



**5+67\$!8#!98,&\$,&:!**

\$%&'(')(\*%+, " - +, ) . &/'0\* 1 1 )%('2"345.6'+('\*\*&/'+%7" 8\*' (6. "9" 8\*%: ; (&6<( 1 (%+'(\*% " =  
>?. "0\* ,. @. A&"0(B, "C(@?'&"D">(', . "\$E"0\*\*<7(%+'\*<" F  
G<.B. %'(\*%"+%7"HI +<. % . &&"G<\*@<+ 1 &" F  
H%%)+, "C.B(. I " F  
J6\*5. "9"G\*, (62" K  
H6+7. 1 (6"L<. .7\* 1 "+%7"L<. .7\* 1 "9"J5. .6?" M  
G<\*?(N(' .7"0\*%7)6""+%7" ; .9(%('(\*%&" M  
>(', . "\$E"J.4)+, "O+<+&& 1 . %'" P  
8\*%:>(', . "\$E"Q(&6\*%7)6"" !R  
G<\*?(N(' .7"C. , +'(\*%&?(5&" !S  
; .9(%('(\*%&"9"T.2">. <1 &"+%7"U'?. <"0\*%&(7. <+'(\*%&" !=  
0\*%9(7. %'(+, ('2"/G<(B+62"/+%7"C. , +'. 7"C.5\* <'(%@"C. &5\*%&(N, ('(. &" !M  
G<(B+62"+%7"0\*%9(7. %'(+, ('2"V"W%7. <&'+%7(%@""? . ; (99. <. %6. &" !M  
C.X) . &'&"9\* <"0\*%9(7. %'(+, ('2" !P  
C. &5\*%&(N, . "3 1 5, \*2. . &" !P  
>+Y. "Z+6Y""?. "8(@?" "+%7"U'?. <"G)N, (6"HI +<. % . &&"3B. % '&" !P  
; (&6, \*&) <. &"C.X) (<. 7"N2">?. "0, . <2"H6" ! [  
C.5\* <'(%@"U5'(\*%&" ! [  
3 1 . <@. %62"+%7"34' . <%+, "C.5\* <'(%@"U5'(\*%&" #R  
0+15)&"C.5\* <'(%@"U5'(\*%&" #R  
H%\*%2 1 \*)&"C.5\* <'(%@" #!  
C.5\* <'(%@"\*34' . <%+, "H@. %6(. &" ##  
U'?. <"C.5\* <'(%@"0\*%&(7. <+'(\*%&" #S  
J)55\* <'(B. "Q. +&) <. &"+%7"C. 1 . 7(. &" #F  
C+%@. "9"Q. +&) <. &" #F  
\$%'. <(1 "J)&5. %&(\*% " \* <"J.5+<+'(\*% " #K  
0+<. "+%7"J)55\* <'("C. &\*) <6. &"9\* <"0\* 15, +( % + % '&"+%7"



;, :&'&-&'8, +7!<+7-\$:!!98= = -, '&/!'>?\$%&+&'8, :!+, @!A8&'%\$!8#!A8, B  
C':%.'=' , +&'8, !

\$'(&'?."5\*(62"\*9"U66(7.%'+,"0\*,,.@."\_U66(7.%'+,`\*<\_'?."0\*,,.@.`]"\*1+(%'+(%"+%".%B(<\*%1.%'"  
9\*<'&')7.%&/'9+6), '2/" +7 1 (%(&'<+'\*<&/'&'+99/" +%7"B(&'<&'?'+'(&'9<.. "\*9"+,, "9\*<1 &"\*9"7(&6<(1 (%+'(\*%"  
+%7" ?+<+&&1 .% '/' (%6,)7(%@ " &.4)+, "+%7" (%'.<5.<&\*%+, " 1 (&6\*%7)6'a" >?." 0\*,,.@." ?+&".%+6'.7" '?(&  
J.4)+, "+%7"\$%'.<5.<&\*%+, " Q(&6\*%7)6"G\*(62"\_G\*(62`]"\* "<.9,.6"+%7" 1+(%'+(%"('&'(%&'(')(\*%+, "

**5D\$!9877\$E\$F:!9'(!'G'ED&:!H!5'&7\$!; I!988.@", +&8.!!**

>?. "0(B("C(@?'&"D">(',"\$E"0\*\*<7(%+'\*<"6\*\*<7(%+'.&"+%7" 1+%+@.&"'?. "0\*,,.@.A&"6\* 15,(+%6." I('?">(',"\$E"+%7"<.,+' .7"5<\*B(&(\*%&"\*9"?'."0, .<2"H6"\"+&"+ 1.%7.7"N2" - H c H]a">?. "0(B("C(@?'&"D">(',"\$E"0\*\*<7(%+'\*<\*B.<&..&"'?. "0\*,,.@.A&"6.%'<+,(d.7"<.&5\*%&."\*" +,,"<.5\* '&"\*9"G<\*?(N(' .7"0\*\*%7)6""\*".%&)<."6\*%&(&'."'"( 15,. 1.%'+('%"\*9"?'(&"G\*,(62"+%7"6\* 15,(+%6." I('?"9.7.<+,"+%7"&'+'.",+ I a">?. "0(B("C(@?'&"D">(',"\$E"0\*\*<7(%+'\*<+%7"7.&(@%+' .7"&'+99" I(,,"+ 1 \*%@"\*'?.<"'?(%&V"

f 0\* 1 1 )%(6+." I('?" 1. 1 N.<&" \*9" '?. " 0\*,,.@." 6\* 1 1 )%( '2" <.@+<7(%@" +55,(6+N,." ,+ I " +%7" 5\*,(62"+%7"5<\*B(7."(%9\* < 1 +'(%%" +N\* )" "<.5\* '&'(%@" +%7"&)55\* < ""5'(%%&a"

f C.B(. I " +55,(6+N,." 0\*,,.@." 5\*,(6.&" '\*". %&)<." (%&'(')'(%%+, " 6\* 1 5,(+%6." I('?" +55,(6+N,." 9.7.<+,"+%7"&'+'.",+ I a"

f Q\*%('\*<" '?. " 0\*,,.@.A&" +7 1 (%&'<+'(%%" \*9" ('&" \* I%" +55,(6+N,." 5\*,(6.&" (%6,)7(%@" <.6\* <7" Y..5(%@" +7?<.%6." "\*"'"( 1.9<+ 1.&"/"+%7"\*'?.<"5<\*6.7)<+,"<.X)<. 1.%'&a"

f 0\*\*%7)6""<+(%@" <.@+<7(%@">(',"\$E"/<.,+' .7"5<\*B(&(\*%&"\*9"?'."0, .<2"H6"\"+&"+ 1.%7.7"N2" - H c H]"/+%7"G<\*?(N(' .7"0\*\*%7)6""



f 
$$\frac{V^0 0^{*7} 6^{''?+''*66}<\&^{*99:6+15}&+ \% 7^{''?+\&''6^{*} \% '(\%)(\% @+7B.<\&.'.99.6'\&^{*} \% /''^{*} <''6<.+'.\&''+''?^{*} \&'(\&.'. \% B(<^{*} \% 1 . \% ''9^{*} < /'' + \% 2'' 1 . 1N.<''^{*} 9''^{*} ? . "U66(7. \% '+, "6^{*} 1 1 ) \% ('2''^{*} \% : 6+15)&^{*} <''(\% "+ \% 2'' 0^{*} , , . @ . " . 15, * 2 1 . \% ''^{*} < . 7)6+''^{*} \% 5 <^{*} @ < + 1 ''^{*} <'' + 6'(B('2a''$$

U66(7. \% '+, " 0^{\*} , , . @ . " I (, , '+Y. < . + &^{\*} \% +N, . " &'. 5 &''^{\*} < . & 5^{\*} \% 7''^{\*} . +6?''(\% 6(7. \% ''^{\*} 9'' & . 4)+, " ? + < + & & 1 . \% '' (\% B^{\*} , B(\% @'' (\% 7(B(7)+, &'' & )Nb. 6''^{\*} ''^{\*} ? . " 0^{\*} , , . @ . A &'' 5^{\*} , (6(. &'' ? +''^{\*} \*66)<'' (\% '' 6^{\*} \% . 6'(\% '' I ('?' + \% 2'' . 7)6+''^{\*} \% +, " + 6'(B('2''^{\*} <''^{\*} ? . <'' 5 <^{\*} @ < + 1 ''^{\*} 9''^{\*} ? . "(\% &'(')'(\% '' /'' + &'' I . , , " + &''(\% 6(7. \% '&'' ? +''^{\*} \*66)<''^{\*} )' & (7. ''^{\*} 9'' ?^{\*} \& . " . 7)6+''^{\*} \% +, " 5 <^{\*} @ < + 1 &''^{\*} <'' + 6'(B(' . & /'' I ? . ' ? . <'' ? . 2''^{\*} \*66)<''^{\*} \% ''^{\*} <''^{\*} 99'' 6+15)&'' (9 /'' N + & . 7''^{\*} \% '' ? . " + , , . @ +''^{\*} \% & /'' ? . < . " (&'' < . + &^{\*} \% ''^{\*} N . , ( . B . '' ? +''^{\*} ? . " (\% 6(7. \% ''^{\*} 6^{\*} ) , 7'' 6^{\*} \% < (N) ' . ''^{\*} +'' ?^{\*} \&' (, . 7)6+''^{\*} \% +, " . \% B(<^{\*} \% 1 . \% ''^{\*} <''^{\*} ? . < I (& . "(\% ' . < 9 . < . " I ('?' +'' &' ) 7 . \% 'A &'' + 66 . & &''^{\*} . 7)6+''^{\*} \% a''

C. @ + < 7 , . & &''^{\*} 9'' I ? . ' ? . <'' +'' 6^{\*} 1 5 , + (\% '' ? + &'' N . . \% 9 ( , . 7'' ) \% 7 . <'' ? . " @ < ( . B + \% 6 . " 5 <^{\*} 6 . 7 ) < . &''^{\*} ) , (\% . 7'' N . , \* I /'' (9'' ? . " 0^{\*} , , . @ . " Y \% ^{\*} I & /'' ^{\*} < . + &^{\*} \% + N , 2'' & ? ^{\*} ) , 7'' Y \% ^{\*} I /'' + N ^{\*} )'' 5^{\*} & & ( N , . " & . 4 ) + , " ? + < + & & 1 . \% '' (\% B^{\*} , B(\% @'' (\% 7(B(7)+, &'' & )Nb. 6''^{\*} ''^{\*} ? . " 0^{\*} , , . @ . A &'' 5^{\*} , (6(. &'' +''^{\*} ? . '' ( 1 . /'' ? . " 0^{\*} , , . @ . " I ( , " 5 <^{\*} 1 5' , 2'' (\% B . &' (@ + ' . ''^{\*} 7 . ' . < 1 (\% . " I ? . ' ? . <'' ? . " + , , . @ . 7'' 6^{\*} \% 7) 6'' 1 ^{\*} < . " , (Y . , 2'' ? + \% ''^{\*} ''^{\*} \*66) << . 7 /'' ^{\*} <''^{\*} ? . < I (& . < . & 5^{\*} \% 7'' (9'' ? . "

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

\_>(',\$E"J.4)+,"O+<+&&1.%"`("&+"&)N&."\*9"G<\*(N('7"0\*%7)6'a"W%7.<" ; .5+<'1.%"\*9"37)6+'(\*%<.@),+'(\*%&"\ "S="0aLaCa"G+<'!RKJ]"(&&).7"(%Q+2"#R#R"\*"(15,.1.%">(',\$E"\*9"?."37)6+'(\*%<H1.%"71.%"&"\*9"! [M#/'?'."0\*,,.@"(&"<.X)(<.7"\*5<\*(N("6.<+(%9\*<1&"\*9&.4)+,"?+<+&&1.%" +&7.9(%7"(%"?\*&."<.@),+'(\*%&a""

G<\*(N('7"0\*%7)6"1.. '&'"?.7.9(%('(\*%\*9">(',\$E"J.4)+,"O+<+&&1.%" I?."%V""

H%"315,\*2.. "6\*%7('(\*%&"?.5<\*B(&(\*%\*9"+%+(7/"+"N.%9('/"\*<+"&.<B(6."\*%"+%("7(B(7)+,A&5+<'(6(5+'(\*%(")%I.,6\*1."&.4)+,"6\*%7)6"\"(a.a"" &.4)+,"?+<+&&1.%"I('?(%?'."W%('7"J'+'.&i"\*<"

H"J')7.%"/'315,\*2../"\*<">?(<7"G+<'2".%@+@.&"(%)%I.,6\*1."6\*%7)6"\*%""?. "N+&(&"\*9&.4'?'+"I\*),7"N."7.'.<1(%7"N2"+<.+&\*%+N,.5.<&\*%""\*N."&\*%&.B.</'5.<B+&(B./+%7"\*Nb.6'(B.,2"\*99.%&(B."?'+"('".99.6'(B.,2"7.%(.&"+%\*?'.<5.<&\*%".X)+,"+66.&&"\*"'?".0\*,,.@"A&"5<\*@<+1&"\*<"+6'(B('.&/'(%)?"W%('7"J'+'.&i"\*<"

H"J')7.%"/'315,\*2../"\*<">?(<7"G+<'2".%@+@.&"(%"J.4)+,"H&&+),/' ; \*1.&'(6" - (\*,.%6./ ; +'(%"@" - (\*,.%6./"\*<"J.4)+,"+%7g\*^.%7.<:N+&.7"J'+,Y(%@"+&"7.9(%7"N.,\*Ii"+%7"

- o >?."+,.,.@"7"6\*%7)6" I +&"5.<5.'<+'.7"+@+(%&"+"5.<&\*%("?"W%('7"J'+'.&i"+%7"
- o >?".6\*%7)6""\*Y"5,+6." I ('?(%""?.0\*,,.@"A&"5<\*@<+1&"+%7"+6'(B('.&a"

0\*%7)6""+Y.&"5,+6." I ('?(%""?. "\_0\*,,.@"A&"5<\*@<+1&"+%7"+6'(B('.&" I?."%""?+"6\*%7)6""\*66)<&V\!]"(%"+,\*6+!(\*%/'+"+"%.B.%/'/\*<'(+6(6)1&"+%6." I?.<."?"0\*,,.@"4.<6(&.&"&)N&'+%'+,"6\*%'<\*,\*B.<N\*?'??"<.&5\*%7.%"+"7"?."6\*%'4"(%" I?(6??"6\*%7)6""\*66)<&i"\*<#\#]"(%"+%2"N)(,7(%@" I%7"\*<6\*%'<\*,.7"N2"+&')7.%"\*%<@+(d+'(\*%<.6\*@(d.7"N2"?."0\*,,.@"a"3B.%&"?'+"\*66)<"\*99"6+15)&"\*<



>(',\$E&.4)+,+"&&+),"(6,)7.&"<+5./"9\*%7,(%@"(6.&/'\*<'&'+' ) '\*<2"<+5./"7.9(% .7+"&9\*,,\* I &V"

f C+5."(&'?. "5.%. '<+'(%%/"%\*" 1+' .<?"\* I &,(@"?/'\*9'"?. "B+@(%+"\*%<"+%)& I ('?"+%2"N\*72"5+<"\*%< \*Nb.6/'\*%<"+,:@. %( '+,6\*%' +6'"\*9"+%\*'?.<"5.<&\*% I ('?\*) "'+99(<1+'(B."6\*%&.%'a"

f L\*%7,(%@"(&'?. "\*)6?(@%"\*9'"?. "5<(B+' . "N\*72"5+<'&\*"9"+%\*'?.<"5.<&\*% "9\*%<'"?. "5)<5\*% . "9" &.4)+, "@<+'(9(6+'(%%/" I ('?\*) "'+99(<1+'(B."6\*%&.%'a"

f \$%6.&'"(&%"\*%:9\*%<6(N, . "&.4)+, "(%'.<6\*)<&. "N.' I . . "5.<&\*%& I ?\*" +<. "<.,+' .7" '\*'. +6?"\*?' .< I ('?%'"?. "7. @<. .& I ? .<.(% " 1+<<+@. "&5\*%?(N(' .7"N2", + I a"

f J'+') '\*<2"<+5."(&%"\*%:9\*%<6(N, . "&.4)+, "(%'.<6\*)<&. " I ('?"+5.<&\*% I ?\*"(&)"%7.<'"?. "&+' ) '\*<2" +@. "9"6\*%&.%'a"

0\*%7)6/'\*%?"?. "N+&(&\*9&.4/'?'+"6\*%&'(')'. &"B(\*, .%6. "6\* 1 1 ('.7V"

f Z2"+6)<<. % "'\*%<9\*%<1 .< "&5\*)&. " \*%<(' (1+' . "5+<'%.< "9"?' . "6\* 1 5,+(%+% 'i"

f Z2"+5.<&\*% I ('? I ?\* 1 "'?. "6\* 1 5,+(%+% "'&?+<. &"+6?(,7"(%6\* 1 1 \*%i"

f Z2"+5.<&\*% I ?\*"(&6\*%?+N('+'(%@" I ('?/'\*%<?+&6\*%?+N('+' .7" I ('?/'?' . "6\* 1 5,+(%+% "'+&"+&5\*)&. " \*%<(' (1+' . "5+<'%.< i"

f Z2"+5.<&\*%&(1(+<,2"&' )+' .7" '\*"+&5\*)&. "9"?' . "6\* 1 5,+(%+% "' )%7.<'"?. "7\* 1 .&'(6\*%<9+1 (,2" B(\*, .%6. ,+ I &\*9"?' . "b)<(&7(6'(%%(" I ?(6?'"?. "6<(1 . "9"B(\*, .%6. "66)<<. 7i" \*<"

f Z2"+%2" \*?' .<"5.<&\*% +@+(%&'"+%"+7), "' \*%<2" )?' 6\* 1 5,+(%+% "' I ?\*" (&5\*% .6'.7"9\*%<1 "'?'+" 5.<&\*%A&"+6'&)"%7.<'"?. "7\* 1 .&'(6\*%<9+1 (,2"B(\*, .%6. ,+ I &\*9"?' . "b)<(&7(6'(%%(" I ?(6?'"?. " 6<(1 . "9"B(\*, .%6. "66)<<. 7a"

0\*%7)6""?+"6\*%&'(')'. &"B(\*, .%6. "6\* 1 1 ('.7N2"+5.<&\*% I ?\*"(&\*%<?+&N. .%("+"&\*6(+<.,+'(%%&?(5" \*9"+<\* 1 +% '(6\*%<'(%' (1+' . "%'+) <. " I ('?'"?. "6\* 1 5,+(%+% 'a">?. "4(&' .%6. "9"&)6?" +<.,+'(%%&?(5" I (, "N. " 7.' .<1 (% .7" N+&.7" \*% " '?. " 5+<'(.&A' &'+' . 1 .%'&"+%7" I ('? " 6\*%&(7.<+'(%% "9" '?. " ,%@"?' \*9" '?. " <.,+'(%%&?(5" '?. " '25. " \*9" <.,+'(%%&?(5" +%7" '?. " 9<.X). %62" \*9" (%'.<+6'(%% N. ' I . . "%" '?. " 5.<&\*%& (%B\*,B.7"(%'"?. "<.,+'(%%&?(5a"L\*%<'?. "5)<5\*%&. "&\*9"?'(&7.9(%('(%%/"7+'(%@"B(\*, .%6. "(%6,)7.&/"N)'"(&%"\*'" , (1 ('.7" '\*"/&.4)+, " \*%<5?2&(6+, +N)&. " \*%<'?. " ' ?<.,+' \*9"&)6?" +N)&. a" ; +'(%@"B(\*, .%6. "7\* .&%"\*'"(%6,)7. " +6'&6\*B.<.7" )%7.<'"?. "7.9(%('(%%\*9"7\* 1 .&'(6"B(\*, .%6. a "

0\*%7)6""\*%?"?. "N+&(&\*9&.4""?+"6\*%&'(')'. &"+6\*)<&. "9"6\*%7)6""7(<.6'.7"+'"+&5.6(9(6"5.<&\*%""?+" I \*),7"6+)&. "+<. +&\*%+N, . "5.<&\*% "9" . +<9\*%<'?. "5.<&\*%A&"+9. '2" \*%<'?. " &+9. '2" \*9" \*?' .<&\*%<'&)99.< &)N&+'(+, . 1 \*'(%%+, "7(&'<. &&a"L\*%<'?. "5)<5\*%&. "&\*9"?'(&7.9(%('(%%V"

f 0\* )<&. "9"6\*%7)6"" 1 .+%&' I \*%<' 1 \*%<. "+6'&/"(6,)7(%@"N)'"%\*" , (1 ('.7" '\*"/+6'&'( I ?(6?'"?. " <.&5\*%7. % "7(<.6'.2"/(%7(<.6'.2"/ \*%<'?'<\*)@?'?'?(<7"5+<'(.&/"N2"+%2"+6'(%% " 1 . ' ?\*7"/7.B(6./" \*%< 1 .+%&/"9\*,,\* I &/" 1 \*%(' \*%</" \*N&.<B.&/"&)<B. (&/" ?<.+'. %&/" \*%<' 6\* 1 1 )%(6+' .&' '\*%<' +N\*)"' + 5.<&\*%/" \*%<'(%'.<9.<. & I ('?"+5.<&\*%A&5\*%5.<'2a"

