



Certified: --

**E-70-24**

FILED WITH THE NASSAU COUNTY CLERK  
OF THE LEGISLATURE APRIL 1, 2024 9:20AM

**NIFS ID: CFPW22000005**

Capital: X

Contract ID #: CFPW22000005

NIFS Entry Date: 07/08/2022

**Department: Public Works**

Service: Job Order Contract

Term: From execution to January 7, 2026, unless extended as per its terms.

Contract Delayed:

Slip Type: New		
CRP:		
Blanket Resolution:		
Revenue:	Federal Aid:	State Aid:
Vendor Submitted an Unsolicited Solicitation: X		

1) Mandated Program:	No
2) Comptroller Approval Form Attached:	Yes
3) CSEA Agmt. & 32 Compliance Attached:	No
4) Significant Adverse Information Identified? (if yes, attach memo):	No
5) Insurance Required:	Yes

Vendor/Municipality Info:	
Name: <b>The Gordian Group, Inc.</b>	ID#: <b>581900371</b>
Main Address: <b>30 Patewood Drive Greenville, SC 29615</b>	
Main Contact: <b>Ammon Leshner</b>	
Main Phone: <b>(800) 874-2291</b>	

Department:
Contact Name: <b>Ken Arnold</b>
Address: <b>NCDPW 1194 Prospect Avenue Westbury, NY 11590</b>
Phone: <b>(516) 571-9607</b>
Email: <b>ldionisio@nassaucountyny.gov, ekobel@nassaucountyny.gov, rcleary@nassaucountyny.gov</b>

## Contract Summary

**Purpose:** Job Order Contract. The Department of Public Works would like to have a new type of contract available to the Department to address buildings repair and remedial needs. Currently, any work done outside the ability of in-house staff is either done by a work order issued to our requirements contractor, or by a lump sum bid contract. Payments under the requirements contracts are solely based on a time and materials. The Department has received a negative reaction after making time and materials-based payments when seeking reimbursement through federal programs after emergency declarations. Lump sum contracts cannot be done quickly and is not an ideal tool in an emergency. The JOC arrangement would address the above-described difficulties by providing a unit price for multiple items the Department will likely use. The Department anticipates setting an annual cap for JOC contracting between \$7 to \$10 million per year with no individual work order exceeding \$1 to \$1.5 million. The final established contracts and scope will determine the set limits.

**Method of Procurement:** There was no advertised solicitation for this proposed contract. Intergovernmental agreement.

**Procurement History:** National Intergovernmental Purchasing Alliance Company, a Delaware corporation d/b/a OMNIA Partners, ("OMNIA") is a national service cooperative created to provide programs and services to members in education and government, and is authorized to establish competitively awarded cooperative purchasing contracts, through a lead agency model, on behalf of itself and its member agencies. Gordian and the University of California have entered into a competitively awarded agreement, Contract Number 2021002786 dated January 8, 2021 (the "Master Agreement"), for the purchase of JOC Services. the Master Agreement provides that any OMNIA members may purchase JOC Services directly from Gordian at the prices stated in the Master Agreement. The County is an OMNIA member. OMNIA members may engage Gordian directly under the Master Agreement. The County, as an OMNIA member will contract with Gordian to receive the goods and services as described in the Master Agreement. ("County Contract").

**Description of General Provisions:** The County Contract shall include both the establishment, (Required Services) and management (Optional Program Management Services) of JOCs contracts to address general, HVAC, plumbing, electrical, roof and parks amenity work. The fee schedule for the Required Services is set at 6.25% of the value of the work ordered and this fee will be paid via a license agreement from the JOC Contractor. The fee schedule for the Optional Program Management Services is set at 5.95% of the value of the construction work ordered and will be paid to Gordian by the County. The term of this contract will commence upon execution and terminate on January 7,2026 - unless extended as per its terms.

**Impact on Funding / Price Analysis:** The maximum amount to be paid directly to Gordian from the County for its services is One Million One Hundred Ninety Thousand Dollars (\$1,190,000.00). Initial encumbrance \$ 100,000.00. Capital Project 90400.

**Change in Contract from Prior Procurement:** N/A

**Recommendation:** Approve as Submitted

# Advisement Information

Fund	Control	Resp. Center	Object	Index Code	Sub Object	Budget Code	Line	Amount
CAP			00	PWCAPCAP	00003	PWCAPCAP 00003 90400 000	01	\$100,000.00
Project Number		90400						
Project Detail		000						
TOTAL							\$100,000.00	

Additional Info	
Blanket Encumbrance	
Transaction	103
Renewal	
% Increase	
% Decrease	

Funding Source	Amount
Revenue Contract:	
County	\$0.00
Federal	\$0.00
State	\$0.00
Capital	\$100,000.00
Other	\$0.00
Total	\$100,000.00

# Routing Slip

Department			
NIFS Entry	Elizabeth Kobel	07/08/2022 02:43PM	Approved
NIFS Final Approval	Roseann D'Alleva	07/08/2022 03:16PM	Approved
Final Approval	Roseann D'Alleva	07/08/2022 03:16PM	Approved
DPW			
Capital Fund Approval	Roseann D'Alleva	07/08/2022 03:17PM	Approved
Final Approval	Roseann D'Alleva	07/08/2022 03:17PM	Approved
County Attorney			
RE & Insurance Verification	Andrew Amato	07/08/2022 03:19PM	Approved
Approval as to Form	Daniel Gregware	07/11/2022 11:41AM	Approved
NIFS Approval	Daniel Gregware	07/11/2022 11:50AM	Approved
Final Approval	Daniel Gregware	07/11/2022 11:50AM	Approved
OMB			
NIFS Approval	Nadiya Gumieniak	07/08/2022 03:43PM	Approved
NIFA Approval	Christopher Nolan	07/11/2022 04:35PM	Approved
Final Approval	Christopher Nolan	07/11/2022 04:35PM	Approved
Compliance & Vertical DCE			
Procurement Compliance Approval	Robert Cleary	07/22/2022 11:54AM	Approved
DCE Compliance Approval	Robert Cleary	07/22/2022 11:54AM	Approved
Vertical DCE Approval	Edward Powers	07/25/2022 09:32AM	Approved
Final Approval	Edward Powers	07/25/2022 09:32AM	Approved
Legislative Affairs Review			
Final Approval	Christopher Leimone	08/26/2022 10:32AM	Approved

<b>Legislature</b>			
Final Approval			In Progress
<b>Comptroller</b>			
Claims Approval			Pending
Legal Approval			Pending
Accounting / NIFS Approval			Pending
Deputy Approval			Pending
Final Approval			Pending
<b>NIFA</b>			
NIFA Approval			Pending



RULES RESOLUTION NO. – 2024

A RESOLUTION AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE A PERSONAL SERVICES AGREEMENT BETWEEN THE COUNTY OF NASSAU, ACTING ON BEHALF OF THE NASSAU COUNTY DEPARTMENT OF PUBLIC WORKS, AND THE GORDIAN GROUP, INC.

WHEREAS, the County has negotiated a personal services agreement with The Gordian Group, Inc. to provide Job Order Contract (“JOC”) services, a copy of which is on file with the Clerk of the Legislature; now, therefore, be it

RESOLVED, that the Rules Committee of the Nassau County Legislature authorizes the County Executive to execute the said agreement with The Gordian Group, Inc.

## CONTRACT FOR SERVICES

THIS AGREEMENT, (together with the schedules, appendices, attachments and exhibits, if any, this "Agreement"), dated as of the date (the "Effective Date") that this Agreement is executed by Nassau County, is entered into by and between (i) Nassau County, a municipal corporation having its principal office at 1550 Franklin Avenue, Mineola, New York 11501 (the "County"), acting for and on behalf of the Department of Public Works, having its principal office at 1194 Prospect Avenue, Westbury, New York 11590 (the "Department") and (ii) The Gordian Group, Inc, having its principal office at 30 Patewood Drive, Suite 350, Greenville, South Carolina 29615 (the "Contractor" or "Gordian").

### W I T N E S S E T H:

WHEREAS, the County desires to hire the Contractor to perform the services described in this Agreement; and

WHEREAS, the Contractor desires to perform the services described in this Agreement;

WHEREAS, National Intergovernmental Purchasing Alliance Company, a Delaware corporation d/b/a OMNIA Partners, ("OMNIA") is a national service cooperative created to provide programs and services to members in education and government, and is authorized to establish competitively awarded cooperative purchasing contracts, through a lead agency model, on behalf of itself and its member agencies;

WHEREAS, Gordian and the University of California have entered into a competitively awarded agreement, Contract Number 2021002786 dated January 8, 2021 (the "Master Agreement"), for the purchase of JOC Services;;

WHEREAS, the Master Agreement provides that any OMNIA members may purchase JOC Services directly from Gordian at the prices stated in the Master Agreement;

WHEREAS, the County is an OMNIA member and is authorized to enter into this Agreement;

WHEREAS, the County desires, through this Agreement, to procure certain services set forth in the Master Agreement in accordance with the pricing and other terms set forth in the Master Agreement which is incorporated by reference herein and included as Exhibit B;

WHEREAS, OMNIA members may engage Gordian directly under the Master Agreement;

WHEREAS, the parties intend that this Agreement, including all additional terms stated in this Agreement which are not expressly stated in the Master Agreement, and the Master Agreement serve as the Agreement between the parties; and

WHEREAS, this is a personal service contract within the intent and purview of Section 2206 of the County Charter;

NOW, THEREFORE, in consideration of the promises and mutual covenants contained in this Agreement, the parties agree as follows:

1. Term. This Agreement shall commence upon execution and terminate on January 7, 2026. In addition, at the sole discretion of the Department, this Agreement may be extended beyond the initial termination date to no later than the termination date of the Master Agreement should that contract be extended.

2. Services. (a) The services to be provided by the Contractor under this Agreement shall

consist of the services described in Exhibit A (the “Services”).

(b) The County shall also have certain duties under this Agreement as set forth in Exhibit A.

3. Payment. (a) Amount of Consideration. The maximum amount to be paid to the Contractor as full consideration for the Contractor’s Services, including JOC consulting, under this Agreement shall not exceed the sum of One Million One Hundred Ninety Thousand Dollars (\$1,190,000.00) (the “Maximum Amount”), which shall be payable as set forth in Exhibit A.

(b) Vouchers; Voucher Review, Approval and Audit. Payments shall be made to the Contractor in arrears and shall be contingent upon (i) the Contractor submitting a claim voucher (the “Voucher”) in a form satisfactory to the County, that (a) states with reasonable specificity the services provided and the payment requested as consideration for such services, (b) certifies that the services rendered and the payment requested are in accordance with this Agreement, and (c) is accompanied by documentation satisfactory to the County supporting the amount claimed, and (ii) review, approval and audit of the Voucher by the Department and/or the County Comptroller or his or her duly designated representative (the “Comptroller”).

(c) Timing of Payment Claims. The Contractor shall submit claims no later than three (3) months following the County’s receipt of the services that are the subject of the claim and no more frequently than once a month.

(d) No Duplication of Payments. Payments under this Agreement shall not duplicate payments for any work performed or to be performed under other agreements between the Contractor and any funding source including the County.

(e) Payments in Connection with Termination or Notice of Termination. Unless a provision of this Agreement expressly states otherwise, payments to the Contractor following the termination of this Agreement shall not exceed payments made as consideration for services that were (i) performed prior to termination, (ii) authorized by this Agreement to be performed, and (iii) not performed after the Contractor received notice that the County did not desire to receive such services.

4. Independent Contractor. The Contractor is an independent contractor of the County. The Contractor shall not, nor shall any officer, director, employee, servant, agent or independent contractor of the Contractor (a “Contractor Agent”), be (i) deemed a County employee, (ii) commit the County to any obligation, or (iii) hold itself, himself, or herself out as a County employee or Person with the authority to commit the County to any obligation. As used in this Agreement the word “Person” means any individual person, entity (including partnerships, corporations and limited liability companies), and government or political subdivision thereof (including agencies, bureaus, offices and departments thereof).

5. No Arrears or Default. The Contractor is not in arrears to the County upon any debt or contract and it is not in default as surety, contractor, or otherwise upon any obligation to the County, including any obligation to pay taxes to, or perform services for or on behalf of, the County.

6. Compliance with Law. (a) Generally. The Contractor shall comply with any and all applicable Federal, State and local Laws, including, but not limited to those relating to conflicts of interest, human rights, a living wage, disclosure of information and vendor registration in connection with its performance under this Agreement. In furtherance of the foregoing, the Contractor is bound by and shall comply with the terms of Appendix EE attached hereto and with the County’s registration protocol. As used in this Agreement the word “Law” includes any and all statutes, local laws,

ordinances, rules, regulations, applicable orders, and/or decrees, as the same may be amended from time to time, enacted, or adopted.

(b) Nassau County Living Wage Law. Pursuant to LL 1-2006, as amended, and to the extent that a waiver has not been obtained in accordance with such law or any rules of the County Executive, the Contractor agrees as follows:

- (i) Contractor shall comply with the applicable requirements of the Living Wage Law, as amended;
- (ii) Failure to comply with the Living Wage Law, as amended, may constitute a material breach of this Agreement, the occurrence of which shall be determined solely by the County. Contractor has the right to cure such breach within thirty days of receipt of notice of breach from the County. In the event that such breach is not timely cured, the County may terminate this Agreement as well as exercise any other rights available to the County under applicable law.
- (iii) It shall be a continuing obligation of the Contractor to inform the County of any material changes in the content of its certification of compliance, attached to this Agreement as Appendix L, and shall provide to the County any information necessary to maintain the certification's accuracy.

(c) Records Access. The parties acknowledge and agree that all records, information, and data, including, without limitation, all content in any media or format entered into, stored in, and/or susceptible to retrieval from County's computer systems ("Information"), acquired in connection with performance or administration of this Agreement remains the sole property of the County and shall be used and disclosed solely for the purpose of performance and administration of the Agreement or as required by law. The Contractor acknowledges that Contractor Information in the County's possession may be subject to disclosure under Article 6 of the New York State Public Officer's Law ("Freedom of Information Law" or "FOIL"). In the event that such a request for disclosure is made, the County shall make reasonable efforts to notify the Contractor of such request prior to disclosure of the Information so that the Contractor may take such action as it deems appropriate.

(d) Prohibition of Gifts. In accordance with County Executive Order 2-2018, the Contractor shall not offer, give, or agree to give anything of value to any County employee, agent, consultant, construction manager, or other person or firm representing the County (a "County Representative"), including members of a County Representative's immediate family, in connection with the performance by such County Representative of duties involving transactions with the Contractor on behalf of the County, whether such duties are related to this Agreement or any other County contract or matter. As used herein, "anything of value" shall include, but not be limited to, meals, holiday gifts, holiday baskets, gift cards, tickets to golf outings, tickets to sporting events, currency of any kind, or any other gifts, gratuities, favorable opportunities or preferences. For purposes of this subsection, an immediate family member shall include a spouse, child, parent, or sibling. The Contractor shall include the provisions of this subsection in each subcontract entered into under this Agreement.

(e) Disclosure of Conflicts of Interest. In accordance with County Executive Order 2-2018, the Contractor has disclosed as part of its response to the County's Business History Form, or other disclosure form(s), any and all instances where the Contractor employs any spouse, child, or parent of a County employee of the agency or department that contracted or procured the goods

and/or services described under this Agreement. The Contractor shall have a continuing obligation, as circumstances arise, to update this disclosure throughout the term of this Agreement.

(f) Vendor Code of Ethics. By executing this Agreement, the Contractor hereby certifies and covenants that:

- (i) The Contractor has been provided a copy of the Nassau County Vendor Code of Ethics issued on June 5, 2019, as may be amended from time to time (the "Vendor Code of Ethics"), and will comply with all of its provisions;
- (ii) All of the Contractor's Participating Employees, as such term is defined in the Vendor Code of Ethics (the "Participating Employees"), have been provided a copy of the Vendor Code of Ethics prior to their participation in the underlying procurement;
- (iii) All Participating Employees have completed the acknowledgment required by the Vendor Code of Ethics;
- (iv) The Contractor will retain all of the signed Participating Employee acknowledgements for the period it is required to retain other records pertinent to performance under this Agreement;
- (v) The Contractor will continue to distribute the Vendor Code of Ethics, obtain signed Participating Employee acknowledgments as new Participating Employees are added or changed during the term of this Agreement, and retain such signed acknowledgments for the period the Contractor is required to retain other records pertinent to performance under this Agreement; and
- (vi) The Contractor has obtained the certifications required by the Vendor Code of Ethics from any subcontractors or other lower tier participants who have participated in procurements for work performed under this Agreement.

7. Minimum Service Standards. Regardless of whether required by Law: (a) The Contractor shall, and shall cause Contractor Agents to, conduct its, his or her activities in connection with this Agreement so as not to endanger or harm any Person or property.

(b) The Contractor shall deliver Services under this Agreement in a professional manner consistent with the best practices of the industry in which the Contractor operates. The Contractor shall take all actions necessary or appropriate to meet the obligation described in the immediately preceding sentence, including obtaining and maintaining, and causing all Contractor Agents to obtain and maintain, all approvals, licenses, and certifications ("Approvals") necessary or appropriate in connection with this Agreement.

8. Indemnification; Defense; Cooperation. (a) The Contractor shall be solely responsible for and shall indemnify and hold harmless the County, the Department and its officers, employees, and agents (the "Indemnified Parties") from and against any and all liabilities, losses, costs, expenses (including, without limitation, attorneys' fees and disbursements) and damages ("Losses"), arising out of or in connection with any acts or omissions of the Contractor or a Contractor Agent, regardless of whether due to negligence, fault, or default, including Losses in connection with any threatened investigation, litigation or other proceeding or preparing a defense to or prosecuting the same; provided, however, that the Contractor shall not be responsible for that portion, if any, of a Loss that is caused by the negligence of the County.

(b) The Contractor shall, upon the County's demand and at the County's direction, promptly and diligently defend, at the Contractor's own risk and expense, any and all suits, actions, or proceedings which may be brought or instituted against one or more Indemnified Parties for which

the Contractor is responsible under this Section, and, further to the Contractor's indemnification obligations, the Contractor shall pay and satisfy any judgment, decree, loss or settlement in connection therewith.

(c) The Contractor shall, and shall cause Contractor Agents to, cooperate with the County and the Department in connection with the investigation, defense or prosecution of any action, suit or proceeding in connection with this Agreement, including the acts or omissions of the Contractor and/or a Contractor Agent in connection with this Agreement.

(d) Infringement Indemnification.

- (i) The Contractor shall indemnify, defend and hold the County harmless against any and all Losses arising out of or in connection with any infringement, violation or unauthorized use of any copyright, trade secrets, or trademark, patent or any other property or personal right of any third party by the Contractor and/or its employees, agents, or subcontractors in the performance of this Agreement. As a condition to the foregoing indemnity obligation, the County shall give the Contractor: (A) prompt written notice of any action, claim or threat of infringement suit or other suit; (B) the opportunity to take over, settle or defend such action, claim or suit at the Contractor's sole expense; and (C) assistance in the defense of any such action at the expense of the Contractor.
- (ii) In addition to the foregoing, if the use of any Information is enjoined for any reason or if the Contractor believes that it may be enjoined, the Contractor shall have the right, at its own expense, to take action in the following order of precedence: (A) to procure for the County the right to continue using such Information; (B) to modify the Information so that it becomes non-infringing and of at least equal quality and performance; or (C) to replace said Information with non-infringing deliverable(s), item(s) or part(s) of at least equal quality and performance, or (D) if none of the foregoing is commercially reasonable, then provide monetary compensation to the County up to the dollar amount of the aggregate consideration paid to the Contractor for such Information. The preceding remedies are in addition to and not in lieu of the Contractor's obligation to indemnify and defend the County. Time is of the essence with respect to every provision of this Agreement in which time of performance is a factor.
- (iii) The foregoing provisions shall not apply to any infringement occasioned by modification by the County that is (A) not contemplated by the Contractor; (B) made without the Contractor's approval; or (C) infringement occasioned by County specifications or requirements provided to the Contractor.
- (iv) In the event that an action at law or equity is commenced against the County arising out of a claim that the County's use of Information infringes any patent, copyright or propriety right and the Contractor is of the opinion that the allegations in such action in whole or in part are not covered by the indemnification and defense provisions set forth in this Agreement, the Contractor shall immediately notify the County in writing and shall specify to what extent the Contractor believes it is obligated to defend and indemnify under the terms and conditions of this Agreement.

