REGULAR MEETING – April 13, 2021

On this the 13th day of April 2021 at 9:00 A.M. the Honorable Commissioners Court of Blanco County convened in a REGULAR MEETING at a regular meeting place thereof in the Courthouse in Johnson City with the following members to-wit:

BRETT BRAY	COUNTY JUDGE
TOMMY WEIR	COMMISSIONER PCT. 1
EMIL UECKER	COMMISSIONER PCT. 2
CHRIS LIESMANN	COMMISSIONER PCT. 3
PAUL GRANBERG	COMMISSIONER PCT. 4
LAURA WALLA	COUNTY CLERK

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ITEM 1 – Call to Order and Roll Call.

Judge and all 4 Commissioners announced present.

ITEM 2 – Pledge of Allegiance.

Public Hearing on Countywide Polling Place Program

ITEM 3 – PUBLIC COMMENTS on the proposed plan to implement a countywide polling place program in the upcoming November 2, 2021 Election pursuant to Election Code 43.007.

ITEM 4 – Discussion of the Proposed Countywide Polling Place Program.

Return to Regular Meeting

ITEM 5 – Consideration and possible action concerning a resolution supporting inclusion in the State of Texas countywide polling place program. Vote on any action taken. (Judge Bray & TAC Spies)

COMMISSIONER LIESMANN made the motion approving the resolution supporting inclusion in the State of Texas countywide polling place program, seconded by Commissioner Weir. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.

COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 6 – PUBLIC COMMENTS – opportunity for the general public to address the Court on any matter. Comments are limited to 3 minutes.

ITEM 7 – Consider approval of minutes of prior Commissioners Court meeting(s). Vote on any action taken. (Judge Bray)

COMMISSIONER UECKER made the motion to dispense with the reading of the minutes and approve as presented, seconded by Commissioner Weir. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 8 – Consider approval of the estimated April 2021 payroll. Vote on any action taken. (Judge Bray)

COMMISSIONER LIESMANN made the motion approving the estimated April 2021 payroll in the amount of $510,191.26, seconded by Commissioner Uecker. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 9 – Consider approval of the official reports. Vote on any action taken. (Judge Bray)

COMMISSIONER GRANBERG moved to approve the official reports, seconded by Commissioner Liesmann. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 10 – Consider ratifying or approving line-item transfers as presented. Vote on any action taken. (Judge Bray)

COMMISSIONER WEIR made the motion approving line-item transfers as presented, seconded by Commissioner Uecker. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 11 – Consider approval of the outstanding bills. Vote on any action taken. (Judge Bray)

COMMISSIONER LIESMANN made the motion approving the outstanding bills in the amount of $167,643.45, seconded by Commissioner Granberg. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 12 – Consider authorization for the County Judge to sign a Resolution and Grant Terms & Conditions with Texas Division of Emergency Management (TDEM) for expenses associated with the COVID-19 pandemic. Vote on any action taken. (Judge Bray)

COMMISSIONER LIESMANN made the motion authorizing the County Judge to sign a Resolution and Grant Terms & Condi Conditions with Texas Division of Emergency Management (TDEM) for expenses associated with the COVID-19 pandemic.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 13 – Consider acceptance of the 2019 financial audit report of Blanco County Appraisal District for year ending December 31, 2019. Vote on any action taken. (Judge Bray)

COMMISSIONER LIESMANN made the motion to accept the 2019 financial audit report of Blanco County Appraisal District for year ending December 31, 2019, seconded by Commissioner Granberg. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 14 – Consider acceptance of a donation/gift of a wall decoration from Kinder Morgan. Vote on any action taken. (Judge Bray)

COMMISSIONER WEIR made the motion to accept a donation/gift of a wall decoration from Kinder Morgan, seconded by Commissioner Granberg. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 15 – Discussion and possible action to approve a "Non-Satellite Based Computing Device Agreement" between Blanco County Precinct 1 Constable and the Blanco County Sheriff's Office. Vote on any action taken. (Judge Bray)

COMMISSIONER LIESMANN made the motion to approve a "Non-Satellite Based Computing Device Agreement" between Blanco County Precinct 1 Constable and the Blanco County Sheriff's Office, seconded by Commissioner Uecker. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 16 – Consider the final subdivision plat of Legacy Hills. Vote on any action taken. (Commissioner Uecker)

COMMISSIONER UECKER made the motion to accept the final subdivision plat of Legacy Hills, seconded by Commissioner Weir. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – NO.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 4/0

ITEM 17 – Discussion and action regarding the Blanco County Spring Cleanup Event scheduled for April 24, 2021. Vote on any action taken. (Commissioner Granberg)

No action taken on this item.

ITEM 18 – Consider approval to replat lots 345 and 346 in the Rockin J subdivision. New lot to be known as lot 345A. Vote on any action taken. (Commissioner Granberg)

COMMISSIONER GRANBERG moved to approve replat lots 345 and 346 in the Rockin J subdivision. New lot to be known as lot 345A, seconded by Commissioner Liesmann. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 19 – Discussion and possible action to request or require developers to install temporary road signs. Vote on any action taken. (Judge Bray & Inspector Roeder)

COMMISSIONER LIESMANN made the motion to request or require developers to install temporary road signs, seconded by Commissioner Weir. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.
COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

ITEM 20 – Discussion and possible action regarding the City of Johnson City's petition to annex Old River Crossing road. Vote on any action taken. (Judge Bray)

No action taken.

ITEM 21 – EXECUTIVE SESSION:

a. Pursuant to Tx. Gov't Code Section 551.071, Consultation with Attorney.
b. Pursuant to Tx Gov't Code Section 551.072, Discussion of the purchase, exchange, lease or value of real estate.
Executive Session began at 11:00AM

ITEM 22 – RETURN TO OPEN SESSON: to consider acting on any posted item. SP
OPEN SESSION Resumed at 11:55AM

There was no action taken during executive session.

ITEM 23 – Consider burn ban. Vote on any action taken. (Judge Bray)

No action taken on burn ban at this time.

ITEM 24 – Adjourn.

COMMISISONER UECKER made the motion to adjourn, seconded by Commissioner Granberg. Judge Bray called for discussion and vote.

JUDGE BRAY – YES.
COMMISSIONER WEIR – YES.
COMMISSIONER UECKER – YES.

COMMISSIONER LIESMANN – YES.
COMMISSIONER GRANBERG – YES. MOTION CARRIED. 5/0

Meeting adjourned at 11:56o'clock a.m.

The above and foregoing minutes were examined and approved in Open Court this _____ day of _____, 2021.

County of Blanco

I, Laura Walla, County Clerk, Blanco County, Texas attest that the foregoing is a true and correct accounting of the Commissioner's Court authorized proceedings for April 13, 2021.

_____

County Clerk and Ex-Officio Member

of Commissioner's Court, Blanco County, Texas

Funds are
available.
B
4-15-21

BLANCO COUNTY
REQUEST FOR A BUDGET INCR
SPECIAL REVENUE FUNDS

DATE: April 12, 2021

TO: **HONORABLE COMMISSIONERS COURT OF BLANCO COUNTY, TE**

FROM: **Sheriff Don Jackson** (Name) **Blanco County Sherif** (DEPARTMENT)

I SUBMIT TO YOU FOR YOUR CONSIDERATION, THE FOLLOWING BUDGET ADJUSTMENTS:

	FUND	LINE ITEM DESCRIPTION	LINE ITEM #	AMOUNT
TO:	Inmate Commissary	Monies that directly benefit the inmates at the Blanco County Jail	45-400-100	10,420.00
				10,420.00
FROM:	Special Fund Inmate Commissary	Special Fund: Monies that are generated from the commission from commissary sales at the Blanco County Jail	45-300-300	10,420.00
				10,420.00

Reason for request:

We are in need of additional funds to cover the LogSoft & Central Square Interface. .

The funds are available we just need them transferred from our special fund into the Commissary line item.

I hereby certify that these funds will be used in accordance with the laws that govern Inmate Commissary Funds.

Department Head Signature

Attest: County Clerk

Commissioners Court Approval

Blanco County Commissioners' Court

April 27, 2021

Invoice File Listing By Fund

Fund	Description	Disbursement
010	General Fund	$ 92,228.67
015	Road & Bridge Fund	$ 19,196.31
016	Records Management Court	$ 904.50
017	Records Management Co Clerk	$ 87.00
046	County Wide Road & Bridge Improv.	$ 5,000.00
Total		$ 117,416.48

The attached list of Claims Payable have been examined & approved for payment by the Assistant County Auditor as provided by the Texas LGC 113.064 & 113.065

Attest Asst. County Auditor: _____ Date 4-22-21

The attached list of Claims Payable have been examined & approved for payment by the Commissioners' Court as provided by the Texas LGC 115.021 & 115.022

County Judge _____ Date _____

Commissioner Pct 1 _____ Commissioner Pct 3 _____

Commissioner Pct 2 _____ Commissioner Pct 4 _____

DEPARTMENT / NAME-OF-VENDOR	INVOICE-NO	S	DESCRIPTION-OF-INVOICE	AMOUNT
0300-GENERAL FUND REVENUES				
STATE COMPRTOLLER	76232	A	1-74-6001460 SPECIALTY COURT	134.34
STATE COMPRTOLLER	76233	A	1-74-6001460 ELECTRONIC FILING	1,923.04
STATE COMPRTOLLER	76234	A	1-74-6001460 CIVIL FEES	6,152.65
STATE COMPRTOLLER	76235	A	1-74-6001460 CRIMINAL COSTS	30,206.66
DEPARTMENT TOTAL				38,416.69
0410-COUNTY CLERK				
BUSINESS CENTER PRINT & OS	76262	A	INV#143766 CO CLERK	136.64
DEPARTMENT TOTAL				136.64
0411-ELECTIONS ADMINISTRATOR				
ELECTION SYSTEMS & SOFTWARE	76266	A	INV#CD2000534 EA	1,235.93
DEPARTMENT TOTAL				1,235.93
0420-TAX ASSESSOR/COLLECTOR				
KRISTEN SPIES	76284	A	DEPOSIT SLIPS	108.89
DEPARTMENT TOTAL				108.89
0425-COUNTY SHERIFF				
BLANCO COUNTY TAX ASSESSOR-COLLECT	76259	A	LICENSE TAG #1199673 LEC	7.50
BLANCO COUNTY TAX ASSESSOR-COLLECT	76260	A	LICENSE TAG#1223426 LEC	7.50
EXPRESS AUTOMOTIVE SERVICE	76269	A	INV#3762931 LEC	58.41
EXPRESS AUTOMOTIVE SERVICE	76270	A	INV#3762944 LEC	52.41
EXPRESS AUTOMOTIVE SERVICE	76271	A	INV#3762966 LEC	58.23
EXPRESS AUTOMOTIVE SERVICE	76272	A	INV#3763039 LEC	52.41
EXPRESS AUTOMOTIVE SERVICE	76273	A	INV#3763062 LEC	87.73
FRONTIER COMMUNICATIONS	76334	A	830-868-7104 LEC	1,025.35
GALLS, LLC	76276	A	INV#018035450 LEC	51.97
GALLS, LLC	76277	A	INV#018120154 LEC	1,082.85
GT DISTRIBUTORS, INC	76278	A	INV#0837015 LEC	366.68
MELONIE LEWIS	76285	A	REIMBURSEMENT	61.04
OFFICESUPPLY.COM	76291	A	INV#4391134 LEC	38.04
OFFICESUPPLY.COM	76292	A	INV#4391134 LEC	192.28
PAY AND SAVE INC.	76290	A	ACCT#137002 LEC	8.39
PEDERNALES ELECTRIC COOP	76227	A	INV #955 LEC	2,779.79
PERFORMANCE FOOD SERVICE	76293	A	INV#1207182 LEC	687.15
PERFORMANCE FOOD SERVICE	76294	A	INV#1207182 LEC	9.47
PERFORMANCE FOOD SERVICE	76295	A	INV#1214050 LEC	916.25
PERFORMANCE FOOD SERVICE	76318	A	INV#1220940 LEC	9.47
PERFORMANCE FOOD SERVICE	76319	A	INV#1220940 LEC	992.61
PETERSON TIRE	76297	A	INV#BL44208 LEC	7.00
PETERSON TIRE	76298	A	INV#BL44235 LEC	7.00
PETERSON TIRE	76326	A	INV#JC35335 LEC	66.35
POLICE & SHERIFFS PRESS	76321	A	AINV#146544 LEC	17.55
SEYMOURS INC.	76300	A	INV#47618 LEC	510.83
SOUTHERN HEALTH PARTNERS	76231	A	INV #BASE41084 LEC	5,565.81
TEXAS A&M ENGINEERING EXT SRV	76323	A	INV#RJ7272567 LEC	275.00
DEPARTMENT TOTAL				14,995.07
0435-INDIGENT HEALTH CARE				
BAYLOR SCOTT WHITE	76327	A	PATIENT #06242014	58.65
BLANCO PHARMACY & WELLNESS	76328	A	ACCT #113-0 INDIGENT	52.41
JOHNSON CITY PHARMACY	76226	A	INV #6	65.65
SCOTT & WHITE HOSPITAL	76337	A	PATIENT #PH9558925540	79.62
DEPARTMENT TOTAL				256.33
0445-EMERGENCY MANAGEMENT				

DEPARTMENT / NAME-OF-VENDOR	INVOICE-NO	S	DESCRIPTION-OF-INVOICE	AMOUNT
BEARCOM WIRELESS WORLDWIDE	76310	A	INV#5183660 ER MGMT	225.00
BURNET COUNTY TREASURER	76203	A	2ND QUARTER TOWER SYSTEM	3,435.31
DIALTONESERVICEES L.P.	76329	A	ACCT #10000001488 EMC	7.27
DIALTONESERVICEES L.P.	76330	A	ACCT #10000001487 DISPATCH	7.27
DIALTONESERVICEES L.P.	76331	A	ACCT #10000001486 CO JUDGE	7.27
DIALTONESERVICEES L.P.	76332	A	ACCT #10000001443 SHERIFF	7.27
DEPARTMENT TOTAL				3,689.39
0450-JUDICIAL EXPENSES				
33RD & 424TH JUDICIAL DISTRICTS CSC	76200	A	MARCH 2021	253.70
FRONTIER COMMUNICATIONS	76219	A	830-868-7986 JUDICIAL	223.42
KYLE J. ERNST	76335	A	CASE #1875 REVOCATION	375.00
RICHARD D MOCK	76230	A	33RD CASE #1904	425.00
STEVEN R WITTEKIEND	76236	A	424TH CAE #CR01722	375.00
TIM COWART	76242	A	424TH CASE #CR1840	325.00
TIM COWART	76243	A	424TH CASE #CR1815	425.00
TOM GREEN COUNTY JUVENILE PROTECTIO	76338	A	3-1-2021 TO 03-13-2021	840.00
VANA AND VANA LAW FIRM	76244	A	424TH CASE #1907	425.00
DEPARTMENT TOTAL				3,667.12
0451-DISTRICT JUDGE				
ALAN GARRETT	76246	A	JUVENILE BOARD COMP APRIL 2021	100.00
ALAN GARRETT	76247	A	DISTRICT JUDGE SUPPLEMENT	51.40
BURNET COUNTY TREASURER	76202	A	MARCH 2021 DISTRICT JUDGE	5,057.50
EVAN C. STUBBS	76248	A	DISTRICT JUDGE SUPPLEMENT	51.40
EVAN C. STUBBS	76249	A	JUVENILE BOARD APRIL 2021	100.00
DEPARTMENT TOTAL				5,360.30
0452-DISTRICT ATTORNEY				
BURNET COUNTY TREASURER	76201	A	MARCH 2021 DISTRICT ATTORNEY	14,783.33
DEPARTMENT TOTAL				14,783.33
0500-COURTHOUSE EXPENSES				
BUSINESS CENTER PRINT & OS	76261	A	INV#143766	125.97
CANON FINANCIAL SERVICES, INC.	76204	A	INV #26528737 DIST CLERK	142.35
CANON FINANCIAL SERVICES, INC.	76205	A	INV #26528738 JP 4	47.73
CANON FINANCIAL SERVICES, INC.	76206	A	INV #26528739 LEC	47.73
CANON FINANCIAL SERVICES, INC.	76207	A	INV #26528740 EXTENSION	37.92
CANON FINANCIAL SERVICES, INC.	76208	A	INV #26528741 TAC	35.52
CANON FINANCIAL SERVICES, INC.	76209	A	INV #26528742 CO CLERK	116.19
CANON FINANCIAL SERVICES, INC.	76210	A	INV #26528744 LEC	83.52
CANON FINANCIAL SERVICES, INC.	76211	A	INV #26528745 MAILROOM	141.48
CANON FINANCIAL SERVICES, INC.	76212	A	INV #26528746 LEC	141.48
CANON FINANCIAL SERVICES, INC.	76213	A	INV #26528747 JP 1	40.32
CANON FINANCIAL SERVICES, INC.	76214	A	INV #26528748 DIST CLERK	131.19
CANON FINANCIAL SERVICES, INC.	76215	A	INV #26528749 UPSTAIRS	37.92
EXPRESS AUTOMOTIVE SERVICE	76274	A	INV#3762985 LEC	134.79
FRONTIER COMMUNICATIONS	76216	A	830-868-7208	16.99
FRONTIER COMMUNICATIONS	76217	A	830-868-2228 FAX ELEV	367.91
FRONTIER COMMUNICATIONS	76218	A	830-868-4266 COURTHOUSE	1,489.95
GULF COAST PAPER CO. INC.	76279	A	INV#2030608	162.47
GULF COAST PAPER CO. INC.	76315	A	INV#2034245	86.18
GVTC	76221	A	830-833-4212 SOUTH ANNEX	306.72
GVTC	76222	A	830-833-4212 SOUTH ANNEX	134.90
GVTC	76223	A	830-833-5331 PCT 1 & 4 INTERNET	94.95
JOHNSON CITY PUBLICATIONS LP	76280	A	ROCKIN J REPLAT	63.75
JOHNSON CITY PUBLICATIONS LP	76281	A	POLLING PLACE PROGRAM HEARING	52.50

DEPARTMENT / NAME-OF-VENDOR	INVOICE-NO	S	DESCRIPTION-OF-INVOICE	AMOUNT
JOHNSON CONTROLS	76282	A	INV#22229537 LEC	170.00
JOHNSON CONTROLS	76283	A	INV#87668472 LEC	66.00
LOWER COLORADO RIVER AUTHORITY	76336	A	INV #TWER0005842	276.73
ODIORNE FEED/RANCH SUPPLY INC	76286	A	INV#173661 LEC	123.00
OFFICESUPPLY.COM	76287	A	INV#4413414	214.95
OFFICESUPPLY.COM	76317	A	INV#4413402	208.15
PAY AND SAVE INC.	76288	A	ACCT#137002 LEC	23.76
PAY AND SAVE INC.	76289	A	ACCT#137002 LEC	13.67
PEDERNALES ELECTRIC COOP	76228	A	INV #955 COUNTY	1,797.51
TERMINIX	76237	A	INV #306310 LEC	136.00
TERMINIX	76238	A	INV #306312 ANNEX	100.00
TERMINIX	76239	A	INV #306313 OLD JAIL	50.00
TERMINIX	76240	A	INV #306346 SOUTH ANNEX	85.00
TEXAS ASSOCIATION OF COUNTIES	76241	A	INV #NRDD-0006872 HUDLER	797.50
VERTICAL BRIDGE S3 ASSETS, LLC	76245	A	INV #INV-00194872	656.73
DEPARTMENT TOTAL				8,759.43
0515-JUSTICE OF THE PEACE PCT #1				
BUSINESS CENTER PRINT & OS	76264	A	INV#143734 JP1	127.44
DEPARTMENT TOTAL				127.44
0525-CONSTABLE PCT #1				
SEYMOURS INC.	76299	A	INV#4760 CONST 1	612.14
DEPARTMENT TOTAL				612.14
0535-911-COUNTY EXPENSES				
BUSINESS CENTER PRINT & OS	76263	A	INV#143726 ADDRESSING	79.97
DEPARTMENT TOTAL				79.97
FUND TOTAL				92,228.67

DEPARTMENT / NAME-OF-VENDOR	INVOICE-NO	S	DESCRIPTION-OF-INVOICE	AMOUNT
0540-R&B PCT #1				
ARMADILLO MATERIALS LLC	76250	A	INV_JCS00360 PCT 1	218.28
ARMADILLO MATERIALS LLC	76252	A	INC_RAW00081 PCT 1	86.67
ARMADILLO MATERIALS LLC	76254	A	INV#_JCS00318 PCT 1	1,953.73
ARMADILLO MATERIALS LLC	76256	A	INV#_RAW00072 PCT 1	774.59
BLANCO COUNTY TAX ASSESSOR-COLLECT	76258	A	LICENSE TAG#1077821 PCT 1	7.50
GVTC	76224	A	830-833-5331 PCT 1	51.69
PETERSON TIRE	76296	A	INV#BL44212 PCT 1	20.00
THIRD COAST DISTRIBUTING, LLC	76305	A	INV#841089 PCT 1	7.68
THIRD COAST DISTRIBUTING, LLC	76306	A	INV#841074 PCT 1	25.37
DEPARTMENT TOTAL				3,145.51
0550-R&B PCT #2				
ERGON ASPHALT AND EMULSIONS, INC	76312	A	INV#9402445596 PCT 2	1,956.28
FRONTIER COMMUNICATIONS	76220	A	830-868-4471 PCT 2	119.17
THIRD COAST DISTRIBUTING, LLC	76301	A	INV#837343 PCT 2	26.45
THIRD COAST DISTRIBUTING, LLC	76302	A	INV#838014 PCT 2	134.89
THIRD COAST DISTRIBUTING, LLC	76303	A	INV#839475 PCT 2	207.42
THIRD COAST DISTRIBUTING, LLC	76304	A	INV#839641 PCT 2	20.49
THIRD COAST DISTRIBUTING, LLC	76307	A	INV#841074 PCT 2	25.37
DEPARTMENT TOTAL				2,490.07
0560-R&B PCT #3				
BRAUNTEX MATERIALS, INC.	76311	A	INV#120767 PCT 3	3,922.80
FORD & CREW HOME AND HARDWARE	76313	A	TRANS#A1+2027 PCT 3	48.33
FORD & CREW HOME AND HARDWARE	76314	A	TRANS#A192355 PCT 3	44.56
FRONTIER COMMUNICATIONS	76333	A	830-825-3270 PCT 3	99.82
HYE PIPE & FEED	76316	A	ORDER#1535000 PCT 3	186.34
STROEHER & OLFERS INC	76322	A	INV#206440 PCT 3	1,207.98
THIRD COAST DISTRIBUTING, LLC	76308	A	INV#841074 PCT 3	25.37
THIRD COAST DISTRIBUTING, LLC	76324	A	INV#056813 PCT 3	145.99
THIRD COAST DISTRIBUTING, LLC	76325	A	INV#057346 PCT 3	182.81
DEPARTMENT TOTAL				5,864.00
0570-R&B PCT #4				
ARMADILLO MATERIALS LLC	76251	A	INV_JCS00360 PCT 4	218.28
ARMADILLO MATERIALS LLC	76253	A	INC_RAW00081 PCT 4	86.67
ARMADILLO MATERIALS LLC	76255	A	INV#_JCS00318 PCT 4	1,953.72
ARMADILLO MATERIALS LLC	76257	A	INV#_RAW00072 PCT 4	774.60
ERGON ASPHALT AND EMULSIONS, INC	76267	A	INV#9402446614 PCT 4	2,333.90
ERGON ASPHALT AND EMULSIONS, INC	76268	A	INV#9402447431 PCT 4	2,233.84
GVTC	76225	A	830-833-1077 PCT 4	50.35
PETERSON TIRE	76320	A	INV#BL44285 PCT 4	20.00
THIRD COAST DISTRIBUTING, LLC	76309	A	INV#841074 PCT 4	25.37
DEPARTMENT TOTAL				7,696.73
FUND TOTAL				19,196.31

DEPARTMENT NAME-OF-VENDOR	INVOICE-NO	S	DESCRIPTION-OF-INVOICE	AMOUNT
0400-RECORDS MANAGEMENT/ COURT EXPENSES				
FILEX SYSTEMS, INC	76275	A	INV#99796 CO CLERK	904.50
DEPARTMENT TOTAL				904.50
FUND TOTAL				904.50

DEPARTMENT NAME-OF-VENDOR	INVOICE-NO	S	DESCRIPTION-OF-INVOICE	AMOUNT
0400-RECORDS MANAGEMENT CLERK EXPENSES				
PPT	76229	A	INV #65528 CO CLERK	87.00
DEPARTMENT TOTAL				87.00
FUND TOTAL				87.00

DEPARTMENT / NAME-OF-VENDOR	INVOICE-NO	S	DESCRIPTION-OF-INVOICE	AMOUNT
0400-EXPENSES				
DOUCET & ASSOCIATES, INC	76265	A	INV#2103060 PCT 2	5,000.00
DEPARTMENT TOTAL				5,000.00
FUND TOTAL				5,000.00

DEPARTMENT NAME-OF-VENDOR	INVOICE-NO	S	DESCRIPTION-OF-INVOICE	AMOUNT
GRAND TOTAL				117,416.48

DON JACKSON
SHERIFF

400 SOUTH U.S. 281 HWY
JOHNSON CITY, TEXAS 78636

NEAL LEONARD
CHIEF DEPUTY

Invoice

Printed on April 19, 2021

Billed To MASON COUNTY SHERIFF'S OFFICE
PO BOX 391
MASON, TX 76856

Upon receipt of this invoice, payment must be received within 30 days.

Reference
Invoice # IN2100044
Invoice Date 4/19/21
Due Date 5/19/21

Item	Amount Owed	Amount Paid
Inmate Billing Damages: Mattress	$49.90	$0.00
Inmate Billing Damages: TV Remote	$10.72	$0.00
Snook, Aaron 04.06.2021 thru 04.08.2021	$135.00	$0.00

Total Owed	**$195.62**
Total Paid	**$0.00**
Uncollectible	**$0.00**
Remaining	**$195.62**

Comments
Mason County Inmate Housing & Damages
April 20201

Please make all checks payable to Blanco County

Blanco County Sheriff's Office
400 S. US 281
JOHNSON CITY, TX 78636
Phone: (830) 868-7104
Fax: (830) 868-4577

FULL PRINTED NAME OF TOWING OPERATOR: DAVID LEE ANASTASI

OPERATOR LIC#: 6256

TOW TRUCK LP#: T8341J

AGENCY / PERSON REQUESTING TOW: BLANCO COUNTY SHERIFF'S OFFICE

ADDRESS: 400 US HWY 281 SOUTH JOHNSON CITY, TX 78636

PHONE: 830-868-7104

Anastasi automotive

TDRL # 005058771C

9766 FM 2673
Canyon Lake, Texas 78133
830-935-2778
1-800-207-3446
VSF #0650238VSF

4662 S. US Hwy. 281
Blanco, Texas 78606
830-833-4208
1-800-207-3446
VSF #0642578VSF

DATE OF TOW: 3-6-21 TIME OF TOW: 10:40 (AM) PM

LOCATION OF VEHICLE: 11TH + PECAN

LOCATION TOWED TO: 304 HWY 281 SOUTH

TIME OF THE CALL REQUESTING VEHICLE RELEASE: INITIALS: 325 721 8842

REASON FOR TOW: ARREST, AND EVIDENCE

ATTORNEY ~~ANTLEY~~ CORCORAN

2118 ~~BUAG~~ BURGER STREET

ABILENE, TX 79603

YEAR	MAKE	MODEL	COLOR	LICENSE #	STATE	VIN
2004	MERCEDES BENZ	400R	BLACK	640YXY	AR	WDBNG75J74A393912

ITEMIZED TOWING CHARGES RELATED TO THE TOW	TOW CHARGES
FLAT BED TOW	300 00
13 LOADED MILES @ $5.00 PER MILE	65 00

VEHICLE STORAGE FACILITY CHARGES	STORAGE CHARGES
DATE OF RELEASE: _____ NAME OF PERSON RELEASING VEHICLE: _____ ID # OF PERSON WHO PICKED UP VEHICLE: _____ # OF DAYS OF STORAGE _____ STORAGE @ $20/DAY FOR VEHICLES LESS THAN 25 FEET STORAGE @ $35/DAY FOR VEHICLES MORE THAN 25 FEET	
NOTIFICATION FEE:	
IMPOUNDMENT FEE (INCLUDES TARPING OF VEHICLE):	~~200 00~~
GOVERNMENTAL OR LAW ENFORCEMENT FEE:	
LIST ACTIONS REQUIRED DURING IMPOUND AND DATE PERFORMED: TAX	
TOTAL	$365 00

YOU MAY DIRECT COMPLAINTS REGARDING THE VEHICLE STORAGE TO TDLR AT P.O. BOX 12157, AUSTIN TX 78711 OR CALL 800-803-9202 OR THROUGH THE WEBSITE WWW.TDLR.TEXAS.GOV OR EMAIL TO INTAKE@TDLR.TEXAS.GOV

CENTRALSQUARE

Quote prepared on:
March 31, 2021
Quote prepared by:
Catherine Chang
cat.chang@centralsquare.com

Quote #: Q-42691
Quote expires on: June 28, 2021

COPY

Quote prepared for:
Robert Woodring
Blanco County
400 S US 281
Johnson City, TX 78636
(830) 868-7104

Thank you for your interest in CentralSquare. CentralSquare provides software that powers over 8,000 communities. More about our products can be found at www.centralsquare.com.

WHAT SOFTWARE IS INCLUDED?

PRODUCT NAME	QUANTITY	UNIT PRICE	TOTAL
Jail PS Pro LogSoft Tracking Interface (Export) License Fee	1	9,600.24	9,600.24
		Software Total	9,600.24 USD

WHAT SERVICES ARE INCLUDED?

DESCRIPTION		TOTAL
PS Pro Project Management Services		816.00
	Services Total	816.00 USD

QUOTE SUMMARY

Software Subtotal	9,600.24 USD
Services Subtotal	816.00 USD
Quote Total	**10,416.24 USD**

MORE INFORMATION AT CENTRALSQUARE.COM

CENTRALSQUARE

Quote prepared on:
March 31, 2021
Quote prepared by:
Catherine Chang
cat.chang@centralsquare.com

WHAT ARE THE RECURRING FEES?

TYPE	AMOUNT
FIRST YEAR MAINTENANCE TOTAL	$1,440.24
FIRST YEAR SUBSCRIPTION TOTAL	$0.00

The amount totals for Maintenance and/or Subscription on this quote include only the first year of software use and maintenance. Renewal invoices will include this total plus any applicable uplift amount as outlined in the relevant purchase agreement.

BILLING INFORMATION

Fees will be payable within 30 days of invoicing.

Please note that the Unit Price shown above has been rounded to the nearest two decimal places for display purposes only. The actual price may include as many as five decimal places. For example, an actual price of $21.37656 will be shown as a Unit Price of $21.38. The Total for this quote has been calculated using the actual prices for the product and/or service, rather than the Unit Price displayed above.

Prices shown do not include any taxes that may apply. Any such taxes are the responsibility of Customer. This is not an invoice.

For customers based in the United States or Canada, any applicable taxes will be determined based on the laws and regulations of the taxing authority(ies) governing the "Ship To" location provided by Customer on the Quote Form.

PAYMENT TERMS

License Fees & Annual Subscriptions
- 100% Due Upon Contract Execution

Contract Startup
- 100% Due Upon Contract Execution

Hardware & Third-Party Software
- 100% Due Upon Contract Execution

Services
- Fixed Fee: 100% Due Upon Completion

Quote prepared on:
March 31, 2021
Quote prepared by:
Catherine Chang
cat.chang@centralsquare.com

- Time & Material: Due as Incurred

Third-Party Services
- Fixed Fee: 50% Due Upon Contract Execution; 50% Due Upon Completion

Travel & Living Expenses
- Due as Incurred

PURCHASE ORDER INFORMATION

Is a Purchase Order (PO) required for the purchase or payment of the products on this Quote Form? (Customer to complete)

Yes [ ] No [ ]

Customer's purchase order terms will be governed by the parties' existing mutually executed agreement, or in the absence of such, are void and will have no legal effect.

PO Number: _____

Initials: _____

Blanco County

Signature: _____

Name: _____

Date: _____

Title: _____

CENTRALSQUARE

Summary of Services

Project: Blanco County SO, TX – Ryan Tech Log Soft Interface – Q-42691

The parties mutually agree and acknowledge this Summary of Services is a high-level overview of the project requested, not a detailed requirements or design of solution.

Project Start Date

Parties agree the project will be scheduled within sixty (60) days from the execution of the above quote number.

Change Requests

Ryan Tech Log Soft interface is a new custom Pro Suite interface that requires development by Central Square. Any custom changes beyond the scope of the interface that are requested by a third-party agency and/or client will require a change request to be completed. The parties may request a change to this summary of services, to increase hours or deliverables, through a written request to the CentralSquare project manager or resource.

Services Scope of Project

The project includes the following scope of services.

CentralSquare will work with the Client to establish a connection between the third-party Ryan Tech Log Soft interface and the Central Square Jail Pro. This a one-way interface from CS Jail Pro to Ryan Technologies' LogSoft system. Jail periodically exports a TXT file with specified inmate data. LogSoft accesses the TXT file and imports the data via a process completely external to CS Pro Suite.

Client acknowledges that this change order covers CentralSquare's part of the Ryan Tech Log Soft interface and acknowledges that they are responsible for any third-party costs associated with the interface.

CentralSquare Technologies (CST) Responsibilities:

- CST PM will schedule kickoff
- CST Product Owner will work with the client and vendor to create and define the scope of the interface
- CST Product Owner will provide a document to the client requiring signature to accept scope of the interface prior to starting development of the interface.
- CST PM will work with CST Development team to schedule development of the interface.
- CST Engineer will develop the interface
- CST Quality Analyst will test the interface within an internal testing system
- CST Technical Consultant will assist the client and vendor to configure, connect and test the interface.
- CST Technical Consultant will provide an IRD, or Interface Requirement Document to the client requiring signature to accept the completed interface prior to releasing the changes to the client's production server. This document will include, but is not limited to, an introduction to the interface, functionality, implementation tasks and assumptions, and disclaimers.
- CST PM will work with the Client to schedule a release to the client's production server to receive the changes
- CST is not responsible for any training on third party applications.

Client Responsibilities:

- To be the primary point of contact with the third-party agencies and/or vendors
- Provide Subject Matter Experts (SMEs) familiar with existing data structures to assist with the interface process
- Provide a point of contact with knowledge of the product
- Ensure scope of changes are reviewed in a timely fashion.
- Actively participate in testing and working with the third-party vendor and/or agencies.
- Sign documents in a timely manner.

Project Management

Even in smaller, less complex projects, there needs to be a point of contact and someone driving a project to successful completion. CentralSquare's Implementation Methodology ensures a project has the right amount of oversight needed to successfully complete the work, no more no less. A CentralSquare Project Manager will be your point of contact for the scoped work with you to develop a timeline to meet your needs, drive the timeline to completion, work to resolve any issues that may arise during the life of the project, all while keeping you up to date so you have the peace of mind your project is on track for a successful completion

Professional Services

Throughout the course of the project, CentralSquare will use several types of services (defined herein) to complete the necessary steps for successful deployment of the contracted services. The overall services aligned to implementation include Consulting Services, Technical Services, Data Conversion Services, Training Services, and in some cases, Installation Services.

Blanco County Commissioner's Court
PO Box 471, Johnson City, TX 78636-0471

April 27, 2021

Mr. David O'Bannon
President
North Blanco County ESD#1
PO Box 454
Johnson City, TX 78636-0454

RE: HB553

Mr. O'Bannon,

As Blanco County's Judge and Commissioners, we disagree with HB553, which would require that all ESD's submit their budgets and proposed tax rates to their County Commissioners' Court for approval.

The Emergency Services District is a board appointed by the Blanco County Commissioners' Court and our court trusts the District's appointed leadership and judgment in setting the budget and tax rates. Furthermore, Emergency Service Districts are already subject to stringent limits on budget and tax increases.

The Blanco County Commissioners' Court has the authority to replace ESD Commissioners every two years if we are not happy with their budgets and tax rates or how they perform their policy-making functions. Blanco County ESD#1 has a record of success and accountability. The requirements proposed in HB553 are not required of other, much larger boards and we do not see the need for it here.

Sincerely,

Brett Bray, County Judge

Tommy Weir, Pct. 1 Commissioner

Emil Uecker, Pct. 2 Commissioner

Chris Liesmann, Pct. 3 Commissioner

Paul Granberg, Pct. 4 Commissioner

Blanco County Commissioner's Court
PO Box 471, Johnson City, TX 78636-0471

April 27, 2021

Ms. Ann Hall
President
Blanco County ESD2
431 Blanco Ave.
Blanco, TX 78606

RE: HB553

Ms. Ann Hall,

As Blanco County's Judge and Commissioners, we disagree with HB553, which would require that all ESD's submit their budgets and proposed tax rates to their County Commissioners' Court for approval.

The Emergency Services District is a board appointed by the Blanco County Commissioners' Court and our court trusts the District's appointed leadership and judgment in setting the budget and tax rates. Furthermore, Emergency Service Districts are already subject to stringent limits on budget and tax increases.

The Blanco County Commissioners' Court has the authority to replace ESD Commissioners every two years if we are not happy with their budgets and tax rates or how they perform their policy-making functions. Blanco County ESD2 has a record of success and accountability. The requirements proposed in HB553 are not required of other, much larger boards and we do not see the need for it here.

Sincerely,

Brett Bray, County Judge

Tommy Weir, Pct. 1 Commissioner

Emil Uecker, Pct. 2 Commissioner

Chris Liesmann, Pct. 3 Commissioner

Paul Granberg, Pct. 4 Commissioner

307.230 When a new subdivision is located adjacent to an existing subdivision such that a road in the new subdivision is adjacent to and parallel to a road in the existing subdivision sufficient right-of-way must be dedicated in the new subdivision to provide the minimum width specified herein, and sufficient causeway shall be paved in order to make the full pavement width comply with Figure 610. Before any pavement is laid to widen an existing pavement, the existing pavement shall be cut back two (2) feet to assure an adequate subgrade and pavement joint.

307.240 Widened street sections (semi-cul-de-sacs or bulges) are prohibited.

307.250 Specifications for TxDOT items referred to in these Rules and Regulations may be found on the TxDOT website.

307.260 The owner or owner's representative shall notify the County Commissioner at least 48 hours prior to material delivery for a road, laying of the base course of a road, and before paving of a road is to be started, so that the County representative will have an opportunity to visit the site to verify that specifications for the road are being met. Failure to do so may result in the road not being approved by the County.

TABLE 307 MINIMUM REQUIREMENTS FOR NEW ROADS

	Local Roadway (1)	Minor Collector (2)	Major Collector (3)	Minor Arterial
ADT	100 – 1000	1001 – 2500	2501 – 5000	5001 +
MIN ROW	60	60	80	**
DESIGN SPEED	30	35	40	**
MIN GRADE	12%	12%	12%	**
MIN GRADIENT	0.3%	0.3%	0.3%	**
Travel Way (min)	22	24	26	**
Paved Width (min)	24	26	28	**
Vert Curve (K)	40 sag	40 sag	40 sag	**
Minimum	15 crest	20 crest	20 crest	**
Stopping Sight Distance	165'	250'	350'	**
Min Horizontal		25	15	**
Curve Radius	200'	229'	382'	**
Sub Grade width minimum	28'	30'	32'	**
Base Width	26'	28'	30'	**
# of Homes	10 – 100	101 – 250	251 – 500	501 +
** Designed & Engineered by AASHTO Standards				

(1) **Local Roadway** – An Urbanized Local Roadway shall be a two-lane paved roadway, with improved shoulders or curb and gutter, and considered a Special Purpose Road with a design capacity of up to 1,000 ADT in accordance with AASHTO design standards and third-class roadways in accordance with TTC Chapter 251.

(2) **Minor Collector** – A Minor Collector shall be a two lane paved roadway, with improved shoulders or curb and gutter, and considered a Rural Collector with a design capacity of 1,001 to 2,500 ADT in accordance with AASHTO design standards, and may be either second-class or third-class roadways in accordance with TTC Chapter 251.

(3) **Major Collector** – A Major Collector shall be a two lane or larger paved roadway, with improved shoulders or curb and gutter, and considered a Rural Collector with a design capacity of 2,501 to 5,000 ADT in accordance with AASHTO design standards, and may be either first-class or second-class roadways n accordance with TTC Chapter 251.

308.000 PREPARING AND CLEARING RIGHT-OF-WAY

308.100 The developer shall clear the right-of-way for construction operations by removing and disposing of all obstructions within the required horizontal clearance for obstructions per the TxDOT Roadway Design Manual, latest edition. However, pursuant to Section 251.016, Transportation Code, the County may remove or order removal of objects in any County road right-of-way that create a safety hazard to the public.

308.110 Trees located on private property that interfere with a clear right-of-way by encroachment or over hanging branches may be removed, pruned or trimmed as necessary in order to provide adequate clearance for vehicular traffic. Whenever a tree susceptible to oak wilt is trimmed, pruned or otherwise cut or damaged, the person responsible for the cut or damage shall immediately dress the cut or damaged area with paint or compound to protect the tree and adjacent trees against oak wilt.

308.120 All unstable subgrade or objectionable material in the roadway shall be removed and replaced with material acceptable to the County.

309.000 ROADWAY EXCAVATION AND EMBANKMENT

309.100 Any roadway excavation necessary to attain conformance with proposed road grades and typical cross sections shall be done in conformity with Item 110 of TxDOT's specifications.

309.110 When the proposed road grades and cross sections require the placing of fill material to raise the roadway, such embankment fill shall be constructed in conformity with Item 132 of TxDOT's specifications. Completed side slopes shall not be steeper than three-to-one (3-to-l).

309.120 Completed cuts shall have side slopes no steeper than three-to-one (3-to-l) unless a different slope is approved by the County Commissioner Court consistent with the provisions of subsection 309.130.

309.130 Requirements for slopes in cuts and on fills may be modified if the developer presents plans designed, signed and sealed by a licensed engineer demonstrating that cuts are in a material of adequate stability to permit a different slope, or using retaining walls to stabilize the slope or fill.

course of a Two Course Surface Treatment. The actual rate used shall be approved by the Road Superintendent.

311.190 For estimating purposes, the rate of application for emulsified asphalt product shall be 0.35 gallons per square yard for the first course and 0.40 gallons per square yard for the second course of a Two Course Surface Treatment. The actual rate shall be approved by the Road Superintendent.

311.200 For Two Course Surface Treatment, the aggregate for the first course may be Grade 3 or 4, Type B; the second course aggregate may be Grade 4 or 5, Type PB, or Type B with a fog seal, TxDOT Item 315.

311.210 Aggregate rock will be applied at the rate of one (1) cubic yard per 90 square yards for the first course, and at the rate of one (l) cubic yard per 100 square yards for the second course. Rolling is required to achieve a uniform embedment. The contractor shall broom-off loose aggregate. If bleeding occurs, the contractor shall apply sand or Grade 5 material to the finished surface for whatever period is required to absorb the excess asphalt.

311.220 Compacted HMACP shall conform to TxDOT's current specifications, Item 340.4 for Hot Mix, Type D (Fine Surface) and the percent aggregate passing by weight or volume shall be as follows:

SIEVE SIZE	PERCENT PASSING
English	
½"	98-100
3/8"	85-100
No. 4	50-70
No. 8	35-46
No. 30	15-29
No. 50	7-20
No. 200	2-7
Design VMA Percent Minimum	15

311.230 The asphaltic material shall be from 3.5 to 6.5 percent of the mixture by weight, or from 8 to 15 percent of the mixture by volume.

311.240 The asphaltic materials for the tack coat, or prime coat, shall be cut back asphalt MC-30, CSS 1-H, or equal, used by TxDOT for that purpose with the approval of the County Commissioner.

311.250 The HMACP material shall be discharged from a mixer at a temperature not to exceed 375 ^{0}F and applied to the roadway at a temperature of not less than 275 ^{0}F.

"DARK SKY" OUTDOOR LIGHTING

Per Blanco County Resolution supporting efforts to preserve night skies of July 12, 2016, Developers are encouraged to adopt "Dark Sky" rules for outdoor lighting for subdivisions, residences and commercial projects.

DARK SKY WORDING FOR HOA AND/OR DEED RESTRICTIONS

Any light fixture used for exterior illumination must be fully shielded, pointed downward, and placed in a manner so that the light source is not directly visible from any other properties or public roadways. In order to reduce glare and light trespass into neighboring lands and to reduce negative impacts to wildlife, exterior illumination shall be restricted to light sources with a Correlated Color Temperature of 3,000K or less. As used herein, "Fully Shielded" means no direct uplight (i.e., no light emitted above the horizontal plane running through the lowest point on the fixture where light is emitted). The use of streetlights should be held to a minimum. The use of reflective *surfaces should always be considered as an alternative to streetlights.*

Customer Service Order

THIS SERVICE ORDER ("Service Order"), is executed and effective upon the date of the signature set forth in the signature block below ("Effective Date") and is by and between Charter Communications Operating, LLC on behalf of those operating subsidiaries providing the Service(s) hereunder ("Spectrum") and Customer (as shown below) and is governed by and subject to the Spectrum Enterprise Commercial Terms of Service posted to the Spectrum Enterprise website, https://enterprise.spectrum.com/ (or successor url) or, if applicable, an existing services agreement mutually executed by the parties (each, as appropriate, a "Service Agreement"). Except as specifically modified herein, all other terms and conditions of the Service Agreement shall remain unamended and in full force and effect.

Account Executive: John Watson
Phone: 5129095561 ext:
Cell Phone:
Email: john.watson@charter.com

Order # 12503025

Customer Information: Customer Code		
Business Name	BLANCO COUNTY	**Customer Type:** New Customer
Billing Address **Attention To:** PO Box 471 Johnson City TX 78636		**Account Number**
Billing Contact	**Billing Contact Phone**	**Billing Contact Email Address**
Camille Swift	(830) 868-4566	bctreas@co.blanco.tx.us
Authorized Contact	**Authorized Contact Phone**	**Authorized Contact Email Address**
Brett Bray	(830) 868-4266	cojudge@co.blanco.tx.us
Technical Contact	**Technical Contact Phone**	**Technical Contact Email Address**
Chris Nagle	(830) 220-0108	chris@hillcountryit.com

Spectrum ENTERPRISE

Current Services and Monthly charges At 400 S Us Highway 281 , Johnson City TX 78636

Description	Quantity	Sales Price	Monthly Recurring Total
DIA500M	1	$1,399.00	$1,399.00
Data Term - 3 YR	1	$0.00	$0.00
1 Static Ip Address	1	$0.00	$0.00
***Total**			**$1,399.00**

*Prices do not include taxes and fees.

New and Revised Services and Monthly Charges At 400 S Us Highway 281 , Johnson City TX 78636

Description	Quantity	Sales Price	Monthly Recurring Total	Contract Term
EPL Intrastate 10 Mbps	1	$240.00	$240.00	60 Months
Ethernet Spoke	1	$0.00	$0.00	60 Months
***Total**			**$240.00**	

*Prices do not include taxes and fees.

New and Revised Services and Monthly Charges At 5010 Old Manor Rd Unit HUB, Austin TX 78723

Description	Quantity	Sales Price	Monthly Recurring Total	Contract Term
EPL Intrastate 10 Mbps	1	$240.00	$240.00	60 Months
Ethernet EPL HUB	1	$0.00	$0.00	60 Months
***Total**			**$240.00**	

*Prices do not include taxes and fees.

One Time fees At 5010 Old Manor Rd Unit HUB, Austin TX 78723

Description	Quantity	Sales Price	Total
Installation	1	$0.00	$0.00
Total			**$0.00**

*Prices do not include taxes and fees.

One Time fees At 400 S Us Highway 281 , Johnson City TX 78636

Description	Quantity	Sales Price	Total
Installation	1	$0.00	$0.00
Total			**$0.00**

*Prices do not include taxes and fees.

Spectrum ENTERPRISE

Special Terms

Electronic Signature Disclosure

By signing and accepting below you are acknowledging that you have read and agree to the terms and conditions outlined in this document.

Authorized Signature for Customer

Printed Name and Title

Date Signed

Spectrum ENTERPRISE

Spectrum Enterprise
Ethernet Service Level Agreement

This document outlines the Service Level Agreement ("SLA") for fiber-based Spectrum Enterprise Ethernet Service and Spectrum Enterprise Cloud Connect Service (individually the "Service" and collectively the "Services"). Capitalized words used, but not defined herein, shall have the meanings given to them in the Agreement.

This SLA is a part of, and hereby incorporated by reference into the Spectrum Enterprise Service Agreement (including the terms and conditions, attachments, and Service Orders described therein, the "Agreement"). To the extent any provision of this SLA conflicts with the Agreement, this SLA shall control. Performance tier goals ("SLA Targets") are set forth in the table(s) below.

Ethernet Services SLA Targets presented below are measured end to end (i.e. from any two applicable Customer's edge or network interface devices at the Service Location) at the individual circuit or service level, and any applicable credits are issued for the affected circuit or service (the "Affected Service").

The Cloud Connect Service SLA Target for Availability is measured between Spectrum Enterprise's network interface device (NID) located at the Customer location and the point of physical handoff of the Service to the Cloud Service Provider (the "Gateway Point").

I. SLA Targets for Ethernet and Cloud Connect Services:

Spectrum Enterprise Ethernet Services SLAs				
Performance Tier	**On-Net**			**Off-Net**
	Metro	**Regional**	**National**	
Miles	0 - 155	156 - 746	> 746	N/A
Kilometers	0 - 250	251 - 1200	> 1200	N/A
Latency	≤ 10ms	≤ 25ms	≤ 125ms	≤ 125ms
Jitter	≤ 2ms	≤ 4ms	≤ 8ms	≤ 8ms
Frame Loss	≤ 0.01%	≤ 0.01%	≤ 0.01%	≤ 0.01%
Availability	≥ 99.99%	≥ 99.99%	≥ 99.99%	≥ 99.99%
MTTR	4 hrs.	4 hrs.	4 hrs.	4 hrs.

