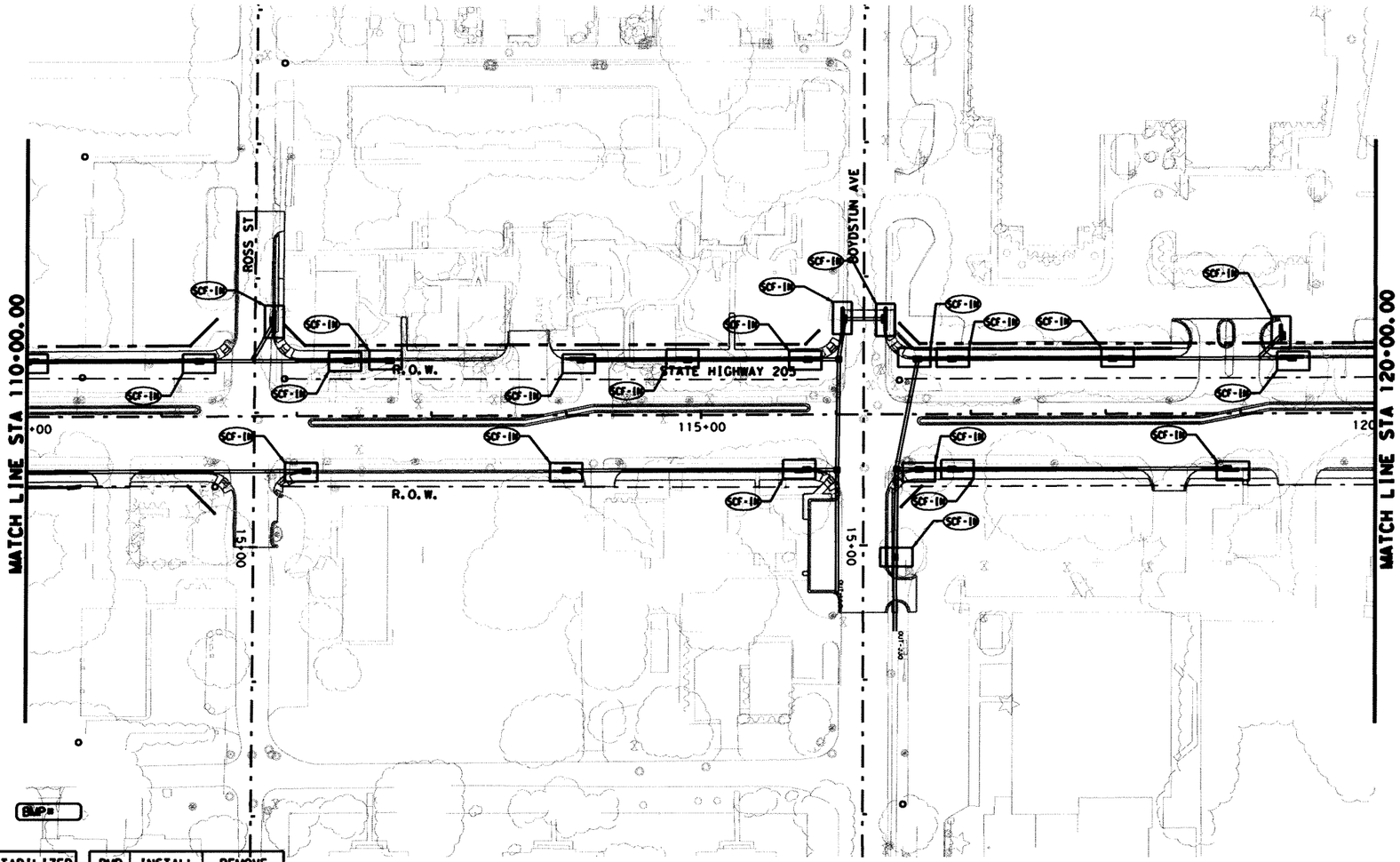
SITE PLAN
STA 101+00 TO 110+00

SHEET 11 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	784
CONT.	SECT.	JOB	
0451	01	032	

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3/22/2006 19:57:34



0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFD(2) — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1(8) — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
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BMP= LF

BMP=

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

AREA=

AREA=

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SH 205
ROCKWALL COUNTY

SW3P

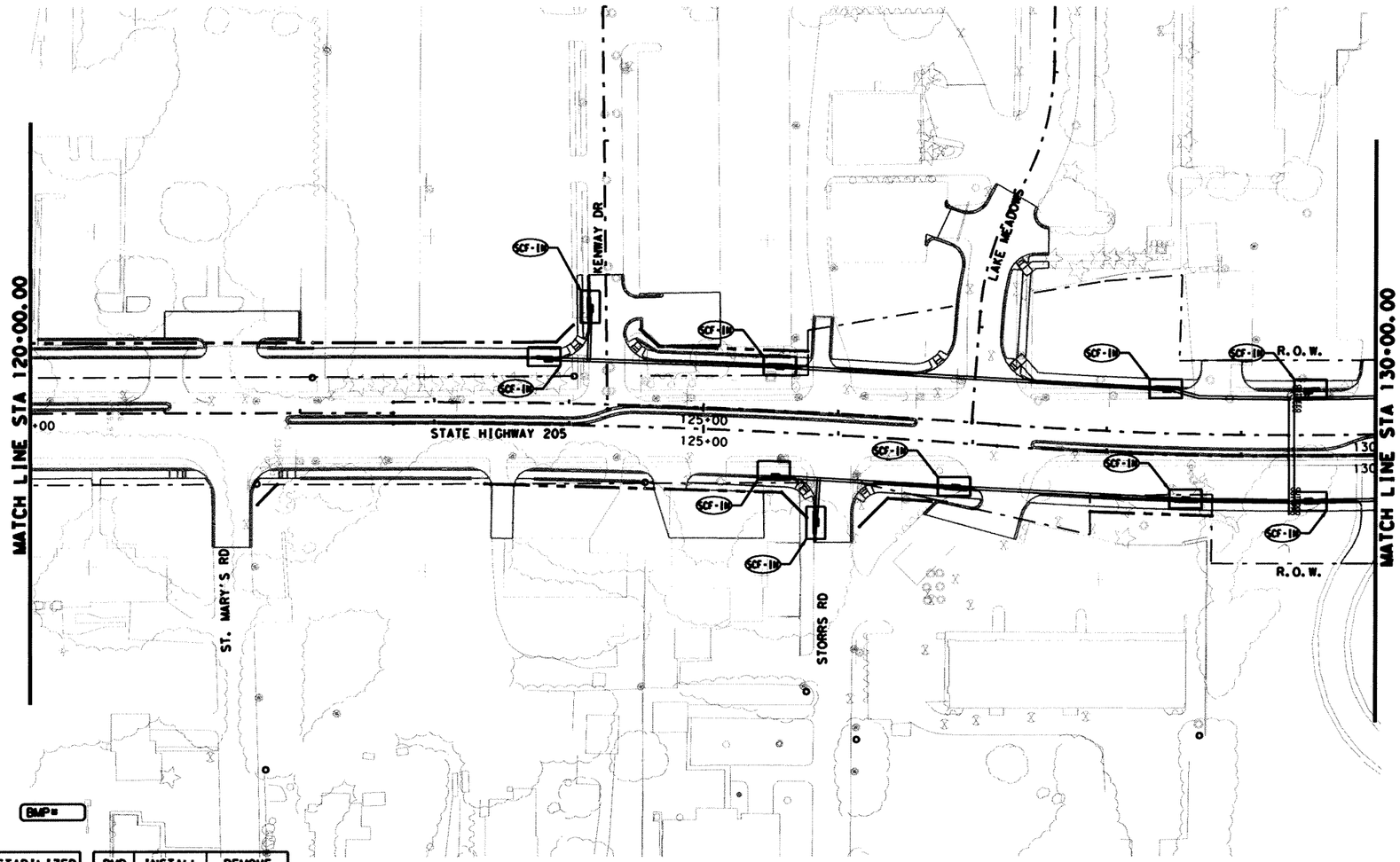
SITE PLAN
STA 110+00 TO 120+00

SHEET 12 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	785
CONT.	SECT.	JOB	
0451	01	032	

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0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFDB — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1B — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

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BMP# LF

BMP#

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

AREA#

AREA#

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March 22, 06

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SH 205
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SW3P

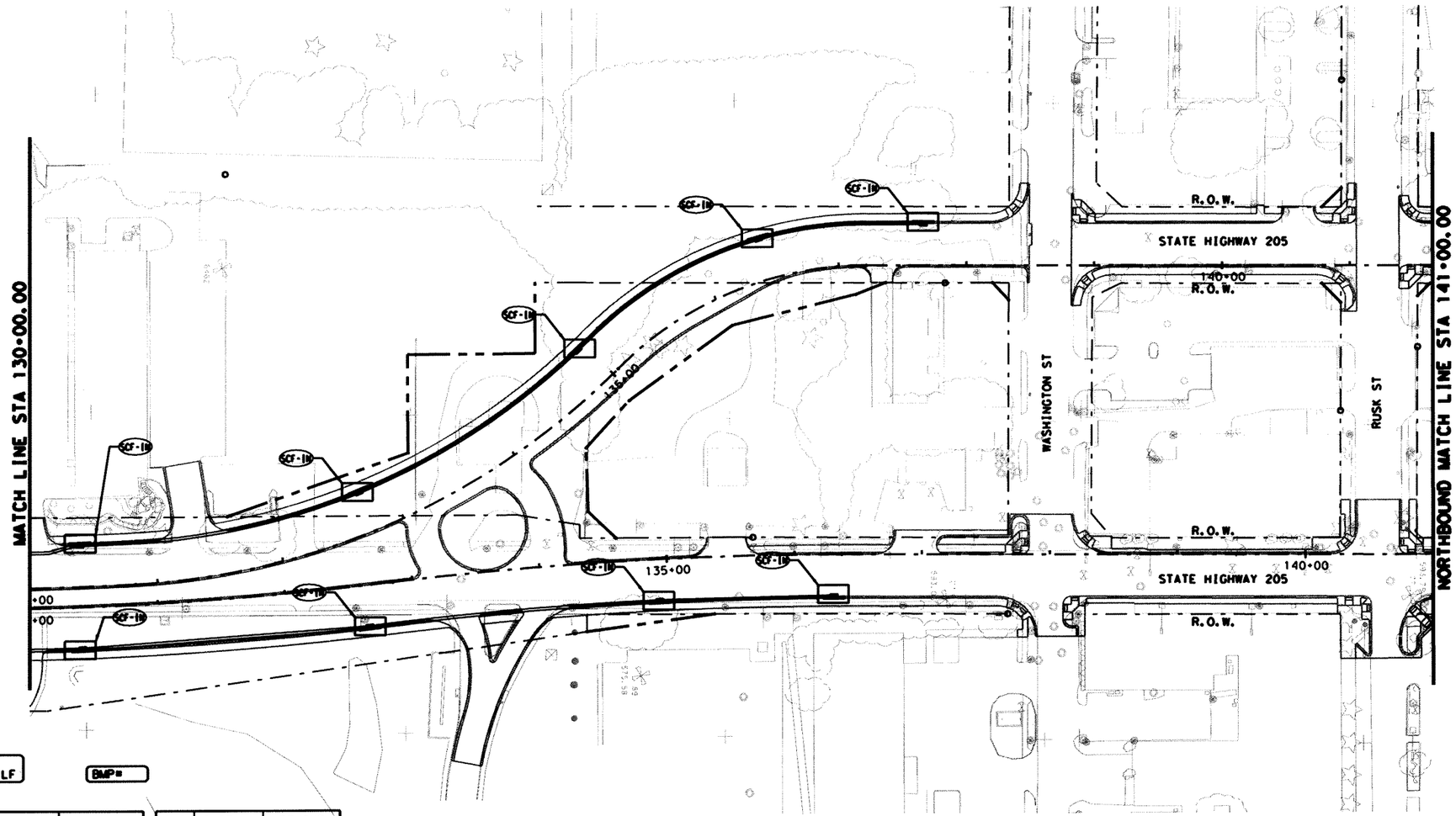
SITE PLAN
STA 120+00 TO 130+00

SHEET 13 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	786
CONT.	SECT.	JOB	
0451	01	032	

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0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFD — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1B — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

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BMP# LF

BMP#

AREA#

AREA#

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

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MASSOUD GHOBADIMANESH
68234
REGISTERED PROFESSIONAL ENGINEER

March 22, 06

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SW3P

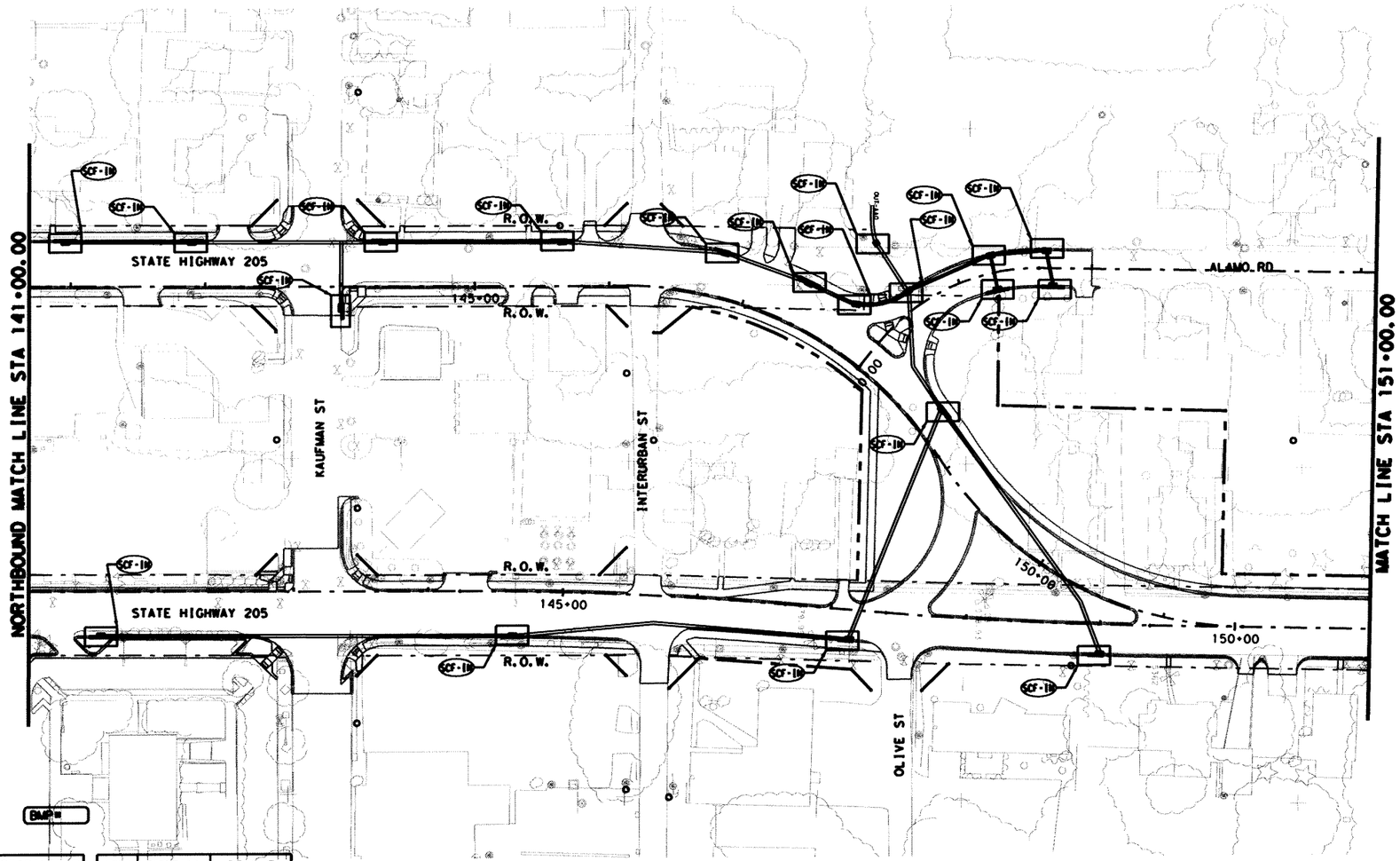
SITE PLAN
STA 130+00 TO 141+00

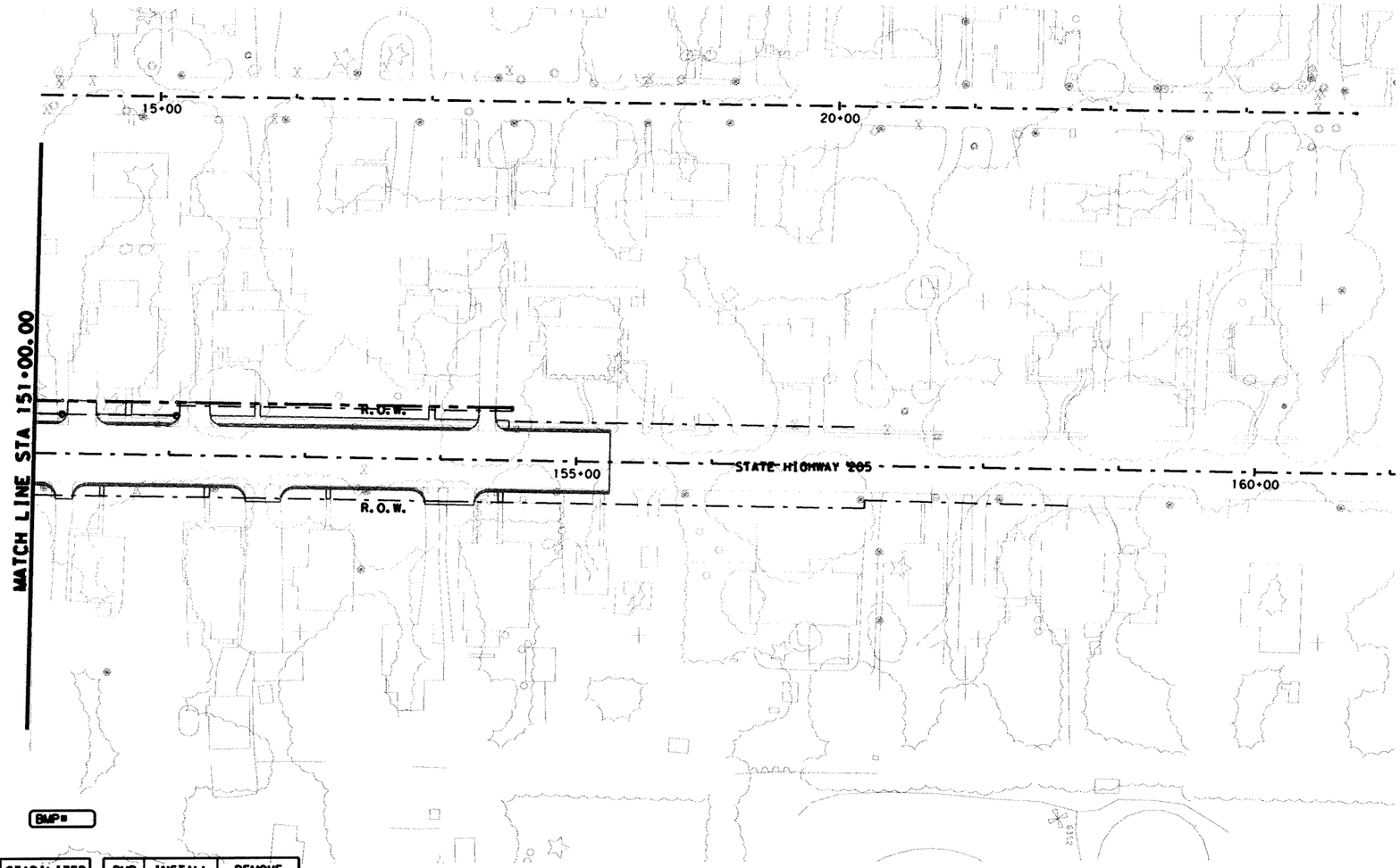
SHEET 14 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	787
CONT.	SECT.	JOB	
0451	01	032	

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NORTHBOUND MATCH LINE STA 141+00.00
MATCH LINE STA 151+00.00
STATE HIGHWAY 205
R.O.W.
145+00
145+00
R.O.W.
ALAMO RD
KAUFMAN ST
INTERURBAN ST
OLIVE ST
150+00
150+00
R.O.W.
R.O.W.
SCF-1B
SCF-1B
SCF-1B



0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFD — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-IN — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
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BMP= LF

BMP=

AREA= | DISTURBED DATE | STABILIZED DATE

BMP= | INSTALL DATE | REMOVE DATE

AREA=

AREA=

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STATE OF TEXAS
MASSOUD GHOBADIMANESH
68234
REGISTERED PROFESSIONAL ENGINEER

March 22, 06

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SH 205
ROCKWALL COUNTY

SW3P

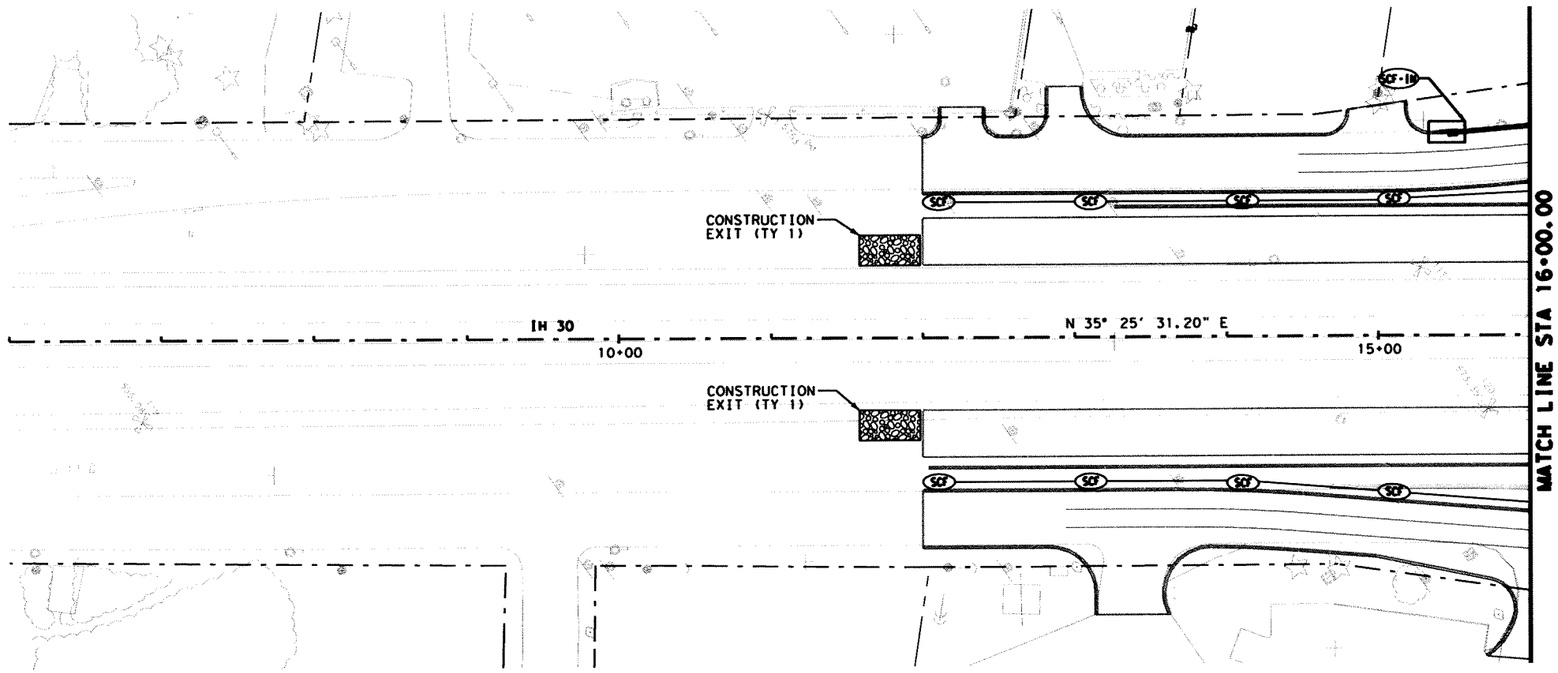
SITE PLAN
STA 151+00 TO END OF PROJECT

SHEET 16 OF 16

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	789
CONT.	SECT.	JOB	
0451	01	032	

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3/22/2006 19:57:58



0 50 100
SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFDZ — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-IB — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
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2. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY AND SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
3. ALL INLETS AND JUNCTION BOXES WITHIN THE PROJECT LIMITS OR AFFECTED BY CONSTRUCTION DEBRIS SHALL BE PROTECTED AT ALL TIMES.
4. EROSION CONTROL DEVICE INSTALLATION, MAINTENANCE, AND REMOVAL SHALL BE IN ACCORDANCE WITH TxDOT STANDARDS FOR EROSION CONTROL.

The seal appearing on this document was authorized by MASSOUD GHOBADIMANESH, P.E. 68234

STATE OF TEXAS — MASSOUD GHOBADIMANESH — 68234 — REGISTERED PROFESSIONAL ENGINEER

March 22, 06

BMP# LF

BMP#

AREA#

AREA#

AREA #	DISTURBED DATE	STABILIZED DATE

BMP #	INSTALL DATE	REMOVE DATE

LTRA — Lina T. Ramey & Associates, Inc.
400 N. St. Paul
Dallas, Texas 75201

PB — Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205
ROCKWALL COUNTY

SW3P

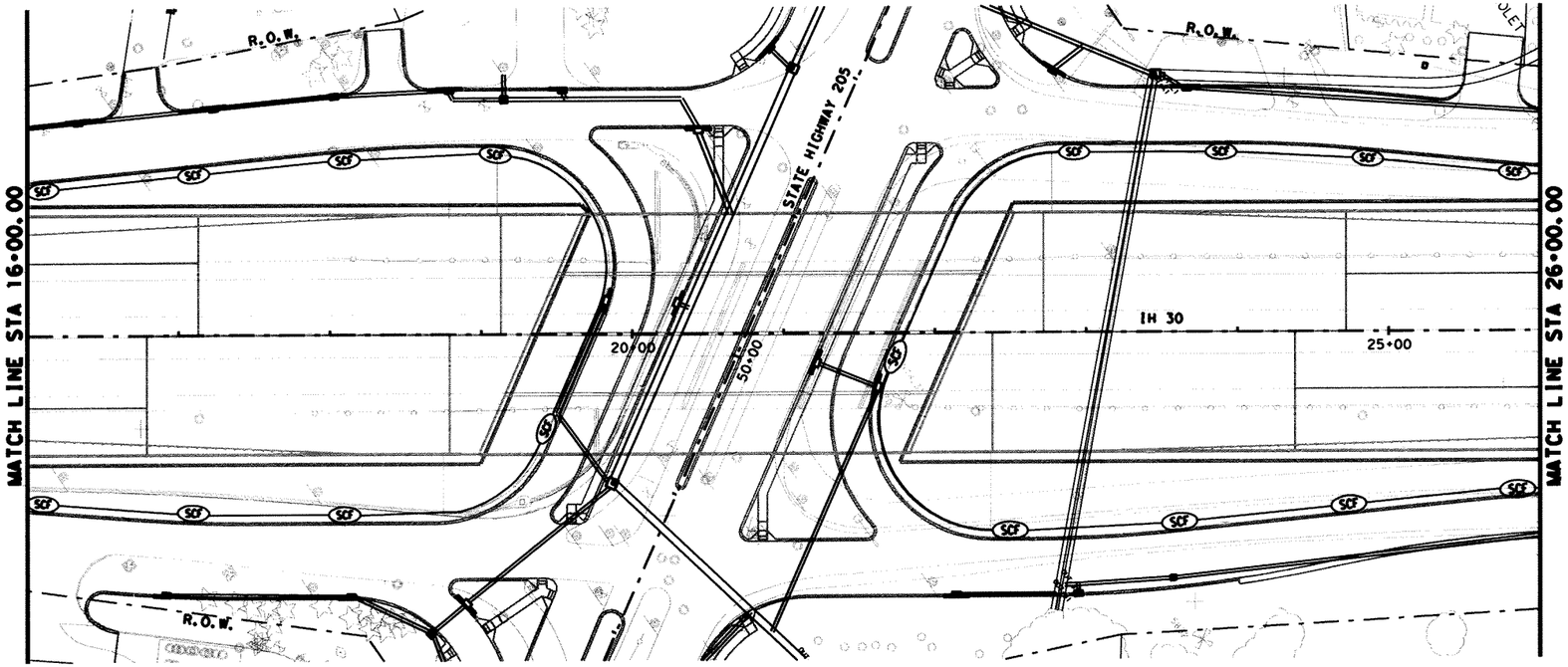
I-30 SITE MAP
STA 6+00 TO 16+00

SHEET 1 OF 3

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	790
CONT.	SECT.	JOB	
0451	01	032	

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SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFDF — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-IB — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

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SH 205
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SW3P

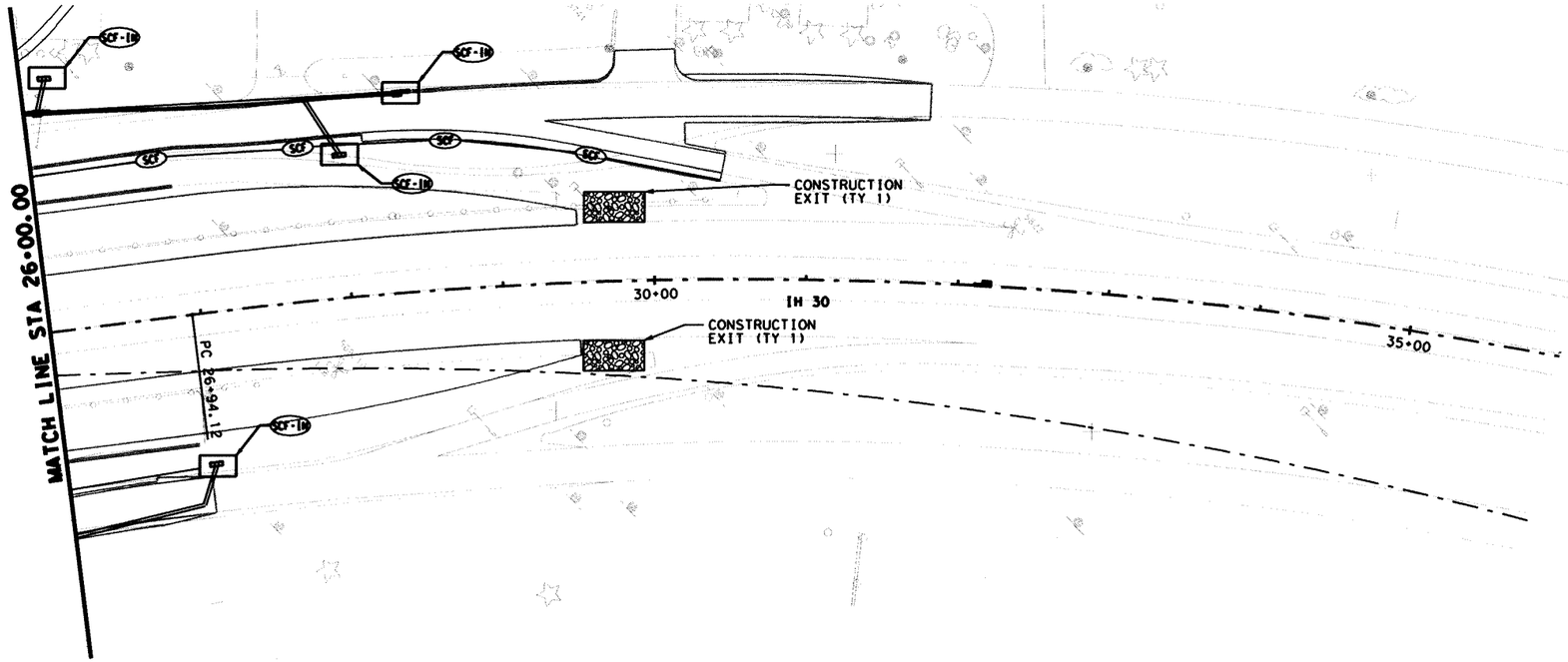
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STA 16+00 TO 26+00

SHEET 2 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
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CONT.	SECT.	JOB	
0451	01	032	

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SCALE IN FEET

LEGEND:

- SCF — SEDIMENT CONTROL FENCE
- RFD2 — ROCK FILTER DAM (TY 2)
- CONSTRUCTION EXIT (TY 1)
- FLOW DIRECTION
- SCF-1B — INLET SEDIMENT CONTROL FENCE (20 LF PER INLET)

NOTES:
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STATE OF TEXAS
MASSOUD GHOBADIMANESH
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REGISTERED PROFESSIONAL ENGINEER

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SW3P

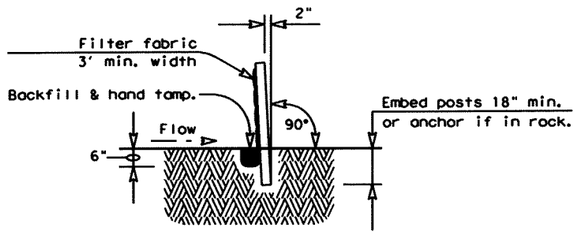
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SHEET 3 OF 3

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6		SH 205

STATE	DIST.	COUNTY	SHEET NO.
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CONT.	SECT.	JOB	
0451	01	032	

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SECTION A-A

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

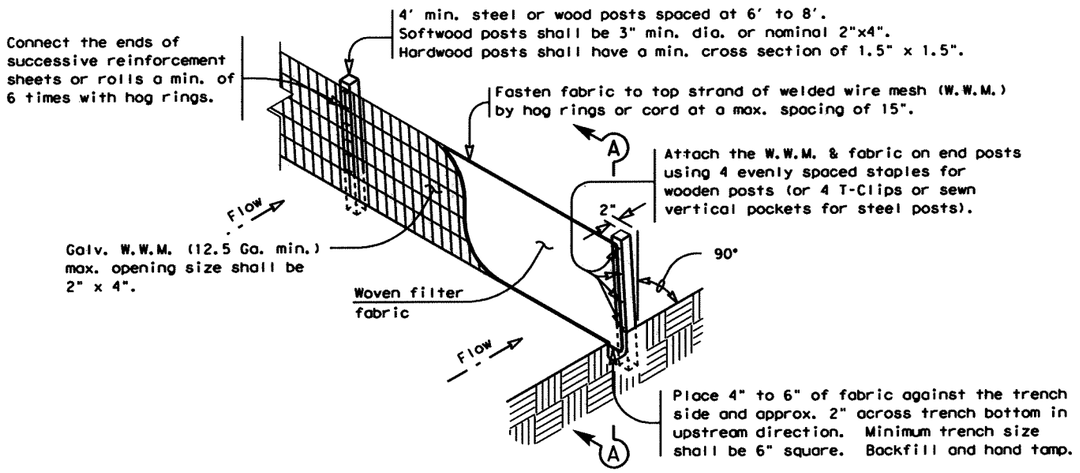
Sediment control fence should be sized to filter a max. flow through rate of 100 GPM/FT^2. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

PLAN SHEET LEGEND

Sediment Control Fence —— SCF ——

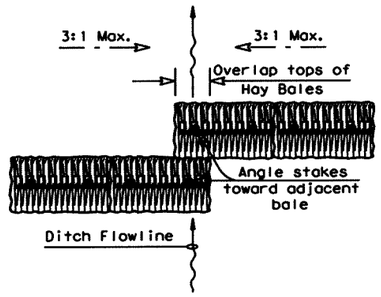
GENERAL NOTES

1. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

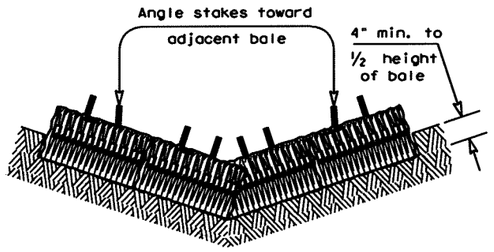


TEMPORARY SEDIMENT CONTROL FENCE

SCF



PLAN VIEW



PROFILE VIEW

PLANS SHEET LEGEND

Baled Hay —— BH ——

BALED HAY USAGE GUIDELINES

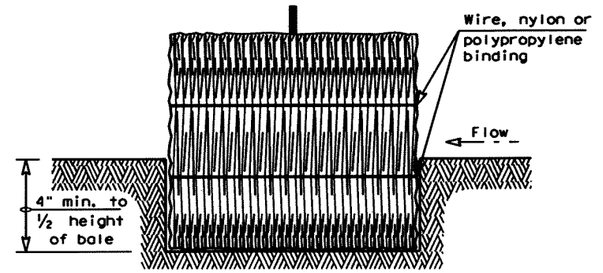
A Baled Hay installation may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A two year storm frequency may be used to calculate the flow rate to be filtered. The installation should be sized to filter a maximum flow thru rate of 5 GPM/FT^2 of cross sectional area. Baled hay may be used at the following locations:

1. Where the runoff approaching the baled hay flows over disturbed soil for less than 100'. If the slope of the disturbed soil exceeds 10%, the length of slope upstream the baled hay should be less than 50'.
2. Where the installation will be required for less than 3 months.
3. Where the contributing drainage area is less than ½ acre.

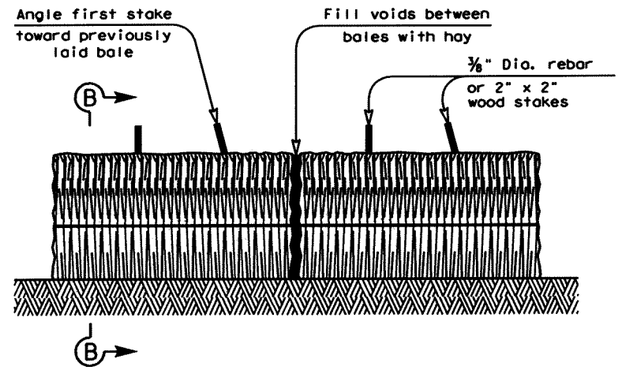
For Baled Hay installations in small ditches, the additional following considerations apply:

1. The ditch sideslopes should be graded as flat as possible to maximize the drainage flowrate thru the hay.
2. The ditch should be graded large enough to contain the overtopping drainage when sediment has filled to the top of the baled hay.

Bales should be replaced usually every 2 months or more often during wet weather when loss of structural integrity is accelerated.



SECTION B-B



BALED HAY FOR EROSION CONTROL

BH

GENERAL NOTES

1. Hay bales shall be a minimum of 30" in length and weigh a minimum of 50 Lbs.
2. Hay bales shall be bound by either wire or nylon or polypropylene string. The bales shall be composed entirely of vegetative matter.
3. Hay bales shall be embedded in the soil a minimum of 4" and where possible ½ the height of the bale.
4. Hay bales shall be placed in a row with ends tightly abutting the adjacent bales. The bales shall be placed with bindings parallel to the ground.
5. Hay bales shall be securely anchored in place with ⅜" Dia. rebar or 2" x 2" wood stakes, driven through the bales. The first stake shall be angled towards the previously laid bale to force the bales together.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

REVISION HISTORY

Texas Department of Transportation
Design Division (Roadway)

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCED & BALED HAY

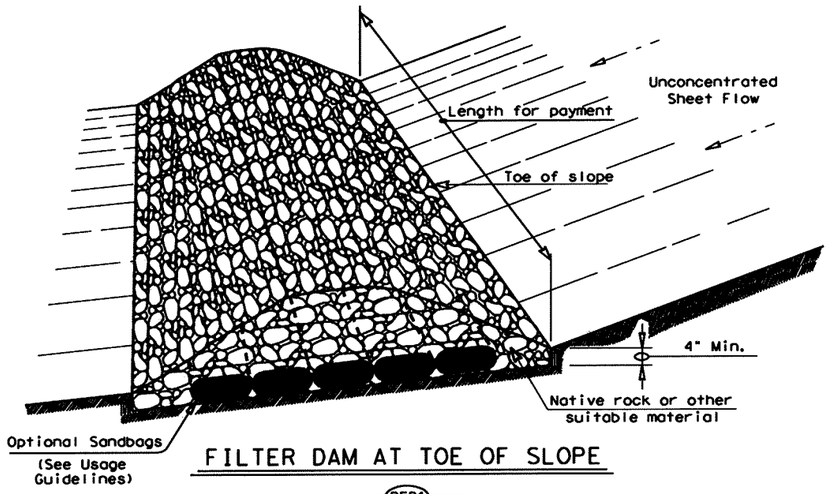
EC(1)-93

FILE: EC193.DGN	DN: HEJ	CK: HEJ	DW: BGD	CK:
©TxDOT JUNE 1993	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	DAL			793
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	ROCKWALL	0451	01	032	SH 205

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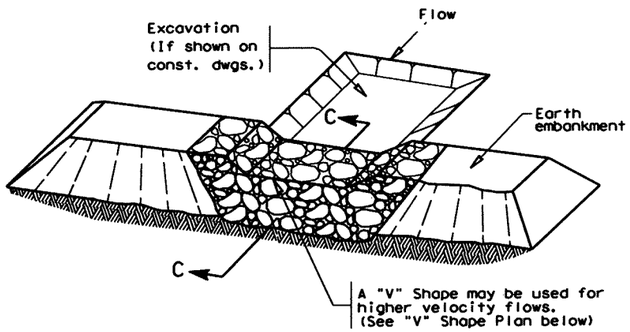
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FILTER DAM AT TOE OF SLOPE

RFD1

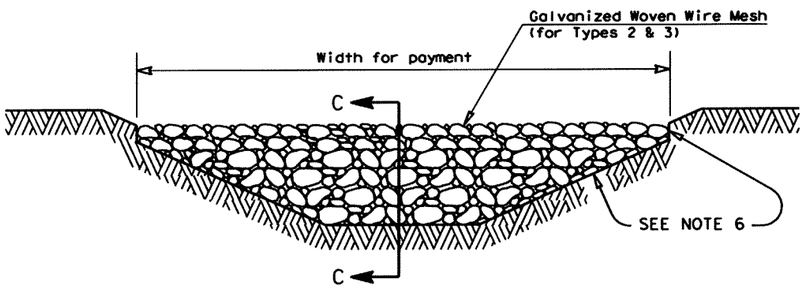
TYPE 1



FILTER DAM AT SEDIMENT TRAP

RFD1 OR RFD2

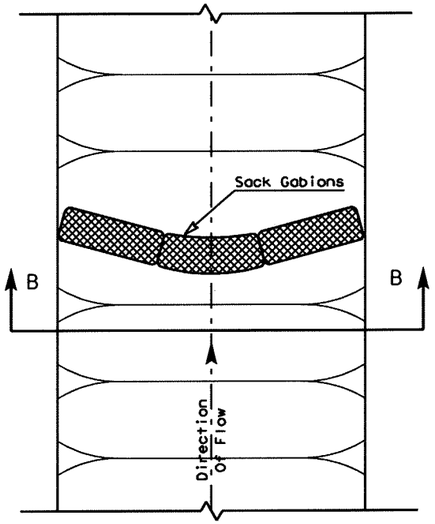
TYPE 1 OR TYPE 2



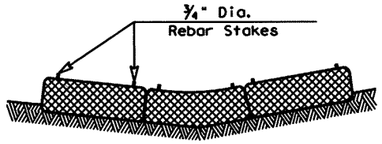
FILTER DAM AT CHANNEL SECTIONS

RFD1 OR RFD2 OR RFD3

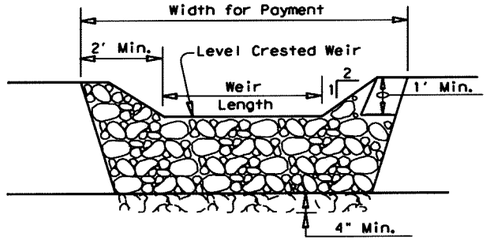
TYPE 1 OR TYPE 2



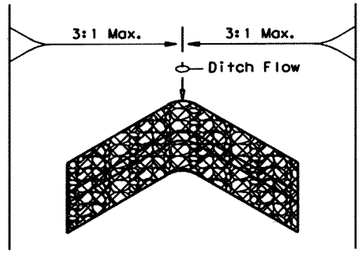
PLAN VIEW



SECTION B-B

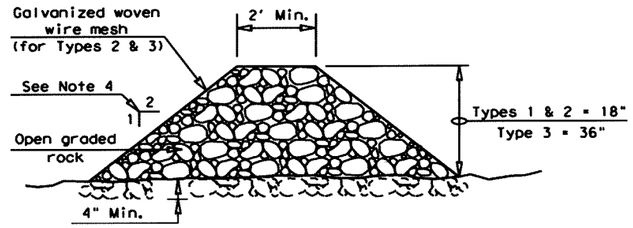


PROFILE



"V" SHAPE

(Plan View)



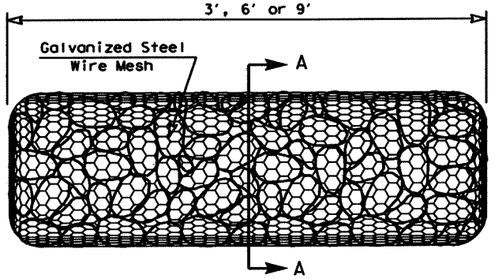
SECTION C-C

PLANS SHEET LEGEND

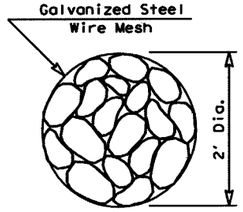
Type 1 Rock Filter Dam — RFD1

Type 2 Rock Filter Dam — RFD2

Type 3 Rock Filter Dam — RFD3



TYPE 4 (SACK GABIONS)



SECTION A-A

ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT^2 of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

Type 1 (18" high with no wire mesh): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approx. 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. In stream use the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with ¾" dia. rebar stakes.
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

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3/22/2006

LEVELS DI...

Texas Department of Transportation
Design Division (Roadway)

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

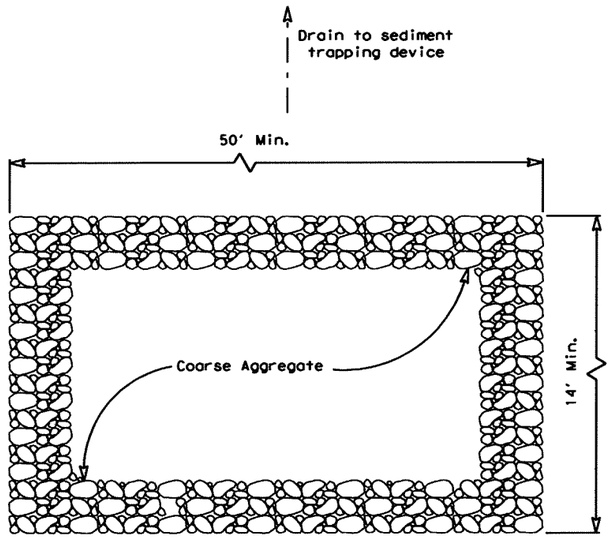
ROCK FILTER DAMS

EC(2)-93

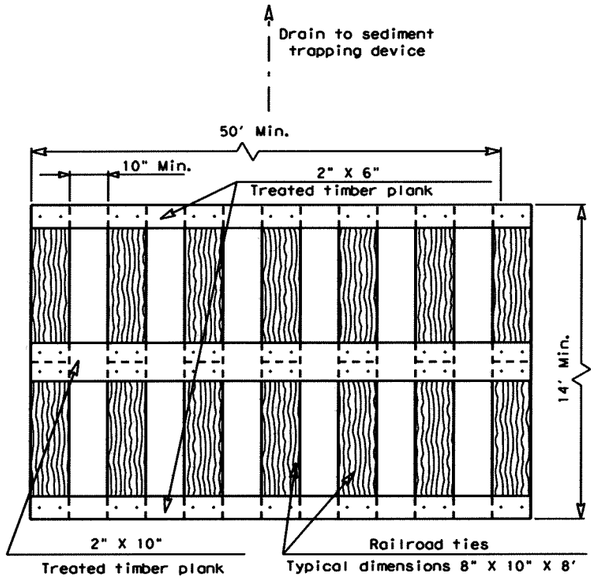
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REVISIONS	DAL			794
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	ROCKWALL	0451	01	032	SH 205

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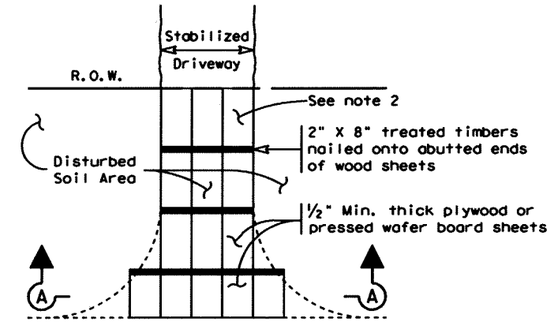
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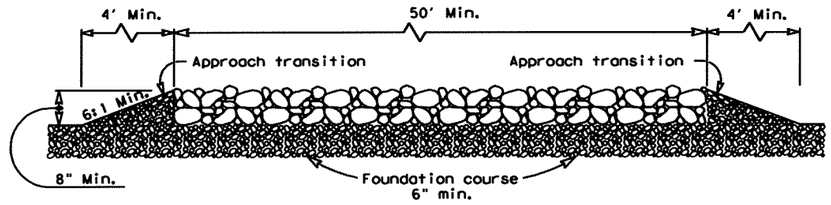
PLAN



PLAN



PLAN

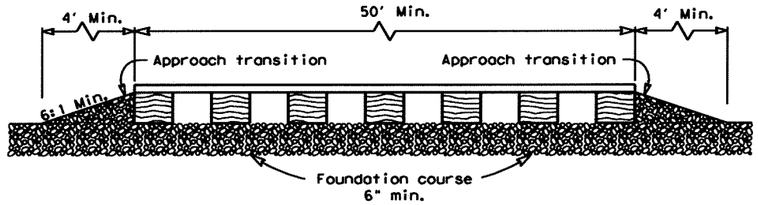


PROFILE

CONSTRUCTION EXIT (TYPE 1)

GENERAL NOTES

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

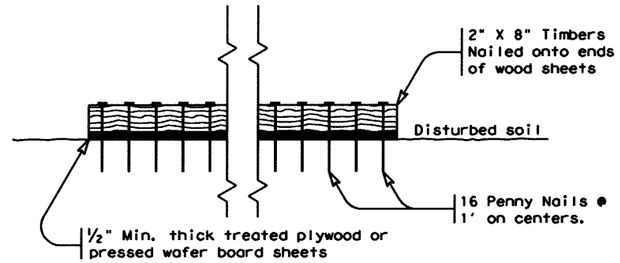


PROFILE

CONSTRUCTION EXIT (TYPE 2)

GENERAL NOTES

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
2. The treated timber planks shall be attached to the railroad ties with ½"x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

GENERAL NOTES

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation
Design Division (Roadway)

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

CONSTRUCTION EXITS

EC(3)-93

FILE: EC393.DGN	DN: HEJ	CK: HEJ	DW: BGD	CK:
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REVISIONS	DAL			795
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	ROCKWALL	0451	0101	032	SH 205

LEVELS DI' CD
1 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62

SEEDING FOR EROSION CONTROL

PLANTING SEASON	PERMANENT BROADCAST SEED MIX ITEM 164 BRDCST SEED(PERM) (WARM OR COOL) SY	TEMPORARY BROADCAST SEED MIX ITEM 164 BRDCST SEED(TEMP) (WARM OR COOL) SY
WARM SEASON Mar.15th, April, May, June, July, August, Sept. 15th	Pure Live Seed Rate Green Sprangletop (Leptochloa dubia) - 15 lbs/acre Hulled - Common Bermuda (Cynodon dactylon) - 50 lbs/acre Buffalograss (Buchloe dactyloides) - 25 lbs/acre total: 90 lbs/acre	Pure Live Seed Rate Foxtail Millet (Setaria italica) - 75 lbs/acre
COOL SEASON Sept 16th, Oct, Nov, Dec, Jan, Feb, Mar 14th	Pure Live Seed Rate Red Winter Wheat (Triticum aestivum) - 30 lbs/acre Crimson Clover (Trifolium incarnatum) - 25 lbs/acre Hulled - Common Bermuda (Cynodon dactylon) - 50 lbs/acre Unhulled - Common Bermuda(Cynodon dactylon) - 50 lbs/acre total: 155 lbs/acre	Pure Live Seed Rate Red Winter Wheat (Triticum aestivum) - 30 lbs/acre

SEEDING NOTES:

1. Contractor shall be responsible for refering to Item 164 of the Texas Standard Specifications for Construction of Highways, Streets and Bridges 1993 for specifications, dimensions, volumes and measurements that have been modified or not shown.
2. All seed shall meet labelling, delivery, analysis, and testing requirements as described in Item 164.2(1).
3. All seeding shall be accomplished using a "TURFGRASS TYPE" seeder; posture type drill seeders will not be allowed. Hydromulch machines shall not be used.
4. Fertilizer shall be applied under Item 166 prior to seeding to help drill fertilizer into soil.
5. Refer to Item 166 Fertilizer this sheet for specifications.
6. All areas to be seeded shall be cultivated to a depth as described in Item 164.3.
7. Vegetative watering shall be paid for under Item 168. Watering rate and specifications shall be as shown on this sheet under Item 168.
8. **BROADCAST SEEDING METHOD OF APPROPRIATE PERMANENT OR TEMPORARY SEED MIX MAY ONLY BE USED WHERE SITE CONDITIONS PREVENT DRILL SEEDING.**

FERTILIZER ITEM 166 FERTILIZER AC

FERTILIZER RATE

Unless otherwise stated in the plans, the contractor shall perform one soil analysis on each project before fertilization andsubmit results to the Engineer with recommended fertilizer rates based on soil analysis. Soil analysis maybe waived if both compost and sod are used on entire project.

FERTILIZER NOTES:

1. Contractor shall be responsible for refering to Item 166 of the Texas Standard Specifications for Construction of Highways, Streets and Bridges 1993 for specifications, dimensions, volumes and measurements that have been modified or not shown.
2. Fertilizer shall be applied before seeding and sodding.
3. Fertilizer shall be delivered in bags unless otherwise specified or approved prior to delivery. Bags shall be clearly labeled showing contents. When non-bagged, loose fertilizer is approved, documentation will be required for each load of material delivered verifying authenticity of material.
4. The product shall be granular and essentially dust free.

VEGETATIVE WATERING FOR SEED AND SOD ITEM 168 VEGETATIVE WATERING MG

WATERING SCHEDULE

MONTH	RATE	TIME SCHEDULE	TOTAL WATER
March, April, May, October	7000 gallons/acre per working day	Vegetative watering for seed and/or sod shall begin on the day after placement for 20 consecutive working days	140,000 gallons/acre (20 working days)
June, July, August, September	12,000 gallons/acre per working day	Vegetative watering for seed and/or sod shall begin on the day after placement for 20 consecutive working days	240,000 gallons/acre (20 working days)
November, December, January, February	1000 gallons/acre per working day	Vegetative watering for seed and/or sod shall begin on the day after placement for 15 consecutive working days	15,000 gallons/acre (15 working days)

Rate and frequency may be adjusted, with the approval of the engineer, to meet site conditions (especially with sod).
For informational purposes only: 1,000 gallons equals 1 MG

VEGETATIVE WATERING NOTES:

1. Contractor shall be responsible for refering to Item 168 of the Texas Standard Specifications for Construction of Highways, Streets and Bridges 1993 for specifications, dimensions, volumes and measurements that have been modified or not shown.
2. All watering equipment shall have a metering device.
3. Water shall be evenly distributed over entire area(s) designated for seeding and/or sodding.
4. If 1/4 inch or more of rainfall occurs on site on any given working day, no vegetative watering will be needed on that working day (Note: 1/4 inch rain equals 7000 gallons of water per acre).
5. **Should the contractor fail to apply the specified amount of water within the time allowed any seed or sod in poor condition shall be replaced, fertilized, and watered at the contractor's expense.**

COMPOST APPLICATION ITEM 161 COMPOST MANF. TOPSOIL (BOS) (CL2) SY

APPLICATION RATE

A one inch uniform layer of compost shall be placed on grade. The compost shall then be incorporated into the existing soil (by till or disk) to a 3 to 4 inch depth.

COMPOST NOTES:

1. Contractor shall be responsible for refering to Special Specification Item 1058 - Compost for specifications, dimensions, volumes and measurements that have been modified or not shown.
2. Erosion Control Compost (ECC) shall be used to control erosion on slopes. ECC shall be used in lieu of Soil Retention Blankets and other slope applications. The ECC shall be uniformly placed on the slope in a minimum one inch layer.
3. Filter berms shall be placed in locations where concentration of flow may cause erosion - reference Special Specification Item 1059 Compost/Mulch Filter Berm

SODDING FOR EROSION CONTROL ITEM 162 BLOCK SOD (BERMUDA) SY

BLOCK OR ROLL SOD

COMMON NAME	BOTANICAL NAME
Common Bermuda Grass	Cynodon dactylon

SODDING NOTES:

1. Contractor shall be responsible for refering to Item 162 of the Texas Standard Specifications for Construction of Highways, Streets and Bridges 1993 for specifications, dimensions, volumes and measurements that have been modified or not shown.
2. All sod (blocks or rolls) shall be placed within 24 hours of delivery to the site.
3. Sod shall be placed only after soil preparation is complete and fertilizer has been applied to soil.
4. Sod blocks shall be placed firmly against adjacent sod blocks.
5. Sod shall be placed with joints alternating on each row to prevent all joints from lining up.
6. Vegetative watering shall be paid for under Item 168. Watering rate shall be as shown on this sheet under Item 168. Sod shall be watered immediately following placement.

REQUIRED ITEMS:

- COMPOST MANUFACTURED TOPSOIL
- FERTILIZER TO BE USED WITH ALL SEEDING AND MOST SODDING.
- VEGETATIVE WATERING TO BE USED WITH ALL SEEDING AND SODDING.
- ONLY BROADCAST SEED IN AREAS WHERE CANNOT DRILL SEED OR SOD.

SEQUENCE OF WORK:

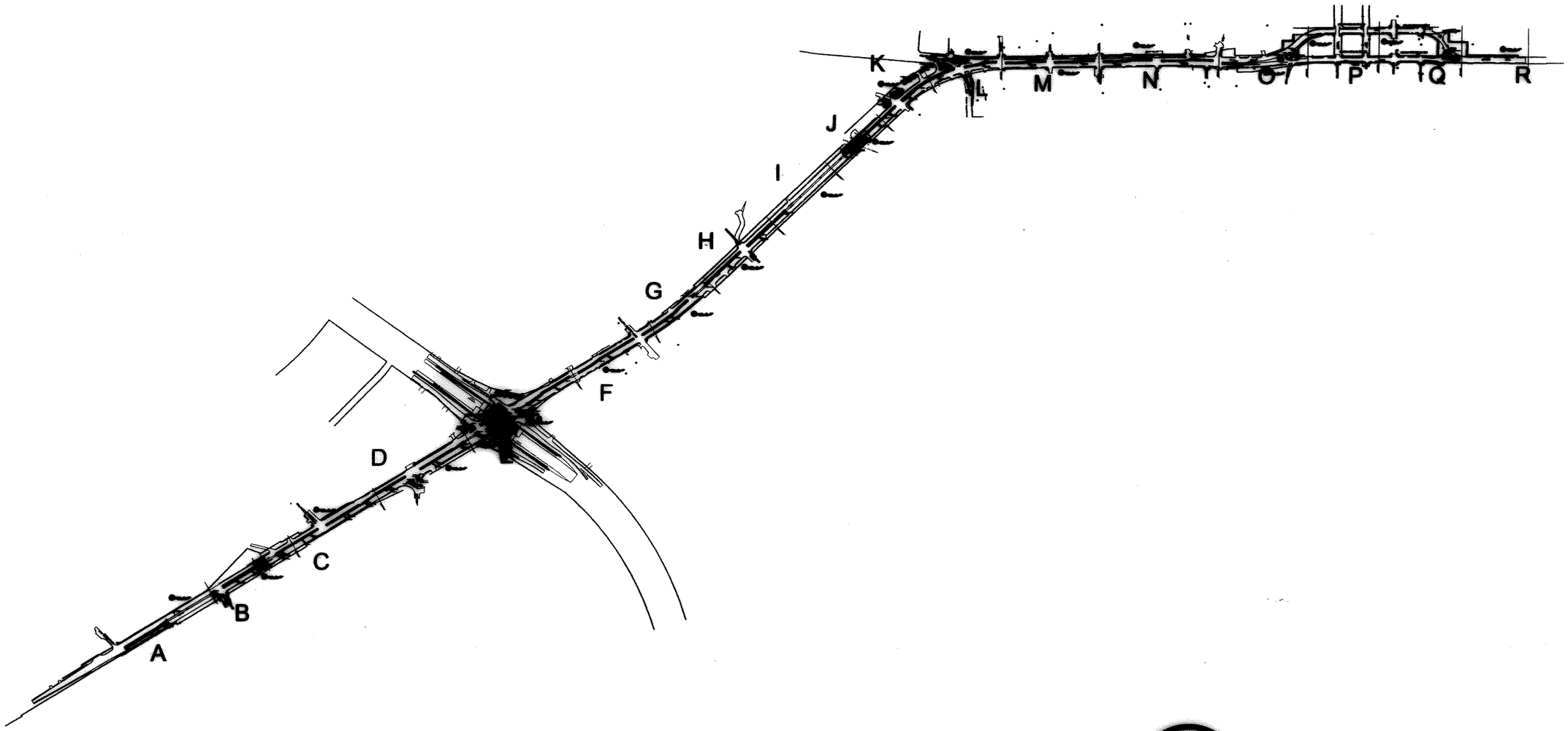
PREPARE SOIL WITH COMPOST
APPLY FERTILIZER
PLACE SEED AND/OR SOD
APPLY WATER FOR SEED AND SOD AREAS

Texas Department of Transportation
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DALLAS DISTRICT STANDARD
VEGETATION ESTABLISHMENT SHEET (MOD)

DESIGN	FED. RD./DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
ORIGINAL 1/15/03	6			SH 205
REVISIONS	STATE	DISTRICT	COUNTY	SHEET NO.
REVISED 2/25/03	TEXAS	DALLAS	ROCKWALL	796
	CONTROL	SECTION	JOB	
	1451	01	032	

3/22/2006
p:\projects\SH205\dgn\standards\SeedingStds.dgn



SPECIAL PAVING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		797
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

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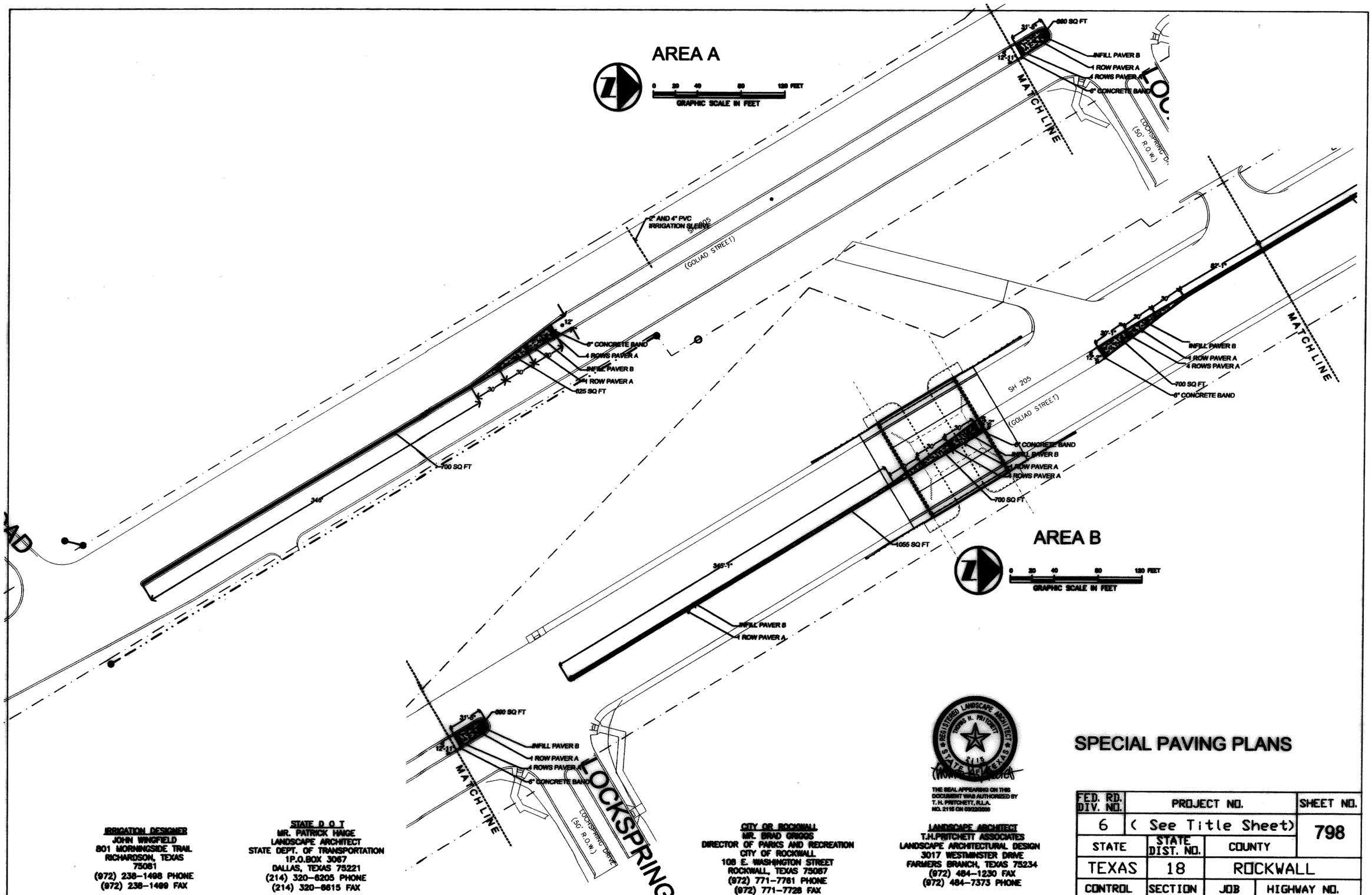
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$$$$date$$$$

AREA A

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET



AREA B

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

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6	(See Title Sheet)		798
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$

RALPH HALL PARKWAY

RALPH HALL PARKWAY

AREA C

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

MATCH LINE

INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
900 SQ FT

347'-1"

INFILL PAVER B
1 ROW PAVER A
1050 SQ FT

2150 SQ FT

INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
285 LF CONCRETE MOW BAND

6" CONCRETE BAND
1150 SQ FT

INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A

MATCH LINE

346'-3"

INFILL PAVER B
1 ROW PAVER A
1100 SQ FT

AREA D

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

296'-5"

INFILL PAVER B
1 ROW PAVER A
1100 SQ FT

MATCH LINE

150 SQ FT
250 SQ FT
500 SQ FT
220 SQ FT
930 SQ FT

INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
1200 SQ FT

308'-5"

INFILL PAVER B
1 ROW PAVER A
1025 SQ FT

(GOLIAD STREET)

INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
600 SQ FT

MATCH LINE

SH 276

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6	(See Title Sheet)		799
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$

NORTH SERVICE ROAD IH 30

INTERSTATE 30
(VARIABLE WIDTH R.O.W.)

STATE HWY 205
COLLAGE STREET

560 LF CONCRETE MOW BAND
(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC IRRIGATION SLEEVE
1000 SQ FT
299'-10"
INFILL PAVER B
1 ROW PAVER A
925 SQ FT
6" CONCRETE BAND
425 SQ FT
6" CONCRETE BAND
4 ROWS PAVER A
INFILL PAVER B
1 ROW PAVER A
350 LF CONCRETE MOW BAND
300 SQ FT
INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
1350 SQ FT
7900 SQ FT
INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC IRRIGATION SLEEVE
INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
2150 SQ FT
285 LF CONCRETE MOW BAND
INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
450 SQ FT
INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
6" CONCRETE BAND
1150 SQ FT
INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
360 LF CONCRETE MOW BAND
880 SQ FT
7100 SQ FT
INFILL PAVER B
1 ROW PAVER A
4 ROWS PAVER A
1100 SQ FT
INFILL PAVER B
1 ROW PAVER A
(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC IRRIGATION SLEEVE
(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC IRRIGATION SLEEVE

SOUTH SERVICE R

INTERSTATE 30
(VARIABLE WIDTH R.O.W.)

WATCHLIN

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GRAPHIC SCALE IN FEET

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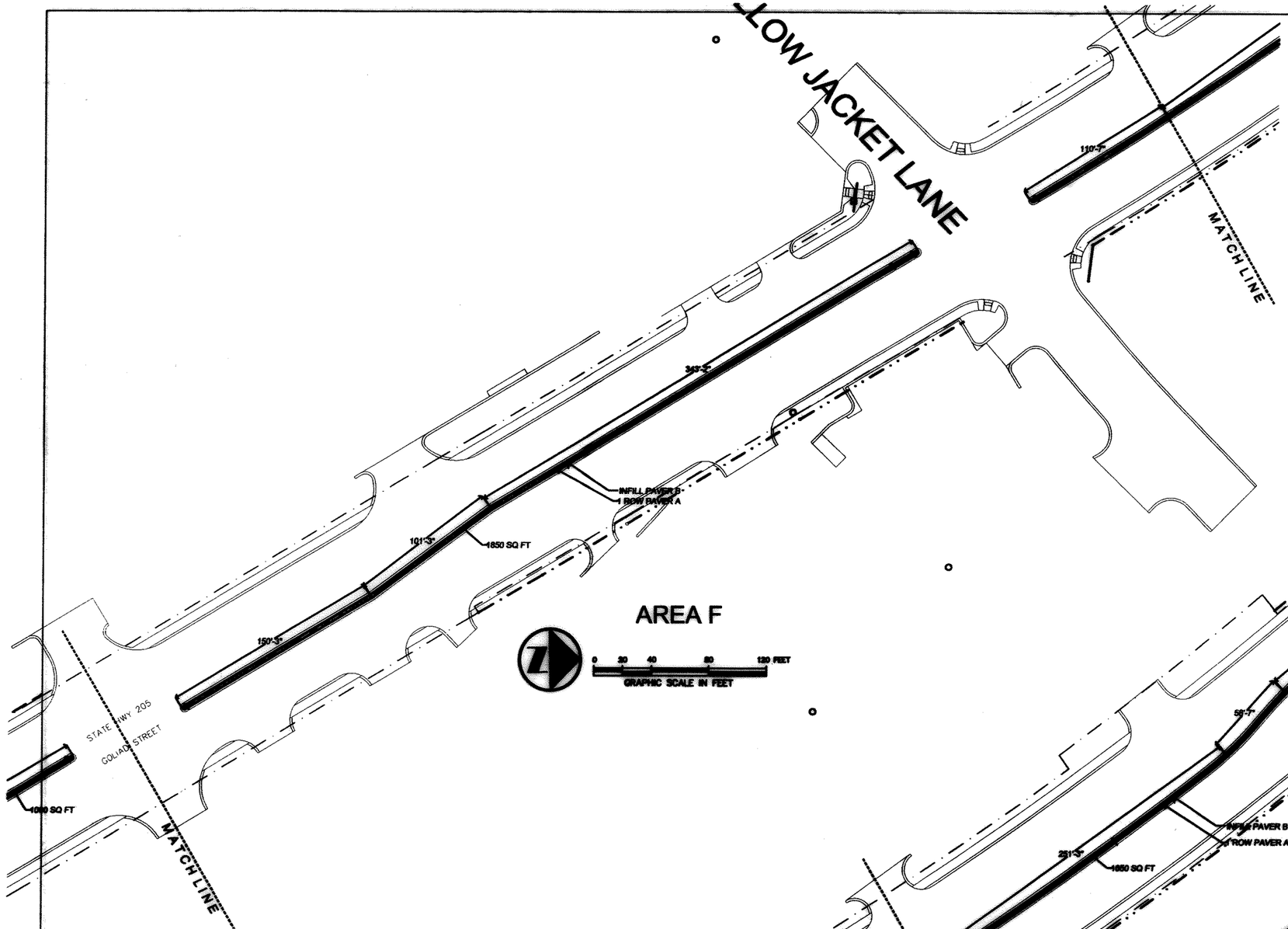
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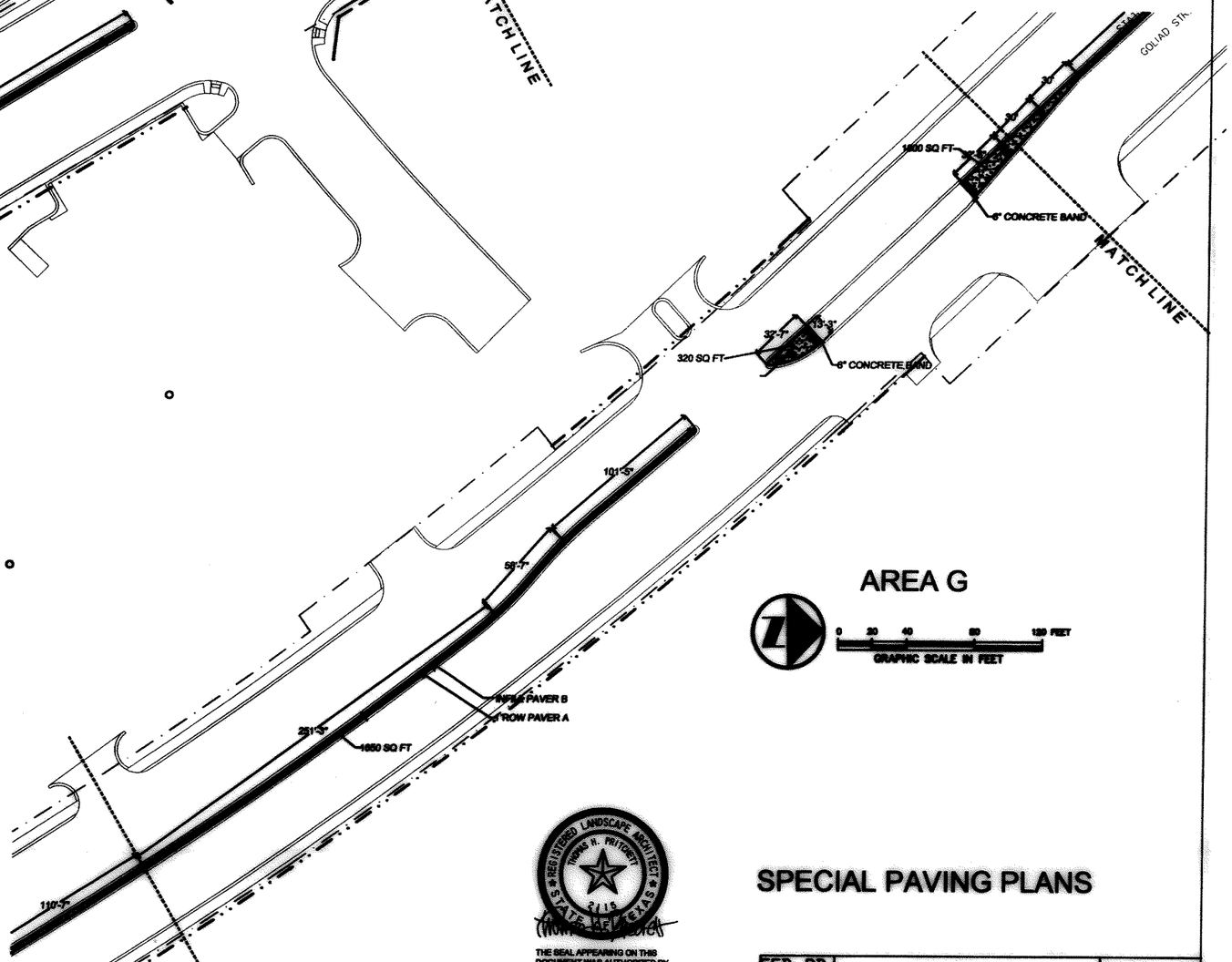
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6	(See Title Sheet)		800
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

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AREA F

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET



AREA G

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

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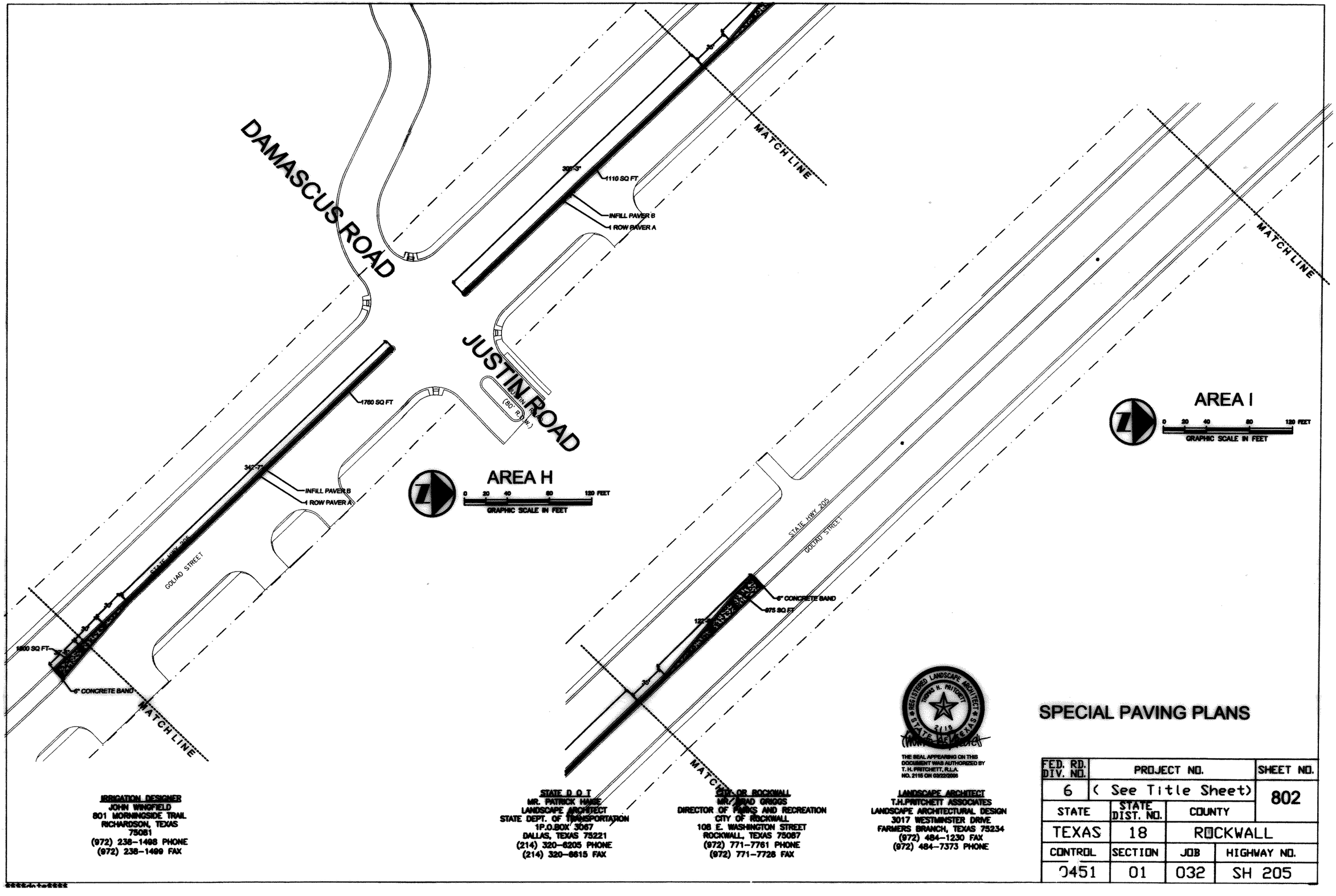
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CONTROL	SECTION	JOB	HIGHWAY NO.
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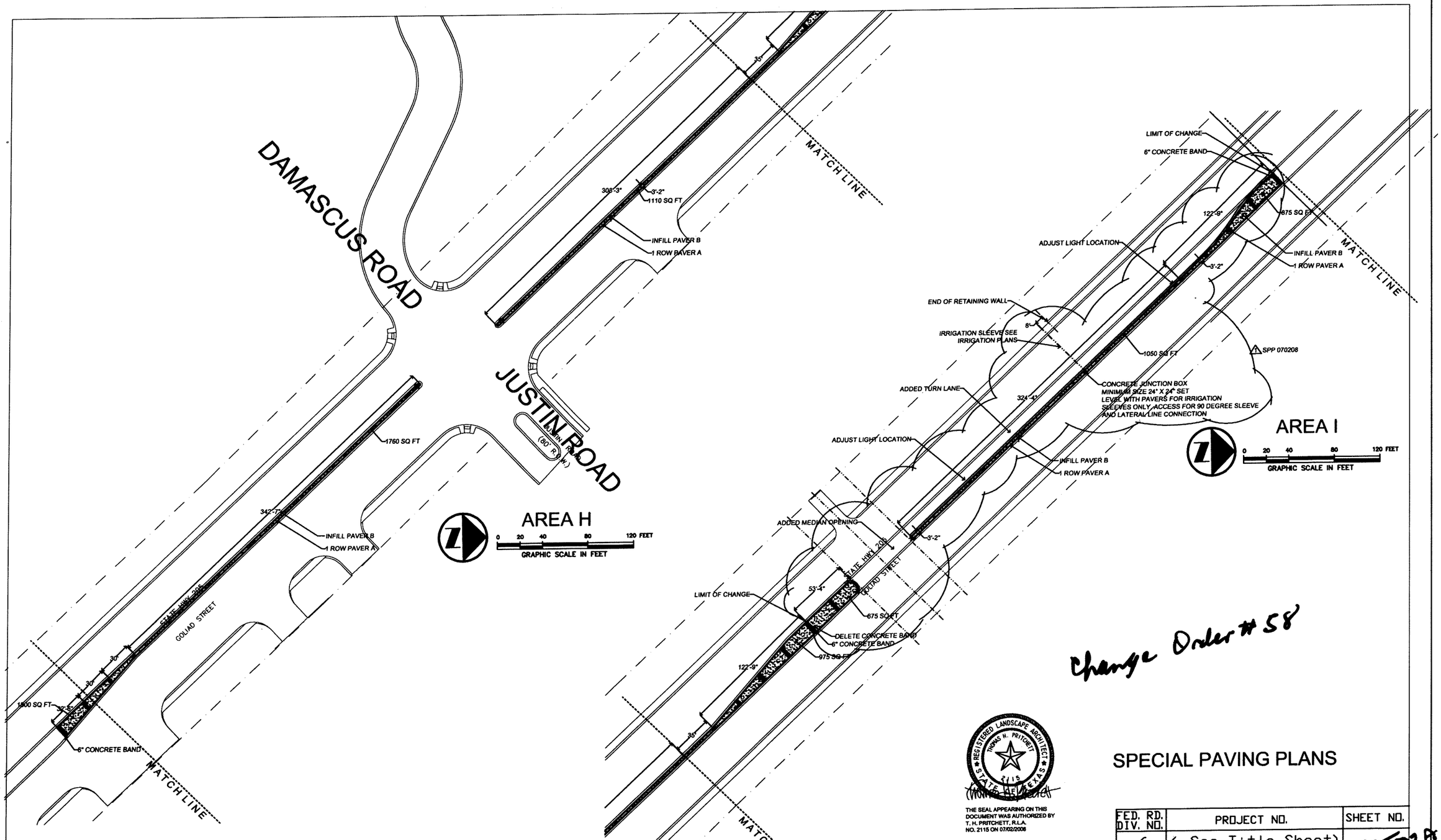
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6	(See Title Sheet)		802
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
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Change Order #58

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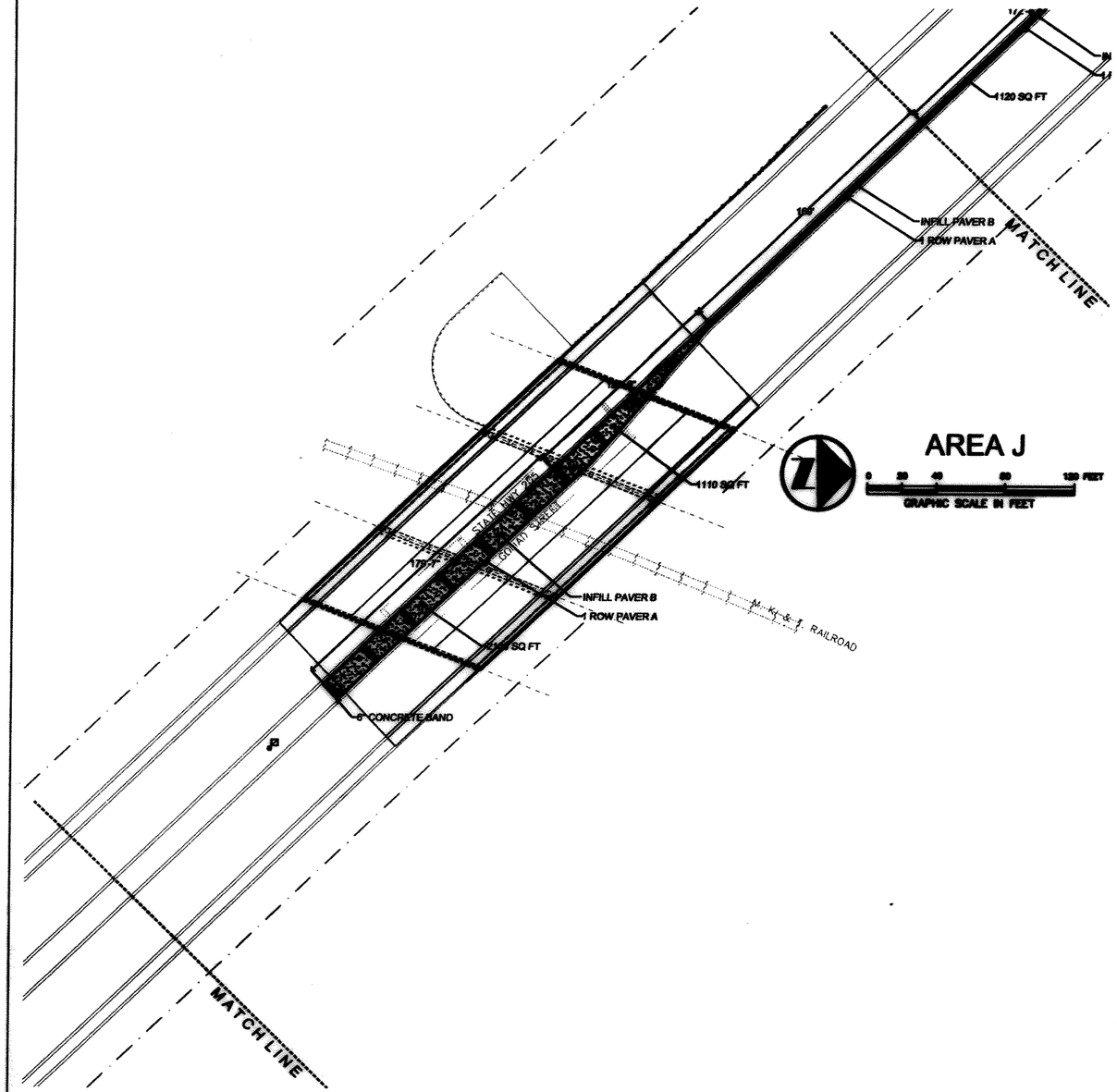
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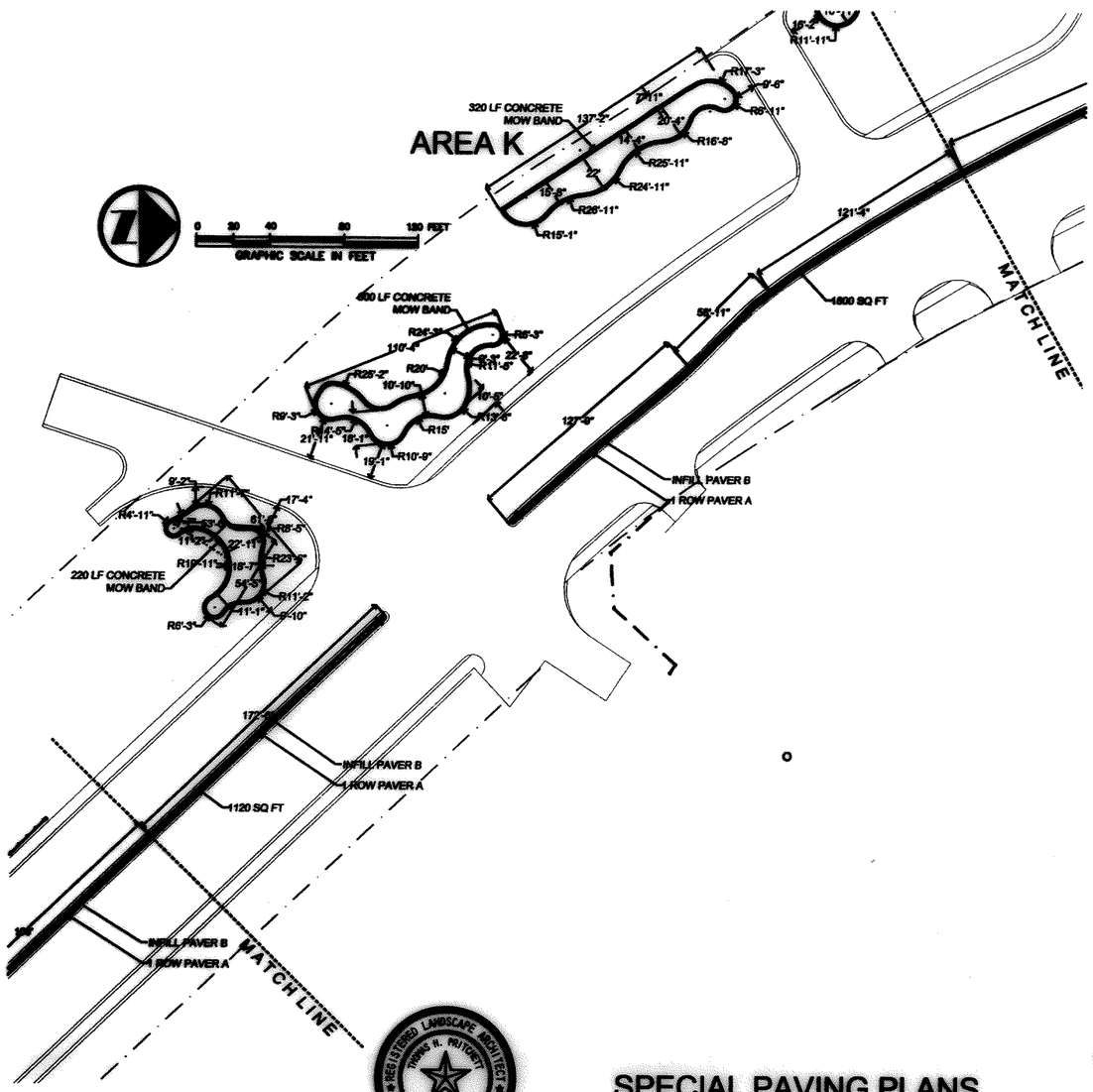
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6	(See Title Sheet)		~~802~~ 802A ~~803~~
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

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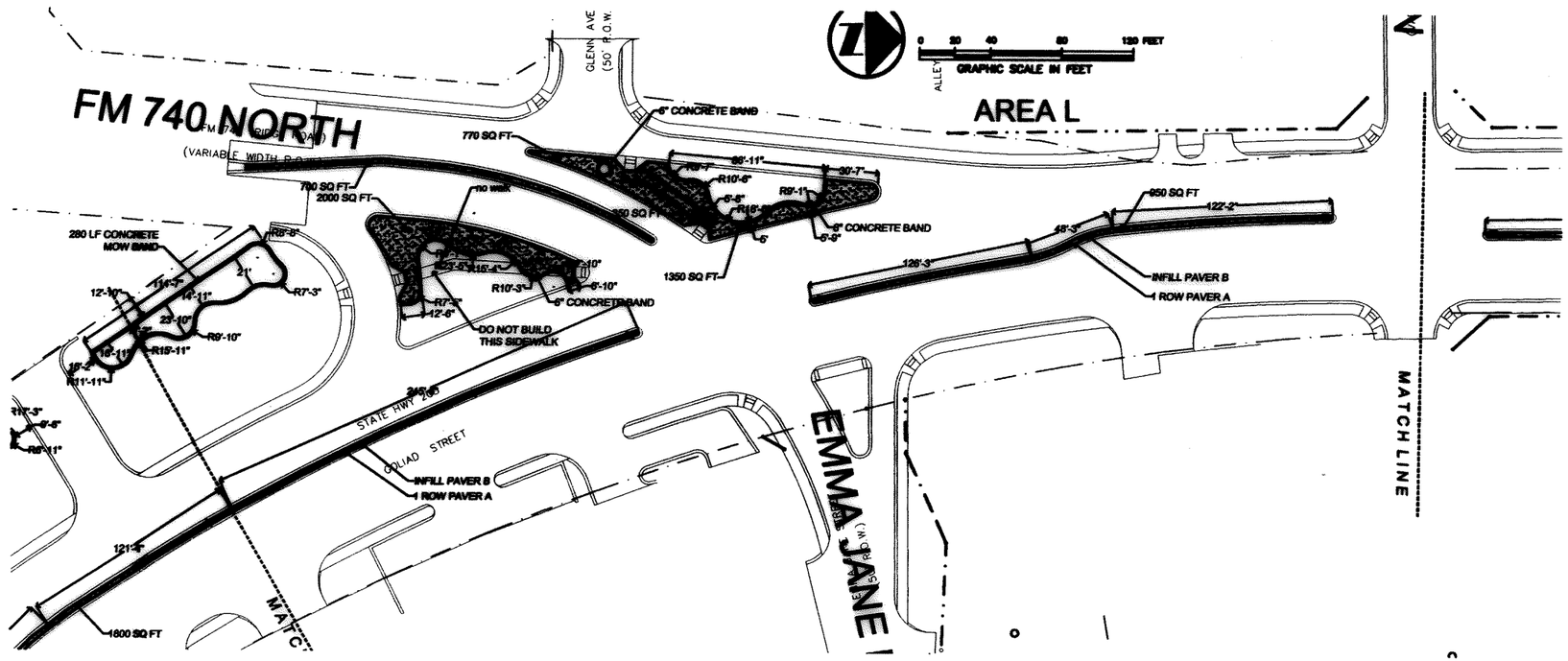
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6	(See Title Sheet)		803
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2116 ON 09/22/2005

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		804
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

IRRIGATION DESIGNER
JOHN WINGFIELD
801 MORNINGSIDE TRAIL
RICHARDSON, TEXAS
75081
(972) 238-1498 PHONE
(972) 238-1499 FAX

STATE D O T
MR. PATRICK HAIGE
LANDSCAPE ARCHITECT
STATE DEPT. OF TRANSPORTATION
1P.O.BOX 3067
DALLAS, TEXAS 75221
(214) 320-6205 PHONE
(214) 320-6615 FAX

CITY OR ROCKWALL
MR. BRAD GRIGGS
DIRECTOR OF PARKS AND RECREATION
CITY OF ROCKWALL
108 E. WASHINGTON STREET
ROCKWALL, TEXAS 75087
(972) 771-7761 PHONE
(972) 771-7728 FAX

LANDSCAPE ARCHITECT
T.H.PRITCHETT ASSOCIATES
LANDSCAPE ARCHITECTURAL DESIGN
3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
(972) 484-1230 FAX
(972) 484-7573 PHONE

88888date8888

AREA N

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

BOYDSTUN AVENUE
(VARIABLE WIDTH R.O.W.)

STATE HWY 205
GOLIAD STREET

207'-10"
51'-3"
1488 SQ FT
182'-11"
INFILL PAVER B
1 ROW PAVER A

210'-9"
47'-2"
1475 SQ FT
209'-4"
INFILL PAVER B
1 ROW PAVER A

BOYDSTON
MATCH LINE

ST. MARY
(VARIABLE WIDTH R.O.W.)

STORRS
(VARIABLE WIDTH R.O.W.)

MATCH LINE

AREA O

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

GOLIAD STREET
STATE HWY 205

700 SQ FT
217'-10"
INFILL PAVER B
1 ROW PAVER A

880 SQ FT
60°
32'-6"
6" CONCRETE BAND

1000 SQ FT
10'-7"
5'-8"

1900 SQ FT
6'-8"
7'-11"
7'-11"
6" CONCRETE BAND

1150 SQ FT
35'-10"
6" CONCRETE BAND

6" CONCRETE BAND
10'-3"

CENTER

MATCH LINE

(VARIABLE WIDTH R.O.W.)

THOMAS H. PRITCHETT
REGISTERED LANDSCAPE ARCHITECT
STATE OF TEXAS
2115
STATE OF TEXAS

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2115 ON 03/22/2000

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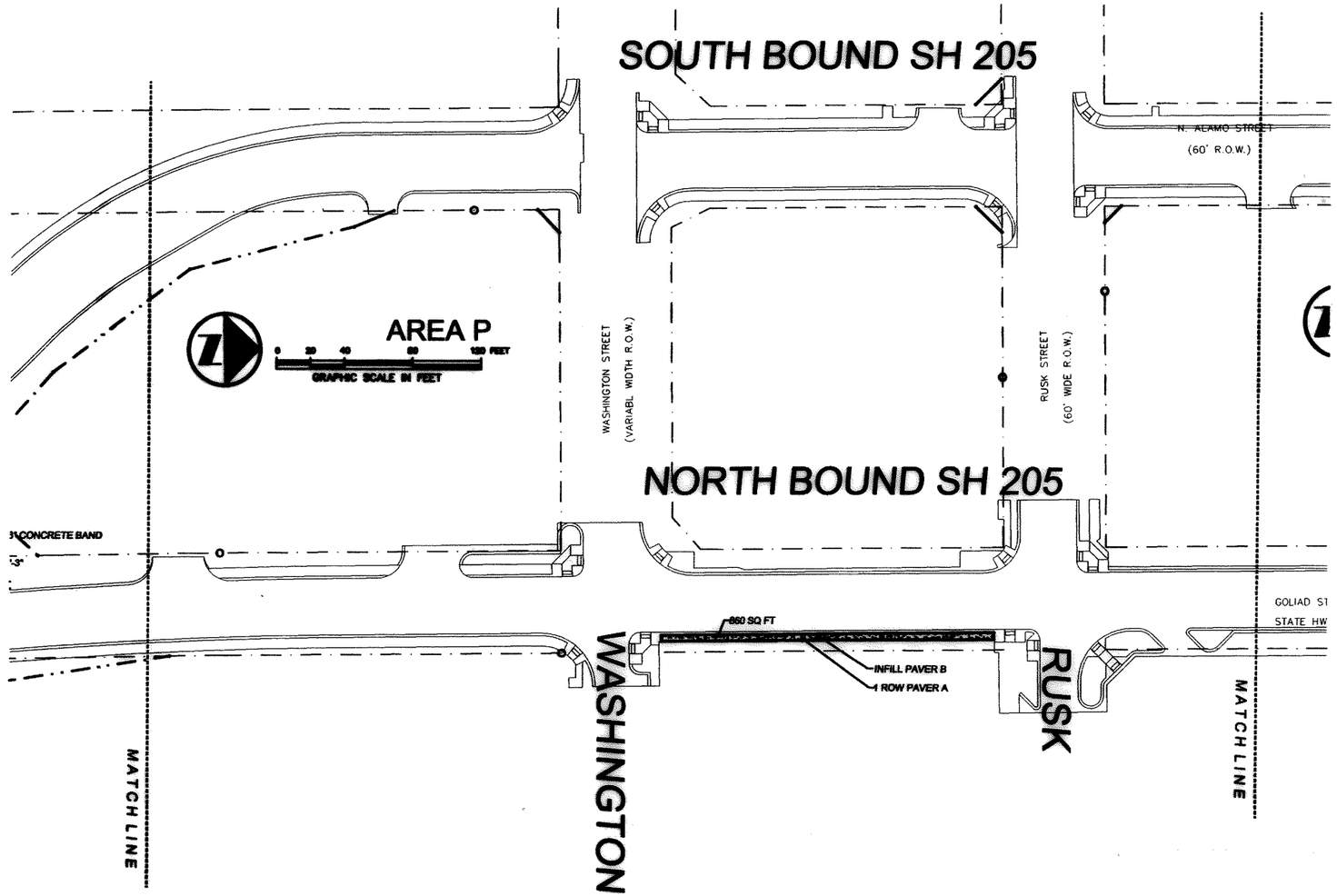
CITY OF ROCKWALL
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LANDSCAPE ARCHITECTURAL DESIGN
3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
(972) 484-1230 FAX
(972) 484-7373 PHONE

SPECIAL PAVING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		805
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$dn to$$$$



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2115 ON 03/22/2006

SPECIAL PAVING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		806
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

IRRIGATION DESIGNER
JOHN WINGFIELD
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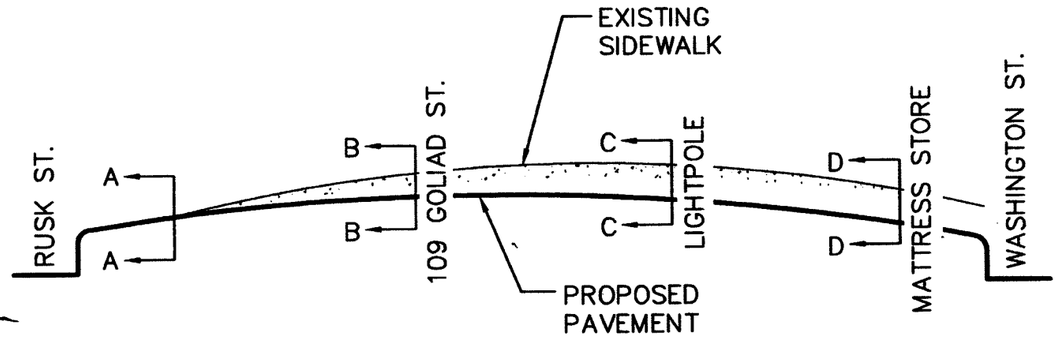
CITY OR ROCKWALL
MR. BRAD GRIGGS
DIRECTOR OF PARKS AND RECREATION
CITY OF ROCKWALL
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ROCKWALL, TEXAS 75087
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$$$$date$$$$

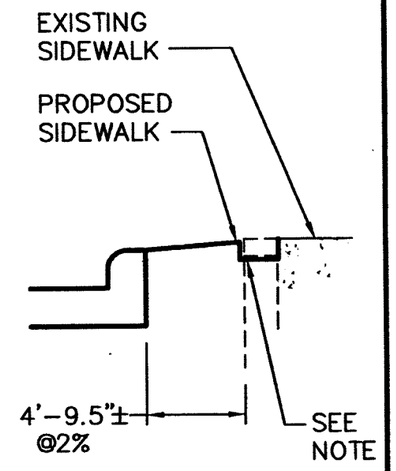
STATE OF TEXAS
KATHLEEN R. LAPPEN
94603
LICENSED
PROFESSIONAL ENGINEER

10-01-09

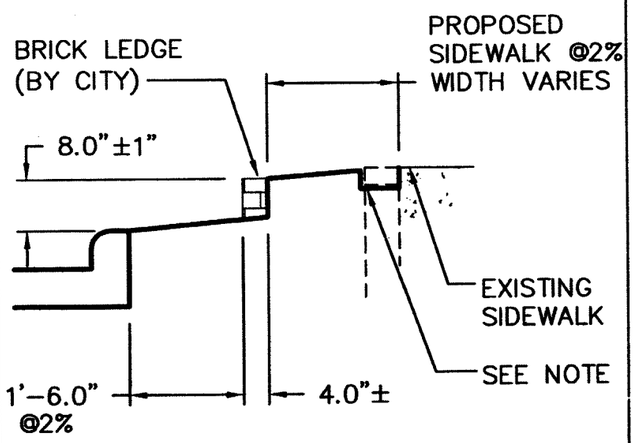


NOTE:
SAWCUT EXISTING SIDEWALK AT BRICK LEDGE. LEAVE 10" WIDE X 3 1/2" DEEP NOTCH FOR FUTURE BRICK (BRICK PLACEMENT BY CITY).