The Contractor shall in such event protect the interests of the County and secure a continuance to permit the County to appear and defend its interests in cooperation with the Contractor as is appropriate, including any jurisdictional defenses the County may have.

(e) The provisions of this Section shall survive the termination of this Agreement.

9. Insurance. (a) Types and Amounts. The Contractor shall obtain and maintain throughout the term of this Agreement, at its own expense: (i) one or more policies for commercial general liability insurance, which policy(ies) shall cover "Nassau County" as an additional insured and have a minimum single combined limit of liability of not less than One Million Dollars (\$1,000,000.00) per occurrence and Two Million Dollars (\$2,000,000.00) aggregate coverage, (ii) if contracting in whole or part to provide professional services, one or more policies for professional liability insurance, which policy(ies) shall have a minimum single limit liability of not less One Million Dollars (\$1,000,000.00) per claim (iii) compensation insurance for the benefit of the Contractor's employees ("Workers' Compensation Insurance"), which insurance is in compliance with the New York State Workers' Compensation Law, and (iv) such additional insurance as the County may from time to time specify.

(b) Acceptability; Deductibles; Subcontractors. All insurance obtained and maintained by the Contractor pursuant to this Agreement shall be (i) written by one or more commercial insurance carriers licensed to do business in New York State and acceptable to the County, and which is (ii) in form and substance acceptable to the County. The Contractor shall be solely responsible for the payment of all deductibles to which such policies are subject. The Contractor shall require any subcontractor hired in connection with this Agreement to carry insurance with the same limits and provisions required to be carried by the Contractor under this Agreement.

(c) Delivery; Coverage Change; No Inconsistent Action. Prior to the execution of this Agreement, copies of current certificates of insurance evidencing the insurance coverage required by this Agreement shall be delivered to the Department. Not less than thirty (30) days prior to the date of any expiration or renewal of, or actual, proposed or threatened reduction or cancellation of coverage under, any insurance required hereunder, the Contractor shall provide written notice to the Department of the same and deliver to the Department renewal or replacement certificates of insurance. The Contractor shall cause all insurance to remain in full force and effect throughout the term of this Agreement and shall not take or omit to take any action that would suspend or invalidate any of the required coverages. The failure of the Contractor to maintain Workers' Compensation Insurance shall render this contract void and of no effect. The failure of the Contractor to maintain the other required coverages shall be deemed a material breach of this Agreement upon which the County reserves the right to consider this Agreement terminated as of the date of such failure.

10. Assignment; Amendment; Waiver; Subcontracting. This Agreement and the rights and obligations hereunder may not be in whole or part (i) assigned, transferred or disposed of, (ii) amended, (iii) waived, or (iv) subcontracted, without the prior written consent of the County Executive or his or her duly designated deputy (the "County Executive"), and any purported assignment, other disposal or modification without such prior written consent shall be null and void. The failure of a party to assert any of its rights under this Agreement, including the right to demand strict performance, shall not constitute a waiver of such rights.

11. Termination. (a) Generally. This Agreement may be terminated (i) for any reason by the County upon thirty (30) days' written notice to the Contractor, (ii) for "Cause" by the County

immediately upon the receipt by the Contractor of written notice of termination, (iii) upon mutual written Agreement of the County and the Contractor, and (iv) in accordance with any other provisions of this Agreement expressly addressing termination.

As used in this Agreement the word “Cause” includes: (i) a breach of this Agreement; (ii) the failure to obtain and maintain in full force and effect all Approvals required for the services described in this Agreement to be legally and professionally rendered; and (iii) the termination or impending termination of federal or state funding for the services to be provided under this Agreement.

(b) By the Contractor. This Agreement may be terminated by the Contractor if performance becomes impracticable through no fault of the Contractor, where the impracticability relates to the Contractor’s ability to perform its obligations and not to a judgment as to convenience or the desirability of continued performance. Termination under this subsection shall be effected by the Contractor delivering to the commissioner or other head of the Department (the “Commissioner”), at least sixty (60) days prior to the termination date (or a shorter period if sixty days’ notice is impossible), a notice stating (i) that the Contractor is terminating this Agreement in accordance with this subsection, (ii) the date as of which this Agreement will terminate, and (iii) the facts giving rise to the Contractor’s right to terminate under this subsection. A copy of the notice given to the Commissioner shall be given to the Deputy County Executive who oversees the administration of the Department (the “Applicable DCE”) on the same day that notice is given to the Commissioner.

(c) Contractor Assistance upon Termination. In connection with the termination or impending termination of this Agreement the Contractor shall, regardless of the reason for termination, take all actions reasonably requested by the County (including those set forth in other provisions of this Agreement) to assist the County in transitioning the Contractor’s responsibilities under this Agreement. The provisions of this subsection shall survive the termination of this Agreement.

12. Accounting Procedures; Records. The Contractor shall maintain and retain, for a period of six (6) years following the later of termination of or final payment under this Agreement, complete and accurate records, documents, accounts and other evidence, whether maintained electronically or manually (“Records”), pertinent to performance under this Agreement. Records shall be maintained in accordance with Generally Accepted Accounting Principles and, if the Contractor is a non-profit entity, must comply with the accounting guidelines set forth in the applicable provisions of the Code of Federal Regulations, 2 C.F.R. Part 200, as may be amended. Such Records shall at all times be available for audit and inspection by the Comptroller, the Department, any other governmental authority with jurisdiction over the provision of services hereunder and/or the payment therefore, and any of their duly designated representatives. The provisions of this Section shall survive the termination of this Agreement.

13. Limitations on Actions and Special Proceedings against the County. No action or special proceeding shall lie or be prosecuted or maintained against the County upon any claims arising out of or in connection with this Agreement unless:

(a) Notice. At least thirty (30) days prior to seeking relief the Contractor shall have presented the demand or claim(s) upon which such action or special proceeding is based in writing to the Applicable DCE for adjustment and the County shall have neglected or refused to make an adjustment or payment on the demand or claim for thirty (30) days after presentment. The Contractor shall send or deliver copies of the documents presented to the Applicable DCE under this Section to each of (i) the Department and the (ii) the County Attorney (at the address specified above for the County) on the same day that documents are sent or delivered to the Applicable DCE. The complaint or necessary moving



papers of the Contractor shall allege that the above-described actions and inactions preceded the Contractor's action or special proceeding against the County.

(b) Time Limitation. Such action or special proceeding is commenced within the earlier of (i) one (1) year of the first to occur of (A) final payment under or the termination of this Agreement, and (B) the accrual of the cause of action, and (ii) the time specified in any other provision of this Agreement.

14. Work Performance Liability. The Contractor is and shall remain primarily liable for the successful completion of all work in accordance this Agreement irrespective of whether the Contractor is using a Contractor Agent to perform some or all of the work contemplated by this Agreement, and irrespective of whether the use of such Contractor Agent has been approved by the County.

15. Consent to Jurisdiction and Venue; Governing Law. Unless otherwise specified in this Agreement or required by Law, exclusive original jurisdiction for all claims or actions with respect to this Agreement shall be in the Supreme Court in Nassau County in New York State and the parties expressly waive any objections to the same on any grounds, including venue and forum non conveniens. This Agreement is intended as a contract under, and shall be governed and construed in accordance with, the Laws of New York State, without regard to the conflict of laws provisions thereof.

16. Notices. Any notice, request, demand or other communication required to be given or made in connection with this Agreement shall be (a) in writing, (b) delivered or sent (i) by hand delivery, evidenced by a signed, dated receipt, (ii) postage prepaid via certified mail, return receipt requested, or (iii) overnight delivery via a nationally recognized courier service, (c) deemed given or made on the date the delivery receipt was signed by a County employee, three (3) business days after it is mailed or one (1) business day after it is released to a courier service, as applicable, and (d)(i) if to the Department, to the attention of the Commissioner at the address specified above for the Department, (ii) if to an Applicable DCE, to the attention of the Applicable DCE (whose name the Contractor shall obtain from the Department) at the address specified above for the County, (iii) if to the Comptroller, to the attention of the Comptroller at 240 Old Country Road, Mineola, NY 11501, and (iv) if to the Contractor, to the attention of the person who executed this Agreement on behalf of the Contractor at the address specified above for the Contractor, or in each case to such other persons or addresses as shall be designated by written notice.

17. All Legal Provisions Deemed Included; Severability; Supremacy. (a) Every provision required by Law to be inserted into or referenced by this Agreement is intended to be a part of this Agreement. If any such provision is not inserted or referenced or is not inserted or referenced in correct form then (i) such provision shall be deemed inserted into or referenced by this Agreement for purposes of interpretation and (ii) upon the application of either party this Agreement shall be formally amended to comply strictly with the Law, without prejudice to the rights of either party.

(b) In the event that any provision of this Agreement shall be held to be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

(c) Unless the application of this subsection will cause a provision required by Law to be excluded from this Agreement, in the event of an actual conflict between the terms and conditions set forth above the signature page to this Agreement and those contained in any schedule, exhibit, appendix, or attachment to this Agreement, the following order of priority shall apply, starting with first priority and ending with last priority:

- A. Exhibit A, Section IV (JOC System License)
- B. Terms and conditions set forth above the signature page of this Agreement;
- C. Appendix EE: Equal Employment Opportunities for Minorities and Women; and Appendix L: Certificate of Compliance (Nassau County Living Wage Law);
- D. Exhibit A (except for Section IV); and
- E. Exhibit B.

To the extent possible, all the terms of this Agreement should be read together as not conflicting.

(d) Each party has cooperated in the negotiation and preparation of this Agreement. Therefore, in the event that construction of this Agreement occurs, it shall not be construed against either party as drafter.

18. Section and Other Headings. The section and other headings contained in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Agreement.

19. Administrative Service Charge. The Contractor agrees to pay the County an administrative service charge of Five Hundred Thirty-Three Dollars (\$533.00) for the processing of this Agreement pursuant to Ordinance Number 74-1979, as amended by Ordinance Numbers 201-2001, 128-2006, and 153-2018. The administrative service charge shall be due and payable to the County by the Contractor upon signing this Agreement.

20. Executory Clause. Notwithstanding any other provision of this Agreement:

(a) Approval and Execution. The County shall have no liability under this Agreement (including any extension or other modification of this Agreement) to any Person unless (i) all County approvals, third party approvals and other governmental approvals have been obtained, including, if required, approval by the County Legislature, and (ii) this Agreement has been executed by the County Executive (as defined in this Agreement).

(b) Availability of Funds. The County shall have no liability under this Agreement (including any extension or other modification of this Agreement) to any Person beyond funds appropriated or otherwise lawfully available for this Agreement, and, if any portion of the funds for this Agreement are from the state and/or federal governments, then beyond funds available to the County from the state and/or federal governments.

21. Intellectual Property. The County right to access and use the Contractor's Gordian's Job Order Contracting System and other related proprietary materials (collectively referred to as "Proprietary Information") shall be governed by the license terms set forth in in Exhibit A.

22. Entire Agreement. This Agreement represents the full and entire understanding and agreement between the parties with regard to the subject matter hereof and supersedes all prior agreements (whether written or oral) of the parties relating to the subject matter of this Agreement.

[Remainder of Page Intentionally Left Blank.]

IN WITNESS WHEREOF, the Contractor and the County have executed this Agreement as of the Effective Date.

THE GORDIAN GROUP, INC.

By: Ammon T. Leher  
Name: Ammon T. Leher  
Title: Vice President  
Date: 8/19/21

NASSAU COUNTY

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: County Executive  
☐ Deputy County Executive  
Date: \_\_\_\_\_

PLEASE EXECUTE IN BLUE INK

STATE OF SOUTH CAROLINA)

)ss.:

COUNTY OF GREENVILLE)

On the 19<sup>th</sup> day of August in the year 2021 before me personally came Armon T. Leshner to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of Greenville; that he or she is the Vice President of The Gordian Group, Inc., the corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto by authority of the board of directors of said corporation.

NOTARY PUBLIC

Clarice M. Byrd  
My commission expires July 23, 2029



STATE OF NEW YORK)

)ss.:

COUNTY OF NASSAU )

On the \_\_\_\_\_ day of \_\_\_\_\_ in the year 20\_\_ before me personally came \_\_\_\_\_ to me personally known, who, being by me duly sworn, did depose and say that he or she resides in the County of \_\_\_\_\_; that he or she is the County Executive of the County of Nassau, the municipal corporation described herein and which executed the above instrument; and that he or she signed his or her name thereto pursuant to Section 205 of the County Government Law of Nassau County.

NOTARY PUBLIC

## EXHIBIT A

### I. GORDIAN'S DUTIES AND RESPONSIBILITIES

Gordian will perform the following duties and responsibilities specified in the Master Agreement for the development, implementation and ongoing support of a JOC program for the County, including the provision of the optional services as set forth below:

#### A. REQUIRED SERVICES

1. **Program Development, Implementation and Support:** Gordian shall be responsible for the development, implementation, and on-going support of the County's customized JOC program.
2. **Contract Documents:** Gordian shall be responsible for preparing the JOC documents that will be used by the County to procure the JOC construction contractors including:
  - a) **Unit Price Book(s):** Gordian shall prepare one or more customized Unit Price Books (also known as a Construction Task Catalog®) containing prices covering material, equipment and labor costs for various units of construction, and adjusting these costs to current market conditions. Local prevailing wages and local material and equipment costs (obtained directly from local, contractors, subcontractors and suppliers) shall be used when applicable to the construction task pricing. Unit prices for demolition shall be provided for each construction task when applicable; and
  - b) **Technical Specifications:** Gordian shall prepare and publish Technical Specifications describing the materials, performance, and installation requirements for each of the construction tasks listed in the unit price book. Where available, the County standard specifications shall be incorporated into the Technical Specifications; and
  - c) **Contractual Terms and Conditions and Bid Forms:** Gordian shall prepare, in conjunction with the County staff, contractual terms and conditions and bid forms which incorporate JOC language and forms with all appropriate County contract language and forms, including, but not limited to, requirements related to: apprenticeship training programs; certified payroll; prevailing wage; living wage; Wicks Law; subcontractor utilization; minority and women owned business utilization; procurement compliance disclosure forms; code of ethics; insurance; bonds; reducing emissions of pollutants from diesel fuel-powered motor vehicles; Iran Divestment Act Certification; and MacBride Fair Employment Principles Certification.
3. **Information Management System:** Gordian shall be responsible for providing the County with a comprehensive web-based JOC Information Management System (hereinafter referred to as "IMS") for an unlimited number of County users. The JOC IMS must be capable of providing full project tracking, developing cost proposals, preparing independent County estimates, generating all project documentation, providing project scheduling, budgeting and cost control,

tracking MBE participation, and generating customized reports. Gordian must incorporate any current County forms and documentation into the IMS; and

4. **Procurement Support:** Gordian shall be responsible for providing the County with procurement support to market the County JOC Program to potential JOC Contractor's. Gordian shall organize and conduct pre-bid meetings with the interested bidders as well as make presentations on behalf of the County with prospective bidders. Gordian's staff assigned to perform procurement support must have JOC procurement experience; and
5. **Training Programs:** Gordian shall be responsible for developing and conducting all training programs for the County and JOC Contractor staff to ensure that the JOC program functions properly. The training programs will include specialized training courses that will involve all County staff and JOC contractors utilizing and administering the JOC program. The training programs will include training on the use of the JOC IMS. All training will be "hands on" with user competency as the objective. Actual County projects that the County plans to perform through JOC may be included in the training programs; and
6. **Job Order Development:** Gordian will perform the following Job Order Development services for the County:
  - a) **Project Identification:** When a project is identified and requested by the County, Gordian will contact the County and assist with determining whether the project is appropriate for JOC.
  - b) **Contractor Identification:** In the event the County has multiple JOC Contractors, Gordian will assist the County in identifying the appropriate JOC Contractor for the project based on factors which include, but are not limited to, the type of work involved and the location of the project.
  - c) **Joint Scope Meeting:** The Gordian's project manager will schedule a Joint Scope Meeting at the project site to help the County and the JOC Contractor agree on the details of the work that the JOC Contractor will perform. The purpose of the scoping process is to allow the JOC Contractor an opportunity to inspect the site and ask questions before submitting a Price Proposal. The goals of this process are to foster open communication, reduce misunderstandings and mistakes that lead to change orders, and provide results that are more cost-effective and collaborative.
  - d) **Develop Detailed Scope of Work:** Gordian will assist in preparing a Detailed Scope of Work that describes the work the JOC Contractor will perform. Gordian will also assist with resolving issues when project plans and actual conditions vary.
  - e) **Request for Price Proposal:** After all parties are in agreement that the Detailed Scope of Work properly reflects the work to be performed, Gordian's project manager will send the Detailed Scope of Work and a Request for Proposal to the JOC Contractor.

- f) **Request Price Proposal:** As the next step in the process, the JOC Contractor prepares and submits a Price Proposal by selecting the appropriate tasks from the Unit Price Book. Gordian's IMS will automatically multiply the unit price of the task by the required quantities by the JOC Contractor's competitively bid Adjustment Factor. Gordian shall also request the JOC Contractor's preparation of any additional County required information (e.g., construction schedule, list of proposed local subcontractors, etc.).
  - g) **Price Proposal Review:** Gordian's project manager will review the Price Proposal to make sure the JOC Contractor has selected the appropriate tasks and quantities and will ask the JOC Contractor to make any required changes. Gordian will also obtain and review any County required information submitted by the JOC Contractor such as a construction schedule and list of proposed subcontractors. Gordian's project manager will submit the Price Proposal and related documents to the County.
  - h) **Issue Job Order:** Once the County approves the Price Proposal and related documents, and decides to move forward with the project, the County is then responsible for the issuance of a job order (which may be in the form of a work order) to the selected JOC Contractor.
  - i) **Construction Management:** During construction, the County's project managers will follow its standard internal policies and procedures for construction management and site inspections, including coordinating any required code inspections. When unforeseen conditions arise or the County desires to change the Detailed Scope of Work, a supplemental Job Order is developed in the same manner as the original Job Order.
7. **On-Going Technical Support:** Gordian shall be responsible for providing extensive on-going technical support to the County during normal business hours, excluding holidays. On-going technical support shall include providing updated contract documents, assisting with the procurement of additional JOC Contractors, providing County with access to all applicable updates and revisions to the IMS, and providing training for new County staff and JOC Contractors during the term of the Agreement. Providing on-going technical support is considered a vital component to ensuring a successful County JOC program.

## **B. OPTIONAL SERVICES**

- 1. **Project Management Services:** Gordian shall, upon request from the County at its sole discretion, provide project management services as set forth below:
  - a) **Preconstruction** – Gordian's project manager will assist the County in determining whether professional design services are required and conduct a pre-construction meeting with the County's representative(s), the JOC contractor and, if applicable, the architect or engineer to review the basic project parameters and funding. Where design services are required, the project manager will work with the architects or engineers to coordinate necessary studies and design standards, and deliver plans and specifications that maximize

the benefits of JOC for each County project. Next, the project manager will coordinate and share any preconstruction information with the County, the JOC contractor and other appropriate parties, and will assist in the coordination of the JOC contractor obtaining the necessary permits.