[1] *"On-Net" includes circuits that are provided by Spectrum Enterprise to Service Locations directly from the Spectrum Network.*

[2] *"Off-Net" includes circuits that are provided to geographic locations that may be outside or inside Spectrum Enterprise service areas and are provided by third party service providers and not from the Spectrum Network.*

Spectrum Enterprise Cloud Connect Gateway Point SLAs	
Availability	≥ 99.99%

II. Priority Classification:

"Excluded Disruptions" means (i) planned outages, (ii) routine or urgent maintenance, (iii) time when Spectrum Enterprise is unable to gain access to Customer's premises to troubleshoot, repair or replace equipment or the Service, (iv) service problems resulting from acts of omissions of Customer or Customer's representatives or agents, (v) Customer equipment failures, (vi) Customer is not prepared to release the Service for testing, and (vii) Force Majeure

Events. Notwithstanding anything to the contrary in the Agreement, any service issues beyond the connectivity to the Cloud Service Provider is not covered by this SLA.

A "Service Disruption" is defined as an outage, disruption, or severe degradation, other than an Excluded Disruption, that interferes with the ability of a Spectrum Enterprise network hub to transmit and receive network traffic between Customer's A and Z Service Locations. The Service Disruption period begins when Customer reports a Service Disruption using Spectrum Enterprise's trouble ticketing system by contacting Customer Care, Spectrum Enterprise acknowledges receipt of such trouble ticket, Spectrum Enterprise validates that the Service is affected , and Customer releases the Service for testing. The Service Disruption ends when the affected Service has been restored.

"Service Degradation" means a degradation of the Service that is not a Service Disruption or a result of an Excluded Disruption, such as failure of the Service to achieve the SLA Targets for Latency / Frame Delay, Jitter / Frame Delay Variation, or Packet / Frame.

Spectrum Enterprise will classify Service problems as follows:

Priority	Criteria
Priority 1	• Service Disruption resulting in a total loss of Service; or • Service Degradation to the point where Customer is unable to use the Service and is prepared to release it for immediate testing (each a "Priority 1 Outage").
Priority 2	• Service Degradation where Customer is able to use the Service and is not prepared to release it for immediate testing.
Priority 3	• A service problem that does not impact the Service; or • A single non-circuit specific quality of Service inquiry.

III. Service Availability

"Service Availability" is calculated as the total number of minutes in a calendar month less the number of minutes that the Service is unavailable due to a Priority 1 Outage ("Downtime"), divided by the total number of minutes in a calendar month.

The following table contains examples of the percentage of Service Availability translated into minutes of Downtime for the 99.99% Service Availability Target:

Percentage by Days Per Month	Total Minutes / Month	Downtime Minutes
99.99% for 31 Days	44,640	4.5
99.99% for 30 Days	43,200	4.3
99.99% for 29 Days	41,760	4.2
99.99% for 28 Days	40,320	4

IV. Mean Time to Restore ("MTTR")

The MTTR measurement for Priority 1 Outages is the average time to restore Priority 1 Outages during a calendar month calculated as the cumulative length of time it takes Spectrum Enterprise to restore a Service following a Priority 1 Outage in a calendar month divided by the corresponding number of trouble tickets for Priority 1 Outages opened during the calendar month for the Service.

MTTR per calendar month is calculated as follows:

$$\frac{\text{Cumulative length of time to restore Priority 1 Outage(s) per Service}}{\text{Total number of Priority 1 Outage trouble tickets per Service}}$$

V. Latency / Frame Delay

Latency or Frame Delay is the average roundtrip network delay, measured every 5 minutes during a calendar month, unless measurement is not possible as a result of an Excluded Disruption, to adequately determine a consistent average monthly performance level for frame delay for each Service. The roundtrip delay is expressed in milliseconds (ms).

Latency / Frame Delay is calculated as follows:

$$\text{Latency / Frame Delay} = \frac{\text{Sum of the roundtrip delay measurements for a Service}}{\text{Total \# of measurements for a Service}}$$

VI. Packet Loss / Frame Loss Ratio

Packet Loss or Frame Loss Ratio is defined as the percentage of frames that are not successfully received compared to the total frames that are sent in a calendar month, except where any packet or frame loss is the result of an Excluded Disruption. The percentage calculation is based on frames that are transmitted from a network origination point and received at a network destination point.

Packet Loss / Frame Loss Ratio is calculated as follows:

Packet Loss / Frame Loss (%) = 100 (%) – Frames Received

VII. Jitter / Frame Delay Variation

Jitter or Frame Delay Variation is defined as the variation in delay for two consecutive frames that are transmitted (one-way) from a network origination point and received at a network destination point. Spectrum Enterprise measures a sample set of frames every 5 minutes during a calendar month, unless measurement is not possible as a result of an Excluded Disruption, and determines the average delay between consecutive frames within each sample set. The monthly Jitter / Frame Delay Variation is calculated as the average of all of the frame delay variation measurements during such calendar month and is expressed in milliseconds (ms).

$$\text{Jitter / Frame Delay Variation} = \frac{\text{Sum of the Frame Delay Variation measurements for a Service}}{\text{Total \# of measurements for a Service}}$$

VIII. Network Maintenance

Maintenance Notice:
Customer understands that from time to time, Spectrum Enterprise will perform network maintenance for network improvements and preventive maintenance. In some cases, Spectrum Enterprise will need to perform urgent network maintenance, which will usually be conducted within the routine maintenance windows. Spectrum Enterprise will use reasonable efforts to provide advance notice of the approximate time, duration, and reason for any urgent maintenance outside of the routine maintenance windows.

Maintenance Windows:
Routine maintenance may be performed Monday – Friday 12 a.m. – 6 a.m. Local Time.

IX. Remedies Service Credit:

If the actual performance of a Service during any calendar month is less than the SLA Targets, and Customer is in compliance with the terms of the Agreement and this SLA, then Customer may request credit equal to the corresponding percentage of the monthly recurring charges for the Affected Service as set forth in the table below. Any credit to be applied will be off-set against any amounts due from Customer to Spectrum Enterprise in the billing cycle following the date Spectrum Enterprise makes its credit determination. Credit requests must be submitted to Spectrum Enterprise within thirty (30) days of the calendar month in which the SLA Target was missed. Spectrum Enterprise will exercise commercially reasonable efforts to respond to such credit requests within 30 days of receipt thereof.

Service Availability	Mean Time To Restore ("MTTR")		Latency / Frame Delay (Roundtrip)	Jitter / Frame Delay Variation	Packet Loss / Frame Loss
30%	> 4 hours ≤ 7:59:59 hours	4%	5%	5%	5%
	> 8 hours	10%			

All SLA Targets are monthly measurements, and Customer may request only one credit per SLA Target per month for the Affected Service. Should one event impact more than one SLA hereunder, Customer shall receive the single highest of the qualifying credits only. Except as set forth below, the credits described in this SLA shall constitute Customer's sole and exclusive remedy, and Spectrum Enterprise's sole and exclusive liability, with respect to any missed SLA Targets. Service Credits hereunder shall not be cumulative per Service.

Chronic Priority 1 Outages:
If Customer experiences and reports three (3) separate Priority 1 Outages where the Downtime exceeds four (4) hours during each Priority 1 Outage within three (3) consecutive calendar months, then Customer may terminate the Affected Service without charge or liability by providing at least thirty (30) days written notice to Spectrum Enterprise; provided, however, that (i) Customer may only terminate the Affected Service; (ii) Customer must exercise its right to terminate the Affected Service by providing written notice to Spectrum Enterprise within thirty (30) days after the event giving rise to Customer's termination right; (iii) Customer shall have paid Spectrum Enterprise all amounts due at the time of such termination for all Services provided by Spectrum Enterprise pursuant to the Agreement, and (iv) the foregoing termination right provides the sole and exclusive remedy of Customer and the sole and exclusive liability of Spectrum Enterprise for chronic Priority 1 Outages and Customer shall not be eligible for any additional credits. Termination will be effective forty-five (45) days after Spectrum Enterprise's receipt of such written notice of termination.

Spectrum ENTERPRISE

Ethernet Intrastate-Only Traffic Certification

Customer Name (Legal Entity): BLANCO COUNTY

Billing Address: ******1460

PO Box 471

Johnson City TX 78636

Charter Communications Operating, LLC and its subsidiaries providing the Services ("Spectrum"), presumes that more than 10% of the traffic carried on the WAN/Ethernet services that we provide to you over any circuit will be interstate in nature, and that therefore by Federal Communications Commission regulation each such circuit must be treated as jurisdictionally interstate in its entirety. If you expect that **10% or less** of the traffic to be carried over any circuit will be **interstate** in nature, please complete the certification form below to identify the relevant circuit(s) and specify the expected jurisdictional allocation of your traffic associated with such circuit(s). Please note that all Internet-related traffic is presumptively interstate. Also, please note that **you must provide this certification annually and whenever there is a material change in the actual or expected jurisdictional nature of your traffic**. In the event that you fail to provide this certification in accordance with procedures specified by Spectrum, Spectrum reserves the right to again presume that more than 10% of the traffic carried over each circuit is interstate in nature and calculate the fees applicable to that usage accordingly.

CERTIFICATION

I certify that the traffic carried by Spectrum in its provision of WAN/Ethernet services on the circuits **listed on the attached Service Order** is jurisdictionally intrastate and **will contain no more than 10% interstate traffic**.

(Authorized Customer Signature) COPY (Date Signed)

(Printed Name) (Title)

Authorized Customer Contact Information:

Phone: (830) 868-4266 Email: cojudge@co.blanco.tx.us

PRELIMINARY OPINION OF
PROBABLE CONSTRUCTION COST FOR
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Prepared By:
K.C. Engineering, Inc. - Firm Registration No. F-977

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PAY ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE IN NUMBERS	AMOUNT (Quantity x Unit Price)
	GENERAL REQUIREMENTS				
010.16.1	SEQUENCE OF CONSTRUCTION	1	LS	$ 600.00	$ 600.00
010.16.2	FIELD ENGINEERING	1	LS	$ 1,800.00	$ 1,800.00
010.16.3	MOBILIZATION	1	LS	$ 3,000.00	$ 3,000.00
010.16.4	AS-BUILT DRAWINGS	1	LS	$ 600.00	$ 600.00
GEN. COND. ART. 5	BONDS AND INSURANCE	1	LS	$ 3,000.00	$ 3,000.00
	TOTAL GENERAL REQUIREMENTS			**$**	**9,000.00**
	ROADWAY IMPROVEMENTS				
102.4.2	CLEARING AND GRUBBING	3	STA	$ 500.00	$ 1,500.00
104.4.1	REMOVE EXISTING ROADWAY	635	SY	$ 2.00	$ 1,270.00
106.4.1	SUBGRADE PREPARATION (6")	1,138	SY	$ 3.00	$ 3,414.00
200.5.1	EXCAVATION	5	CY	$ 15.00	$ 75.00
220.4.1	EMBANKMENT	578	CY	$ 10.00	$ 5,780.00
240.6.1	FLEXIBLE BASE, 6" DEPTH, DENSITY CONTROLLED	180	CY	$ 50.00	$ 9,000.00
310.4.1	REMOVING CONCRETE (LOW-WATER CROSSING)	72	SY	$ 15.00	$ 1,080.00
TxDOT 310	PRIME COAT (AEP OR MC-30)	1,027	SY	$ 3.00	$ 3,081.00
TxDOT 316	CHIP SEAL (TWO COURSE) (ASPHALT - EA-HFRS-2P) (AGGREGATE - GR 4 AND GR 5 - SAC B)	1,027	SY	$ 5.00	$ 5,135.00
	TOTAL ROADWAY IMPROVEMENTS			**$**	**30,335.00**
	DRAINAGE IMPROVEMENTS				
TxDOT 462	CONCRETE BOX CULVERT (7 FT X 4 FT)	114	LF	$ 500.00	$ 57,000.00
TxDOT 466	WINGWALL (PW-1) (HW = 4 FT)	2	EA	$ 10,000.00	$ 20,000.00
	TOTAL DRAINAGE IMPROVEMENTS			**$**	**77,000.00**
	SIGNS, STRIPING & TRAFFIC CONTROL				
TxDOT 502	BARRICADES, SIGNS, AND TRAFFIC HANDLING	1	LS	$ 3,500.00	$ 3,500.00
TxDOT 644	INSTALL SMALL ROADSIDE SIGN, SUPPORTS, AND ASSEMBLIES (FLOOD GAUGE)	2	EA	$ 750.00	$ 1,500.00
TxDOT 658	OBJECT MARKER ASSEMBLY (OM-2X) (WC) GND	2	EA	$ 350.00	$ 700.00
	TOTAL SIGNS, STRIPING & TRAFFIC CONTROL			**$**	**5,700.00**

PRELIMINARY OPINION OF
PROBABLE CONSTRUCTION COST FOR
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Prepared By:
K.C. Engineering, Inc. - Firm Registration No. F-977

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PAY ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE IN NUMBERS	AMOUNT (Quantity x Unit Price)
	EROSION AND SEDIMENTATION CONTROL				
900.5.1	SILT FENCE	280	LF	$ 3.00	$ 840.00
900.5.1	SILT FENCE - REMOVE	280	LF	$ 2.00	$ 560.00
905.5.1	CONCRETE WASHOUTS	1	LS	$ 500.00	$ 500.00
910.8.1	REVEGETATION (TOPSOIL AND SEEDING)	410	SY	$ 2.00	$ 820.00
920.3.1	ROCK FILTER DAM, TYPE 2	40	LF	$ 40.00	$ 1,600.00
920.3.1	ROCK FILTER DAM, TYPE 2 - REMOVE	40	LF	$ 20.00	$ 800.00
	TOTAL EROSION AND SEDIMENTATION CONTROL			**$**	**5,120.00**
	MISCELLANEOUS WORK ITEMS				
750.10.1	LOCATING EXISTING UNDERGROUND FACILITIES	1	LS	$ 1,000.00	$ 1,000.00
	TOTAL MISCELLANEOUS WORK ITEMS			**$**	**1,000.00**
	TOTAL BID (TOTAL OF ITEMS IN THE COLUMNS ABOVE)			**$**	**128,155.00**

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April 7, 2021
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BLANCO COUNTY, TEXAS

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GEN. COND. ART. 5	BONDS AND INSURANCE	1	LS	$ 3,000.00	$ 3,000.00
	TOTAL GENERAL REQUIREMENTS			**$**	**9,000.00**
	ROADWAY IMPROVEMENTS				
102.4.2	CLEARING AND GRUBBING	3	STA	$ 500.00	$ 1,500.00
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240.6.1	FLEXIBLE BASE, 6" DEPTH, DENSITY CONTROLLED	180	CY	$ 50.00	$ 9,000.00
310.4.1	REMOVING CONCRETE (LOW-WATER CROSSING)	72	SY	$ 15.00	$ 1,080.00
TxDOT 310	PRIME COAT (AEP OR MC-30)	1,027	SY	$ 3.00	$ 3,081.00
TxDOT 316	CHIP SEAL (TWO COURSE) (ASPHALT - EA-HFRS-2P) (AGGREGATE - GR 4 AND GR 5 - SAC B)	1,027	SY	$ 5.00	$ 5,135.00
	TOTAL ROADWAY IMPROVEMENTS			**$**	**30,335.00**
	DRAINAGE IMPROVEMENTS				
TxDOT 462	CONCRETE BOX CULVERT (7 FT X 4 FT)	114	LF	$ 500.00	$ 57,000.00
TxDOT 466	WINGWALL (PW-1) (HW = 4 FT)	2	EA	$ 10,000.00	$ 20,000.00
	TOTAL DRAINAGE IMPROVEMENTS			**$**	**77,000.00**
	SIGNS, STRIPING & TRAFFIC CONTROL				
TxDOT 502	BARRICADES, SIGNS, AND TRAFFIC HANDLING	1	LS	$ 3,500.00	$ 3,500.00
TxDOT 644	INSTALL SMALL ROADSIDE SIGN, SUPPORTS, AND ASSEMBLIES (FLOOD GAUGE)	2	EA	$ 750.00	$ 1,500.00
TxDOT 658	OBJECT MARKER ASSEMBLY (OM-2X) (WC) GND	2	EA	$ 350.00	$ 700.00
	TOTAL SIGNS, STRIPING & TRAFFIC CONTROL			**$**	**5,700.00**

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST FOR COUNTY ROAD 301 BLANCO COUNTY, TEXAS

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920.3.1	ROCK FILTER DAM, TYPE 2	40	LF	$ 40.00	$ 1,600.00
920.3.1	ROCK FILTER DAM, TYPE 2 - REMOVE	40	LF	$ 20.00	$ 800.00
	TOTAL EROSION AND SEDIMENTATION CONTROL			**$**	**5,120.00**
	MISCELLANEOUS WORK ITEMS				
750.10.1	LOCATING EXISTING UNDERGROUND FACILITIES	1	LS	$ 1,000.00	$ 1,000.00
	TOTAL MISCELLANEOUS WORK ITEMS			**$**	**1,000.00**
	TOTAL BID (TOTAL OF ITEMS IN THE COLUMNS ABOVE)			**$**	**128,155.00**

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010.16.4	AS-BUILT DRAWINGS	1	LS	$ 600.00	$ 600.00
GEN. COND. ART. 5	BONDS AND INSURANCE	1	LS	$ 3,000.00	$ 3,000.00
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TxDOT 466	WINGWALL (PW-1) (HW = 4 FT)	2	EA	$ 10,000.00	$ 20,000.00
	TOTAL DRAINAGE IMPROVEMENTS			**$**	**77,000.00**
	SIGNS, STRIPING & TRAFFIC CONTROL				
TxDOT 502	BARRICADES, SIGNS, AND TRAFFIC HANDLING	1	LS	$ 3,500.00	$ 3,500.00
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	TOTAL EROSION AND SEDIMENTATION CONTROL			**$**	**5,120.00**
	MISCELLANEOUS WORK ITEMS				
750.10.1	LOCATING EXISTING UNDERGROUND FACILITIES	1	LS	$ 1,000.00	$ 1,000.00
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	TOTAL EROSION AND SEDIMENTATION CONTROL			**$**	**5,120.00**
	MISCELLANEOUS WORK ITEMS				
750.10.1	LOCATING EXISTING UNDERGROUND FACILITIES	1	LS	$ 1,000.00	$ 1,000.00
	TOTAL MISCELLANEOUS WORK ITEMS			**$**	**1,000.00**
	TOTAL BID (TOTAL OF ITEMS IN THE COLUMNS ABOVE)			**$**	**128,155.00**

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PROBABLE CONSTRUCTION COST FOR
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BLANCO COUNTY, TEXAS

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Prepared By:
K.C. Engineering, Inc. - Firm Registration No. F-977

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PAY ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE IN NUMBERS	AMOUNT (Quantity x Unit Price)
	GENERAL REQUIREMENTS				
010.16.1	SEQUENCE OF CONSTRUCTION	1	LS	$ 600.00	$ 600.00
010.16.2	FIELD ENGINEERING	1	LS	$ 1,800.00	$ 1,800.00
010.16.3	MOBILIZATION	1	LS	$ 3,000.00	$ 3,000.00
010.16.4	AS-BUILT DRAWINGS	1	LS	$ 600.00	$ 600.00
GEN. COND. ART. 5	BONDS AND INSURANCE	1	LS	$ 3,000.00	$ 3,000.00
	TOTAL GENERAL REQUIREMENTS			**$**	**9,000.00**
	ROADWAY IMPROVEMENTS				
102.4.2	CLEARING AND GRUBBING	3	STA	$ 500.00	$ 1,500.00
104.4.1	REMOVE EXISTING ROADWAY	635	SY	$ 2.00	$ 1,270.00
106.4.1	SUBGRADE PREPARATION (6")	1,138	SY	$ 3.00	$ 3,414.00
200.5.1	EXCAVATION	5	CY	$ 15.00	$ 75.00
220.4.1	EMBANKMENT	578	CY	$ 10.00	$ 5,780.00
240.6.1	FLEXIBLE BASE, 6" DEPTH, DENSITY CONTROLLED	180	CY	$ 50.00	$ 9,000.00
310.4.1	REMOVING CONCRETE (LOW-WATER CROSSING)	72	SY	$ 15.00	$ 1,080.00
TxDOT 310	PRIME COAT (AEP OR MC-30)	1,027	SY	$ 3.00	$ 3,081.00
TxDOT 316	CHIP SEAL (TWO COURSE) (ASPHALT - EA-HFRS-2P) (AGGREGATE - GR 4 AND GR 5 - SAC B)	1,027	SY	$ 5.00	$ 5,135.00
	TOTAL ROADWAY IMPROVEMENTS			**$**	**30,335.00**
	DRAINAGE IMPROVEMENTS				
TxDOT 462	CONCRETE BOX CULVERT (7 FT X 4 FT)	114	LF	$ 500.00	$ 57,000.00
TxDOT 466	WINGWALL (PW-1) (HW = 4 FT)	2	EA	$ 10,000.00	$ 20,000.00
	TOTAL DRAINAGE IMPROVEMENTS			**$**	**77,000.00**
	SIGNS, STRIPING & TRAFFIC CONTROL				
TxDOT 502	BARRICADES, SIGNS, AND TRAFFIC HANDLING	1	LS	$ 3,500.00	$ 3,500.00
TxDOT 644	INSTALL SMALL ROADSIDE SIGN, SUPPORTS, AND ASSEMBLIES (FLOOD GAUGE)	2	EA	$ 750.00	$ 1,500.00
TxDOT 658	OBJECT MARKER ASSEMBLY (OM-2X) (WC) GND	2	EA	$ 350.00	$ 700.00
	TOTAL SIGNS, STRIPING & TRAFFIC CONTROL			**$**	**5,700.00**

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	EROSION AND SEDIMENTATION CONTROL				
900.5.1	SILT FENCE	280	LF	$ 3.00	$ 840.00
900.5.1	SILT FENCE - REMOVE	280	LF	$ 2.00	$ 560.00
905.5.1	CONCRETE WASHOUTS	1	LS	$ 500.00	$ 500.00
910.8.1	REVEGETATION (TOPSOIL AND SEEDING)	410	SY	$ 2.00	$ 820.00
920.3.1	ROCK FILTER DAM, TYPE 2	40	LF	$ 40.00	$ 1,600.00
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	TOTAL EROSION AND SEDIMENTATION CONTROL			**$**	**5,120.00**
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BLANCO COUNTY

PLANS OF PROPOSED CULVERT PROJECT

BLANCO COUNTY PROJECT NO. _____

NET LENGTH OF PROJECT = 330 LF = 0.06 MI
PROJECT LIMITS: AT HYATT RANCH ROAD

FOR THE CONSTRUCTION OF DRAINAGE STRUCTURES AND ROADWAY CONSISTING PRIMARILY OF CONCRETE BOX CULVERTS, PARALLEL WINGWALLS, GRADING, FLEXIBLE BASE, PRIME COAT, ASPHALT PAVEMENT, FLOOD GAUGES, AND OBJECT MARKERS

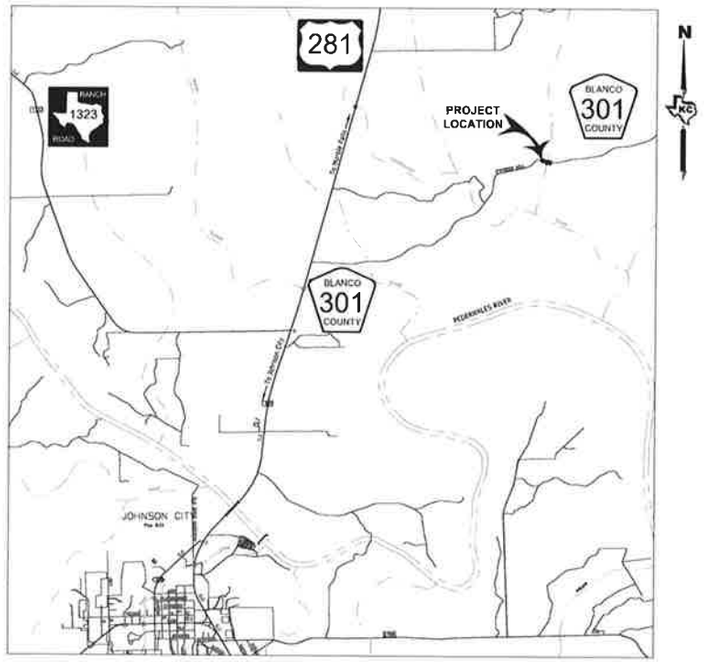
DESIGN SPEED =
CONSISTENT WITH CR 301
ADT - UNKNOWN

— NOT FOR CONSTRUCTION —
100% COMPLETE SET
FOR REVIEW PURPOSES ONLY

INDEX OF SHEETS

* THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE, PUBLISHED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, HAVE BEEN ISSUED BY ME AND ARE APPLICABLE TO THIS PROJECT.

GREG HALEY, P.E. DATE



LOCATION MAP

THE STATE OF TEXAS
BLANCO COUNTY

BLANCO COUNTY COMMISSIONERS COURT

COUNTY JUDGE

BRETT BRAY

COUNTY COMMISSIONERS

TOMMY WIER — PRECINCT 1
EMIL RAY UECKER — PRECINCT 2
CHRIS W. LIESMANN — PRECINCT 3
PAUL GRANBERG — PRECINCT 4

SPECIFICATION NOTE:

These plans are governed by the specifications entitled K.C. Engineering, Inc. Standard Specifications (3rd Edition) dated May 2010. All references to the term "Specifications" in the plans shall refer to those defined above, unless specifically noted otherwise.

These drawings are for illustration purposes only and not to be scaled for any purposes. K.C. Engineering, Inc. and the Engineer shall not be responsible for anything obtained by scaling these drawings.

EQUATIONS: NONE
EXCEPTIONS: NONE
RAILROAD CROSSINGS: NONE

ENGINEER IN CHARGE:

GREG HALEY, P.E. DATE

K.C. ENGINEERING, INC.
CONSULTING ENGINEERS
705 HWY. 281 NORTH, PLAZA I, SUITE 103
MARBLE FALLS, TEXAS 78654
OFFICE: 830-693-5635 FAX: 830-693-9664
Email: info @ kcengineering.com
REGISTRATION # F-000977

TITLE SHEET
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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GENERAL NOTES:

1. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THESE APPROVED PLANS. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE PLAN REVISIONS AND APPROVAL OF THE ENGINEER AND BLANCO COUNTY.
2. CONTRACTORS SHALL CALL THE TEXAS ONE CALL SYSTEM AND APPLICABLE SERVICE PROVIDERS FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN THE EASEMENTS OR ROADWAY RIGHT-OF-WAY AT 1-800-DIG-TESS.
3. THE CONTRACTOR SHALL NOTIFY BLANCO COUNTY AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ANY INSTALLATION OF A DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR ROADWAY RIGHT-OF-WAY OR PRIOR TO INSTALLATION OF ANY TEMPORARY TRAFFIC CONTROL MEASURES.
4. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. COPIES OF THE OSHA STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE. INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 903 SAN JACINTO, RM. 319, AUSTIN, TEXAS 78701.
5. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT THE APPROVAL OF THE OWNER. APPROVAL SHALL INCLUDE THE DISPOSAL SITE.
6. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF ANY FACILITY ON SITE.
7. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AND GRADED TO DRAIN.
8. UPON APPROVAL OF THE ENGINEER, ALL DEBRIS AND EXCESS MATERIAL SHALL BE REMOVED FROM THE SITE IN A MANNER NOT TO DAMAGE THE SITE.
9. THE INFORMATION CONTAINED ON THESE DRAWINGS IN REGARDS TO EXISTING UTILITIES, TOPOGRAPHY, CONTOURS, OR SUBSURFACE CONDITIONS IS FURNISHED SOLELY AS THE INFORMATION AVAILABLE AT THIS TIME. ITS ACCURACY IS NOT GUARANTEED AND ITS USE IN NO WAY RELIEVES THE CONTRACTOR OF ANY RESPONSIBILITY FOR LOSSES DUE TO ANY INACCURACIES.
10. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES FOR EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING CONSTRUCTION PERMITS FOR PROPOSED IMPROVEMENTS FROM BLANCO COUNTY PRIOR TO STARTING CONSTRUCTION.

STORM WATER POLLUTION PREVENTION PLAN (SWP3) GENERAL NOTES:

1. ALL CONSTRUCTION ACTIVITIES DISTURBING ONE ACRE AND GREATER MUST OBTAIN STORM WATER DISCHARGE AUTHORIZATION FROM THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THROUGH COMPLIANCE WITH TCEQ'S GENERAL PERMIT #TXR150000. THE PRIMARY CONSTRUCTION SITE OPERATOR(S) [PCSO] MUST PREPARE AND IMPLEMENT AN SWP3 THROUGHOUT CONSTRUCTION WHICH INCLUDES THE EROSION AND SEDIMENT CONTROL (ESC) PLAN AND OTHER BEST MANAGEMENT PRACTICES (BMPs) SPECIFIED IN THESE PLANS APPROVED BY BLANCO COUNTY.
2. SMALL CONSTRUCTION ACTIVITIES DISTURBING BETWEEN ONE AND FIVE ACRES SHALL POST A TCEQ CONSTRUCTION SITE NOTICE (CSN) ON SITE PRIOR TO COMMENCING CONSTRUCTION. LARGE CONSTRUCTION ACTIVITIES DISTURBING FIVE ACRES OR GREATER SHALL SUBMIT A NOTICE OF INTENT (NOI) TO TCEQ AND POST THE NOI ON SITE AT LEAST SEVEN (7) DAYS PRIOR TO BEGINNING CONSTRUCTION. NOTICES POSTED MUST BE MAINTAINED THROUGHOUT CONSTRUCTION.
3. THE PCSO MUST REVISE THE SWP3 WHENEVER CHANGING SITE CONDITIONS, OR A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS NOT PREVIOUSLY ADDRESSED; OR WHEN RESULTS OF INSPECTIONS BY SITE OPERATORS, BLANCO COUNTY, TCEQ, OR OTHER LOCAL AGENCY AUTHORIZED TO APPROVE ESC PLANS INDICATE THE SWP3 IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS IN DISCHARGES FROM THE SITE.
4. TEMPORARY OR PERMANENT EROSION CONTROL AND STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE, AND AS SPECIFIED ON THE PLANS, IN PORTIONS OF THE SITE WHERE CONSTRUCITON ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. THESE MEASURES MUST BE INITIATED NO LATER THAN 14 DAYS AFTER CESSATION, UNLESS CONSTRUCTION ACTIVITIES WILL RESUME WITHIN 21 DAYS IN THE AREA.
5. UPON FINAL STABILIZATION OF THE ENTIRE SITE, INCLUDING COMPLETION OF ALL STABILIZATION REQUIREMENTS OF THE APPROVED PLANS AND PERMIT AS VERIFIED BY BLANCO COUNTY, THE PCSO SHALL SUBMIT A NOTICE OF TERMINATION (NOT) TO TCEQ, IF REQUIRED.

THE LOCATION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

UTILITY COMPANIES:

ATMOS ENERGY
CONTACT: JOHN RAYMER
PHONE: (512) 310-3875

FRONTIER (TELEPHONE)
PHONE: (512) 756-1684

PEDERNALES ELECTRIC CO-OP
CONTACT: MARK MOREN
PHONE: (830) 693-5525

SPECTRUM
CONTACT: PETE NAVEJAS
PHONE: (512) 748-1601

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

THE EXISTING CONDITIONS SHOWN IN THESE PLANS, INCLUDING BOUNDARY, BUILDINGS, TREES, AND TOPOGRAPHY ARE BASED ON SURVEY INFORMATION PROVIDED BY:

CUPLIN AND ASSOCIATES LAND SURVEYORS AND PLANNERS
1500 OLLIE LANE
MARBLE FALLS, TEXAS 78654
(830) 693-8815
(325) 388-3300

CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY K.C. ENGINEERING, INC. AT (830) 693-5635, CONCERNING ANY DISCREPANCIES.

THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A TITLE COMMITMENT, THEREFORE THE SURVEYOR WILL NOT BE HELD RESPONSIBLE FOR ANYTHING THAT A TITLE COMMITMENT MAY DISCLOSE.

THE LOCATION OF UTILITIES SHOWN HEREON ARE FROM OBSERVED EVIDENCE OF ABOVE GROUND APPURTENANCES AND SURFACE GROUND MARKINGS BY DIG-TESS AND/OR UTILITY COMPANIES. THE SURVEYOR WAS NOT PROVIDED WITH UNDERGROUND PLANS TO DETERMINE THE LOCATION OF ANY SUBTERRANEAN USES.

LEGEND

3/8" IRON PIN FOUND	STONE FENCE
1/2" IRON PIN FOUND	WIRE FENCE
1/2" IRON PIN SET	WOOD FENCE
NAIL FOUND	CHAINLINK FENCE
UTILITY POLE	OVERHEAD UTILITY
GUY WIRE	UNDERGROUND FIBER OPTIC
LIGHT POLE	EXISTING SANITARY SEWER
FIRE HYDRANT	EXISTING STORM DRAIN
WATER METER	UNDERGROUND TELEPHONE
WATER VALVE	UNDERGROUND ELECTRIC
WATER WELL	EXISTING WATER
GAS METER	PROPOSED WATER
GAS VALVE	PROPOSED FORCE MAIN
SEWER CLEANOUT	PROPOSED SILT FENCE
UTILITY PEDESTAL	PROPOSED LIMITS OF CONSTRUCTION
TELEPHONE PEDESTAL	EXISTING CONTOURS
SANITARY SEWER MANHOLE	PROPOSED CONTOURS
SIGN	RECORD INFORMATION
CONC. PAD WITH ELEC.	ELECTRIC SECONDARY
ELECTRIC PEDESTAL	ELECTRIC PRIMARY
MAILBOX	ELECTRIC FUTURE USE
TEMPORARY BENCHMARK	RAILROAD RIGHT OF WAY
EXISTING TREE	
BULK STORAGE BIN	

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GENERAL NOTES
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CONSTRUCTION GENERAL NOTES

AND

GENERAL REQUIREMENTS

GENERAL

A Maintenance Bond is required for this project. The Maintenance Bond shall be in an amount equal to the bid price. Blanco County shall not pay the final invoice until it has received the Maintenance Bond. The Maintenance Bond shall comply with the bonding requirements set forth in the contract documents.

The General Notes listed herein are grouped by general category of work and headings are provided for convenience only. General Notes are applicable to all items of work for the entire project and the order of listing or grouping has no additional significance since all General Notes are of equal importance.

Standard Details description numbers may not necessarily be called out specifically in the construction drawings.

Blanco County reserves the right to vary the limits and/or scope of work.

Blanco County reserves the right to eliminate any pay item(s) in the contract documents and/or to vary the quantity or quantities of any pay item or pay items in the contract documents by up to 25% (overrun and/or underrun) without the respective unit price(s) or the total contract price being eligible for unit price adjustment or overall contract price adjustment in favor of the contractor. If changes are made by Blanco County, Plans Quantities shall be adjusted by Change Order to reflect the overruns/underruns.

Drawings in the construction plans are for illustration purposes only. Nothing shall be scaled from the construction drawings. The contractor shall refer to appropriate construction plan sheets for actual dimensions.

The Engineer will not measure completed work.

The contractor is responsible for all measurements and calculations for quantity takeoff purposes for bid preparation and for any other purpose. The contractor assumes all responsibility for determining location, dimensions and quantities whether those locations, dimensions and quantities are obtained by field measurements, constructions plans interpretation, other methods or any combination and/or variation thereof.

The contractor shall perform a quantity takeoff from the construction plans to verify those quantities agree with those contained in the contract documents, if provided. Quantity disagreement shall not be a basis for a dispute or claim before, during or after construction. In the event the contractor discovers a disagreement between the quantity or quantities shown in the contract documents, if provided, and his own calculations, he shall notify the Engineer immediately. The Engineer shall make the determination as to the correct quantity or quantities and, if a discrepancy exists, issue an addendum prior to bid submittal. If the contractor does not notify the Engineer of a discrepancy prior to bid submittal, the quantity or quantities shown in the contract documents, if provided, shall be considered correct and proof that the contractor agrees to those quantities.

The contractor shall satisfy himself prior to bid submittal that all quantities of material and work, whether paid for directly or considered subsidiary to the contract, are adequate for completion of the work. The contractor shall visit the site and become familiar with its location, physical characteristics, and the work to be performed as indicated in the plans and contract documents, if provided. The contractor shall verify both the quantities of materials and work in the plans and in the contract documents, if provided. Submittal of a bid shall be considered proof that the contractor has complied with this item and all items contained herein. Any discrepancies found in the construction plans, these General Notes, and/or construction specifications shall be called to the attention of the Engineer prior to bid submittal. In the event of a discrepancy and/or conflict, the Engineer shall issue an addendum or clarification addressing the discrepancy and/or conflict prior to bid submittal.

The contractor shall provide construction controls including, but not limited to, all construction staking required for control and completion of the work. The contractor shall take the steps necessary to preserve and protect pre-existing

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control points from damage or movement. Pre-Existing control points are defined as existing right-of-way markers, lot corner pins, benchmarks, property boundaries, easements, and/or anything used to mark permanent features. Blanco County may, at its discretion, replace any control points damaged or moved by the contractor's operation and the fee for replacing the control points will be deducted from any monies due the contractor. Otherwise, the contractor shall retain a Registered Professional Land Surveyor (the surveyor) to reset the control points, provided that Blanco County is presented with a report under certification and seal of the surveyor that the points were set at their original positions. Payment for this work shall be by the item "Field Engineering" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

For construction staking, the contractor shall utilize control points established by the surveyor, if provided, to establish location, dimensions, lines and grades and/or any other aspect of the work. The contractor may perform construction staking with his own forces, provided that the construction staking is within generally accepted tolerances required for satisfactorily completing the work. If, in the opinion of Blanco County, the staking is not within generally accepted tolerances, Blanco County may require the contractor to have the staking performed by a Registered Professional Land Surveyor. Payment for this work shall be by the item "Field Engineering" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

In the event surveying control points are not provided, and/or should the contractor believe that adequate surveying control does not exist, he shall provide for additional surveying in his bid to provide the control necessary to comply with these items. The Contractor shall account for all surveying in his bid to adequately provide the control necessary to comply with this item. It is entirely the contractor's responsibility to verify the existing project control and if adequate control is not available, make provisions in his bid for establishing satisfactory control adequate to prosecute and complete the work. Payment for this work shall be by the item "Field Engineering" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Dimensions shown on the plans have been projected onto a horizontal plane. Plan lengths shown are based upon horizontal distances. Items of work paid for directly, or considered subsidiary to the contract, shall be based upon the beginning and ending locations as shown on the plans and not by three-dimensional distances. The actual constructed lengths shall be by beginning and ending locations as shown on the plans.

Contours shown on plan sheets, if any, are for informational purposes only. Construct all items of work in accordance with the dimensions and elevations shown on the construction plans and details.

Construct roadways in accordance with the horizontal and vertical alignments and street typical sections shown on the plans. Construct intersecting roadways with roadway typical section transitions as shown on the plans. If the intersection roadway transition length is not shown on the plans, construct intersecting roadways with a typical section transition length of 200', minimum.

Anything shown in the construction documents with the annotation "ROW" (Right of Way) or anything that could be interpreted as right of way and/or property lines are shown for informational purposes only. The annotations represent an approximation of the right of way and/or property lines and may more closely approximate existing fences or reflect information obtained from publicly available sources. Refer to the Preliminary Plat, Construction Plat, Final Plat, deed records, right of way records, and/or other information, as applicable, for precise dimensions of right of way, lots and other areas.

Contract time shall be in accordance with Article 3 of the Standard Form of Agreement in the Project Manual.

Construction inspection shall be at the discretion of Blanco County and based upon the requirements of Blanco County.

Required material testing and/or inspections shall be arranged by and paid for by the contractor using an independent testing laboratory approved in advance by Blanco County. Material test reports shall be submitted under the seal of a

Licensed Engineer registered in the State of Texas (the testing engineer). Each test report submitted shall bear a statement from the testing engineer that the material tested complies with the specifications or specifically identify any material whose test result does not comply with the specifications and identify the particular item that does not comply with the specifications. The contractor shall be required to pay for any retesting and/or reinspection of materials or work resulting from the failure of the initial test or subsequent testing and/or inspection required because of the failure of previously tested materials and/or work performed. Minimum testing frequency shall be as established herein or as established by Blanco County.

Documentation submitted to the Engineer for review, e.g., flexible base, hot mix designs, asphalt types, concrete mix designs, etc., shall uniquely mark, highlight, or otherwise specifically identify any item in the submittal that does not comply with the specifications cited herein.

Any review performed by the Engineer shall be considered a courtesy to the contractor and such review and/or reviews shall not relieve the contractor of his responsibility to comply with the construction plans and specifications.

The contractor shall be required to maintain all areas throughout the duration of the project. All required maintenance of the completed work shall be the contractor's responsibility and shall be considered a part of the contract and at the contractor's sole expense until final acceptance by Blanco County. Payment for this work shall be by the item "Sequence of Construction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The contractor shall keep the entire project site accessible to Blanco County, the Engineer, and any other entity that may exercise regulatory review and/or control of the project, or any portion of the work.

The contractor shall protect all areas, whether within or outside of the actual limits of construction. Construction vehicles and equipment shall be limited to areas in which work is to be performed, as shown herein. Areas outside of the work area that have experienced damage (such as trees, loss of vegetative cover, etc.) from the construction, storage of equipment and/or materials, or any other process associated with the construction, shall be repaired and restored by the contractor at his sole expense. Blanco County shall be the sole judge as to the acceptability of the repair and restoration.

Any damage created by equipment or any other means on the project or on adjacent properties and/or streets and roadways shall be repaired to Blanco County's satisfaction at the contractor's sole expense.

All construction and construction-related equipment shall remain within the established work area unless Blanco County has granted prior authorization otherwise.

It shall be the contractor's responsibility to obtain temporary construction easements or other appropriate permissions for construction work, equipment storage, and/or equipment access off public right of way.

During the times when no work is performed, the contactor shall store all equipment, materials and incidentals in a location that does not interfere with traffic, sight distance or in such a manner that is objectionable to adjoining properties, residences, etc. Blanco County shall make the final determination as to this item.

Locations used for storing construction equipment, materials, and stockpiles of any type, within the right of way, shall be as directed by Blanco County. Use of right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side road / street intersections is not obstructed and at other locations where an unsightly appearance will not exist. Blanco County makes no assertions that any such space is or will be available.

Anything referenced herein, and in the contract documents, as "Item" and/or "TxDOT Standard Specification Item No(s):" or any combination using the word "Item" or "Items", shall be a reference to the items listed in the Texas Department of Transportation (TxDOT) publication: Standard Specifications For Construction And Maintenance Of

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GENERAL NOTES
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BLANCO COUNTY, TEXAS

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Highways, Streets, And Bridges, Adopted by the Texas Department of Transportation November 1, 2014 and is incorporated herein and made a part hereof, by reference. This note may not apply herein when referring to specific bid items for method of payment purposes only.

Where TxDOT Specifications conflict, or appear to conflict, with the construction plans, these General Notes and/or other specifications in the contract documents, the specifications and/or General Notes considered the most stringent shall prevail. Blanco County shall be the sole authority in making a conflict determination.

The Standard Construction Specifications of Blanco County are incorporated herein and made a part hereof by reference. In the event of conflict with these or other specifications, the construction plans and specifications shall take precedence over the Standard Construction Specifications of Blanco County. Blanco County shall be the sole judge in such a determination.

In instances where conflict exists among these specifications the hierarchy shall be generally as follows:

1) Federal/State/Local Law, Rules or Ordinances
2) Construction Plans
3) General Notes
4) Individual Specifications
5) Standard Construction Specifications of Blanco County (current edition/revision)

In the event of conflict between the construction plans and/or specifications, and those rules, ordinances, policies, and procedures established by law under the authority of a city, county, state, and/or federal jurisdictional entity or entities, the rules, policies, laws, and procedures of those governmental entities shall prevail.

In the event of a conflict between any General Notes, Specifications, Construction Plans, or Project Manual the Engineer shall make the determination as to which is governing, with the focus being on the most stringent. Conflicts and/or potential conflicts shall be called to the attention of the Engineer prior to submitting a bid. The Engineer shall issue an addendum or clarification addressing conflicts and/or potential conflicts prior to bid submittal. The submittal of a bid shall indicate compliance with this item and that no potential conflict(s) exists. Subsequent to contract award, the Engineer shall make conflict determinations in all cases.

Permanent features to remain, indicated herein on the plans or otherwise, shall be identified, marked, and protected from damage or removal by the contractor.

There are utilities within the project limits and/or adjoining areas. The contractor shall take all necessary precautions to avoid utilities on or near the project.

No work shall be performed near an existing facility without a representative from the affected utility being present for the duration of the work.

The contractor's attention is called to the fact that both overhead and underground utilities may be present in or near the project. It is the contractor's responsibility to comply with the Texas One-Call Notification System. The One-Call number is 1-800-DIG-TESS (1-800-344-8377) or 811. State law requires anyone digging or excavating with machine-powered (mechanical) equipment to a depth of more than 16" to call a notification center at least two working (2) days, but not more than fourteen (14) days prior to any excavation. Contractors shall call the Texas One Call System and Blanco County for utility locates in accordance with the required timeframes prior to any work. Payment for this item shall be by "Locating Existing Underground Facilities" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Utilities shown in the plans are for informational purposes only and their locations are approximate and based upon the available information provided to the Engineer for and at the time of plans preparation. The contractor shall notify the appropriate utility to field locate and mark all installations. Furthermore, there may be other existing utilities in the project limits that are not shown on the plans. The contractor shall be responsible for contacting all utility companies that may be present within the project limits to locate their facility. Payment for this item shall be by "Locating Existing Underground Facilities" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The contractor, using hand tools only (no motorized equipment), shall excavate around existing utilities which intersect proposed structures and notify Blanco County's representative of potential conflicts, prior to any construction in the area.

The locations, depths, and heights (if any) of existing utilities shown on the plans are approximate only. Actual locations, depths, and heights of utilities shall be verified by the contractor prior to construction. Any damage to existing utilities shall be repaired by the contractor at his sole expense. Payment for this item shall be by "Locating Existing Underground Facilities" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

It shall be the contractor's entire responsibility to repair and/or replace, at his entire expense, any utilities damaged or otherwise disturbed as a result of his and/or his subcontractor's operations on the project regardless of whether or not those utilities were shown on the plans.

The contractor shall not cut or trim trees without the approval of Blanco County.

If the contractor believes that a tree (or trees) must be removed that are not within the actual limits of construction, he shall contact Blanco County to discuss removal. If Blanco County agrees that the tree(s) should be removed, a Change Order shall be prepared. If Blanco County does not believe that the tree should be removed, the contractor shall protect the tree(s) and take precautions so as not to damage the tree(s).

Large construction equipment (or any other equipment deemed large by Blanco County) shall not be allowed on any roadway and/or parking areas once it has been paved. Any damage created by any equipment on the subgrade, base course(s), structure(s), and/or pavement shall be repaired to Blanco County's satisfaction at the contractor's sole expense.

With permission of Blanco County, the contractor may establish a yard on the project provided adequate space is available. In the event the contractor establishes a yard on the project, or at any other location, he shall be responsible for establishing his own Storm Water Pollution Prevention Plan (SWP3) and complying with the requirements of the Texas Pollutant Discharge Elimination System (TPDES).

The contractor shall keep the project free from litter. At the request of Blanco County, the contractor shall pick up all litter within the project regardless of the source of the litter. This work shall be paid for by the item "Sequence of Construction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The contractor shall perform the removal of any obstruction(s) on the site and in the road/street right of way and/or easements, not shown on the plans. This work shall be paid for by the item "Sequence of Construction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

If work is performed at the contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the contractor is responsible for all costs associated with replacing the work, if required.

The roadbed shall be free of organic material prior to placing any section of the pavement structure.

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Equip all construction equipment used in roadway work with highly visible omnidirectional flashing warning lights and orange daylight fluorescent flags.

Use hand methods or other means to remove objectionable material and obstructions, if doing work by mechanical methods is impractical. This work shall be paid for by the item "Sequence of Construction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

All improvements shall be made in accordance with these approved plans. Any additional improvements will require plan revisions and approval of Blanco County.

The contractor is responsible for demolition of any facility on the project and all utility relocation work, if required, for completion of the project. Payment shall be by the appropriate bid item(s) in the contract, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

All areas disturbed by the construction shall be restored and graded to drain. Slopes shall be stabilized to prevent erosion. All site stabilization shall be performed per the project specifications as outlined on the Title Sheet. This work shall be paid for by the appropriate bid items in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Upon approval of Blanco County, all debris and excess material shall be removed from the Site in a manner so as not to damage the Site.

The information contained on these drawings regarding existing utilities, topography, contours, or subsurface conditions is furnished solely as the information available at the time of plans preparation. Its accuracy is not guaranteed or otherwise warranted and its use and/or reliance upon in no way relieves the contractor of any responsibility for losses due to inaccuracies.

Construction operations shall be in accordance with applicable regulations of the U.S. Occupational Safety and Health Administration (OSHA). Copies of the OSHA standards may be purchased from the U.S. Government Printing Office. Information and related reference materials may be purchased from OSHA, 903 San Jacinto, Room 319, Austin, TX 78701.

The contractor shall be responsible for obtaining work orders, if required, for proposed public improvements from Blanco County prior to beginning construction.

The Project Superintendent shall be English-speaking and on-site at all times that construction activities are taking place. The Project Superintendent shall be available by telephone at all times in the event of an emergency or other condition that requires the contractor's immediate attention and/or assistance as determined by Blanco County.

The contractor and his subcontractors shall be required to have complete plans and specifications in their possession at all times while on the project.

The contractor shall submit electronic record drawings (PDF format) to Blanco County within 30 days of project completion. Record drawings shall reflect any changes and/or completed construction that differs from approved drawings. Payment shall be by the item "As-Built Drawings" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

All work performed in conjunction with this project shall comply with the project specifications as outlined on the Title Sheet.

Materials and construction procedures within the scope of this project shall conform to the project specifications, Blanco County Building Codes and Regulations, as well as other safety codes and inspection provisions applicable to the project and requirements of the appropriate Fire Department or appropriate Emergency Services District.

The contractor shall be responsible for acquiring all permits, tests, approvals, and acceptances required to complete the construction of this project. Payment shall be by the bid item "Sequence of Construction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Items not specifically called for on the plans, or in the specifications, but that are reasonably necessary to construct the facility or improvements, shall be paid for by the item "Sequence of Construction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Construction of radii at intersections at the end of each project shall be paid for by the appropriate bid item, in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Refer to project specifications for additional specifications and contract information.

The centerline alignment was developed as a "best-fit" alignment approximation. As such, dimensions shown in the plans may not match those shown on the Typical Sections. The contractor shall construct the project based upon the dimensions shown on the Typical Sections and as approved by Blanco County.

