â
(NEBILETâ)

!:;04:

4VNG0 @5G>28=0: 1 B01;5B:0 ;>; (C 283;O4V =51V2>;>;>;C 3V4@>E;>@@84C) 5 <3;

4>?>28=8: ;0:B>78 <>=>3V4@0B; :@>E<0;L :C:C@C47O=89; =0B@VN :@>A:0@<5;>70; 3V?@@<><5;>70;

?>;VA>@@10B 80; F5;N;>70 :@8AB0;0;VG=0; :@5<5=VN 4V>:A84 :>;>>W4=89 1572;4=89; <03=VN AB50@0B.

V:0@AL:0 D>@<0. "01;5B:8.

$0@<0:>:>>B5@0?52B8G=0 3@C?0. !5;5:B82=V 1;>:0B>@@8 β-04@5=>@5F5?B>@@V2. >4 "! !0712.

;V=VG=V E0@0:B5@8AB8:8.

>;070==O.
A5=FV0;L=0 0@B5@V0;L=0 3V?5@B5=7VO. %@>=VG=0 A5@F520 =54>AB0B=VAB;; ;53:0>;>>3> AB C?5=O 01> ?>3> ABC?5=O BO6:>AB; 4> AB0@8B4>@;=5<5;4V2 ;V:C20==O
E2@@8AB 2V;;C 2V4 70 @@;V2.

@>B8?>:070==O.
V428I5=0 GCB;82VAB; 4> 4VN;=@>W @5G>28=8 01> 4> V=H8E :@5@5=BV2 ?@5?0@0BC;
?5@GV=:0>20 =54>AB@>70;>>W =5 01> ;<565==O DC=:FVW ?5G;=:@0>20 =5;8;8;
3>AB@@0 0> 5@F520 =54>AB0B=VAB;; :0@4V>35==89 H>:; 01> 5?V7>48 48 45:><?5=A>B@0>20 =5 (157
HBCG>=@5>W 2>4VO @8B<C
1@0>=VE>?V0@ B@0 1@0>=EV0;L=0 0AB<0 2 0=0<=57V;
=5;V;V>2@=0 D5>E@>@>F8B><0;
<5B01>VG=89>;;V3A>70;C D5>E@>>F8B><0;
1@048:0@4VO (4> ?>G>B:C;; :@5@2<=0 G>AB>@>0 A5@F52E 5@F520 3@5=5@>;5 5;@> :<5=H5 60 C40@V2/E2;)
;0@5@V0;L=0 3V?>B>=VO (A8AB>;VG=89 0@B5@V0;L=89 B8A: <5=H5 90 << @B. AB.)
B062;V 2V>@C65==O 2 @>>1VF; :@>@0@=>W G0AB>8 :@>0V>7.

!@?>AV1 70AB>AC20==O B0 4>78.
___A5=FV0;L=0 0@B5@V0;L=0 3V?5@B5=7VO.___
>@>A;89< ?0F0VN=B0< ?@8>W0Vn 1 B01;5B:C 51V;5BC, (5 <3 =51V;V>;>;C) =0 4>1C, C @07
<>6;;82> ABV2 2 >480= V B>9 A0<89 G0A. @5?0@0@0B <>6=0 ?@8>WnBn ?V4 G0A W6V B0. V>7;5=>782 4@V>78 B01;5B:8
;5@B0B 02>8< G5@57 1-2 B86=V ;V:C20==O; 0;5 V>7VO@V0=V 4V >4 4V;V :V?A>5@>30TBLAO ;8H5
G5@57 4 B86=V.
__>;51>@>789 7 V 65=<0> 8; 0=B03>==V>7AB0:L<0> ?@;5?0@0@0B; 70A>:B@8@>730=
=5 >@>?B=87B >W ?V4 A8 2 : 2 >430=V>7 B01;5B:8 ?5@B0B0B W6 5 W6V B0. > FL>3> G0AC
40>@B> 0289 3V?5@@B50=7V; 5@F5@>0 A@>>=:;5@?V0V>7 B V>> 57 G5@B0> 12,5-25 <3
3V4@>E;>@B807V4C.
%2>@>789 7 =5 2@@@0V0N I5=A0 ABV2 2 =0B@?VN. 5;;W0 5@4V>70=0 4>1 ?>G>V0>7>W 4>1 A V0=48=:C. #
>@> 0289 3V?>V>7>;7 =0B@8 C5;@5;5=V8 V>7 4=O 2 @03 <>@C>2 01> W6V B>0O W6V B0.
%2@>789 7 ?5G;=:@0>20 =5<4@0B=VAB;. >@> 07>74 70AB>AC20==O ?@5?0@0BC B0 1@>>1;L W60V>7B>>W4=89
@5@=<V89, B>;>; ?@>>B>B0T;=V0>7=0V89.
%2>@>789 ;@V=:0>20 =5<4@0B=VAB; 2V>7:C (2V@>0V>70 2 >48=8 65 @07 =0 4>1C). ;>O >; FV>79>20 E2@>8G> 5@F520 =54>AB0B=VAB;; 7=0G5=;=N ?>G;0>;4 :@8G;=:;05 5A<5=H5 60 <4=0 4>1C; 0; ?>G0V>73 702>>2 : 2 >0>430=V>7 =0 4V; ?V4A8V5>=VB8 WW0 C7>;5==O. '507@5=V8
=5 =0B@?VN C5;@5;5=V8 V>7 =4O 2 @03 <>@>20V?B: 2 4>1>7B0 4@V>78 70;5@V>W3> 4V @C 0@ :>0AE .
___%@>789 7 A5@F52>>W =54>AB0B=VAB;.___

