$%675$&7

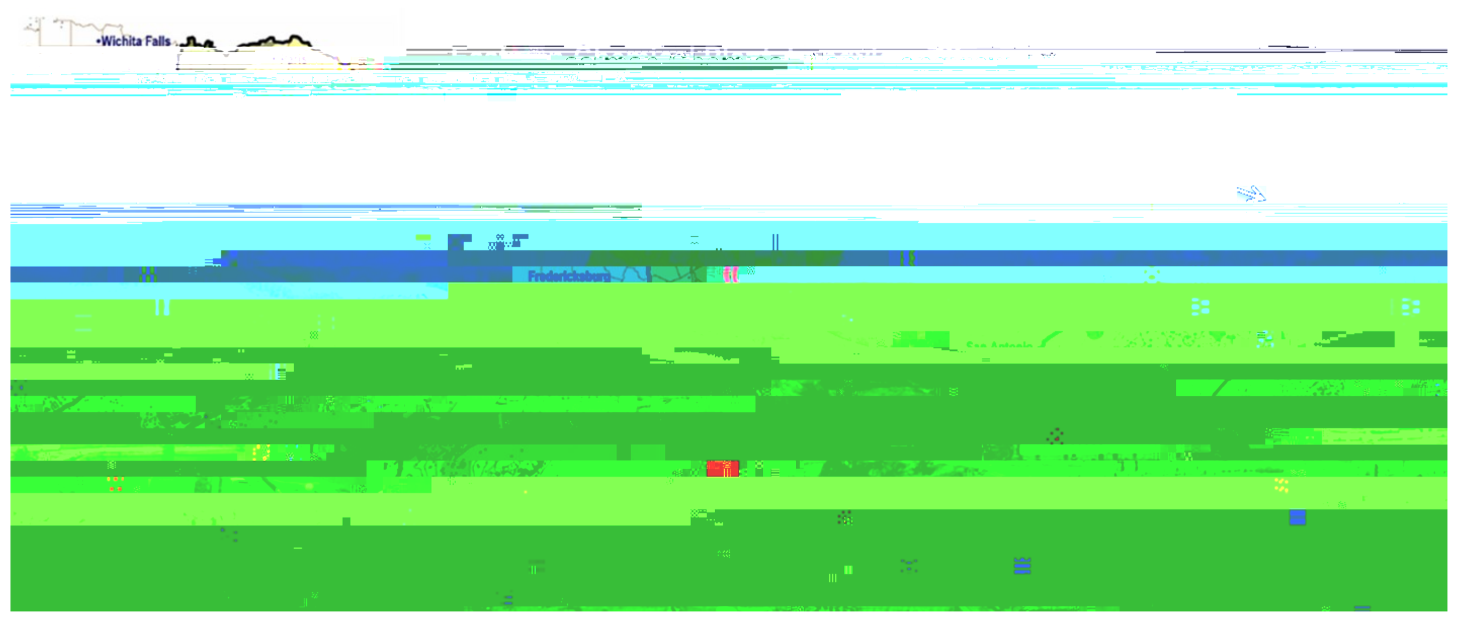
'LUHFW XVH RI JHRWKHUPDO HQHUJ\ KDV KLVWRULFDOO\ EHHQ OLPLWHG WR VPDOO FDSDFLW\ DSSOLDOO *ë !S˜ I I L

FLHQF\ RI WKH QDWXUDO JDV WXUELQH %ODFNZHOO HW DO

- 3UHYLRXV VWXGLHV KDYH SURGXFHG JHQHUDO LQIRUPDWLRQ RQ WKH JHRWKHUPDO SRWHQWLDO RI WKLV DUHD EXW WKLV VWXG\ H[DPLQ D JHRWKHUPDO SURMHFW

- ZLOO UHVHDUFK XVLQJ UHVRXUFHV OLNH 2SHQ(,)LJXUH 2SHQ(,

$QDO\VLV RI RWKHU IDFWRUV UHTXLUHG IRU XQGHUVWDQGLQJ RI UHVHUYRLU PRGHOLQJ" >6XJJHVWLRQ



)LJXUH 6XEVXUIDFH WHPSHUDWXUH RI (DVW DQG 6RXWK 7H[DV DW IHHW GHSWK %ODFNZHOO HW DO 7KH VWXG\ DUHD KLJKOLJKWHG ZLWK WKH EOXH VTXDUH KDV UHJLRQDOO\ KLJK WHPSHUDWXUHV EXW PRUH GDWD SRLQWV DUH EHLQJ DGGHG DV SDUW RI WKLV SURMHFW WR LQFUHDVH WKH UHVROXWLRQ RI WKH KHDW IORZ DQG WHPSHUDWXUH

