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!"#$$ %$&'()*"+',$ -#./#0,1$23)/#$

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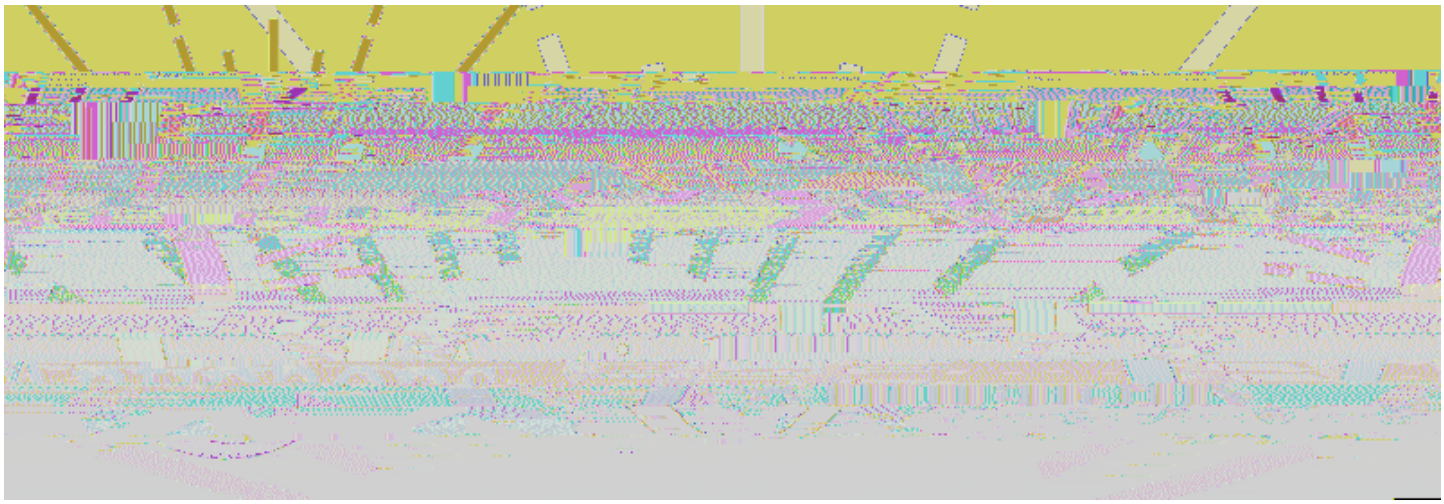

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"#$%&'(!(#)*'+,!-./.0$%#)112(.3!

"#$!%!&'()*#+',!-./,+!0'+1'!.,!(#$!4#)$+!5*6)7+!57+'%&.71!+2!4#)$+!813!.2$!,#+2(!4$2,$,!5,$6!7$8+2$!.'6!.8($2!9.2:;,!,+'<=!(#$!9.<')8)>.(=!!)'!,$24)>$,!+8!$4$')'<!*2.:$2!)'!(#$!/.,(!,$4$'!6.:,!+8!&64$'(!)'!(#$!?$,($2'!@#52>#A!!"#$:!/)0$/:!6.($!7.>0!(+!,)B(#C>$'(52:!D(./:!.'6!7$>.E$!+'$!+8!(#$!0$:!E5,)>./!8$.(52$,!+8!(#$!6.:,!/$.6)'<!5*!(+!@#2),(E.,A!!!

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"#$!8)2,(!/$(($2,!+8!(#$!()(/$,=!82+E!/.,(!(+!8)2,(=!.**$.2!(+!8+2E!.!F.()'!.>2+,()>=!9#.!(#$1=!E$.')'<!G"+E+22+1=!D!1)//!7$!H(#$2$IG=!E)22+2)'<!(#$!(#$!E$+8!(#$!.'()*#+',J!