V:C20==O E@>=VG=>W A5@F52>W =54>AB0B=>ABV A;V4 ?>G8=0B8 7 ?>2V;L=>3> B8B@C20==O 4>78 4> 4>AO3=5==O V=482V4C0;L=>W >?B8B8<0;L=>W ?V4B@@@8W 4>78. "0:8< E2>@@8< A;V4 ?>@87=0G0B8 ?>@5?0@@0B B 28?04:C, O:I> A?>AB5@@V30TBLAO E@@>=VG=0 A5@@F520 =54>AB0B=VABL 157 5?V7>4V2 WW 3>AB@@@>W 45:>BO3>< >AB0==VE 6 B86@@=V2. V:0@@ ?>>28=5=< <0B8 4>A2V4 ;V:C20==O A5@@F52>W =54>AB0B=>ABV. %2>@@V, O:V 70AB@>A>2CNBL V=HV A5@@F52>-AC48==V 70A>18 (4VC@@5B8:8, 483>:A8=, V=3V1VB@@8 @@8 0=3V>B5=78=?5@@2>@@N20;L==>3> D5@@<5=BC ($), 0=B0@3>=VAB8 @5F5?B>@@2 0=3V>B5=78=C), ?>28==V <0B8 265 ?V4V1@@0=0=C 4>7C F8E ;V:V2 ?@@>BO3>< >AB0==VE 2 B86@@=V2, ?5@@H =V6 @@>7?>G>=5BLAO WE ;V:C20==O 51V;5B>><, . >G0B@@0>25 B8B@@@8@@@B20==O 4>78 A;V4 ?>@@>2>4@@@8B@@@8 70 =86@@G5=02545=>N AE5<>N, 28@@B@@8 2 B86@@=V2 B0 >@@VT=BCNG@@8L =0 ?5@@5@@A87@@0878 ?0FVT=BB=>78 E2>@@>@@89 ?>28==5 =5 <5 <5 <5=H5 2 3>48= ?5@51C2020B8 ?V4 =03;O40<0G @@0@@87>4 4>@@2@@0V4G5=>3> ;V:0@@O, I>1 2?52=5=8@@8AO 2@52@>78=8@@=BV8>0 C B> ::V=VG=>89 AB>I@@=0= AB01V;LAB=C V;L@@>0=89 AB01 70 78H0@@;A@= C@@>NB@@O;=5@@OAB8 @@V;=0=A =0 ?G5=C :V=VG=>9 AB?@@=0=