- b) **Site Visit** – During construction, Gordian’s project manager will monitor the JOC contractor's work in-progress, manage the JOC contractor's compliance with the approved safety plan and complete a report for each site visit.
- c) **Communication** – Gordian’s project manager will provide weekly construction status reports to the County, conduct project progress meetings with the JOC contractor and staff on a periodic basis, and coordinate any required technical and code inspections.
- d) **Supplemental Job Orders** – In the event there are unforeseen conditions or the County requests changes to the Detailed Scope of Work after construction has begun, Gordian’s project manager will analyze and process a supplemental Job Order by utilizing the procedures to develop the initial Job Order.
- e) **Approvals** – Gordian’s project manager will review and recommend for approval, or direct necessary revisions to, the JOC contractor’s applications for payment and obtain the County’s approval of the work. Final acceptance of the work will be the responsibility of the County. Technical and code inspections will be the responsibility of the appropriate inspection agencies.
- f) **Project Close-out** – As the final step in the process, Gordian’s project manager will enter all Job Order related information into the IMS and collect any required as-builts, warranties and OEMs from the JOC contractor.

## C. ADDITIONAL SERVICES

Gordian will provide to the County at the County’s request any of the Additional Services set forth in the Master Agreement for the same terms and conditions set forth therein.

## II. THE COUNTY’S DUTIES AND RESPONSIBILITIES

The County will assume the following duties and responsibilities:

1. The County shall review all documentation and requests for information submitted by Gordian in a timely manner.
2. The County shall provide full information regarding requirements for the JOC program, including but not limited to, facilities lists, current County procedures, programs, technical specifications and bidding information.



3. The County shall designate, in writing, a representative who shall render or obtain decisions pertaining to the JOC program in a timely manner.
4. The County shall provide work space and access to the Internet, copiers, printers, facsimile machines, and local telephone service for use by Gordian's on-site staff.
5. The County shall be responsible for reproduction of the Construction Task Catalog®, Technical Specifications, Contract and General Conditions, Instructions to Bidders and Bid Forms, including the bid packages distributed to construction contractors.

### **III. FEES**

1. For all purchases of Required Services made under the JOC program by the County, Gordian shall collect from the JOC contractor a License Fee of Six and Twenty-Five Hundredths Percent (6.25%) of the value of work ordered. The License Fee shall be incorporated into the JOC contractor's adjustment factor and Gordian will collect the applicable fees from the JOC contractor.
2. In consideration for the Project Management Services set forth in Section I(B), Paragraph 1, to be provided on a project-by-project basis, and only upon request from the County, Gordian shall be paid the following Project Management Fee, in addition to the applicable fees set forth above, according to the following schedule:

Project Management Fee: The County shall pay Gordian a Project Management Fee of Five and Ninety-Five Hundredths Percent (5.95%) of the value of the construction work ordered.

The Project Management Fee shall be payable when construction of a Job Order has been completed and accepted by the County, except at the election of Gordian, the fee for Job Orders requiring more than 60 days to complete shall be payable monthly on a percentage of completion basis.

### **IV. JOC SYSTEM LICENSE**

Gordian hereby grants to the County, and the County hereby accepts from Gordian for the term of this Agreement, a non-exclusive right, privilege and license to Gordian's Job Order Contracting System and other related proprietary materials (collectively referred to as "Proprietary Information") to be used for the sole purpose of operating the County's Job Order Contracting program. The parties hereby agree that Proprietary Information shall include, but is not limited to, the JOC Information Management System (as defined below) applications and support documentation, Construction Task Catalog® (also commonly referred to as a unit price book), construction cost data, training materials and other proprietary materials provided by Gordian. In the event this Agreement expires or terminates as provided herein, this JOC System License shall terminate and the County shall return to Gordian all

Proprietary Information in the County's possession, except that the County shall be permitted to retain a copy of the Construction Task Catalog® for archival purposes as required by the County's record retention policies.

The County acknowledges that disclosure of Proprietary Information will result in irreparable harm to Gordian for which monetary damages would be an inadequate remedy and agrees that no such disclosure shall be made to anyone without first receiving the written consent of Gordian. The County further acknowledges and agrees to respect the copyrights, registrations, trade secrets and other proprietary rights of Gordian in the Proprietary Information during and after the term of this Agreement and shall at all times maintain complete confidentiality with regard to the Proprietary Information provided to the County, subject to federal and state laws related to public records disclosure or such other legal obligations that may require disclosure.

Upon expiration or termination of this Agreement as provided herein, Gordian shall provide to the County all project data generated by the County in a form accessible by a standard database program, such as Microsoft® Access®.

Gordian agrees to grant a license to each contractor that is awarded a JOC contract by the County, provided the JOC contractor agrees to pay Gordian's contractor license fee in effect when the County awards the contract, and provided the County includes licensing language in the JOC contract similar in form to this JOC System License.

In the event of a conflict in terms and conditions between this JOC System License and any other terms and conditions of this Agreement or similar purchasing document issued by the County pursuant to this Agreement, this JOC System License shall take precedence.

## **EXHIBIT B**

### **Master Agreement**



The Agreement to furnish certain goods and services described herein and in the documents referenced herein ("Goods and/or Services") is made by and between The Regents of the University of California, a California public corporation ("UC") on behalf of the University of California, and the supplier named below ("Supplier"). This Agreement is binding only if it is negotiated and executed by an authorized representative with the proper delegation of authority.

## **1. Statement of Work**

Supplier agrees to perform the Services listed in the statement of work attached as Attachment A ("Statement of Work") and any other documents referenced in the Incorporated Documents section herein, at the prices set forth in the Statement of Work and any other documents referenced in the Incorporated Documents section herein. Unless otherwise provided in the Agreement, UC will not be obligated to purchase a minimum amount of Goods and/or Services from Supplier.

## **2. Term of Agreement/Termination**

- a) The initial term of the Agreement will be from **January 8, 2021** and through **January 7, 2026** (Initial Term) and is subject to earlier termination as provided below. UC may renew the Agreement for **five** successive **one** - year periods (each, a Renewal Term), by providing Supplier with at least **30** calendar days' written notice before the end of the Initial Term or any Renewal Term.
- b) UC may terminate the Agreement for convenience by giving Supplier at least **30** calendar days' written notice.
- c) UC or Supplier may terminate the Agreement for cause by giving the other party at least **30** days' notice to cure a breach of the Agreement (Cure Period). If the breaching party fails to cure the breach within the Cure Period, the non-breaching party may immediately terminate the Agreement.

## **3. Purchase Order; Advance Payments**

Unless otherwise provided in the Agreement, Supplier may not begin providing Goods and/or Services until UC approves a Purchase Order for the Goods and/or Services.

## **4. Pricing, Invoicing Method, and Settlement Method and Terms**

Refer to Statement of Work or Purchase Order for Pricing. For system-wide agreements, each UC Location will specify the Invoicing Method and Payment Options that will apply, taking into account the operational capabilities of Supplier and the UC Location. See UC's Procure to Pay Standards <http://www.ucop.edu/procurement-services/files/Matrix%20for%20website.pdf> for the options that will be considered. In the case of systemwide agreements, each UC Location will specify these terms in a Statement of Work or Purchase Order, as the case may be.]

For non-systemwide agreements, the Invoicing Method, and Settlement Method and Terms are addressed below.

Invoicing Method

Notwithstanding the provisions of Article 3 of the Terms and Conditions of Purchase, Supplier will be required to use the following Invoicing Method:

All invoices must clearly indicate the following information:

- California sales tax as a separate line item;
- Shipping costs as a separate line item;
- UC Purchase Order or Release Number;
- Description, quantity, catalog number and manufacturer number of the item ordered;
- Net cost of each item;
- Any pay/earned/dynamic discount;
- Reference to original order number for all credit memos issued;

Supplier will submit invoices following the designated invoice method directly to UC Accounts Payable Departments at each UC Location, unless UC notifies the Supplier otherwise by amendment to the Agreement.

## 5. Notices

As provided in the UC Terms and Conditions of Purchase, notices may be given by email, which will be considered legal notice only if such communications include the following text in the Subject field: FORMAL LEGAL NOTICE – [insert, as the case may be, Supplier name or University of California]. If a physical format notice is required, it must be sent by overnight delivery or by certified mail with return receipt requested, at the addresses specified below.

To UC, regarding confirmed or suspected Breaches as defined under Appendix – Data Security:

<b>Name</b>	David Rusting, Chief Information Security Officer
<b>Phone</b>	510-987-0086
<b>Email</b>	<a href="mailto:David.Rusting@ucop.edu">David.Rusting@ucop.edu</a>
<b>Address</b>	1111 Franklin St.
	Oakland, CA 94607

To UC, regarding Breaches or Security Incidents as defined under Appendix – Business Associate:

<b>Name</b>	Roslyn Martorano
<b>Phone</b>	510-987-0564
<b>Email</b>	<a href="mailto:Roslyn.Martorano@ucop.edu">Roslyn.Martorano@ucop.edu</a>
<b>Address</b>	1111 Franklin St.
	Oakland, CA 94607

To UC, regarding contract issues not addressed above:

<b>Name</b>	Sean Parker
<b>Phone</b>	805-451-1545
<b>Email</b>	<a href="mailto:Sean.Parker@ucop.edu">Sean.Parker@ucop.edu</a>
<b>Address</b>	1111 Franklin St.
	Oakland, CA 94607

To Supplier:

<b>Name</b>	Ammon Leshner
<b>Phone</b>	864-752-4545
<b>Email</b>	A.Leshner@gordian.com
<b>Address</b>	30 Patewood Drive, Suite 350
	Greenville, SC 29615

## 6. Intellectual Property, Copyright and Patents

☐ The Goods and/or Services involve Work Made for Hire

☒ The Goods and/or Services **do not** involve Work Made for Hire

## 7. Patient Protection and Affordable Care Act (PPACA)

☐ Because the Services involve temporary or supplementary staffing, they are subject to the PPACA warranties in the T&Cs.

☒ The Services do not involve temporary or supplementary staffing, and they are not subject to the PPACA warranties in the T&Cs.

## 8. Prevailing Wages

☒ Supplier is not required to pay prevailing wages when providing the Services.

## 9. Fair Wage/Fair Work

☐ Supplier is not required to pay the UC Fair Wage (defined as \$13 per hour as of 10/1/15, \$14 per hour as of 10/1/16, and \$15 per hour as of 10/1/17) when providing the Services.

## 10. Federally Funded Contracts, Grants, and Cooperative Agreements

Not Applicable

## 11. Restriction Relating to Consulting Services or Similar Contracts – Follow-on Contracts

Please note a Supplier that is awarded a consulting services or similar contract cannot later submit a bid or be considered for

any work “required, suggested, or otherwise deemed appropriate” as the end product of the Services (see Public Contract Code Section 10515).

## **12. Insurance**

Deliver the PDF version of the Certificate of Insurance to UC’s Buyer, by email with the following text in the Subject field: CERTIFICATE OF INSURANCE – **Gordian Group Inc.**

## **13. Service-Specific and/or Goods-Specific Provisions**

Not Applicable

## **14. Records about Individuals**

Records created pursuant to the Agreement that contain personal information about individuals (including statements made by or about individuals) may become subject to the California Information Practices Act of 1977, which includes a right of access by the subject individual. While ownership of confidential or personal information about individuals is subject to negotiated agreement between UC and Supplier, records will normally become UC’s property, and subject to state law and UC policies governing privacy and access to files. When collecting the information, Supplier must inform the individual that the record is being made, and the purpose of the record. Use of recording devices in discussions with employees is permitted only as specified in the Statement of Work.

## **15. Amendments to UC Terms and Conditions of Purchase**

ARTICLE 7 – INTELLECTUAL PROPERTY, COPYRIGHT, PATENTS, AND DATA RIGHTS Section 7.B.1 includes additional language as follows:

“This provision shall not apply to any of the Goods and/or Services classified as Proprietary Information as set forth and defined in the JOC System License contained herein. The access, use and ownership of the Proprietary Information shall be exclusively governed by the terms of the JOC System License.”

## **16. Amendments to Appendix – Data Security**

Not Applicable

## **17. Amendments to Appendix – Business Associate**

Not Applicable

## **18. Not Used**

## **19. Incorporated Documents**

This Agreement and its Incorporated Documents contain the entire agreement between the Parties, in order of the below precedent, concerning its subject matter and shall supersede all prior or other agreements, oral and written declarations of intent and other legal arrangements (whether binding or non-binding) made by the Parties in respect thereof.

- a. Gordian Group Inc. JOC Purchasing Agreement 2021002786

- b. UC Terms and Conditions of Purchase - UC Required Terms Gordian Revisions
- c. UC Appendix – Data Security
- d. UC Appendix - Business Associate (HIPAA)
- e. Statement of Work – Attachment A
- f. Gordian Pricing
- g. Gordian UC Pricing
- h. Gordian JOC System License
- i. Gordian Value Add Planning Solutions Summary
- j. Gordian ROPA Physical Assets Solution
- k. Gordian Sightlines Strategic Capital Planning
- l. Gordian Sightlines Space Utilization
- m. Gordian Sightlines Sustainability Solutions


## 20. Entire Agreement

The Agreement and its Incorporated Documents contain the entire Agreement between the parties and supersede all prior written or oral agreements with respect to the subject matter herein.

**This Agreement can only be signed by an authorized representative with the proper delegation of authority.**

**THE REGENTS OF THE  
UNIVERSITY OF CALIFORNIA**

DocuSigned by:

  
(Signature)


Lauren Friedman, Director, Design & Construction, Capital Programs

(Printed Name, Title)

1/8/2021

(Date)

**Gordian Group Inc.**

  
(Signature)

Ammon T. Leshner

(Printed Name, Title)

01/05/2021

(Date)





## ARTICLE 1 – GENERAL

The equipment, materials, or supplies ("Goods") and/or services ("Services") furnished by Supplier (together, the "Goods and Services") and covered by the UC Purchase Order ("PO") and/or other agreement (which, when combined with these Terms and Conditions and any other documents incorporated by reference, will constitute the "Agreement") are governed by the terms and conditions set forth herein. As used herein, the term "Supplier" includes Supplier and its sub-suppliers at any tier. As used herein, "UC" refers to The Regents of the University of California, a corporation described in California Constitution Art. IX, Sec. 9, on behalf of the UC Locations identified in the Agreement and/or the PO. UC and Supplier individually will be referred to as "Party" and collectively as "Parties." Any defined terms not defined in these Terms and Conditions of Purchase will have the meaning ascribed to such term in any of the other documents incorporated in and constituting the Agreement. No other terms or conditions will be binding upon the Parties unless accepted by them in writing. Written acceptance or shipment of all or any portion of the Goods, or the performance of all or any portion of the Services, covered by the Agreement, will constitute Supplier's unqualified acceptance of all of the Agreement's terms and conditions. The terms of any proposal referred to in the Agreement are included and made a part of the Agreement only to the extent the proposal specifies the Goods and/or Services ordered, the price therefor, and the delivery thereof, and then only to the extent that such terms are consistent with the terms and conditions of the Agreement.

## ARTICLE 2 – TERM AND TERMINATION

- A. As applicable, the term of the Agreement ("Initial Term") will be stated in the Agreement. Following the Initial Term, the Agreement may be extended by written mutual agreement.
- B. UC's obligation to proceed is conditioned upon the appropriation of state, federal and other sources of funds not controlled by UC ("Funding"). UC will have the right to terminate the Agreement without damage, penalty, cost or further obligation in the event that through no action or inaction on the part of UC, the Funding is withdrawn.
- C. UC may, by written notice stating the extent and effective date thereof, terminate the Agreement for convenience in whole or in part, at any time. The effective date of such termination shall be consistent with any requirements for providing notice specified in the Agreement, or immediate if no such terms are set forth in the Agreement. As specified in the termination notice, UC will pay Supplier as full compensation the pro rata Agreement price for performance through the later of the date that (i) UC provided Supplier with notice of termination or (ii) Supplier's provision of Goods and/or Services will terminate.
- D. UC may by written notice terminate the Agreement for Supplier's breach of the Agreement, in whole or in part, at any time, if Supplier refuses or fails to comply with the provisions of the Agreement, or so fails to make progress as to endanger performance and does not cure such failure within five (5) business days, or fails to supply the Goods and/or Services within the time specified or any written extension thereof. In such event, UC may purchase or otherwise secure Goods and/or Services and, except as otherwise provided herein, Supplier will be liable to UC for any excess costs UC incurs thereby.
- E. UC's Appendix – Data Security, Appendix – BAA, and/or Appendix – GDPR will control in the event that one or more appendices are incorporated into the Agreement and conflicts with the provisions of this Article.

## ARTICLE 3 – PRICING, INVOICING METHOD, AND SETTLEMENT METHOD AND TERMS.

Pricing is set forth in the Agreement or Purchase Order, and the amount UC is charged and responsible for shall not exceed the amount specified in the Agreement unless UC has given prior written approval. Unless otherwise agreed in writing by UC, Supplier will use the invoicing method and payment settlement method (and will extend the terms applicable to such settlement method) set forth in UC's Supplier Invoicing, Terms & Settlement Matrix. UC will pay Supplier, upon submission of acceptable invoices, for Goods and/or Services provided and accepted. Invoices must be itemized and reference the Agreement or Purchase Order number. UC will not pay shipping, packaging or handling expenses, unless specified in the Agreement or Purchase Order. Unless otherwise provided, freight is to be FOB destination. Any of Supplier's expenses that UC agrees to reimburse will be reimbursed under UC's Travel Policy, which may be found at <http://www.ucop.edu/central-travel-management/resources/index.html>. Where applicable, Supplier will pay all taxes imposed on Supplier in connection with its performance under the Agreement, including any federal, state and local income, sales, use, excise and other taxes or assessments. Notwithstanding any other provision to the contrary, UC will not be responsible for any fees, interest or surcharges Supplier wishes to impose.



#### ARTICLE 4 – INSPECTION.

The Goods and/or Services furnished will be exactly as specified in the Agreement, free from all defects in Supplier's performance, design, skill and materials, and, except as otherwise provided in the Agreement, will be subject to inspection and test by UC at all times and places. If, prior to final acceptance, any Goods and/or Services furnished are found to be incomplete, or not as specified, UC may reject them, require Supplier to correct them at the sole cost of Supplier, or require provision of such Goods and/or Services at a reduction in price that is equitable under the circumstances. If Supplier is unable or refuses to correct such deficiencies within a time UC deems reasonable, UC may terminate the Agreement in whole or in part. Supplier will bear all risks as to rejected Goods and/or Services and, in addition to any costs for which Supplier may become liable to UC under other provisions of the Agreement, will reimburse UC for all transportation costs, other related costs incurred, or payments to Supplier in accordance with the terms of the Agreement for unaccepted Goods and/or Services and materials and supplies incidental thereto. Notwithstanding final acceptance and payment, Supplier will be liable for latent defects, fraud or such gross mistakes as amount to fraud.