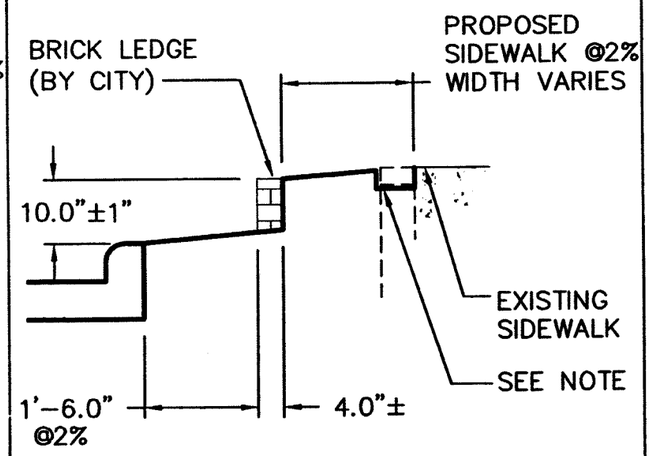
SIDEWALK PROFILE – LOOKING EAST



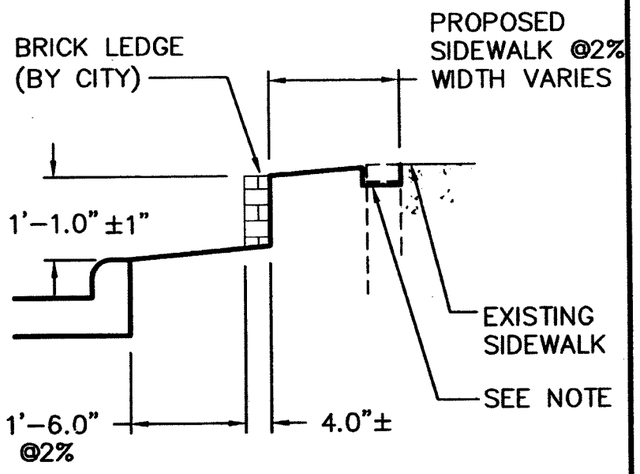
SECTION A–A



SECTION B–B



SECTION C–C



SECTION D–D

Change Order #88

SH–205
DOWNTOWN SIDEWALK

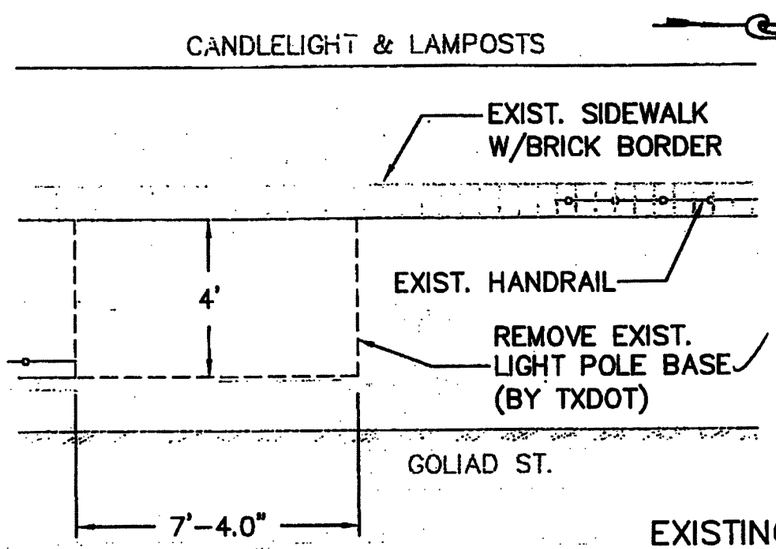
CITY OF ROCKWALL
"THE NEW HORIZON"

SCALE
NTS

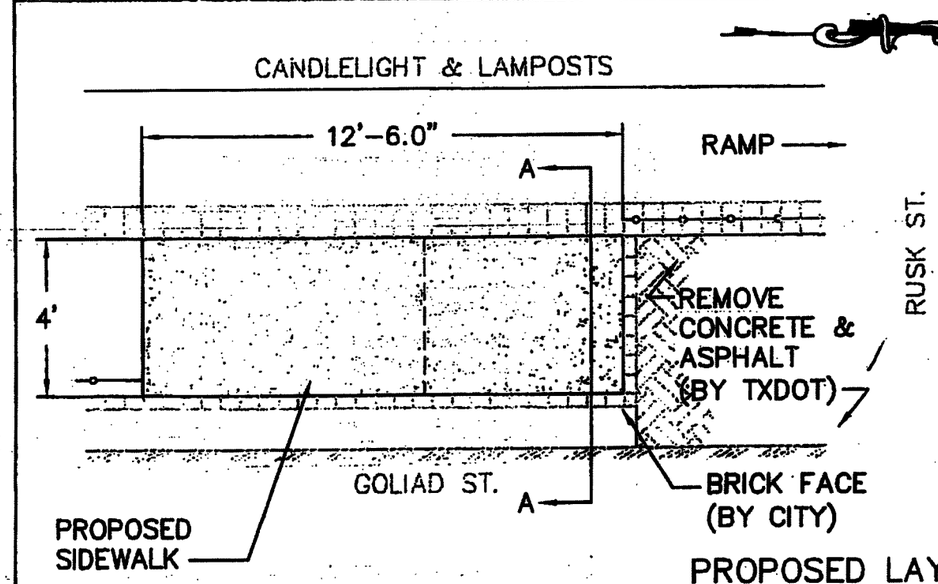
DATE
OCT 1, 2009

DRAWING NAME
SH–205 Sidewalk Rev.

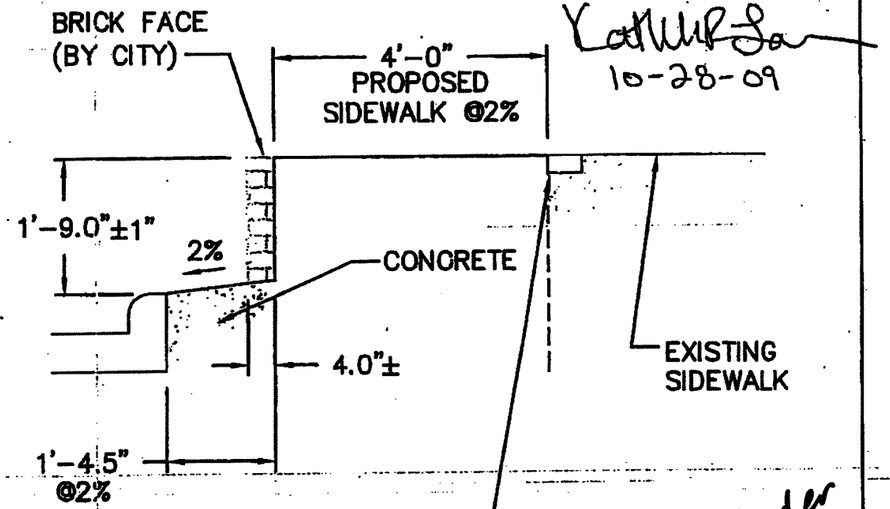
SHEET
506AA



EXISTING LAYOUT



PROPOSED LAYOUT



SECTION A-A

STATE OF TEXAS
KATHLEEN R. LAPPEN
94603
LICENSED
PROFESSIONAL ENGINEER
10-28-09

Change Order #88

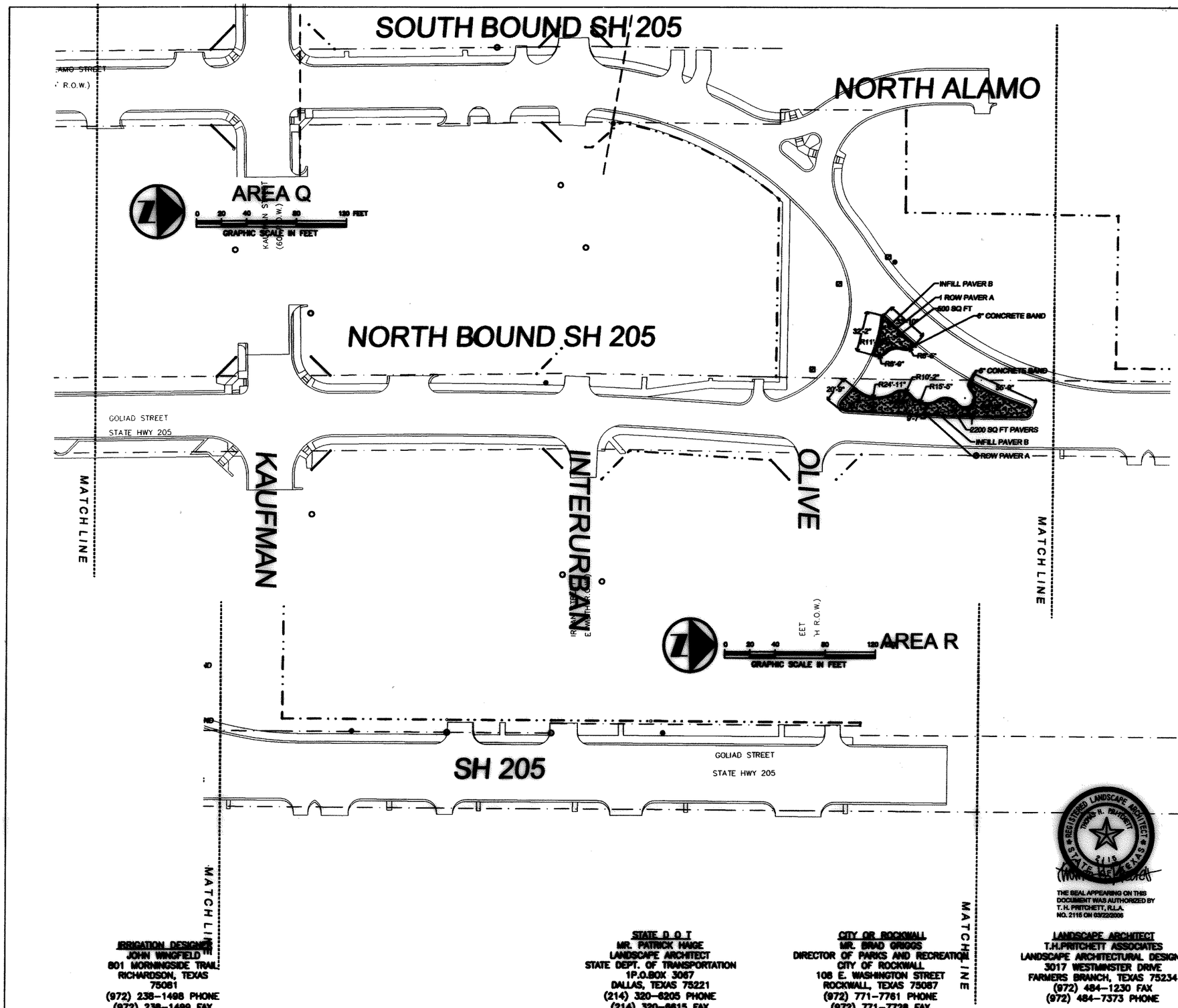
SH-205 & RUSK ST.

DOWNTOWN SIDEWALK

CITY OF ROCKWALL
"THE NEW HORIZON"

SCALE	
NTS	
DATE	DRAWING NAME
OCT 23, 2009	SH-205 Sidewalk Rev.

806 BA



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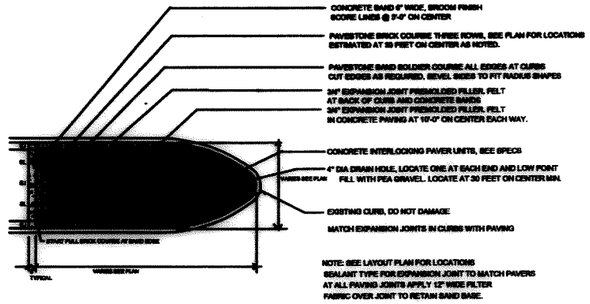
REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
2115
STATE OF TEXAS

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2115 ON 03/22/2006

SPECIAL PAVING PLANS

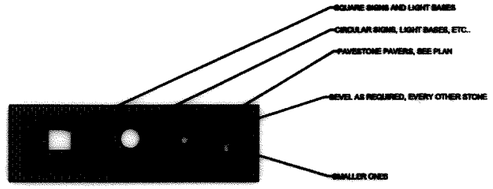
FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		807
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$dn t=$$$$



1 **PAVESTONE PAVING PLAN**
NOT TO SCALE

PAVESTONE PAVERS TO BE PROVIDED AND INSTALLED
PER MANUFACTURES SPECIFICATIONS
HOLLAND STONE PAVER, 2 3/8" THICK, TERRA COTTA COLOR
1-800-580-PAVE FOR PAVESTONE CO.



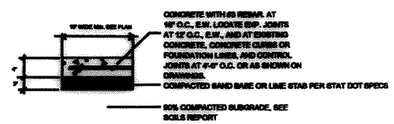
2 **PAVESTONE PAVING DETAIL AT LIGHTS AND SIGN BASES**
NOT TO SCALE

PAVESTONE PAVERS TO BE PROVIDED AND INSTALLED
PER MANUFACTURES SPECIFICATIONS
HOLLAND STONE PAVER, 2 3/8" THICK, TERRA COTTA COLOR
1-800-580-PAVE FOR PAVESTONE CO.



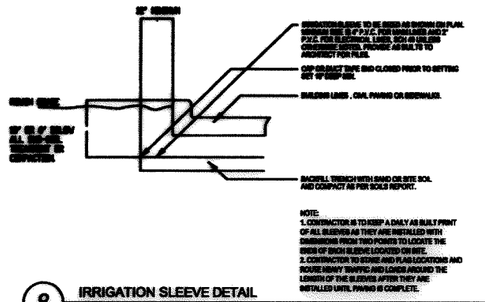
3 **PAVESTONE PAVING DETAIL AT LIGHTS AND SIGN BASES**
NOT TO SCALE

PAVESTONE PAVERS TO BE PROVIDED AND INSTALLED
PER MANUFACTURES SPECIFICATIONS
HOLLAND STONE PAVER, 2 3/8" THICK, TERRA COTTA COLOR
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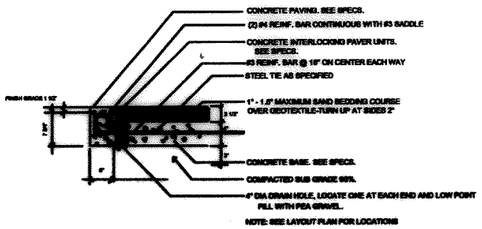


7 **16" WIDE CONCRETE BAND**
NOT TO SCALE

CONCRETE BANDS PER DETAILS, COLOR INTEGRAL
EDGE WITH HEAVY BROOM FINISH, COLOR SAMPLE
TO BE APPROVED BY LANDSCAPE ARCHITECT.

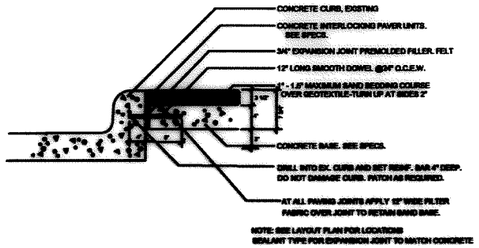


8 **IRRIGATION SLEEVE DETAIL**
N.T.S.



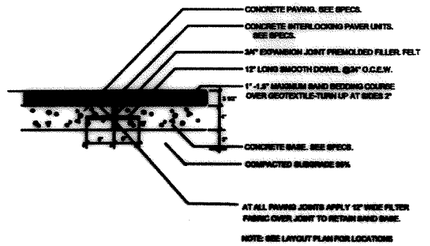
4 **CONCRETE BAND AT PAVESTONE**
NOT TO SCALE

CONCRETE FINISH TO BE BROOM FINISH
CONSTRUCTION LINES AT 6'-0" ON CENTER
EXPANSION JOINTS AT ALL EXISTING PAVING,
AND AT 50'-0" ON CENTER, EACH WAY.
SLOPE TOP SURFACE AND CONCRETE TO DRAIN
ALLOW FOR 1.25% SLOPE FOR POSITIVE DRAINAGE



5 **PAVESTONE AT EXISTING CURB**
NOT TO SCALE

CONCRETE FINISH TO BE BROOM FINISH
CONSTRUCTION LINES AT 6'-0" ON CENTER
EXPANSION JOINTS AT ALL EXISTING PAVING,
AND AT 50'-0" ON CENTER, EACH WAY.
SLOPE TOP SURFACE AND CONCRETE TO DRAIN
ALLOW FOR 1.25% SLOPE FOR POSITIVE DRAINAGE



6 **EXPANSION JOINT AT PAVESTONE**
NOT TO SCALE

CONCRETE FINISH TO BE BROOM FINISH
CONSTRUCTION LINES AT 6'-0" ON CENTER
EXPANSION JOINTS AT ALL EXISTING PAVING,
AND AT 50'-0" ON CENTER, EACH WAY.



THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
T. H. PRITCHETT, R.L.A.
NO. 2115 ON 09/04/2006

SPECIAL PAVING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		808
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

IRRIGATION DESIGNER
JOHN WINGFIELD
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FARMERS BRANCH, TEXAS 75234
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PLANTING DESIGN SUMMARY

SHEET NO.	160-2004	161-2011	192-2001	192-2002			192-2013	192-2015	192-2024		192-2026	192-2027					192-2030	192-2031		
CSJ 9-12-203	Furn/Place Topsoil (SY)	Fertilize Compost (1") (SY)	GC-1 Liriope	GC-2 White Lantana	GC-3 Day Lilies	GC-4 Mulhly Grass	Landscape Mulch (SY)	Landscape Edging (LF)	TR-6 Crape Myrtle	TR-7 Yaupon Holly	TR-5 Dwarf Magnolia	TR-1 Red Oak	TR-2 Maple	TR-3 Cedar Elm	TR-4 Bald Cypress	TR-8 Live Oak	SH-2 Dwarf Yaupon Holly	SH-1 Indian Hawthorne	SH-3 Burford Holly	SH-4 Mint Julep Juniper
798 (A/B)	811.1	811.1	6950	160	260	0	811.1	0	31	0	0	8	9	0	0	0	270	70	0	0
799 (C/D)	43.3	43.3	600	0	12	0	43.3	0	2	0	0	0	0	0	0	3	40	0	0	0
800 (E)	1400.0	1400.0	9210	440	390	0	1400.0	0	17	32	2	12	7	8	0	17	160	30	0	284
801 (F)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2254.4	2254.4	16760	600	662	0	2254.4	0	50	32	2	20	16	8	0	20	470	100	0	284
CSJ 451-1-32																				
801 (G)	166.7	166.7	1400	95	40	0	166.7	0	0	0	8	0	2	0	0	0	180	0	20	0
802 (H/I)	747.2	747.2	6050	50	60	0	747.2	0	0	19	72	45	0	0	0	25	90	0	20	25
803 (J/K)	791.7	791.7	6100	300	270	0	791.7	0	19	10	0	10	11	0	4	13	90	20	0	9
804 (L/M)	658.9	658.9	3950	385	190	24	658.9	0	3	14	4	3	4	4	0	3	80	82	0	3
805 (N/O)	805.6	805.6	4700	700	110	0	805.6	90	15	0	6	3	5	0	0	7	90	70	32	7
806 (P)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
807 (Q/R)	294.4	294.4	1200	240	50	20	294.4	0	8	0	0	0	4	0	0	0	0	64	0	0
	3464.5	3464.5	23400	1770	720	44	3464.5	90	45	43	90	61	26	4	4	48	530	236	72	44
CSJ 451-1-44																				
803 (J)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROJECT TOTALS	5718.9	5718.9	40160	2370	1382	44	5718.9	90	95	75	92	81	42	12	4	68	1000	336	72	328

IRRIGATION DESIGN SUMMARY

SHEET NO.	Irrigation System Item 170-2001 "For Contractor's Information Only"											628-2140
CSJ 9-12-203	Remote Control Valves-Ea	Quick Coupling Valves-Ea	Spray Heads-Ea	Bubblers Ea	Conduit/ Control Wire LF	Controller Ea	1" Water Meter-Ea	1½" Water Meter-Ea	Backflow Preventor	2" Sleeve (or Bore)-LF	4" Sleeve (or Bore)-LF	Electrical Service-Ea
798 (A/B)	5	1	88	0	1200	1	1	1	2	100	100	1
799 (C/D)	0	0	0	0	1800	0	1	0	1	50	50	0
800 (E)	14	1	146	55	0	1	1	0	1	400	400	1
801 (F)	0	0	0	0	0	0	0	0	0	0	0	0
	19	2	234	55	3000	2	3	1	4	550	550	2
CSJ 451-1-32												
801 (G)	2	0	19	0	80	1	1	0	1	50	50	1
802 (H/I)	5	0	83	104	1400	0	0	1	1	70	70	0
803 (J/K)	6	0	86	25	0	0	0	0	0	80	80	0
804 (L/M)	4	1	61	9	250	1	2	0	2	70	70	1
805 (N/O)	7	0	78	0	0	1	1	0	1	170	170	1
806 (P)	0	0	0	0	0	0	0	0	0	0	0	0
807 (Q/R)	2	1	30	0	0	1	1	0	1	35	35	1
	26	2	357	129	1730	4	5	1	6	475	475	4
CSJ 451-1-44												
803 (J)	0	0	0	0	0	0	0	0	0	0	0	0
PROJECT TOTALS	45	4	591	184	4730	6	8	2	10	1025	1025	6

STREET LIGHTING SUMMARY

SHEET NO.	416-2029	618-2018	624-2007	624-2008
CSJ 9-12-203	DRILL SHAFT (SIGNS (1) POLE)-LF	CONDT (PVC) (SCH40) (2") LF	GROUND BOX (Ty A)-EA	GROUND BOX (Ty A) with APRON-EA
798 (A/B)	48	1477	2	0
799 (C/D)	42	2216	5	0
800 (E)	24	588	2	0
801 (F)	18	972	3	0
	132	5253	12	0
CSJ 451-1-32				
801 (G)	18	440	2	0
802 (H/I)	36	1624	2	0
803 (K)	18	530	2	0
804 (L/M)	36	1778	8	0
805 (N/O)	60	1760	8	0
806 (P)	0	0	0	0
807 (Q/R)	24	825	1	3
	192	6957	23	3
CSJ 451-1-44				
803 (J)	12	520	0	2
PROJECT TOTALS	336	12730	35	5

SPECIAL PAVING SUMMARY

SHEET NO.	420-2078	420-2086	528-2004
CSJ 9-12-203	CL A CONC (MISC) 8" SY	CL A CONC (MISC) 4" SY	LANDSCAPE PAVERS-SY
798 (A/B)	2.68	0	463.3
799 (C/D)	0.56	0	1063.9
800 (E)	1.94	216.0	2672.2
801 (F)	0	0	205.6
	5.18	216.0	4405.0

SHEET NO.	420-2078	420-2086	528-2004
CSJ 451-1-32	CL A CONC (MISC) 8" SY	CL A CONC (MISC) 4" SY	LANDSCAPE PAVERS-SY
801 (G)	1.47	0	418.9
802 (H/I)	0.77	0	427.2
803 (K)	0	116.67	324.4
804 (L/M)	16.44	38.89	935.6
805 (N/O)	40.5	0	909.4
806 (P)	0	0	95.6
807 (Q/R)	8.89	0	300.0
	68.07	155.56	3411.1

SHEET NO.	420-2078	420-2086	528-2004
CSJ 451-1-44	CL A CONC (MISC) 8" SY	CL A CONC (MISC) 4" SY	LANDSCAPE PAVERS-SY
803 (J)	0.77	0	357.2
PROJECT TOTALS	74.02	371.56	8173.3

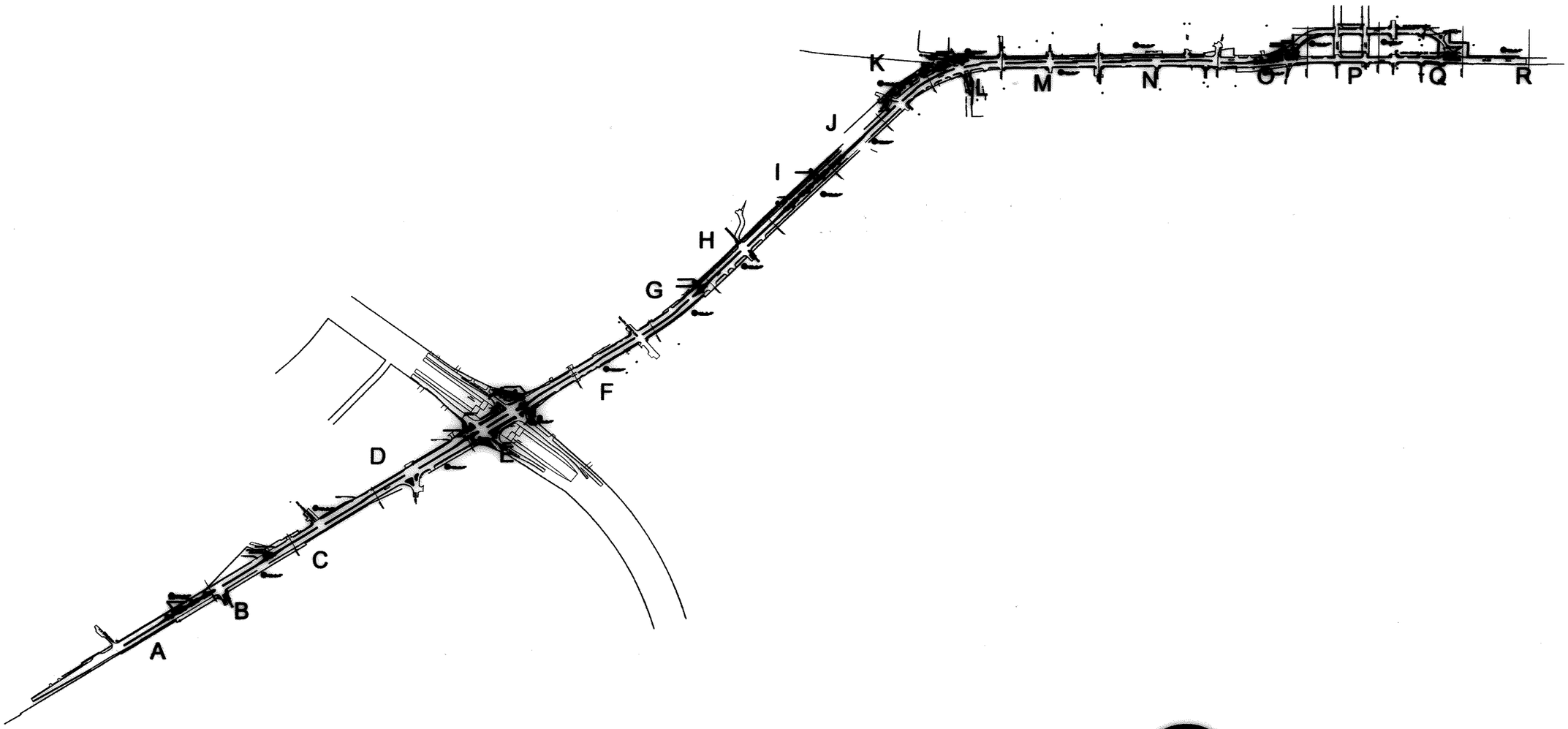
TEMPLATED REVISED: 10-23-02

6/23/06 ADDENDUM

Texas Department of Transportation
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SUMMARY OF LANDSCAPE, IRRIGATION, SPECIAL PAVING, & STREET LIGHTING

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
XXX	6	(See Title Sheet)		SH 205
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
XXX	TEXAS	DALLAS	ROCKWALL	809
CHECK	CONTROL	SECTION	JOB	
XXX	0451	01	032, etc.	
CHECK				
XXX				



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IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		810
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

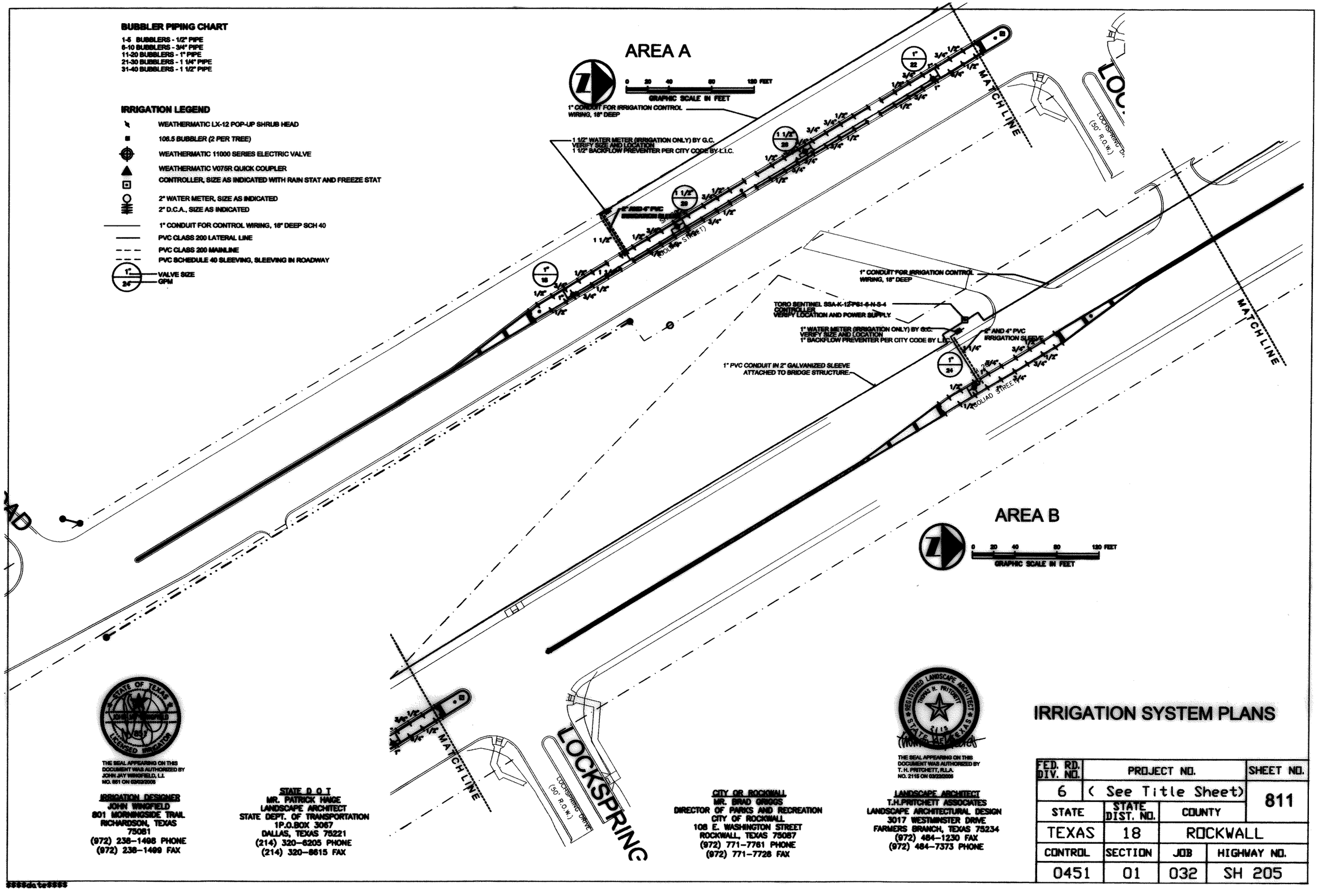
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BUBBLER PIPING CHART

1-5 BUBBLERS - 1/2" PIPE
6-10 BUBBLERS - 3/4" PIPE
11-20 BUBBLERS - 1" PIPE
21-30 BUBBLERS - 1 1/4" PIPE
31-40 BUBBLERS - 1 1/2" PIPE

IRRIGATION LEGEND

- WEATHERMATIC LX-12 POP-UP SHRUB HEAD
- 106.5 BUBBLER (2 PER TREE)
- WEATHERMATIC 11000 SERIES ELECTRIC VALVE
- WEATHERMATIC V075R QUICK COUPLER
- CONTROLLER, SIZE AS INDICATED WITH RAIN STAT AND FREEZE STAT
- 2" WATER METER, SIZE AS INDICATED
- 2" D.C.A., SIZE AS INDICATED
- 1" CONDUIT FOR CONTROL WIRING, 18" DEEP SCH 40
- PVC CLASS 200 LATERAL LINE
- PVC CLASS 200 MAINLINE
- PVC SCHEDULE 40 SLEEVING, SLEEVING IN ROADWAY
- 1" / 24 — VALVE SIZE / GPM



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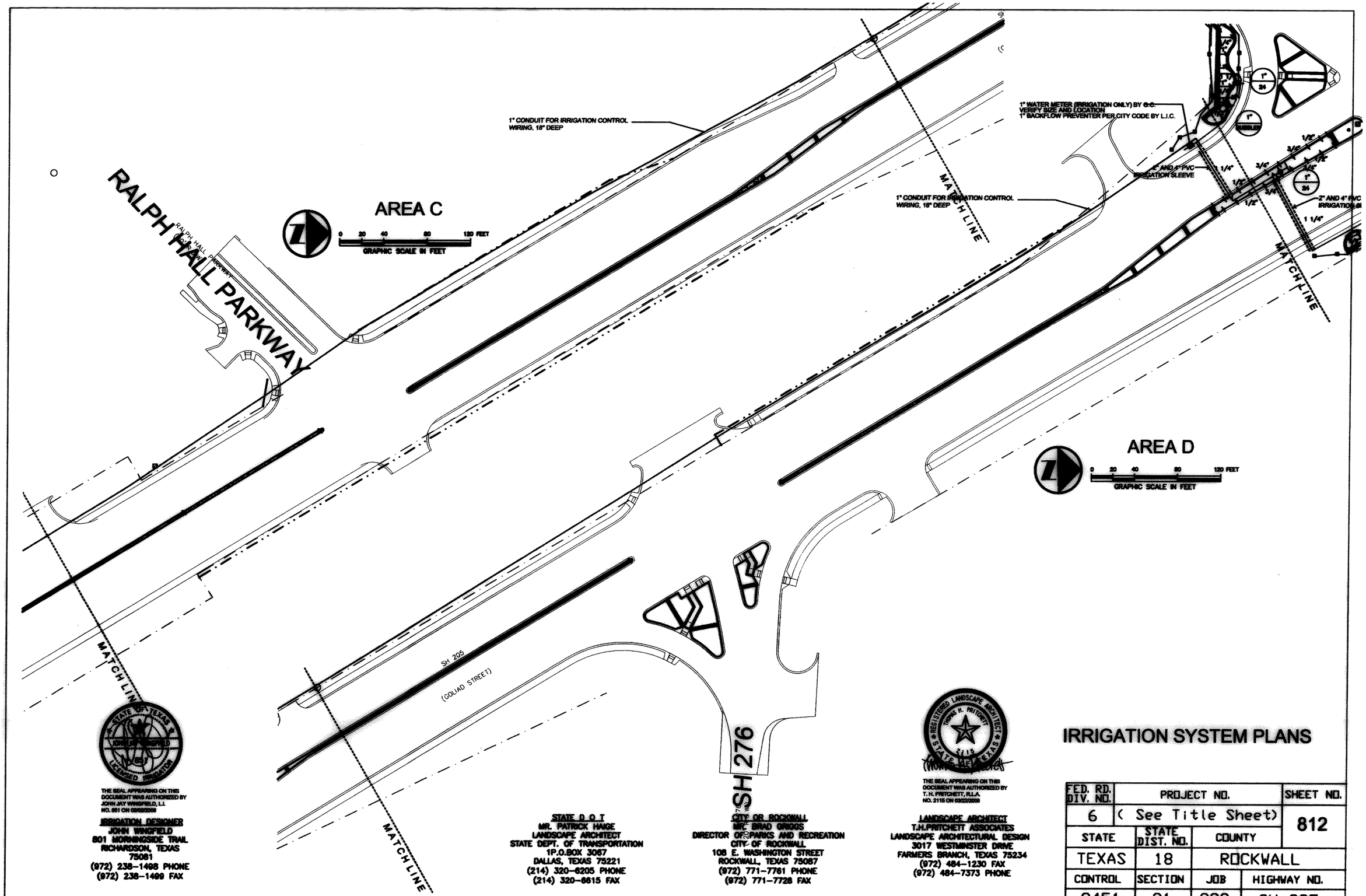
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IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		811
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



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IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		812
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$in to$$$$

NORTH SERVICE ROAD IH 30

INTERSTATE 30
(VARIABLE WIDTH R.O.W.)

STATE HWY 205

GOLIAD STREET

TORO SENTINEL SSA-K-36-PS1-5-N-S-4
CONTROLLER
VERIFY LOCATION AND POWER SUPPLY

(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC
IRRIGATION SLEEVE

1" WATER METER (IRRIGATION ONLY) BY G.C.
VERIFY SIZE AND LOCATION
1" BACKFLOW PREVENTER PER CITY CODE BY L.I.C.

2" AND 4" PVC
IRRIGATION SLEEVE

1350 SQ FT

1150 SQ FT

SOUTH SERVICE ROAD

MATCHLIN

(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC
IRRIGATION SLEEVE

1" WATER METER (IRRIGATION ONLY) BY G.C.
VERIFY SIZE AND LOCATION
1" BACKFLOW PREVENTER PER CITY CODE BY L.I.C.

2" AND 4" PVC
IRRIGATION SLEEVE

2" AND 4" PVC
IRRIGATION SLEEVE

(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC
IRRIGATION SLEEVE

(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC
IRRIGATION SLEEVE

INTERSTATE 30
(VARIABLE WIDTH R.O.W.)

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

SLEEVING NOTES

Contractor shall lay sleeves and conduits at twenty-four (24") inches below finish grade of the top of pavement.

Contractor shall extend sleeves one (1') foot beyond edge of all pavement.

Contractor shall cap pipe ends using PVC caps.

All sleeves shall be Schedule 40 PVC pipe.

Contractor shall furnish Owner and Irrigation Contractor with an 'as-built' drawing showing all sleeve locations.

IRRIGATION NOTES

All sprinkler equipment numbers reference the Weathermatic equipment catalog unless otherwise indicated.

LAWN SPRAY HEADS are LX-4 installed as per detail shown.

SHRUB SPRAY HEADS are LX-12 installed as per detail shown.

ELECTRIC CONTROL VALVES shall be #11000 CR installed per detail shown. Size valves as sown on plan. Valves shall be installed in value boxes large enough to permit manual operation, removal of solenoid and/or valve cover without any earth excavation.

QUICK COUPLING VALVES shall be #VQ75R installed per detail shown. Swing joints shall be constructed using 3/4" Schedule 80 elbows. Contractor shall supply owner with three (3) #CQ75 couplers and three (3) #10 swivel hose ells as part of this contract.

AUTOMATIC CONTROLLER shall be installed at location shown. Power (120V) shall be located in a junction box within five (5') feet of controller location by other trades.

All 24 volt valve wiring is to be UF 14 single conductor. All wire splices are to be permanent and waterproof.

SLEEVES shall be installed by General Contractor. Sleeve material shall be Schedule 40. Size as indicated on plan.

Ten days prior to start of construction, Landscape or Irrigation Contractor shall verify static water pressure. If static pressure is less than 65 P.S.I., do not work until notified to do so by Owner.

All main line and lateral piping to a minimum of 12 inches of cover. All piping under paving shall have a minimum of 18" of cover.

The Irrigation Contractor shall coordinate installation of the system with the Landscape Contractor so that all plant material will be watered in accordance with the intent of the plans and specifications.

The Irrigation Contractor shall select the proper arc and radius for each nozzle to insure 100% and proper coverage of all lawn areas and plant material. All nozzles shall be Weathermatic 5500 Series. All nozzles in parking lot islands and planting beds shall be low angle to minimize over spray on pavement surfaces. No water will be allowed to spray on building.

IRRIGATION SYSTEM PLANS

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY JOHN JAY WINGFIELD, L.I. NO. 861 ON 02/02/2006

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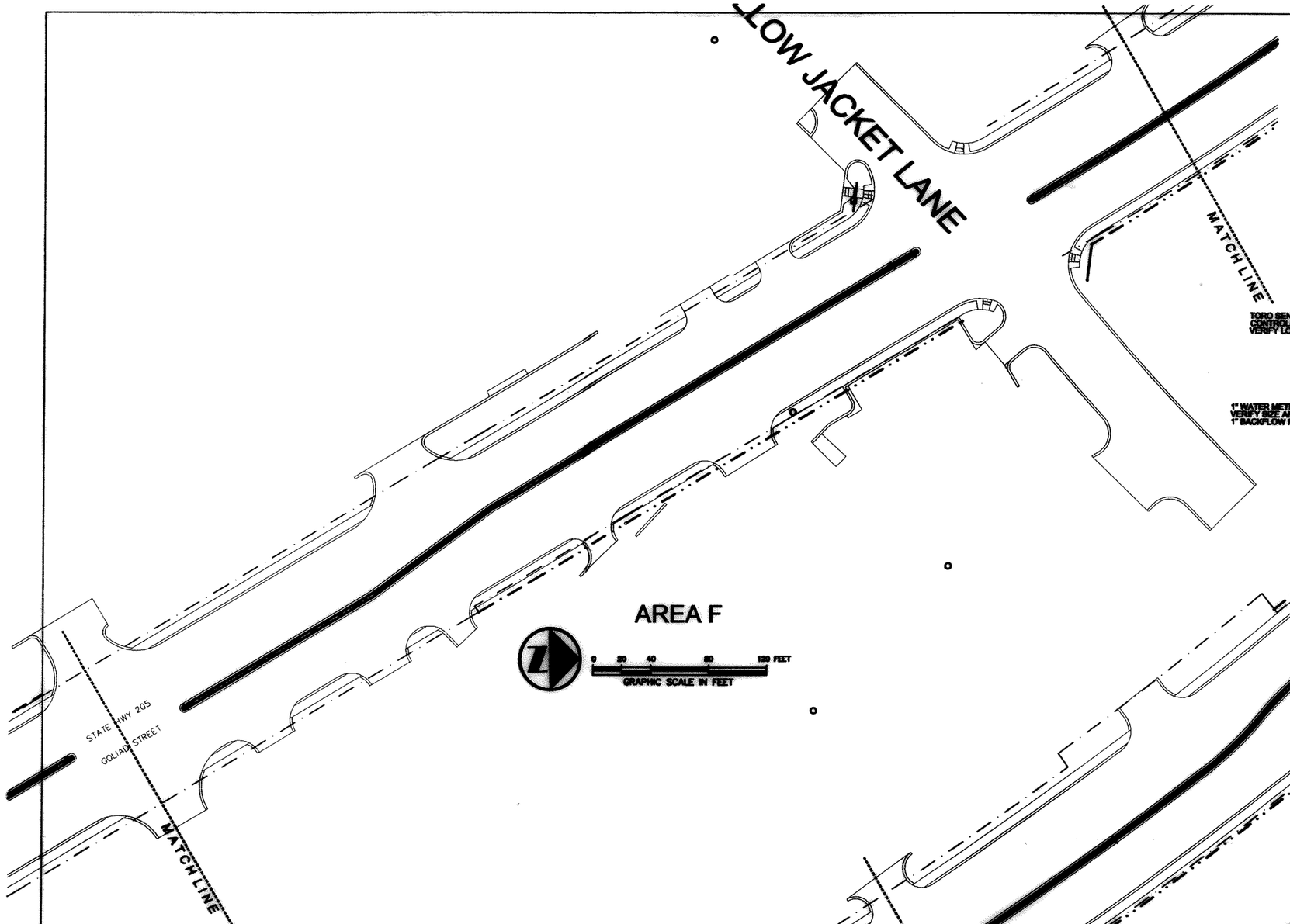
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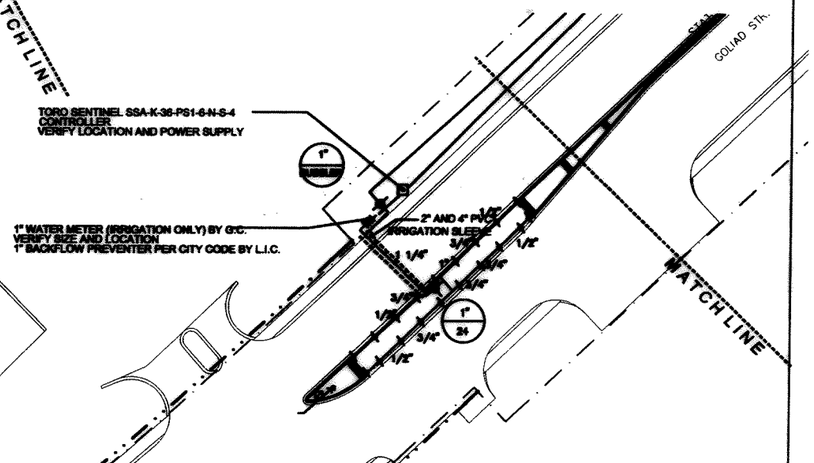
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FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		813
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205



AREA F

0 30 40 80 120 FEET
GRAPHIC SCALE IN FEET



AREA G

0 30 40 80 120 FEET
GRAPHIC SCALE IN FEET

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IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		814
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

DAMASCUS ROAD

JUSTIN ROAD

MATCH LINE

STATE HWY 205

GOLIAD STREET

AREA H

0 20 40 80 120 FEET

GRAPHIC SCALE IN FEET

1 1/2" WATER METER (IRRIGATION ONLY) BY G.C.
VERIFY SIZE AND LOCATION
1 1/2" BACKFLOW PREVENTER PER CITY CODE BY L.I.G.

2" AND 4" PVC IRRIGATION SLEEVE

AREA I

0 20 40 80 120 FEET

GRAPHIC SCALE IN FEET

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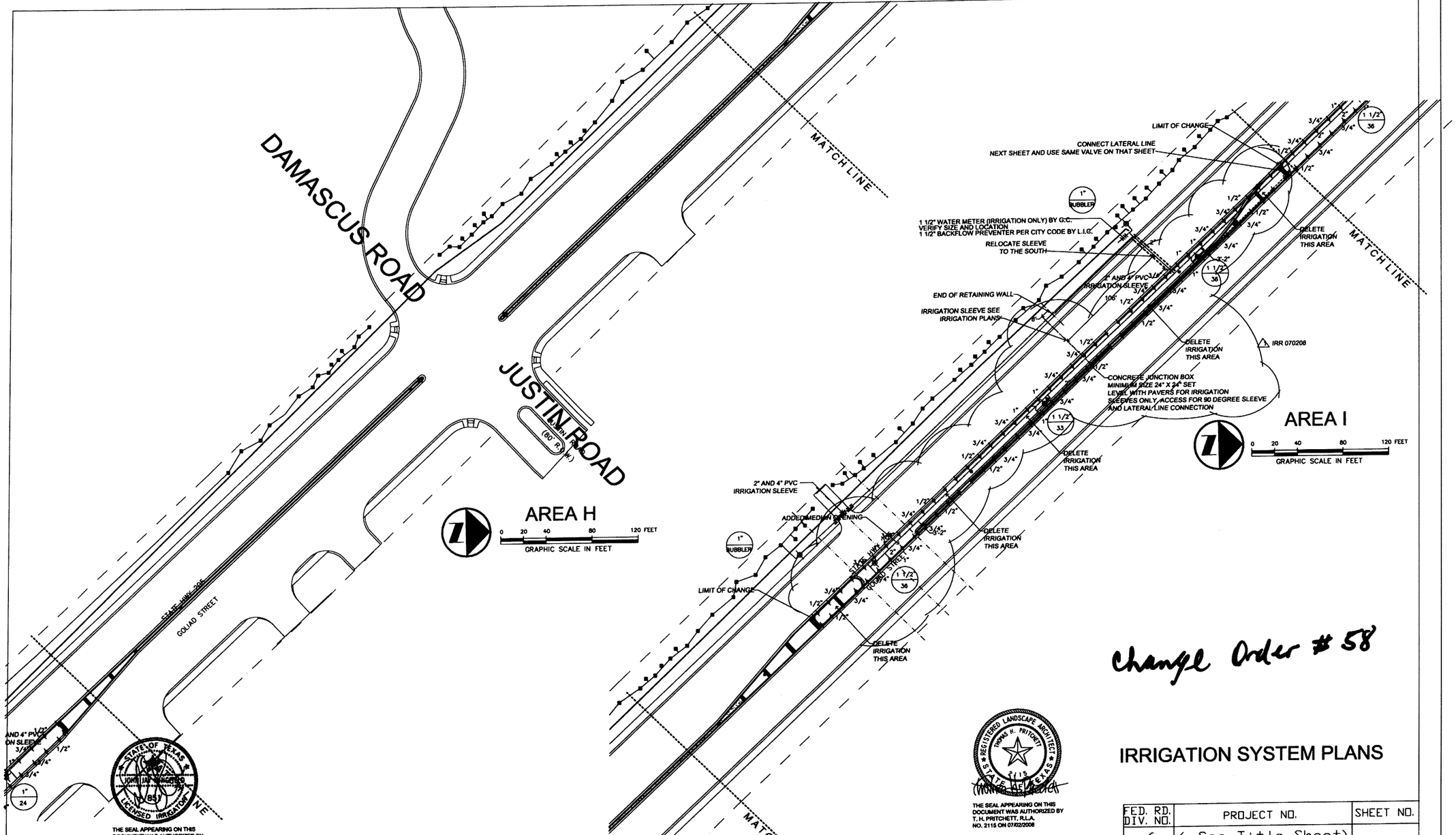
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IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		815
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205



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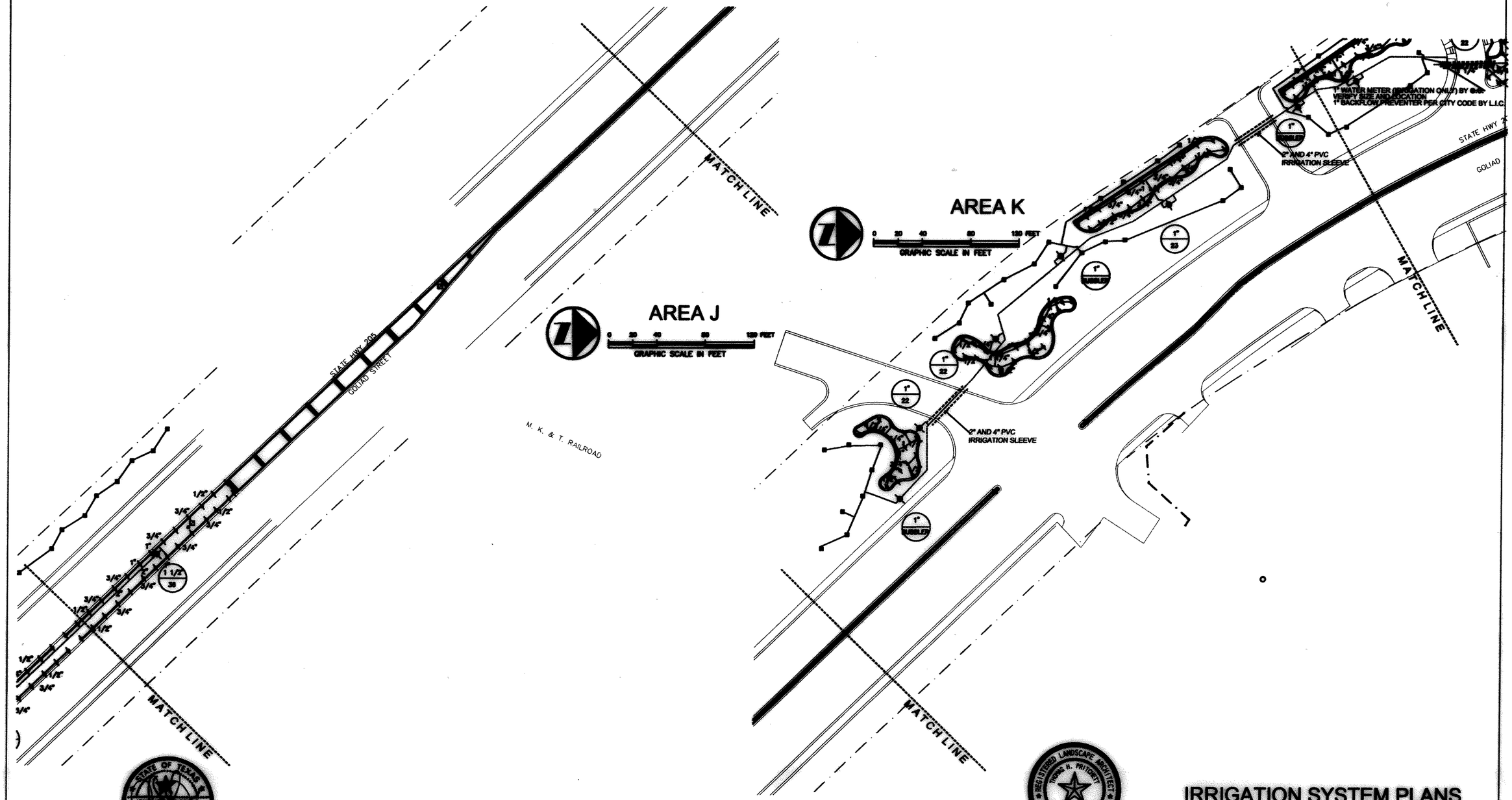
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Change Order # 58

IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		815A
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



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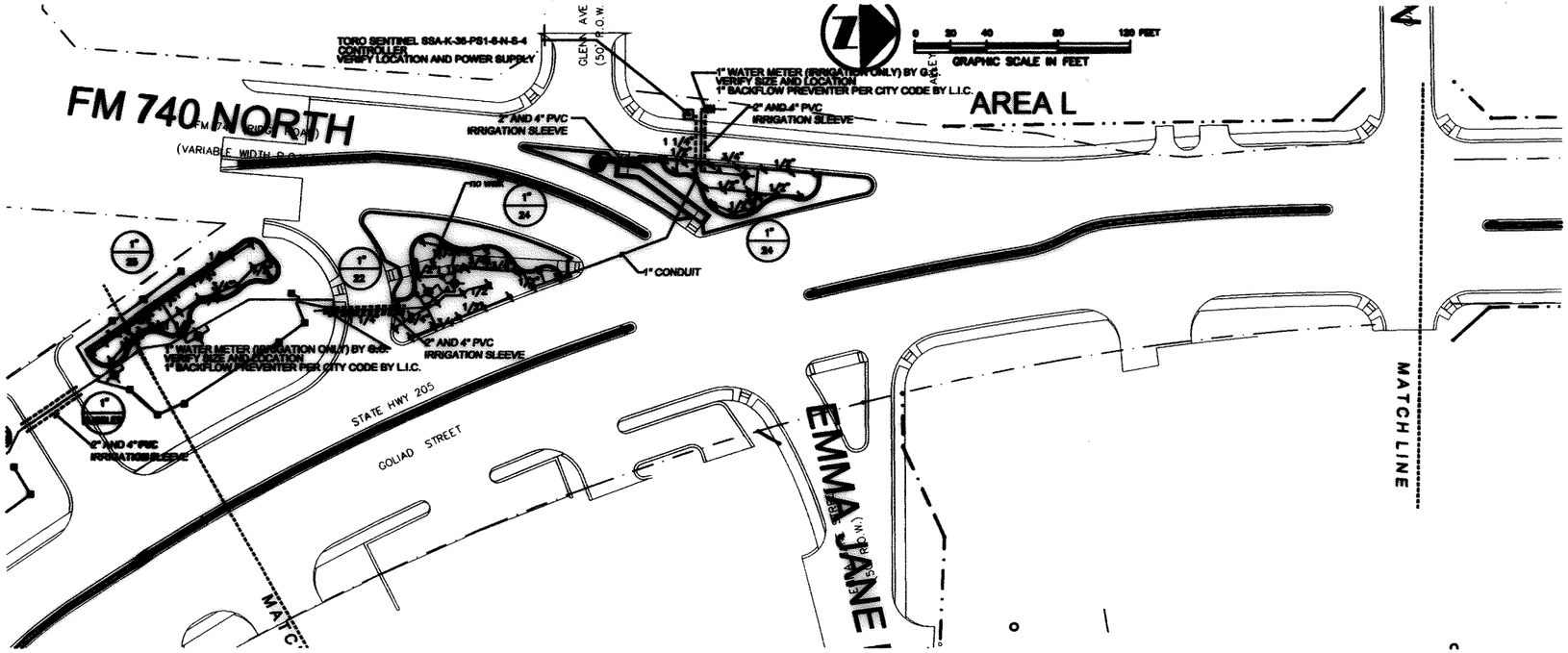
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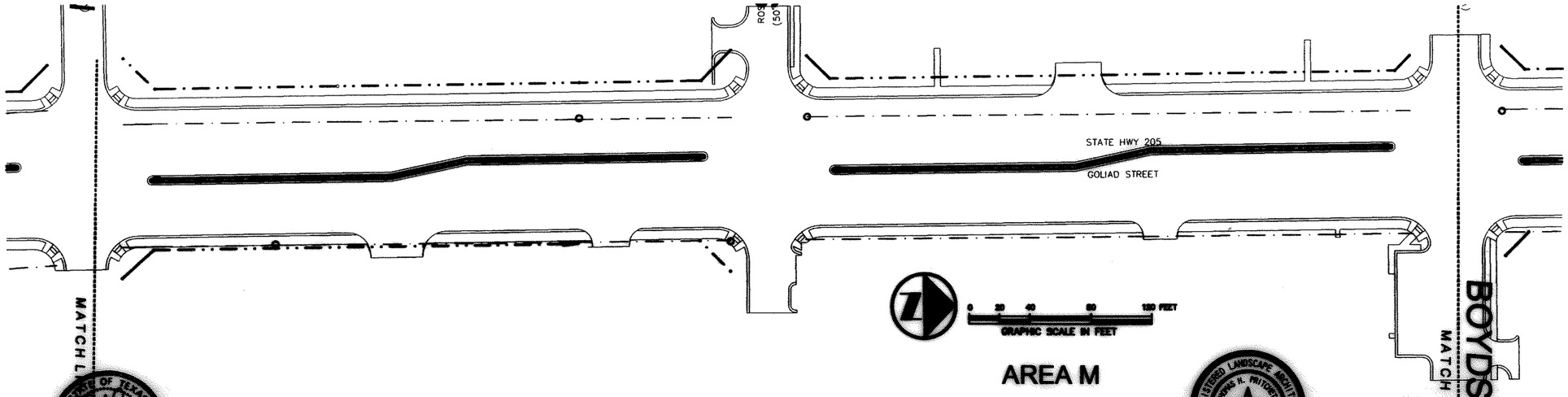
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IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		816
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$





AREA M

IRRIGATION SYSTEM PLANS

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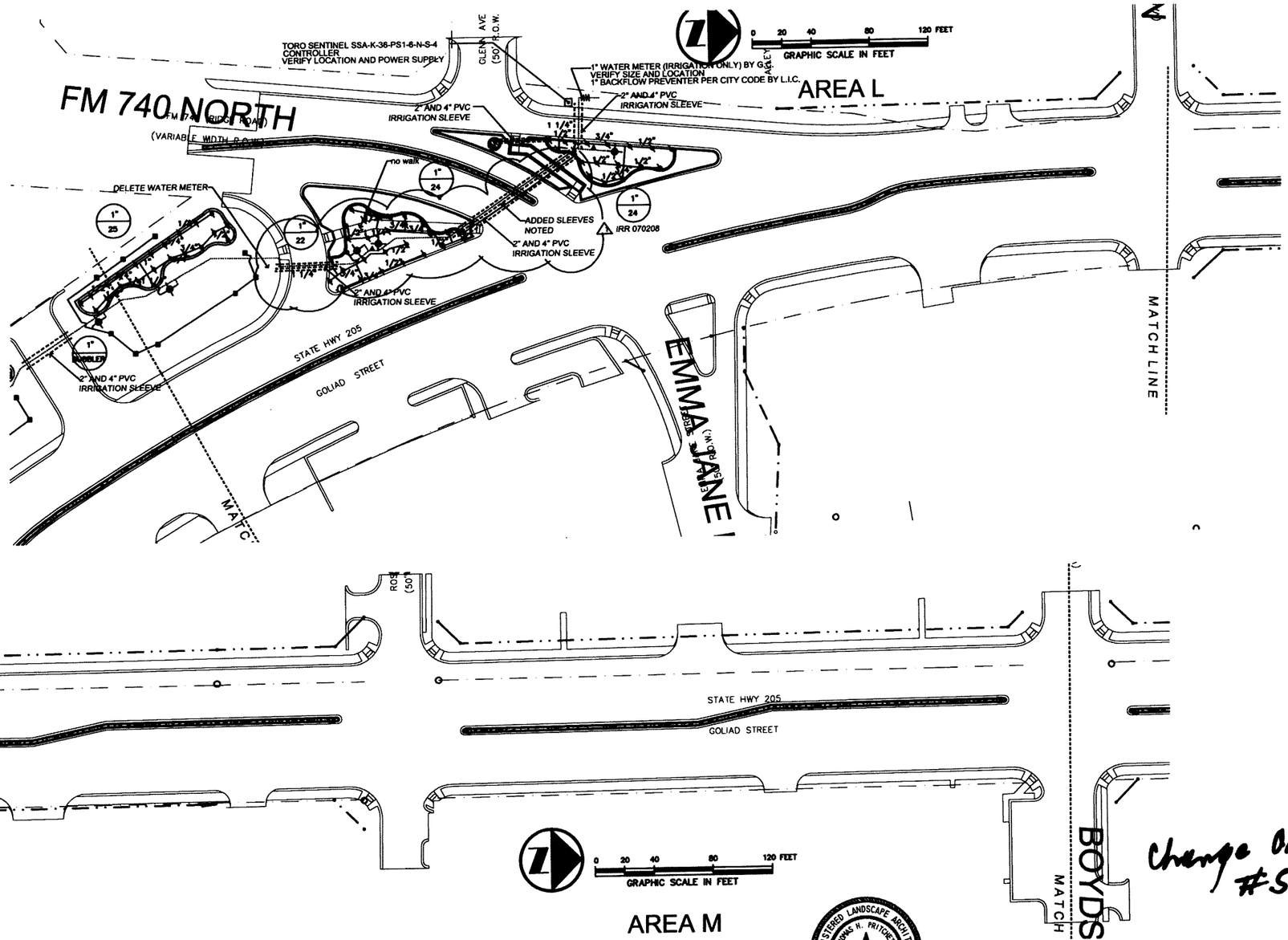
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FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		817
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



Change Order #58

IRRIGATION SYSTEM PLANS

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(972) 771-7728 FAX

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(972) 484-7373 PHONE

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		817A
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$

AREA N

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

BOYDSTUN AVENUE
(VARIABLE WIDTH R.O.W.)

STATE HWY 205
GOLIAD STREET

ST. MARY
(VARIABLE WIDTH R.O.W.)

STORRS
(VARIABLE WIDTH R.O.W.)

MATCH LINE

BOYDSTON

MATCH LINE

TORO SENTINEL SSA-K-36-PS1-6-N-S-4 CONTROLLER
VERIFY LOCATION AND POWER SUPPLY

1" WATER METER (IRRIGATION ONLY) BY S.C.
VERIFY SIZE AND LOCATION
1" BACKFLOW PREVENTER PER CITY CODE BY L.C.

2" AND 4" PVC IRRIGATION SLEEVE

1 1/4"

GOLIAD STREET

STATE HWY 205

AREA O

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

CENTER

MATCH LINE

(VARIABLE WIDTH R.O.W.)

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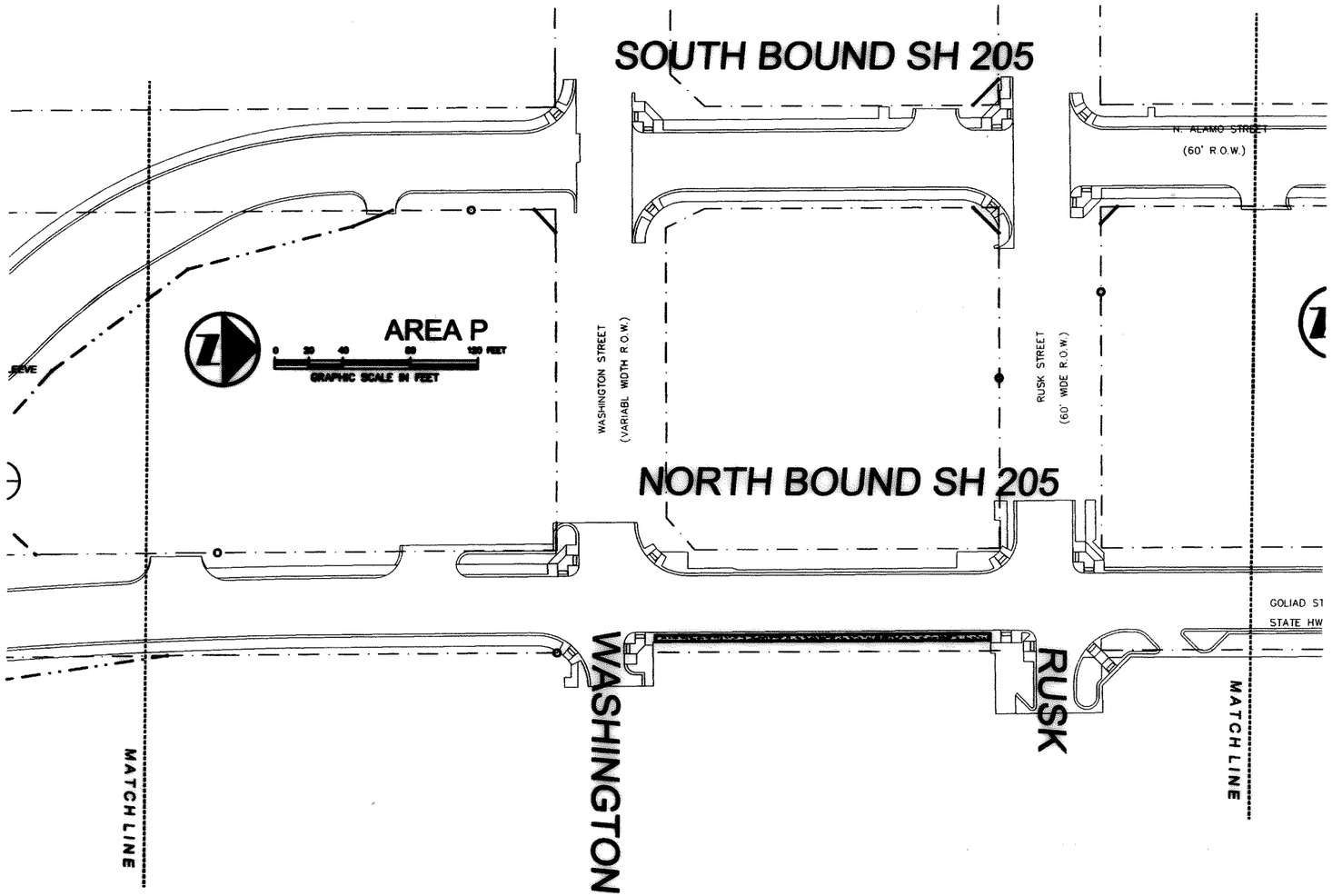
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IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		818
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205



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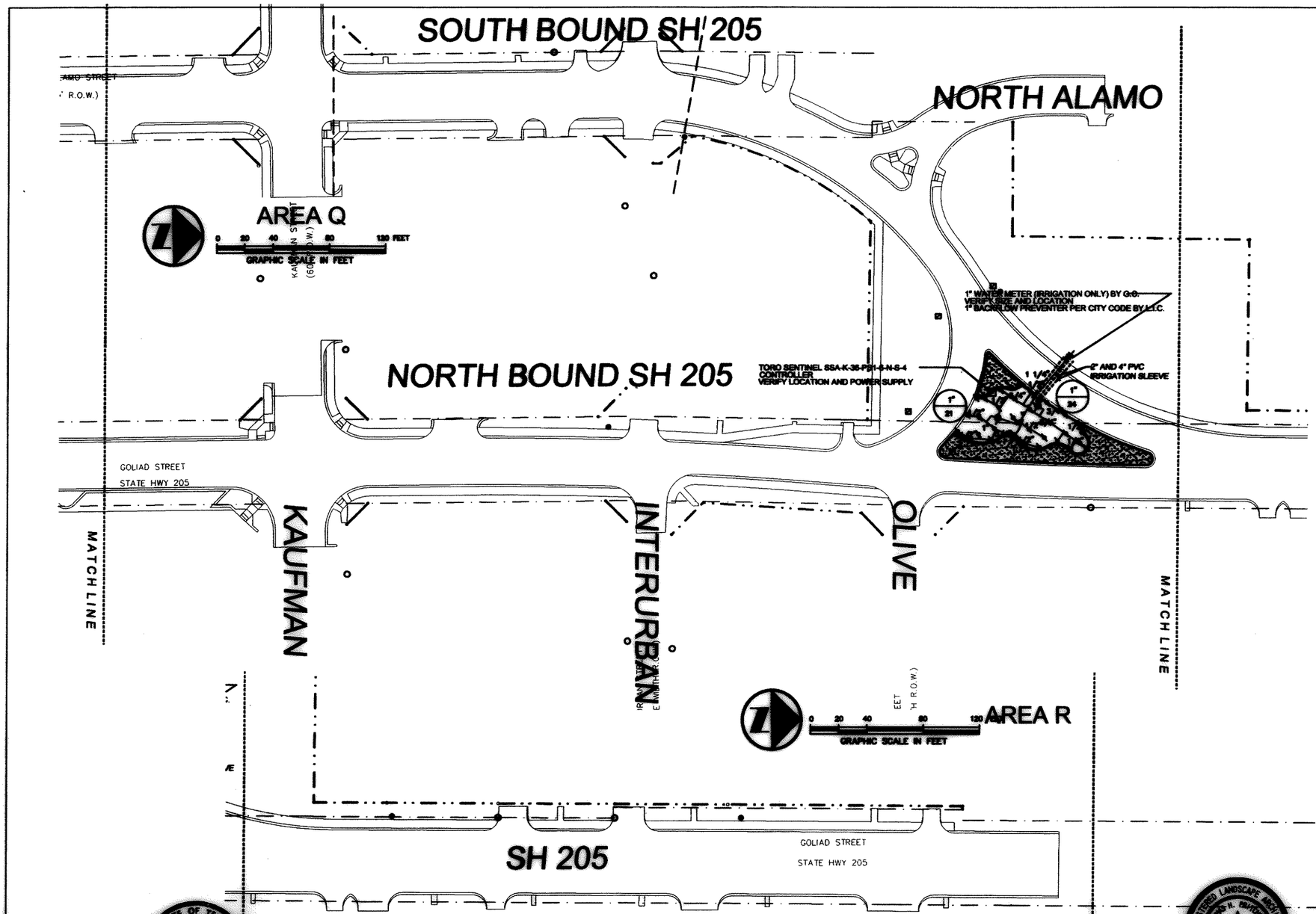
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IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		819
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



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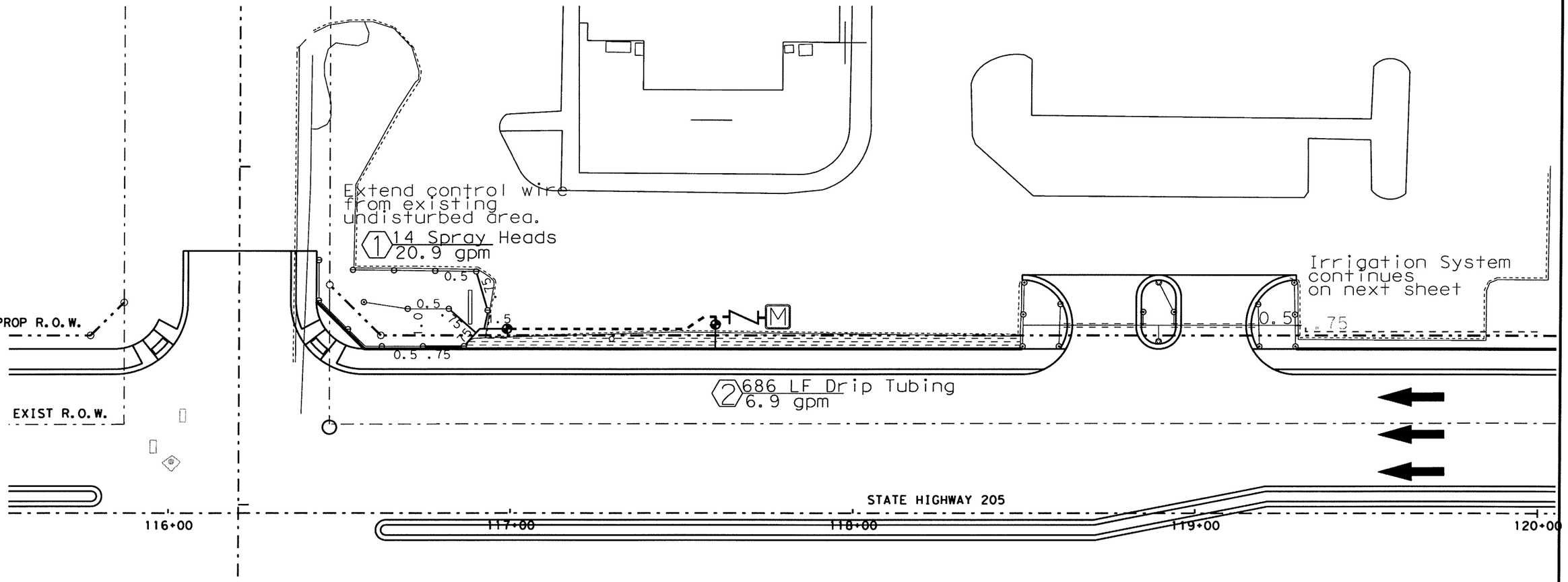
CITY OR ROCKWALL
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IRRIGATION SYSTEM PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		820
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205



M EXISTING WATER METER

EXISTING BACKFLOW PREVENTER

REMOTE CONTROL VALVE

XX VALVE LABEL VALVE SIZE / FLOW RATE

5' Radius MPR Nozzle on 6" Sprinkler

10' Radius MPR Nozzle on 6" Sprinkler

12' Radius MPR Nozzle on 6" Sprinkler

QUICK COUPLING VALVE

2" MAINLINE

LATERALS (sized on plans)

LATERALS (1/2")

BORING UNDER ROADWAY

PRESSURE COMPENSATING DRIPPER TUBING (12" o.c.)

PLAN
SCALE : 1"=30'

REGISTERED LANDSCAPE ARCHITECT
PATRICK J. HAIGH
1498
STATE OF TEXAS

Patrick Haigh
29 Jan 2010

Texas Department of Transportation
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SH 205

IRRIGATION LAYOUT

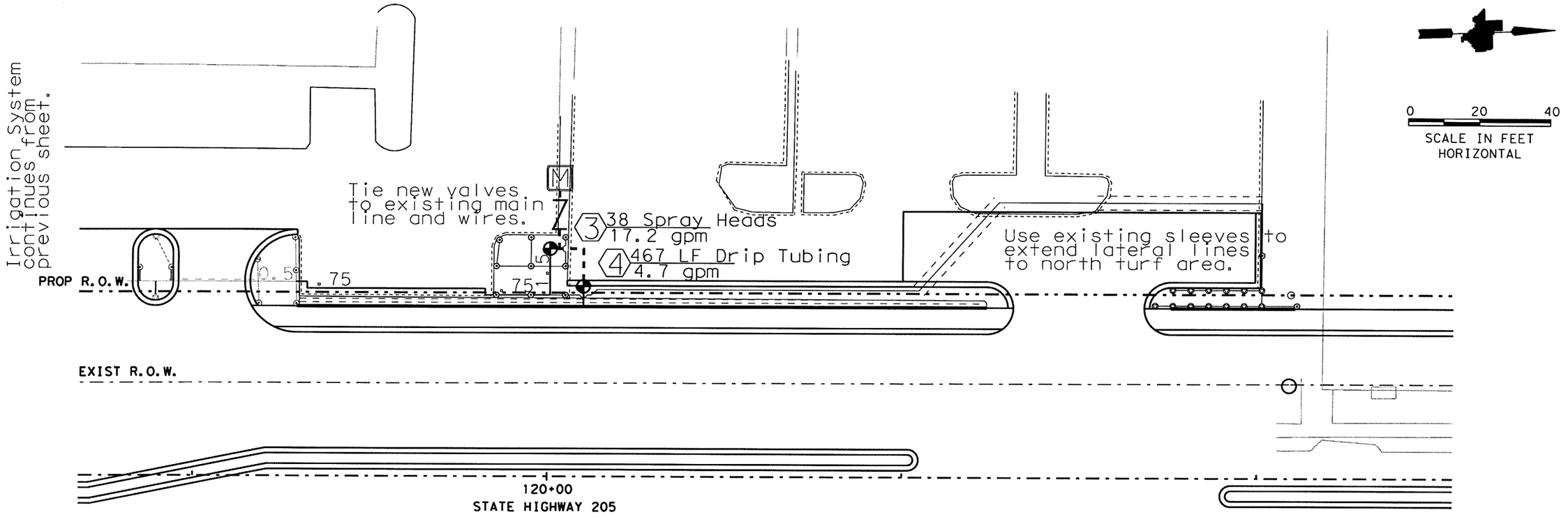
WALL H

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	
CONT.	SECT.	JOB	
0451	01	032, ETC	220AA

$DGNSPECLEVS
$DATES $SYTIMES



PLAN
SCALE : 1"=30'

EXISTING WATER METER	QUICK COUPLING VALVE
EXISTING BACKFLOW PREVENTER	2" MAINLINE
REMOTE CONTROL VALVE	LATERALS (sized on plans)
VALVE LABEL XX — VALVE SIZE / FLOW RATE	LATERALS (1/2")
5' Radius MPR Nozzle on 6" Sprinkler	BORING UNDER ROADWAY
10' Radius MPR Nozzle on 6" Sprinkler	PRESSURE COMPENSATING DRIPPER TUBING (12" o.c.)
12' Radius MPR Nozzle on 6" Sprinkler	

REGISTERED LANDSCAPE ARCHITECT
PATRICK J. HAIGH
1498
STATE OF TEXAS
Patrick Haigh 29 Jan 2007

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SH 205

IRRIGATION LAYOUT

WALL I

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	
CONT.	SECT.	JOB	
0451	01	032, ETC	

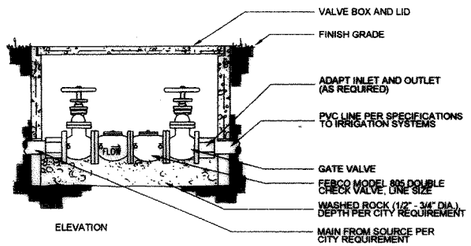
8208A

DGNSPECSLEV$ $DATE$ $SYTIME$

ELECTRICAL SERVICE DATA

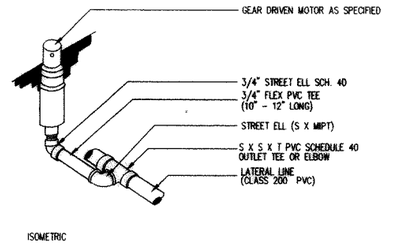
ELEC. SERVICE NO.	SHEET NO. AREA	ELECTRICAL SERVICE DESCRIPTION (SEE ED (4) (5) (8) -03 NO.	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS NO. SIZE	SAFETY SWITCH AMPS	MAIN CURCUIT BKR. POLE/AMP	TWO-POLE CONTACTOR AMPS	PANEL BOARD/ LOADCENTER AMP RATING (MIN)	CIRCUIT NUMBER	BRANCH CKT. BREAKERS, POLE/AMPS	BRANCH CURCUIT AMPS	KVA LOAD
IRR-1	811 AREA B	ELC SRV TY D 120/240 060 (NS) AL (N) PS (U)	1 1/4"	3/#6	N/A	2P/60	N/A	100 AMP	A	1P/20	4.0	0.5
IRR-2	813 AREA E	ELC SRV TY D 120/240 060 (NS) AL (N) PS (U)	1 1/4"	3/#6	N/A	2P/60	N/A	100 AMP	A	1P/20	4.0	0.5
IRR-3	814 AREA G	ELC SRV TY D 120/240 060 (NS) AL (N) PS (U)	1 1/4"	3/#6	N/A	2P/60	N/A	100 AMP	A	1P/20	4.0	0.5
IRR-4	817 AREA L	ELC SRV TY D 120/240 060 (NS) AL (N) PS (U)	1 1/4"	3/#6	N/A	2P/60	N/A	100 AMP	A	1P/20	4.0	0.5
IRR-5	818 AREA O	ELC SRV TY D 120/240 060 (NS) AL (N) PS (U)	1 1/4"	3/#6	N/A	2P/60	N/A	100 AMP	A	1P/20	4.0	0.5
IRR-6	820 AREA Q	ELC SRV TY D 120/240 060 (NS) AL (N) PS (U)	1 1/4"	3/#6	N/A	2P/60	N/A	100 AMP	A	1P/20	4.0	0.5

STATE OF TEXAS — JAMES WINGFIELD — 88486 — LICENSED PROFESSIONAL ENGINEER — 5/17/06



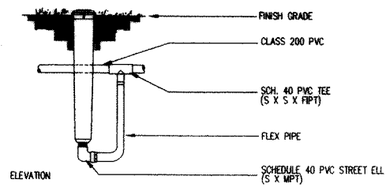
BACKFLOW PREVENTER

not to scale



GEAR DRIVEN ROTARY

not to scale



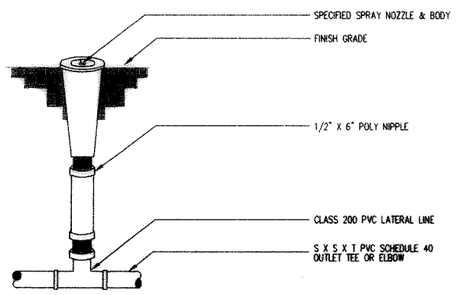
HIGH RISER ASSEMBLY

not to scale

1 DOUBLE CHECK ASSEMBLY
N.T.S.

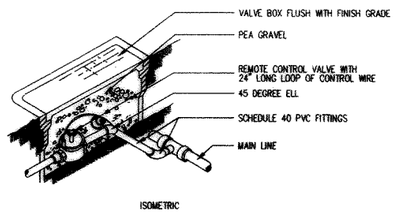
2 ROTARY HEAD
N.T.S.

3 12" POP UP
N.T.S.



POP - UP RISER ASSEMBLY

not to scale



REMOTE CONTROL VALVE

not to scale

4 4" POP UPS
N.T.S.

5 ELECTRIC VALVE
N.T.S.

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REGISTERED LANDSCAPE ARCHITECT — THOMAS H. PRITCHETT — 2115 — STATE OF TEXAS

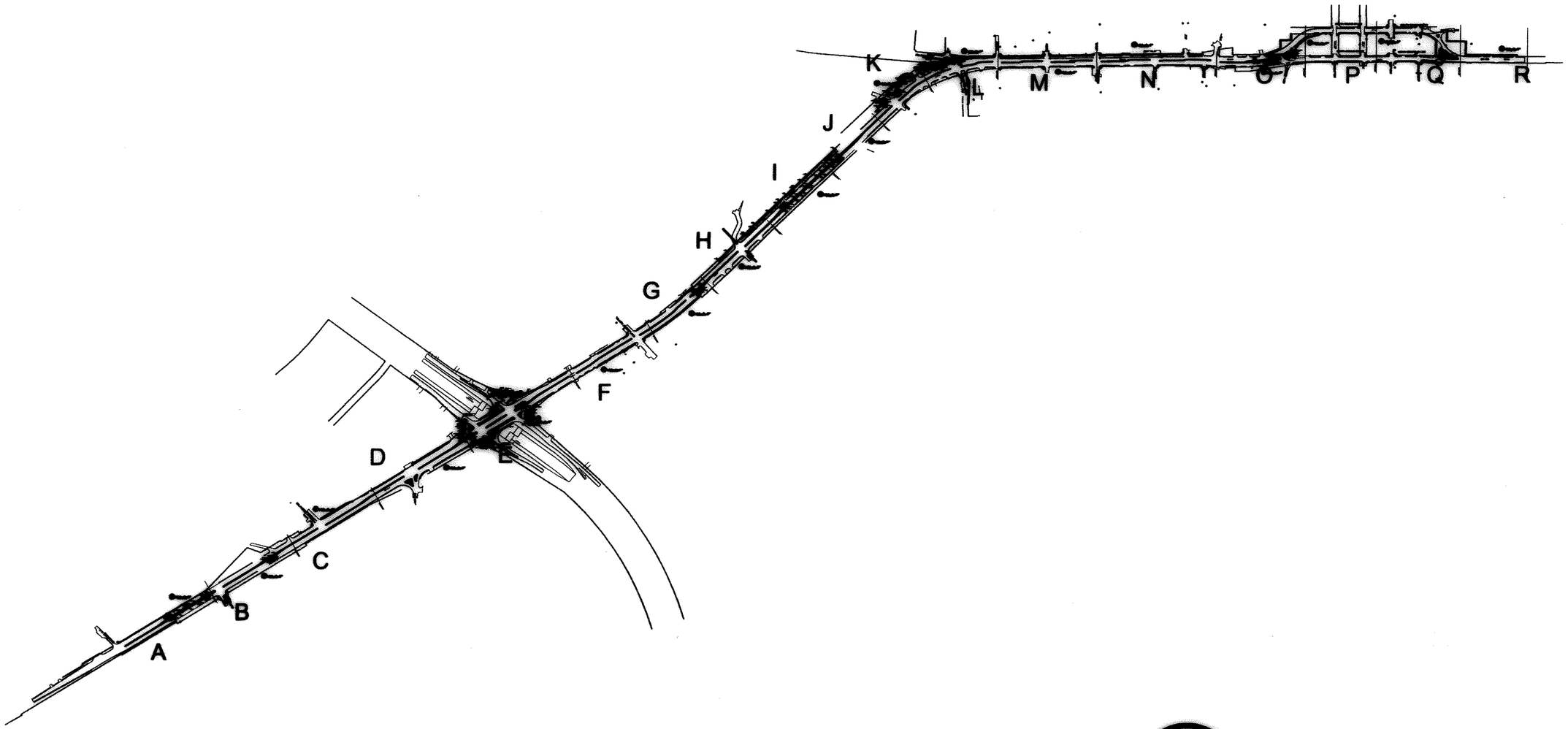
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LANDSCAPE ARCHITECT
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IRRIGATION SYSTEM DETAILS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		822
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



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REGISTERED LANDSCAPE ARCHITECT · THOMAS H. PRITCHETT · STATE OF TEXAS · 2115

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LANDSCAPE PLANTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		823
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

PLANT LIST

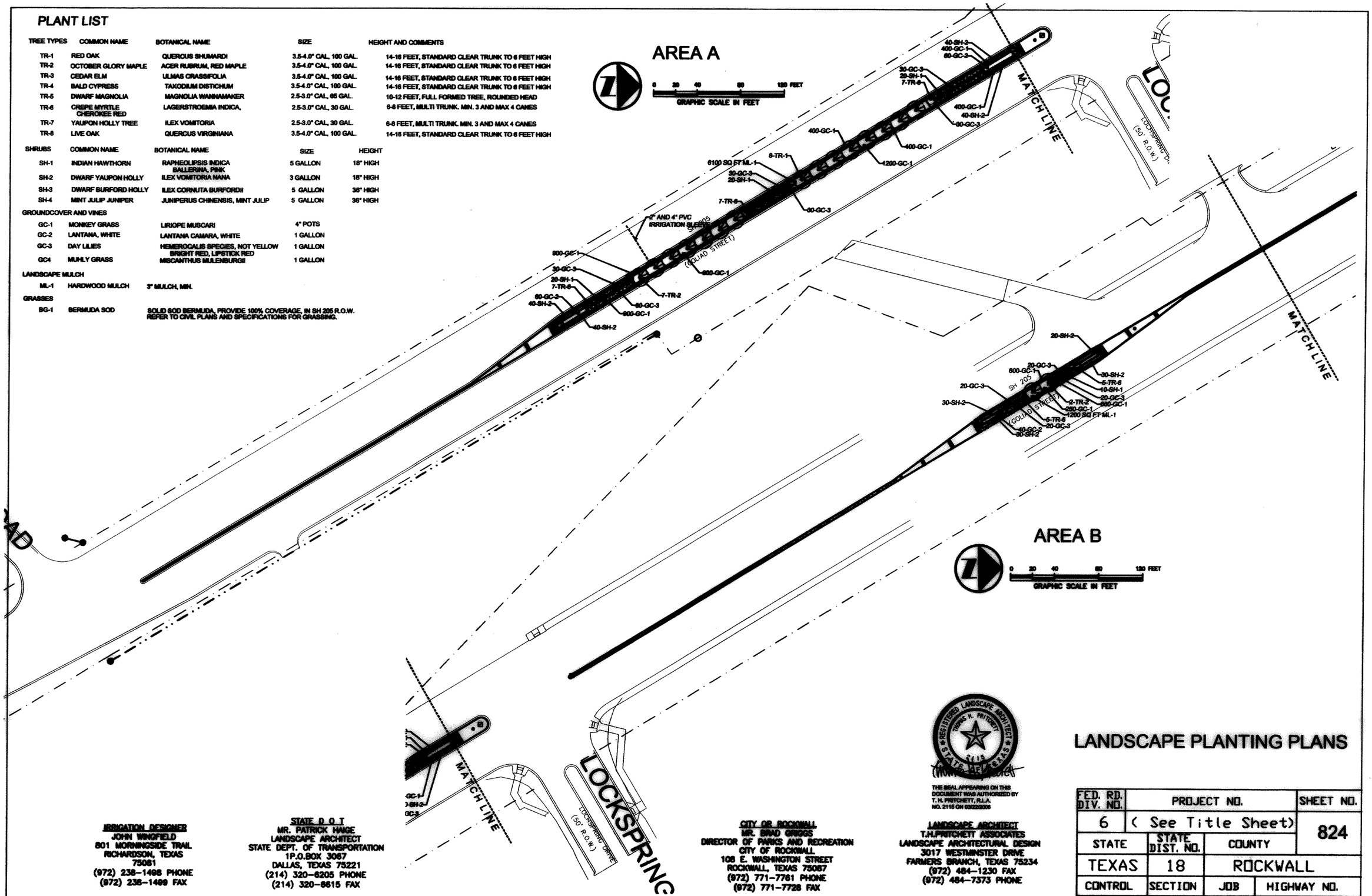
TREE TYPES	COMMON NAME	BOTANICAL NAME	SIZE	HEIGHT AND COMMENTS
TR-1	RED OAK	QUERCUS SHUMARDI	3.5-4.0" CAL, 100 GAL.	14-16 FEET, STANDARD CLEAR TRUNK TO 6 FEET HIGH
TR-2	OCTOBER GLORY MAPLE	ACER RUBRUM, RED MAPLE	3.5-4.0" CAL, 100 GAL.	14-16 FEET, STANDARD CLEAR TRUNK TO 6 FEET HIGH
TR-3	CEDAR ELM	ULMAS CRASSIFOLIA	3.5-4.0" CAL, 100 GAL.	14-16 FEET, STANDARD CLEAR TRUNK TO 6 FEET HIGH
TR-4	BALD CYPRESS	TAXODIUM DISTICHUM	3.5-4.0" CAL, 100 GAL.	14-16 FEET, STANDARD CLEAR TRUNK TO 6 FEET HIGH
TR-5	DWARF MAGNOLIA	MAGNOLIA WANNAMAKER	2.5-3.0" CAL, 65 GAL.	10-12 FEET, FULL FORMED TREE, ROUNDED HEAD
TR-6	CREPE MYRTLE CHEROKEE RED	LAGERSTROEMIA INDICA,	2.5-3.0" CAL, 30 GAL.	6-8 FEET, MULTI TRUNK. MIN. 3 AND MAX 4 CANES
TR-7	YAUPON HOLLY TREE	ILEX VOMITORIA	2.5-3.0" CAL, 30 GAL.	6-8 FEET, MULTI TRUNK. MIN. 3 AND MAX 4 CANES
TR-8	LIVE OAK	QUERCUS VIRGINIANA	3.5-4.0" CAL, 100 GAL.	14-16 FEET, STANDARD CLEAR TRUNK TO 6 FEET HIGH

SHRUBS	COMMON NAME	BOTANICAL NAME	SIZE	HEIGHT
SH-1	INDIAN HAWTHORN	RAPHEOLIPSIS INDICA BALLERINA, PINK	5 GALLON	18" HIGH
SH-2	DWARF YAUPON HOLLY	ILEX VOMITORIA NANA	3 GALLON	18" HIGH
SH-3	DWARF BURFORD HOLLY	ILEX CORNUTA BURFORDII	5 GALLON	36" HIGH
SH-4	MINT JULIP JUNIPER	JUNIPERUS CHINENSIS, MINT JULIP	5 GALLON	36" HIGH

GROUNDCOVER AND VINES			
GC-1	MONKEY GRASS	LIRIOPE MUSCARI	4" POTS
GC-2	LANTANA, WHITE	LANTANA CAMARA, WHITE	1 GALLON
GC-3	DAY LILIES	HEMEROCALIS SPECIES, NOT YELLOW	1 GALLON
GC4	MUHLY GRASS	BRIGHT RED, LIPSTICK RED MISCANTHUS MULENBURGII	1 GALLON

LANDSCAPE MULCH		
ML-1	HARDWOOD MULCH	3" MULCH, MIN.

GRASSES		
BG-1	BERMUDA SOD	SOLID SOD BERMUDA. PROVIDE 100% COVERAGE, IN SH 205 R.O.W. REFER TO CIVIL PLANS AND SPECIFICATIONS FOR GRASSING.