SEQUENCE OF CONSTRUCTION

Blanco County may, at its sole discretion, provide, maintain, and remove portable changeable message signs.

The contractor shall not place or remove portable changeable message signs, other signs, and/or barricades without prior authorization of Blanco County.

The sequence of construction shall be as provided for in the Traffic Control Plan and/or Sequence of Construction. Blanco County reserves the right to revise the Sequence of Construction if there are extenuating circumstances that make the revision(s) in the best interest of the project and Blanco County.

DEMOLITION

Payment for removal of existing concrete, or other physical features requiring removal, shall be paid for by the appropriate bid item, in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP, SWP3, OR SW3P)

The contractor shall comply with the requirements set forth in the Texas Commission on Environmental Quality (TCEQ) "Texas Pollutant Discharge Elimination System" (TPDES). Information on the TPDES Construction General Permits may be obtained by contacting the TCEQ's web site at "http://www.tceq.com."

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GENERAL NOTES
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Job No. 21-222
Date: 04/06/21
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GENERAL REQUIREMENTS — GENERAL NOTES

Legal Disclaimer: Information contained in this paragraph is based upon the best information available at the time of plans preparation. It is the contractor's sole responsibility to secure all necessary forms and documentation and comply with the provisions of the TPDES.

The contractor shall comply with the provisions contained within TPDES General Permit No. TXR150000.

The contractor shall be considered the Primary Operator and, for the purposes of the TPDES General Permit No. TXR150000, shall have control over the construction plans and specifications to the extent necessary to comply with the TPDES General Permit No. TXR150000.

The contractor shall submit to the TCEQ the Notice of Intent (NOI) and Notice of Termination in compliance with TPDES General Permit No. TXR150000. The NOI must be submitted to the TCEQ electronically using the online e-Permits system on TCEQ's website. The contractor is responsible for all associated fees.

The Storm Water Pollution Prevention Plan (SWPPP, SW3P, and/or SWP3) prepared for this project, if provided, was prepared for site infrastructure construction only and was not prepared for other types of construction and/or construction support activities. It shall be the responsibility of Blanco County and/or Operator (Primary or Secondary, as appropriate) of the facility to ensure compliance with the Clean Water Act and the TPDES (including filing a Notice of Change, if necessary) for the entirety of the project's development.

The contractor shall post a TCEQ Construction Site Notice (CSN) on-site prior to commencing construction in accordance with the instructions on the SWP3 in the construction plans or otherwise in compliance with TCEQ criteria.

In the event that relevant information in the NOI changes, the contractor shall submit to the TCEQ a Notice of Change (NOC) electronically using the online e-Permits system on TCEQ's website at least fourteen (14) days before the change occurs.

The contractor shall use the Erosion Control Details in the construction plans to the extent necessary to control erosion.

The SWP3 must be developed and implemented by the Primary Operator(s). The SWP3 in the plans is considered a starting point and upon commencement of construction, the contractor shall develop and implement the SWP3.

The contractor shall be responsible amending (through Notice of Change) the SWP3 to:

1. Identify potential sources of pollution relating to construction support activities.
2. Describe the management practices that will be used to prevent pollutants from being discharged into surface waters of the state or Waters of the U.S.
3. Provide the location and description of construction support activities (including off-site) authorized under the permittee's NOI, including:
    a. Asphalt plants
    b. Concrete plants
    c. Other activities providing support to the construction site authorized under this general permit
4. Vehicle wash areas
5. Designated points where vehicles will exit onto paved roads
6. The dates of major grading activities, if different than those shown in the construction plans

The contractor shall amend (through Notice of Change) the SWP3 to include locations of construction support activities (including off-site), vehicle wash areas, and designated points where vehicles will exit onto paved roads.

GENERAL REQUIREMENTS — GENERAL NOTES

The contractor shall provide Blanco County 48 hours' notice prior to disturbing any vegetation or beginning any site preparation in advance of the clearing operation.

The contractor will be required to follow best management practices and to use and maintain sedimentation and water pollution control devices as indicated on the Storm Water Pollution Prevention Plan (SWPPP, SW3P, or SWP3) and the Erosion Control Plan, Erosion Control Layout, Erosion and Sediment Control Plan, and/or similarly titled plan sheets, if provided, or shall otherwise develop and implement his own SWP3, when required.

The contractor shall not receive final payment for the project until the construction areas have achieved 80% vegetative cover with permanent vegetation and/or landscaping.

In areas that have achieved 80% vegetative cover (when compared to the surrounding, undisturbed, vegetative cover), the contractor may remove and reuse any temporary erosion control devices (that are in reasonable condition) on other locations on the project.

The contractor shall provide for interim drainage on the project. Interim drainage shall ensure that all runoff is channeled or otherwise directed to temporary erosion control devices.

The contractor shall take the steps necessary to ensure that all construction traffic leaving the project shall not track mud or other debris onto any public street, or roadway within the area. Should mud or other debris be tracked onto any roadway, the contractor shall take immediate steps to remove it to the satisfaction of Blanco County.

Temporary construction entrances shall be utilized where necessary, as indicated on the plans and/or at the discretion of Blanco County. Payment shall be by the bid item "Temporary Construction Entrance" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The contractor shall modify, as necessary, temporary erosion control devices so that they serve their intended purpose.

The contractor shall maintain all temporary erosion control devices to a condition similar to that of when it was installed originally.

The contractor shall keep all temporary erosion control devices free of silt and/or any other material that may accumulate. Accumulated silt shall be removed prior to reaching a depth of 6". Payment shall not be made directly but shall be considered subsidiary to the contract.

The contractor, as the Primary Operator, shall perform all inspections and recordkeeping required to comply with the TPDES General Permit No. TXR150000.

The contractor shall provide temporary and permanent vegetation and its usage shall comply with the requirements of the SWP3 and Erosion Control Layout (or other similarly named plan sheets). The contractor shall provide temporary and permanent vegetation and its usage shall comply with the requirements of the SWP3 and Erosion Control Layout (or other similarly named plan sheets). Payment shall be by the appropriate bid items in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The contractor shall remove all temporary erosion control devices once permanent vegetation is established and prior to acceptance and final payment. Payment for this work shall be the appropriate bid item(s) in the contract, if provided, or shall be considered subsidiary to the contract if no direct payment method is provided for in the contract documents.

Payment for temporary and permanent vegetation to comply with the SWP3 shall be by the Item "Revegetation" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

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GENERAL NOTES
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Job No.	Date	Scale (Hor.)	Scale (Vert.)	Checked By	Drawn By
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The wash out of concrete trucks must be performed in accordance with Part V of the TPDES General Permit No. TXR150000. Payment for this item shall be by the bid item "Concrete Washouts", in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The contractor shall be required to submit to the TCEQ the Notice of Termination (NOT). The NOT must be submitted to the TCEQ electronically using the online e-Permits system on TCEQ's website.

Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. Track all exposed soil, stockpiles, and slopes. Tracking consists of operating a tracked vehicle or equipment up and down the slope, leaving track marks perpendicular to the direction of the slope. Re-track slopes and stockpiles after each rain event or every 14 days, whichever occurs first. This work shall be considered subsidiary to the contract.

Locate aboveground storage tanks kept on-site for construction purposes in a contained area as to not allow any exposure to soils. The containment will be sized to capture 150% of the total capacity of the storage tanks.

VEGETATION / REVEGETATION

Vegetation work shall comply with TxDOT Standard Specification Item No.: 160, 161, 162, 164, 166, 168 & 169.

All areas disturbed by the construction of this project shall be permanently stabilized with perennial vegetation. Payment shall be by the item "Revegetation" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Cellulose fiber or paper mulch used for erosion control shall be applied at a recommended rate of 2,500 lbs/ac.

The seedbed should be maintained in a condition favorable for the growth of grass. The seedbed shall remain in a moist condition. It is recommended that the seedbed receive at least ½" of water per week. In the event of a ½" rainfall or greater, vegetative watering may be postponed for one week. Watering shall be performed as directed by Blanco County for the duration of the project. Payment shall be by the bid item "Revegetation" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The establishment of permanent vegetation shall occur as soon as a section of work has been completed. In the event that permanent vegetation is not established on a disturbed area, temporary revegetation shall be established in accordance with the SWP3.

Seeding shall consist of drill seeding, broadcast seeding or hydro-mulching. If hydro-mulched, the mulch shall consist of either wood or paper mulch and be applied at the recommended rate of 2,500 pounds per acre. Fertilizer of the 13-13-13 analysis shall be included in the mixture and at the manufacturer's recommended rate. Each bag of seed shall comply with the requirements of the Texas Seed Law including the labeling requirements for showing pure live seed (pls = purity x germination).

Alternate seeding recommendations and applicable dates:

January 16 - May 15: 1 pound per 1000 square feet of hulled Bermuda grass.

May 16 – September 15: 1 pound per 1000 square feet of hulled Bermuda grass and 2 pounds per 1000 square feet of Foxtail Millet.

September 16 – January 15: 1 pound per 1000 square feet of un-hulled Bermuda grass and 3 pounds per 1000 square feet wheat (red, winter) or oats.

Payment for temporary and permanent revegetation to comply with the SWP3 will be by the bid item "Revegetation" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The contractor shall obtain approval from Blanco County for the actual depth of topsoil excavation for both on-site and off-site locations.

Topsoil obtained off-site from the project shall have a minimum plasticity index (PI) of 25.

ROW PREPARATION

The contractor shall clearly mark all trees with a diameter 6" or greater, as measured 4' from the ground that are anticipated to require removal. He shall then notify Blanco County and shall accompany Blanco County to assess the necessity for removal of those trees and/or any other physical features and to receive authorization for their removal. Blanco County shall be the final authority in determining which trees and/or other physical features are authorized for removal. No work on this contract is authorized until Blanco County has issued such authorization.

Material removed during ROW Preparation that is not suitable backfill shall be disposed of in a manner and location as approved by Blanco County. ROW Preparation shall be paid for by the item "Preparing ROW", Clearing and Grubbing", or similar item in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

EXCAVATION / EMBANKMENT / BACKFILL (GRADING)

Structural excavation and backfilling of structures shall comply with TxDOT Item 400 – "Excavation and Backfill for Structures" and shall be paid for by the Bid Item "Struc Excav" or "Structural Excavation" or similar item, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The quantities for excavation and embankment, if provided, are for the site only and are neat (compaction factors were not included). The contractor shall use all available information to determine the quantities of excavation, embankment, and backfill for all aspects of the project. Payment shall be by the appropriate bid items in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

No material shall be removed from the site without prior approval of Blanco County. Excess excavation (waste) shall be disposed of by the contractor at a location and manner as approved by Blanco County. Blanco County may provide a disposal location on or near the project. Contact Blanco County for such a determination.

Grading and backfill material shall be free of objectionable or deleterious material such as roots, limbs, leaves, and grass, etc.

The contractor shall provide sufficient sprinkling of the project site, easements and haul roads to adequately control dust. Payment shall be by the bid item "Sequence of Construction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents. If, in the opinion of

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GENERAL NOTES
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Date: 04/06/21
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GENERAL REQUIREMENTS — GENERAL NOTES

Blanco County, adequate dust control is not being performed, all construction operations shall cease until such time as adequate dust control has been performed. The contractor shall not be entitled to additional payment if work is stopped for this item.

Grading and backfill material shall be placed in horizontal lifts parallel to the finished grade of the site. In areas where embankment is to be placed on the side of a hill, embankment or slope, the hill, embankment or slope shall be notched or stepped so that the entire lift remains horizontal.

Existing ditches that are to be filled with embankment that will be located within the completed site shall be widened to a width sufficient to accommodate compaction equipment and to a depth equal to the bottom of the existing ditch. Embankment shall then be placed to line and grade. Payment for over-excavating shall be considered subsidiary to the contract.

At drainage structure locations, the contractor will not be permitted to build subgrade to section and then excavate to place the structure. The structure shall be placed prior to subgrade construction and backfilled to a reasonable depth above the structure to accommodate construction equipment.

In instances where subsurface water is encountered that creates "soft spots" that prevent satisfactory compaction and cannot be cured by aeration, the contractor shall over-excavate the area to a depth of 1.5' below subgrade elevation and place a 6" lift of Grade 2 (TxDOT) concrete aggregate in the over-excavated area. An additional 1' of select subgrade material shall be placed and compacted on top of the concrete aggregate to subgrade elevation. Where possible, the contractor shall attempt to drain the pooled area to a ditch or other location that provides a suitable outfall for the pooled area. Payment for this item shall be negotiated by Change Order or performed by Force Account Work.

Areas of subgrade or flexible base deemed unstable or soft shall be repaired by aeration (plowed up and air dried), replaced, and recompacted to section. Such areas shall not be permitted to "cure out" or "bridge over". Payment shall be considered subsidiary to the contract.

Grading material shall be placed in a condition as close to optimum moisture content as possible, and within a range of +/- 2 % of optimum.

Maximum compacted lifts of embankment / backfill shall be six (6) inches.

The contractor shall be responsible for securing his own source of water. The contractor shall be responsible for obtaining any required permits and follow all applicable laws regarding the matter.

If the contractor secures water from a municipality, Municipal Utility District (MUD), Blanco County or other public source, which is provisionally acceptable, and the municipality, MUD, Blanco County, and/or other public source declares an emergency of low availability, imperiling customers of domestic water supply, attributable to the use of construction water supplied for this project, then that source's use shall be immediately suspended by the contractor as directed by Blanco County. Blanco County's decision shall be final. Blanco County's decision shall not be construed as relieving the contractor of any responsibility to complete the work contained in the bid and contract in accordance with the schedules contained therein. Blanco County's decision shall not be construed as damaging the contractor in any way. The contractor shall then be directed to secure an alternative source of construction water.

Rollers of the "Hyster" or "sheepsfoot" type will be required for embankment construction on all lifts except the final lift. Medium pneumatic rollers will be required on all lifts of embankment.

Should borrow and/or topsoil be required, Blanco County shall approve the borrow location(s). If borrow is required, no additional compensation shall be granted the contractor. In addition, the contractor shall secure any required archeological, historical, and environmental clearances required by law prior to obtaining any borrow and/or topsoil.

GENERAL REQUIREMENTS — GENERAL NOTES

Rock or broken concrete produced by the project is allowed in embankments. The size of the rock or broken concrete will not exceed the layer thickness requirements in TxDOT Item 132.3.4., "Compaction Methods." The material shall not be placed within 5 feet of the finished subgrade elevation.

Subgrade shall be compacted using the Ordinary Compaction method in accordance with TxDOT Item 132.

FLEXIBLE (FLEX) BASE

Flexible base work shall comply with TxDOT Standard Specification Item No. 247, Type A, Grade 2 or better. The gradation requirements of Specification Section 240 are acceptable.

The flexible base shall be crushed stone produced from oversize aggregate. Crushed gravel or uncrushed gravel shall not be permitted.

The flexible base shall be placed, compacted and finished as a unit that includes the site, edges, tapers, transitions, and base "tail-out".

Bluetops will be required at intervals not to exceed 100' to control line and grade.

Flexible base depth shall be as shown on the typical sections. Lift thickness shall be:

0" – 6"	One Lift (Only Lift)
6" – 12"	Two Equal Lifts
12" – 18"	Three Equal Lifts

When compacting in a single course, compact to at least 100% of maximum dry density as determined by TxDOT test method Tex-113-E at a moisture content of +/- 2% of optimum as determined by Tex-113-E.

The following table will govern the acceptance of compaction on base courses, when compacted in multiple courses. Compaction requirements are in percent of maximum dry density as determined by TxDOT Test Method Tex-113-E. When compacting in a single course, compact to at least 100% of maximum dry density as determined by TxDOT Test Method Tex-113-E. Compact all courses at a moisture content of +/- 2% of optimum as determined by Tex-113-E.

Item	Material	All Roadways Lift	Min Density
FLEXIBLE BASE, 6" DEPTH (DENSITY CONTROLLED) (TxDOT ITEM 247) (KCE SPECIFICATION ITEM 240)	FLEXIBLE BASE (6")	1st of 3 Lifts	95%
		2nd of 3 Lifts	98%
		(Final or Only Lift)	100%

Complete subgrade, ditches, slopes, and place all drainage structures to conform to required lines, grades, and cross-sections, as shown and directed, prior to the placement of flexible base.

The contractor shall, at his sole expense, obtain thickness and density tests at random locations as determined by Blanco County and perform the tests in the presence of Blanco County, if requested. The tests shall be at a rate not to exceed one thickness and one density test per 1,000 linear feet of placement, per lift. The contractor shall retain the services of an independent testing laboratory, approved in advance by Blanco County, for sampling and testing and provide the test results, including a statement that the frequency of sampling and testing complies with the plans and specifications, and

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specifically identify any material whose test result does not comply with the specifications, to Blanco County under the seal of a Licensed Engineer registered in the State of Texas. The flexible base placement shall not be approved until all tests have met the thickness and density requirements herein.

If the contractor fails to bluetop subgrade, the contractor may be required to provide additional thickness checks of the flexible base thickness at a rate of one test per 300 linear feet of placement, per lane and per lift, at the request of Blanco County. Payment for additional flexible base depth checks shall be considered subsidiary to the contract.

Blanco County shall determine whether to accept placement sections, generally providing that no more than one of the five most recent density tests is below the specified density, and that the sole substandard density is no more than 3 pounds per cubic foot below the required density. Blanco County may require that any sections of failed densities be recompacted to meet density requirements regardless of test history.

Measure the moisture content of the material daily in accordance with TxDOT Test Method Tex-115-E or Tex103-E during compaction.

Do not attempt to achieve density by drying the material after compaction.

Do not use a vibratory roller to compact material directly over a concrete box culvert.

Provide Blanco County with a copy of each truck's weight ticket that is marked with the date and the location the load was placed.

The flexible base shall be "cured" at least four (4) days after achieving the required density or until its moisture content is at least two (2) percentage points below optimum. Finishing of the flexible base shall not be allowed during the "curing" process. This requirement may be waived at the sole discretion of Blanco County.

During the "curing" process and prior to paving, the contractor shall apply only enough sprinkling to control dust. Excessive sprinkling shall not be allowed.

RIDE QUALITY

Ride quality is important in the long-term structural performance of the roadway. Initial construction of smooth flexible base and pavement tend to remain smooth over a longer period of time.

Blanco County shall be the sole authority in determining the acceptability of ride quality.

In the event Blanco County and the contractor cannot agree on ride quality, the contractor shall be required to construct the flexible base to the profile and typical sections as shown on the plans. As proof of such, the contractor shall place bluetops on 50' intervals along centerline and each base crown and provide Blanco County with a report prepared under the signature and seal of a Registered Professional Land Surveyor in Texas that the bluetops are placed at the correct horizontal and vertical coordinates. A deviation from the dimensions shown on the plans in the completed work of more than 0.03 feet in the horizontal and/or vertical dimension(s) at the bluetop location(s) shall be cause for rejection of the flexible base and/or final pavement.

It is recommended that the contractor consult with Blanco County prior to the base finishing operation to ensure that this section is completely understood and that both parties understand its provisions and the expectations of Blanco County.

Payment for Ride Quality shall be by the bid item "Sequence of Construction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

STRUCTURES

Safety end treatments shall comply with TxDOT Item 467 – "Safety End Treatment".

Structural excavation and backfilling of structures shall comply with TxDOT Item 400 – "Excavation and Backfill for Structures".

In addition to directing interim drainage to erosion control devices, the contractor shall maintain and provide for interim drainage throughout the project. The contractor shall ensure that rainfall runoff (or water runoff generated by construction activities) that may become trapped because of the proposed construction and that could affect the traveling public shall take whatever measures are necessary to prevent any impacts to the public. This shall be achieved by using temporary pipe(s), berm(s), and/or ditch(es) to channel rainfall runoff (or construction water) away from areas being used by the public. The contractor shall monitor the project to identify potential problem areas and implement these interim drainage measures before anticipated rainfall. The contractor shall inspect the site during rainfall events and make required corrective measures immediately. Payment for this work shall be by the item "Sequence of Construction". in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

The contractor shall notify Blanco County at least forty-eight (48) hours prior to any installation of a drainage facility within a drainage easement or street right of way.

The contractor shall be responsible for the preservation of all drainage features and appurtenances and all other physical features on or near the project that may be impacted by his operation. Any damage incurred to features that existed either prior to construction or were installed as part of the project will be repaired or replaced to a condition equal to or better than that prior to the damage at the contractor's sole expense. Blanco County will be the sole judge as to the adequacy of the repair or replacement.

In instances where the contractor is expecting to use heavy equipment (or any other construction equipment) it is recommended that he analyze existing and/or installed drainage structures to determine their adequacy to support such loads. The contractor may elect to place additional temporary fill above structures to ensure that the drainage feature's structural integrity is maintained, or he may elect to use equipment that will not adversely affect the structure(s).

The contractor shall provide trench protection as required. Payment shall be by the item "Trench Safety, All Depths" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Trench excavation protection shall comply with TxDOT Standard Specification Item No. 402 and the appropriate codes established by the Occupational Safety and Health Administration (OSHA).

The lengths of drainage features indicated herein are approximate. The contractor shall verify in the field that all drainage features are of sufficient length to complete the work required by the construction plans. This verification shall be performed prior to ordering materials.

Payment for all types of drainage features shall be by the appropriate bid item as provided for in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

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FIRM REGISTRATION #: F-977

GENERAL NOTES
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Job No. 21-222
Scale (Hor.) 1"=30'
Scale (Vert.) AS NOTED
Date: 04/06/21 Checked By: MS Drawn By: GD
Rev. No. Date Remarks
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Existing drainage features that require removal and disposal shall be done so by the contractor. The contractor shall be responsible for disposal at an off-site location approved by Blanco County.

The roadway surface of concrete shall receive a tine finish with a medium broom and tined perpendicular to centerline.

Non-roadway surfaces of concrete shall receive an ordinary surface finish.

The contractor shall grade the locations of each roadway and/or sideroad pipe to the flowlines shown on the plans. Prior to placement of the pipe and/or pipe bedding, the contractor shall obtain the approval of Blanco County of the pipe flowlines and location in the channel and/or ditch prior to placement of the pipe(s) bedding.

Bedding shall be Class B, unless shown otherwise on the plans.

Payment for reinforcing steel is subsidiary to the appropriate bid item in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Payment for dowels and epoxy grout is subsidiary to the contract.

Dewatering for the installation of structures shall be considered subsidiary to the contract.

The contractor shall ensure all drainage pipes and culverts are free and clear of silt and/or any other objectionable material prior to final acceptance by Blanco County. If necessary, the contractor shall use whatever method acceptable to Blanco County to clean the pipes and culverts. In the event the structures are depressed, when compared to the upstream and downstream flowlines, Blanco County may elect to waive this requirement. The contractor shall ensure compliance with the SWP3 during this operation.

Epoxy shall comply with TxDOT Departmental Materials Specifications DMS-6100 and shall be Type III, Class C or Class D and shall be listed on the TxDOT Materials Producer List.

Installation of epoxy-grouted rebar shall comply with the manufacturer's recommendations.

After drilling the hole for the rebar, test the fit prior to injecting the epoxy.

In the event a standard or formed toewall is used, the toewall may be terminated upon encountering solid rock. In that case, provide epoxy-grouted dowel bars a minimum of 18" into solid rock, or as shown on the plans, using the most conservative method.

Flowable backfill shall comply with TxDOT Item 401. Properties of flowable backfill shall be as shown for Excavatable in Table 2.

The contractor shall provide incidental grading around each end of structures (pipes and culverts) to ensure adequate drainage. Payment for this work shall be considered subsidiary to the contract.

PRIME COAT

Prime Coat shall be MC-30 or AE-P.

Distribute prime coat smoothly and evenly with a distributor at the rate of 0.20 gallons per square yard.

Apply blotter material to all driveways and intersections when exposed to traffic.

PAVING

Structural pavement designs were provided by others.

The contractor shall consult with Blanco County at least 48 hours prior to the time he expects to pave. If, in the opinion of Blanco County, weather conditions are going to be unsuitable or unfavorable for the application of asphalt, the contractor shall reschedule his paving operation until such time that the weather conditions are more suited for paving operations.

Paving work shall comply with TxDOT Standard Specification Item No.: 300, 301, 302, 314, 315, 316, and 320 unless stated otherwise herein.

Provide a smooth transition joint at each end of the project, at concrete crossings and at intersections that are paved.

Asphalt season begins May 1 and ends September 30. Paving outside of the asphalt season is solely at the discretion of Blanco County.

If the contractor expects to pave outside of the asphalt season, Blanco County may elect to grant permission to pave. If Blanco County grants permission to pave, approval to pave will be granted on a day-to-day basis based upon both the existing and forecasted (as forecast by the National Weather Service) weather conditions. In no case will permission be granted to pave when the probability of precipitation is greater than or equal to 30% or when existing ambient temperature is 60° F and falling or when the overnight temperature is expected to be below 55° F.

The type of asphalt for Chip Seal (Two Course Surface Treatment and/or Seal Coat) shall be Polymer-Modified Asphalt Cement (AC-15P) or Emulsified Asphalt (EA-HFRS-2P), or as shown on the plans.

Suggested asphalt (EA-HFRS-2P) application rates are:

Chip Seal (Two Course Surface Treatment) – First Course:	0.35 gallons per square yard
Chip Seal (Two Course Surface Treatment) – Second Course:	0.42 gallons per square yard
Chip Seal (Seal Coat):	0.40 gallons per square yard

The aggregate for Chip Seal (Two Course Surface Treatment and/or Seal Coat) shall be TxDOT Gr 4 Precoated (PB) and TxDOT Gr 5 Precoated (PB), or as shown on the plans.

Aggregate application type, grade and suggested application rates are:

Chip Seal (Two Course Surface Treatment) – First Course:	TY PB Gr 4 – 1 CY per 90 SY
Chip Seal (Two Course Surface Treatment) – Second Course:	TY PB Gr 5 – 1 CY per 150 SY
Chip Seal (Seal Coat):	TY PB Gr 5 – 1 CY per 130 SY

The contractor shall retain the services of a geotechnical testing laboratory to sample the aggregate (all types and grades) after it has been produced and delivered to the site. The geotechnical testing lab shall determine compliance with the specifications and establish the aggregate spread rate(s) and the asphalt application rate(s) based upon the type of asphalt specified herein. The rates for emulsified asphalt shall be based upon the percent of residual asphalt in the emulsified mixture as established by the asphalt supplier. The proposed aggregate spread rate(s) and asphalt application rate(s) shall

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GENERAL NOTES
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Job No. 21-222
Date: 040821
Scale (Horz.): 1"=20'
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be signed, sealed and dated by an engineer licensed to practice engineering in the State of Texas and the application rates shall be presented to Blanco County at least one week prior to paving. These rates shall constitute the beginning application rates and shall be adjusted as describe herein. The contractor is entirely responsible for the application rates.

In the event the contractor has extensive experience with the type of asphalt and aggregate proposed and the producer(s) of each material, the foregoing paragraph may be waived at the sole discretion of Blanco County and the contractor is entirely responsible for the application rates.

The asphalt and aggregate application rates shown herein are estimated, and for informational purposes only, as a general indictor of what may be reasonably expected for the type of asphalt and aggregate proposed. Asphalt and aggregate application rates shall be adjusted in the field based upon conditions at the time of application, as described herein. If any of the application rates vary by more than 30%, a Change Order may be prepared, at the discretion of Blanco County, to revise contract quantities for those particular items, but the unit price for any item shall not be revised. If the contractor anticipates quantities varying by more than 30%, he shall make it known to Blanco County at least one week prior to paving. Requests for price adjustments may not be considered if made after the paving has commenced. Since the contractor is entirely responsible for the paving application, construction, and maintenance throughout the duration of the project and throughout the maintenance period (if applicable), he shall base his bid upon the application rates that his experience indicates will achieve suitable and desirable results based upon the type of asphalt and aggregate proposed and that will serve their intended purpose.

The Contractor shall be required to provide recommendations to Blanco County, based upon conditions prior to or at the time of application, on adjusting suggested asphalt application rates and suggested aggregate application rates when the road conditions, material properties, construction methods (whichever the case may be) change or if there is disagreement with the materials and/or suggested application rates shown herein. If the contractor does not provide recommendations then it shall be considered that the contractor agrees with the materials and/or suggested rates shown herein and therefore accepts the entire responsibility for the application, construction, and maintenance of the paving.

If the Contractor in any way disagrees with the materials and/or applications, as illustrated for any particular purpose and as proposed herein, he shall notify Blanco County immediately upon contract execution. If the contractor disagrees with the materials and/or applications and does not notify Blanco County immediately upon contract execution, it shall be considered proof that he is in total agreement and accepts the entire responsibility for the application, construction, maintenance, and the applicability of those materials and/or applications for their intended purpose.

Should the contractor propose alternatives to what are shown and described herein, and if Blanco County concurs, the contractor shall remain entirely responsible for the materials and/or their applications.

Asphalt cement (of the "AC" type) shall be applied at a temperature of 350° F, or as shown on the plans.

The contractor shall adjust the spray bar nozzles to ensure there is no overlap and/or overspray on the previously placed shot (application).

The contractor shall ensure that the spray bar nozzles and spray bar height are adjusted to achieve precisely the overlap intended (double or triple).

Asphalt shall not be applied within 1½ hours of sunset, or later, unless directed otherwise or approved by Blanco County.

Use paper or other approved material at the beginning and end of each application so that the transverse joint is straight and prevents overlap of the asphalt shots.

Areas with excessive asphalt or aggregate shall be removed immediately or as directed by Blanco County.

Furnish medium pneumatic-tire rollers in accordance with Item 210, "Rolling." Roll before opening to traffic.

Surface all transitions, tapers, climbing lanes and intersections to the limits as shown on the plans or as directed by Blanco County. Chip seal for intersections, driveways, and turnouts shall be paid for by the bid item "Intersections, Driveways and Turnouts" and /or "Driveway Removal and Reconstruction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Keep all traffic, including construction traffic, off freshly placed surface treatments and/or chip seal, until as directed by Blanco County.

The contractor shall provide Blanco County with a current Distributor Certification confirming calibration of asphalt measurement equipment.

The contractor shall provide Blanco County with a copy of the shipping ticket for the asphalt prior to application. The contractor must sample asphalt, in accordance with the applicable item. Label the sample can with date and project information. Samples must be stored where they are readily available to Blanco County. The contractor shall be responsible for supplying storage for all samples until the project achieves substantial completion or as otherwise directed by Blanco County. At Blanco County's discretion, the contractor shall deliver all samples to Blanco County upon completion of the project.

When directed by Blanco County, the Contractor is responsible for disposal of all asphalt binder samples in accordance with Local, State, and Federal regulations.

Apply a very light sprinkling of water ("skeet") on the flexible base prior to placing the first application of asphalt. Allow the water to penetrate and/or evaporate completely prior to paving.

The contractor shall place a string line or paint line to establish horizontal control of the asphalt applications.

Without prior approval of Blanco County, asphalt application widths shall not exceed 12'.

Asphalt joints shall be on centerline and lane lines, or as approved by Blanco County.

A blade broom capable of uniformly distributing the first course of aggregate will be required on the Chip Seal (Two Course Surface Treatment). Keep all traffic off the first course of chip seal after the aggregate has been blade broomed and rolled.

Both the first course and second course of the Two Course Surface Treatment shall be placed the same day unless directed otherwise by Blanco County.

Previously tested aggregates delivered to the project, which are found to contain excessive quantities of dust (more than 0.5 percent passing the No. 40 sieve) during pre-coating, stockpiling or hauling operations will be rejected.

PORTABLE CHANGEABLE MESSAGE SIGNS

Portable Changeable Message Signs (PCMS) shall be provided, maintained, and installed by Blanco County. The contractor shall give at least one week notice prior to beginning work for Blanco County to install the PSMS.

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GENERAL NOTES
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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SHEET 2.10

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BARRICADES, SIGNS, AND TRAFFIC HANDLING

Signs, mounts, and installations shall comply with the Texas Manual on Uniform Traffic Control Devices (TMUTCD) and the standard sheets contained in the plans. In the event of a conflict, the TMUTCD shall govern.

Signs shall have a mounting height of not less than 7' above the roadway elevation.

Traffic control devices shall be kept in a well-maintained, like-new condition. Traffic control devices that, in the opinion of Blanco County, are not in a good, well-maintained condition shall be replaced by the contractor at his sole expense. Blanco County shall be the sole judge in the determination of the condition of traffic control devices. In the event the contractor does not perform the replacement in a timely manner, in the opinion of Blanco County, work may be suspended until such time as the device(s) has (have) been replaced.

Traffic control devices shall be maintained in a clean condition. The contractor shall clean all traffic control devices any time reflectivity is diminished by dirt, mud, or other material. Blanco County shall be the sole judge in making the determination of cleanliness and limited reflectivity. Blanco County reserves the right to suspend construction activities until the traffic control devices have been restored to a clean condition. Payment for this work shall be considered subsidiary to the contract.

Existing regulatory, warning signs, and their supports shall be removed and replaced on temporary supports for the duration of construction. Upon completion of the work, the signs shall be reinstalled at their original locations. Payment for this work shall by the bid item "Barricades, Signs, and Traffic Handling", in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

If an existing non-regulatory sign conflicts with construction, the contractor shall remove the sign, place it alongside the fence and / or right of way, and shall notify Blanco County and Blanco County shall reinstall the sign after construction. Payment for this work shall by the bid item "Barricades, Signs, and Traffic Handling", in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

TRAFFIC CONTROL PLAN (TCP)

Blanco County shall close CR 301 for construction and construct, maintain, and remove a temporary detour for local traffic only. The contractor shall be aware that local traffic will be traversing the work area along the detour and adjust his operations accordingly. The detour will be located outside of the limits of construction. If the contractor believes that the detour, or any portion of it, must be closed for any of his operations, he shall seek the approval of Blanco County prior to the closure and provide traffic control as directed by Blanco County. Payment shall be by the bid item "Sequence of Construction" in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Traffic control shall be in place prior to any operation.

Cover, relocate or remove existing signs that conflict with traffic control.

Incorporate a 3H:1V safety wedge into the proposed construction for any roadway edge of two (2) inches or greater adjacent to a roadway under traffic.

All flaggers shall be English-speaking.

Payment for the Traffic Control Plan (TCP) shall be considered subsidiary to the contract.

The Traffic Control Plan (TCP) for this project shall be as provided in the Traffic Control Plan / Sequence of Construction and appropriate standard details in the construction plans.

DELINEATORS AND OBJECT MARKERS

Payment for delineators and object markers shall be by the appropriate bid item in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

Payment for remove and/or relocate delineators and/or object markers shall be by the appropriate bid item in the contract documents, if provided, or shall be considered subsidiary to the contract if no direct payment is provided for in the contract documents.

UTILITIES

The contractor shall contact all utility companies for existing utility locations prior to construction when excavation is required.

MAILBOXES

Certain mailboxes may require temporary relocation. Blanco County will relocate mailboxes provided that the County concurs with the necessity for relocation. The contractor shall provide Blanco County 48 hours advance notice prior to the apparent need to relocate mailboxes in order to provide Blanco County adequate time to determine if there is an actual need to relocate the mailbox(es) and if the need exists, to perform the relocation.

TRENCH SAFETY

All construction operations shall be accomplished in accordance with applicable regulations of the U.S. Occupational Safety and Health Administration (OSHA). Copies of the OSHA standards may be purchased from the U.S. Government Printing Office. Information and related reference materials may be purchased from OSHA, 903 San Jacinto, Rm. 319, Austin, Texas 78701.

Contractor and/or contractor's independently retained employee or structural design/geotechnical/safety equipment consultant, if any, shall review these plans and all available geotechnical information and the anticipated installation sites within the project work area in order to implement the contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The contractor's implementation of these systems, programs, and/or procedures shall provide for adequate trench excavation safety protection that comply with, at a minimum, the United States Occupational Safety and Health Administration (OSHA) standards for trench excavations. Specifically, the contractor and/or the contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavations.

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GENERAL NOTES
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Job No 21-222 | Scale (Hor.) 1"=00' | Scale (Vert.) AS NOTED
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In accordance with the regulations of the United States Occupational Safety and Health Administration (OSHA) and the laws of the State of Texas, all trenches over five (5) feet in depth in either hard and compact soil or soft and unstable soil shall be sloped, shored, sheeted, braced or otherwise supported. All trenches less than five (5) feet in depth shall also be effectively protected when hazardous ground movement may be expected.

In accordance with the United States Occupational Safety and Health Administration regulations, when an employee or employees are required to be in trenches four (4) feet or more in depth, adequate means of exit, such as a ladder, stairway, steps, or other safe means of egress shall be provided and located so as to require no more than twenty-five (25) feet of lateral travel for the trench occupants.

If trench safety system details are not provided in the plans because trenches were anticipated to be less than five (5) feet in depth, and during construction it is determined that ditches are actually five (5) feet or more in depth, or trenches that are less than five (5) feet in depth and are in any area where hazardous movements could be expected, all construction activities in that area shall cease immediately. The trenching area shall be barricaded and protected from entry by anyone and Blanco County notified immediately. Construction shall not resume in that area until an appropriate trench excavation protection system, including design and details are submitted and approved by Blanco County. A registered professional engineer shall design the trench excavation protection system. Should any of these scenarios prove to be the case, a bid item shall be added to the contract, by change order, on a negotiated basis similar to other change orders.

When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.

Employees shall not work in excavations in which there is accumulated water, or in excavations in which water is accumulating unless adequate precautions have been taken to protect the trench occupants.

If water is controlled or prevented from accumulating by the use of water removal equipment, a competent person shall be provided by the contractor to ensure proper operation and monitoring of the water removal equipment and its operation.

Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least two feet (2') from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling to excavations, or by a combination of both if necessary.

Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard-increasing occurrence. These inspections are only required when employee or other personal exposure can be reasonably anticipated.

Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees and others shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation

At a minimum, trench excavation protection shall comply with TxDOT Standard Specification Item No. 402.

MISCELLANEOUS

Pipe underdrain may be used at the discretion of Blanco County. Payment shall be on an agreed-upon basis and by Change Order or performed by Force Account Work.

A high-quality crack sealant compatible to both asphalt and concrete shall be provided on the top joint of all asphalt-concrete interfaces.

Do not completely close driveways for reconstruction purposes, unless a reasonable alternate access exists to the property, as approved by Blanco County.

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GENERAL NOTES
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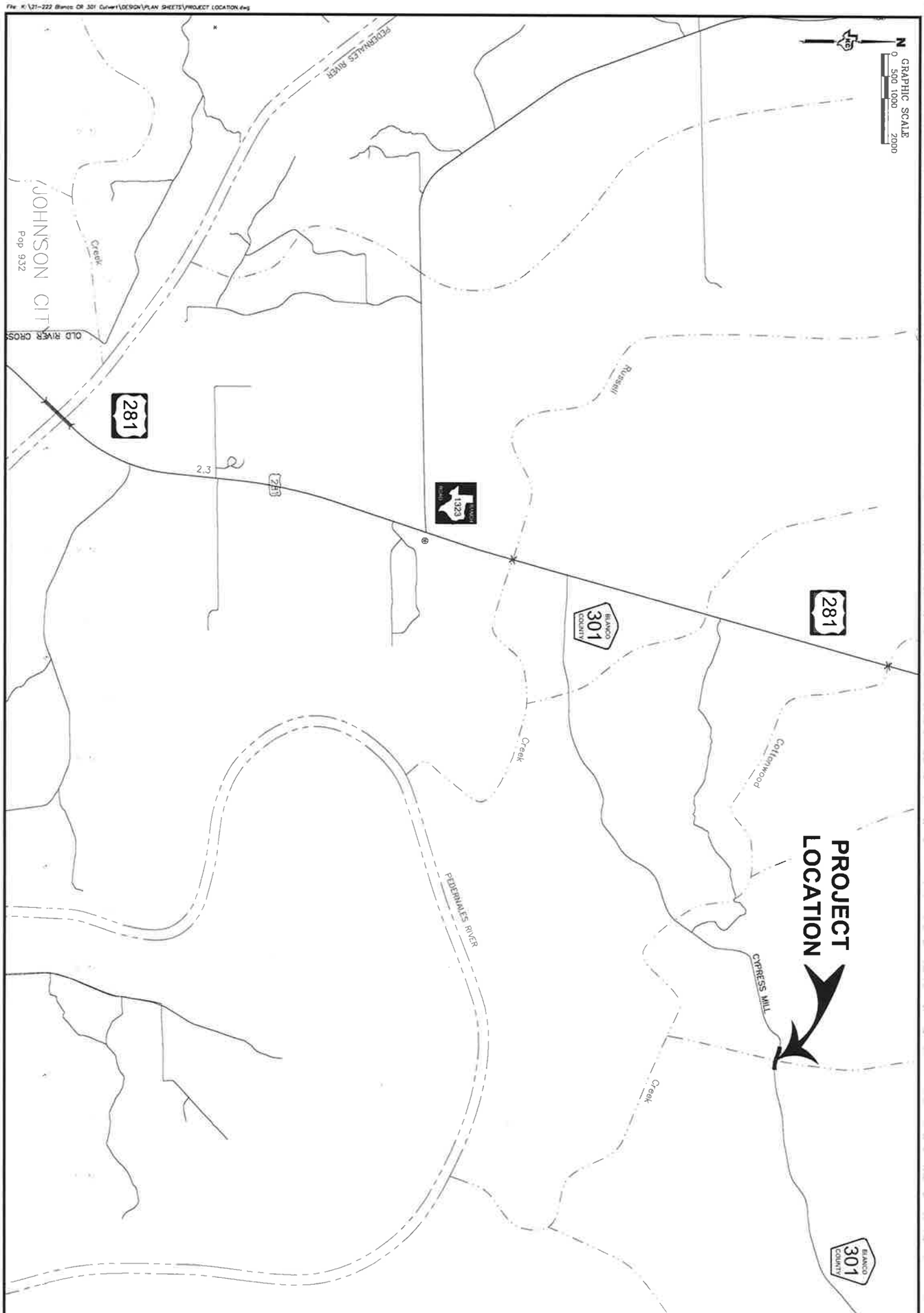

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Job No	Scale (Hor.):	1"=00'
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Date: 03/04/21	Checked By: MS	Drawn By: DD

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PROJECT LOCATION
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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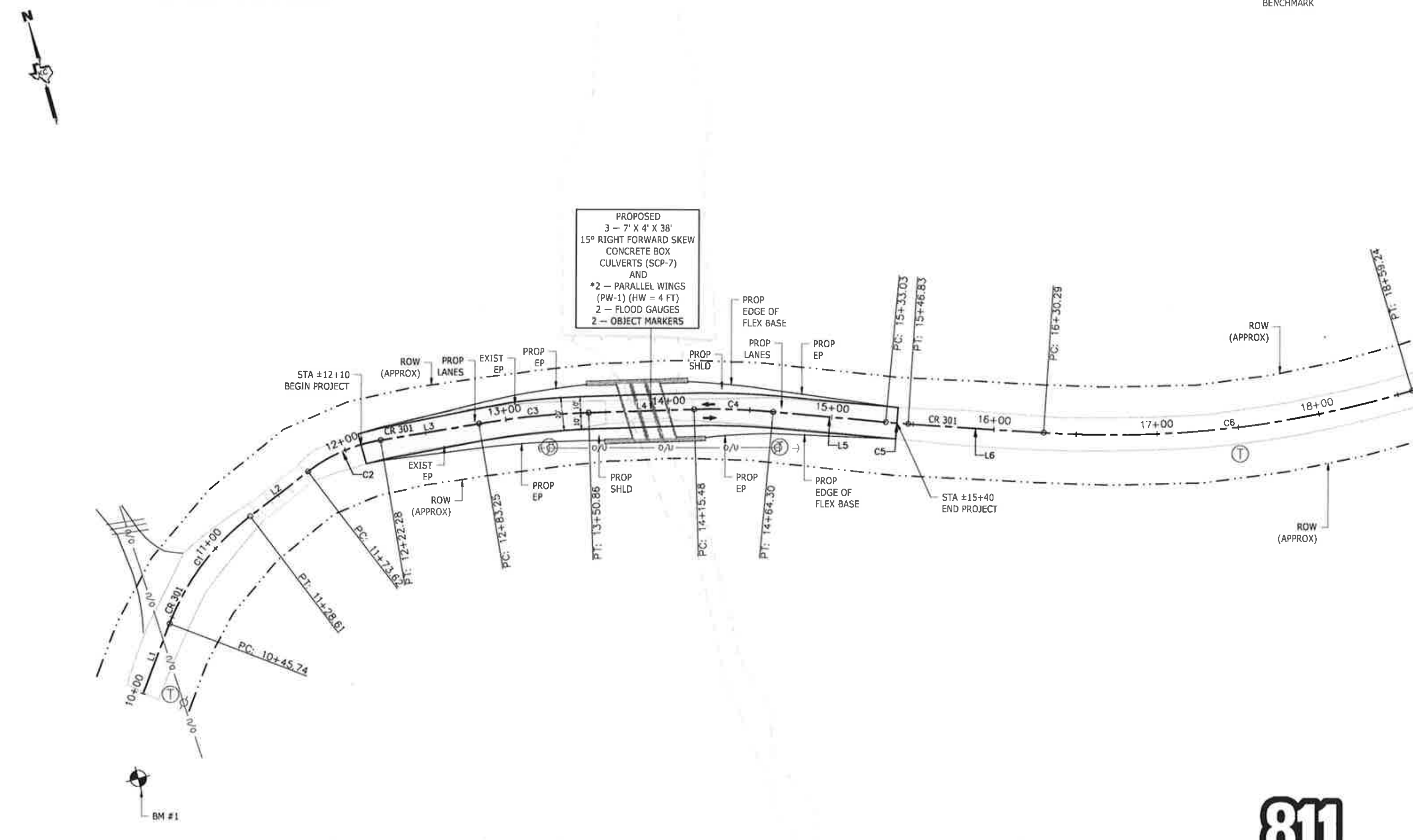
REGISTRATION # F-000977

GRAPHIC SCALE
0 15 30 60

RIGHT OF WAY SHOWN HEREON IS ESTIMATED AND DOES NOT REPRESENT AN ON-THE-GROUND SURVEY. SEE GENERAL NOTES FOR MORE INFORMATION.

SEE PLAN SHEET "DATA SHEET" FOR LINE AND CURVE DEFINITIONS AND BENCHMARK



PROPOSED SHOULDER

PROPOSED LANES

*FOUR WINGWALLS ARE REQUIRED. IN ACCORDANCE WITH TxDOT SPECIFICATION ITEM 466, PAYMENT SHALL BE BY EACH END OF THE STRUCTURE AND THE QUANTITY FOR PAYMENT SHALL BE TWO (2).

Know what's **below.**
Call before you dig.

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PROJECT LAYOUT
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Rev. No.	Date	Remarks
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ALIGNMENT DATA TABLE

Number	Start Station	Start Northing/Easting	Bearing	Dc	Radius	PI Northing/Easting	Length	Tangent	Chord	Mid Ord.	External	End Station	End Northing/Easting
L1	10+00.00	N 10091197.64 E 2920520.65	N35° 47' 48"E				45.74'					10+45.74	N 10091234.74 E 2920547.41
C1	10+45.74	N 10091234.74 E 2920547.41		38°12'	150.00'	N 10091269.23 E 2920572.28	82.87'	42.52'	81.82'	5.69'	5.91'	11+28.61	N 10091285.54 E 2920611.55
L2	11+28.61	N 10091285.54 E 2920611.55	N67° 27' 08"E				45.01'					11+73.62	N 10091302.80 E 2920653.12
C2	11+73.62	N 10091302.80 E 2920653.12		57°18'	100.00'	N 10091312.31 E 2920676.05	48.66'	24.82'	48.18'	2.95'	3.03'	12+22.28	N 10091310.01 E 2920700.76
L3	12+22.28	N 10091310.01 E 2920700.76	S84° 40' 02"E				60.97'					12+83.25	N 10091304.34 E 2920761.47
C3	12+83.25	N 10091304.34 E 2920761.47		11°28'	500.00'	N 10091301.19 E 2920795.18	67.61'	33.86'	67.56'	1.14'	1.14'	13+50.86	N 10091293.53 E 2920828.15
L4	13+50.86	N 10091293.53 E 2920828.15	S76° 55' 12"E				64.62'					14+15.48	N 10091278.91 E 2920891.10
C4	14+15.48	N 10091278.91 E 2920891.10		14°19'	400.00'	N 10091273.38 E 2920914.90	48.82'	24.44'	48.79'	0.74'	0.75'	14+64.30	N 10091284.99 E 2920937.86
L5	14+64.30	N 10091284.99 E 2920937.86	S89° 55' 40"E				68.74'					15+33.03	N 10091241.40 E 2921002.42
C5	15+33.03	N 10091241.40 E 2921002.42		11°28'	500.00'	N 10091238.03 E 2921008.90	13.80'	6.90'	13.80'	0.05'	0.05'	15+46.83	N 10091236.84 E 2921015.44
L6	15+46.83	N 10091236.84 E 2921015.44	S71° 30' 33"E				83.46'					16+30.29	N 10091210.37 E 2921094.60
C6	16+30.29	N 10091210.37 E 2921094.60		8°49'	650.00'	N 10091173.69 E 2921204.29	228.94'	115.67'	227.76'	10.05'	10.21'	18+59.24	N 10091177.10 E 2921319.91
L7	18+59.24	N 10091177.10 E 2921319.91	N88° 18' 37"E				48.70'					19+07.93	N 10091178.53 E 2921368.59

SEE PLAN SHEET "PROJECT LAYOUT" FOR LINE AND CURVE INFORMATION.

BENCHMARKS

NAME	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM #1	10091148.31	2920504.53	1145.59	½" IRON PIN W/ CAP

SEE PLAN SHEET "PROJECT LAYOUT" FOR BENCHMARK LOCATION.