#### ARTICLE 5 – ASSIGNED PERSONNEL; CHARACTER OF SERVICES

Supplier will provide the Services as an independent contractor and furnish all equipment, personnel and materiel sufficient to provide the Services expeditiously and efficiently, during as many hours per shift and shifts per week, and at such locations as UC may so require. Supplier will devote only its best-qualified personnel to work under the Agreement. Should UC inform Supplier that anyone providing the Services is not working to this standard, Supplier will immediately remove such personnel from providing Services and he or she will not Oagain, without UC's written permission, be assigned to provide Services. At no time will Supplier or Supplier's employees, sub-suppliers, agents, or assigns be considered employees of UC for any purpose, including but not limited to workers' compensation provisions. Supplier shall not have the power nor right to bind or obligate UC, and Supplier shall not hold itself out as having such authority. Supplier shall be responsible to UC for all Services performed by Supplier's employees, agents and subcontractors, including being responsible for ensuring payment of all unemployment, social security, payroll, contributions and other taxes with respect to such employees, agents and subcontractors.

#### ARTICLE 6 – WARRANTIES

In addition to the warranties set forth in Articles 11, 12, 17, 23, 24, 25 and 26 herein, Supplier makes the following warranties. Supplier acknowledges that failure to comply with any of the warranties in the Agreement will constitute a material breach of the Agreement and UC will have the right to terminate the Agreement without damage, penalty, cost or further obligation.

- A. General Warranties. Supplier represents, warrants and covenants that: (i) Supplier is free to enter into this Agreement and that Supplier is not, and will not become, during the Term, subject to any restrictions that might restrict or prohibit Supplier from performing the Services or providing the Goods ordered hereunder; (ii) Supplier will comply with all applicable laws, rules and regulations in performing Supplier's obligations hereunder; (iii) the Goods and/or Services shall be rendered with promptness and diligence and shall be executed in a skilled manner by competent personnel, in accordance with the prevailing industry standards; and if UC Appendix Data Security is NOT included:(iv) Supplier has developed a business interruption and disaster recovery program and is executing such program to assess and reduce the extent to which Supplier's hardware, software and embedded systems may be susceptible to errors or failures in various crisis (or force majeure) situations; (v) if Supplier uses electronic systems for creating, modifying, maintaining, archiving, retrieving or transmitting any records, including test results that are required by, or subject to inspection by an applicable regulatory authority, then Supplier represents and warrants that Supplier's systems for electronic records are in compliance; and (vi) Supplier agrees that the Goods and/or Services furnished under the Agreement will be covered by the most favorable warranties Supplier gives to any customer for the same or substantially similar goods or services, or such other more favorable warranties as specified in the Agreement. The rights and remedies so provided are in addition to and do not limit any rights afforded to UC by any other article of the Agreement.
- B. Permits and Licenses. Supplier agrees to procure all necessary permits or licenses and abide by all applicable laws, regulations and ordinances of the United States and of the state, territory and political subdivision or any other country in which the Goods and/or Services are provided.
- C. Federal and State Water and Air Pollution Laws. Where applicable, Supplier warrants that it complies with the requirements in UC Business and Finance Bulletin BUS-56 (Materiel Management; Purchases from Entities Violating State or Federal Water or Air Pollution



Laws). Consistent with California Government Code 4477, these requirements do not permit UC to contract with entities in violation of Federal or State water or air pollution laws.

- D. Web Accessibility Requirements. As applicable to the Supplies and/or Services being provided under the Agreement, Supplier warrants that:
1. It complies with California and federal disability laws and regulations; and
  2. The Goods and/or Services will conform to the accessibility requirements of WCAG 2.0AA.
  3. Supplier agrees to promptly respond to and resolve any complaint regarding accessibility of its Goods and/or Services;
- E. General Accessibility Requirements. Supplier warrants that:
1. It will comply with California and federal disability laws and regulations;
  2. Supplier will promptly respond to remediate to any identified accessibility defects in the Goods and Services to conform to WCAG 2.0 AA; and
  3. Supplier agrees to promptly respond to and use reasonable efforts to resolve and remediate any complaint regarding accessibility of its Goods and/or Services.
- F. Warranty of Quiet Enjoyment. Supplier warrants that Supplier has the right of Quiet Enjoyment in, and conveys the right of Quiet Enjoyment to UC for UC's use of, any and all intellectual property that will be needed for Supplier's provision, and UC's use of, the Goods and/or Services provided by Supplier under the Agreement.
- G. California Child Abuse and Neglect Reporting Act ("CANRA"). Where applicable, Supplier warrants that it complies with CANRA.
- H. Debarment and Suspension. Supplier warrants that it is not presently debarred, suspended, proposed for debarment, or declared ineligible for award of federal contracts or participation in federal assistance programs or activities.
- I. UC Trademark Licensing Code of Conduct. If the Goods will bear UC's name (including UC campus names, abbreviations of these names, UC logos, UC mascots, or UC seals) or other trademarks owned by UC, Supplier warrants that it holds a valid license from UC and complies with the Trademark Licensing Code of Conduct policy, available at <http://policy.ucop.edu/doc/3000130/TrademarkLicensing>.
- J. Outsourcing (Public Contract Code section 12147) Compliance. Supplier warrants that if the Agreement will displace UC employees, no funds paid under the Agreement will be used to train workers who are located outside of the United States, or plan to relocate outside the United States as part of the Agreement. Additionally, Supplier warrants that no work will be performed under the Agreement with workers outside the United States, except as described in Supplier's bid. If Supplier or its sub-supplier performs the Agreement with workers outside the United States during the life of the Agreement and Supplier did not describe such work in its bid, Supplier acknowledges and agrees that (i) UC may terminate the Agreement without further obligation for noncompliance, and (ii) Supplier will forfeit to UC the amount UC paid for the percentage of work that was performed with workers outside the United States and not described in Supplier's bid.

#### ARTICLE 7 – INTELLECTUAL PROPERTY, COPYRIGHT, PATENTS, AND DATA RIGHTS

- A. Goods and/or Services Involving Work Made for Hire.
1. Unless UC indicates that the Goods and/or Services do not involve work made for hire, Supplier acknowledges and agrees that any deliverables provided to UC by Supplier in the performance of the Agreement, and any intellectual property rights therein, (hereinafter the "Deliverables") will be owned by UC. The Deliverables will be considered "work made for hire" under U.S. copyright law and all right, title, and interest to and in such Deliverables including, but not limited to, any and all copyrights or trademarks, will be owned by UC. In the event that it is determined that UC is not the owner of such Deliverables under the "work made for hire" doctrine of U.S. copyright law, Supplier hereby irrevocably assigns to UC all right, title, and interest to and in such Deliverables and any copyrights or trademarks thereto.
  2. The Deliverables must be new and original. Supplier must not use any pre-existing copyrightable or trademarked images, writings, or other proprietary materials (hereinafter "Pre-Existing Materials") in the Deliverables without UC's prior written permission. In the event that Supplier uses any Pre-Existing Materials in the Deliverables in which Supplier has an ownership interest, UC is hereby granted, and will have, a non-exclusive, royalty-free, irrevocable, perpetual, paid-up, worldwide license (with the right to sublicense) to make, have made, copy, modify, make derivative works of, use, perform, display publicly, sell, and otherwise distribute such Pre-Existing Materials in connection with the Deliverables.



3. Whenever any invention or discovery is made or conceived by Supplier in the course of or in connection with the Agreement, Supplier will promptly furnish UC with complete information with respect thereto and UC will have the sole power to determine whether and where a patent application will be filed and to determine the disposition of title to and all rights under any application or patent that may result.
  4. Supplier is specifically subject to an obligation to, and hereby does, assign all right, title and interest in any such intellectual property rights to UC as well as all right, title and interest in tangible research products embodying any such inventions whether the inventions are patentable or not. Supplier agrees to promptly execute any additional documents or forms that UC may require in order to effectuate such assignment.
- B. Goods and/or Services Not Involving Work Made for Hire.
1. If the Goods and/or Services do not involve work made for hire, and in the event that Supplier uses any Pre-Existing Materials in the Deliverables in which Supplier has an ownership interest, UC is hereby granted, and will have, a non-exclusive, royalty-free, irrevocable, perpetual, paid-up, worldwide license (with the right to sublicense) to make, have made, copy, modify, make derivative works of, use, perform, display publicly, sell, and otherwise distribute such Pre-Existing Materials in connection with the Deliverables. This provision shall not apply to any of the Goods and/or Services classified as Proprietary Information as set forth and defined in the JOC System License contained herein. The access, use and ownership of the Proprietary Information shall be exclusively governed by the terms of the JOC System License.
  2. The Deliverables must be new and original. Supplier must not use any Pre-Existing Materials in the Deliverables without UC's prior written permission.
  3. Whenever any invention or discovery is made or conceived by Supplier in the course of or in connection with the Agreement, Supplier will promptly furnish UC complete information with respect thereto and UC will have the sole power to determine whether and where a patent application will be filed and to determine the disposition of title to and all rights under any application or patent that may result.
  4. Supplier is specifically subject to an obligation to, and hereby does, assign all right, title and interest in any such intellectual property rights to UC as well as all right, title and interest in tangible research products embodying any such inventions whether the inventions are patentable or not. Supplier agrees to promptly execute any additional documents or forms that UC may require in order to effectuate such assignment.
- C. General. Should the Goods and/or Services become, or in Supplier's opinion be likely to become, the subject of a claim of infringement of any patent, copyright, trademark, trade name, trade secret, or other proprietary or contractual right of any third party, Supplier will provide written notice to UC of the circumstances giving rise to such claim or likely claim. In the event that UC receives notice of a claim of infringement or is made a party to or is threatened with being made a party to any claim of infringement related to the Goods and/or Services, UC will provide Supplier with notice of such claim or threat. Following receipt of such notice, Supplier will either (at Supplier's sole election) (i) procure for UC the right to continue to use the affected portion of the Goods and/or Services, or (ii) replace or otherwise modify the affected portion of the Goods and/or Services to make them non-infringing, or obtain a reasonable substitute product for the affected portion of the Goods and/or Services, provided that any replacement, modification or substitution under this paragraph does not effect a material change in the Goods and/or Services' functionality. If none of the foregoing options is reasonably acceptable to UC, UC will have the right to terminate the Agreement without damage, penalty, cost or further obligation.
- D. UC Rights to Institutional Information. Institutional Information shall belong exclusively to UC and unless expressly provided, this Agreement shall not be construed as conferring on Supplier any patent, copyright, trademark, license right or trade secret owned or obtained by UC. Any right for Supplier to use Institutional Information is solely provided on a non-exclusive basis, and only to the extent required for Supplier to provide the Goods or Services under the Agreement. As used herein, "Institutional Information" means any information or data created, received, and/or collected by UC or on its behalf, including but not limited to application logs, metadata and data derived from such data.

### ARTICLE 8 – INDEMNITY AND LIABILITY

To the fullest extent permitted by law, Supplier will defend, indemnify, and hold harmless UC, its officers, employees, and agents, from and against all losses, expenses (including, without limitation, reasonable attorneys' fees and costs), damages, and liabilities of any kind resulting from or arising out of the Agreement, including the performance hereunder of Supplier, its officers, employees, agents, sub-suppliers, or



anyone directly or indirectly employed by Supplier, or any person or persons under Supplier's direction and control, provided such losses, expenses, damages and liabilities are due or claimed to be due to the acts or omissions of Supplier, its officers, employees, agents, sub-suppliers, or anyone directly or indirectly employed by Supplier, or any person or persons under Supplier's direction and control. UC agrees to provide Supplier with prompt notice of any such claim or action and to permit Supplier to defend any claim or action, and that UC will cooperate fully in such defense. UC retains the right to participate in the defense against any such claim or action, and the right to consent to any settlement, which consent will not unreasonably be withheld.

In the event Appendix DS applies to this Agreement, Supplier shall reimburse or otherwise be responsible for any costs, fines or penalties imposed against UC as a result of Supplier's Breach of Institutional Information and/or failure to cooperate with UC's response to such Breach. As used herein, "Breach" means: (1) any disclosure of Institutional Information to an unauthorized party or in an unlawful manner; (2) unauthorized or unlawful acquisition of information that compromises the security, confidentiality or integrity of Institutional Information and/or IT Resources; and (3) the acquisition, access, use, or disclosure of Protected Health Information or medical information in a manner not permitted under the Health Insurance Portability and Accountability Act (HIPAA) or California law. "IT Resources" means IT infrastructure, cloud services, software, and/or hardware with computing and/or networking capability that is Supplier owned/managed, or UC-owned, or a personally owned device that stores Institutional Information, is connected to UC systems, is connected to UC networks, or is used for UC business.

### ARTICLE 9 – INSURANCE

Supplier, at its sole cost and expense, will insure its activities in connection with providing the Goods and/or Services and obtain, keep in force, and maintain the following insurance with the minimum limits set forth below, unless UC specifies otherwise: A. Commercial Form General Liability Insurance (contractual liability included) with limits as follows:

1. Each Occurrence \$ 1,000,000
  2. Products/Completed Operations Aggregate \$ 2,000,000
  3. Personal and Advertising Injury \$ 1,000,000
  4. General Aggregate \$ 2,000,000
- B. Business Automobile Liability Insurance for owned, scheduled, non-owned, or hired automobiles with a combined single limit of not less than one million dollars (\$1,000,000) per occurrence. (Required only if Supplier drives on UC premises or transports UC employees, officers, invitees, or agents in the course of supplying the Goods and/or Services to UC.)
- C. If applicable, Professional Liability Insurance with a limit of two million dollars (\$2,000,000) per occurrence or claim with an aggregate of not less than two million dollars (\$2,000,000). If this insurance is written on a claims-made form, it will continue for three years following termination of the Agreement. The insurance will have a retroactive date of placement prior to or coinciding with the effective date of the Agreement.
- D. Workers' Compensation as required by applicable state law and Employer's Liability with limits of one million dollars (\$1,000,000) per occurrence. Workers' Compensation as required by applicable state law and Employer's Liability with limits of one million dollars (\$1,000,000) per occurrence.
- E. If applicable, Supplier Fidelity Bond or Crime coverage for the dishonest acts of its employees in a minimum amount of one million dollars (\$1,000,000). Supplier will endorse such policy to include a "Regents of the University of California Coverage" or "Joint Payee Coverage" endorsement. UC and, if so requested, UC's officers, employees, agents and sub-suppliers will be named as "Loss Payee, as Their Interest May Appear" in such Fidelity Bond.
- F. In the event Appendix DS applies to this Agreement, Supplier, at its sole cost and expense, will obtain, keep in force, and maintain one or more insurance policies that provide coverage for technology, professional liability, data protection, and/or cyber liability. Typically referred to as Privacy, Technology and Data Security Liability, Cyber Liability, or Technology Professional Liability insurance, it will cover liabilities for financial loss due to the acts, omissions, or intentional misconduct of Supplier, its officers, employees, agents, sub-suppliers, or anyone directly or indirectly employed by Supplier, or any person or persons under Supplier's direction and control, in connection with the performance of this Agreement, as well as all Supplier costs, including damages it is obligated to pay UC or any third party, that are associated with any confirmed or suspected Breach or compromise of Institutional Information. In some cases, Professional Liability policies may include some coverage for data breaches or loss of Institutional Information. Regardless of the type of policy(ies) in place, such coverage will include without limitation: (i) costs to notify parties whose data were lost or compromised; (ii) costs to provide credit monitoring and credit restoration services to parties whose data were lost or compromised; (iii) costs associated with third party claims arising from the confirmed or suspected Breach or loss of Institutional Information, including



litigation costs and settlement costs; (iv) any investigation, enforcement, fines and penalties, or similar miscellaneous costs; and (v) any payment made to a third party as a result of extortion related to a confirmed or suspected Breach. The following insurance coverage is based on the highest Protection Level Classification of Institutional Information identified in Exhibit 1 to Appendix DS:

1. P1 - This insurance policy must have minimum limits of \$500,000 each occurrence and \$500,000 in the aggregate.
2. P2 - This insurance policy must have minimum limits of \$1,000,000 each occurrence and \$1,000,000 in the aggregate.
3. P3 and P4, less than 70,000 records - this insurance policy must have minimum limits of \$5,000,000 each occurrence and \$5,000,000 in the aggregate.
4. P3 and P4, 70,000 or more records - this insurance policy must have minimum limits of \$10,000,000 each occurrence and \$10,000,000 in the aggregate.

Protection Level Classifications are defined in the UC Systemwide Information Security Classification of Information and IT Resources:

<https://security.ucop.edu/policies/institutional-information-and-it-resource-classification.html>

- G. Additional other insurance in such amounts as may be reasonably required by UC against other insurable risks relating to performance. If the above insurance is written on a claims-made form, it will continue for three years following termination of the Agreement. The insurance will have a retroactive date of placement prior to or coinciding with the effective date of the Agreement. If the above insurance coverage is modified, changed or cancelled, Supplier will provide UC with not less than fifteen (15) days' advance written notice of such modification, change, or cancellation, and will promptly obtain replacement coverage that complies with this Article.
- I. The coverages referred to under A and B of this Article must include UC as an additional insured. It is understood that the coverage and limits referred to under A, B and C of this Article will not in any way limit Supplier's liability. Supplier will furnish UC with certificates of insurance (and the relevant endorsement pages) evidencing compliance with all requirements prior to commencing work under the Agreement. Such certificates will:
  1. Indicate that The Regents of the University of California has been endorsed as an additional insured for the coverage referred to under A and B of this Article. This provision will only apply in proportion to and to the extent of the negligent acts or omissions of Supplier, its officers, agents, or employees.
  2. Include a provision that the coverage will be primary and will not participate with or be excess over any valid and collectible insurance or program of self-insurance carried or maintained by UC.

### ARTICLE 10 – USE OF UC NAME AND TRADEMARKS

Supplier will not use the UC name, abbreviation of the UC name, trade names and/or trademarks (i.e., logos and seals) or any derivation thereof, in any form or manner in advertisements, reports, or other information released to the public, or place the UC name, abbreviations, trade names and/or trademarks or any derivation thereof on any consumer goods, products, or services for sale or distribution to the public, without UC's prior written approval. Supplier agrees to comply at all times with California Education Code Section 92000.

### ARTICLE 11 – FEDERAL FUNDS

Supplier who supplies Goods and/or Services certifies and represents its compliance with the following clauses, as applicable. Supplier shall promptly notify UC of any change of status with regard to these certifications and representations. These certifications and representations are material statements upon which UC will rely.