7DV	7DVN RU 6	0LOHVW 1XPEHU	0LOHVWRQH 'HVF	0LOHVWRQH 9HULILFDWLRQ 3URFHVV
	5HVRXUFH GDWD FRPSLODWLRQ	0	,QLWLDO DVVHVVPHQW RI UHVRXUFH DQG SODQW	,QYHVWLJDWLRQ RI WKH JHRWKHUPDO SRWHQWLDO RI WKH VWXG\ ORFDWLRQ (DVWPDQ &KHPLFDO &RPSDQ\ /RQJYLHZ
	5HYLHZ DQG DVVHVV ZHOO GDWD	0	'DWDEDVH RI ZHOO GDWD	&RPSOHWH VXEVXUIDFH DQG ZRUNERRN XVLQJ KHDGLQJV DV GHILQHG LQ UHOHYDQW FRQWHQW PRGHOV LQFOXGLQJ :HOO)OXLG 3URGXFWLRQ DQG +HDW)ORZ
	&DOFXODWH 53,	0	7DEXODWHG 53, UHVXOWV DUHDV	'DWD EDVHV WR VHOHFW WKH 3URGXFWLYLW\ ,QGH[53, UHVXOWV IRU LGHQWLILHG ZHOOV ZLWKLQ DSSUR[NP UDGLXV]RQH RI LQWHUHVW DURXQG VHOHFWHG SODQW VLWH
	3HUPLWWLQJ DVVHVVPHQW	0	3HUPLWWLQJ DVVHVVPHQW	5HSRUW GRFXPHQWLQJ UHOHYDQW IHGHUDO VWDWH DQG ORFDO SHUPLWWLQJ UHTXLUHG IRU JHRWKHUPDO GHYHORSPHQW DW WKH VWXG\ VHOHFWHG ORFDWLRQ FDVH

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- KHDW IORZ SRLQWV IURP 608 DQG JHRWKHUPDO JUDGLHQW SRLQWV IURP %(* ZLWK 608 *HRWKHUPDO 'DWD (DVWPDQ &KHPLFDO &RPSDQ\ SRZHU
- LGHQWLILHG WKH &RWWRQ 9DOOH\ 3HWUROLWK DQG 5RGHVVD VWXG\ DUHD ZKLFK LQFOXGH JHQH(9hyX` RZHU
- $OO 1*'6 FRQWHQW PRGHOV KDYH EHHQ GRZQORDGHG DQG DUH EHLQJ H[DPLQHG IRU GDWD RYHUODSV ZLWK WKH VWXG\ DUHD

68**(67,216"

6RPH WKRXJKWV ZH FRXOG XVH KHOS ZLWK LQFOXGH WKH SURV DQG FRQV RI DOWHUQDWLYH PHWKRGV IRU WKH UHVHUYRLU PRGHO DQG EHWWHU SRURVLW\ DQG SHUPHDELOLW\ GDWD "
RXU VWXG\ DUHD DW ORZ WR QR FRVW" $UH WKHUH RWKHU ODUJH VFDOH PDQXIDFWXULQJ IDFLOLWLHV RU DQ\ EHVW SUDFWLFHV WR EH PDGH DYDLODEOH

SS

'ULOOLQJLQIR FRP 3URGXFWLRQ +LVWRU\ 6XPPDU\ 'DWD $FFHVVHG -DQXDU\ DSS GULOOLQJLQ
)RRWH 5 4 0DVVLQJLOO / 03HQUROLHXP *HRORJ\ DQG WKH GLVWULEXWLRQ RI FRQYHQWLRQDO FUXGH RL
:DVKLQJWRQ *HRORJLFDO 6XUYH\
+DOEHUW\ 0 7 DQG +DOEHUW\ - - 5HODWLRQVKLS %HWZHHQ 6DVV 7H[DV 5HJLRQDO DQG 6DELQH
2SHQ(, -5$OJXODWRU\ DQG 3HUPLWWLQJ ,QIRUPDWLRQ 'HVNWRS 7RRO NLW *HRWKHUPDO -DQXDU\
608 *HRWKHUPDO /DE 608 1RGH RI WKH 1DWLRQDO *HRWKHUPDO 'DWD 6\VWHP $FFHVVHG 'HFHPEH
86*6 5HFHQW 86*6 2LO DQG *DV $VVHVVPHQWV LQ WKH *XOI %DVLQ &RDVWDO 3ODLQ 5HJLRQ $FFHVVHG

$&.12:/('*(0(176

7KLV ZRUN KDV EHHQ SHUIRUPHG E\ -608 XQGHU WKH VXSSRUW RI WKH 6XVWDLQDEOH (QHUJ\ &RQWDFW IRU WKH 1DWLR
³15(/´ LQ VXSSRUW RI 'HSDUWPHQW RI (QHUJ\ 3URMHFW (QHUJ\ 1DWLRQDO 6KRZFDVH WR WKH

)LJXUH &XUUHQW PDS RI WKH VWXG\ DUHD VKRZLQJ 608 KHDW IORZ %(* %+7 DQG ZHOOV ZLWK ZHOO ORJ ORFDWLRQV ZLWKLQ NP RI WKH (DVWPDQ &KHPLFDO &RPSDQ\ SRZHU SODQW

$&.12J/('*(0 '$`$&7KLV Z/('@FE P X p0P À Rô R X°WPW D0P % h" I