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KL!M$>$E7$2J!!	%!!.*)$'().!!!	*8!:'1*.3!*
KN!M$>$E7$2J!!	%!"6+'.)!! !	*8!-.#*!
KO!M$>$E7$2J!!	%!#.6)B!P$,,$!!	*8!;..+!.<!=)11)!*
QR!M$>$E7$2J!!	%!$/.4),!M.4)6!!	*8!>)/!.<!?$6'*!*
QK!M$>$E7$2J!!	%!%2)$',!! !	*8!?$/1%#'7"!*
QQ!M$>$E7$2J!!	%!#$B!S$'()5E!!	*8!>'7"!.<!+&)!@$+'.71!*
QT!M$>$E7$2J!!	%!&EE.'5$/!!	*8!:'+&!A1!'1!4.*!*

U.>#!4$2,$!$>#+$,!V>2)*(52$!C!+8($'!6)88$2$'(!4$2,$,!-)'>/56)'<!,+E$!82+E!(#$!>+//$>()+'!
+8!7++0,!1$!0'+1!.,!(#$!&*+>2:*#.3!.2$!0')(($6!(+<$(#$2!(+!,*$.0!+8!P$,5,A!!!

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U.>#!4$2,$!8+//+1,!(#$!,.E$!,(25>(52$!C!

W e Y See T L	*T a e*
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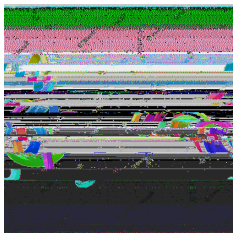

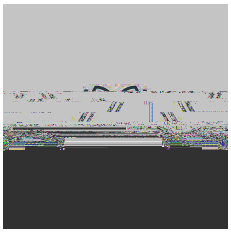

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%!>+E$=!%! ?),6+E!82+E!+ ' !#)<#=!! !
1#+!+26$2$6! . //!(#) ' <,!E)<#()/ : a!! !
(+!5,!(#$!* . (#!+8!0 ' + 1/$6<$!,#+ 1 !!!
. ' 6!($. >#!5,!) ' !)(,! 1 . : ,!(+!<+A!! !
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%!>+E$=!%!>+E$=!<2$. (!F+26!+8!E)<#(=!
1#+!(+! : +52!(2)7$,!+ ' !V) ' .)G,!#$)<#(!
) ' !. ' >)$ ' (!()E$,!6)6!<)4$!(#$!/ . 1!
) ' !>/+56!. ' 6!E . Z$,(:!. ' 6!. 1$A!!

;)D . '() E! ;)D . '() E!F 3 3$7C) 0!1&$00!(. 3) !+ . !/ . CG!8!F1#$) 0!

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!!!!!!%!>+E$=!%!_2 . ' >#!+8!P$, ,$G,!, ($E=!
!!!!!!!!!!!!!!!!5 ' (+! : +52!+ 1 ' !. ' 6!2$,>5$!(#$Eb!
!!!!!!!!!!!!!!!!!!!c2+E!6$*(#,!+8!#$//! : +52!*$+*/$!, . 4$=!
!!!!!!!!!!!!!!!!!!!!!. ' 6!<)4$!(#$E!4)>(+2 : !+G$2!(#$!<2 . 4$A!

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%,!89) ' +5)8,:%, /)(0* 1 ;,

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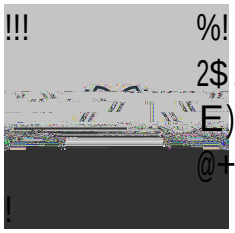
!!! 

%! ?),6+E=!>+E) ' <!8+2(#!82+E!(#$!E+5(#!+8!(#$! 9 +,(!X)<#=!
2$. >#) ' <!82+E!+ ' $!$ ' 6!(+!(#$!+(#$2=!
E)<#()/ : !. ' 6!, 1$$(/ : !+26$2) ' <! . //!(#) ' <,J!
@+E$!. ' 6!($. >#!5,!(#$!1 . : !+8!*256$ ' >$A!!H+*&)!8!57+'%&. 7I!