- A. For commercial transactions involving funds on a federal contract (federal awards governed by the FAR), the following provisions apply, as applicable:
  1. FAR 52.203-13, Contractor Code of Business Ethics and Conduct;
  2. FAR 52.203-17, Contractor Employee Whistleblower Rights and Requirement to Inform Employees of Whistleblower Rights;
  3. FAR 52.203-19, Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements;
  4. FAR 52.219-8, Utilization of Small Business Concerns;
  5. FAR 52.222-17, Non-displacement of Qualified Workers;
  6. FAR 52.222-21, Prohibition of Segregated Facilities;
  7. FAR 52.222-26, Equal Opportunity;
  8. FAR 52.222-35, Equal Opportunity for Veterans;



9. FAR 52.222-36, Equal Opportunity for Workers with Disabilities;
  10. FAR 52.222-37, Employment Reports on Veterans;
  11. FAR 52.222-40, Notification of Employee Rights Under the National Labor Relations Act;
  12. FAR 52.222-41, Service Contract Labor Standards;
  13. FAR 52.222-50, Combating Trafficking in Persons;
  14. FAR 52.222-51, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment - Requirements;
  15. FAR 52.222-53, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services - Requirements;
  16. FAR 52.222-54, Employment Eligibility Verification;
  17. FAR 52.222-55, Minimum Wages Under Executive Order 13658;
  18. FAR 52.222-62, Paid Sick Leave under Executive Order 13706;
  19. FAR 52.224-3, Privacy Training;
  20. FAR 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations;
  21. FAR 52.233-1, Disputes; and
  22. FAR 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels.
- B. For non-commercial transactions involving funds on a federal contract, the UC Appendix titled '*Federal Government Contracts Special terms and Conditions (Non-Commercial Items or Services)*' and located at [www.ucop.edu/procurement-services/policiesforms/index.html](http://www.ucop.edu/procurement-services/policiesforms/index.html) is hereby incorporated herein by this reference.
- C. For transactions involving funds on a federal grant or cooperative agreement (federal awards governed by eCFR Title 2, Subtitle A, Chapter II, Part 200) the following provisions apply, as applicable:
1. Rights to Inventions. If Supplier is a small business firm or nonprofit organization, and is providing experimental, development, or research work under this transaction, Supplier must comply with the requirements of 3 CFR Part 401, "Rights to Inventions Made by nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements".
  2. Clean Air Act. Supplier agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
  3. Byrd Anti-Lobbying. Supplier certifies that it will not, and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352.
  4. Procurement of Recovered Materials. If Supplier is a state agency or agency of a political subdivision of a state, then Supplier must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act.
- D. In these provisions, the term "contractor" as used therein will refer to Supplier, and the terms "Government" or "Contracting Officer" as used therein will refer to UC. Where a purchase of items is for fulfillment of a specific U.S. Government prime or subcontract, additional information and/or terms and conditions may be included in an attached supplement. By submitting an invoice to UC, Supplier is representing to UC that, at the time of submission:
1. Neither Supplier nor its principals are presently debarred, suspended, or proposed for debarment by the U.S. government (see FAR 52.209-6);
  2. Supplier has filed all compliance reports required by the Equal Opportunity clause (see FAR 52.222-22); and
  3. Any Supplier representations to UC about U.S. Small Business Administration or state and local classifications, including but not limited to size standards, ownership, and control, are accurate and complete.
  4. Byrd Anti-Lobbying. Supplier certifies that it will not, and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or



employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352.

## ARTICLE 12 – EQUAL OPPORTUNITY AFFIRMATIVE ACTION

Supplier will abide by the requirements set forth in Executive Orders 11246 and 11375. Where applicable, Supplier will comply with 41 CFR §§ 60-1.4(a), 60-300.5(a) and 60-741.5(a), incorporated by reference with this statement: **“This contractor and subcontractor shall abide by the requirements of 41 CFR §§ 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status or disability.”** With respect to activities occurring in the State of California, Supplier agrees to adhere to the California Fair Employment and Housing Act. Supplier will provide UC on request a breakdown of its labor force by groups as specified by UC, and will discuss with UC its policies and practices relating to its affirmative action programs. Supplier will not maintain or provide facilities for employees at any establishment under its control that are segregated on a basis prohibited by federal law. Separate or single-user restrooms and necessary dressing or sleeping areas must be provided, however, to ensure privacy.

## ARTICLE 13 – LIENS

Supplier agrees that upon UC's request, Supplier will submit a sworn statement setting forth the work performed or material furnished by sub-suppliers and material men, and the amount due and to become due to each, and that before the final payment called for under the Agreement, will upon UC's request submit to UC a complete set of vouchers showing what payments have been made for such work performed or material furnished. Supplier will promptly notify UC in writing, of any claims, demands, causes of action, liens or suits brought to its attention that arise out of the Agreement. UC will not make final payment until Supplier, if required, delivers to UC a complete release of all liens arising out of the Agreement, or receipts in full in lieu thereof, as UC may require, and if required in either case, an affidavit that as far as it has knowledge or information, the receipts include all the labor and materials for which a lien could be filed; but Supplier may, if any sub-supplier refuses to furnish a release or receipt in full, furnish a bond satisfactory to UC to indemnify it against any claim by lien or otherwise. If any lien or claim remains unsatisfied after all payments are made, Supplier will refund to UC all monies that UC may be compelled to pay in discharging such lien or claim, including all costs and reasonable attorneys' fees.

## ARTICLE 14 – PREMISES WHERE SERVICES ARE PROVIDED

- A. Cleaning Up. Supplier will at all times keep UC premises where the Services are performed and adjoining premises free from accumulations of waste material or rubbish caused by its employees or work of any of its sub-suppliers, and, at the completion of the Services; will remove all rubbish from and about the premises and all its tools, scaffolding, and surplus materials, and will leave the premises "broom clean" or its equivalent, unless more exactly specified. In case of dispute between Supplier and its sub-suppliers as to responsibility for the removal of the rubbish, or if it is not promptly removed, UC may remove the rubbish and charge the cost to Supplier.
- B. Environmental, Safety, Health and Fire Protection. Supplier will take all reasonable precautions in providing the Goods and Services to protect the health and safety of UC employees and members of the public and to minimize danger from all hazards to life and property, and will comply with all applicable environmental protection, health, safety, and fire protection regulations and requirements (including reporting requirements). In the event that Supplier fails to comply with such regulations and requirements, UC may, without prejudice to any other legal or contractual rights of UC, issue an order stopping all or any part of the provision of the Goods and/or Services; thereafter a start order for resumption of providing the Goods and/or Services may be issued at UC's discretion. Supplier will not be entitled to make a claim for extension of time or for compensation or damages by reason of or in connection with such stoppage. Supplier will have sole responsibility for the safety of all persons employed by Supplier and its sub-suppliers on UC premises, or any other person who enters upon UC premises for reasons relating to the Agreement. Supplier will at all times maintain good order among its employees and all other persons who come onto UC's premises at Supplier's request and will not engage any unfit or unskilled person to provide the Goods and/or Services. Supplier will confine its employees and all other persons who come onto UC's premises at Supplier's request or for reasons relating to the Agreement and its equipment to that portion of UC's premises where the Services are to be provided or to roads leading to and from such work sites, and to any other area which UC may permit





Supplier to use. Supplier will take all reasonable measures and precautions at all times to prevent injuries to or the death of any of its employees or any other person who enters upon UC premises at Supplier's request. Such measures and precautions will include, but will not be limited to, all safeguards and warnings necessary to protect workers and others against any conditions on the premises that could be dangerous and to prevent accidents of any kind whenever the Goods and/or Services are being provided in proximity to any moving or operating machinery, equipment or facilities, whether such machinery, equipment or facilities are the property of or are being operated by, Supplier, its sub-suppliers, UC or other persons. To the extent compliance is required, Supplier will comply with all relevant UC safety rules and regulations when on UC premises.

- C. Tobacco-free Campus. UC is a tobacco-free institution. Use of cigarettes, cigars, oral tobacco, electronic cigarettes and all other tobacco products is prohibited on all UC owned or leased sites.

### ARTICLE 15 – LIABILITY FOR UC - FURNISHED PROPERTY

Supplier assumes complete liability for any materials UC furnishes to Supplier in connection with the Agreement and Supplier agrees to pay for any UC materials Supplier damages or otherwise is not able to account for to UC's satisfaction. UC furnishing to Supplier any materials in connection with the Agreement will not, unless otherwise expressly provided in writing by UC, be construed to vest title thereto in Supplier.

### ARTICLE 16 – COOPERATION

Supplier and its sub-suppliers, if any, will cooperate with UC and other suppliers and will so provide the Services that other cooperating suppliers will not be hindered, delayed or interfered with in the progress of their work, and so that all of such work will be a finished and complete job of its kind.

### ARTICLE 17 – ADDITIONAL TERMS APPLICABLE TO THE FURNISHING OF GOODS

The terms in this Article have special application to the furnishing of Goods:

- A. Price Decreases. Supplier agrees immediately to notify UC of any price decreases from its suppliers, and to pass through to UC any price decreases.
- B. Declared Valuation of Shipments. Except as otherwise provided in the Agreement, all shipments by Supplier under the Agreement for UC's account will be made at the maximum declared value applicable to the lowest transportation rate or classification and the bill of lading will so note.
- C. Title. Title to the Goods purchased under the Agreement will pass directly from Supplier to UC at the f.o.b. point shown, or as otherwise specified in the Agreement, subject to UC's right to reject upon inspection.
- D. Changes. Notwithstanding the terms in Article 34, Amendments, UC may make changes within the general scope of the Agreement in drawings and specifications for specially manufactured Goods, place of delivery, method of shipment or packing of the Agreement by giving notice to Supplier and subsequently confirming such changes in writing. If such changes affect the cost of or the time required for performance of the Agreement, UC and Supplier will agree upon an equitable adjustment in the price and/or delivery terms. Supplier may not make changes without UC's written approval. Any claim of Supplier for an adjustment under the Agreement must be made in writing within thirty (30) days from the date Supplier receives notice of such change unless UC waives this condition in writing. Nothing in the Agreement will excuse Supplier from proceeding with performance of the Agreement as changed hereunder. Supplier may not alter or misbrand, within the meaning of the applicable Federal and State laws, the Goods furnished.
- E. Forced, Convict and Indentured Labor. Supplier warrants that no foreign-made Goods furnished to UC pursuant to the Agreement will be produced in whole or in part by forced labor, convict labor, or indentured labor under penal sanction. If UC determines that Supplier knew or should have known that it was breaching this warranty, UC may, in addition to terminating the Agreement, remove Supplier from consideration for UC contracts for a period not to exceed one year. This warranty is in addition to any applicable warranties in Articles 6 and 11.
- F. Export Control. Supplier agrees to provide UC (the contact listed on the Purchase Order) with written notification that identifies the export-controlled Goods and such Goods' export classification if any of the Goods is export-controlled under the International Traffic in Arms Regulations (ITAR) (22 CFR §§ 120-130), the Export Administration Regulations (15 CFR §§ 730-774) 500 or 600 series, or controlled on a military strategic goods list. Supplier agrees to provide UC (the contact listed on the Purchase Order) with written



notification if Supplier will be providing information necessary for the operation, installation (including on-site installation), maintenance (checking), repair, overhaul, and refurbishing of the Goods that is beyond a standard user manual (i.e. "Use" technology as defined under the EAR 15 CFR § 772.1), or "Technical Data" (as defined under the ITAR 22 CFR § 120.10).

### ARTICLE 18 – CONFLICT OF INTEREST

Supplier affirms that, to the best of Supplier's knowledge, no UC employee who has participated in UC's decision-making concerning the Agreement has an "economic interest" in the Agreement or Supplier. A UC employee's "economic interest" means:

- A. An investment worth \$2,000 or more in Supplier or its affiliate;
- B. A position as director, officer, partner, trustee, employee or manager of Supplier or its affiliate; C. Receipt during the past 12 months of \$500 in income or \$440 in gifts from Supplier or its affiliate; or
- D. A personal financial benefit from the Agreement in the amount of \$250 or more.

In the event of a change in these economic interests, Supplier will provide written notice to UC within thirty (30) days after such change, noting such changes. Supplier will not be in a reporting relationship to a UC employee who is a near relative, nor will a near relative be in a decision making position with respect to Supplier.

### ARTICLE 19 – AUDIT REQUIREMENTS

The Agreement, and any pertinent records involving transactions relating to this Agreement, is subject to the examination and audit of the Auditor General of the State of California or Comptroller General of the United States or designated Federal authority for a period of up to five (5) years after final payment under the Agreement. UC, and if the underlying grant, cooperative agreement or federal contract so provides, the other contracting Party or grantor (and if that be the United States or an instrumentality thereof, then the Comptroller General of the United States) will have access to and the right to examine Supplier's pertinent books, documents, papers, and records involving transactions and work related to the Agreement until the expiration of five (5) years after final payment under the Agreement. The examination and audit will be confined to those matters connected with the performance of the Agreement, including the costs of administering the Agreement.

### ARTICLE 20 – PROHIBITION ON UNAUTHORIZED USE OR DISCLOSURE OF INSTITUTIONAL INFORMATION

- A. Prohibition on Access, Use and Disclosure of Institutional Information. Supplier will not access, use or disclose Institutional Information, other than to carry out the purposes for which UC disclosed the Institutional Information to Supplier, except as required by applicable law, or as otherwise authorized in writing by UC prior to Supplier's disclosure. Supplier shall have the limited right to disclose Institutional Information to Supplier's employees provided that: (i) Supplier shall disclose only such Institutional Information as is necessary for the Supplier to perform its obligations under this Agreement, and (ii) Supplier informs such employees of the obligations governing the access, use and disclosure of Institutional Information prior to Supplier's disclosure. Supplier shall be liable for any breach of this Agreement by its employees. For avoidance of doubt, this provision prohibits Supplier from using for its own benefit Institutional Information and any information derived therefrom. For the avoidance of doubt, the sale of Institutional Information is expressly prohibited.
- B. Compliance with Applicable Laws and Industry Best Practices. Supplier agrees to comply with all applicable state, federal, and foreign laws, as well as industry best practices, governing the collection, access, use, disclosure, safeguarding and destruction of Institutional Information. Supplier agrees to protect the privacy and security of Institutional Information according to all applicable laws and industry best practices, and no less rigorously than it protects its own information, but in no case less than reasonable care.
- C. Confidential Institutional Information. Supplier agrees to hold UC's Confidential Institutional Information, and any information derived therefrom, in strict confidence. Confidential Institutional Information shall be defined as any Institutional Information which is (i) marked as "Confidential" at the time of disclosure; (ii) if disclosed orally, identified at the time of such oral disclosure as confidential, and reduced to writing as "Confidential" within thirty (30) days of such oral disclosure; and (iii) if not marked as "Confidential," information that would be considered by a reasonable person in the relevant field to be confidential given its content and the circumstances of its disclosure. Confidential Information will not be considered confidential to the extent that: (i) Supplier can demonstrate by written records was known to Supplier prior to the effective date of the Agreement; (ii) is currently in, or in the future



enters, the public domain other than through a breach of the Agreement or through other acts or omissions of Supplier; (iii) is obtained lawfully from a third party; or (iv) is disclosed under the California Public Records Act or legal process. For the avoidance of doubt, as applicable to Supplier's Services, Confidential Institutional Information may include any information that identifies or is capable of identifying a specific individual, including but not limited to: 1. Personally identifiable information,

2. Protected Health Information as defined by the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the HIPAA regulations (including, but not limited to 45 C.F.R. § 160.103),
3. Medical information as defined by California Civil Code § 56.05,
4. Cardholder data,
5. Student records, or
6. Individual financial information that is subject to laws restricting the use and disclosure of such information, including but not limited to:
  - a. Article 1, Section 1 of the California Constitution; the California Information Practices Act (Civil Code § 1798 *et seq.*);
  - b. The federal Gramm-Leach-Bliley Act (15 U.S.C. §§ 6801(b) and 6805(b)(2));
  - c. The federal Family Educational Rights and Privacy Act (20 U.S.C. § 1232g);
  - d. The federal Fair and Accurate Credit Transactions Act (15 U.S.C. § 1601 *et seq.*);
  - e. The Fair Credit Reporting Act (15 U.S.C. § 1681 *et seq.*), and
  - f. Applicable international privacy laws, including, but not limited to the General Data Protection Regulation.
- D. **Required Disclosures of Institutional Information.** If Supplier is required by a court of competent jurisdiction or an administrative body to disclose Institutional Information, Supplier will notify UC in writing immediately upon receiving notice of such requirement and prior to any such disclosure (unless Supplier is prohibited by law from doing so), to give UC an opportunity to oppose or otherwise respond to such disclosure. To the extent Supplier still required to disclose Institutional Information, Supplier will furnish only that portion that is legally required and will exercise all reasonable efforts to obtain reliable assurance that confidential treatment will be afforded to any Confidential Institutional Information.
- E. **No Offshoring.** Supplier's transmission, transportation or storage of Institutional Information outside the United States, or access of Institutional Information from outside the United States, is prohibited except with prior written authorization by UC.
- F. **Conflict in Terms.** UC's Appendix – Data Security, Appendix – BAA, and/or Appendix GDPR will control in the event that one or more appendices is incorporated into the Agreement and conflicts with the provisions of this Article.
- G. **Acknowledgement.** Supplier acknowledges that remedies at law would be inadequate to protect UC against any actual or threatened breach of this Section by Supplier, and, without prejudice to any other rights and remedies otherwise available to UC, Supplier agrees to the granting of injunctive relief in UC's favor without proof of actual damages.

## ARTICLE 21 – UC WHISTLEBLOWER POLICY

UC is committed to conducting its affairs in compliance with the law, and has established a process for reporting and investigating suspected improper governmental activities. Please visit <http://www.ucop.edu/uc-whistleblower/> for more information.

## ARTICLE 22 – SUSTAINABLE PROCUREMENT GUIDELINES

Supplier will conduct business using environmentally, socially, and economically sustainable products and services (defined as products and services with a lesser or reduced effect on human health and the environment, and which generate benefits to the University as well as to society and the economy, while remaining within the carrying capacity of the environment), to the maximum possible extent consistent with the Agreement, and with the University of California Sustainable Practices Policy (<https://policy.ucop.edu/doc/3100155>) and the University of California Sustainable Procurement Guidelines:

(<https://www.ucop.edu/procurement-services/files/sustainableprocurementguidelines.pdf>).

In accordance with the University of California Sustainable Practices Policy, Supplier will adhere to the following requirements and standards, as applicable. Supplier acknowledges that failure to comply with any of the sustainability standards and requirements in the Agreement will constitute a material breach of the Agreement and UC will have the right to terminate the Agreement without damage, penalty, cost or further obligation.



- A. Sustainability Marketing Standards. Supplier sustainability related claims, where applicable, must meet UC recognized certifications and standards set forth in the UC Sustainable Procurement Guidelines and/or meet the standards of Federal Trade Commission's (FTC) Green Guides.
- B. Electronic Transfer of Supplier Information. Suppliers, when interacting with the UC, shall be prohibited from providing hard copies of presentations, marketing material, or other informational materials. Suppliers will be required to present all information in electronic format that is easily transferable to UC staff. Materials may be provided in hard copy or physical format if specifically required or requested by a UC representative.
- C. Packaging Requirements. All packaging must be compliant with the Toxics in Packaging Prevention Act (AB 455) and must meet all additional standards and requirements set forth in the UC Sustainable Practices Policy. In addition, UC requires that all packaging meet at least one of the criteria listed below:
  - 1. Uses bulk packaging;
  - 2. Uses reusable packaging (e.g. totes reused by delivery service for next delivery);
  - 3. Uses innovative packaging that reduces the weight of packaging, reduces packaging waste, or utilizes packaging that is a component of the product;
  - 4. Maximizes recycled content and/or meets or exceeds the minimum post-consumer content level for packaging in the U.S. Environmental Protection Agency Comprehensive Procurement Guidelines;
  - 5. Uses locally recyclable or certified compostable material.
- D. Foodservice Foam Ban. As of 2018, the University no longer allows packaging foam or expanded polystyrene (EPS) for takeaway containers or other food service items, in any University-owned or -operated food service facility.
- E. Product Packaging Foam Ban. Beginning January 1st, 2020, the University will prohibit all contracted and non-contracted suppliers from selling or distributing packaging foam (other than that utilized for laboratory supply or medical packaging) to UC campuses. Packaging foam is defined as any open or closed cell, solidified, polymeric foam used for cushioning or packaging, including but not limited to: low-density polyethylene foam, polypropylene foam, polystyrene foam (i.e. expanded polystyrene (EPS)), polyurethane foam, polyethylene foam, polyvinyl chloride (PVC) foam, and microcellular foam. Not included in this ban are easily biodegradable, plant-based foams such as those derived from corn or mushrooms.
- F. E-Waste Recycling Requirements. All recyclers of UC electronic equipment must be e-Steward certified by the Basel Action Network (BAN).
- G. Hosted and Punch-out Catalog Requirements. Suppliers enabled with eProcurement hosted catalog functionality must clearly identify products with UC-recognized certifications, as defined by the UC Sustainable Procurement Guidelines, in both hosted and punch-out catalog e-procurement environments.