- f C.+&\*%+N,. "5.<&\*%" 1 .+%&"+<.+&\*%+N,. "5.<&\*%")%7.<&(1(,+<"6(<6) 1 &'+%6.&"+%7" I ('?'&(1(,+<"(7.%'('.&"\*"'?'."6\* 1 5,+(%+% 'a"
- f J)N&'+'(+,". 1 \*'(\*%+, "7(&'<.&&" 1 .+%&"&(@%(9(6+% "" 1 .%'+"&)99.<(%@"\*<"+%@)(&'?'+" 1 +2"N)" 7\*.&"\*""%.6.&&+<(,2"<.X)<." 1 .7(6+,"\*<\*"?'<"5<\*9.&&(\*%+, "'<+' 1 .%"\*<"6\*)%&.,(%@a

---

; +'(%@B(\*, .%6. "+&'7.9(% .7"("%'?'>(', . "\$E" ; +'(%@ - (\*, .%6. "7.9(%('\*%" +N\*B. "'?+'7(7"%\*'<.5\* <' .7,2" \*66)<("%"+5<\*@<+ 1 "\*<'+6'(B('2"\*9"'? . "0\* , , @. "(% "'? . "W%(' .7"J'+'. &a"

---

; \* 1 .&'(6"B(\*, .%6. "+&'7.9(% .7"("%'?'>(', . "\$E" ; \* 1 .&'(6" - (\*, .%6. "7.9(%('\*%" +N\*B. "'?+'7(7"%\*'<.5\* <' .7,2" \*66)<("%"+5<\*@<+ 1 "\*<'+6'(B('2"\*9"'? . "0\* , , @. "(% "'? . "W%(' .7"J'+'. &a"

---

>+Y(%@&.4)+, "+7B+%'+@. "\*9+%\*'?'<"5.<&\*%9\* <'?' . "N.% .9("9"+%2\*% . "\*'?'<'?'+'5.<&\*% "I ('?\*)" ' ?+'5.<&\*%A&"+99(<1+'(B. "6\*%&. %' /" (%6,) 7(%@/"N)'"%\*', (1 (' .7"'\*"/+%2"\*9"'? . "9\* , , \* I (%@"+6'&V" >? . "5<\* &'(') '@"\*9"+%\*'?'<"5.<&\*%i" >? . "'<+99(6Y(%@"9"+%\*'?'<"5.<&\*%/"7.9(% .7"+&'?' . "(%7)6. 1 .% "'\*9"+5.<&\*% "'\*5.<9\* <1 "+ 6\* 1 1 .<6(+, "&.4"+6'/"\* < , +N\* <' \* < "& .<B(6.&/"?'<\*) @?"9\* <6. /"9<+) 7/"\* <6\* .<6(%i" >? . "<.6\* <7(%@"9" (1+@ .&/"%6,) 7(%@B(7. "\* \* <5? \* \* @<+5? /" \* <+) 7(\*"9"+%\*'?'<"5.<&\*%A& &.4)+, "+6'(B('2" \* < (" (1+' . "5+<'&/" I ('?\*)' "'?+'5.<&\*%A&"+99(<1+'(B. "6\*%&. %' i" >? . "7(&'<(N) '(%\*"9" (1+@ .&/"%6,) 7(%@B(7. "\* \* <5? \* \* @<+5? /" \* <+) 7(\*"9"+%\*'?'<"5.<&\*%A& &.4)+, "+6'(B('2" \* < (" (1+' . "5+<'&/" (9)'?' . "(%7(B(7)+, "7(&'<(N) '(%@"'?' . "(1+@ .& \* <+) 7(\*" Y% \* I & \* \* <'&?\*) , 7" ?+B. "Y% \* I % "'?+' "'? . "5.<&\*% "7.5(6' .7"("%'?' . "(1+@ .& \* <+) 7(\*"7(7"%\*' +99(<1+'(B. ,2"6\*%&. % "'\*"'?' . "7(&6, \* & )<.i"+%7g\* < >? . "B( . I (%@"9"+%\*'?'<"5.<&\*%A& &.4)+, "+6'(B('2" \* < (" (1+' . "5+<'&/" (%"+5,+6. "I ? .< . "'?+' \*'?'<"5.<&\*% "I \* ) , 7" ?+B. "+< . +&\*%+N, . .45.6'++'(%\*"9" 5<(B+62/" I ('?\*)' "'?+'5.<&\*%A& +99(<1+'(B. "6\*%&. %' "



V" j )(7" 5<\*" X)\*" ?+<+&& 1 .% " \*66)<&" I ? .% " & )N1 (&&(\*%" ' \* " \* <"  
< . b . 6' (\*%" \* 9") % I . , 6\* 1 . " 6\*% 7) 6'" (& " ) & . 7/" . 45, (6(' , 2" \* <" ( 1 5, (6(' , 2"/" + & " ? . " N + & (& " 9\* <" 7 . 6 (& (\*% & "  
+ 99 . 6' (% @ " + % " (% 7 ( B ( 7 ) + , A & " . 7) 6 + ' (\*% " \ . a @ a / " + 7 1 (&& (\*% / " + 6 + 7 . 1 ( 6" & ' + % 7 (% @ / " @ < + 7 . & / "  
+ && (@ % 1 . % ' j i " . 1 5 , \* 2 1 . % " \ . a @ a / " ? (< (% @ / " + 7 B + % 6 . 1 . % ' / " + && (@ % 1 . % ' j i " \* <" 5 + < ' ( 6 ( 5 + ' (\*% " (% " + "  
0 \* , , . @ . " 5 < \* @ < + 1 " \* < " + 6' ( B (' 2 " \ . a @ a / " 6 + 1 5 ) & " ? \* ) & (% @ ] a

---



+6'(B."<.&5\*%&.a"H%("7(B(7)+," I ?\*"7\* .&"%\*"5?2&(6+,,2"<.&(&"\*<"B.<N+,,2"<.9)&."&.4)+,"  
+6'(B('2"(&"%\*"%.6.&&+<(,2"@B(%@"6\*%&.%'a"C.,2(%@"&\*,.,2")5\*% "%\*%:B.<N+,"6\* 1 1 )%(6+'(\*%  
6+%",.+7"\*"+9+,&."6\*%6,)&(\*%"+&"\* I ?.'?.<"6\*%&.%'" I +&"&\*)@?"\*<"@B.%a"

f \_\_\_\_\_ "H99(< 1 +'(B."6\*%&.%'" 1 )&'N."\*% @\*(%@"?<\*)@?\*"')"'?."+6'(B('2a"0\*%&.%'" 1 +2"  
N." I ('?7<+ I %"N2"+%2"5+<'2"+'+%2"( 1 .a"C.6\*%@%(d(%@"'?. "72%+ 1 (6"%+')<."\*9"&.4)+,"+6'(B('2/"

\_0\* .<6(\*%`"(&"'?. "(15<\*5.<")&. " \*9"5<.&&<." '\*"6\* 15., "+%\*'?.<"(%7(B(7)+, "'\*(%('+' ."\*<"6\*%'(%). "

0\* .<6(\*% "6+% "(%6,)7. "+"I(7. "<+%@. "\*9"N. ?+B(\*<&/"(%6,)7(%@"%'(1(7+'(\*%/" 1+%5),+'(\*%/"?'<.+ '&/"+%7" N,+6Y 1+(,a"H"5.<&\*%A&" I \*<7&" \*<"6\*%7)6""+<." &)99(6(. % "' '\*"6\*%&'(')'. "6\* .<6(\*% "(9"'?. 2" I <\*%@9),,2" (15+(<+%\*'?.<"(%7(B(7)+,A&"9<. .7\* 1 "9" I (, "+%7"+N,( '2"'\*6?\*\*\*&. " I ?.' ?.<"\*<"%\*" "\*" .%@+@. "(%&. 4)+, "+6'(B('2a"34+ 15, .&"\*9"6\* .<6(\*% "(%6,)7. "'?<.+'. %(@"'\*"\_\*)'`&\* 1 . \*% . "N+&. 7"\*% "&. 4)+, "\*<(. %'+('\*/" @.%7.<(7. %('2"'\*<"@.%7.<" .45<.&&(\*%"+%7"'?<.+'. %(@"'\*"?+< 1 "%% .&. ,9"(9"'?. "\*'?.<"5+<'2"7\* .&"%\*" .%@+@. "(%"'?. "&. 4)+, "+6'(B('2a" c ?.%"&\* 1 . \*% . "(%7(6+' .&/"B.<N+,2" \*<"5?2&(6+,2/"?'+'?' .2"7\*"%\*'"





6\*%9(7.%'+('2a">?.&."(%7(B(7)+,&"<."5<\*?(N('7"9<\*1"N<.+Y(%@"6\*%9(7.%'+('2")%.,.&&'?'<."(&"+" (1 1(%.%'"'"?'<."\*9"?+<1 "'\*"&.,9"\*<"\*?'<.&a"H%"(7(B(7)+," I ?\*"&..Y&"6\*%9(7.%'+,"+&&(&'+%6." 1+2"7\* &\*N2"&5.+Y(%@" I ('?'5<\*9.&&(\*%+,&" I ?\*" ?+B."+" ,.@+,,2"5<\*'.6'.7"6\*%9(7.%'+('2a">?. "6\*%9(7.%'+," <.&\*)<6.&" +B+(,+N,." '\*"(7(B(7)+,&" \*%" 6+15)&" +<." ,(&'7" N.,\* I a" 8\*.'/" ?\* I .B.</" '?+'?'&." 6\*%9(7.%'+,"<.&\*)<6.&"<."X)(<.7"N2"&'+'." ,+I "'\*%\*(92"6?(,7"5<\*'.6'(B."&.<B(6.&'+%7g\*,<,"\*6+,"+ I ".%9\* <6. 1 .%'"\*9"+%2"<.5\* <" I ?(6?("%B\*,B.&"&)&5.6'.7"+N)&."\*9"+ 1 (%\* <")%7.<"'?. "+@."\*9"!Pa"

**;%G+%/#/&3.&B31>"7%1#",.\$"#@&**

H"5.<&\*%" 1+2"7.&(<."\*"<.5\* <"G<\*?(N('7"0\*%7)6"'\*"'?'."0\*,,.@."N)"'"\* 1+(%'+(%6\*%9(7.%'+('2i" (9"&\*/'?'."0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\* <" I (,,".B+,)+'.&)6?"<.X).&'&a" c ?<."+6\* 15,+(%+%'" <.X).&'&"?'+'?'."6\* 15,+(%+%'&" % + 1 ." \* <" \* ? . <" (7.%'(9(+N,."(%9\* < 1 + ('\*% "%\*"N."&?+<.7" I ('?' '?' . <.&5\*%7.%'"\* <"?'+'%\*"9\* < 1 +,"+6'(\*%N."'+Y.%/'?'."0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\* <"

="/6\$3/+./& ;%G+ ".%7& :@& !9%&B\$%.@& I6#&

---

H" \_>(1 .,2" c +<%(%"`" (&" + 6+15)&: I(7. " %\*'9(6+'(\*% " \*9" +& .<(\*)&" \*<" 6\*%'(%))(@" ' ?<.+ " '\* " ?." U66(7. % '+, "6\* 1 1 )%('2a">? . ">(1 .,2" c +<%(%"7\* .&"%\*" (%6,)7. "(7. % '(92(%@"(%9\* < 1+'(\*%" +N\*) "" ?." 6\* 15,+(%+% 'a"\$9"+<.5\* <"\*9" 1 (&6\*%7)6"7(&6,\*& .&" + "6\*%'(%))(@" ' ?<.+ "(%B\* ,B(%@"\*% . "9" ? . "&5.6(9(.7" \_0, .<2"6<(1 .&`" " \* " ? . "U66(7. % '+, "6\* 1 1 )%('2/" ? . "0\* , , . @ . "1+2"(&& ) . "+"6+15)& I(7. "(1 .,2" I +<%(%" \ I ?(6?"6+% " +Y. " " ? . "9\* < 1 " \*9" +% . 1 +(, " " \* "6+15)&]" " \* "5<\* . 6" " ? . " ? . +, ' ? " \* < "&+9. '2" \*9" ? . "6\* 1 1 )%('2a"

---

H, " ? (@ ? . < " .7)6+'(\*% "(%&'(') '(\*%&" ? + " ? < .6.(B. "9.7. < +, "9)%7(%@" (%6,)7(%@" " ? . "0\* , , . @ . /" +< . " \*N, (@ + ' .7" '\* " (&& ) . "5)N,(6,2" + "%H%%) +, " J.6) < ('2" C.5\* < " \\_HJC`]" I ?(6?" (7. % '(9(.&" ? . "%) 1N. < "9" 5+< (6), +< " < .5\* < ' .7"6<(1 .&" \*% "6+15)&" \* < "6+15)&"5<\*5. < '2/" \* < " +7b+6. " " " \* "6+15)&a">? . "HJC"7\* .&"%\*" (%6,)7. " (7. % '(92(%@"(%9\* < 1+'(\*%" +N\*) "" ? . "6\* 15,+(%+% " \* < "&5\*%7. % 'a"

---

H, " ? (@ ? . < " .7)6+'(\*% "(%&'(') '(\*%&" ? + " ? +B. "6+15)&"5\* ,(6. "9\* <6. &" \* < "&6.) < ('2"7.5+< '1. % '&" 1 )&" 1+(%'+(%" + "7+(,2"6<(1 . , \* @ " ? + " (%6,)7. &" . % ' < (.&"9\* < +, "6<(1 .&" ? + " \*66) < " I ('? (% "N\* ? " ? ? . "0, .<2" @ . \* @ < +5?2" + "%7" ? . "6+15)&" & +9. '2"9\* <6. A&" < . @ , +< "5+< \* , " < \* )' . a">? . "6<(1 . , \* @ "7\* .&"%\*" (%6,)7. " (7. % '(92(%@"(%9\* < 1+'(\*%" +N\*) "" ? . "6\* 15,+(%+% " \* < "&5\*%7. % 'a"

### **G\$?8.&' ,E!O?&'8, :!**

>? . "0\* , , . @ . "&" < \*% @,2" . %6\* ) < + @ . & + , , "(%7(B(7)+, &" \* " & . . Y" + && (&' + %6. "9\* < "1" + "1.7(6+, "5<\*B(7. < " + %7g\* < " , + I" . %9\* <6. 1. % " (1 1.7(+ . ,2" +9' . < + "%6(7. % " \*9"&.4) +, "B(\*, . %6. a">? (&" ( " ? . "N. &" \*5' (\*% " \* " . %&) < . " 5< . & . < B+ (' \* " \*9" . B(7. %6. " + %7" \* "N. @ (% " + " (1 .,2" (%B. &' (@ + '(

+ "<(&Y"\*9"?+<1 "'\*"'?. "6\* 15,+(%+% '/'<.&5\*%7.% '/'\*<"\*"'?. "N<\*+7.<"6+ 15)&"6\* 1 1 )%('2"+%7" I (,,"+Y." &' .5&"\*"+77<.&&"?\*&.<(&Y&a">?.&.&' .5&" 1+2"(%6,)7."(%' .<(1 "&)55\*<'(B."\*<"5<\*'.6'(B." 1 .+&)<.&"\* 5<\*B(7."9\*<"'?. "&+9.'2"\*9"'?. "(%7(B(7)+,"+%7"'?. "6+ 15)&"6\* 1 1 )%('2a""

C.5\*<'&"\*9"B(\*,+('\*%&"\*9"'?(&"G\*,(62" 1+2"N." 1+7." '\*"'?. "0(B,"C(@?'&"D">(',\$E"0\*\*<7(%+'\*<a"H" 9\*<1+,"6\* 15,+(%'" 1+2"N."9(,7"+'+%2"'(1 ."N2")&(@"'?. "9\*<1 "5<\*B(7.7"+'" [I I I a\\*42a.7\)g&.4\)+,:](#) <.&5.6':('.,:(4a"H"9\*<1+,"6\* 15,+(%'" 1+2"N."&)N 1 ('.7"N2"7<\*55(%@"('"\*99"+"'?. "0(B,"C(@?'&"D">(',\$

H^0"C\*\*1"!!!"  
I I I a\*42a.7)g6(B(:<@?'&:'(',..:(4"

>?. "0(B,"C(@?'&"D">(',\$E"0\*\*<7(%+'\*<" I(,"<.6.(B. ""?. "+%\*%2 1 \*)&"<.5\*<"+%7" I(,"7. '.<1(%."+%2"

>?. "Z)<.+) "9\*<"G<(B+'."G\* &'.6\*%7+<2"37)6+('(%"+66.5'&"+,, "25.&"\*9"6\* 1 5,+(%'&<.,+'.'7"\*  
'?. " 0\*,,. @. " +%7" 1+2"<.9.<" +%2" 6\* 1 5,+(%'" ("<.6.(B.&" (%6,)7(%@" 6\* 1 5,+(%'&<.,+'.'7" '\*  
(%&'(')'(%"+, " 5\*(,6(.&" \*"<" 5<\*6.7)<.&/' \*"<"N\*?'/' "\*" '?'." 0\*,,. @./" +%" +66<.7('@" +@.%62/" \*"  
+%\*?'<"+55<\*5<(+'. "%'('2"9\* "<.&\*,)'(%\*a"  
Z)<.+) "9\*<"G<(B+'."G\* &'.6\*%7+<2"37)6+('(%"  
#FSF"0+5('\*, "U+Y&" ;<(B./"J)('."=RR"  
J+6<+ 1. %'\*/"OH"[FPSS"  
\[!K]"=S!:K[#=" "  
[I I I aN55.a6+a@\\*B"](#)

**A#9%.&; %<3.#"1F&B31/"7%.,#"31/k**

0\* 1 5,+(%+% '&"+%7"?'(<7:5+<2" I(%.&&.&"+<." %6\* )<+@.7" "\*" <.5\* <"G<\*?(N(' .7"0\*%7)6"'+&"&\*%"+&  
5\* &&(N,." (%' \* "<7.<" '\*' 1+4(1(d." '?'." 0\*,,. @.A&" +N(,'2" "\*" <.&5\*%7" 5<\* 1 5',2" +%7" .99.6'(B.,2a">?. "  
0\*,,. @."7\* .&"%\*/"?'\* I.B.</' ,(1("?'." (1."9<+1."9\* "<.&5\* <'(%@"\$9"?'<.&5\*%7.%'"(&"%\*"+" 1.1N.<  
\*9"?'."U66(7.%'+, "6\* 1 1)%( '2"?'."0\*,,. @." I(,,"&'(,,"&."Y" "\*" +Y." '&' .5&" "\*" .%7"?'."?'<+&& 1.%'/'5<.B.%"  
( '&' <.6)<<.%6./" +%7" +77<.&&" ('&' .99.6'&/' N)'" ('&' +N(,'2" "\*" '+Y." 7(&6(5,(%+<2" +6'(%\*" +@+(%&" '?'." <.&5\*%7.%'" 1+2/"\*9"6\* )<.&./"N,.(1(' .7a"H%"( %6(7.%'7\* .&"%\*"?'<+B." "\*" \*66)<"\*%6+1 5)&"\*N.<.5\* <' .7"  
'\*"'?'."0\*,,. @.a"