Total Volume Table

Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
12+25.00	3.80	5.98	0.00	0.00	0.00	0.00
12+50.00	8.26	0.74	5.59	3.11	5.59	3.11
12+75.00	17.82	0.00	12.08	0.34	17.68	3.45
13+00.00	23.87	0.25	19.12	0.12	36.78	3.57
13+25.00	54.03	0.00	35.76	0.12	72.54	3.69
13+50.00	135.66	0.00	87.50	0.00	160.03	3.69
13+72.00	175.51	0.00	126.79	0.00	286.82	3.69
13+86.00	0.00	0.00	0.00	0.00	286.82	3.69
14+00.00	182.65	0.00	0.00	0.00	286.82	3.69
14+25.00	141.44	0.00	149.76	0.00	436.59	3.69
14+50.00	48.08	0.00	86.97	0.00	523.56	3.69
14+75.00	21.94	0.00	32.35	0.00	555.91	3.69
15+00.00	11.19	0.00	15.34	0.00	571.25	3.69
15+25.00	3.32	2.80	6.72	1.34	577.96	5.03

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CONSULTING ENGINEERS
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DATA SHEET
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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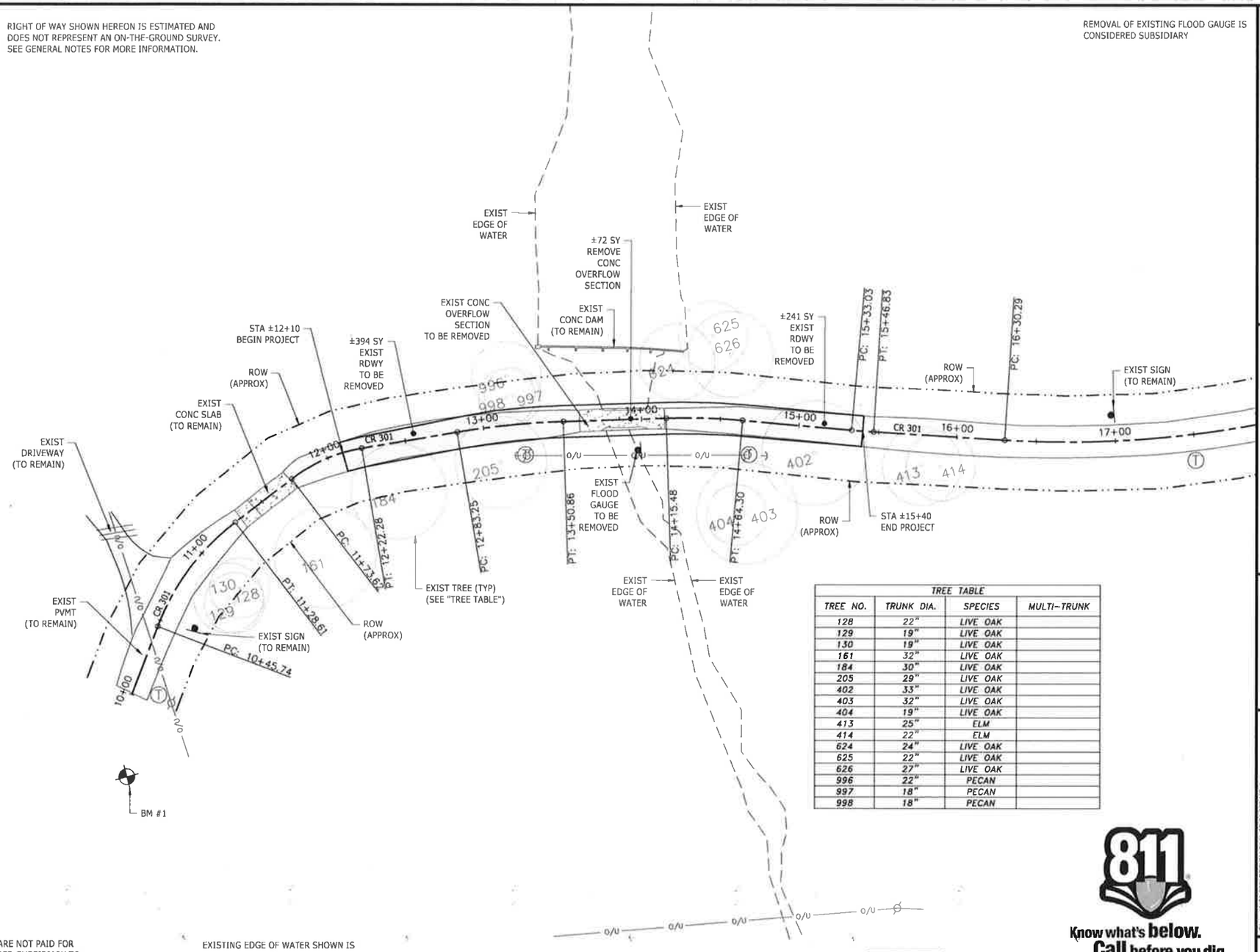

TREE TABLE			
TREE NO.	TRUNK DIA.	SPECIES	MULTI-TRUNK
128	22"	LIVE OAK	
129	19"	LIVE OAK	
130	19"	LIVE OAK	
161	32"	LIVE OAK	
184	30"	LIVE OAK	
205	29"	LIVE OAK	
402	33"	LIVE OAK	
403	32"	LIVE OAK	
404	19"	LIVE OAK	
413	25"	ELM	
414	22"	ELM	
624	24"	LIVE OAK	
625	22"	LIVE OAK	
626	27"	LIVE OAK	
996	22"	PECAN	
997	18"	PECAN	
998	18"	PECAN	

ITEMS TO BE REMOVED THAT ARE NOT PAID FOR DIRECTLY SHALL BE CONSIDERED SUBSIDIARY TO THE CONTRACT.

EXISTING EDGE OF WATER SHOWN IS AS OF THE DATE OF THE SURVEY.

Know what's below. Call before you dig.

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CONSULTING ENGINEERS
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EXIST CONDITIONS & DEMO PLAN
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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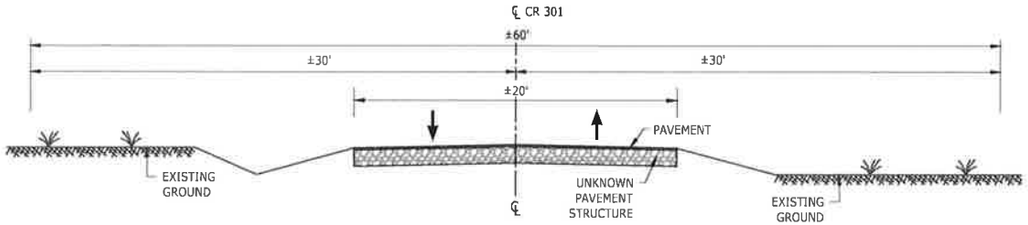
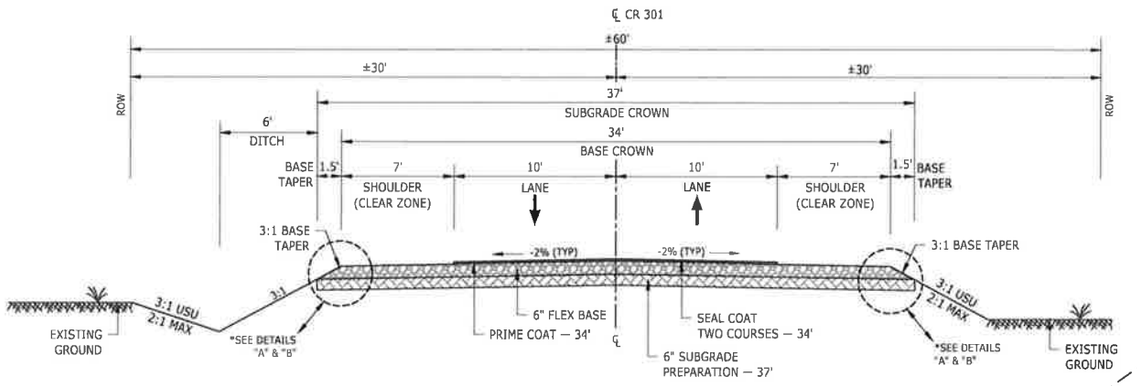


EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION

(1)

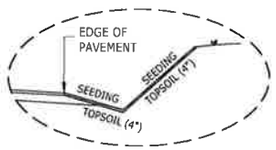
STA 13+50 — STA 14+12

PRIME COAT:

- AEP OR MC-30
- 0.20 GAL/SY
- 48-HOUR MINIMUM CURE

SEAL COAT (TWO COURSES):

ASPHALT: EA-HFRS-2P
AGGREGATE:
FIRST COURSE: TxDOT TY PB GR 4
SECOND COURSE: TxDOT TY PB GR 5

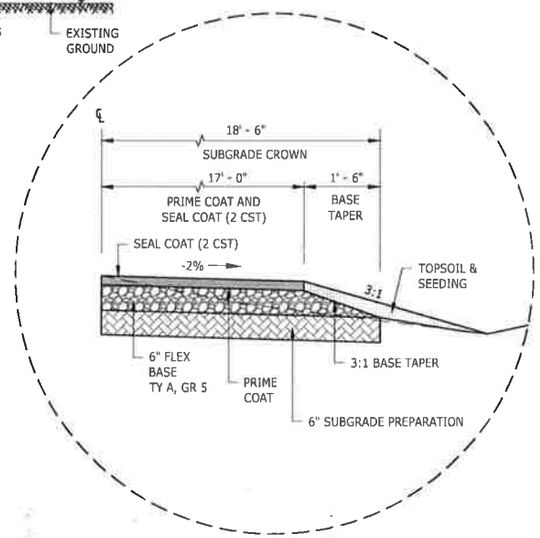


DETAIL "B"
N.T.S.

TEMPORARY AND PERMANENT EROSION CONTROL

TRANSITIONS:

EXISTING TO SECTION 1	STA 12+10 — STA 13+50
SECTION 1 TO EXISTING	STA 14+12 — STA 15+40



DETAIL "A"
N.T.S.

NOT TO SCALE

CLEAR ZONE FROM TxDOT DESIGN MANUAL TABLE 4-2

STRUCTURAL PAVEMENT DESIGN BY OTHERS

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TYPICAL SECTIONS
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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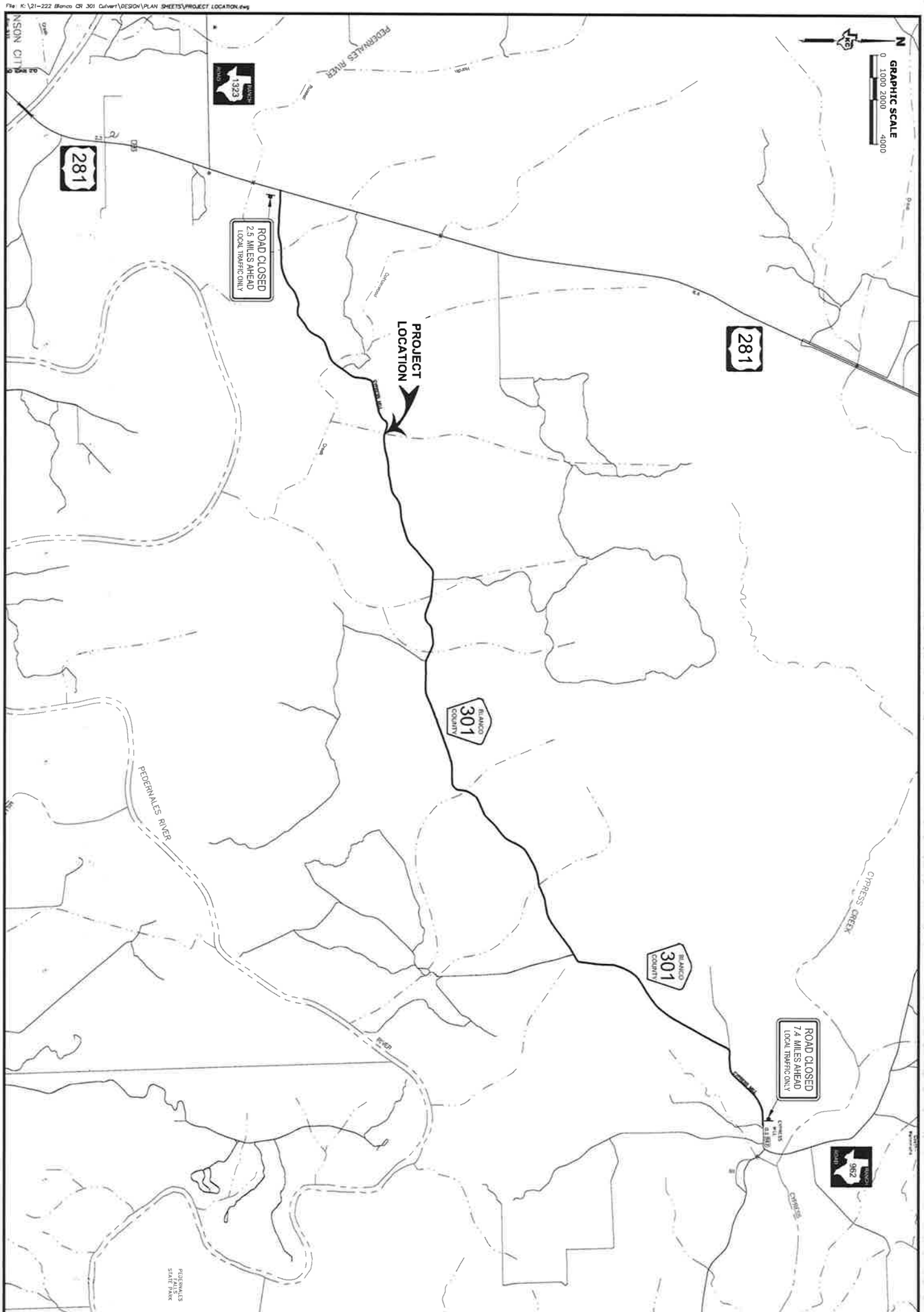

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TRAFFIC CONTROL PLAN
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

K.C. ENGINEERING, INC.
CONSULTING ENGINEERS
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MARBLE FALLS, TEXAS 78654
OFFICE: 830-693-5635 FAX: 830-693-9664
Email: info @ kcengineering.com
REGISTRATION # F-000977

GRAPHIC SCALE
0 15 30 60

RIGHT OF WAY SHOWN HEREON IS ESTIMATED AND DOES NOT REPRESENT AN ON-THE-GROUND SURVEY. SEE GENERAL NOTES FOR MORE INFORMATION.

AT ITS SOLE DISCRETION, BLANCO COUNTY MAY CONSTRUCT A TEMPORARY DETOUR WITH ITS OWN FORCES.

THE LOCATION OF THE DETOUR WILL BE DETERMINED BY BLANCO COUNTY.

SIGNAGE FOR THE TEMPORARY DETOUR SHALL BE FURNISHED, INSTALLED, AND REMOVED BY BLANCO COUNTY.

BLANCO COUNTY MAY ELECT TO HAVE THE CONTRACTOR FURNISH TEMPORARY DETOUR SIGNAGE AND, IF SO, TEMPORARY DETOUR SIGNAGE SHALL BE PAID FOR BY CHANGE ORDER.

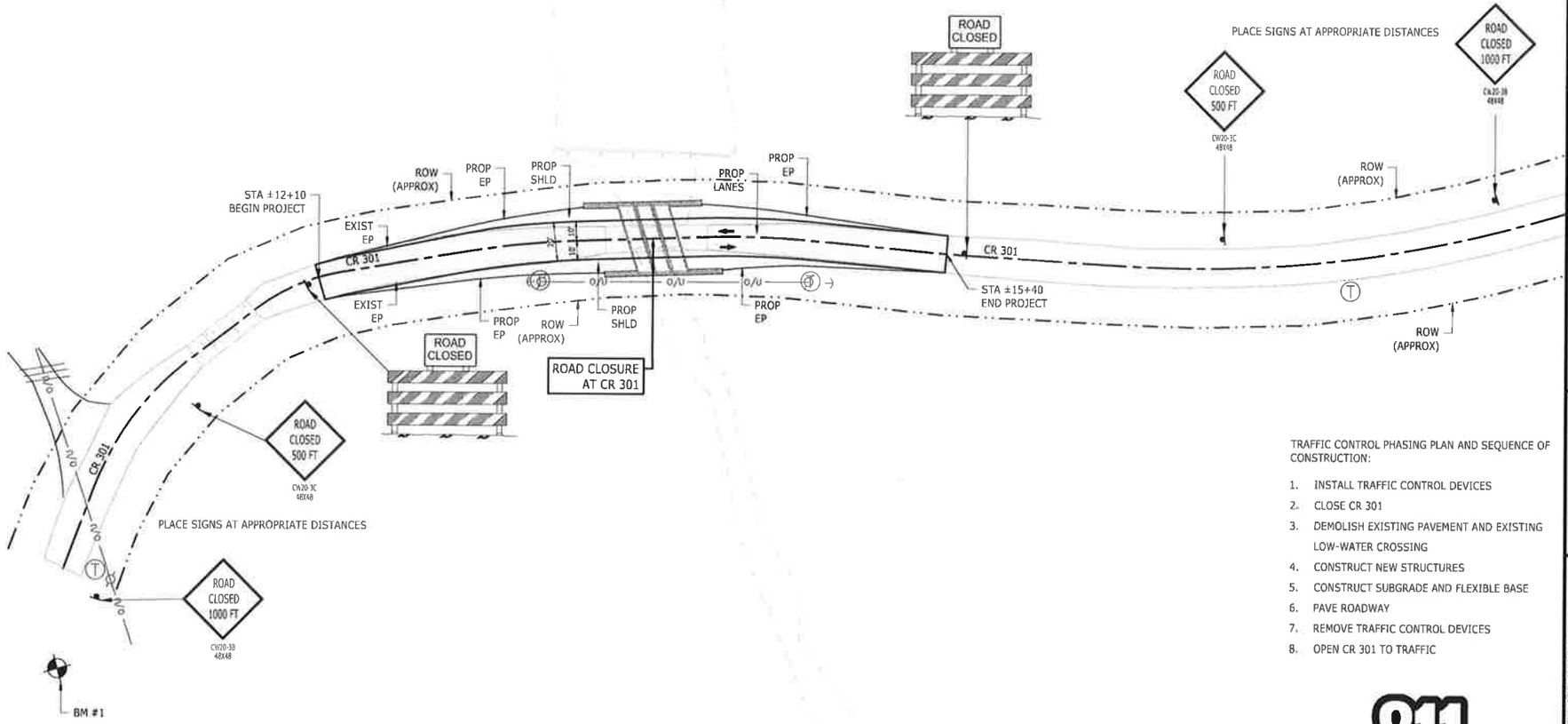
THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL PROPERTIES ADJACENT TO CR 301 AT ALL TIMES.

THE GOVERNING ROAD CLOSURE STANDARD IS WZ (RCD) - 13.

SIGNS SHOWN ARE CONSIDERED MINIMUM REQUIRED AND THEIR LOCATIONS ARE APPROXIMATE. USE ADDITIONAL SIGNS AS REQUIRED OR AS DIRECTED BY BLANCO COUNTY. ADJUST SIGN LOCATIONS AND SPACING AS DIRECTED BY BLANCO COUNTY.

REMOVE SIGNS WHEN THEIR USE IS NO LONGER WARRANTED.

DETAILS FOUND IN "COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICE LIST" AT:
http://ftp.txdot.gov/pub/txdot-info/trf/pdf/cwztcd.pdf



TRAFFIC CONTROL PHASING PLAN AND SEQUENCE OF CONSTRUCTION:

1. INSTALL TRAFFIC CONTROL DEVICES
2. CLOSE CR 301
3. DEMOLISH EXISTING PAVEMENT AND EXISTING LOW-WATER CROSSING
4. CONSTRUCT NEW STRUCTURES
5. CONSTRUCT SUBGRADE AND FLEXIBLE BASE
6. PAVE ROADWAY
7. REMOVE TRAFFIC CONTROL DEVICES
8. OPEN CR 301 TO TRAFFIC

811 Know what's below. Call before you dig.

SIGN LOCATIONS NOT TO SCALE

PROPOSED SHOULDER
PROPOSED LANES

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TRAFFIC CONTROL PLAN
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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SEQUENCE OF CONSTRUCTION

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW THE SEQUENCE OF WORK NOTED BELOW. THE CONTRACTOR MAY SUBMIT AN ALTERNATE SEQUENCE AND TRAFFIC CONTROL PLAN SUBJECT TO THE APPROVAL OF WILLIAMSON COUNTY PRIOR TO USING ANY ALTERNATE SEQUENCING PLAN.

PROVIDE SAFE AND CONVENIENT ACCESS TO ABUTTING PROPERTIES, HIGHWAYS, PUBLIC ROADS, AND STREET CROSSINGS. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE ROADWAY SURFACE AND WORK ZONE WITHIN THE PROJECT LIMITS WHILE THE TCP IS IN EFFECT.

PHASE I - TRAFFIC CONTROL AND EROSION CONTROL

1. INSTALL TRAFFIC CONTROL BARRICADES USING BC (2-4)-14.
2. POST TCEQ CONSTRUCTION SITE NOTICE AND INSTALL RAIN GAUGE.
3. PLACED EROSION CONTROL MEASURES AS SHOWN ELSEWHERE HEREIN.

PHASE II - SUBGRADE, STRUCTURE, FLEX BASE, AND PRIME COAT

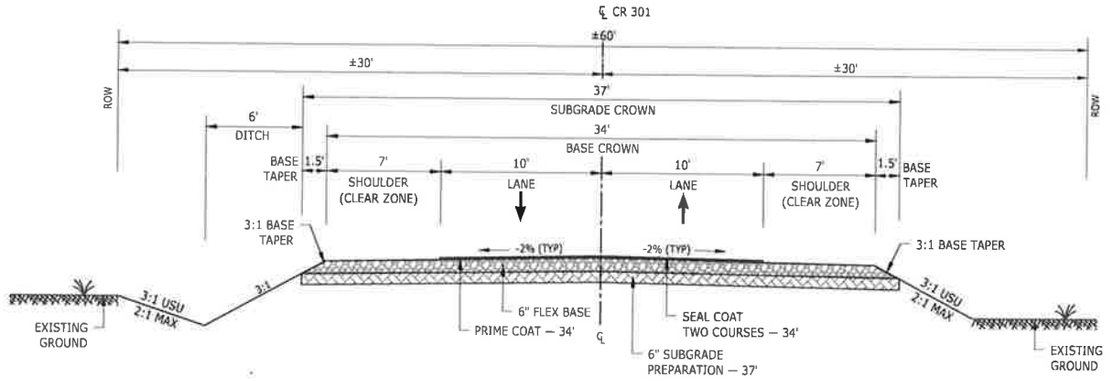
1. CLOSE THE ROADWAY USING WZ (RCD) - 13.
2. RELOCATE SIGNS AND MAILBOXES, IF NECESSARY, (TEMPORARY) AS SHOWN ELSEWHERE HEREIN.
3. CLEAR AND GRUB ROW AND STOCKPILE TOPSOIL.
4. INSTALL ROADWAY DRAINAGE CULVERT AND WINGWALLS.
5. PERFORM EXCAVATION AND EMBANKMENT.
6. ADJUST EROSION CONTROLS AS NECESSARY (PAYMENT IS SUBSIDIARY TO THE CONTRACT).
7. PERFORM SUBGRADE PREPARATION.
8. PLACE AND CURE FLEX BASE.
9. PLACE AND CURE PRIME COAT (48 HOURS MINIMUM).

PHASE III - PAVING

1. PLACE SEAL COAT (TWO COURSES).
2. CLEAN UP AND PLACE TOPSOIL AND FINAL SEEDING.
3. WATER REVEGETATED AREAS UNTIL GRASS IS ESTABLISHED.
4. REMOVE EROSION CONTROL MEASURES AFTER ACCEPTANCE.
5. FINAL CLEAN UP.

NOTES:

1. CONTRACTOR SHALL PROVIDE ACCESS AT ALL TIMES TO STREETS, COMMERCIAL AND PRIVATE DRIVEWAYS.
2. AT A MINIMUM, EXISTING DRAINAGE CONDITIONS ARE TO BE MAINTAINED DURING ALL CONSTRUCTION PHASES. IF TEMPORARY PIPES ARE REQUIRED TO MAINTAIN DRAINAGE, WORK AND MATERIALS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE SUBSIDIARY TO VARIOUS BID ITEMS.



PROPOSED
TYPICAL SECTION

TRAFFIC CONTROL PLAN
SEQUENCE OF CONSTRUCTION

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CONSULTING ENGINEERS
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TRAFFIC CONTROL PLAN
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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Date: Apr 07, 2021, 10:51am User ID: gmph
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NOTES:

EPOXY SHALL COMPLY WITH TxDOT DEPARTMENTAL MATERIALS SPECIFICATION DMS-6100 AND BE TYPE III, CLASS C (OR CLASS D), AND LISTED ON THE TxDOT MATERIALS PRODUCER LIST.

DOWEL HOLE DIAMETER SHALL BE IN ACCORDANCE WITH THE APPROVED EPOXY MANUFACTURER'S RECOMMENDATIONS.

CONCRETE AND EPOXY SHALL COMPLY WITH TxDOT STANDARD SPECIFICATION ITEM 420 CONCRETE STRUCTURES.

REBAR SHALL BE LAPPED A MINIMUM OF 24".

NOTES:

ALL CONCRETE RIPRAP SHALL BE TxDOT CLASS "A" WITH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

REINFORCING STEEL SHALL BE GRADE 60.

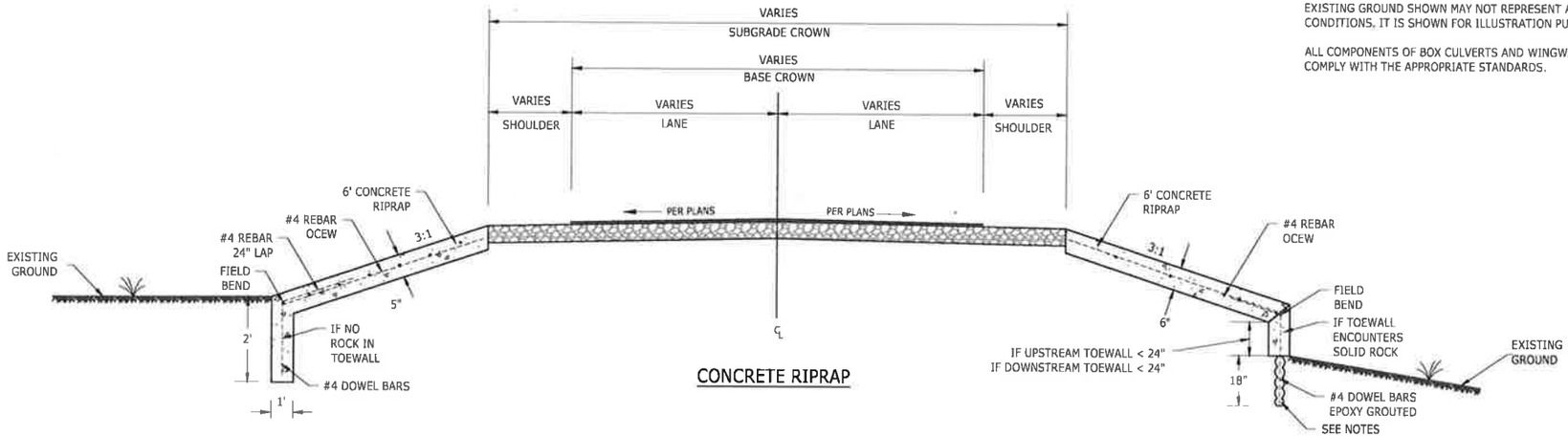
#4 DOWEL BARS, SHALL BE DOWELED 18" INTO SOLID ROCK USING EPOXY GROUT AND 18" CENTER-TO-CENTER SPACING.

REBAR SHALL HAVE A 3" CLEAR DISTANCE FROM ALL SIDES OF CONCRETE, GROUND, BACKFILL AND BEDDING.

CONTRACTOR SHALL DE-WATER THE SITE AS REQUIRED AND PAYMENT IS SUBSIDIARY.

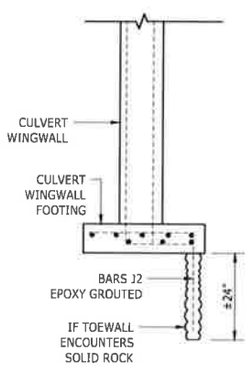
EXISTING GROUND SHOWN MAY NOT REPRESENT ACTUAL CONDITIONS. IT IS SHOWN FOR ILLUSTRATION PURPOSES ONLY.

ALL COMPONENTS OF BOX CULVERTS AND WINGWALLS SHALL COMPLY WITH THE APPROPRIATE STANDARDS.

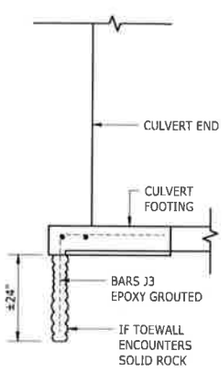


CONCRETE RIPRAP

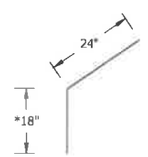
THIS DETAIL MAY BE USED IF THE FULL DEPTH OF TOEWALL CANNOT BE ACHIEVED.



WINGWALL TOEWALL



CULVERT TOEWALL



*LENGTH VARIES DEPENDING UPON DEPTH OF TOEWALL

DOWEL BARS

REINFORCING SHOWN IS FOR ILLUSTRATION PURPOSES ONLY AND ALL REINFORCING MAY NOT BE SHOWN.

REFER TO APPROPRIATE STANDARDS FOR REINFORCING SIZE, SPACING, AND DIMENSIONS.

THE EPOXY-GROUTED REINFORCING OPTION MAY BE USED PROVIDED THAT THE END OF THE REINFORCING IS FOUNDED IN SOLID ROCK.

THE EPOXY-GROUTED REINFORCING OPTION SHALL NOT BE USED IN FRACTURED ROCK OR IF THE SUB-SURFACE HAS MULTIPLE STRIATIONS.

IN THE EVENT OF A CONFLICT WITH BARS J2 AND/OR J3, THE APPROPRIATE STANDARDS SHALL GOVERN.

NOT TO SCALE

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MARBLE FALLS, TEXAS 78654
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FIRM REGISTRATION #: F-977

DETAILS - SITE
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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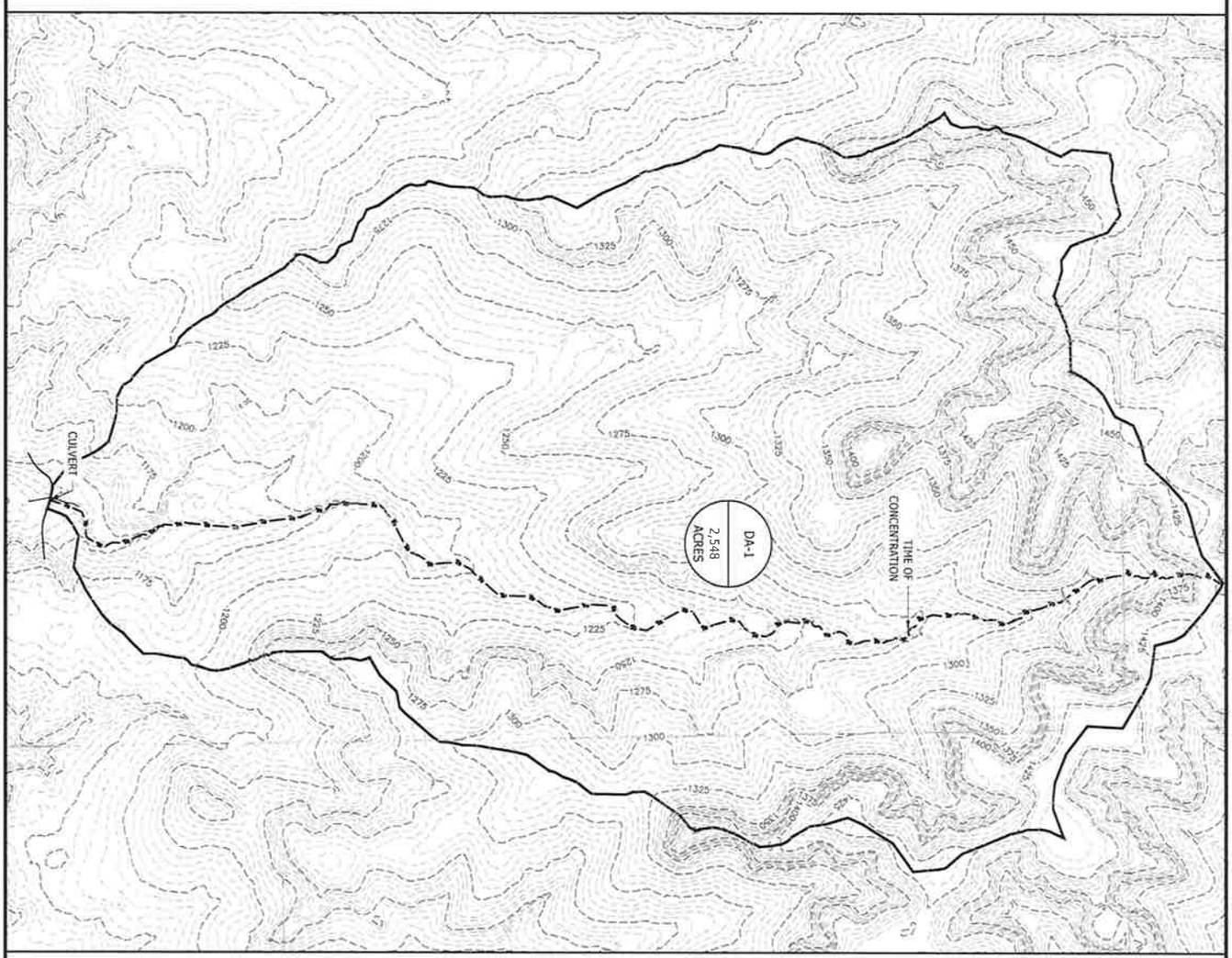

CONTOUR INTERVAL:

MAJOR CONTOUR 25 FOOT
MINOR MINOR 5 FOOT

SHEET 10.0

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DRAINAGE AREA MAP
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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MARBLE FALLS, TEXAS 78654
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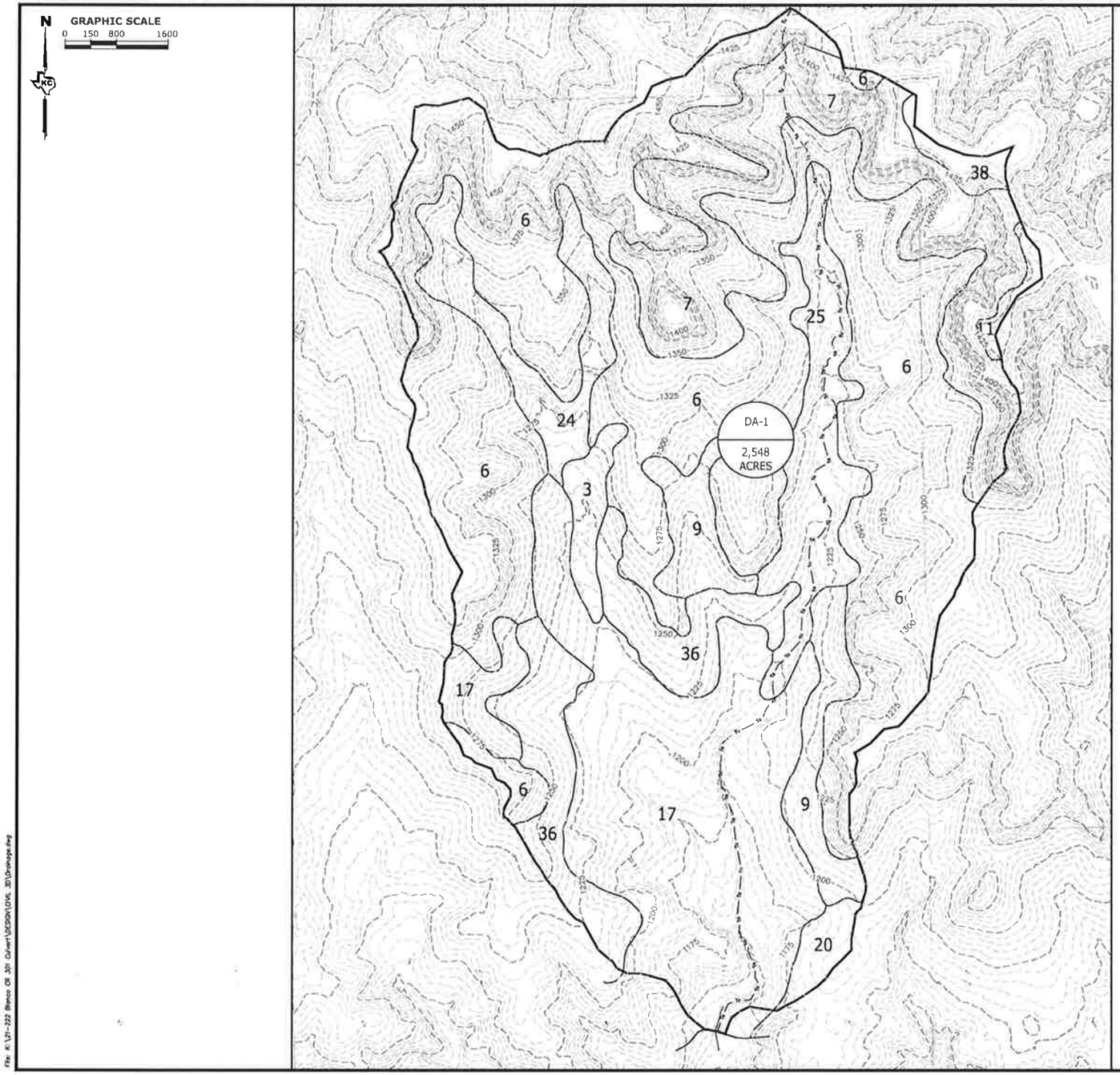

EXISTING SOIL DESCRIPTIONS			
SOIL KEY	ACRES	SOIL GROUP	SOIL DESCRIPTION
3	32	D	Anhalt Clay
6	1077	D	Brackett Association
7	304	D	Bracket-Real Association
9	103	D	Doss Silty Clay
11	11	D	Ekrant-Rock Outcrop
17	496	D	Hensley Association
20	35	C	Hye Fine Sandy Loam
24	91	C	Krum Clay (1%-3% Slopes)
25	132	C	Krum Clay (3%-5% Slopes)
36	160	C	Pedernales Fine Sandy Loam
38	17	D	Purves Clay

CONTOUR INTERVAL:

MAJOR CONTOUR	25 FOOT
MINOR MINOR	5 FOOT

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REGISTRATION # F-000977

SOIL DESCRIPTIONS
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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DA-1 HYDROLOGY (NRCS)								
DRAINAGE AREA	DESIGN FREQUENCY	DESIGN AEP	DRAINAGE AREA (AC)	DRAINAGE AREA (SQ MI)	*NRCS CN	Tc (MIN)	Q 1.2-YR (CFS)	Q 100-YR (CFS)
DA-1	1.2-YEAR	98.8%	2,458	3.84	74	172	550	
DA-1	100-YEAR	1%	2,458	3.84	74	172		4,985

*IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) "HYDRAULIC DESIGN MANUAL" (REVISED SEPTEMBER 2019), CLIMATIC ADJUSTMENT FACTORS WERE APPLIED TO THE RUNOFF CURVE NUMBERS (NRCS CN). FIGURE 4-20 PROVIDES FOR A REDUCTION OF -15. A REDUCTION FACTOR OF -9 WAS USED BASED UPON ANTECEDENT MOISTURE CONDITION I (AMC I) AS A LOWER BOUND.

HYDRAULIC DATA (HEC-RAS)												
	DA	1.2-YR FLOWRATE (CFS)	100-YR FLOWRATE (CFS)	STRUCTURE SIZE & TYPE	SLOPE	1.2-YR HW ALLOWABLE ELEVATION	1.2-YR HW ELEVATION	100-YR HW ELEVATION	1.2-YR OUTLET VELOCITY (FT/SEC)	100-YR OUTLET VELOCITY (FT/SEC)	1.2-YR BYPASS FLOW (CFS)	100-YR BYPASS FLOW (CFS)
EXISTING	DA-1	550	4985	OVERFLOW SECTION	0.74%	N/A	1133.4	1138.0	4.3	4.1	550	4985
PROPOSED	DA-1	550	4985	3 - 7' X 4' X 38' BOX CULVERTS	0.53%	1135.5	1135.5	1140.3	3.4	5.5	0	4435

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DATA SHEET
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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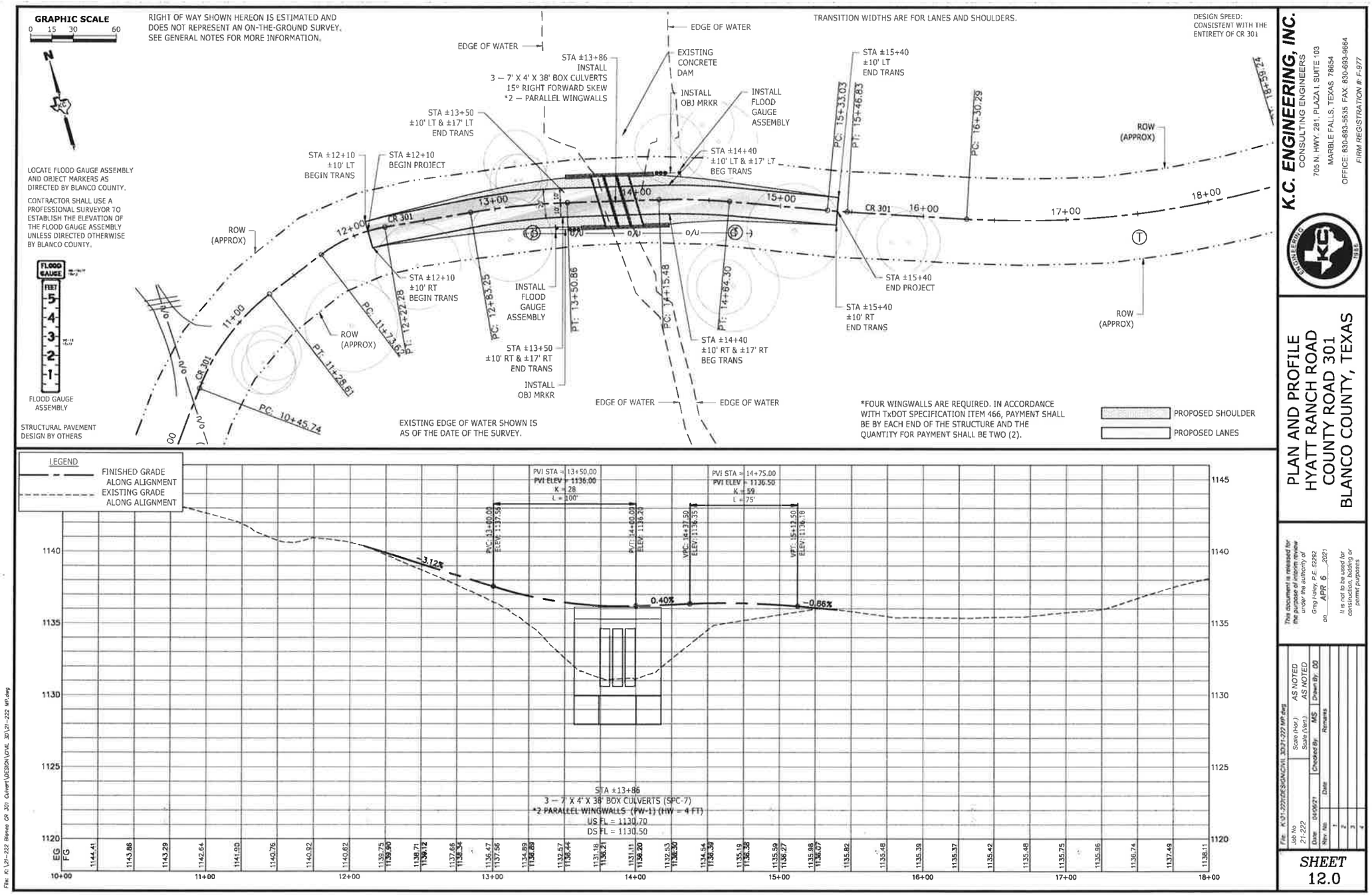

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PLAN AND PROFILE
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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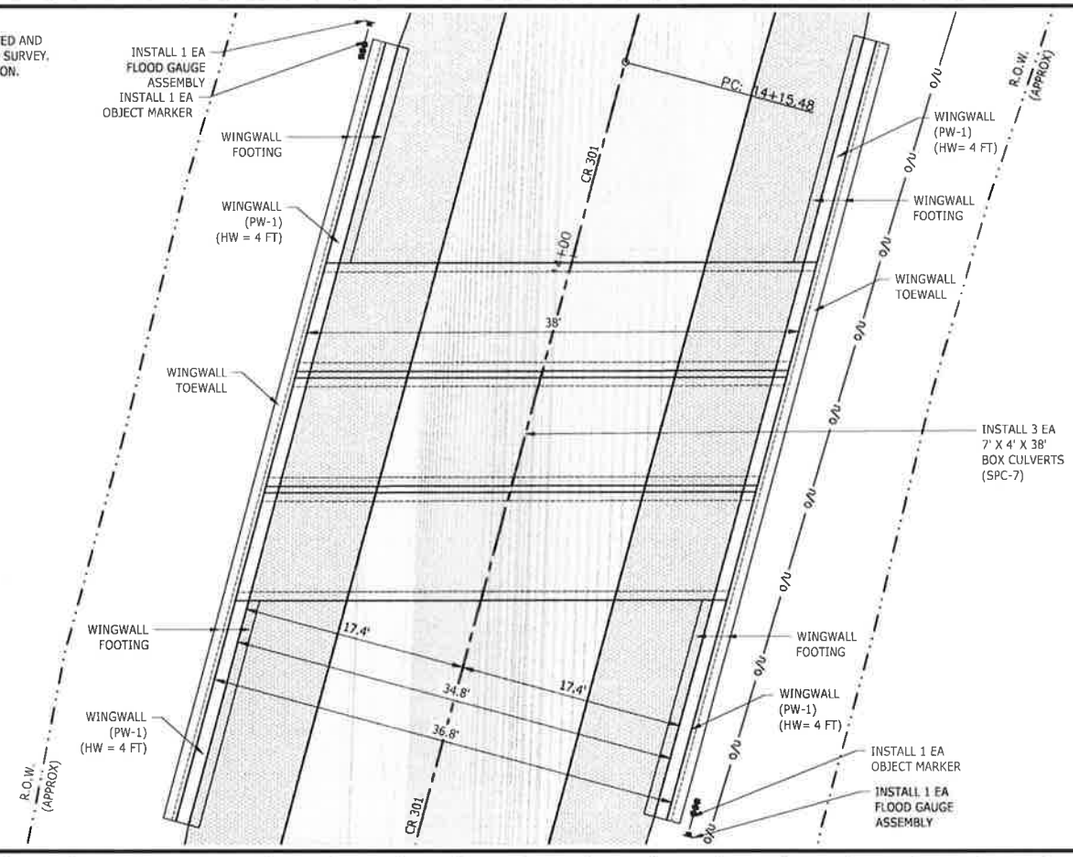
GRAPHIC SCALE

0 5 10

RIGHT OF WAY SHOWN HEREON IS ESTIMATED AND DOES NOT REPRESENT AN ON-THE-GROUND SURVEY. SEE GENERAL NOTES FOR MORE INFORMATION.



PRIOR TO BEGINNING WORK, LOCATE THE BOX CULVERTS AND WINGWALLS FOR REVIEW AND APPROVAL OF BLANCO COUNTY.

PLACEMENT OF BOX CULVERTS AND WINGWALLS SHALL NOT COMMENCE UNTIL BLANCO COUNTY HAS APPROVED THEIR LOCATIONS.

LOCATE FLOOD GAUGE ASSEMBLY AND OBJECT MARKERS AS DIRECTED BY BLANCO COUNTY

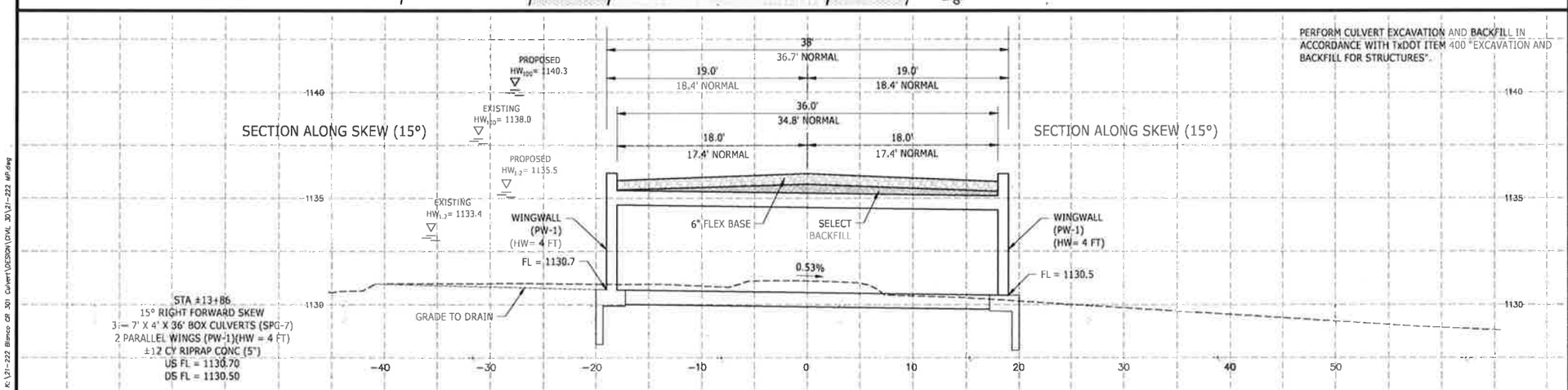
CONTRACTOR SHALL USE A PROFESSIONAL SURVEYOR TO ESTABLISH THE ELEVATION OF THE FLOOD GAUGE ASSEMBLY UNLESS DIRECTED OTHERWISE BY BLANCO COUNTY

FLOOD GAUGE ASSEMBLY

PROPOSED SHOULDER

PROPOSED LANES

FOUR WINGWALLS ARE REQUIRED. IN ACCORDANCE WITH TxDOT SPECIFICATION ITEM 466, PAYMENT SHALL BE BY EACH END OF THE STRUCTURE AND THE QUANTITY FOR PAYMENT SHALL BE TWO (2).



STA ±13+86
15° RIGHT FORWARD SKEW
3 — 7' X 4' X 36' BOX CULVERTS (SPG-7)
2 PARALLEL WINGS (PW-1)(HW = 4 FT)
±12 CY RIPRAP CONC (5")
US FL = 1130.70
DS FL = 1130.50

PERFORM CULVERT EXCAVATION AND BACKFILL IN ACCORDANCE WITH TxDOT ITEM 400 "EXCAVATION AND BACKFILL FOR STRUCTURES".