## ARTICLE 23 – PATIENT PROTECTION AND AFFORDABLE CARE ACT (PPACA) EMPLOYER SHARED RESPONSIBILITY

If the Services involve Supplier furnishing UC with temporary or supplementary staffing, Supplier warrants that:

- A. If Supplier is an Applicable Large Employer (as defined under Treasury Regulation Section 54.4980H-1(a)(4)):
  - 1. Supplier offers health coverage to its full-time employees who are performing Services for UC;
  - 2. Supplier's cost of enrolling such employees in Supplier's health plan is factored into the fees for the Services; and
  - 3. The fees for the Services are higher than what the Services would cost if Supplier did not offer health coverage to such full-time employees.
- B. If Supplier is not an Applicable Large Employer (as defined above):
  - 1. Supplier offers group health coverage to its full-time employees who are performing Services for UC and such coverage is considered Minimum Essential Coverage (as defined under Treasury Regulation Section 1-5000A-2) and is Affordable (as defined under Treasury Regulation Section 54.4980H-5(e)); or
  - 2. Supplier's full-time employees who are performing services for UC have individual coverage and such coverage satisfies the PPACA requirements for mandated individual coverage.



Supplier acknowledges that UC is relying on these warranties to ensure UC's compliance with the PPACA Employer Shared Responsibility provision.

### ARTICLE 24 - PREVAILING WAGES

Unless UC notifies Supplier that the Services are not subject to prevailing wage requirements, Supplier will comply, and will ensure that all sub-suppliers comply, with California prevailing wage provisions, including but not limited to those set forth in Labor Code sections 1770, 1771, 1771.1, 1772, 1773, 1773.1, 1774, 1775, 1776, 1777.5, and 1777.6. For purposes of the Agreement, the term "sub-supplier" means a person or firm, of all tiers, that has a contract with Supplier or with a sub-supplier to provide a portion of the Services. The term sub-supplier will not include suppliers, manufacturers, or distributors. Specifically, and not by way of limitation, if apprenticeship occupations are involved in providing the Services, Supplier will be responsible for ensuring that Supplier and any sub-suppliers comply with Labor Code Section 1777.5. Supplier and sub-supplier may not provide the Services unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5 and 1771.1. Notwithstanding the foregoing provisions, Supplier will be solely responsible for tracking and ensuring proper payment of prevailing wages regardless if Services are partially or wholly subject to prevailing wage requirements. In every instance, Supplier will pay not less than the UC Fair Wage (defined as \$13 per hour as of 10/1/15, \$14 per hour as of 10/1/16, and \$15 per hour as of 10/1/17) for Services being performed at a UC Location (defined as any location owned or leased by UC).

The California Department of Industrial Relations (DIR) has ascertained the general prevailing per diem wage rates in the locality in which the Services are to be provided for each craft, classification, or type of worker required to provide the Services. A copy of the general prevailing per diem wage rates will be on file at each UC Location's procurement office, and will be made available to any interested party upon request. Supplier will post at any job site:

- A. Notice of the general prevailing per diem wage rates, and
- B. Any other notices required by DIR rule or regulation.

By this reference, such notices are made part of the Agreement. Supplier will pay not less than the prevailing wage rates, as specified in the schedule and any amendments thereto, to all workers employed by Supplier in providing the Services. Supplier will cause all subcontracts to include the provision that all sub-suppliers will pay not less than the prevailing rates to all workers employed by such sub-suppliers in providing the Services. The Services are subject to compliance monitoring and enforcement by the DIR. Supplier will forfeit, as a penalty, not more than \$200 for each calendar day or portion thereof for each worker that is paid less than the prevailing rates as determined by the DIR for the work or craft in which the worker is employed for any portion of the Services provided by Supplier or any sub-supplier. The amount of this penalty will be determined pursuant to applicable law. Such forfeiture amounts may be deducted from the amounts due under the Agreement. If there are insufficient funds remaining in the amounts due under the Agreement, Supplier will be liable for any outstanding amount remaining due. Supplier will also pay to any worker who was paid less than the prevailing wage rate for the work or craft for which the worker was employed for any portion of the Services, for each day, or portion thereof, for which the worker was paid less than the specified prevailing per diem wage rate, an amount equal to the difference between the specified prevailing per diem wage rate and the amount which was paid to the worker. Review of any civil wage and penalty assessment will be made pursuant to California Labor Code section 1742.

### ARTICLE 25 – FAIR WAGE/FAIR WORK

If the Agreement is for Services that will be performed at one or more UC Locations, does not solely involve furnishing Goods, and are not subject to extramural awards containing sponsor-mandated terms and conditions, Supplier warrants that it is in compliance with applicable federal, state and local working conditions requirements, including but not limited to those set forth in Articles 11, 12 and 14 herein, and that Supplier pays its employees performing the Services no less than the UC Fair Wage. Supplier agrees UC may conduct such UC Fair Wage/Fair Work interim compliance audits as UC reasonably requests, as determined in UC's sole discretion. Supplier agrees to post UC Fair Wage/Fair Work notices, in the form supplied by UC, in public areas (such as break rooms and lunch rooms) frequented by Supplier employees who perform Services.

For Services rendered (actual spend) not subject to prevailing wage requirements in excess of \$100,000 in a year (under the Agreement or any combination of agreements for the same service), Supplier will (i) at Supplier's expense, provide an annual independent verification



(<https://www.ucop.edu/procurement-services/for-suppliers/fwfw-resources-suppliers.html>) performed by a licensed public accounting firm (independent accountant) or the Supplier's independent internal audit department (<http://na.theiia.org/standardsguidance/topics/Pages/Independence-and-Objectivity.aspx>) in compliance with UC's required verification standards and procedures (<https://www.ucop.edu/procurement-services/for-suppliers/fwfw-resources-suppliers.html>), concerning Supplier's compliance with this provision, and (ii) ensure that in the case of a UC interim audit, its independent accountant/independent internal auditor makes available to UC its UC Fair Wage/Fair Work work papers for the most recent verification period. Supplier agrees to provide UC with a UC Fair Wage/Fair Work verification annually, in a form acceptable to UC, no later than ninety days after the end of the 12-month period in which \$100,000 in spend is reached.

The Fair Wage Fair Work annual independent verification requirement does not extend to contracts for professional services or consulting for which pre-certification has been provided to UC (<https://www.ucop.edu/procurement-services/for-suppliers/fwfw-resources-suppliers.html>). Please see the UC Procurement/Supply Chain Management Policy BUS-43 (<https://www.ucop.edu/procurementservices/policies-forms/business-and-finance/index.html>) for the definition of professional services and consulting.

### ARTICLE 26 – MEDICAL DEVICES

This Article applies when the Goods and/or Services involve UC purchasing or leasing one or more medical devices from Supplier, or when Supplier uses one or more medical devices in providing Goods and/or Services to UC.

Medical Device as used herein will have the meaning provided by the U.S. Food and Drug Administration ("FDA") and means an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including a component part, or accessory which is: (i) recognized in the official National Formulary, or the United States Pharmacopoeia, or any supplement to them; (ii) intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in humans or other animals, or (iii) intended to affect the structure or any function of the body of humans or other animals, and which does not achieve any of its primary intended purposes through chemical action within or on the body of humans or other animals and which is not dependent upon being metabolized for the achievement of any of its primary intended purposes.

Supplier warrants that prior to UC's purchase or lease of any Medical Device or Supplier's use of any Medical Device in providing Goods and/or Services hereunder, Supplier will: (i) perform security testing and validation for each such Goods and/or Services or Medical Device, as applicable; (ii) perform security scans to detect malware on any software embedded within any Goods and/or Services or Medical Device, as applicable, in order to verify that the software does not contain any known malware; (iii) conduct a vulnerability scan encompassing all ports and fuzz testing; and (iv) provide UC with reports for (i) – (iii). Supplier warrants that any Good or Medical Device is compliant with FDA's most current guidance or regulation for the quality system related to the cybersecurity and the Management of Cybersecurity in Medical Devices, and that Supplier will maintain compliance with any updates to such guidance or regulations.

Throughout Supplier's performance of this Agreement, Supplier will provide UC with reasonably up-to-date patches, firmware and security updates for any Medical Device provided to UC, and any other Medical Device used in the course of providing Services, as applicable. All such patches and other security updates will be made available to UC within thirty (30) days of its commercial release or as otherwise recommended by Supplier or Supplier's sub-supplier, whichever is earlier.

Supplier warrants that all software and installation media not specifically required for any Medical Device used by Supplier or Goods and/or Services delivered to UC under this Agreement as well as files, scripts, messaging services and data will be removed from all such Goods and/or Services or Medical Device following installation, and that all hardware ports and drivers not required for use or operation of such Goods and/or Services or Medical Device will be disabled at time of installation. In addition, Medical Devices must be configured so that only Supplier-approved applications will run on such Medical Devices.

Supplier agrees that UC may take any and all actions that it, in its sole discretion, deems necessary to address, mitigate and/or rectify any real or potential security threat, and that no such action, to the extent such action does not compromise device certification, will impact, limit, reduce or negate Supplier's warranties or any of Supplier's other obligations hereunder.



Supplier warrants that any Medical Device provided to UC, and any other Medical Device used in the course of providing such Goods and/or Services, meet and comply with all cyber-security guidance and similar standards promulgated by the FDA and any other applicable regulatory body.

If the Goods and/or Services entail provision or use of a Medical Device, Supplier will provide UC with a completed Manufacturer Disclosure Statement for Medical Device Security (MDS2) form for each such Medical Device before UC is obligated to purchase or lease such Medical Device or prior to Supplier's use of such device in its performance of Services. If Supplier provides an MDS2 form to UC concurrently with its provision of Goods and/or Services, UC will have a reasonable period of time to review such MDS2 form, and if the MDS2 form is unacceptable to UC, then UC in its sole discretion may return the Goods or terminate the Agreement with no further obligation to Supplier.

### **ARTICLE 27 – FORCE MAJEURE**

Neither Party will be liable for delays due to causes beyond the Party's control (including, but not restricted to, war, civil disturbances, earthquakes, fires, floods, epidemics, quarantine restrictions, freight embargoes, and unusually severe weather).

### **ARTICLE 28 – ASSIGNMENT AND SUBCONTRACTING**

Except as to any payment due hereunder, Supplier may not assign or subcontract the Agreement without UC's written consent. In case such consent is given, the assignee or subcontractor will be subject to all of the terms of the Agreement.

### **ARTICLE 29 – NO THIRD-PARTY RIGHTS**

Nothing in the Agreement, express or implied, is intended to make any person or entity that is not a signer to the Agreement a third-party beneficiary of any right created by this Agreement or by operation of law.

### **ARTICLE 30 – OTHER APPLICABLE LAWS**

Any provision required to be included in a contract of this type by any applicable and valid federal, state or local law, ordinance, rule or regulations will be deemed to be incorporated herein.

### **ARTICLE 31 – NOTICES**

A Party must send any notice required to be given under the Agreement by overnight delivery or by certified mail with return receipt requested, to the other Party's representative at the address specified by such Party.

### **ARTICLE 32 – SEVERABILITY**

If a provision of the Agreement becomes, or is determined to be, illegal, invalid, or unenforceable, that will not affect the legality, validity or enforceability of any other provision of the Agreement or of any portion of the invalidated provision that remains legal, valid, or enforceable.

### **ARTICLE 33 – WAIVER**

Waiver or non-enforcement by either Party of a provision of the Agreement will not constitute a waiver or non-enforcement of any other provision or of any subsequent breach of the same or similar provision.

### **ARTICLE 34 – AMENDMENTS**

The Parties may make changes in the Goods and/or Services or otherwise amend the Agreement, but only by a writing signed by both Parties' authorized representatives. In the event there is a Material Change to the Agreement, the parties agree to meet and confer in good faith in order to modify the terms of the Agreement. A Material Change as used herein refers to:

- A. A change to the scope of Goods and/or Services to be provided by Supplier, as agreed to by UC;
- B. A change in the Institutional Information Supplier is required to create, receive, maintain or transmit in performance of the Agreement, such that the Protection Level Classification of such Institutional Information changes;



- C. Changes in the status of the parties;
- D. Changes in flow down terms from external parties; and E. Changes in law or regulation applicable to this Agreement.

Each party shall notify the other party upon the occurrence of a Material Change.

## ARTICLE 35 – GOVERNING LAW AND VENUE

California law will control the Agreement and any document to which it is appended. The exclusive jurisdiction and venue for any and all actions arising out of or brought under the Agreement is in a state court of competent jurisdiction, situated in the county in the State of California in which the UC Location is located or, where the procurement covers more than one UC Location, the exclusive venue is Alameda County, California.

## ARTICLE 36 – ASSISTANCE IN LITIGATION OR ADMINISTRATIVE PROCEEDINGS

Supplier will make itself and its employees, subcontractors, or agents assisting Supplier in the performance of its obligations reasonably available to UC at no cost to UC to testify as witnesses, or otherwise, in the event of investigations, or proceedings against UC, its directors, officers, agents, or employees relating to the Goods or Services.

## ARTICLE 37 – SUPPLIER TERMS

Any additional terms that Supplier includes in an order form or similar document will be of no force and effect, unless UC expressly agrees in writing to such terms.

## ARTICLE 38 – SURVIVAL CLAUSE

Upon expiration or termination of the Agreement, the following provisions will survive: WARRANTIES; INTELLECTUAL PROPERTY, COPYRIGHT, PATENTS, AND DATA RIGHTS; INDEMNITY AND LIABILITY; USE OF UC NAMES AND TRADEMARKS; LIABILITY FOR UC-FURNISHED PROPERTY; COOPERATION; TERMS APPLICABLE TO THE FURNISHING OF GOODS; AUDIT REQUIREMENTS; PROHIBITION ON UNAUTHORIZED USE OR DISCLOSURE OF INSTITUTIONAL INFORMATION; GOVERNING LAW AND VENUE, and, to the extent incorporated into the Agreement, the terms of the APPENDIX–DATA SECURITY, APPENDIX–BAA, and/or APPENDIX–GDPR.

## ARTICLE 39 – CONTRACTING FOR COVERED SERVICES

Covered Services, for the purpose of this Agreement, are defined as work customarily performed by bargaining unit employees at the University in the categories of services described in Regents Policy 5402, and American Federation of State, County, and Municipal Employees (AFSCME) Collective Bargaining Agreement Article 5. Covered Services include, but are not necessarily limited to, the following services: cleaning, custodial, janitorial, or housekeeping services; food services; laundry services; grounds keeping; building maintenance (excluding skilled crafts); transportation and parking services; and security services.

Unless UC notifies Supplier that the Services are not Covered Services, Supplier warrants that it is in compliance with applicable federal, state and local working conditions requirements, including but not limited to those set forth in in other Articles of the Agreement. In accordance with Regents Policy 5402 and AFSCME Collective Bargaining Agreement Article 5, Supplier also warrants that it pays its employees performing the Covered Services at UC locations the equivalent value of the wages and benefits – as determined in the Wage and Benefit Parity Appendix – received by UC employees providing similar services at the same, or nearest UC location.

Supplier agrees UC may conduct such compliance audits as UC reasonably requests, and determined at UC's sole discretion. Supplier agrees to post UC Contracting for Covered Services notices, in the template supplied by UC, in a prominent and accessible place (such as break rooms and lunch rooms) where it may be easily seen by workers who perform Covered Services. The term "Supplier" includes Supplier and its Sub-Suppliers at any tier. Supplier also agrees to:

- (a) upon UC's request, provide verification of an independent audit performed by Supplier's independent auditor or independent internal audit department (<http://na.theiia.org/standards-guidance/topics/Pages/Independence-and-Objectivity.aspx>) and at





Supplier's expense; and

- (b) ensure that, in the case of a UC interim audit, Supplier's auditor makes available to UC its Contracting for Covered Services work papers for the most recently audited time period. Supplier agrees to provide UC requested verification, in a form acceptable to UC, no later than ninety days after receiving UC's request.



## ARTICLE 1. PURPOSE AND INTRODUCTION

- A. In the course of providing the Goods and/or Services contemplated by the Agreement, Supplier may gain access to the University of California's (UC) Institutional Information and/or IT Resources (both defined below). In such an event, UC and Supplier desire to appropriately protect Institutional Information and IT Resources. The purpose of this Appendix-Data Security is to specify Supplier's cybersecurity and risk management responsibilities when Supplier has access to Institutional Information and/or IT Resources.
- B. Any capitalized terms used here have the meaning ascribed to such terms as set forth in the Agreement or Incorporated Documents.
- C. Supplier must provide commercially acceptable cybersecurity and cyber risk management to protect Institutional Information and/or IT Resources. This must include, but is not limited to the Supplier:
  1. Developing and documenting a plan that protects Institutional Information and IT Resources.
    - Supplier must responsibly execute this plan.
    - Supplier's approach must conform to a recognized cybersecurity framework designed for that purpose.<sup>1</sup>
    - Supplier's information security plan must be supported by a third-party review or certification. Supplier may only use an alternative to a third-party review if approved by the responsible UC Information Security Officer.
  2. Conducting an accurate and thorough assessment of the potential risks to and vulnerabilities of the security of the Institutional Information and/or IT Resources. Supplier must mitigate anticipated risks effectively. This includes implementing commercially acceptable security policies, procedures, and practices that protect Institutional Information and/or IT Resources.
  3. Updating its plan to effectively address new cybersecurity risks.
  4. Complying with pertinent contractual and regulatory responsibilities.
  5. Providing UC with evidence of compliance with Supplier's information security plan.
  6. Keeping UC informed with timely updates on risks, vulnerabilities, Security Incidents, and Breaches.
  7. Keeping UC informed of any measures UC must perform to ensure the security of Institutional Information and IT Resources.

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<sup>1</sup> Examples include the latest versions of PCI DSS, NIST CSF, CIS Critical Security Controls, ISO 27002, NIST SP 800-53 and NIST SP 800-171.

- D. If, in the course of providing the Goods and/or Services under the Agreement, Supplier engages in transactions with UC affiliated individuals (including but not limited to: students, staff, faculty, customers, patients, guests, volunteers, visitors, research subjects, etc.), as a benefit and result of the Agreement, Supplier must treat any data about UC affiliated individuals that Supplier creates, receives, and/or collects in the course of those transactions with the same level of privacy and security protections and standards as required of Institutional Information by this Appendix.
- E. Supplier agrees to be bound by the obligations set forth in this Appendix. To the extent applicable, Supplier also agrees to impose, by written contract, the same terms and conditions contained in this Appendix on any sub-supplier retained by Supplier to provide or assist in providing the Goods and/or Services to UC.
- F. To the extent that a requirement of this Appendix conflicts with those of any other UC Agreement or Incorporated Document, the most stringent requirement (including but not limited to: least risk to UC, shortest time, best practice, etc.) will apply.