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D!>. E$!8+2(#!82+E!(#$!E+5(#!+8!(#$! 9 +,(!X)<#!HJ'#$(&!KL,MI!

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?),6+E!2$. >#$,!E)<#()/ : !82+E!+ ' $!$ ' 6!+8!(#$!$. 2(#!(+!(#$!+(#$2=!. ' 6!

.7+5(!/.($2=!#5E.')(:!),!)'!'$$6!+8!+'$!1#+!1)//!'+(!Z5,(!,#+1!5,!+52!8++/),#'$,,!75(!1)//!,#+1!5,!#+1!(+!,(+*!7$)'<!8++/,A!

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"#2!.2$!E+E$'(,!)'!(#$!S+,*$/,;!2$($//)'<!+8!P$,5,;,!,(+2:!(#.(!1$!E)<#(!*$2>$)4$!P$,5,;,!.>()+',!'+(!.,!1),$!+2!*256$'(!75(!8++/),#!.'6!)22$,*+',)7/$A!]$(=!Z5,(!.,!1#$'!(#$!+'$!.>()'<!(#$!8++/!0'+1,!1#$'!(+!,(+*=!,+!6)6!P$,5,A!X),!8+//:!+'/:!1$'(!

>.//!&6+'.)!+2!F+26A!

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%52!P$1),#!82)$'6,!2$>+<'),$!(#$!'.E$!+8!S+6![!(#$!iD!.E;!+2!X$72$1!]X?X!C!.,!,+!#+/:!(#.(!1#$'!2$.6)'<!./+56!(#$:!5,$!(#$!X$72$1!1+26!i&6+'.);!(+!$B*2$,,!(#$)2!2$4$2$'>$A!!X2!)'!(#$!,$>+'6!+8!(#$!,$4$'!&64$'(!&'()*#+',=!(#$!12)($2!./,+!5,$,!(#$!X$72$1!i&6+'.);!(+!*2.:!(+!(#$!,.>2$6!E:,($2:!(#.(!),!]X?XA!!!

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"#.(!'.E$=!]X?X=!1.,!<)4$'!(+!9+,$,!)'!(#$!E.Z$,()>!8)2$!+8!(#$!752')'<!75,#A!!"#$2$!S+6!),!2$4$./$6!.,!(#$!S+6!+8!&72.#.E!D,..>!.'6!P.>+7=!75(!E+2$!(#.'!(#.(J!9+,$,!.,0,!8+2!S+6;,!'.E$!.'6!(#$!E:,($2)+5,!2$*/:!),!(#.(!iD!.E!1#+!D!.E;!-./,+!(2.',/.($6!iD!1)//!7$C(#2;3A!!X2!),!.!S+6!+8!*.,(=!*2$,$'(!.'6!85(52$![!.'!.7)6)'<!*2$,$'>$!(#.(!72)'<,!82$$6+E!.'6!/)7$2.()+'A!!"#$!&'()*#+'!,*$.0,!+8!(#$!<)4)'<!+8!(#$!F.1!.(!V)'.)!(+!72)'<!Z5,()>$!.'6!+26$2!.'6!(#$!+5(,(2$(>#$6!.2E!-UB+65,!jAK3!(#.(!/$(,!(#$!$',/.4$6!.'6!,588$2)'<!*$+*/$!+8!D,2.$/!<+A!