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CULVERT LAYOUT
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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GRAPHIC SCALE

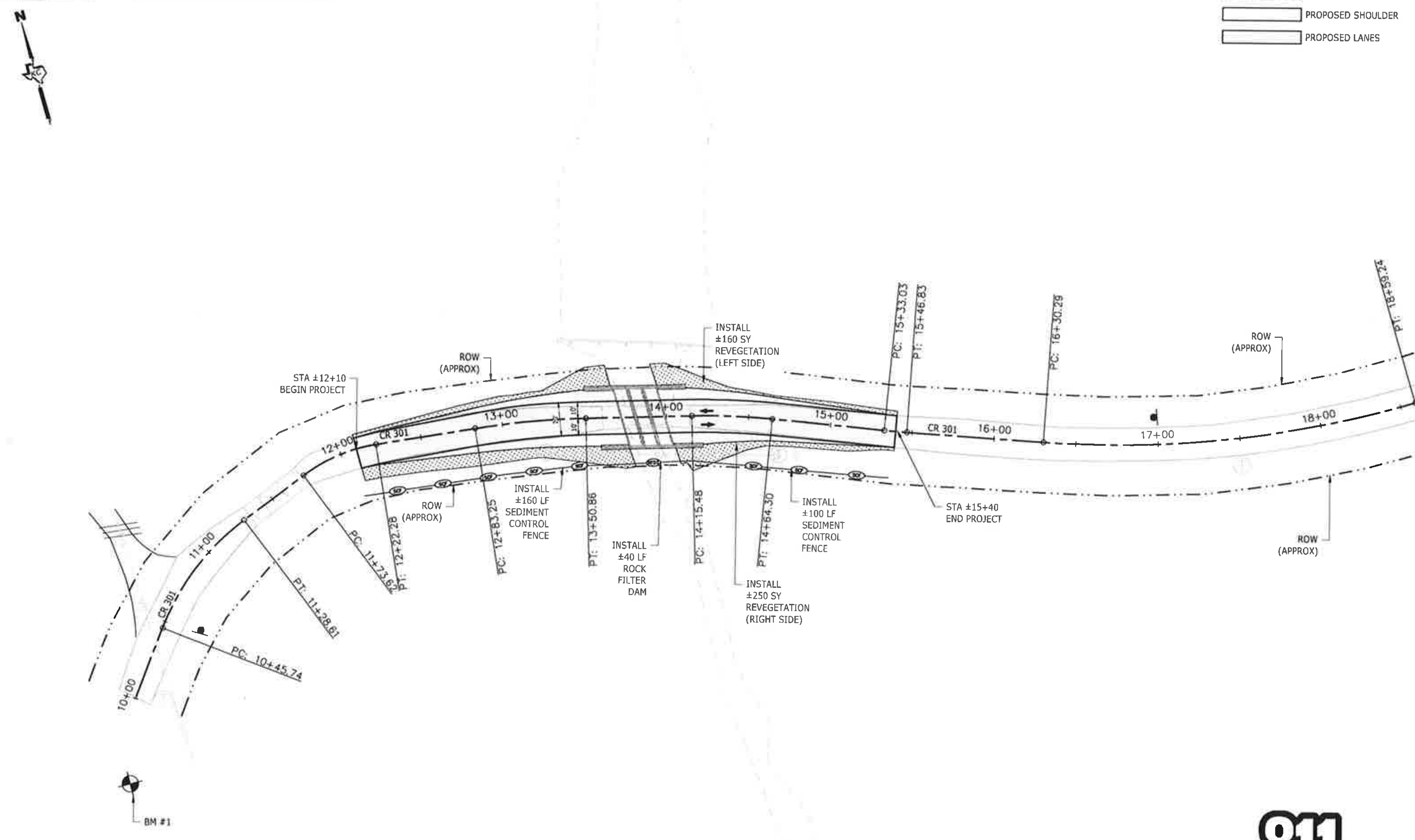
0 15 30 60

RIGHT OF WAY SHOWN HEREON IS ESTIMATED AND DOES NOT REPRESENT AN ON-THE-GROUND SURVEY. SEE GENERAL NOTES FOR MORE INFORMATION.

PROPOSED REVEGETATION

PROPOSED SHOULDER

PROPOSED LANES



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811 Know what's **below.** **Call** before you dig.

EROSION CONTROL PLAN
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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A. GENERAL SITE DATA

1. PROJECT LIMITS: Countywide Cross Culvert Replacement Project

Begin Project Coordinates :	Latitude:	N 30° 20' 08"	Longitude:	W 98° 21' 19"
End Project Coordinates :	Latitude:	N 30° 20' 07"	Longitude:	W 98° 21' 14"

2. PROJECT SITE MAPS:

* Project Location Map: The Title Sheet
* Drainage Patterns: Erosion Control Layout
* Areas Where Soil Disturbance Will Occur: Culvert Cross Sections and Erosion Control Layout Sheets
* Slopes Anticipated After Major Grading or Areas of Soil Disturbance: Culvert Cross Section Sheets
* Location of Erosion and Sediment Controls and Where Temporary or Permanent Stabilization Practices are Expected to be Used: Erosion Control Layout
* Location of Construction Support Activities: To be provided to Williamson County by the contractor
* Surface Waters and Discharge Locations: This Sheet
* Locations of Stormwater Discharges Directly to a Surface Water Body or a MS4: This Sheet
* Vehicle Wash Areas: To be Provided to Williamson County by the contractor
* Designated Points Where Vehicles Will Exit Onto Paved Roads: To be provided to Williamson County by the contractor
* Stormwater Discharge Locations: Erosion Control Layout
* Locations of Pollutant Generating Activities: Erosion Control Layout (Pollutant Generating Activities Associated with Construction Support Activities will be provided by the Primary Operator)
* Project Specific Location(s) (PSL): To be specified in the field during construction and located in the project SW3P file. Reference Item No. 10 below.

3. PROJECT DESCRIPTION:

Cross culvert installation and paving

4. MAJOR SOIL DISTURBING ACTIVITIES:

Grading, Culvert Replacement, Backfill and Topsoil Placement

5. EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER:

Good Condition - 100% Vegetative Cover

6. TOTAL PROJECT AREA: Varies

7. TOTAL AREA TO BE DISTURBED: Varies

8. WEIGHTED RUNOFF COEFFICIENT

Before Construction: Varies
After Construction: Same as before construction

9. NAME OF RECEIVING WATERS:

Unnamed Creek to Cottonwood Creek to Pedernales River
Segment ID: 1414
Impaired: No
Locations Where Stormwater Discharges Directly into Surface Waters or MS4: None

10. PROJECT SW3P File:

For projects disturbing one acre or more, the contractor will maintain a SWP3 file with all pertinent environmental documents and correspondence on-site and provide copies of all pertinent environmental documents and correspondence to Williamson County.

11. POTENTIAL POLLUTANTS AND SOURCES

Potential pollutants are soil from grading operations, culvert placement, flexible base from the dumping and placement operations, and soil from placement of topsoil and seeding. The contractor shall provide a list of other potential pollutants and their sources that could be present but are not listed here. The controls for these pollutants are listed herein. The contractor shall provide a list of construction and waste materials expected to be stored on-site and a description of controls to minimize pollutants from these materials.

12. DESCRIPTION OF CONSTRUCTION ACTIVIES

The project involves the placement of temporary BMPs, scarifying and reshaping the existing pavement, constructing new subgrade, placing flexible base, paving, and the establishment of permanent BMPs.

B. EROSION AND SEDIMENT CONTROLS

1. SOIL STABILIZATION PRACTICES: (Select T = Temporary or P = Permanent, as applicable)

- ___ TEMPORARY VEGETATION
- ___ MULCHING (Hay or Straw)
- ___ BUFFER ZONES
- ___ PLANTING
- P SEEDING
- ___ SODDING
- P PRESERVATION OF NATURAL RESOURCES
- ___ FLEXIBLE CHANNEL LINER
- ___ RIGID CHANNEL LINER
- ___ SOIL RETENTION BLANKET
- ___ COMPOST MANUFACTURED TOPSOIL
- ___ VERTICAL TRACKING
- T & P OTHER:

Disturbed areas on which construction activity has ceased temporarily and will not resume for 14 calendar days shall be stabilized immediately. Disturbed areas where construction activity has ceased permanently shall be stabilized immediately. Immediately is defined as "as soon as practicable but no later than the end of the next work day following the day the earth-disturbing activities have ceased".

2. STRUCTURAL PRACTICES:
(T = Temporary or P = Permanent)

- T SILT FENCES
- ___ EROSION CONTROL 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
- ___ PAVED FLUMES
- T ROCK BEDDING AT CONSTRUCTION EXIT
- ___ TIMBER MATTING AT CONSTRUCTION EXIT
- ___ CHANNEL LINERS
- ___ SEDIMENT TRAPS
- ___ SEDIMENT BASINS
- ___ STORM INLET SEDIMENT TRAP
- ___ STONE OUTLET STRUCTURES
- ___ CURBS AND GUTTERS
- ___ STORM SEWERS
- ___ VELOCITY CONTROL DEVICES
- ___ SLOPE TEXTURING
- ___ OTHER:

NOTES:
The tops of BMPs should not be higher than the roadway elevation so as not to flood the roadway, unless prior approval has been granted by the Owner.

Erosion control measures must be installed and maintained according to the manufacturer's recommendations.

Controls must be developed to minimize the offsite transport of litter, construction debris, and construction materials.

Preserve existing vegetation to the greatest extent possible.

3. STORM WATER MANAGEMENT:

A. 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.

B. Non-paved areas and ditches shall be stabilized with a permanent vegetative cover.

C. Minimize off-site vehicle tracking of sediments and the generation of dust. Use Rock Bedding at Construction Exits to control off-site vehicle tracking and use sprinkling to control dust.

4. STORM WATER MANAGEMENT ACTIVITIES: (Sequence of Construction)

Phase 1: Install Silt Fence and Rock Filter Dams
Perform Routine Inspections of Temporary Erosion Control Devices and Repair as Required
Phase 2: Place Topsoil, Seeding, and Vegetative Watering
Perform Routine Inspections of Temporary Erosion Control Devices and Repair as Required
Phase 3: After 80% Permanent Vegetative Cover, Remove Temporary Erosion Control Devices

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, but not limited to, non-polluted ground water, spring water, foundation or footing drain water, water used for dust control or pavement washing and vehicle washwater containing no detergents.

6. DATES

The activities (see Description of Construction Activities) are anticipated to commence in June 2021. It is anticipated that the activities will cease in August 2021. Although these dates are subject to change, the overall time period for completion of the project is reasonable. The activities should occur in the sequence described.

7. RESPONSIBILITIES

The contractor, as Primary Operator, is responsible for the installation and maintenance of stormwater control measures prior to final stabilization of the site and prior to submission of a Notice of Termination (NOT).

C. OTHER REQUIREMENTS & PRACTICES

1. MAINTENANCE:

Maintain all erosion and sediment controls in good working order. Perform any necessary cleaning/repairs/replacements at the earliest possible date prior to next rain event, but no later than 7 calendar days. Ensure the surrounding ground has dried sufficiently to prevent damage from equipment. "Too wet" is the only reason for not adhering to time frames described. When construction activities permanently or temporarily cease and are not expected to resume for 14 or more days on a disturbed portion of the site, stabilization measures must be initiated immediately.

2. INSPECTION:

An inspection and maintenance report, signed by the County and the contractor, will be filed for each inspection. Revise/clean/repair/replace each BMP control device in accordance with the current field inspection and maintenance report and Item 1 (maintenance) above.

3. WASTE MATERIALS:

On a daily basis, or as may be directed by the County, 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:

All sanitary waste will be collected from portable units as necessary or as required by local regulation by a licensed sanitary waste management contractor.

6. CONSTRUCTION VEHICLE TRACKING:

On a regular basis, or as may be directed by the County, dampen haul roads for dust control and stabilize construction entrances/exits. Provide for a motorized broom or vacuum type sweeper to be available on a daily basis, or as may be directed, to remove sediment from paved roadways abutting or traversing the project site.

7. MANAGEMENT PRACTICES:

A. Construct disposal areas, stockpiles, haul roads and PSL's 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, water body or streambed.

B. Locate construction staging areas, vehicle maintenance and PSL's areas in a manner to minimize the runoff of pollutants.

C. 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.

D. 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.

E. Procedures and/or practices should be taken to control dust.

F. Sediment to be removed from roadways daily or when work begins after weather events if construction activities have ceased due to weather event.

G. The Contractor will be required to contain wash water from concrete trucks in a manner that will prevent same from entering any waterway.

H. The Contractor is responsible for insuring that all Subcontractors are aware and comply with all components of the Temporary Erosion Control Plans.

I. The Contractor shall be considered the Primary Operator and have day-to-day operational control over the activities and be responsible for the implementation of BMPs and be responsible for the construction plans and specifications (including the authority to make modifications to the specifications) to the extent necessary to comply with the TCEQ TPDES General Permit TXR150000. This authorization applies to the limits of this project only (as defined herein).

J. The Contractor shall post the TCEQ Site Notice at a conspicuous location and it must contain, at a minimum: 1) the site-specific TPDES authorization number; 2) the operator name, contact name, and contact phone number; 3) a brief description of the project; and 4) the location of the SWP3.

K. The Contractor shall attach a copy of the TCEQ TPDES General Permit No. TXR150000 to this plan.

L. The Contractor shall maintain a permanent record of the dates when major grading activities occur, when the construction activities temporarily or permanently cease on any portion of the site, and the dates when stabilization measures are initiated.

M. The Contractor shall revise or update the SWP3 within seven days of any substantial change that may have an effect on discharge or when site inspections indicate the existing SWP3 is proving ineffective in eliminating or significantly minimizing pollutants in discharges.

N. The Contractor shall ensure compliance with all provisions of the TPDES General Permit TXR150000.

STORM WATER POLLUTION PREVENTION PLAN (SWP3)

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REGISTRATION # F-000977

SWPPP
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

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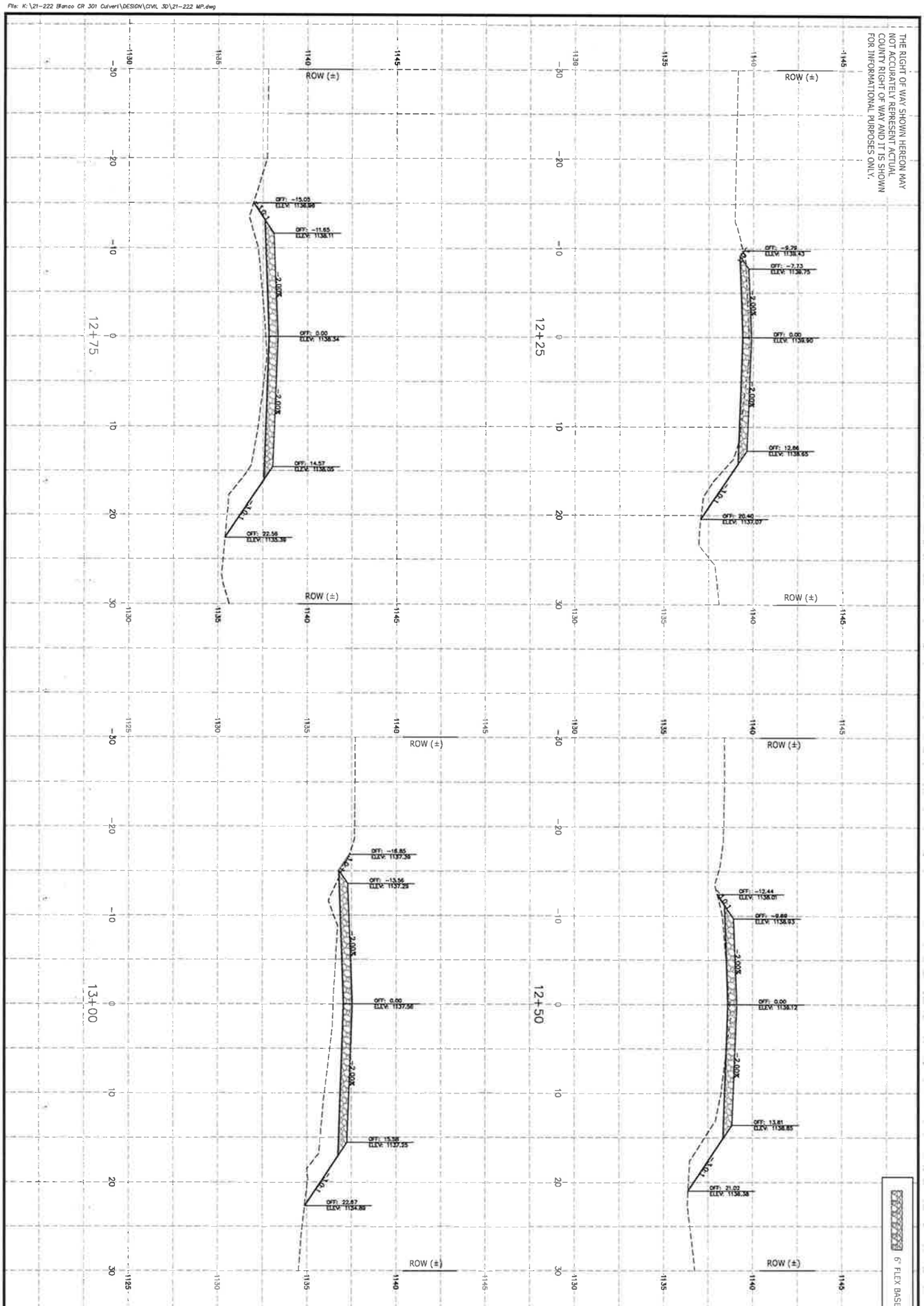

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CROSS SECTONS
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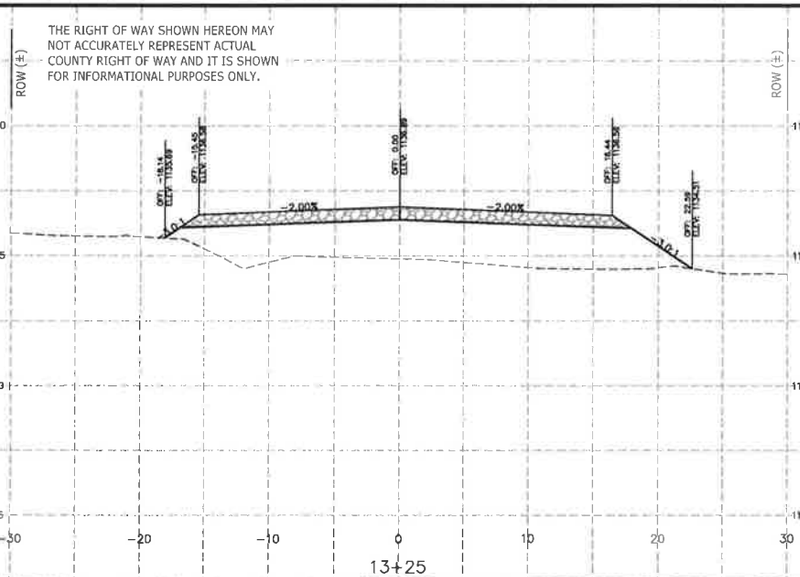
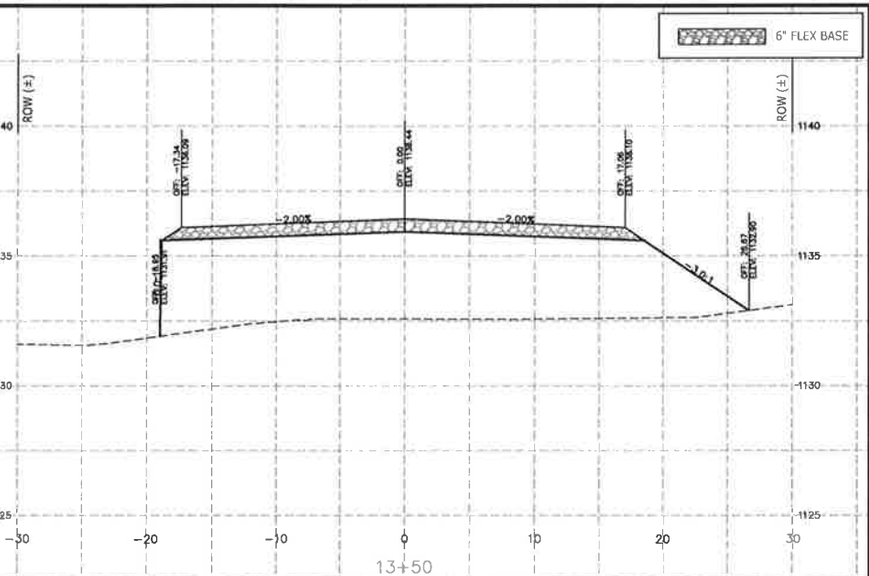
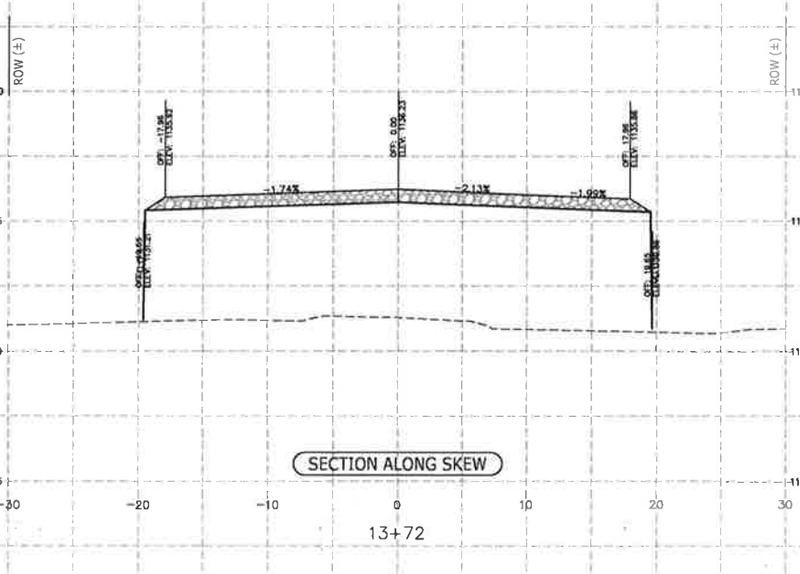
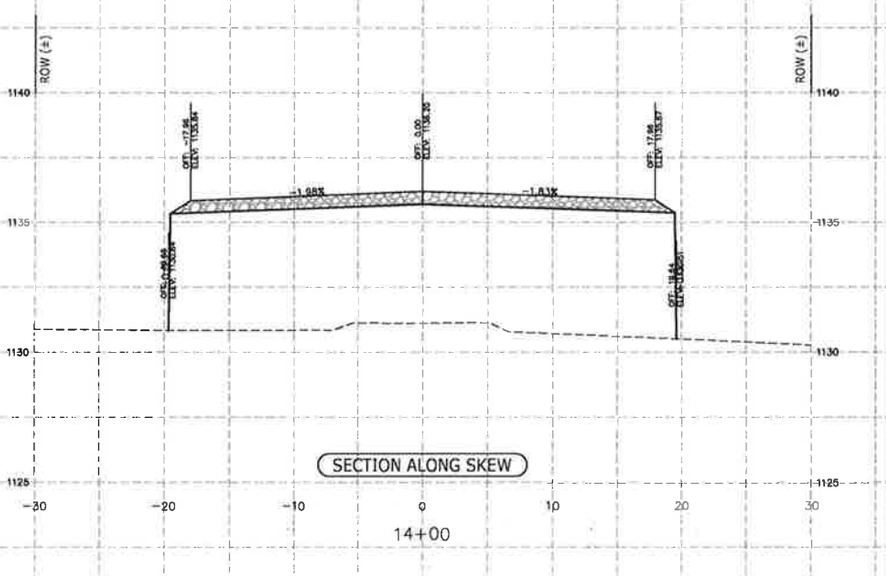
THE RIGHT OF WAY SHOWN HEREON MAY NOT ACCURATELY REPRESENT ACTUAL COUNTY RIGHT OF WAY AND IT IS SHOWN FOR INFORMATIONAL PURPOSES ONLY.









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CROSS SECTIONS
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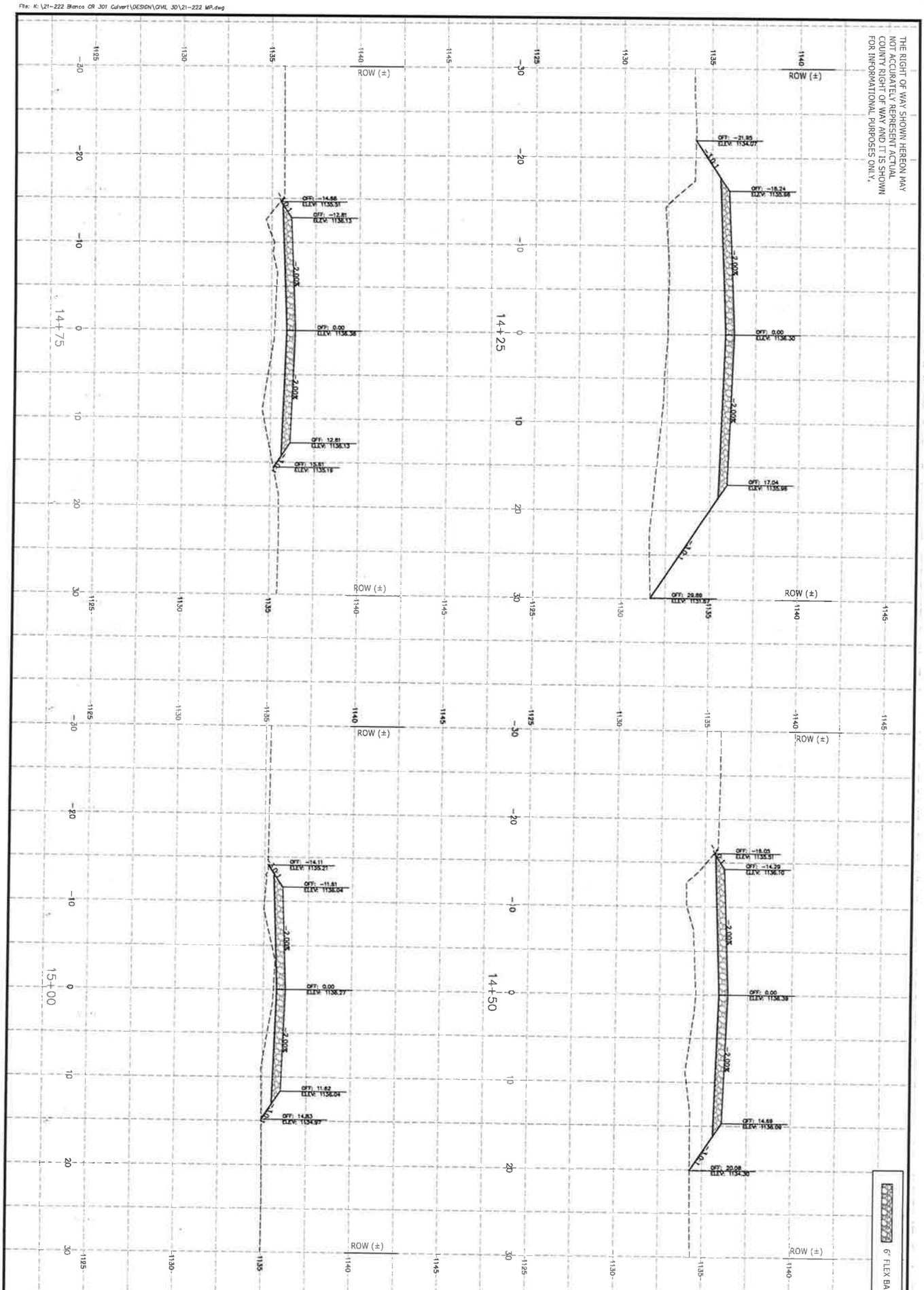

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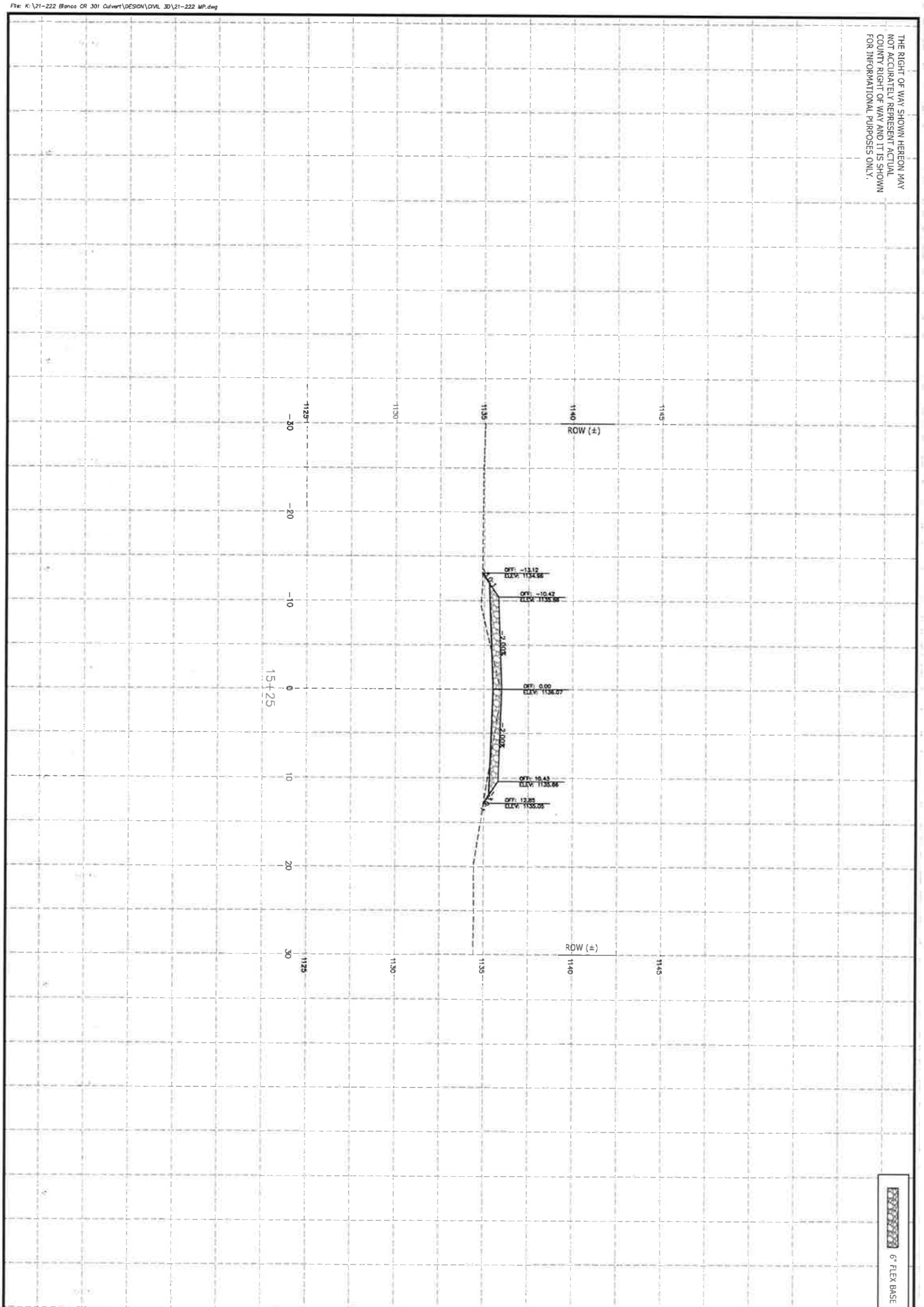
File: K:\21-222 Blanco CR 301 Culvert\DESIGN\CIVIL 3D\21-222 MP.dwg

THE RIGHT OF WAY SHOWN HEREON MAY NOT ACCURATELY REPRESENT ACTUAL COUNTY RIGHT OF WAY AND IT IS SHOWN FOR INFORMATIONAL PURPOSES ONLY.



SHEET 16.3

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Job No.	Scale (Hor.):	AS NOTED
21-222	Scale (Vert.):	AS NOTED
Date: 04/06/21	Checked By: MS	Drawn By: GD

Rev. No	Date	Remarks
1		
2		
3		
4		

This document is released for the purpose of interim review under the authority of Greg Haley, P.E. 52292 on APR 6 ,2021

It is not to be used for construction, bidding or permit purposes

CROSS SECTONS
HYATT RANCH ROAD
COUNTY ROAD 301
BLANCO COUNTY, TEXAS

K.C. ENGINEERING, INC.
CONSULTING ENGINEERS
705 N. HWY. 281, PLAZA I, SUITE 103
MARBLE FALLS, TEXAS 78654
OFFICE: 830-693-5635 FAX: 830-693-9664
FIRM REGISTRATION #: F-977

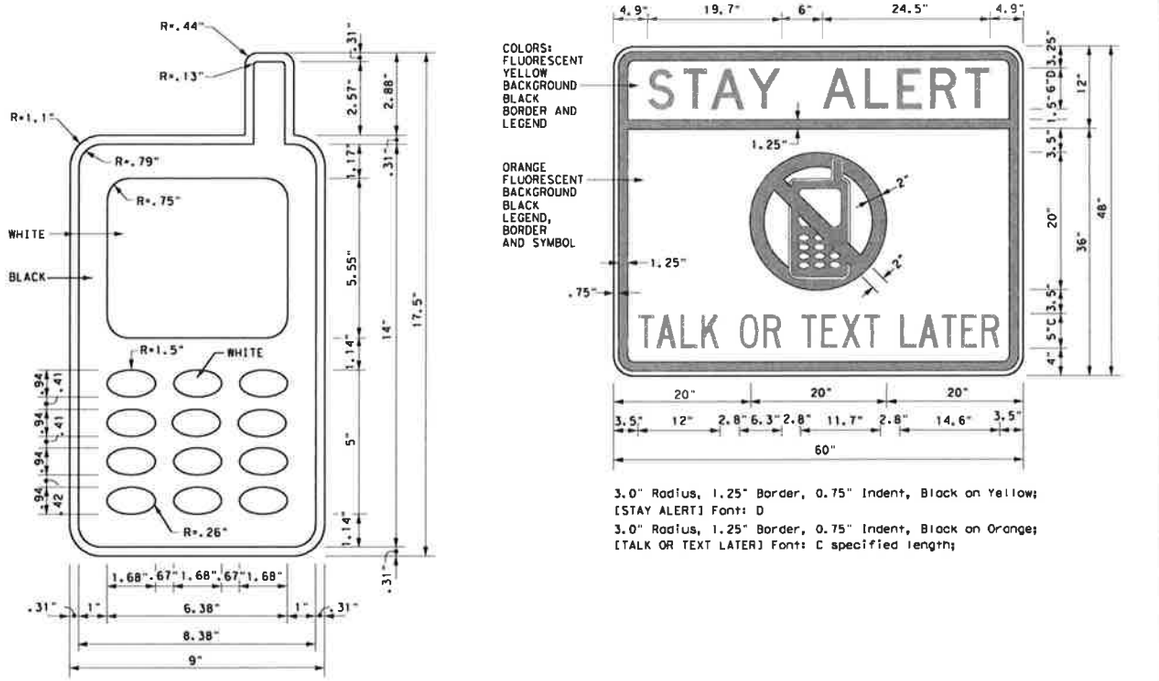
DATE:
FILE:

BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. The development and design of the Traffic Control Plan (TCP) is the responsibility of the Engineer.
3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.
4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.
5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.
6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.
7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.
8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.
9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.
10. As shown on BC(2), the OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER (see Sign Detail G20-10T) and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. However, the TRAFFIC FINES DOUBLE sign will not be required on projects consisting solely of mobile operation work, such as striping or milling edgeline rumble strips. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits.
11. Except for devices required by Note 10, traffic control devices should be in place only while work is actually in progress or a definite need exists.
12. The Engineer has the final decision on the location of all traffic control devices.
13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY APPAREL NOTES:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.



3.0" Radius, 1.25" Border, 0.75" Indent, Black on Yellow; [STAY ALERT] Font: D
3.0" Radius, 1.25" Border, 0.75" Indent, Black on Orange; [TALK OR TEXT LATER] Font: C specified length;

SIGN DETAIL (G20-10T)

Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be found on-line at the web address given below or by contacting:

Texas Department of Transportation
Traffic Operations Division - TE
Phone (512) 416-3118

THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT http://www.txdot.gov
COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)
DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)
MATERIAL PRODUCER LIST (MPL)
ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"
STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)
TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)
TRAFFIC ENGINEERING STANDARD SHEETS

Texas Department of Transportation | Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-14

FILE: bc-14.dgn	DW: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-03 5-10 8-14 9-07 7-13	DIST	COUNTY		SHEET NO. 17.0

DATE:
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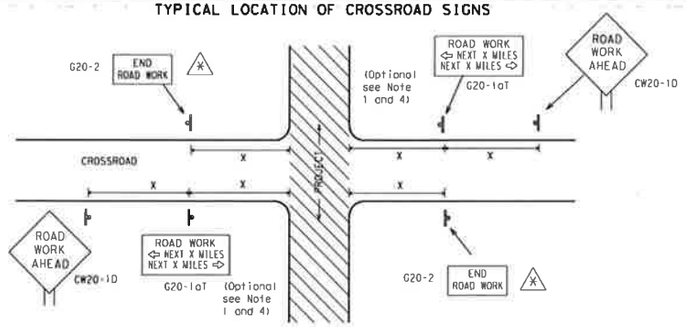
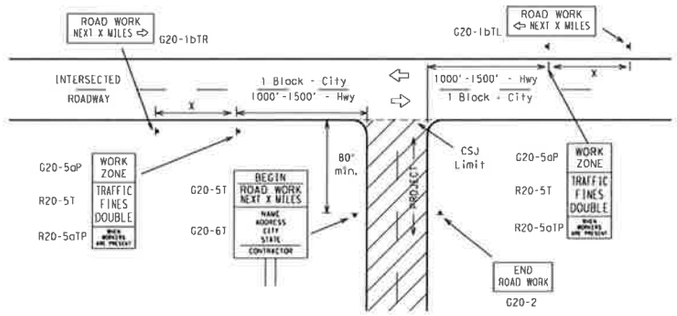
TYPICAL LOCATION OF CROSSROAD SIGNS



(*) May be mounted on back of "ROAD WORK AHEAD" (CW20-1D) sign with approval of Engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D)sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK"(G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES"(G20-1aT)sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection the Contractor shall place the "CONTRACTOR NAME" (G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow(G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR)" signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING[1,5,6]

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20[4] CW21 CW22 CW23 CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign Spacing "X" Δ
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500[2]
60	600[2]
65	700[2]
70	800[2]
75	900[2]
80	1000[2]
*	*[3]

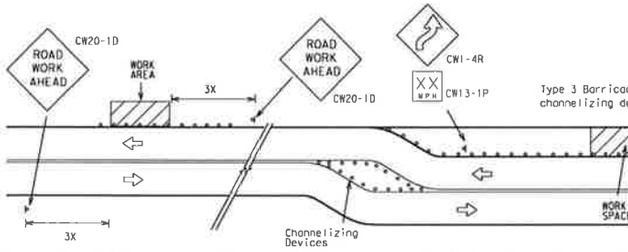
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

Δ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

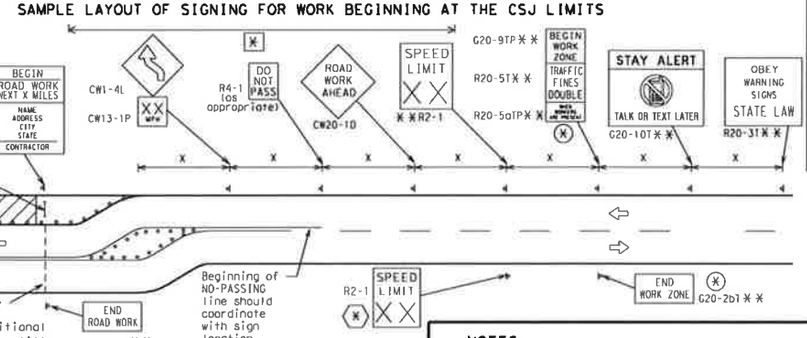
1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D)signs may be used on low volume crossroads at the discretion of the Engineer. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS

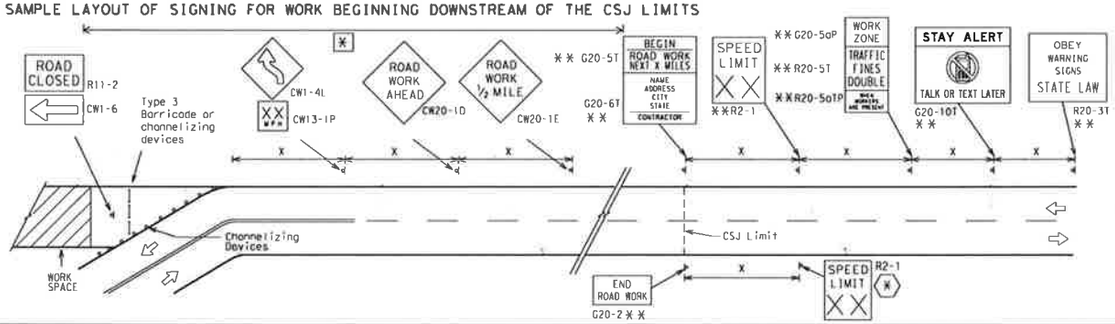


When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD" (CW20-1D)signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS



SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES" (G20-5T)sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

(*) The "BEGIN WORK ZONE" (G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

* * Required CSJ Limit signing. See Note 10 on BC(1). TRAFFIC FINES DOUBLE signs will not be required on projects consisting solely of mobile operations work.

(*) Area for placement of "ROAD WORK AHEAD" (CW20-1D)sign and other signs or devices as called for on the Traffic Control Plan.

(*) Contractor will install a regulatory speed limit sign at the end of the work zone.

LEGEND

⟼	Type 3 Barricade
○ ○ ○	Channelizing Devices
▬	Sign
X	See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

SHEET 2 OF 12

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-14

FILE: bc-14.dgn	DW: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS 9-07 8-14 7-13	DIST	COUNTY		SHEET NO. 17.1

56

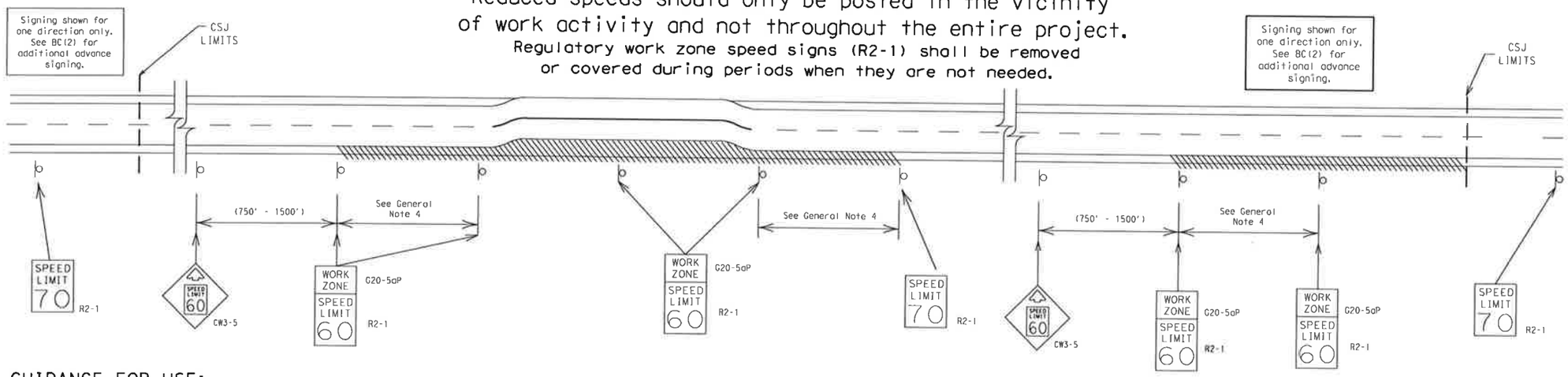
DATE:
FILE:

TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project.

Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

a) rough road or damaged pavement surface
b) substantial alteration of roadway geometrics (diversions)
c) construction detours
d) grade
e) width
f) other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the travelled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.
(See Removing or Covering on BC(4)).

GENERAL NOTES

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:
   40 mph and greater 0.2 to 2 miles
   35 mph and less 0.2 to 1 mile
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, erection and maintenance of the "ADVANCE SPEED LIMIT" (CW3-5) sign, "WORK ZONE" (G20-5aP) plaque and the "SPEED LIMIT" (R2-1) signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Low enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
10. For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form #1204 in the TxDOT e-form system.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC(3)-14

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REVISIONS 9-07 8-14 7-13	DIST	COUNTY		SHEET NO. 17.2

DATE:
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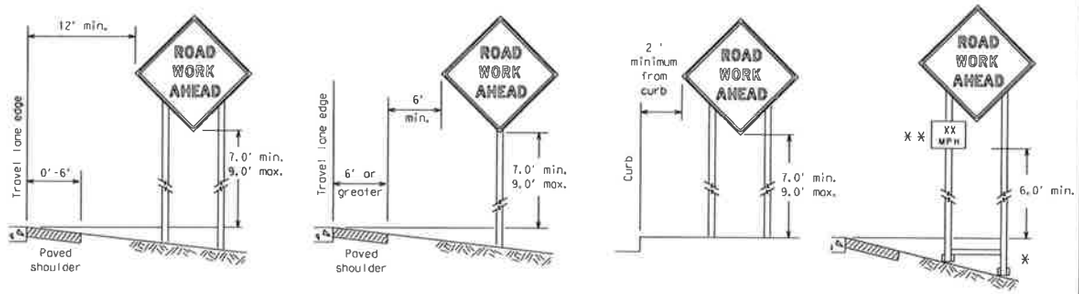
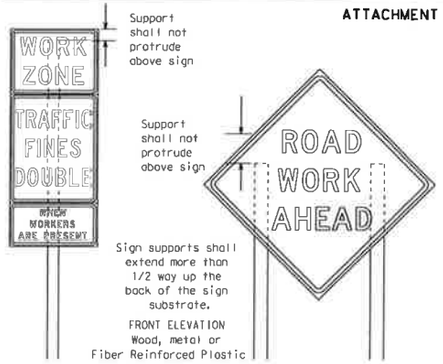
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



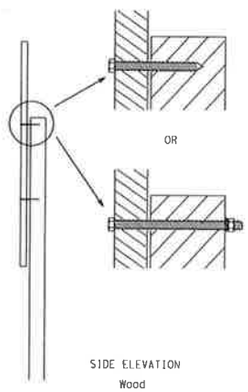
* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS



Splicing embedded perforated square metal tubing in order to extend past height will only be allowed when the splice is made using four bolts, two above and two below the spice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

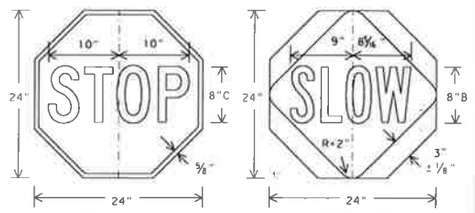


Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24" as detailed below.
2. When used at night, the STOP/SLOW paddle shall be retroreflectorized.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC sheets or the CWZTCD. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
5. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
6. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD). The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
7. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
8. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
9. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type B_{FL} or Type C_{FL}, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

1. Flags may be used to draw attention to warning signs. When used the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

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Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-14

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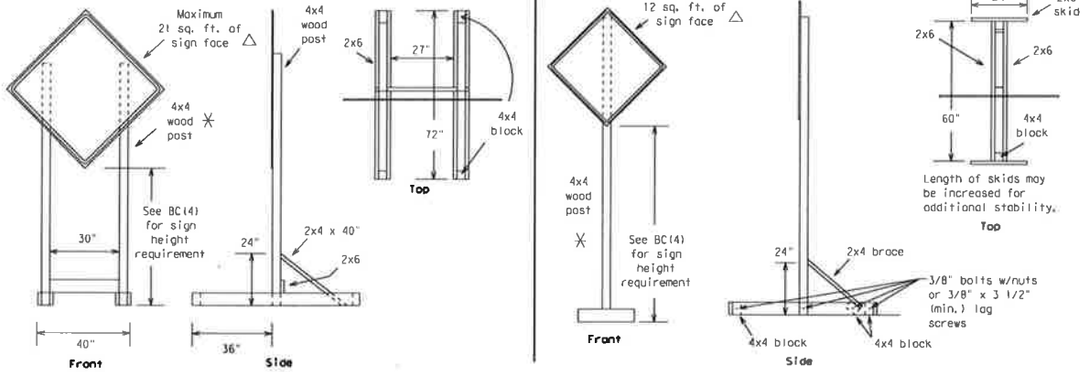
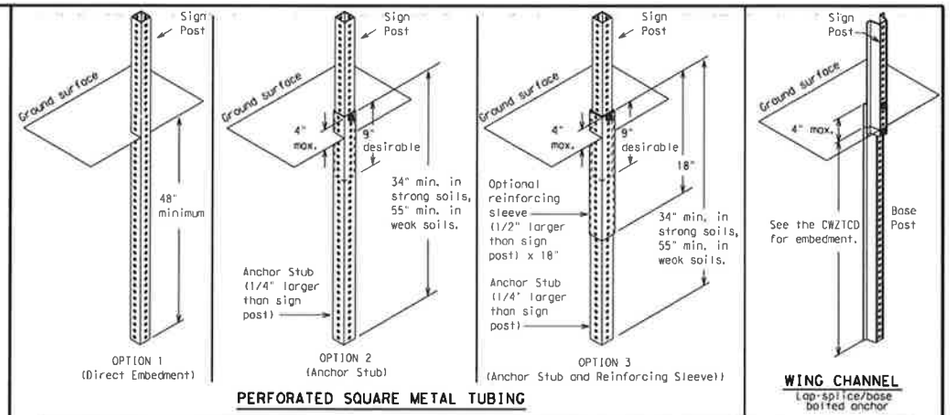


SKID MOUNTED WOOD SIGN SUPPORTS

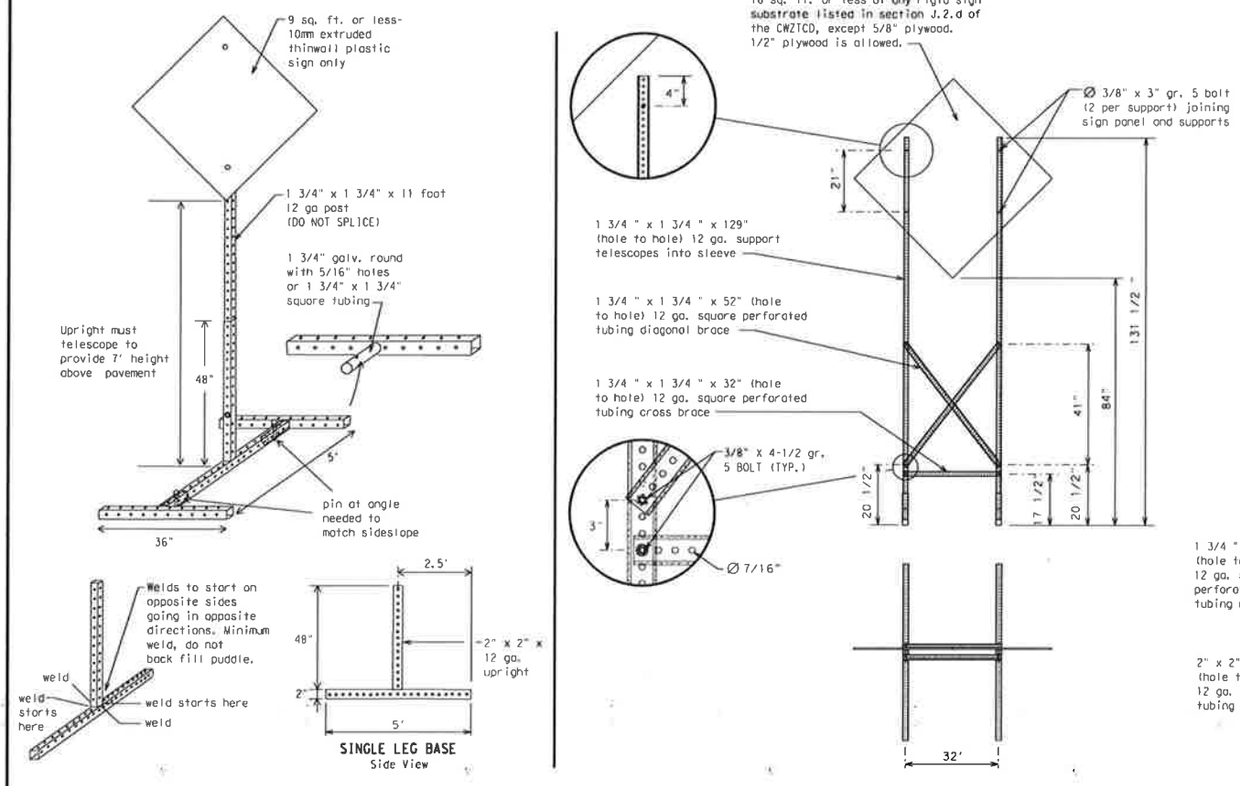
LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS □



PERFORATED SQUARE METAL TUBING

GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support.
The maximum sign square footage shall adhere to the manufacturer's recommendation.
Two post installations can be used for larger signs.