>?. "0\*,,. @."&'<\*%@,2".%6\* )<+@.&"?'<.5\* <'(%@"\*9"G<\*?(N(' .7"0\*%7)6"')%7.<"?'(&"G\*,(62a"\$"("&"%"?'." N.&"'(%'<.&"\*9"?'(&"6\* 1 1)%( '2"?'+"&" 1+%2'6\* 1 5,+(%+% '&"+&5\* &&(N,."6?\*" \*."\*" <.5\* <"\*%6\*,,. @." \*99(6(+,&" +%7"?'+" 5<+'(6(5+%'&"(%"?'."@<(.B+%6." 5<\*6.&&"+<."9\* <'?<(@?"'(%&'?<+<(%@"(%9\* <1+'(%\*a">" @)<+<7" +@+(%&"\*7(&6\* )<+@(%@"<.5\* <'(%@"\*5<+'(6(5+'(%"/'+&')7.%'" I?'\* <.5\* <'&"G<\*?(N(' .7"0\*%7)6" \* < 5+<'(6(5+'.&"%"?'."@<(.B+%6." 5<\*6.&&"/.'?'<+&" +6\* 1 5,+(%+%'/'<.&5\*%7.%'/'\* <+"?'(<7:5+<2" I(%.&&/" I(,,"%\*"N."&)Nb.6" "\*" \*7(&6(5,(%+<2" +6'(%\*"N2"?'." 0\*,,. @."9\* <'5.<&\*%+, "6\*%&) 1 5'(%\*" \*9"+,6\*?'\*," \* < 7<)&"\* <\*"?'<.B(\*,+('(%&"\*9"?'."6\*%7)6"5\*,(62"\%\*" (%6,)7(%@"?'(&"G\*,(62)"+"\* <%" .<+<?'." (1."\*9"?'." (%6(7.%'/'5<\*B(7.7"?'+" +%2'&)6?'B(\*,+('(%&"7(7%"\*" +%7"7\*%" \*5,+6."?'."?'<.'?\*" &+9.'2" \*9"+%2" \*?'<.5.<&\*%+" <(&Y+%7"7\*%"\*" (%B\*,B."5,+@(<+<6 1/'6?'+'(%@"\* <"+6+7.1(6"7(&?'\*%&.'2a">?. "0\*,,. @." 1+2"?'\* I.B.</' (%('+'." +%7)6+('(%"+, "7(&6)&&(%\*" \* <5)<&)." \*?'<.7)6+('(%"+, "<.1.7(.&" I('?'?'." &')7.%'"<.@+<7(%@"+,"6\*?'\*," \* <\*"?'<.7<)&a"Z.(%@"(%' \*4(6+' .7" \* <"(1 5+<.7"N2'7<)&" \* <"+,6\*?'\*," (&"%\*" 7.9.%&." "\*" +%2'B(\*,+('(%\*" \*9"?'(&"G\*,(62"+%7"7\* .&"%\*"7(1(%&'\*%\*.A&"<.5\*%&(&(N(,'2" "\*" \*N'+("6\*%&.&.'a"

>?. "0\*,,. @."&'<\*%@,2".%6\* )<+@.&"6\* 1 5,+(%+% '&"\*5)<&)."6<(1(%+, " +6'(%\*"9\* <"(%6(7.%'&"\*9'&.4)+, "?"<+&& 1.%'/' &.4)+, "B(\*,.%6./" +%7" (%'(1+'." 5+<'%<.B(\*,.%6." '?'+" 1+2" +,&\*N." 6<(1.&")%7.<" 0+, (9\* <%(+," +Ia">?. "0\*,,. @." I(,,"&&(&"+"6\* 1 5,+(%+%'"(%' 1+Y(%@"+"6<(1(%+, "<.5\* <" +%7"6\*%5.<+'." I('?' +I."9\* <6.1.%'"+@.%6(.&"(9"+6\* 1 5,+(%+%'"7.6(7.&"\*5)<&)."?"6<(1(%+, "5<\*6.&&"\*?'." .4".%'" 5.<1(' .7" N2" ,+Ia">?. "0\*,,. @.A&" G\*,(62" 7.9(%('(%&/' +%7" N)<7.%" \*9" 5<\*%9" 1+2" 7(99.<" 9<\* 1" 0+, (9\* <%(+<6<(1(%+, " +Ia"H"6\* 1 5,+(%+%'" 1+2'&..Y<.6\* )<.&.)%7.<"?'(&"G\*,(62"+%7g\* <5)<&)."6<(1(%+, " +6'(%\*a"8.'?'<+I."9\* <6.1.%'A&"7.'.<1(%+'(%\*" I?'.'?'<."\* <%" \*"'\*5<\* &.6)'. "+"<.5\*%7.%'/'% \* <"?'." \*)'6\* 1." \*9"+%2'6<(1(%+, "5<\* &.6)('(%"/'+<.7.'.<1(%+'(B."\*9" I?'.'?'<+"B(\*,+('(%\*" \*9"?'(&"G\*,(62"?'& \*66)<<.7a"

G<\*6..7(%&")%7.<"?&"G\*,(62" 1+2"N."6+<<(.7\*)"'5<(\*<"\*/&(1),'+%.\*)&,2" I('?'/\*<"9\*,,\* I(%@"6(B(," \*<"6<(1(%+, "5<\*6..7(%@&"\*99"6+15)&a">?. "0\*,,.@. " 1+2"\*%\*"7.,+2"6\*%7)6'(%@"('&"\* I"(%B.&'(@+'(%% )%,,&&"&5.6(9(6+,2"<.X).&'.7"N2"'?.",+I".%9\*%<6. 1.%'"\".a@a"/mHG ; ]a"\$%""?. ".B.%""\*9"&)6?"+"&5.6(9(6 <.X).&"/" '?. "0\*,,.@. " I(,,"7.9.<" ('&"(%B.&'(@+'(%%\*"%,2"7)<(%@" '?." '(1." '?+"',+I".%9\*%<6. 1.%'" (& @+'?<(%@" .B(7.%6./" I?(6?'&?\*) ,7"%\*" .46..7"' .%"7+2&" +N&.%'" .4' .%) +'%@"6(<6) 1&'+%6.&a">?. " 0\*,,.@. " I(,,"%B.<'?. ,&&"6\* 1 1 )%(6+'." I('?' '?' . "6\* 15,+(%+%'" +%7"<.&5\*%7.%"" \ (9"+55<\*5<(+'. ]" <.@+<7(%@">(',\$E"<(@?'&"5<\*6.7)<+, \*5'(%%&"/+%7"'?. "(15,. 1.%'+(%%\*"9"&)55\*%<'(B." 1.+&)<.&"\*"+&&<."&+9.'2"+%7" I.,,: "N.(%@"a">?. "0\*,,.@. " I(,,"5<\* 15',2"<.&) 1 ."9+6':@+'?<(%@" +&"&\*%\*" +&" ('(%& (%9\*%<1.7"'?+'",+I".%9\*%<6. 1.%'"?+&"6\* 15.,'.7"('&"(%('+(,%B.&'(@+'(%%a"

>?. "0\*,,.@. " +Y.&"'?. "+66)<+62"\*9"(%9\*%<1+'(%%B.<2"&.<("&.&,2"/"+&" +<.5\*%<"\*9"G<\*?(N(' .7"0\*%7)6'" 1+2"?+B."&B.<."6\*%&.X).%6.&a"H"@\*\*7:9+('?'6\* 15,+(%+"?' +<.&),'&'(%"+9(9%7(%@"\*9%\*"')<.&5\*%&(N,." (&"%\*"6\*%&(7.<.7"+'9+,&."\*%<'9+N<(6+' .7"<.5\*%<"\*9"G<\*?(N(' .7"0\*%7)6'a" G+<'(.&" +%7" I('%.&&.&"+<." .45.6'.7""\*5<\*B(7." '<)'9),(%9\*%<1+'(%%""\*"'?.\$B.&'(@+'\*%<"O.+<(%@"U99(6.<"/+7"H55.+,&"U99(6.<a" J?\*) ,7"+%2"5'+2"/"\*<+" I(%.&&"/5<\*B(7."Y%\* I(%@"2"9+,&."(%9\*%<1+'(%%"+&"5+<"\*9"'?(&"5<\*6.&&""?(&" 1+2"N."6\*%&(7.<.7"+B(\*,+(%%\*"9"0\*,,.@. "5\*,(6.&"+%7" I(,,"N."<.9.<<.7""\*"'? ."55<\*5<(+'. \*99(6."9\*%< 9)<'?.<"?+%7,(%@"\$'"(&" +B(\*,+(%%\*"9"'? ."0\*7."\*9"J')7.%""0\*%7)6'"\* 1+Y." +%"(%' .%('\*%+,2"9+,&." <.5\*%<"\*9"+%2"5\*,(62"B(\*,+(%%"/+%7"(" 1+2"+,&\*B(\*,+.'&'+."6<(1(%+,&'&')'.&"+%7"6(B,"7.9+1+'(%%"+, I&a"

W%7.<"0+, (9\*%<(+, +I"/+%("7(B(7)+, " 1)&' 1+Y." + " 1+%7+'\*<2"<.5\*%<"\*9"&)&5.6'.7"6?(,7"+N)&." +%7" % .@. .6"/"(6,)7(%@"&.4)+, +&&+), " I? .%""?+"%7(B(7)+, "%""? . (<5<\*9.&&(\*%+, "6+5+6(2"\*<" I('?'%""? ." &6\*5."\*9""? . (<. 15,\*2 1 .%"/"?' +&"Y%\* I, .7@."\*9"/" \*%<"N&.<B.&"/" + 1 (%%<")%7.<"'?. "+@."\*9"!P" I ?\* 1 "'? ." (%7(B(7)+, Y%\* I &"\*%<.+&\*%+N,2"&)&5.6'&'?+&"N. .%""? . "&)<B(B\*%<"\*9"6?(,7"+N)&." \*%<%.@. .6'a" H,," 0\*,,.@. " 15,\*2. .&"+<."<.X)<.7""\*( 1 1 .7(+'. ,2"<.5\*%<" +%2"&)&5.6'.7"6?(,7"+N)&." +%7"% .@. .6""\* "'? ."0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\*%<+%7"'? ." ; (<.6'\*%<"\*9"0+15)&"J+9.'2a">?. "&\*)<6."\*9"+N)&." 7\* .&'%\*"%. .7"'\*N."Y%\* I"(%%<7.<"\*9(. . "+<.5\*%<'a">?. "0\*,,.@. " I(,,"<.5\*%<" +, "&)&5.6'.7"6?(,7"+N)&." +%7"% .@. .6"/"(6,)7(%@"&.4)+, +&&+), "/" \*%+, +I".%9\*%<6. 1.%'" +%7g\*%<'?. "m\*&"H%@.,.&"0\*%)'2" ; .5+<' 1 .%""\*9"0?(,7"+%7"L+1 (,2"J.<B(6.&a"\$'"(&"%""'?. "<.&5\*%&(N(,'2"\*9"+%2". 15,\*2. /'&')7.%"/" \*%< B\* ,) %' .<"\*% ("B.&'(@+' .&)&5.6'.7"6?(,7"+N)&.a">?(&("&"?' .<\*, . "9"0?(,7"G<\*'.6'(B."J.<B(6.&"+%7"+, I".%9\*%<6. 1.%'a"

\$%" +77'(%%""\*%\*(92(%@"'?. "0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\*%<+%7" ; (<.6'\*%<"\*9"0+15)&"J+9.'2/" +%2"(%7(B(7)+, " 1+2" 1+Y." +7(<.6""<.5\*%<" +&"9\*,,\* I&V"

f \$9"+6?(,7"(&"(%( 1 1 .7(+'. "7+%@.<"/"6+,,"[! !a"

f \$9""?<."(&"%\*( 1 1 .7(+'. "7+%@.<"/"6\*%'+6""? ."0?(,7"G<\*'.6'(%%O\*',( "#="\*?)<&"+7+2"/"M7+2&"+ I . . Y"/" + "\PRR"]F=R:=RRRa"\$9"6+, (%@"9<\* 1 \*)'&(7."\*9"0+, (9\*%<(+/'6+,,"#\!S]"KS[:="FRRa"

H%2"U66(7.%'+, . 15,\*2.. " I?\*"(&"+&\*"+6\*%9(7.%'(+, . 15,\*2.. \9\*%<.4+15., /" +"'? .<+5(&/'&.4)+, +&&+), "B(6'(1"+7B\*6+'. /"5?2&(6(+%)"+%7" I?\*" I +&"?(<.7"(%%""?+"6\*%9(7.%'(+, "<\*, . "&?\*) ,7"<.5\*%< "&)&5.6'.7"6?(,7"+N)&." \*%<%.@. .6""\* ,+I".%9\*%<6. 1.%'" +%7g\*%<'?. "m\*&"H%@.,.&"0\*%)'2" ; .5+<' 1 .%""\*9"0?(,7"+%7"L+1 (,2"J.<B(6.&N)" I \*),7"%\*" 1+Y." +%2"&)6?"<.5\*%<"\*9"'? ."0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\*%<+%7" ; (<.6'\*%<"\*9"0+15)&"J+9.'2a"



M-??8.&'(\$!P\$+:-.\$:!,@!G\$=\$@'\$:!

W5\*%<.6.(5"\*0"+<.5\*<'/"?. "0\*,,.@." I(,"5<\*B(7.<.&\*%+N,."+%7"+55<\*5<(+'.&)55\*<(B." 1 .+&<.&"  
7.&(@%.7" '\*" 5<.&.<B." .X)+,"+66.&&" '\*" '?." 0\*,,.@.A&" 5<\*@<+ 1 &" +%7" +6'(B('.&/" +%7" '\*" 5<\*'.6" '?."

- f 0?+%@.("%\*%:6+15)&"?\*)&(%@" I?%.9.+&(N,./"\*<+<<+%@(%@"\*7(&&\*,B."+"?\*)&(%@"6\*%'<+6'" +%7"5<\*<+'(%@"+<.9)%7("%"+66\*7+6." I('?'6+15)&"?\*)&(%@"5\*,(6(.&i"
- f m(1('@"+"(%7(B(7)+,"\*<"\*%<+%(d+'(\*%A&"+66.&&"\*"6.<+'(% 0\*,,.@"."9+6,(('.&"\*<'+6'(B('.& 5.%7(%@"<.&\*,)'(%%"\*9"?." 1+'.'<i"
- f - \*,)'%'+<2",.+B."\*9"+N&.%6.i"
- f G<\*B(7(%@"+"%".&6\*%<'""\*"%&)<.&+9." 1\*B. 1.% "N. ' I..%6,+&&.&"+%7"+6'(B('.&i"
- f G<\*B(7(%@"+6+7. 1(6&)&55\*%<'&.<B(6.&/'&)6?"+&'') '\*<(%@i"
- f \$%'<(1"&)&5.%&(\*%\*"<0\*,,.@".: (15\*&.7",.+B.i"
- f H%2"\*?'<.<. 1.72"'?+"6+%N." "+(\*<.7""\*"?."(%B\*,B.7"(7(B(7)+,&""\*%<.+&\*%+N,2"+6?<(.B."?." @\*+,&\*9"?(&'G\*,(62a"

**'1#%." 0 &)+/<%1/"31&3.&)%<.,.,#31&**

\$9"'?. 0\*,,.@"."7.'.<1(%.&""?+"""?."6\*%7)6'/'&"+,,.@"."7/"5\*&.&"+5?2&(6+,&+9.'2"<(&Y""\*%\*%."\*%< 1 \*%<.&')7.%&'&/'\*%<'""\*"'?. 0\*,,.@"."A&".7)6+'(\*%+,".%B(<\*% 1.%"/'?"?." 0\*,,.@"." 1+2"&)&5.%7"'?."<.&5\*%7.%/'\*%"+%("%'<(1"N+&(&/'9<\* 1""?." 0\*,,.@"."/'9<\* 1"<.&7.%6."?+,,&/'\*%<9<\* 1"&5.6(9(6'5<\*<+ 1"&"\*%<+6'(B('.&a" H%2"&)6?"+&&.& &1.% "" I(,"N." 1+7."\*%"+6+&.:N2:6+&."N+&(&/'N+&.7"\*%"+%("%7(B(7)+,(d.7"&+9.'2"+%7" B(\*,.%6."<(&Y"+%+2&(&a\$9"'?. 0\*,,.@"."7.'.<1(%.&""?+"""?."( 1 1.7(+."5?2&(6+,"?<+""\*""?."?>+,"?\*"< &+9.'2"\*9&')7.%&'&\*"<\*"?'<.&(&b)'(9(&.<. 1\*B+/'"?.%""?."<.&5\*%7.% "" 1+2"N."&)&5.%7.7"\*%"+%("%'<(1" N+&(&a">?.7.6(&(\*%""\*7\*%&\* I(,"N."5<\*B(7.7""\*""?."<.&5\*%7.% ""(%) I<'(%@a""

H'&')7.% ""<.&5\*%7.% "" I(,"?+B."+"\*55\*%<')%(2"\*6?+,,.@"."?."7.6(&(\*% (1 1.7(+."2"9\*,,\* I(%@" '?."(%'<(1"&)&5.%&(\*%a">\*6?+,,.@"."?."&)&5.%&(\*%/'"?."<.&5\*%7.% ""&?\*)7"6\*%'<+6""?." ;.+%"\*9" J')7.%&'&U99(6." I('?'("?"<." \S]N)&(%.&&'7+2&'"" 1.. "" I('?'?." ;.+%"\*9" J')7.%&'&'<7.&(@%..)] I?'\* I(,"<.B. I'?'?."+55.+,"\*7.'.<1(%." I?'?."<'?"?."7.6(&(\*% ""5) ""?."<.&5\*%7.% ""\*% ("%'<(1" &)&5.%&(\*% I+&"+N('<+<2"\*<"6+5<(6\*)&a" H'7.6(&(\*% (&"+N('<+<2"+%7"6+5<(6\*)& I?'<."?<." (&%"<+<'(\*%+,"6\*%6.'6'(\*%N.' I.. ""??"9+6'&5<.&.%'.7"+%7""?."7.6(&(\*% 1+7.a">?."<.&5\*%7.% "" I(,"<. 1+("% \*%")%'<(1"&)&5.%&(\*% I?'(,"??"+55.+,"(&5.%7(%@a">?."<.&5\*%7.% "" I(,"N."%\*(9(.7)%" I<'(%@"\*9" '?."\*)'6\* 1."\*9"?."+55.+,"a">?."7.6(&(\*% ""5,+6."+2"<.&5\*%7.% ""\*%"+%("%'<(1"&)&5.%&(\*% I(,"%\*" N."6\*%&(7.<.7+&".B(7.6."?"+"%2"7.'.<1(%+"(\*%?'&N."% 1+7.<."@+<7(%@"5\*'.'%'+,<.&5\*%&(N(,'2a""

G<\*B(&(\*%&"9\*%<)&5.%&(\*% \*9+6), '2" 1. 1N.<&"+<."6\*%'+(% .7)%"?'?."L+6), '2"O+%7N\*%Y"+%7" 8>>" L+6), '2"0\*,,.6'(B."Z+<+@(%@"H@<.. 1.% ""\ I?'<."+55,(6+N,.)a"J'+99" 1+2"N."5,+6.7"\*%".,+B."+"??" 7(&6<.'(\*%\*"9"?." 0\*,,.@"."/'+"%7)%"Y..5(%@" I('?"+55,(6+N,.)6\*,,.6'(B."N+<+@(%@"+@<.. 1.% '&a"

**B.,.%&,17&)+<<3.#&;%/3+.6%/&3.&B30<\$,"1,1#/'&,17&;%/<317%1#/'&**

>?. 0\*,,.@"."(&6\* 1 1('.'7""\*%<.+')(%@"+,,1. 1N.<&"\*9"?."6\* 1 1)%(2" I('?'7(@%('2/"6+<./"+%7"<.&5.6'a" H%2"&')7.% "" I?'\* .45.<(%6.&"\*% (&"+99.6'.7" N2" B(\*,+(\*%&))7.<"?'(&'G\*,(62/" I?'?.'<'+&" + 6\* 15,+(%+%'/'+"<.&5\*%7.%/'/\*%<+"?'<7:5+<2/" I(,"?+B." .X)+,+66.&&"\*"&)&55\*%<'"+%7" 6\*)%&.,(%@" &.<B(6.&""<\*)@?"??" 0\*,,.@"."a"

>?. 0\*,,.@"." &'<\*%@,2" .%6\*%<+@.& ("7(B(7)+,&" \*%<.5\*%<' G<\*?(N('7" 0\*%7)6'a" >?. 0\*,,.@"." <.6\*%@(d.&/'?\*" I.B.</'?'+"""?."7.6(&(\*% ""\*%<.5\*%<' G<\*?(N('7" 0\*%7)6'" \'"\*""?." 0\*,,.@"." +%7g\*%<"+ I" .%9\*%<6. 1.% "]6+%N."7(99(6), 'a">?. 0\*,,.@"." &'<\*%@,2" .%6\*%<+@.& ("7(B(7)+,&" I?'\*%<."6\*%&(7.<(%@"

I ? . ' ? . < " \* " < . 5 \* < " G < \* ? ( N ( ' . 7 " 0 \* % 7 ) 6 " " \* " & . . Y " ' ? . " & ) 5 5 \* < " \* 9 " 6 \* % 9 ( 7 . % ' ( + , " 6 + 1 5 ) & " + % 7 " 6 \* 1 1 ) % ( ' 2 " < . & \* ) < 6 . & / " , ( & ' . 7 " N . , \* I a " > ? . & . " ' < + ( % . 7 " 5 < \* 9 . & & ( \* % + , & " 6 + % " 5 < \* B ( 7 . " @ ) ( 7 + % 6 . " ( % " 1 + Y ( % @ " 7 . 6 ( & ( \* % & / " ( % 9 \* < 1 + ' ( \* % " + N \* ) " + B + ( , + N , . " < . & \* ) < 6 . & + % 7 " 5 < \* 6 . 7 ) < + , \* 5 ' ( \* % & / " + % 7 " + & & ( & ' + % 6 . " \* " . ( ' ? . < " 5 + < ' 2 " ( % " ' ? . " . B . % " ' ? + " " < . 5 \* < " + % 7 g \* < " < . & \* , ) ' ( \* % " ) % 7 . < " ' ? ( & " G \* , ( 6 2 " ( & " 5 ) < & ) . 7 a " > ? . & . " < . & \* ) < 6 . & " + < . " + B + ( , + N , . " < . @ + < 7 , . & & " \* 9 " I ? . % " \* < " I ? . < . " " ? . " ( % 6 ( 7 . % " \* 6 6 ) < < . 7 a " "