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X2=!>+'6$',$6!)'!8+52!/)'$,!),!(#$!4$2:!#$.2(!+8!D,2.$/;,!$B*$2)$'>$!+8!S+6=!75(!)(!6+$,';(!,(+*!(#2A!!"#$!4$2,$!>+''$>(,!(#.(!2$./)(:!(+!+52!+1'!/)4$,!'+1=!*2.:)'<!(#.(!(#$!iD!.E;=!2$4$./$6!(+!9+,$,!/+'<!.<+!1)//!i>+E$!.'6!2$6$$E!5,;A!!D'!(#),!&64$'(!()E$!1$!.2$!/$6!,($*!7:!,($*!(+!UEE.'5$/=!(#$!iS+6!1)(#!5,;!)'!P$,5,!@#2),(=!(#$!iD!.E;!E.6$!8/$,#!.'6!7/++6=!7+2'!)'!_$(#/$#$E=!,588$2)'<!1)(#!.'6!8+2!(#$!1+2/6=!E.6$!*2$,$'(!.E+'<!5,!(+6.:=!.,!F)4)'<!i&6+'.);A!

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T&)!;)6U!T)##/!]'7X1G!!*

V'7'1+)#!.<!T#'7'+/G!]'"&!:/(.3Q)!$7!B.#)1!97*!A;B1!*

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- P$1),#!*$+*/$!6+';(!,*$.0!(#$!'.E$!+8!S+6![!,$$)'<!)(!.,!(++!#+/:!(+!,.:!./+56A!!D'!(#$!X$72$1!($B(!+8!(#$!%/6!"$,(.E$'(!(#$!4+1$/,!.2$!E),,$6!+5(!(+!/$.4$!(#$!5'*2+'+5'>$.7/$!]X?XA!!?#:!6+!:+5!(#)'0!(#2!),!(#),!)6$.!)'!P$1),#!(#$+/+<:!.7+5(!'+(!'.E)'<!S+6g!
- 95,/)E,!#.4$!OO!'.E$,!8+2!S+6!1#)>#!6$,>2)7$!1#+!S+6!),!(#$!&//!9$2>)85/=!(#$!V+52>$!+8!k$.>$=!(#$!S5.26).'!+8!c.)(#=!$(>A!!-(#2;,!.!,(+2:!(#.(!(#$!2$.,+'!(#$!>.E$/!,E)/$,!),!,#$!0'+1,!(#$!KRR !'.E$!+8!S+6b3!!?$!5,$!E.':!1.:,!+8!6$,>2)7)'<!S+6![!!F+26=!9+,(!X)<#=!&'>)$'(!+8!M.:,=!c.(#$2=!9+(#$2=!c.)(#85/!%'$=!e+>0A!!?#)>#!'.E$,!6+!:+5!/)0$!(+!5,$!8+2!S+6![!.'6!1#:g!
- &2$!(#$2$!.':!'.E$,!+2!6$,>2)*()+',!+8!S+6!:+5!6+';(!/)0$!+2!8$$/!>+E8+2(.7/$!1)(#g!!D8!,+!1#)>#!+'$,!.'6!1#:g!!

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S+6!+8!E.':!'.E$,=!75(!+'$!2$./)(:!!

1$!(#.'0!:+5!8+2!2$.>#)'<!+5(!(#(+!()E$!.'6!()E$!.<.)'=!,*$.0)'<!1+26,!+8!<2.>$!.'6!/)7$2.()+'A!

@+E$!2$6$$E!5,!82+E!.//!(#.(!(2.*,!.'6!)E*2),+',!5,A!

V(2$(>#!+5(!:+52!E)<#(:!.2E!

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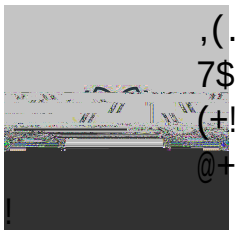
%!e++(!+8!P$,,$=!



,(.'6)'<!.,!.!,)<'!.E+'<!(#$!*$+*/$,a!

7$8+2$!:+5!0)'<,!1)//!,#5(!(#$)2!E+5(#,=!

(+!:+5!(#$!'.()+',!1)//!E.0$!(#$)2!*2.:$2J!

@+E$!.'6!6$/)4$2!5,=!.'6!6$/.:!'+!/+'<$2A!!H+&)!8!57+'%&.7I!