1>:C A5@FO 1>:C AC48=		@048:0@4VO, A5@F520 =54>AB0B=VABL, C?>2V;L=5==O ?@>2V4=>ABV/1;>:040 @B5@V0;L=0 3V?>B5=7VO, ?>A8;5==O ?5@5W :C;L302>ABV		
1>:C 48E0;L=8E H;OEV2	048H:0	@>=E>A?07<		
1>:C B@02==>3> B@@0;BC	0?>@@, =C4>B0, 4V0@5O	8A?5?AVO,<5B5>@87<, 1;N20==O		
1>:C H:V@@8		!25@1V6, 5@8B5 <0B>7=5 H:V@V=5 28A8?0==O	>A8;5==O ?A>@@V07C	
1>:C AB0B528E >@30=V2		B5=FVO		
>7;048 7030;L=>3> E0@0:B5@C	V428I5=0 2B>@ <;N20=VABL, =01@O:8			

@V< FL>3>, ?>2V4><;O;>@0O ?@@> B0:V ?>1VG=V @50:FVW, A?@@8G8=5=V 45O:8<β-04@5=>1;@0<8: 30;NF8=0FVW, ?A8E>78, A@;CB0=VABL A2V4><>ABV, ?>E@;>40==O/FV0=>7 :V=FV2::, A8=4@>< 59>=>, ACEVABL >G59 B0 B>:A8G=VABL 70 B8?><: ?@@>?@@>=>=>;>@C. %@>==VG=0 A5@F520 =54>AB0B=VABL.

V4>@>@ABV ?@@> ?>1VG=V @50:FVW C E2@@>@8E =0 A5@F52C =54>AB0B=VABL 1C;8 >B@8@0=V ?V4 G>0 ?;0F51>->:@B@>;N20=>3> 4>A;V465==O, C E2@0V O:8V465=L, C 4VG O O:8V465=L 1067 E2@@>@8E >B@8@5; ?;0F51>. 09G>0ABVH8<8 ?>1VG=8<8 @50:FVO<8 @0 ?;0F5<;F>V<8, ?@@> O:V ?>2V4><;O;>;8 ?0FV5=B8, >B@8@0;8, 1C;8 1@@048:0@4V0 B0 70?><>@>G5==O.

>1VG=V @50:FVW @0 ?;0F5<, I> E>@>0 1 ?>B5=FV9=> ?>720O70=V V7 70AB>A>20==O< ?@>B8?5=F>0@0BC, B0 B0:V, I> @>7@V7=O;8AO >: E0 5?0@0BC, B0 7 0GCB8O ?@@> O=>;>B@=V :0B5@>@V9 A5@F520 =54>AB0B=VABV:

?>A8;5==O A5@F520 =54>AB0B=VABV A?>AB5@V30;>@0O C 5,5 % E2@@>@8E, >:@5<>@0O, B0 C 5,2 % E2@@>@8E, >:@5<>@0;

>0B>@AB0B5G=0 3V?>B5=7VO <0;0 @0?>;B8=V< C E2@@>@8E, >:@5<>@0;, B0 C 1 % E2@@>@8E, >:@5<>@8;

=5?5@5A83=>A B>;A@C>AB A?>AB5@V30;>@0O C 1,6 % E2@@>@8E, >:@5<>@0O, B0 C 0,8 % E2@@>@8E, >:@5<>B0;

-1;>:040 AB@C?5=O A?>AB5@V30;>@0O C 1,4 % E2@@>@8E, >:@5<>@0O, B0 C 0,9 % E2@@>@8E, >:@5<>B0;

=01@O:8 =06=VE :V=FV2>: <0;8 @0A@C>A:0, B0 C 0,2 % E2@@>@8E, >:@5<>@B0.

5@54>7C20==O.

@8 ?5@54>7C20==V β-04@5=>1;@0B>@2 A?>AB5@V30;@0NB;0@0: 1@0048:0@4VO, 0@B5@V0;L=0 3V?>B5=7VO, 1@@>=E>A?07<, 3@>AB@0B=VABV A5@F520 =54>AB0B=VABL. V4>7C20==O ?5@54>7C20==O: ?@@><520==O H;C=:0, ?@@87>@5==O 0;B8?>20==>@> 2C3V;;O B0 ?@@>0=8E 70A>1V2. (CG@0=0 25=B8;OFVO ;535=L B0;>6 <>65 1CB8 ?>B@V1=0 @0 @0748E 5?>:5@4BCG0>: @0=NV@@> 70 @V2=5< 3;N:>78 :@>2V B0 ?@>2570==O ?@@V70;@>2>@6>V@>4 2 :@>2:: ?@@8 1@0048:0@4VW B0 @V428I5==V 203@>@V0=VW 22545==O 0B@>?V=C 01@>V <5B8;0AC;ND0@C, ?@@8 3V?5@0=5H8 7 4>78 2 :@>2V 2:>0<52@>@0H8 7 4>78 2,5 2:>0AB05@>0O >GV:@V20==O 5D5:BC. @578AB5=B=VABV 28?04:0< E;N>B8O 7 4>70 /:V> 28I5707>=0G5== 70E>48 @0 4>?><>3@0NBL, A;V4