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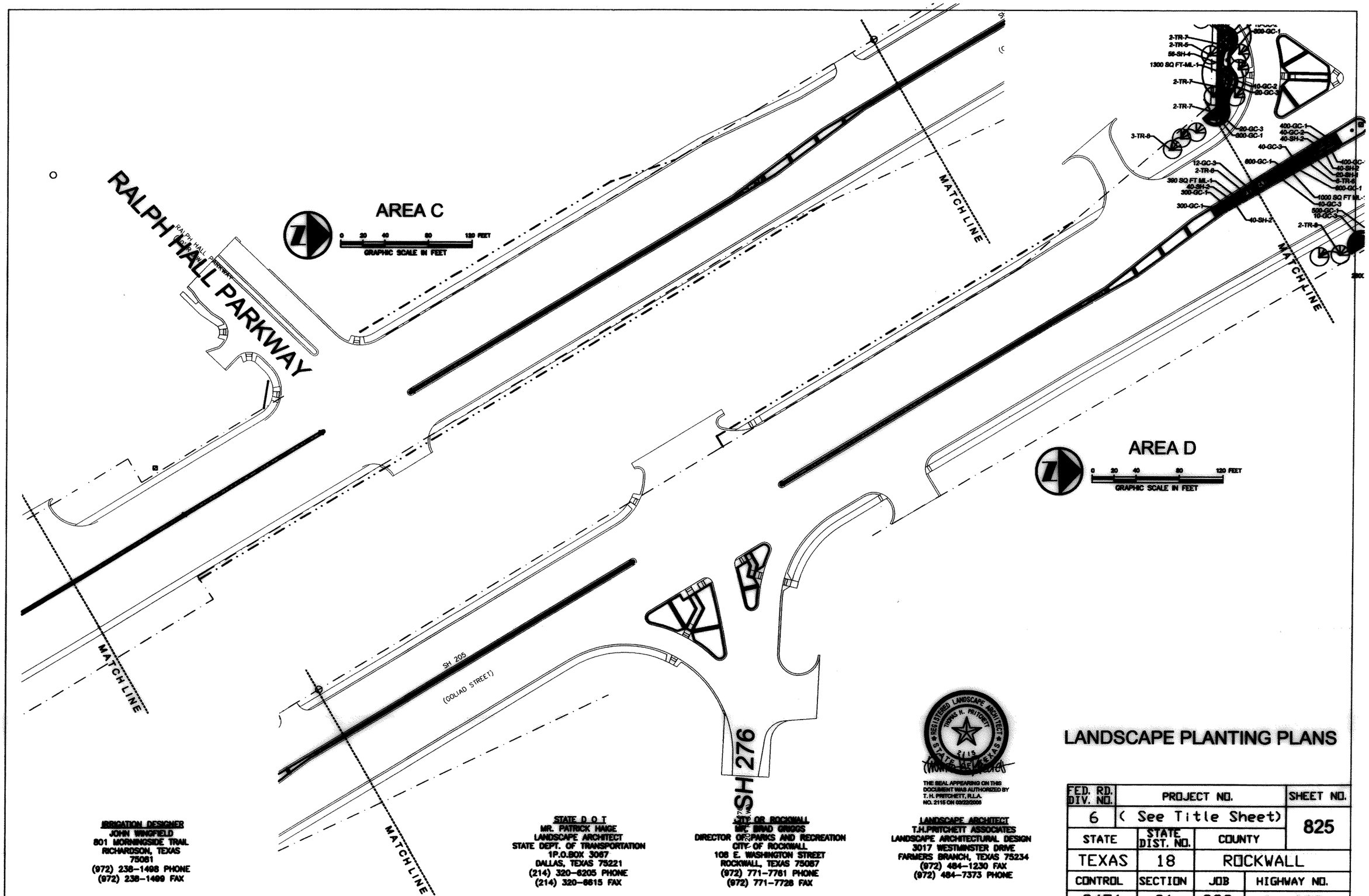
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THOMAS H. PRITCHETT
STATE OF TEXAS
2115

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LANDSCAPE PLANTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		824
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205



LANDSCAPE PLANTING PLANS

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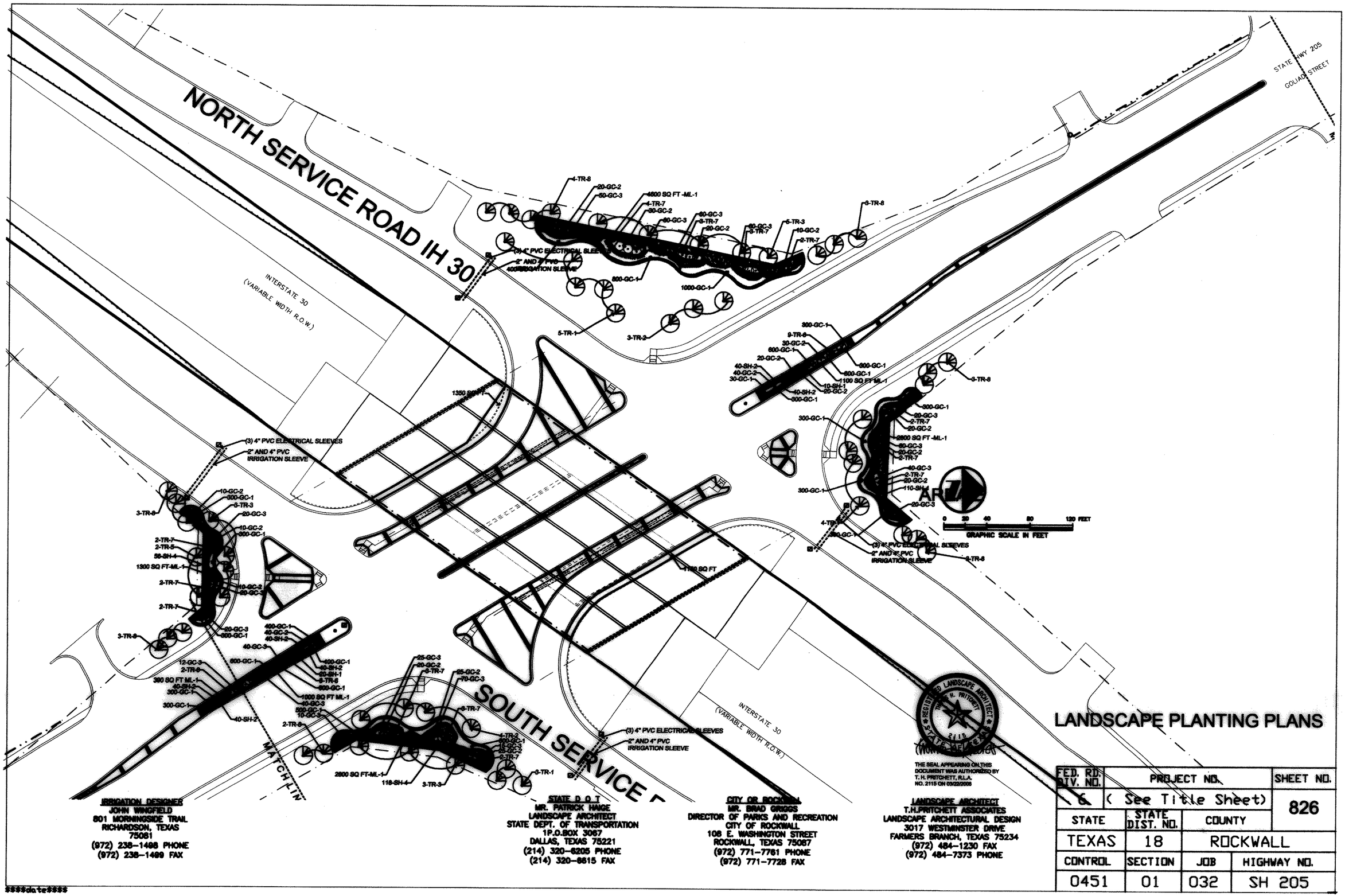
FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		825
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

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LANDSCAPE PLANTING PLANS

IRRIGATION DESIGNER
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(214) 320-6615 FAX

CITY OF ROCKWALL
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DIRECTOR OF PARKS AND RECREATION
CITY OF ROCKWALL
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ROCKWALL, TEXAS 75087
(972) 771-7761 PHONE
(972) 771-7728 FAX

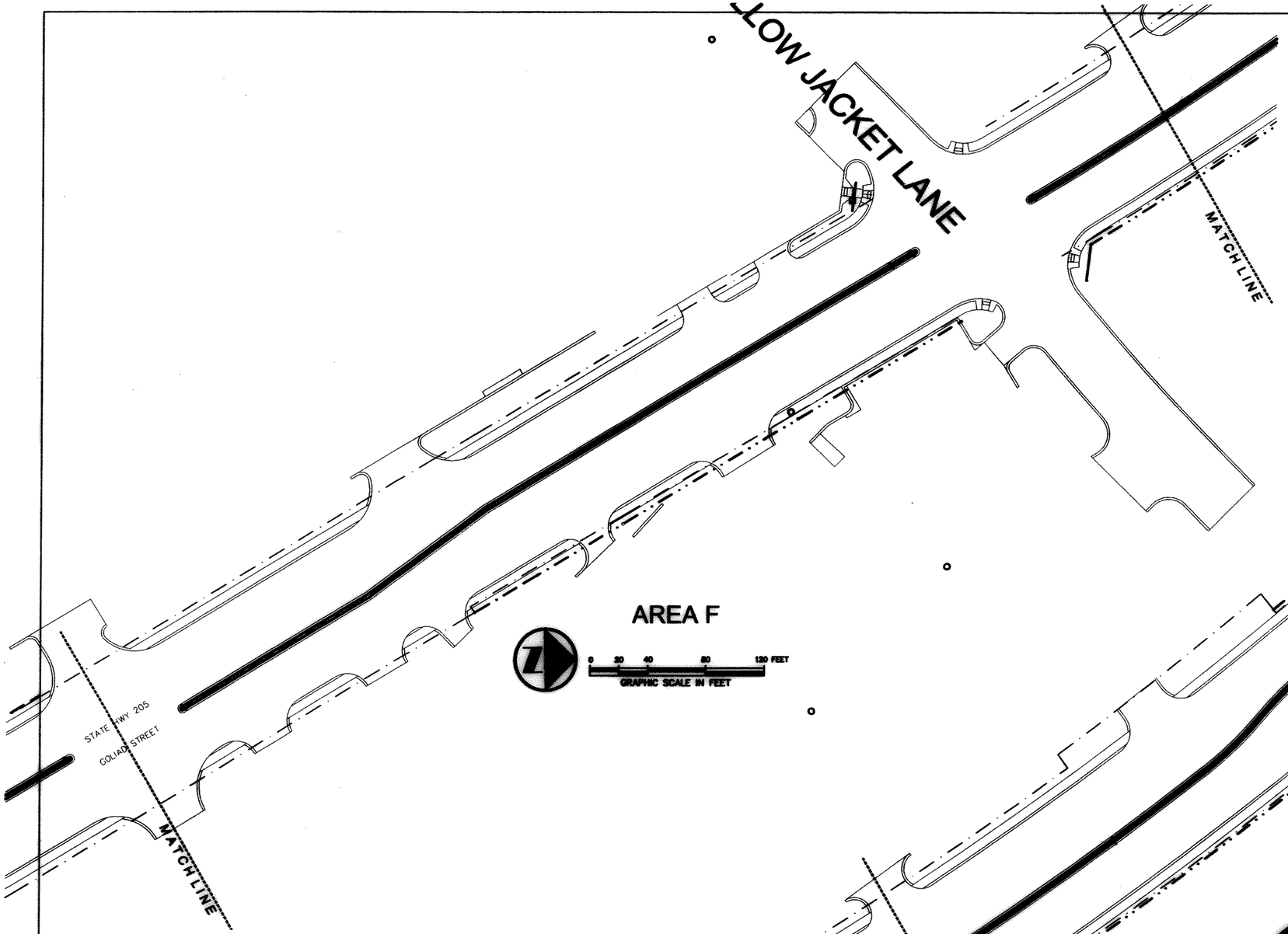
LANDSCAPE ARCHITECT
T.H.PRITCHETT ASSOCIATES
LANDSCAPE ARCHITECTURAL DESIGN
3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
(972) 484-1230 FAX
(972) 484-7373 PHONE

REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
2115
STATE OF TEXAS

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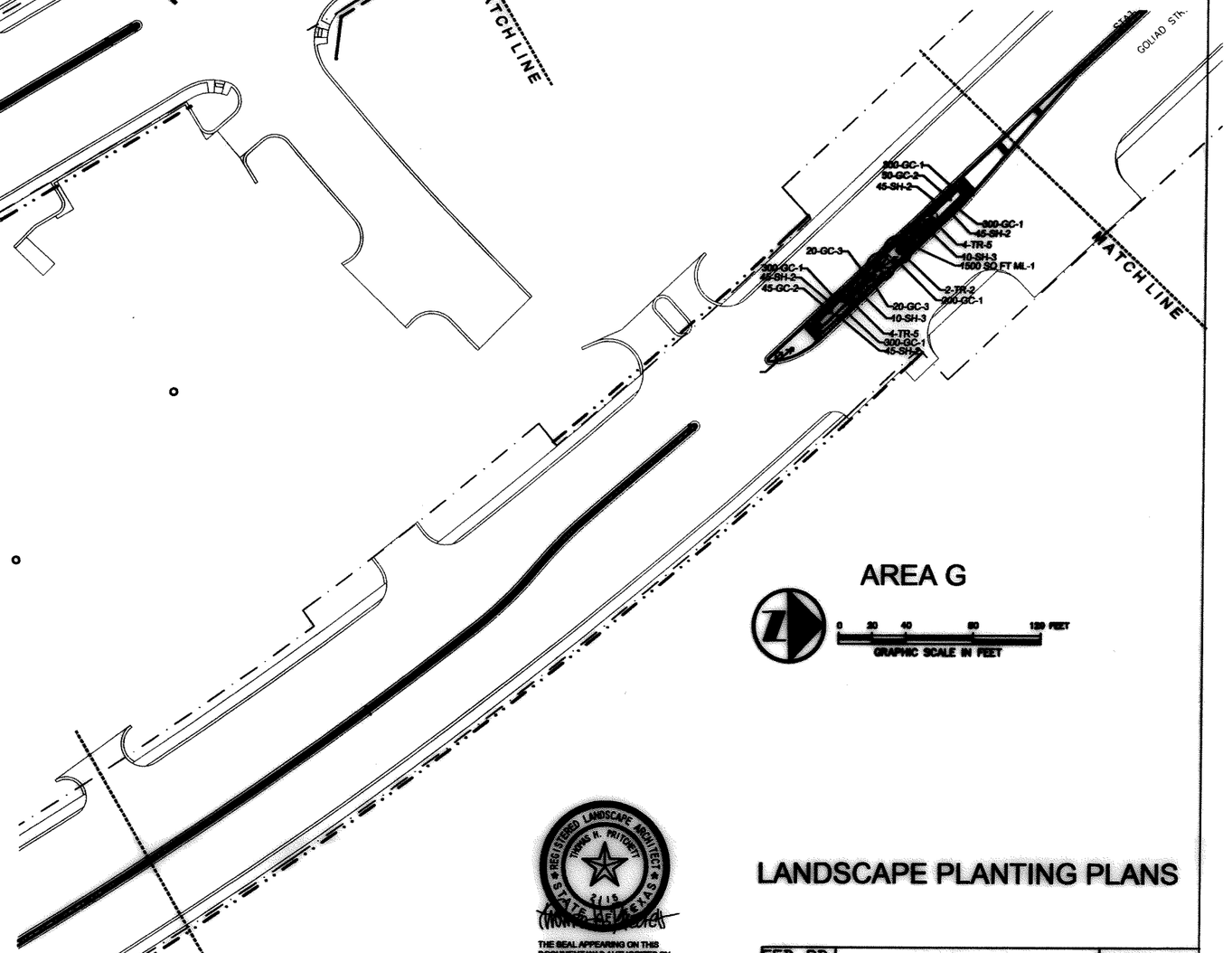
FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		826
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



AREA F

0 30 40 80 120 FEET
GRAPHIC SCALE IN FEET



AREA G

0 30 40 80 120 FEET
GRAPHIC SCALE IN FEET

IRRIGATION DESIGNER
JOHN WINGFIELD
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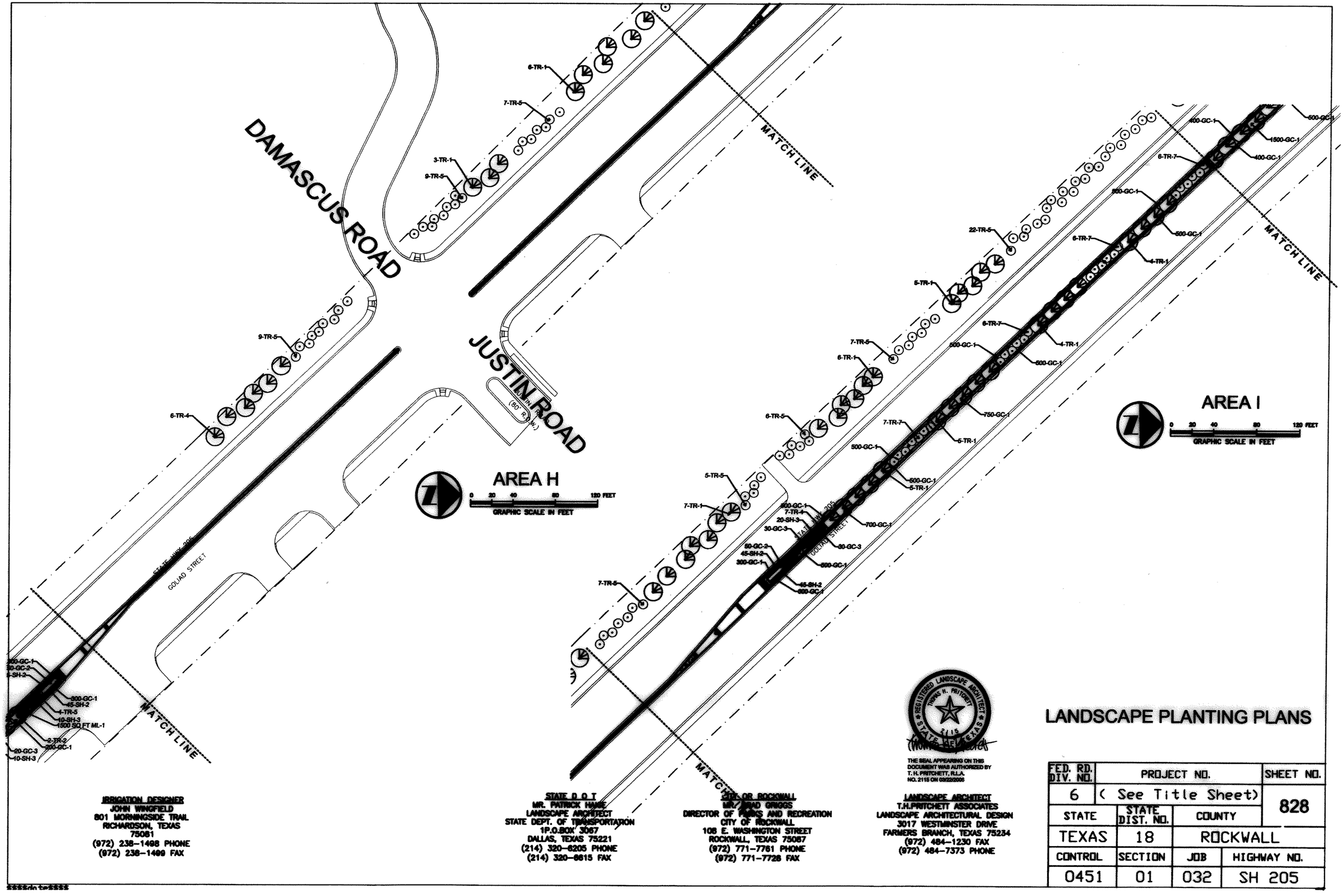
REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
2115
STATE OF TEXAS

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LANDSCAPE ARCHITECTURAL DESIGN
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LANDSCAPE PLANTING PLANS

FED. RD. DIV. NO.	PROJECT NO.			SHEET NO.
6	(See Title Sheet)			827
STATE	STATE DIST. NO.	COUNTY		
TEXAS	18	ROCKWALL		
CONTROL	SECTION	JOB	HIGHWAY NO.	
0451	01	032	SH 205	



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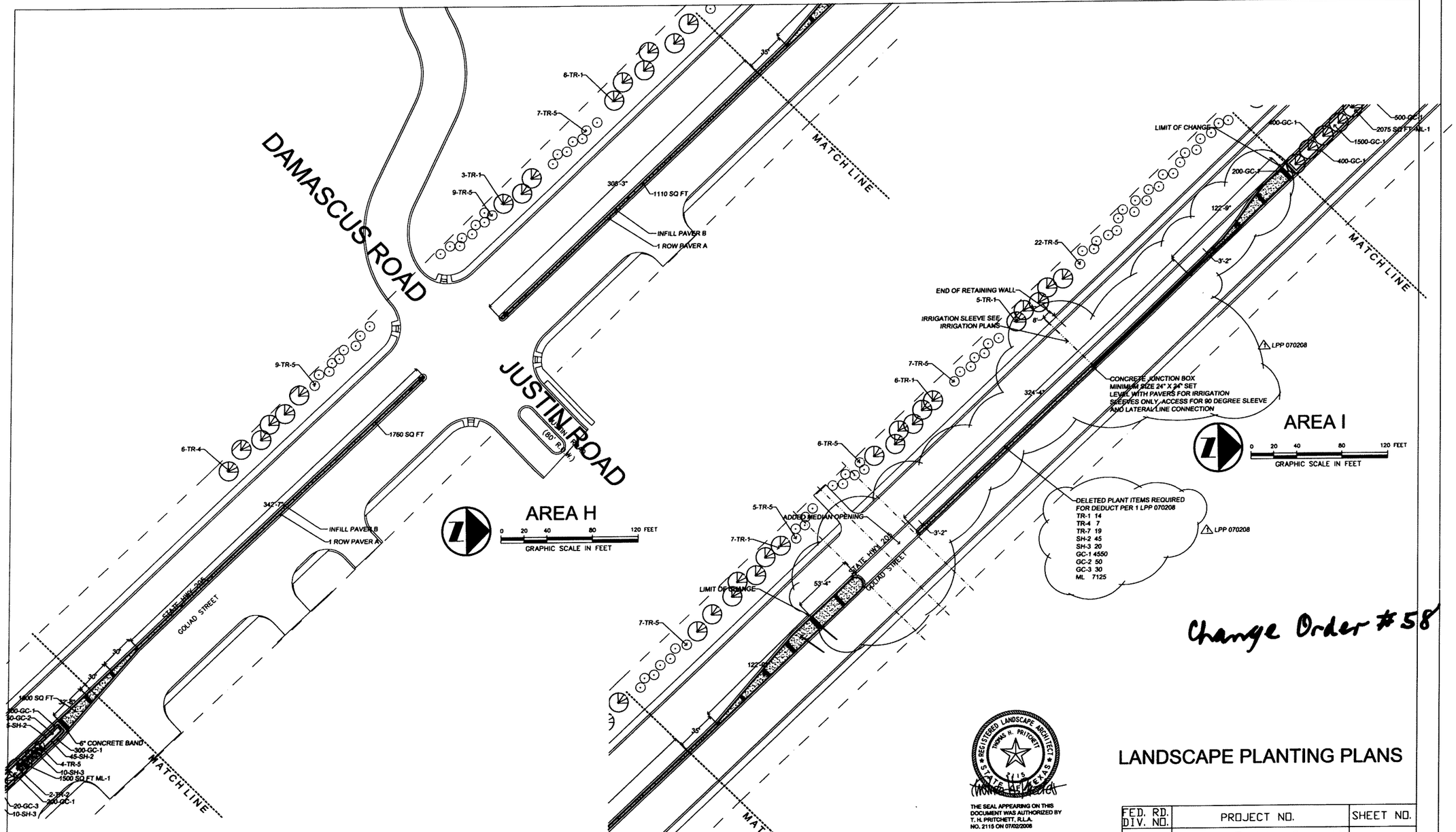
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LANDSCAPE PLANTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		828
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$dn t=$$$$



Change Order #58

IRRIGATION DESIGNER
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REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
2115
STATE OF TEXAS

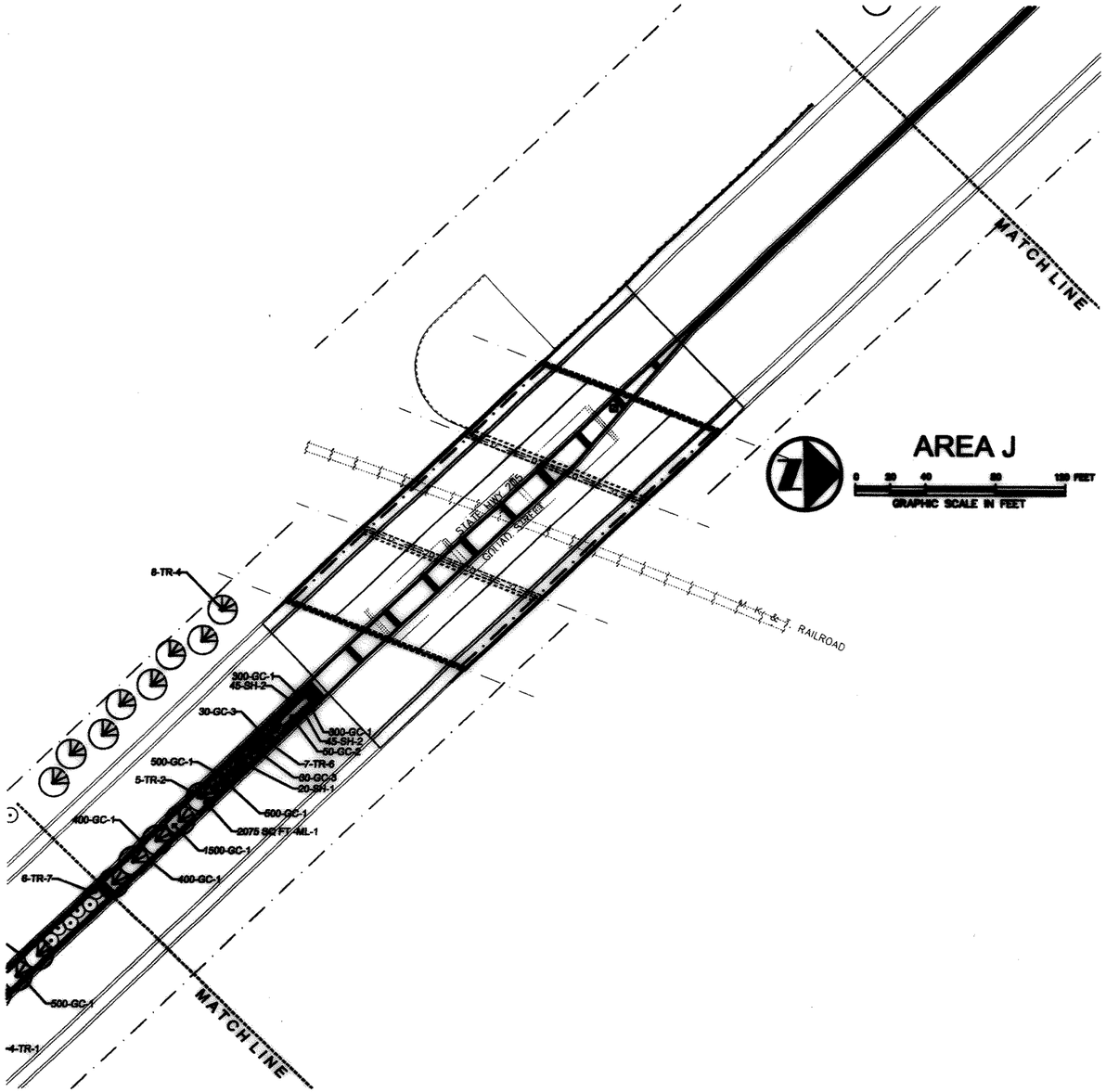
THE SEAL APPEARING ON THIS
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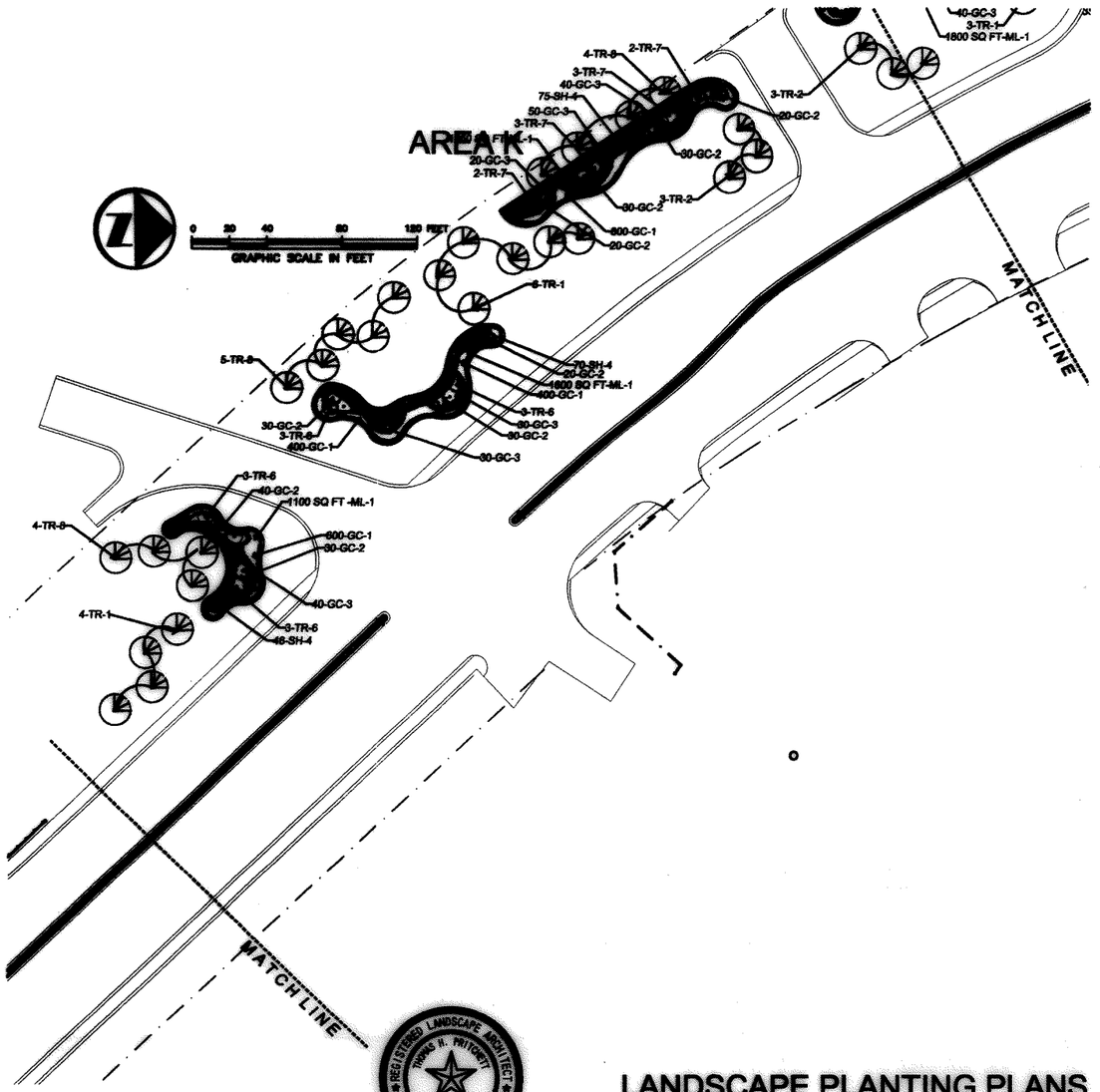
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LANDSCAPE ARCHITECTURAL DESIGN
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LANDSCAPE PLANTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		828A
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$





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LANDSCAPE PLANTING PLANS

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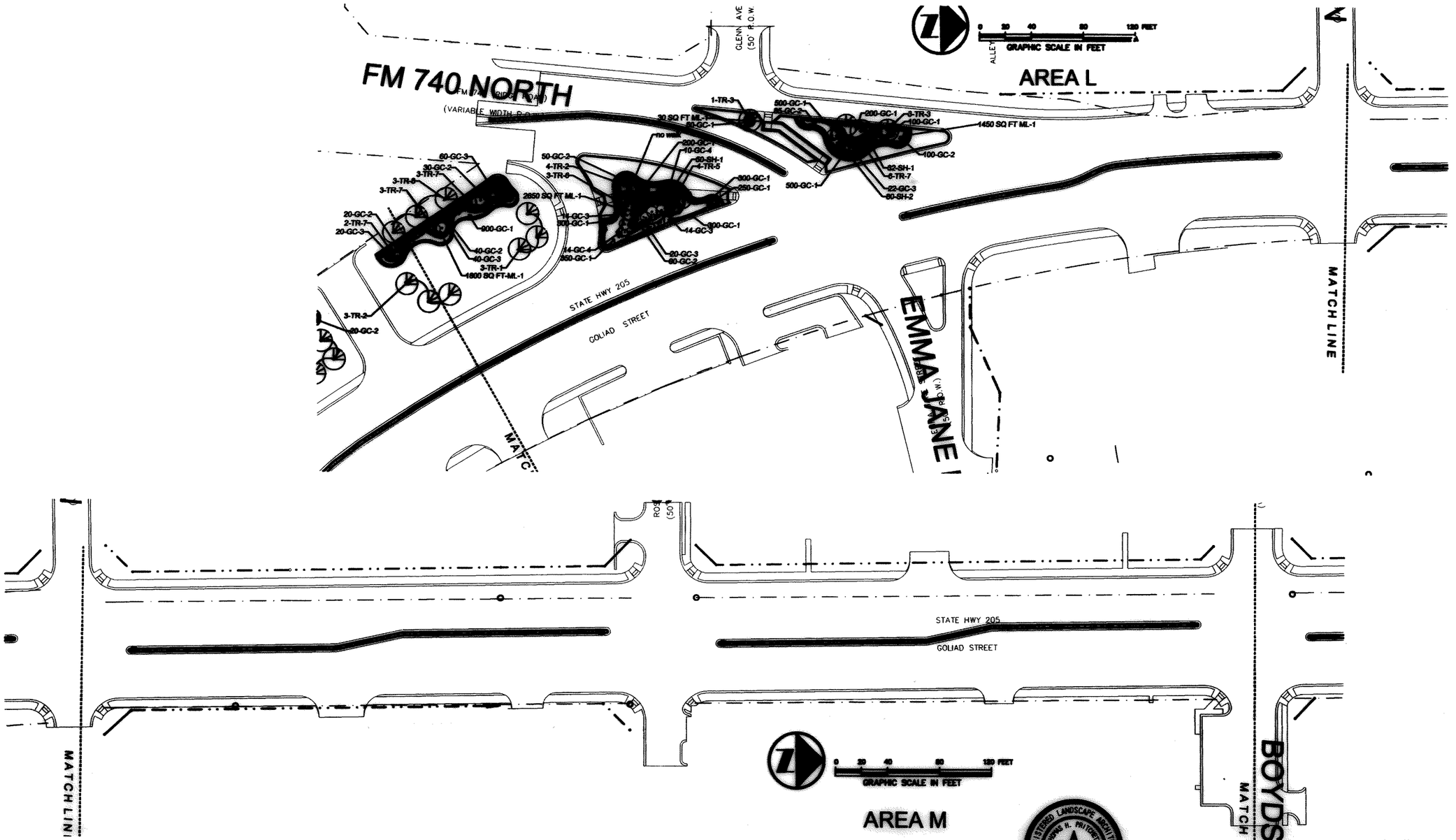
STATE D O T
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FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		829
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



LANDSCAPE PLANTING PLANS

REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
STATE OF TEXAS
2115

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2115 ON 03/23/2009

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(972) 484-7373 PHONE

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		830
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$

AREA N

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

BOYDSTUN AVENUE
(VARIABLE WIDTH R.O.W.)

STATE HWY 205
GOLIAD STREET

BOYDSTON
MATCH LINE

ST. MARY'S
(VARIABLE WIDTH R.O.W.)

STORRES
(VARIABLE WIDTH R.O.W.)

MATCH LINE

GOLIAD STREET
STATE HWY 205

45-SH-2
400-GC-1
6-TR-5
20-GC-3
45-SH-2
20-GC-3
400-GC-1
5-TR-2
600-GC-1
4700 SQ FT ML-1
600-GC-1
3-TR-8
600-GC-1
20-GC-3
4-TR-8
200-GC-2
400-GC-1
60-GC-2
50-GC-2
5-TR-1
7-TR-6
94-SF-T
20-GC-3
200-GC-2
400-GC-1
4750 SQ FT ML-1
90 LF STEEL EDGING
600 SQ FT ML-1
32-SH-3
4-TR-8
1000-GC-1
55-SH-1
20-GC-3
4-TR-8
200-GC-2

(VARIABLE WIDTH R.O.W.)

MATCH LINE

CENTER

AREA O

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

STATE OF TEXAS
REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
2115

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STATE D O T
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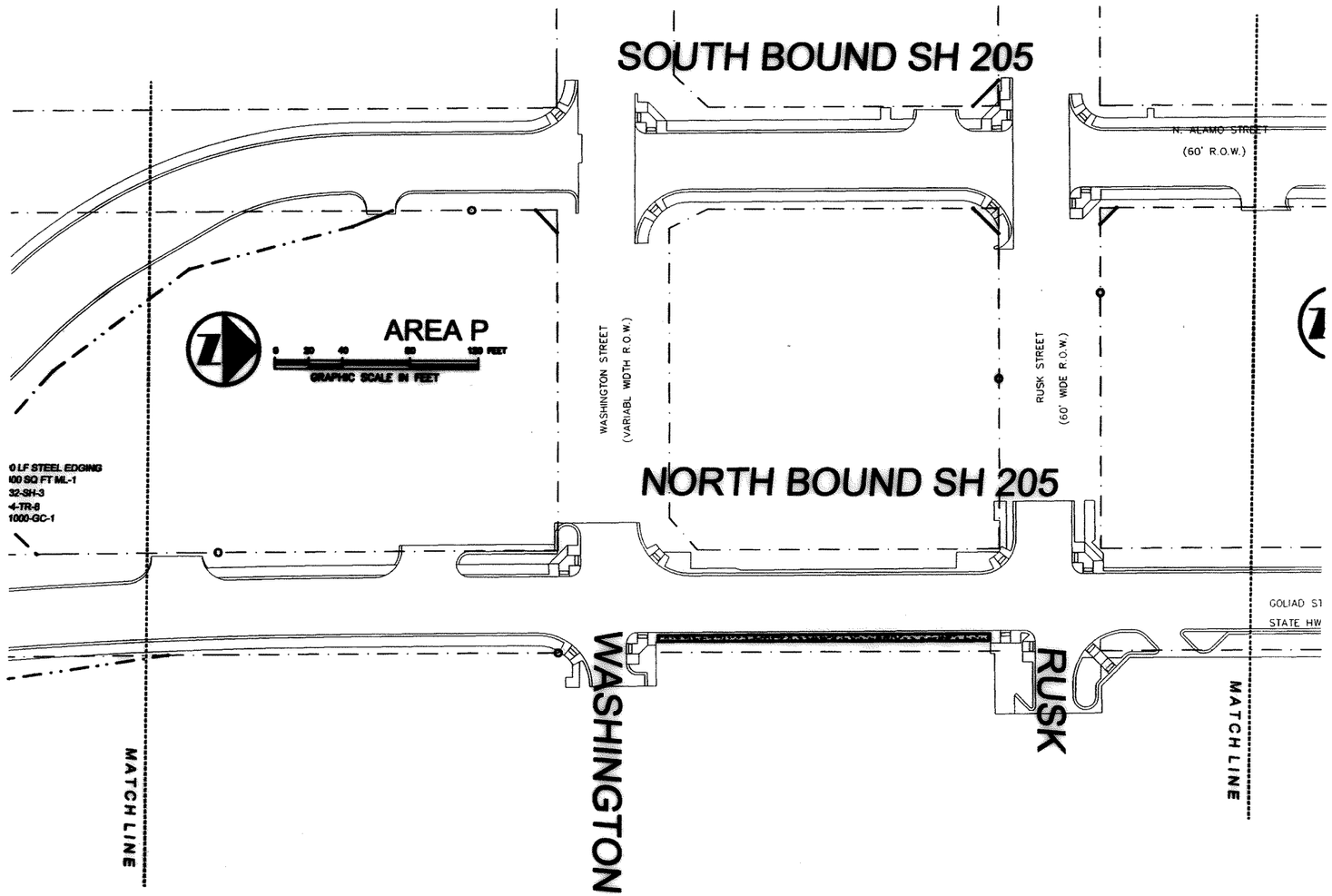
CITY OR ROCKWALL
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LANDSCAPE ARCHITECT
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LANDSCAPE ARCHITECTURAL DESIGN
3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
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(972) 484-7373 PHONE

LANDSCAPE PLANTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		831
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



IRRIGATION DESIGNER
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75081
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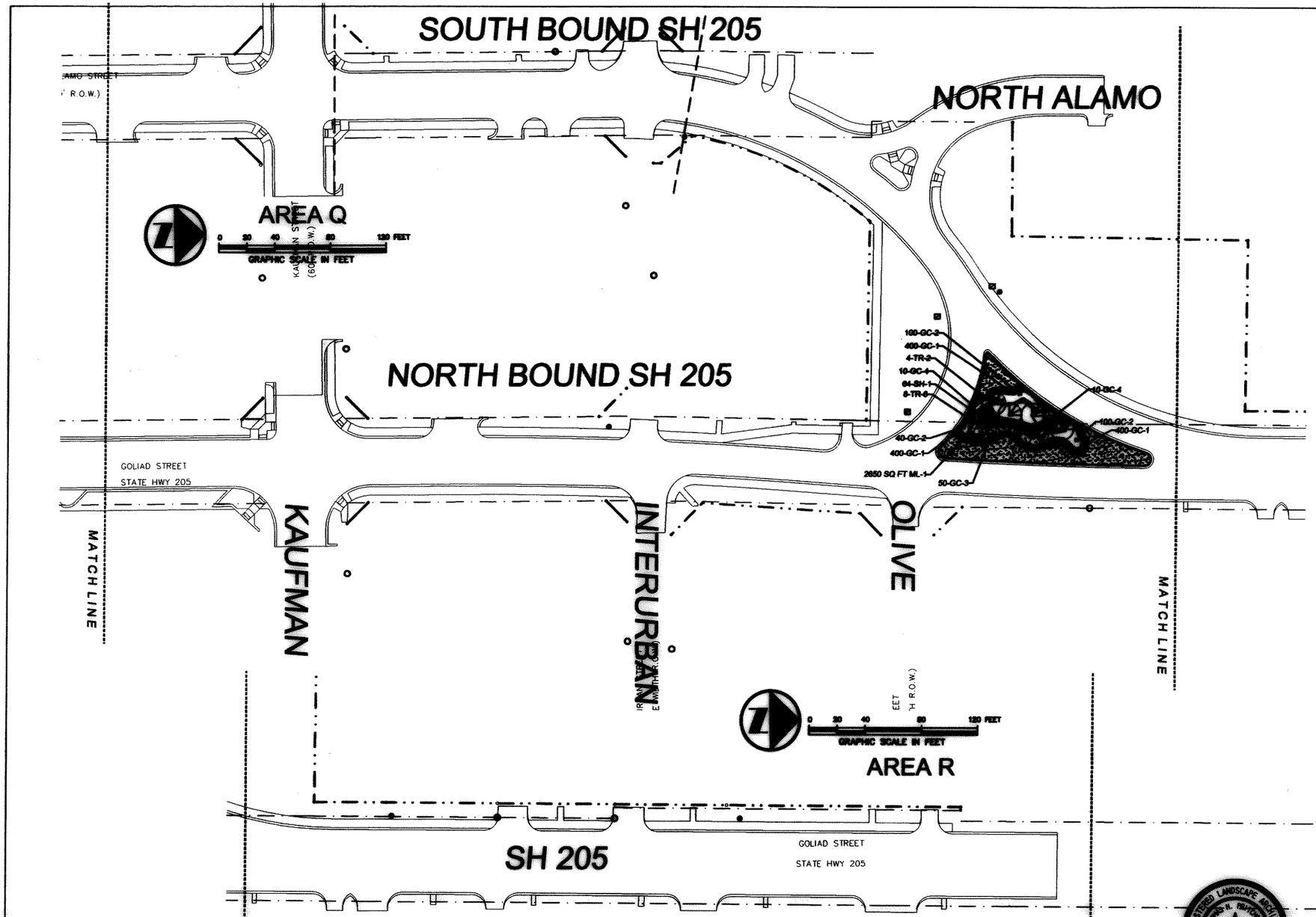
REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
STATE OF TEXAS
2115
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LANDSCAPE ARCHITECT
T.H.PRITCHETT ASSOCIATES
LANDSCAPE ARCHITECTURAL DESIGN
3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
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(972) 484-7373 PHONE

LANDSCAPE PLANTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		832
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

SSSSdn to SSSS



IRRIGATION DESIGNER
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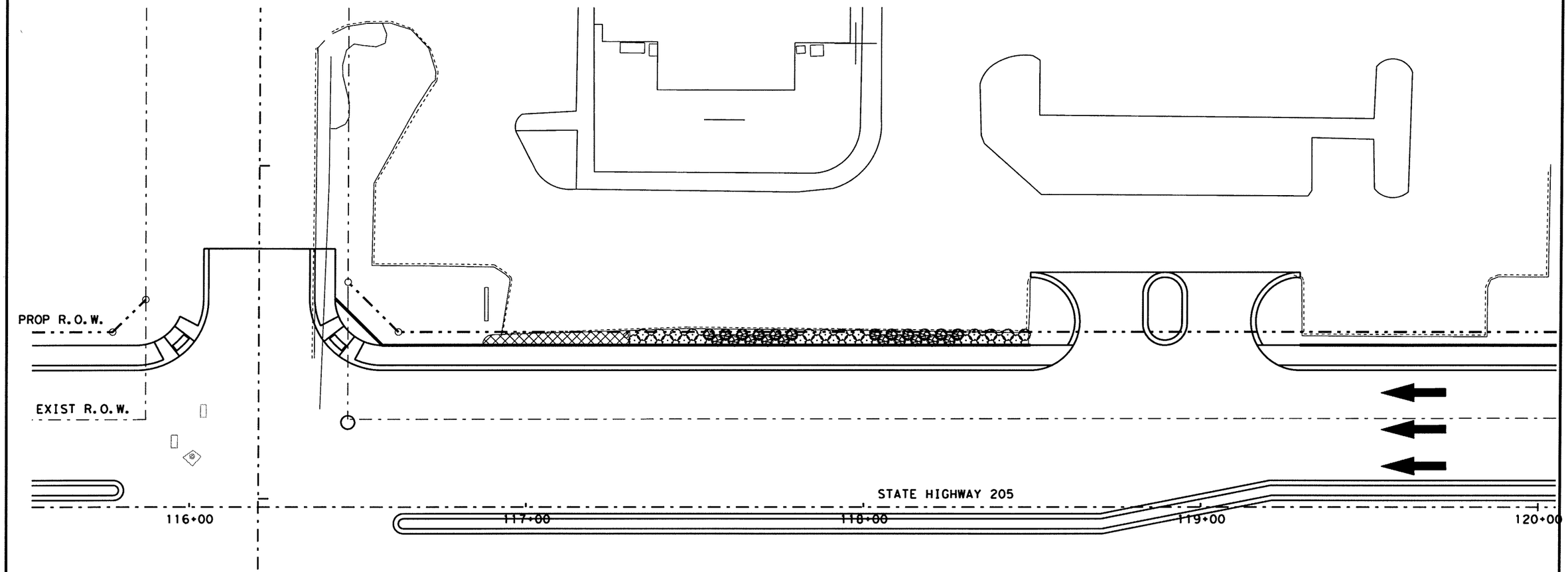
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T.H.PRITCHETT ASSOCIATES
LANDSCAPE ARCHITECTURAL DESIGN
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REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
2115
STATE OF TEXAS

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LANDSCAPE PLANTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		833
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205



PLAN
SCALE : 1"=30'

ESTIMATED SHEET QUANTITIES

DESCRIPTION	QTY.	UNIT	SPACING
Indian Hawthorn (5 gallon)	22	EA	3' o.c.
Dwarf Burford Holly (5 gallon)	26	EA	3' o.c.
Liriope (1gallon)	92	EA	18" o.c.

REGISTERED LANDSCAPE ARCHITECT
PATRICK J. HAIGH
1498
STATE OF TEXAS

Patrick Haigh
29 Jan 2010

Texas Department of Transportation
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SH 205

LANDSCAPE LAYOUT

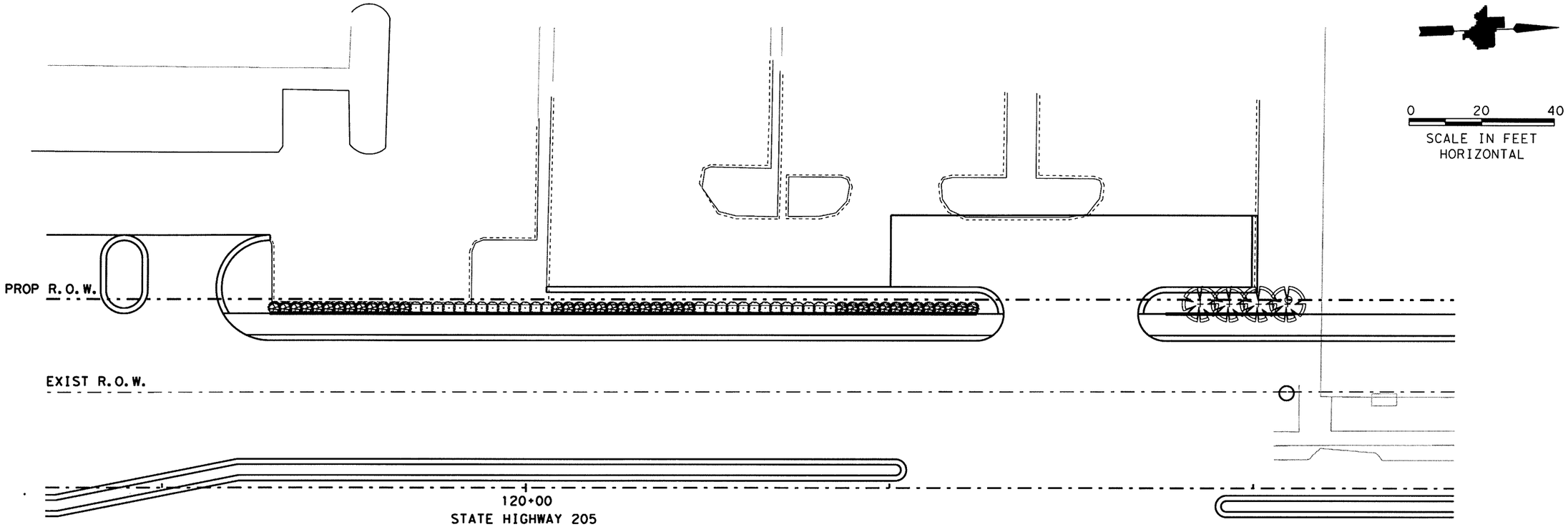
WALL H

SHEET 1 OF 1

FED.RD. DIV.NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	833A
CONT.	SECT.	JOB	
0451	01	032, ETC	

$DGNSPECSLEVS $SYTIME$
$DATE$



0 20 40
SCALE IN FEET
HORIZONTAL

PLAN
SCALE : 1"=30'

ESTIMATED SHEET QUANTITIES

DESCRIPTION	QTY.	UNIT	SPACING
Yaupon Holly (Tree Form, 30 gal)	4	EA	8' o.c.
Indian Hawthorn (5 gallon)	39	EA	3' o.c.
Dwarf Burford Holly (5 gallon)	26	EA	3' o.c.

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PATRICK J. HAIGH
1498
STATE OF TEXAS
Patrick Haigh
29 Jan 2010

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LANDSCAPE LAYOUT

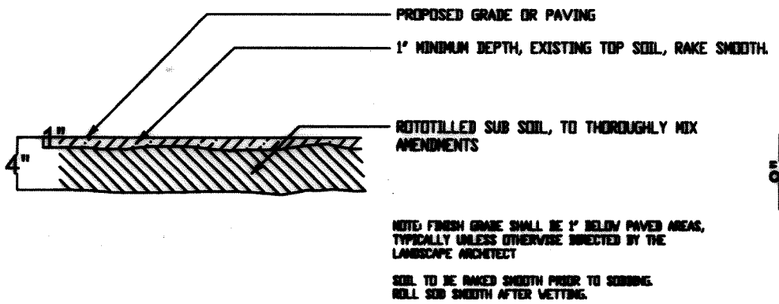
WALL I

SHEET 1 OF 1

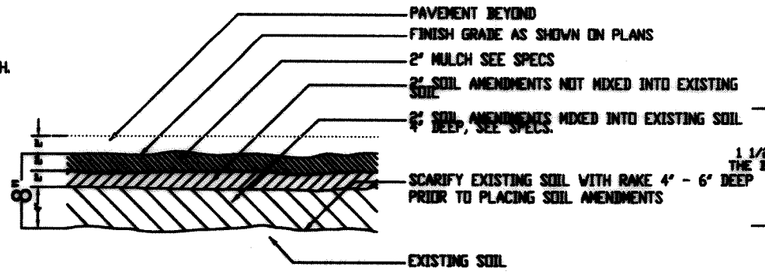
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	33
CONT.	SECT.	JOB	
0451	01	032, ETC	

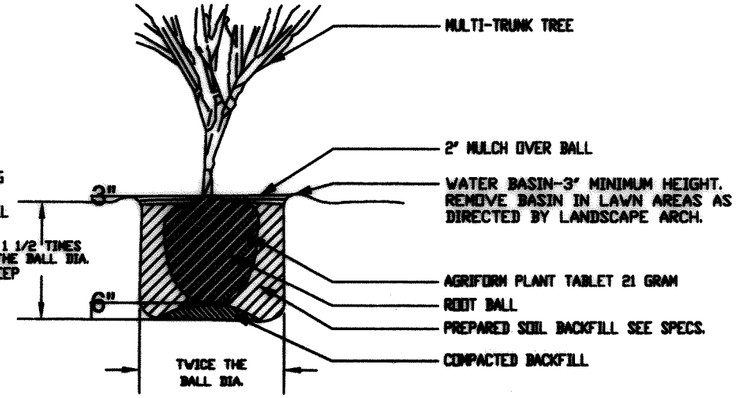
DGNSPEC$ELEV$ $SYTIME$ $DATE$



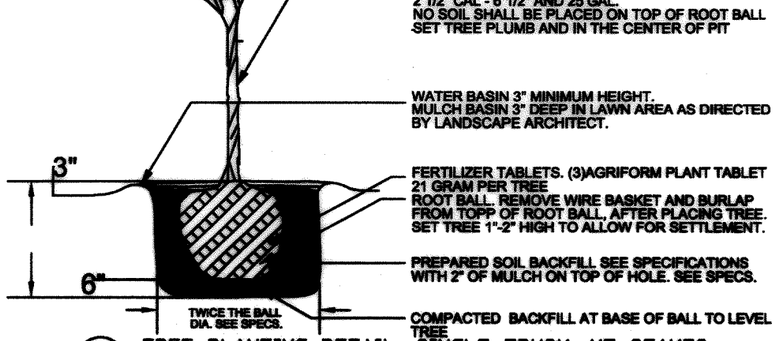
1 LAWN AND GRASS 'E' DETAIL
N.T.S.



2 SHRUB & GROUND COVER MIX 'A' BEDS DETAIL
N.T.S.

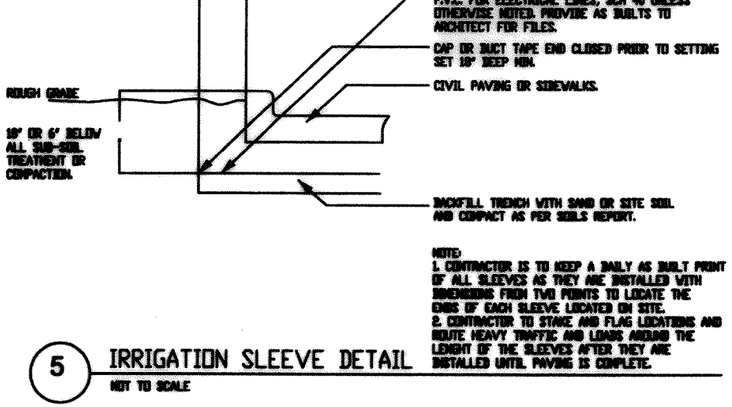


3 TREE PLANTING MULTI-TRUNK TREE, NO STAKES
N.T.S



4 TREE PLANTING DETAIL, SINGLE TRUCK, NO STAKES
N.T.S.

NOTE:
CONCRACTOR TO FLOOD TREE PIT PRIOR TO PLANTING TO TEST DRAINAGE QUALITIES OF THE SOIL. IF IT IS UNDESIREBLY SLOW NOTIFY LANDSCAPE ARCHITECT PRIOR TO PLANTING THE TREE. DO NOT PLANT TREE UNTIL INSPECTION BY LANDSCAPE ARCHITECT.



5 IRRIGATION SLEEVE DETAIL
NOT TO SCALE

IRRIGATION DESIGNER
JOHN WINGFIELD
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(972) 484-1230 FAX
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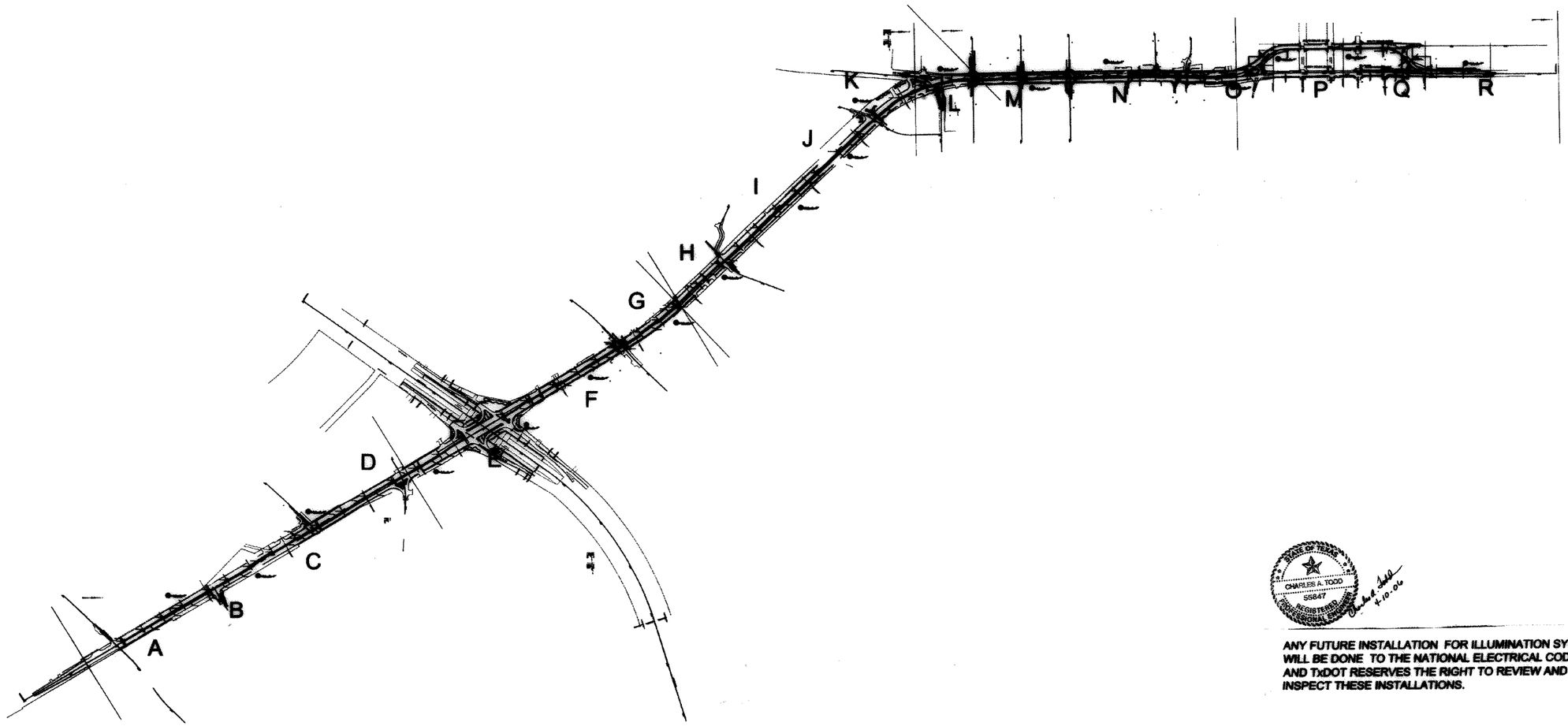
REGISTERED LANDSCAPE ARCHITECT * THOMAS H. PRITCHETT * STATE OF TEXAS * 2/15

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2233 ON 05/04/2006

LANDSCAPE PLANTING DETAILS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		835
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



ANY FUTURE INSTALLATION FOR ILLUMINATION SYSTEMS WILL BE DONE TO THE NATIONAL ELECTRICAL CODE AND TxDOT RESERVES THE RIGHT TO REVIEW AND INSPECT THESE INSTALLATIONS.

STREET LIGHTING PLANS

IRRIGATION DESIGNER
JOHN WINGFIELD
801 MORNINGSIDE TRAIL
RICHARDSON, TEXAS
75081
(972) 238-1498 PHONE
(972) 238-1499 FAX

CIVIL ENGINEER
CHUCK TODD
ENGINEERING DEPARTMENT
385 S. GOLIAD
CITY OF ROCKWALL, TEXAS
75081
(972) 771-7746 PHONE
(972) 771-7748 FAX

STATE D O T
MR. PATRICK HAIGE
LANDSCAPE ARCHITECT
STATE DEPT. OF TRANSPORTATION
1P.O.BOX 3067
DALLAS, TEXAS 75221
(214) 320-6205 PHONE
(214) 320-6615 FAX

CITY OR ROCKWALL
MR. BRAD GRIGGS
DIRECTOR OF PARKS AND RECREATION
CITY OF ROCKWALL
108 E. WASHINGTON STREET
ROCKWALL, TEXAS 75087
(972) 771-7781 PHONE
(972) 771-7728 FAX

LANDSCAPE ARCHITECT
T.H.PRITCHETT ASSOCIATES
LANDSCAPE ARCHITECTURAL DESIGN
3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
(972) 484-1230 FAX
(972) 484-7373 PHONE

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		836
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

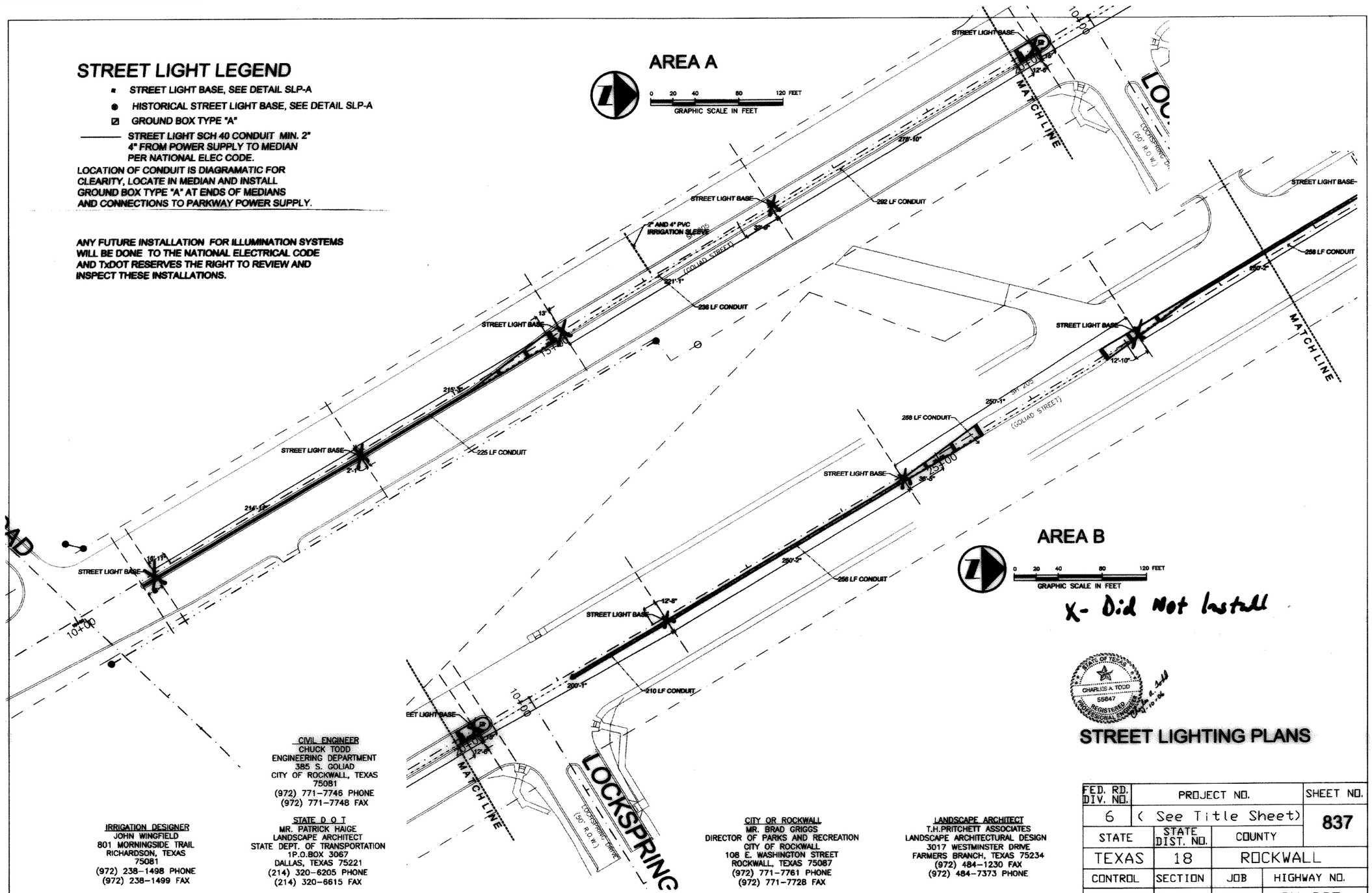
$$$$date$$$$

STREET LIGHT LEGEND

- ■ STREET LIGHT BASE, SEE DETAIL SLP-A
- ● HISTORICAL STREET LIGHT BASE, SEE DETAIL SLP-A
- ⊠ GROUND BOX TYPE "A"
- ——— STREET LIGHT SCH 40 CONDUIT MIN. 2" 4" FROM POWER SUPPLY TO MEDIAN PER NATIONAL ELEC CODE.

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X- Did Not Install

CHARLES A. TODD 55647 REGISTERED PROFESSIONAL ENGINEER

STREET LIGHTING PLANS

CIVIL ENGINEER
CHUCK TODD
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FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		837
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

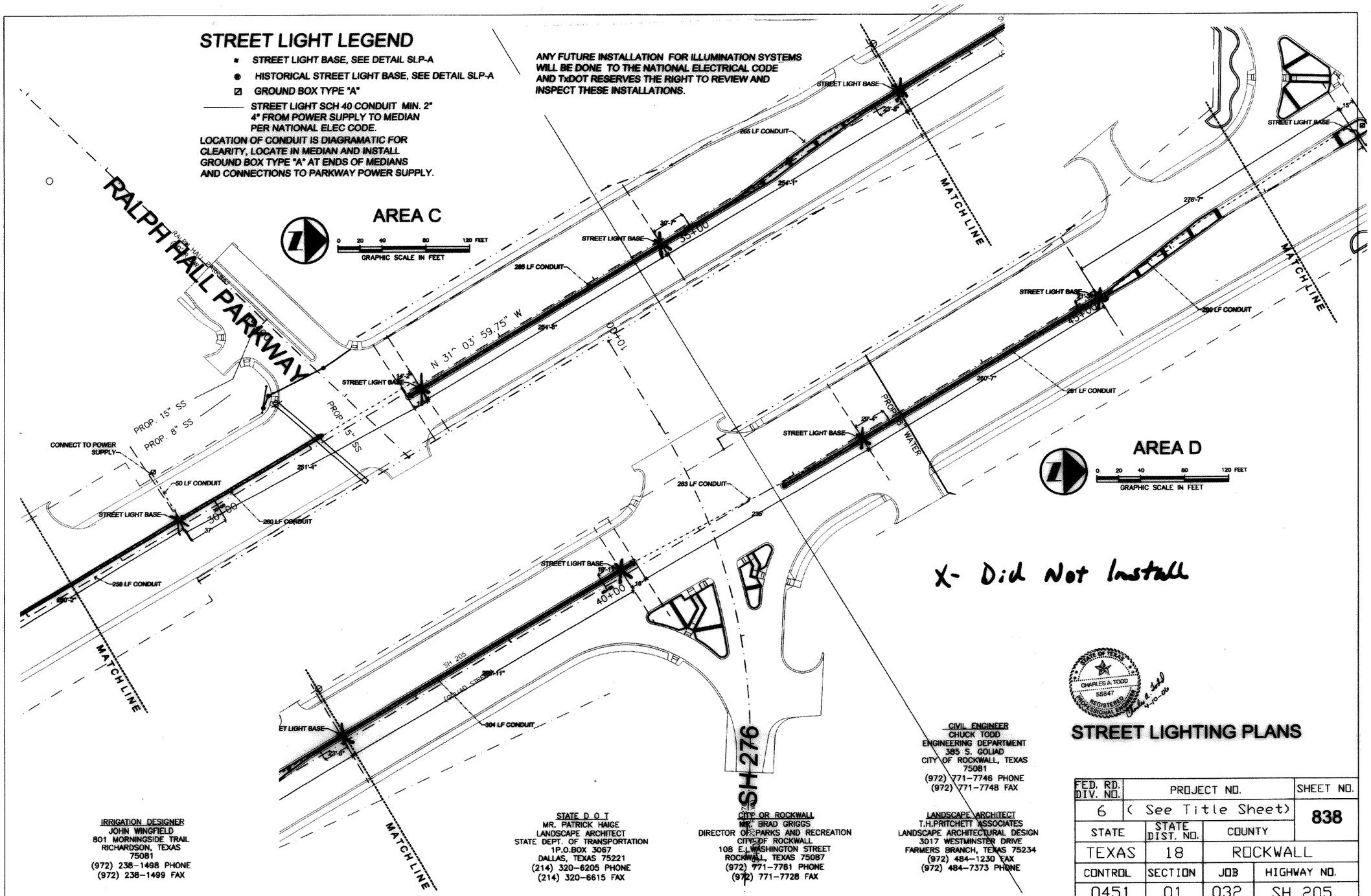
$$$$date$$$$

STREET LIGHT LEGEND

- ▪ STREET LIGHT BASE, SEE DETAIL SLP-A
- ● HISTORICAL STREET LIGHT BASE, SEE DETAIL SLP-A
- ☑ GROUND BOX TYPE "A"
- ——— STREET LIGHT SCH 40 CONDUIT MIN. 2" 4" FROM POWER SUPPLY TO MEDIAN PER NATIONAL ELEC CODE.

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X- Did Not Install

IRRIGATION DESIGNER
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(972) 238-1498 PHONE
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(972) 484-7373 PHONE

STATE OF TEXAS
CHARLES A. TODD
55847
REGISTERED
PROFESSIONAL ENGINEER
4-10-06

STREET LIGHTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		838
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$

STREET LIGHT LEGEND

- ▪ STREET LIGHT BASE, SEE DETAIL SLP-A
- ● HISTORICAL STREET LIGHT BASE, SEE DETAIL SLP-A
- ⊠ GROUND BOX TYPE "A"
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NORTH SERVICE ROAD IH 30

SOUTH SERVICE ROAD IH 30

INTERSTATE 30 (VARIABLE WIDTH R.O.W.)

PC 1

PT 15+88.30

N 29° 42' 52.79" E

15+00

PC 16+73.03

PT 17+49.27

N 57.68" E

PC 17+91.04

169+18.61

(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC IRRIGATION SLEEVE

1350 SQ FT

20+00

50+00

N 35° 25' 31.13" E

STREET LIGHT BASE

276'-7"

WATCHLIN

STREET LIGHT BASE

PROP. 8" WATER

PROP. 10" SS

STREET LIGHT BASE

35+00

PROP. 8" WATER

PROP. 10" SS

298 LF CONDUIT

PROP. 8" WATER

290'-5"

292 LF CONDUIT

STREET LIGHT BASE

N 35° 25' 31.21" E

STATE HWY 205

GOLIAD STREET

STREET LIGHT BASE

PROP. 10" SS

PROP. 8" WATER

X- Did Not Install

(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC IRRIGATION SLEEVE

1150 SQFT

PC 22+61.90

PT 23+58.68

PT 23+91.88

PT 24+90.21

N 41° 25' 00.00" E

25+00

27+05.64

(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC IRRIGATION SLEEVE

(3) 4" PVC ELECTRICAL SLEEVES
2" AND 4" PVC IRRIGATION SLEEVE

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

STATE OF TEXAS · CHARLES A. TODD · 55647 · REGISTERED PROFESSIONAL ENGINEER

4-10-06

CIVIL ENGINEER
CHUCK TODD
ENGINEERING DEPARTMENT
385 S. GOLIAD
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(972) 771-7748 FAX

IRRIGATION DESIGNER
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RICHARDSON, TEXAS
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(972) 238-1499 FAX

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LANDSCAPE ARCHITECT
STATE DEPT. OF TRANSPORTATION
1P.O.BOX 3067
DALLAS, TEXAS 75221
(214) 320-6205 PHONE
(214) 320-6615 FAX

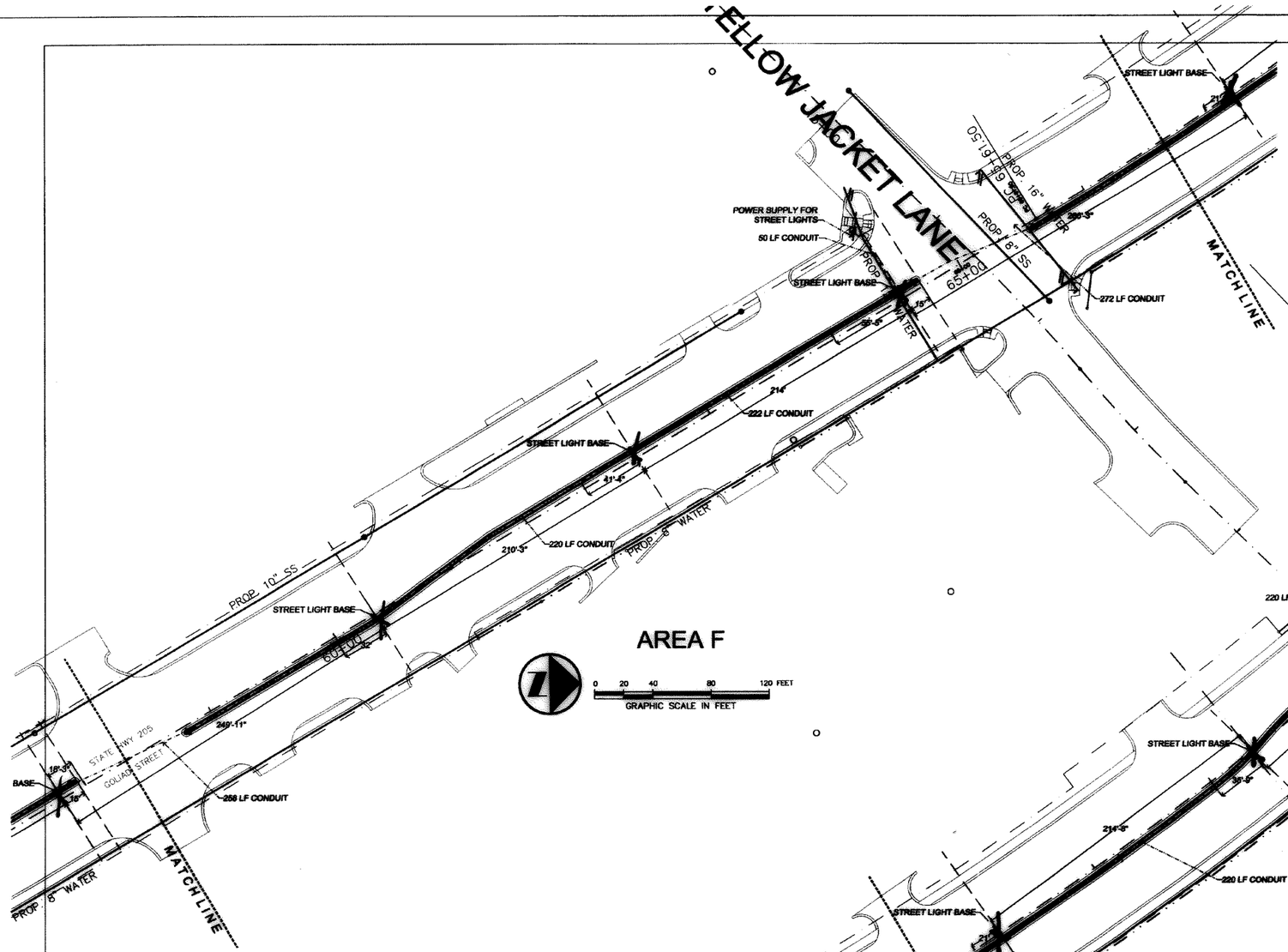
CITY OR ROCKWALL
MR. BRAD GRIGGS
DIRECTOR OF PARKS AND RECREATION
CITY OF ROCKWALL
108 E. WASHINGTON STREET
ROCKWALL, TEXAS 75087
(972) 771-7761 PHONE
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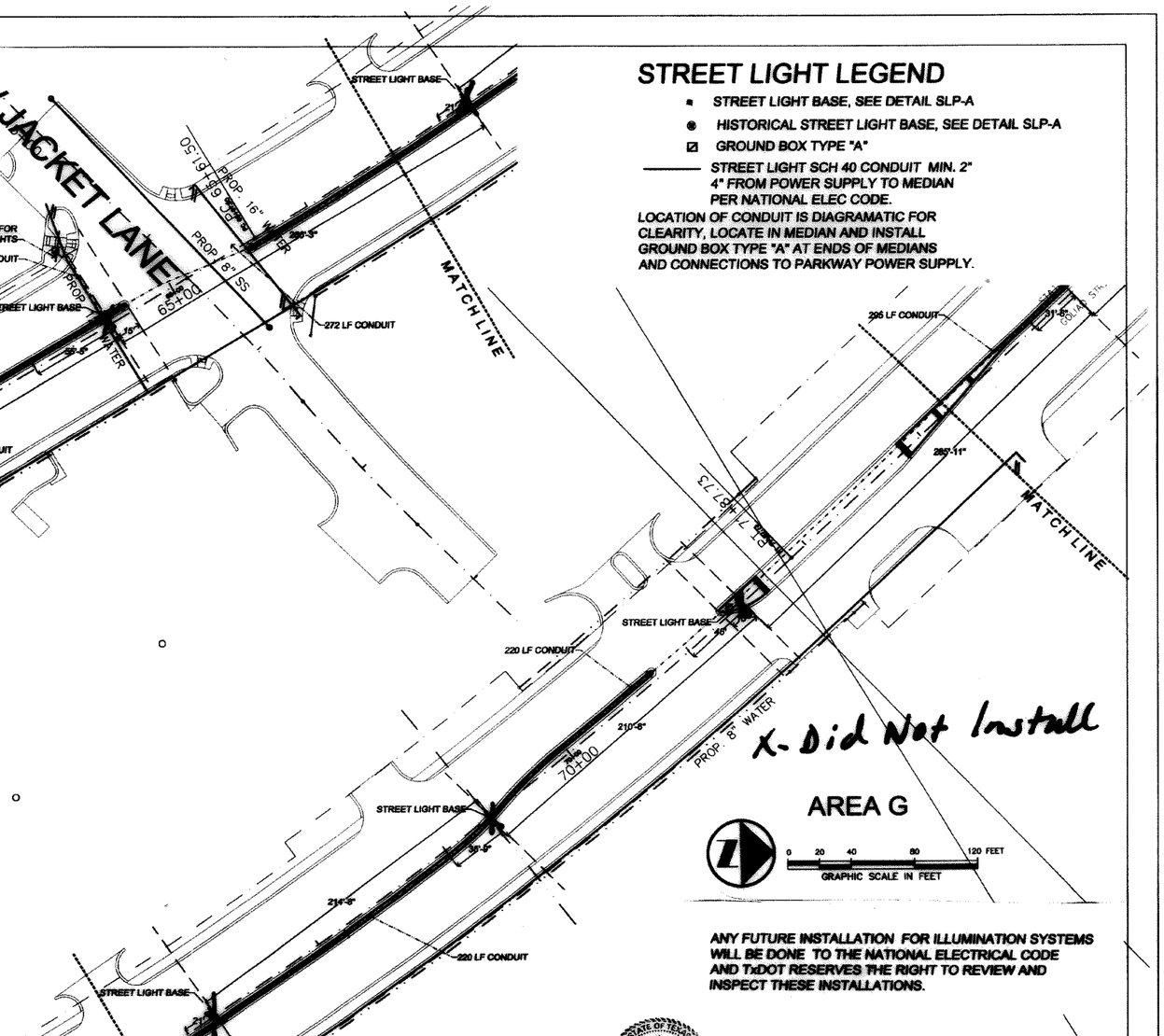
LANDSCAPE ARCHITECT
T.H.PRITCHETT ASSOCIATES
LANDSCAPE ARCHITECTURAL DESIGN
3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
(972) 484-1230 FAX
(972) 484-7373 PHONE

STREET LIGHTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		839
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$





STREET LIGHT LEGEND

- STREET LIGHT BASE, SEE DETAIL SLP-A
- HISTORICAL STREET LIGHT BASE, SEE DETAIL SLP-A
- GROUND BOX TYPE "A"
- STREET LIGHT SCH 40 CONDUIT MIN. 2" 4" FROM POWER SUPPLY TO MEDIAN PER NATIONAL ELEC CODE.

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X-Did Not Install

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STATE OF TEXAS — CHARLES A. TODD — 55547 — REGISTERED PROFESSIONAL ENGINEER — 12-10-04

STREET LIGHTING PLANS

IRRIGATION DESIGNER
JOHN WINGFIELD
801 MORNINGSIDE TRAIL
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75081
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CIVIL ENGINEER
CHUCK TODD
ENGINEERING DEPARTMENT
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CITY OF ROCKWALL, TEXAS
75081
(972) 771-7746 PHONE
(972) 771-7748 FAX

STATE D.O.T.
MR. PATRICK [illegible]
LANDSCAPE ARCHITECT
STATE DEPT. OF TRANSPORTATION
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CITY OR ROCKWALL
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LANDSCAPE ARCHITECT
T.H.PRITCHETT ASSOCIATES
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3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
(972) 484-1230 FAX
(972) 484-7373 PHONE

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		840
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

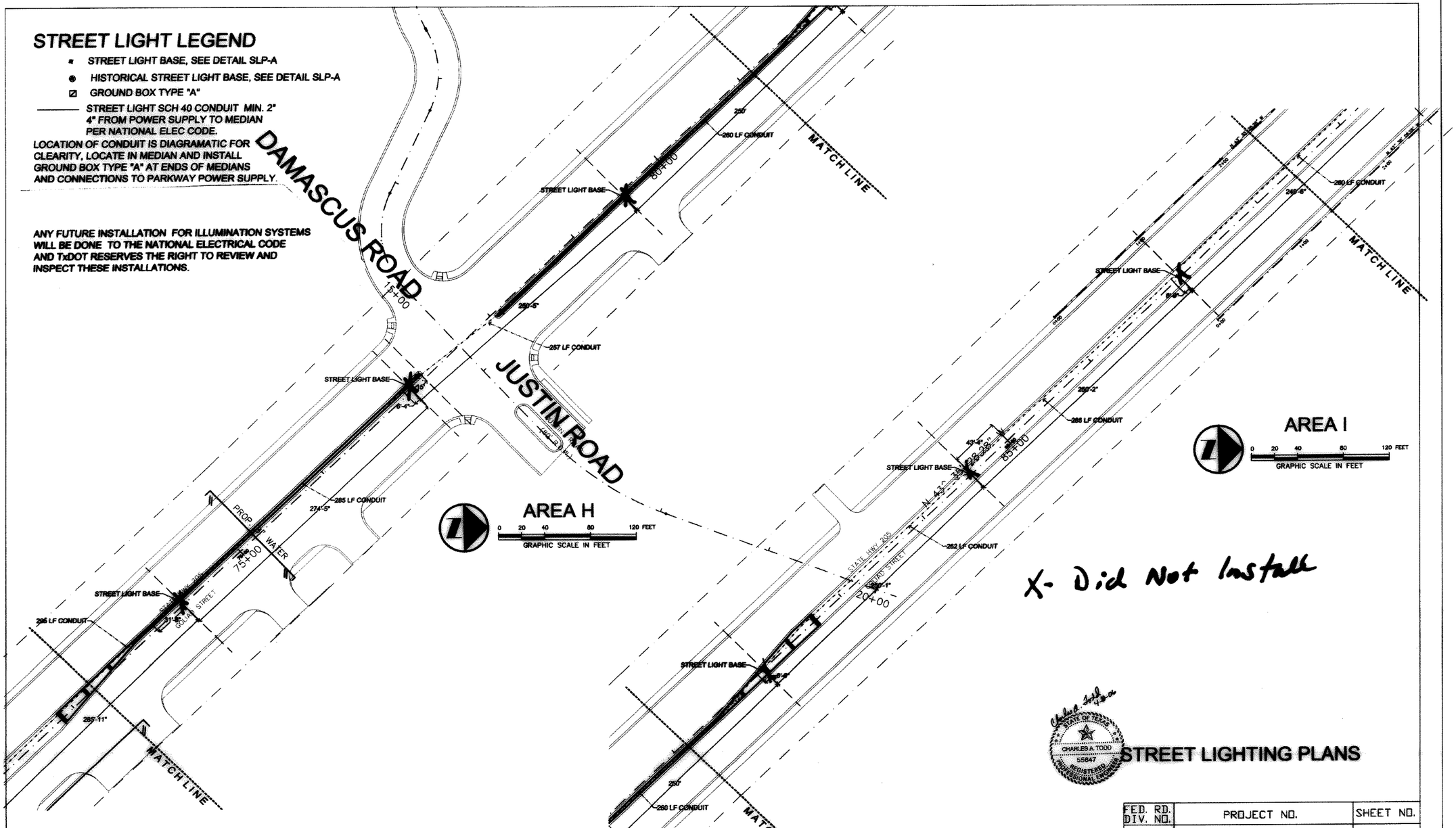
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STREET LIGHT LEGEND

- STREET LIGHT BASE, SEE DETAIL SLP-A
- HISTORICAL STREET LIGHT BASE, SEE DETAIL SLP-A
- GROUND BOX TYPE "A"
- STREET LIGHT SCH 40 CONDUIT MIN. 2" 4" FROM POWER SUPPLY TO MEDIAN PER NATIONAL ELEC CODE.

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X- Did Not Install

CHARLES A. TODD 55647 REGISTERED PROFESSIONAL ENGINEER

STREET LIGHTING PLANS

IRRIGATION DESIGNER
JOHN WINGFIELD
801 MORNINGSIDE TRAIL
RICHARDSON, TEXAS
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CHUCK TODD
ENGINEERING DEPARTMENT
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STATE D O T
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LANDSCAPE ARCHITECT
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LANDSCAPE ARCHITECTURAL DESIGN
3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
(972) 484-1230 FAX
(972) 484-7373 PHONE

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		841
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

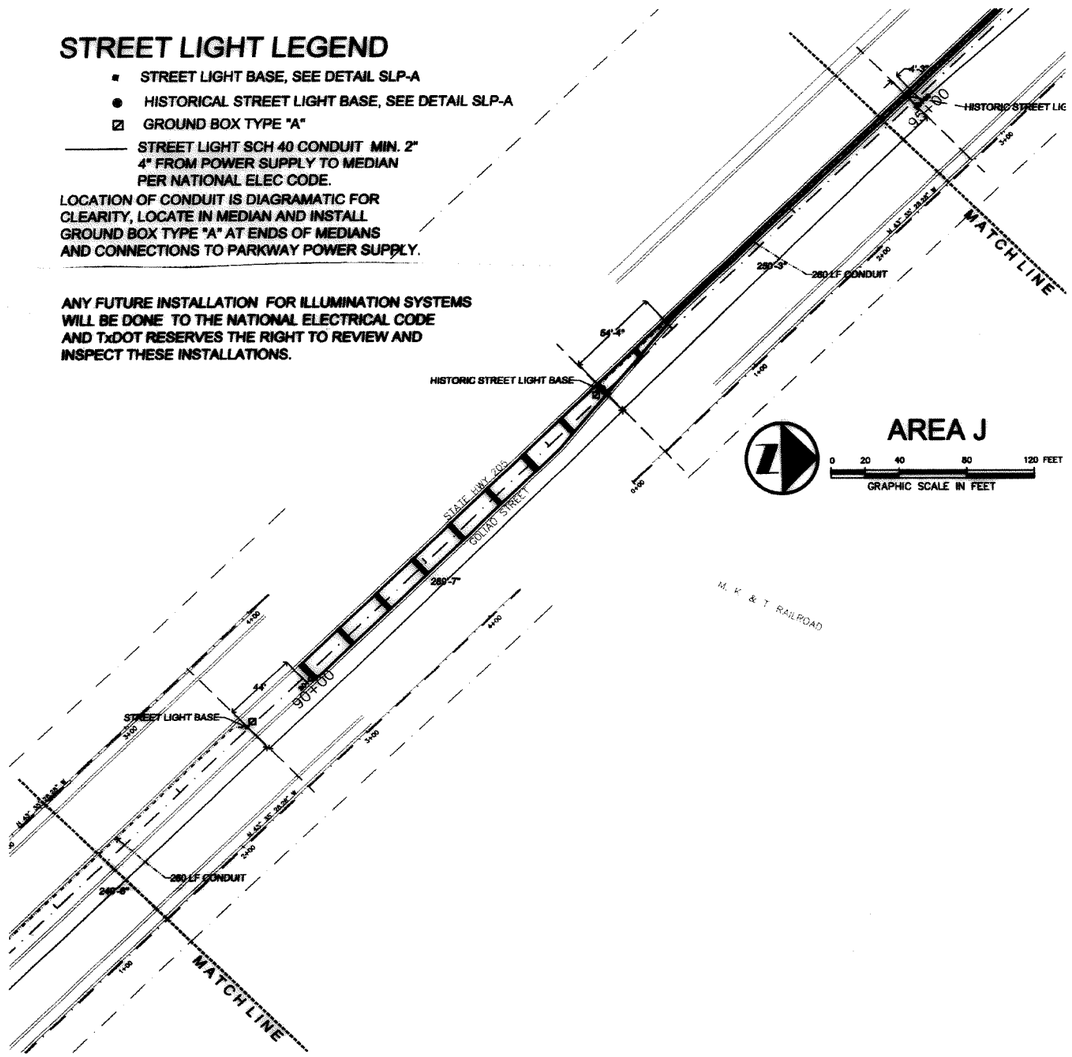
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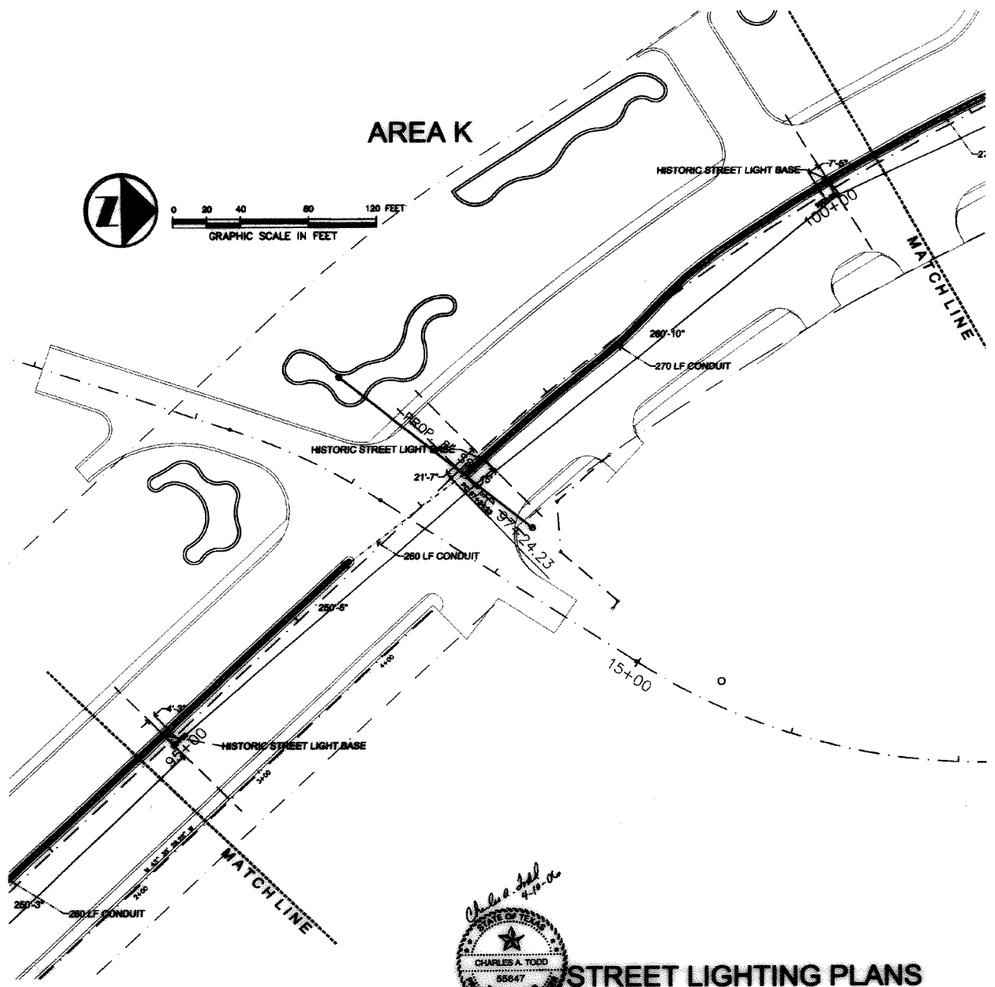
STREET LIGHT LEGEND

- ▪ STREET LIGHT BASE, SEE DETAIL SLP-A
- ● HISTORICAL STREET LIGHT BASE, SEE DETAIL SLP-A
- ☑ GROUND BOX TYPE "A"
- ——— STREET LIGHT SCH 40 CONDUIT MIN. 2" 4" FROM POWER SUPPLY TO MEDIAN PER NATIONAL ELEC CODE.

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CHARLES A. TODD
55647
REGISTERED PROFESSIONAL ENGINEER

STREET LIGHTING PLANS

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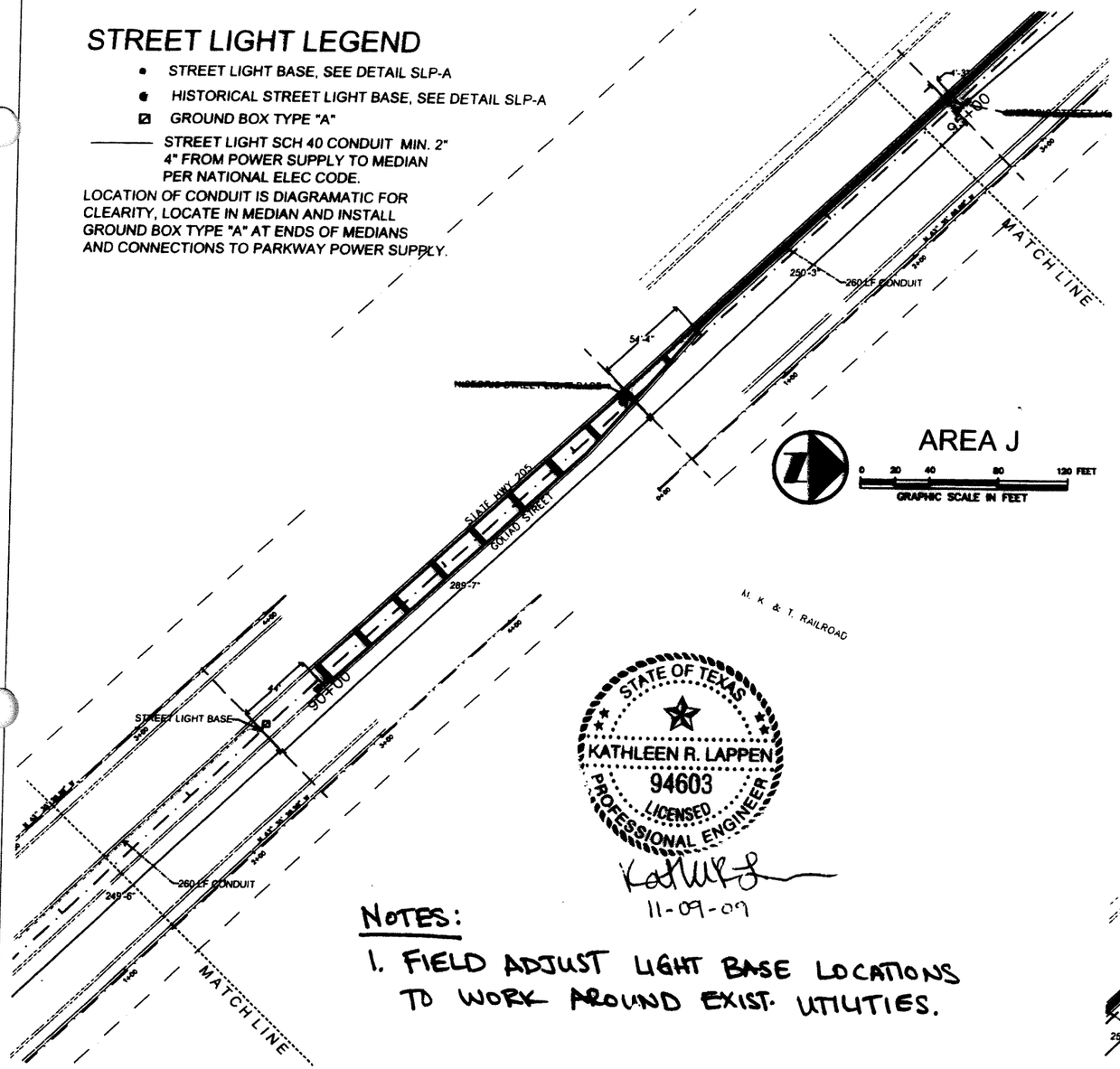
FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		842
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

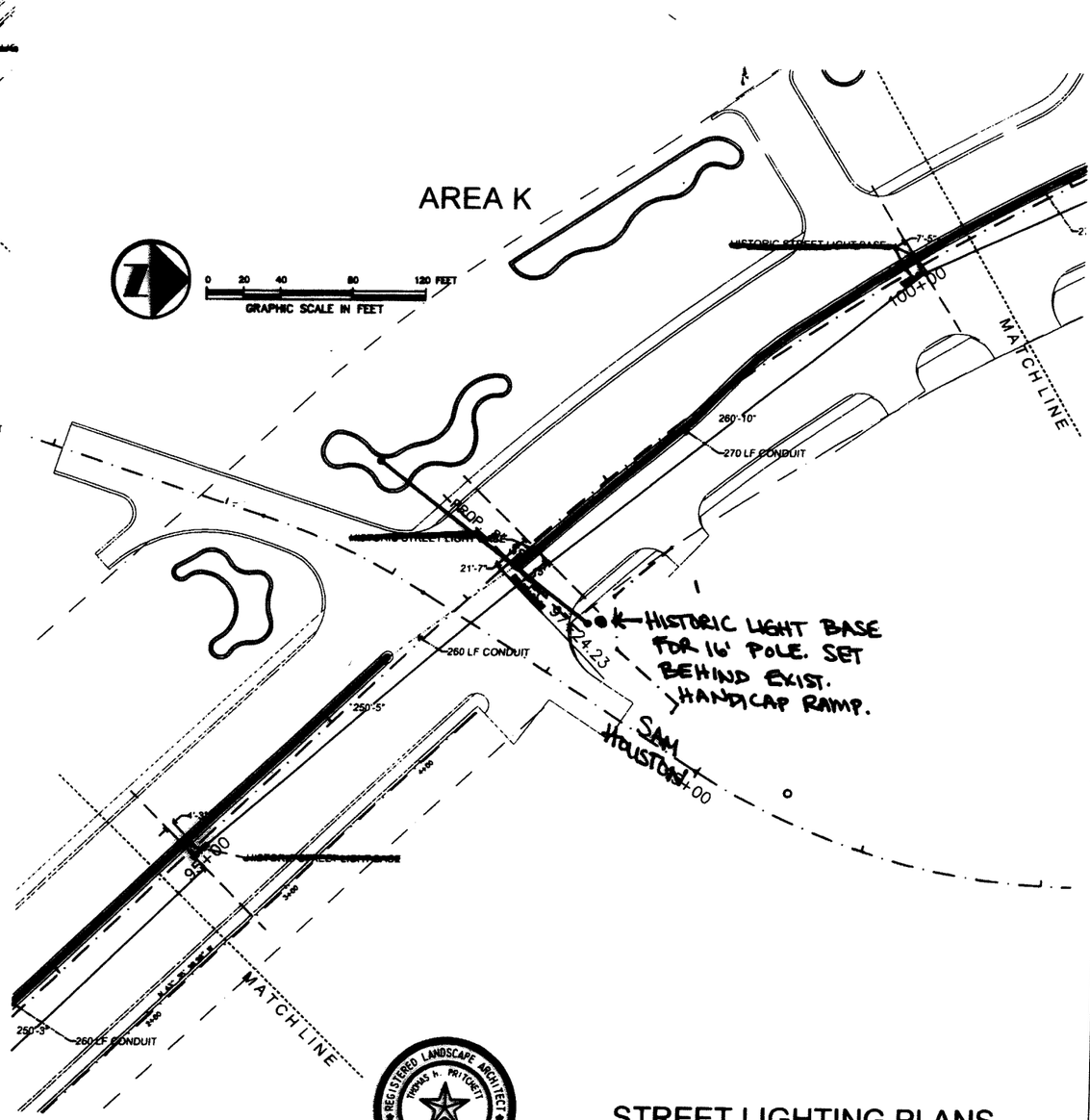
$$$$date$$$$

STREET LIGHT LEGEND

- STREET LIGHT BASE, SEE DETAIL SLP-A
- HISTORICAL STREET LIGHT BASE, SEE DETAIL SLP-A
- GROUND BOX TYPE "A"
- ——— STREET LIGHT SCH 40 CONDUIT MIN. 2" 4" FROM POWER SUPPLY TO MEDIAN PER NATIONAL ELEC CODE.

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STATE OF TEXAS
KATHLEEN R. LAPPEN
94603
LICENSED
PROFESSIONAL ENGINEER

11-09-09

NOTES:

1. FIELD ADJUST LIGHT BASE LOCATIONS TO WORK AROUND EXIST. UTILITIES.

REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
2115
STATE OF TEXAS

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2115 ON 03/22/2006

STREET LIGHTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		842A
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

IRRIGATION DESIGNER
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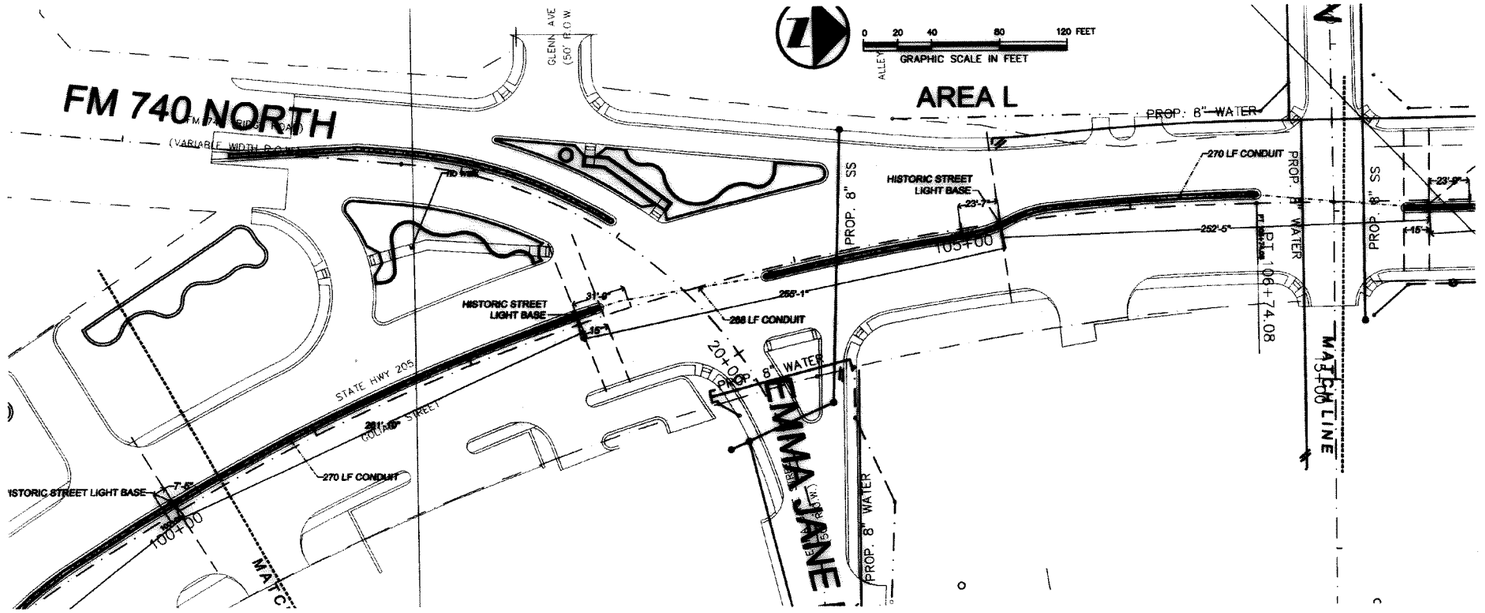
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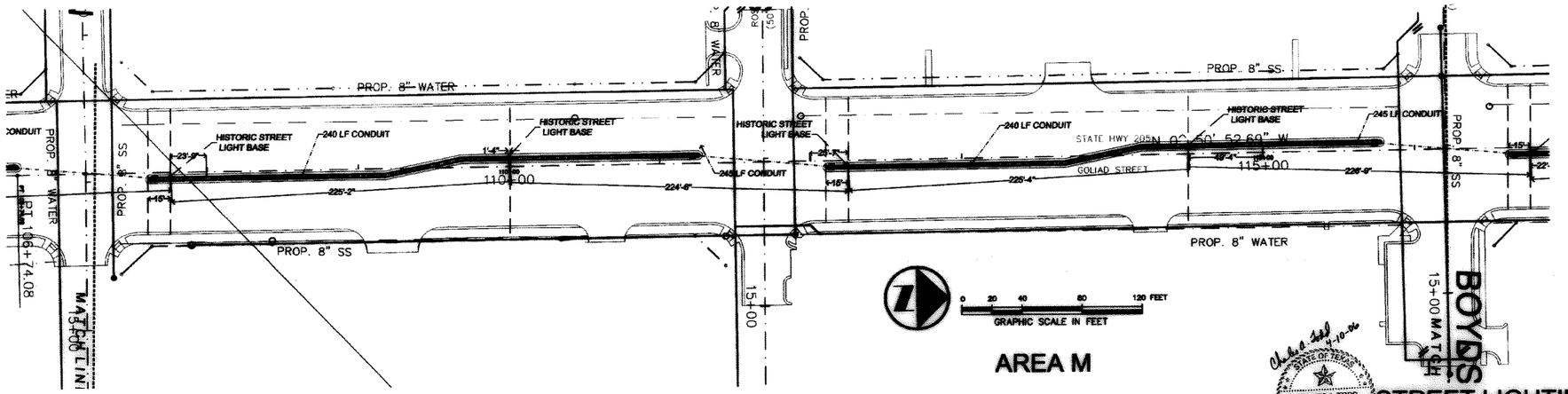
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AREA M

CHARLES A. TODD 55647 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS

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(972) 484-7373 PHONE

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		843
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$

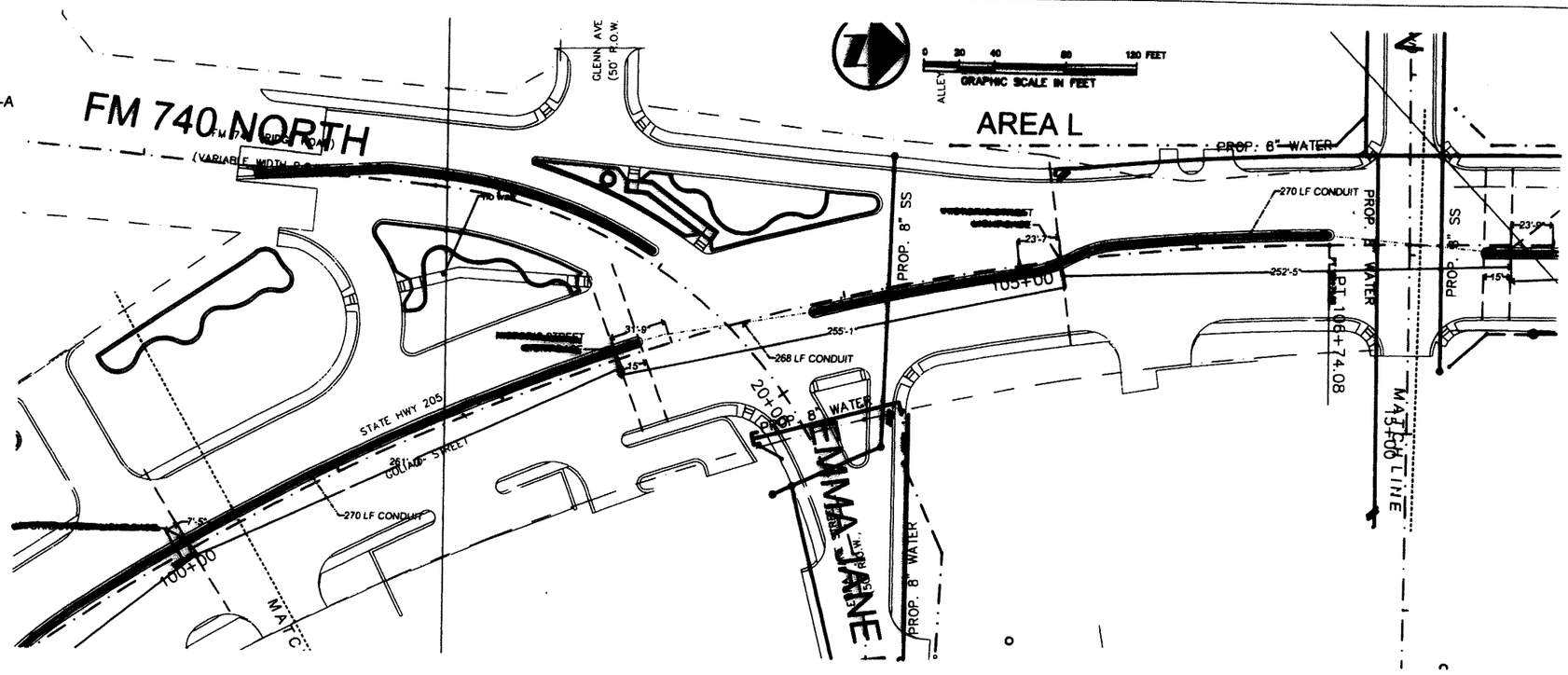
STREET LIGHT LEGEND

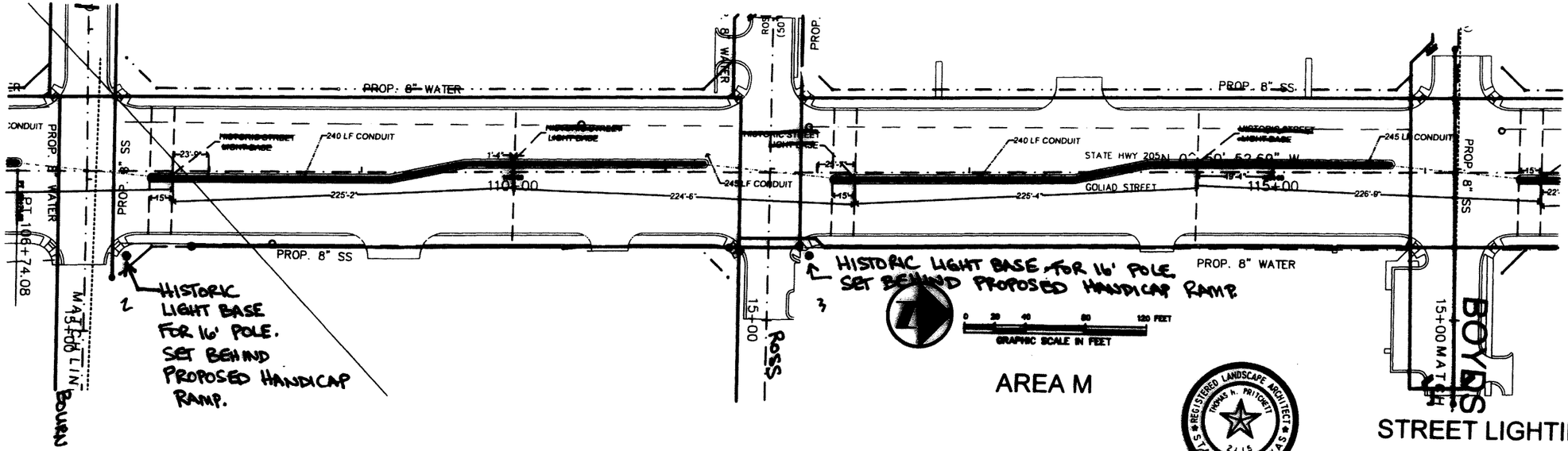
- STREET LIGHT BASE, SEE DETAIL SLP-A
- HISTORICAL STREET LIGHT BASE, SEE DETAIL SLP-A
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STATE OF TEXAS
KATHLEEN R. LAPPEN
94603
LICENSED
PROFESSIONAL ENGINEER

11-01-09





REGISTERED LANDSCAPE ARCHITECT
THOMAS H. PRITCHETT
STATE OF TEXAS
2115

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2115 ON 03/22/2006

STREET LIGHTING PLANS

SEE NOTES, PAGE 1.