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d(#$!e++(!+8!P$,,$!,#.//!,(.'6!.,!.!,)<'./!(+!(#$!*$+*/$,d!HF1$'$&!OO,O^I!

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d0)'<,!,#.//!,#5(!(#$)2!E+5(#,!7$>.5,$!+8!#)Ed!HF1$'$&!_K,O_I!

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d#)E!(#$!S$'()/$,!,#.//!7$,$$>#d!HF1$'$&!OO,O^I!

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-,./,01$2'!

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F.,(!:$.2=!.8($2!D!1.,!+26.)'$6!.'6!1$;6!E+4$6!)'(+!(#$!E.',$=!1$!6),>+4$2$6!.!*.(>#!+8!<.26$'=!(#.(!#.6!7$$'!>/$.2$6=!1.,!+'>$!#+E$!(+!825)(!(2$$,A!%52!'$)<#7+52,!(+/6!5,!+8!(#$)2!2$/)$8!(#.(!(#$:;6!7$$'!>5(!6+1'=!75(!D!8$/(!,.6'$,,!8+2!(#$!/+,,!+8!.//!(#.(!825)(85/!*+($'().A!"#),!,$(!E$!+'!.!E),,)+'!(+!/++0!8+2!2$*/.>$E$'(!(2$$,![!#+*$85//:!,+E$!(#.(!E)<#(!'+(!<2+1!(++!/.2<$!,+!.,!'+(!(+!6),(527!(#$!'$)<#7+52,A!UB*$2)$'>$6!<.26$'$2,!1)//!0'+1!+8!(#$!#+2()>5/(52./!($>#')`5$!(+!$',52$!.!,E.//$2!825)(!(2$$A!&!825)()'<!,*$>)$,!),!<2.8($6!+'(+!(#$!2++(,(+>0!+8!.'+(#$2!,E.//$2!,*$>)$,![!(#$!2++(,!7$)'<!(#$!E+,(!,)<')8)>.'(!6$($2E)'.'(!+8!.!(2$$;,!4'(5./!,(.(52$A!!

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?#$'!1$!2$.6!+8!(#$!e++(!+8!P$,,$!)'!D,.).#!-,+E$()E$,!(2.',/.($6!.,!(#$!V(5E*!+8!P$,,$3=!1$!.2$!+88$2$6!.'!)E.<$!+8!(#$!,(.($!+8!(#$!'.()+'!+8!P56.#!8+//+1)'<!(#$!$B)/$!)'!_.7:/+'![!.!'.()+'!,+!<2+5'6!6+1'!.//!(#.(!),!/$8(!),!.!,(5E*!+8!2++(,A!"#$!*2+E),$!(#.(!(#$!9$,,).#!1+5/6!,*2)'<!8+2(#!82+E!P$,,$;,!,(5E*=!7+(#!2$>+<'),$6!(#$!'.()+';,!6$,*$2.($!,(.($!'6!'$$6!(+!7$!6$/)4$2$6!82+E!(#$)2!+**2$,,+2,=!1#)/$!.88)2E)'<!(#.(!)(!1+5/6!7$!82+E!(#$!2+:./!M.4)6)>!/)'$.<$!(#.(!(#$!9$,,).#!1+5/6!>+E$A!!