## ARTICLE 2. DEFINED TERMS

- A. **“Breach”** means: (1) Any disclosure of Institutional Information to an unauthorized party or in an unlawful manner; (2) Unauthorized or unlawful acquisition of information that compromises the security, confidentiality, or integrity of Institutional Information and/or IT Resources; or (3) The acquisition, access, use, or disclosure of protected health information (PHI) or medical information in a manner not permitted under the Health Insurance Portability and Accountability Act (HIPAA) or California law.
- B. **“Illicit Code”** means: (1) Any code UC would not reasonably expect to be present or operating; (2) Hidden software or functionality with adverse or undesired actions or consequences; (3) Code that replicates or transmits Institutional Information or activates operating systems or other similar services without the express knowledge and approval of UC; (4) Code that alters, damages, or erases any Institutional Information or software without the express knowledge and approval of UC; or (5) Code or apparatus that functions in any way as a: key lock, node lock, time-out, “back door,” “trap door,” “booby trap,” “dead drop device,” “data scrambling device,” or other function, regardless of how it is implemented, which is intended to alter or restrict the use of or access to any Institutional Information and/or IT Resources.
- C. **“Institutional Information”** means: Any information or data created, received, and/or collected by UC or on its behalf, including but not limited to: application logs, metadata, and data derived from such data.
- D. **“IT Resource”** means: IT infrastructure, cloud services, software, and/or hardware with computing and/or networking capability that is Supplier owned/managed or UC-owned, or a personally owned device that stores Institutional Information, is connected to UC systems, is connected to UC networks, or is used for UC business. IT Resources include, but are not limited to: personal and mobile computing systems and devices,

mobile phones, printers, network devices, industrial control systems (including but not limited to: SCADA, PLCs, DPC, Operational Technology, etc.), access control systems, digital video monitoring systems, data storage systems, data processing systems, backup systems, electronic and physical media, biometric and access tokens, Internet of Things (IoT), or any other device that connects to any UC network.

E. **“Major Change”** means: The implementation of a change that could have an effect on the security of an IT Resource or Institutional Information. The scope includes changes to architectures, processes, tools, metrics, and documentation, as well as changes to IT services and other configuration items. These include changes related to:

1. Technology upgrades or migrations.
2. Responses to Security Incidents.
3. Modifications of scope (data elements, features, location of Institutional Information, etc.).
4. Regulatory guidance.
5. Law and legal regulations.
6. Responses to risk assessments.
7. Addressing vulnerabilities.
8. Material updates or shifts in technologies used by Supplier.

F. **“Security Incident”** means: (1) A material compromise of the confidentiality, integrity, or availability of Institutional Information; (2) A single event or a series of unwanted or unexpected events that has a significant probability of compromising UC business operations or threatening Institutional Information and/or IT Resources; (3) Any event involving a cyber intrusion; or (4) A material failure of Supplier’s administrative, technical, or physical controls that resulted or could have resulted in an adverse impact to the confidentiality, integrity, or availability of Institutional Information or IT Resources.

### ARTICLE 3. ACCESS TO INSTITUTIONAL INFORMATION AND IT RESOURCES

A. Supplier must limit its access to, use of, and disclosure of Institutional Information and IT Resources to the least invasive degree necessary required to provide the Goods and/or Services.

1. Supplier may not access or use Institutional Information and IT Resources for any purpose except to provide the Goods and/or Services.
2. For the avoidance of doubt, Supplier may not access, use, or disclose Institutional Information and IT Resources outside the scope of the Agreement for purposes of, including but not limited to: marketing, advertising, research, sale, or licensing unless expressly approved in writing by UC.

B. In the event that Goods and/or Services include the review of a specific Security Incident or a threat to or anomaly in Institutional Information or IT Resources, Supplier must limit inspection to the least invasive degree necessary required to perform the investigation.

**ARTICLE 4. SUPPLIER'S INFORMATION SECURITY PLAN AND RESPONSIBILITIES**

- A. Supplier acknowledges that UC must comply with information security standards as required by law, regulation, and regulatory guidance, as well as by UC's internal security program that protects Institutional Information and IT Resources.
- B. Supplier must establish, maintain, comply with, and responsibly execute its information security plan.
- C. Supplier's initial information security plan is attached as Exhibit 2 and incorporated by reference.
- D. Updates to Exhibit 2 will occur as follows:
  - 1. On an annual basis, Supplier will review its information security plan, update it as needed, and submit it upon written request by UC.
  - 2. In the event of a Major Change, Supplier will review its information security plan, update it as needed, and submit it to UC as detailed herein.
- E. If Supplier makes any material modifications to its information security plan that will affect the security of Institutional Information and IT Resources, Supplier must notify UC within seventy-two (72) calendar hours and identify the changes.
- F. Supplier's Information Security Plan must:
  - 1. Ensure the security (including but not limited to: confidentiality, integrity, and availability) of Institutional Information and IT Resources through the use and maintenance of appropriate administrative, technical, and physical controls;
  - 2. Protect against any reasonably anticipated threats or hazards to Institutional Information and IT Resources;
  - 3. Address the risks associated with Supplier having access to Institutional Information and IT Resources;
  - 4. Comply with applicable regulations and/or external obligations listed in Exhibit 1;
  - 5. Comply with all applicable legal and regulatory requirements for data protection, security, and privacy;
  - 6. Clearly document the cybersecurity responsibilities of each party;
  - 7. Follow UC records retention requirements outlined in the Statement of Work (SOW) or in UC's Terms and Conditions;
  - 8. Prevent the sharing of passwords or authentication secrets that provide access to Institutional Information and/or IT Resources;
  - 9. Prevent the use of passphrases (passwords) or other authentication secrets that are common across customers or multiple unrelated UC sites or units;
  - 10. Prevent unauthorized access to Institutional Information and IT Resources;
  - 11. Prevent unauthorized changes to IT Resources;
  - 12. Prevent the reduction, removal, or turning off of any security control without express written approval from UC;

13. Prevent the creation of new Supplier accounts to access Institutional Information and IT Resources without express written approval from UC;
14. Prevent the storing, harvesting, or passing through of UC credentials (username, password, authentication secret, or other factor); and
15. Prevent the use or copying of Institutional Information for any purpose not authorized under the Agreement or any associated Statement of Work (SOW).

#### ARTICLE 5. REQUESTS FROM UC AND EVIDENCE OF COMPLIANCE

- A. Supplier must provide UC with evidence that demonstrates to UC's reasonable satisfaction Supplier's adherence to its information security plan (including but not limited to: third-party report, attestation signed by an authorized individual, attestation of compliance by a qualified assessor, or a mutually agreed upon equivalent) upon execution of the Agreement, upon reasonable request (including but not limited to: annually, after Major Changes, and/or as a result of a Security Incident), or as required by any applicable regulatory or governmental authority.
- B. Supplier must respond to UC's reasonable questions related to cybersecurity controls, Security Incidents, or Major Changes, newly published vulnerabilities, and/or risk assessments within ten (10) business days.
- C. UC may request and perform a security audit using a qualified third party or a mutually agreed upon alternative annually or as a result of a Breach.

#### ARTICLE 6. NOTIFICATION OF MAJOR CHANGES AND VULNERABILITY DISCLOSURES

- A. Within twenty (20) business days, Supplier must notify UC regarding changes in Supplier's security posture or IT infrastructure. Such notices must occur:
  1. When Major Changes happen.
  2. When Supplier becomes aware of a vulnerability that warrants a CVE<sup>2</sup> rating of "High" or "Critical," based on the latest CVE version, for which a patch is not yet available or for which Supplier will delay application of an available patch.
- B. Supplier must use commercially acceptable efforts to remediate, within twenty (20) business days, any vulnerability rated as CVE High or Critical.
- C. In response to Major Changes, Supplier must update its information security plan no later than fifteen (15) days into the next calendar quarter and must provide updated evidence of compliance with the information security plan.

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<sup>2</sup> Common Vulnerabilities and Exposures (CVE) is a dictionary-type list of standardized names for vulnerabilities and other information related to security exposures maintained by The MITRE Corporation. CVE aims to standardize the names for all publicly known vulnerabilities and security exposures. The goal of CVE is to make it easier to share data across separate vulnerability databases and security tools. The CVE list can be found at: [cve.mitre.org](https://cve.mitre.org)

**ARTICLE 7. RETURN AND DISPOSAL OF INSTITUTIONAL INFORMATION**

- A. Within thirty (30) calendar days of the termination, cancellation, expiration, or other conclusion of the Agreement, Supplier must return all Institutional Information to UC and then dispose of the Institutional Information in possession of Supplier as detailed herein. This provision also applies to all Institutional Information that is in the possession of sub-suppliers or agents of Supplier.
- B. Such disposal will be accomplished using the methods described in UC's Institutional Information Disposal Standard (<https://security.ucop.edu/policies/institutional-information-disposal.html>) or an alternative approved by UC.
- C. Supplier will certify in writing to UC that such return and/or disposal has been completed.
- D. If Supplier believes that return and/or disposal of Institutional Information is technically impossible or impractical, Supplier must provide UC with a written statement explaining the reason for this conclusion. If UC determines that return and/or disposal is technically impossible or impractical, Supplier will continue to protect the Institutional Information in accordance with the terms of this Appendix for as long as the Institutional Information is in Supplier's possession.

**ARTICLE 8. NOTIFICATION OF CORRESPONDENCE CONCERNING INSTITUTIONAL INFORMATION**

- A. Supplier agrees to notify UC promptly, both orally and in writing, but in no event more than seventy-two (72) calendar hours after Supplier receives correspondence or a complaint that relates to a regulation, contractual obligation, Breach, or material risk concerning Institutional Information. For purposes of this Article 8.A, a correspondence or complaint may include, but is not limited to, any communication that originates from law enforcement, regulatory or governmental agencies, government investigators, corporations, or an individual, but excludes normal customer service correspondence or inquiries.

**ARTICLE 9. COORDINATING, REPORTING, AND RESPONDING TO BREACHES AND SECURITY INCIDENTS**

- A. **Reporting of Breach or Security Incident:** If Supplier reasonably suspects or confirms a Breach and/or a Security Incident impacting Institutional Information and/or IT Resources, Supplier must promptly notify UC both orally and in writing using the contacts in the Agreement. Supplier must provide such notifications no later than (1) seventy-two (72) calendar hours after the initial suspicion of a Security Incident and/or Breach and (2) seventy-two (72) calendar hours after the initial confirmation of a Security Incident and/or Breach, if Supplier is able to make such a confirmation. Supplier's notification must identify:
1. Contacts for both technical and management coordination;

2. Escalation and identifying information, such as ticket numbers, system identifiers, etc.;
  3. The nature of the Breach and/or Security Incident;
  4. The Institutional Information and/or IT Resources affected;
  5. What Supplier has done or will do to mitigate any deleterious effect; and
  6. What corrective action Supplier has taken or will take to prevent future Security Incidents.
- B. Supplier will provide other information as reasonably requested by UC.
- C. In the event of a suspected Breach and/or Security Incident, Supplier will keep UC informed regularly of the progress of its investigation until the incident is resolved.
- D. **Coordination of Breach Response or Security Incident Activities:** Supplier will fully cooperate with UC's investigation of any Breach and/or Security Incident involving Supplier and/or Goods and/or Services. Supplier's full cooperation will include, but not be limited to, Supplier:
1. Promptly preserving any potential forensic evidence relating to the Breach and/or Security Incident;
  2. Remedying the Breach and/or Security Incident as quickly as circumstances permit;
  3. Promptly, but no more than seventy two (72) calendar hours after the discovery of Breach and/or Security Incident, designating a contact person to whom UC will direct inquiries and who will communicate Supplier responses to UC inquiries;
  4. As rapidly as circumstances permit, assigning/using appropriate resources to remedy, investigate, and document the Breach and/or Security Incident, to restore UC service(s) as directed by UC, and undertake appropriate response activities;
  5. Providing status reports to UC regarding Breach and Security Incident response activities, either on a daily basis or a frequency approved by UC;
  6. Coordinating all media, law enforcement, or other Breach and/or Security Incident notifications with UC in advance of such notification(s), unless expressly prohibited by law;
  7. Ensuring that knowledgeable Supplier employees are available on short notice, if needed, to participate in UC and Supplier initiated meetings and/or conference calls regarding the Breach and/or Security Incident; and
  8. Ensuring that knowledgeable Supplier employees and agents participate in after-action analysis, including root cause analysis and preventive action planning.
- E. **Breaches and Security Incidents – Corrective And Preventive Action:** As a result of a Breach and/or Security Incident impacting Institutional Information and/or IT Resources, and upon UC's request, Supplier must prepare a report detailing corrective and preventive actions. The report must include:



1. A mutually agreed upon timeline for the corrective and preventive actions based on the nature of the Breach and/or Security Incident;
  2. Identification and description of the root causes; and
  3. Precise steps Supplier will take to address the failures in the underlying administrative, technical, and/or physical controls to mitigate damages and future cyber risk.
- F. **Costs:** Supplier must reimburse UC for reasonable costs related to responding to Breaches impacting Institutional Information and IT Resources caused by Supplier. This includes all costs associated with notice and/or remediation of the Breach.
- G. **Grounds for Termination:** Any Breach may be grounds for termination of the Agreement by UC. Agreement obligations to secure, dispose, and report continue through the resolution of the Breach and/or Security Incident.

#### ARTICLE 10. ILLICIT CODE WARRANTY

- A. Supplier represents and warrants that the Goods and/or Services do not contain Illicit Code.
- B. To the extent that any Goods and/or Services have Illicit Code written into them, Supplier will be in breach of this Agreement, and no cure period will apply.
- C. Supplier agrees, in order to protect UC from damages that may be intentionally or unintentionally caused by the introduction of Illicit Code, to promptly isolate or otherwise secure and then return Institutional Information and/or IT Resources.
- D. Supplier acknowledges that it does not have any right to electronically hold Institutional Information or assert any claim against UC by withholding the Goods and/or Services using Illicit Code.
- E. Should Supplier learn of the presence of Illicit Code, Supplier will promptly provide UC with written notice explaining the scope and associated risk.
- F. Supplier represents and warrants that it will take commercially reasonable steps to promptly remove Illicit Code.
- G. Supplier represents and warrants that even if Illicit Code is unintentionally installed via any method, Supplier will never utilize the Illicit Code.
- H. This provision does not relate to malware or viruses that attack the running IT Resource. These are covered under ARTICLE 9 - COORDINATING, REPORTING, AND RESPONDING TO BREACHES AND SECURITY INCIDENTS.

#### ARTICLE 11. BACKGROUND CHECKS

- A. Before Supplier's employee, sub-supplier, or agent may access Institutional Information and/or IT Resources classified at Protection Level 3 or Protection Level 4<sup>3</sup>, Supplier must conduct a thorough and pertinent background check. Supplier must evaluate the results prior to granting access in order to assure that there is no indication

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<sup>3</sup> See Exhibit 1.

that the employee, sub-supplier, or agent presents a risk to Institutional Information and IT Resources.

B. Supplier must retain each employee's, sub-supplier's, or agent's background check documentation for a period of three (3) years following the termination of the Agreement.

## Exhibit 1 – Institutional Information

### 1. Protection Level Classification<sup>4</sup>:

☐ Protection Level 1

☐ Protection Level 2

☐ Protection Level 3

☐ Protection Level 4

**Explanation:** [Optional, add detail if needed, may be covered in SOW]

The Protection Level determines the applicable cyber security insurance requirement in the Terms and Conditions.

### 2. Institutional Information data element descriptors:

Select all data types that apply:

- A. ☐ Animal Research Data.
- B. ☐ Controlled Technical Information (CTI).
- C. ☐ Controlled Unclassified Information (CUI) – 800-171/NARA.
- D. ☐ Defense Department: Covered Defense Information (CDI).
- E. ☐ Federal Acquisition Regulations (FARS/DFAR) other than CUI.
- F. ☐ GDPR personal data.
- G. ☐ GDPR special data.
- H. ☐ Health data – other identifiable medical data not covered by HIPAA. (Including but not limited to: occupational health, special accommodation, or services qualification, etc.)
- I. ☐ Health Records subject to HIPAA Privacy or Security Rule (PHI).
- J. ☐ Human Subject Research Data.
  - 1. ☐ Identified.
  - 2. ☐ Anonymized.
- K. ☐ Intellectual property (IP), such as patents, copyright, or trade secrets.
- L. ☐ ITAR/EAR-controlled data.
- M. ☐ Payment card data (PCI, PCI DSS).
- N. ☐ Personally identifiable information – PII.
- O. ☐ Student data, whether or not subject to FERPA.
- P. ☐ Other: \_\_\_\_\_
- Q. ☐ Other: \_\_\_\_\_

<sup>4</sup> For reference see: <https://security.ucop.edu/policies/institutional-information-and-it-resource-classification.html>

- R. ☐ Other: \_\_\_\_\_
- S. ☐ Other: \_\_\_\_\_

### 3. Institutional Information Regulation or Contract Requirements:

Select all regulations or external obligations that apply to inform UC and the Supplier of obligations related to this Appendix:

#### Privacy (\* indicates data security requirements are also present)

- A. ☐ California Confidentiality of Medical Information Act (CMIA) \*.
- B. ☐ California Consumer Privacy Act (CCPA).
- C. ☐ California Information Practices Act (IPA).
- D. ☐ European Union General Data Protection Regulation (GDPR)\*.
- E. ☐ Family Educational Rights and Privacy Act (FERPA) \*.
- F. ☐ Federal Policy for the Protection of Human Subjects ("Common Rule").
- G. ☐ Genetic Information Nondiscrimination Act (GINA).
- H. ☐ Gramm-Leach-Bliley Act (GLBA) (Student Financial Aid) \*.
- I. ☐ Health Insurance Portability and Accountability Act/Health Information Technology for Economic and Clinical Health Act (HIPAA/HITECH) \*.
- J. ☐ Substance Abuse and Mental Health Services Administration SAMHSA (CFR 42 Part 2).
- K. ☐ The Fair and Accurate Credit Transaction Act (FACTA).
- L. ☐ The Fair Credit Reporting Act (FCRA).

#### Data Security

- M. ☐ Chemical Facility Anti-Terrorism Standards (CFATS).
- N. ☐ Defense Federal Acquisition Regulations (DFARS).
- O. ☐ Export Administration Regulations (EAR).
- P. ☐ Federal Acquisition Regulations (FARS).
- Q. ☐ Federal Information Security Modernization Act (FISMA).
- R. ☐ International Traffic in Arms Regulations (ITAR).
- S. ☐ Payment card data (PCI, PCI DSS).
- T. ☐ Toxic Substances Control Act (TSCA).
- U. ☐ Other: \_\_\_\_\_
- V. ☐ Other: \_\_\_\_\_
- W. ☐ Other: \_\_\_\_\_
- X. ☐ Other: \_\_\_\_\_

## Exhibit 2

# Supplier's Initial Information Security Plan

[Supplier to provide and update per the Appendix DS requirements.]



# UNIVERSITY OF CALIFORNIA

## Appendix – Business Associate Agreement

This Appendix - Business Associate Agreement ("Appendix BAA") supplements and is made a part of any and all agreements entered into by and between The Regents of the University of California, a California corporation ("UC"), on behalf of its University of California Health System and \_\_\_\_\_, Business Associate ("BA").

### RECITALS

- A. UC is a "Covered Entity" as defined under 45 C.F.R. § 160.103
- B. UC and BA are entering into or have entered into, and may in the future enter into, one or more agreements (each an "Underlying Agreement") under which BA performs functions or activities for or on behalf of, or provides services to UC ("Services") that involve receiving, creating, maintaining and/or transmitting Protected Health Information ("PHI") of UC as a "Business Associate" of UC as defined under 45 C.F.R. § 160.103. This Appendix BAA shall only be operative in the event and to the extent this Appendix BAA is incorporated into an Underlying Agreement between UC and BA.
- C. UC and BA desire to protect the privacy and provide for the security of PHI used by or disclosed to BA in compliance with the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), the regulations promulgated thereunder by the U.S. Department of Health and Human Services (45 C.F.R. Parts 160, 162 and 164) (the "HIPAA Regulations"), the Health Information Technology for Economic and Clinical Health Act of 2009 (the "HITECH Act"), California Civil Code § 56 et seq., §§1798.82 and 1798.29, and other applicable laws and regulations. The purpose of this BA Agreement is to satisfy certain standards and requirements of HIPAA, the HIPAA Regulations, including 45 CFR § 164.504(e), the HITECH Act, including Subtitle D, part 1, as they may be amended from time to time, and similar requirements under California law.
- D. UC has designated all of its HIPAA health care components as a single component of its hybrid entity and therefore this BA Agreement is binding on all other UC health care components (collectively, the Single Health Care Component or the SHCC). This BA Agreement is effective on the date of the Underlying Agreement under which BA provides Services to UC ("Effective Date").