Nominal Post Size	Number of Posts	Maximum Sq. feet of Sign Face	Minimum Soil Embedment	Drilled Hole(s) Required
4 x 4	1	12	36"	NO
4 x 4	2	21	36"	NO
4 x 6	1	21	36"	YES
4 x 6	2	36	36"	YES

WOOD POST SYSTEM FOR GROUND MOUNTED SIGN SUPPORTS

WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).

OTHER DESIGNS

MORE DETAILS OF APPROVED LONG/INTERMEDIATE AND SHORT TERM SUPPORTS CAN BE FOUND ON THE CWZTCD LIST. SEE BC(1) FOR WEBSITE LOCATION.

GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
3. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

□ See BC(4) for definition of "Work Duration."

✳ Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.

△ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

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Texas Department of Transportation | Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-14

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WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD
Alternate	ALT
Avenue	AVE
Best Route	BEST RTE
Boulevard	BLVD
Bridge	BRDG
Cannot	CANT
Center	CTR
Construction Ahead	CONST AHD
CROSSING	XING
Detour Route	DETOUR RTE
Do Not	DONT
East	E
Eastbound	(route) E
Emergency	EMER
Emergency Vehicle	EMER VEH
Entrance, Enter	ENT
Express Lane	EXP LN
Expressway	EXPWY
XXXX Feet	XXXX FT
Fog Ahead	FOG AHD
Freeway	FRWY, FWY
Freeway Blocked	FWY BLKD
Friday	FRI
Hazardous Driving	HAZ DRIVING
Hazardous Material	HAZMAT
High-Occupancy	HOV
Vehicle Highway	HWY
Hour(s)	HR, HRS
Information	INFO
It Is	ITS
Junction	JCT
Left	LFT
Left Lane	LFT LN
Lane Closed	LN CLOSED
Lower Level	LWR LEVEL
Maintenance	MAINT

WORD OR PHRASE	ABBREVIATION
Major	MAJ
Miles	MI
Miles Per Hour	MPH
Minor	MNR
Monday	MON
Normal	NORM
North	N
Northbound	(route) N
Parking	PKING
Road	RD
Right Lane	RT LN
Saturday	SAT
Service Road	SERV RD
Shoulder	SHLDR
Slippery	SLIP
South	S
Southbound	(route) S
Speed	SPD
Street	ST
Sunday	SUN
Telephone	PHONE
Temporary	TEMP
Thursday	THURS
To Downtown	TO DWNTN
Traffic	TRAF
Travelers	TRVLRS
Tuesday	TUES
Time Minutes	TIME MIN
Upper Level	UPR LEVEL
Vehicles (s)	VEH, VEHS
Warning	WARN
Wednesday	WED
Weight Limit	WT LIMIT
West	W
Westbound	(route) W
Wet Pavement	WET PVMT
Will Not	WONT

Roadway designation = IH-number, US-number, SH-number, FM-number

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

FREEWAY CLOSED X MILE	FRONTAGE ROAD CLOSED	ROADWORK XXX FT	ROAD REPAIRS XXXX FT
ROAD CLOSED AT SH XXX	SHOULDER CLOSED XXX FT	FLAGGER XXXX FT	LANE NARROWS XXXX FT
ROAD CLSD AT FM XXXX	RIGHT LN CLOSED XXX FT	RIGHT LN NARROWS XXXX FT	TWO-WAY TRAFFIC XX MILE
RIGHT X LANES CLOSED	RIGHT X LANES OPEN	MERGING TRAFFIC XXXX FT	CONST TRAFFIC XXX FT
CENTER LANE CLOSED	DAYTIME LANE CLOSURES	LOOSE GRAVEL XXXX FT	UNEVEN LANES XXXX FT
NIGHT LANE CLOSURES	I-XX SOUTH EXIT CLOSED	DETOUR X MILE	ROUGH ROAD XXXX FT
VARIOUS LANES CLOSED	EXIT XXX CLOSED X MILE	ROADWORK PAST SH XXXX	ROADWORK NEXT FRI-SUN
EXIT CLOSED	RIGHT LN TO BE CLOSED	BUMP XXXX FT	US XXX EXIT X MILES
MALL DRIVEWAY CLOSED	X LANES CLOSED TUE - FRI	TRAFFIC SIGNAL XXXX FT	LANES SHIFT *
XXXXXXXX BLVD CLOSED			

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List		Location List	Warning List	** Advance Notice List
MERGE RIGHT	FORM X LINES RIGHT	AT FM XXXX	SPEED LIMIT XX MPH	TUE-FRI XX AM- X PM
DETOUR NEXT X EXITS	USE XXXXX RD EXIT	BEFORE RAILROAD CROSSING	MAXIMUM SPEED XX MPH	APR XX-XX X PM-X AM
USE EXIT XXX	USE EXIT I-XX NORTH	NEXT X MILES	MINIMUM SPEED XX MPH	BEGINS MONDAY
STAY ON US XXX SOUTH	USE I-XX E TO I-XX N	PAST US XXX EXIT	ADVISORY SPEED XX MPH	BEGINS MAY XX
TRUCKS USE US XXX N	WATCH FOR TRUCKS	XXXXXXX TO XXXXXXX	RIGHT LANE EXIT	MAY X-X XX PM - XX AM
WATCH FOR TRUCKS	EXPECT DELAYS	US XXX TO FM XXXX	USE CAUTION	NEXT FRI-SUN
EXPECT DELAYS	PREPARE TO STOP		DRIVE SAFELY	XX AM TO XX PM
REDUCE SPEED XXX FT	END SHOULDER USE		DRIVE WITH CARE	NEXT TUE AUG XX
USE OTHER ROUTES	WATCH FOR WORKERS			TONIGHT XX PM- XX AM
STAY IN LANE *				

** See Application Guidelines Note 6.

APPLICATION GUIDELINES

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limited to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work.

WORDING ALTERNATIVES

1. The words RIGHT, LEFT and ALL can be interchanged as appropriate.
2. Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
3. EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
4. Highway names and numbers replaced as appropriate.
5. ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
6. AHEAD may be used instead of distances if necessary.
7. FT and MI, MILE and MILES interchanged as appropriate.
8. AT, BEFORE and PAST interchanged as needed.
9. Distances or AHEAD can be eliminated from the message if a location phase is used.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS, WHEN EXPOSED TO ONE DIRECTION OF TRAFFIC. WHEN EXPOSED TO TWO WAY TRAFFIC, THE FOUR DRUMS SHOULD BE PLACED WITH ONE DRUM AT EACH OF THE FOUR CORNERS OF THE UNIT.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the "Flagger Symbol" (CW20-7) are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow board provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

BC(6)-14

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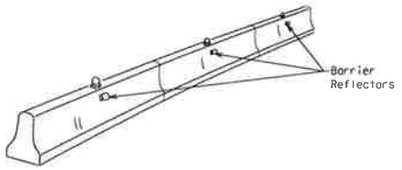
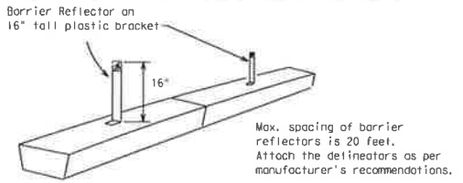
1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.

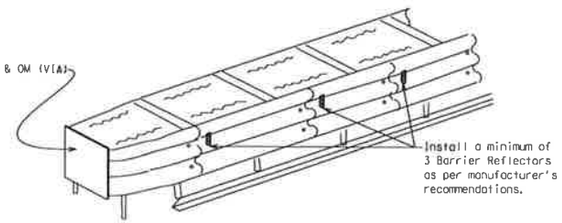


CONCRETE TRAFFIC BARRIER (CTB)

3. Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
4. Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional)while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.



LOW PROFILE CONCRETE BARRIER (LPCB)

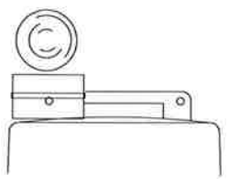


DELINEATION OF END TREATMENTS

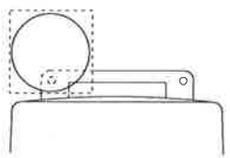
END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet crashworthy standards as defined in the National Cooperative Highway Research Report 350. Refer to the CWZTCD List for approved end treatments and manufacturers.

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS



Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



Warning reflector may be round or square. Must have a yellow reflective surface area of at least 30 square inches.

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B_{FL} or C_{FL} Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
4. Type C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
8. The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

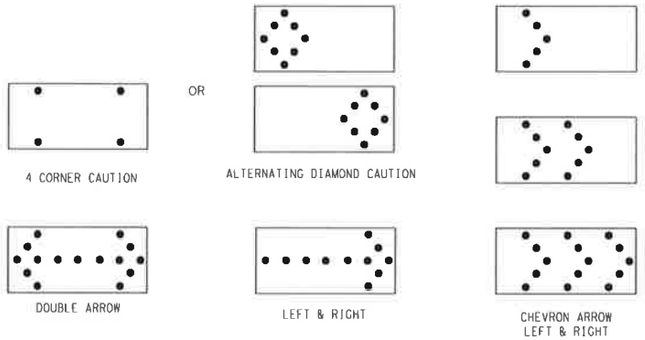
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
4. Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

1. A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
2. The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
6. The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

1. The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
2. Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
3. The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
4. The Flashing Arrow Board should be able to display the following symbols:



5. The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
6. The straight line caution display is NOT ALLOWED.
7. The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
8. Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential Chevron display may be used during daylight operations.
11. The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
13. A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
14. Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

REQUIREMENTS			
TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

ATTENTION
Flashing Arrow Boards shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

FLASHING ARROW BOARDS

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the National Cooperative Highway Research Report No. 350 (NCHRP 350) or the Manual for Assessing Safety Hardware (MASH).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the CWZTCD for a list of approved TMAs.
4. TMAs are required on freeways unless otherwise noted in the plans.
5. A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
6. The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is on extended distance from the TMA.

SHEET 7 OF 12

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR

BC(7)-14

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GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

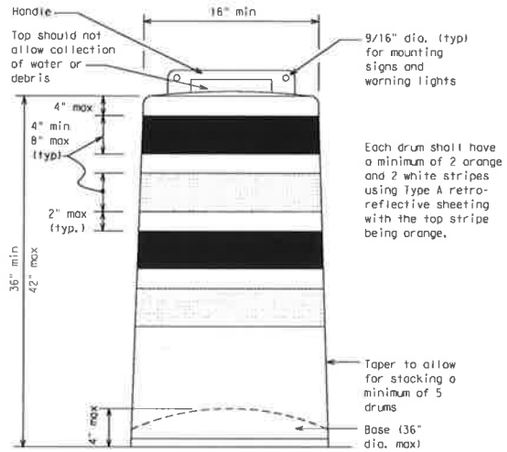
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

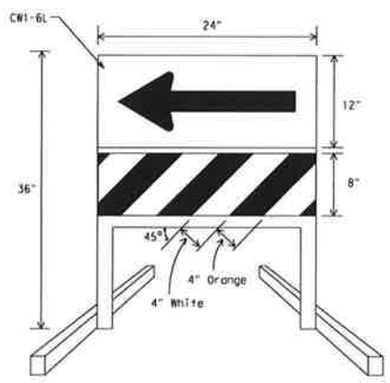
RETROREFLECTIVE SHEETING

1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.

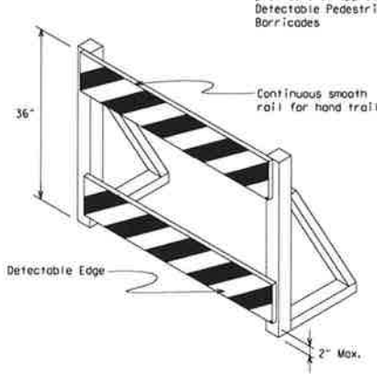




DIRECTION INDICATOR BARRICADE

1. The Direction Indicator Barricade may be used in tapers, transitions, and other areas where specific directional guidance to drivers is necessary.
2. If used, the Direction Indicator Barricade should be used in series to direct the driver through the transition and into the intended travel lane.
3. The Direction Indicator Barricade shall consist of One-Direction Large Arrow (CW1-6) sign in the size shown with a black arrow on a background of Type B_{FL} or Type C_{FL} Orange retroreflective sheeting above a rail with Type A retroreflective sheeting in alternating 4" white and orange stripes sloping downward at an angle of 45 degrees in the direction road users are to pass. Sheeting types shall be as per DMS 8300.
4. Double arrows on the Direction Indicator Barricade will not be allowed.
5. Approved manufacturers are shown on the CWZTCD List. Ballast shall be as approved by the manufacturers instructions.

This detail is not intended for fabrication. See note 3 and the CWZTCD list for providers of approved Detectable Pedestrian Barricades



DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a device that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades may use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.

18" x 24" Sign (Maximum Sign Dimension) Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer

12" x 24" Vertical Panel mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-14

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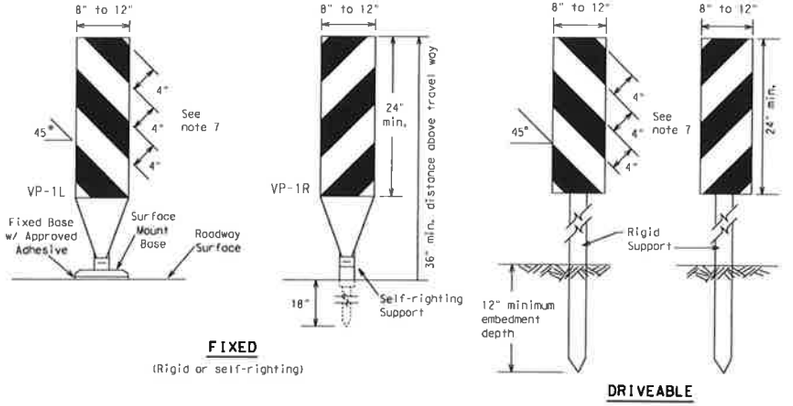
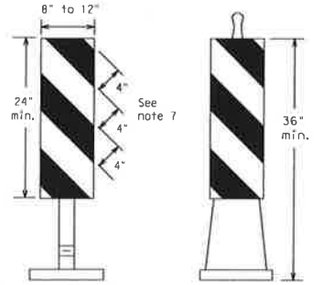


FIXED
(Rigid or self-righting)

DRIVEABLE

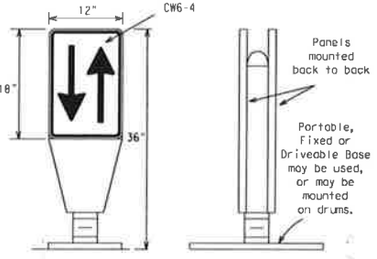


(Rigid or self-righting)

PORTABLE

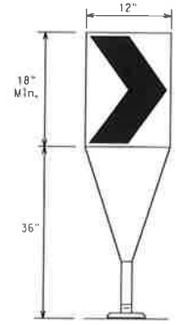
1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual Appendix B "Treatment of Pavement Drop-offs in Work Zones" for additional guidelines on the use of VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.

VERTICAL PANELS (VPs)



1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with 42" cones or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)



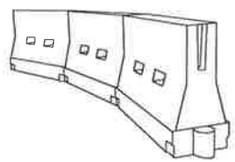
Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

CHEVRONS

GENERAL NOTES

1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.



LONGITUDINAL CHANNELIZING DEVICES (LCD)

1. LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
2. LCDs may be used instead of a line of cones or drums.
3. LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
5. LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
6. LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10) placed near the top of the LCD along the full length of the device.

WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate NCHRP 350 crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'
35		205'	225'	245'	35'	70'
40		265'	295'	320'	40'	80'
45	L=WS	450'	495'	540'	45'	90'
50		500'	550'	600'	50'	100'
55		550'	605'	660'	55'	110'
60		600'	660'	720'	60'	120'
65		650'	715'	780'	65'	130'
70		700'	770'	840'	70'	140'
75		750'	825'	900'	75'	150'
80		800'	880'	960'	80'	160'

** Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS

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BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

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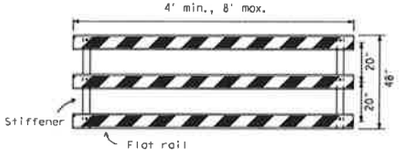
TYPE 3 BARRICADES

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials used in the construction of Type 3 Barricades.
2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.

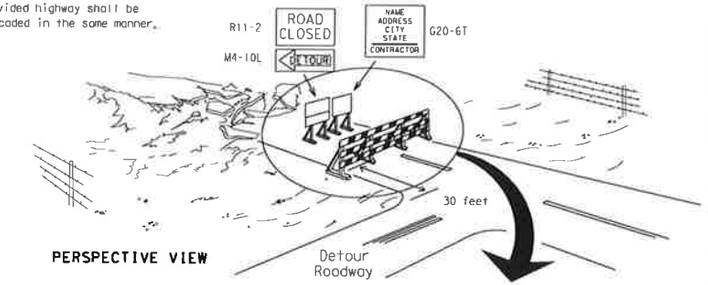
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

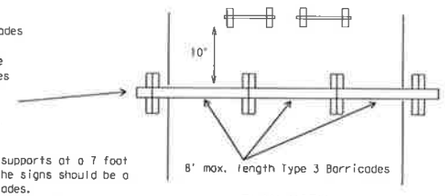
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

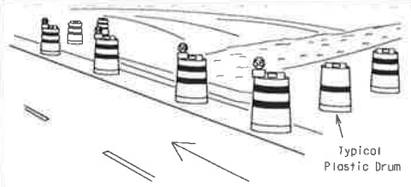
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

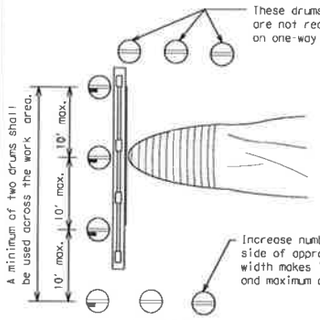
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

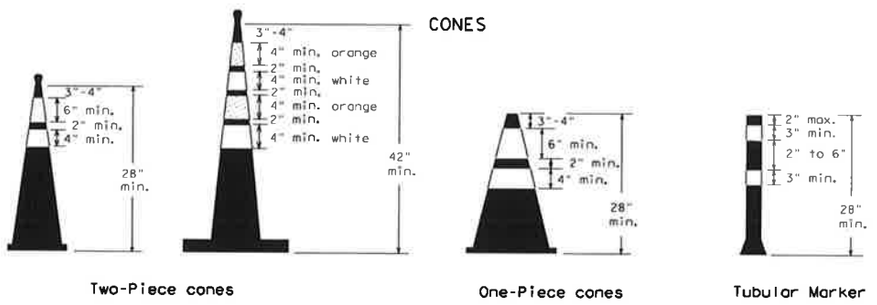
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.



PLAN VIEW

LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
SB	Steady burn warning light or yellow warning reflector

CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS

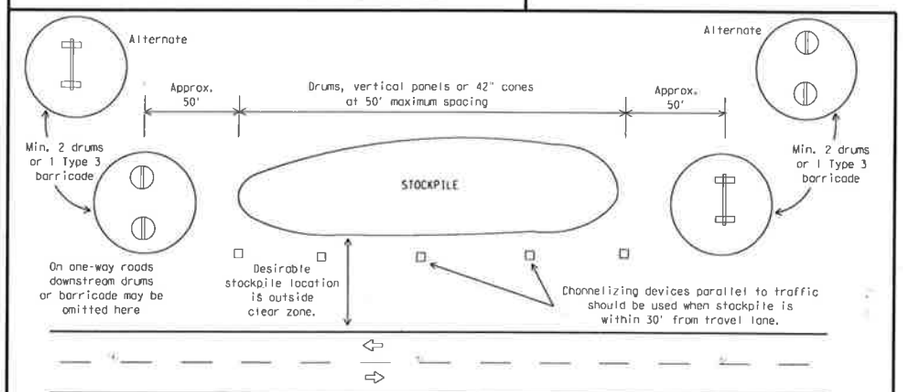


Two-Piece cones | One-Piece cones | Tubular Marker

28" Cones shall have a minimum weight of 9 1/2 lbs.

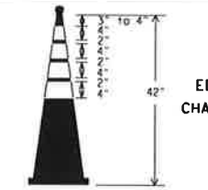
42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

1. Traffic cones and tubular markers shall be predominantly orange, and meet the height and weight requirements shown above.
2. One-piece cones have the body and base of the cone molded in one consolidated unit. Two-piece cones have a cone shaped body and a separate rubber base, or ballast, that is added to keep the device upright and in place.
3. Two-piece cones may have a handle or loop extending up to 8" above the minimum height shown, in order to aid in retrieving the device.
4. Cones or tubular markers used at night shall have white or white and orange reflective bands as shown above. The reflective bands shall have a smooth, sealed outer surface and meet the requirements of Departmental Material Specification DMS-8300 Type A.
5. 28" cones and tubular markers are generally suitable for short duration and short-term stationary work as defined on BC(4). These should not be used for intermediate-term or long-term stationary work unless personnel is on-site to maintain them in their proper upright position.
6. 42" two-piece cones, vertical panels or drums are suitable for all work zone durations.
7. Cones or tubular markers used on each project should be of the same size and shape.



TRAFFIC CONTROL FOR MATERIAL STOCKPILES

THIS DEVICE SHALL NOT BE USED ON PROJECTS LET AFTER MARCH 2014.



EDGELINE CHANNELIZER

1. This device is intended only for use in place of a vertical panel to channelize traffic by indicating the edge of the travel lane. It is not intended to be used in transitions or tapers.
2. This device shall not be used to separate lanes of traffic (opposing or otherwise) or warn of objects.
3. This device is based on a 42 inch, two-piece cone with an alternate striping pattern: four 4 inch retroreflective bands, with an approximate 2 inch gap between bands. The color of the band should correspond to the color of the edgeline (yellow for left edgeline, white for right edgeline) for which the device is substituted or for which it supplements. The reflectorized bands shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
4. The base must weigh a minimum of 30 lbs.

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WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

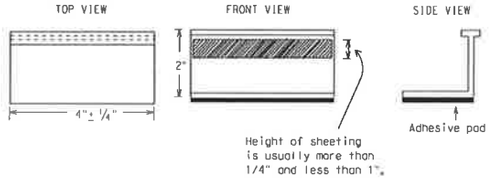
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where floggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
   A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
   B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS	DMS-8241
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

BC(11)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS 2-98 9-07	DIST	COUNTY		SHEET NO.
1-02 7-13				17.10
11-02 8-14				

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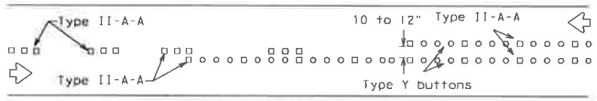
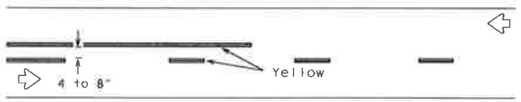
DATE:
FILE:

PAVEMENT MARKING PATTERNS

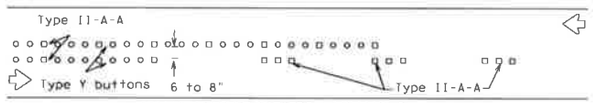
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



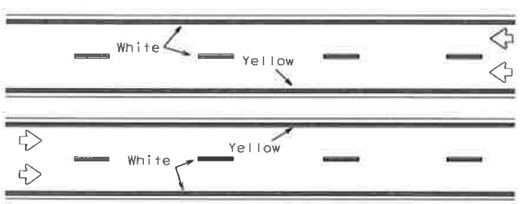
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



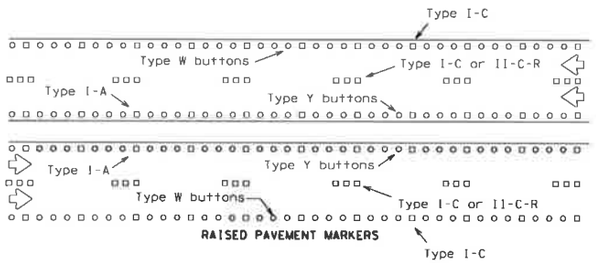
RAISED PAVEMENT MARKERS - PATTERN B

Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer.
Prefabricated markings may be substituted for reflectorized pavement markings.

CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



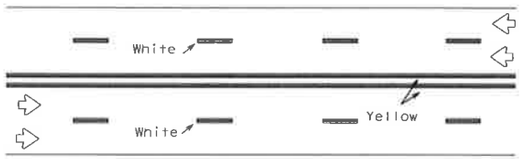
REFLECTORIZED PAVEMENT MARKINGS



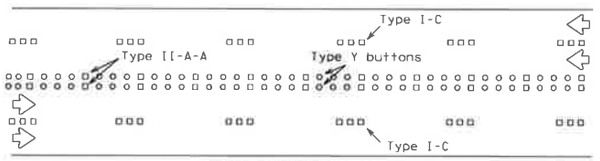
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



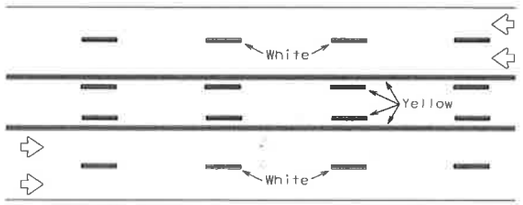
REFLECTORIZED PAVEMENT MARKINGS



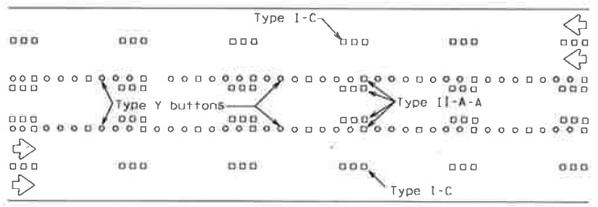
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS

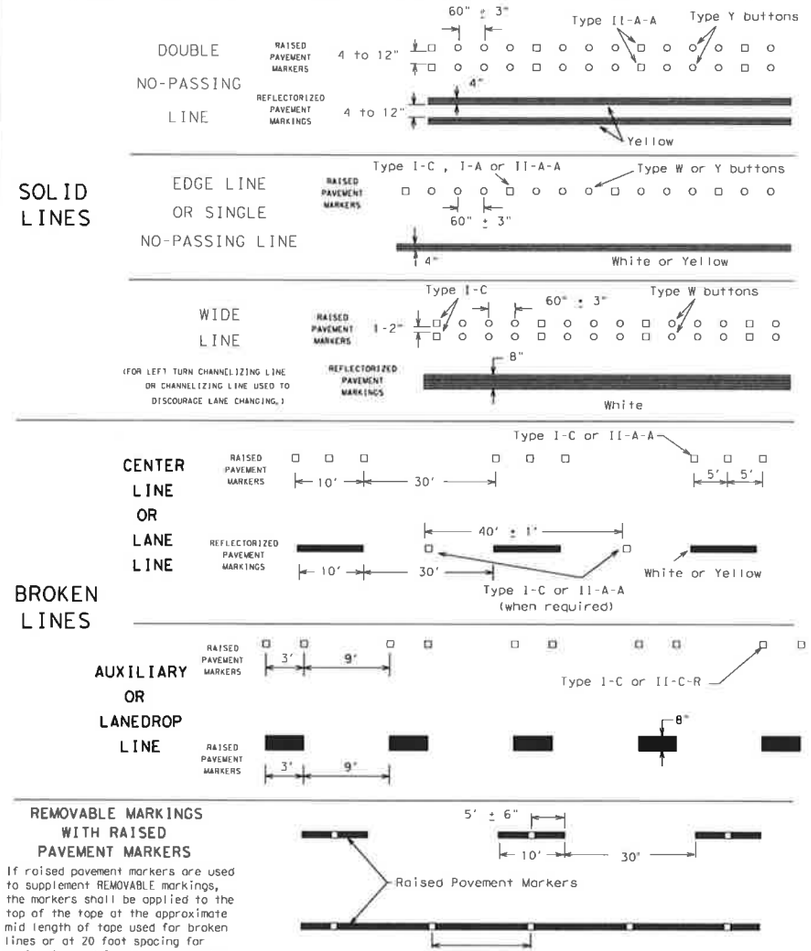


RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.

Centerline only - not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

SHEET 12 OF 12

Texas Department of Transportation

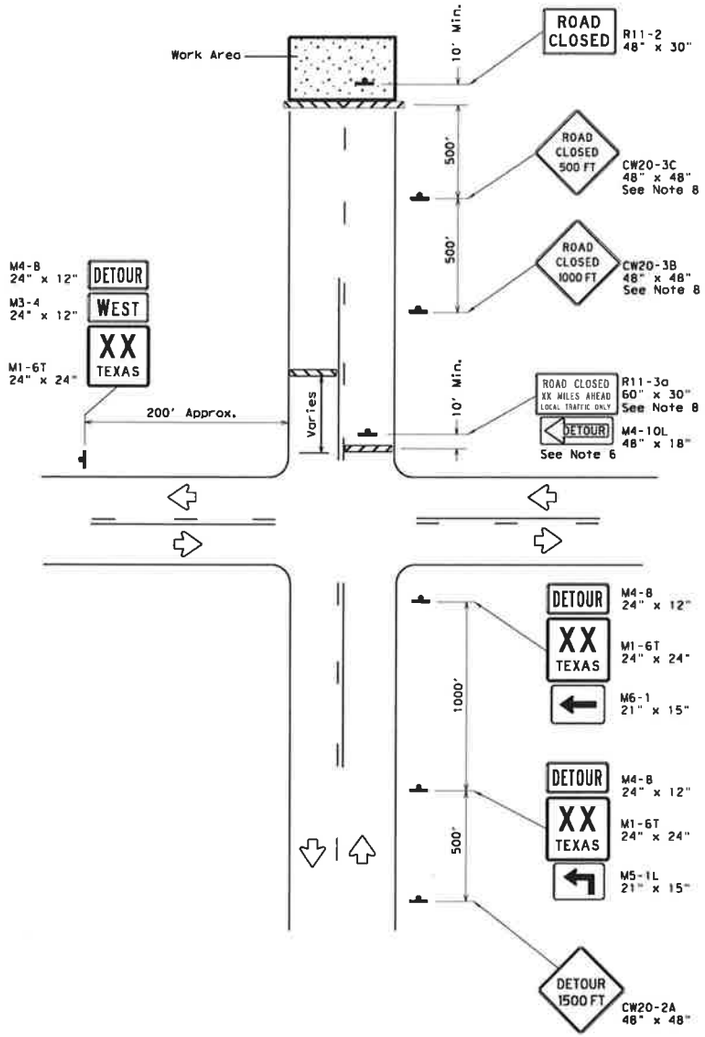
Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-14

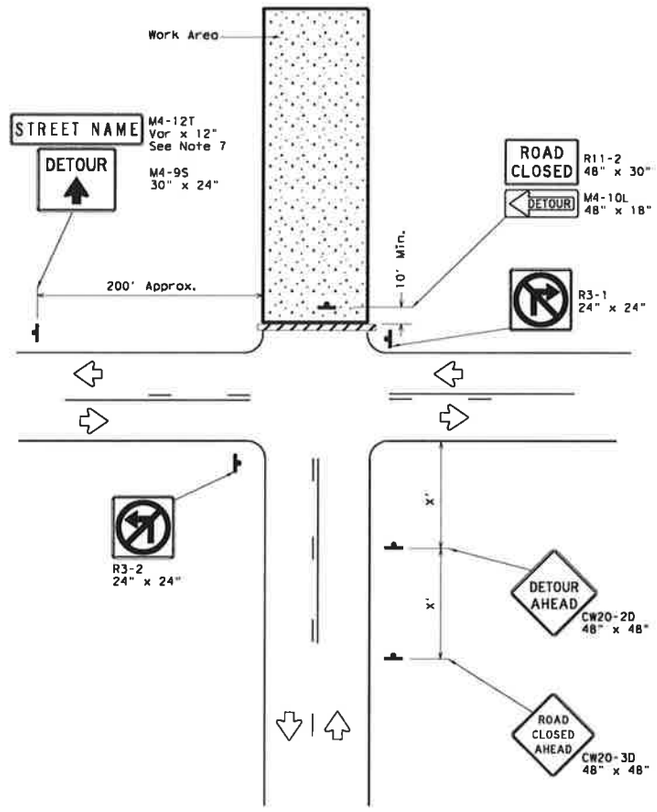
FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS				
1-97 9-07	DIST	COUNTY		SHEET NO.
2-98 7-13				17.11
11-02 8-14				
106				

DATE:
FILE:



ROAD CLOSURE BEYOND THE INTERSECTION

Signing for a Numbered Route with an Off-Site Detour



ROAD CLOSURE AT THE INTERSECTION

Signing for an Un-numbered Route with an Off-Site Detour

LEGEND	
	Type 3 Barricade
	Sign

Posted Speed *	Minimum Sign Spacing "x" Distance
30	120'
35	160'
40	240'
45	320'
50	400'
55	500'
60	600'
65	700'
70	800'
75	900'

* Conventional Roads Only

GENERAL NOTES

1. This sheet is intended to provide details for temporary work zone road closures. For permanent road closure details see the D&OM standards.
2. Barricades used shall meet the requirements shown on Barricade and Construction Standard BC(10) and listed on the Compliant Work Zone Traffic Control Devices list (CWZTCD).
3. Stockpiled materials shall not be placed on the traffic side of barricades.
4. Barricades at the road closure should extend from pavement edge to pavement edge.
5. Detour signing shown is intended to illustrate the type of signing that is appropriate for numbered routes or un-numbered routes as labeled. It does not indicate the full extent of detour signing required. Detour routes should be signed as shown elsewhere in the plans.
6. If the road is open for a significant distance beyond the intersection or there are significant origin/destination points beyond the intersection, the signs and barricades at this location should be located at the edge of the traveled way.
7. The Street Name (M4-12T) sign is to be placed above the DETOUR (M4-9S) sign.
8. For urban areas where there is a shorter distance between the intersection and the actual closure location, the ROAD CLOSED XX MILES AHEAD (R11-3a) sign may be replaced with a ROAD CLOSED TO THRU TRAFFIC (R11-4) sign. If adequate space does not exist between the intersection and the closure a single ROAD CLOSED AHEAD (CW20-3D) sign spaced as per the table above may replace the ROAD CLOSED 1000 FT (CW20-3B) and ROAD CLOSED 500 FT (CW20-3C) signs.
9. Signs and barricades shown shall be subsidiary to Item 502. Locations where these details will be required shall be as shown elsewhere in the plans.

Texas Department of Transportation

Traffic Operations Division Standard

WORK ZONE ROAD CLOSURE DETAILS

WZ(RCD)-13

FILE: wzrcd-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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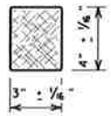
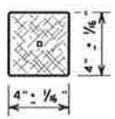
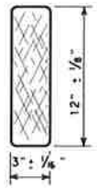
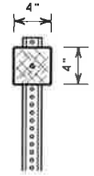
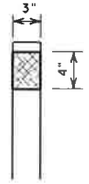
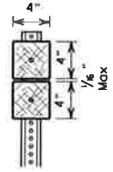
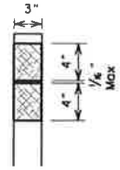
REVISIONS				
1-97 4-98 7-13	DIST	COUNTY		SHEET NO.
2-98 3-03				18.0

REFLECTOR UNIT SIZES FOR DELINEATORS AND OBJECT MARKERS

	SIZE 1	SIZE 2	SIZE 3	SIZE 4
DEVICE				
SHEETING	Yellow, White or Red Type B or C reflective sheeting			
NOTE	1. Size 1 and 4 - Direct applied reflective sheeting for use on flexible post (flx). 2. Size 2 and 3 - For use on wing channel (wc) post only. Use approved metal, plastic or fiberglass backplate with 17/64" mounting holes.			

DELINEATORS

	SINGLE		DOUBLE	
DEVICE				
	1-Size 2 reflector unit	1-Size 1 reflector unit	2-Size 2 reflector units	2-Size 1 reflector units
SHEETING	Yellow, White or Red Type B or C Reflective Sheeting			
POST TYPE	WC	YFLX, WFLX	WC	YFLX, WFLX
MOUNT TYPE	GND	GND, SRF	GND	GND, SRF

D & OM DESCRIPTIVE CODES

INSTL DEL ASSM (D-XX)SZ X (XXXX)XXX(XX)

NUMBER OF REFLECTORS
S = Single
D = Double

COLOR OF REFLECTORS
W = White
Y = Yellow
R = Red

REFLECTOR UNIT SIZE
1 or 2

TYPE OF POST OR DELINEATOR
WC = Wing Channel Post
YFLX = Yellow Flexible Post
WFLX = White Flexible Post
BRF = Barrier Reflector

TYPE OF MOUNT
GND = Embedded (drivable or set in concrete)
CTB = Concrete Barrier Mount
GF1 or GF2 = Guard Fence Attachment
SRF = Surface Mount

DIRECTION
If Required
BI = Bi-Directional
BR = Bi-Directional with red on back

INSTL OM ASSM (OM-XX) (XXXX)XXX(XX)

TYPE OF OBJECT MARKER
1, 2, 3, or 4

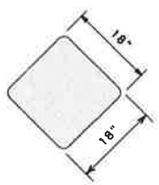
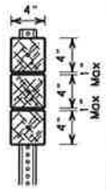
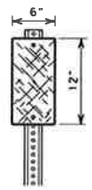
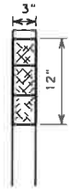
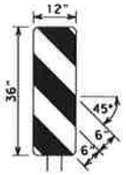
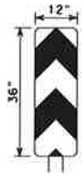
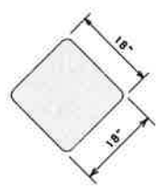
NUMBER OF REFLECTORS OR DIRECTION
X = 3-Size 2 reflector units (Type 2 only)
Y = 1-Size 3 reflector unit (Type 2 only)
Z = 3-Size 1 or 1-Size 4 reflector unit(s) (Type 2 only)
L = Left Side (Type 3 Object Marker only)
R = Right Side (Type 3 Object Marker only)
C = Center (Type 3 Object Marker only)

TYPE OF POST
WC = Wing Channel Post
WFLX = White Flexible Post
TWT = Thin Walled Tubing

TYPE OF MOUNT
GND = Embedded (drivable)
SRF = Surface Mount
WAS = Wedge Anchor Steel
WAP = Wedge Anchor Plastic

DIRECTION
If Required
BI = Bi-Directional

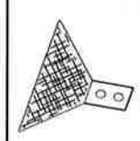
OBJECT MARKERS

	Type 1 (OM-1)	Type 2 (OM-2)			Type 3 (OM-3)			Type 4 (OM-4)
	OM-1	OM-2X	OM-2Y	OM-2Z	OM-3L	OM-3R	OM-3C	OM-4
DEVICE								
		3-Size 2 reflector units	1-Size 3 reflector unit	3-Size 1 reflector units or 1-Size 4 reflector unit				
SHEETING	Yellow-Type B_{FL} or C_{FL} Sheeting	Yellow - Type B or C Sheeting			Alternating acrylic black and retroflective yellow - Type B_{FL} or C_{FL} Sheeting			Red - Type B_{FL} or C_{FL} Sheeting
POST TYPE	TWT	WC	WC	WFLX	TWT			TWT
MOUNT TYPE	WAS, WAP	GND	GND	GND, SRF	WAS, WAP			WAS, WAP

DEPARTMENTAL MATERIAL SPECIFICATIONS

FLEXIBLE DELINEATOR & OBJECT MARKER POSTS (EMBEDDED & SURFACE MOUNT TYPES)	DMS-4400
SIGN FACE MATERIALS	DMS-8300
DELINEATORS, OBJECT MARKERS AND BARRIER REFLECTORS	DMS-8600

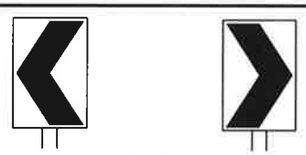
BARRIER REFLECTORS (BRF)

	GF1	GF2	CTB
DEVICE			

1. Barrier reflectors shall meet the requirements of DMS 8600.
2. Approved Barrier Reflectors are listed on the "Barrier Reflectors" Material Producer List at: www.txdot.gov.

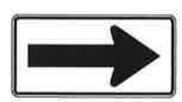
SHEETING	Yellow, White, Red
NOTE	1. Reflective sheeting shall have a minimum dimension of 3 inches and minimum surface area of 9 square inches.

CHEVRONS

DEVICE:  W1-8

SIZE (W x L)	18"x 24" (Conventional)	24"x 30" (Conventional Oversize)	30"x 36" (Expressway)	36" x 48" (Freeway)
MOUNTING HEIGHT	4'-0" or 7'-0"		7'-0" Only	

ONE DIRECTION LARGE ARROW

DEVICE:  W1-6

SIZE (W x L)	48" x 24" (Conventional)	60" x 30" (Expressway & Freeway)
MOUNTING HEIGHT	7'-0"	

NOTE
1. CHEVRON (W1-8) signs and ONE DIRECTION LARGE ARROW (W1-6) Signs shall be installed per Sign Mounting Details (SMD) Standard Sheets and paid under Item 644 (Small Roadside Sign Assemblies).
2. When there is a need to increase conspicuity, the Texas version of the ONE DIRECTION LARGE ARROW sign (W1-9T) may be used instead of the ONE DIRECTION LARGE ARROW (W1-6).

NOTE:

Delineator and object marker substrates and sign substrates shall be 0.080" Aluminum sign blank to conform to ASTM B-209 Alloy 6061-T6 or approved alternative.

Texas Department of Transportation — Traffic Safety Division Standard

DELINEATOR & OBJECT MARKER MATERIAL DESCRIPTION

D & OM(1)-20

FILE:	dmfl-20.dgn	DW: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
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REVISIONS					
10-09 3-15		DIST	COUNTY		SHEET NO.
4-10 7-20					19.0

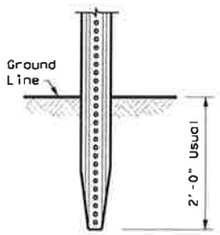
20A

DATE:
FILE:

POST TYPE AND SUPPORT FOUNDATION DETAILS

WING CHANNEL (WC)

GND

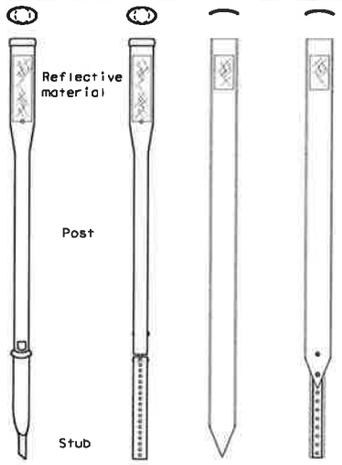


NOTES

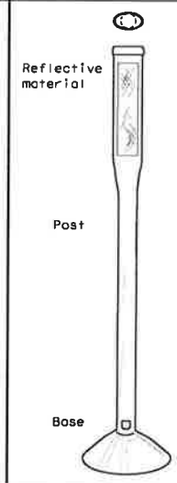
1. Embedded Wing Channel (WC) post option may be used for Type 2 Object Markers and Delineators only.
2. 1.12 lbs/ft steel per ASTM A 1011 SS Gr. 50, or ASTM A499.

FLEXIBLE POSTS (YFLX, WFLX)

GND



SRF



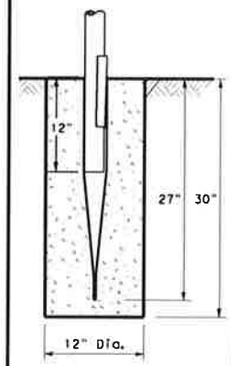
EMBEDDED | SURFACE MOUNT

NOTES

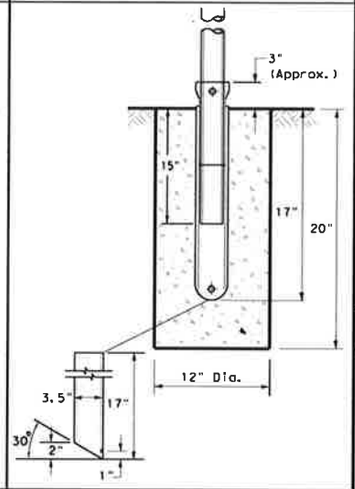
1. See "Flexible Delineator and Object Marker Posts" Material Producer List for approved devices.
2. Install per manufacturer's recommendations.
3. Post length may vary to meet field conditions.
4. When using yellow delineators with flexible posts to separate opposing direction of travel, such as centerline or median use, the flexible posts shall be yellow.

WEDGE ANCHOR SYSTEMS

WAS



WAP

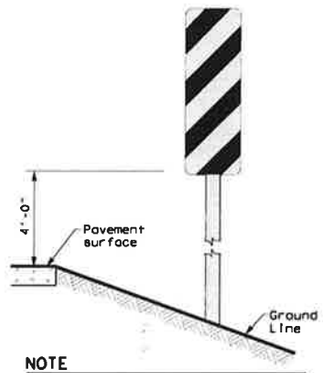


STEEL | PLASTIC

NOTE

1. Install per manufacturer's recommendations.

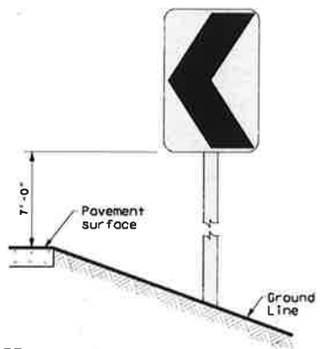
TYPES 1, 3, AND 4 OBJECT MARKERS AND CHEVRONS



NOTE

Mounting at 4 feet to the bottom of the chevron is permitted for chevrons that will not exceed a height of 6'-6" to the top of the chevron (sizes 24" x 30" and smaller).

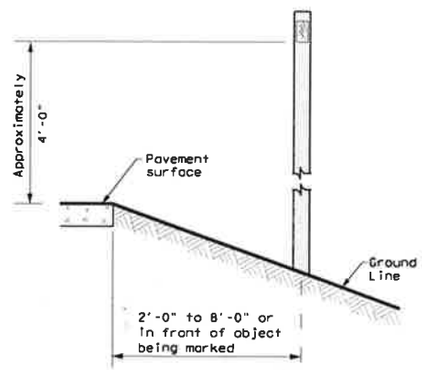
CHEVRONS AND ONE DIRECTION LARGE ARROW SIGN



NOTE

Chevrons 30" x 36" and larger shall be mounted at a height of 7' to the bottom of the chevron. Chevron sign and ONE DIRECTION LARGE ARROW sign (W1-9T) shall be installed per SMD standard sheets and paid under Item 644.

DELINEATORS AND TYPE 2 OBJECT MARKERS

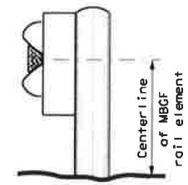


See general notes 1, 2 and 3.

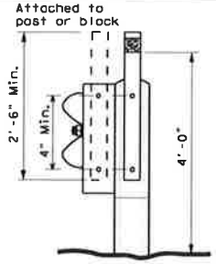
TYPE OF BARRIER MOUNTS

GUARD FENCE ATTACHMENT

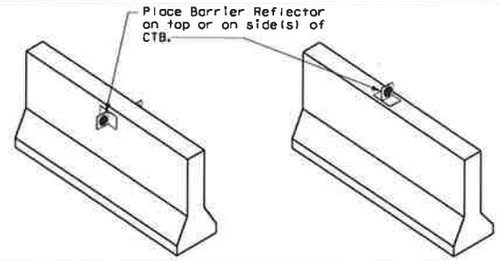
GF1



GF2



CONCRETE TRAFFIC BARRIER (CTB)



GENERAL NOTES

1. Place delineators on a section of roadway at a consistent 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 Type 2 object markers and delineators are more than 8'-0" from the edge of the pavement, it may not be possible to maintain a height of approximately 4'-0". If this is the case, place the object marker or delineator as close to the desired height as possible.
4. Install all delineators, object markers and barrier reflectors in accordance with the manufacturer's recommendation.
5. Barrier reflectors should be installed a minimum of 18 inches above the edge of the pavement surface.
6. Diagonal stripes on Type 3 object markers shall slope down toward the intended travel lane.