> ? . < . " + < . " 1 + % 2 " < . & \* ) < 6 . & " + B + ( , + N , . " \* % " 6 + 1 5 ) & " + % 7 " ( % " ' ? . " & ) < < \* ) % 7 ( % @ " 6 \* 1 1 ) % ( ' 2 a " H & " 7 . ' + ( , . 7 " N . , \* I / " ' ? . < . " + < . " 0 \* % 9 ( 7 . % ' ( + , " C . & \* ) < 6 . & / " I ? ( 6 ? " N 2 " , + I " 6 + % % \* " & ? + < . " ( % 9 \* < 1 + ' ( \* % " I ( ' ? \* ) " ' ? . " 6 \* % & . % " \* 9 " ' ? . " ( % 7 ( B ( 7 ) + , & . . Y ( % @ " + & & ( & ' + % 6 . " \ ( % " 1 \* & " 6 ( < 6 ) 1 & ' + % 6 . & ] a " > ? . < . " + < . " + , & \* " + " B + < ( . ' 2 " \* 9 " 0 \* , , @ . " < . & \* ) < 6 . & " ' ? + " I ( , , N . " 7 ( & 6 < . . " + % 7 " 5 < ( B + ' . " N ) " " + < . " % \* " 6 \* % & ( 7 . < . 7 " 6 \* % 9 ( 7 . % ' ( + , a " > ? . & . " < . & \* ) < 6 . & " I ( , , 1 + ( % ' + ( % " " ? . " 5 < ( B + 6 2 " \* 9 " + % " ( % 7 ( B ( 7 ) + , A & " ( % 9 \* < 1 + ' ( \* % " I ( ' ? ( % " " ? . " , ( 1 ( ' . 7 " 6 ( < 6 , . " \* 9 " ? \* & . " ( % B \* , B . 7 " ( % " " ? . " < . & \* , ) ' ( \* % " \* 9 " + " 6 \* 1 5 , + ( % " ) % 7 . < " " ? ( & " G \* , ( 6 2 a " "

**B31>7%1#", \$k ; %/3+.6%/&N23145 %7"6, \$0k**

> ? . " 0 \* , , @ . " & ' < \* % @ , 2 " . % 6 \* ) < + @ . & " + , " 6 \* 1 1 ) % ( ' 2 " 1 . 1 N . < & " \* " 1 + Y . " + 5 < \* 1 5 " < . 5 \* < " \* 9 " + % 2 " ( % 6 ( 7 . % " \* 9 " G < \* ? ( N ( ' . 7 " 0 \* % 7 ) 6 " " \* " , \* 6 + , " + I " . % 9 \* < 6 . 1 . % " + % 7 " ' ? . " 0 \* , , @ . a " L \* < " ( % 7 ( B ( 7 ) + , & " I ? \* " + < . " % \* " "



R3.%1/"6&%, 0"1,#"31/D" j )+, (9(.7" 5<\*B(7.<&" 6+% 5<\*B(7." + "9\* <. %&(6" .4+ 1 (%+'(\*%a">?. "9\* <. %&(6" 1 .7(6+, ".4+ 1 "?"&" I \*"@\*+, &V"9(<&'/" "7(+@%\*&. "+%7" '<.'+'?' .9) ,, ".4' .% "'\*9"+%2" (%b)<2"\*<5?2&(6+, ".99.6" "\(%6,) 7(%@ 5<.B. %'(\*% " \*9" &.4)+, ,2" '<+%& 1 ('.7" (, % .&&. &"+%7" 5<.@%+%62]" +%7" &.6\*%7/" '\* 5<\*5 .<.2" 6\*,, .6" +%7" 5<. &.<B. ".B(7.%6.a" >? .< (&"+, (1 ('.7" I(%7\* I " \*9" '(1. "\ I ('?("% [K" ?\*)<&]" 9\*,, \* I(%@"+"(%6(7.% "'\*9"&.4)+, "+&&+), ""\*5<. &.<B. "5?2&(6+, "+%7"\*'?. <"9\* <1 &"\*9".B(7.%6."/+, '?\*)@?" (' 1+2"N. "5\*&&(N, . "'\* " \*N'+(% ".B(7.%6. "9<\* 1 " '\* I ., &/" &?.. ' &/" 6,\*'?. &/" +%7" '\*'?. <(' 1 &9\* <., \*%@ .< 5.<(\*7&"\*9"(' 1 .a\$'("&N. &'""\*@"+'? .< ".B(7.%6. "5<(\*<"\* I +&?(@@"+5.<&\*%A&"N\*72"\*<6?+%@(%@6,\*'?(%@a \$9"6,\*'?. &?"?+B. "N. .% "6?+%@. 7/"?' . "6,\*'?. & I \*%<+"+'? ."(' 1 ."\*9"?' . "(%6(7.% "'&?\*) ,7"N. "N<\*)@?" ""\*""? ." .4+ 1 (%+'(\*%("+"6, .+%/"&+%(' <2"6\*%' +(% .<&)6?'+&"+5+5.<"N+@"\* <" I +55.7"(% "+"6, .+%&?.. 'a" ; \*%\*"" )&." +5,+&'(6"N+@V"5,+&'(6"6\*%' +(% .<&"7\*%\*"N<.'+'? . "+%7" 1+2" <.%7.< ".B(7.%6.)&., . &&a" H"6?+%@. " \*9 6,\*'?(%@"&?\*) ,7"+, &\*N. "N<\*)@?" ""\*""? ." ?\*&5(+, /"+&"?' . "6,\*'?. & I \*%<+"+'? ."(' 1 ."\*9"?' . "(%6(7.% "' I (, , (Y., 2"N. "Y.5"+"& ".B(7.%6.a" >+Y(%@"'?' . "&' .5&"\*@"+'? .< ".B(7.%6. "(1 1 .7(+'. 2"7\* .&"\*%""6\* 1 1 ("+" (%7(B(7)+, "'\*"+%2"5+<'(6), +<"6\*)<&. "\*9"+6'(\*%a">?. "7.6(&(\*% " '\*&. .Y"(' 1 ., 2" 1 .7(6+, "+' .%'(\*%"+%7" @+'? .<+%2".B(7.%6. "

J+% '+' Q\*%(6+/"0+(9\*<%(+" [R=R=""  
\  
#=#]"#F[:M#RP"\#=:?\* )<"?'\*',(%.]"

**I77"#31,\$A14B,0<+/\kS&A>4B,0<+/\k;%/3+.6%/k**

U66(7.% '+,"6\* 1 1 )%('2" 1 . 1 N.<&"?+B."+66.&&"\*"+B+(<'2"\*9"<.&\*)<6.&"5<\*B(7.7"N2""?. "0\*,,. @. a"H,,  
\*%:6+ 15)&" <.5\*<'(%@ " \*5'(\*%&" ,(&' .7" +N\*B." ?+B." &'+99" 1 . 1 N.<&" '<+(%.7" '\*" &)55\*<' " (%7(B(7)+,&"

O(\$.( '\$L!8#G\$:87- &'8, !O?&'8, :!

>?. "0\*,,. @. "(6\* 1 1 ('. 7" \*5<\*B(7(%@"+5<\* 1 5"/" ?\* <\*) @?/" .X) ('+N, ./+%7" (1 5+<'(+, <.&\*,) '(%"\*9  
+,, <. 5\* <' .7" B(\*, +('%"&" \*9" '?(&" G\*, (62a" >?. " 0\*,,. @. " )&. &" ' I \* 5<\*6. &&. &" \* " <. &\* ,B. " <. 5\* <'&" \*9  
G<\*?(N(' .7" 0\*%7) 6" ) %7. <' ?(&" G\*, (62" ; (&6(5, (%+<2" C. &\*,) '(%" /" I ?(6?" (%B\*, B. &" +%" (%B. &' (@+' (%"  
+%7"+7b) 7(6+' (%"/+%7" (9"+55<\*5<(+'. /" ? . "(1 5\* &' (%%"\*9" &+%6' (%&/" +7" H7+5" +N, . " C. &\*,) '(%" /" I ?(6?"  
(%6,) 7. &" <. &\* <+' (B. " \*5' (%&" 9\* <' <. &\* ,B(%@" <. 5\* <'&a" >?. " 0(B, " C(@?'&" D" >(', . "\$E" 0\*\*<7(%+ '\*<" I (, "  
7. ' .<1 (%. " ' ? . "+55<\*5<(+'. " <. &\*,) '(%" 5<\*6. &&" +9' .< 1 +Y(%@" +%" (%('(+, +&&. && 1 . % " \*9" ?' . " <. 5\* <' .7"  
(%9\* <1 +('%" /" 6\*%&(7. <(%@" ' ? . " &' +'. 7" (%. ' <. &'&" \*9" ?' . " 5+<' (. &/" 6+ 1 5) &" &+9. '2" /" +%7" ?' . " 0\*,,. @. A&"  
\*N, (@+' (%%" \* 1 +(%' +(%" +%" . %B(<\*% 1 . % " 9<. " 9<\* 1 " ?+<+&& 1 . % " /" +7" 7(&6<(1 (%+' (%%a"  
"

>?. "5<\*6. &&. &") %7. <" ?(&" G\*, (62" +<. " &. 5+<+' . "+%7" 7(&' (%6" 9<\* 1 " 0+, (9\* <%(+A&" 6<(1 (%+, " 5<\*6. 7) <. &a"  
G<\*6. . 7(%&") %7. <' ?(&" G\*, (62" 1+2" N. " 6+<<(. 7" \*) " 5<(\*<" \*"/&(1 ), '+% . \*) &, 2" I ('?/" \*<" 9\*,, \* I (%@" 6(B, "  
\* <' 6<(1 (%+, " 5<\*6. . 7(%&" \*99:6+ 1 5) &a" 8. ('? . <+7. 6(&(\*%N2" , +I . % 9\* <6. 1 . % " <. @+<7(%@" 5<\* &. 6) '(%"  
%\* <' ?' . " \*) '6\* 1 . " \*9" +2" 6<(1 (%+, " 5<\*6. . 7(%@" I (, " N. " 6\*%&(7. <. 7" 7. ' .<1 (%+' (B. " \*9" I ?' . ' ? . <' +"  
B(\*, +('%" \*9" ?(&" G\*, (62" \*66) <<. 7a"

'1"#, \$I//%/0%1#&

H9' .< <. 6. (B(%@" +<. 5\* <' \*9" G<\*?(N(' .7" 0\*%7) 6"/" ?' . " 0(B, " C(@?'&" D" >(', . "\$E" U99(6. " I (, " @+' ? . <"  
(%9\* <1 +('%" +N\*) " " ?' . " <. 5\* <' .7" 6\*%7) 6" +7" <. &5\*%7" \* " +2" (1 1 . 7(+'. " ? . +, ' ? " \* <" &+9. '2" 6\*%6. <%&"  
<+(&. 7"N2" ?' . " <. 5\* <' a" >?. " 0(B, " C(@?'&" D" >(', . "\$E" U99(6. " I (, " +&&. &&" ?' . " 6\* 1 5, +%" +%" A&" &+9. '2" +7"  
I . :, :N. (%@" \*99. <' ?' . " 0\*,,. @. A&" (1 1 . 7(+'. " &) 55\* <' " +7" +&&(&' +%6. /" +7" +&&. &&" ?' . " %+' ) <. " +7"  
6<6) 1 &' +%6. &" \*9" ?' . " <. 5\* <' " \*7. ' .<1 (%. " I ?' . ' ? . <' ?' . " <. 5\* <' .7" 6\*%7) 6" +&(&. &+" 5\* . %' (+, " G\*, (62"  
B(\*, +('%" /" I ?' . ' ? . <' ?' . " <. 5\* <' .7" 6\*%7) 6" (&" I ('? (%" ?' . " &6\*5. " \*9" ?(&" G\*, (62"/" +7" ?' . "+55<\*5<(+'. "  
1 +% . % . <\*9<. &\*,) '(%" ) %7. <' ?(&" G\*, (62a"

>?. "0(B, "C(@?'&" D" >(', . "\$E" U99(6. " I (, " 5<\*B(7. " \*) ' <. +6?" \* " . +6?" (7. %' (9+ N, . " 6\* 1 5, +(%+%" ?' +'" (&"  
+,,. @. 7" \* " ?+B. " .45. <(. %6. 7" 1 (&6\*%7) 6" a" >?. " \*) ' <. +6?" I (, " (%6,) 7. " ?' . " 9\*,, \* I (%@" (%9\* <1 +('%" V"

- '? . "0\*,,. @. " ?+&" <. 6. (B. 7" +<. 5\* <' " ?+ " ?' . " 2" 1+2" ?+B. " .45. <(. %6. 7" 1 (&6\*%7) 6" i"
- <. '+, (+' (%%" 9\* <" 9, (%@" + " 6\* 1 5, +(%" \* <" 5+<' (6(5+' (%@" (% " + " 6\* 1 5, +(%" 5<\*6. &&/" \* <" N\* ?' /" (&"  
5<\*?(N(' .7i"
- '? . "6\* ) %& . , (%@" <. &\*) <6. &' +B(+, +N, . " + " ?' . " 0\*,,. @. " \* <' (%" ?' . " 6\* 1 1 ) % ('2i"
- '? +/" I ?' . % " + " 6<(1 . " 1+2" ?+B. " \*66) <<. 7"/" ?' . 2" ?+B. " ?' . " <(@?' " \* <. 5\* <' " ?' . " 1 + ' . <' \* " , + I "  
. %9\* <6. 1 . % " i"
- '? . " <(@?' " \* & . . Y" 1 . 7(6+, " <. + ' 1 . % " i"
- '? . " 0\*,,. @. A&" (%B. &' (@+' (%%" 5<\*6. 7) <. &i"
- 5\* . %' (+, (%' . <(1 " 1 . +&) <. &" ?' + " +<. " +B(+, +N, . i"
- '? . "(1 5\* <' +%6. " \*9" 5<. & . <B(%@" . B(7. %6. i"
- +<. X) . &" 9\* <' ?' . " 6\* 1 5, +(%+%" \* " 1 . . " I ('? " ?' . " 0(B, " C(@?'&" D" >(', . "\$E" U99(6. " \* " 7(&6) &&"  
\*5' (%&" 9\* <' <. &5\*%7(%@" \* " ?' . " <. 5\* <' i"
- '? . " <(@?' " \* " N. " +66\* 1 5+%( . 7"N2" +%" +7B(&\* <" \*9" 6?\*(6. i" +7"

'?." I+2" '?." 0\*,,.@." <.&5\*%7&" '\*<.5\*%'&" \*9" 1 (&6\*%7)6'" +%7" +" 7.&6<5'(%%" \*9" 5\*'.%'(+," 7(&6(5,(%+<2"6\*%&.X) .%6.&a"

H&5+<"\*9"?'."('(+,"+&&. && 1 .%'/'?'." 0(B("C(@?'&"D">('," \$E"U99(6. " I(,"V"

f +&&. &&"'?'."%+'<." +%7"6(<6) 1 &' +%6.&"\*9"?'." <.5\*%'i"

f +77<.&&"(1 1 .7(+'. "5?2&(6+,"&+9. '2"+%7" . 1 \*'(%%+," I .,,:N.(%@i"

f 6\* 1 1 )%(6+'."% .6.&&+<2"7. '+(&"\*9"?'." <.5\*%'0+15)&" J+9. '2"\*' .%' .<'?'." <.5\*%'(%'"?'." 0\*,,.@.A&'7+(,2"6<(1 .," \*@(9"<.X)(<.7"N2"?'." 0,.<2"H6'i"

f 5<\*B(7. " '?'." 6\* 15,(+%+%'" I('?' +%" .45,(+%+'(%%" \*9" '?'." 5<\*6.7)<+," \*5'(%&/' (%6,)7(%@ ; (&6(5,(%+<2"C.&\*,)')(%%" +%7"H7+5'+N,."C.&\*,)')(%%" i"

f 7(&6)&&" '?'." 6\* 15,(+%+% 'A&" 5<.9.<.%6. " 9\*%' 1 +%%.<" \*9' <.&\*,)')(%%" +%7" +%2" N+<<(<.&" '\* 5<\*6..7(%@i"

f 7(&6)&&"'?'." 5<\*6. &&"9\*%'<9(,(%@"+"9\*%'<1 +,"6\* 15,(+'i"

f +&&. &&"9\*%'<+%2"5+'.' <%"\*9"6\*%7)6'"N2"?'." <.&5\*%7. %'i"+%7"

f 7. ' .<1 (%. "+@. "9"?'." 6\* 15,(+%+% 'i"+%7)"9"?'." 6\* 15,(+%+% "(&"+" 1 (%\*%'<" I +&"+" 1 (%\*%'<+"?'." '(1 . " \*9" '?'." +,.,@.7" G<\*?(N('7" 0\*%7)6'/" 1+Y. " '?'." +55<\*5<(+'.' %\*'(9(6+'(%&" '\*" &'+'.' +@.%6(. &a"

"

H%2" J)55\*%'(B. " Q. +&)<.&"5)" (%"5,+6. " I(,"N. "Y.5"5<(B+'./" .46.5"'\*"'?'." .4'. %'"?'+"7\*(%@"&\* (15+(<&"?'." +N(,'2"\*9"?'." (%&'(')'(%%"\*5<\*B(7. "'?'."&)"55\*%'(B. " 1 .+&)<.&a"L\*%'<.4+15,./'"\*".99.6')+'.' + '?'\*)&(%@"6?+%@./" &' +99" +' "C.&(7. %'(+," 37)6+'(%%" +%7" O\*)&(%@" J.<B(6.&" I(,"N. " (%9\*%'<1 .7"\*9"?'." %..7"'\*"+&&(&" I('?'+"?\*)&(%@"6?+%@." +&"7(<.6'.7"N2"?'." 0(B("C(@?'&"D">('," \$E"0\*\*<7(%+'\*%'<N)" I(,"%\*"N. "5<\*B(7.7" I('?'+"%2"\*9"?'."7. '+(&"\*9"+%2"6\* 15,(+'a" c ?.%"?'." 0(B("C(@?'&"D">('," \$E" 0\*\*<7(%+'\*%'<7.6(7.&"\*'"(%('+'.' "+%)"(B.&'(@+'(%%/"(15\*&. "(%'<(1"5<\*'.6'(B. " 1 .+&)<.&/'\*%'<"+Y. "+%2" \*'?'<+'6'(%%"?'+'(15+6'&"+'<.&5\*%7.%'/'?'." 0(B("C(@?'&"D">('," \$E"0\*\*<7(%+'\*%'< I(," +,&\*'.%&)<.' ?+'\*"'?'." <.&5\*%7. %'"(&"\*'(9(.7"+%7"<.6.(B.&" I<('.' %"(9\*%'<1 +'(%%"\*%"+B+(,+N,." <.&\*)<6.&+%7"\*5'(%&a"

"

H"'?'." 6\*%6,) &(%%"\*9"?'.