5@54>7C20==O.

?@87=0G0B8 3;N:03>= V7 @>7@0EC=:C 50-100 ?>B@V1=> V=T:FVN <>6=0 ?>2B>@@8B8 ?@>BO3><
3>48=8 B0, C @07V =5>1EV4=>ABV, ?@@>25AB8 2=CB@VH=L>25==C V=DC7VN 3;N:03>=C V7
@>7@@0EC=:C 70 4. 5:AB@@@5<0;L=8E 28?04:0E A;V4 ?@@>2>48B8 HBCG=C 25=B8;OFVN ;535=L B0
?V4:;NG0B8 HBCG=>3> 2>4VO @8B

0AB>AC20==O C ?5@V>4 203VB=>ABV 01> 3>4C20==O 3@C44N.
$0@<0:>:>;>3VG=V 5D5:B8 =51V2>;>;C <>6CBL =530B82=> 2?;8=CB8 =0 ?5@51V3 203VB=>ABV, ?;V4 B0
=5<2;O, B>3> A;V4 70AB>A>@2C20B88 ;8H5 B>4V, :>;8 :>@8@@8CBL 2V4 70AB>AC20==O ?5@52060T
?>B5=FV9=89 @878: 4;O ?>;40. /:I> ;V:C20==O =51V2>;>;C =5>1EV4=5, B> A;V4 ?@>2>48B8
A?>AB5@@565==O 70 <0B>2:>2-?;0F5=B0@=8< :@@2>>1V3>< B0 70 @>AB>< ?;40. @8 ?V4B25@465==V
=530B82=>>W 4VW =5>1EV4=> @@>73;O=CB8 ?8B0=>>O ?@@> ;V:C20==O 0;LB5@@=0B82=8<8 ?@5?0@0B0<8
<8. 0 =5>2;O< ?>B@@@V1=> @5B5;L=> A>AB5@565@V30B8 V <0B8 =0 C0@7V, I> B0:8E A83;;V:5

VB8.
>A;V465==O I>4> 70AB>AC20==O ?@@5?0@@0BC 4VB8 <0< ?V4;VB:0< =5 ?@@>2>48;8AO, B>2>W 3@C??8
?@5?0@0B =5 @5:><5=4C4CTBLAO.