Texas Department of Transportation | Traffic Safety Division Standard

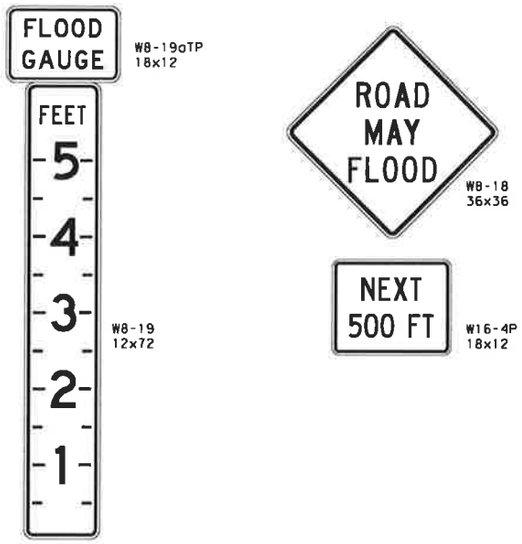
DELINEATOR & OBJECT MARKER INSTALLATION

D & OM(2)-20

FILE: dom2-20.dgn	DW: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS				
10-09 3-15	DIST	COUNTY		SHEET NO.
4-10 7-20				20.0
20B				

DATE:
FILE:

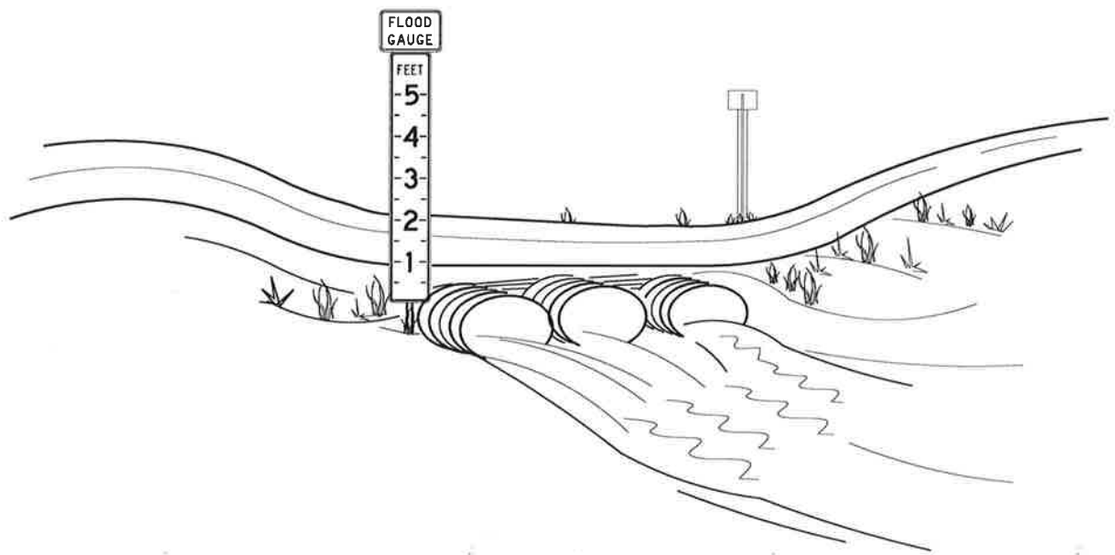
DATE:
FILE:



DEPARTMENTAL MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

ALUMINUM SIGN BLANKS THICKNESS	
Squore Feet	Minimum Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	FLUORESCENT YELLOW	TYPE B_{FL} & C_{FL} SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM



GENERAL NOTES

1. Each flood gauge assembly shall consist of the FLOOD GAUGE sign (W8-19aTP) and DEPTH MARKER (W8-19). Two assemblies should be erected, one along each approach, at the low water crossing location on the right side of the roadway.
2. The flood gauge assembly should be of sufficient height to register depth of water to a minimum of five (5) Feet above the lowest travel lane pavement surface. Actual height of depth marker required for each location is shown elsewhere in the plans, but should not be in excess of ten (10) feet.
3. The flood gauge assembly should be located not more than ten (10) feet from the pavement edge. Consideration should be given to placement with regard to the following factors:
   a) Accurate register of depth of water over roadway.
   b) Daytime and nighttime visibility of the flood gauge assembly along roadway approaches.
   c) Outside the main flow of water during both normal and flood conditions.
4. In areas where flood conditions would likely obscure the flood gauge assembly, a second pair of gauges, one on each approach, registering depths greater than shown on the first flood gauge assembly, is recommended.
5. The Engineer will approve all flood gauge assembly locations before installation.
6. 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.
7. FLOOD GAUGE signs and depth marker shall be mounted in accordance with Standard SMD (series). The recommended mounting is three (3) inch fiberglass reinforced pipe (FRP) pipe as shown on Standard SMD(GEN) and SMD(FRP). ROAD MAY FLOOD sign (W8-18) along the approach roadway may be required in areas where rainfall causes frequent roadway flooding.

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

http://www.txdot.gov/

Texas Department of Transportation | Traffic Operations Division Standard

FLOOD GAUGE ASSEMBLY

FGA-15

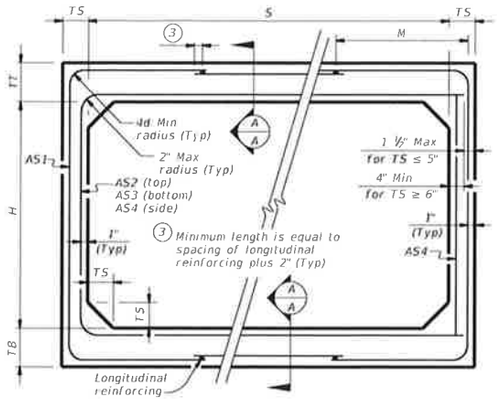
FILE: fga-15.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT January 1997	CONT	SECT	JOB	HIGHWAY
REVISIONS				
3-15	DIST	COUNTY		SHEET NO. 21.0

BOX DATA

SECTION DIMENSIONS					Fill Height	M (Min)	REINFORCING (sq. in. / ft.) (2)							(1) Lift Weight
S (ft.)	H (ft.)	TT (in.)	TB (in.)	TS (in.)	(ft.)	(in.)	AS1	AS2	AS3	AS4	AS5	AS7	AS8	(tons)
7	3	8	8	8	< 2	-	0.23	0.31	0.22	0.19	0.19	0.19	0.19	9.6
7	3	8	8	8	2 < 3	47	0.27	0.25	0.24	0.19	-	-	-	9.6
7	3	8	8	8	3 - 5	43	0.19	0.19	0.19	0.19				9.6
7	3	8	8	8	10	43	0.21	0.20	0.21	0.19	-	-	-	9.6
7	3	8	8	8	15	43	0.28	0.26	0.27	0.19	-	-	-	9.6
7	3	8	8	8	20	43	0.36	0.34	0.35	0.19	-	-	-	9.6
7	3	8	8	8	25	43	0.45	0.42	0.43	0.19	-	-	-	9.6
7	3	8	8	8	30	43	0.54	0.50	0.51	0.19	-	-	-	9.6
7	4	8	8	8	< 2	-	0.21	0.34	0.25	0.19	0.19	0.19	0.19	10.4
7	4	8	8	8	2 < 3	43	0.23	0.28	0.28	0.19	-	-	-	10.4
7	4	8	8	8	3 - 5	43	0.19	0.22	0.19	0.19	-	-	-	10.4
7	4	8	8	8	10	43	0.19	0.23	0.23	0.19	-	-	-	10.4
7	4	8	8	8	15	41	0.24	0.30	0.30	0.19	-	-	-	10.4
7	4	8	8	8	20	41	0.31	0.38	0.39	0.19	-	-	-	10.4
7	4	8	8	8	25	41	0.38	0.47	0.48	0.19	-	-	-	10.4
7	4	8	8	8	30	41	0.46	0.57	0.57	0.19	-	-	-	10.4
7	5	8	8	8	< 2	-	0.19	0.36	0.27	0.19	0.19	0.19	0.19	11.2
7	5	8	8	8	2 < 3	47	0.21	0.31	0.31	0.19	-	-	-	11.2
7	5	8	8	8	3 - 5	43	0.19	0.24	0.21	0.19	-	-	-	11.2
7	5	8	8	8	10	43	0.19	0.25	0.26	0.19	-	-	-	11.2
7	5	8	8	8	15	41	0.21	0.32	0.33	0.19	-	-	-	11.2
7	5	8	8	8	20	41	0.27	0.41	0.42	0.19	-	-	-	11.2
7	5	8	8	8	25	41	0.33	0.51	0.52	0.19	-	-	-	11.2
7	5	8	8	8	30	41	0.40	0.61	0.62	0.19	-	-	-	11.2
7	6	8	8	8	< 2	-	0.19	0.38	0.30	0.19	0.19	0.19	0.19	12.0
7	6	8	8	8	2 < 3	59	0.19	0.33	0.34	0.19	-	-	-	12.0
7	6	8	8	8	3 - 5	47	0.19	0.25	0.23	0.19	-	-	-	12.0
7	6	8	8	8	10	43	0.19	0.26	0.27	0.19	-	-	-	12.0
7	6	8	8	8	15	41	0.19	0.34	0.35	0.19	-	-	-	12.0
7	6	8	8	8	20	41	0.24	0.43	0.45	0.19	-	-	-	12.0
7	6	8	8	8	25	41	0.29	0.53	0.55	0.19	-	-	-	12.0
7	6	8	8	8	30	41	0.35	0.64	0.65	0.19	-	-	-	12.0
7	7	8	8	8	< 2	-	0.19	0.40	0.33	0.19	0.19	0.19	0.19	12.8
7	7	8	8	8	2 < 3	59	0.19	0.36	0.37	0.19	-	-	-	12.8
7	7	8	8	8	3 - 5	59	0.19	0.27	0.25	0.19	-	-	-	12.8
7	7	8	8	8	10	47	0.19	0.27	0.29	0.19	-	-	-	12.8
7	7	8	8	8	15	43	0.19	0.35	0.37	0.19	-	-	-	12.8
7	7	8	8	8	20	43	0.22	0.44	0.46	0.19	-	-	-	12.8
7	7	8	8	8	25	43	0.27	0.54	0.57	0.19	-	-	-	12.8
7	7	8	8	8	30	41	0.32	0.65	0.67	0.19	-	-	-	12.8

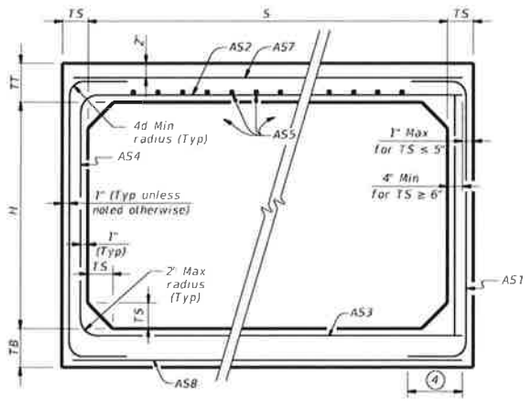
(1) For box length = 8'-0"

(2) AS1 thru AS4, AS7 and AS8 are minimum required areas of reinforcement per linear foot of box length. AS5 is minimum required area of reinforcement per linear foot of box width.



CORNER OPTION "A" CORNER OPTION "B"

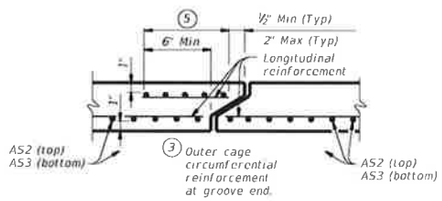
FILL HEIGHT 2 FT AND GREATER



CORNER OPTION "A" CORNER OPTION "B"

FILL HEIGHT LESS THAN 2 FT

(4) Length is equal to spacing of longitudinal reinforcing plus 2". (10" Min) (Typ)



SECTION A-A

(Showing top and bottom slab joint reinforcement.)

MATERIAL NOTES:

Provide 0.03 sq. in./ft. minimum longitudinal reinforcement at each face in slabs and walls. This minimum requirement may be met by the transverse wires when wire mesh reinforcement is used.

Provide Class H concrete (f'c = 5,000 psi).

GENERAL NOTES:

Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.

See Box Culverts Precast Miscellaneous Details (SCP-MD) standard sheet for details and notes not shown.

In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Submit shop plans for alternate designs in accordance with Item "Precast Concrete Structural Members (Fabrication)".

HL93 LOADING

Texas Department of Transportation | Bridge Division Standard

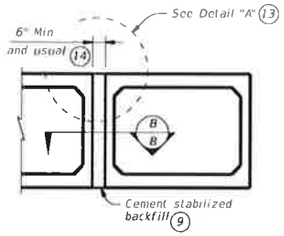
SINGLE BOX CULVERTS PRECAST

7'-0" SPAN

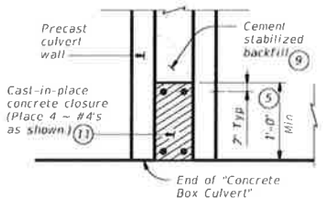
SCP-7

FILE	scp07sis-20.dgn	BK. TxDOT	CK. TxDOT	DW. TxDOT	CK. TxDOT
©TxDOT February 2020		FED.RT.	DIV. NO.	HIGHWAY	
REVISIONS					
		SHEET	COUNTY		SHEET NO.
					22.0

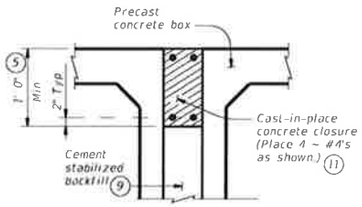
DATE:
FILE:



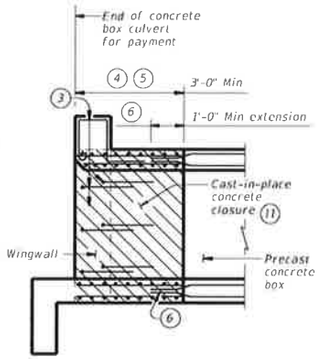
MULTIPLE UNIT PLACEMENT



SECTION B-B

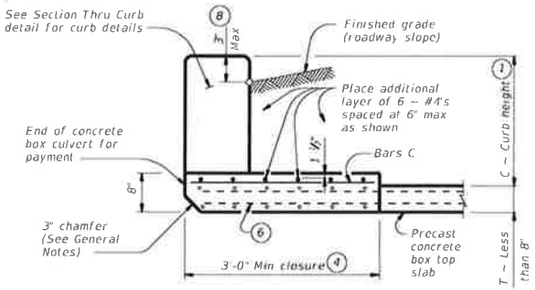


DETAIL "A" (13)

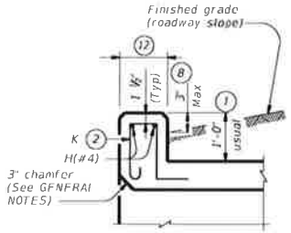


WINGWALL CONNECTION

(Also applies to safety end treatment.)

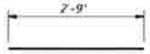


SECTION THRU TOP SLABS LESS THAN 8"

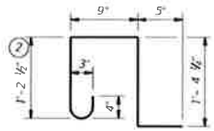


SECTION THRU CURB

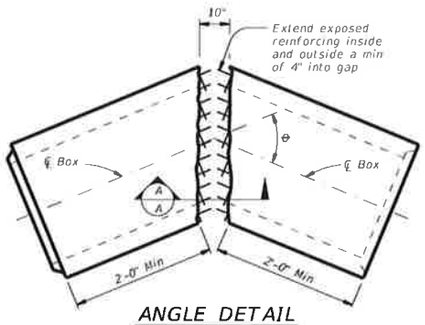
QUANTITIES PER FOOT OF CURB (10)	
Reinforcing Steel	4.12 Lb
Concrete	0.037 CY



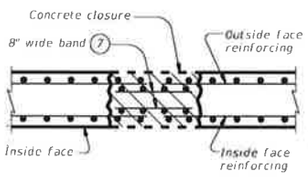
BARS C (#4)
(Spa = 1'-0" Max)



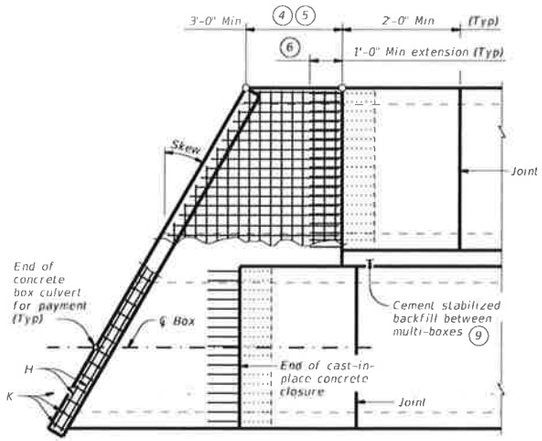
BARS K (#4)
(Spa = 1'-0" Max)
(Length = 4'-2")



ANGLE DETAIL



SECTION A-A



PLAN OF SKEWED ENDS

(Showing multi-box placement.)

(1) 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail, or curbs taller than 1'-0, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.

(2) For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted.

(3) Extend curb, wingwall, or safety end treatment reinforcing into concrete closure. Bend or trim, as necessary, any reinforcing that does not fit into closure area.

(4) Provide a 3'-0" Min cast-in-place concrete closure. Break back boxes in the field or cast boxes short. Provide bands of reinforcing in the closure that are the same size and spacing as in the precast box section. Provide #4 longitudinal reinforcement spaced at 12 inches Max within the closure. Except where shown otherwise, construct the cast-in-place closure flush with the inside and outside faces of the precast box section.

(5) For multiple unit placements, adjust the length of the closure for the interior walls as necessary. Provide a 3'-0" Min cast-in place closure in the top slab, bottom slab, and exterior wall. See Section B-B detail when interior walls are cast full length.

(6) Extend precast box reinforcing a minimum of 1'-0" into concrete closure (Typ).

(7) Place bands of reinforcing matching the inside and outside face reinforcing in the gaps of the top and bottom slabs. Place a band matching the outside face reinforcing of the wall in the gaps of the walls (placed in the outside face only). Tack weld the bands to the exposed reinforcing at each point of contact.

(8) For vehicle safety, the following requirements must be met:
- For structures without bridge rail, construct curbs no more than 3" above finished grade.
- For structures with bridge rail, construct curbs flush with finished grade.

Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(9) Cement stabilized backfill between boxes is considered part of the box culvert for payment.

(10) All curb concrete and reinforcing is considered part of the box culvert for payment.

(11) Any additional concrete and reinforcing required for the closures will be considered subsidiary to the box culvert for payment.

(12) 1'-0" typical. 2'-3" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elsewhere in the plans.

(13) For multiple unit placement with overlay, with 1 to 2 course surface treatment, or with the top slab as the final riding surface, provide wall closure as shown in Detail "A".

(14) This dimension may be increased with approval of the Engineer to allow the precast boxes to be tunneled or jacked in accordance with Item 476, "Jacking, Boring, or Tunneling Pipe or Box". No payment will be made for any additional material in the gap between adjacent boxes.

MATERIAL NOTES:

Provide Grade 60 reinforcing steel.
Provide ASTM A1064 welded wire reinforcement.
Provide Class C concrete (f'c = 3,600 psi) for the closures.
Provide cement stabilized backfill meeting the requirements of Item 400, "Excavation and Backfill for Structures".
Any additional concrete required for the closures will be considered subsidiary to the box culvert.

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.
Refer to the Single Box Culverts Precast (SCP) standard sheets for details and notes not shown.
Chamfer the bottom edge of the top slab closure 3 inches at culvert closure ends.

Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing bars dimensions are out-to-out of bars.

HL93 LOADING

Texas Department of Transportation

Bridge Division Standard

BOX CULVERTS PRECAST MISCELLANEOUS DETAILS

SCP-MD

FILE: scpmdsts-20.dgn	DN: TxDOT	CK: LMW	DW: BWHITT×DOT	CK: TxDOT
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REVISIONS				
	DIST	COUNTY		SHEET NO.
				23.0

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Culvert Station and/or Creek Name followed by applicable end (Lt, Rt or Both)	Description of Box Culvert No. Spans ~ Span X Height	Max Fill Height (Ft)	Applicable Box Culvert Standard (4)	Applicable Wingwall or End Treatment Standard	Skew Angle (0°,15°, 30° or 45°)	Side Slope or Channel Slope Ratio (SL:1)	T Culvert Top Slab Thickness (In)	U Culvert Wall Thickness (In)	C Estimated Curb Height (Ft)	Hw (1) Height of Wingwall (Ft)	A Curb to End of Wingwall (Ft)	B Offset of End of Wingwall (Ft)	Lw Length of Longest Wingwall (Ft)	Ltw Culvert Toewall Length (Ft)	Atw Anchor Toewall Length (Ft)	Riprap Apron (CY)	Class "C" Conc (Curb) (2) (CY)	Class "C" Conc (Wingwall) (3) (CY)	Total Wingwall Area (SF)
STA 13+86	3 - 7' X 4'	2.0	SCP - 7	PW-1	15	3:1	8	8	1.0	6	N/A	N/A	17.6	26.9	N/A	0.0	2.0	29.8	398

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NOTES:
Skew = 0° on SW-0, FW-0, SETB-CD, SETB-SW-0, and SETB-FW-0 standard sheets;
30° maximum for safety end treatment

SL:1 = Horizontal : 1 Vertical
- Side slope at culvert for flared or straight wingwalls.
- Channel slope for parallel wingwalls.
- Slope must be 3:1 or flatter for safety end treatments.

T = Box culvert top slab thickness. Dimension can be found on the applicable box culvert standard sheet.

U = Box culvert wall thickness. Dimension can be found on the applicable box culvert standard sheet.

C = Curb height

See applicable wing or end treatment standard sheets for calculations of Hw, A, B, Lw, Ltw, Atw, and Total Wingwall Area

Hw = Height of wingwall

A = Distance from face of curb to end of wingwall (not applicable to parallel or straight wingwalls)

B = Offset of end of wingwall (not applicable to parallel or straight wingwalls)

Lw = Length of longest wingwall.

Ltw = Length of culvert toewall (not applicable when using riprap apron)

Atw = Length of anchor toewall (applicable to safety end treatment only)
Total Wingwall Area = Wingwall area in sq. ft. for two wingwalls (one structure end) if Lt or Rt.
Area for four wingwalls (two structure ends) if Both.

(1) Round the wall heights shown to the nearest foot for bidding purposes.

(2) Concrete volume shown is for box culvert curb only. For curbs using the Box Culvert Rail Mounting Details (RAC) standard sheet quantities shown must be increased by a factor of 2.25. If Class S concrete is required for the top slab of the culvert, also provide Class S concrete for the curb. Curb concrete is considered part of the Box Culvert for payment.

(3) Concrete volume shown is total of wings, footings, culvert toewall (if any), anchor toewalls (if any) and wingwall toewalls. Riprap aprons, culverts, and curb quantities are not included.

(4) Regardless of the type of culvert shown on this sheet, the Contractor has the option of furnishing cast-in-place or precast culverts unless otherwise shown elsewhere on the plans. If the Contractor elects to provide culverts of a different type than those shown on this sheet, it is the Contractor's responsibility to make the necessary adjustments to the dimensions and quantities shown.

SPECIAL NOTE:

This sheet is a supplement to the box culvert standards. It is to be filled out by the culvert specifier and provides dimensions for the construction of the box culvert wingwalls and safety end treatments.

An Excel 2010 spreadsheet to assist in completing this table can be downloaded from the Bridge Standards (English) web page on the TxDOT web site. The completed sheet must be signed, sealed, and dated by a licensed Professional Engineer.

Texas Department of Transportation | Bridge Division Standard

BOX CULVERT SUPPLEMENT
WINGS AND END TREATMENTS

BCS

FILE:	bcsstd01-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS		DIST	COUNTY		SHEET NO.
					24.0

TABLE OF DIMENSIONS AND REINFORCING STEEL
(Wings for one structure end)

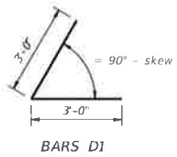
Dimensions					Variable Reinforcing				Estimated Quantities per ft of wing (2-wings) (4)		Estimated Quantities per ft of Toewall (1-toewall)	
Maximum Wingwall Height Hw	W	X	Y	Z	Bars J1		Bars J2					
					Size	Spa	Size	Spa	Reinf (Lb/Ft)	Conc (CY/Ft)	Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	48.64	0.406	6.85	0.071
2'-9"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	49.31	0.424	6.85	0.071
3'-0"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	49.98	0.444	6.85	0.071
3'-3"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	53.32	0.462	6.85	0.071
3'-6"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	53.98	0.480	6.85	0.071
4'-0"	3'-2"	1'-2"	1'-0"	7"	#4	1'-0"	#4	1'-0"	55.77	0.532	6.85	0.071
4'-6"	3'-2"	1'-2"	1'-0"	7"	#4	1'-0"	#4	1'-0"	59.77	0.568	6.85	0.071
5'-0"	3'-9"	1'-7"	1'-2"	7"	#4	1'-0"	#4	1'-0"	63.45	0.632	6.96	0.075
5'-6"	3'-9"	1'-7"	1'-2"	7"	#4	1'-0"	#4	1'-0"	67.46	0.668	6.96	0.075
6'-0"	4'-4"	2'-0"	1'-4"	7"	#5	1'-0"	#5	1'-0"	80.67	0.730	7.07	0.078
6'-6"	4'-4"	2'-0"	1'-4"	7"	#5	1'-0"	#5	1'-0"	85.05	0.768	7.07	0.078
7'-0"	5'-0"	2'-3"	1'-9"	8"	#5	1'-0"	#5	1'-0"	92.15	0.864	8.07	0.093
7'-6"	5'-0"	2'-3"	1'-9"	8"	#5	1'-0"	#5	1'-0"	96.54	0.902	8.07	0.093
8'-0"	5'-6"	2'-8"	1'-10"	8"	#5	6"	#5	6"	139.04	0.962	8.13	0.095
8'-6"	5'-6"	2'-8"	1'-10"	8"	#5	6"	#5	6"	144.47	1.000	8.13	0.095
9'-6"	6'-0"	2'-10"	2'-2"	9"	#5	6"	#5	6"	156.93	1.136	8.41	0.110
10'-6"	6'-5"	3'-0"	2'-5"	9"	#6	6"	#5	6"	196.27	1.234	8.57	0.117
11'-6"	7'-2"	3'-6"	2'-8"	11"	#6	6"	#6	6"	230.13	1.438	9.52	0.140
12'-6"	7'-8"	3'-9"	2'-11"	1'-0"	#7	6"	#6	6"	283.41	1.592	9.74	0.157
13'-6"	8'-2"	4'-0"	3'-2"	1'-2"	#8	6"	#6	6"	348.72	1.804	10.02	0.186
14'-6"	8'-10"	4'-5"	3'-5"	1'-4"	#9	6"	#6	6"	432.94	2.046	10.30	0.218
15'-6"	9'-6"	4'-10"	3'-8"	1'-6"	#9	6"	#7	6"	489.52	2.302	11.24	0.253
16'-0"	9'-11"	5'-0"	3'-11"	1'-7"	#9	6"	#7	6"	505.72	2.448	11.47	0.279

TABLE OF WINGWALL REINFORCING
(2-wings)

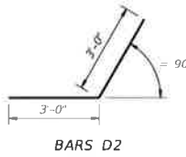
Bar	Size	No.	Spa
D1	#6	~	1'-0"
D2	#6	~	1'-0"
E1	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	~	8"
M1	#4	4	~
P	#4	~	1'-0"
V	#4	~	1'-0"

TABLE OF TOEWALL REINFORCING

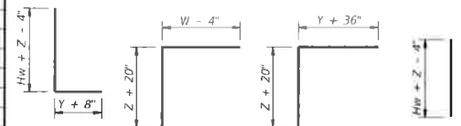
Bar	Size	No.	Spa
J3	#4	~	1'-0"
M2	#4	2	~
E2	#4	~	1'-0"



BARS D1



BARS D2



BARS J1 BARS J2 BARS J3 BARS V

WING DIMENSION FORMULAS:

(All values are in feet.)

Hw = H + T + C
Lw = (Hw) (SL) ÷ cosine (θ) for Type PW-1
= (Hw - 1') (SL) ÷ cosine (θ) for Type PW-2 and Hw ≥ 4'
= (Hw - 0.5') (SL) ÷ cosine (θ) for Type PW-2 and Hw < 4'

For cast-in-place culverts:
Ltw = [(N) (S) + (N + 1) (U)] ÷ cosine (θ)

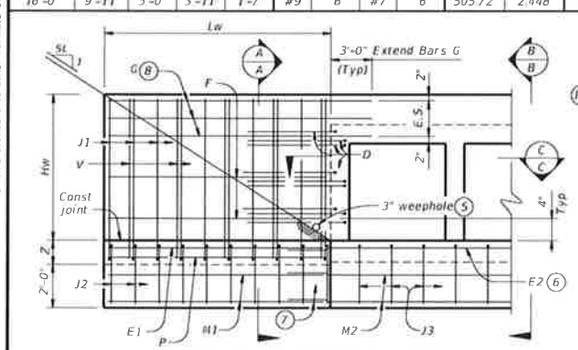
For precast culverts:
Ltw = [(N) (2 U + S) + (N - 1) (0.5')] ÷ cosine (θ)
Total Wingwall Area (two wings ~ SF)
= (2)(Hw)(Lw) for Type PW-1
= (2)(Hw)(Lw) - 6 SF for Type PW-2 and Hw ≥ 4'
= (2)(Hw)(Lw) - 1.5 SF for Type PW-2 and Hw < 4'

Hw = Height of wingwall
Lw = Length of wingwall
Ltw = Culvert toewall length
N = Number of culvert spans
SL:1 = Channel slope ratio, (horizontal: 1 vertical, usual value is 2:1)
θ = Culvert skew

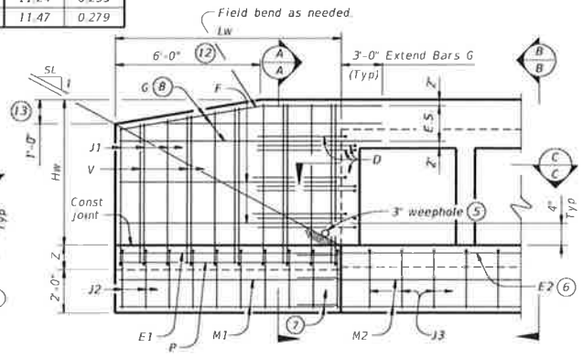
See applicable box culvert standard sheet for S, H, T, and U values.

1. Skew = 0°
2. At discharge end, chamfer may be ¾" minimum.
3. For 15° skew ~ 1"
   For 30° skew ~ 2"
   For 45° skew ~ 3"
4. Quantities shown are for two Type PW-1 wings. Adjust concrete volume for Type PW-2 wings. To determine estimated quantities for two wings, multiply the tabulated values by Lw. Quantities shown do not include weight of Bars D.
5. Provide weepholes for Hw = 5'-0" and greater. Fill around weepholes with coarse gravel.
6. Extend Bars E2 1'-6" minimum into the wingwall footing.
7. Lap Bars M1 1'-6" minimum with Bars M2.
8. Place Bars G as shown, equally spaced at 8" maximum. Provide at least two pairs of Bars G per wing.
9. 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-0, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
10. For vehicle safety, the following requirements must be met:
    - For structures without bridge rail, construct curbs no more than 3" above finished grade.
    - For structures with bridge rail, construct curbs flush with finished grade.

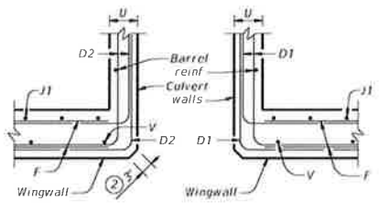
    Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
11. 1'-0" typical. 2'-3" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elsewhere in the plans.
12. 3'-0" for Hw < 4'.
13. 6" for Hw < 4'.



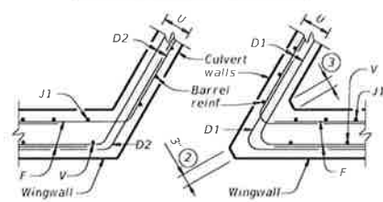
PARTIAL ELEVATION - PW-1



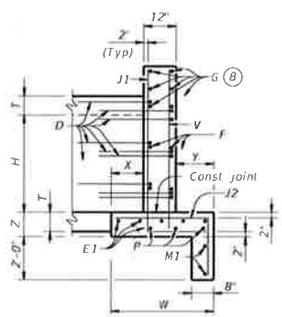
PARTIAL ELEVATION - PW-2



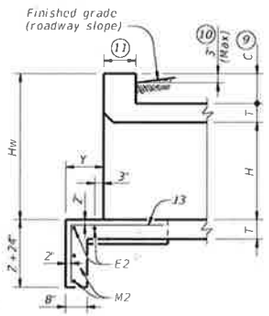
SECTION C-C - PW-1



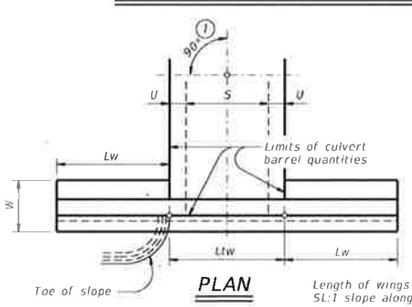
SECTION C-C - PW-2



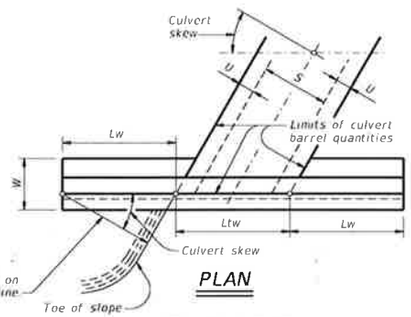
SECTION A-A
(Showing wing reinforcement.)



SECTION B-B
(Showing wing reinforcement.)



PLAN
DETAILS FOR NON-SKEWED BOX CULVERTS



PLAN
DETAILS FOR SKEWED BOX CULVERTS
(Showing 30° skew.)

DESIGNER NOTES:

Type PW-1 can be used for all applications and must be used if railing is to be mounted to the wingwall.
Type PW-2 can only be used for applications without a railing mounted to the wingwall.

MATERIAL NOTES:

Provide Class C concrete (f'c=3,600 psi).
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.

GENERAL NOTES:

Designed in accordance with AASHTO LRFD Bridge Design Specifications.
Depth of toewalls for wingwalls and culverts may be reduced or eliminated when founded on solid rock, when directed by the Engineer.
See Box Culvert Supplement (BCS) standard sheet for wingwall type and additional dimensions and information.
Quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for the Contractor's information only.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

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CONCRETE WINGWALLS
WITH PARALLEL WINGS FOR BOX CULVERTS
TYPES PW-1 AND PW-2

PW

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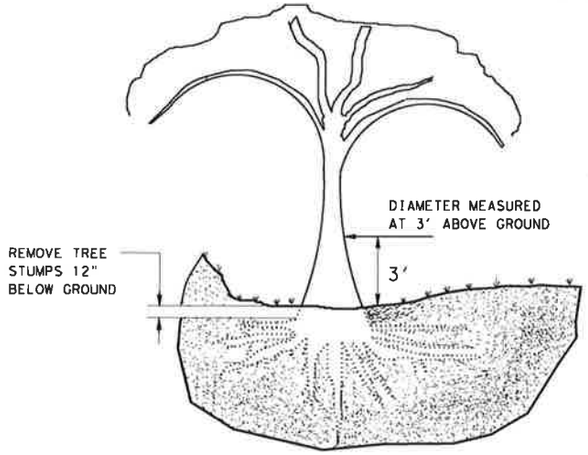
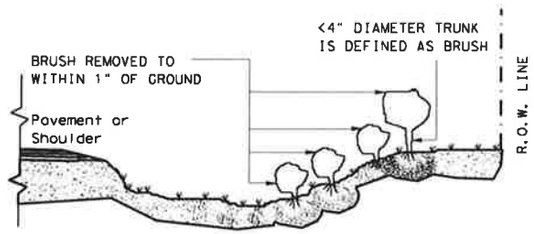
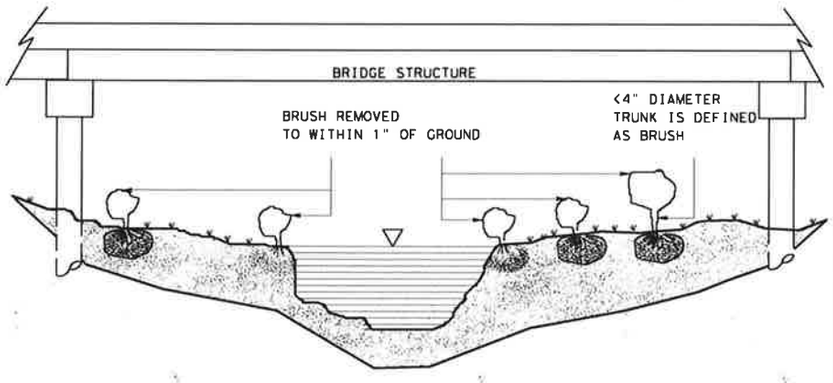


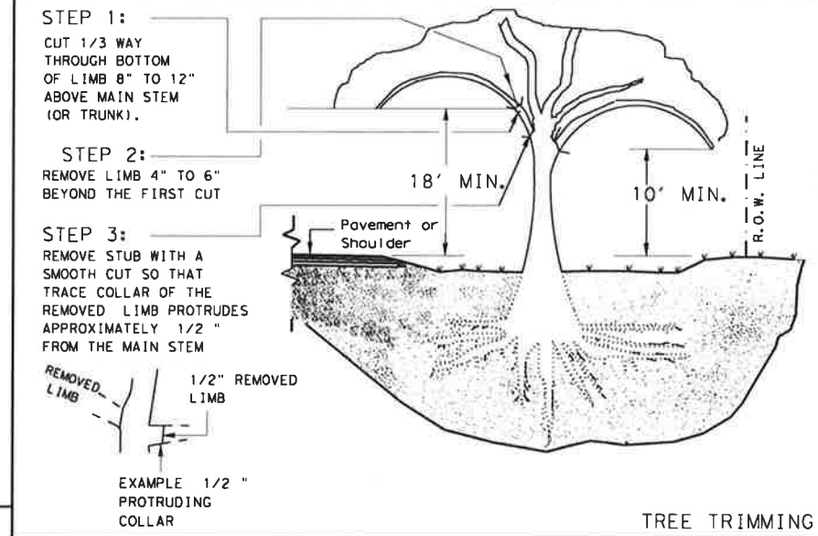
TREE REMOVAL



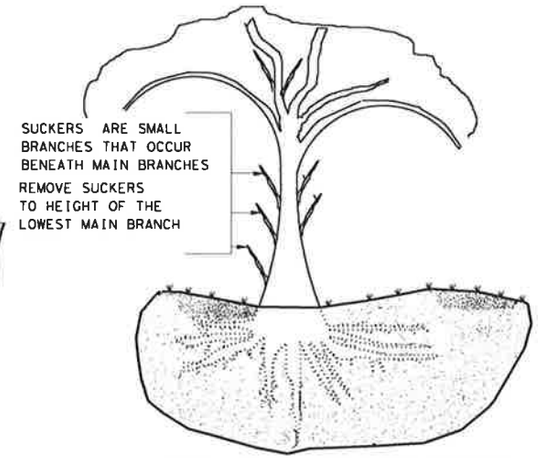
BRUSH REMOVAL



BRUSH REMOVAL UNDER BRIDGE AND IN CHANNEL



TREE TRIMMING



STEPS 1, 2 AND 3 APPLY WHEN REMOVING LIMBS 2" IN DIAMETER OR LARGER.

GENERAL NOTES:

TREE TRIMMING

1. TRIM AND REMOVE ALL TREE LIMBS ON THE PAVEMENT SIDE OF THE TRUNK 18' ABOVE THE PAVEMENT OR BRIDGE DECK ELEVATION, UNLESS OTHERWISE SHOWN ON THE PLANS.

2. TRIM AND REMOVE ALL TREE LIMBS BETWEEN THE TRUNK AND R.O.W. LINE 10' ABOVE NATURAL GROUND, TERRAIN OR OTHER STRUCTURE ELEVATION, UNLESS OTHERWISE SHOWN ON THE PLANS.

TREE REMOVAL

3. FOR TREES MARKED FOR REMOVAL, THE DIAMETER OF TREES ARE DETERMINED BY MEASUREMENT OF THE TRUNK CIRCUMFERENCE 3' ABOVE THE GROUND. TREES WITH TRUNKS OF LESS THAN 4" DIAMETER ARE CONSIDERED TO BE BRUSH. TREES WITH MULTIPLE TRUNKS AT THE POINT OF MEASUREMENT ARE MEASURED AND PAID FOR SEPARATELY.

4. MEASUREMENTS FOR PAYMENT OF TREE DIAMETERS ARE DIVIDED INTO THE RANGES SHOWN IN TABLE 1.

TABLE 1
TREE TRUNK SIZE FOR TREE REMOVAL PAYMENT

PAY ITEM	RANGE FOR PAY ITEMS			
	TRUNK DIAMETER *		TRUNK CIRCUMFERENCE	
	LOWER LIMIT IS GREATER THAN	UPPER LIMIT IS LESS THAN OR EQUAL TO	LOWER LIMIT IS GREATER THAN	UPPER LIMIT IS LESS THAN OR EQUAL TO
752 6005	4	12	12 1/2	37 1/2
752 6006	12	18	37 1/2	56 1/2
752 6007	18	24	56 1/2	75 1/2
752 6008	24	30	75 1/2	94
752 6009	30	36	94	113
752 6010	36	42	113	132
752 6011	42	48	132	151
752 6012	48	60	151	188 1/2
752 6013	60	72	188 1/2	226
752 6019	72	84	226	264
	84	GREATER THAN 84	264	NOT APPLICABLE

*SEE GENERAL NOTE *3.

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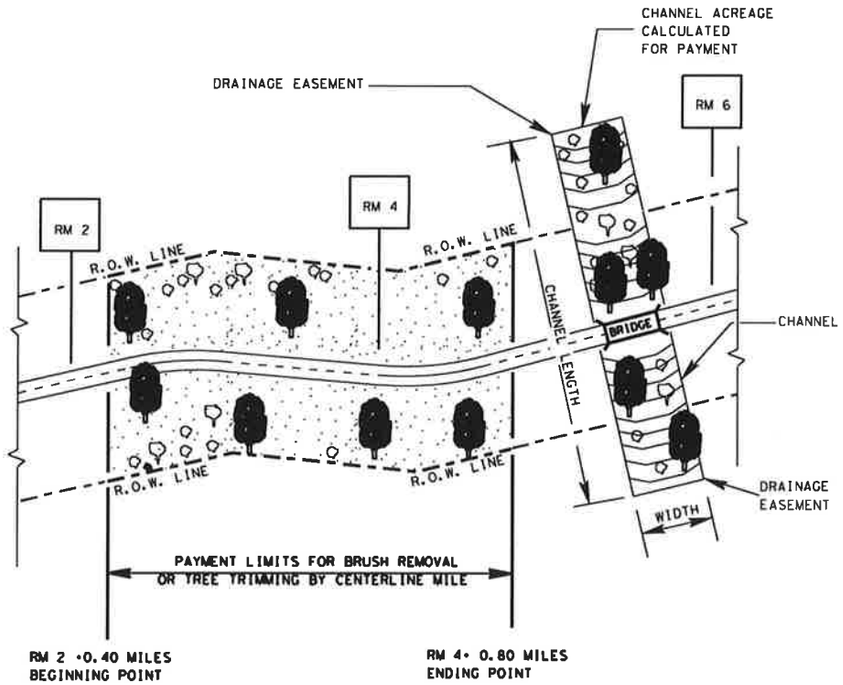
TREE AND BRUSH REMOVAL

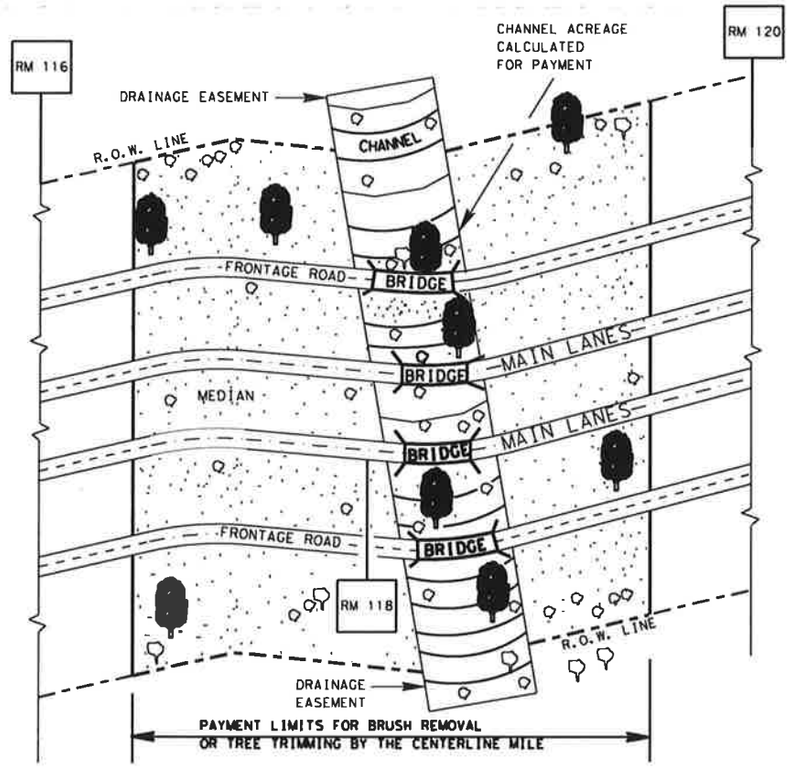
TRB-15(1)

FILE:	DN: JCO	CK: JB	DW: JCO	CK:
©TxDOT MARCH 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS Revised to 2014 Specification	DIST	COUNTY		SHEET NO. 26.0



BRUSH REMOVED TO WITHIN 1" OF GROUND <4" DIAMETER TRUNK IS DEFINED AS BRUSH UNLESS OTHERWISE DIRECTED

EXAMPLE: UNDIVIDED HIGHWAY



RM 116 + 0.40 MILES BEGINNING POINT

BRUSH REMOVED TO WITHIN 1" OF GROUND <4" DIAMETER TRUNK IS DEFINED AS BRUSH UNLESS OTHERWISE DIRECTED

RM 118 + 1.50 MILES ENDING POINT

EXAMPLE: DIVIDED HIGHWAY WITH FRONTAGE ROADS

LEVELS DISPLAYED

GENERAL NOTES:

TREE TRIMMING AND BRUSH REMOVAL

1. PAYMENT BY THE CENTERLINE MILE IS MADE TO THE NEAREST 1/100 (0.01) MILE.
2. LIMITS OF WORK ARE SHOWN AS DISTANCES FROM REFERENCE MARKERS (RM).
3. PAY ITEMS BY THE CENTERLINE MILE INCLUDE ALL TREE TRIMMING OR BRUSH REMOVAL IN THE RIGHT OF WAY ON BOTH SIDES OF THE HIGHWAY. FOR DIVIDED HIGHWAYS, THE MEDIAN IS INCLUDED. FOR HIGHWAYS WITH FRONTAGE ROADS, THE AREAS BETWEEN THE FRONTAGE ROADS AND MAIN LANES, AND THE AREAS OUTSIDE OF THE FRONTAGE ROADS ARE INCLUDED.
4. BRUSH REMOVAL AND TREE TRIMMING UNDER BRIDGES, IN AND ALONG CHANNELS AND EASEMENTS ARE PAID FOR BY THE ACRE FOR AREAS DESIGNATED ON THE PLANS.

Texas Department of Transportation
Maintenance Division
Standard Plans

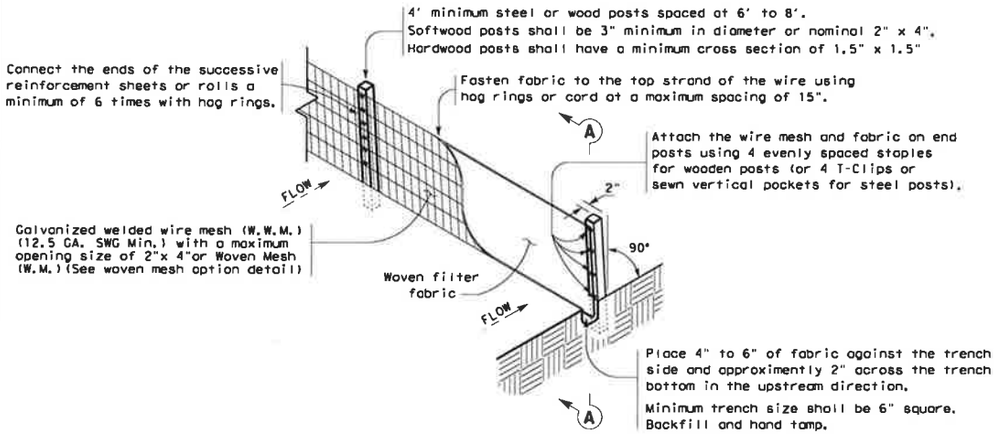
TREE AND BRUSH REMOVAL

TRB-15(2)

NOT TO SCALE — SHEET 2 OF 2

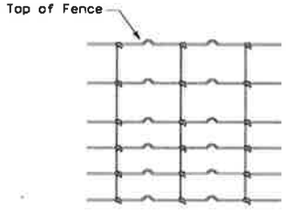
FILE: TRB-15(2).DGN	DRAWN: JEO MODIFIED:	CHECKED: LJB	DW:	CK:					NEG NO.#
©TxDOT APRIL 2015		STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT					SHEET
REVISED: 5/13/2004	LJB								
REVISED: 9/24/2004	LJB	COUNTY			CONTROL	SECTION	JOB	HIGHWAY	
REVISED: APRIL 2015	JEO							27.0	

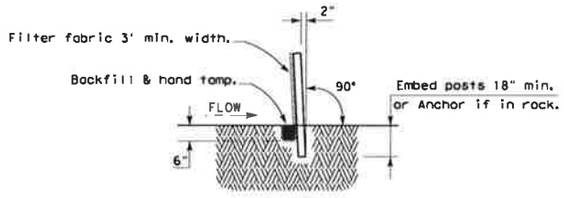
DATE
FILE



TEMPORARY SEDIMENT CONTROL FENCE

SCF





SECTION A-A

HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

Galvanized hinge joint knot woven mesh (12.5 GA.SWG Min.) requires a minimum of five horizontal wires spaced at a maximum of 12 inches apart and all vertical wires spaced at a maximum of 12 inches apart.