"



f 0,\*&."?<.5\*<" I('??."\*5'(%%"\*"<.:\*5.%"('+"+%\*?'<.(1."(9"?."6\*15,+(%+%'"<.X).&'&  
<.&\*,)')(%%"\*"<(9"?."0\*,,@."&)N&.X).%,'2'7.'.<1(%.&"?<."(&+"%..7"\*9)<'?<.(%B.&'(@+'.'  
'?."+,,.@.7"1 (&6\*%7)6'a"

**R3.0, \$B30 <\$, #1/Pk = "/0"//, \$/k, 17&I <<%, \$/k3>k = "/0"//, \$/k**

H"9\* < 1 +, "6\* 15, +( % "9\* < 5) < 5\* & . & "9" ? (& "G\* , (62" (& + "7\*6) 1 . % "9( . 7"N2" + "6\* 15, +( % + % " " \* < & (@ . 7"N2"  
'? . "0(B, ("C(@?'&"D">(' . " \$E" 0\*\* < 7( % + ' \* < + , , . @ ( % @ " > ( ' . " \$E" J.4) + , "O+ < + & & 1 . % " + % 7" < . X) . & ' ( % @ " ? + "  
'? . "0\* , , @ . (%B . &' (@ + ' . " ? . " + , , . @ + ' (%a "H"9\* < 1 +, "6\* 15, +( % " 1 + 2"N . "9( . 7" + " + % 2" (1 . "N2") & ( % @ " ? . "  
9\* < 1 " 5 < \* B(7.7" + " ? ' 5 & \gg I I I a \* 42a.7) g&.4) + , : < . & 5.6 : ' ( ' . : (4a " H" 9\* < 1 " 1 + 2" N . " & ) N1 ( ' . 7" N2"  
7 < \* 55( % @ " ( " \* 99" + " ' ? . " 0(B, ("C(@?'&"D">(' . " \$E" U99(6. / "N2" . 1 + ( / " \* < "N2" 1 + ( , a "W5\* % " < . 6. (5" \* 9" + "  
6\* 15, +( % / " ' ? . " 0(B, ("C(@?'&"D">(' . " \$E" 0\*\* < 7( % + ' \* < " I ( , , "6\* % ' + 6" ' ? . "6\* 15, +( % + % " ' ' \* "6\* % 7) 6" + % "  
( % ' + Y . " ( % ' . < B( . I a " c ? . % + " 6\* 15, +( % + % " & ) N1 ( & + " 9\* < 1 +, "6\* 15, +( % / " ' ? . " 0(B, ("C(@?'&"D">(' . " \$E"  
0\*\* < 7( % + ' \* < " I ( , , "9( & " 5 < \* 15' , 2'7 . ' . < 1( % . " I ? . ' ? . < V"

- f ' ? . "6\* % 7) 6" + , , . @ . 7" I \* ) , 7" (9" 5 < \* B. 7" / " 6\* % & ' ( ' ) . " > ( ' . " \$E" J.4) + , "O+ < + & & 1 . % " i"
- f ' ? . "6\* % 7) 6" + , , . @ . 7" \* 66) < < . 7" ( % " ? . "0\* , , @ . A& . 7) 6 + ' ( \* % " 5 < \* @ < + 1 " \* < + 6' (B('2i"
- f ' ? . "6\* % 7) 6" + , , . @ . 7" \* 66) < < . 7" ( % " ? . "W( ' . 7" J' + ' . & i"
- f ' ? . "6\* % 7) 6" + , , . @ . 7" \* 66) < < . 7" \* % " \* < " + 9' . < (H) @ ) & " ! = / # R # Ri + % 7"
- f ' ? . "6\* 15, +( % + % " (& 5 + < ' (6(5 + ' ( % @ " ( % " \* < + ' . 15' ( % @ " \* " 5 + < ' (6(5 + ' . " ( % " ? . "0\* , , @ . A& . 7) 6 + ' ( \* % "  
5 < \* @ < + 1 " \* < + 6' (B('2" + " ? . " (1 . " ? . "6\* 15, +( % " (& 9( . 7a"

\$9" ? . "9\* < 1 +, "6\* 15, +( % " & + ' (& 9( . & + , , " \* 9" ? . & . " . . 1 . % ' & / ( " I ( , "N . " (%B . &' (@ + ' . 7" + % 7" < . & \* , B. 7" + & + " > ( ' . "  
< . " \$E" J.4) + , "O+ < + & & 1 . % " 1 + ' . < " ? < \* ) @ ? " ? . " 5 < \* 6. 7) < . & " \* ) , ( % . 7" ( % " H55. % 7(4" H a " \$9" ( " + 55 . + < & " N + & . 7"  
) 5\* % " ( ' ( + , < . B( . I " \* < " ) 5\* % " ( % 9\* < 1 + ' ( \* % @ + ' ? . < . 7" 7) < ( % @ + % " (%B . &' (@ + ' ( \* % " ? + " + " 9\* < 1 +, "6\* 15, +( % "  
7\* . & " % \* " & + ' (& 92" + % 7g\* < % \* " , % @ . < & + ' (& 9( . & + , , " ? . & . " . . 1 . % ' & / " ? . "0\* , , @ . " I ( , "7( & 1 (& & " ? . "9\* < 1 +, "  
6\* 15, +( % " 9\* < 5) < 5\* & . & " \* 9" ? . " > ( ' . " \$E" J.4) + , "O+ < + & & 1 . % " 5 < \* 6. & & a " > ? . "

**R3.0, \$B30 <\$, "1#/k)"F1%7& : @B"C"\$& ; "F9#/&S &! "#\$%&' ( &B33.7"1, #3.&**

\$%" 6+&.&" I? .<." (" +55.+<&"N+&.7" \*%"+%" (%('(+,"<.5\*<" '?+' "'?." .,. 1.%'&"&'+'.7"+N\*B." I\*),7"N." &+'(&9(.7/"N)' "'?."6\* 15,+(%+% "'7\* .&"%\*" " I (&?"\*"9(,."+"9\*< 1+,"6\* 15,+(%/'/"?'."0(B("C(@?'&"D">(',."\$E" 0\*\*<7(%+'\*<" 1+2/"(%"'? .(<"7(&6<.'(\*%/"7.6(7."\*"&(@%+"6\* 15,+(% "'\*9">(',."\$E"J.4)+,"O+<+&& 1.% "'+%7" (%('+'."+%("B.&'(@+'(\*%"+%7"<.&\*,) '(\*%"5<\*6.&&")%7.<"'?'."5<\*6.&&"\*'),(% .7"N.,\* I a"\$9"?'(&"\*66)<&/'?'." 0(B("C(@?'&"D"D">(',."\$E"0\*\*<7(%+'\*<" I(,,"%\*" "N."+"6\* 15,+(%+% "'\*<'\*?'< I(&."+"5+<'2"\*\*\*"?'." 1+''.<a

"

>?."0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\*<" I(,"6\*%&(7.<" I ?+'&' .5&" 1+2"N."5\*%&&(N,."\*%"+55<\*5<(+'.  
I ?.'%"+<.&5\*%7.%'"(&)"%Y%\* I %"\*<"'?. "6\* 15,(+%+%'"<.X).&'&"+%\*%2 1('2"/+%7" I ?+'\*"?.<" 1 .+&)<.&  
\*%<. 1 .7(&" 1 (@?' "N."6\*%&(7.<.7" '\*"+77<.&&" +%2".99.6'&"\*9"?'."<.5\*%<.7"N."?+B(\*%<"\*%'"?."6+15)&  
6\* 1 1)%( '2a">?."0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\*<" I(," 1+Y."+"7.'.<1(%+'(\*%<."@+<7(%@"'?"  
+55<\*5<(+'. " 1+%%.<"\*9"&\*,)'(\*%)"%7.<"'?. "5\*%(62a">?."0\*,,@." I(,"&..Y"&\*,)'(\*%)"6\*%&&(&'."% I ('?"  
'?. "6\* 15,(+%+% 'A&"<.X).&'/'(9"('(&"5\*%&&(N,."\*\*"7\*%&\*/N&.7")5\*%'"?."9+6'&"+%7"6(<6) 1&' +%6.&' I ?(,"  
+,&\*%5<\*'.6'(%@"'?".'?.,?'+"%7"&+9.'2"\*9"?'."6\* 15,(+%+%'" +%7"?'."0\*,,@."6\* 1 1)%( '2a"

"

>?."0\*,,@."A&"+N(,'2"\*"(B.&'(@+'."+%7"<.&5\*%7"9),,2"\*"+<.5\*%<" 1+2"N.",(1(' .7"9"?'."6\* 15,(+%+%  
<.X).&'&"+%\*%2 1('2" \*%<7.6,(%.&" '\*" 5+<(6(5+".' (% "+%)"(B.&'(@+'(\*%a">?." 0\*,,@." I(,/" ?\* I .B.</"  
5)&&)." \*'?.<" &' .5&" '\*", (1(' ' ?." .99.6'&"\*9"?'." 5\*%.'%'+, G<\*?(N(' .7" 0\*%7)6"'+%7" 5<.B."%'" (&  
<.6)<<.%6.a"\$%"+,,"6&&.&'?'."9(%+,"7.6(&(\*%\*" I ?.'?'</" ?\* I /"+%7" '\*" I ?+' .4.'%'"?'."0\*,,@." I(,"  
6\*%7)6"'+%)"(B.&'(@+'(\*%"+%7" I ?.'?'<\*"?'<(%'<.(1"<. 1 .7(+,"\*%<5<\*'.6'(B." 1 .+&)<.&' I(,"N."+"Y.%  
(%6\*%6'.6'(\*%)" I ('?"+<.5\*%<"\*9"G<\*?(N(' .7" 0\*%7)6" I(,"N." 1+7."(% "+ 1+%%.<"6\*%&&(&'."% I ('?'"?(&  
G\*%(62a"

"

c ?.<."?'."0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\*<7.'.<1(%.&"'?"+"6\* 15,(+%+% 'A&"<.X).&'&]6+%N."  
?%\*%<.7"/' ?." 0\*,,@." 1+2"%.B.<'?.,.&&"'+Y." \*'?'<"+55<\*5<(+'. "&' .5&" '\*", (1(%+".' ?'."<.5\*%<.7"  
6\*%7)6"/' 5<.B."%'" ('&'<.6)<<.%6."/ "+%7" <. 1 .72" ('&".99.6'&" \*%'" ?'." 6\* 15,(+%+%'" +%7" ?'." 0\*,,@."  
6\* 1 1)%( '2a">?\*&.&' .5&" 1+2"(%6),7."(%6<.+&.7" 1 \*%('\*<(%@"&)5.<B(&(\*%/"\*%<.6)<('2"+" ,\*6+'(\*%&  
\*%<"+6'(B('&" I ?.<."?'."+,.,@.7" 1 (&6\*%7)6"\*66)<<.7i"5<\*B(7(%@"+77('(\*%+,"<+(%@"+%7" .7)6+'(\*%  
1+'<(+,&"9\*%<'&')7.%'&" +%7" . 15,\*2..&i" \*%<6\*%7)6'(%@"6,(1+'.'&)<B.2&"<."@+<7(%@"&.4)+,B(\*, .%6.a"  
>?." 0\*,,@." I(,"+,&\*"' +Y."(1 1 .7(+'. "&' .5&" '\*%5<\*B(7."9\*%<'?'."&+9.'2"\*9"?'."6\* 15,(+%+%'" I ?(,"  
Y..5(%@"'?"."6\* 15,(+%+% 'A&"(7.%'('2"6\*%9(7.%'+,+"&"+55<\*5<(+'. a">?.&."&' .5&" 1+2"(%6),7."6?+%@(%@"  
,(B(%@"+<<+@. 1 .% '&' \*%<6\*)&&."&6? .7),.&'"+&&(@% 1 .% '&'/\*%<"'.&'&a">?."6\* 15,(+%+%'" I(,"N."%\*(9(.7"  
'?+'?'."&' .5&"?'."0\*,,@." I(,"+"Y." \*%<.&5\*%7" \*%'" ?'."6\* 15,(+%+%'" I(,"N.",(1(' .7"N2"?'."<.X).&'9\*%<  
6\*%9(7.%'+,('2a">?."0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\*<1+2"+,&\*%<.X).&'?"'+<.5\*%<"N."<.5\*%.7"  
+%7"5)&&.7)"%7.<"'?(&"G\*%(62"9"+%2"% . I "%<"+77('(\*%+,"(%9\*%<1+'(\*%N.6\* 1 .&"+B(+,N,./"+%7g\*%<("9"  
'?. "6\* 15,(+%+%'"7.6(7.&"'?'+"'"?' .2" I \*),7,(Y." ; (&6(5,(%<2"C.&\*,)'(\*%'"\*%66)<a"

"

\$%'"?\*&."(%&' +%6.&" I ?.'%'"?'."0(B("C(@?'&"D">(',\$E"0\*\*<7(%+'\*<7.'.<1(%.&"'?"+"?."0\*,,@." 1 )&"  
5<\*6. .7" I ('?"+%)"(B.&'(@+'(\*%7.&5('."?'."6\* 15,(+%+% 'A&"<.X).&'?"'+(""%\*"'\*66)</'?'."0(B("C(@?'&  
D">(',\$E"0\*\*<7(%+'\*<" I(," %\*'(92" ?'." - 14.5(9143 c mB/9143 c mB9143 c mBTBT500(,)0.2(")0.2(") - 2.

"

+ "B(\*,+('(\*%"\*9"+"&.5+<+'."5\*(, (62/" I ?.'?'<"J')7.%'" 0\*7."\*9" 0\*%7)6'/"L+6), '2" O+%7N\*\*Y/"\*<"J'+99"  
O+%7N\*\*Y/"?'." 0\*,,.@."

>?. "0(B("C(@?'&'D">(',\$E"0\*\*<7(%+\*'< 1+2".4'.%7"+%2"7.+7,(%.&' I('?'%''?(&'G\*(,62)"9\*<"@\*\*7  
6+)&."&'?\*' I"%+%7"7\*6) 1.%.7a" \_ ^\*\*7"0+)&.`" I(,"N."7.'.<1(%."7"N2"'?'."0(B("C(@?'&'D">(',\$E"  
0\*\*<7(%+\*'<("?'?<.<'&\*,.7(&6<.'(\*%"+%7" 1+2"(6,)7.V"'?'." )%+B(+,N(,'2"\*9"+' I('%.&&'5+<'2"/" \*"  
+7B(&\*<"N.6+)&."\*9"7.+?'/"(,%.&&'/\*<\*'?'<.<.46)&+N,.6(<6) 1 &' +%6.&i"6\*%6)<<.%"+I".%9\*<6. 1.%"  
+6'(B('2i"\*<""?'."%.7"9\*<"+%@)+@."+&&(&' +%6."\*<"+66\* 1 1 \*7+'(\*%\*"9"7(&+N(,'.&a"H,'?\*)@?'<.+&\*%+N,."  
+'.' 1 5'&" I(,"N." 1 +7."\*"&6?.7),."5<\*6..7(%@&'6\*%&(&' .%" I('?'+"7B(&\*<A&"+B(+,N(,'2"/"?'."5<\*6.&&"  
I(,"%\*"N."7.,+2.7"\*&6?.7),."?'."5<\*6..7(%@&'+"'"?'."6\*%B.(.%6."\*9"?'."7B(&\*<a">?'."5+<'(&" I(,"  
N."%\*"9(.'7(" I(<'(%@"\*9"+%2".4'.%&(\*%/"'?'<.+&\*%&9\*<('/"+%7"5<\*b.6'.7"%." I"(1.,(%.&a">?'."0\*,,.@."  
I(,"%\*"')%<.+&\*%+N,2'7.%2"+&' )7.%"5+<'2A&"<.X).&'9\*<+"%".4'.%&(\*%\*"9"+'7.+7,(%."<.,+'7"\*"+  
6\* 15,+(%'7)<(%'5.<(\*7&"\*9".4+ 1 (%+'(\*%&"\*<&6?\*",6,\*&)<.&a"

>?(&'5\*(,62"7.&(@%+'.&'<.+&\*%+N,2"5<\* 1 5'"(1.9<+ 1.&'9\*<""?'." 1 +b\*<\*&' +@.&'\*9"?'."(%B.&'(@+'(\*%"+%7"  
<.&\*,)'(\*%5<\*6.&&"\25(6+,2"&."9\*<?'(%N)&(&'7+2&]"N)"'?"0\*,,.@." 1 +2".4'.%7"+%2"(1.9<+ 1."  
(%"?'&'5\*(,62"9\*<"@\*\*7"6+)&.a"H%" .4'.%&(\*% 1 +2"N.<.X)<7"9\*<"@\*\*7"6+)&."\*" .%&)<."9\*<".4+ 1 5,./"  
'?'."%'.@<'2"+%7"'?\*<\*)@?'%.&&"\*9"?'."(%B.&'(@+'(\*%i'"\*6\* 1 5,2" I('?"<.X).&'N2",+I".%9\*<6. 1.%"i"  
\*%"+66\*)%""\*9"?'." )%+B(+,N(,'2"\*9"?'."5+<'(&"\*< I('%.&&.&i"\*<9\*<\*"?'<.,@('1+'.'<.+&\*%&/'&)6?'+&"  
(%'.<B.%%@" N<.+Y&" (%'?'." 0\*,,.@." 6+,.%7+<' 0\*,,.@." 9%+,&" 5.<(\*7&/"?'." 6\* 15,.4'2" \*9"?'."  
(%B.&'(@+'(\*%/"'?'."B\*,) 1."\*9"(%9\*< 1+'(\*%\*"<.,%@"?'\*9"?'." I(<'.'%<.6\*<7"/"+%7g\*<""?'."&.B.<('2"+%7"  
.4'.%""\*9"?'."+,.,@."7" 1 (&6\*%7)6'a"

>?. "%B.&'(@+'\*<"+%7g\*<?'<+<(%@"\*99(6.<" I(,"%\*"6\*%&(7.<""?'."5+&'&".4)+,?"(&'\*<2"\*9"+'6\* 1 5,+(%+%"  
\*<.<.&5\*%7.%"/" )%,&&V" !]"?'." 5<(\*<"\*< &)"N&.X).%"&.4)+,?"(&'\*<2"N.' I..%"'?'." 6\* 1 5,+(%+%'" +%7"  
+%2\*%."\*?'<""?'."<.&5\*%7.%"/"(&"7(<.6',2<.,.B+%""\*5<\*B."?"+"5?2&(6+,(%b)<(&"+,.,@."7"\*'+B."  
N..%'"9,(6'.7"N2"'?<.&5\*%7.%" I.<.(%9,(6'.7"N2"+%\*"?'<('7(B(7)+,i"\*<#]"'?"."4(&' .%6."\*9"+'7+'(%@"  
<.,+'(\*%&?(5" \*< 5<(\*<"\*< &)"N&.X).%" 6\*%&.&)&)+, ".4)+, "<.,+'(\*%&" N.' I..%"'?'." 6\* 1 5,+(%+%'" +%7"  
<.&5\*%7.%"/"(&"<.,.B+%""\*?"\* I"?'."5+<'(&"6\* 1 1 )%(6+,.7"6\*%&.%"/"5<(\*<"\*< &)"N&.X).%"6\*%&.&)&)+,  
&.4)+, "<.,+'(\*%&a" c ?<."?'."(%B.&'(@+'\*<"+%7g\*<?'<+<(%@"\*99(6.<+,, \* I&"6\*%&(7.<+'(\*%\*"9".B(7.%6."  
+N\*)"' + 7+'(%@"<.,+'(\*%&?(5" \*< 5<(\*<"\*< &)"N&.X).%" 6\*%&.&)&)+, ".4)+, "<.,+'(\*%&" N.' I..%"'?'."  
6\* 1 5,+(%+%'" +%7"?'."<.&5\*%7.%"/"?'." 1.<."9+6""?'+"'"?'." 6\* 1 5,+(%+%'" +%7"<.&5\*%7.%"/" .%@+@.7"(%  
\*?'<6\*%&.&)&)+, ".4)+, "<.,+'(\*%&" I('?'\*%." +%\*"?'<(&"%B.<.&)"99(6.(%"/"N2"(&.,9"/" \*'&"+N,(&"?'+"  
'?'."6\*%7)6'"(%X).&'(\*% I +&"6\*%&.&)&)+, a"G<(\*<"\*'+,, \* I@@"'?"."6\*%&(7.<+'(\*%\*"9"+%2".B(7.%6."\*9"  
5+&'&".4)+,?"(&'\*<2"/"?'."(%B.&'(@+'\*<"+%7g\*<?'<+<(%@"\*99(6.<" I(,"5<\*B(7."+" I(<'.'%".45,+%+'(\*%\*"'"?'."  
5+<'(&+&"\* I ?2"'?"."6\*%&(7.<+'(\*%\*"9"?'." .B(7.%6."(&"6\*%&(&' .%" I('?'?(&'5\*(,62a"

>?. "%B.&'(@+'(\*%"+%7"+7b)7(6+'(\*%\*"9"+,.,@."7" 1 (&6\*%7)6'" )%7.<""?(&'5\*(,62"(&"%\*" +%"+7B.<&+<(+,"  
5<\*6.&&"N.' I..%"'?'."6\* 1 5,+(%+%'"/"?'."<.&5\*%7.%"/"+%7"?'." I('%.&&.&"N)"'<+?'<+"<+) 1+:(%9\*< 1.7"  
5<\*6.&&"9\*<""?'."0\*,,.@." ""\*6\* 1 5,2" I('?'(&"\*N,(@+'(\*%&)"%7.<.4(&'(%@" ,+ I a">?"6\* 1 5,+(%+%'" 7\*.&"  
%\*"?'+B."?'."N)<7.%""\*5<\*B."/%"\*<7\* .&'?"<.&5\*%7.%"/"?'+B."?'."N)<7.%""\*7(&5<\*B."/"'?'." )%7.<.2(%@"  
+,.,@+'(\*%\*"<"+,.,@+'(\*%&"\*9" 1 (&6\*%7)6'a">?"7.6(&(\*%\*"5<\*6..7" I('?'+"(%B.&'(@+'(\*%)"(&"%\*" +"  
7.'.<1 (%+'(\*%\*"?'+"?'."<.&5\*%7.%"/"?'&+" .%@+@.7" (%'?'." 6\*%7)6'" +&"+,.,@."7a">?"<.&5\*%7.%"/" (&"  
5<.&)" 1.7"%\*"<.&5\*%&(N,."9\*<""?'."6\*%7)6'"'?'+"(&'?"&)"Nb.6'"\*9"?'."(%B.&'(@+'(\*%"/" )%,&&"+%7")'(&"+  
7.6(&(\*%\*"9"<.&5\*%&(N,('2"?+&"N..%" 1 +7.")5\*%""?'."6\* 1 5,.'(\*%\*"9"?'." +7b)7(6+'(\*%5<\*6.&&a"