A>1;82>AB>ABV 70AB>AC20==O.
030;L=8<8 4;O 1;>:B>@8V2 b-04@565=>@5F5?B>@V2 T =86G5=02545=V ?>?5@54655==O V 70AB5@56=V
70E>48.
V4B@@8:048 β-04@565=>@5F5?B>@V2 7<5=HCT @878: ?>@CH5=L A5@F52O> 8B7 B0 V=BC10FVW.
@8 ?V43>B>2FV 4> EV>3@VG=>>3> 2B>CG>==O 70AB>AC20==O 1;>:B>@V2 β-04@565=>@5F5?B>@V2 A;V4 ?@@8@8=8B8 =5 <5=H5 =6 70 24 3>48=8. 15@56=V=@=@V1>0 ?>B@@@V1=0 ?@8 70AB>AC20==V >:@565<8E 0>5AB5B8V2, O:V A?@8G8@=ONBL ?@83=VG5==O 0@40, B0>8E O: F8:;>?@@@>0=, 5DV>@@ 01> B>@8@@565>=. >O2C 203CA=0=8E @50;FV9 C ?0FVV=BV2 =0 F>=V ;V:C20==O 0>;B@O5@@F>V2 7 22545==O> 0B>@@?V>=.
/: ?@028;>, ?@0FV>@FV2 =51V2>;>;<8 V7 =5;V:V>20>N E@@=>VG>=N A5@F>52>N =54>AB0B=V0<=V 1;>:B>@V2@8
        β-04@565=>@5F5?B>@V2 =5 A;V4 ?@87=0G0B8, ?@>:8 WE AB0= =5 AB01V;V7C20;8
@878=>=B8 B5@0?VN 1;>:B>@V>< β-04@565=>@5F5?B>@V2 ?>B@@@V1=0<, O:V <>NBL VH50@1C A5@FO>,
A;V4 ?@>ABC?>2>2, B>;1>> ?@@>BO>3>< 1-2 B86=V2. # @07V =51V2>;>;C, I>1 70?>1V3B8
7>3>@>AB@@>==N 70E0@@@=>0=2>==O, @8:;5><5@<=B5=Lp@>>G8< ?@8:B>C20==O ?@@5>0@5B8 ?@8:AC20==O
:0B@56>V=5< β-04@565=>@5F5?B>@V2 <>6CBL A?@8G@>@V=OB8 1@048:@0@4VN. /:I> ?C;LA0 C AB08>V
7=86C4CTBLAO 50-55 C4@0@<2 70 E28;@8=C V/G8 C ?0FV4=B0 @>72820NBLAO A8<@B8@@@>0=8 A8><, B>:V 2:07C@NBL =0
1=8:C4CTBLAO, B> 4>7C @5:><5=4CTBLAO 7=8487B8. ;>:B>@8 β-04@565=>@5F5?B>@V2 A;V4
70AB>AC20B8 7 >AB>@>6=VABN ?@@8 ;V:C20==V: 0) ?0FV@V=BV2 7 @>72>@@0@=V< A8<8@@@@>0< A8><, ?5@@8?@?@>8G=>N
:=@>@>2>28V3C (E2>@>10 10 01> A8=4@><V 59==>, ?5@4A5@@@42>N :CV;>@8>50 @07@@>AB@@5==
707>7=>G5=V 7>E@72>>@N20;; 1) ?>?@@>10 >0@V>G=0 B@>0@>8::>N=@V:0 11;>>04>N ABC?5=O C C 72@@77:C 7
7=530B82>2=>< 27;82>< 1;:;>0>B>@V2 β-04@565=>@5F5?B>@V2 0 ?@@>2V4=0B8L; 2) E2>@@>8E =0
AB>5=>:0@AVN @8 F>C@@>0< 2>0:A7B0V: 157?5@5@H4>>N 207@@>:=@A2>?VN :>@@@@=0@@@5
0@B5@@V9V, >?@@A5?0B>>20>>N G5@@57 a-04@565=>@5F5?B>@8: 1;>:B>@V2 β-04@565=>@5F5?B>@V2
<>6CBL 71V;LHC20B8 @>0B>>@=> 2 B@@820@@@;V =0>:024V 71@565=>@>0:@>>2?4;Q.
><1V=0@FV>O =51V2>;>;C 7 >?@@>08B@@8:?@52@@0@>0=8 :0>:1;=>:B>@8< 25@0@010<8 3@@>@G>, 0 B0:>> 7 3@@>>?@B5>=782=8
<8 70A@>10@10B8 F5=B@@>0;L=>N 40V2 4 =5 @5:><5=4CTBLAO 27030;V.
51V2>;>;B0> =5 2?;8@820T =0 278=2 2 :@>0VC C E2>@@>8E =0 FC:@@>0289 4V015B. 572060NG8 =0 F5, =5>1EV4=>
1CB8 >15@@565=8< ?@@8 70AB>AC20==V 9>3> 4;O ;V:C20==O E2>@@8E FVTW :@>0B>A4V5L 27;V2 =0
=51V2>;>;C <>65 <0A:C20B8 45O:V A8<?@>><8 >A@V>3> 3V?@@>3;V:5>8V V8B@>28284>W
70;>78. @8 @0>?B>2>>
0@B5@@V9V< 7>7 >1V0@B>@>0@>0@B>< =@07 7>0@@>7=>0=@2>< 48E@>0;L8E H:OE52V2 1;>:B>@V2 β-
04@565=>@5F5?B>@V2 A;V4 70AB>AC20B8 7 >AB>@>6=VABN, 1>><65 ?@>A08>08B08L :>@>0B>A5V>
48E@>0;L8E H:OE52V.
0 ?@@>3>1>>:C ;V:C20==O E@@>@>3V>4N A5@@F>52>N =54>AB0B=V> =51V2>;>;C ;V:C20@=>O
@5B>C;O@=> A;V4 @5?0@@565==O 70 E2@@>@>8< ?@@>108 =5 A;V4 @0V7:> ?@8@?8=O>B8 ?@8:AC20==O.