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"#$!%!&'()*#+',!7$.5()85//:!82.E$!(#$!,*2)'<)'<!8+2(#!+8!P$,5,=!(#$!9$,,).#!.,!7+(#!+2)<)'.()'<!82+E!.'6!$E7+6:)'<!(#$!e++(!+8!P$,,$A!"#$!*2+4$'.'>$!+8!P$,5,;!+2)<)'!),!.!>/$.2!85/8)/E$'(!+8!*2+*#$>:A!D(!),!+'!(#$!2++(,(+>0!+8!(#),!'.()+'=!(#),!>#+,$'!*$+*/$!+8!S+6!(#.(!(#$!9$,,).#!#.,!>+E$![!.'!$E7/$E!+8!S+6;,!/+4$!8+2!.//!*$+*/$,;!.'6!)'!1#+,$!*2$,$'>$!+**2$,,+2,!1)//!7$!72+5<#(!/+1A!!"+!2$(52'!(+!(#$!)E.<$!+8!825)(!(2$$,=!(#$!*2)'>)*/$!+8!<2.8()'<!8+2!4'(5./!,)I$!>.'!./,+!.>(!)'!2$4$2,$A!&'6!,+!)(!),!1)(#!5,![!.,!1$!.2$!<2.8($6!)'(+!@#2),(=!)(!),!)'!.'6!(#2+5<#!UEE.'5$/!-S+6;,!+1'!2++(,(+>0!)'!#5E.'!8+2E3!(#.(!1$!>.'!2$.>#!+52!85//$,(!#5E.'!,(.(52$A!!

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T&)!;)6U!=.77')!]'00G!!*

- "#$! _)7/)>./! 12)($2,! 1$2$!8.>$6! 1)(#!

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! ' (()*+,<.,,%,= ' >,*6,?8@)02,%,?8>,!94)+A2,%,=)+A,*6,5B ' ,C85)*+(,

%!>+E$=!%!n$:!+8!M.4)6=!>+E$!
o!+*$'!1)6$!+52!#$.4$'/:!#+E$A!
" #$%!&#'%!'()!*&!+,%!,%#-%./#)0!)(#0!
o!7.2!(#$!1.:!(+!6$.(#G,!.7+6$A!
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%!>+E$=!%!_2)<#(!.'6!9+2')'<!V(.2=!
.'6!72)'<!5,!>+E8+2(!82+E!.8.2b!
M),*$/!(#$!,#.6+1,!+8!(#$!')<#(!
.'6!(52'!+52!6.20'$,,!)'(+!/)<#(A!

;)D.'()E!;)D.'()E!F3 3$7C)0!1&$00!(.3)!+.!/.CG!8!F1#$)02!

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)'!+'$!(#$!#$.2(,!+8!.//!E.'0)'6A!
_)6!.//!+52!,.6!6)4),)+',!>$.,$!
.'6!7$!:+52,$/8!+52!n)'<!+8!k$.>$A!

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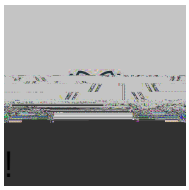
%!n$:!+8!M.4)6!.'6!,>$*(2$!+8!(#$!X+5,$!+8!D,2.$/a!
:+5!+*$'!.'6!'+!+'$!>.'!,#5(a!
:+5!,#5(!.'6!'+!+'$!>.'!+*$'J!
@+E$!.'6!/$.6!(#$!*2),+'$2,!82+E!(#$!*2),+'!#+5,$=!
(#+,$!1#+!61$//!)'!6.20'$,,!.'6!(#$!,#.6+1!+8!6$.(#A!!!!!!H+&)!8!57+'%&.7I!



dD!1)//!*/.>$!+'!#),!,#+5/6$2!(#$!0$:!+8!(#$!#+5,$!+8!M.4)6d!!!!HF1$'$&!KK,KKI!

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c+2!(#$!E+,(!*.2(!(#$!_)7/$!2$8$2,!(+!*2),+',!)'!.!E.(($2C+8C8.>(!1.:A!!e$8$2$'>$,!.2$!E.6$!(+!*$+*/$!7$)'<!)E*2),+'$6!1)(#+5(!Z56<E'(!.7+5(!#+1!+2!1#:A!!"#$!.'()*#+'!1$!(.0$!8+2!+52!2$8/$>()+'!(+6.:!*)>0,!5*!.!(#E!(#.(!25',!(#2+5<#!(#$!_)7/$!(#.(!*2),+',!.2$!*/.>$,!+8!6.20'$,,!(+!7$!82$$6!82+EA!!f+!Z56<E'(!),!E.6$!1#$(#$2!(#$!*2),+'$2!6$,24,!(#$)2!82$$6+E!+2!'+(A!!!