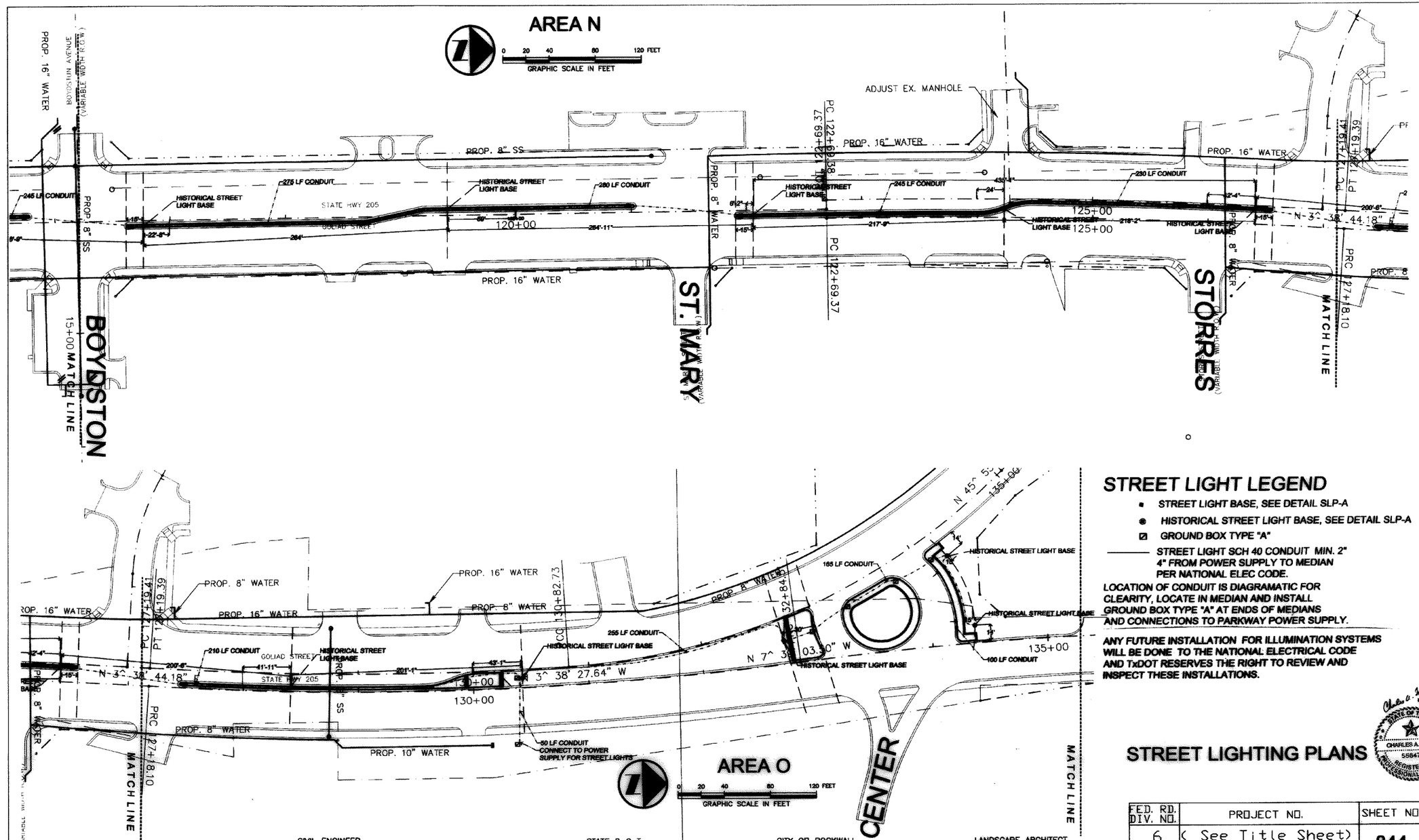
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FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		843A
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205



STREET LIGHT LEGEND

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STREET LIGHTING PLANS

STATE OF TEXAS — CHARLES A. TODD — 58647 — REGISTERED PROFESSIONAL ENGINEER

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		844
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

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(972) 484-7373 PHONE

$$$$date$$$$

AREA N

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

PROP. 16" WATER
BOYDSTON AVENUE (VARIABLE WIDTH R.O.W.)
PROP. 8" SS
245 LF CONDUIT
275 LF CONDUIT
HISTORICAL STREET LIGHT BASE
STATE HWY 205
GOLIAD STREET
280 LF CONDUIT
120+00
264'
264'-11"
PROP. 16" WATER
BOYDSTON
15+00 MATCH LINE
PROP. 8" WATER
PROP. 8" SS
PC 122+69.37
PROP. 16" WATER
ST. MARYS (VARIABLE WIDTH R.O.W.)
SET BEHIND EXIST. GUARDRAIL.
ADJUST EX. MANHOLE
HISTORIC LIGHT BASE FOR 16' POLE.
SET EAST OF PROPOSED HANDICAP RAMP.
HISTORIC LIGHT BASE FOR 16' POLE.
KEARNEY
245 LF CONDUIT
230 LF CONDUIT
125+00
217'-9"
216'-2"
SET WEST OF EXIST. HANDICAP RAMP. HISTORIC LIGHT BASE FOR 16' POLE.
PROP. 16" WATER
LAKE ARMSTRONG
PC 127+19.39
PT 127+61.41
N-3° 38' 44.18" E
PRC 127+18.10
MATCH LINE
STORRIES (VARIABLE WIDTH R.O.W.)
PROP. 8" WATER
HISTORIC LIGHT BASE FOR 16' POLE. SET WEST OF EXIST. POWER POLE.

STATE OF TEXAS
KATHLEEN R. LAPPEN
94603
LICENSED
PROFESSIONAL ENGINEER
11-09-09

* - USE BREAKAWAY BASE FOR 18' POLES IN MEDIAN. (2 TOTAL)

PROP. 16" WATER
PROP. 8" WATER
PROP. 16" WATER
PROP. 8" WATER
PROP. 16" WATER
PROP. 8" WATER
PC 127+19.39
PT 127+61.41
210 LF CONDUIT
GOLIAD STREET
STATE HWY 205
N-3° 38' 44.18" E
200'-6"
11'-11"
201'-1"
43'-1"
PRC 127+18.10
MATCH LINE
PROP. 8" WATER
PROP. 10" WATER
130+00
PC 130+82.73
255 LF CONDUIT
HISTORICAL STREET LIGHT BASE FOR 18' POLE.
3° 38' 27.64" W
50 LF CONDUIT CONNECT TO POWER SUPPLY FOR STREET LIGHTS
PC 132+84.00
165 LF CONDUIT
N 45° 5[illegible]
135+00
HISTORICAL STREET LIGHT BASE FOR 16' POLE.
HISTORICAL STREET LIGHT BASE FOR 16' POLE.
100 LF CONDUIT
135+00
HISTORICAL STREET LIGHT BASE FOR 18' POLE.
N 7° 3[illegible] 03.30" W
CENTER
MATCH LINE

AREA O

0 20 40 80 120 FEET
GRAPHIC SCALE IN FEET

SEE NOTES, PAGE 1.

STREET LIGHT LEGEND

- STREET LIGHT BASE, SEE DETAIL SLP-A
- HISTORICAL STREET LIGHT BASE, SEE DETAIL SLP-A
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STREET LIGHTING PLANS

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		844A
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

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REGISTERED LANDSCAPE ARCHITECT THOMAS H. PRITCHETT STATE OF TEXAS 2115
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2115 ON 03/22/2006

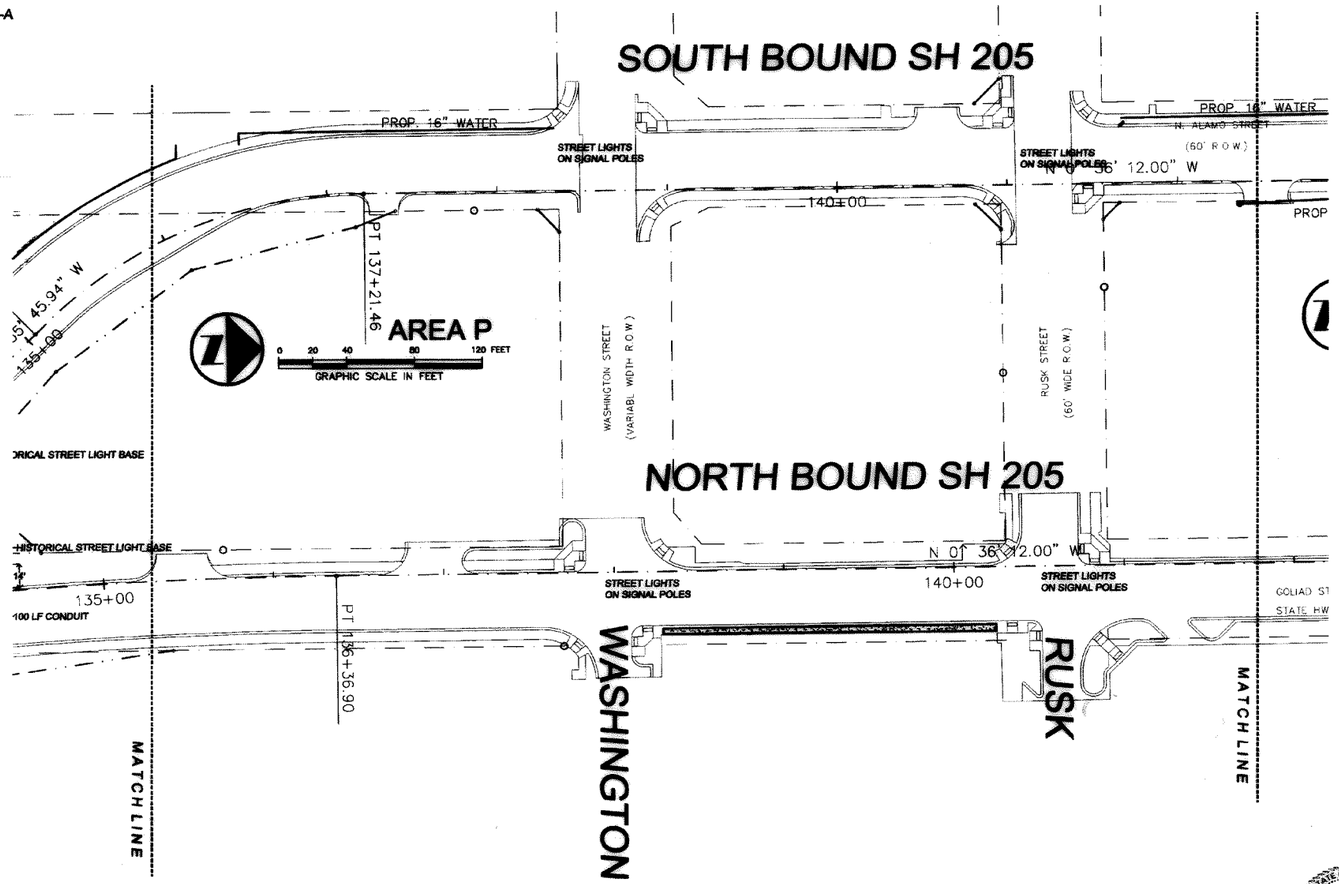
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LANDSCAPE ARCHITECTURAL DESIGN
3017 WESTMINSTER DRIVE
FARMERS BRANCH, TEXAS 75234
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STREET LIGHT LEGEND

- ▪ STREET LIGHT BASE, SEE DETAIL SLP-A
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- ⊠ GROUND BOX TYPE "A"
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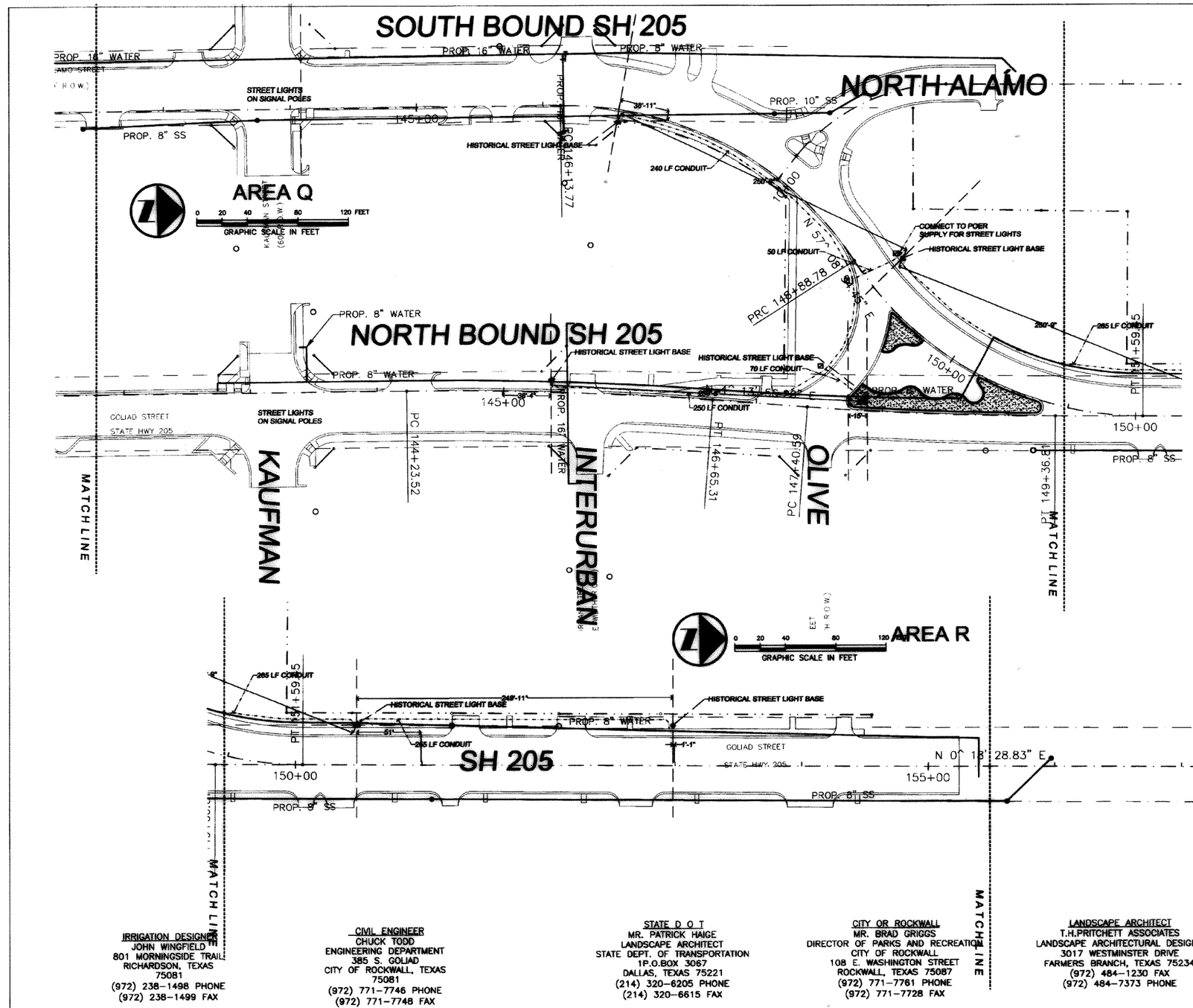
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FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		845
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



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STATE OF TEXAS — CHARLES A. TODD — 55647 — REGISTERED — 4-10-06

STREET LIGHTING PLANS

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FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		846
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$

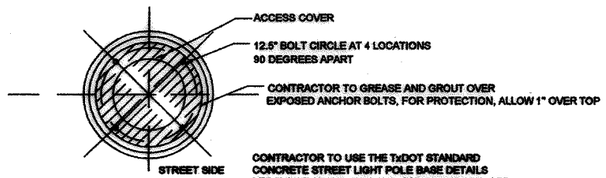
NO LIGHT POLES OR LIGHTS OR WIRING ARE TO BE PROVIDED AS PART OF THESE PLANS FOR COORDINATION INFORMATION ONLY.

ARCHITECTURAL AREA LIGHTING (AAL) PROMENADE SERIES

FIXTURE:
2-FR9S DOUBLE PEDESTRIAN LIGHT STANDARD WITH H3 OR H5 HORIZONTAL LAMP REFLECTOR, 150 WATT TO 175 WATT METAL HALIDE LAMP, MEDIUM BASE SOCKET FOR USE WITH E-17 LAMPS; (VOLTAGE); CHM GLASS CHIMNEY WITH BRASS HOLDER, AND DBZ DARK BRONZE COLOR.

ARM:
#2-TRASU PERIOD ARM, ONE PIECE CAST ALUMINUM, AND DBZ DARK BRONZE COLOR.

POLE, BASE, AND POLE CAP: DB6 4R-125, 4" OD ROUND STRAIGHT ALUMINUM, 15' TALL (SPECIAL) WITH DB6 BASE, 36" HT X 15" BASE DIAMETER, P/N A50596-1, SMALL CAST FINIAL AT TOP, DBZ DARK BRONZE COLOR.

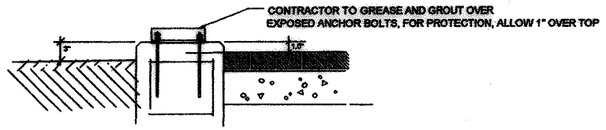


CONTRACTOR TO USE THE TxDOT STANDARD CONCRETE STREET LIGHT POLE BASE DETAILS PER TxDOT STANDARDS AND SPECIFICATIONS. SEE PLAN RID (6)-04 FOR STRUCTURAL DETAILS.

1 ARCHITECTURAL AREA LIGHTING BOLT PATTERN LAYOUT

NOT TO SCALE

CONTRACTOR TO USE THIS TEMPLATE FOR BIDDING PURPOSES. PRIOR TO CONSTRUCTION OF THE CONCRETE BASES. CONTRACTOR TO VERIFY WITH CITY OF ROCKWALL ENGINEERING DEPARTMENT, CHUCK TODD AND MANUFACTURER FOR THE MEASUREMENTS OF THE TEMPLATE REQUIRED FOR THE POLE CONNECTION REQUIRED BY THE SELECTED MANUFACTURER. THE CONTRACTOR TO COORDINATE J ANCHOR LOCATION, DEPTH AND MANUFACTURER SPECIFICATIONS ON SIZE AND LENGTH.



SECTION GROUT CAP

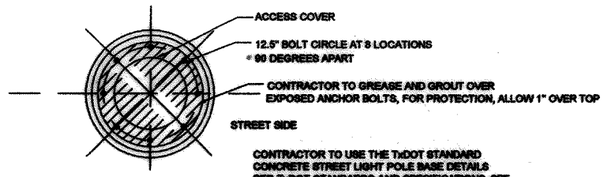
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LIGHT MANUFACTURER TO BE SELECTED:SERIES

FIXTURE:

ARM:

POLE, BASE, AND POLE CAP:DARK BRONZE COLOR.

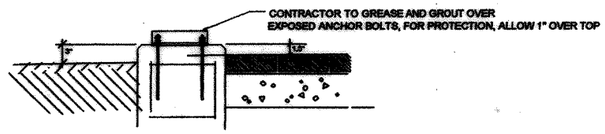


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SECTION GROUT CAP

1st Change Order

STREET LIGHTING DETAILS



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2115 ON 03/24/2006

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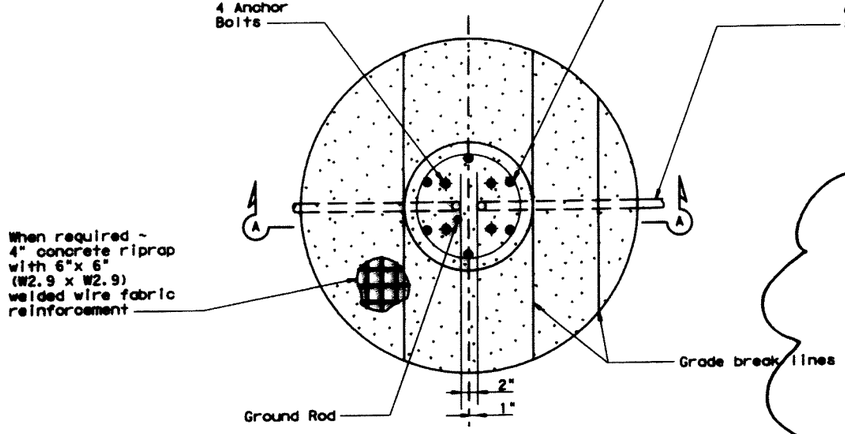
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6	(See Title Sheet)		848
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

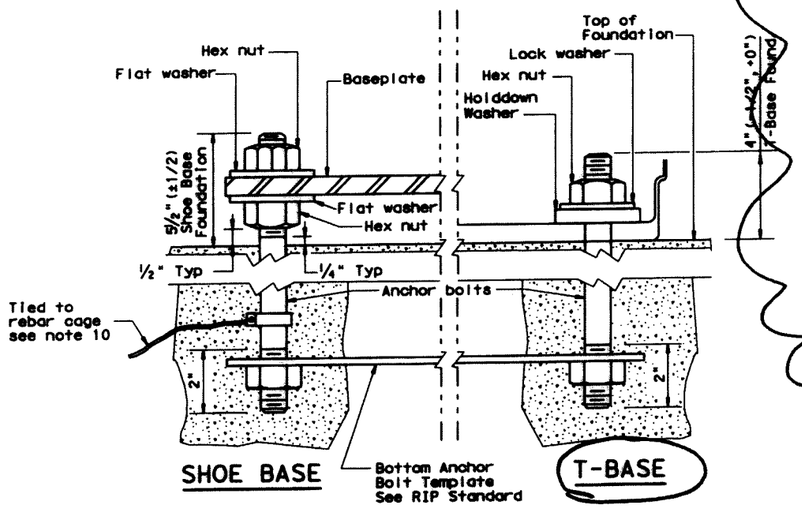
$$$$date$$$$

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DATE:
FILE:



FOUNDATION DETAIL



ANCHOR BOLT DETAIL

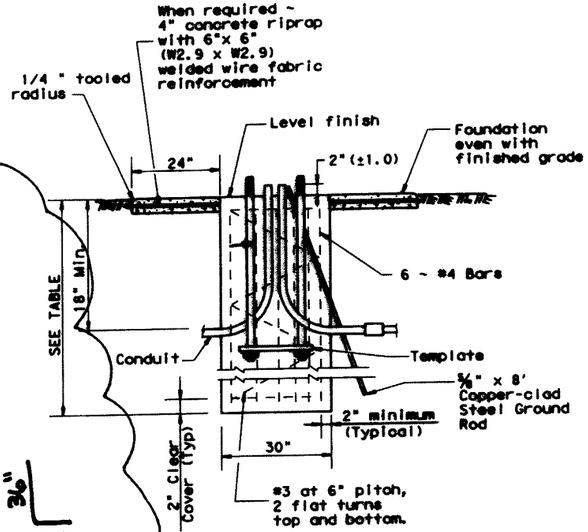
2

FOR BREAKAWAY BASE:

- Change length and have 4" bend
- Use bolt pattern supplied by manufacturer.

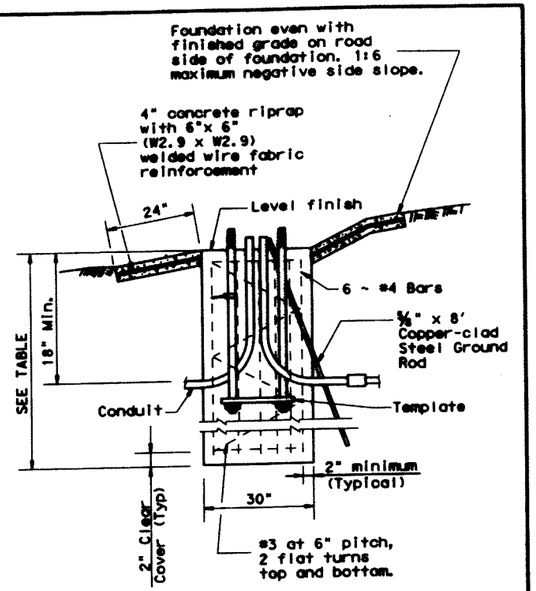
36" / 4"

STATE OF TEXAS
KATHLEEN R. LAPPEN
94603
LICENSED
PROFESSIONAL ENGINEER
11-09-09



SECTION A-A

SHOWING CONSTANT GRADE



SECTION A-A

SHOWING SLOPED GRADE

PAY QUANTITY OF RIPRAP PER FOUNDATION (Install only when shown on the plans)		
Foundation Diameter	RIPRAP DIAMETER	RIPRAP (CONC) (CL B)
30 in.	78 in.	0.35 CY

ANCHOR BOLTS			
POLE MOUNTING HEIGHT	BOLT CIRCLE		ANCHOR BOLT SIZE
	Shoe Base	T-Base	
<40 ft.	13 in.	14 in.	1 in. x 30in.
40-50 ft.	15 in.	17 ¼ in.	1 ¼ in. x 30in.

1 in. x 36 in. x 4 in.

2

RECOMMENDED FOUNDATION LENGTHS (See note 1)			
MOUNTING HEIGHT	TEXAS CONE PENETROMETER N Blows/ft		
	10	15	40
≤20 ft.	6'	6'	6'
>20 ft. to 30 ft.	8'	6'	6'
>30 ft. to 40 ft.	8'	8'	6'
>40 ft. to 50 ft.	10'	8'	6'

BREAKAWAY POLE PLACEMENT (See note 6)	
Roadway Functional Classification	** Pole offset (distance to transformer base, tolerance + 6in. -0in.)
Freeway Mainlanes (roadway with full control of access)	15 ft. (minimum and typical) from lane edge
All curbed, 45 mph or less design speed	2.5 ft. minimum (15 ft. desirable) from curb face
All others	10 ft. minimum*(15 ft. desirable) from lane edge

* or as close to ROW line as is practical

** provide 2/5 of the luminaire mounting height behind the pole for "falling area" to prevent encroachment on the other travel lanes. See design guidelines.

1. "Recommended Foundation Lengths" table is for information purposes only. Foundation lengths shall be as shown on the plans, or as directed by the Engineer. Foundations will be paid for under Item 416, "Drilled Shaft Foundations," unless otherwise shown on the plans.
2. Erect roadway illumination assembly poles plumb and true. Form and level the top 6" of the foundation so the pole will be plumb. Use leveling nuts to plumb shoe base poles. Do not use shims or leveling nuts under transformer bases. Do not grout between basepiate and the foundation.
3. Ensure Class 2A and 2B fit for anchor bolts and nuts. Tap and chase nuts after galvanizing. Anchor bolt body with rolled threads need not be full size.
4. Use appropriate class of concrete as specified in Items 416 and 432.
5. Place riprap around the foundation when called for elsewhere in the plans. Riprap will be paid for under Item 432.
6. Locate breakaway roadway illumination assemblies as shown in the placement table, unless otherwise dimensioned on the plans. Protect non-breakaway illumination assemblies from vehicular impact (i.e. 2 ft. behind guard rail or mounted on traffic barrier), or located outside the clear zone, except that 2.5 ft. from curb face is minimum desired for light poles on city streets, 45 mph or less, see design guidelines for further information.
7. Use 8 hold down washers on transformer base poles as recommended by the manufacturer and supplied with base.
8. Install a minimum of 2 conduits in each foundation. See lighting layout sheets for locations of foundations with more than 2 conduits. Cap unused conduits in foundations on both ends.
9. Conduit location in foundations is critical for breakaway devices. Place conduits 2 in. apart on centerline as shown.
10. Bond anchor bolt to rebar cage with #6 bare stranded copper conductor. Use listed mechanical connectors rated for embedment in concrete.
11. Use rip rap on T-base foundations that are located on a sloped grades.

Texas Department of Transportation
Traffic Operations Division

ROADWAY ILLUMINATION DETAILS

(RDWY ILLUM FOUNDATIONS)

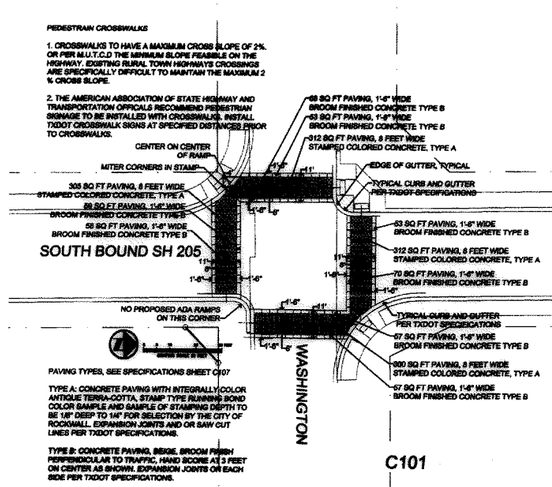
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REVISIONS

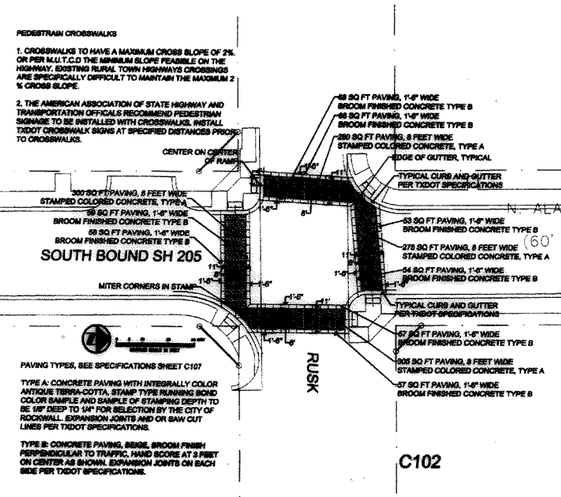
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DIST	COUNTY		SHEET NO.
			72CAP

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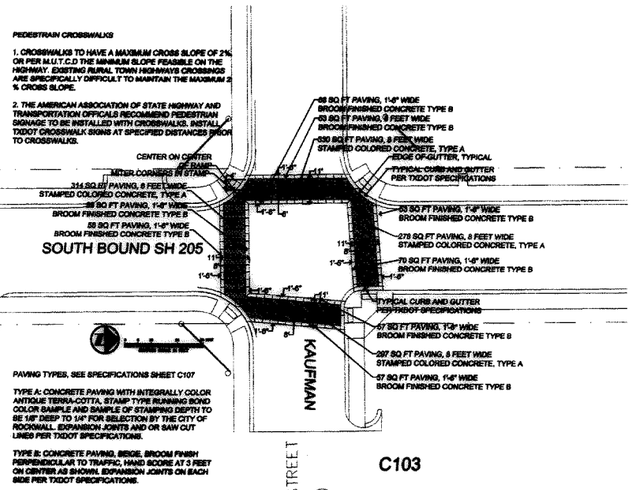
WASHINGTON STREET
(VARIABL WIDTH R.O.W.)



C102

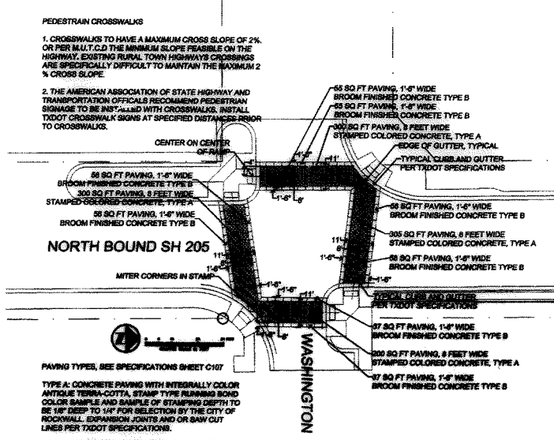
RUSK STREET
(60' WIDE R.O.W.)

N. ALAMO STREET
(60' R.O.W.)

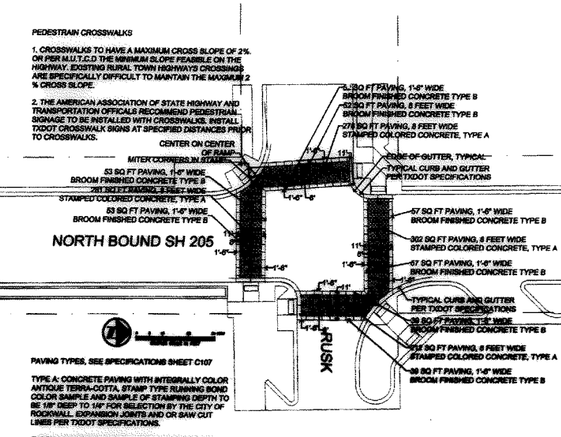


C103

KAUFMAN STREET
(60' R.O.W.)

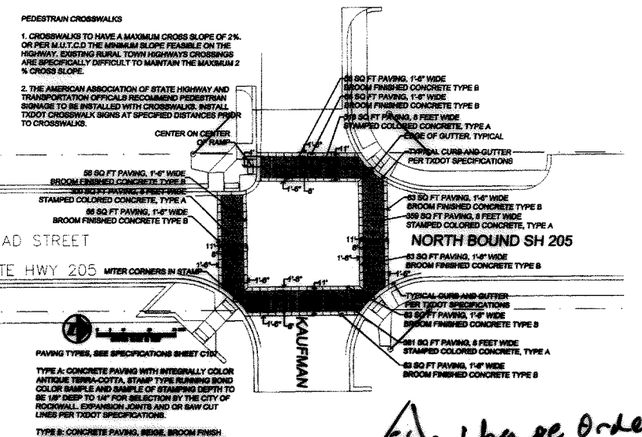


C104



C105

GOLIAD STREET
STATE HWY 205



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C106

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THOMAS H. PRITCHETT
2115
STATE OF TEXAS

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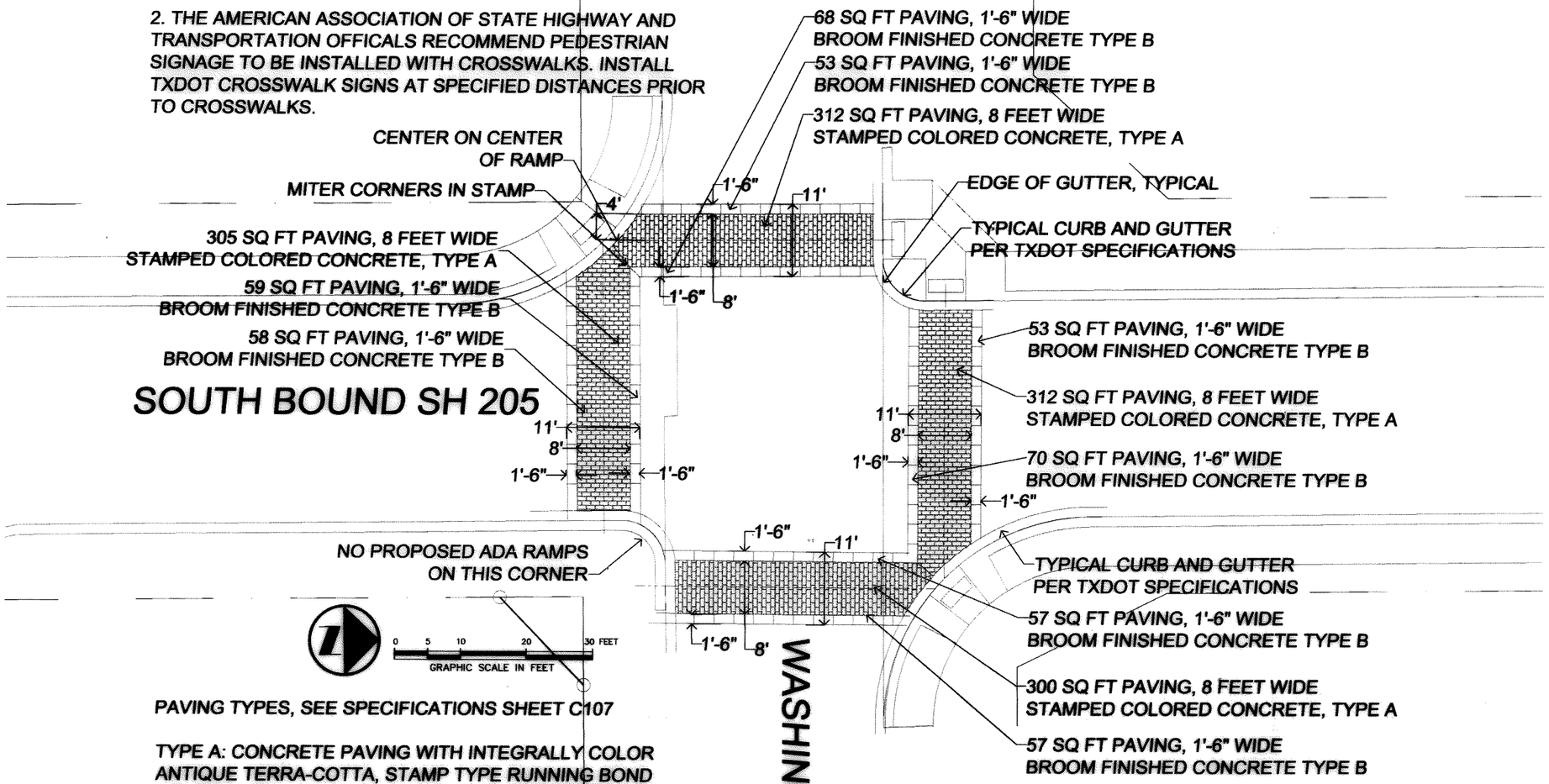
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STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
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0451	01	032	SH 205

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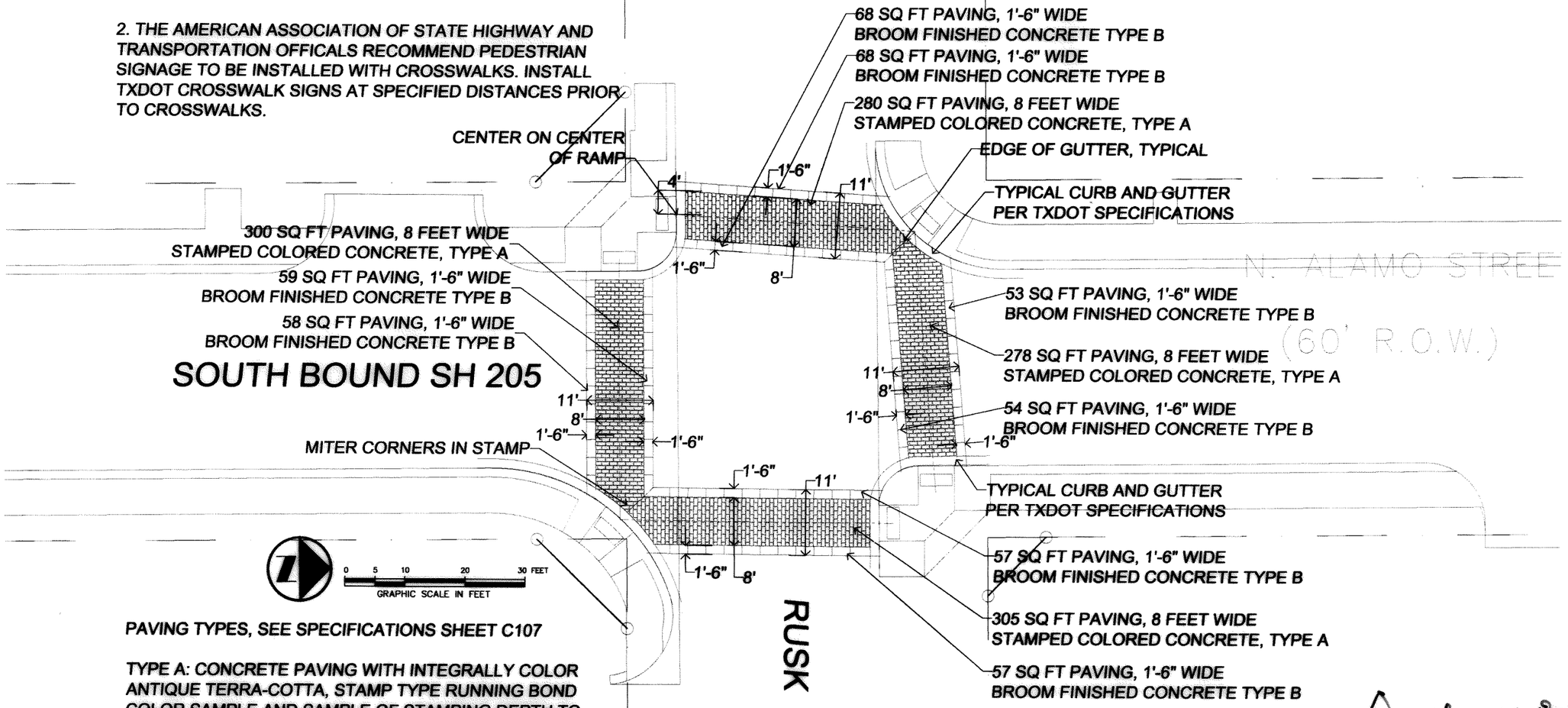
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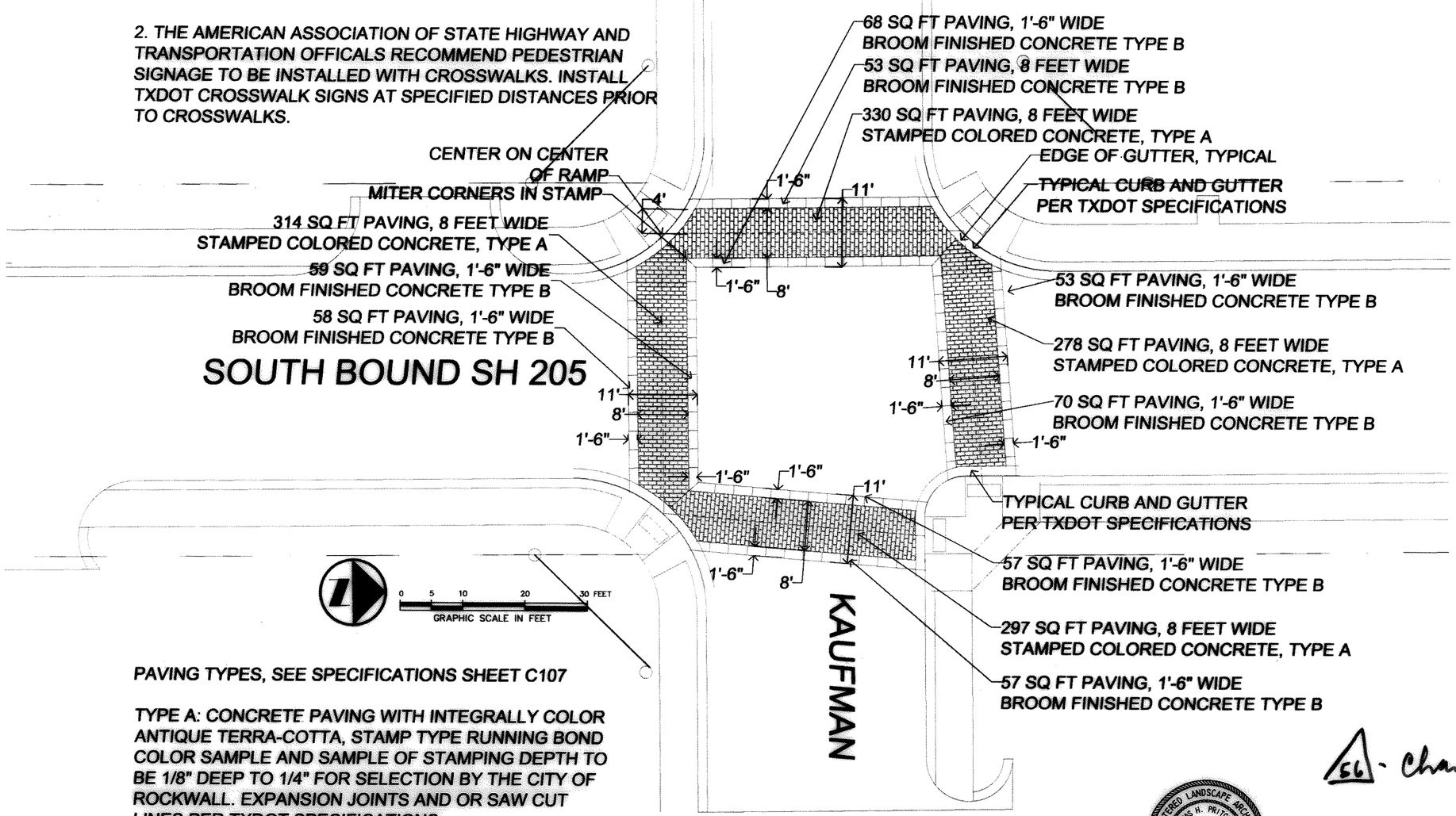
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STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
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0451	01	032	SH 205

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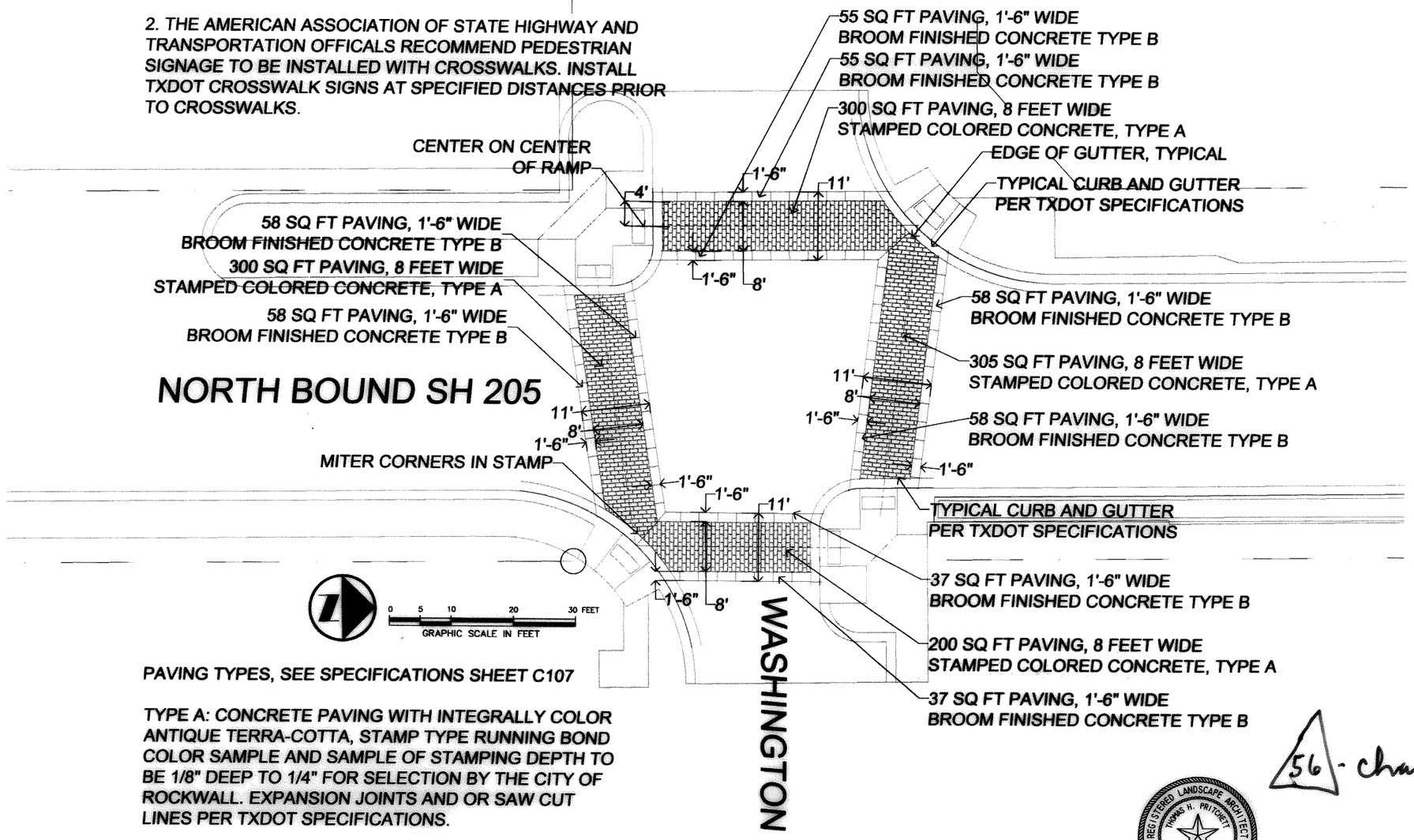
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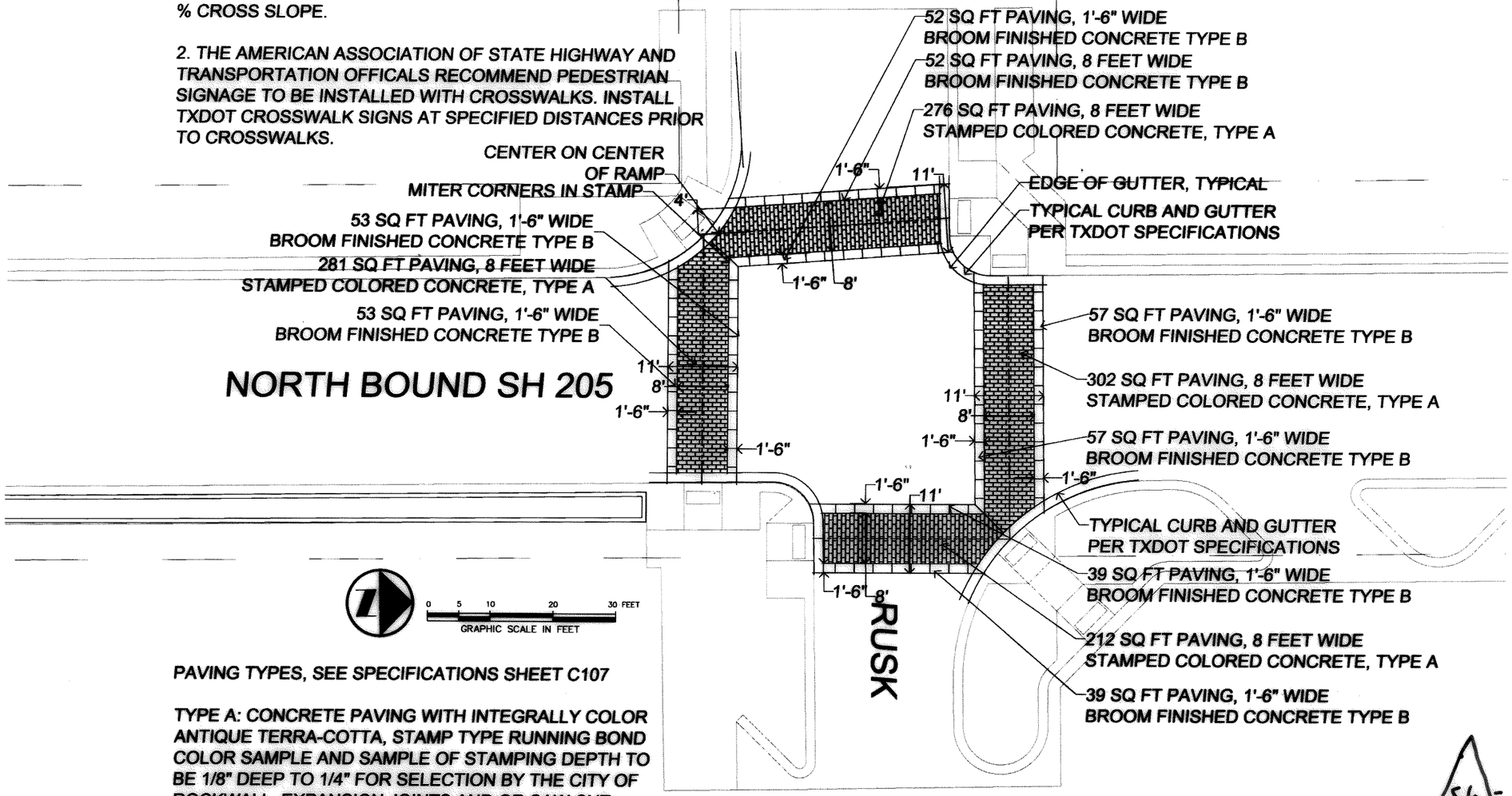
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CROSSWALKS

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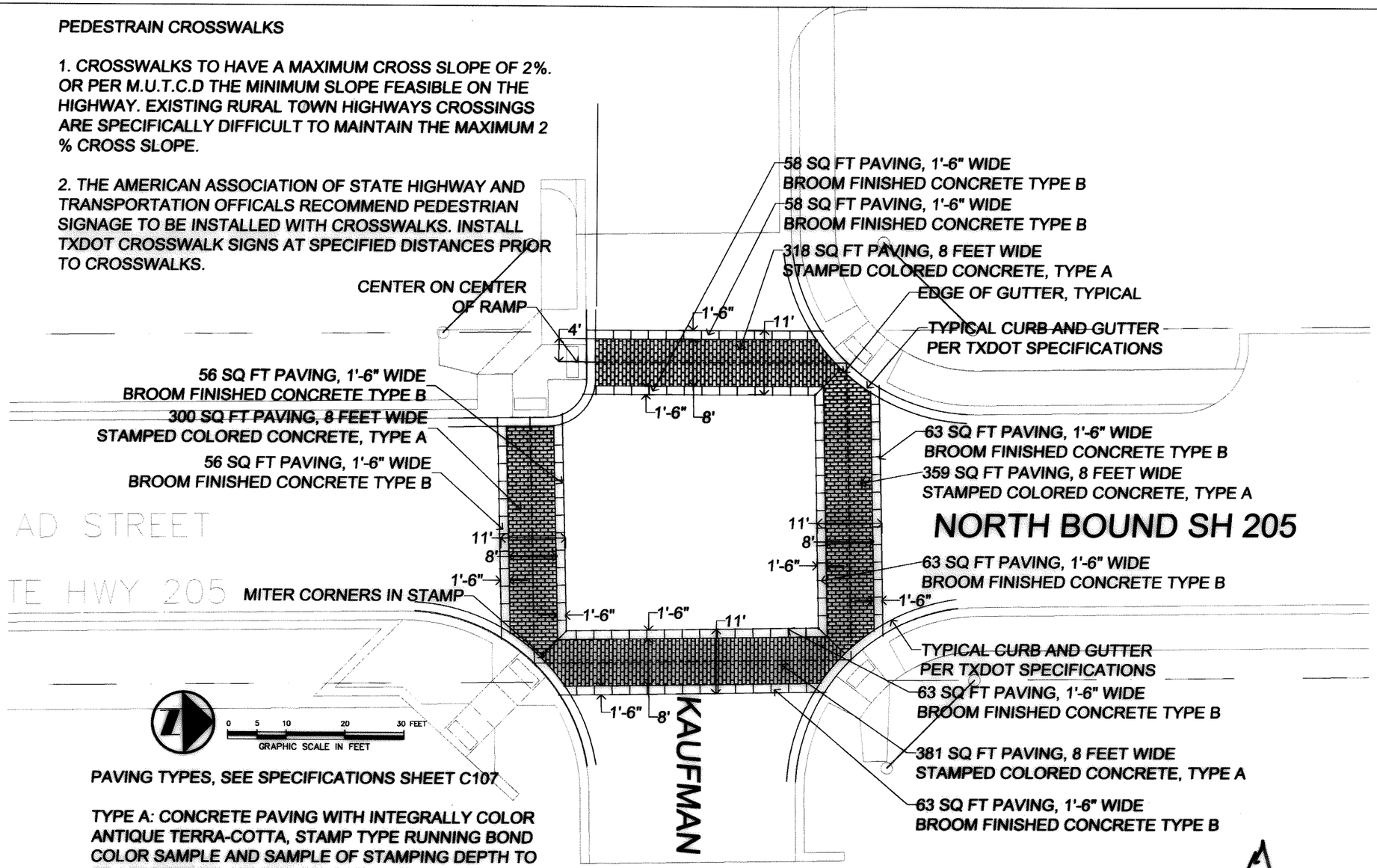
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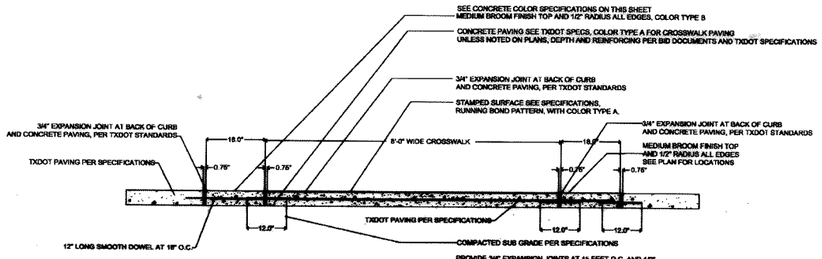
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FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		85 5
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$



1 **CONCRETE CROSSWALK DETAILS**

NOT TO SCALE

PLACEMENT OF CONCRETE NOTES
1. ALL PAVING TO SLOPE TO DRAIN PER CIVIL GRADING AND DRAINAGE PLANS IN CONTRACT DOCUMENTS.
2. NO BIRD BATHS ALLOWED ON FINISHED CROSSWALK PAVING SURFACES.
3. MINIMUM SLOPE FOR STAMPED CONCRETE TO BE 1.5% UNLESS OTHERWISE NOTED.
4. NOTIFY TXDOT PROJECT MANAGER IF CROSSWALKS ARE IN SLOPES OVER 2% CROSS SLOPE. MAXIMUM ALLOWED WITHIN RURAL DOWNTOWN TO BE 4%, UNLESS APPROVED BY TXDOT.
5. STAMPED AND COLORED CONCRETE TO END AT EDGE OF GUTTER.

CONCRETE STAMP SPECIFICATIONS:
ALL STAMPING AND IMPRINTING PRODUCTS AND TOOLS TO BE MANUFACTURED BY LITHOTEX, SCOFIELD SYSTEMS OR APPROVED EQUALS.

ALL FIELDS SHOWN TO BE STAMPED SHALL BE STAMPED WITH LITHITEX, PAVERCRAFTERS PRODUCTS BASE BID NEW BRICK, RUNNING BOND PATTERN, ORDER NUMBER 2010, PATTERN D-2010.01

ALL APPLICATIONS FOR COLORED AND IMPRINTED CONCRETE TO HAVE SCOFIELD CURESEAL-W SEMI GLOSS SEALER APPLIED PER MANUFACTURES SPECIFICATIONS AFTER STAMPING OR MEDIUM BROOM FINISHING ALL EXPOSED SURFACES ON THE PROJECT SITE.

CONCRETE STAMP SAMPLES:

SEE NOTES BELOW FOR SIZE AND APPROVAL PROCESS.
1. ALL STAMPING TO BE 1/8"-1/4" DEEP TO ALLOW FOR ADA ACCESS OVER THE FINISHED SURFACES
2. ALL SCORED RAMPS TO BE SCORED PER TXDOT SPECIFICATIONS AND DETAILS

A **CONCRETE STAMP SPECIFICATIONS**

COLOR SPECIFICATIONS:
ALL COLORING MATERIALS ARE TO BE PER SPECIFIED DATA BELOW OR APPROVED EQUAL
COLOR TYPES NOTED ON PLANS

TYPE A: SHALL BE A LIGHT BEIGE, COLOR SCOFIELD PRODUCTS CHROMIX
5234 SUNNY BEIGE OR #C-12 MESA BEIGE, COLOR SAMPLES TO BE PROVIDE TO ARCHITECT FOR ON SITE SELECTION AND APPROVAL.

TYPE B: SHALL BE A MEDIUM DARK RED, COLOR SCOFIELD PRODUCTS CHROMIX
4821 SHADY RED OR #C-22 CORAL RED, COLOR SAMPLES TO BE PROVIDE TO ARCHITECT FOR ON SITE SELECTION AND APPROVAL.

SAMPLES TO BE POURED INPLACE IN 4 FOOT X 4 FOOT SAMPLES AND STAMPED WITH STAMPED NOTED ABOVE FOR FINAL APPROVAL SELECTION.

CHROMIX Admixtures for Color-Conditioned Concrete

L. M. SCOFIELD COMPANY
6533 BANDINI BLVD. LOS ANGELES, CALIFORNIA 90040
4155 SCOFIELD ROAD, DOUGLASVILLE, GEORGIA 30134
Offices and warehouses nationwide and internationally.
Inquiries: (800) 800-9900
Los Angeles, CA: (323) 720-3000 Fax (323) 720-3030
Atlanta, GA: (770) 920-6000 Fax (770) 920-6060

Applicable Standards and Building Codes

As formulated water-reducing admixtures, all CHROMIX Admixtures conform to the following specifications: ASTM C 494, AASHTO M 194, and CRD C 87. As formulated coloring agents, they conform to ASTM C 979.

All CHROMIX Admixtures meet the requirements of the Uniform Building Code and the Standard Building Code for use in reinforced and prestressed concrete, and are approved by the City of Los Angeles under its classification Admixtures for Cement Reduction. Scofield should be contacted about approvals in specific jurisdictions.

Professional concreting standards and practices, including those published by the American Concrete Institute (ACI), the Portland Cement Association (PCA), and the National Ready Mixed Concrete Association (NRMCA) should be followed.

B **CONCRETE COLOR SPECIFICATIONS**

C107

56 - change Order

CROSSWALKS



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY T. H. PRITCHETT, R.L.A. NO. 2115 ON 01/22/2008

STATE D O T
MR. PATRICK HAIGE
LANDSCAPE ARCHITECT
STATE DEPT. OF TRANSPORTATION
P.O.BOX 3067
DALLAS, TEXAS 75221
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(214) 320-6615 FAX

CITY OR ROCKWALL
MR. BRAD GRIGGS
DIRECTOR OF PARKS AND RECREATION
CITY OF ROCKWALL
108 E. WASHINGTON STREET
ROCKWALL, TEXAS 75087
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(972) 771-7728 FAX

LANDSCAPE ARCHITECT
T.H.PRITCHETT ASSOCIATES
LANDSCAPE ARCHITECTURAL DESIGN
1218 CAMINO LAGO
IRVING, TEXAS 75039
tom@landdesignplan.com
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FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
6	(See Title Sheet)		85A6
STATE	STATE DIST. NO.	COUNTY	
TEXAS	18	ROCKWALL	
CONTROL	SECTION	JOB	HIGHWAY NO.
0451	01	032	SH 205

$$$$date$$$$

CITY OF ROCKWALL
SH 205 WATER AND SEWER AS-BUILTS
0451-01-032
0009-12-203

HWY 205 AUDIT		FITTING REPORT		UPDATE	5/13/2008				BRANCH	
DATE:		UNIT	FITTING		UNIT	MEGA LUG		UNIT	MEGA LUG	TOTAL FITINGS
DESCRIPTION	QUAN	WEIGHT	WEIGHT	QUAN	WEIGHT	WEIGHT	QUAN	WEIGHT	WEIGHT	& ACC. WEIGHT
		LBS	LBS		LBS	LBS		LBS	LBS	LBS
TEE INSTALLATION COMPLETE										
24"X 24"	0	1815	0	0	103	0	0	103	0	0
24"X 16	0	1245	0	0	103	0	0	54	0	0
24"X 12	0	1185	0	0	103	0	0	27.5	0	0
24"X 10	0	0	0	0	103	0	0	23	0	0
24"X 8	0	1160	0	0	103	0	0	17.5	0	0
24"X 6	0	1145	0	0	103	0	0	14.5	0	0
24"X 4	0	0	0	0	103	0	0	0	0	0
	0		**0**	**0**		**0**	**0**		**0**	**0**
16"X 16" TEE MJXMJ	4	740	2,960	8	52.8	422.4	4	52.8	211.2	3,594
16"X 12" TEE MJXMJ	0	715	0	0	52.8	0	0	31.4	0	0
16"X 10" TEE MJXMJ	1	645	645	2	52.8	105.6	1	26	26	777
16"X 8" TEE MJXMJ	12	625	7,500	24	52.8	1267.2	12	16.3	195.6	8,963
16"X 6" TEE MJXMJ	7	615	4,305	14	52.8	739.2	7	12.1	84.7	5,129
16"X 4" TEE MJXMJ	0	600	0	0	52.8	0	0	8.8	0	0
	24		**15,410**	**48**		**2,534**	**24**		**517.5**	**18,462**
12"X 12" TEE MJXMJ	1	410	410	3	31.4	94.2	1	31.4	31.4	536
12"X 10" TEE MJXMJ	0	390	0	0	31.4	0	0	26	0	0
12"X 8" TEE MJXMJ	0	340	0	0	31.4	0	0	16.3	0	0
12"X 6" TEE MJXMJ	0	325	0	0	31.4	0	0	12.1	0	0
12"X 4" TEE MJXMJ	0	315	0	0	31.4	0	0	8.8	0	0
	1		**410**	**3**		**94**	**1**		**31.4**	**536**
10"X10" TEE MJXMJ	0	310	0	0	26	0	0	26	0	0
10"X 8" TEE MJXMJ	0	260	0	0	26	0	0	16.3	0	0
10"X 6" TEE MJXMJ	0	250	0	0	26	0	0	12.1	0	0
10"X 4" TEE MJXMJ	0	235	0	0	26	0	0	8.8	0	0
	0		**0**	**0**		**0**	**0**		**0**	**0**
8"X 8" TEE MJXMJ	8	185	1,480	16	16.3	260.8	8	16.3	130.4	1,871
8"X 6" TEE MJXMJ	16	175	2,800	32	16.3	521.6	16	12.1	193.6	3,515
8"X 4" TEE MJXMJ	0	165	0	0	16.3	0	0	8.8	0	0
	24		**4,280**	**48**		**782.4**	**24**		**324**	**5,386**
6"X 6" TEE MJXMJ	0	125	0	0	12.1	0	0	12.1	0	0
6"X 4" TEE MJXMJ	0	110	0	0	12.1	0	0	8.8	0	0
	0		**0**	**0**		**0**	**0**		**0**	**0**
4"X 4" TEE MJXMJ	0	80	0	0	8.8	0	0	8.8	0	0
TOTAL WEIGHT OF TEES	**49**		**20,100**	**99**		**3,411**	**49**		**872.9**	**24,384**
			LBS			**LBS**			**LBS**	**LBS**
FIRE HYDRANT FITTINGS										
6" SWVL TEE	0	71	0	0	14.5	0	0	14.5	0	0
12"X 6" SWVL TEE	6	133	798	6	14.5	87	6	14.5	87	972
6"X 13" SWVL FH ADPT	0	212	0	0	14.5	0	0	14.5	0	0
6" SWVL 90 BEND	0	49	0	0	14.5	0	0	14.5	0	0
TOTAL FIRE HYD FITTING	**6**		**798**	**6**		**87**	**6**		**87**	**972**
			LBS			**LBS**			**LBS**	**LBS**

TAPPING SLEEVE	UNIT	SLEEVE WEIGHT	TOTAL SLE WT	UNITS	BRANCH UNIT MEGA LUG WT	TOTAL MEGA LUG WT	
16"X 16" TAPPING SLEEVE	0	650	0	0	52	0	0
16"X 12" TAPPING SLEEVE	0	590	0	0	31	0	0
16"X 10" TAPPING SLEEVE	0	570	0	0	26	0	0
16"X 8" TAPPING SLEEVE	0	550	0	0	16.3	0	0
16"X 6" TAPPING SLEEVE	0	540	0	0	12.1	0	0
16"X 4" TAPPING SLEEVE	0	600	0	0	8.8	0	0
12"X 12" TAPPING SLEEVE	0	292	0	0	31.4	0	0
12"X 10" TAPPING SLEEVE	0	287	0	0	26	0	0
12"X 8" TAPPING SLEEVE	1	246	246	1	16.3	16.3	262.3
12"X 6" TAPPING SLEEVE	0	240	0	0	12.1	0	0
12"X 4" TAPPING SLEEVE	0	239	0	0	8.8	0	0
10"X 10" TAPPING SLEEVE	0	222	0	0	26	0	0
10"X 8" TAPPING SLEEVE	0	215	0	0	16.3	0	0
10"X 6" TAPPING SLEEVE	0	201	0	0	12.1	0	0
10"X 4" TAPPING SLEEVE	0	194	0	0	8.8	0	0
8"X 8" TAPPING SLEEVE	1	154	154	1	16.3	16.3	170.3
8"X 6" TAPPING SLEEVE	0	147	0	0	12.1	0	0
8"X 4" TAPPING SLEEVE	0	142	0	0	8.8	0	0
6"X 6" TAPPING SLEEVE	0	113	0	0	12.1	0	0
6"X 4" TAPPING SLEEVE	0	111	0	0	8.8	0	0
4"X 4" TAPPING SLEEVE	0	100	0	0	8.8	0	0
TOTAL SLEEVE WEIGHT	**2**		**400**	**2**		**32.6**	**432.6**
			LBS			**LBS**	**LBS**
BENDS							
24" 45 BEND	0	865	0	0	103	0.0	0.0
16" 45 BEND	24	380	9120	48	52.8	2,534.4	11,654.4
12" 45 BEND	2	215	430	4	27.5	110.0	540.0
10" 45 BEND	0	153	0	0	23	0.0	0.0
8" 45 BEND	45	110	4950	90	17.5	1,575.0	6,525.0
6" 45 BEND	4	75	300	8	14.5	116.0	416.0
4" 45 BEND	0	50	0	0	8.5	0.0	0.0
TOTAL 45 DEGREE WEIGHT	**75**		**14800**	**150**		**4,335.4**	**19,135.4**
			LBS			**LBS**	**LBS**
24" 221/2 BEND	0	880	0	0	103	0.0	0.0
16" 221/2 BEND	3	385	1155	6	54	324.0	1,479.0
12" 221/2 BEND	0	220	0	0	27.5	0.0	0.0
10" 221/2 BEND	0	160	0	0	23	0.0	0.0
8" 221/2 BEND	5	110	550	10	17.5	175.0	725.0
6" 221/2 BEND	0	75	0	0	14.5	0.0	0.0
4" 221/2 BEND	0	50	0	0	8.5	0.0	0.0
TOTAL 221/2 DEGREE WEIG	**8**		**1705**	**16**		**499.0**	**2,204.0**
			LBS			**LBS**	**LBS**
24" 111/4 BENDS	0	885	0	0	103	0.0	0.0
16" 111/4 BEND	1	385	385	2	54	108.0	493.0
12" 111/4 BEND	0	220	0	0	27.5	0.0	0.0
10" 111/4 BEND	1	160	160	2	23	46.0	206.0
8" 111/4 BEND	0	110	0	0	17.5	0.0	0.0
6" 111/4 BEND	0	75	0	0	14.5	0.0	0.0
4" 111/4 BEND	0	50	0	0	8.5	0.0	0.0

TOTAL 111/4 DEGREE WEIG	**2**		**545**	**4**		**154.0**				**699.0**
			LBS			**LBS**				**LBS**
24" 90 BEND	0	1215	0	0	103	0.0				0.0
16" 90 DEGREE BEND	3	490	1470	6	54	324.0				1,794.0
12" 90 DEGREE BEND	0	255	0	0	27.5	0.0				0.0
10" 90 DEGREE BEND	0	190	0	0	23	0.0				0.0
8" 90 DEGREE BEND	21	125	2625	42	17.5	735.0				3,360.0
6" 90 DEGREE BEND	35	85	2975	70	14.5	1,015.0				3,990.0
4" 90 DEGREE BEND	0	55	0	0	8.5	0.0				0.0
TOTAL 90 DEGREE WEIGHT	**59**		**7070**	**118**		**2,074.0**				**9,144.0**
			LBS			**LBS**				**LBS**
24" SLEEVE	0	360	0	0	103	0.0				0.0
16" SLEEVE	11	200	2200	22	54	1,188.0				3,388.0
12" SLEEVE	1	110	110	2	27.5	55.0				165.0
10" SLEEVE	1	85	85	2	23	46.0				131.0
8" SLEEVE	17	65	1105	34	17.5	595.0				1,700.0
6" SLEEVE	4	45	180	8	14.5	116.0				296.0
4" SLEEVE	0	35	0	0	8.5	0.0				0.0
TOTAL SLEEVE WEIGHT	**34**		**3680**	**68**		**2,000.0**				**5,680.0**
			LBS			**LBS**				**LBS**
24" CAP	0	370	0	0	103	0.0				0.0
16" CAP	4	175	700	8	54	432.0				1,132.0
12" CAP	2	80	160	4	27.5	110.0				270.0
10" CAP	0	60	0	0	23	0.0				0.0
8" CAP	0	45	0	0	17.5	0.0				0.0
6" CAP	0	30	0	0	14.5	0.0				0.0
4" CAP	0	14	0	0	8.5	0.0				0.0
TOTAL CAP WEIGHT	**6**		**860**	**12**		**542.0**				**1,402.0**
			LBS			**LBS**				**LBS**
24" PLUG	0	315	0	0	103	0.0				0.0
16" PLUG	11	150	1650	11	54	594.0				2,244.0
12" PLUG	2	85	170	2	27.5	55.0				225.0
10" PLUG	1	65	65	1	23	23.0				88.0
8" PLUG	25	45	1125	25	17.5	437.5				1,562.5
6" PLUG	2	25	50	2	14.5	29.0				79.0
4" PLUG	0	15	0	0	8.5	0.0				0.0
3" PLUG	0	10	0	0	5	0.0				0.0
2" PLUG	0	5	0	0	2.5	0.0				0.0
TOTAL PLUG WEIGHT	**41**		**3060**	**41**		**1,138.5**				**4,198.5**
			LBS			**LBS**				**LBS**
24X16 REDUCER	0	705	0	0	103	0.0				0.0
24X12 REDUCER	0	610	0	0	54	0.0				0.0
16"X 12" REDUCER	0	325	0	0	54	0.0				0.0
16"X 10" REDUCER	0	300	0	0	54	0.0				0.0
16"X 8" REDUCER	2	270	540	4	54	216.0				756.0
16"X 6" REDUCER	0	250	0	0	54	0.0				0.0
12"X 10" REDUCER	0	190	0	0	27.5	0.0				0.0
12"X 8" REDUCER	6	180	1080	12	27.5	330.0				1,410.0
12"X 6" REDUCER	0	150	0	0	27.5	0.0				0.0
10"X 8" REDUCER	0	135	0	0	23	0.0				0.0
10"X 6" REDUCER	0	115	0	0	23	0.0				0.0
8"X 6" REDUCER	6	95	570	12	17.5	210.0				780.0
8"X 4" REDUCER	0	78	0	0	17.5	0.0				0.0
6"X 4" REDUCER	0	60	0	0	14.5	0.0				0.0
TOTAL REDUCER WEIGHT	**14**		**2190**	**28**		**756.0**				**2,946.0**
			LBS			**LBS**				**LBS**
16"X 16" CROSS	0	895	0	0	52.8	0.0				0.0
16"X 12" CROSS	0	745	0	0	31.4	0.0				0.0
16"X 10" CROSS	0	745	0	0	26	0.0				0.0
16"X 8" CROSS	2	675	1350	8	16.3	130.4				1,480.4
16"X 6" CROSS	0	650	0	0	12.1	0.0				0.0
12"X 12" CROSS	0	495	0	0	31.4	0.0				0.0
12"X 10" CROSS	0	495	0	0	26	0.0				0.0
12"X 8" CROSS	0	385	0	0	16.3	0.0				0.0
12"X 6" CROSS	0	360	0	0	12.1	0.0				0.0
10"X 10" CROSS	0	380	0	0	26	0.0				0.0
10"X 8" CROSS	0	310	0	0	16.3	0.0				0.0
10"X 6" CROSS	0	285	0	0	12.1	0.0				0.0
8"X 8" CROSS	1	255	255	4	16.3	65.2				320.2
8"X 6" CROSS	0	205	0	0	16.3	0.0				0.0
6"X 6" CROSS	0	160	0	0	12.1	0.0				0.0
6"X 4" CROSS	0	155	0	0	8.8	0.0				0.0
TOTAL CROSS WEIGHT	**3**		**1605**	**12**		**195.6**				**1,800.6**
			LBS			**LBS**				**LBS**
TOTAL FITTING WEIGHT	**299**		**56,813**			**15,225.1**		**TONAGE**	**36.499**	**72,998.0**

construction cut information for the SH 205 project						
7/5/2007						
Description	**Station location**	**LT OR RT**	**flow line**	**existing grade**	**cut**	
water improvements						
8" water	9+43.66	lt	543.2	550.6	7.4	
8" water	10+00	lt	541.7	549.4	7.7	
8" water	15+00	lt	527.1	533.0	5.9	
8" water	19+91.85	lt	?	523.0		Match Exist
8" water	25+45.80	lt	?	517.5		Match Exist
8" water	28+50	lt	521.2	522.3	1.1	
8" water	30+45	lt	521.2	525.1	3.9	
8" water	43+00	lt	550.0	558.4	8.4	
8" water	43+00	rt	548.2	553.6	5.4	
8" water	53+96.77	lt	?	560.7		Match Exist
8" water	55+17.47	lt	548.3	560.2	11.9	
8" water	55+17.47	rt	550.0	555.8	5.8	
8" water	57+73.00	rt	554.4	560.4	6.0	
8" water	62+00	rt	563.2	570.8	7.6	
8" water	64+52.52	rt	569.2	576.2	7.0	
12" water	64+59.99	lt	571.5	578.0	6.5	
8" water	65+59.25	rt	569.3	578.9	9.6	
16" water	66+03	rt	573.3	578.9	5.6	
16" water	66+03	lt	573.3	580.0	6.7	
8" water	68+11.27	rt	572.7	581.1	8.4	
8" water	75+15.01	rt	557.2	568.7	11.5	
8" water	75+12.51	lt	558.0	569.0	11.0	
8" water	77+98	rt	549.2	558.3	9.1	
8" water	106+94.09	lt	575.0	583.8	8.8	
8" water	107+01.09	rt	574.5	581.3	6.8	
8" water	107+01.09	lt	575.0	583.8	8.8	
8" water	108+45	lt	577.3	586.1	8.8	
8" water	111+44.23	lt	576.3	587.4	11.1	
8" water	111+44.23	rt	576.3	584.3	8.0	
8" water	111+82.40	rt	576.3	584.1	7.8	
8" water	114+00	rt	579.0	585.0	6.0	
8" water	115+89.94	rt	577.9	583.8	5.9	
16" water	115+89.94	rt	570.9	583.3	12.4	
16" water	115+89.94	lt	572.1	583.7	11.6	
16" water	116+75.87	rt	570.9	583.2	12.3	
sanitary sewer						
10" sewer	55+49.11	rt	551.8	557.9	6.1	
10" sewer	56+01.22	rt	551.9	558.6	6.7	
10" sewer	57+67.00	rt	552.4	560.2	7.8	
10" sewer	57+67.00	lt	552.6	561.6	9.0	
8" sewer	56+25	lt	550.1	560.8	10.7	
8" sewer	60+52.96	lt	559.8	569.5	9.7	
8" sewer	63+54.97	lt	567.1	576.0	8.9	
8" sewer	97+73.01	rt	?	?		
8" sewer	97+39.04	rt	552.0	558.5	6.5	
8" sewer	97+17.76	lt	552.5	562.6	10.1	

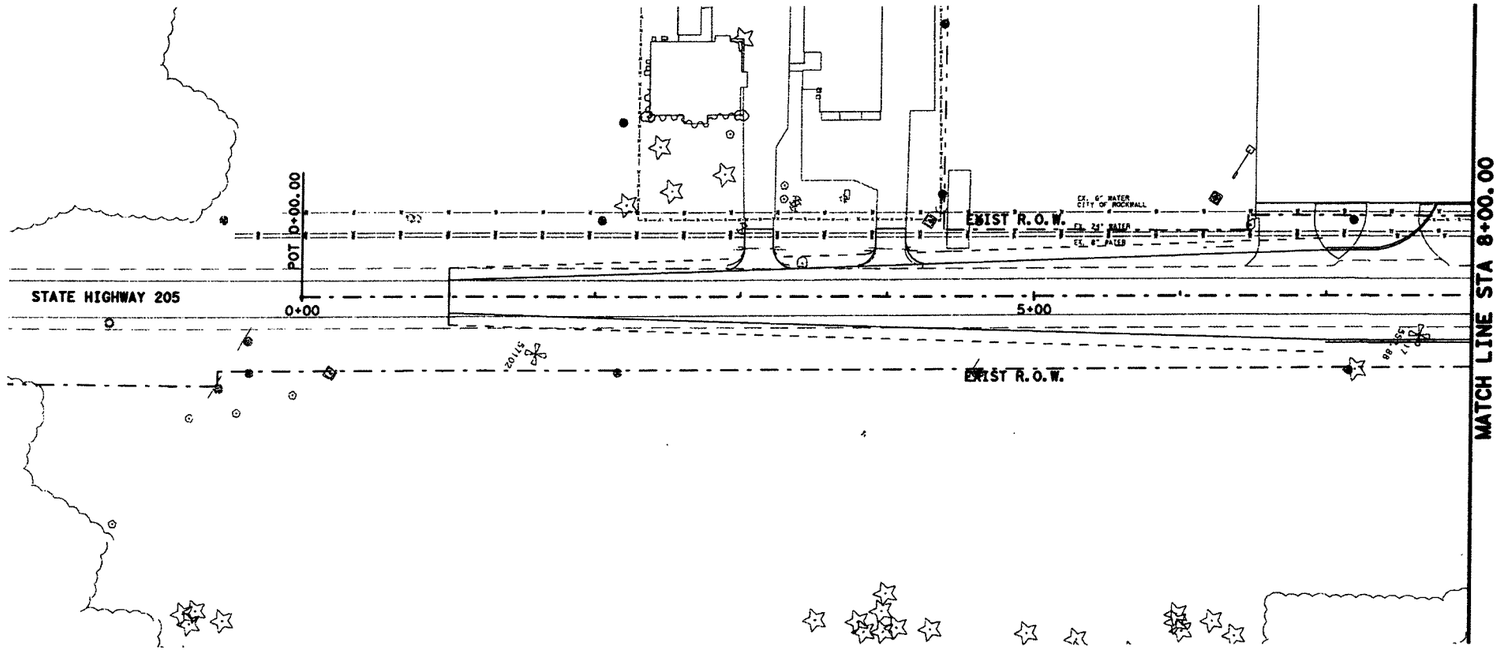
8" sewer	97+09.54	lt	559.7	568.9	9.2	
8" sewer	107+36.93	rt	573.1	581.2	8.1	
8" sewer	107+38.01	lt	575.3	584.7	9.4	
8" sewer	116+20.77	rt	573.8	579.2	5.4	
8" sewer	116+08.93	rt	574.3	582.4	8.1	
8" sewer	116+18.92	lt	578.7	587.2	8.5	
8" sewer	116+18.58	lt	578.7	587.2	8.5	
8" sewer	115+75	lt	575.6	587.3	11.7	
8" sewer	116+60	lt	575.5	586.8	11.3	
8" sewer	119+50	lt	576.9	589.9	13.0	

Hwy 205 Water Main extra depth by Station Location

Location by station group

from Station	to Station	cut depth from grade	length of cut area
9+43.66	10+00	7.4'	57'
10+00	11+00	7.7'	100'
11+00	12+00	7.7'	100'
12+00	13+00	7.7'	100'
13+00	14+00	7.7'	100'
15+00	16+00	7.7'	100'
16+00	17+00	5.9'	100'
17+00	18+00	5.9'	100'
18+00	19+91	5.9'	100'
25+45.80	26+00	4.5'	54.2'
27+00	28+00	1.1'	100'
28+00	29+00	7.5'	100'
30+00	31+00	8.5'	100'
43+12.55	43.15.55'	9.5'	20' & 80' (bore)
53+96.77	54+00	7.5'	3.23'
54+00	55+17	7.5'	117'
55+10	56+00	8.5'	90'
57+00	58+00	8.5'	100'
59+00	60+00	8.5'	100'
61+00	62+00	7.6'	100'
62+00	63+00	7.6'	100'
64+00	65+00	8.5'	100'
65+00	66+00	6.5'	100'
67+00	68+00	8.5'	100'
68+00	69+00	8.5'	100'
69+00	70+00	8.5'	100'
70+00	71+00	9'	100'
71+00	72+00	9'	100'
72+00	73+00	8.4'	100'
73+00	74+00	8.5'	100'
74+00	75+00	8.5'	100'
75+00	76+00	8.5'	100'
76+00	77+00	8.5'	100'
77+00	78+00	8.5'	100'
78+00	78+50	8.5'	50'
103+83	104+19.22	7.5'	36.22'
105+00	106+94.09	8.5'	194.09'
106+94.09	107+00	8.5'	5.91'
107+00	108+00	8.5'	100'
108+00	109+00	8.5'	100'
109+00	110+00	8.5'	100'
110+00	111+00	8.5'	100'
111+00	112+00	8.5'	100'
112+00	113+00	9'	100'
113+00	114+00	9'	100'
114+00	115+00	8.5'	100'
115+00	116+00	8.5'	100'
116+00	117+00	8.5'	100'
118+00	119+00	8.5'	100'

119+00	120+00	8.5'	100'	
120+00	121+00	8'	100'	
121+00	122+00	8'	100'	
122+00	123+00	8'	100'	
123+00	124+00	7'	100'	
124+00	125+00	7.5'	100'	
125+00	126+00	7.5'	100'	
126+00	127+00	7.5'	100'	
127+00	128+00	7.5'	100'	
128+00	129+00	7.5'	100'	
129+00	130+00	8.5'	100'	
130+00	131+00	8.83'	100'	
131+00	132+00	14.14'	100'	
132+00	133+00	14.5'	100'	
133+00	134+00	15'	100'	
134+00	135+00	16.85'	100'	
135+00	136+00	9.35'	100'	Goliad
136+00	137+00	8.5'	100'	Alamo
137+00	138+00	8.8'	100'	
141+67.50	142+00	8.5'	32.5'	
142+00	143+00	8.5'	100'	
143+00	144+00	8'	100'	
144+00	145+00	8'	100'	
145+00	146+15	8'	100'	
146+15	147+00	7.5'	100'	
148+00	148+55.25	7.5'	55.25'	
145+50.26	146+00	7.5'	49.74'	
146+00	147+00	7.5'	100'	Goliad
147+00	148+00	7.5'	100'	
148+00	149+00	7.5'	100'	
149+00	150+00	7.5'	100'	
150+00	151+00	7.5'	100'	
151+00	152+00	7.6'	100'	
152+00	153+00	7.6'	100'	
153+00	154+00	7.6'	100'	
154+00	155+00	7.5'	100'	
155+00	156+00	7.5'	100'	end of line
Branch lines				
30+80 lt	31+00 lt	8.5'	20'	revised tie in
43+12.55 lt	43+32.55	9.5'	20'	tie in to existing line
43+15 rt	43+35 rt	7'	20'	tie in to exsitng line
43+12			100'	boreunder 205
53+96 lt	55+11.47	8.5'	155.5'	tie in to existing line
55+17			100'	bore under 205
55+17 rt	53+07.40	9'	210'	lakeside chev add on
64+52.52lt	64+82.52	11'	30'	southwest corner of yellow jacket



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

555 550 545 540 535 530 525

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

WATER LINE

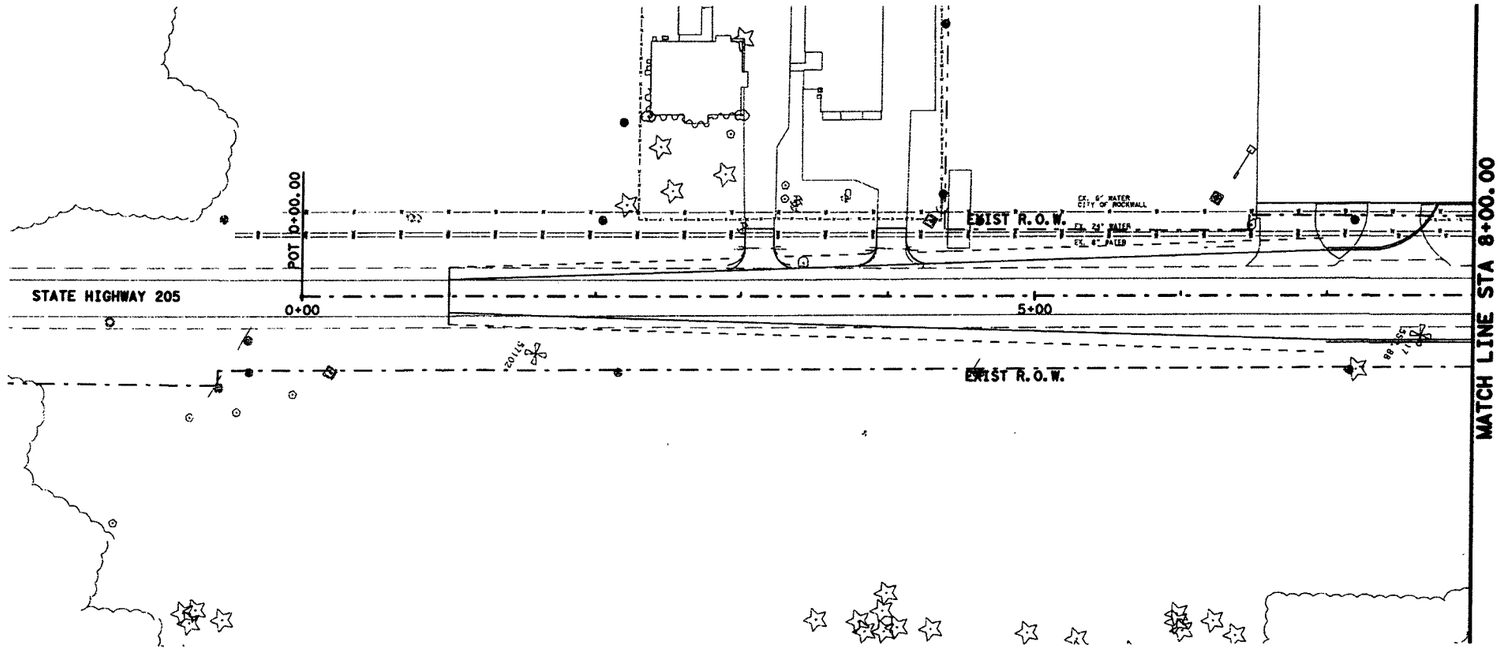
PLAN & PROFILE
STA 0+00 TO 8+00

SHEET 1 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	510
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/22/2006 Plotted 22-MAR-2006 15:18





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

555 550 545 540 535 530 525

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00

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3-22-06

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SH 205

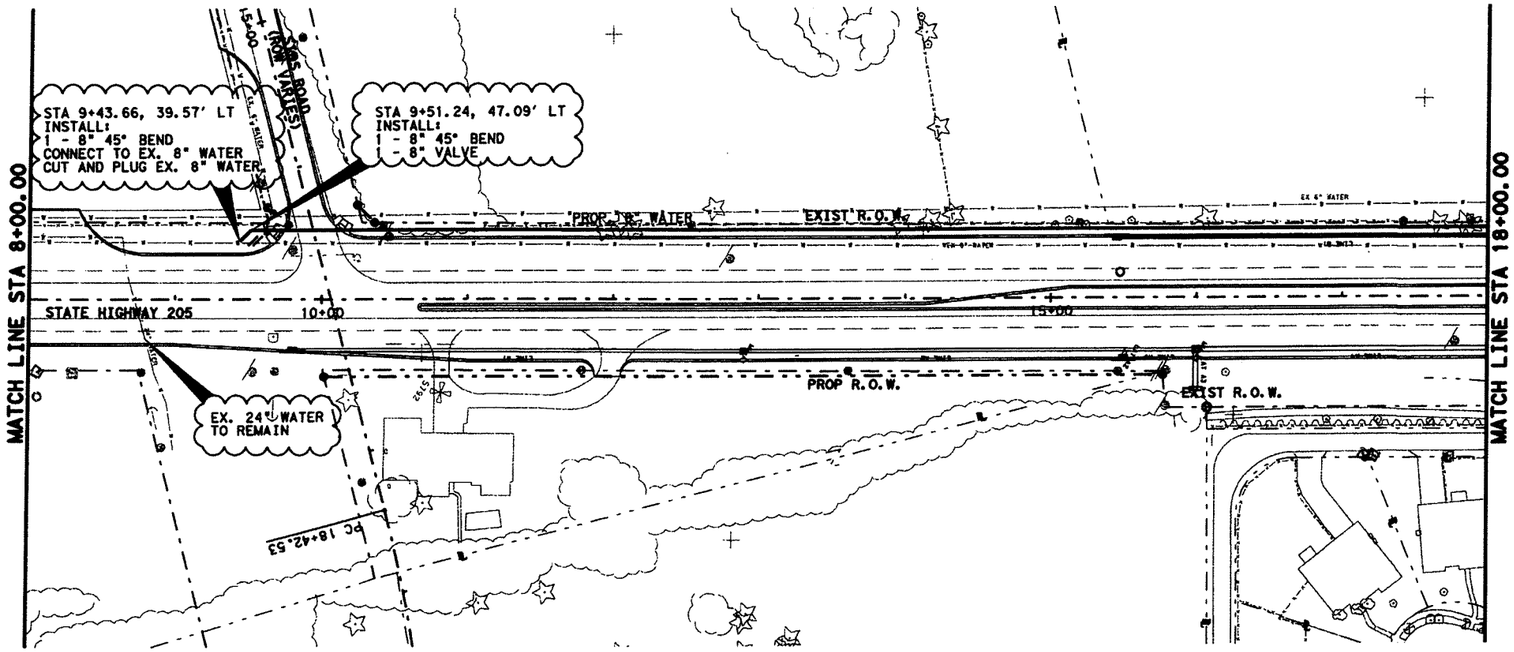
WATER LINE

PLAN & PROFILE
STA 0+00 TO 8+00

SHEET 1 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	510
CONT.	SECT.	JOB	
0451	01	032, ETC	





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

555
550
545
540
535
530
525

NO PROFILE PROVIDED FOR 8" WATER LINE

8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00

3-22-06

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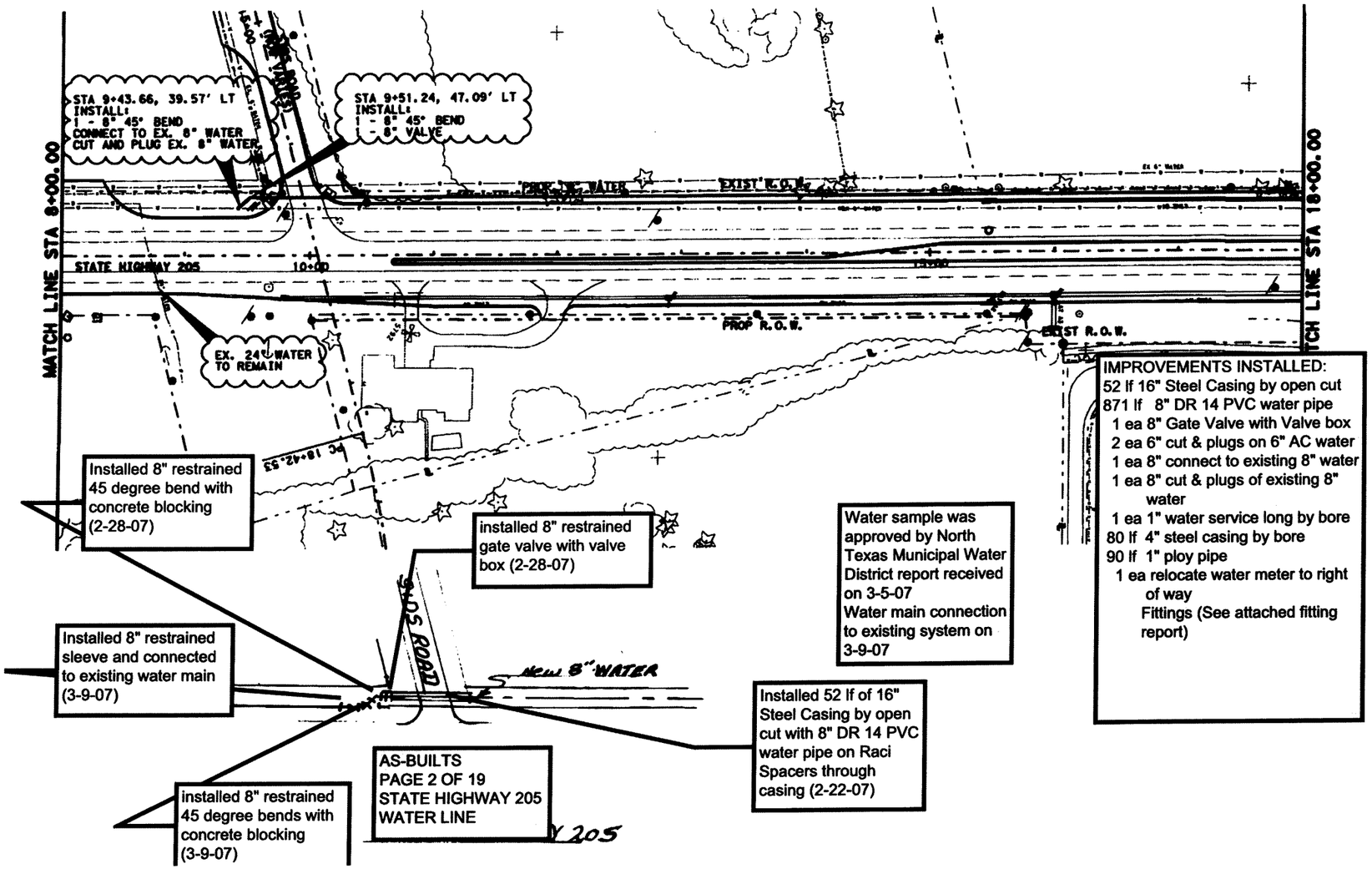
WATER LINE

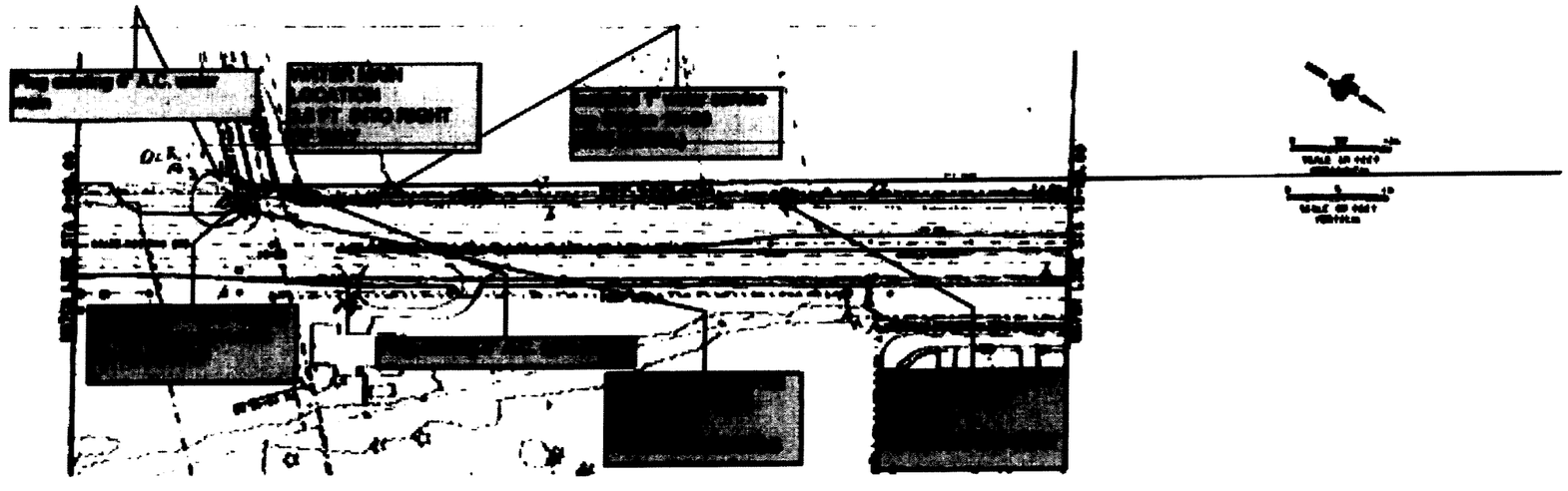
PLAN & PROFILE
STA 8+00 TO 18+00

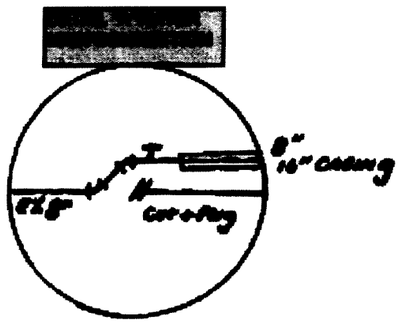
SHEET 2 OF 19

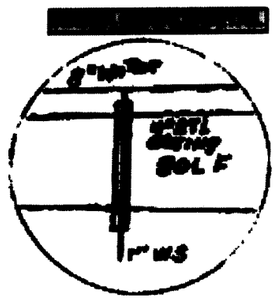
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		SH 205
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	511
CONT.	SECT.	JOB	
0451	01	032, ETC	