---

c ? . < . " ' ? . < . " ( & " . B ( 7 . % 6 . " \* 9 + " 5 + ' ' . < % " \* 9 " 6 \* % 7 ) 6 " & ( 1 ( , + < " ( % " % + ' ) < . " N 2 " ' ? . " < . & 5 \* % 7 . % ' / " . ( ' ? . < " 5 < ( \* < / " \* < " & ) N & . X ) . % ' / " ' \* " ' ? . " 6 \* % 7 ) 6 " ( % X ) . & ' ( \* % / " ' ? ( & " ( % 9 \* < 1 + ' ( \* % " 1 + 2 " N . " 7 . . 1 . 7 " < . , . B + % " + % 7 " 5 < \* N + ' ( B . " ' \* " ' ? . " 7 . 6 ( & ( \* % : 1 + Y . < A & " 7 . ' . < 1 ( % + ' ( \* % " \* 9 " < . & 5 \* % & ( N ( ' 2 / " + % 7 g \* < " ' ? . " 7 . ' . < 1 ( % + ' ( \* % " \* 9 " & + % 6 ' ( \* % a " > ? . " 0 ( B ( , " C ( @ ? ' & " D " > ( ' , . " \$ E " 0 \* \* < 7 ( % + ' \* < " I ( , " 1 + Y . " + " 7 . ' . < 1 ( % + ' ( \* % " \* 9 " < . , . B + % 6 . " N + & . 7 " \* % " + % " + & & . & & 1 . % " \* 9 " I ? . ' ? . < " ' ? . " 5 < . B ( \* ) & " ( % 6 ( 7 . % " " I + & " & ) N & ' + % ' ( + , , 2 " & ( 1 ( , + < " ' \* " ' ? . " 6 \* % 7 ) 6 " 6 ( ' . 7 " ( % " ' ? . " < . 5 \* < " + % 7 " ( % 7 ( 6 + ' . & " + " 5 + ' ' . < % " \* 9 " N . ? + B ( \* < + % 7 " ' ? . " 0 \* , . @ . / " ' ? < \* ) @ ? " ' ? . " 0 ( B ( , " C ( @ ? ' & " D " > ( ' , . " \$ E " 0 \* \* < 7 ( % + ' \* <

<.6\*<7a"J)6?"<.6\*<7&" I(,,"N." )&.7"(%<.B(. I(%@"+%2"9)<'?.<"6\*%7)6'/"\*<"7.B.,\*5(%@"&+%6'(\*%&/" +%7" I(,,"<. 1+(%"+%5+<"\*9"+&')7.%'A&"6\*%7)6'"<.6\*<7a"\$%" +77('(\*%""\*""<.6\*<7&"Y.5"N2""?. "0(B("C(@?'&"D" >(',"\$E"0\*\*<7(%+'\*</"'?. "6\*%7)6""9(,.&"\*9"&')7.%'&" I ?\*"?+B."N..%&)&5.%7.7"\*<".45.,,.7"9<\* 1 ""?. " 0\*,,.@." +<." 1+(%'+(% .7"(%""?. " ; .+% "\*9"J')7.%'&"U99(6. "(%7.9(%(' .2a"0\*%7)6""9(,.&"\*9"&')7.%'&" I ?\*" ?+B."%\*"N..%&)&5.%7.7"\*<".45.,,.7"+<." 1+(%'+(% .7"(%""?. " ; .+% "\*9"J')7.%'&"U99(6."9\*<"%\*"9. I .<" '?+%&.B.%"2.+<&"9<\* 1 ""?. "7+' . "\*9"?'."(%6(7.%'a"L)<'?.<"X).&'(\*%&"&?\*"),7"N."7(<.6'.7""\*""?. "0(B(,





**K??\$, @>!K)!C':%?'7', +. /!G\$:87-&'8, !8#!+!Q. '\$(+, %\$!8#!5'&7\$!; I!M\$>-+7!  
R+.+::=\$, &!!**

H55.%7(4" H" \*)', (%.&" '?'." 7(&6(5,(%+<2" <.&\*,)')(\*%" 5<\*6.7)<.&" '?'." 0\*,,.@." 9\*,,\* I &" (%<.&\*,B(%@  
+,,.@+'(\*%&" '?'+" 5.<&\*%" ?+&"N..%" &)Nb.6'.7"'\*">(. "\$E" J.4)+," O+<+&& 1.%"("% B(\*,+('(\*%"\*9"'?'."  
0\*,,.@.A&" J.4)+,"+%7"\$%'.<5.<&\*%+," Q(&6\*%7)6'"G\*,(62a"

**23#6%&3>&'1C%/#F,#31&**

W5\*% "'?." 9(,%@"\*9"+L\* < 1+, "0\* 15,+(%/' I <(' .%"%\*(6." I(,,"N."5<\*B(7.7"'\*"'?."5+<'(.&a">?."%\*(6."  
I(,,"(6,)7."?'."9\*,,\* I(%@"(9\* < 1+'(\*%V"

f >?."&5.6(9(6"+,,.@+'(\*%"+%7"'?."&5.6(9(6\*%7)6"'?+"(&"+,,.@.7"'\*"+B."\*66)<<.7i"

f >?."(7.%( '2"\*9"'?."5+<'(.&i"

f >?."7+'."+%7",\*6+'(\*%\ (9"Y%\* I %]'\*9"'?."6\*%7)6"'?+"(&"+,,.@.7"'\*"+B."\*66)<<.7i"

f

"

>?. "%B.&'(@+'\*<" I(,," 5<.5+<." +" &) 1 1+<2" \*9" .+6?" (%'.<B(. I " \\_\$%'<.B(. I " J) 1 1+<2`]a" >?. "%B.&'(@+'\*<" I(,," &?+<." '?. "%\$'<.B(. I " J) 1 1+<2" I('?'?'." (%'.<B(. I ..a">?. "%\$'<.B(. I .." I(,," ?+B." '?.<." \S]N)&(%.&&"7+2&""\*6\* <<.6""\* <"6\* 1 1.%"\*%"+%2&'+' . 1.%"&" 1+7."(%""?."\$%'.<B(. I "J) 1 1+<2a" >?. "7.+7,(%." 1+2"N." .4' .%7.7"9\* <"^\*7"0+)&./")5\*%<.X) .&""\*""?."\$%B.&'(@+'\*<a"\$9""?."(%'.<B(. I .." ?+&" %\*" 6\* <<.6'(\*%&" '\*/" \* <" 6\* 1 1.%"&" \*%/" '?. "%\$'<.B(. I " J) 1 1+<2/" '?. "%\$'<.B(. I .." I(,," &(@%" +%" +6Y%\* I, .7@. 1.%" ""?'+'""?." (%'.<B(. I .." ?+&" <.B(. I .7"+%7"+@<..&"?'+'""?."\$%'.<B(. I " J) 1 1+<2" (& +66)<+' .a" \$9" '?. "%\$'<.B(. I .." ?+&" 6\* <<.6'(\*%&" \* <" 6\* 1 1.%"&" '\*"' ?." \$%'.<B(. I " J) 1 1+<2/" '?. "%\$'<.B(. I .." 1+2"&)N 1 ("+" I <('' .%<.&5\*%&. " I ('?'( ""?<.. \S]N)&(%.&&"7+2&"<.9, .6'(%@'+%2"+77('(\*%&" \* <"6?+%@. &" I ?(6?""?." (%'.<B(. I .." N., (.B. &"+<."% .6.&&+<2""\*." %&)<."?" ."+66)<+62"\*9""?." (%'.<B(. I .. A& &'+' . 1.%" 'a" \$9" %\*" <.&5\*%&." (&" <.6.(B.7" 9<\* 1" '?. "%\$'<.B(. I .." N2" '?. " 7.+7,(%./" '?. (<" \$%'.<B(. I " J) 1 1+<2" 1+2"N."(%6,)7.7"(%""?."\$%B.&'(@+'(\*% "C.5\* <"+%7" I(,,"N."5<.&) 1 .7""\*N." +66)<+' .a"\$%"+,," (%&' +%6. &" I ? .<." '?. "%\$%B.&'(@+'\* <" (%6,)7. &" '?. "%\$%'.<B(. I " J) 1 1+<2" +&"+% " .4?(N (" '\*"+<.5\* </'" '?. "%\$%B.&'(@+'\* <" I(,," +, &\*"( %6,)7. "+%2" <.&5\*%&.a"

"

3+6?" 5+<2" I(,,"N." 5<\*B(7.7" I('?'+'\*55\* <')%( '2" '\*"\*99.<"<., .B+%"" I('%.&&. &"+%7" .B(7.%6.a">?. "%B.&'(@+'\* <" I(,,"6\*%&(7.<"+,,"<., .B+%"" .B(7.%6./"N\*?'( %6),5+ '\* <2"+%7" .46),5+ '\* <2a"H,,"(%9\* < 1+'(\*% " 9\* <" 6\*%&(7.<+'(\*% "N2" '?. " O. +<(%@ " U99(6.< 1) &""N." 5<\*B(7.7" '\*"' ?." \$%B.&'(@+'\* <" +&" 5+<' '\*9" '?. "

"

'\*"<.,.B+%'"(%9\*<1+'(\*%/ "'?.\$%B.&'(@+'\*<"



O.+<(%@"U99(6.<a">?."O.+<(%@"U99(6.<" I(,,"7."!<1(%."?'<.,.B+%6."\*9".+6?"X).&'(\*%"+%7".45,+("%

(&"<. &5\*%&(N, ."9\* <"\*% . "\* <" 1 \* <. "B(\*, + '( \*% & " \* 9 " ' ? . " 0 \* , , . @ . A & " + % ' ( 7 (& 6 < ( 1 (% + ' (\*% " 5 \* , ( 6 (. & / " ' ? . " 0 \* , , . @ . " I ( , , (& & ) . " & + % 6 ' (\*% & " 6 \* 1 1 . % & ) < + ' . " I (' ? " ' ? . " B (\*, + '( \*% \ & ] " ( % " + 6 6 \* < 7 + % 6 . " I (' ? " [H55.%7\(4" 3](#) " \* < [H55.%7\(4" L](#) a " H % 2 " & + % 6 ' (\*% & " (& & ) . 7 " I ( , , " N . " (% 6 , ) 7 . 7 " ( % " ' ? . " O . + < ( % @ " U 9 9 ( 6 . < A & " I < ( ' ' . % " 7 . ' . < 1 (% + ' (\*% a "

**I << % , \$ / &**

H55 . + , & " 1 + 2 " N . " 9 ( , . 7 " N 2 " . ( ' ? . < " 5 + < ' 2 " + % 7 " 1 ) & " N . " & . % " " " \* " " ? . " 0 ( B ( , " C ( @ ? ' & " D " > ( ' , . " \$ E " 0 \* \* \* < 7 ( % + ' \* < a " c ? . % " + % " + 5 5 . + , (& " 9 ( , . 7 " ' ? . " \* ' ? . < " 5 + < ' 2 " I ( , , " N . " % \* ' ( 9 ( . 7 / " ( % " I < ( ' ( % @ / " + % 7 " I ( , , " ? . % " ? + B . " 9 ( B . " \ F ] " N ) & ( % . & & " 7 + 2 & " \* \* \* < . & 5 \* % 7 " \* \* \* " ? . " + 5 5 . + , a " H % 2 " 5 + < ' 2 A & " 7 . 6 ( & ( \* % " % \* " " \* " & ) N 1 ( " + < . 5 , 2 " \* \* + % " + 5 5 . + , (& % \* " " . B ( 7 . % 6 . " ' ? + " ' ? . " % \* % : + 5 5 . + , ( % @ " 5 + < ' 2 " + @ < . . 7 " I (' ? " ' ? . " + 5 5 . + , a " > ? . " + 5 5 . + , & " 5 < \* 6 . & & " (& 7 \* 6 ) 1 . % ' + < 2 " \* % , 2 / " + % 7 " % \* " ? . + < ( % @ " (& " ? . , 7 a " H 5 5 . + , & " I ( , , " 9 \* , , \* I " ' ? . " 5 < \* 6 . 7 ) < . & " \* ) ' , ( % . 7 " ( % [H55.%7\(4" ^ a](#) "

"

"

!

"

K??\$, @>!S)!C':%'?'', +. /!G\$:87- &'8, !8#!+!Q. '\$(+, %\$!8#!A8, B5'&7\$!; I!  
P':%8, @ - %&!KE+, :&!+!M&- @\$, &!

H55.%7(4" Z" \*)', (%.&'?'." 7(&6(5,(%+<2" <.&\*,)')(\*%" 5<\*6.7)<.&'?'." 0\*,,. @." 9\*,,\* I&" (%<.&\*B(%@  
+,,. @+'(\*%&'?'+'+"5.<&\*%"?'&"N..%&)"Nb.6'.7""8\*%:>(<.. "\$E" Q(&6\*%7)6'"N2"+"&')7.%'"(%B(\*,+'(\*%  
\*9"'?. "0\*,,. @.A&J.4)+, "+%7"\$%'.<5.<&\*%+, "Q(&6\*%7)6'"G\*, (62a"

**23#6%&3>#1C%/#F,#31&**

\$9"!]"'?'." 0(B("C@?'&"D">(<'.. "\$E" 0\*\*<7(%+\*'<"7.'.<1(%.&'?'+'?'." 6\* 15,+(%+% 'A&"<.5\* <' 1)&"'  
5<\*6..7"'?'<\*)@?' ; (&6(5,(%+<2" C.&\*),')(\*%i" \#]'.('?.<"'?'." 6\* 15,+(%+% "'\* <.&5\*%7.%'"7.6,(%.&' '\*  
5)<&)."H7+5'+N,."C.&\*),')(\*%i"\*< \S]'.('?.<"'?'." 6\* 15,+(%+% "'\* <.&5\*%7.%'"9+(&' '\*<.&5\*%7"'\*"'?'."  
0(B("C@?'&"D">(<'.. "\$E" 0\*\*<7(%+\*'<A&"(X)"<2"<.@+<7(%@"H7+5'+N,."C.&\*),')(\*%/'?'." 0(B("C@?'&"D"  
>(<'.. "\$E" 0\*\*<7(%+\*'<" I(, "%\*' (92"N\*?'?5<'(&'%" I (<'(%@"/'?'+'?'." 6\* 15,+(%+" I(, "5<\*6..7"'?'<\*)@?'  
; (&6(5,(%+<2" C.&\*),')(\*%a">?. " 0(B("C@?'&"D">(<'.. "\$E" 0\*\*<7(%+\*'<A&" I (<'.. "%\*' (9(6+'(\*% "'\*"'?'."  
<.&5\*%7.%'"+"%7"6\* 15,+(%+% " I(, "(%6,).7.V"

- f >?. "6\* 15,+(%+% 'A&"%+ 1 .i"
- f 8+')<."\*9"'?. "<.5\* <'i"
- f J5.6(9(6"5\*,(62"B(\*,+'(\*%\&]"+,,. @.7"\.a@a"/&.4)+, "+&&+), '/&.4)+, "?+<+&& 1 .%'/<.'+, ('(\*%]i"
- f ;+'. \&]"\*9"+,,. @.7"5\*,(62"B(\*,+'(\*%\&]i"
- f m\*6+'(\*%\&]i"\*9"+,,. @.7"5\*,(62"B(\*,+'(\*%\&]i"
- f Z(<.9"7.&6<5'(\*%\*"9"+,,. @+'(\*%\&]i"
- f H'&'+' . 1 .% "'?'+'?'?."<.&5\*%7.%'" (&5<.&.) 1 .7"%\*"<.&5\*%&(N,."9\* <'?'."+,,. @.7"6\*%7)6'"+"%7"  
'?'+'+' 7.'.<1(%+'(\*%<.@+<7(%@"<.&5\*%&(N,('2" I(, "N." 1+7."+'?'." 6\*%6,)&(\*%\*"9"'?'."  
; (&6(5,(%+<2" C.&\*),')(\*%5<\*6.&&i"
- f H'&'+' . 1 .% "'?'+'?'?." 5<'(&' ?+B."?'."<(@?' "'\* <B(. I "+"%7" (%&5.6" +, ".B(7.%6." N.(%@"  
6\*%&(7.<.7" N2"'?'." \$%B.&'(@+'\* <\* " O.+<(%@" U99(6.<'7)<(%@"'?'." ; (&6(5,(%+<2" C.&\*),')(\*%  
5<\*6.&&/"6\*%&(&' .% " I ('?'?'&"G\*,(62i"+"%7"
- f H'&'+' . 1 .% "'<.@+<7(%@"'?'." 0\*,,. @.A&"5\*,(62"<.,+' .7"'\*9+,&."<.5\* <'&+"%7" 1+Y(%@"Y%\* I (%@,2"  
9+,&."&'+' . 1 .% '&'7)<(%@"'?'." ; (&6(5,(%+<2" C.&\*),')(\*%5<\*6.&&a"

>?. "%\*(6. "9"'?. "6\* 15,+(%+" I(, "+, &\*N." +66\* 15+%(7" I ('?'+'<.X) .&'9\* <+" 1 . '(%@" I ('?'?'?." 0(B,  
C@?'&"D">(<'.. "\$E" 0\*\*<7(%+\*'<" I ('?(%9\*)<"\=]N)&(%.&&"7+2&a"H"'?'." 1 . '(%@"/'\* <'9"'?'."<.&5\*%7.%'"  
7\* .&' "%\*"<.&5\*%7"'\*"'?'." 1 . '(%@"<.X) .&' "%\*"<(&)"%N,." "\*" 1 . '(%@"9\*)<"\=]N)&(%.&&"7+2&/'?'."  
0(B("C@?'&"D">(<'.. "\$E" 0\*\*<7(%+\*'<" I(, "5<\*B(7."?'."9\*,,\* I (%@"(9\* <1+'(\*%)" I (<'(%@"

- f U%:"+"%7"\*99:6+ 15)&<.&\* <6.&'/(%6,)7(%@"6\*)%&.,(%@"/'?.+, '?'/" 1 .%'+, "?+.+, '?'/. ,. @+, "+&&(&'+"%6."  
\(%6,)7(%@"6\*%%.6'(%@"<.&5\*%7.%'" I ('?B(&+"%7"( 1 1 (@++'(\*%"+7B(&\* <2"<.&\*)<6.&]"/&')7.%"  
9(%+%6(+, +(7/"+"%7"\*?'?."<"+B+(, +N, ".&.<B(6.&a"
- f >?. "<+%@."\*9"&)55\* <'(B." 1 .+&)<.&+"%7"<. 1 .7(&"+B+(, +N, ./'(%6,)7(%@"6?+%@.&'"+6+7. 1 (6/"  
,(B(%@"/'+'&5\* <+'(\*%/"+"%7g\* <" I \* <Y(%@"&' )+'(\*%&'\* <\*'?'?."<)&)55\* <'(B." 1 .+&)<.&+"&" 1 +2"N."  
+55\* <5<(+'.a"

f H%\*B.<B(. I "\*9"'. "5<\*6.7)<+, "\*5'(\*%&" +%7"5<\*6.&&/'(%6,)7(%@"H7+5'+N, ."C.&\*,)'(\*%" +%7"  
; (&6(5,(%+<2"C.&\*,)')(\*%a"

f



U%6."?."\$(('L+6':^+'?<(%@('6\* 15,.'/'?'."0(B('C('@?'&'D">(',\$E"0\*\*<7(%+\*<" I(,5<\*B(7."?'."\$%'<.B( I"J) 1 1+<(.&+%7"+%2"7\*6) 1 .%'<2".B(7.%6."@+'?<.7"\*\*\*?."5+<('9\*%<.B( I a"^(B.%"?'."&.%&('B.%'+)<."\*9"?'."(%9\*%<1+'(\*%5<\*B(7.7/'?'."0(B('C('@?'&'D">(',\$E"0\*\*<7(%+\*<" I(,5<\*B(7."?'."(%9\*%<1+'(\*%("+"&.6)<." 1+%%.<".a@a/"N2"5<\*B(7(%@"7('@'+,6\*5(&."\*9"?'." 1+'<(+,&'?'<\*)@?'+"5<\*'.6'.7/"\_<.+7:.\*%2," I.N"5\*%<+,]a"8.('?'<""?."6\* 15,+(%+%""%<""?."<.&5\*%7.%"\%<""?."<"+7B(&\*%&/"(6,)7(%@"N)""%\*", (1('7"\*\*\*9+1(,2" 1. 1N.<&"+%7g\*%<".@+,"6\*)%&.,] 1+2"6\*52/"<. 1\*B./"5?\*'\*@<+5?"5<(%"/"(1+@."/B(7.\*'+5."/<.6\*%<7/"\*%<("+"%2" 1+%%.<""\*?'<.I(&."7)5,(6+'."\*%<". 1\*B."?'."(%9\*%<1+'(\*%5<\*B(7.7a"H%2'&')7.%" I?'\*9+(&""\*"+N(7."N2"?'(&'G\*,(62" 1+2"N."&)Nb.6""\*7(&6(5,(% .a"H%2"+7B(&\*%< I?'\*9+(&""\*"+N(7."N2"?'(&'G\*,(62" 1+2"N."&)Nb.6""\*7(&6(5,(% ."+%7g\*%< 1+2"N.".46,)7.7"9<\* 1'9)<'<.<5+<(6(5+'\*%("%'?"5<\*6.&&a&>?"5+<('1+2"<.&5\*%7"\*\*\*?."\$%'<.B( I"J) 1 1+<('"+%7"+%2"7\*6) 1 .%'<2".B(7.%6.i"?'."5+<('& I(,(&)N 1('+"%2"<.&5\*%&." I('?'%""%"\!R]N)&(%.&&'7+2&'\*9" N.(%@"%\*'9(7."\*9"?'<."\*55\*%<')%('2"\*\*\*<.B( I"?'."7\*6) 1 .%'&a">?"5+<('1+2"<.&5\*%7"(%""%".\*%<N\*?'\*9"?'."9\*.,\* I(%@" I+2&V&