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"#2!),!.!($'6$'>:!(+!2$.6!4$2,$,!/)0$!(#),!)'!.!E$(.*#+2)>./!,$',$!(#.(!$4$2:+'$!#.,!,+E$!,+2(!+8!E$'(./p$E+()+'./p,*)2)(5./!*2),+'!82+E!1#)>#!(#$:!''$$6!2$/$.,$!(+!(#2)4$A!!k$2#.*,!(#),!),!,+A!!_5(!1#.(!.7+5(!*$+*/$!)'>.2>$2.($6!)'!.>(5./!*2),+',=!1)(#+5(!<$(()'<!)'(+!E+2./!+2!*+/)()>./!Z56<E'(,!.7+5(!1#:!(#$:!.2$!(#2g!!

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%! 9 +2 ') ' <!V(. 2=!

, * /$ ' 6+52!+8!/)<#(!$($2 ' ./! . ' 6!, 5 ' !+8!2)<#($+5, ' $, , J!

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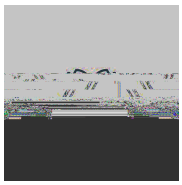

@ . , (/$A!!] +5!> . ' !) E . <) ' $!(#$!#++C# . . A!!

!"#$%&%!"'$()%++)',,-).%/+,(0)!,'()"'-)!"!,#)12#)$3%()(,((%2')*

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%!>+E$=!%!>+E$=!UEE.'5$/=!.'6!2.',+E!>.*()4$!D,2.$/!
(#.(!E+52',!)'!/+'$/:!$B)/$!#$2$!5'()/!(#$!V+'!+8!S+6!.**$.2A!

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;)D.'()E!;)D.'()E!F33$7C)0!
1&$00!(.3)!+.!/.CG!8!F1#$)02!

!

%!UEE.'5$/=!+52!0)'<!.'6!+52!/.1<)4$2=!
(#$!#+*$!+8!(#$!'.()+',!.'6!(#$)2!V.4)+52J!
@+E$!.'6!,.4$!5,=!%!F+26!+52!S+6A!!H+&*)!8!57+'%&.71I*!

dF++0=!(#$!:+5'<!1+E.'!),!1)(#!>#)/6!.'6!,#.//!7$.2!.!,+'=!.'6!,#.//!'.E$!#)E!
DEE.'5$/d!!HF*1$'$&!\,OLI*!

!

d1$!#.4$!+52!#+*$!,$(!+'!(#$!/)4)'<!S+6=!1#+!),!(#$!V.4)+52!+8!.//!*$+*/$d!!

HO!T'3!L,O^I!

!! -,./,01$2'!

!

V)'>$!2$.6)'<!(#$!/.($!P)E!@+(($2;,!1+'6$285/!&64$'(!7++0!iUB*$>(.'(;!-@.)2',!
k57/)>.()+',=!QRRQ3=!85//!+8!>2$.()4$!'$1!.'6!2$1+20$6!i%;!&'()*#+',=!D!#.4$!7$$'!

)*&+,*!

!

!!!!!&64$'(!S+6=!

?$!<)4$!(#.'0,!8+2!:+52!>+',(.'(!*2$,$'>$!

.'6!8+2!(#$!2$'$1./=!$.>#!:$.2=!+8!(#$!.,,52.'>$!+8!:+52!V+'=!UEE.'5$/A!

%*$'!+52!E)'6,!(+!(#$!72$.6(#!+8!(#),!*2+E),$=!

(#.(!:+5!.2$!S+6!1)(#!5,a!

S+6!)'!.'6!(#2+5<#!.//=!

S+6!2$'$1)'<!.'6!2>2.()'<!.//A!

V+!7$!)(A!&E$'!

!

!

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