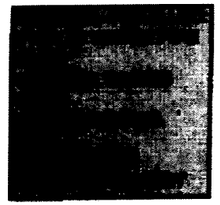
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3/22/2006

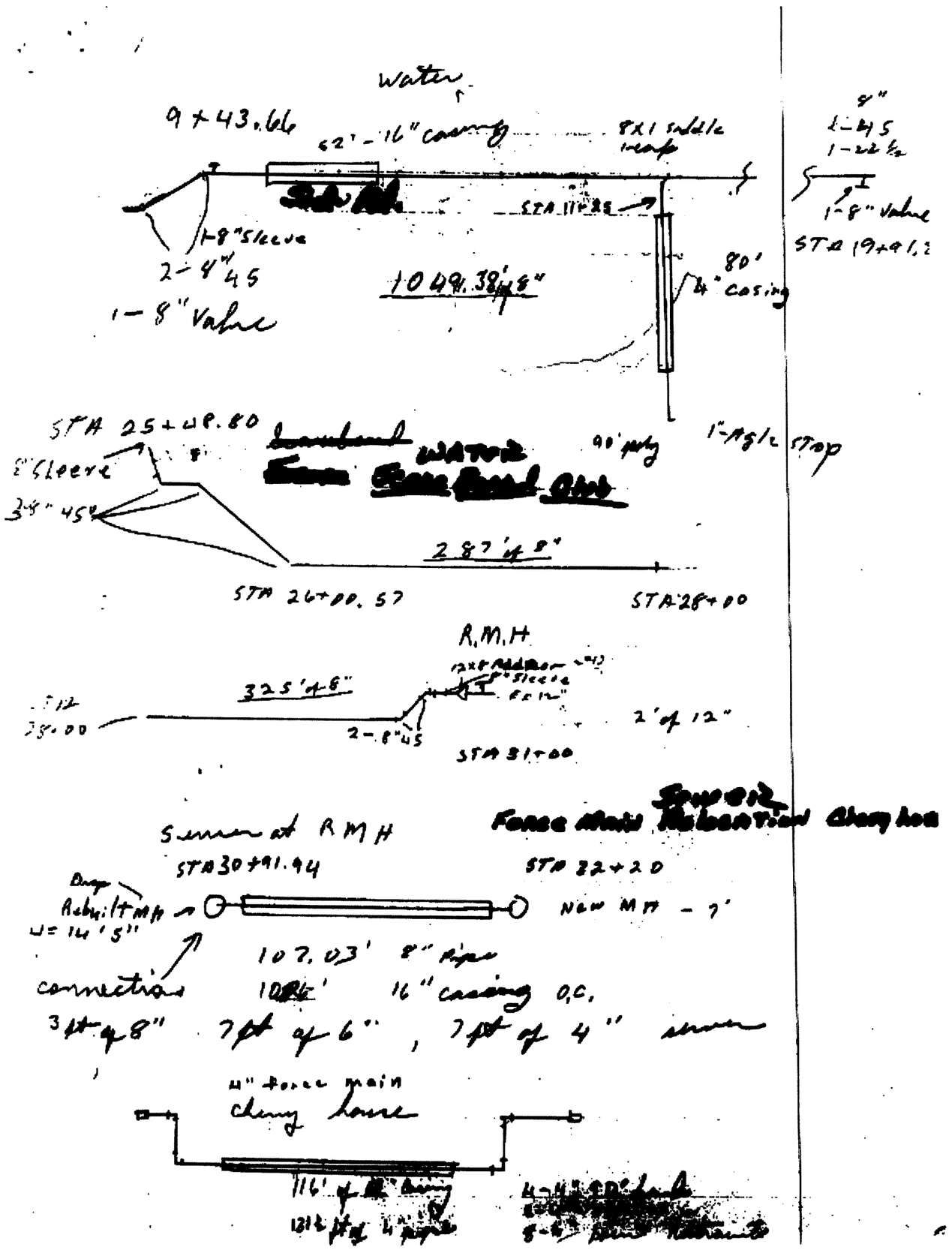

STA 9+43.66, 39.57' LT
INSTALL:
1 - 8" 45° BEND
CONNECT TO EX. 8" WATER
CUT AND PLUG EX. 8" WATER
STA 9+51.24, 47.09' LT
INSTALL:
1 - 8" 45° BEND
VALVE
PROP. 8" WATER
EXIST R.O.W.
MATCH LINE STA 8+00.00
MATCH LINE STA 18+00.00
STATE HIGHWAY 205
10+00
PROP R.O.W.
EXIST R.O.W.
EX. 24" WATER
TO REMAIN
PC 18+42.53
Installed 8" restrained 45 degree bend with concrete blocking (2-28-07)
installed 8" restrained gate valve with valve box (2-28-07)
Water sample was approved by North Texas Municipal Water District report received on 3-5-07
Water main connection to existing system on 3-9-07
Installed 8" restrained sleeve and connected to existing water main (3-9-07)
SYRS ROAD
NEW 8" WATER
Installed 52 lf of 16" Steel Casing by open cut with 8" DR 14 PVC water pipe on Raci Spacers through casing (2-22-07)
installed 8" restrained 45 degree bends with concrete blocking (3-9-07)
AS-BUILTS
PAGE 2 OF 19
STATE HIGHWAY 205
WATER LINE
205
IMPROVEMENTS INSTALLED:
52 lf 16" Steel Casing by open cut
871 lf 8" DR 14 PVC water pipe
1 ea 8" Gate Valve with Valve box
2 ea 6" cut & plugs on 6" AC water
1 ea 8" connect to existing 8" water
1 ea 8" cut & plugs of existing 8" water
1 ea 1" water service long by bore
80 lf 4" steel casing by bore
90 lf 1" ploy pipe
1 ea relocate water meter to right of way
Fittings (See attached fitting report)

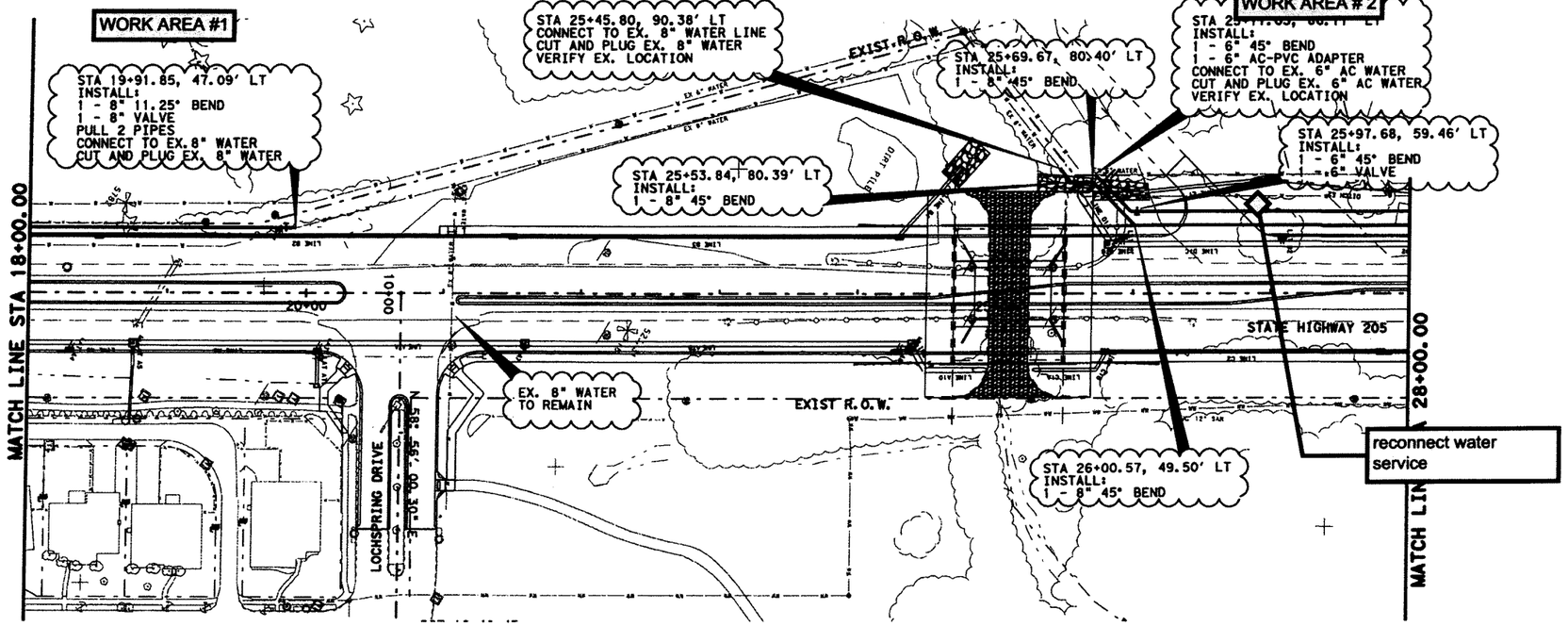


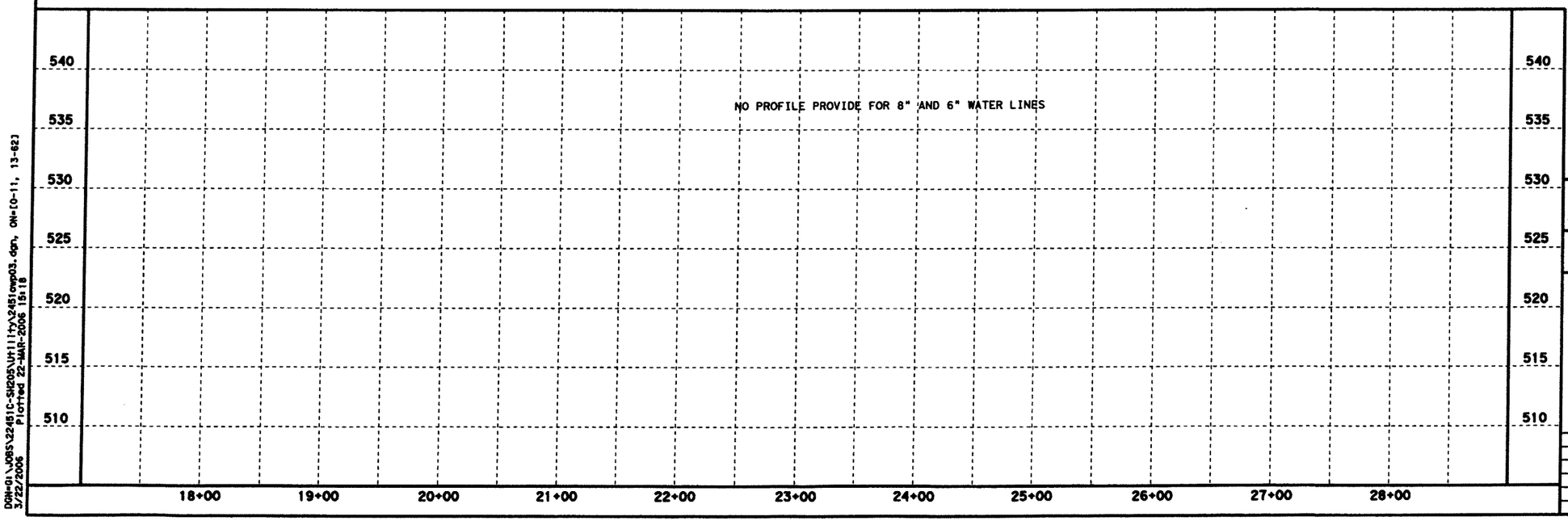







Water
9+43.66
62'-16" casing
8"x1 saddle
tap
STA 11+38
1-8" sleeve
2-4" 45
1-8" Valve
1049.38' of 8"
80'
4" casing
1-8" Valve
STA 19+91.2
STA 25+48.80
8" sleeve
3-8" 45°
Lombard WATER
90' proj
1"-A&C stop
287' of 8"
STA 26+00.57
STA 28+00
R.M.H
325'+6"
2-8" 45
STA 31+00
2' of 12"
Sewer at RMH
STA 30+91.94
STA 32+20
Force Main
Dump
Rebuilt MH
NEW MH - 7'
connection
107.03' 8" pipe
16" casing O.C.
4" force main
Clamp Lane
116' of
4" CIP lined





DGN=01\JOBS\22451C-SH205\H11ty\2451swp03.dgn, ON=10-11, 13-623
3/22/2006 Plotted 22-MAR-2006 15:18

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

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SH 205

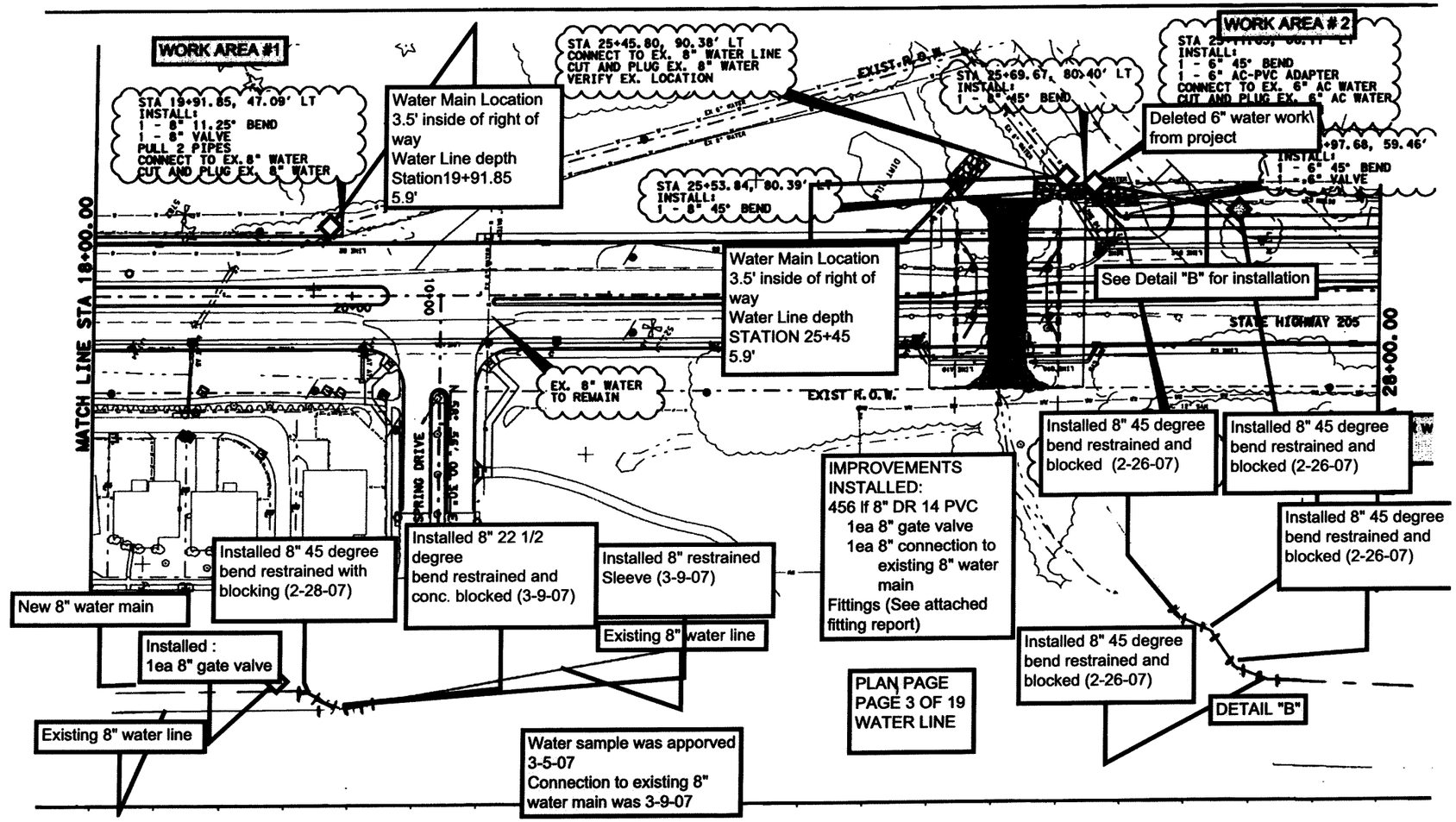
WATER LINE

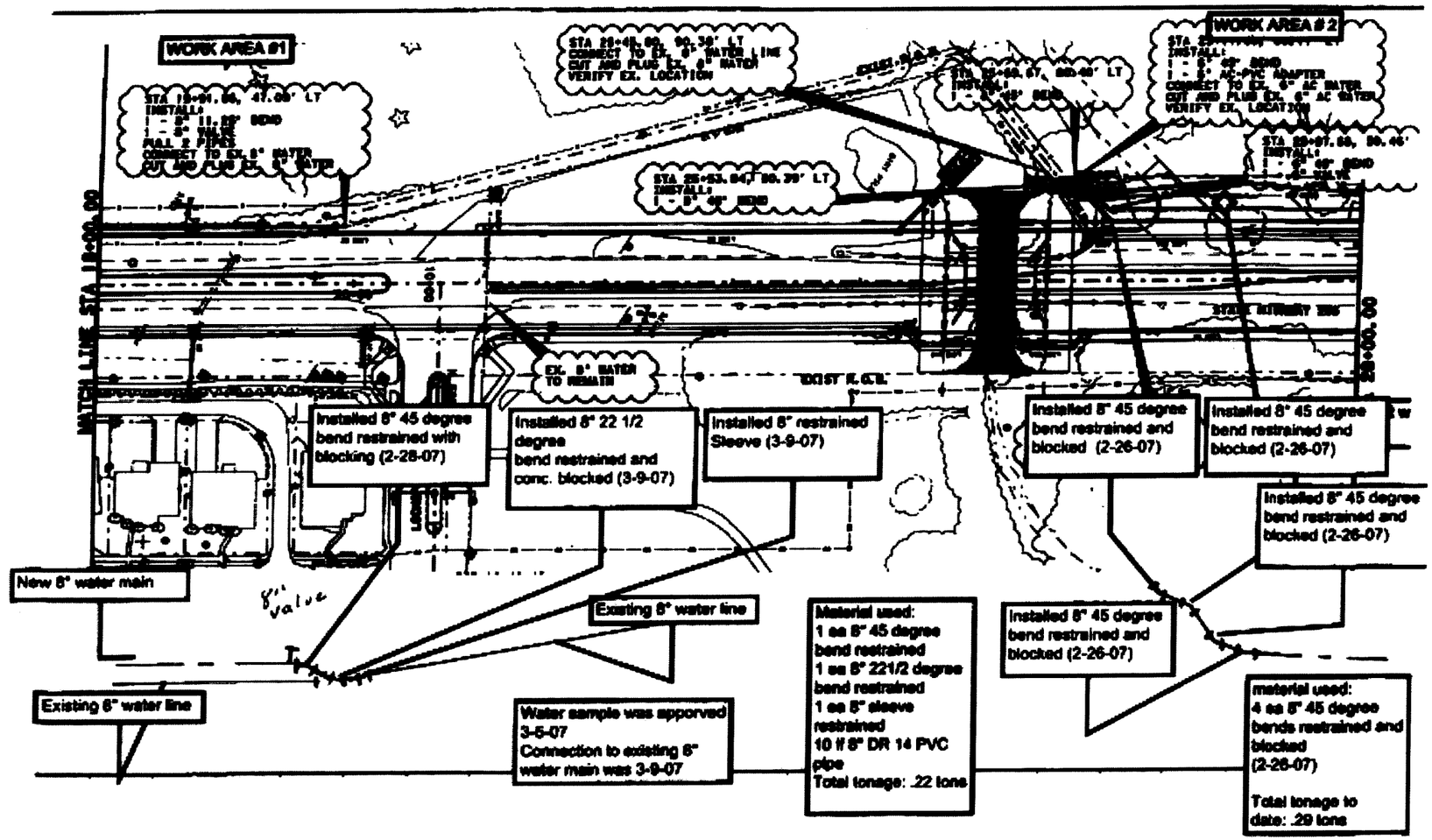
PLAN & PROFILE
STA 18+00 TO 28+00

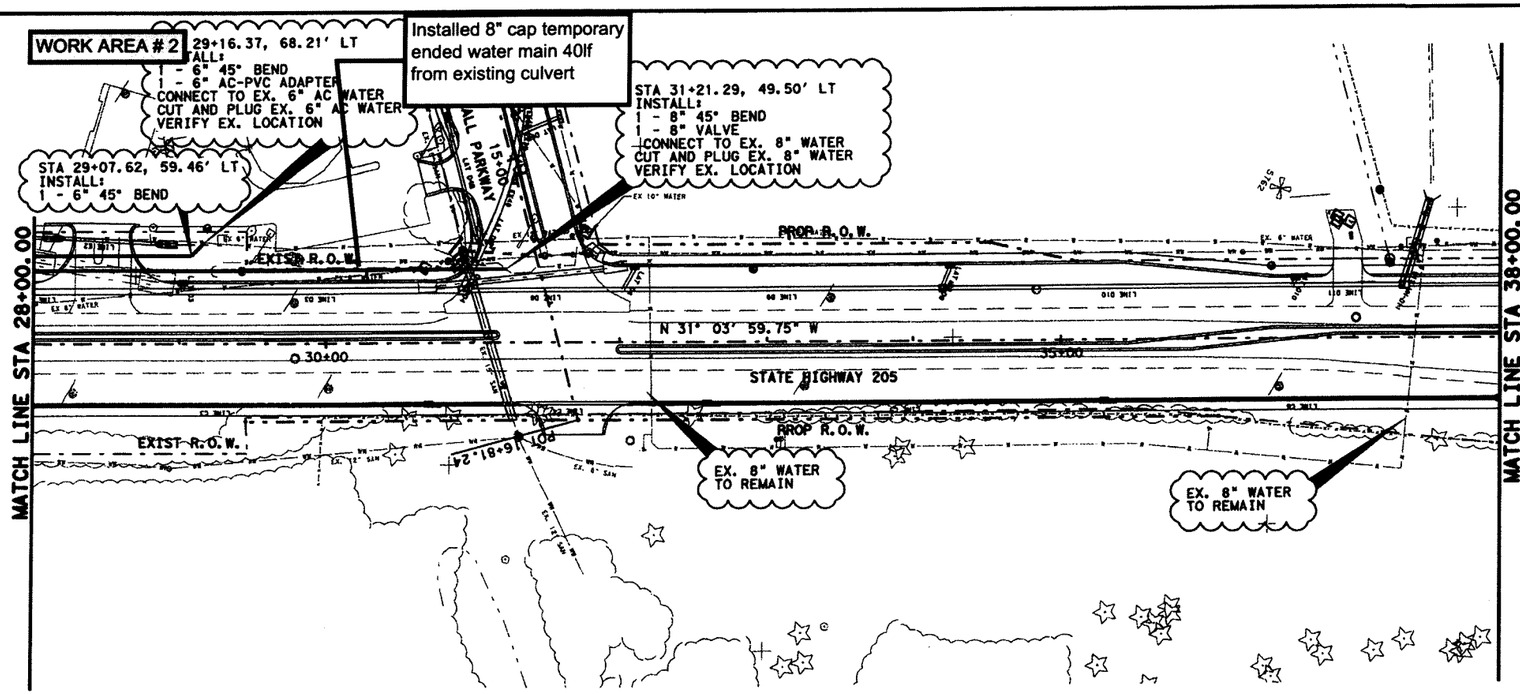
SHEET 3 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	512
CONT.	SECT.	JOB	
0451	01	032, ETC	


WORK AREA #1
STA 19+91.85, 47.09' LT
INSTALL:
1 - 8" 11.25° BEND
1 - 8" VALVE
PULL 2 PIPES
CONNECT TO EX. 8" WATER
CUT AND PLUG EX. 8" WATER
Water Main Location
3.5' inside of right of way
Water Line depth
Station19+91.85
5.9'
STA 25+45.80, 90.38' LT
CONNECT TO EX. 8" WATER LINE
CUT AND PLUG EX. 8" WATER
VERIFY EX. LOCATION
EXIST R.O.W.
STA 25+69.67, 80.40' LT
INSTALL:
1 - 8" 45° BEND
WORK AREA # 2
INSTALL:
1 - 6" 45° BEND
1 - 6" AC-PVC ADAPTER
CONNECT TO EX. 6" AC WATER
CUT AND PLUG EX. 6" AC WATER
Deleted 6" water work\ from project
INSTALL:
1 - 6" 45° BEND
1 - 6" VALVE
STA 25+53.84, 80.39' LT
INSTALL:
1 - 8" 45° BEND
Water Main Location
3.5' inside of right of way
Water Line depth
STATION 25+45
5.9'
See Detail "B" for installation
STATE HIGHWAY 205
MATCH LINE STA 18+00.00
28+00.00
EX. 8" WATER TO REMAIN
EXIST R.O.W.
Installed 8" 45 degree bend restrained and blocked (2-26-07)
Installed 8" 45 degree bend restrained and blocked (2-26-07)
IMPROVEMENTS INSTALLED:
456 lf 8" DR 14 PVC
1ea 8" gate valve
1ea 8" connection to existing 8" water main
Fittings (See attached fitting report)
Installed 8" 45 degree bend restrained and blocked (2-26-07)
Installed 8" 45 degree bend restrained and blocked (2-26-07)
Installed 8" 45 degree bend restrained with blocking (2-28-07)
Installed 8" 22 1/2 degree bend restrained and conc. blocked (3-9-07)
Installed 8" restrained Sleeve (3-9-07)
New 8" water main
Existing 8" water line
Installed : 1ea 8" gate valve
Existing 8" water line
PLAN PAGE
PAGE 3 OF 19
WATER LINE
DETAIL "B"
Water sample was apporved 3-5-07
Connection to existing 8" water main was 3-9-07


WORK AREA #1
WORK AREA # 2
EX. 8" WATER TO REMAIN
Installed 8" 45 degree bend restrained with blocking (2-28-07)
Installed 8" 22 1/2 degree bend restrained and conc. blocked (3-9-07)
Installed 8" restrained Sleeve (3-9-07)
Installed 8" 45 degree bend restrained and blocked (2-26-07)
Installed 8" 45 degree bend restrained and blocked (2-26-07)
Installed 8" 45 degree bend restrained and blocked (2-26-07)
Installed 8" 45 degree bend restrained and blocked (2-26-07)
New 8" water main
Existing 8" water line
Existing 8" water line
Water sample was approved 3-5-07
Connection to existing 8" water main was 3-9-07
Material used:
1 ea 8" 45 degree bend restrained
1 ea 8" 221/2 degree bend restrained
1 ea 8" sleeve restrained
10 lf 8" DR 14 PVC pipe
Total tonage: .22 tons
material used:
4 ea 8" 45 degree bends restrained and blocked
(2-26-07)
Total tonage to date: .29 tons



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

As Builts for Water Imp.
State Highway 205

NOR PROFILE PROVIDED FOR 8" AND 6" WATER LINES

550 545 540 535 530 525 520

28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Richard T. Grice

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8777 Stemmons Freeway
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SH 205

WATER LINE

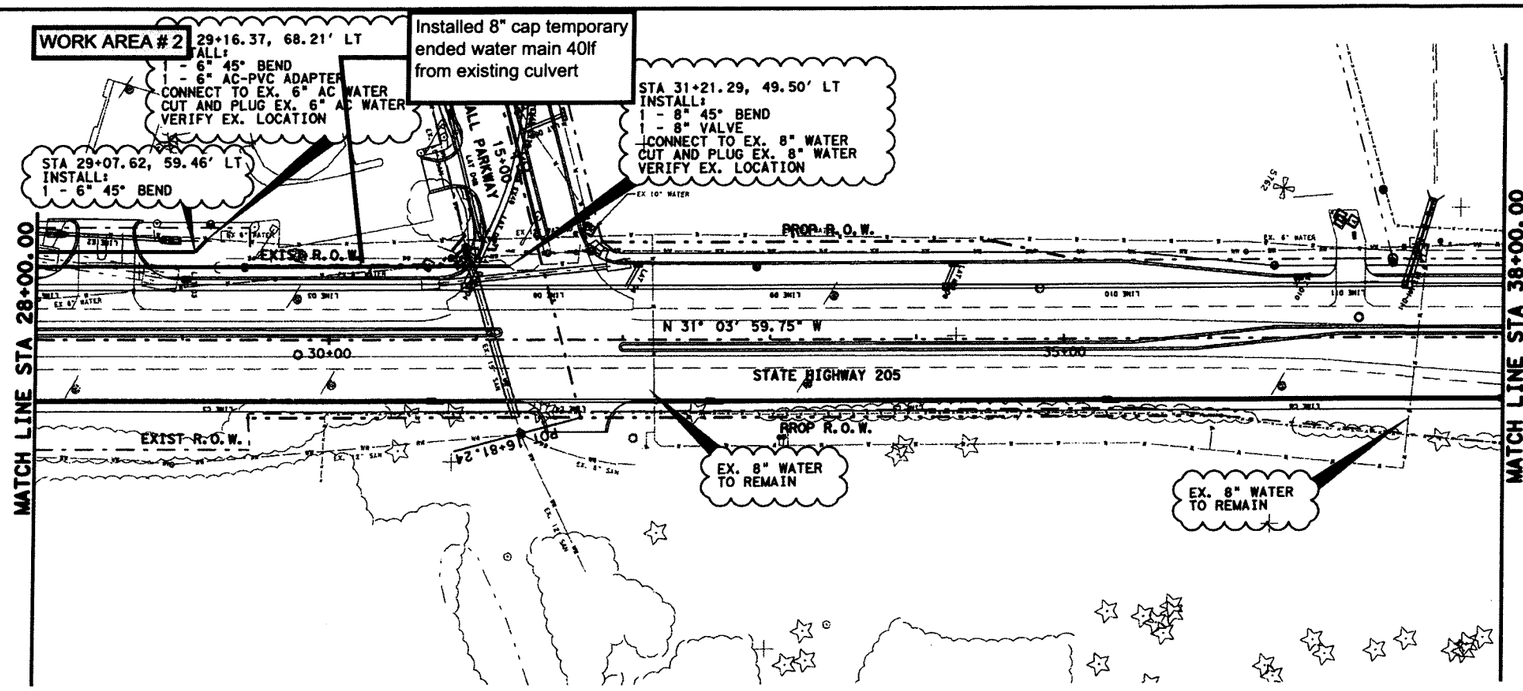
PLAN & PROFILE
STA 28+00 TO 38+00

SHEET 4 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	513
CONT.	SECT.	JOB	
0451	01	032, ETC	

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Plotted 22-MAR-2006 15:45
3/22/2006



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

As Builts for Water Imp.
State Highway 205

NOR PROFILE PROVIDED FOR 8" AND 6" WATER LINES

550 545 540 535 530 525 520

28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00

3-22-06

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SH 205

WATER LINE

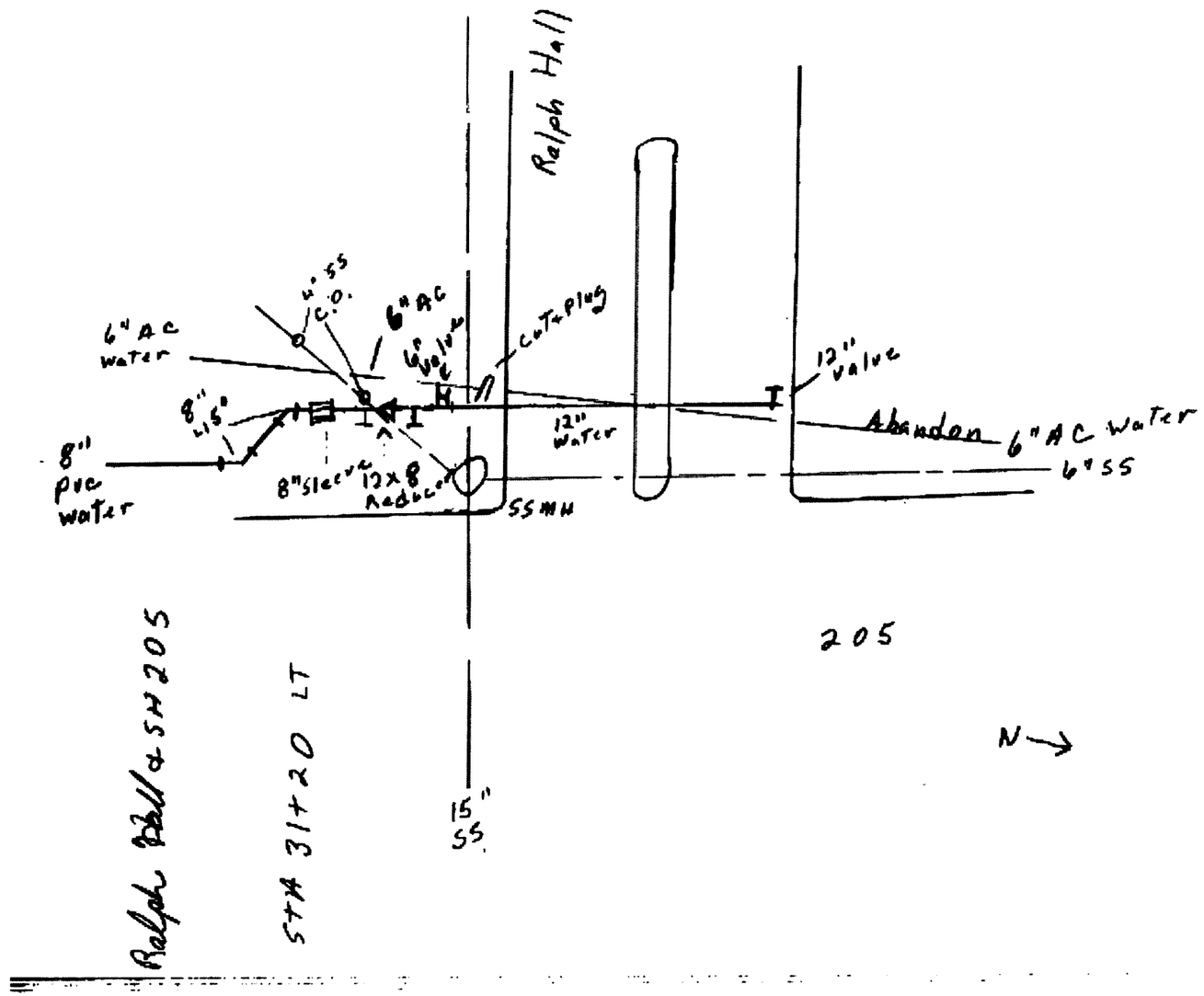
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STA 28+00 TO 38+00

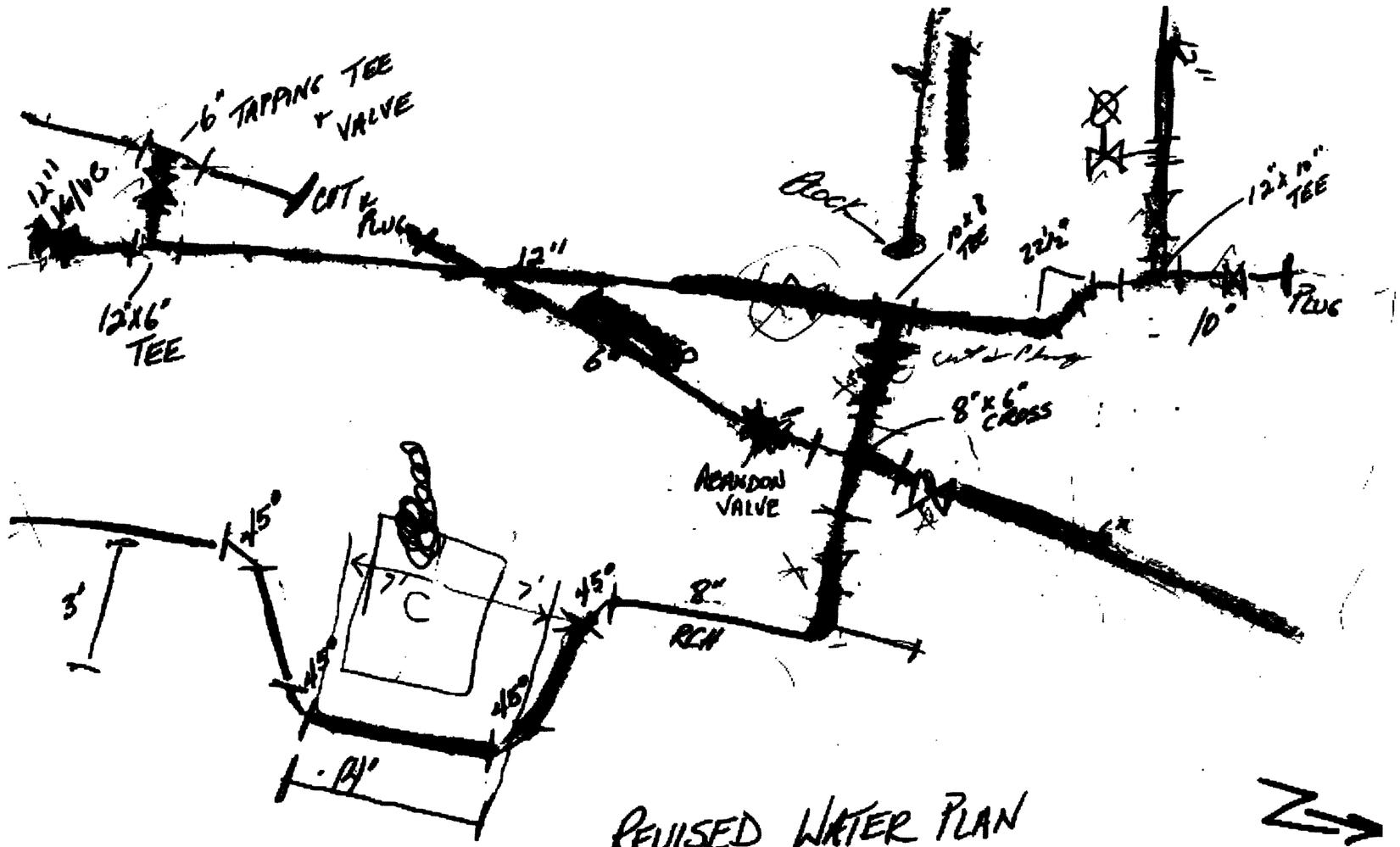
SHEET 4 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	513
CONT.	SECT.	JOB	
0451	01	032, ETC	

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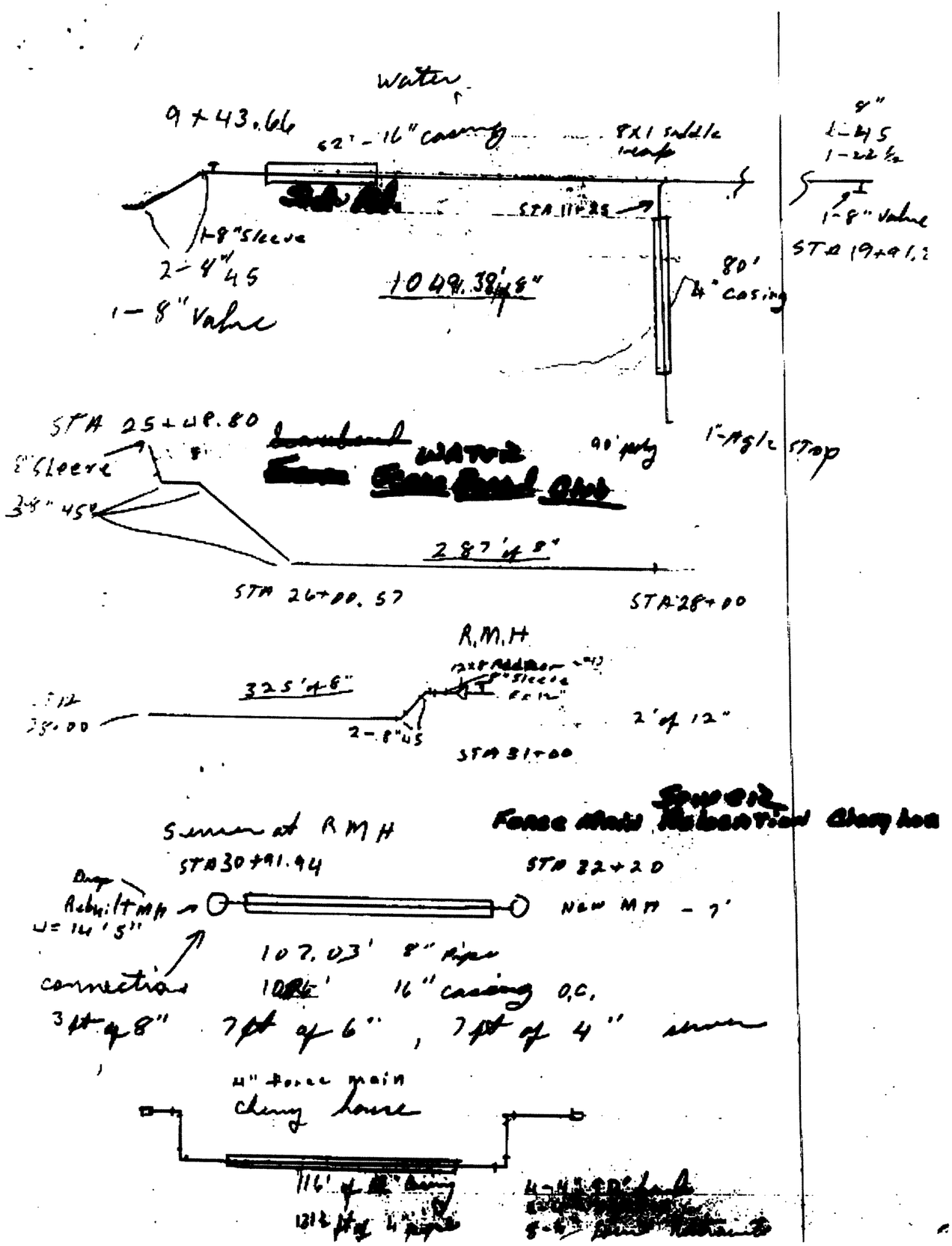

Ralph Hall
6" AC water
4" SS C.O.
6" AC
6" Valve
Cut + plug
12" valve
8" LIS
12" water
Abandon 6" AC water
8" pvc water
8" sleeve
12 x 8 Reducer
SS MH
6" SS
205
Ralph Hall & SH 2
STA 31+20 LT
15" SS
N

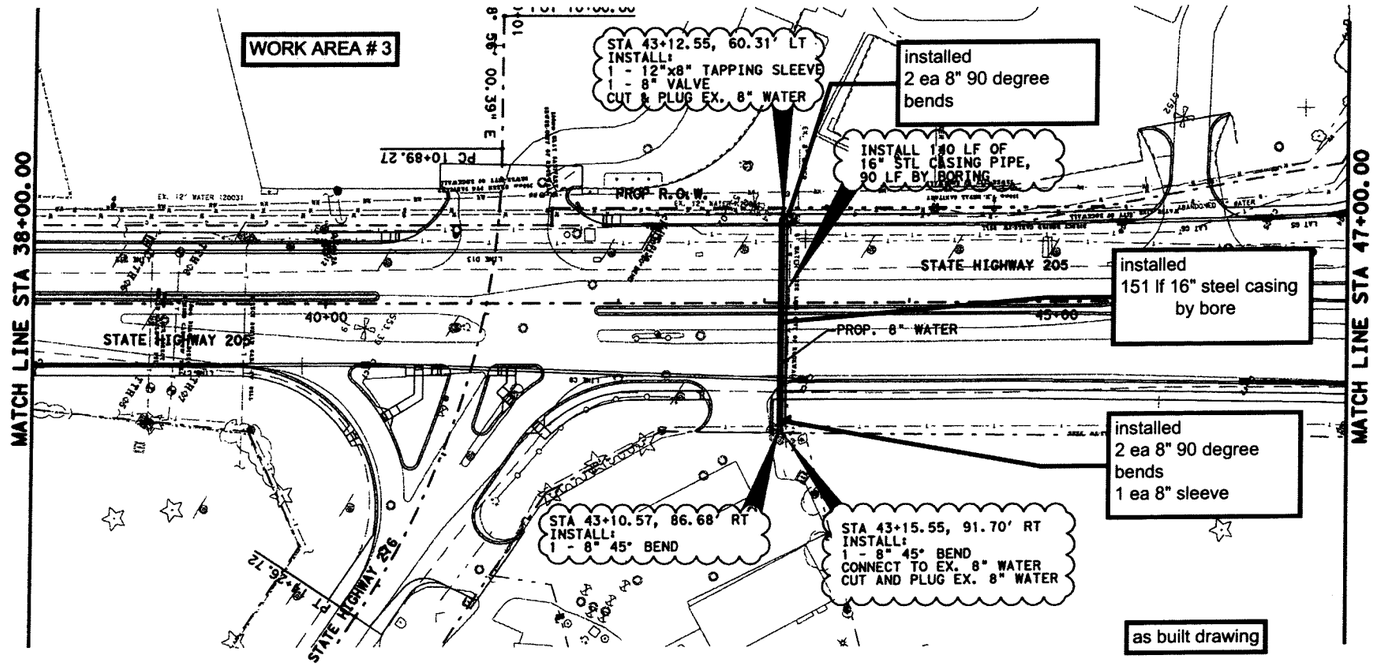


REVISED WATER PLAN

© 205/RALPH HALL PKWY

NOT TO SCALE


water
9+43.66
62'-16" casing
8X1 saddle
4"
2-45
1-22½
STA 111+25
1-8" Valve
STA 19+91.2
1-8" Sleeve
2-4" 45
1-8" Valve
1049.38'of 8"
80'
4" casing
STA 25+48.80
8"
8" Sleeve
3-8" 45°
90° ply
1"A/C stop
287'of 8"
STA 26+00.57
STA 28+00
R.M.H
12x8 Reducer
8" Sleeve
325'of 8"
2-8"45
2'of 12"
STA 31+00
Sewer at R M H
STA 30+91.94
STA 32+20
Dump
Rebuilt MH
NEW MH - 7'
L= 14'5"
107.03' 8" Pipe
connection
16" casing O.C.
3 pt of 8" 7pt of 6", 7pt of 4" sewer
4" force main
clamp base
116'
4" Force main



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

NO PROFILE PROVIDED FOR 8" WATER LINE

560 555 550 545 540 535 530

38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

WATER LINE

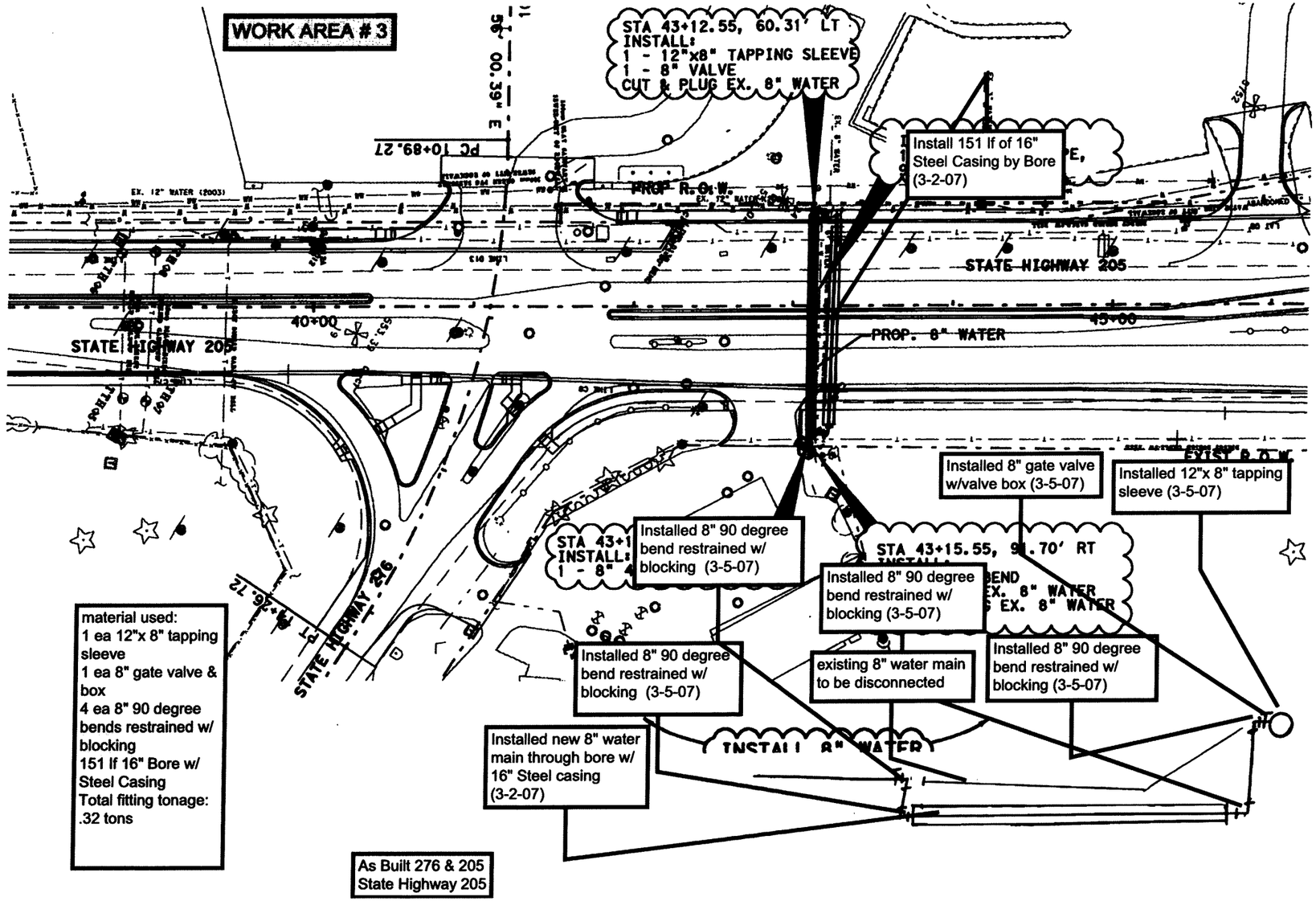
PLAN & PROFILE
STA 38+00 TO 47+00

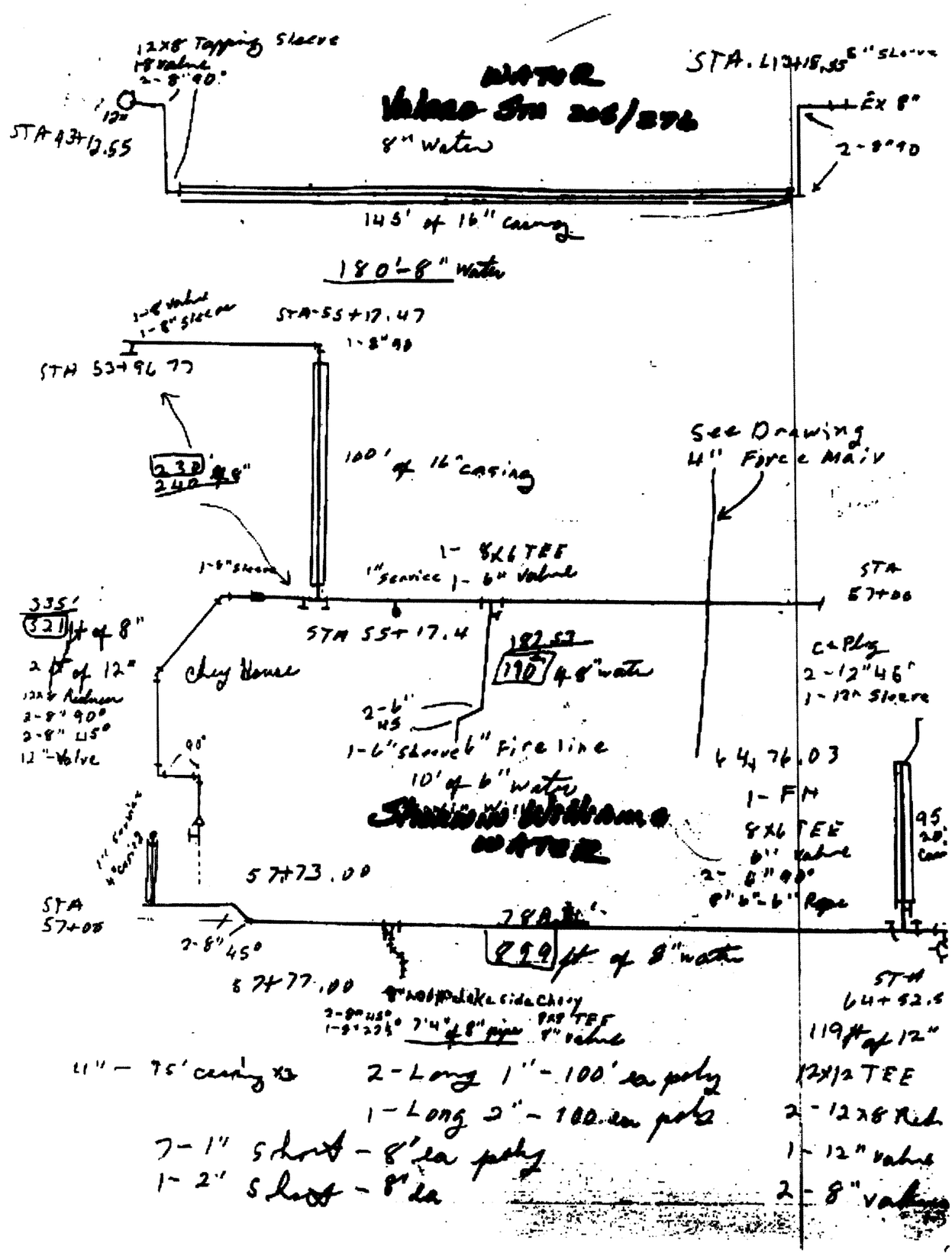
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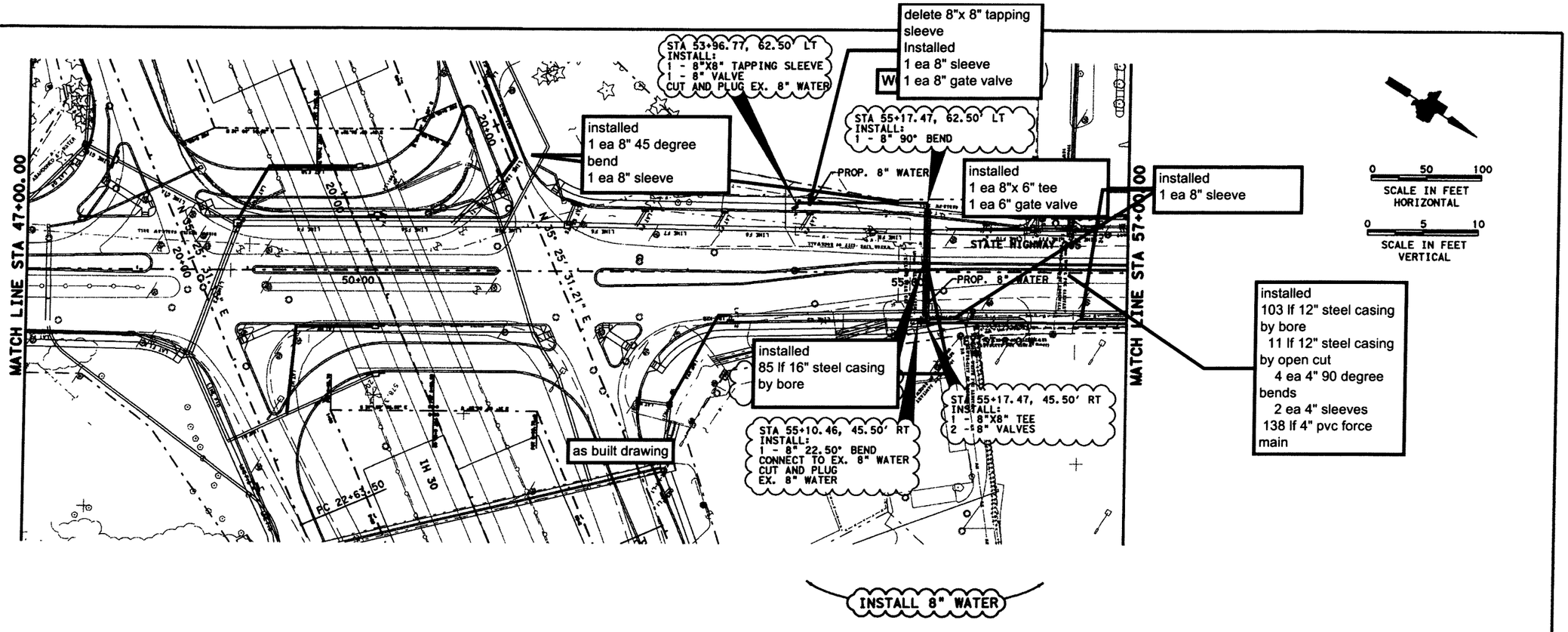
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	514
CONT.	SECT.	JOB	
0451	01	032, ETC	

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Plotted 22-MAR-2006 15:18
3/22/2006


WORK AREA # 3
STA 43+12.55, 60.31' LT
INSTALL:
1 - 12"x8" TAPPING SLEEVE
1 - 8" VALVE
CUT & PLUG EX. 8" WATER
Install 151 lf of 16" Steel Casing by Bore (3-2-07)
PC 10+89.27
EX. 12" WATER (2003)
PROP. R.O.W.
STATE HIGHWAY 205
40+00
45+00
PROP. 8" WATER
STATE HIGHWAY 276
Installed 8" gate valve w/valve box (3-5-07)
Installed 12"x 8" tapping sleeve (3-5-07)
Installed 8" 90 degree bend restrained w/ blocking (3-5-07)
Installed 8" 90 degree bend restrained w/ blocking (3-5-07)
Installed 8" 90 degree bend restrained w/ blocking (3-5-07)
existing 8" water main to be disconnected
Installed 8" 90 degree bend restrained w/ blocking (3-5-07)
Installed new 8" water main through bore w/ 16" Steel casing (3-2-07)
material used:
1 ea 12"x 8" tapping sleeve
1 ea 8" gate valve & box
4 ea 8" 90 degree bends restrained w/ blocking
151 lf 16" Bore w/ Steel Casing
Total fitting tonage: .32 tons
As Built 276 & 205 State Highway 205


WATER
Volume Sta 208/276
12x8 Tapping Sleeve
8" Valve
2-8" 90°
STA 93+12.55
8" water
STA. 117+15.35 6" Sleeve
Ex 8"
2-8"90
145' of 16" casing
180'-8" Water
STA 55+17.47
1-8"90
STH 53+96.77
See Drawing
4" Force Main
100' of 16" casing
1-8"sleeve
1- 8x6 TEE
1" Service 1- 6" Valve
STA 57+06
335'
32 ft of 8"
2 ft of 12"
Clay House
2-6" MJ
1-6" Sleeve 6" Fire line
10' of 6" water
90°
57+73.00
STA 57+05
2-8" 45°
57+77.00
8" Molly Lake Side Chevy
2-8" MJ 90°
1-8" 22½° 7'4" 8" pipe
8x8 TEE
8" Valve
64+76.03
1- FM
8x6 TEE
6" Valve
2-8" 90°
8"6"-6" Pipe
95
20' Cas
6+52.6
119 ft of 12"
12x12 TEE
2-12x8 Red
1-12" Valve
2-8" Valve
11" - 75' casing x3
2-Long 1"-100' ea poly
1-Long 2"-100' ea poly
7-1" Short - 8' ea poly
1-2" Short - 8' ea



3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

WATER LINE

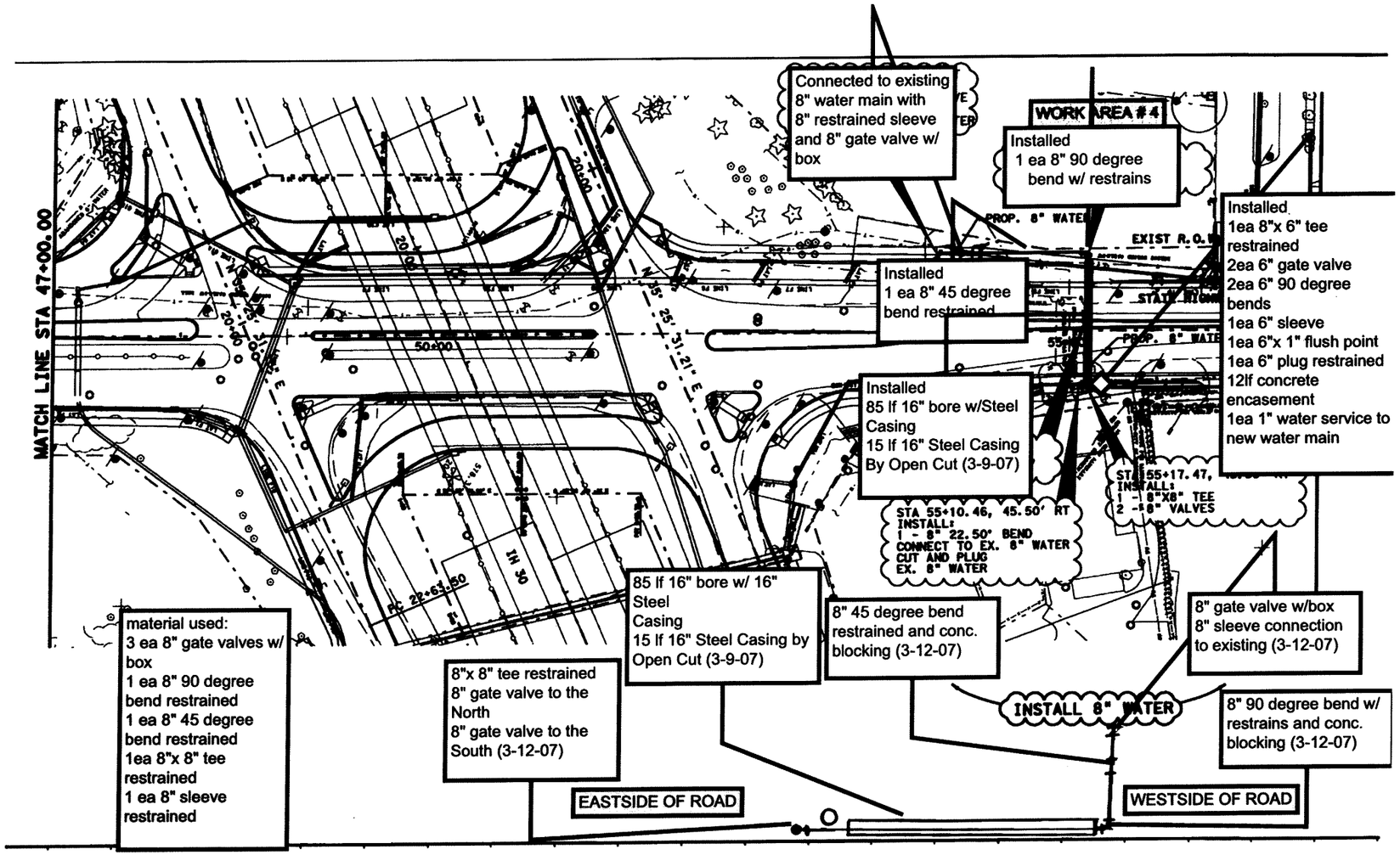
PLAN & PROFILE
STA 47+00 TO 57+00

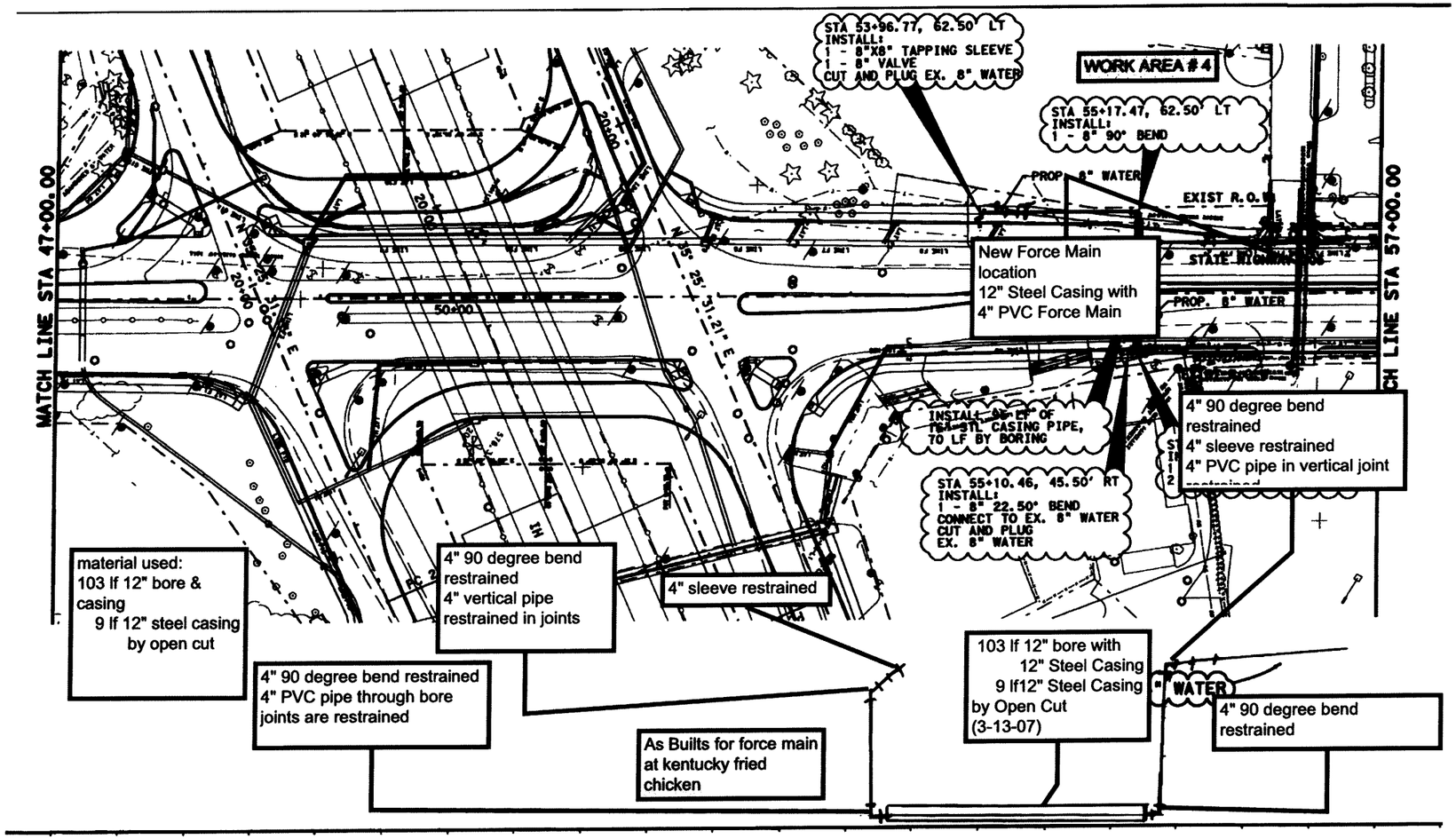
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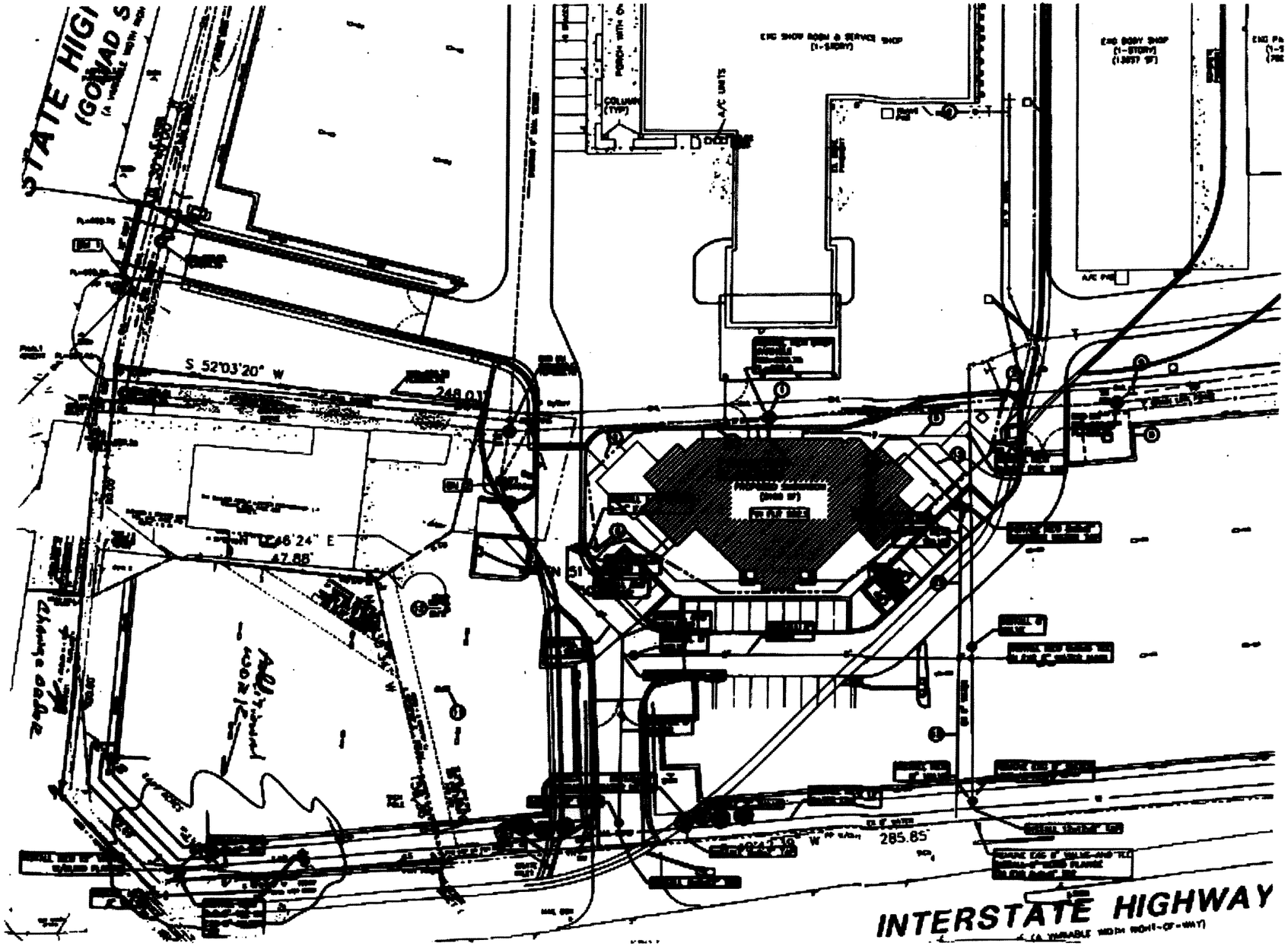
DIST. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

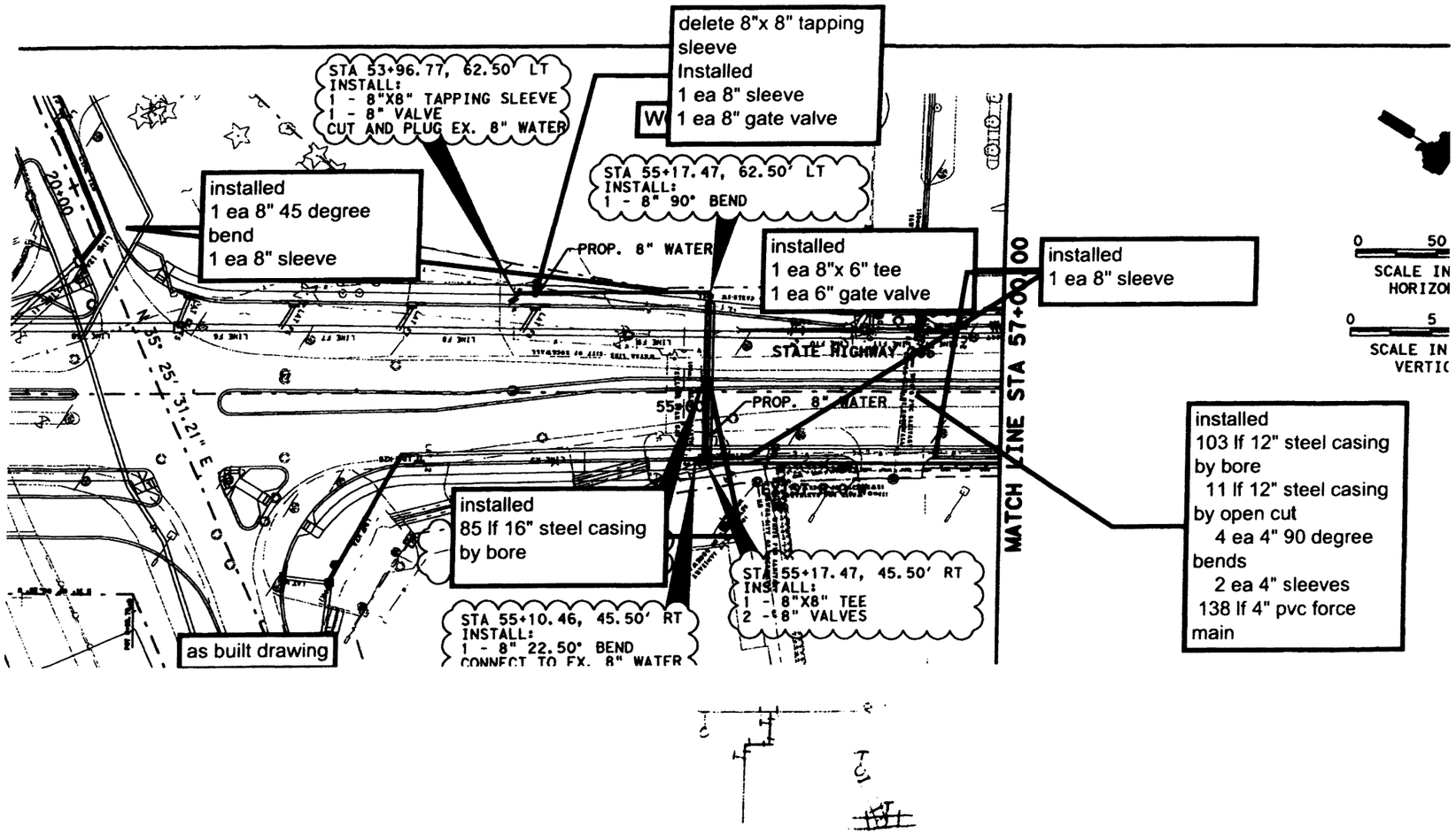
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	515
CONT.	SECT.	JOB	
0451	01	032, ETC	

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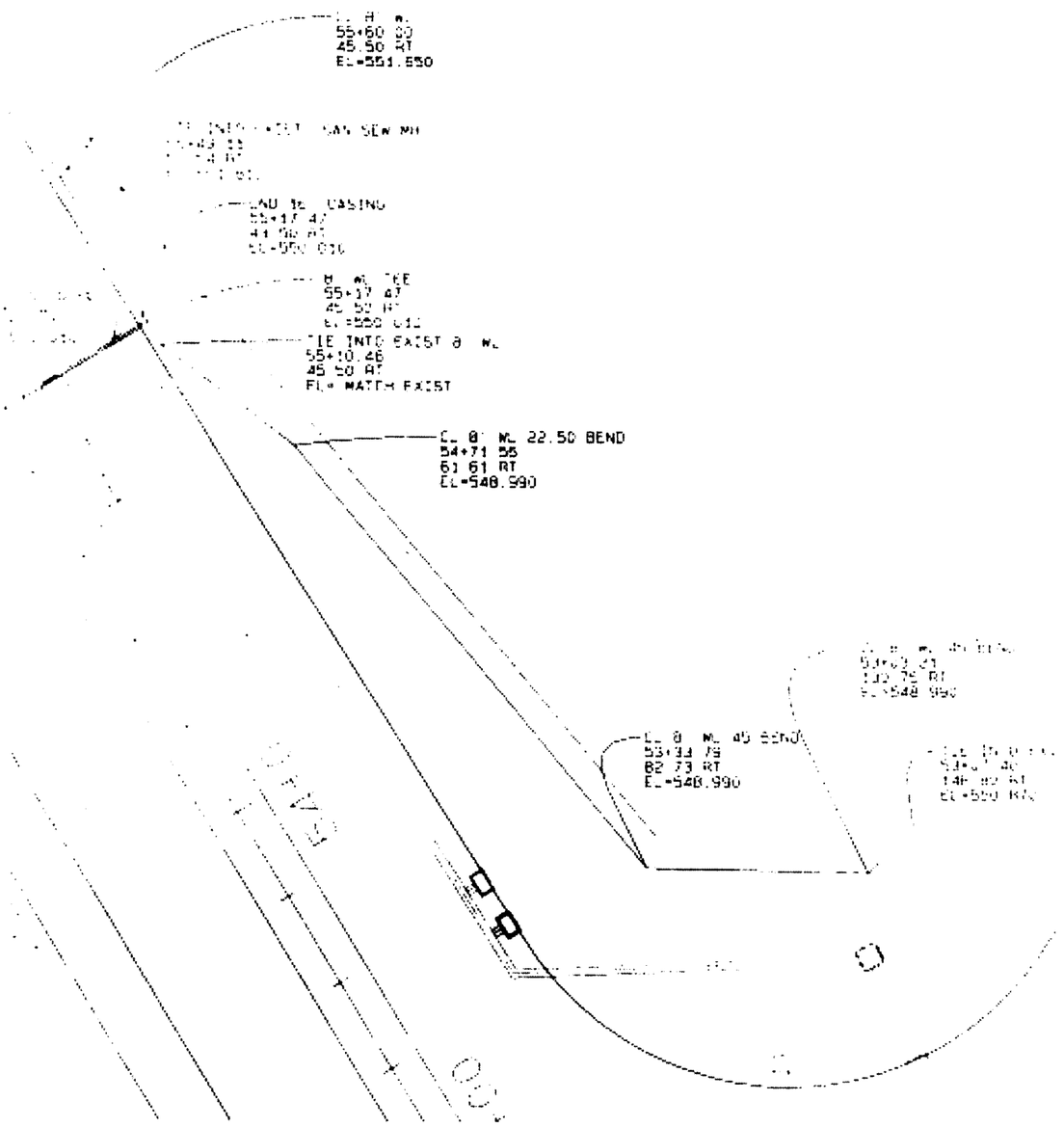

Connected to existing 8" water main with 8" restrained sleeve and 8" gate valve w/ box
WORK AREA # 4
Installed 1 ea 8" 90 degree bend w/ restrains
Installed 1 ea 8" 45 degree bend restrained
Installed 85 lf 16" bore w/Steel Casing 15 lf 16" Steel Casing By Open Cut (3-9-07)
Installed 1ea 8"x 6" tee restrained 2ea 6" gate valve 2ea 6" 90 degree bends 1ea 6" sleeve 1ea 6"x 1" flush point 1ea 6" plug restrained 12lf concrete encasement 1ea 1" water service to new water main
MATCH LINE STA 47+00.00
STA 55+10.46, 45.50' RT INSTALL: 1 - 8" 22.50° BEND CONNECT TO EX. 8" WATER CUT AND PLUG EX. 8" WATER
STA 55+17.47, INSTALL: 1 - 8"X8" TEE 2 - 8" VALVES
85 lf 16" bore w/ 16" Steel Casing 15 lf 16" Steel Casing by Open Cut (3-9-07)
8" 45 degree bend restrained and conc. blocking (3-12-07)
8" gate valve w/box 8" sleeve connection to existing (3-12-07)
material used: 3 ea 8" gate valves w/ box 1 ea 8" 90 degree bend restrained 1 ea 8" 45 degree bend restrained 1ea 8"x 8" tee restrained 1 ea 8" sleeve restrained
8"x 8" tee restrained 8" gate valve to the North 8" gate valve to the South (3-12-07)
INSTALL 8" WATER
8" 90 degree bend w/ restrains and conc. blocking (3-12-07)
EASTSIDE OF ROAD
WESTSIDE OF ROAD


STA 53+96.77, 62.50' LT
INSTALL:
1 - 8"X8" TAPPING SLEEVE
1 - 8" VALVE
CUT AND PLUG EX. 8" WATER
WORK AREA # 4
STA 55+17.47, 62.50' LT
INSTALL:
1 - 8" 90° BEND
PROP. 8" WATER
EXIST R.O.W.
MATCH LINE STA 47+00.00
MATCH LINE STA 57+00.00
New Force Main
location
12" Steel Casing with
4" PVC Force Main
PROP. 8" WATER
4" 90 degree bend
restrained
4" sleeve restrained
4" PVC pipe in vertical joint
INSTALL 80 LF OF
16" STL CASING PIPE,
70 LF BY BORING
STA 55+10.46, 45.50' RT
INSTALL:
1 - 8" 22.50° BEND
CONNECT TO EX. 8" WATER
CUT AND PLUG
EX. 8" WATER
material used:
103 lf 12" bore &
casing
9 lf 12" steel casing
by open cut
4" 90 degree bend
restrained
4" vertical pipe
restrained in joints
4" sleeve restrained
4" 90 degree bend restrained
4" PVC pipe through bore
joints are restrained
As Builts for force main
at kentucky fried
chicken
103 lf 12" bore with
12" Steel Casing
9 lf12" Steel Casing
by Open Cut
(3-13-07)
WATER
4" 90 degree bend
restrained

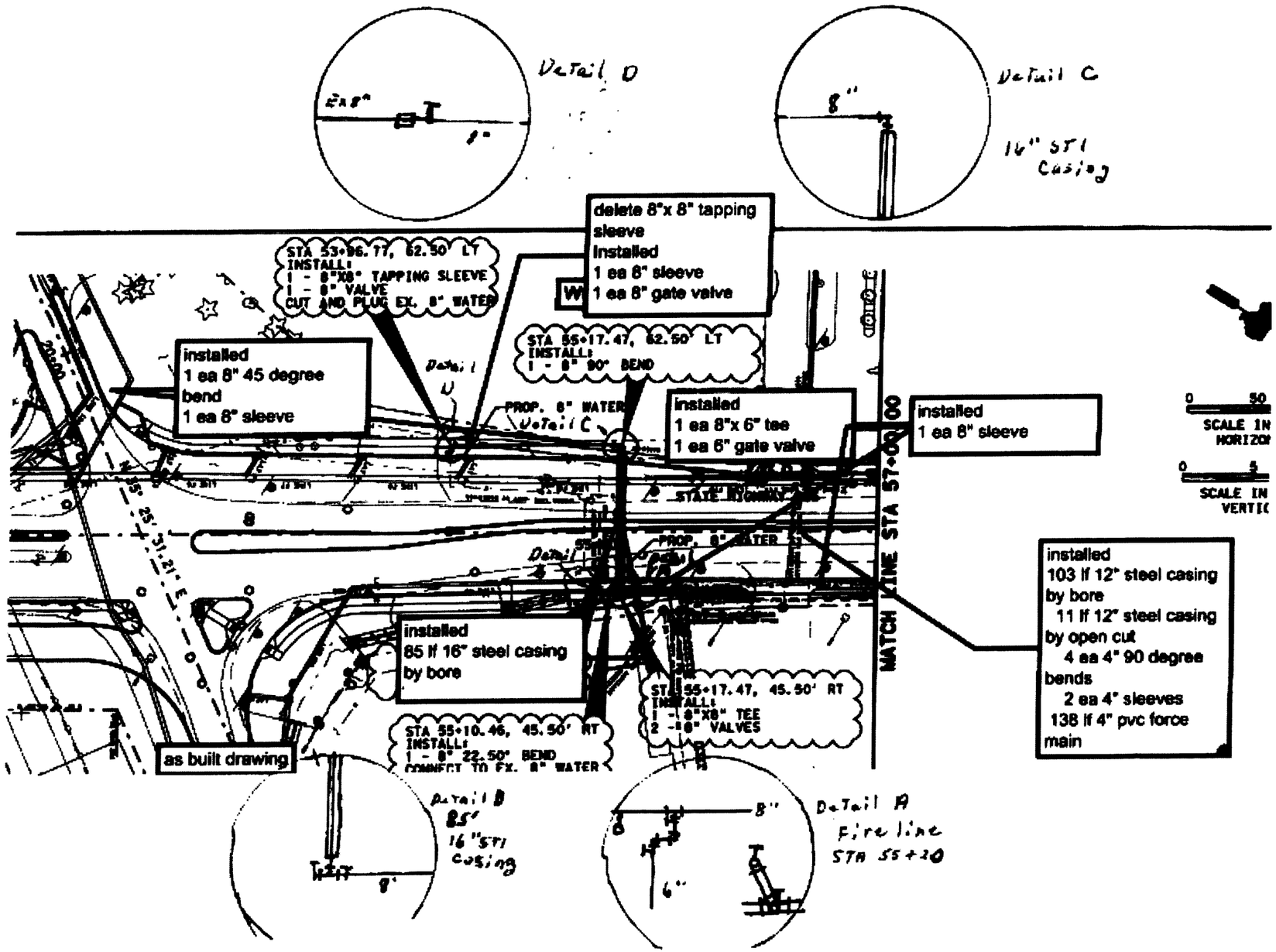

S 52°03'20" W
248.01'
N 46°46'24" E
47.88'
285.85'
INTERSTATE HIGHWAY


STA 53+96.77, 62.50' LT
INSTALL:
1 - 8"X8" TAPPING SLEEVE
1 - 8" VALVE
CUT AND PLUG EX. 8" WATER
delete 8"x 8" tapping sleeve
Installed
1 ea 8" sleeve
1 ea 8" gate valve
STA 55+17.47, 62.50' LT
INSTALL:
1 - 8" 90° BEND
installed
1 ea 8" 45 degree bend
1 ea 8" sleeve
PROP. 8" WATER
installed
1 ea 8"x 6" tee
1 ea 6" gate valve
installed
1 ea 8" sleeve
STATE HIGHWAY
MATCH LINE STA 57+00
PROP. 8" WATER
installed
103 lf 12" steel casing by bore
11 lf 12" steel casing by open cut
4 ea 4" 90 degree bends
2 ea 4" sleeves
138 lf 4" pvc force main
installed
85 lf 16" steel casing by bore
STA 55+10.46, 45.50' RT
INSTALL:
1 - 8" 22.50° BEND
CONNECT TO EX. 8" WATER
STA 55+17.47, 45.50' RT
INSTALL:
1 - 8"X8" TEE
2 - 8" VALVES
as built drawing
N 25° 31' 21" E
SCALE IN HORIZO
SCALE IN VERTIC

Lakeside Chevy



Pt 3.


Detail D
Ex 8"
8"
Detail C
8"
16" STI Casing
delete 8"x 8" tapping sleeve
Installed
1 ea 8" sleeve
1 ea 8" gate valve
STA 53+96.77, 62.50' LT
INSTALL:
1 - 8"X8" TAPPING SLEEVE
1 - 8" VALVE
CUT AND PLUG EX. 8" WATER
installed
1 ea 8" 45 degree bend
1 ea 8" sleeve
STA 55+17.47, 62.50' LT
INSTALL:
1 - 8" 90° BEND
PROP. 8" WATER
Detail C
installed
1 ea 8"x 6" tee
1 ea 6" gate valve
installed
1 ea 8" sleeve
STA 57+00.00
MATCH LINE STA
0 50
SCALE IN HORIZON
0 5
SCALE IN VERTIC
installed
103 lf 12" steel casing by bore
11 lf 12" steel casing by open cut
4 ea 4" 90 degree bends
2 ea 4" sleeves
138 lf 4" pvc force main
installed
85 lf 16" steel casing by bore
STA 55+10.46, 45.50' RT
INSTALL:
1 - 8" 22.50° BEND
CONNECT TO EX. 8" WATER
STA 55+17.47, 45.50' RT
INSTALL:
1 - 8"X8" TEE
2 - 8" VALVES
as built drawing
Detail B
85'
16" STI Casing
8"
Detail A
Fire line
STA 55+20
8"
6"

Terminated new water service at this new location.

Installed 60 lf of 4" steel casing by bore 36 lf of 4" steel casing by open cut

connection point to new 8" water main

Installed 60 lf of 18" steel casing by bore

EXISTING WATER METERS FOR LUIGI'S AND PIZZA INN PRESENTLY LOCATED EAST OF SH 205 ARE TO BE RELOCATED TO THE WEST SIDE OF SH 205

WORK AREA #4

Terminated 2" water service

Installed 68 lf 4" steel casing by bore 21 lf of 4" steel casing by open cut

CONNECT TO EX. 12" WATER

STA 64+52.52, 49.29' LT
INSTALL:
1 - 12" 11.25° BEND

Installed 100 lf 20" steel casing by bore 125 lf of 12" DR14 PVC

Installed 1 ea 12"x12" tee 2 ea 12"x8" reducers

Installed 1 ea 12" gate valve 2 ea 8" gate valve

STA 65+41.97, 52.09' LT
INSTALL:
1 - 16" 45° BEND
CUT AND PLUG
EX. 16" STL CYL. RCCP WATER
CONNECT TO
EX. 16" STL CYL. RCCP WATER

STA 65+46.56, 48.55' LT
INSTALL:
1 - 16" 45° BEND

INSTALL 95 LF OF 20" STL CASING PIPE, 70 LF BY BORING

INSTALL 16" WATER

MATCH LINE STA 57+00.00

INSTALL 12" WATER

EXIST. R.O.W.