%2>@8< =0 ?A>@V07 2 0=0<=57V ?@87=0G0B8 β-04@5=>1;>:0B>@8 A;V4 BV;L:8 ?VA;O B>3>, O: A8BC0FVO 1C45 @5B5;L=> 282065=0. ;>:0B>@8 β-04@5=>@5F5?B>@@V2 <>6CBL ?V428IC20B8 GCB;82VABL 4> 0;5@35=V2 V ABC??V=L BO6:>ABV 0=0DV;0:B8G=8E @50:FV9.

@5?0@@0B 78 <>=>>3V4@@0B (141,75 <3 2 1 B01;5BFV), B>3> =5 A;@V4 ?@89<0B8 E2=@@@8< 7V A?04:>>2>N =5?5@5A>?2>@A878, 45DVF8B@>>< 2 >@30=7V A8=4@@>< <0;L01A@>@@1FVW 3;N:>>78-30;0;B>>78.

40B=VABL 2?;820B8 =0 H284:VABL @50:FVW ?@8 :5@C20==V 02B>B@@@0=A?@@B>< 01> @>1>BV 7 V=H8<8 <5E0=V7?<0<8. V4?>>2V4=5==O =5 ?@@@2>48;8AL. >A;V465==O 7 D0@:0<0<8 ?@@:070;8, I> 51V;5B@@, =5 2?;820T =0 ?A8E>>@1@@@@=8, I> V@>>4V <>6;V82V V?@@0GV7>>=0=> 5==O B0 2V4GCBBO 2B>ACBCB8.

70T<>4VO 7 V=H8<8 ;V:0@AL:8<8 70A>1 0< 270T<>4VW.

!?V;L=5 70@AB>AC20==O =5 @5:><5=4C2B=10O:
0) 7 0=B80@8B<V=8<8 70A>1 0<8, <5:A8;L5=8, ?@>?0D5=>=>>=> <=65 ?>A8B8@B>AO 4VO =0 ?@@2V4=2VABL B0 71V;LH8@TB>AO =5B30B82=89 V=>B@>?=>? 89 5D5:B;
1) 7 0=B03>V=VAB0><8 :0;LFVN B8?C 25@0V:0@:@@40. =CB@@V=>L>=>=@>25==5 22545==O 25@0V:0@0@8<, O:V ?@@@89<0@<NBL β-04@5=>1;>:0B>@8, <>65 ?@@=2725AB8 4> 7>0G@>> 0@B5@V0;L1>3> B8A;@@2>NB5=>O VV >?>4><B5=7=B>VV@>@@@:5=>OV;B;B>B>@10A=89; β-04@5=>@@@@5F5@@@B>@@B>0@10A=89;

2) 7 3V?@>B5=7V782=8@8 ?@@507>0@0@0@V<8 F5=B5@0;LN>W 4VW (:;:@>@V48=, 3C40@0@=0F0@0@=, <>A:;0@N>V48=, <5B8;LN0N40@D0, @8:0@=5@V48=) <>65 ?@@8725@AB8 4> ?@@A8;5==O A5@4V52>W =54>AB0B>=>AV 2>0A;V4>:@ 7 <58H5N@5==O ?>A8B8=:>V G0A>@>0B>@>@5==O B80:;@@@@@@@@0><>V .@8 @V4=>@08>@V2A2V 2V4:@5<0 ?59:54 70 :V@>@5=5==@> 70AB0@5==O β-04@5=>@1>:0B>@@V2, 2V@>@>2V3V4V4=>>V;B 7>=@>@AB@@@@B>>> 0@@@A5@>@V;>7>>1> B80:;>: (A80:B4>><< 2V4