>?."5+<('1+2"5<\*B(7."+" I<'.'%<.&5\*%&.a">?"\$%B.&'(@+'\*%<" I(, (%6\*%5\*%<+'. "+%2" I<'.'%<.&5\*%&."5<\*B(7.7"N2"?'."5+<('&("'"?'."\$%B.&'(@+'(\*%C.5\*%<'a"

>?."5+<('1+2"&)N 1('+" I<'.'%<.X).&'9\*%<+77('(\*%+, "(%B.&'(@+'(\*%a"J)6?<.X).&'&' 1+2"(%6,)7."/N)""<."%\*", (1('7"\*\*\*/'?'."9\*.,\* I(%@"V"!]<.X).&'&]'9\*%<9\*.,\* I:)5'(%'<.B( I &]' I('?' .4(&'(%@" I('%.&&.&'\*6,+<(92"\*%<5<\*B(7."+77('(\*%+, "(%9\*%<1+'(\*%/"(6,)7(%@"99.<(%@"X).&'(\*%&'\*'"?'."\$%B.&'(@+'\*%<'5\*%&."\*% I'%.&&.&'&+'?"7(&6<.'(\*%\*9"?'."\$%B.&'(@+'\*%<[i"#]<.X).&'&]'9\*%<'<.B( I &' I('?'% . I' I'%.&&.&'i"\*%<[S]<.X).&'&]'\*6\*%&(7.<%" I'.B(7.%6.a"H%2"<.X).&'9\*%<+77('(\*%+, "(%B.&'(@+'(\*% I(, .45,+(%""?."<.+&\*%9\*%<'?."<.X).&'a"

>?."\$%B.&'(@+'\*%<" 1+2"6\*%7)6"9\*.,\* I:)5'(%'<.B( I &' I('?'?'."5+<('1+2"7" I'(%.&&.&'N+&.7")5\*%&.B(7.%6."@+'?<.7"7)<(%@"?'."5<.,(1(%+<2"(%B.&'(@+'(\*%"+%7"?'."5+<('&A"<.X).&'9\*%<+77('(\*%+, "(%B.&'(@+'(\*%/"9"+%2a">?"5+<('1+2"7" I'(%.&&.&'6+%" .45.6""'+"/"(%""?."&'9\*.,\* I:)5'(%'<.B( I &'/'?'."\$%B.&'(@+'\*%<" I(, (&..Y"<.&5\*%&.&'\*%&5.6(9(6+,,@+'(\*%&\*%<.B(7.%6."a@a/"+"\$%B.&'(@+'\*%<" 1+2"&'\* I" \*%."\*9"?'."5+<('1+2"&.<('&'\*9" .4" 1 .&&+@.&'N. I .%?"(1&.,9\*%<'<.&.,9"+%7"+%\*?'<.I'(%.&&.+%7"+&Y"+N\*)""?."6\*%'.%""\*9"?'." .4" 1 .&&+@.&'a">\*""?." .4'."%"+77('(\*%+, 1+'<(+,/" I'(%.&&.&'\*%<.B(7.%6." +<."(7.%'9(7.7)<(%@" .B(7.%6."<.B( I/"?'."\$%B.&'(@+'\*%<" I(, 6\*%7)6"'+77('(\*%+, "(%<.B( I &'"+%7" @+'?<+77('(\*%+, .B(7.%6."6\*%&(&'."% I'?'?"5<\*6.7)<.&\*)', (%.7"+N\*B.a"H%2"+%7"+, "(%9\*%<1+'(\*%9\*%< 6\*%&(7.<+'(\*% N2"?'." O.+<(%@" U99(6.<" &'\*),7" N." 5<\*B(7.7" '\*"'?'."\$%B.&'(@+'\*%<" 7)<(%@"?'." 5<.,(1(%+<2"(%B.&'(@+'(\*%a"\$%9\*%<1+'(\*%""?+" I+&'\*%5<\*B(7.7"\*\*\*?."\$%B.&'(@+'\*%<" I(, "%\*%N."+, \* I.7" 7)<(%@"?'."?'<+<(%@"('&.,9")% ,&&"("6+%"N."6.,+<2"7. 1\*%&'<+'.7"?'+"&)6?"(%9\*%<1+'(\*% I+&'\*%""<.+&\*%+N,2"Y\*% I %""\*%<"+B(+,N, .""\*""?."5+<('1+2"?'."(1."\*9"?'."(%B.&'(@+'(\*%a"

>?."\$%B.&'(@+'\*%<" I(, 5<.5+<."+"\$%B.&'(@+'(\*%C.5\*%<") 1 1+<(d(%@"?'."9+6'+%7".B(7.%6."@+'?<.7"(%""?."6\*%)&."\*9"?'."G<.,(1(%+<2"\$%B.&'(@+'(\*%a">?"\$%B.&'(@+'\*%<" I(, "%\*%""&'+'."9+6'+, "9(%7(%&'\*%<"), '(1+'."9(%7(%&'&""\*% I'?'.'?<""?."<.&5\*%7.%""?+&'/\*%<"+&'\*%"/B(\*,+' .7\*%."\*%< 1 \*%."\*9"?'."O\*.,@.A&"5\*,(6.&'(%""?."\$%B.&'(@+'(\*%C.5\*%<'a">?"\$%B.&'(@+'\*%<" I(, '+'+6?"+&"+55.%7(6.&'\*""?."\$%B.&'(@+'(\*%C.5\*%<'+"+, "\$%'<.B( I" J) 1 1+<('"+%7"+%2" 7\*6) 1 .%'<2".B(7.%6."@+'?<.7" (%""?'." G<.,(1(%+<2"\$%B.&'(@+'(\*%/"(6,)7(%@"+2" I<'.'%<.&5\*%&.&'\*""?." .B(7.%6."&)N 1('7"N2"?'."5+<('&a" c ?.%""?."



O.+<(%@U99(6.<" I(,"6\*%7)6'"+"(B."?.+<(%@/"+" I?(6?"'?.2" I(,"5.<1("'%7(<.6'"6<\*%&&:.4+1(%+'(\*%  
\*9"'?. "5+<('.&"+%7" I('%.&&.&a"L\*5)<5\*%&. &"\*9"'?(&"G\*,(62/"'?. " ' .<1 "\$%7(<.6'" 0<\*%&&:34+1(%+'(\*%  
1 .+%&"'?. "O.+<(%@U99(6.<" I(,"+,,\* I "'?. "5+<('.&"+%7g\*%<'?. (<+7B(&\*%&"\*%&)"N 1 ('5<\*5\*%&.7"X) .&'(\*%&  
9\*%<'?. "5+<('.&"+%7" I('%.&&.&/"&" I ., "+&"9\*,,\* I : )5"X) .&'(\*%&"N+&.7"\*%'" .&'(1 \*%2"5<\*B(7.7"7)<(%@  
'?. "?.+<(%@a">?. "O.+<(%@U99(6.<" I(,"+&Y"'?. "5+<('.&"+%7" I('%.&&.&"'?. "5<\*5\*%&.7"X) .&'(\*%&"'?'+'"'?. "  
O.+<(%@U99(6.<"7.' .<1 (%.&"+<. "6\*%&&(&' .%" I ('?'?'(&"G\*,(62"+%7"+<. "5<\*N+'(B."\*9"9+6'&"<., .B+% "'\*%  
'?. "+7b)7(6+'(\*%\*"9"'?. "1+''.<a">?. "O.+<(%@U99(6.<"1+2"<.9)&. "'\*"+,,\* I "X) .&'(\*%&"'?'+'"+<." )%7),2"  
?+<+&&(%@"\*%<'?'+'&. .Y"(%9\*%<1+'(\*%\*"?'+'("%"\*%"<., .B+%")%7.<"'?'(&"G\*,(62a"  
"

>?. "O.+<(%@U99(6.<("&"<.&5\*%&(N,. "9\*%<"1+(%'+(%@"+"\*%<7.<2/"9+(</"+"%7"<.&5.6'9), "?.+<(%@"+"%7"?'+&  
N<\*+7"+)'?\*<('2"'\*%<.&5\*%7"'\*%7(&<)5'(B."\*%<'?'+'&&(%@"N. ?+B(\*%&/"(%6,)7(%@"+7b\*)<(%@"'?. "?.+<(%@"  
\*%<.46,)7(%@"'?. " \*99.%7(%@"5.<&\*%a" G+<('.&"1+2"1+Y."<.X) .&'&" '\*"'?. "

>?. "O. +<(%@" U99(6.<" I(,,"7.'.<1(%."(9"'?. "5<\*99.<.7" I('%.&&\.&]" ?+&"<.,.B+%'"(%9\*<1+'(\*%" +%7"(9" '?.<." (&" & )99(6(.%" b)&'(9(6+'(\*%" 9\*<" 5.<1('(%@" +" I('%.&&" I?\*" I+&" %\*'" (%'.<B(. I .7" N2" '?. "\$%B.&'(@+ '\*<a" >?. " O. +<(%@" U99(6.<" 1+2" +,&\* "<.X)(<." '?. "\$%B.&'(@+ '\*<" '\*" (%'.<B(. I " '?. "% . I ,2" 5<\*99.<.7" I('%.&&a" c ?.%" I('%.&&.&" +<." +55<\*B.7" '\*" N. "5<.&.%/'" '?. "<.&5\*%7.%'" +%7"6\* 15,+(%+%'" I(,,"N. "5<\*B(7.7" I('?" +,(&" \*9" I('%.&&.&" +%7" +2"<.,.B+%'" 7\*6) 1 .%'&"<.,+' .7" '\*" '?. " I('%.&&.&A" +55. +<+%6. "+'"'?. "?. +<(%@"%\*" ,+' .<"?' +%'"'?'<.. "

5.<1(''.7" "\*" 6<\*&&:.4+1(%." '?'." I('%.&&.&" \*<" +%2" 5+<'2" 7)<(%@" '?'." ?.+<(%@/" %\*<" I(, " '?'." 2" N."  
5.<1(''.7" "\*" \*99.< I('%.&&.&/" 7\*6) 1 .%'&/" \*<"+'6,\*&(%@" '&'+'. 1 .%'a"\$9"+%2" 5+<'2" 6?\* \*&.&" %\*'" \*"+55.+<"  
+' "'?'." ?.+<(%@/" '?'." 0\*,,@." 1+2" 1\*B." 9\* <I +<7" I('?' '?'." ?.+<(%@" +%7"



>?. " 0(B(," C(@?'&" D" >(',." \$E" 0\*\*<7(%+'\*<" I(," 5<\*B(7." '?'." 6\* 15,+(%+% "'+%7"'?'." <.&5\*%7.% "' I('?" %\*'(6." \*9"+%2"7.,+2&"+%7"@B." '?'." 1 "+%". I"(1.'+N,." 9\*<6\* 15,.'(\*% "\*9"'?'." (%B.&'(@+'(\*%a"

>?. (%B.&'(@+'(\*% I(," (%6,)7." +% "(%'.<B(. I \&] I('?" '?'." 6\* 15,+(%+% '/' '?'." <.&5\*%7.% "' +%7g\* <"+%2" \*'?'." <5.<&\*% I ?\*" 1+2"?'+B." (%9\*<1+'(\*% "<.@+<7(%@" '?'." (%6(7.% '/' .+6?"\*9" I ?\* 1 "(&." %6\*) <+@.7" '\*" 6\*\*5.<+'." I('?"+%2"(%B.&'(@+'(\*%a">?. "%B.&'(@+'\*<" I(," 5<.5+<." +"&) 1 1+<2"\*9".+6?"(%'.<B(. I /&?+<." '?'."&) 1 1+<2" I('?" '?'." (%'.<B(. I . /"+%7"5<\*B(7." '?'." (%'.<B(. I . . I('?"+"\*55\*<')%('2"'\*6\* <<.6"'\* < 6\* 1 1 .% "'\*%"+%2"&'+' . 1 .%'&" 1+7."(%"'?'."&) 1 1+<2a"\$9%\*" <.&5\*%&."(&"<.6.(B.7"9<\* 1 "'?'."(%'.<B(. I . . I('?'(%"'?<.. \S]N)&(%.&&"7+2&"<.9,.6'(%@"+%2"+77('(\*%&"\* <6?+%@.&" I ?(6?"?'."(%'.<B(. I . ."N.,(.B.& +<."% .6.&&+<2/"?'."(%'.<B(. I "&) 1 1+<2"&?+,,"N."7.. 1 .7"'\*N." )%7(&5)' .7a"\$%"+,,"(%&' +%6.&" I ?<."?'." %B.&'(@+'\* <" (%6,)7.&"+% "(%'.<B(. I "&) 1 1+<2"+&"+% ".4?(N(' '\*"+<.5\*</' '?'." %B.&'(@+'\* <" I(," +,&\* (%6,)7." +%2" <.&5\*%&."a" >?. "%B.&'(@+'\* <" 1+2" +,&\* @+'?'." <"+%2" <..B+% "' 7\*6) 1 .%'&" +%7" 6\*%7)6" 9\* ,,\* I :)5"\* < <.N)"'+, "(%'.<B(. I &/' +&"% .6.&&+<2a""

>?. " 0(B(," C(@?'&" D" >(',." \$E" 0\*\*<7(%+'\* <"

9<\* 1 " '?. " \$%B.&'(@+'\*%a" U%6." '?. " \$%B.&'(@+'\*<" (& &+'(&9(.7" '?+" '?. " <.5\*<" (& 6\* 15,. ' /" '?. " \$%B.&'(@+'\*<" I(,,"&)N 1('"'?. "<.5\*<'""\*"'?. "0(B("C(@?'&"D">(',"\$E"0\*\*<7(%+'\*<a">?. "0(B("C(@?'&"D">(',"\$E"0\*\*<7(%+'\*<" I(,,"<.B(. I" '?. " <.5\*<'"+%7"+&&.&&" I?. '?. "<'?. " <.5\*<'"+%7. 1 \*%&'<+' .&/"N2"+ 5<.5\*%7. <+%6. "\*9"?'." .B(7.%6. /"'?'+'V"!]"?'." .B(7.%6. "&)55\*<'&"?'." \$%B.&'(@+'\*<A&"9+6')+,"9(%7(%@&i" +%7" \#]" '?. " \$%B.&'(@+'\*<A&" 9+6')+," 9(%7(%@&" &)55\*<' " '?. " \$%B.&'(@+'\*<A&" ),'(1+'." 9(%7(%@ " \*9" <.&5\*%&(N,( '2"\*<"%\*%:<.&5\*%&(N,( '2a"

>?. " 0(B("C(@?'&" D">(',"\$E"0\*\*<7(%+'\*<" 1+2"<.X)(<." '?+" '?. " \$%B.&'(@+'\*<" 6\*%7)6"+77('(\*%+, " (%B.&'(@+'\*%/" 6\*%&(&' .% " I('?' '?. " 5<\*6.7)<.&\*") ,(% .7"+N\*B.a"U%6. "'?. " 0(B("C(@?'&"D">(',"\$E" 0\*\*<7(%+'\*<" ?+&" 6\*%9<1 .7" '?+" '?. " L(%+, " C.5\*<" (& 6\* 15,. ' /" '?. " 0(B



**K??\$,@'>!C)!K@+?&+67\$!G\$:87- &'8,!J.8%\$@ - .\$.!**

H7+5'+N,."<.&\*,)'(\*%" (&+" B\*,)%'+<2/"<. 1 .7(.&:

f G+<'(6(5+% '&" (% " +7+5'+N, ." <.&\*,) '(\*%" 5<\*6.&&.&" 1 )&' " N." 5<\*'.6'.7" 9<\* 1 " &.6\*%7+<2"  
B(6'(1(d+'(\*%" +%7" \*'?.<" 5\*'.%'(+, " ?+<1&/" (%6,)7(%@" '?." 5<.&&<." '\*" 5<\*6..7" '?<\*)@?'  
+7+5'+N, ." <.&\*,) '(\*%"(%&' .+7"\*0"9\* <1 +, "<.&\*,) '(\*%a"

**I7, <#, :\$%& ; %/3\$+#"31&A<#"31/&**

" H% (7(<.6'/" 9+6,(+' .7" 6\*B.<&+'(\*% (7(B(7)+,," I('?' '?' . 6\* 15,+(%+% '/' '?' . <.&5\*%7.%/' +%7g\* <' \*?' .< 5+<(6(5+% '&' '\* 7(&6)&&' .45.<(.%6." +%7" 5.<&5.6'(B." +%7" .45,\*<.(%'.<.&'&' I ?(,." I \*<Y(%@" '\* I +<7&" 1 ..'(%@" .45<.&&.7"% .7&a">?(&' % .@\*('+' .7"5\*6.&&"7\* .&"%\*"<.X)(.<."7(<.6'("%'.<+6'(\*%N.' I ..%"?' .5+<(.&"\*?"?' .5+<(.&'+%7" \*?' .<5+<(6(5+% '&'N)"'+?' .</'(7.5.%7.%',2" I ('?'+'6\*%<7(%+'\*<a"

" H" 9+6,(+' .7" (%'.<+6'(\*%N.' I ..%" '?' .<.&5\*%7.%'" +%7" 0\*,,.@" .9+6), '2"+%7g\* <'&'+99"7.&(@% .7"'\*5<\*B(7." +66\*)%'+N,( '2/'&'<6')<.7"&)55\* </' +%7"'?' . 7.B.,\*5 1 .%" \*9" +", .+<%(%" 5,+%a" >?' . 9\*6)&" \*9" + " 0UH" (&" \*N+,+%6." &)55\* <' +%7" +66\*)%'+N,( '2"9\* <+"(7(B(7)+, " I ?\*?"?&"+6Y\* I .7@.7"'?' .<(\*N,(@+'(\*%'"<.5+<?'<+1 "+%7" I (, (%@% .&&" \*' .%@+@." (%" +% .7)6+(\*%+, 5<\*6.&&a" >?' . 0UH" 1 \*7., " 7\* .&" %\*" <.X)(.<." 5+<(6(5+(\*%9<\* 1 "'?' .6\* 15,+(%+% '/'N)"'+&" I ('?'\*?' .<"25.&"\*9"+7+5'+N, .<.&\*,)'(\*%/'( " 1 )&" N."B\*,)'%'+<2"9\* <'?' .6\* 15,+(%+% '+'%7"'?' .<.&5\*%7.%' a"

Q .+&)<.&"?'+' 1+2"N." +@<. .7"'\*+&"+<.&), "'\*9"?' ."+7+5'+N, .<.&\*,)'(\*%5<\*6.&&" 1+2"(%6,)7."V"

f H,6\*?'\*,.7)6+(\*%6,+&&.&"9\* <'?' .<.&5\*%7.%' i"

f C.@),+< 1 ..'(%@&" I ('?'+"%"+55<\*5<(+ ' .0\*,,.@" ."(7(B(7)+,/' )%('/\*<.&\*)<6. i"

f G.<1+% .%" .4'.%&(\*%\*9"+%\*:6\*%'+6"7(<.6'(B. i"

f C.&'<(6'(\*%9<\* 1 "5+<(6(5+(\*%("5.6(9(6'6),N&"+%7g\* <\*'<@+% (d+'(\*%&i"

f <.&5\*%7.%'"<.&'<(6'(\*%9<\* 1 "5+<(6(5+(\*%("5+<(6),+<".B.%'&i"

f <.&5\*%7.%'"6\* 15,.'(\*%\*"9"+% .7)6+(\*%+, 5,+% I ('?'<.@),+< 1 ..'(%@&" I ('?'?' ."+7+5'+N, .i" <.&\*,)'(\*%6\*%<7(%+'\*<\*'?' .<+55<\*5<(+ ' .0\*,,.@" .&'+99"\*<9+6), '2" 1 . 1 N.<i"+%7g\* <"

f 0\*)%&.,(%@&.&&(\*%&"9\* <'?' .<.&5\*%7.%' a"