ST-TE HIGHWAY

12" bore relocated to the south driveway to match existing 4" sewer main

Connected 2" water service to this point

WATER LINE H

INSTALL 95 LF OF 24" STL CASING PIPE, 70 LF BY BORING

MATCH LINE STA 68+00.00

Installed 1" water service (short)

Installed 2" water service (short)

STA 64+52.52, 49.50' RT
REFER TO DETAIL D

Installed 1" water service (short)

STA 65+59.25, 49.50' RT
REFER TO DETAIL C

STA 57+77.00, 49.5
INSTALL:
1 - 8" 45° BEND

STA 57+73.00, 45.50' RT
INSTALL:
1 - 8" 45° BEND

Installed 1 ea 8"x8" tee 1 ea 8" gate valve

STA 64+76.03, 49.50' RT
INSTALL:
1 - FIRE HYDRANT
1 - 6" VALVE
1- 8"X6" TEE
6 LF OF PVC 6" WATER PIPE
REMOVE AND SALVAGE
EX. FIRE HYDRANT

STA 65+60.25, 57.23' RT
INSTALL:
1 - 16" 45° BEND

STA 65+57.28, 57.62' RT
INSTALL:
1 - 16" 45° BEND
CUT AND PLUG
EX. 16" STL CYL. RCCP WATER
CONNECT TO
EX. 16" STL CYL. RCCP WATER

INSTALL 8" WATER

YELLOW JACKET LANE

DETAIL D

12" WATER
8" WATER
8" WATER

INSTALL:
1 - 12"X12" TEE
2 - 12"X8" REDUCERS
1 - 12" VALVE
2 - 8" VALVES

DETAIL C

8" WATER
8" WATER

INSTALL:
1 - 16"X8" TEE
1 - 8" VALVE
1 - 16" VALVE

INSTALL:
1 - 16"X8" TEE
1 - 8" VALVE
1 - 16" VALVE

16" WATER

0 50 100
SCALE IN FEET HORIZONTAL

0 5 10
SCALE IN FEET VERTICAL

WATER LINE I

STA 64+52.52, 49.29' LT
INSTALL:
1 - 12" 11.25° BEND

STA64+59.99, 86.82' LT
INSTALL:
1 - 12" 22.50° BEND
CUT AND PLUG
EX. 12" WATER

PROP. GRADE
EX. GRADE

STA 64+92.52, 49.50' RT
INSTALL:
1 - 8"X8" TEE
1 - 10"X8" REDUCER

95 LF 20" STL CASING

EL = 571.50 GRADE BREAK
EL = 567.57 GRADE BREAK
PROP. 24" STM EL = 569.49
PROP. 24" STM EL = 568.09
EL = 565.81
INSTALL: 1 - 12" 45° VERTICAL BEND
EL = 569.22

137.05 LF 12" P.V.C. WATER PIPE - CLASS 200 & CLASS "C" EMBEDMENT

WATER LINE H

STA 65+46.56, 48.55' LT
INSTALL:
1 - 16" 45° VERTICAL BEND

STA 65+41.97, 52.09' LT
INSTALL:
1 - 16" 45° BEND
CUT AND PLUG
EX. 16" STL CYL. RCCP WATER
CONNECT TO
EX. 16" STL CYL. RCCP WATER

95 LF 24" STL CASING

STA 65+60.25, 57.23' RT
INSTALL:
1 - 16" 45° VERTICAL BEND

STA 65+57.28, 57.62' RT
INSTALL:
1 - 16" 45° BEND
CUT AND PLUG
EX. 16" STL CYL. RCCP WATER
CONNECT TO
EX. 16" STL CYL. RCCP WATER

EL = 567.71
PROP. 24" STM EL = 570.06
PROP. 24" STM EL = 569.60
EL = 567.09

113.95 LF 16" P.V.C. WATER PIPE - CLASS 200 & CLASS "C" EMBEDMENT

585 580 575 570 565 560 555

57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00

3-24-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Richard T. Grice

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

WATER LINE

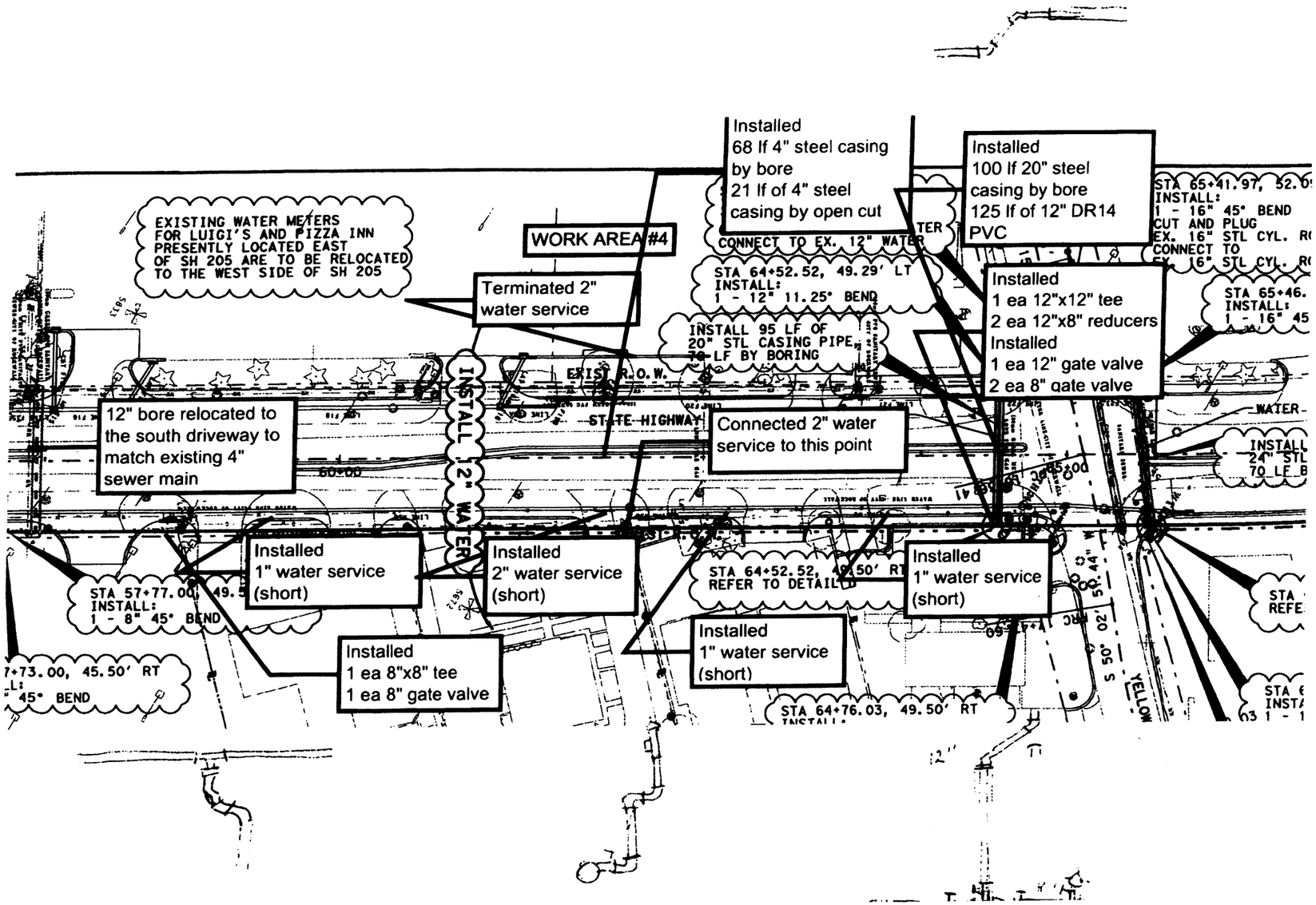
PLAN & PROFILE
STA 57+00 TO 68+00

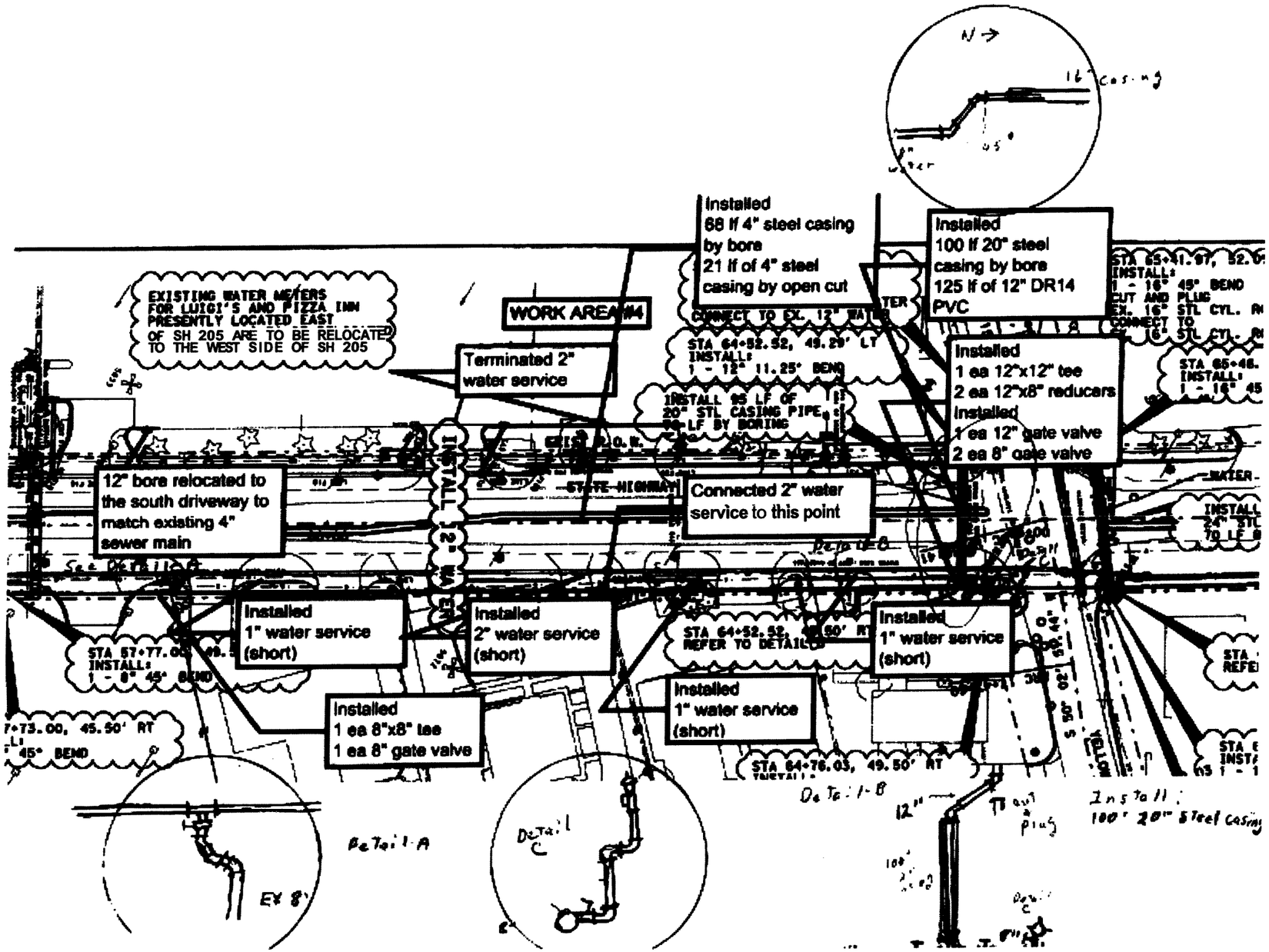
SHEET 7 OF 19

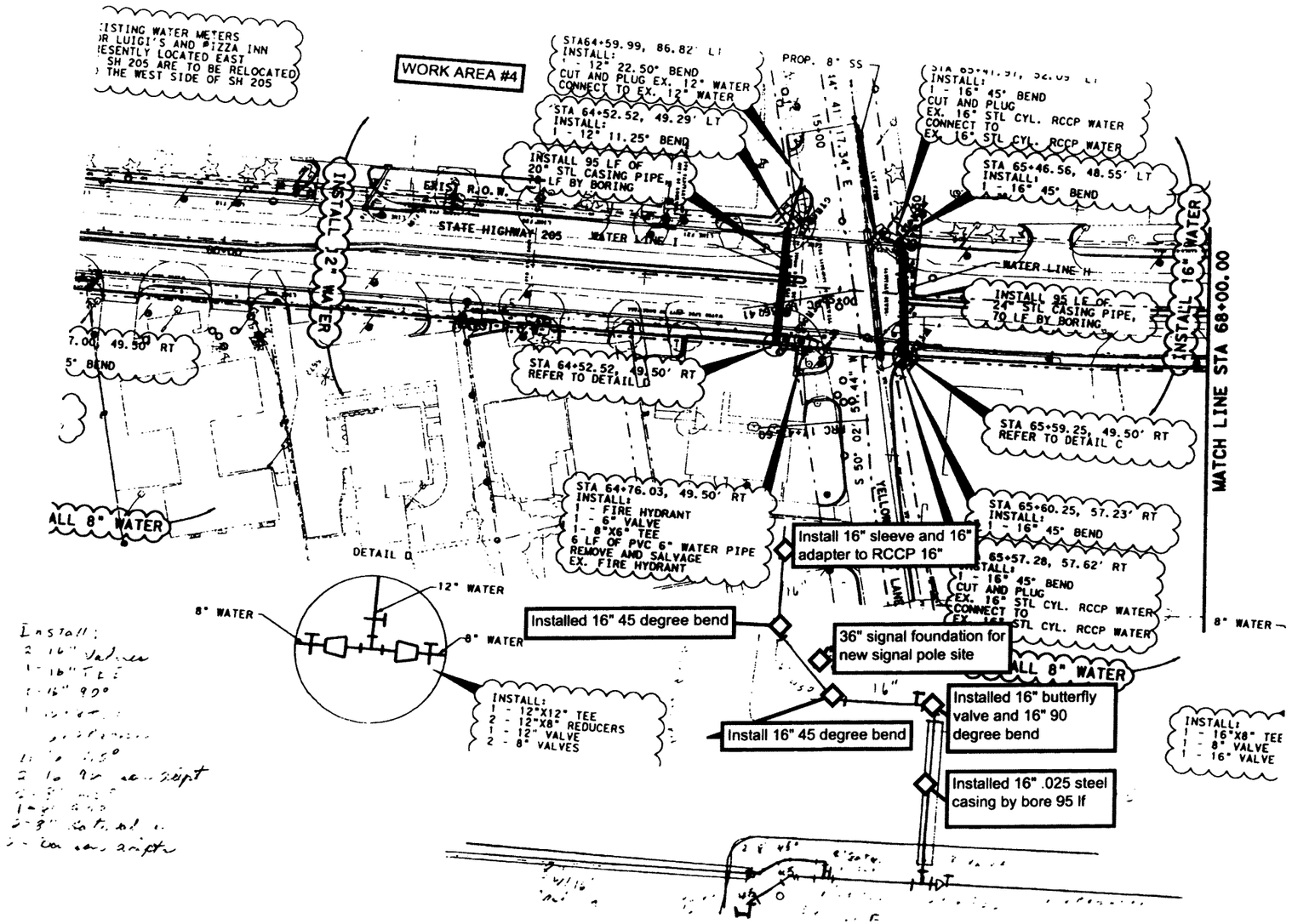
DIST. COUNTY	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	516
CONT.	SECT.	JOB	
0451	01	032, ETC	

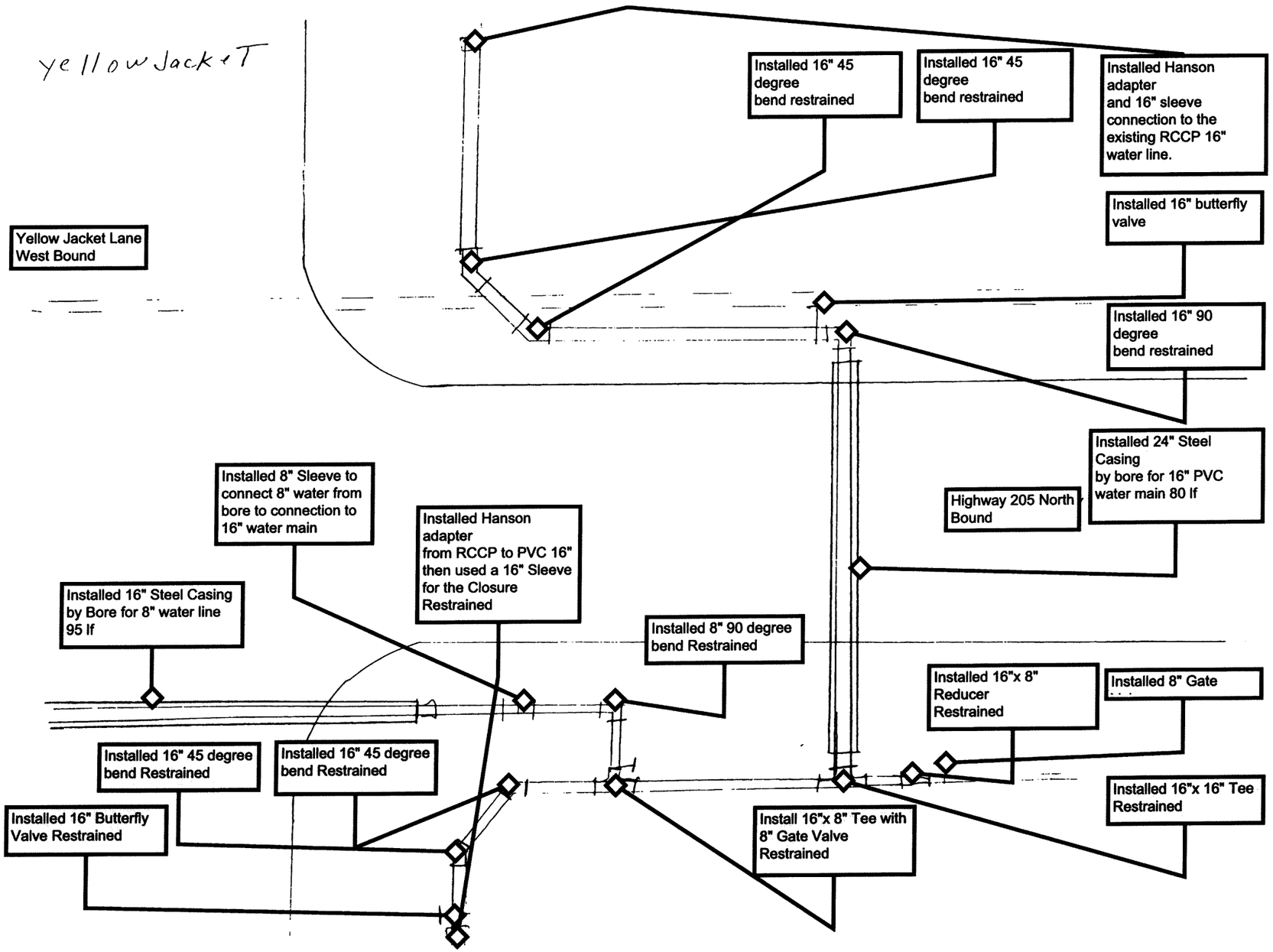
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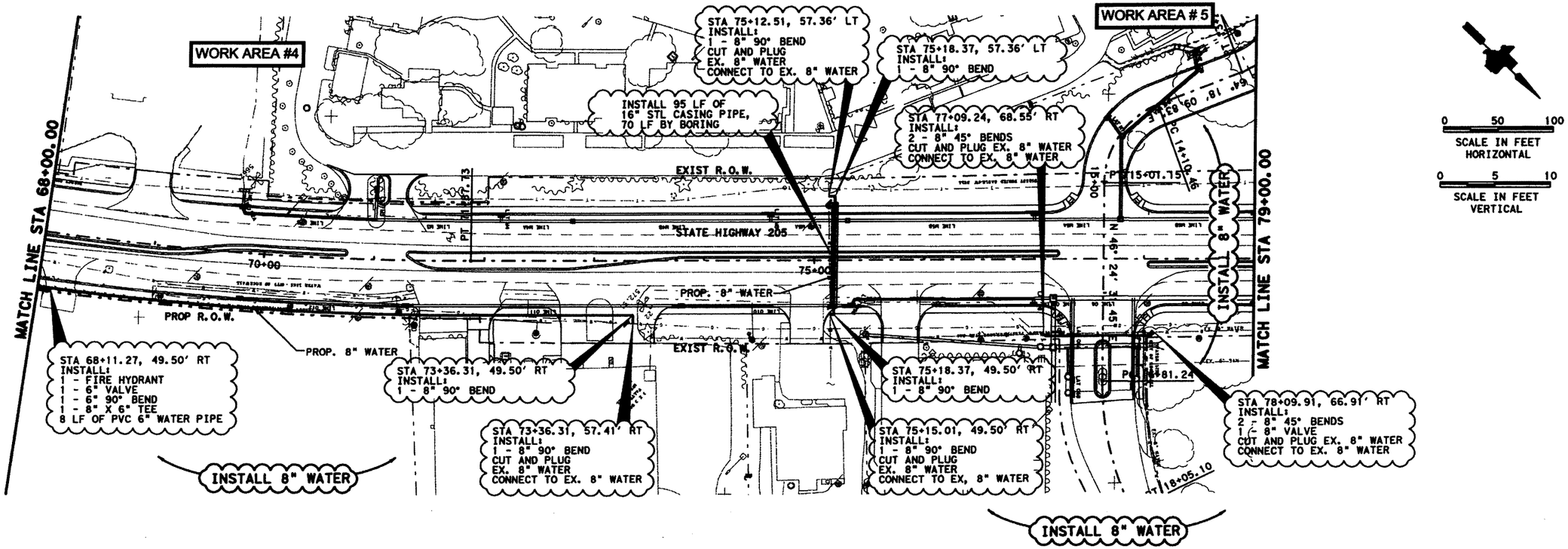

EXISTING WATER METERS FOR LUIGI'S AND PIZZA INN PRESENTLY LOCATED EAST OF SH 205 ARE TO BE RELOCATED TO THE WEST SIDE OF SH 205
WORK AREA #4
Terminated 2" water service
Installed 68 lf 4" steel casing by bore 21 lf of 4" steel casing by open cut
CONNECT TO EX. 12" WATER
STA 64+52.52, 49.29' LT INSTALL: 1 - 12" 11.25° BEND
INSTALL 95 LF OF 20" STL CASING PIPE, 70 LF BY BORING
Installed 100 lf 20" steel casing by bore 125 lf of 12" DR14 PVC
Installed 1 ea 12"x12" tee 2 ea 12"x8" reducers
Installed 1 ea 12" gate valve 2 ea 8" gate valve
STA 65+41.97, 52.0 INSTALL: 1 - 16" 45° BEND CUT AND PLUG EX. 16" STL CYL. R CONNECT TO EX. 16" STL CYL. R
STA 65+46. INSTALL: 1 - 16" 45
EXIST. R.O.W.
STATE HIGHWAY
12" bore relocated to the south driveway to match existing 4" sewer main
INSTALL 12" WATER
Connected 2" water service to this point
INSTALL 24" STL 70 LF B
WATER
Installed 1" water service (short)
Installed 2" water service (short)
STA 57+77.00, 49.5 INSTALL: 1 - 8" 45° BEND
Installed 1 ea 8"x8" tee 1 ea 8" gate valve
STA 64+52.52, 49.50' RT REFER TO DETAIL
Installed 1" water service (short)
Installed 1" water service (short)
STA 64+76.03, 49.50' RT
7+73.00, 45.50' RT
45° BEND
YELLOW
STA REFE
STA INSTA


EXISTING WATER METERS FOR LUIGI'S AND PIZZA INN PRESENTLY LOCATED EAST OF SH 205 ARE TO BE RELOCATED TO THE WEST SIDE OF SH 205
WORK AREA #4
Terminated 2" water service
Installed 68 lf 4" steel casing by bore 21 lf of 4" steel casing by open cut
Installed 100 lf 20" steel casing by bore 125 lf of 12" DR14 PVC
Installed 1 ea 12"x12" tee 2 ea 12"x8" reducers Installed 1 ea 12" gate valve 2 ea 8" gate valve
12" bore relocated to the south driveway to match existing 4" sewer main
Connected 2" water service to this point
Installed 1" water service (short)
Installed 2" water service (short)
Installed 1" water service (short)
Installed 1" water service (short)
Installed 1 ea 8"x8" tee 1 ea 8" gate valve
STATE HIGHWAY
CONNECT TO EX. 12" WATER
STA 64+52.52, 49.29' LT
INSTALL: 1 - 12" 11.25° BEND
INSTALL 95 LF OF 20" STL CASING PIPE 90 LF BY BORING
STA 64+52.52 REFER TO DETAIL
STA 64+76.03, 49.50' RT
STA 57+77.00
INSTALL: 1 - 8" 45° BEND
7+73.00, 45.50' RT
45° BEND
STA 65+46.
INSTALL: 1 - 16" 45
16" casing
Detail A
Detail C
Detail B
12"
Tie out & plug
Install: 100' 20" Steel casing
EX 8"


WORK AREA #4
ISTING WATER METERS
R LUIGI'S AND PIZZA INN
ESENTLY LOCATED EAST
SH 205 ARE TO BE RELOCATED
THE WEST SIDE OF SH 205
STA64+59.99, 86.82' LT
INSTALL:
1 - 12" 22.50° BEND
CUT AND PLUG EX. 12" WATER
CONNECT TO EX. 12" WATER
STA 64+52.52, 49.29' LT
INSTALL:
1 - 12" 11.25° BEND
INSTALL 95 LF OF
20" STL CASING PIPE,
70 LF BY BORING
EXIST R.O.W.
STATE HIGHWAY 205
WATER LINE I
INSTALL 12" WATER
7.00, 49.50' RT
5° BEND
STA 64+52.52, 49.50' RT
REFER TO DETAIL D
ALL 8" WATER
DETAIL D
STA 64+76.03, 49.50' RT
INSTALL:
1 - FIRE HYDRANT
1 - 6" VALVE
1 - 8"X6" TEE
6 LF OF PVC 6" WATER PIPE
REMOVE AND SALVAGE
EX. FIRE HYDRANT
PROP. 8" SS
S 50° 02' 44" E
17.34'
15.00
YELLOW
LANE
STA 65+41.97, 52.03' LT
INSTALL:
1 - 16" 45° BEND
CUT AND PLUG
EX. 16" STL CYL. RCCP WATER
CONNECT TO
EX. 16" STL CYL. RCCP WATER
STA 65+46.56, 48.55' LT
INSTALL:
1 - 16" 45° BEND
WATER LINE H
INSTALL 95 LF OF
24" STL CASING PIPE,
70 LF BY BORING
INSTALL 16" WATER
STA 65+59.25, 49.50' RT
REFER TO DETAIL C
MATCH LINE STA 68+00.00
STA 65+60.25, 57.23' RT
INSTALL:
1 - 16" 45° BEND
65+57.28, 57.62' RT
INSTALL:
1 - 16" 45° BEND
CUT AND PLUG
EX. 16" STL CYL. RCCP WATER
CONNECT TO
EX. 16" STL CYL. RCCP WATER
8" WATER
ALL 8" WATER
INSTALL:
1 - 16"X8" TEE
1 - 8" VALVE
1 - 16" VALVE
Install 16" sleeve and 16" adapter to RCCP 16"
Installed 16" 45 degree bend
36" signal foundation for new signal pole site
Install 16" 45 degree bend
Installed 16" butterfly valve and 16" 90 degree bend
Installed 16" .025 steel casing by bore 95 lf
12" WATER
8" WATER
8" WATER
INSTALL:
1 - 12"X12" TEE
2 - 12"X8" REDUCERS
1 - 12" VALVE
2 - 8" VALVES
Install:
2 16" Valves
1 - 16" TEE
1 16" 90°
1 12" 45°
11 16" 45°
2 16" 22.5° sleeve adapt
1 8" 45°
2 8" valves

yellowJacket





585
580
575
570
565
560
555

NO PROFILE PROVIDED FOR 8" WATER LINE

68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00

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3/24/2006 Plotted 24-MAR-2006 13:15

3-24-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
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SH 205

WATER LINE

PLAN & PROFILE
STA 68+00 TO 79+00

SHEET 8 OF 19

DIST. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	517
CONT.	SECT.	JOB	
0451	01	032, ETC	

PROFILE ON SHEET 7A OF 19

EXIST R.O.W.

16" STL CASING PIPE
TO BE BORING

STATE HIGHWAY 205

Detail C

Detail B

3" WATER LINE

PROP R.O.W.

WATER LINE SAT 02

3' ROW

EXIST R.O.W.

STA 72+20.00, 49.50' RT
INSTALL:
1 - 8" 45° BEND

STA 72+42.25, 71.78' RT
INSTALL:
1 - 8" 45° BEND

INSTALL 8" WATER

STA 73+11.61
INSTALL:
1 - 8" TEE
1 - 8" VALVE
1 - 8" VALVES
CONNECT TO EX. 8" WATER

STA 73+16.37, 73.37' RT
INSTALL:
1 - 8" TEE
1 - 8" VALVES
CUT AND PLUG
EX. 8" WATER

REFER TO DETAIL A

5 - 1" Services

INSTAL

6" Fire Line

Install
1 - FH
1 - 8"x6" TEE
1 - 6" Valve
6 LF of 6" PVC Water

N

EXTRA PIPE
STA 73+
STA 77+
408'

Service Lo
STA 69+32 -
STA 70+00 -
STA 71+40 -
STA 74+38 -
STA 74+43 -
STA 75+30 -
STA 76+15 -
STA 76+20 -

Detail 'A

80' 16" STL Casing

12"

6"

Detail 'B

95' 16" STL Casing

6"

8"

Detail C

Ex 8"

Ex 8"

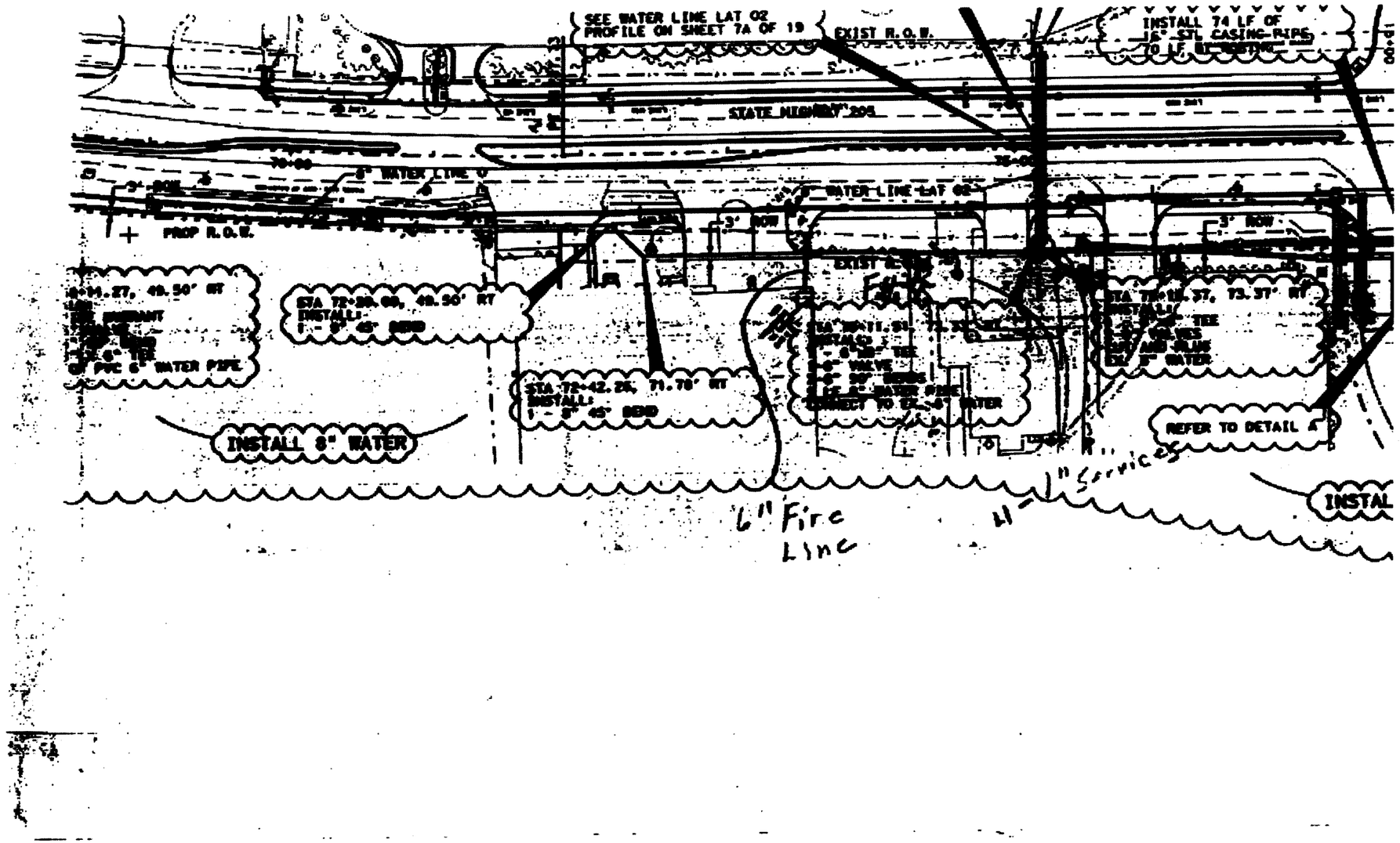
8"

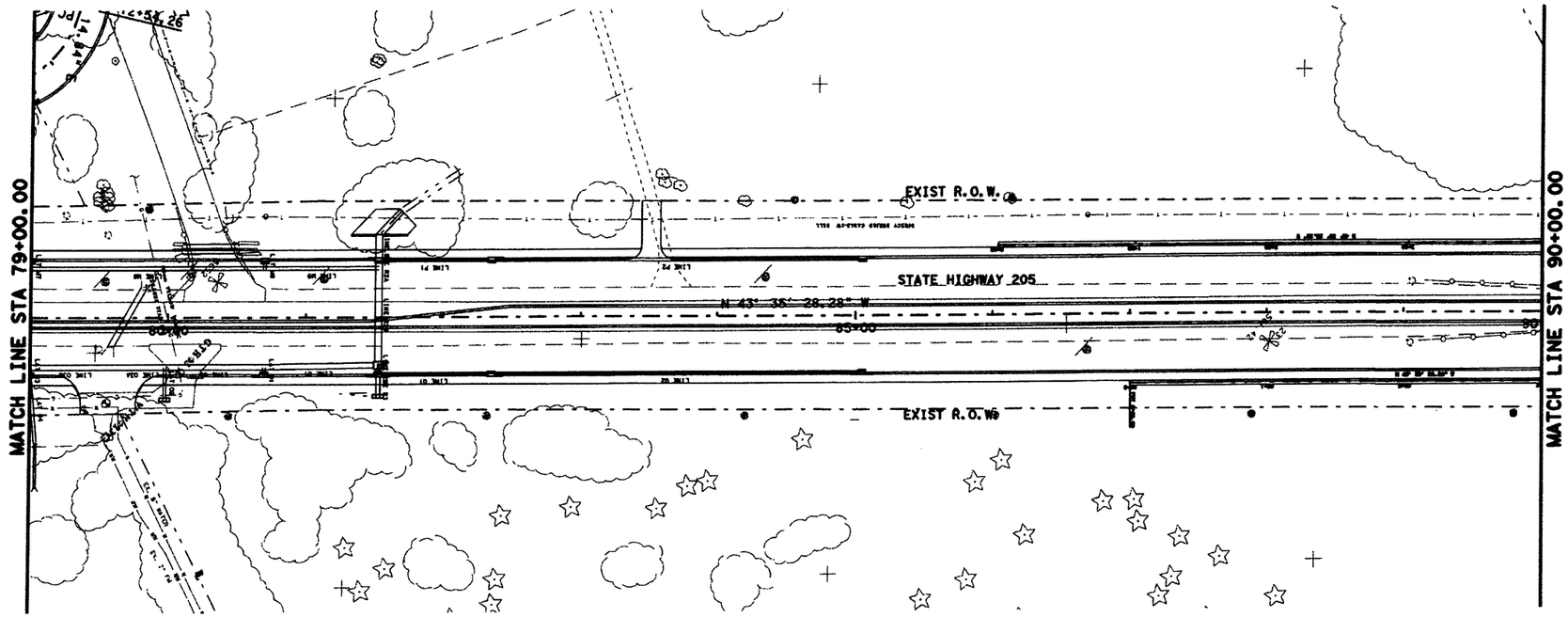
6"

8"

6"

Detail D


SEE WATER LINE LAT 02 PROFILE ON SHEET 7A OF 19
EXIST R.O.W.
INSTALL 74 LF OF 6" STL CASING PIPE
70 LF BY BORING
STATE HIGHWAY 205
8" WATER LINE
8" WATER LINE LAT 02
PROP R.O.W.
INSTALL 8" WATER
REFER TO DETAIL A
6" Fire Line
1" Services



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

570 565 560 555 550 545 540

79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00 90+00

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
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SH 205

WATER LINE

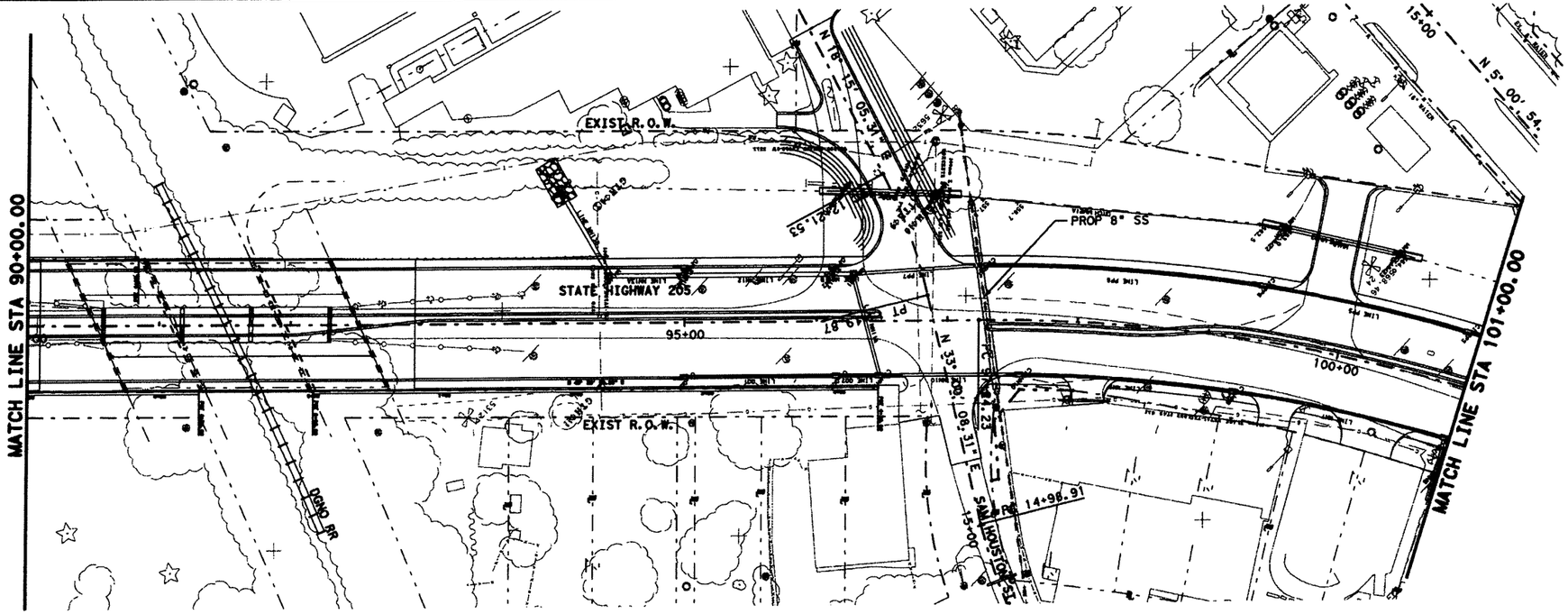
PLAN & PROFILE
STA 79+00 TO 90+00

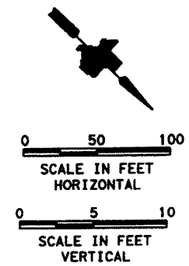
SHEET 9 OF 19

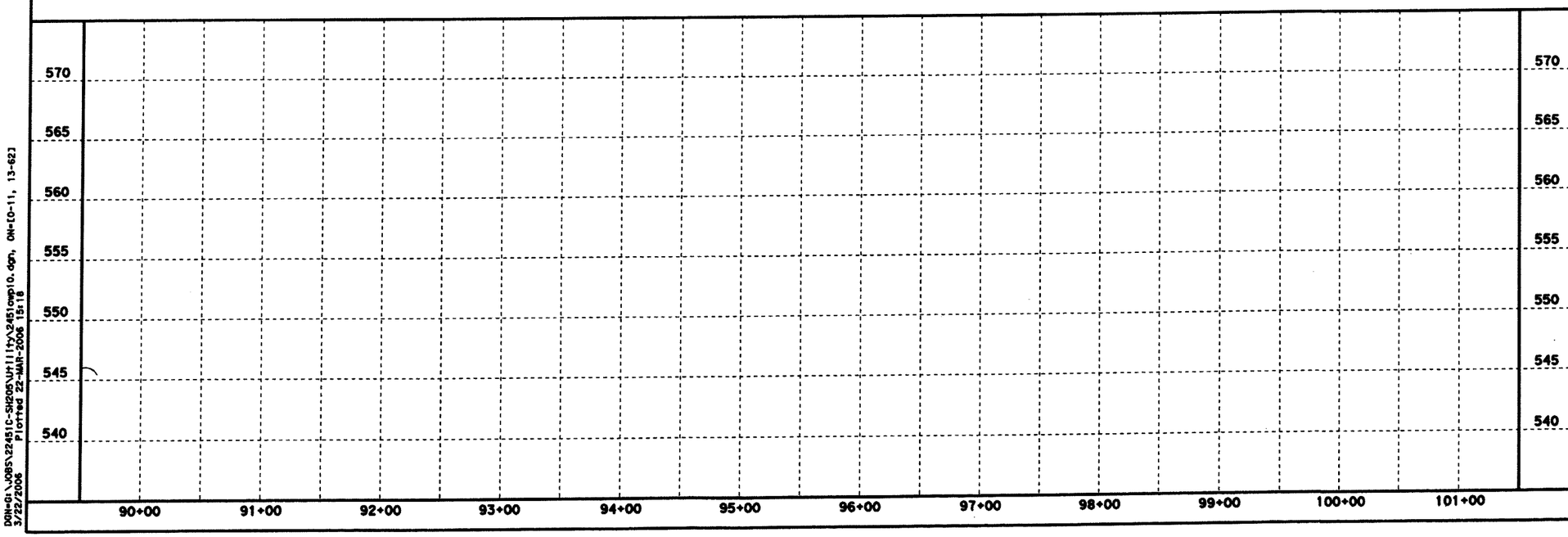
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	518
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/22/2006 Plotted 22-MAR-2006 15:18







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3/22/2006 Plotted 22-MAR-2006 15:18

3-22-06

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SH 205

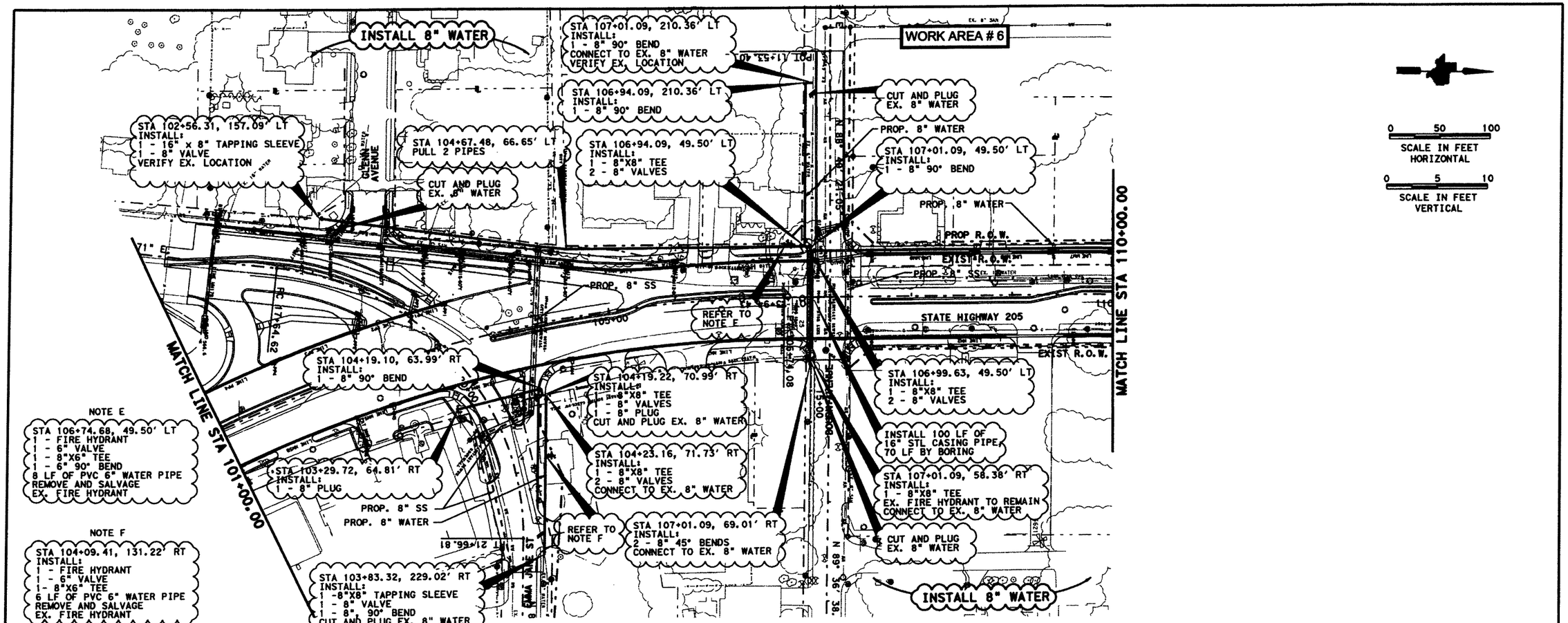
WATER LINE

PLAN & PROFILE
STA 90+00 TO 101+00

SHEET 10 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	519
CONT.	SECT.	JOB	
0451	01	032, ETC	



NO PROFILE PROVIDED FOR 8" WATER LINE

585 580 575 570 565 560 555

101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00

3-24-06

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SH 205

WATER LINE

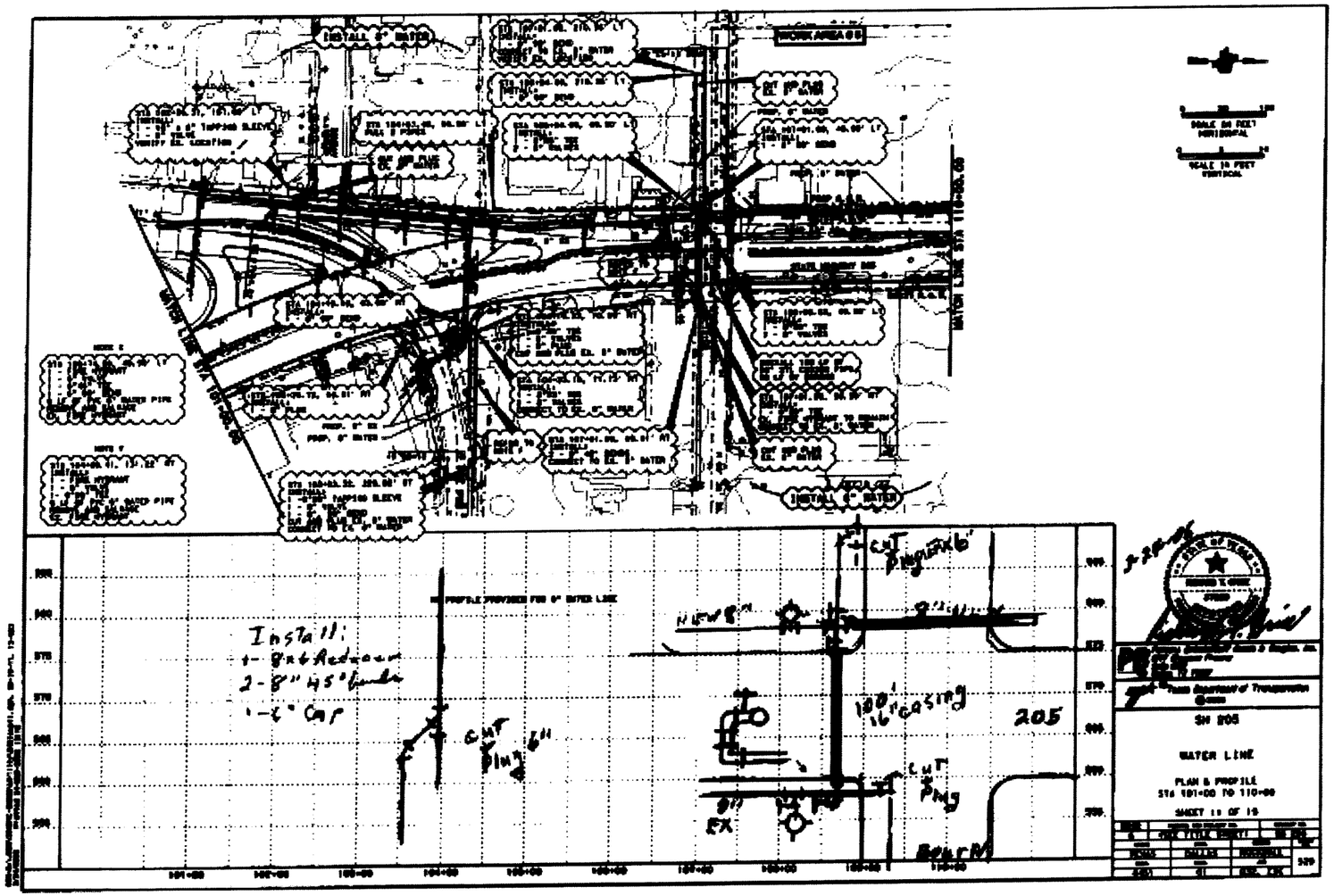
PLAN & PROFILE
STA 101+00 TO 110+00

SHEET 11 OF 19

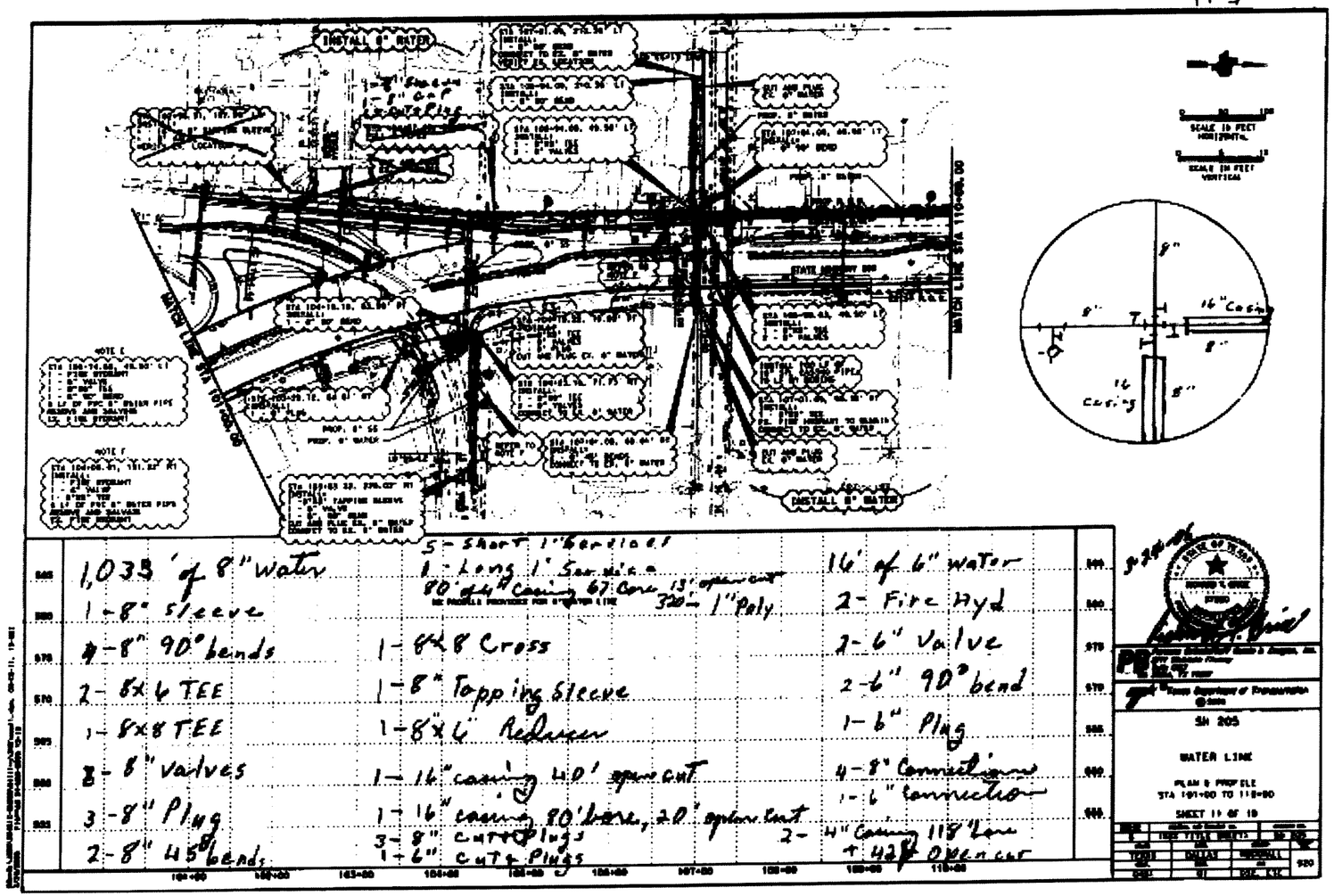
DIST. DIV. SEC.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	520
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/24/2006 Plotted 24-MAR-2006 13:15


INSTALL 8" WATER
WORK AREA #3
8" SP ZONE
SCALE IN FEET HORIZONTAL
SCALE IN FEET VERTICAL
Install:
1- 8"x6" Reducer
2- 8" 45° Bends
1- 6" Cap
CUT PLUG & 6"
CUT PLUG & 6"
NEW 8"
100' 16" CASING
205
CUT PLUG
8" EX
BORE
SH 205
WATER LINE
PLAN & PROFILE
STA 101+00 TO 110+00
SHEET 11 OF 15

PT 4



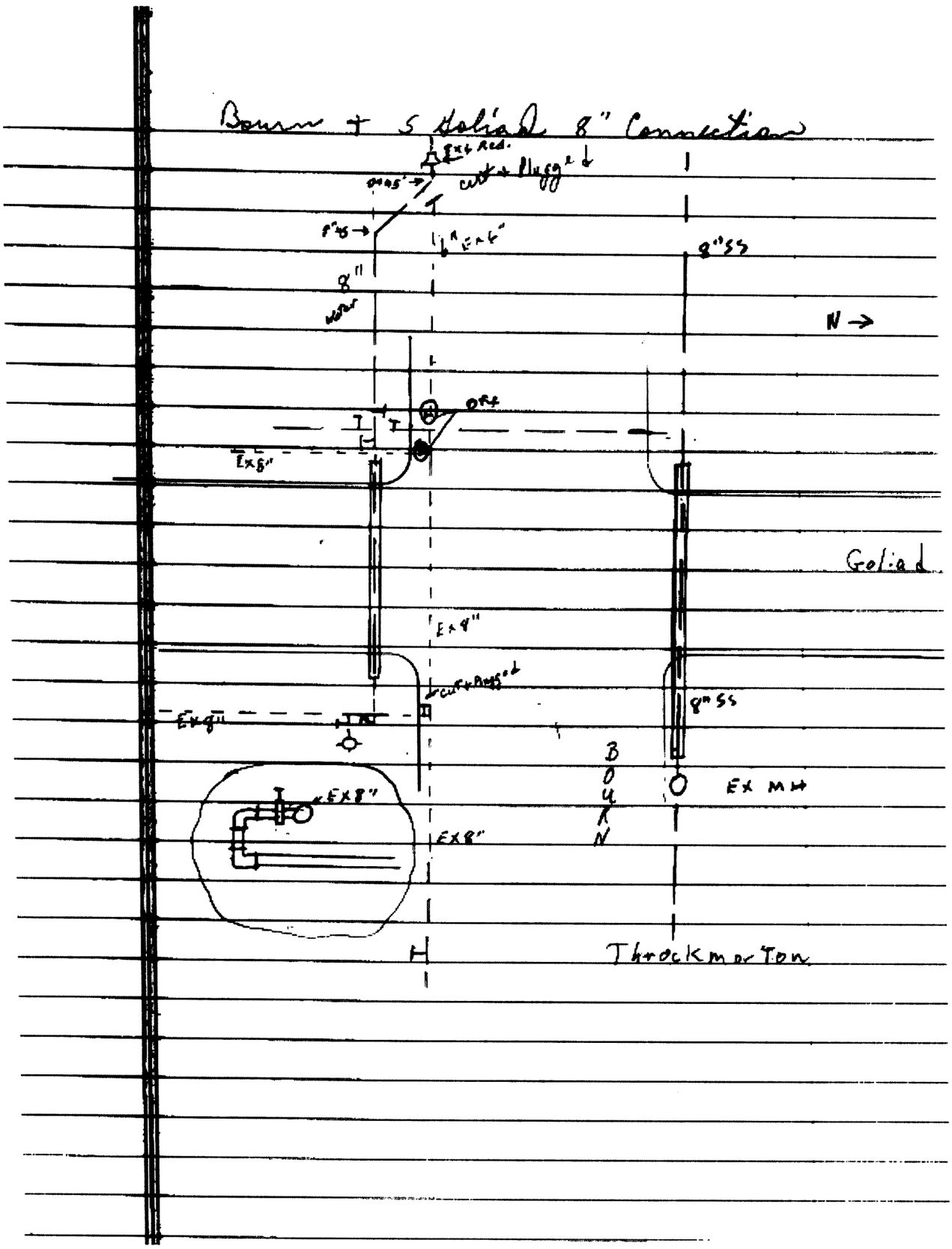
1,035 ' of 8" water	5 - Short 1" Services		16' of 6" water	
1 - 8" sleeve	1 - Long 1" Service	80' of 16" Casing 67' Core 13' open cut	2 - Fire Hyd	
4 - 8" 90° bends	1 - 8x8 Cross	320' - 1" Poly	2 - 6" Valve	
2 - 8x6 TEE	1 - 8" Tapping Sleeve		2 - 6" 90° bend	
1 - 8x8 TEE	1 - 8"x6" Reducer		1 - 6" Plug	
8 - 8" valves	1 - 16" casing 40' open cut		4 - 8" Connections	
3 - 8" Plug	1 - 16" casing 90' bore, 20' open cut		1 - 6" connection	
2 - 8" 45° bend,	3 - 8" cut + plugs		2 - 4" Casing 118' Bore + 42' Open cut	
	1 - 6" cut + plugs			

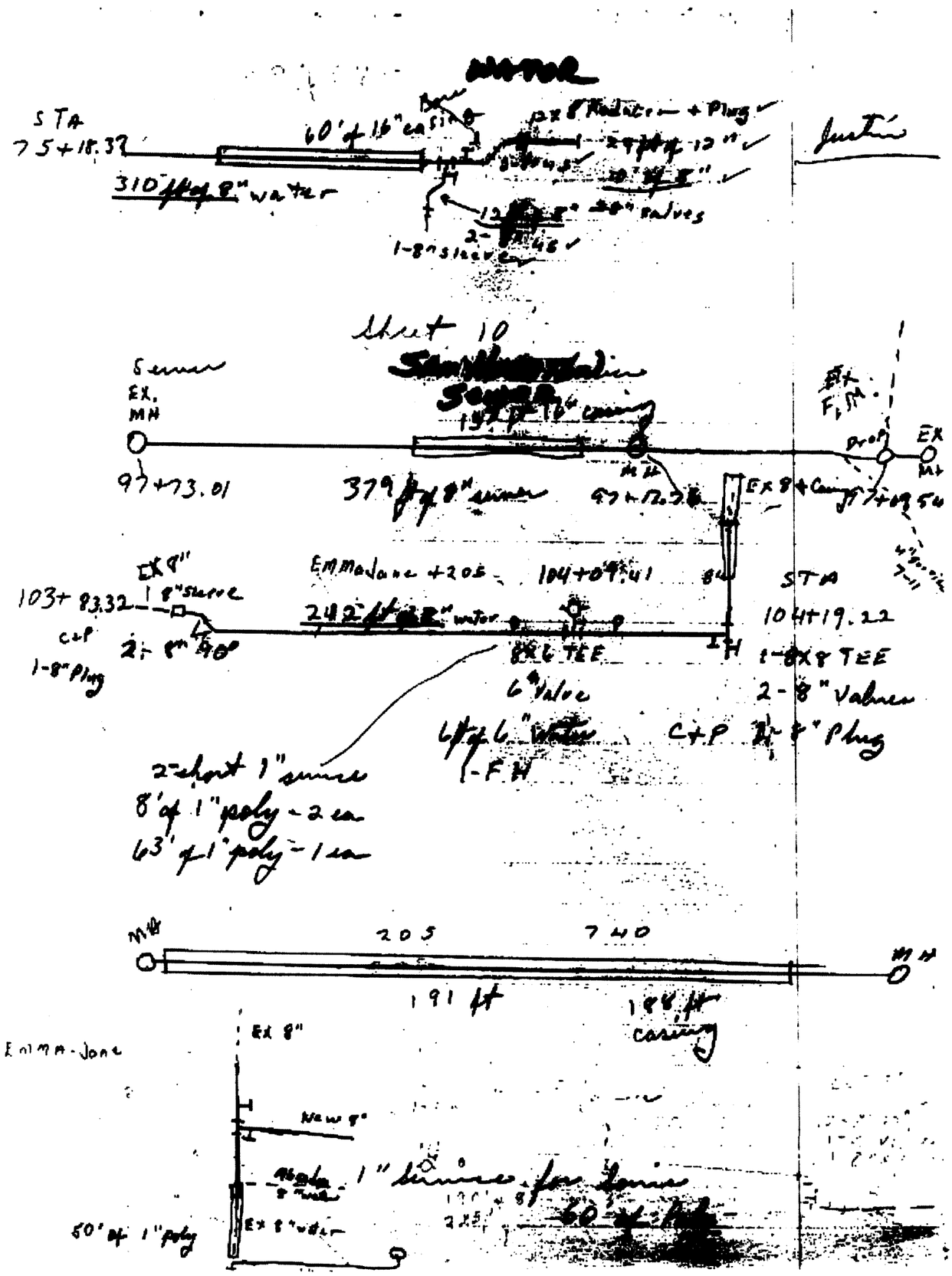
SH 205

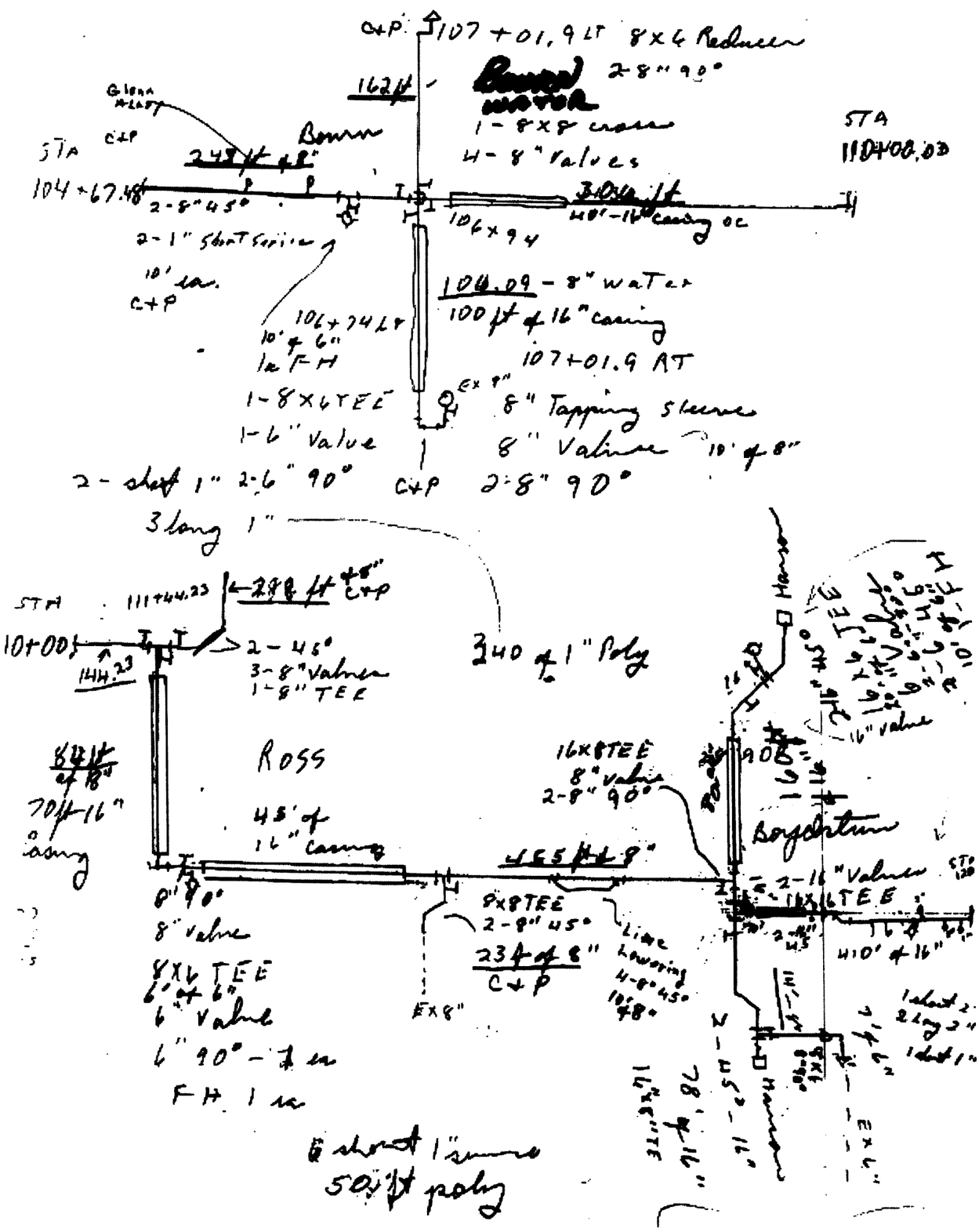
WATER LINE

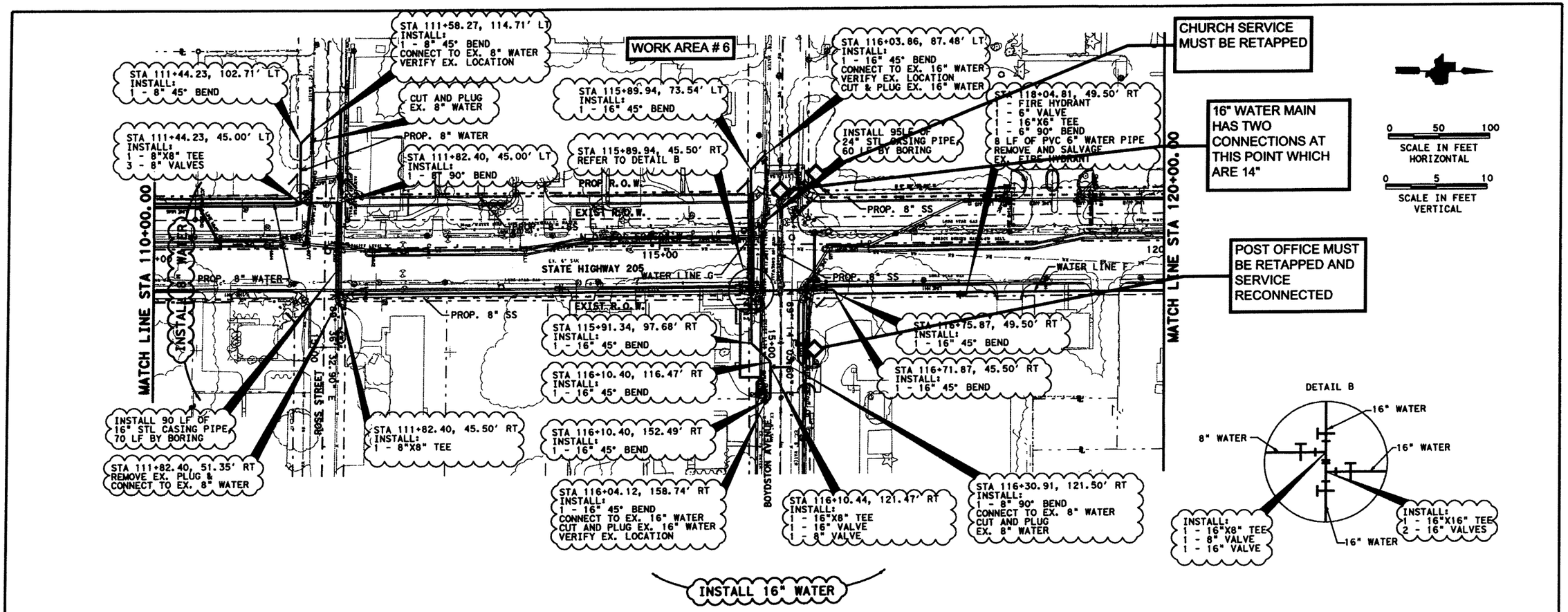
PLAN & PROFILE
STA 101+00 TO 118+00

SHEET 11 OF 19


Bowie + S Goliad 8" Connection
Ex 4 Red.
cut + Plugg 2 ⊥
8"SS →
8"SS →
8"
water
8"SS
N →
Ex 8"
Goliad
Ex 8"
cut + Plugg 2 ⊥
Ex 8"
8"SS
EX 8"
EX 8"
BOUND
EX MH
Throckmorton


WATER
STA
75+18.32
60' of 16" casing
8x8 Reducer + Plug
2 Plug 12"
8" x 8"
12 8" 90° valves
2- 45
1-8" sleeve
310 ft of 8" water
Justin
Sheet 10
Sewer
EX. MH
379 ft of 8" sewer
97+73.01
EX 8" + Casing
Prop
EX MH
EX 8"
103+83.32
8" sleeve
2- 8" 45°
c+p
1-8" Plug
Emma Jane +205
104+09.41
242 ft 8" water
8x6 TEE
6" Valve
6 ft of 6" water
1-FH
STA
104+19.22
1-8x8 TEE
2-8" Valves
C+P 8" Plug
2-short 1" sewer
8' of 1" poly - 2 ea
63' of 1" poly - 1 ea
MH
205
740
MH
191 ft
184 ft
casing
Emma-Jane
EX 8"
New 8"
1" sewer for Jamie
50' of 1" poly
EX 8" water


C+P
107+01.9 LT 8x6 Reducer
2-8" 90°
162 ft
Bowen
1-8x8 cross
4-8" valves
STA
110+08.03
STA
104+67.48
248 ft 8"
2-8" 45°
304 ft
40'-16" casing oc
106x94
2-1" short risers
10' ea.
C+P
104.09 - 8" water
100 ft of 16" casing
106+74 LT
10' of 6"
1 ea F-H
1-8x6 TEE
1-6" Valve
107+01.9 RT
8" Tapping sleeve
8" Valves 10' of 8"
2-8" 90°
2 - short 1" 2-6" 90°
3 long 1"
C+P
STA
10+00
111+44.23
288 ft 8"
C+P
2-45°
3-8" Valves
1-8" TEE
340 of 1" Poly
144.23
64 ft of 8"
70 ft 16" casing
Ross
45' of 16" casing
465 ft 8"
8" 90°
8" valve
8x6 TEE
6" of 6"
6" Valve
6" 90° - 1 ea
F-H 1 ea
8x8 TEE
2-8" 45°
234 of 8" C+P
Line Lowering
4-8" 45°
10' 48°
EX 8"
6 short 1" runs
50 ft poly
16x8 TEE
8" valve
2-8" 90°
90°
Boydstun
2-16" Valves
16x16 TEE
410' of 16"
2-45°
2-16" 45°
78' of 16"
EX 6"



3-24-06

STATE OF TEXAS
RICHARD T. GRICE
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SH 205

WATER LINE

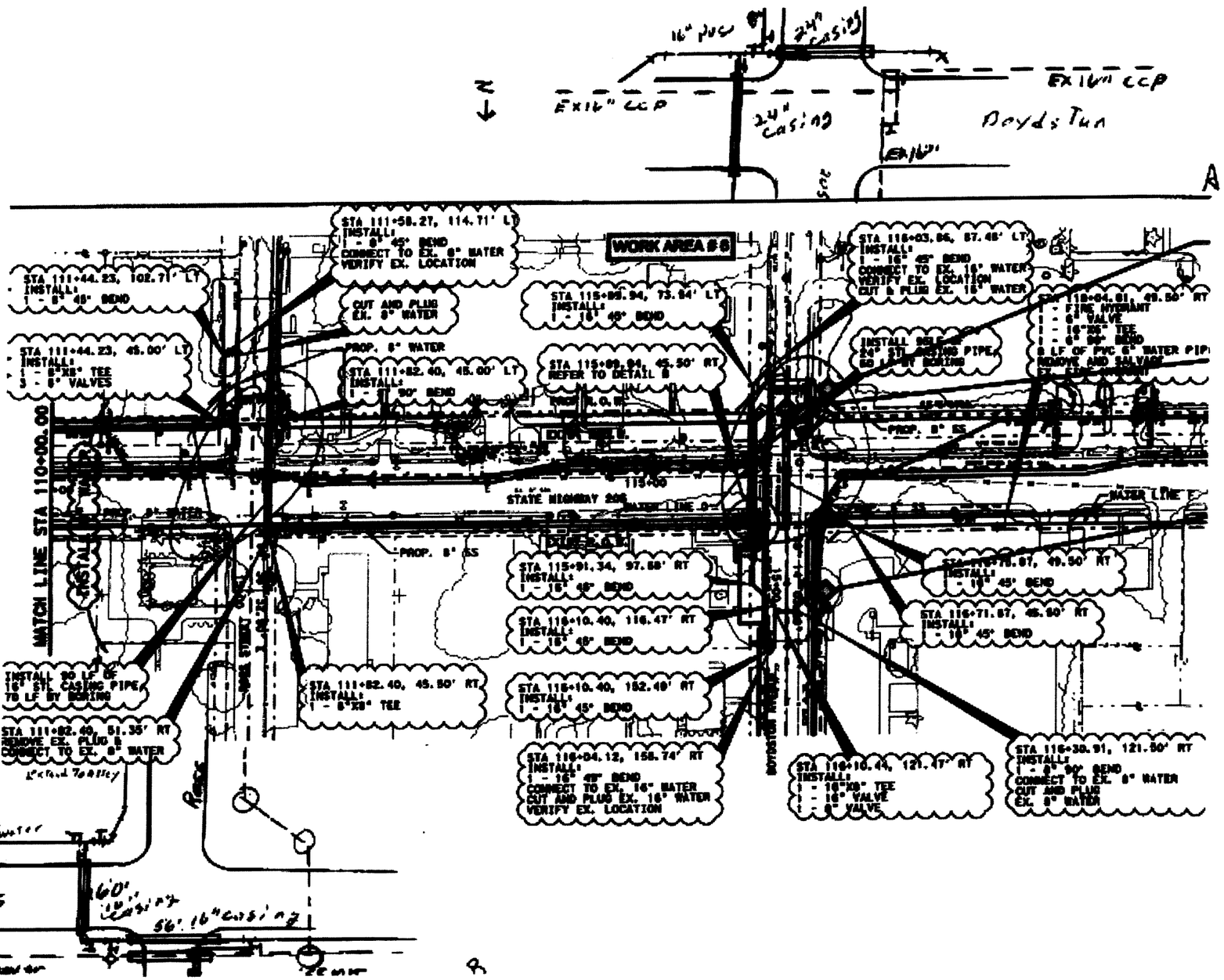
PLAN & PROFILE
STA 110+00 TO 120+00

SHEET 12 OF 19

DIST. DIV. SEC.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

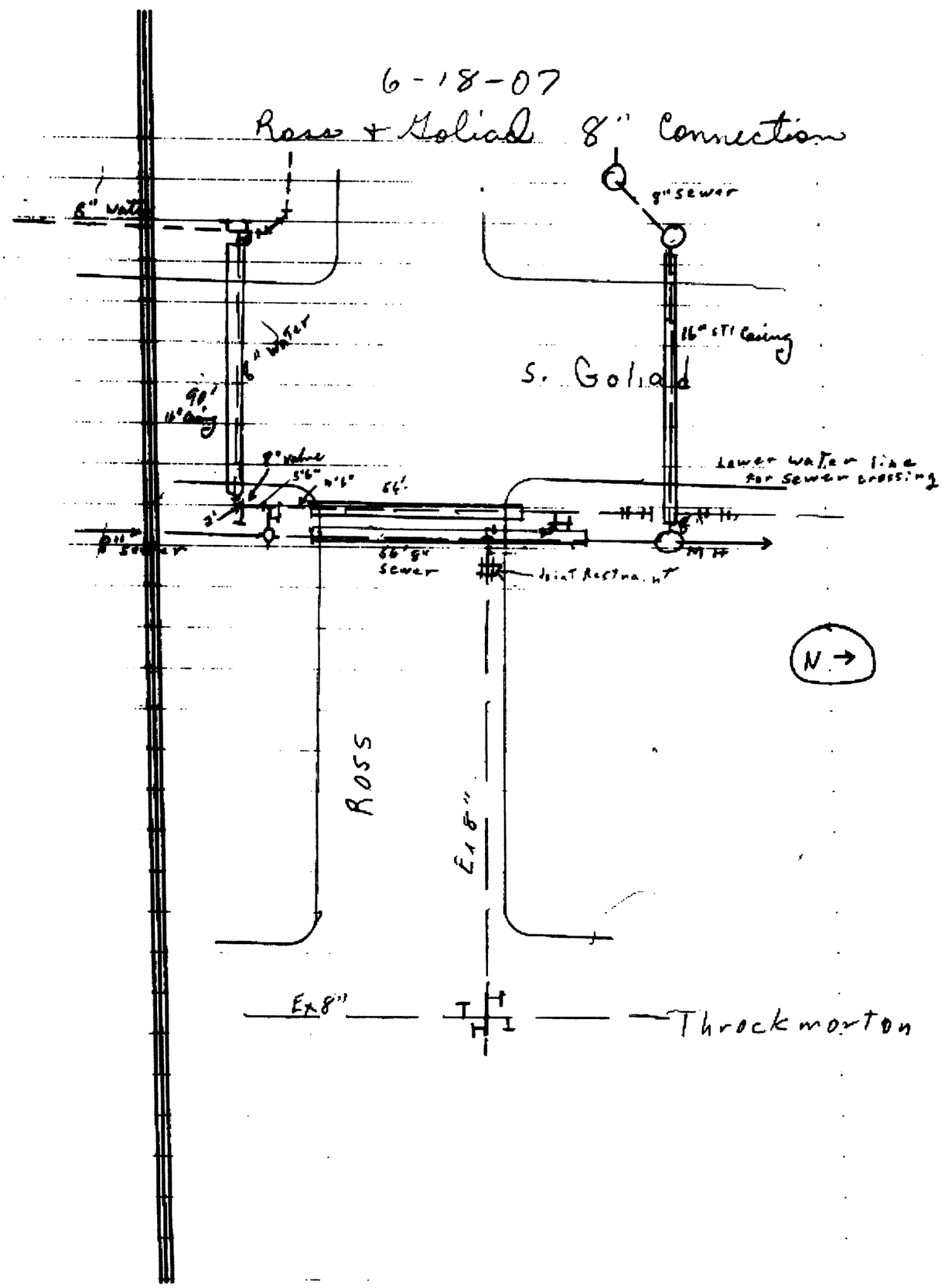
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	521
CONT.	SECT.	JOB	
0451	01	032, ETC	

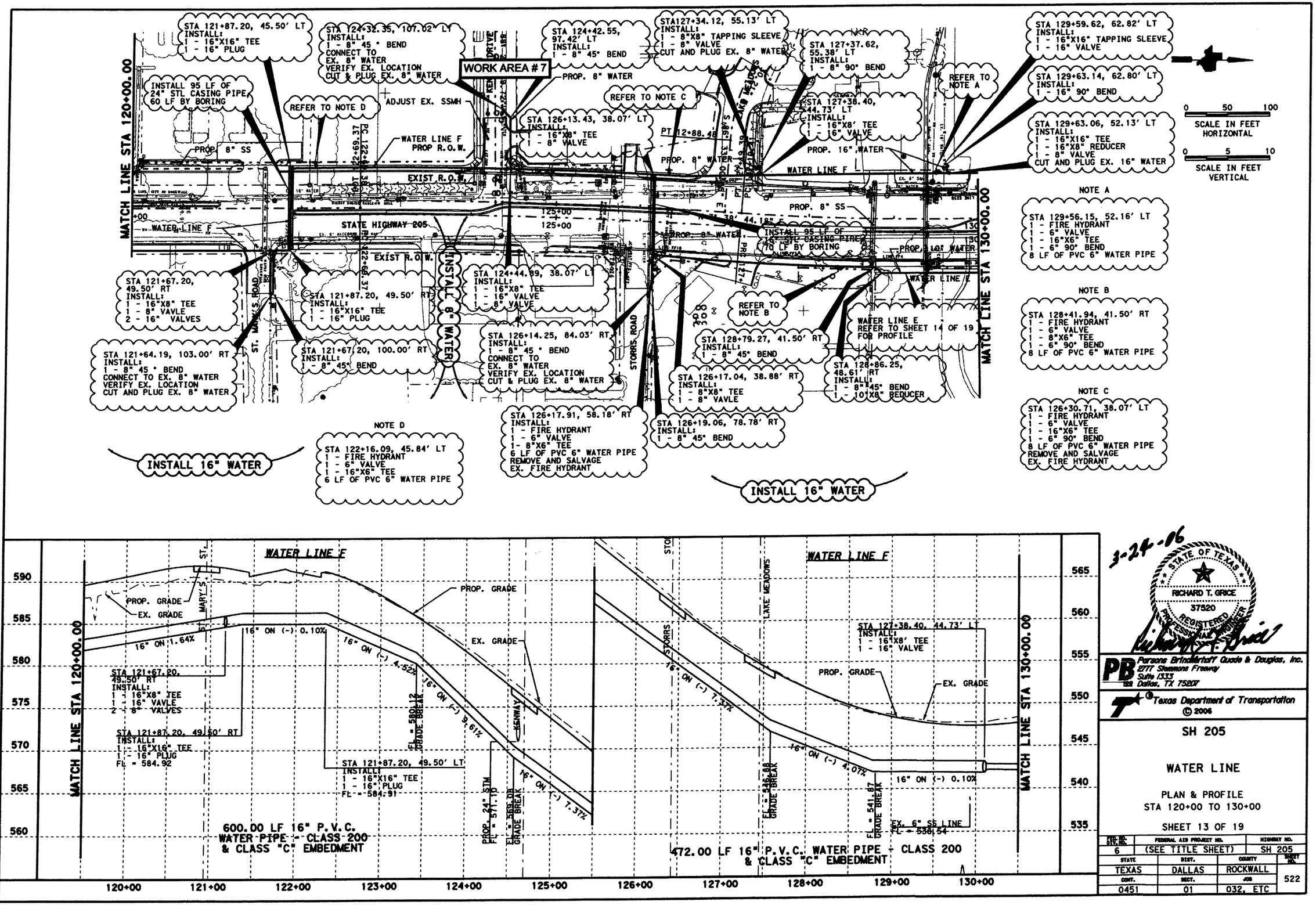
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3/24/2006 Plotted 24-MAR-2006 13:15


16" PVC
24" casing
EX16" CCP
EX16" CCP
24" casing
Boyds Run
EX16"
A
STA 111+58.27, 114.71' LT
INSTALL:
- 8" 45° BEND
CONNECT TO EX. 8" WATER
VERIFY EX. LOCATION
WORK AREA # 6
STA 111+44.23, 102.71' LT
INSTALL:
1 - 8" 45° BEND
CUT AND PLUG
EX. 8" WATER
STA 115+88.94, 73.84' LT
INSTALL:
1 - 16" 45° BEND
STA 116+03.86, 87.48' LT
INSTALL:
- 16" 45° BEND
CONNECT TO EX. 16" WATER
VERIFY EX. LOCATION
CUT & PLUG EX. 16" WATER
STA 111+44.23, 45.00' LT
INSTALL:
1 - 8"X8" TEE
3 - 8" VALVES
PROP. 8" WATER
STA 111+82.40, 45.00' LT
INSTALL:
1 - 90° BEND
STA 115+88.94, 45.50' RT
REFER TO DETAIL B
INSTALL
24" STL CASING PIPE
BY BORING
STA 118+04.81, 49.50' RT
1 - FIRE HYDRANT
1 - 8" VALVE
1 - 16"X8" TEE
1 - 8" 90° BEND
8 LF OF PVC 8" WATER PIP
REMOVE AND SALVAGE
EX. FIRE HYDRANT
MATCH LINE STA 110+00.00
STATE HIGHWAY 355
WATER LINE
PROP. 8" DS
STA 115+91.34, 97.58' RT
INSTALL:
1 - 16" 45° BEND
STA 116+10.40, 116.47' RT
INSTALL:
1 - 16" 45° BEND
STA 116+71.87, 49.50' RT
INSTALL:
- 16" 45° BEND
STA 116+71.87, 48.50' RT
INSTALL:
- 16" 45° BEND
INSTALL 20 LF OF
16" STL CASING PIPE
70 LF BY BORING
STA 111+82.40, 45.50' RT
INSTALL:
1 - 8"X8" TEE
STA 111+82.40, 51.35' RT
REMOVE EX. PLUG &
CONNECT TO EX. 8" WATER
STA 116+10.40, 152.49' RT
INSTALL:
1 - 16" 45° BEND
STA 116+04.12, 158.74' RT
INSTALL:
1 - 16" 45° BEND
CONNECT TO EX. 16" WATER
CUT AND PLUG EX. 16" WATER
VERIFY EX. LOCATION
STA 116+10.44, 121.47' RT
INSTALL:
1 - 16"X8" TEE
1 - 16" VALVE
1 - 8" VALVE
STA 116+30.91, 121.50' RT
INSTALL:
1 - 8" 90° BEND
CONNECT TO EX. 8" WATER
CUT AND PLUG
EX. 8" WATER
Locust Valley
8" WATER
Race
305
60'
56' 16" CMP
8" SEWER
SEWER

6-18-07

Ross + Goliad 8" Connection





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3/24/2006 Plotted 24-MAR-2006 13:15

3-24-06

STATE OF TEXAS
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Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

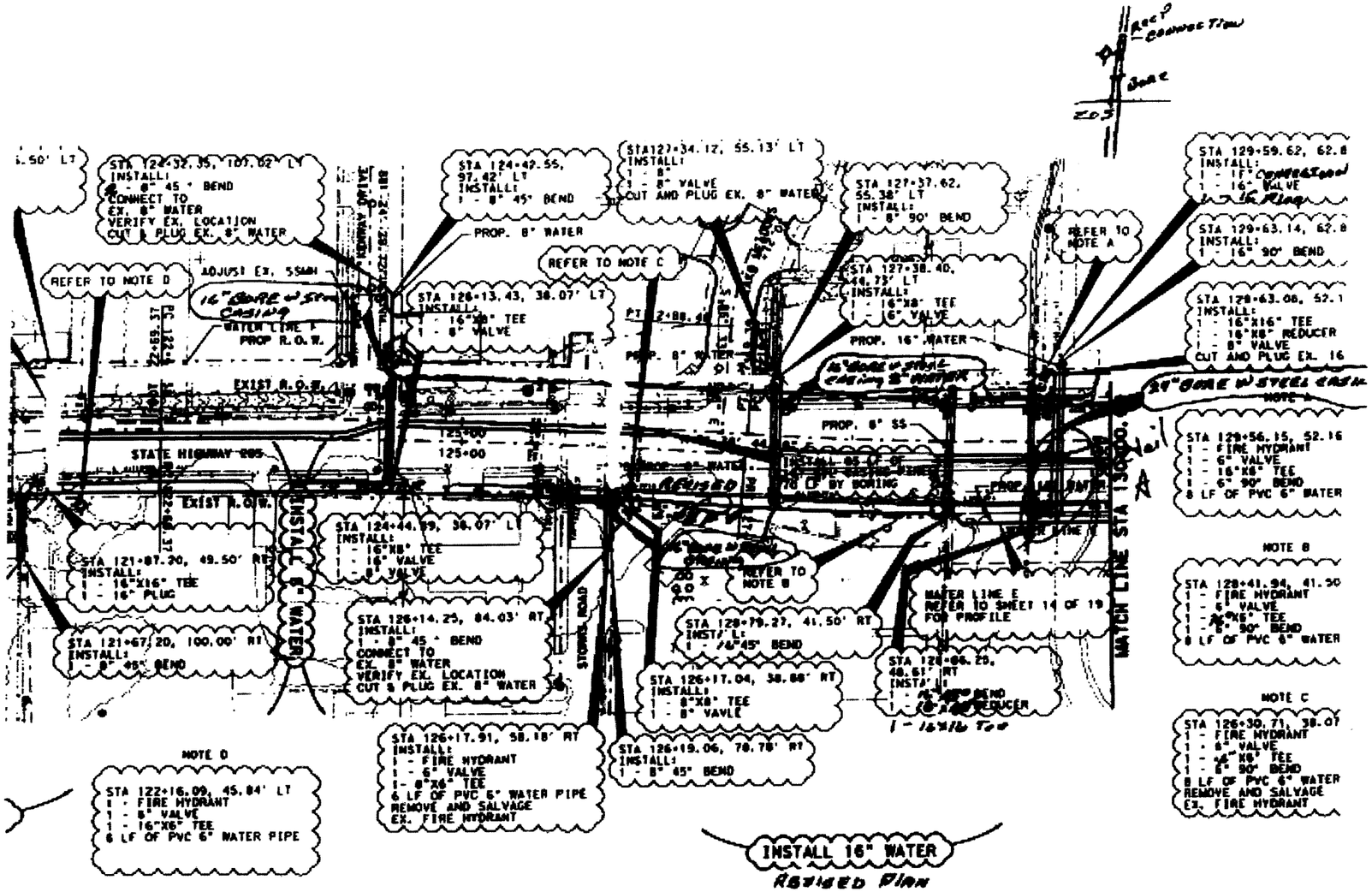
WATER LINE

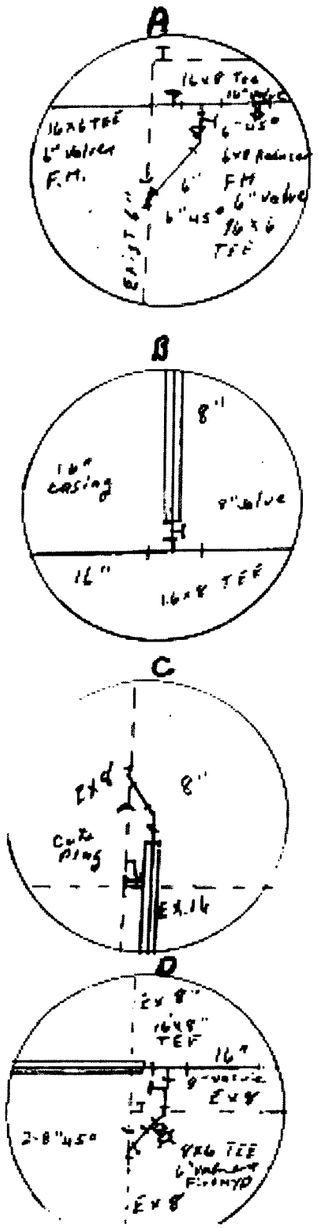
PLAN & PROFILE
STA 120+00 TO 130+00

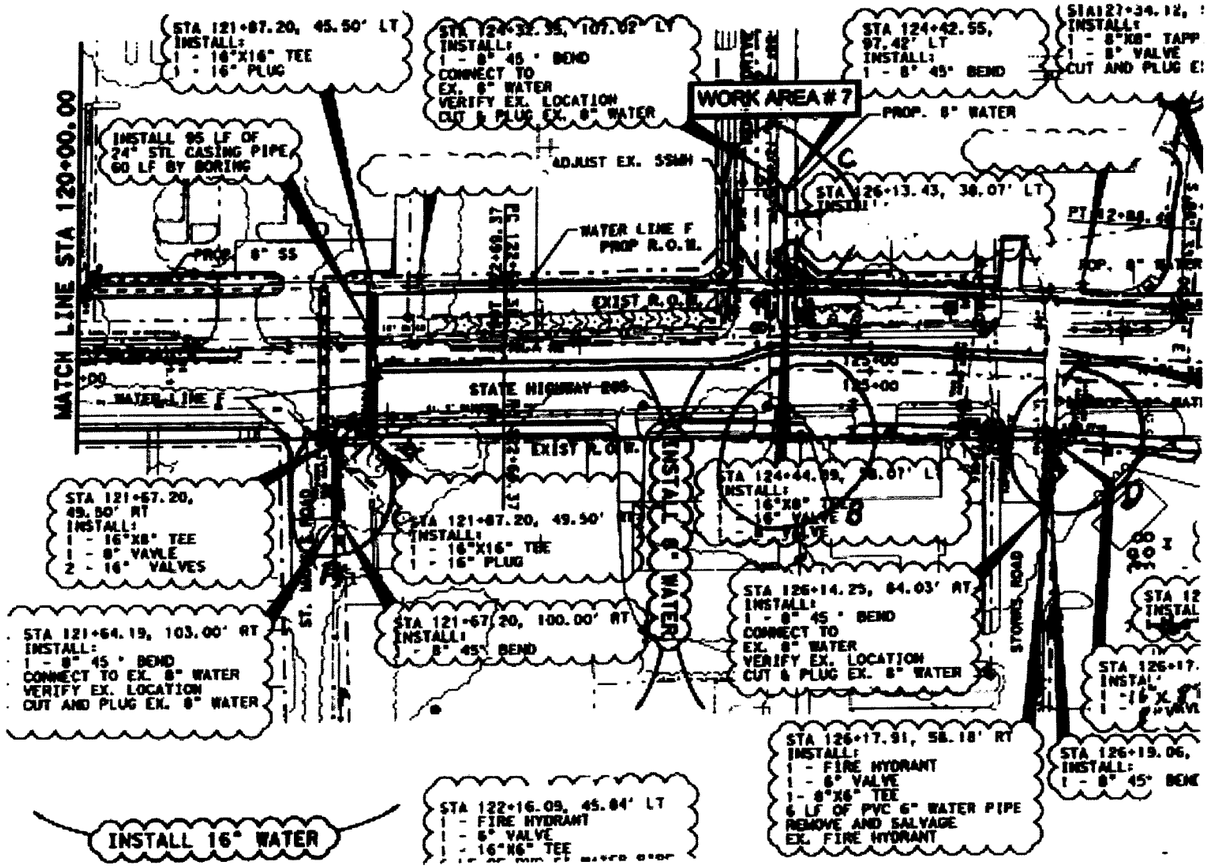
SHEET 13 OF 19

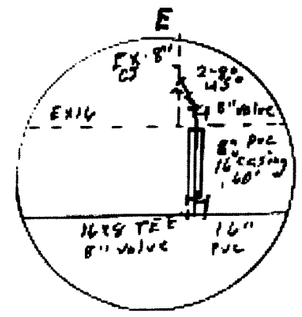
CONT. NO. DIST. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

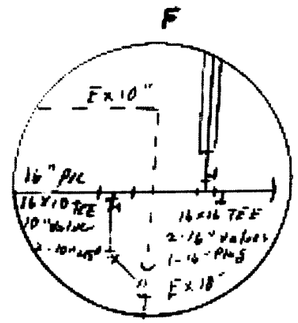
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	522
CONT.	SECT.	JOB	
0451	01	032, ETC	

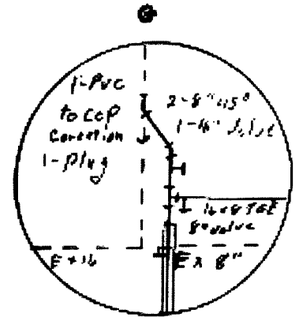

STA 124+32.35, 107.02' LT
INSTALL:
1 - 8" 45° BEND
CONNECT TO
EX. 8" WATER
VERIFY EX. LOCATION
CUT & PLUG EX. 8" WATER
REFER TO NOTE D
ADJUST EX. SSMH
16" STEEL CASING
WATER LINE I
PROP R.O.W.
EXIST R.O.W.
STATE HIGHWAY 285
STA 124+42.55, 97.42' LT
INSTALL:
1 - 8" 45° BEND
PROP. 8" WATER
STA 124+44.99, 38.07' LT
INSTALL:
1 - 16"X8" TEE
1 - 16" VALVE
1 - 8" VALVE
STA 121+87.30, 49.50' RT
INSTALL:
1 - 16"X16" TEE
1 - 16" PLUG
STA 121+67.20, 100.00' RT
INSTALL:
1 - 8" 45° BEND
STA 126+14.25, 84.03' RT
INSTALL:
1 - 8" 45° BEND
CONNECT TO
EX. 8" WATER
VERIFY EX. LOCATION
CUT & PLUG EX. 8" WATER
STA 126+13.43, 38.07' LT
INSTALL:
1 - 16"X8" TEE
1 - 8" VALVE
STA 126+17.91, 58.18' RT
INSTALL:
1 - FIRE HYDRANT
1 - 6" VALVE
1 - 8"X6" TEE
6 LF OF PVC 6" WATER PIPE
REMOVE AND SALVAGE
EX. FIRE HYDRANT
NOTE D
STA 122+16.09, 45.84' LT
1 - FIRE HYDRANT
1 - 6" VALVE
1 - 16"X6" TEE
6 LF OF PVC 6" WATER PIPE
STA 127+34.12, 55.13' LT
INSTALL:
1 - 8"
2 - 8" VALVE
CUT AND PLUG EX. 8" WATER
REFER TO NOTE C
PROP. 8" WATER
STA 127+37.62, 55.38' LT
INSTALL:
1 - 8" 90° BEND
STA 127+38.40, 48.73' LT
INSTALL:
1 - 16"X8" TEE
1 - 16" VALVE
PROP. 16" WATER
PROP. 8" SS
REFER TO NOTE B
STA 128+79.27, 41.50' RT
INSTALL:
1 - 16"45° BEND
STA 126+17.04, 38.88' RT
INSTALL:
1 - 8"X8" TEE
1 - 8" VAVLE
STA 126+19.06, 78.78' RT
INSTALL:
1 - 8" 45° BEND
STA 128+06.29, 48.61' RT
INSTALL:
1 - 45° BEND
1 - REDUCER
1 - 16"X8" TEE
WATER LINE E
REFER TO SHEET 14 OF 19
FOR PROFILE
STA 129+59.62, 62.8
INSTALL:
1 - 16" 90° BEND
1 - 16" VALVE
STA 129+63.14, 62.8
INSTALL:
1 - 16" 90° BEND
STA 129+63.08, 52.1
INSTALL:
1 - 16"X16" TEE
1 - 16"X8" REDUCER
1 - 8" VALVE
CUT AND PLUG EX. 16
24" BORE W/ STEEL CASING
NOTE A
STA 129+56.15, 52.16
1 - FIRE HYDRANT
1 - 6" VALVE
1 - 16"X6" TEE
1 - 6" 90° BEND
8 LF OF PVC 6" WATER
NOTE B
STA 128+41.94, 41.30
1 - FIRE HYDRANT
1 - 6" VALVE
1 - 8"X6" TEE
1 - 6" 90° BEND
8 LF OF PVC 6" WATER
NOTE C
STA 126+30.71, 38.07
1 - FIRE HYDRANT
1 - 6" VALVE
1 - 8"X6" TEE
1 - 6" 90° BEND
8 LF OF PVC 6" WATER
REMOVE AND SALVAGE
EX. FIRE HYDRANT
MATCH LINE STA 125+00
INSTALL 16" WATER
Revised Plan

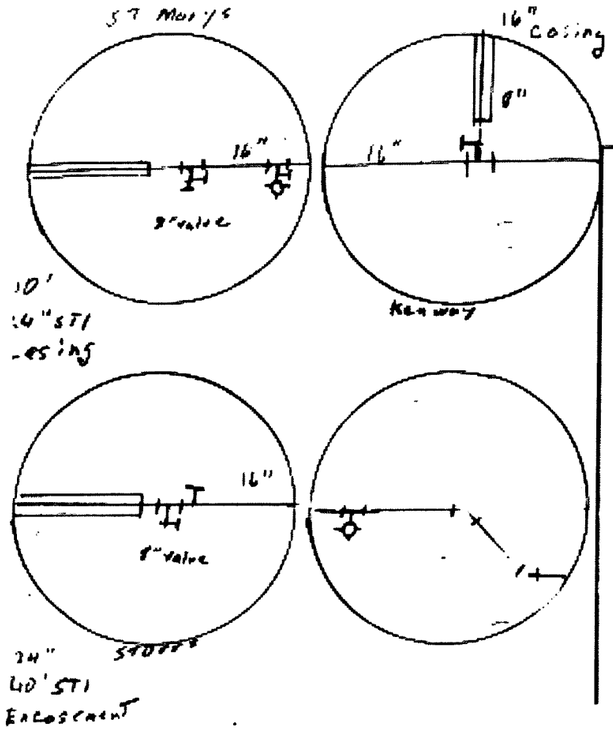

A
16x6 TEE
6" valve
F.M.
6" valve
16x6
TEE
B
8"
16" casing
8" valve
16x8 TEE
C
Ex 16
D
Ex 8"
16x8" TEE
16"
8" valve
Ex 8"
2-8"x45°
8x6 TEE
6" valve
Ex 8"

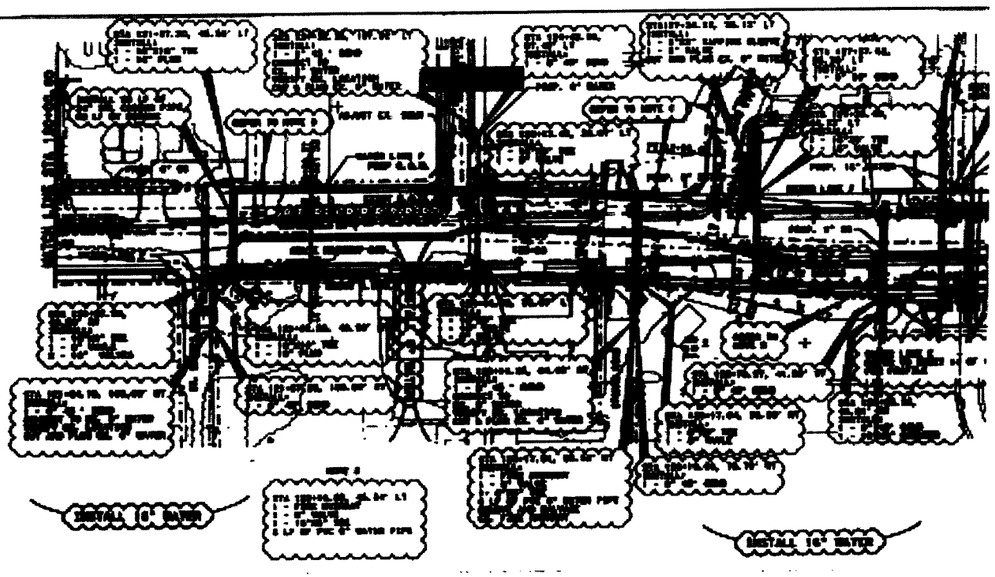

MATCH LINE STA 120+00.00
STA 121+87.20, 45.50' LT
INSTALL:
1 - 16"X16" TEE
1 - 16" PLUG
STA 124+32.35, 107.02' LT
INSTALL:
1 - 8" 45° BEND
CONNECT TO
EX. 8" WATER
VERIFY EX. LOCATION
CUT & PLUG EX. 8" WATER
WORK AREA # 7
STA 124+62.55, 97.42' LT
INSTALL:
1 - 8" 45° BEND
PROP. 8" WATER
INSTALL 95 LF OF 24" STL CASING PIPE BY BORING
ADJUST EX. SSMH
STA 126+13.43, 38.07' LT
WATER LINE F PROP R.O.W.
PROP 8" SS
EXIST R.O.W.
STATE HIGHWAY 805
WATER LINE F
STA 121+67.20, 49.50' RT
INSTALL:
1 - 16"X8" TEE
1 - 8" VAVLE
2 - 16" VALVES
STA 121+87.20, 49.50'
INSTALL:
1 - 16"X16" TEE
1 - 16" PLUG
STA 124+44.89, 38.07' L
INSTALL:
16"X8" TEE
16" VALVE
STA 126+14.25, 84.03' RT
INSTALL:
1 - 8" 45° BEND
CONNECT TO
EX. 8" WATER
VERIFY EX. LOCATION
CUT & PLUG EX. 8" WATER
STA 121+64.19, 103.00' RT
INSTALL:
1 - 8" 45° BEND
CONNECT TO EX. 8" WATER
VERIFY EX. LOCATION
CUT AND PLUG EX. 8" WATER
STA 121+67.20, 100.00' RT
INSTALL:
1 - 8" 45° BEND
STA 126+17.91, 58.18' RT
INSTALL:
1 - FIRE HYDRANT
1 - 6" VALVE
1 - 8"X6" TEE
6 LF OF PVC 6" WATER PIPE
REMOVE AND SALVAGE
EX. FIRE HYDRANT
STA 126+19.06,
INSTALL:
1 - 8" 45° BEND
INSTALL 16" WATER
STA 122+16.09, 45.84' LT
1 - FIRE HYDRANT
1 - 6" VALVE
1 - 16"X6" TEE

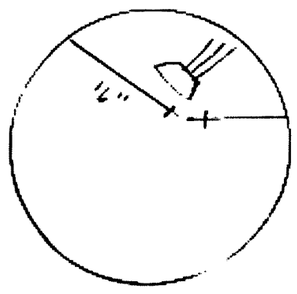

E
Ex 8"
CS
2-8"x45°
8" valve
Ex 16
8" PVC
16" casing
60' LF
16x8 TEE
8" valve
16" PVC

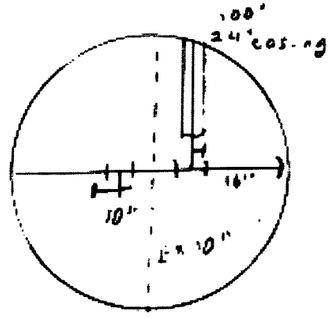

F
Ex 10"
16" PVC
16x10 TEE
10" valve
16x16 TEE
2-16" valves
1-16" Plug
Ex 18"

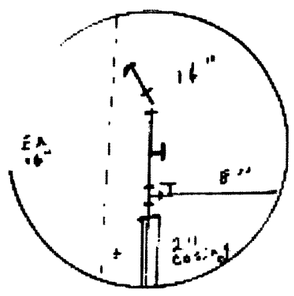

G
1-PVC
to cap
Connection
1-plug
2-8"x45°
1-16" valve
16x8 TEE
8" valve
Ex 16
Ex 8"

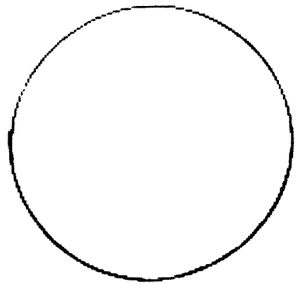

ST Mary's
16" casing
16"
8"
16"
8" valve
Kenway
16"
8" valve
24"
STOPPLE
40' STI
ENCROACHMENT


INSTALL 16" WATER


12"


100'
24" casing
16"
10"
EA 10"

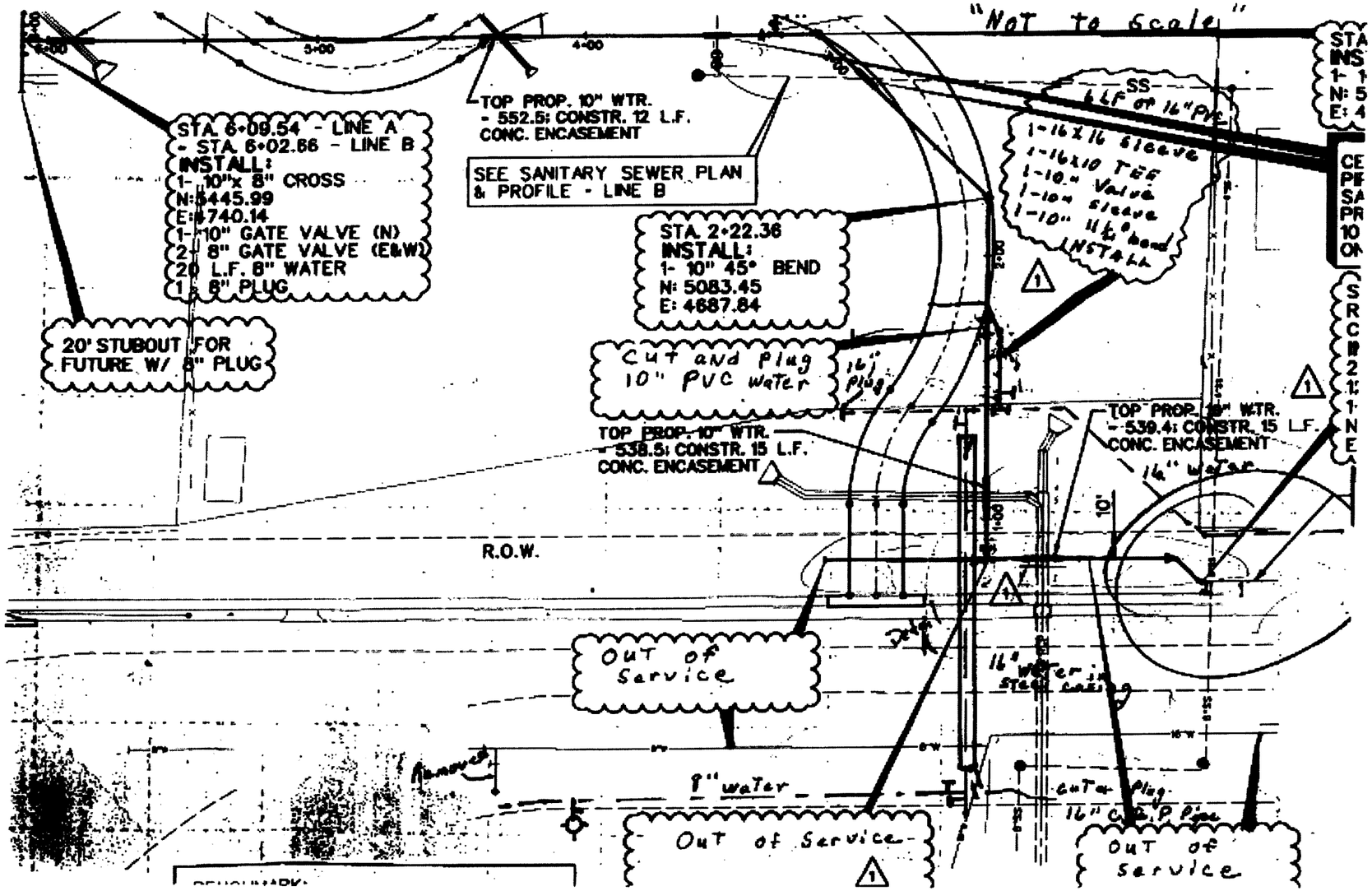

16"
EA 16"
8"
24" casing

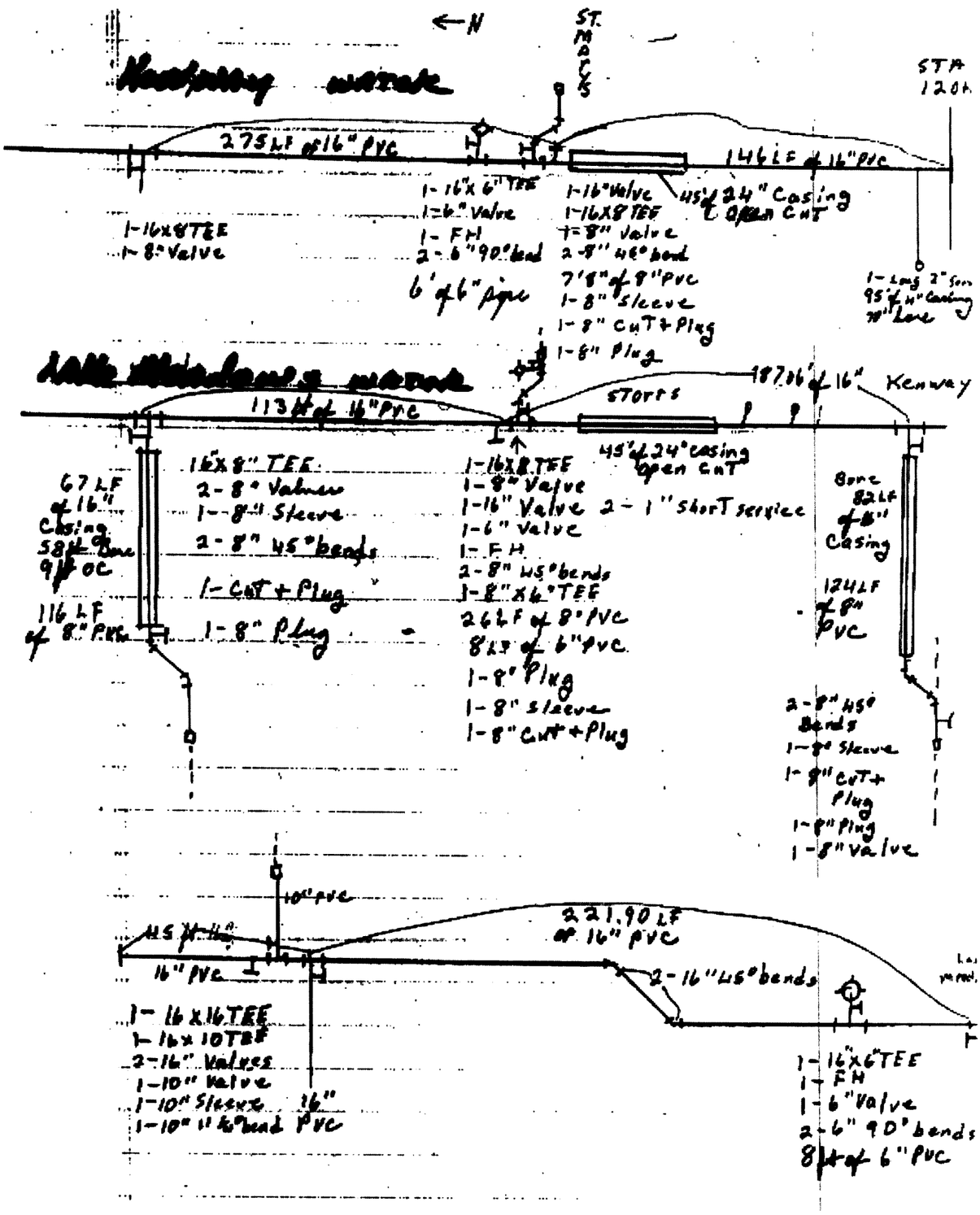


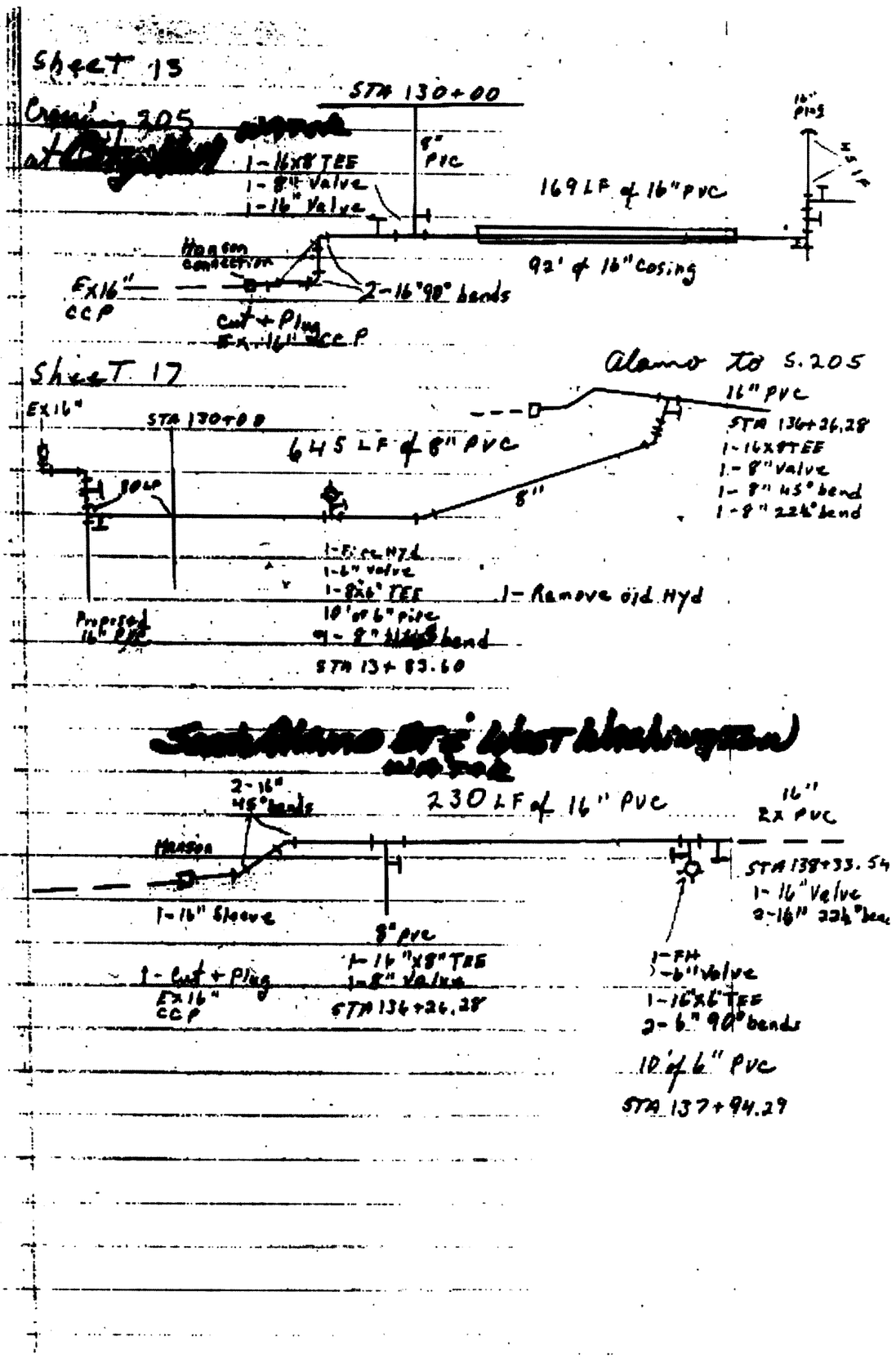
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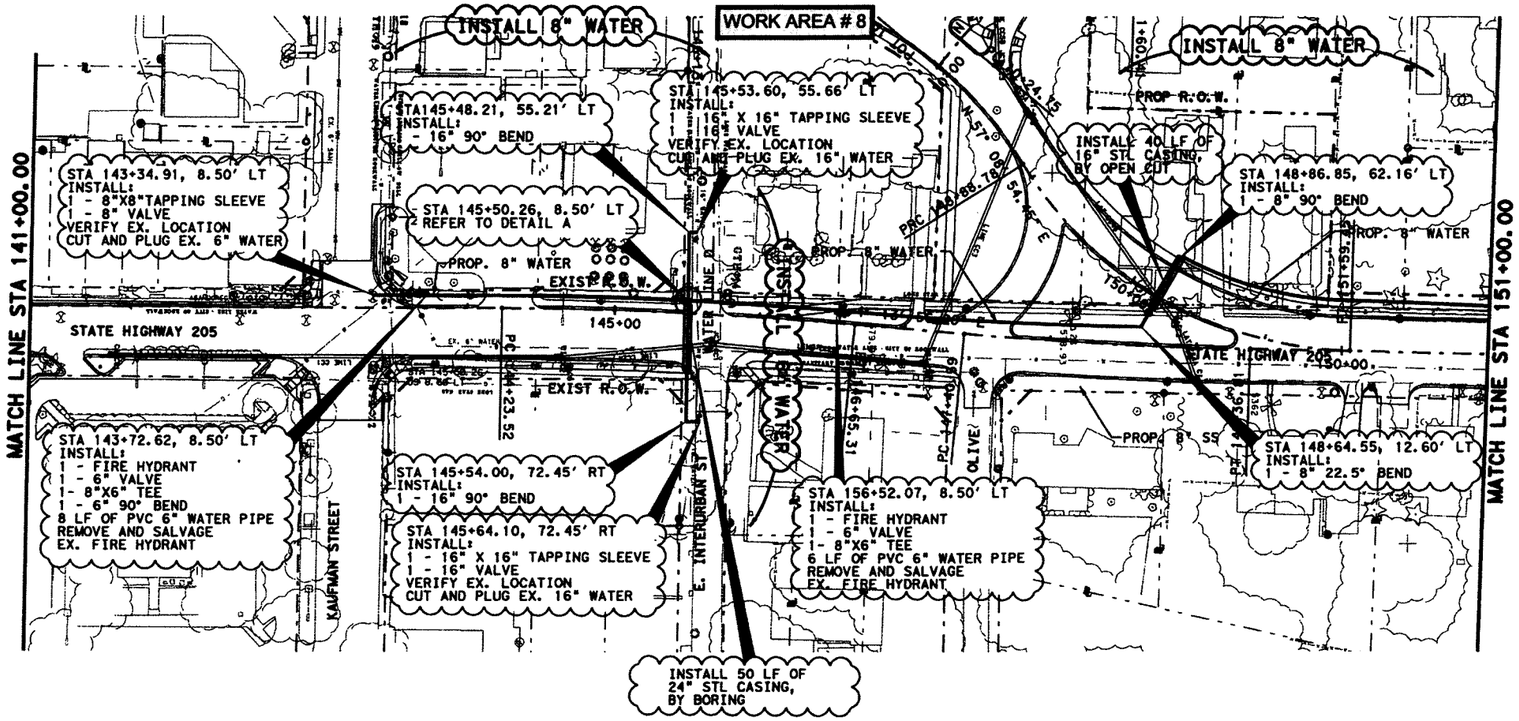
10" Connection