@8 >4=0@G0@C==OS AC20==OV A;V;BV 1CB8 >15@56;NOV 20@@@@@@@@@0G@8:8:
0) 7 0=B8@8B>B>=>>>@0M0@B0@0@70@@=5=0@>=5) <>65 ?>A0A8;LN20B80@5=>@B0VT>@VV;BV2:@5N2>@@ >>-?@@@2>4VO V4=5===OV =@@@2545=>@@@;
1) 7 30;>>25@=>5V35=30>:2>V-8><<8>V .;:VV8:8>V-0<5<@2A1BB>B>A>8> 0<<<5B8>A>8>@@>@@>=5)@>=5 <>65 ?@@A89G2G0B0=20O28 @5D0=B5NAB>@A=O>B@@B0@@B8>0@V;L:B@B@0B4>V>2; 0=@V428IT8AFV@@ B8>B>@55:@@@>@>>=0=OB@@@N>V@0V@50::BH0>@A@@=@>@@B0 0@AB0@5==O =0>?>>8@:>O1>BV;B8AFV@@>T;=50;L=0@A8@@5@=58@>@5V48>@@N>@;8V;B 75V;LH8@TB>AO
2) 7 D57>D0@0=2@48=V >7>@>@0@@V5:@@@@=>>@>>A8B8V;B5@>@8@+>@@>N>@@28V;BT0=0@B0@0>@+=>@4>=@>@@@@8V;B@>@@0@5B80@8V 1A@B@@B0N>>@>>@>@>@AB0B@>5=@>>7>@@@@5A>=> =5@@@B@@5@V>;@@>>>@@T@>@@0>> @>50;L4>==>@@5V

@8 @@8-?V;L1>@>B>0V@@BV0@@5@V8V@8@@>>@@V>@5@>@B>N0@5@>@V2:@54>=5@58@@>>@>+>>8@2@>@A8>>>>20@0@5>>N>@@+8@>@0@@@0@A8>@>@@@T>@@0@5@@V

**70T<>4VO, 7C<>2;5=V D0@@@<0:>>48=@@@>V5:8>:>OV:V8=>:V V@@>?>@@0=@@@>@N>?@0AT87@>@@O>;@8:>A@@@>@=@>@@@@@@>@N@@>@@8@@>@@8@@@@>@@@>@>@+@@@@@@@@0@@@

>4=>G0A=5 70AB>AC20==O 0;:>3>;N, DC@>A5 3V4@>E;>@@>BV0784C =5 2?;820T =0 D0@ <0:>:V=5B8:C =51V2>;>;C;

 =51V2>;>;; =5 2?;820T =0 D0@ <0:>:V=5B8:C =51V2>;>;; =5 2?;820T =0 D0@ <0:>:V=5B8:C =51V2>;>;; =5 2?;820T =0 D0@ <0:>:V=5B8:C =51V2>;>;;

 =51V2>;>;; =5 2?;820T =0 D0@ <0:>:V=5B8:C =51V2>;>;; =5 2?;820T =0 D0@ <0:>:V=5B8:C =51V2>;>;; =5 2?;820T =0 D0@ <0:>:V=5B8:C =51V2>;>;; =5 2?;820T =0 D0@ <0:>:V=5B8:C =51V2>;>;;

$0@<0:>:>;>3VG=V 2;0AB82>ABV.

$0@<0:>:>48=0

51V2>;>;; O2;OT A>1>N @0F5<0B, O:89 A:;040TBLAO 7 42>E 5=0=BV><5@V2: SRRR-=51V2>;>;;C (D-=51V2>;>;;;) B0 RSSS-=51V2>;>;;C (L-=51V2>;>;;). V= ?>T4=CT 42V D0@<0:>:>;>3VG=V 2;0AB82>ABV:

 7024O:8 D-5=0=BV><5@C =51V2>;>;; T :>=:C@5=B=8< V A5;5:B82=8< 1;>:0B>@><

 β₁-04@5=>@5F5?B>@V2;

 7024O:8 L-5=0=BV><5@C 2V= <0T <0:>:V=5B8G=V 2;0AB82>ABV 2=0;>3V4=V 4> <01A01>;C 270T<>4VW 7 L-0@3V=V=>N=>