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 maximum 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.

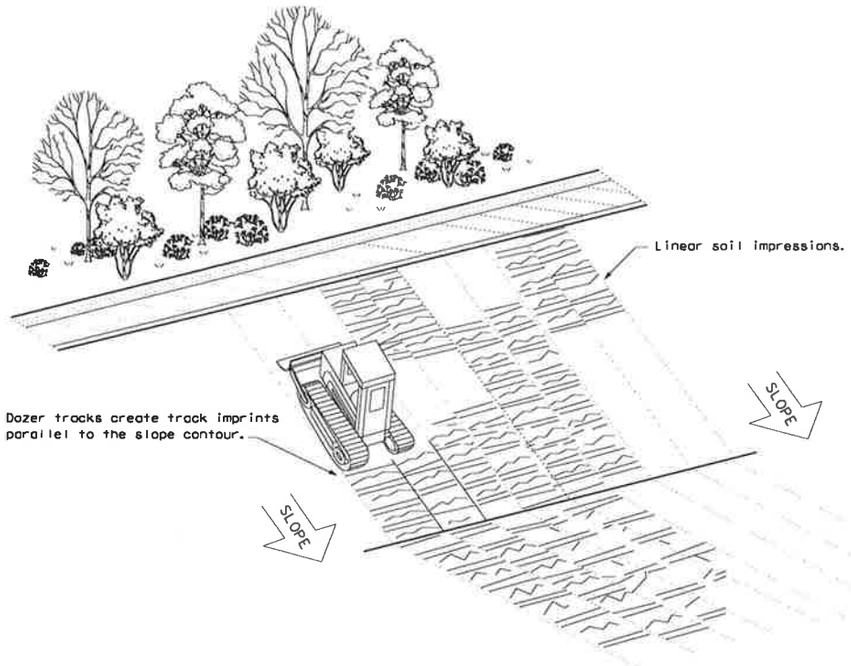
LEGEND

Sediment Control Fence

SCF

GENERAL NOTES

1. Vertical tracking is required on projects where soil distributing activities have occurred unless otherwise approved.
2. Perform vertical tracking on slopes to temporarily stabilize soil.
3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" to 4" in width by 1/2" to 2" in depth.
4. Do not exceed 12" between track impressions.
5. Install continous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.



VERTICAL TRACKING

Texas Department of Transportation

Design Division Standard

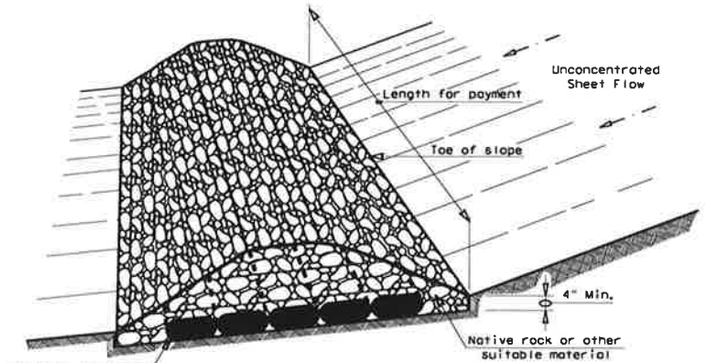
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCE & VERTICAL TRACKING

EC(1)-16

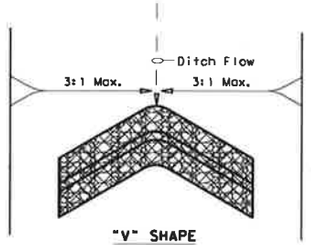
FILE: ec116	DW: TxDOT	CK: KW	DW: VP	CK: LS	
© TxDOT: JULY 2016	CONT	SECT	JOB		HIGHWAY
REVISIONS	DIST	COUNTY			SHEET NO.
					28.0

DATE:
FILE:

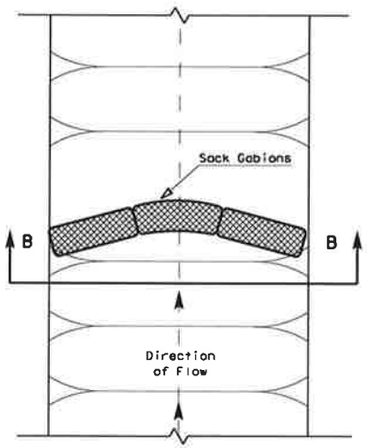


FILTER DAM AT TOE OF SLOPE

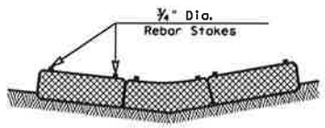
RFD1



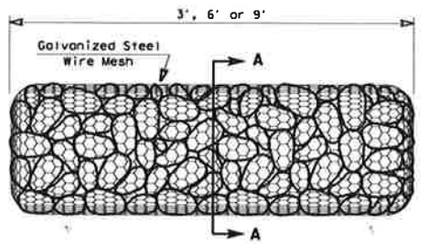
"V" SHAPE
PLAN VIEW



PLAN VIEW

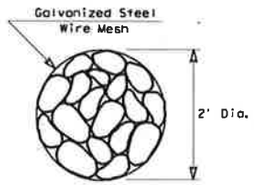


SECTION B-B

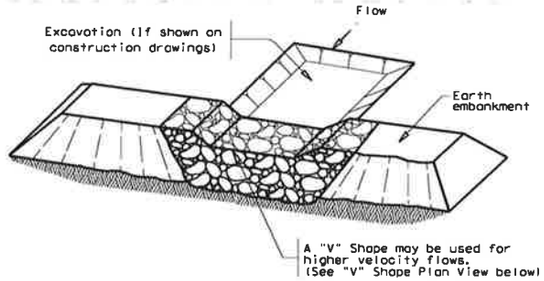


TYPE 4 (SACK GABIONS)

RFD4

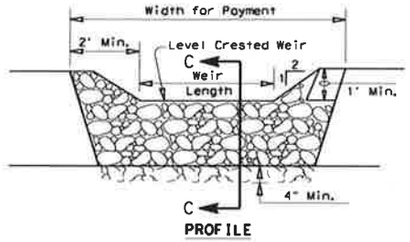


SECTION A-A

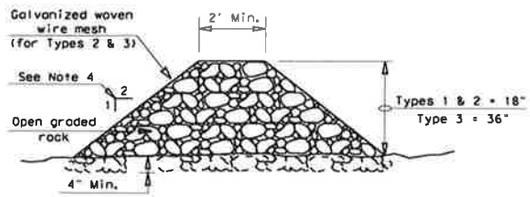


FILTER DAM AT SEDIMENT TRAP

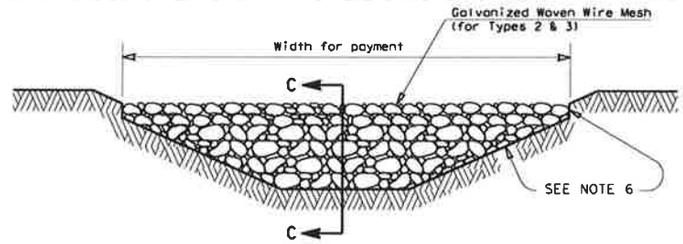
RFD1 OR RFD2



PROFILE



SECTION C-C



FILTER DAM AT CHANNEL SECTIONS

RFD1 OR RFD2 OR RFD3

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. For 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, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 ½" x 3 ¼"
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.

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) (3" to 6" aggregate): 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 (approximently 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) (3" to 6" aggregate): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh) (4" to 8" aggregate): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions) (3" to 6" aggregate): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

Type 5: Provide rock filter dams as shown on plans.

PLAN SHEET LEGEND

Type 1 Rock Filter Dam — RFD1
Type 2 Rock Filter Dam — RFD2
Type 3 Rock Filter Dam — RFD3
Type 4 Rock Filter Dam — RFD4

Texas Department of Transportation | Design Division Standard

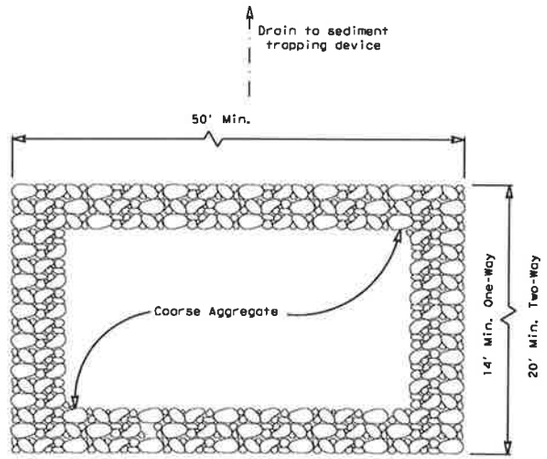
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

ROCK FILTER DAMS

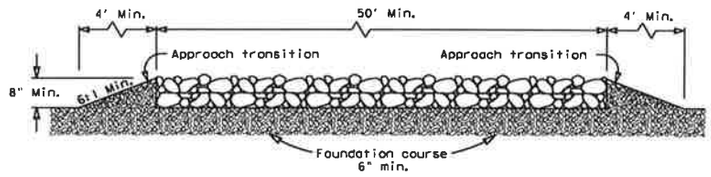
EC(2)-16

FILE: ec216	DN: TxDOT	CK: KM	DW: VP	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY		SHEET NO. 29.0

DATE: $DATE$
FILE: $FILE$



PLAN VIEW



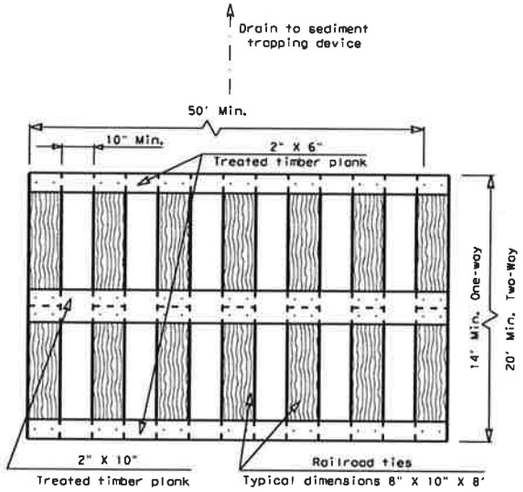
ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 1)

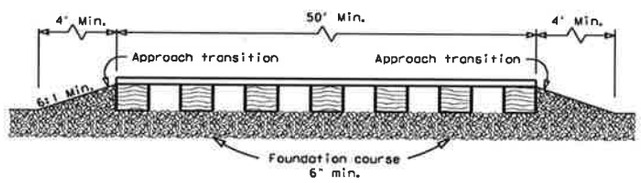
ROCK CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

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 materials 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.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.



PLAN VIEW



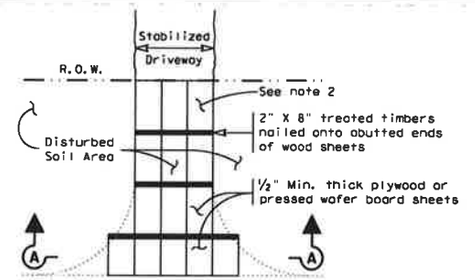
ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 2)

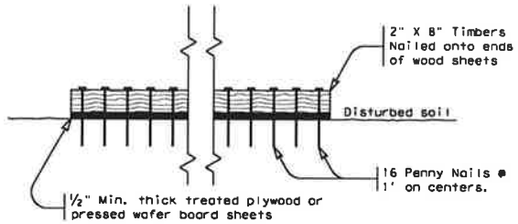
TIMBER CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 2)

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.
8. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.



PLAN VIEW



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

SHORT TERM

GENERAL NOTES (TYPE 3)

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 Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

CONSTRUCTION EXITS

EC(3)-16

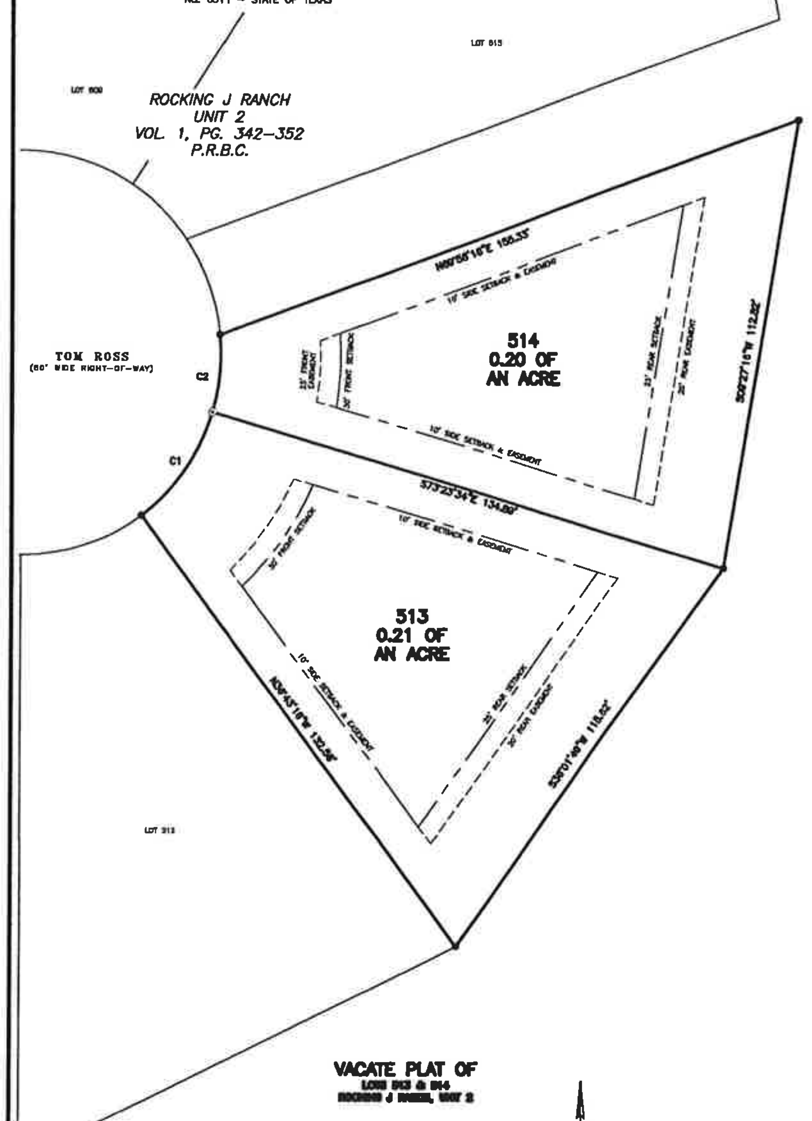
FILE: ec316	DN: TxDOT	CK: KW	DW: VP	CK: LS
©TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY		SHEET NO.
				30.0

Current

I JOHN T. KUBALA, A REGISTERED PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THAT THE ABOVE PLAT WAS PREPARED USING INFORMATION OBTAINED BY AN ON THE GROUND SURVEY MADE UNDER MY DIRECTION AND SUPERVISION IN MARCH 2019.

DATE ________ DAY OF ________________ 2019 A.D.

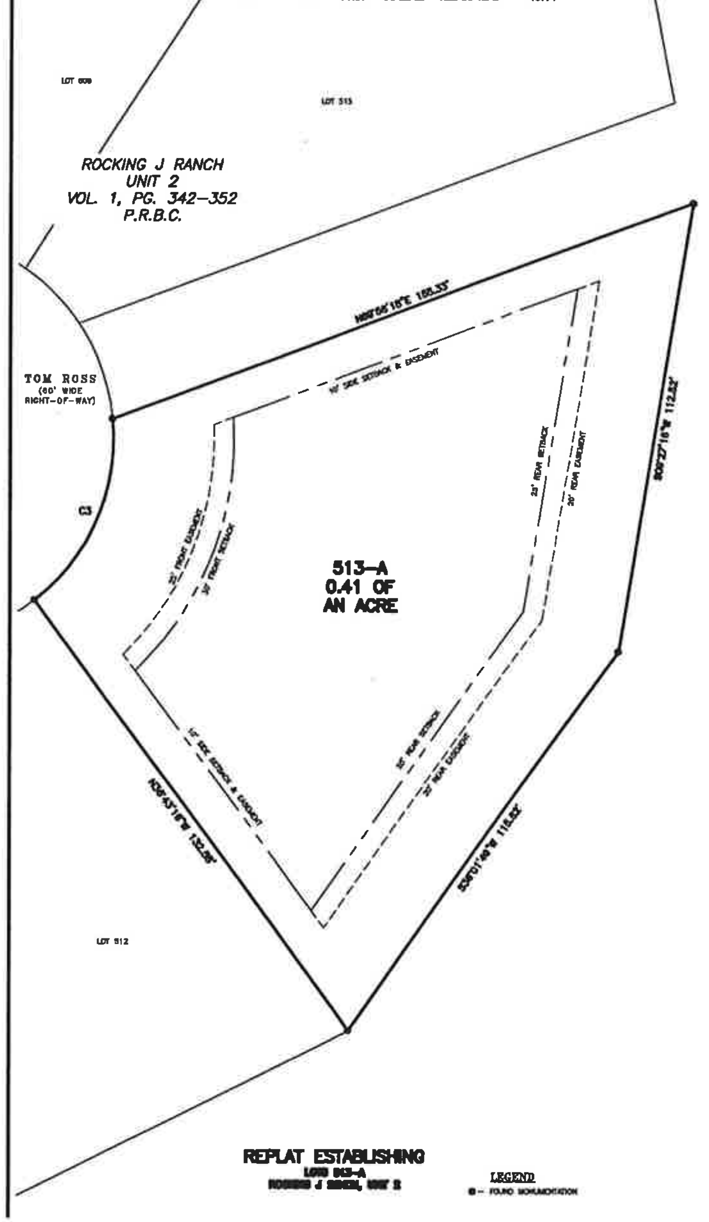
JOHN T. KUBALA
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 6511 – STATE OF TEXAS



VACATE PLAT OF
LOTS 513 & 514
ROCKING J RANCH, UNIT 2

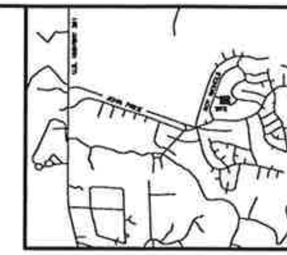
Proposed

CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	50.00'	32.00'	36°40'18"	N34°56'35"E	31.46'
C2	50.00'	19.37'	22°11'46"	N05°30'33"E	19.25'
C3	50.00'	51.37'	58°52'05"	N23°50'42"E	49.14'



REPLAT ESTABLISHING
LOTS 513-A
ROCKING J RANCH, UNIT 2

LEGEND
● – FOUND MONUMENTATION



STATE OF TEXAS
COUNTY OF BLANCO

KNOW ALL MEN BY THESE PRESENTS, I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY AS SHOWN OF RECORD VOLUME 323, PAGE 781 AND VOLUME 323, PAGE 786 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF BLANCO COUNTY, TEXAS AND DESCRIBED HEREON, AND THAT I ADOPT THIS REPLAT OF SUBDIVISION WITH MY FREE CONSENT, SUBJECT TO ANY AND ALL EASEMENTS OF RESTRICTIONS HEREFORE GRANTED.

WITNESS MY HAND, THIS ___ DAY OF ________, A.D. 2019

THERESA BURNS WEST
P.O. BOX 100568
SAN ANTONIO, TEXAS, 78201

STATE OF TEXAS
COUNTY OF BLANCO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED, THERESA BURNS WEST, KNOWN TO ME AS THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGE TO ME THAT SHE HAS EXECUTED THE SAME FOR THE PURPOSE AND CONSIDERATION THEREIN STATED.

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS DAY OF ________ A.D., 2019

NOTARY PUBLIC IN AND FOR BEXAR COUNTY, TEXAS

MY COMMISSION EXPIRES ____________

APPROVED BY COMMISSIONERS COURT ON THE ____ DAY OF ________, A.D., 2019

BLANCO COUNTY JUDGE
JUDGE NAME

CLERK NAME
BLANCO COUNTY CLERK

I, LAURA WALLA, COUNTY CLERK OF BLANCO COUNTY, TEXAS DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THIS ____ DAY OF ________, A.D., 2019, AT O'CLOCK
__M. IN THE PLAT RECORDS OF BLANCO COUNTY, TEXAS IN BOOK ____, PAGE ____, WITNESS MY HAND AND SEAL OF OFFICE THIS ____ DAY OF ________, A.D., 2019.

LAURA WALLA
COUNTY CLERK, BLANCO COUNTY, TEXAS

CDS muery
ENGINEERS • SURVEYORS

SCALE IN FEET
1"=20'

REPLAT OF
LOT 513–A ROCKING J RANCH UNIT 2
BEING FORMERLY LOTS 513 & 514 OUT OF ROCKING J RANCH, UNIT 2, A SUBDIVISION OF RECORD IN VOLUME 1, PAGES 342–352 OF THE PLAT RECORDS OF BLANCO COUNTY TEXAS, BEING 0.41 OF AN ACRE SITUATED IN BLANCO COUNTY, TEXAS OUT OF THE CHARLES V. TAPLIN SURVEY NO. 66, ABSTRACT NO. 595 AND CONVEYED TO THERESA BURNS WEST OF RECORD IN VOLUME 323, PAGE 781 AND VOLUME 323, PAGE 786 OF THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY BLANCO COUNTY, TEXAS

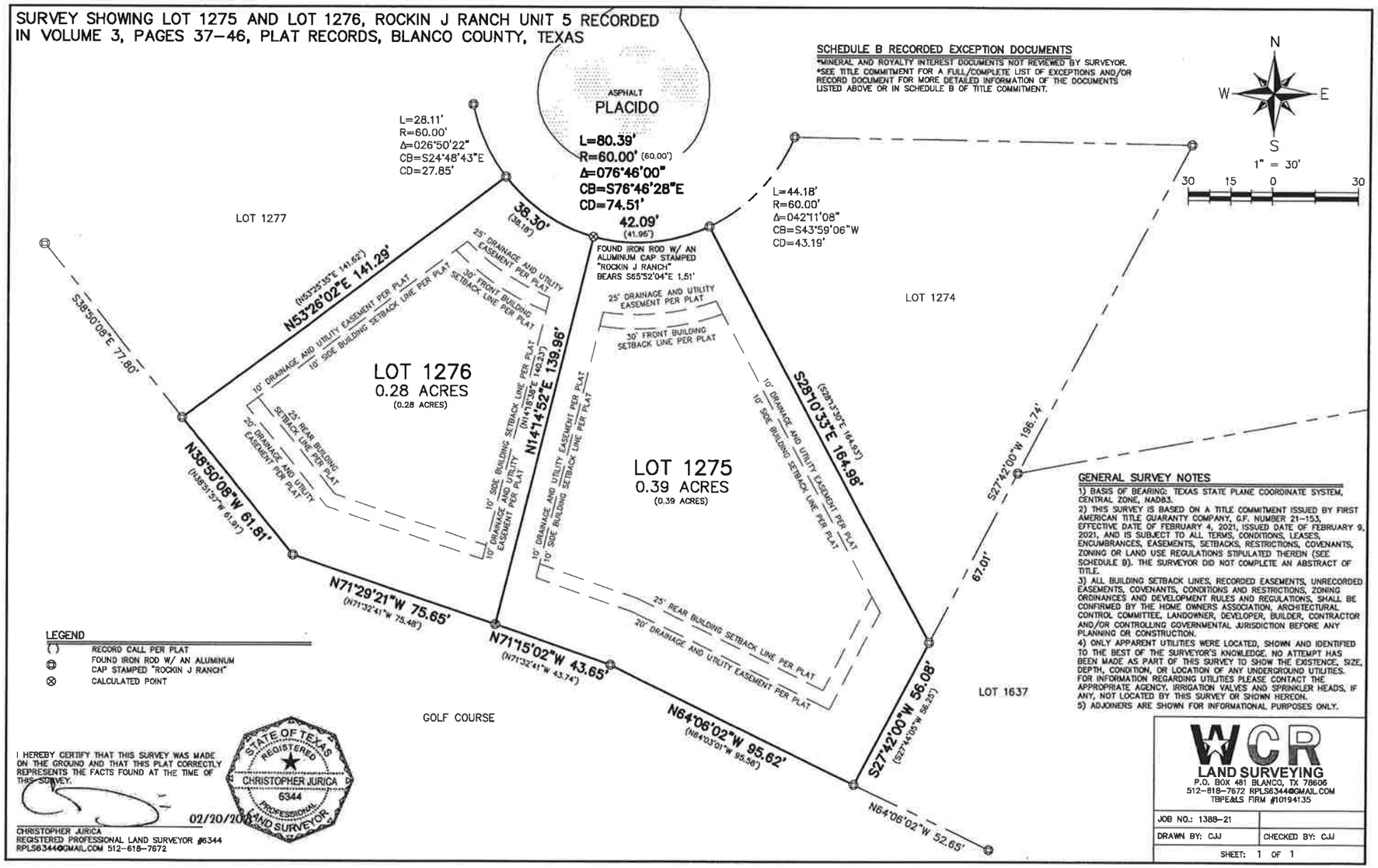
NOTE:

1) BEARING BASIS IS THE PLAT
2) THIS PLAT IS SUBJECT TO ALL EASEMENTS RESTRICTIONS, RESERVATIONS AND COVENANTS OF RECORD

SHEET 1 OF 1

current

SURVEY SHOWING LOT 1275 AND LOT 1276, ROCKIN J RANCH UNIT 5 RECORDED IN VOLUME 3, PAGES 37–46, PLAT RECORDS, BLANCO COUNTY, TEXAS



SCHEDULE B RECORDED EXCEPTION DOCUMENTS

*MINERAL AND ROYALTY INTEREST DOCUMENTS NOT REVIEWED BY SURVEYOR.
*SEE TITLE COMMITMENT FOR A FULL/COMPLETE LIST OF EXCEPTIONS AND/OR RECORD DOCUMENT FOR MORE DETAILED INFORMATION OF THE DOCUMENTS LISTED ABOVE OR IN SCHEDULE B OF TITLE COMMITMENT.

GENERAL SURVEY NOTES

1) BASIS OF BEARING: TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NAD83.
2) THIS SURVEY IS BASED ON A TITLE COMMITMENT ISSUED BY FIRST AMERICAN TITLE GUARANTY COMPANY, G.F. NUMBER 21–153, EFFECTIVE DATE OF FEBRUARY 4, 2021, ISSUED DATE OF FEBRUARY 9, 2021, AND IS SUBJECT TO ALL TERMS, CONDITIONS, LEASES, ENCUMBRANCES, EASEMENTS, SETBACKS, RESTRICTIONS, COVENANTS, ZONING OR LAND USE REGULATIONS STIPULATED THEREIN (SEE SCHEDULE B). THE SURVEYOR DID NOT COMPLETE AN ABSTRACT OF TITLE.
3) ALL BUILDING SETBACK LINES, RECORDED EASEMENTS, UNRECORDED EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS, ZONING ORDINANCES AND DEVELOPMENT RULES AND REGULATIONS, SHALL BE CONFIRMED BY THE HOME OWNERS ASSOCIATION, ARCHITECTURAL CONTROL COMMITTEE, LANDOWNER, DEVELOPER, BUILDER, CONTRACTOR AND/OR CONTROLLING GOVERNMENTAL JURISDICTION BEFORE ANY PLANNING OR CONSTRUCTION.
4) ONLY APPARENT UTILITIES WERE LOCATED, SHOWN AND IDENTIFIED TO THE BEST OF THE SURVEYOR'S KNOWLEDGE, NO ATTEMPT HAS BEEN MADE AS PART OF THIS SURVEY TO SHOW THE EXISTENCE, SIZE, DEPTH, CONDITION, OR LOCATION OF ANY UNDERGROUND UTILITIES. FOR INFORMATION REGARDING UTILITIES PLEASE CONTACT THE APPROPRIATE AGENCY. IRRIGATION VALVES AND SPRINKLER HEADS, IF ANY, NOT LOCATED BY THIS SURVEY OR SHOWN HEREON.
5) ADJOINERS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.

LEGEND

( ) RECORD CALL PER PLAT
FOUND IRON ROD W/ AN ALUMINUM CAP STAMPED "ROCKIN J RANCH"
CALCULATED POINT

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND THAT THIS PLAT CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF THIS SURVEY.

02/20/2021

STATE OF TEXAS
REGISTERED
CHRISTOPHER JURICA
6344
PROFESSIONAL
LAND SURVEYOR

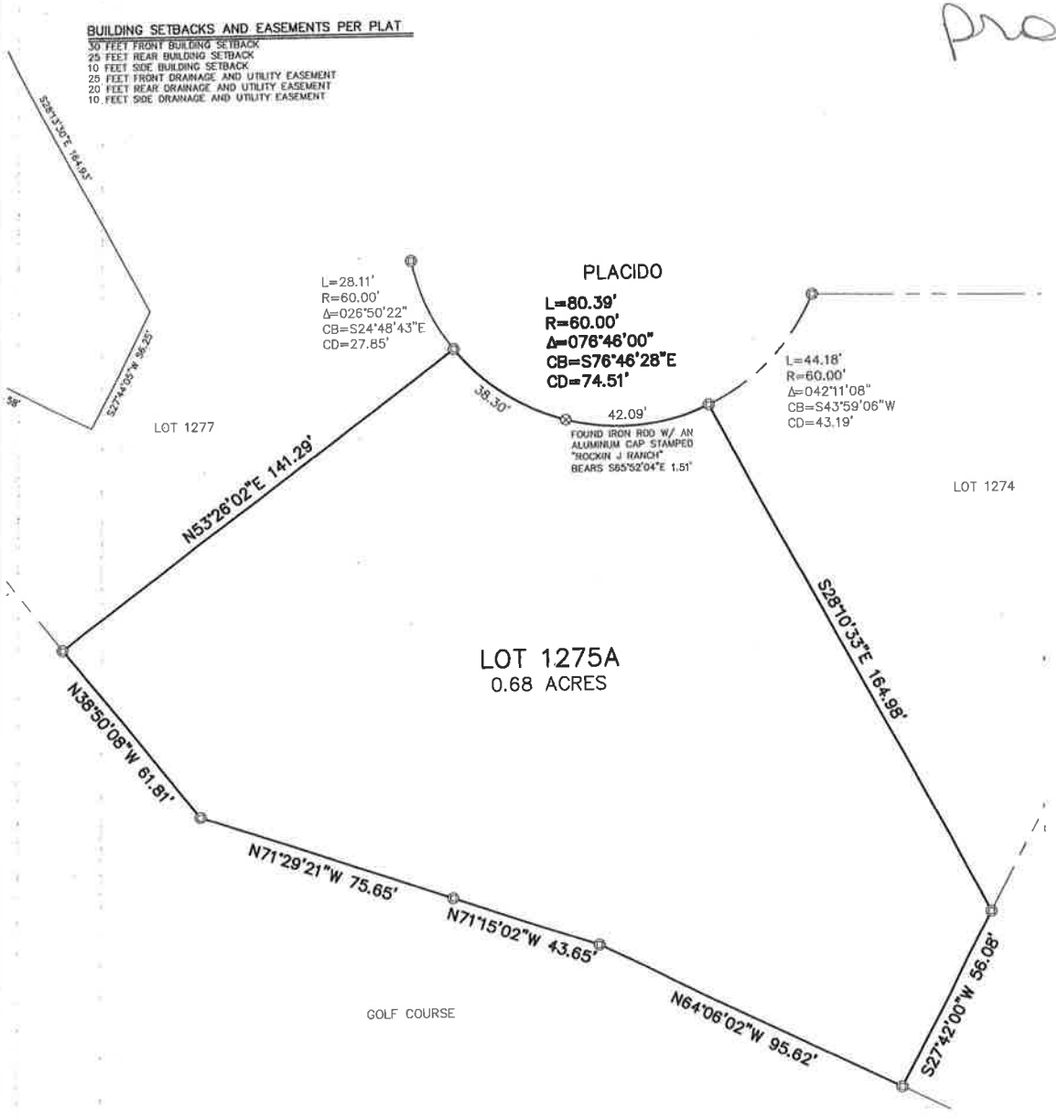
CHRISTOPHER JURICA
REGISTERED PROFESSIONAL LAND SURVEYOR #6344
RPLS6344@GMAIL.COM 512–618–7672

WCR
LAND SURVEYING
P.O. BOX 481 BLANCO, TX 78606
512–818–7672 RPLS6344@GMAIL.COM
TBPE&LS FIRM #10194135

JOB NO.: 1388–21	
DRAWN BY: CJJ	CHECKED BY: CJJ
SHEET: 1 OF 1	

AND LOT 1276, ROCKIN J RANCH UNIT 5 RECORDED
-46, PLAT RECORDS, BLANCO COUNTY, TEXAS
INTO
LOT 1275A

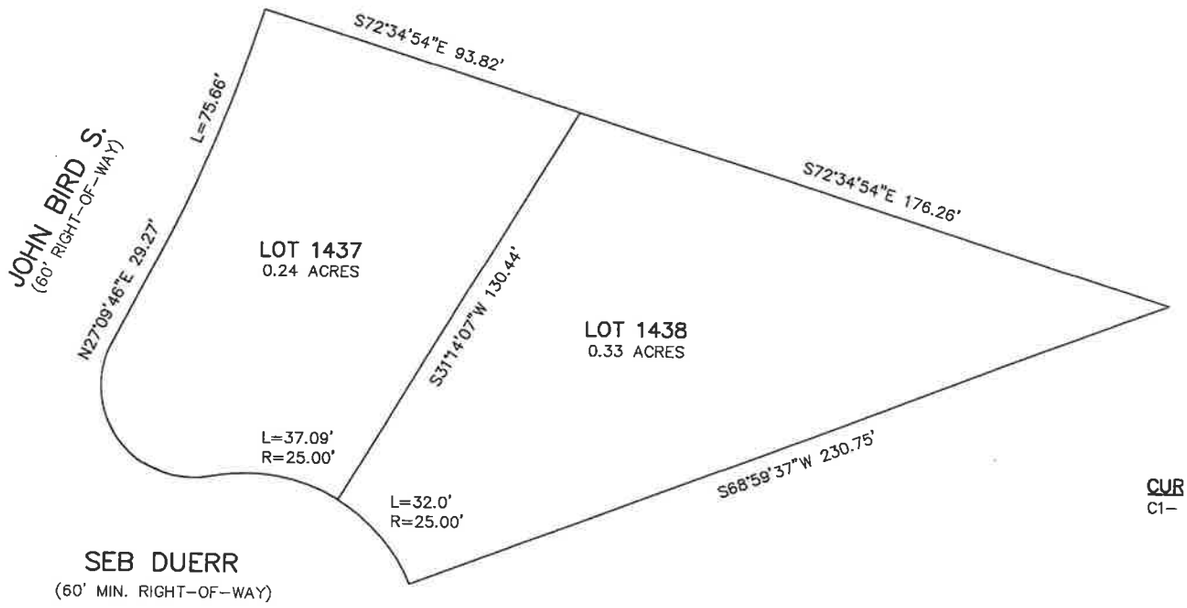
proposed



current

BUILDING SETBACKS AND EASEMENTS PER PLAT

30 FEET FRONT BUILDING SETBACK
25 FEET REAR BUILDING SETBACK
10 FEET SIDE BUILDING SETBACK
25 FEET FRONT DRAINAGE AND UTILITY EASEMENT
20 FEET REAR DRAINAGE AND UTILITY EASEMENT
10 FEET SIDE DRAINAGE AND UTILITY EASEMENT

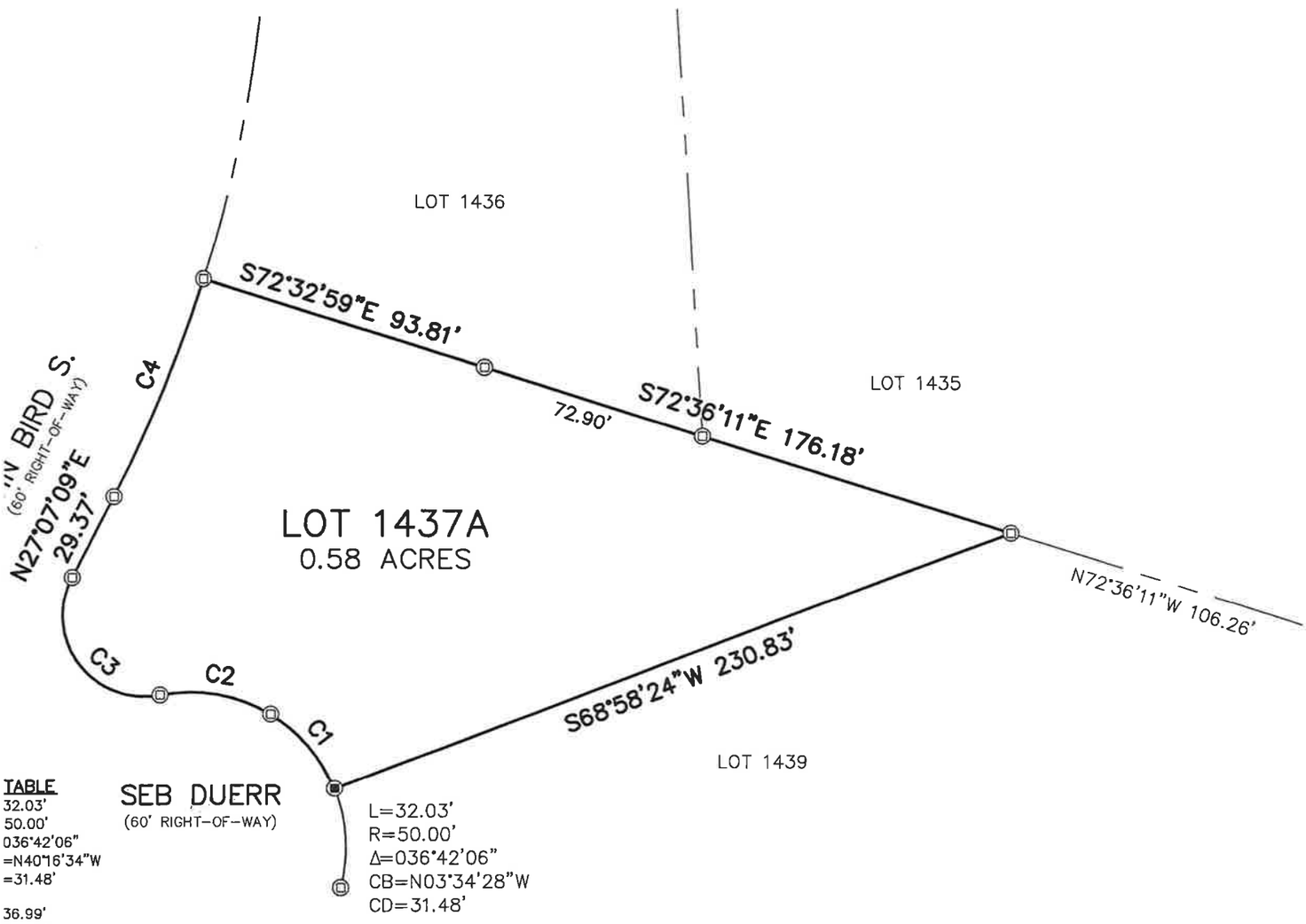


CUR
C1–
C2–
C3–
C4–

EXISTING
VOLUME 3, PAGES 37–46
PLAT RECORDS

ROCKIN J RANCH UNIT 5 RECORDED
)RDS, BLANCO COUNTY, TEXAS

proposed



TABLE

32.03'
50.00'
036°42'06"
=N40°16'34"W
=31.48'

36.99'
50.00'
042°23'10"
=N80°12'42"W
=36.15'

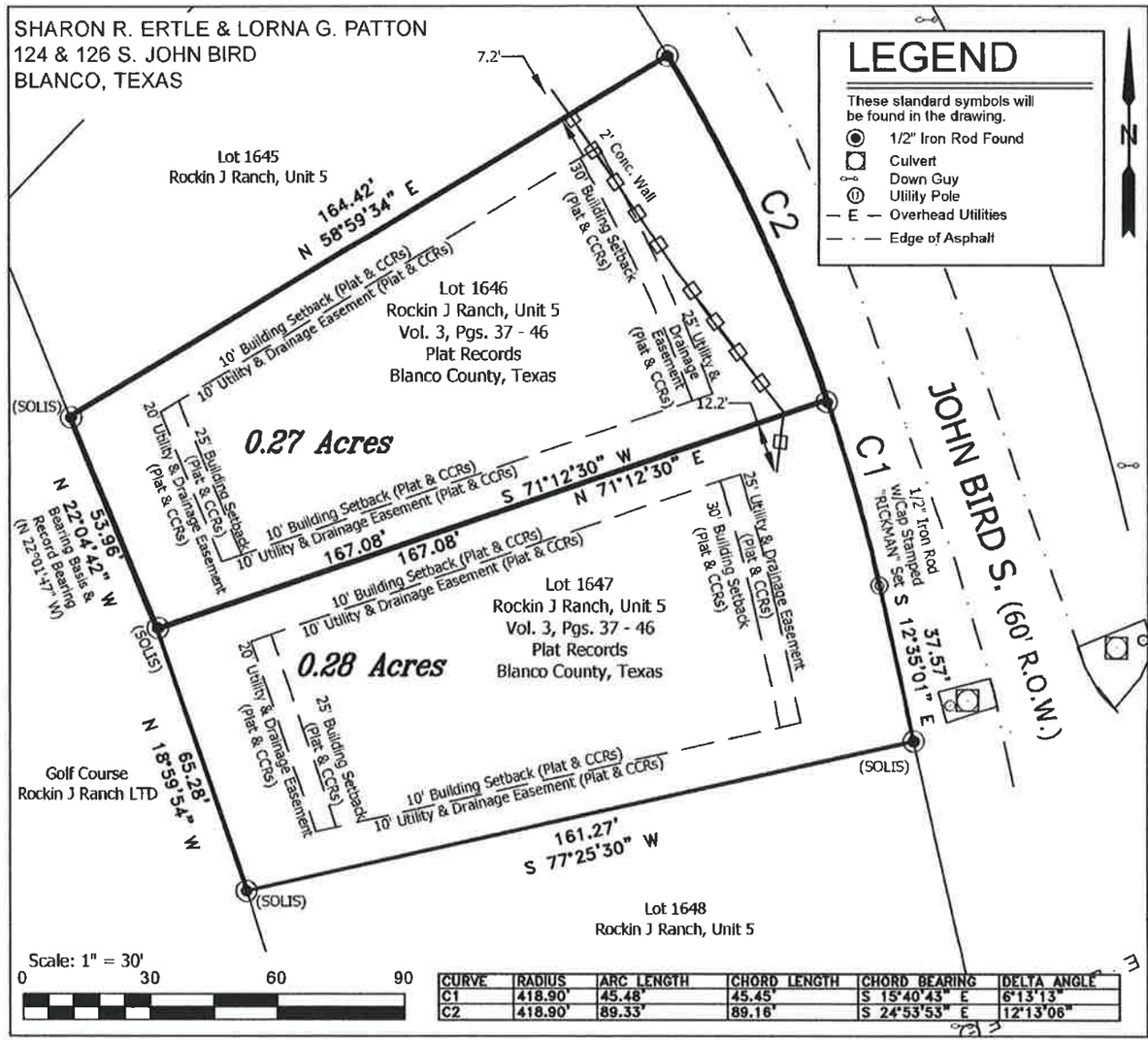
58.49'
26.00'
128°53'09"
=N36°59'58"W
=46.91'

75.60'
444.84'

PROPOSED

Current

SHARON R. ERTLE & LORNA G. PATTON
124 & 126 S. JOHN BIRD
BLANCO, TEXAS



LEGEND

These standard symbols will be found in the drawing.

- 1/2" Iron Rod Found
- Culvert
- Down Guy
- Utility Pole
- E — Overhead Utilities
- Edge of Asphalt

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	418.90'	45.48'	45.45'	S 15°40'43" E	6°13'13"
C2	418.90'	89.33'	89.16'	S 24°53'53" E	12°13'06"

SURVEY OF LOTS 1647 & 1648, ROCKIN J. RANCH, UNIT 5 ACCORDING TO PLAT RECORDED IN VOLUME 3, PAGES 37 - 46, PLAT RECORDS, BLANCO COUNTY, TEXAS.

Flood Statement: According to the Flood Insurance Rate Map (FIRM) No. 48031C0115C, dated February 6, 1991, Panel not printed.

Survey Notes:

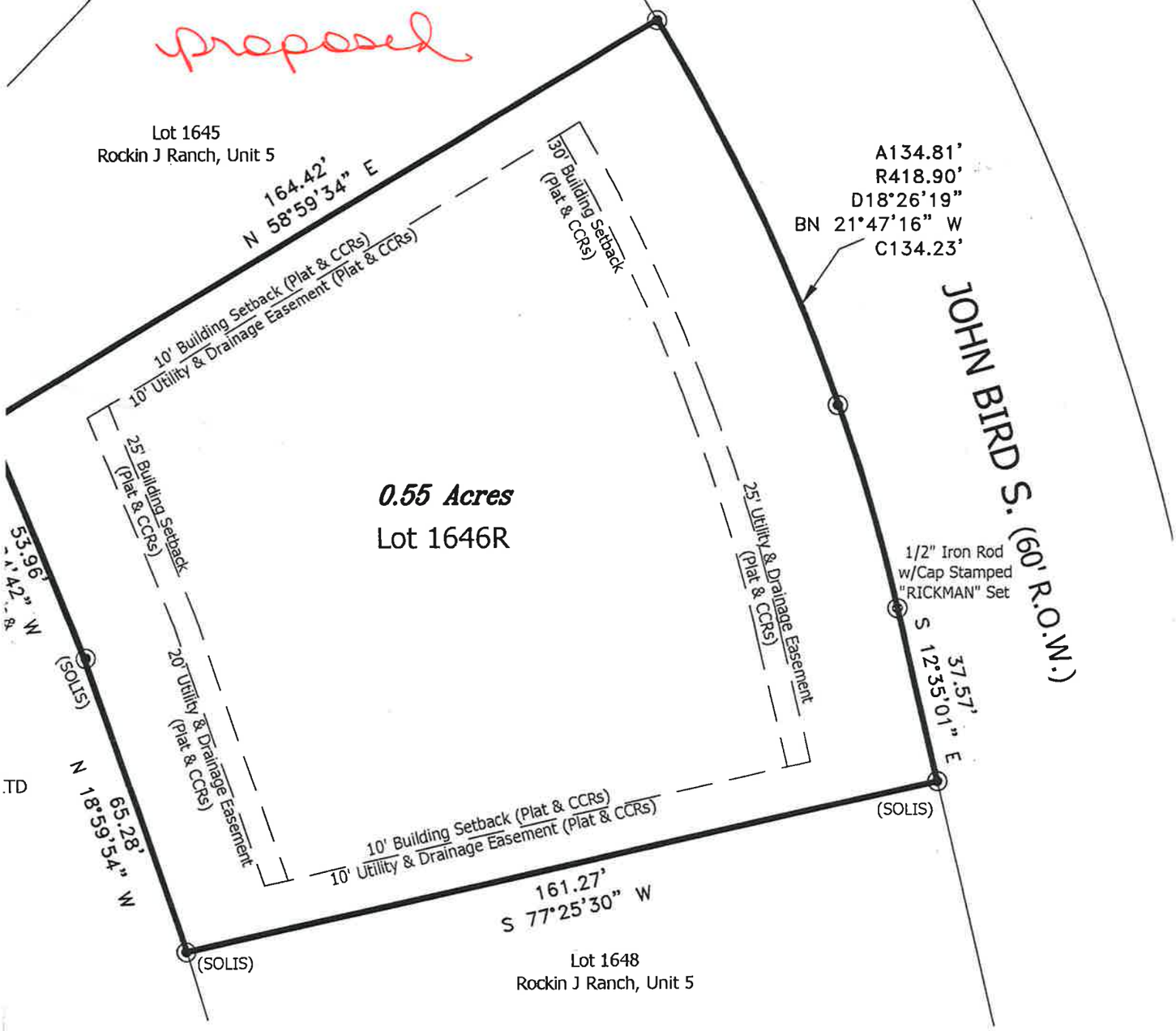
1. Bearings Based on NAD83, Texas Central Zone (4203).
2. Surveyor has not investigated the existence of Design Guidelines or other unrecorded documents as may be promulgated by an Architectural Control Committee.
3. No Title Commitment was provided to Surveyor at time of Survey.
4. Ingress & Egress Easement per Volume 305, Page 836, Official Public Records, Blanco County, Texas.
5. Building Setbacks and Utility Easements per Plat, and Covenants and restrictions per Volume 305, Page 836, Volume 305, Page 848. amended in Volume 342, Page 42, amended in Volume 380, Page 956, amended in Volume 428, Page 93, and amended in Volume 455, Page 122, Official Public Records, Blanco County, Texas;
   - -25' Utility & Drainage Easement - along Front lot lines
   - -10' Utility & Drainage Easement - along Side lot lines
   - -20' Utility & Drainage Easement - along Rear lot lines
   - -30' Building Setback - along Front lot lines
   - -25' Building Setback - along Rear lot lines
   - -10' Building Setback - along Side lot lines

CERTIFICATION:
THE UNDERSIGNED DOES HEREBY CERTIFY THAT THIS EXHIBIT REPRESENTS A SURVEY MADE ON THE GROUND ON OCTOBER 29, 2020, OF THE PROPERTY SHOWN HEREON:

STATE OF TEXAS
REGISTERED
AMIL M. BAKER JR.
1469
PROFESSIONAL
LAND SURVEYOR

Amil M. Baker Jr.
Amil M. Baker, Jr.,
Registered Professional Land Surveyor No. 1469
Job Number: 20-151

RICKMAN LAND SURVEYING, LLC
TBPLS FIRM NO. 101919-00
419 BIG BEND
CANYON LAKE, TEXAS 78133
PHONE (830) 935-2457
WWW.RICKMANLANDSURVEYING.COM



REPLAT OF LOT 1646 AND LOT 1647, ROCKIN J RANCH, PHASE 5 ESTABLISHING