"Not to Scale"



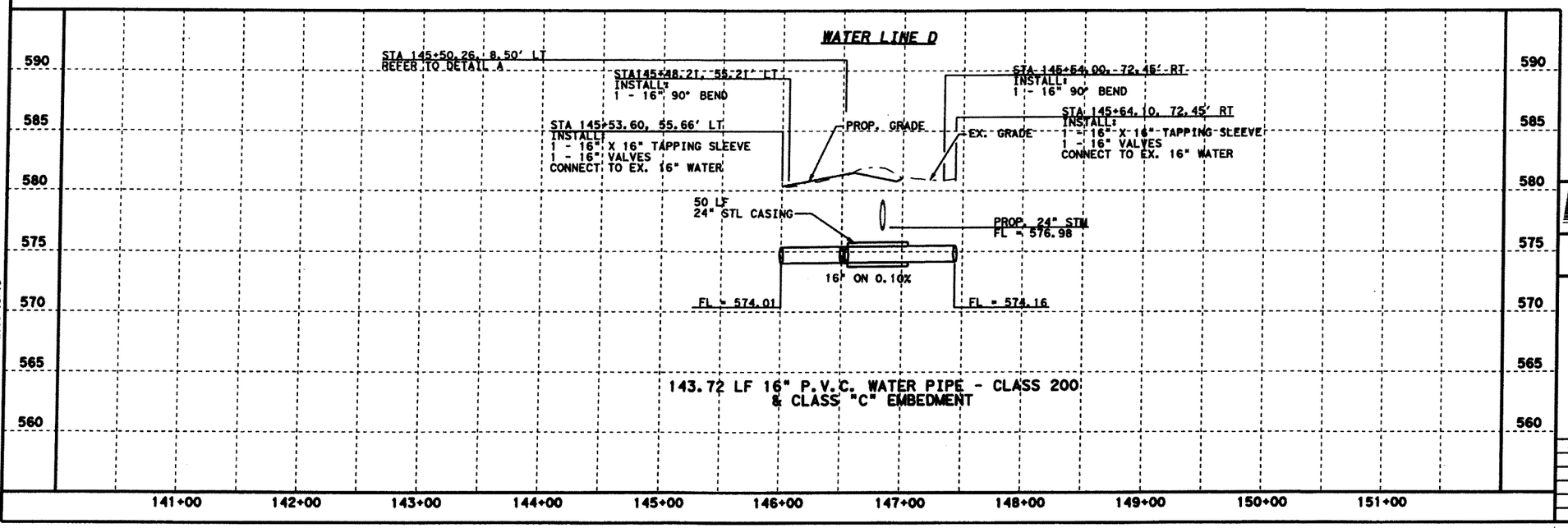

←N
ST. MARKS
STA 120+
275 LF of 16" PVC
1-16x8 TEE
1-8" Valve
1-16x6" TEE
1-6" Valve
1-FH
2-6" 90° bend
6' of 6" pipe
1-16" Valve
1-16x8 TEE
1-8" Valve
2-8" 45° bend
7'8" of 8" PVC
1-8" sleeve
1-8" cut + plug
1-8" plug
45' of 24" Casing Open Cut
146 LF of 16" PVC
1-Long 2" Serv 95' of 4" Casing 70" Bore
113' of 16" PVC
STORTS
1870' of 16" Kenway
67 LF of 16" Casing 58' Bore 9' OC
116 LF of 8" PVC
16x8" TEE
2-8" Valves
1-8" Sleeve
2-8" 45° bends
1-cut + plug
1-8" plug
1-16x8 TEE
1-8" Valve
1-16" Valve
1-6" Valve
1-FH
2-8" 45° bends
1-8" x 6" TEE
264 LF of 8" PVC
8 LF of 6" PVC
1-8" Plug
1-8" sleeve
1-8" cut + plug
45' of 24" casing Open Cut
2-1" short service
Bore 82 LF of 8" Casing
124 LF of 8" PVC
2-8" 45° Bends
1-8" Sleeve
1-8" cut + Plug
1-8" Plug
1-8" Valve
10" PVC
45° of 16"
16" PVC
221.90 LF of 16" PVC
2-16" 45° bends
1-16 x 16 TEE
1-16 x 10 TEE
2-16" Valves
1-10" Valve
1-10" Sleeve
1-10" 11 1/4" bend PVC
1-16"x6" TEE
1-FH
1-6" Valve
2-6" 90° bends
8' of 6" PVC


Sheet 13
STA 130+00
1-16x8 TEE
1-8" Valve
1-16" Valve
8" PVC
169 LF of 16" PVC
92' of 16" casing
16" PVC
Hanson connection
Ex 16" CCP
2-16" 90° bends
Cut + Plug Ex 16" CCP
Sheet 17
Alamo to S.205
16" PVC
Ex 16"
STA 130+00
645 LF of 8" PVC
8"
STA 136+26.28
1-16x8 TEE
1-8" Valve
1-8" 45° bend
1-8" 22½° bend
1-Remove old Hyd
1-Fire Hyd
1-6" valve
1-8x6 TEE
10' of 6" pipe
STA 134+24.28
Proposed 16" PVC
South Alamo St. (West Washington)
2-16" 45° bends
230 LF of 16" PVC
16" Ex PVC
Hanson
1-16" Sleeve
8" PVC
1-16"x8" TEE
1-8" Valve
STA 134+24.28
1-Cut + Plug Ex 16" CCP
STA 138+33.54
1-16" Valve
2-16" 22½° bends
1-FH
1-6" Valve
1-16"x6" TEE
2-6" 90° bends
10' of 6" PVC
STA 137+94.29



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL



3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

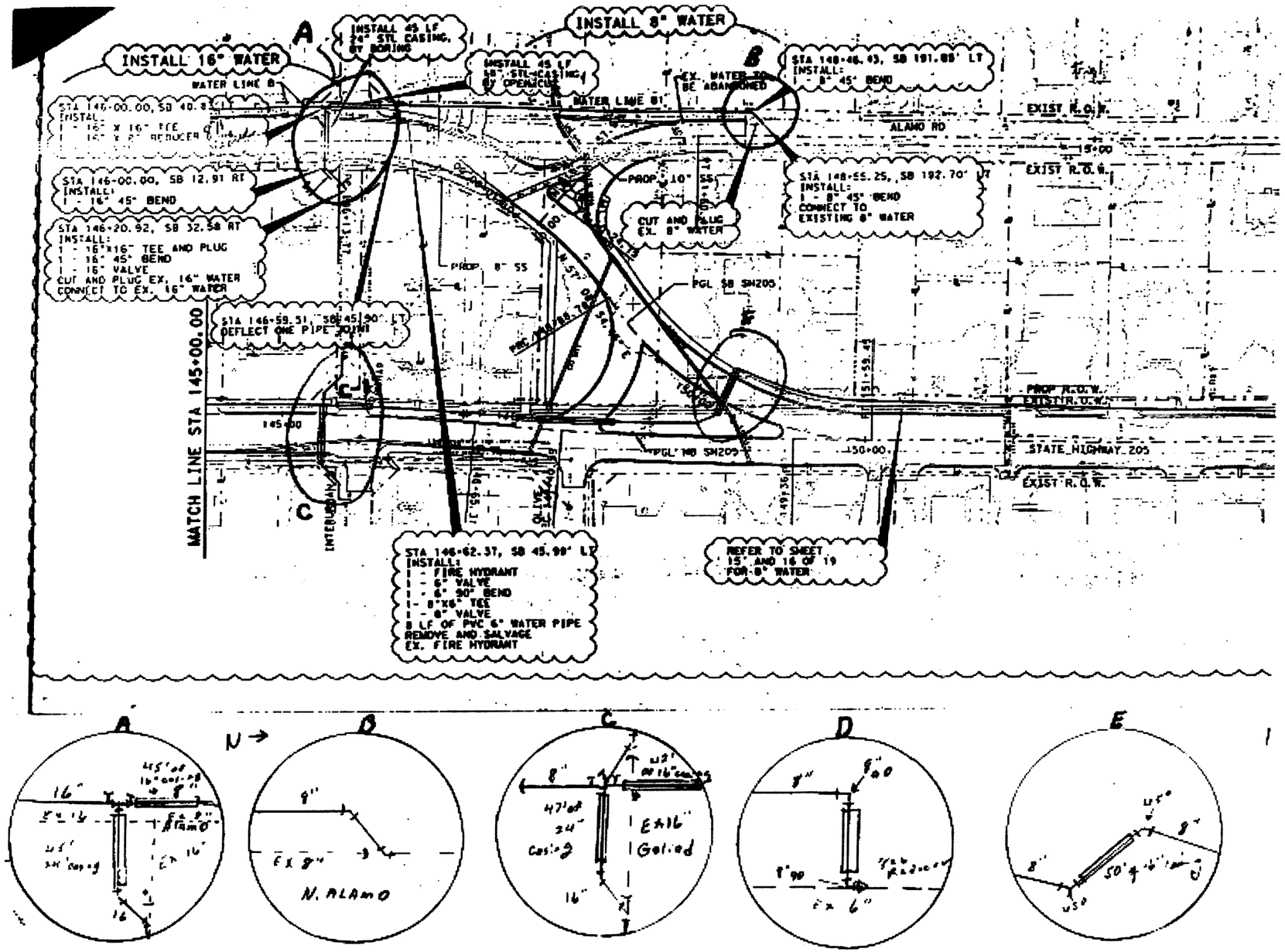
WATER LINE
NB COUPLET
PLAN & PROFILE
STA 141+00 TO 151+00

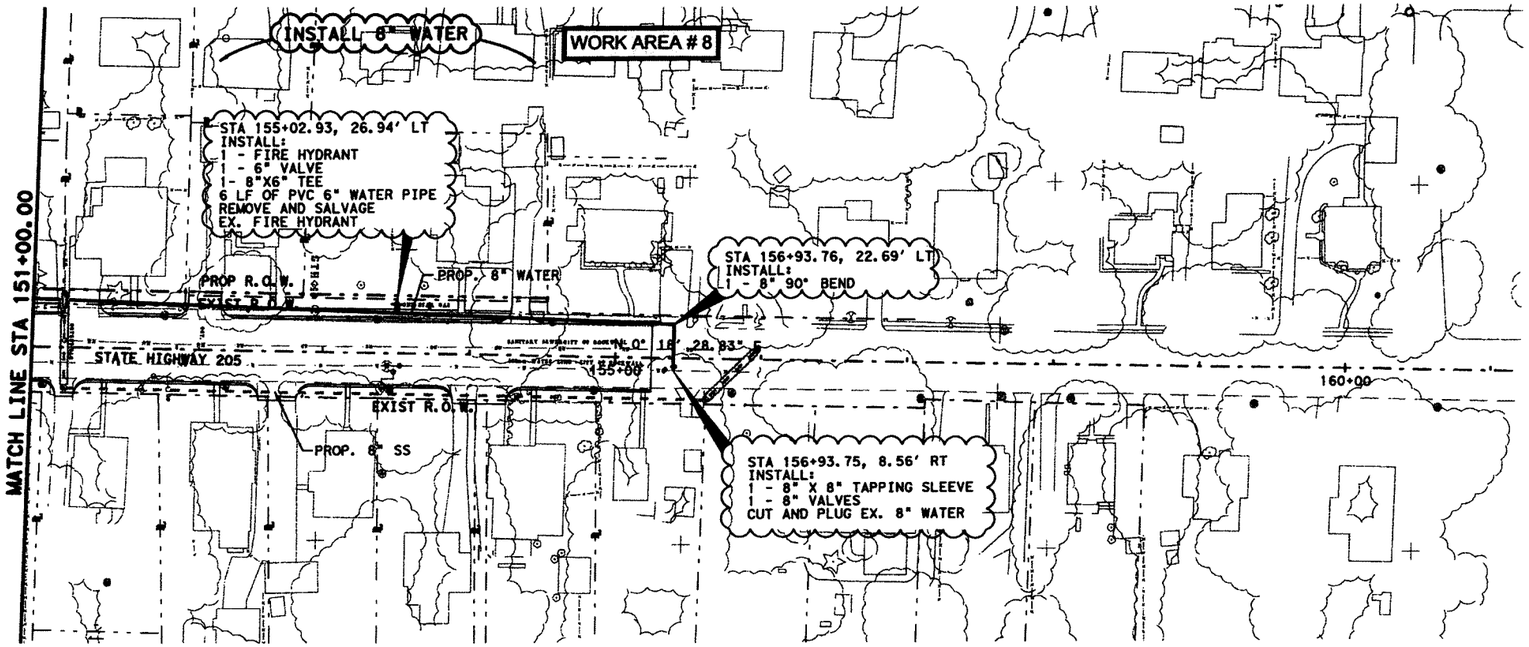
SHEET 15 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	524
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=01\J085\2245IC-SH205\U1111\y\2451cwp15.dgn, ON=10-11, 13-621
Plotted 22-MAR-2006 15:19
3/22/2006


INSTALL 16" WATER
A
INSTALL 45 LF 24" STL CASING, BY BORING
INSTALL 45 LF 36" STL CASING BY OPEN CUT
INSTALL 8" WATER
B
EX. WATER TO BE ABANDONED
WATER LINE A
WATER LINE B1
STA 146+00.00, SB 40.8' RT
INSTALL:
1 - 16" X 16" TEE
16" X 8" REDUCER
STA 146+00.00, SB 12.91 RT
INSTALL:
1 - 16" 45° BEND
STA 146+20.92, SB 32.58 RT
INSTALL:
1 - 16"X16" TEE AND PLUG
1 - 16" 45° BEND
1 - 16" VALVE
CUT AND PLUG EX. 16" WATER
CONNECT TO EX. 16" WATER
STA 146+59.51, SB 45.90° LT
DEFLECT ONE PIPE JOINT
STA 148+46.43, SB 191.89' LT
INSTALL:
1 - 8" 45° BEND
EXIST R.O.W.
ALAMO RD
STA 148+55.25, SB 192.70' LT
INSTALL:
1 - 8" 45° BEND
CONNECT TO EXISTING 8" WATER
PROP 10" SS
CUT AND PLUG EX. 8" WATER
PROP 8" SS
PGL SB SH205
PROP R.O.W.
EXIST R.O.W.
STATE HIGHWAY 205
PGL NB SH205
MATCH LINE STA 145+00.00
145+00
150+00
C
INTERSECTION
STA 146+62.37, SB 45.98° LT
INSTALL:
1 - FIRE HYDRANT
1 - 6" VALVE
1 - 6" 90° BEND
1 - 8"X6" TEE
1 - 8" VALVE
8 LF OF PVC 6" WATER PIPE
REMOVE AND SALVAGE
EX. FIRE HYDRANT
REFER TO SHEET 15 AND 16 OF 19 FOR 8" WATER
A
16"
45° on 16" cast'g
8"
Ex 16"
Ex 8"
N. Alamo
16"
45° on 24" Casing
Ex 16"
16"
N
B
8"
Ex 8"
N. ALAMO
C
8"
45° on 16" casing
47° on 24" Casing
Ex 16" Cased
16"
D
8"
8"90
8"90
Ex 6"
E
45°
8"
8"
50' of 16" casing
45°





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

585 580 575 570 565 560 555

151+00 152+00 153+00 154+00

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

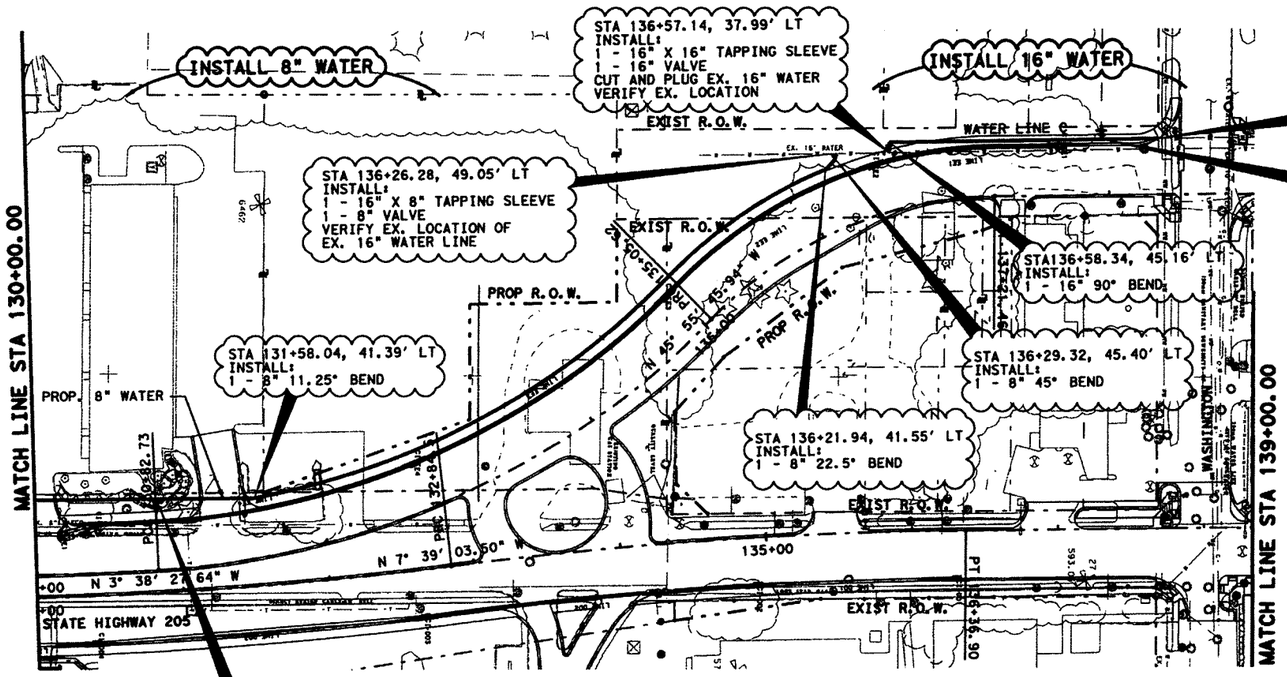
WATER LINE
NB COUPLET
PLAN & PROFILE
STA 151+00 TO END OF PROJECT

SHEET 16 OF 19

FED. ROAD DIST. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

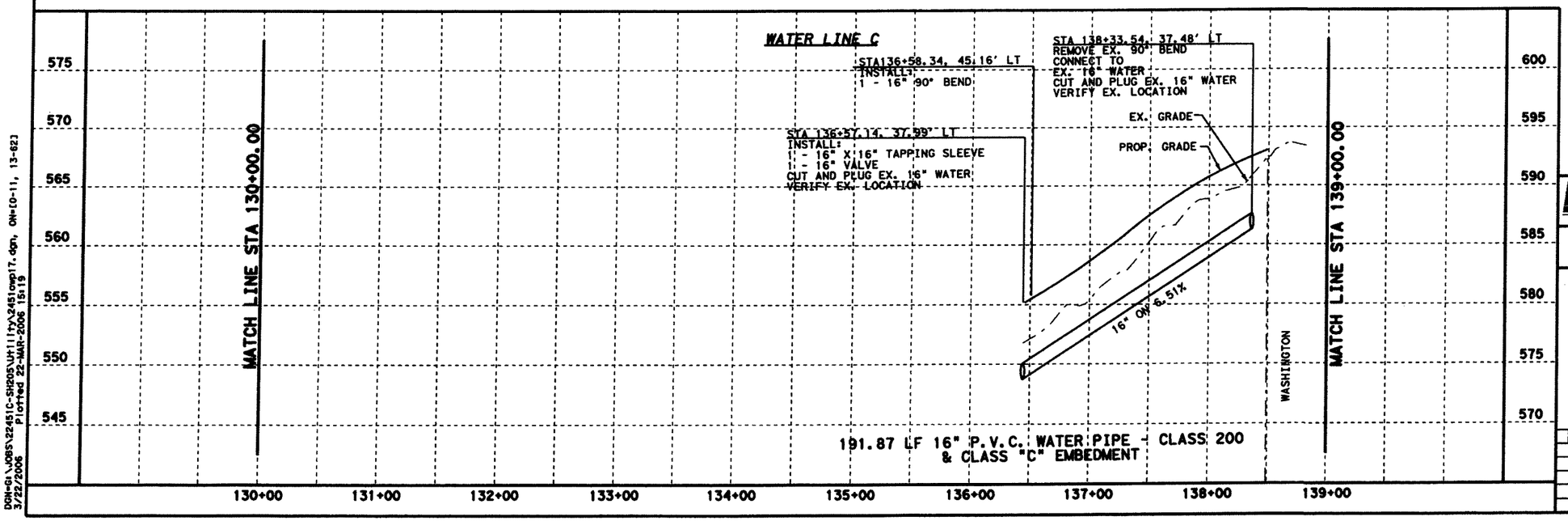
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	525
CONT.	SECT.	JOB	
0451	01	032, ETC	

DGN=D:\JOBS\224510-SH205\util\tyX2451owp16.dgn, ON=10-11, 13-623
Plotted 22-MAR-2006 15:19
3/22/2006



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL



3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
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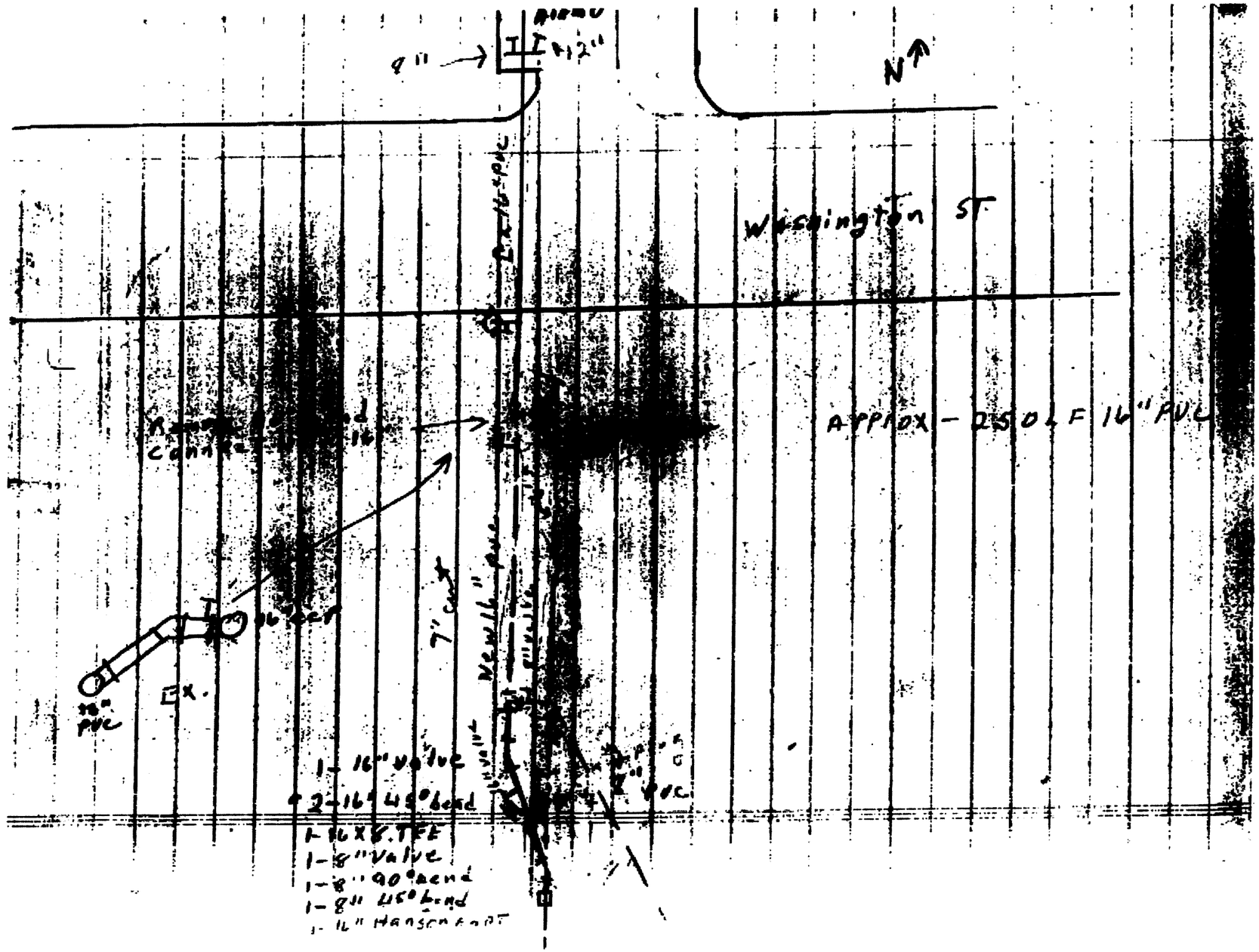
SH 205

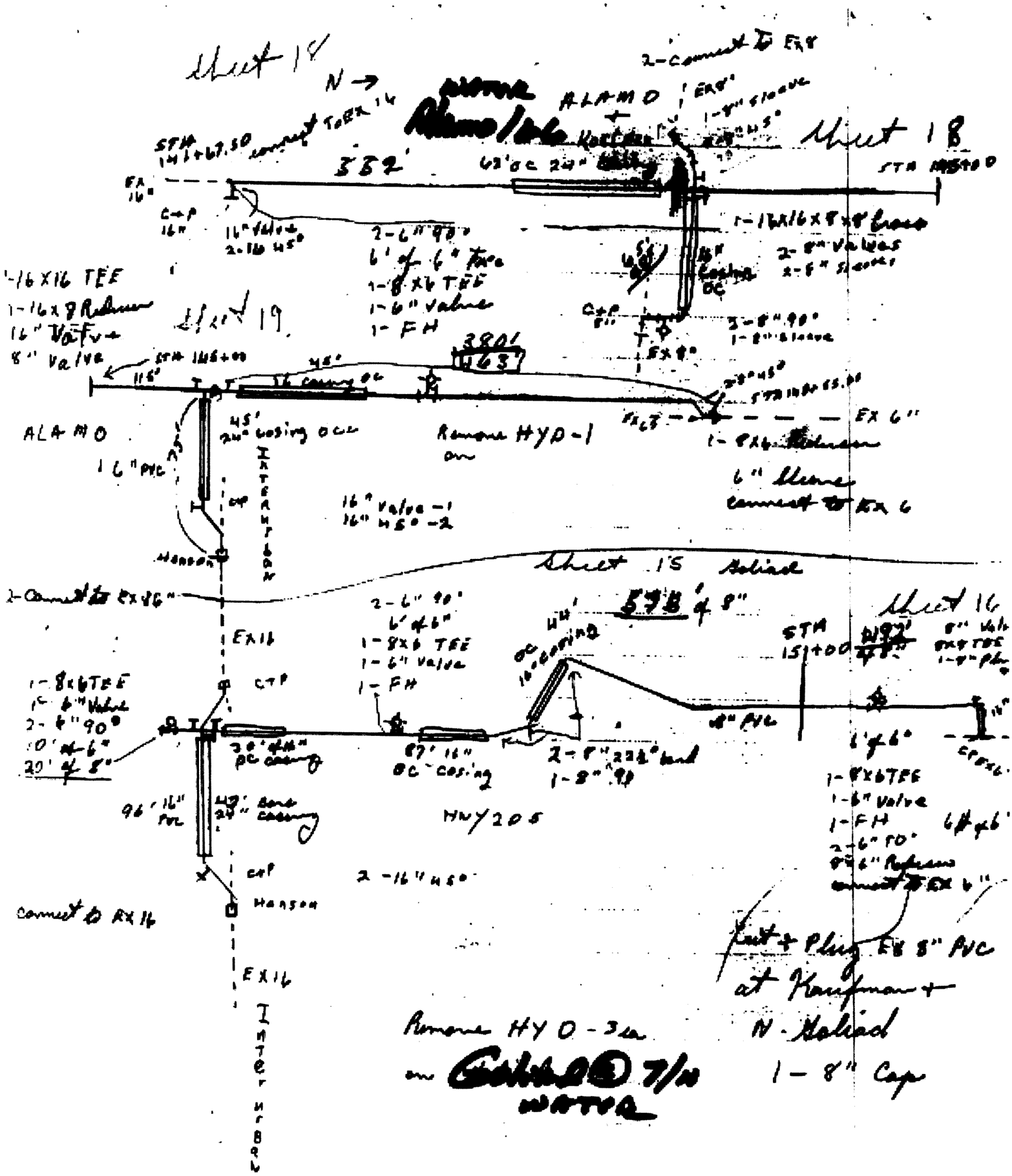
WATER LINE
SB COUPLET
PLAN & PROFILE
STA 130+00 TO 139+00

SHEET 17 OF 19

CONT. SECT. JOB	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	
CONT.	SECT.	JOB	
0451	01	032, ETC	526

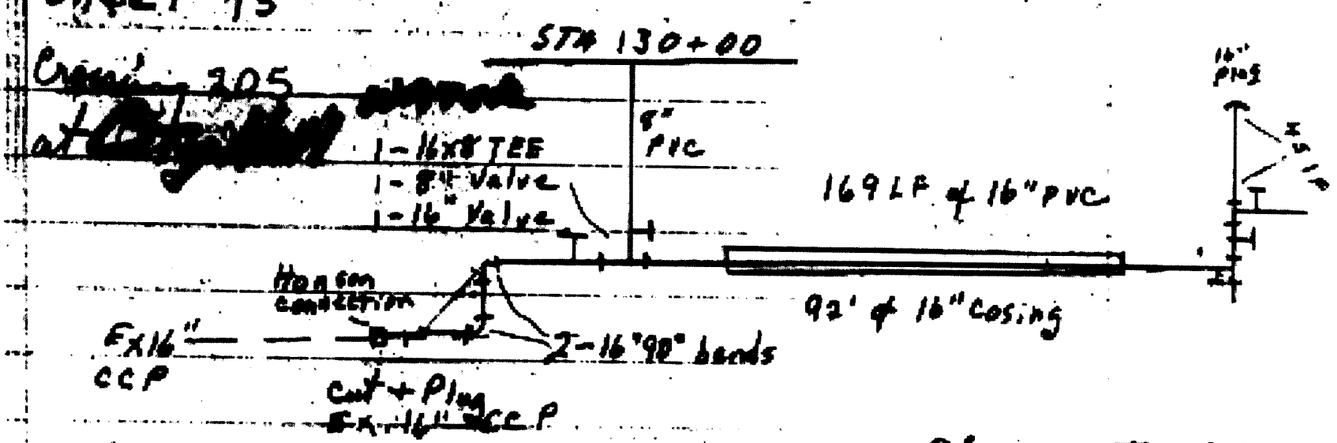
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Plotted 22-MAR-2006 15:19
3/22/2006


N
Washington ST.
APPROX - 250 ± F 16" PVC
7" Cast
Manville
EX.
1-16" Valve
2-16" 45° Bend
1-16X6 TEE
1-6" Valve
1-6" 90° Bend
1-6" 45° Bend


Sheet 14
N →
Alamo
ALAMO
Sheet 18
382'
STA 1+67.50
STA 4+50.00
16" Valve
2-16 45°
2-6" 90°
6' of 6" Pipe
1-8x6 TEE
1-6" Valve
1-FH
1-16x16x8 Cross
2-8" Valves
2-8" Sleeves
8" Valve
Sheet 19
3801
163'
STA 1+65+00
45°
16" casing OC
ALAMO
16" PVC
45° 24" casing OC
Remove HYD-1
on
6" Line
connect to Ex 6
16" Valve -1
16" 45° -2
Sheet 15 Added
2-Connect to Ex 16"
578' of 8"
Sheet 16
2-6" 90°
6' of 6"
1-8x6 TEE
1-6" Valve
1-FH
STA 15+00
8" Valve
End TEE
1-8" Plug
1-8x6TEE
1-6" Valve
2-6" 90°
10' of 6"
20' of 8"
CAP
8" PVC
6' of 6"
1-8x6TEE
1-6" Valve
1-FH
2-6" 90°
6" Reducer
connect to Ex 6"
96' 16" PVC
HWY 205
2-16" 45°
Connect to Ex 16
Hanson
Ex 16
Interurban
Remove HYD-3a
on
7/11
WATER
Cut + Plug Ex 8" PVC
at Kaufman +
N. Walnut
1-8" Cap

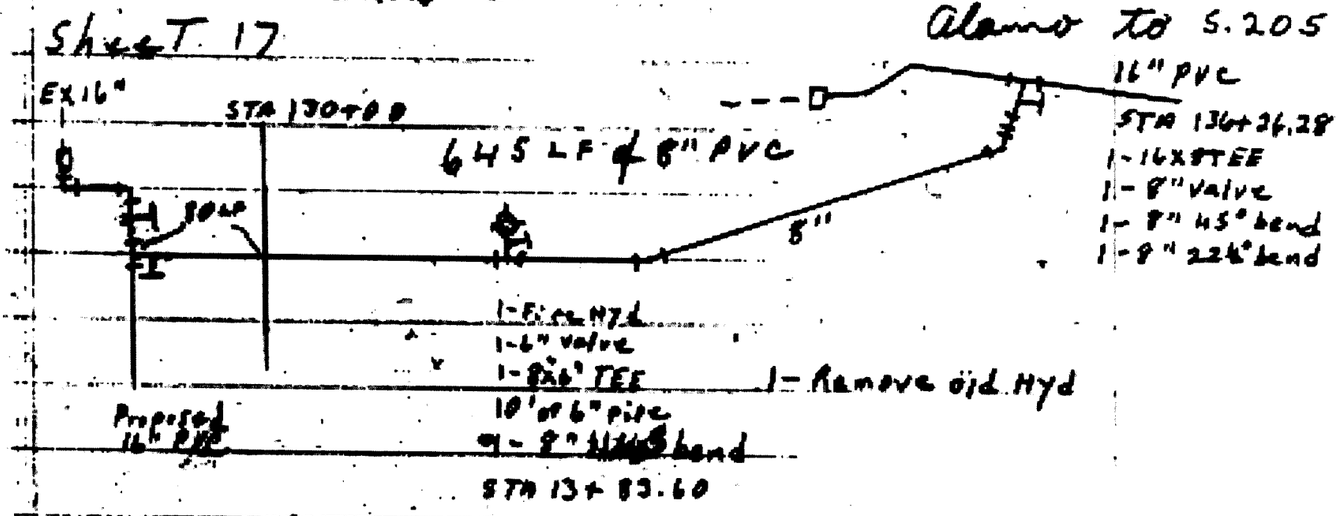
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Crossing 205 signal at [illegible]

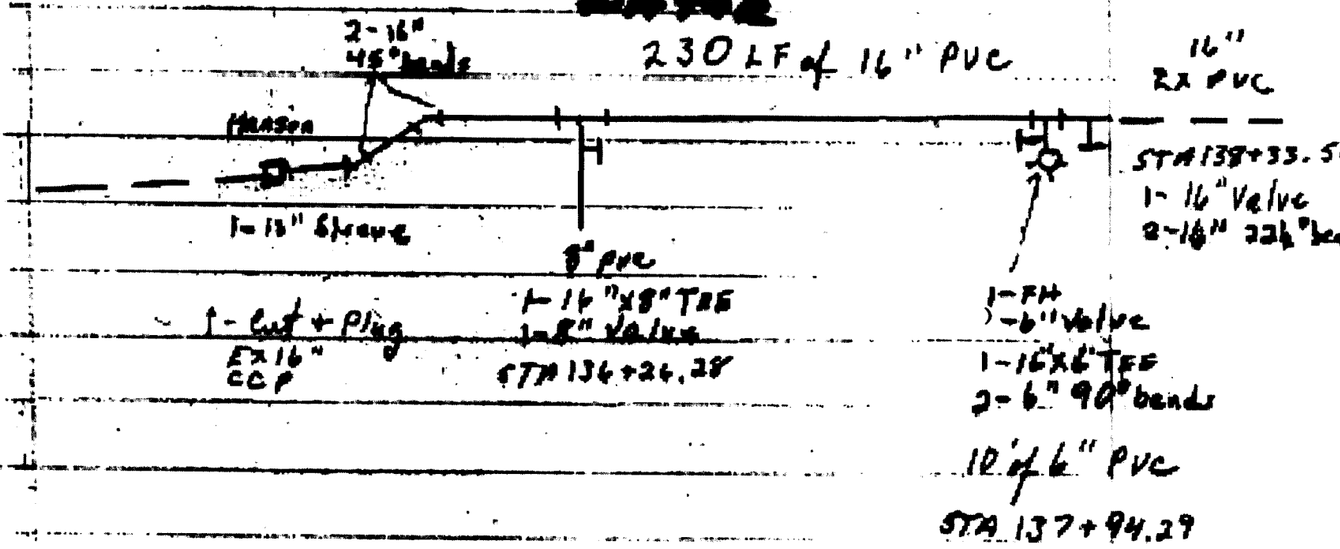


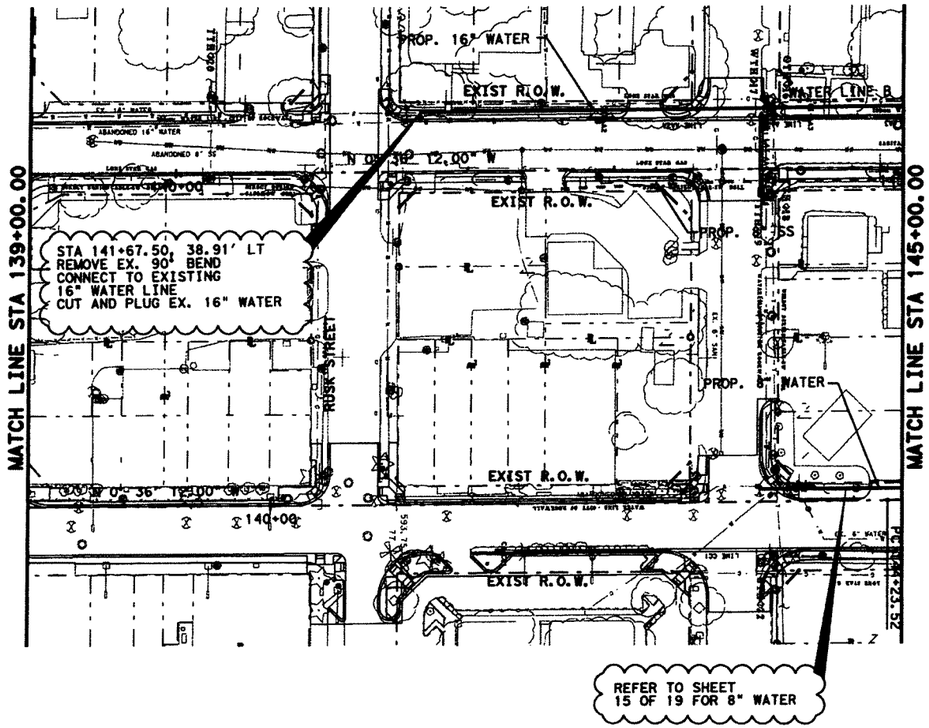
Sheet 17

Alamo to S.205



South Alamo St. & West Washington

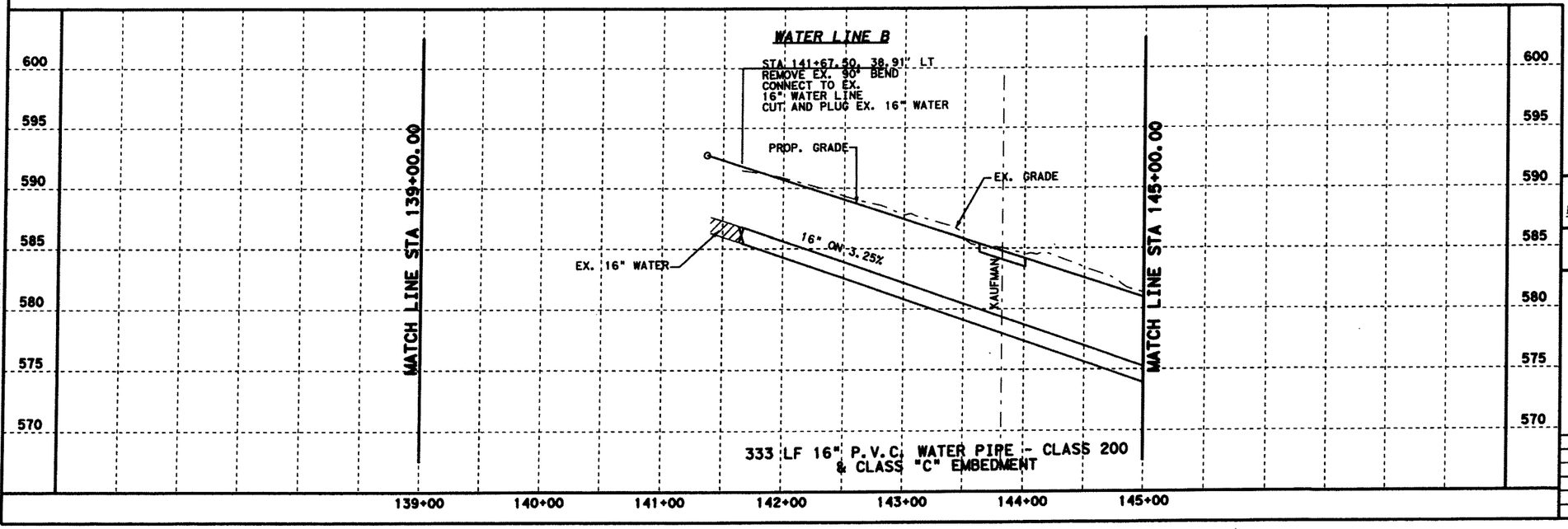






0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL



3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Richard T. Grice

PB Parsons Brinckerhoff Quade & Douglas, Inc.
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Suite 1333
Dallas, TX 75207

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SH 205

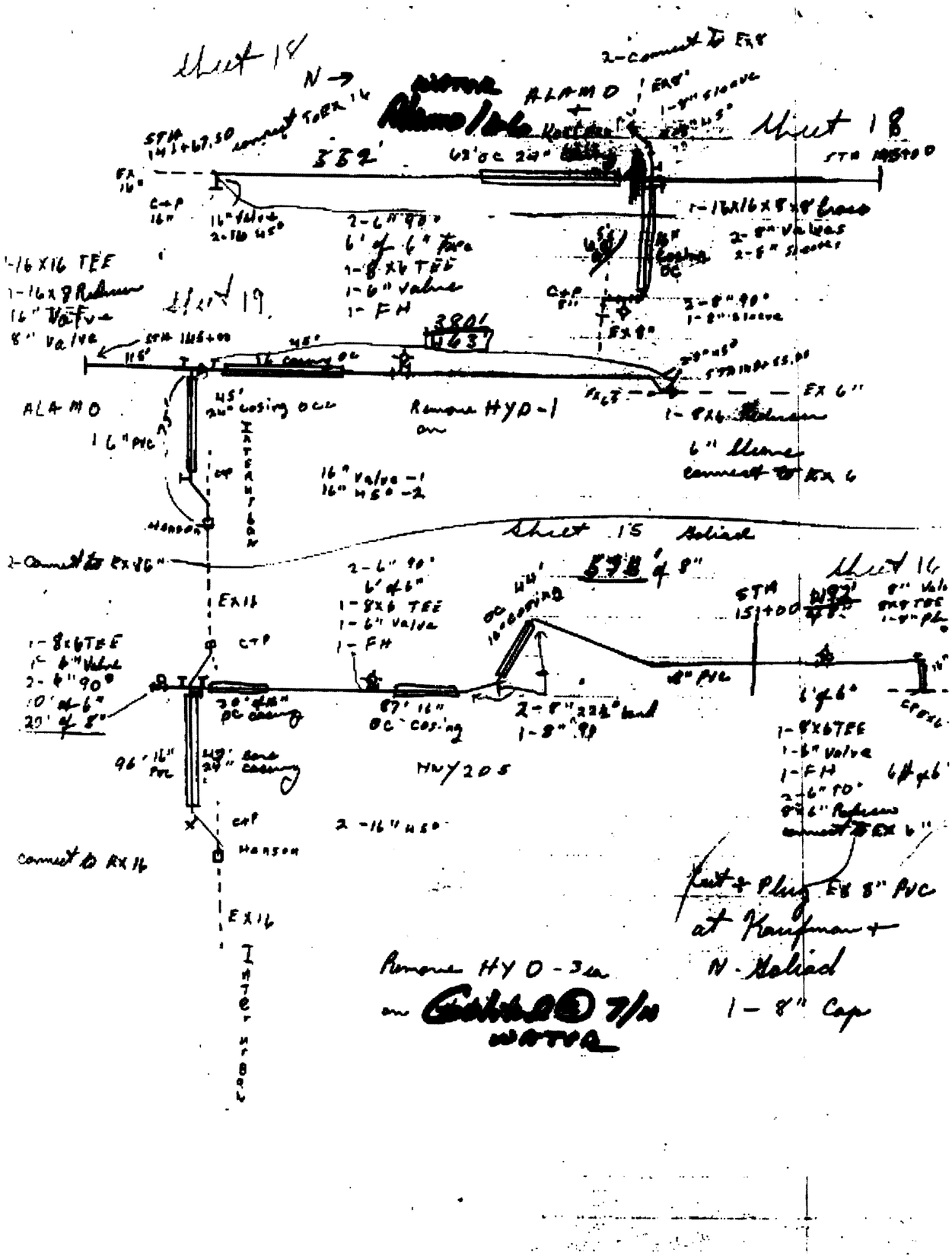
WATER LINE
SB COUPLET
PLAN & PROFILE
STA 139+00 TO 145+00

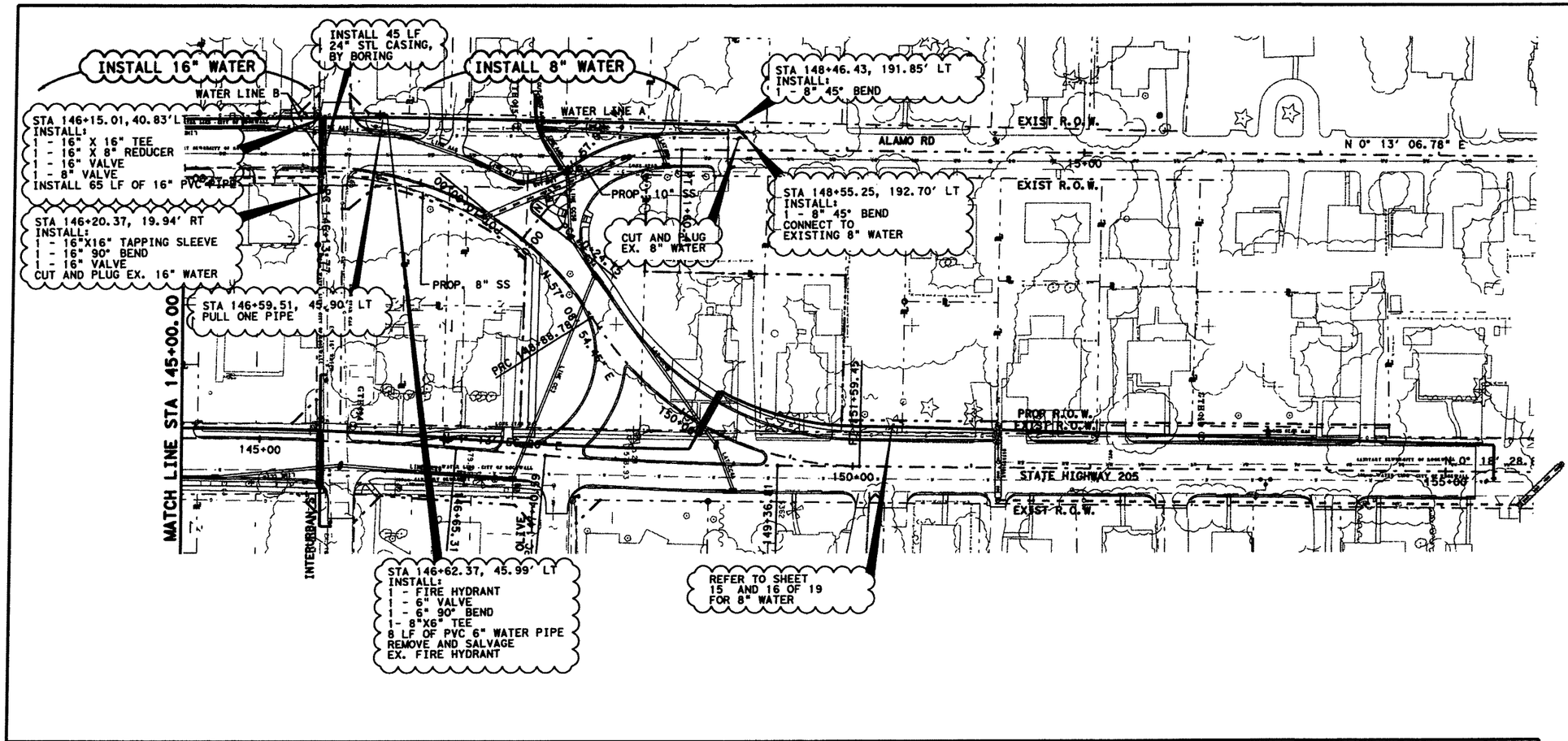
SHEET 18 OF 19

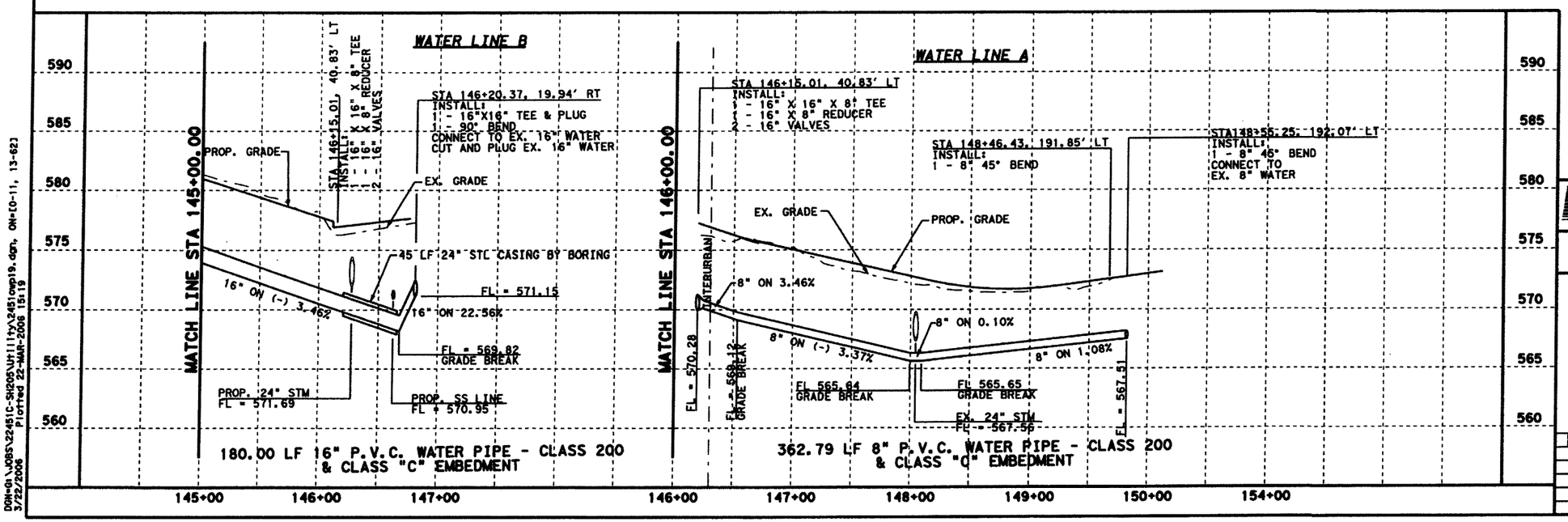
DIST. NO. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	527
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/22/2006 Plotted 22-MAR-2006 15:19


Sheet 14
N →
ALAMO
Remove Hyd
2-connect to Ex 8"
1-8" sleeve
Sheet 18
STA 141+67.50
connect to Ex 16"
352'
62' OC 24" Casing
STA 145+00
Ex 16"
C+P 16"
16" Valve
2-16" 45°
2-6" 90°
6' of 6" Pipe
1-8x6 TEE
1-6" Valve
1-FH
1-16x16x8" Cross
2-8" Valves
2-8" Sleeves
8" OC
C+P 8"
Ex 8"
2-8" 90°
1-8" Sleeve
1-16 X 16 TEE
1-16x8 Reducer
16" Valve
8" Valve
Sheet 19
STA 144+00
115'
16" casing OCC
3801
1463'
45°
20" casing OCC
STA 146+55.00
Ex 6"
ALAMO
16" PVC
Remove Hyd-1
on
1-8x6 Reducer
6" line
connect to Ex 6
16" Valve -1
16" 45° -2
Hanson
Sheet 15 Related
2-Connect to Ex 16"
578' of 8"
Sheet 16
EX 12
2-6" 90°
6' of 6"
1-8x6 TEE
1-6" Valve
1-FH
STA 15+00
8" Valve
8x6 TEE
1-8" PVC
1-8x6 TEE
1-6" Valve
2-6" 90°
10' of 6"
20' of 8"
CAP
30" dia" PC casing
87' 16" OC casing
2-8" 22½° bend
1-8" 90°
8" PVC
6' of 6"
CP 6x6
96' 16" PVC
42" Bore
24" casing
HWY 205
1-8x6 TEE
1-6" Valve
1-FH
6' of 6"
2-6" 90°
8x6" Reducer
connect to Ex 6"
2-16" 45°
connect to Ex 16
Hanson
Ex 16"
Interstate
Cut + Plug Ex 8" PVC
at Kaufman +
N-Related
1-8" Cap
Remove Hyd-3
on
WATER





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3/22/2006
Plotted 22-MAR-2006 15:19

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

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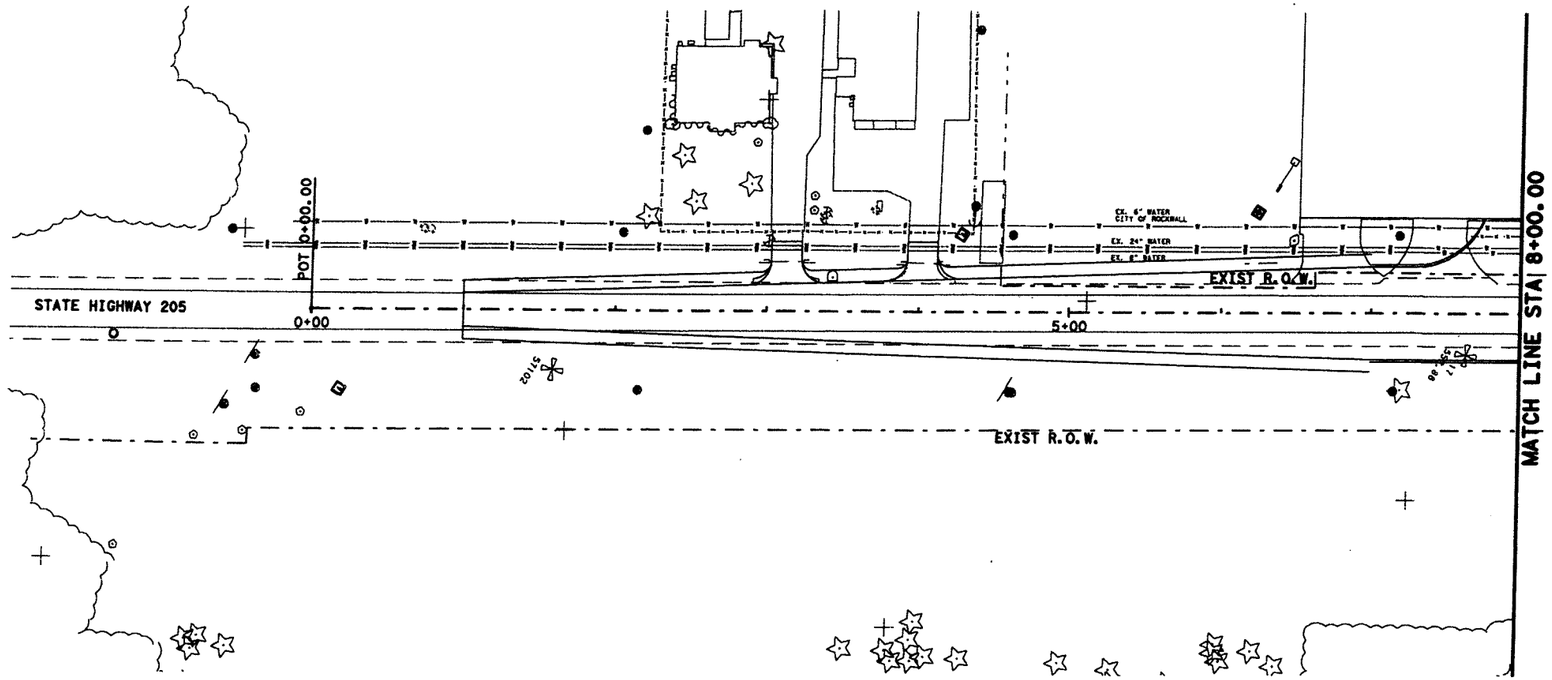
SH 205

WATER LINE
SB COUPLET
PLAN & PROFILE
STA 145+00 TO END OF PROJECT

SHEET 19 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	528
CONT.	SECT.	JOB	
0451	01	032, ETC	





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

555 550 545 540 535 530 525

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00

3-27-06

STATE OF TEXAS
RICHARD T. GRICE
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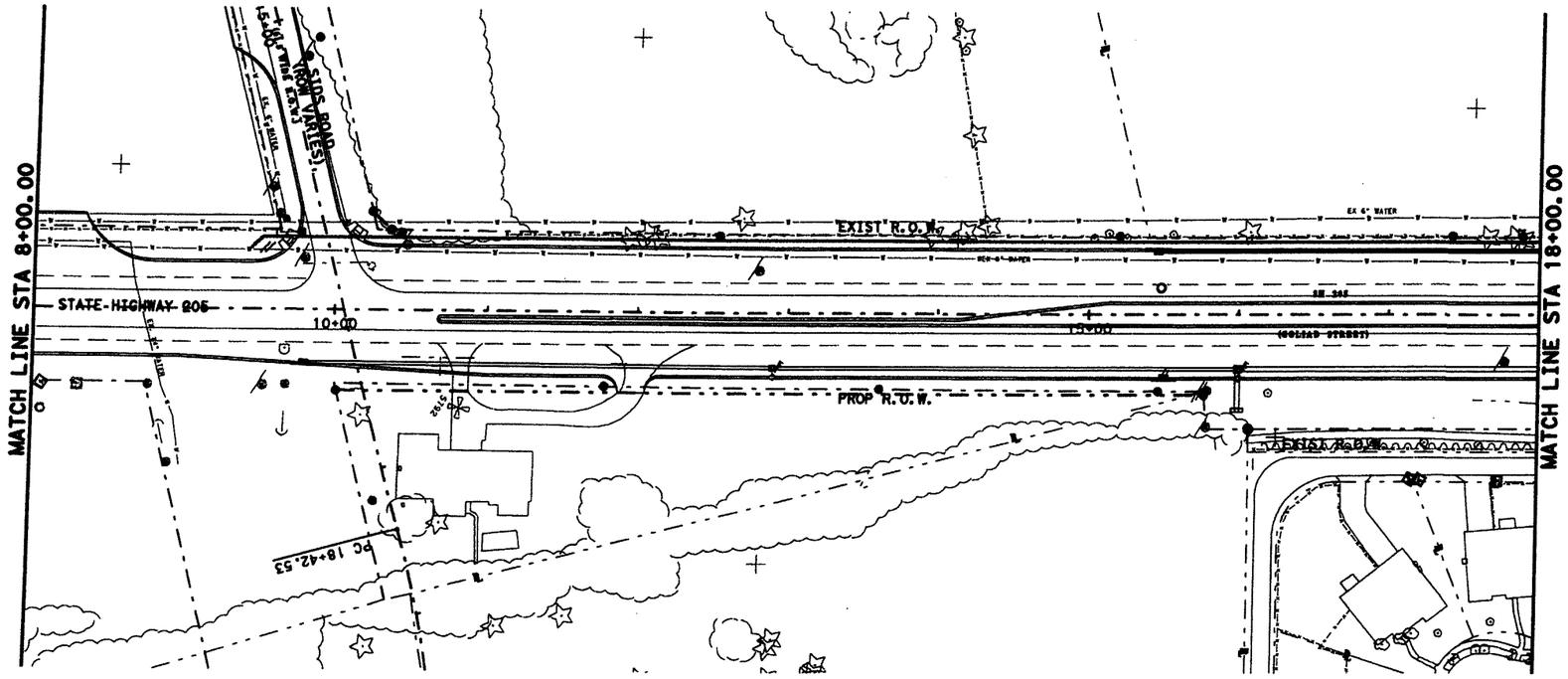
PLAN & PROFILE
STA 0+00 TO 8+00

SHEET 1 OF 19

DIST.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	529
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/22/2006 Plotted 22-MAR-2006 15:16





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

555 550 545 540 535 530 525

8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

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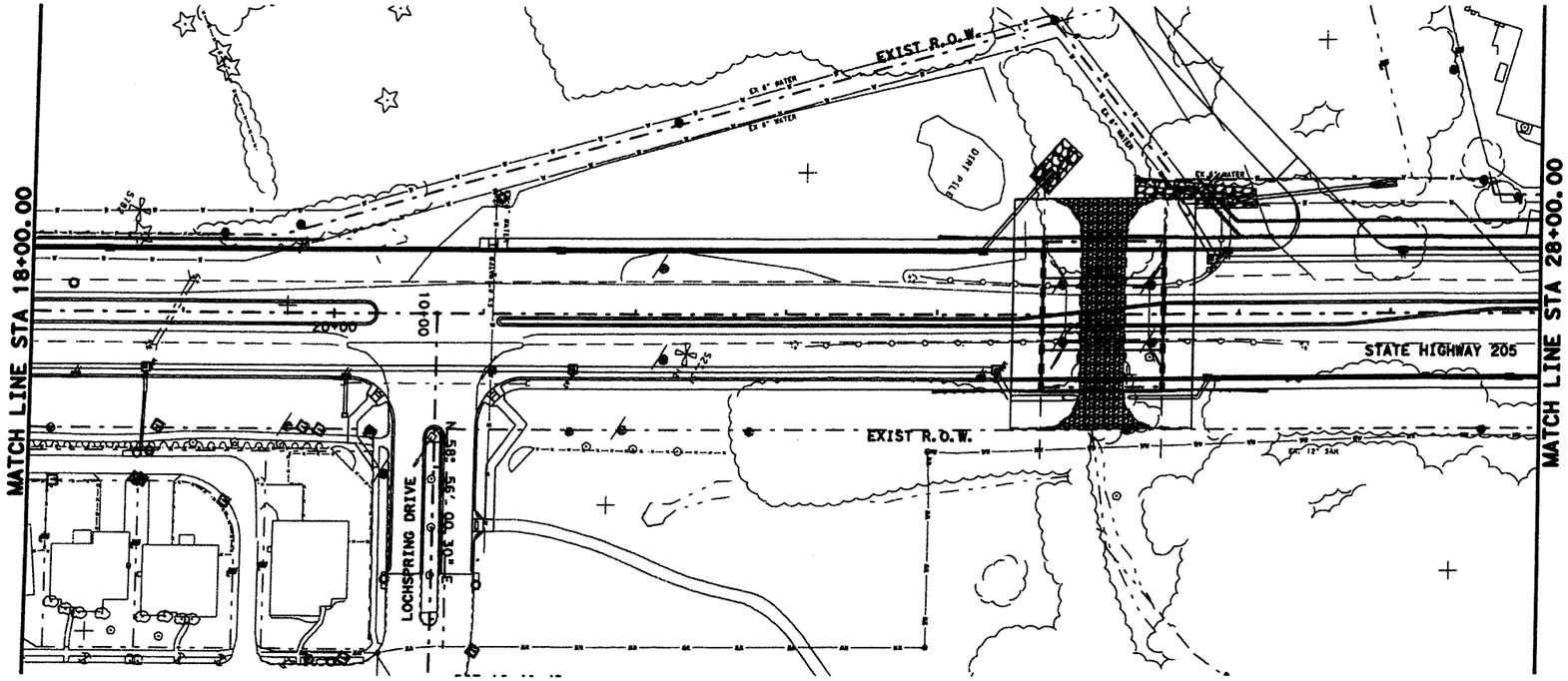
PLAN & PROFILE
STA 8+00 TO 18+00

SHEET 2 OF 19

DIST. COUNTY	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	530
CONT.	SECT.	JOB	
0451	01	032, ETC	

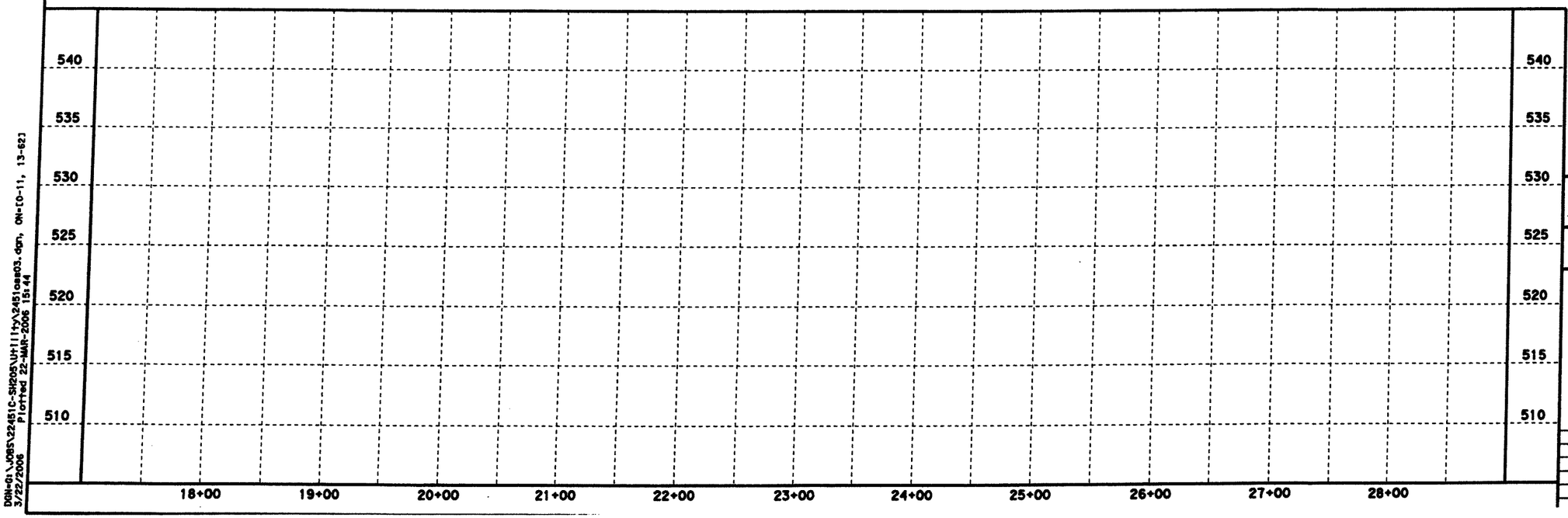
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Plotted 22-MAR-2006 15:44
3/22/2006





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL



3-22-06

STATE OF TEXAS
RICHARD T. GRICE
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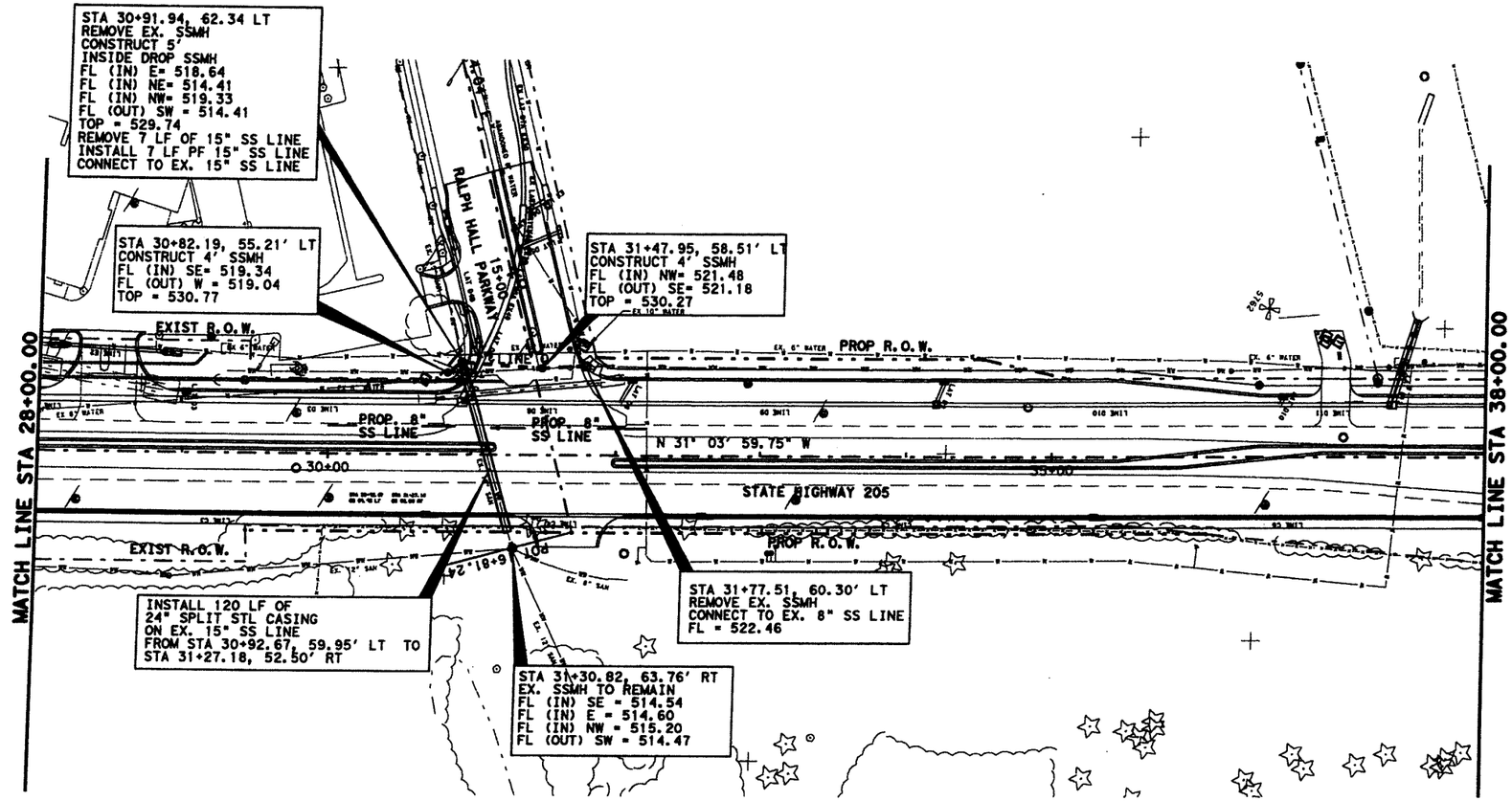
PLAN & PROFILE
STA 18+00 TO 28+00

SHEET 3 OF 19

DIST.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	531
CONT.	SECT.	JOB	
0451	01	032 ETC	

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3/22/2006



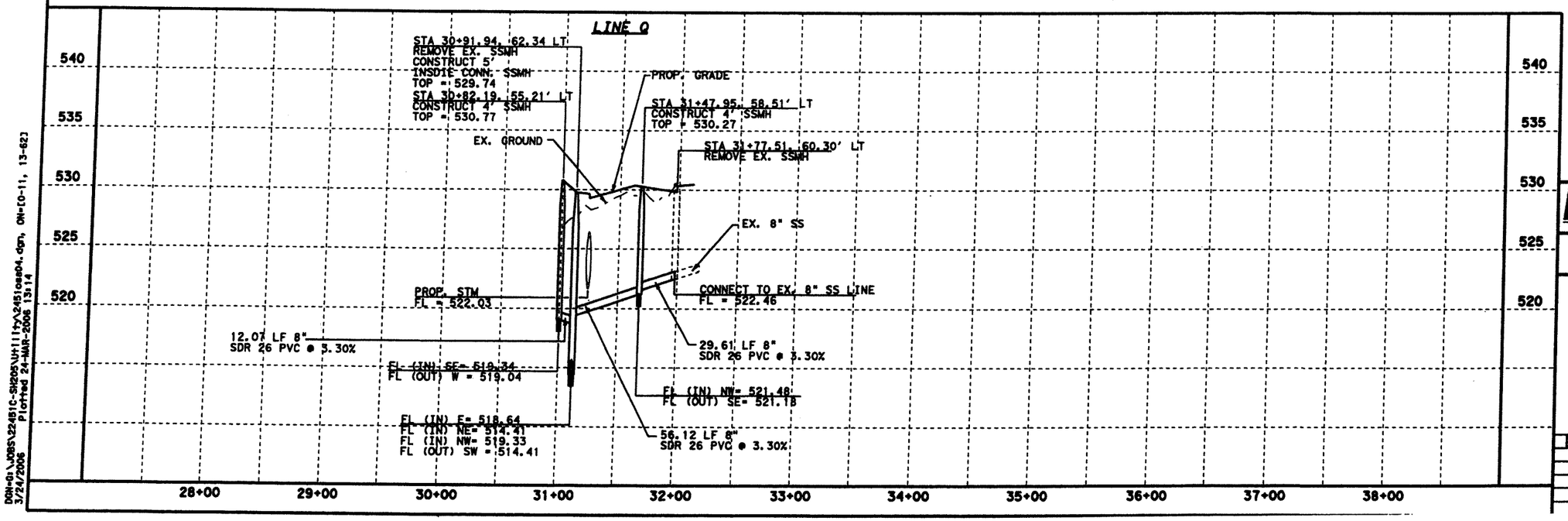


0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

NOTE:

EX. 15" SS LINE ALSO TO BE
TV INSPECTED AFTER
SPLIT CASING IS INSTALLED.



3-24-06

STATE OF TEXAS
RICHARD T. GRICE
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SANITARY SEWER

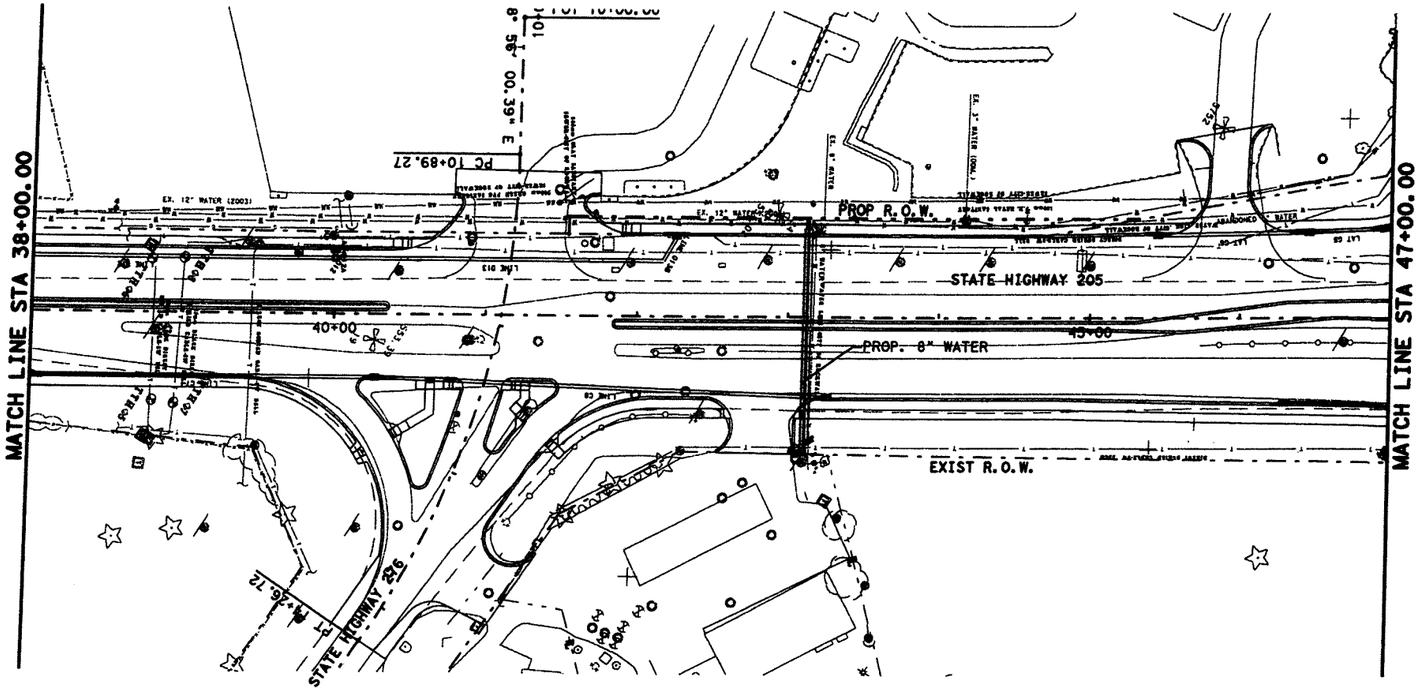
PLAN & PROFILE
STA 28+00 TO 38+00

SHEET 4 OF 19

CONT. NO. DIST. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	532
CONT.	SECT.	JOB	
0451	01	032. ETC	

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3/24/2006 Plotted 24-MAR-2006 13:14



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

560
555
550
545
540
535
530

38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
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PROFESSIONAL ENGINEER

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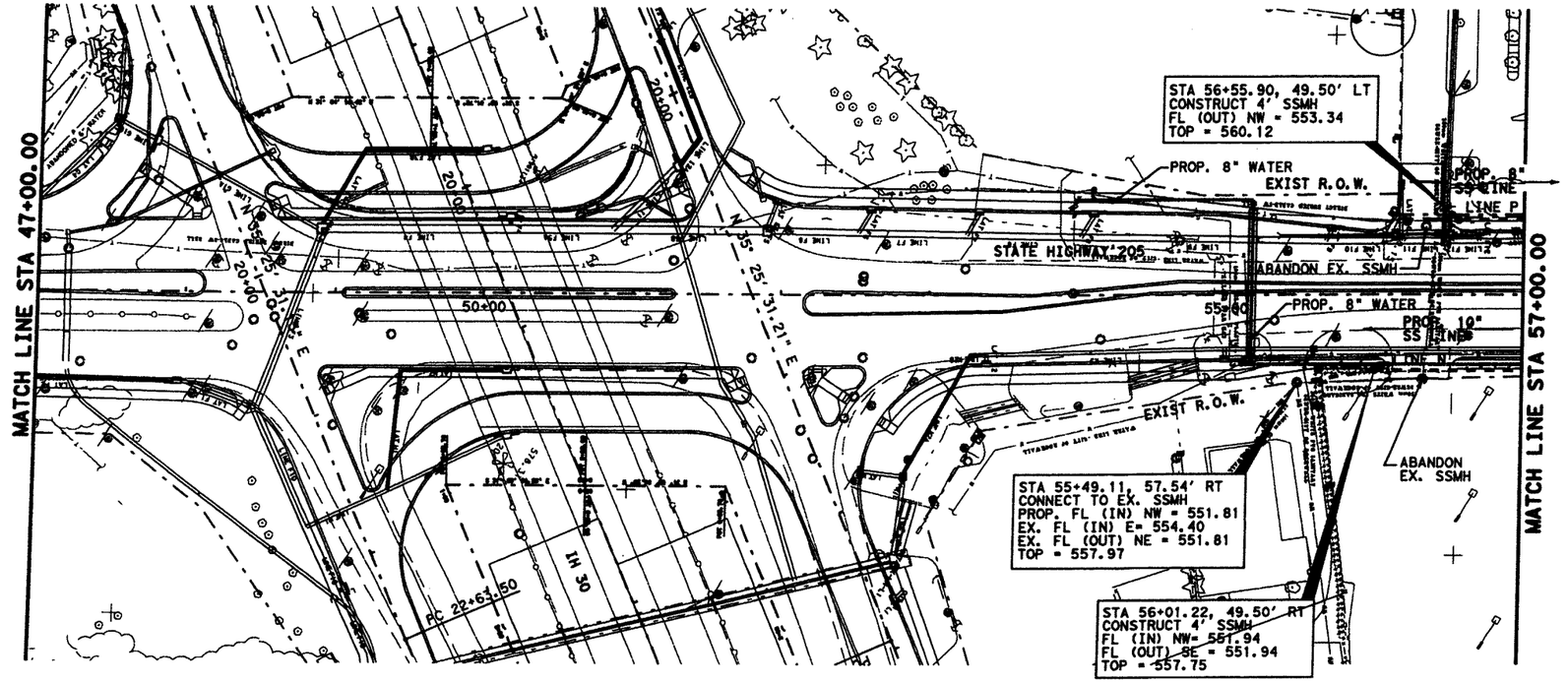
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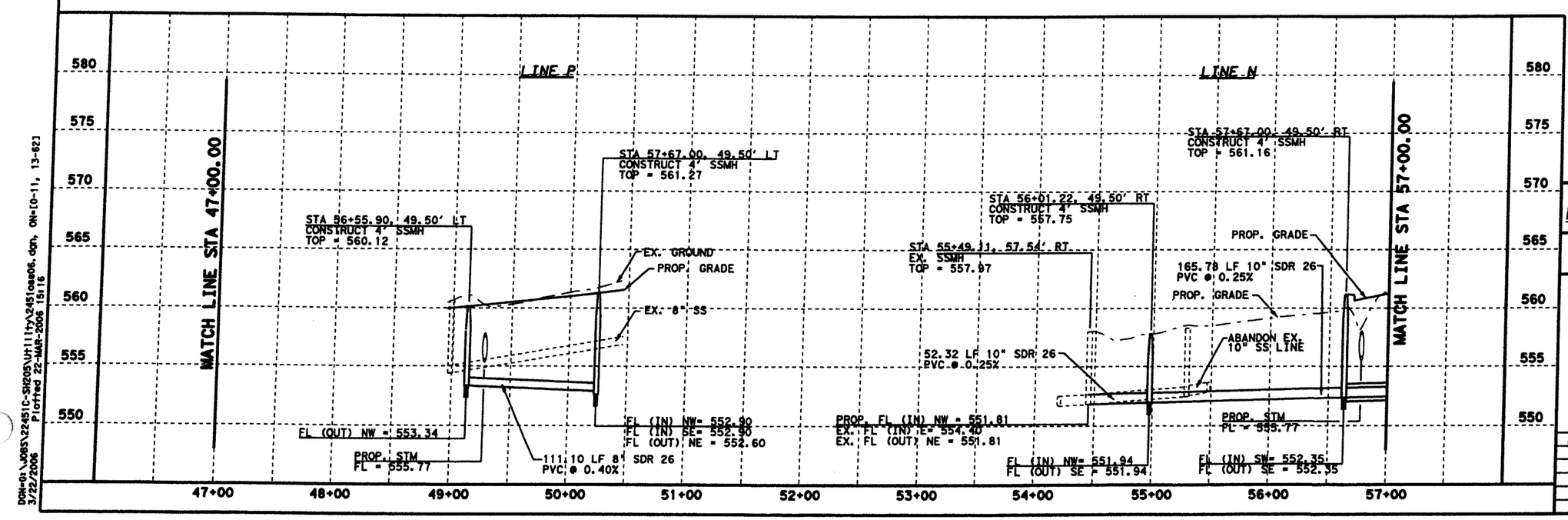
PLAN & PROFILE
STA 38+00 TO 47+00

SHEET 5 OF 19

DIST.	COUNTY	CONTROL SECT.	JOB	HIGHWAY NO.
6	(SEE TITLE SHEET)			SH 205
STATE	DIST.	COUNTY		SHEET NO.
TEXAS	DALLAS	ROCKWALL		533
CONT.	SECT.	JOB		
0451	01	032, ETC		

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3/22/2006 Plotted 22-MAR-2006 15:16





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3/22/2006
Plotted 22-MAR-2006 15:16

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
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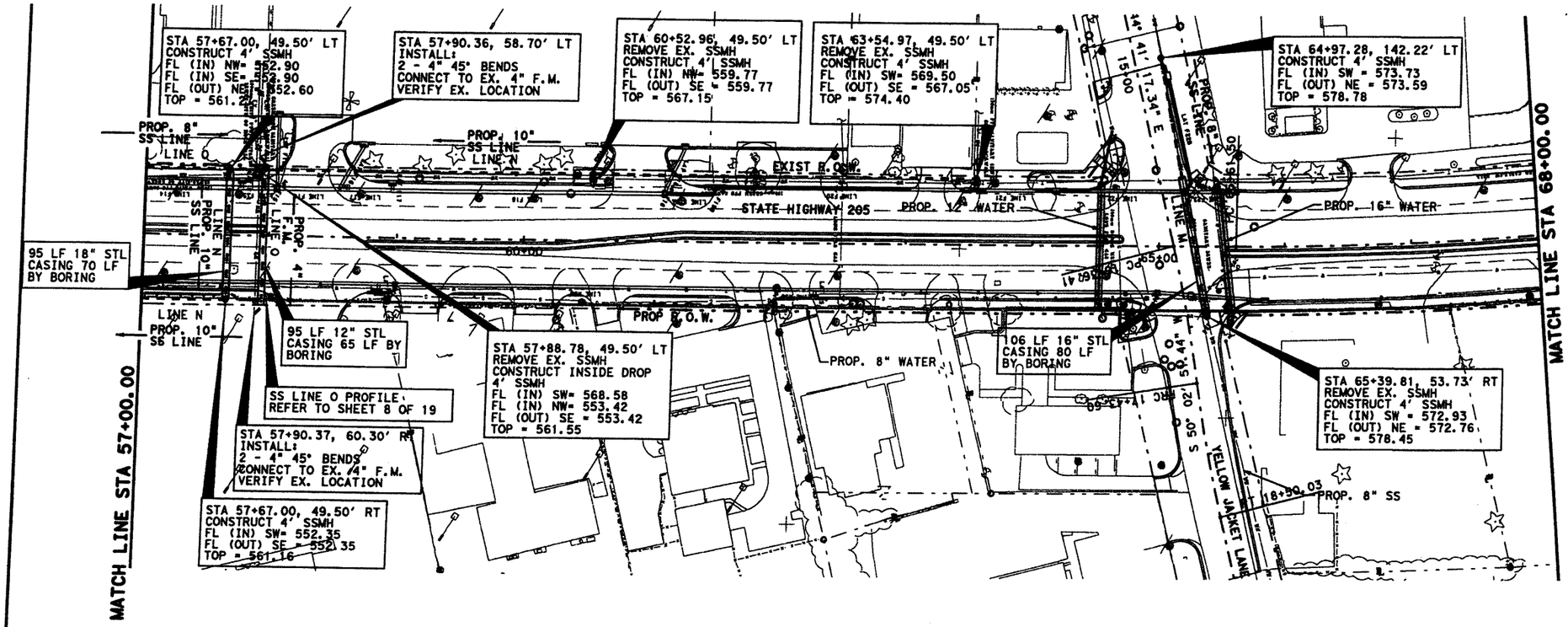
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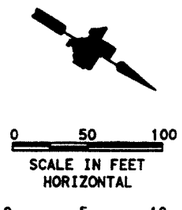
PLAN & PROFILE
STA 47+00 TO 57+00

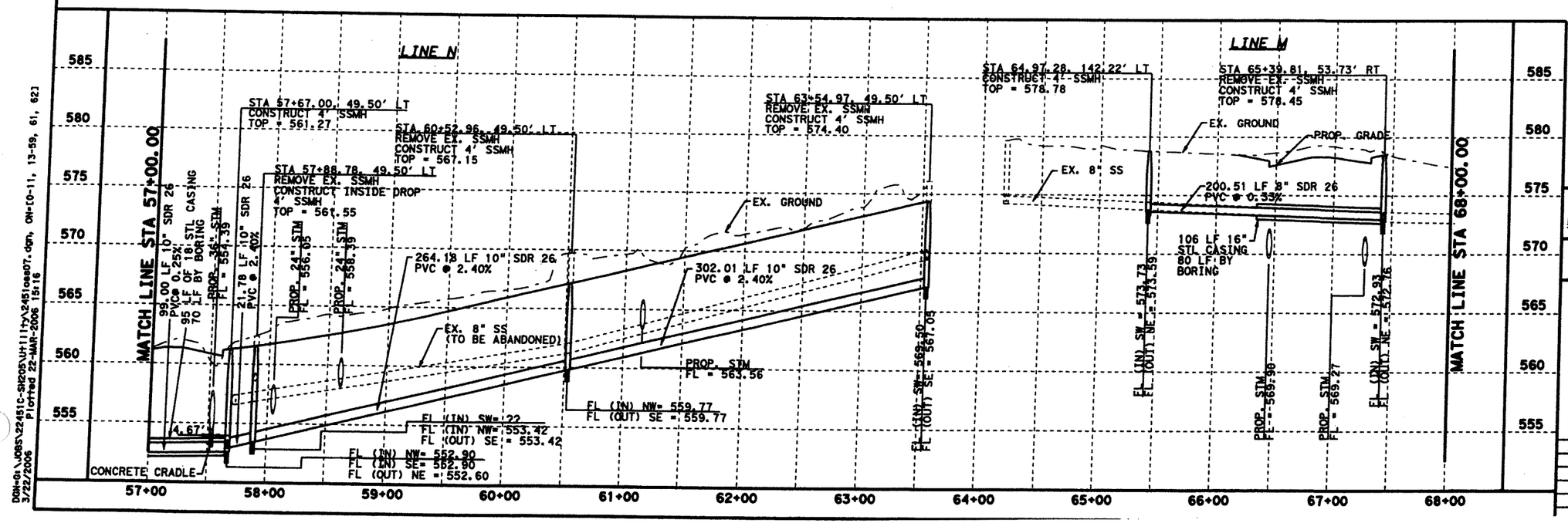
SHEET 6 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	534
CONT.	SECT.	JOB	
0451	01	032, ETC	







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3/22/2006 Plotted 22-MAR-2006 15:16

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
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SH 205

SANITARY SEWER

PLAN & PROFILE
STA 57+00 TO 68+00

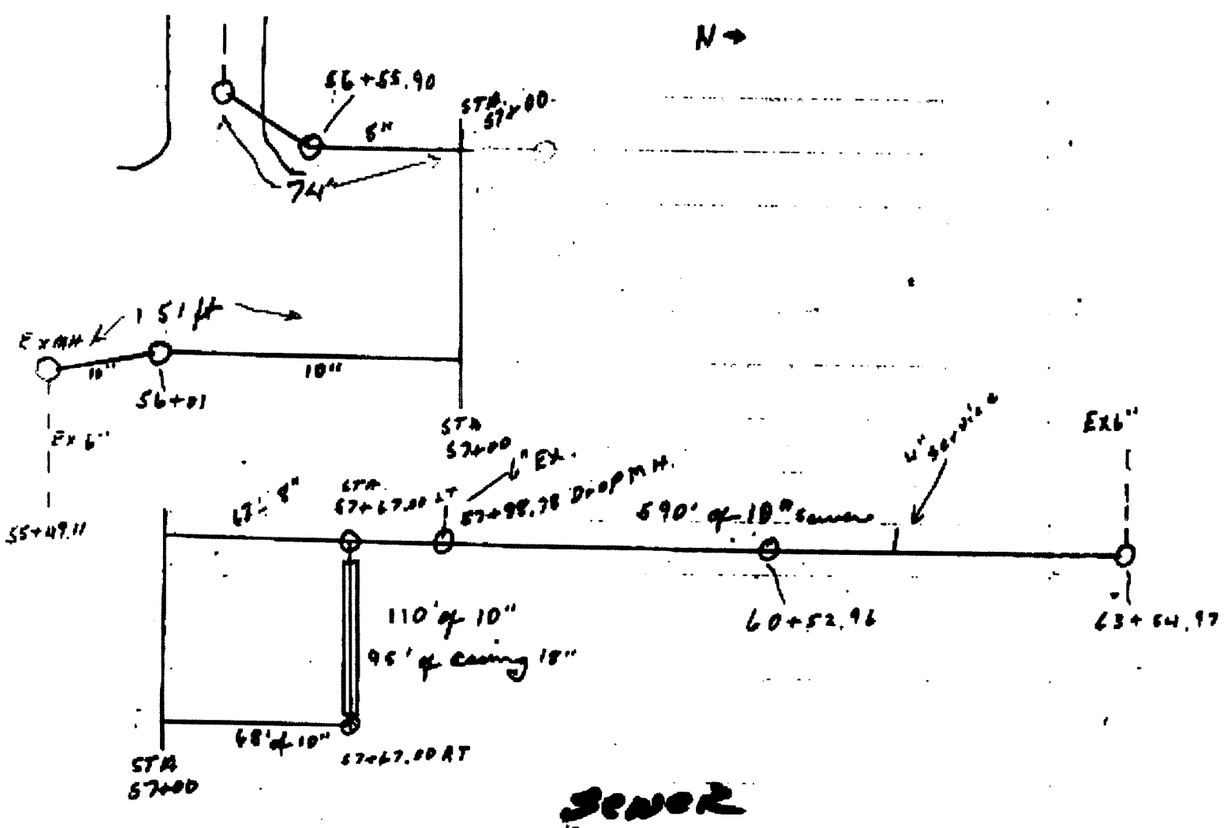
SHEET 7 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	535
CONT.	SECT.	JOB	
0451	01	032 ETC	