\$%7(B(7)+,&" I ?\* I (&" \*' 5+<(6(5+." (%" +% "+7+5'+N, .<.&\*,)'(\*%5<\*6.&&" 1 )&" ?+B." &)66.&&9),,2" 6\* 15,.' .7" 5<.5+<+'\*2" 1 ..'(%@&" I ('?'?' ."+7+5'+N, .<.&\*,)'(\*%6\*%<7(%+'\*<a"\$%7(B(7)+,&" 1+2"N." +66\* 15+%( .7"N2"+%"+7B(&.<+"+%2" 1 ..'(%@&"<.,+' .7"'\*"'?' ."+7+5'+N, .<.&\*,)'(\*%5<\*6.&&a"

**I7,<#,:\$%& ;%/3\$+##31&IF.%%0%1#/#&**

H%2" +@<.. 1 .%'&" <.+6?.7" (%" +% "+7+5'+N, .<.&\*,)'(\*% 1 )&" N." 7\*6) 1 .%' .7" N2" '?' ."+7+5'+N, .<.&\*,)'(\*%6\*%<7(%+'\*<"+%7" +55<\*B.7" N2" '?' . 0(B(," C(@?'&" D" >('., "\$E" 0\*%<7(%+'\*<' \*' .%&)<." 6\*%&(&' .%62" I ('?'?' . "0\*,,.@" .A&">('., "\$E"\*N,(@+'(\*%&a"H%"+@<.. 1 .%" I (,,"%\*"N." 6\*%&(7.<.7"B+, (7"9" '?' . 0(B(," C(@?'&" D" >('., "\$E" 0\*%<7(%+'\*<' 7\* .&"%\*" +55<\*B." ('a"\$9" '?' . 0(B(," C(@?'&" D" >('., "\$E" 0\*%<7(%+'\*<' \*<" 7.&(@%.. " +55<\*B.&" +% "+@<.. 1 .%" +9' .<' '?' . 5+<(.&" ?+B." B\*,)'%'+<(2" <.+6?.7"

% .6.&&+<2" '\*9+6(,'+'.'?'<.&\*,)'(\*%/'?'." 0\*,,.@." 1+2"N."<.X)<.7" '\*5<\*7)6."<.6\*7&" 6<+'.7" 7)<(%@"'?'(&"5<\*6.&&"(%<.&5\*%&." '\*"+'b)7(6(+,&)N5\* .%+"\*("<"+L3CGH".7)6+'(\*%+,"<.6\*7"<.X) .&'a"\$9" +7+5'+N,.'<.&\*,)'(\*% ("&" '\*55.7" 5<(\*<" '\*6\* 15,.'(\*%/'&'+' . 1.%&" 1+7." N2" +5+<'2" (%"+7+5'+N,.' <.&\*,)'(\*% 1+2"%\*"N.")&.7"(%"+7(&6(5,(%+<2"<.&\*,)'(\*%5<\*6.&&"<.,+'.7" '\*"'?'+' 1+'.'<a"

**I7,<#,:\$%&;% 0%7"/&3.&'1#%.C%1#31/&3.&#9%&B3\$\$F%&B3 0 0+1"#@&**

\$%" +77('(\*% " '\*" (%'.<B.%'(\*%&" +55,(.7" '\*" '?'<.&5\*%7.%'/' +%7" <.@+<7,.&&" \*9" I?'.'?<'?'." 0\*,,.@." 5)<&).&" +"; (&6(5,(%+<2" C.&\*,)'(\*% " \*<" '+Y.&" \*'?'<" 9\* <1+, "7(&6(5,(%+<2" +6'(\*%/'?'." 0(B," C(@?'&" D" >('," \$E" 0\* \* <7(%+ '\*<" 1+2" 9(%7("?'.,59), " \* <" % .6.&&+<2" '\*<.X) .&" \* <" <.X)<."?'<.&5\*%7.%' '\*<" \*'?'<.&" '\*")%7.<' +Y." &5.6(9(6'&' .5&" 7.&(@% .7" '\*" .,(1(%+'.'?'." 1(&6\*%7)6'/' 5<.B.%'" ('&" <.6)<<.%6./'+%7g\* <" <. 1.72" ('&" .99.6'&a" 34+ 15, .&" (%6,)7./" N) "' +<." %\*'" , (1(' .7" '\*/'?'." 9\*,, \* I (%@V"

f C.X) .&'(%@" \* <" <.X)<(%@" + " 0\*,,.@." %' ('2" '\*5<\*B(7." "'<+(%@" 9\* <" ('&'&'+99" \* <" 1 . 1 N .<&i"

f C.X) .&'(%@" \* <" <.X)<(%@" '?'<.&5\*%7.%' "' \* <" <.6.(B." "'<+(%@" @i"

f 0 \* %' (%) (%@" + %2" \*9"?' . "5<\*'.6'(B." + %7"&)55\* <' (B." 1 . +&) <.&" 5<.B(\*)&,2" .&' +N, (&' .7i"

f \$7.%' (92(%@" '?' . "% . .7" 9\* <" + %2" +77('(\*% +, " \* <" \*% @ \* (%@" 1 . +&) <.&/'&)55\* <'&" + %7" <. 1 . 7. (&i" \* <"

f C.B(&(%@" 0\*,,.@." 5\* , (6(&/' 5<+6'(6.&/' \* <" & .<B(6.&a"

"

!

"



+55<\*5<(+'.<.&\*,)'(%%"(.+6?"6+&.a"

>?. "0(B("C@?'&"D">(',\$E"0\*\*<7(%+\*'<+,&\*?'&'"?."7(&6<'(%%"\*'"<.B(. I "+%2"(%'<(1"5<\*'.6'(B." \*<"<. 1.7(+," 1.&)<.&"\*7'.<1(%." I ?.'?'<'?'<2'&?'\*),7"N."6?+@.7"\*<+<."%\*",%@"<+55,(6+N,.a" >?. "C.B(. I"G+%.,,"I(,,"(&&)." +7'.<1(%+\*'(%%"&"+%6'(%%"&"+%7"'?."5+<'(&" I(,,"<.6.(B."%\*(6."\*9"'?." 7'.<1(%+\*'(%%" I('?'%9(B." \F]N)&(%&.&&"7+2&"\*9"'?)."C.B(. I"G+%.,&"<.6.(5"\*9"+,," 1+'<(+,&"(%"'?)." 6+&.a" L\* <" 6+&. &" (%B\*,B(%@" +,," @+\*'(%%"&" \*9" >(&." \$E" J.4)+,," O+<+&&1.%/'" '?. " C.B(. I" G+%.,&" 7'.<1(%+\*'(%%"&".@+<7(%@"&"+%6'(%%"&" I(,,"N."(%6,)7.7"(%"'?)."O.+<(%@"U99(6.<A&" I<('.%"7'.<1(%+\*'(%%"a"

H%2" %%. " \* < " 1 \* < . " \* 9 " ? . " & + % 6 ' ( % % & " , ( & ' . 7 " ? . < . " 1 + 2 " N . " ( 1 5 \* & . 7 " % % " + < . & 5 \* % 7 . % " I ? \* " ( & " 9 \* ) % 7 " < . & 5 \* % & ( N , . " 9 \* < + " B \* , + ' ( % " \* 9 " ? . " 0 \* , , . @ . A & " J . 4 ) + , + % 7 " \$ % ' . < 5 . < & \* % + , " Q ( & 6 \* % 7 ) 6 " G \* , ( 6 2 a " J + % 6 ' ( % % & " + < . " + && . && . 7 " ( % " < . & 5 \* % & . " ' \* " ? . " & 5 . 6 ( 9 ( 6 " B \* , + ' ( % " & ] " + % 7 " + % 2 " 5 < ( \* < " 7 ( & 6 ( 5 , ( % . " ? ( & ' \* < 2 " \* 9 " ? . " < . & 5 \* % 7 . % " a " J + % 6 ' ( % % & " + < . " 9 9 . 6 ( B . " ( 1 1 . 7 ( + ' . , 2 a " \$ 9 " ? . " < . & 5 \* % 7 . % " + 5 5 . + , & " ? . " 9 ( % 7 ( % @ & " 6 \* % ' + ( . 7 " ( % " ? . " L ( % + , " C . 5 \* < / " ? . " & + % 6 ' ( % % & " I ( , , " 6 \* % ( % ) . " ( % " 9 9 . 6 " 7 ) < ( % @ " ? . " + 5 5 . + , a " > ? . " & + % 6 ' ( % % & " 1 + 2 " N . " , ( 9 ' . 7 " % % , 2 ( 9 " + & " + < . & ) , " \* 9 " ? . " 9 ( % + , \* ) ' 6 \* 1 . " \* 9 " ? . " + 5 5 . + , " ? . " < . & 5 \* % 7 . % " ( & " 9 \* ) % 7 " % \* " < . & 5 \* % & ( N , . " 9 \* < \* % . " \* < " 1 \* < . " \* 9 " ? . " \* < ( @ ( % + , " 5 \* , ( 6 2 " B \* , + ' ( % % & " & ) N 1 ( ' . 7 " \* " ? . " C . B ( . I " G + % . , &

**T"/#&3>&83/' : \$%& ) , 16#31/&**

H%2" %%. " \* < " 1 \* < . " \* 9 " ? . " & + % 6 ' ( % % & " , ( & ' . 7 " N . , \* I " 1 + 2 " N . " ( 1 5 \* & . 7 " % % " + < . & 5 \* % 7 . % " I ? \* " ( & " 9 \* ) % 7 " < . & 5 \* % & ( N , . " 9 \* < + " B \* , + ' ( % " \* 9 " ? . " 0 \* , , . @ . A & " J . 4 ) + , + % 7 " \$ % ' . < 5 . < & \* % + , " Q ( & 6 \* % 7 ) 6 " G \* , ( 6 2 a " J + % 6 ' ( % % & " % \* " , ( & ' . 7 " ? . < . " 1 + 2 " N . " ( 1 5 \* & . 7 " ( % " 6 \* % & ) , + ' ( % " I ( ' ? + % 7 + 5 5 < \* B + , " N 2 " ? . " 0 ( B ( , " C @ ? ' & " D " > ( ' , . \$ E " 0 \* \* < 7 ( % + ' \* < a " "

\_\_\_\_\_"\$%"+, "(%&' + % 6 . & " I ? . < . " + & ' ) 7 . % " ( & " 9 \* ) % 7 " < . & 5 \* % & ( N , . " 9 \* < . % @ + @ ( % @ " ( % " G < \* ? ( N ( ' . 7 " 0 \* % 7 ) 6 " / " ? . " 0 ( B ( , " C @ ? ' & " D " > ( ' , . \$ E " 0 \* \* < 7 ( % + ' \* < " I ( , , " 6 \* % & ( 7 . < + % 7 " 7 . ' < 1 ( % . " I ? . ' ? . < " % % : 7 ( & 6 ( 5 , ( % + < 2 " / + 7 1 ( % ( & ' < + ' ( B . " 1 . & ) < . & " 9 \* < " ? . " , + < @ . < " 6 + 1 5 ) & " 6 \* 1 1 ) ( % " 2 " + < . " + 5 5 < \* 5 < ( + ' . a " J ) 6 ? " < . 1 . 7 ( + , / " 6 \* 1 1 ) ( % " 2 : N + & . 7 " < . & 5 \* % & . & " 1 + 2 " ( % 6 , ) 7 . " . 7 ) 6 + ' ( % % + , " ( % ( ' + ( B . & " + % 7 g \* < " < + ( % @ & " 6 , ( 1 + ' . & ) < B . 2 & / " \* < " \* ? . < + 5 5 < \* 5 < ( + ' . " 1 . & ) < . & a " "

\_\_\_\_\_" H%2" &' ) 7 . % " 9 \* ) % 7 " < . & 5 \* % & ( N , . " 9 \* < . % @ + @ ( % @ " ( % " G < \* ? ( N ( ' . 7 " 0 \* % 7 ) 6 " / " I ? \* " ( & " % \* " 5 . < 1 + % . % ' , 2 " & . 5 + < + ' . 7 " 9 \* 1 " ? . " 0 \* , , . @ . / " I ( , " N . " < . X ) ( < . 7 " \* " 6 \* 1 5 , . ' " % % : 7 ( & 6 ( 5 , ( % + < 2 " / . 7 ) 6 + ' ( % % + , " ( % ( ' + ( B . & " + " ? . " 7 ( & 6 < . ' ( % " \* 9 " ? . " C . B ( . I " G + % . , a " "

\_\_\_\_\_" 8 \* ' ( 6 . / " ( % " I < ( ' % @ / " ? + " 6 \* % ( % ) + ' ( % " \* < " < . 5 . ' ( ' % " \* 9 " G < \* ? ( N ( ' . 7 " 0 \* % 7 ) 6 " 1 + 2 " N . " 6 + ) & . " 9 \* < + 7 7 ( ' ( % % + , " 7 ( & 6 ( 5 , ( % + < 2 " + 6 ' ( % % a " "

\_\_\_\_\_" H" I < ( ' . % " < . 5 < ( 1 + % 7 " 9 \* < " B \* , + ' ( % @ " ? . " J . 4 ) + , + % 7 " \$ % ' . < 5 . < & \* % + , " Q ( & 6 \* % 7 ) 6 " G \* , ( 6 2 a " > ? ( & " 6 \* % 7 ) 6 " & ' + ) & " & 5 . 6 ( 9 ( . & " + 5 . < ( \* 7 " \* 9 " ( 1 . " 7 ) < ( % @ " I ? ( 6 ? " ? . " & ' ) 7 . % " A & " @ \* \* 7 " & ' + % 7 ( % @ " I ( ' ? " ? . " 0 \* , , . @ . " 1 + 2 " N . " ( % " b . \* 5 + < 7 2 a " > ? . " & ' ) 7 . % " ( & " \* 9 9 ( 6 ( + , 2 " I + < % . 7 " ' ? + " 6 \* % ( % ) + ' ( % " \* < " < . 5 . ' ( ' % " \* 9 " G < \* ? ( N ( ' . 7 " 0 \* % 7 ) 6 " 1 + 2 " N . " 6 + ) & . " 9 \* < + 7 7 ( ' ( % % + , " 6 \* % 7 ) 6 " + 6 ' ( % % ( % 6 , ) 7 ( % @ " 5 < \* N + ' ( % % / " & ) & 5 . % & ( % % / " \* < . 4 5 ) , & ( % " 9 \* 1 " ? . " 0 \* , , . @ . a " "

\_\_\_\_\_" 346 , ) & ( % " 9 \* 1 " 5 + < ( 6 5 + ' ( % " ( % " 5 < ( B ( , . @ . 7 " + 6 ' ( B ( ' . & " 9 \* < + " & 5 . 6 ( 9 ( . 7 " 5 . < ( \* 7 " \* 9 " ( 1 . " 5 < ( B ( , . @ . 7 " + 6 ' ( B ( ' . & " 1 + 2 " ( % 6 , ) 7 . / " N ) " + < . % \* " , ( 1 ( ' . 7 " \* " . . . 6 ' . 7 " \* < + 5 5 \* ( % ' . 7 " H J U 0 " \* 9 9 ( 6 . & / " & ' ) 7 . % " < . & . + < 6 ? / " + ? , . ' ( 6 & / " & \* 1 . " & ' ) 7 . % " . 1 5 , \* 2 1 . % ' / " + % 7 " & ' ) 7 2 " + N < \* + 7 ] a " H 7 7 ( ' ( % % + , " < . & ' < ( 6 ' ( % % & " \* < " 6 \* % 7 ( ' ( % % & " 1 + 2 " + , & \* " N . " ( 1 5 \* & . 7 a " - ( \* , + ' ( % % & " \* 9 " ? . " . ' < 1 & " \* 9 " 7 ( & 6 ( 5 , ( % + < 2 " 5 < \* N + ' ( % " \* < " + % 2 " \* ? . < " 0 \* , , . @ . " 5 \* , ( 6 2 " B \* , + ' ( % % & " 1 + 2 " < . & ) , " ( % " 9 ) < ' ? . < " 7 ( & 6 ( 5 , ( % + < 2 " + 6 ' ( % % a " "

\_\_\_\_\_ "C.5+21 .% "'\*"'?. "0\*,,. @. ".\*<"\*"+%+99.6'.7"5+<'2"9\*<"7+ 1+@. &"<. & ),'(%@"9<\* 1 "+"  
B(\*,+ '(\*\*%\*9"?'(&"0\*7.a">\*". %9\*<6. "'?(&"&+%6'(%%/"'?. "0\*,,. @. "<. &.<B.&"'?. "<(@?'\*\*" I('??\*,7"  
( '&"'+%&6<(5'&"+%7"7. @<. .&"\*<"\*7. %2"+&')7. %"5+<'(6(5+'(%%"(%@"<+7)+ '(\*\*%6.<. 1 \*%(.&"+%7"  
5<(B(. @.7".B. %'&a"

\_\_\_\_\_ "J')7. %'&" 1+2"N. "<. 1 \*B.7"9<\* 1 "0\*,,. @. "?\*)&(%@"+%7g\*<"  
N+<<. 7"9<\* 1 "+55,2(%@"9\*<"6+ 15)&"?\*)&(%@"7). ".\*7(&6(5,(%+<2"B(\*,+ '(\*\*%&"\*9"?'(&"0\*7.a"

\_\_\_\_\_ "346,) &(%%"9<\* 1 "0\*,,. @. "5<. 1 (&.&/"+' .%7(%@"6,+&&. &/"+%7"\*'?. <"5<(B(. @. &"\*<"  
+6'(B('(. &"9\*<"+&5.6(9(.7"5.<(\*7"\*9"(1 ./"&"&. "9\*<'?'(%"'?. "&)&5. %&(%%"\*'(6.a"8\*'(6. "9"?'(&"  
+6'(%%" I(, "<. 1 +(%"(%"'?. "&')7. %'A&"6\*%7)6""9(, . "+%7" I(, "N. "5.< 1+% .% ',2"<.6\*<7.7"\*%"'?. "  
&')7. %'A&" +6+7. 1 (6" '<+%&6<(5'a" 0\*%7('(%%&" 9\*<" <. +7 1 (&&(%%" 1+2" N. " &5.6(9(.7" (%" '?. "  
&)&5. %&(%%"\*'(6.a"

\_\_\_\_\_ "G.< 1+% .% "''. < 1 (%+'(%%"\*9'&')7. %'"&/'+' )&"+%7".46,) &(%%"9<\* 1 "0\*,,. @. "5<. 1 (&.&/"  
5<(B(. @. &/" +%7" +6'(B('(. &a" >?(&" +6'(%%" I(, "N. " 5.70Tm/TT2 1 Tf[(5<()0. (())0.2(%%"(2") -245.85<.)0

**K??\$, @'>!N)!N+% -7&/!8.!M&+##! P \$ = 6\$.!M+, %&'8, ', E!J.8%\$@ - .\$.!**

\$9" '?." <.&5\*%7.%'" (&" 9\*)%7" <.&5\*%&(N,. " 9\*<" +" B(\*,+(\*% " \*9" \*% ." \*<" 1 \*<." \*9" '?." 0\*,,.@.A&"



6\*%&(&' .%' I ('?'+%2"+55,(6+N, . "6\*,,.6'(B."N+<@+(%("@"+@<.. 1 .%'a"

'<).'?'9(%7(%@"+&"\*" I?.'?.<"?'."+,,.@.7"6\*%7)6"B(\*,+'.7"?'."J.4)+,+%7"\$%'<5.<&\*%+,"  
Q(&6\*%7)6"G\*(62a">?."5+<'(.&"I(,"?+B.""?."\*55\*('&N1('+"\$15+6"J'+'.1.%'"\*"  
'?."O.+<(%@"0\*11('.."/+%7"?'."O.+<(%@"0\*11('.."I(,"<.B(.I"?'."5+<'(.&A"\$15+6"  
J'+'.1.%'&/"+%7"+,,"\*?'<"1+'.<(,+&"(%"?'."6+&."<.7+6'.7"+&"%.6.&&+<2"+%7"+55<\*5<+'.]/"  
(%6,)7(%@"?'."O.+<(%@"\*%<"\$%B.&'(@+'(\*%"U)'6\*1."+%7"+'+6?.7"+55.%7(6.&/"(%"+&&.&&(%@"?'."  
+55<\*5<+'."&+%6'(\*%a'"

**K??\$, @'>!Q)!K??\$+7!J.8%\$@ - .\$.!**

H55.+,&"\*9"? .+<(%@"\*("<(%B.&'(@+'(B. "\*" )'6\* 1 .&" 1 +2"N."9(, .7"N2" .('?.<"5+<'2a"H55.+,&" 1 )&"N."&.%"  
'\*"'?."