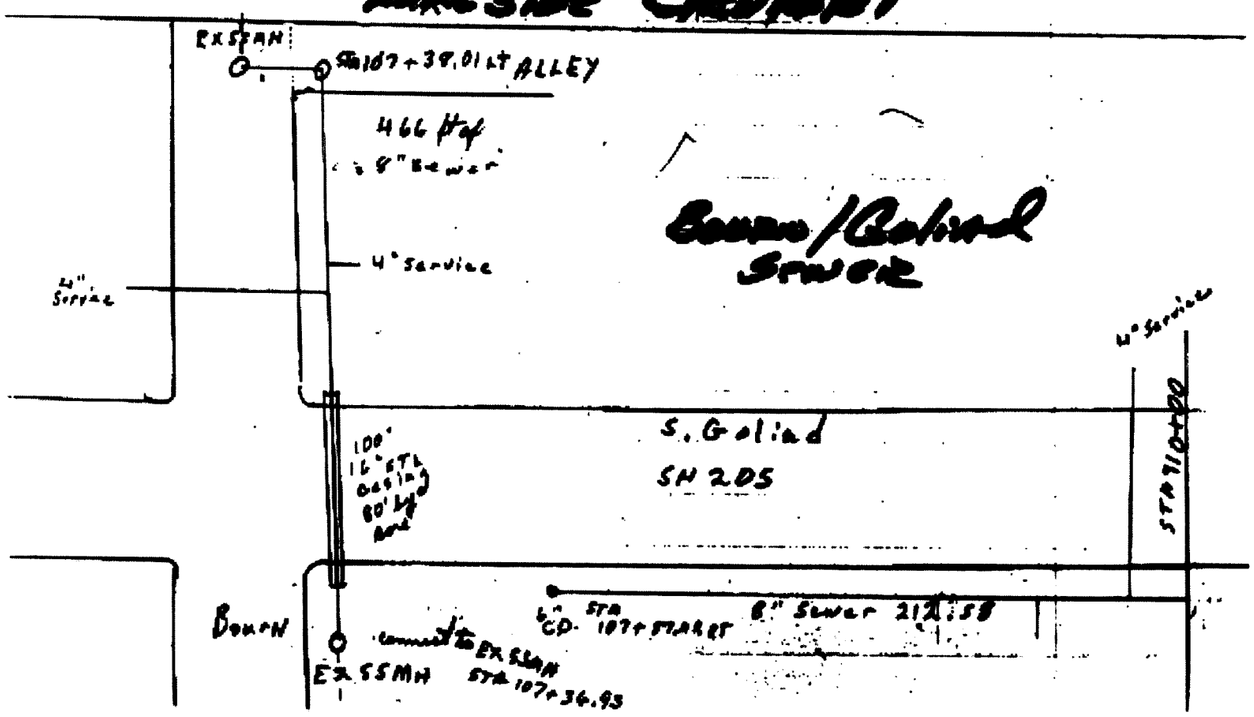
KFC

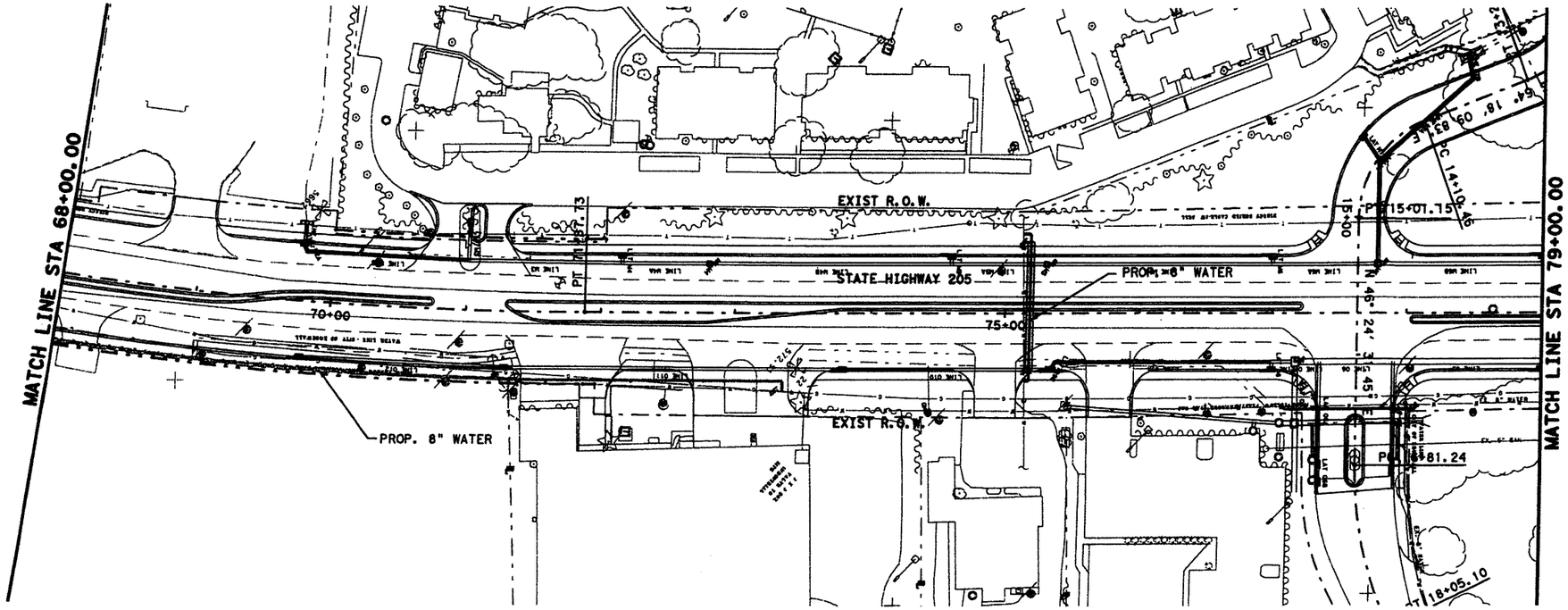
Sheet 7



Sewer

Lakeside Chevrolet





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

LINE O (PLAN REFER TO SHEET 7 OF 19)

STA 57+90.36, 58.70' LT
INSTALL:
2 - 4" 45° BENDS
CONNECT TO EX. 4" F.M.
VERIFY EX. LOCATION

STA 57+90.37, 60.30' RT
INSTALL:
2 - 4" 45° BENDS
CONNECT TO EX. 4" F.M.
VERIFY EX. LOCATION

EX. GROUND
PROP. GRADE
95 LF 12" DIA STL CASING 65 LF BY BORING
119 LF 4" PVC, SDR 26 FORCE MAIN WITH RESTRAINED JOINTS

FL = 552.90
PROP. 36" STM
FL = 554.70
PROP. 36" STM
FL = 556.20
FL = 555.01

575 570 565 560 555 550 545

68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00

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Plotted 22-MAR-2006 15:17
3/22/2006

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

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SH 205

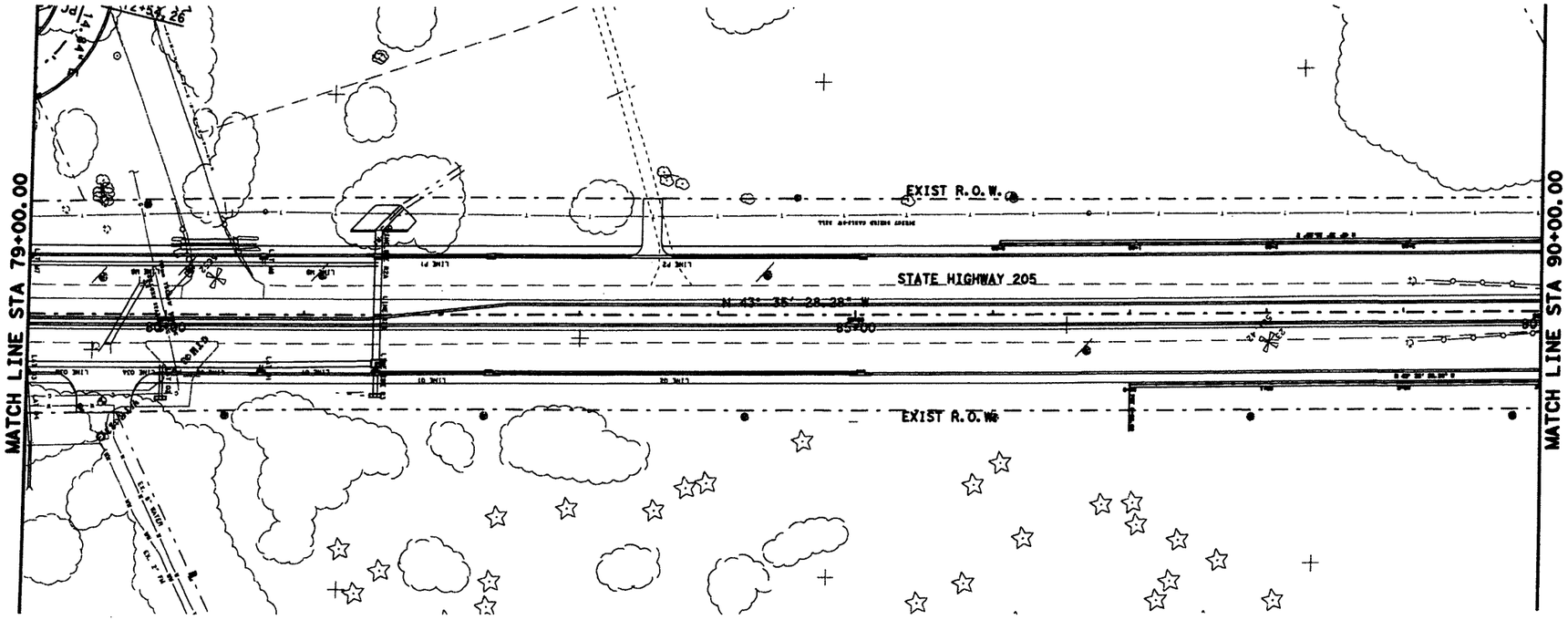
SANITARY SEWER

PLAN & PROFILE
STA 68+00 TO 79+00

SHEET 8 OF 19

CONT. NO. DIST. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	536
CONT.	SECT.	JOB	
0451	01	032 ETC	



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

570
565
560
555
550
545
540

79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00 90+00

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Parsons Brinckerhoff Quade & Douglas, Inc.
8777 Stemmons Freeway
Suite 1333
Dallas, TX 75247

Texas Department of Transportation
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SH 205

SANITARY SEWER

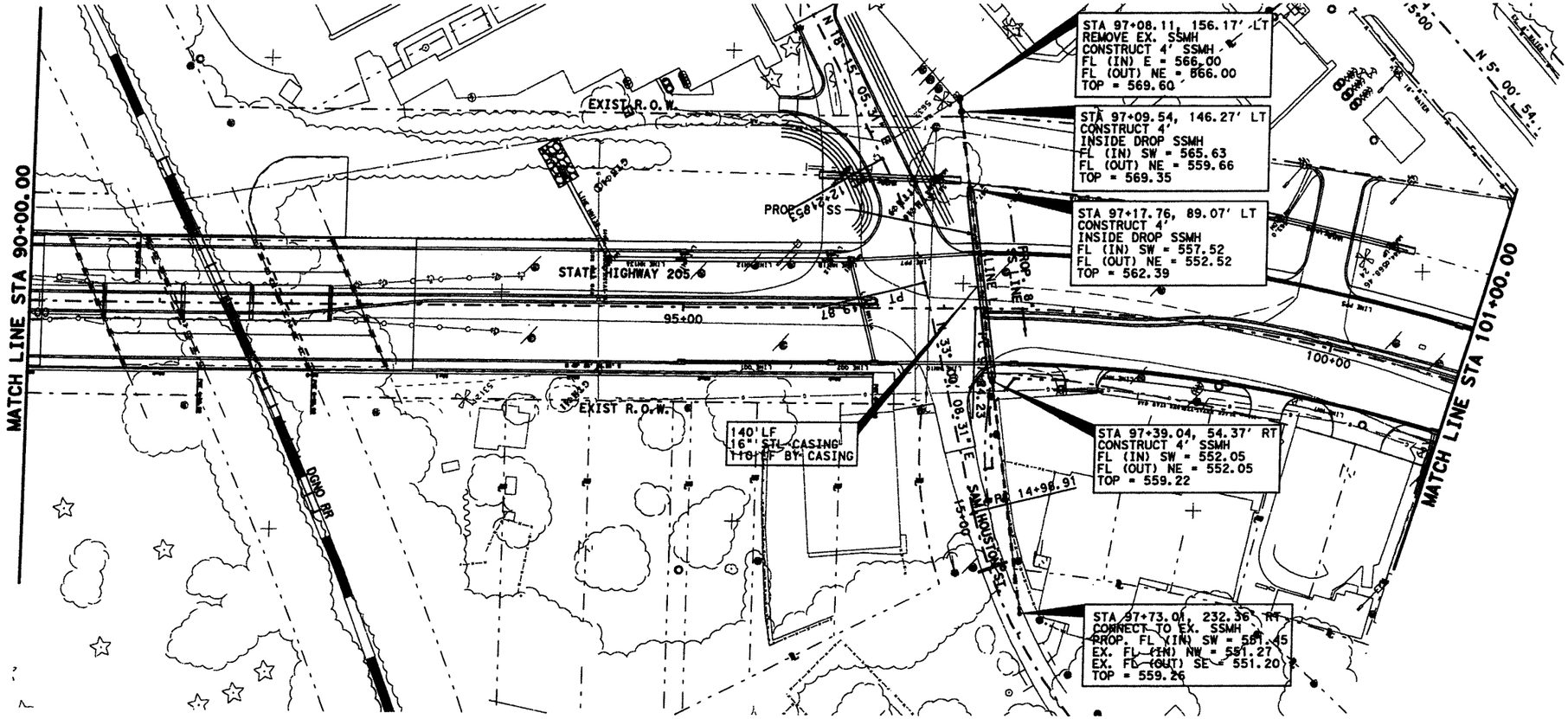
PLAN & PROFILE
STA 79+00 TO 90+00

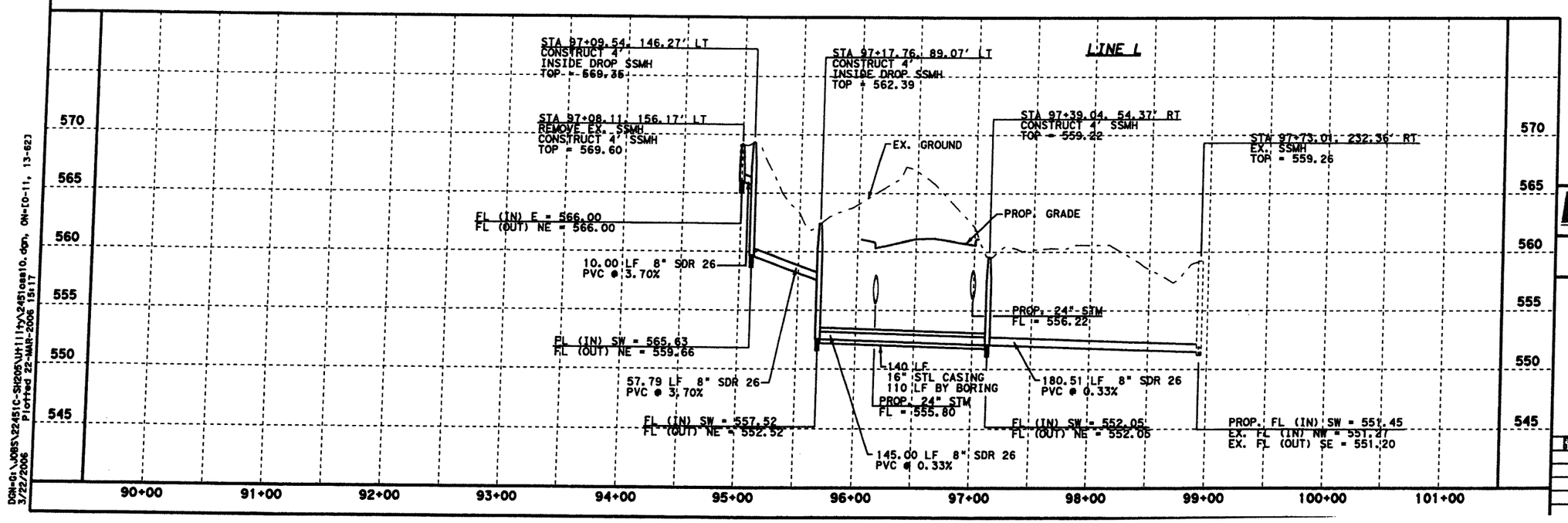
SHEET 9 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	537
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/22/2006 Plotted 22-MAR-2006 15:17





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Plotted 22-MAR-2006 15:17
3/22/2006

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Richard T. Grice

PB Parsons Brinckerhoff Quade & Douglas, Inc.
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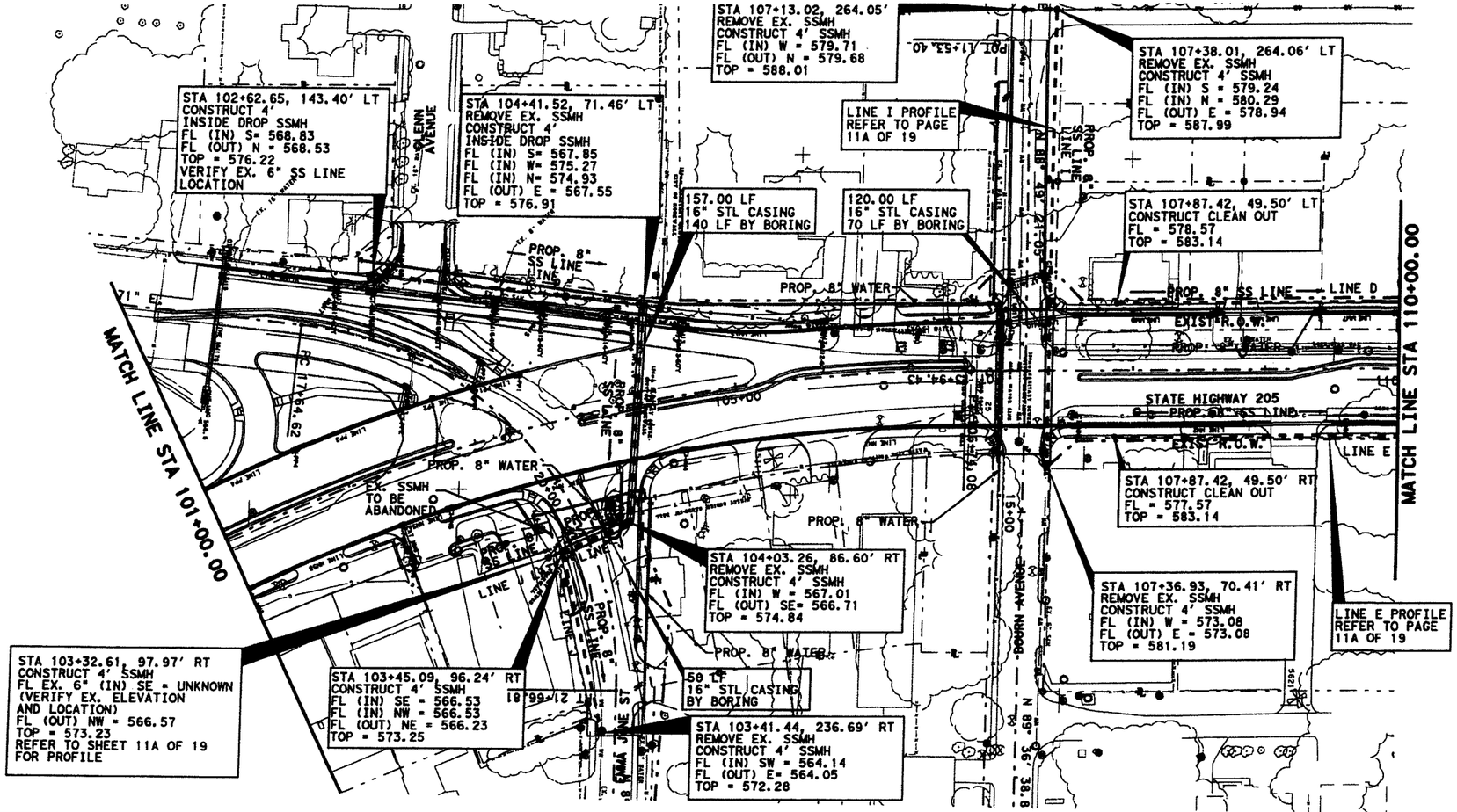
SANITARY SEWER

PLAN & PROFILE
STA 90+00 TO 101+00

SHEET 10 OF 19

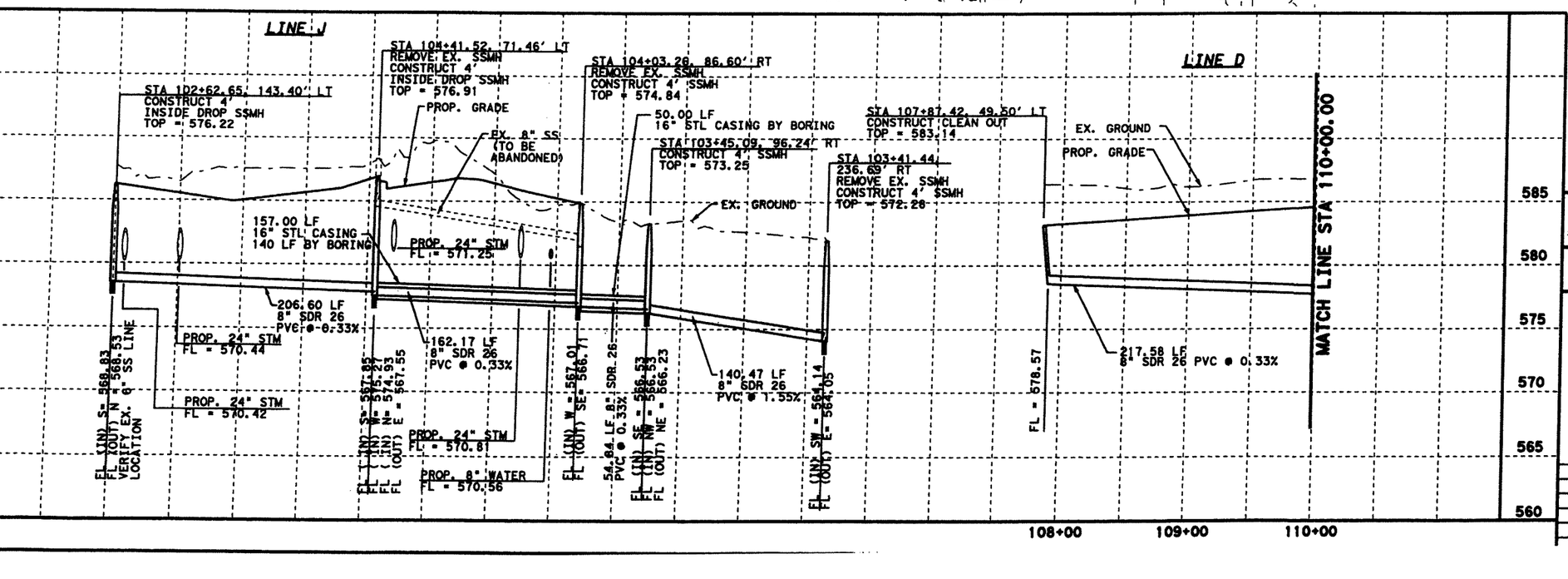
DIST. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	538
CONT.	SECT.	JOB	
0451	01	032, ETC	



NOTE:

WASTEWATER LINE E, I & J ARE LOCATED ON SHEET 11A OF 19



3-24-06

STATE OF TEXAS
RICHARD T. GRICE
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SANITARY SEWER

PLAN & PROFILE
STA 101+00 TO 110+00

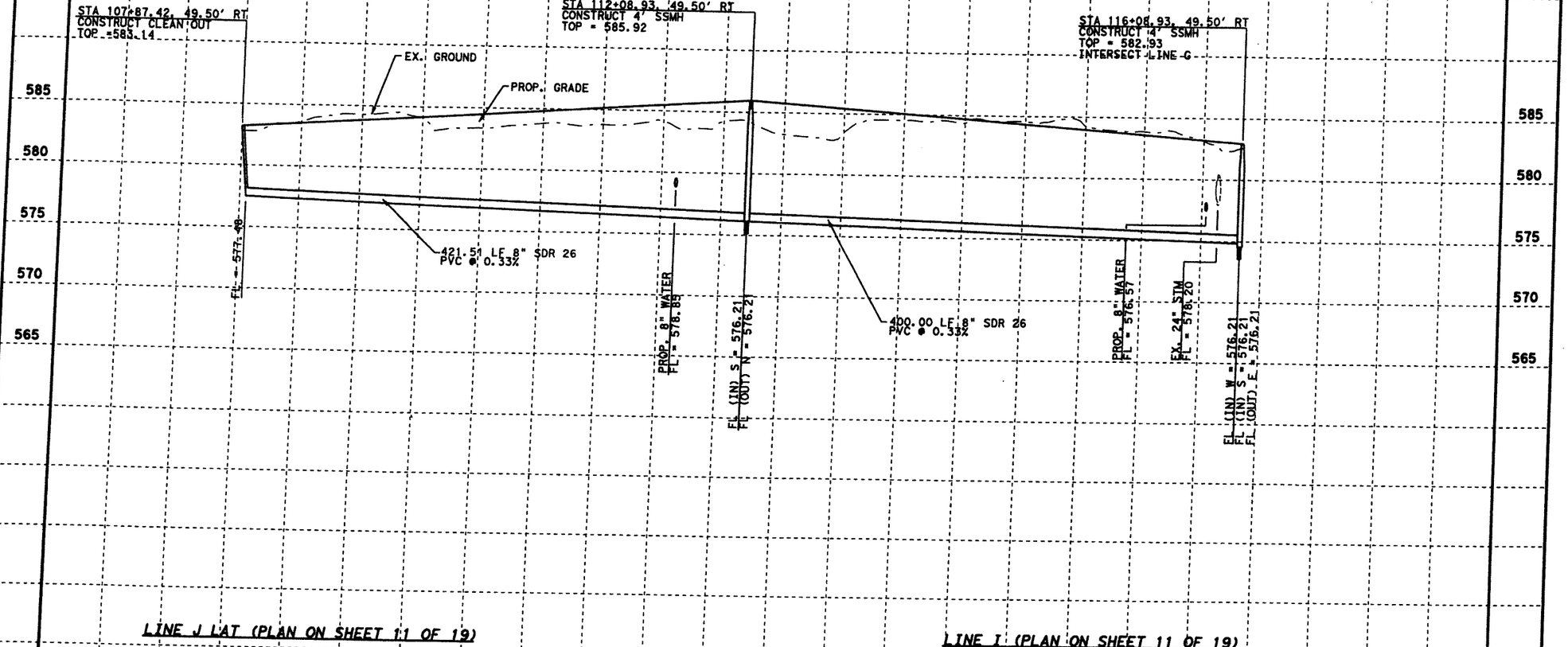
SHEET 11 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	539
CONT.	SECT.	JOB	
0451	01	073 STG	

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Plotted 24-MAR-2006 13:14
3/24/2006

LINE E (PLAN ON SHEET 11 OF 19 AND SHEET 12 OF 19)



LINE J LAT (PLAN ON SHEET 11 OF 19)

LINE I (PLAN ON SHEET 11 OF 19)

0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
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SANITARY SEWER

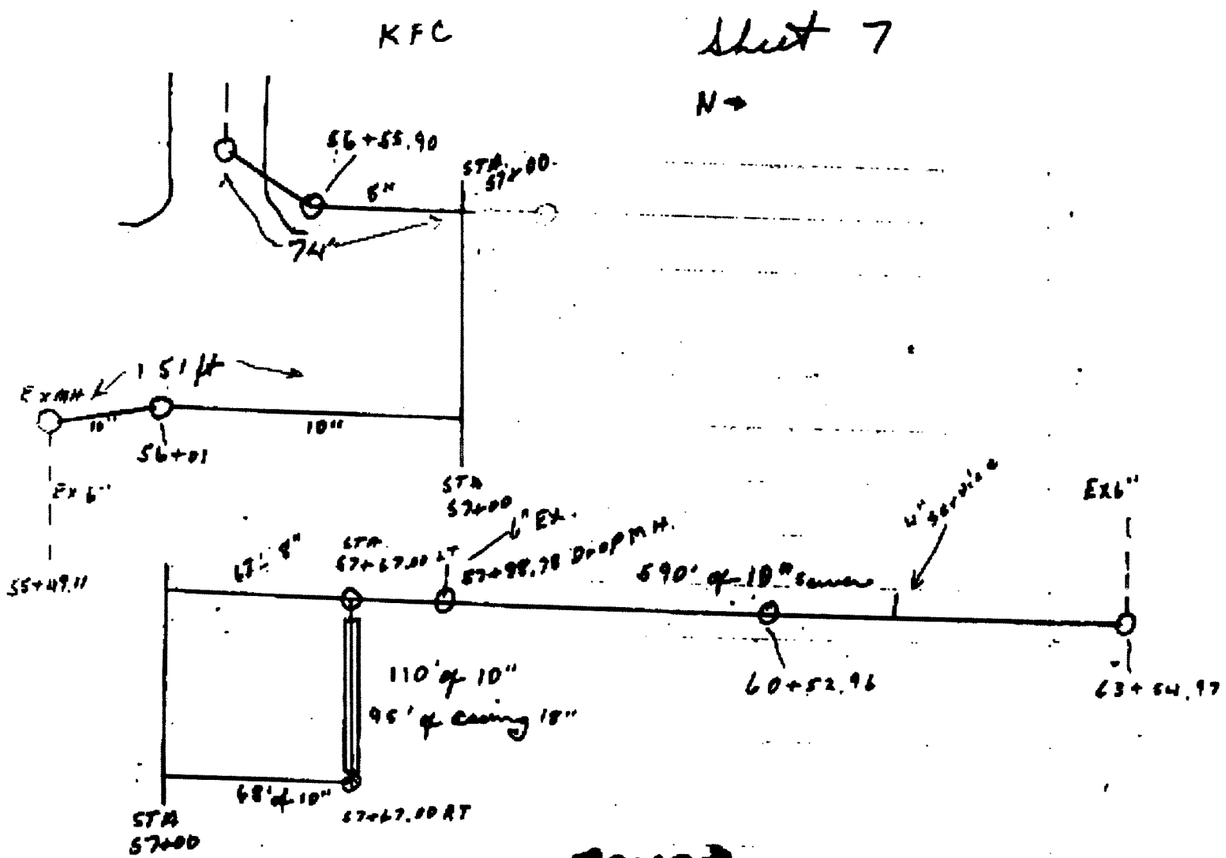
PLAN & PROFILE
STA 101+00 TO 110+00

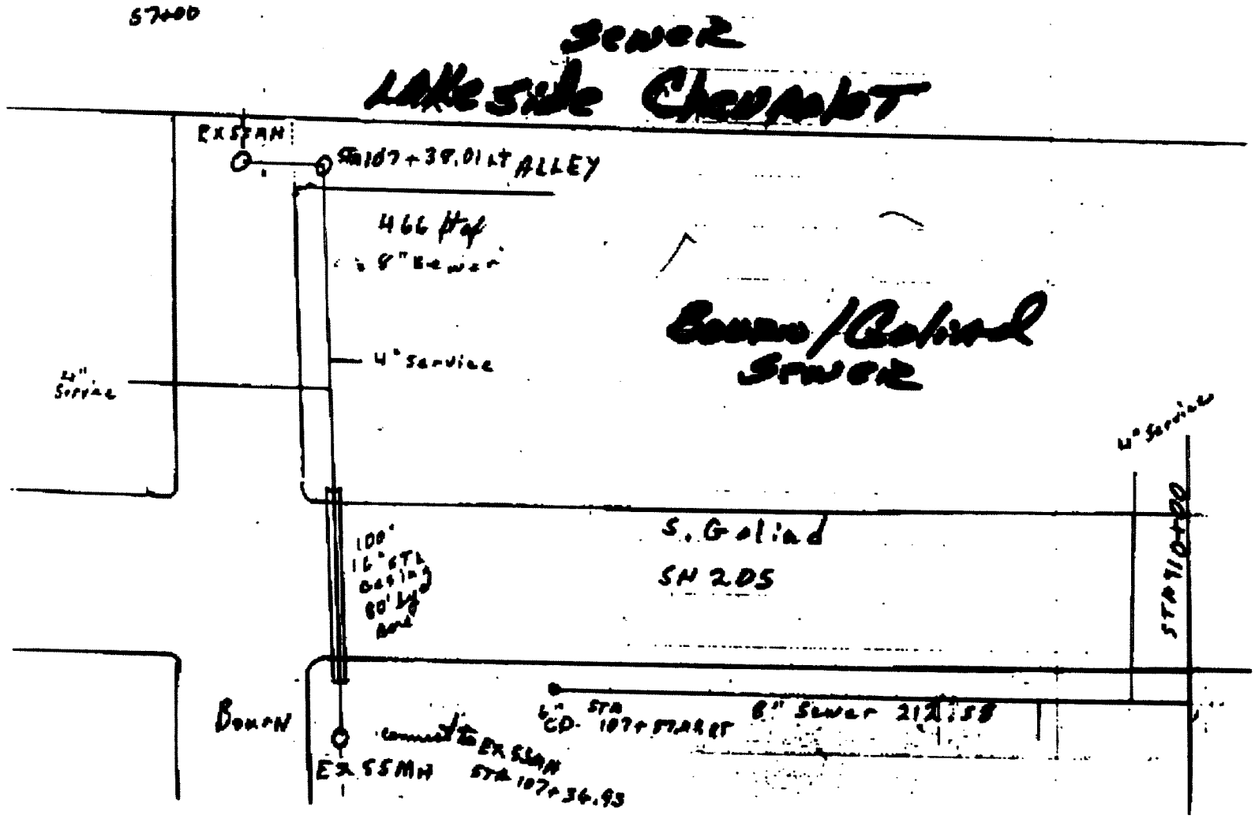
SHEET 11A OF 19

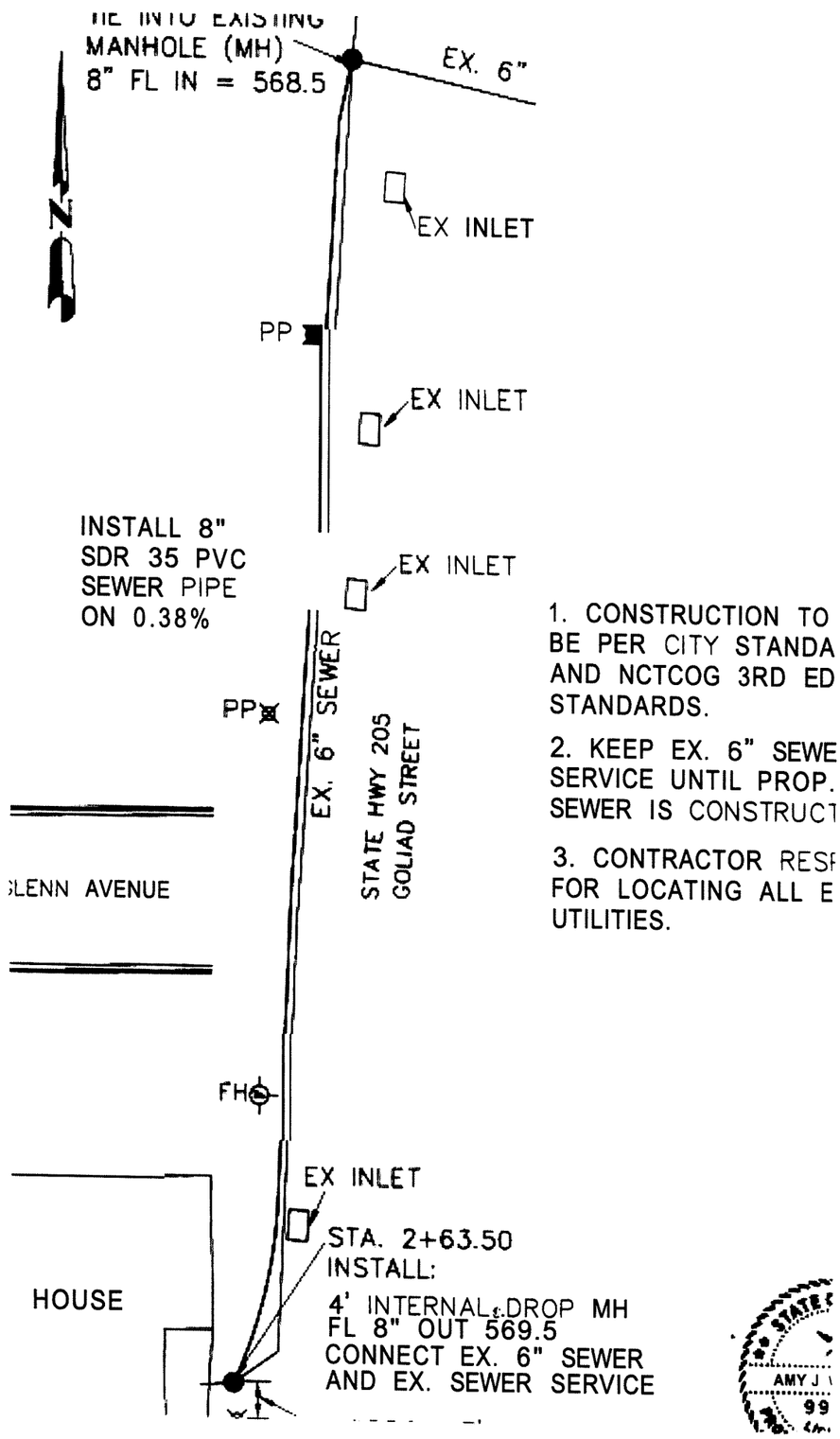
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	540
CONT.	SECT.	JOB	
0451	01	032 ETC	

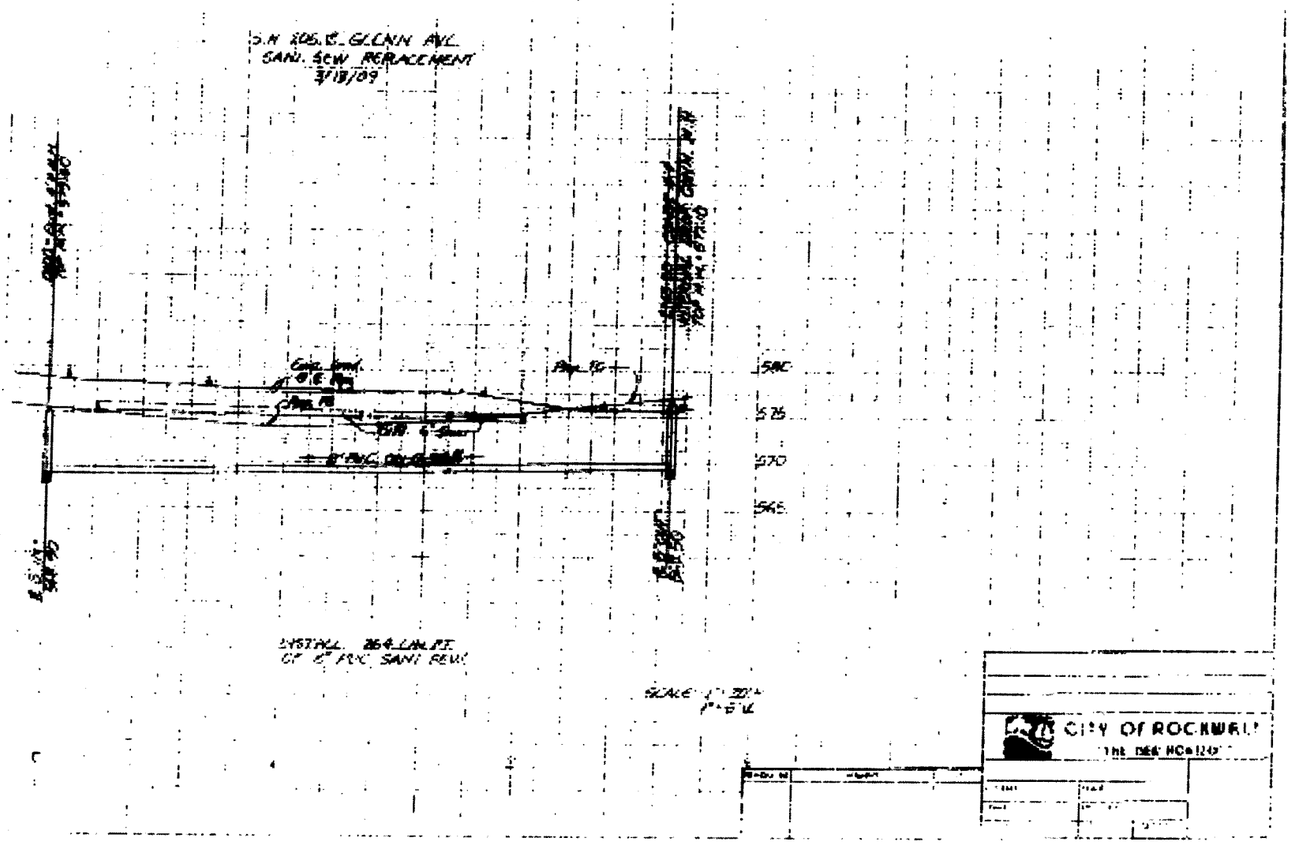
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Plotted 22-MAR-2006 15:17
3/22/2006

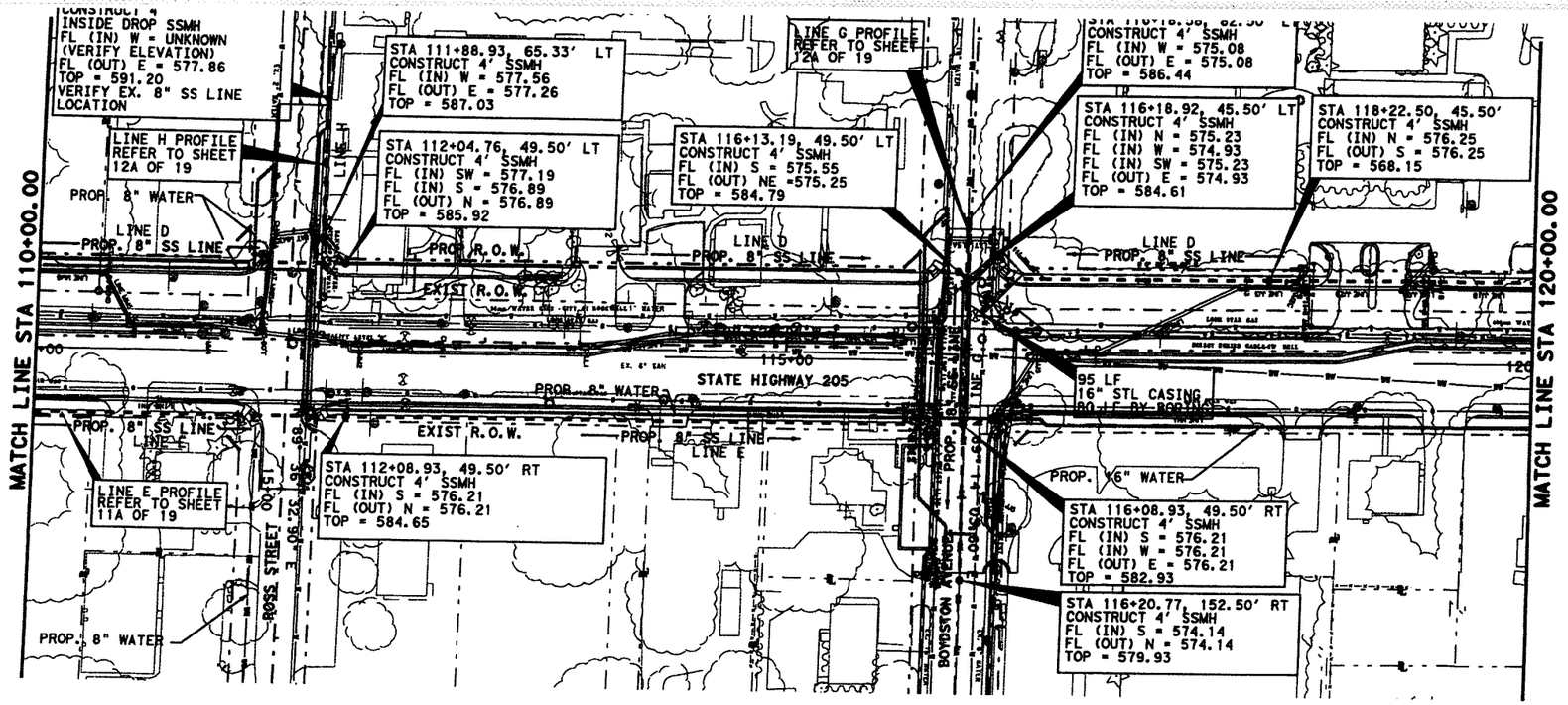

KFC
Sheet 7
N→
56+55.90
STA 57+00
8"
74°
151 ft
Ex MH
10"
10"
56+01
Ex 6"
STA 57+00
6" Ex.
55+49.11
67+67.10 RT
STA 57+67.10 LT
67+98.78 Drop MH
590' of 10" Sewer
4" Service
Ex 6"
110' of 10"
95' of casing 18"
60+52.96
63+64.97
68' of 10"
STA 57+00

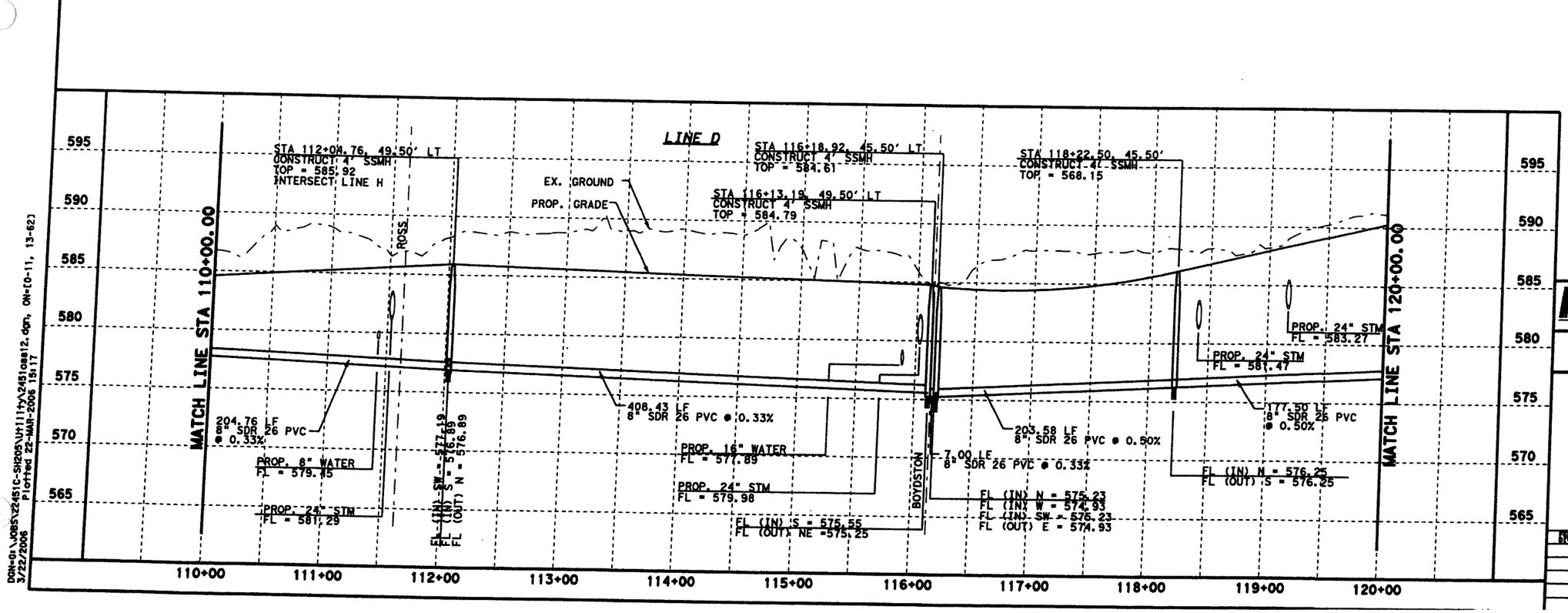

Sewer
Lakeside Chevrolet
Ex STAN
STA 107+39.01 LT ALLEY
466 ft of 8" Sewer
4" Service
4" Service
Bowen/Goliad Sewer
4" Service
S. Goliad
SN 205
STA 110+20
100' 16" STL Casing 80' Lt of Bowen
Bowen
Ex SSMH
Connect to Ex SSMH STA 107+36.93
4" CO STA 107+97.87
8" Sewer 212.58


TIE INTO EXISTING
MANHOLE (MH)
8" FL IN = 568.5
EX. 6"
EX INLET
PP
EX INLET
INSTALL 8"
SDR 35 PVC
SEWER PIPE
ON 0.38%
EX INLET
PP
EX. 6" SEWER
STATE HWY 205
GOLIAD STREET
GLENN AVENUE
FH
EX INLET
STA. 2+63.50
INSTALL:
4' INTERNAL DROP MH
FL 8" OUT 569.5
CONNECT EX. 6" SEWER
AND EX. SEWER SERVICE
HOUSE
1. CONSTRUCTION TO
BE PER CITY STANDA
AND NCTCOG 3RD ED
STANDARDS.
2. KEEP EX. 6" SEWE
SERVICE UNTIL PROP.
SEWER IS CONSTRUCT
3. CONTRACTOR RESP
FOR LOCATING ALL E
UTILITIES.
AMY J
99

S.W. 105 ST. & GLENN AVE.
SANI. SEW REPLACEMENT
3/18/09







DGN=G:\JOBS\22451C-SH205\Ut111\X2451oast2.dgn, ON=[0-11, 13-62]
3/22/2006 Plotted 22-MAR-2006 15:17

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

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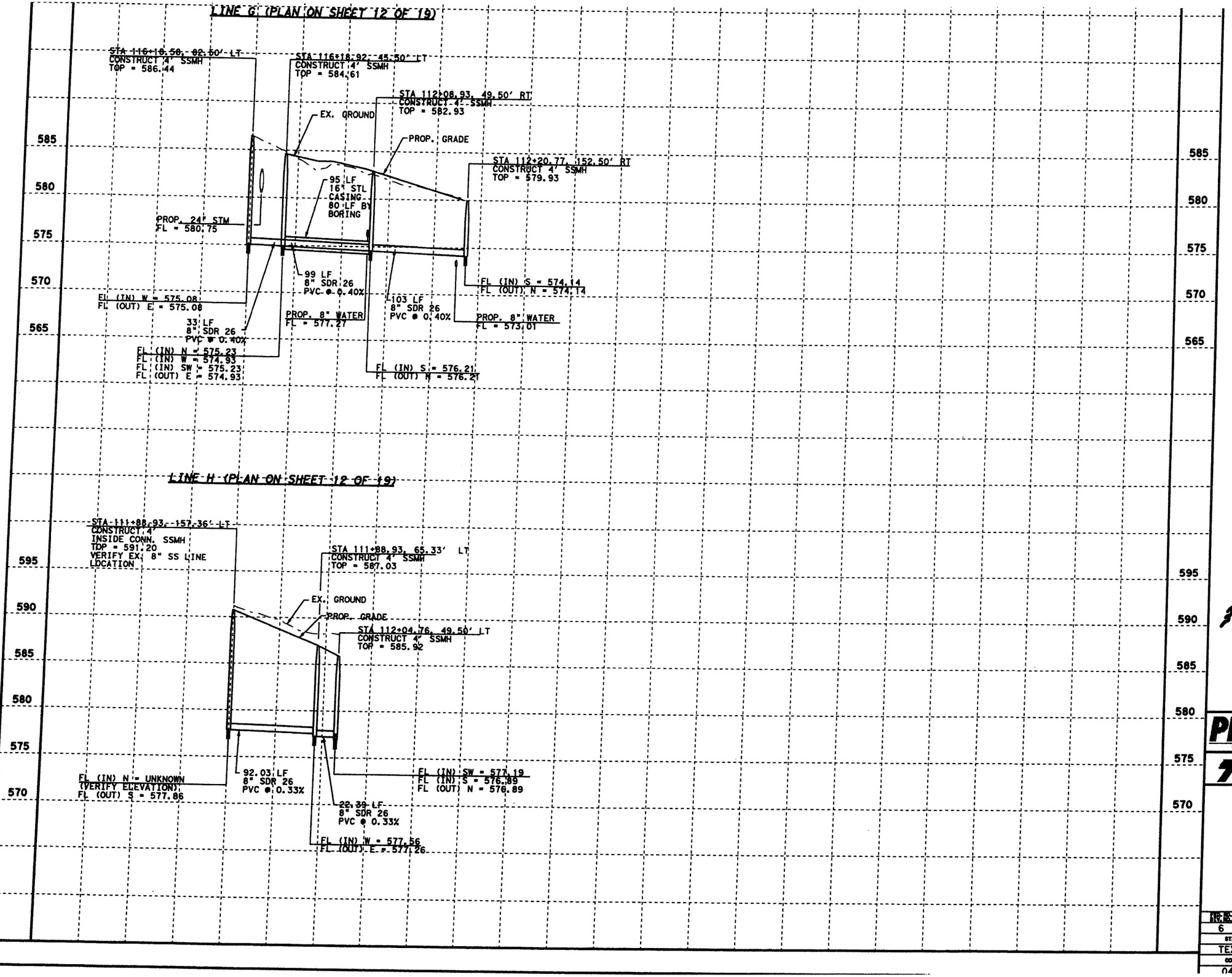
SANITARY SEWER

PLAN & PROFILE
STA 110+00 TO 120+00

SHEET 12 OF 19

DIST. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	
CONT.	SECT.	JOB	541
0451	01	032, ETC	



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3/22/2006 Plotted 22-MAR-2006 15:17

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
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2777 Stemmons Freeway
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SH 205

SANITARY SEWER

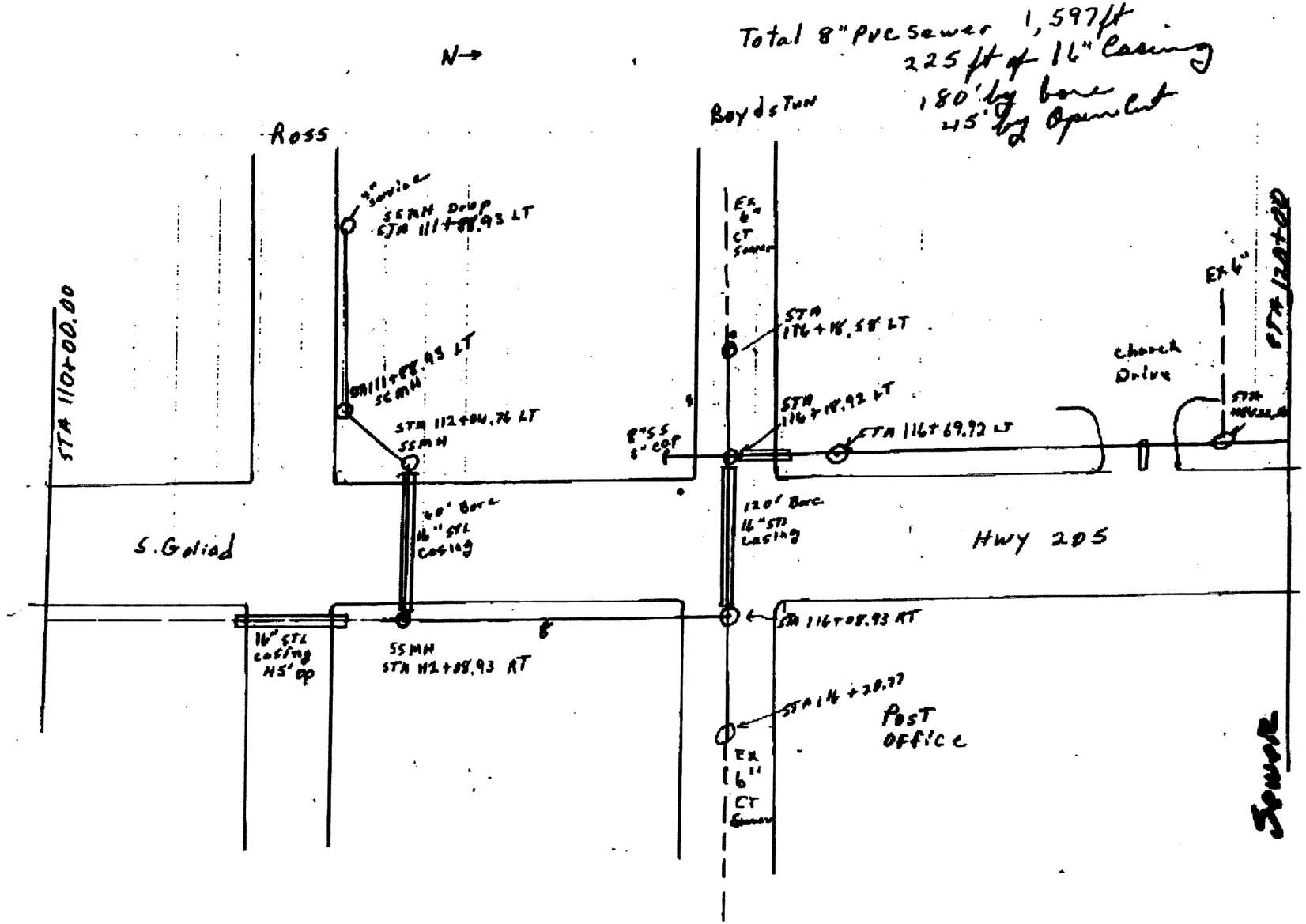
PLAN & PROFILE
STA 101+00 TO 110+00

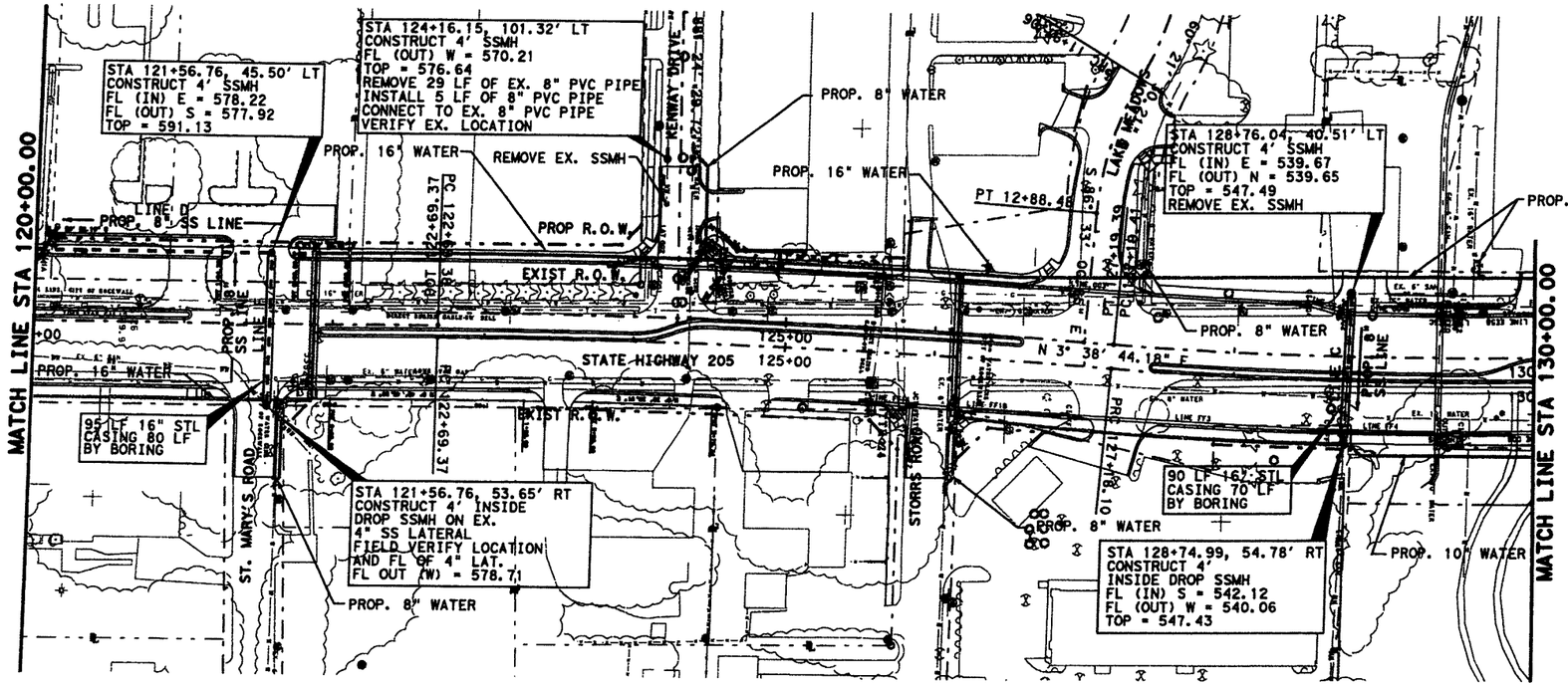
SHEET 12A OF 19

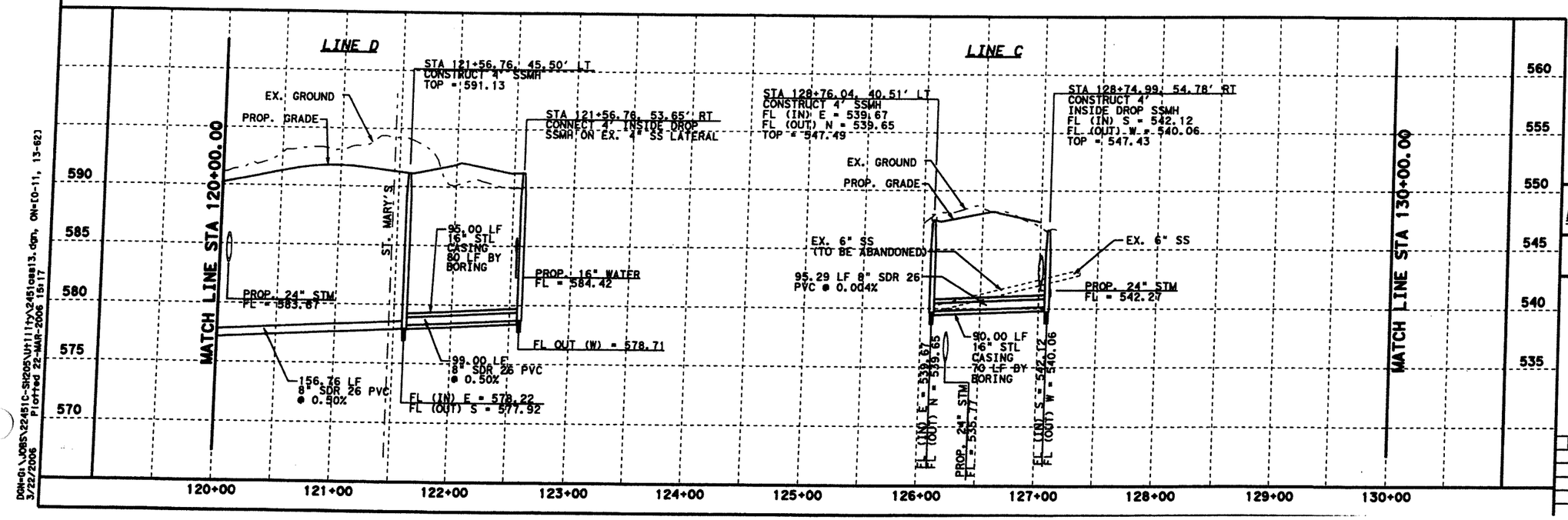
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	
CONT.	SECT.	JOB	542
0451	01	032 ETC	

Total 8" PVC Sewer 1,597 ft
225 ft of 16" Casing
180' by bore
45' by Open Cut







0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205

SANITARY SEWER

PLAN & PROFILE
STA 120+00 TO 130+00

SHEET 13 OF 19

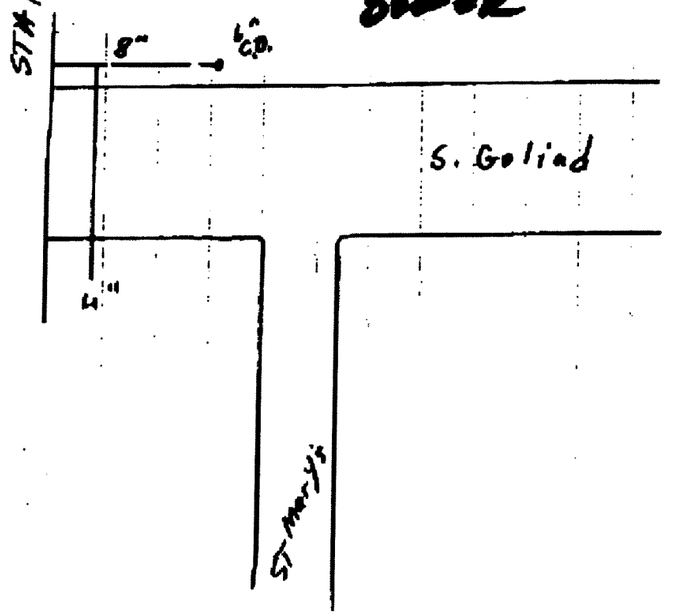
DIST. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	(SEE TITLE SHEET)		SH 205
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	543
CONT.	SECT.	JOB	
0451	01	032. ETC	

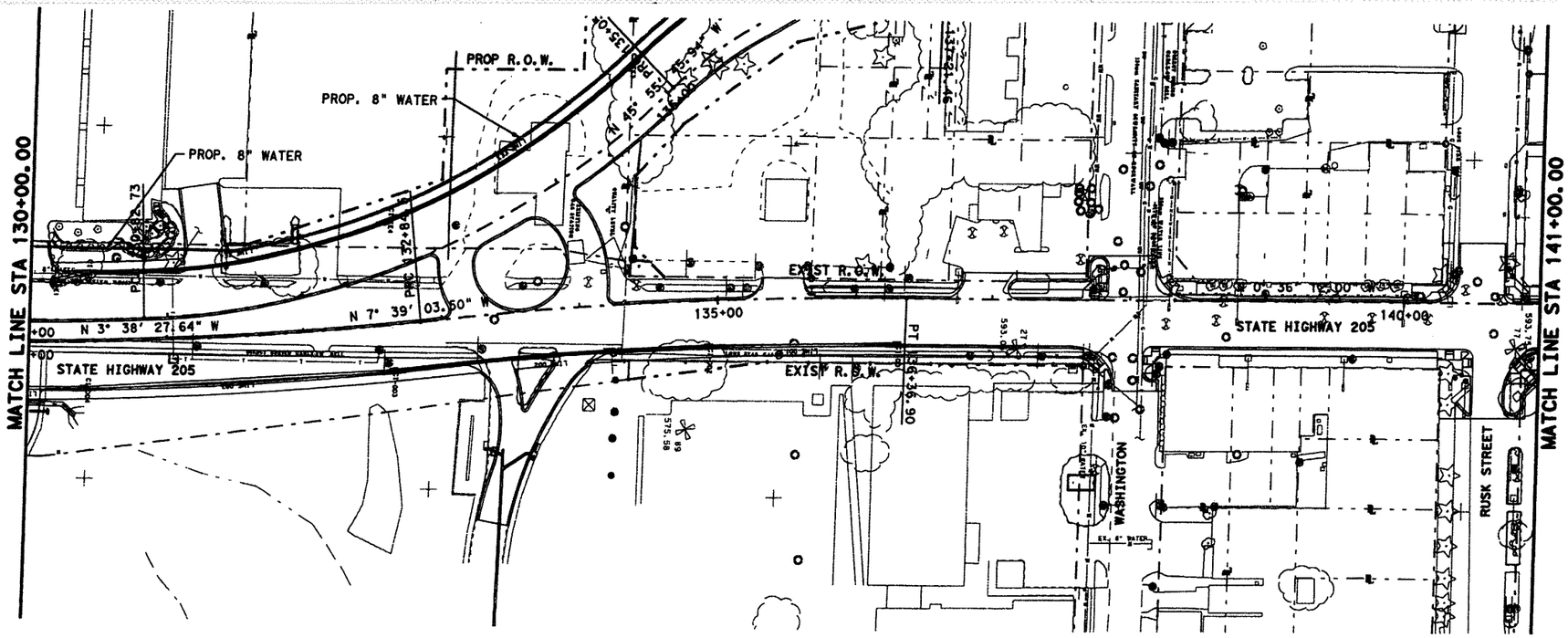
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3/22/2006 Plotted 22-MAR-2006 15:17

74' of 8" PVC Sewer
1-6" C.O.
1-4" Long Sewer service
95' of 4" PVC 93' of 8" Casing

Sewer

N →





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37820
REGISTERED
PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
8777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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SH 205

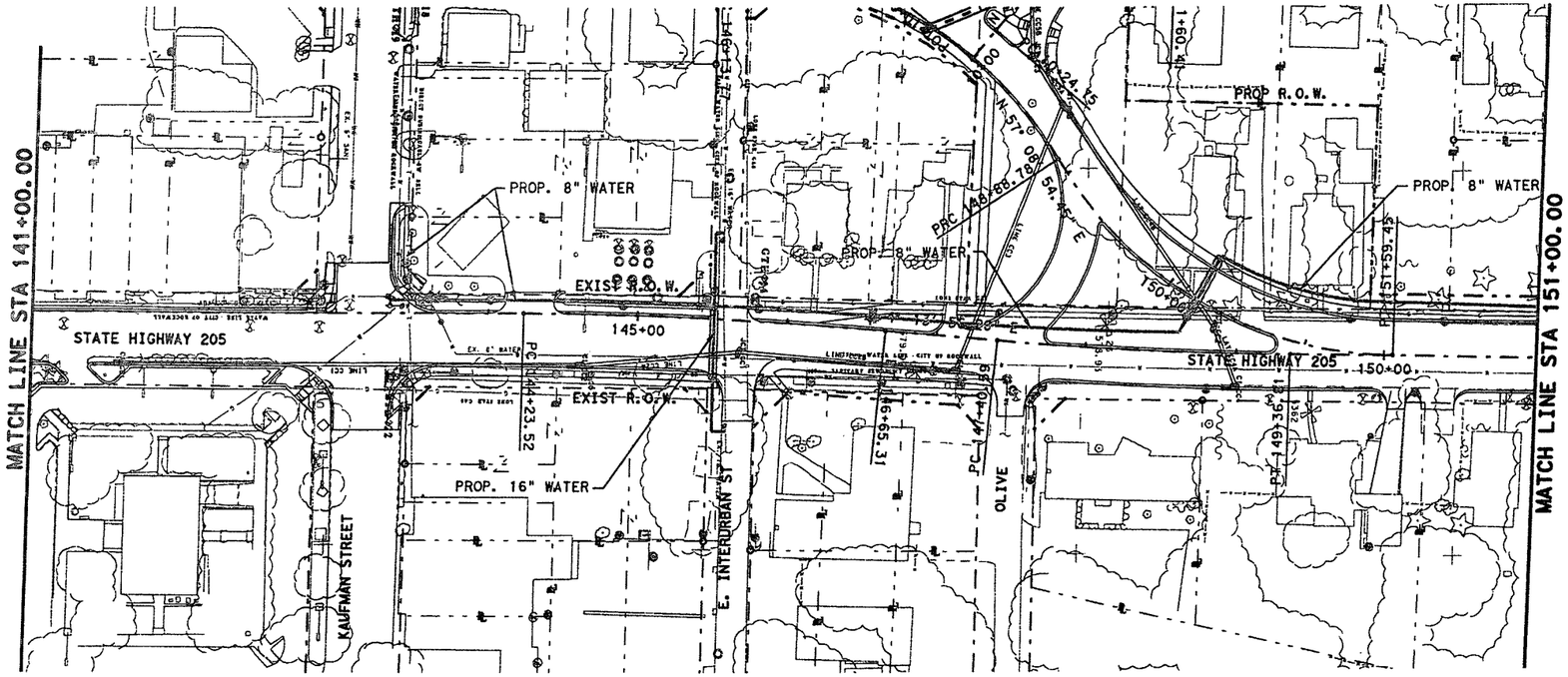
SANITARY SEWER
NB COUPLET
PLAN & PROFILE
STA 130+00 TO 141+00

SHEET 14 OF 19

DIST. NO. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	544
CONT.	SECT.	JOB	
0451	01	032. ETC	

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3/22/2006 Plotted 22-MAR-2006 15:17





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

600 595 590 585 580 575 570

141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00 151+00

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

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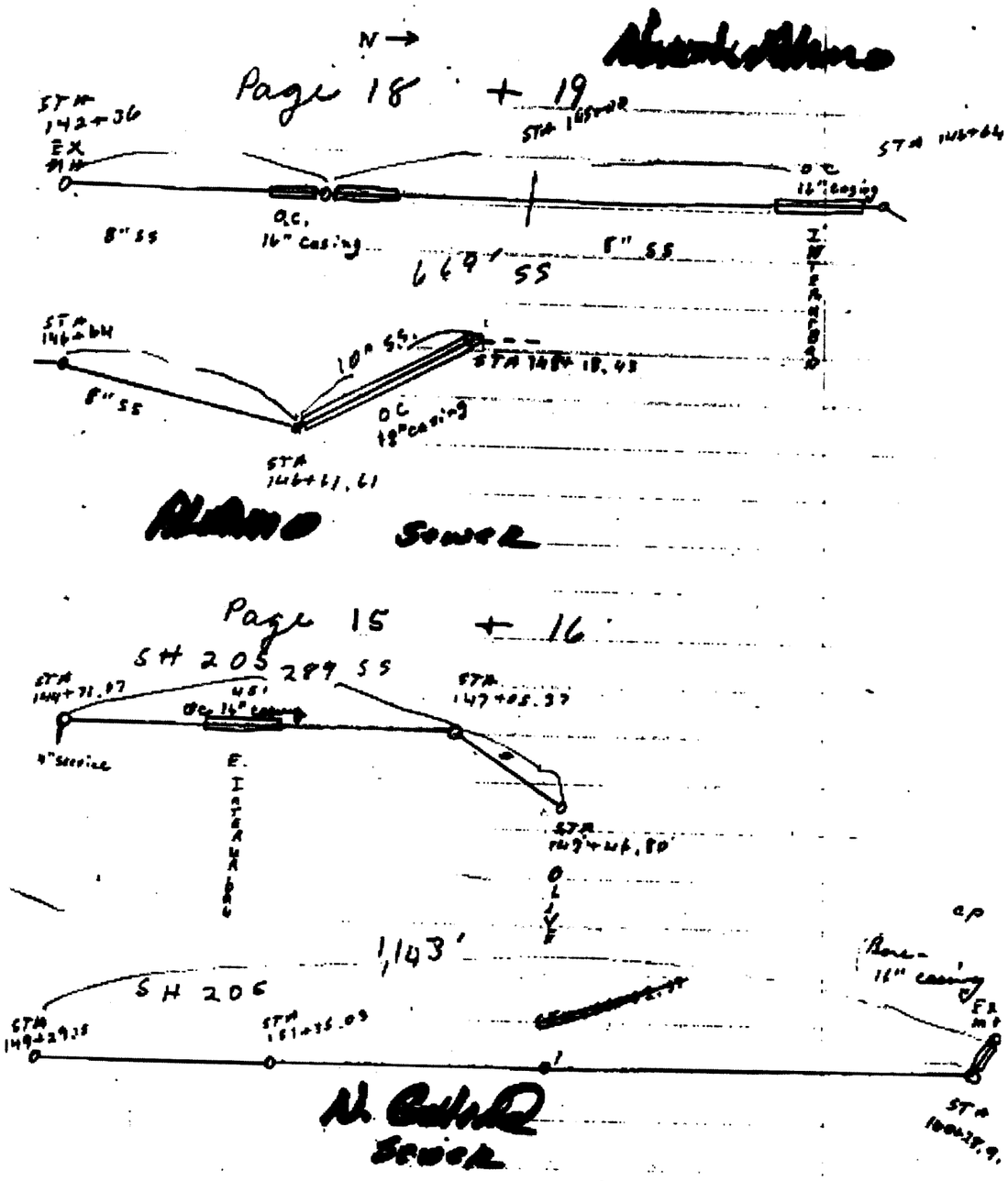
SANITARY SEWER
NB COUPLET
PLAN & PROFILE
STA 141+00 TO 151+00

SHEET 15 OF 19

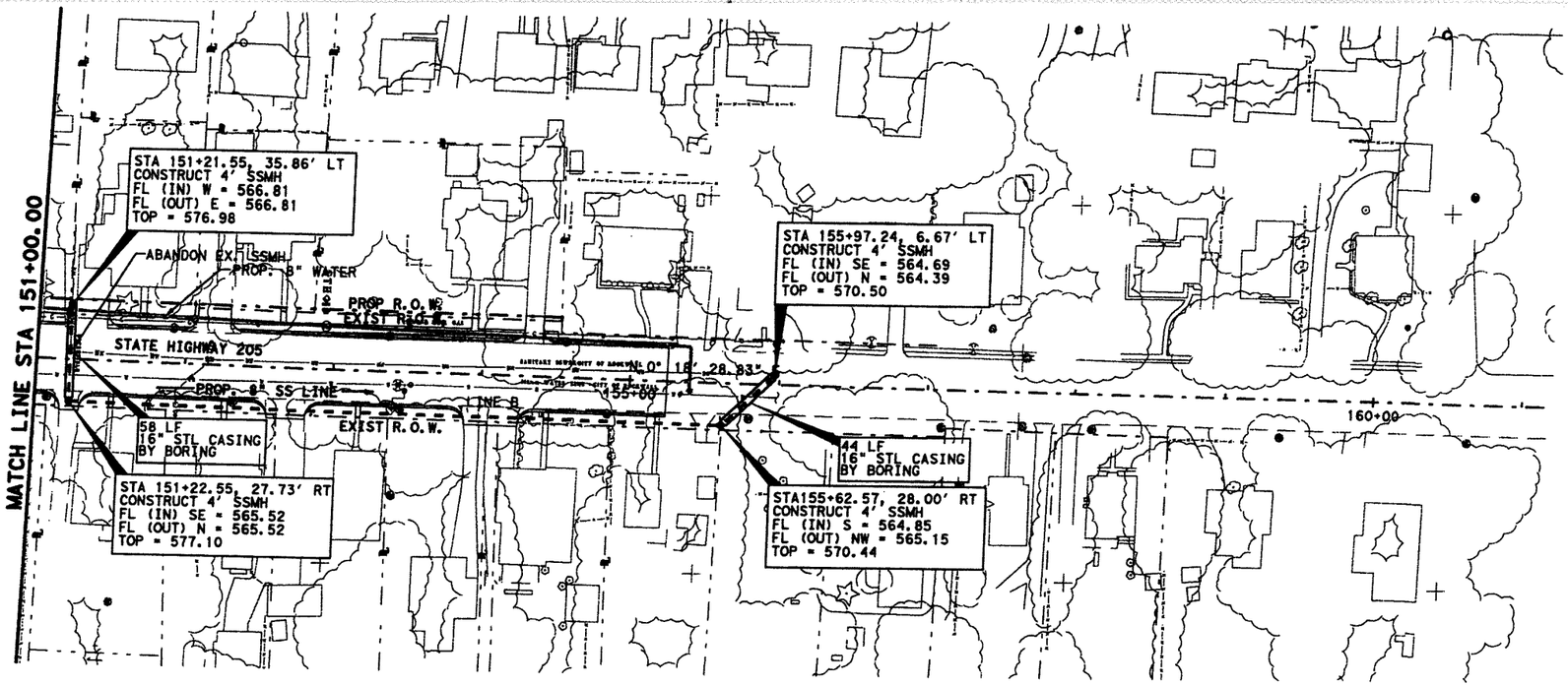
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

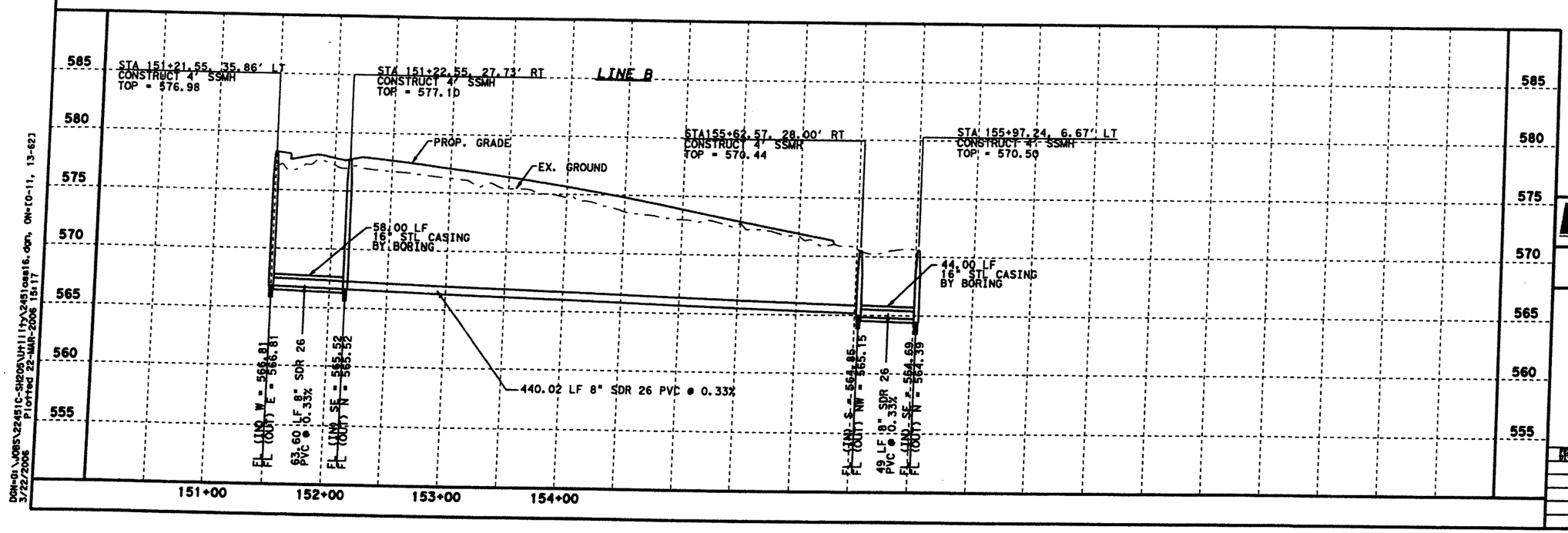
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	545
CONT.	SECT.	JOB	
0451	01	032, ETC	

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3/22/2006 Plotted 22-MAR-2006 15:17


N →
Page 18 + 19
STA 142+36
EX MH
8" SS
QC, 16" casing
STA 146+64
669' SS
8" SS
STA 148+18.43
STA 146+61.61
Sewer
Page 15 + 16
SH 205
289' SS
STA 146+71.07
48'
4" Service
E. INTERMED
STA 147+05.37
STA 147+46.80
OLIVE
1,143'
SH 206
STA 149+29.35
STA 151+35.09
STA 160+39.9

13 short SS







0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

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3/22/2006 Plotted 22-MAR-2006 15:17

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
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PROFESSIONAL ENGINEER

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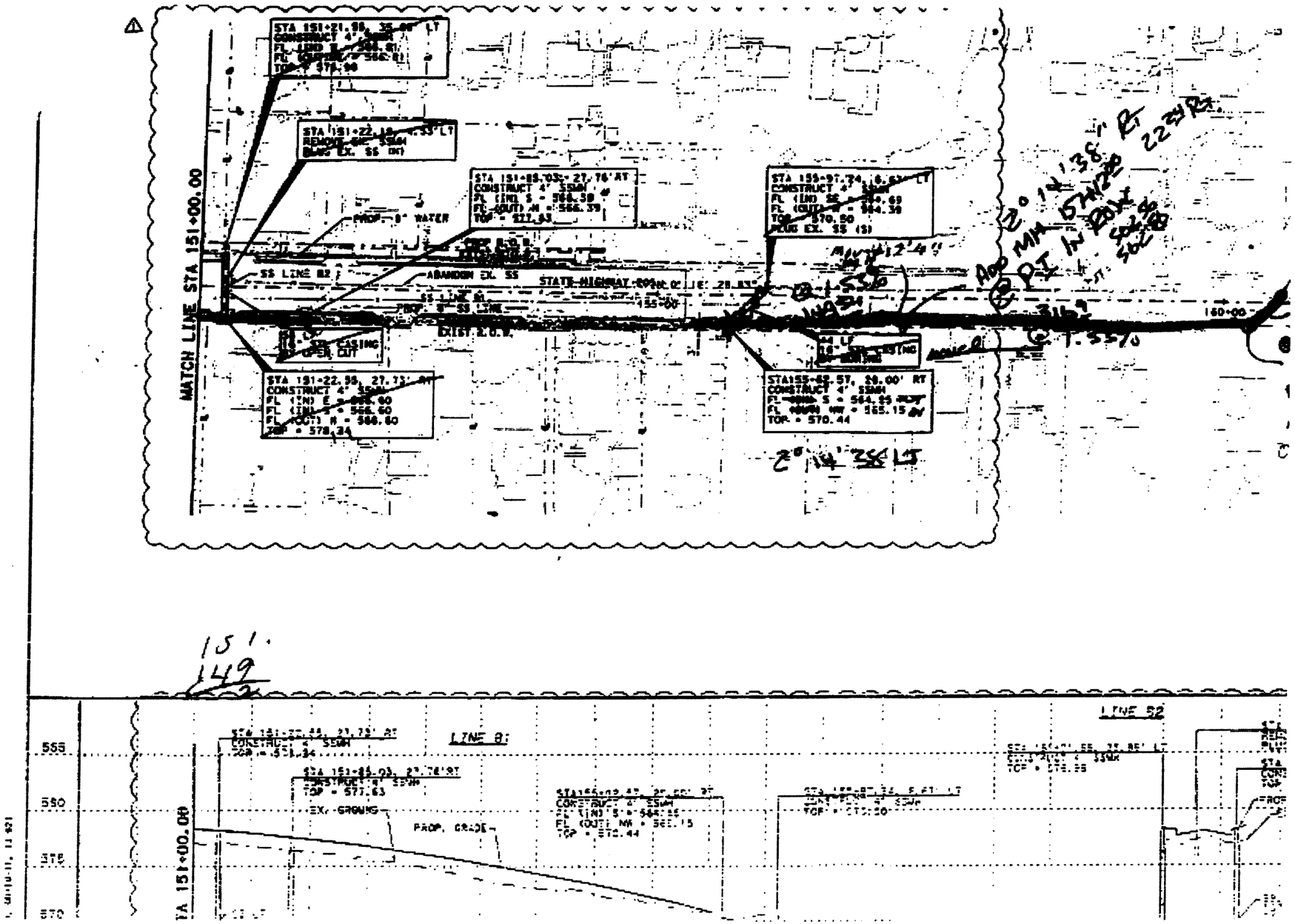
SH 205

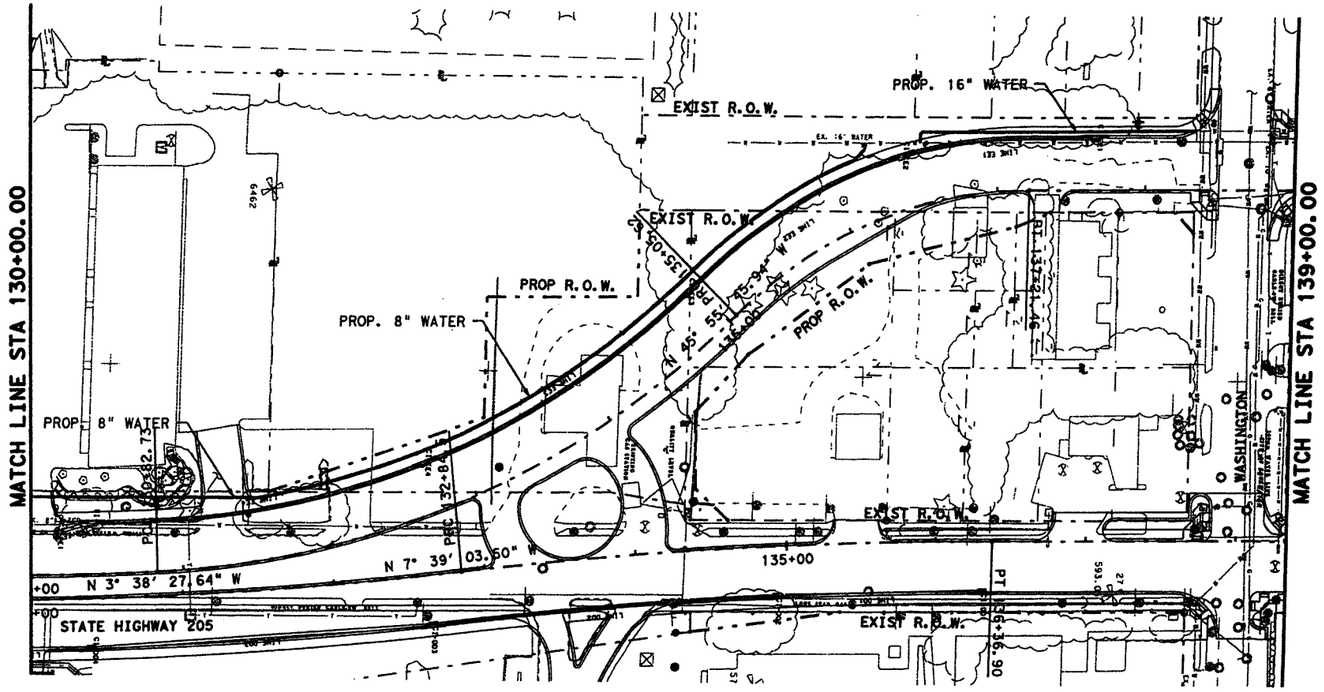
SANITARY SEWER
NB COUPLET
PLAN & PROFILE
STA 151+00 TO END OF PROJECT

SHEET 16 OF 19

FED. AID PROJ. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

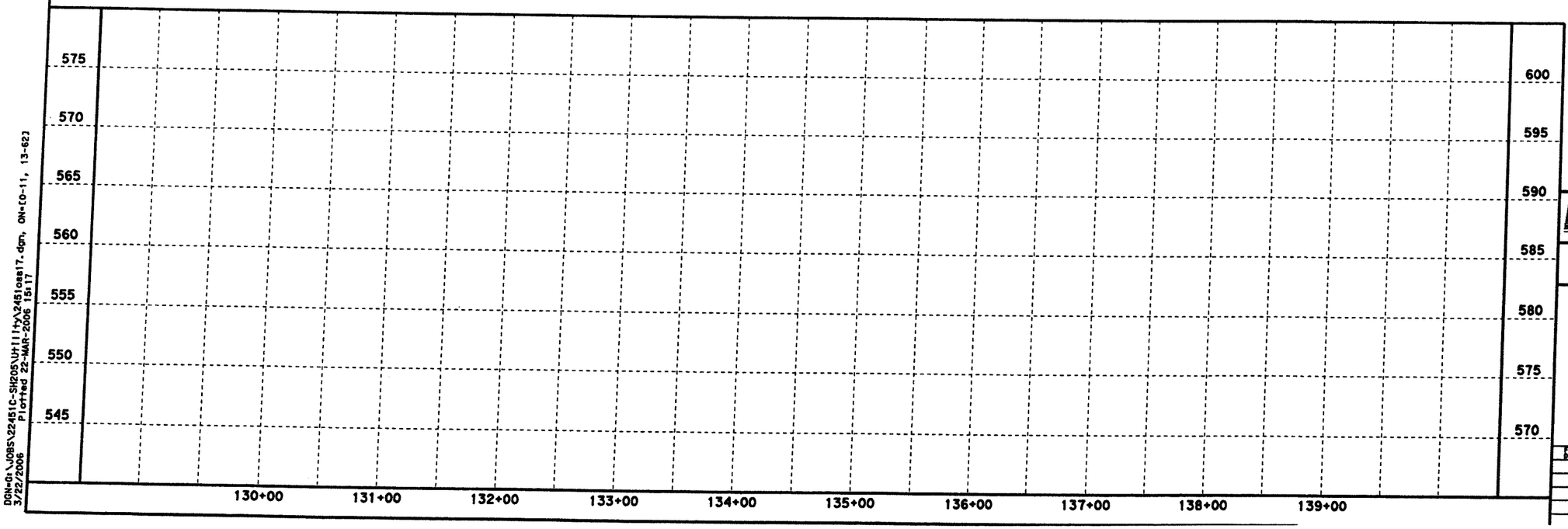
STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	546
CONT.	SECT.	JOB	
0451	01	032, ETC	


MATCH LINE STA 151+00.00
STA 151+21.55, 35.00' LT
CONSTRUCT 4' SSMH
FL (IN) E = 566.61
TOP = 576.98
STA 151+22.18, 9.33' LT
REMOVE 6" SSMH
PLUG EX. SS (IN)
STA 151+85.03, 27.78' RT
CONSTRUCT 4' SSMH
FL (IN) S = 566.59
FL (OUT) N = 566.39
TOP = 577.63
PROP. 8" WATER
SS LINE B2
ABANDON EX. SS
STATE HIGHWAY CONN. OF
PROP. 8" SS LINE
EXIST. C.O.
EX. CASING
STA 151+22.55, 27.73' RT
CONSTRUCT 4' SSMH
FL (IN) E = 566.60
FL (IN) S = 566.60
FL (OUT) N = 566.60
TOP = 578.24
STA 155+97.74, 6.63' LT
CONSTRUCT 4' SSMH
FL (IN) SE = 560.69
FL (OUT) = 564.38
TOP = 570.50
PLUG EX. SS (S)
STA 155+82.57, 39.00' RT
CONSTRUCT 4' SSMH
FL (IN) S = 564.85
FL (OUT) NW = 565.15
TOP = 570.44
150+00
LINE B:
LINE B2
555
550
545
540
EX. GROUND
PROP. GRADE
STA 151+00.00



0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL



DGN=D:\JOBS\22451C-SH205\UH111tyX2451oss17.dgn, ON=10-11, 13-623
Plotted 22-MAR-2006 15:17
3/22/2006

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
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PROFESSIONAL ENGINEER

Parsons Brinckerhoff Quade & Douglas, Inc.
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Dallas, TX 75207

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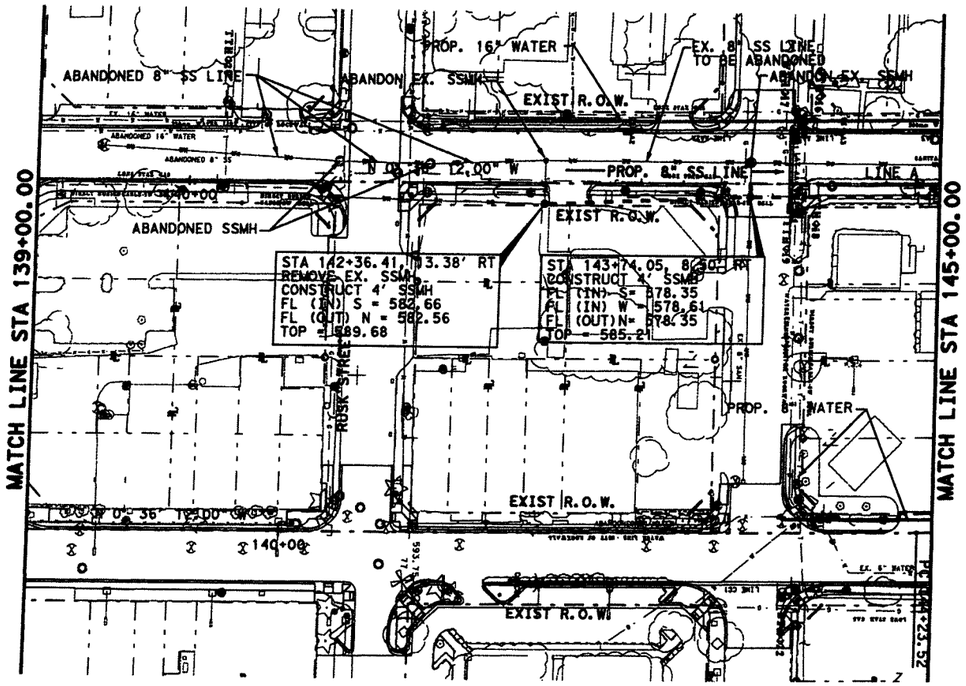
SH 205

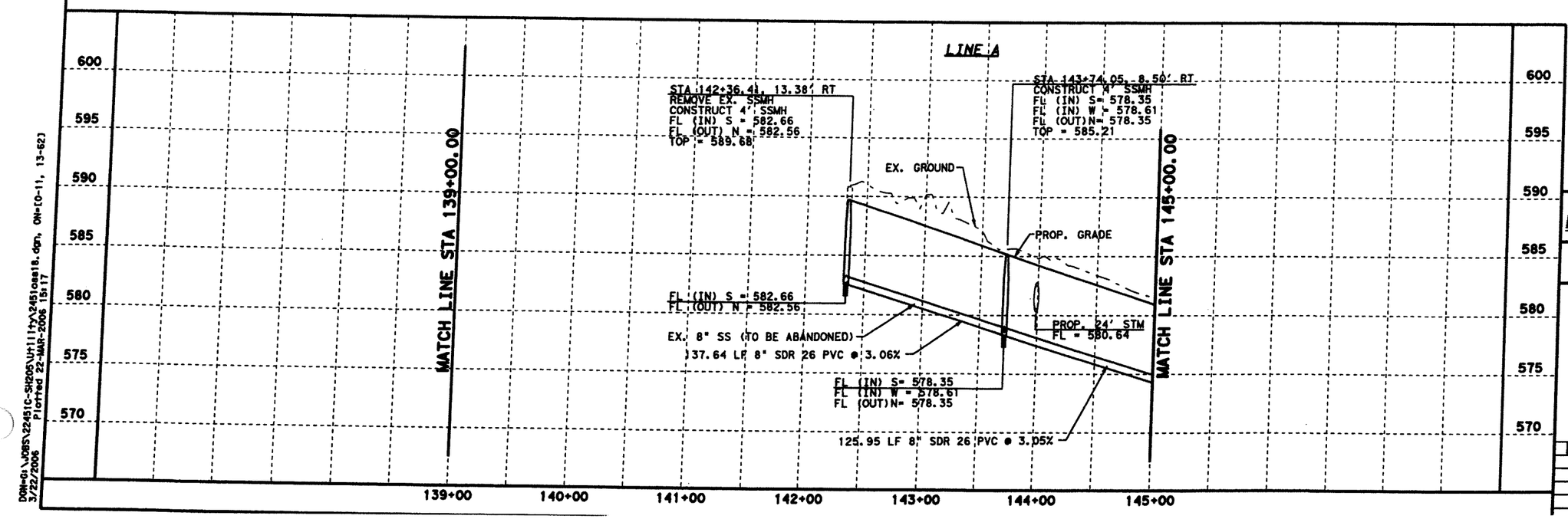
SANITARY SEWER
SB COUPLET
PLAN & PROFILE
STA 130+00 TO 139+00

SHEET 17 OF 19

REG. NO. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	547
CONT.	SECT.	JOB	
0451	01	032, ETC	





0 50 100
SCALE IN FEET
HORIZONTAL

0 5 10
SCALE IN FEET
VERTICAL

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
Dallas, TX 75207

Texas Department of Transportation
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SH 205

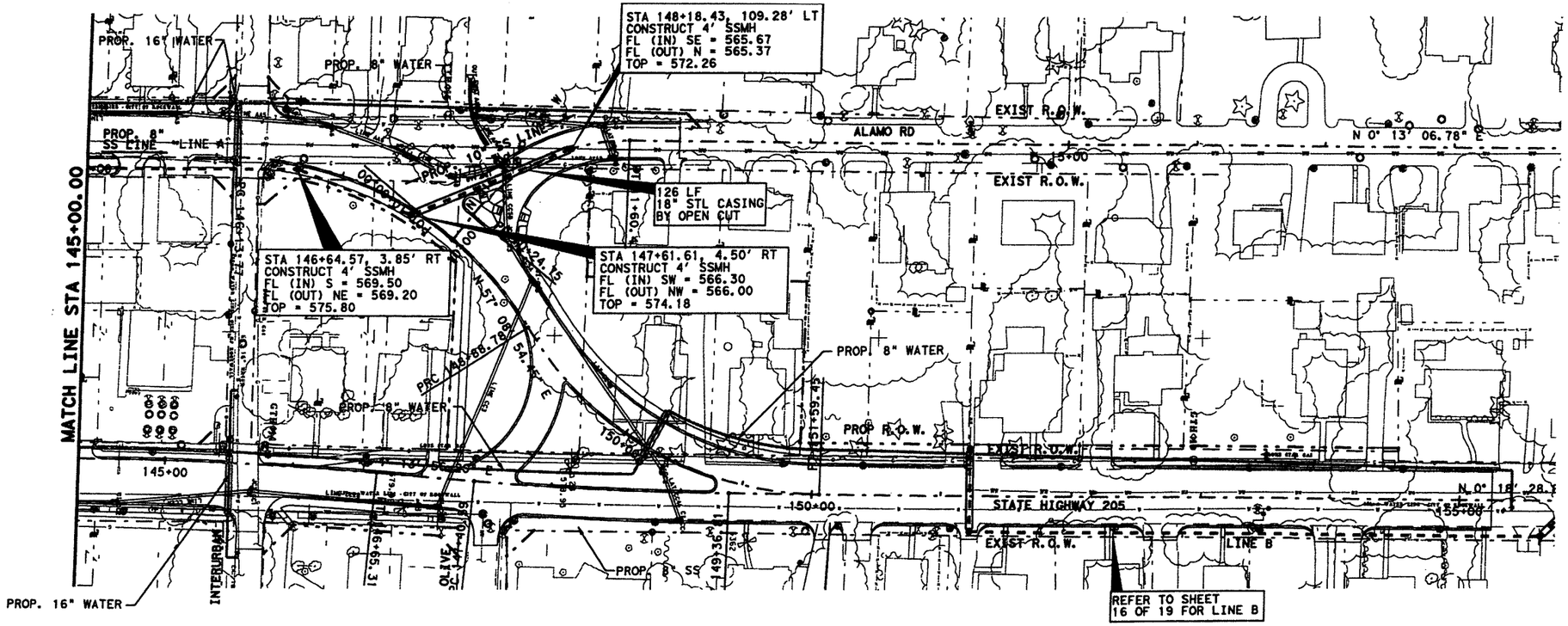
SANITARY SEWER
SB COUPLET
PLAN & PROFILE
STA 139+00 TO 145+00

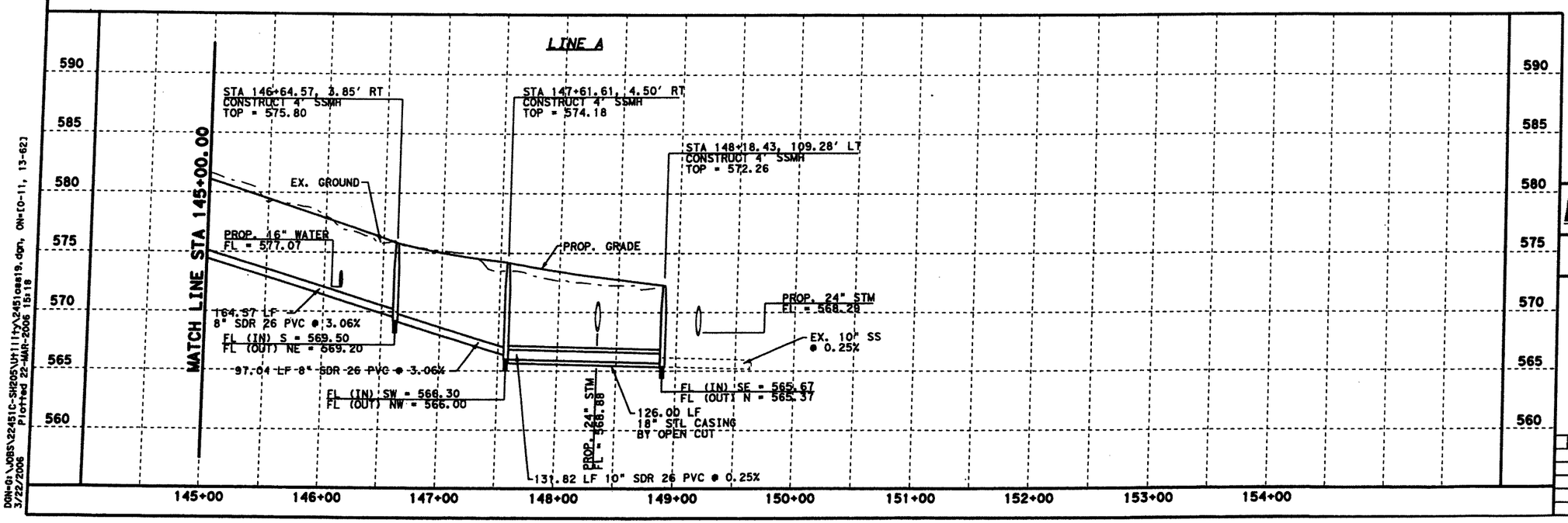
SHEET 18 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	548
CONT.	SECT.	JOB	
0451	01	070 ETC	

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3/22/2006

3-22-06

STATE OF TEXAS
RICHARD T. GRICE
37520
REGISTERED
PROFESSIONAL ENGINEER

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2777 Stemmons Freeway
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SANITARY SEWER

SB COUPLET
PLAN & PROFILE
STA 145+00 TO END OF PROJECT

SHEET 19 OF 19

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	(SEE TITLE SHEET)	SH 205

STATE	DIST.	COUNTY	SHEET NO.
TEXAS	DALLAS	ROCKWALL	549
CONT.	SECT.	JOB	
0451	01	032, ETC	