### 1. DEFINITIONS

Except for PHI, all capitalized terms in this Appendix BAA shall have the same meaning as those terms in the HIPAA Regulations.

PHI shall have the same meaning as "protected health information" in the HIPAA Regulations that is created, received, maintained, or transmitted by Business Associate or any Subcontractor on behalf of UC and shall also include "medical information" as defined at Cal. Civ. Code § 56.05.

## 2. OBLIGATIONS OF BA

BA agrees to:

- A. Comply with the requirements of the Privacy Rule that apply to UC in carrying out such obligations, to the extent BA carries out any obligations of UC under the Privacy Rule. BA also agrees to comply with the requirements of California state privacy laws and regulations that apply to UC in carrying out such obligations, to the extent BA carries out any obligations of UC under California Civil Code § 1798 et seq., California Civil Code § 56 et seq., and California Health & Safety Code §§ 1280.15 and 1280.18, as applicable, unless otherwise mutually agreed to by BA and UC.
- B. Not Use or Disclose PHI other than as permitted or required by the Underlying Agreement or as required by law.
- C. Use appropriate safeguards, and comply, where applicable, with 45 C.F.R. § 164 Subpart C with respect to ePHI, to prevent the Use or Disclosure of PHI other than as provided for by the Underlying Agreement(s) and the Appendix BAA.
- D. Notify UC, orally and in writing, as soon as possible, but in no event more than five (5) calendar days, after BA becomes aware of any Use or Disclosure of the PHI not permitted or required by the Appendix BAA or Underlying Agreement(s), including Breaches of unsecured PHI as required by 45 C.F.R. § 164.410 and potential compromises of UC PHI, including potential inappropriate access, acquisition, use or disclosure of UC PHI (each, collectively an “Incident”). BA shall be deemed to be aware of any such Incident, as of the first day on which it becomes aware of it, or by exercising reasonable diligence, should have been known to its officers, employees, agents or sub-suppliers. The notification to UC shall include, to the extent possible, each individual whose unsecured PHI has been, or is reasonably believed by BA to have been, accessed, acquired, used or disclosed during such Incident. BA shall further provide UC with any other available information that UC is required to include in a notification to affected individuals at the time of the notification to UC, or promptly thereafter as information becomes available. BA shall take prompt corrective action to remedy any such Incident, and, as soon as possible, shall provide to UC in writing: (i) the actions initiated by the BA to mitigate, to the extent practicable, any harmful effect of such Incident; and (ii) the corrective action BA has initiated or plans to initiate to prevent future similar Incidents.
- E. Ensure that any Subcontractors that create, receive, maintain, or transmit PHI on behalf of the BA agree to the same restrictions, conditions, and requirements that apply to the BA with respect to such PHI.
- F. If BA maintains PHI in a Designated Record Set, BA shall make the PHI in the Designated Record Set available to UC, or if directed by UC to the Individual or the Individual’s designee, as necessary to satisfy UC’s obligations under 45 C.F.R. § 164.524.
- G. If BA maintains PHI in a Designated Record Set, BA shall make any amendments directed or agreed to by UC pursuant to 45 C.F.R. § 164.526, or take other measures as necessary to satisfy UC’s obligations under 45 C.F.R. § 164.526.

- H. Maintain and make available the information required to provide an accounting of disclosures to UC, or if directed by UC to the Individual, as necessary to satisfy UC's obligations under 45 C.F.R. § 164.528.
- I. Make its internal practices, books, and records, relating to the Use and Disclosure of PHI available to UC, and to the Secretary for purposes of determining UC's compliance with HIPAA, HITECH and their implementing regulations.

### 3. PERMITTED USES AND DISCLOSURES BY BA

BA may only Use or Disclose the Minimum Necessary PHI to perform the services set forth in the Underlying Agreement.

### 4. TERM AND TERMINATION

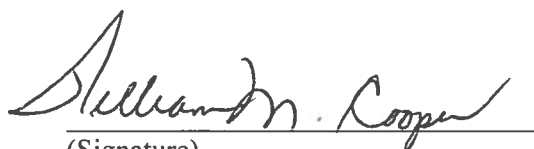
- A. Termination for Cause. UC may terminate this Appendix BAA and any Underlying Agreement(s), if UC determines BA has violated a material term of the Appendix BAA.
- B. Upon termination of this Appendix BAA for any reason, with respect to PHI received from UC, or created, maintained, or received by BA on behalf of UC, BA shall return to UC, or if agreed to by UC, destroy, all such PHI that BA still maintains in any form, and retain no copies of such PHI.

To the extent return or destruction of UC PHI is not feasible, BA shall (1) retain only that PHI which is necessary for BA to continue its proper management and administration or to carry out its legal responsibilities; and (2) continue to use appropriate safeguards for such UC PHI and comply with Subpart C of 45 C.F.R. Part 164 with respect to ePHI to prevent Use or Disclosure of the PHI, other than as provided for in this Section, for as long as BA retains the PHI.

- C. Survival. The obligations of BA under this Section 4.B shall survive the termination of this Appendix BAA and any Underlying Agreement(s).

The Appendix BAA is signed below by the parties' duly authorized representatives.

**THE REGENTS OF THE  
UNIVERSITY OF CALIFORNIA**

  
(Signature)

WILLIAM M. COOPER  
(Printed Name, Title)

AVP + CPO  
8/2/19  
(Date)

**BUSINESS ASSOCIATE**

\_\_\_\_\_  
(Supplier Name)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name, Title)

\_\_\_\_\_  
(Date)



# ATTACHMENT A TO PURCHASING AGREEMENT # \_\_\_\_\_

## STATEMENT OF WORK

This Statement of Work # \_\_\_\_ ("SOW") is issued pursuant to Purchasing Agreement # \_\_\_\_\_ dated \_\_\_\_\_, 20\_\_ between UC and Supplier ("Agreement").

### 1. Title and Description of the Scope of Goods and/or Services

**[Buyer: Provide an overview and background of Goods and/or Services to be provided.]**

### 2. Term of SOW

This SOW will begin on \_\_\_\_\_, 20\_\_ ("Effective Date") and continue through \_\_\_\_\_, 20\_\_. This SOW may not be renewed or otherwise amended except through a Change Order pursuant to the Change Management section below.

### 3. Key Tasks and Activities, Deliverables and Completion Timeframe

Supplier Obligations				
Task		Activities	Deliverables	Completion Date or Timeframe
1	[General description]	[Specific details using action verbs like "create", "develop", "test", "analyze", "evaluate", etc.]	[List each discrete tangible work product that is considered a critical end result from the Supplier; deliverables are nouns, not verbs]	[Specific dates are best; can be stated as "Week 1", "Week 2", etc.]
2				
3				
4				
5				
Additional as needed		<p>Include: Identify all phases. If additional phases will not be known until first phase work begins, be sure to specify hourly rate and a not to exceed price for this work.</p> <p>Request Supplier to provide data type, protected health information and other data</p>		

#### 4. UC Obligations

[Buyer: Include as appropriate language such as: UC will provide working space, equipment, furniture, utilities, and services, as follows:]

#### 5. Place(s) of Performance

[Buyer: Use this section if appropriate to outline where Services will be provided]

#### 6. Key Personnel

Supplier's Account Manager is listed below, is subject to UC approval, and has overall responsibility for managing the UC/Supplier relationship:

Name	
Phone	
Email	
Address	

Subcontractors authorized to provide Goods and/or Services under this SOW [Buyer: Names should be listed only if Agreement permits use of subcontractors]:

Name of Subcontractor	Goods and/or Services the Subcontractor will provide

Supplier's Account Management Team is:

Name	
Phone	
Email	
Address	
Name	
Phone	
Email	
Address	
Name	
Phone	
Email	
Address	
Name	
Phone	
Email	
Address	

UC'S Project Manager, responsible for acceptance/rejection of project results/deliverables, is:

Name	
Phone	
Email	
Address	

## 7. Reporting Requirements

**[Buyer: Identify any key reports that should be produced by Supplier or critical reporting events. This can be included in the table above if preferred.]**

Supplier agrees to provide other reports as reasonably requested by UC during the Term of the Agreement and any extension(s) to the Term at no additional cost to UC.

## 8. Assumptions

- a) The following items are not included within the scope of Goods and/or Services to be provided under this SOW: **[Buyer: Delete if not needed]**
- b) **[Buyer: Add more as needed]**
- c) Additional assumptions include the following: **[Buyer: Delete if not needed, but list any UC dependencies that must be fulfilled in order for Supplier to provide the Goods and/or Services]**
- d) **[Buyer: Add more as needed]**

## 9. Service Level Agreement

- a) **[Buyer: Any critical SLAs should be stated here. For goods, consider the following language:]**

During the Term of the Agreement, and any extension(s) of the Term, Supplier will provide the following minimum service standards:

Normal delivery	-next business day
Rush delivery	-within 4 hours
Pick up returns	-within 2 business days
Request for reports	-within 5 business days
Order fill rate	-98%
Delivery accuracy	-98%
Delivery, on-time	-98%
Invoice/billing accuracy	-98%
Customer service satisfaction	-98%

The minimum service standards set forth above recognize that occasional errors are likely; however, Supplier further agrees to use its best efforts to achieve 100% of service levels. Should the service levels fall below the minimum standards and Supplier does not take corrective action within fourteen (14) days following UC written notification, UC reserves the right to terminate the Agreement immediately.

## 10. Pricing, Invoicing Method, and Settlement Method and Terms

**[Buyer: Pricing includes the contract amount (for instance, time and materials using an hourly rate; whether there is a not to exceed cap; and flat fee); and the payment schedule (what percentage must be paid at what times, including milestones)]**

Pricing is addressed below. The Invoicing Method, and Settlement Method and Terms are addressed in the applicable Agreement. As regards Invoicing Method, and Settlement Method and Terms, the terms of the applicable Agreement will take precedence over any conflicting terms in this Statement of Work.

- a) “Fixed Price Services” to be rendered under this SOW, including deliverables to be provided as part of Fixed Price Services, are described in this section as:
- b) “Time and Materials Services” to be rendered under this SOW, including deliverables to be provided as part of Time and Materials Services:
- c) The rates applicable to each person who will render Time and Materials Services are as follows:

Name and Title of Person Rendering Services	Rate per Hour/Day	Estimated No. of Days	Extended Cost of Fees	UC MRC
Estimated Maximum Expenses (if any):			n/a	

Estimated Maximum Cost:		
-------------------------	--	--

d) **[Buyer: Outline Payment Schedule as needed]**

## 11. Program Requirements

**[Buyer: If items will be ordered by catalog, use the Appendix – Electronic Commerce. If applicable, consider using these additional terms for Goods:]**

Order Packaging and Labeling. Supplier agrees that each UC order will be individually wrapped and labeled with the following information:

Purchase Order number;

Product description, quantity and catalog number of the product ordered and an open 30-character field for internal identification e.g., UC storehouse catalog numbers and/or internal customer order numbers; and

Other information, as may be requested by ordering UC Location.

Packaging slips will be attached to the outside of the package such that it can be inspected by UC at the requesting department and/or receiving dock.

Receiving Locations. Supplier agrees to provide desktop and dock delivery to all UC current and future authorized personnel delivery points, as requested by UC.

Standard Delivery Requirements. Supplier will deliver Monday through Friday, excluding UC- and Supplier-observed holidays. Supplier provide UC with a schedule on or before September 1 of the following calendar year showing holidays and other planned shutdowns (such as the annual inventory) that would impact Supplier's ability to deliver the Goods and/or Services. Supplier agrees to deliver all UC orders received by 3:30pm Pacific Time the next business day as follows:

Campus direct (desktop delivery)	- by 3:30 pm Pacific Time
Storehouse (drop ship delivery)	- by 10:00 am Pacific Time

Delivery Delays. Supplier will report any delivery delay whatsoever to the ordering Location, as well as its cause, within two (2) hours after Supplier is able to reasonably determine there will be a delay; the report will be provided to UC by telephone, e-mail, or facsimile. Supplier will keep UC fully informed and will take all reasonable action in eliminating the cause of delay.

Rush Delivery Requirements. Supplier agrees to deliver UC emergency orders within four (4) hours after receipt of order at no additional charge to UC. Rush delivery orders for same day delivery must be requested by UC prior to 1:00 pm Pacific Time. Supplier cannot guarantee, but agrees to use good faith efforts to provide same day delivery for rush orders UC places after 1:00 pm Pacific Time.

Returns. Supplier agrees to accept Goods returned by UC if in resalable condition and if made within thirty (30) days of original shipment. Supplier must pick up returns from the ordering department location within two business days. Services under \$20.00 do not need to be physically returned to Supplier.

Credit. Requests for credit can be transmitted by the ordering UC personnel via the established order management system (telephone, fax, paper return form, and web-based). Chargebacks and credit memos will be issued to UC ordering departments in the current month's billing period. Return items will be credited at cost. If Goods were purchased via UC purchasing card, credit must be issued to the same purchasing card.

Out of Stock Items. If there is an out of stock situation of any ordered inventoried item(s), the out of stock item will be added to the back order file and will be delivered to UC when the item is in stock without a further order being submitted.

Surveys. Supplier will, at UC's request, conduct customer surveys of UC orders through questionnaires. The content of these surveys will be approved by UC. UC will be responsible for the tabulation of these surveys.

## 12. Acceptance Criteria and Testing

**[Buyer: Provide details of the Acceptance Criteria and testing which each Deliverable or Milestone must meet to be accepted, if specifics aren't defined.]**

- a) **[Buyer: Indicate any additional financial or other considerations resulting from acceptance testing]**

## 13. Changes to the Services

UC may desire to change the Goods and/or Services following execution of an SOW. If so, UC will submit a written Amendment to Supplier describing the changes in appropriate detail. If an Amendment does not require Supplier to incur any additional material costs or expenses, then Supplier will make the modification within ten (10) business days of Supplier's receipt of UC's Amendment. If an Amendment does require that Supplier incur additional material costs or expenses, then Supplier in good faith will provide UC with a written, high level, non-binding assessment of the costs and expenses and the time required to perform the modifications required by the Amendment, within ten (10) business days of Supplier's receipt of UC's Amendment. UC will notify Supplier in writing within ten (10) business days after receipt of Supplier's response to the Amendment as to whether UC wishes Supplier to implement the Amendment based on the response. UC will compensate Supplier for implementation of an Amendment in accordance with the terms and conditions of the relevant Amendment and Supplier's response to the Amendment, if any. Supplier's implementation of an Amendment will not delay the performance of Services and/or the delivery of deliverables not reasonably affected by an Amendment.

## 14. No Mandatory Use

Because there is no mandatory use policy at UC, nothing in this Statement of Work will be construed to prevent UC from entering into similar agreements with any third parties including, without limitation, suppliers that may be in competition with Supplier.

## 15. Additional Terms

**[Buyer: If recording devices will be allowed, add the following: Supplier will use recording devices in discussions with UC employees only when UC and the employees so authorize; this authorization must be in writing. If applicable, Supplier's use of recording devices in such discussion is proposed as follows: (Insert terms)]**

Insurance Requirements **[Buyer: insert terms, if needed or different from basic levels in T&Cs]**

This Statement of Work is signed below by the parties' duly authorized representatives.

**THE REGENTS OF THE  
UNIVERSITY OF CALIFORNIA**

**[SUPPLIER NAME]**

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed Name, Title)

\_\_\_\_\_  
(Printed Name, Title)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Date)

EXAMPLE



UNIVERSITY  
OF  
CALIFORNIA

Amendment to Agreement

This Amendment # 1 to Agreement # 201002786 ("Agreement") is entered into between The Regents of the University of California (UC) and Supplier.

**AMENDMENT TO AGREEMENT**

The Agreement is hereby amended as follows:

Documents incorporated and listed under Section 19. Incorporated Documents:

- n. RFP # 002013-MAY2020 UC System-wide Job Order Contracting (JOC) Services

All other terms, conditions and provisions of the Agreement shall remain in full force and effect.

This Amendment is signed by the parties' duly authorized representatives, and shall be effective as of April 27<sup>th</sup>, 2021.

**The GORDIAN GROUP INC.**

By: 

Name: Ammon T. Lesher

Title: VP, General Counsel

Date: 4/22/2021

**THE REGENTS OF THE  
UNIVERSITY OF CALIFORNIA**



Sean Parker

Acting Associate Director - Procurement

4/22/2021





# UNIVERSITY OF CALIFORNIA

## Amendment to Agreement

This Amendment # 2 to Agreement # 201002786 ("Agreement") is entered into between The Regents of the University of California (UC) and Supplier.

### AMENDMENT TO AGREEMENT

The Agreement is hereby amended as follows:

Section 1. Statement of Work to add the following language:

"As a result of Request for Proposal # 00213-MAY2020 UC System-wide Job Order Contracting (JOC) Services, the Agreement to furnish certain goods and services described herein and in the documents referenced herein ("Goods and/or Services") is made by and between The Regents of the University of California, a California public cooperation ("UC") on behalf of the University of California and the supplier named below ("Supplier"). This Agreement is binding only if it is negotiated and executed by an authorized representative with the proper delegation of authority.

Supplier agrees to extend Goods and/or Services to public agencies (state and local governmental entities, public and private primary, secondary and higher education entities, non-profit entities, and agencies for the public benefit ("Public Agencies") registered with OMNIA Partners, Public Sector ("Participating Public Agencies") under the terms of this agreement. All contractual administration (e.g. terms, conditions, extensions, and renewals) will remain the UC's responsibility except as outlined in the above referenced RFP 00213-MAY2020 UC System-wide Job Order Contracting (JOC) Services. Operational issues, fiduciary responsibility, payment issues and liabilities, and disputes involving individual Participating Public Agencies will be addressed, administered, and resolved by each Participating Public Agency."

Documents incorporated and listed under Section 19. Incorporated Documents:

- o. RFP # 002013-MAY2020- Questionnaire Response – Gordian

All other terms, conditions and provisions of the Agreement shall remain in full force and effect.

This Amendment is signed by the parties' duly authorized representatives, and shall be effective as of May 20<sup>th</sup>, 2021.

GORDIAN GROUP INC.

THE REGENTS OF THE  
UNIVERSITY OF CALIFORNIA

By:

Name: Ammon T. Leshner

Sean Parker

Title: VP, General Counsel

Acting Associate Director - Procurement

Date: 5/17/21

5/17/21



UC SYSTEM-WIDE JOB ORDER CONTRACTING (JOC) SERVICES  
Executive Summary

**Lead Agency:** University of California

**Solicitation:** 002013-MAY2020

**RFP Issued:** July 1, 2020

**Pre-Proposal Date:** July 14, 2020

**Response Due Date:** August 4, 2020

**Proposals Received:** #2

**Awarded to:** Gordian Group, Inc.

**Scope of Services include but are not limited to:**

- Development of a Unit Price Book (UPB)
- JOC Training
- Technical Support
  - Preparing construction and technical specifications
  - Site-licensed software
  - Creating executive summary reports
- On-Going Support
  - Answering technical and support questions
  - Assist with billing inquiries and disputes
  - Assist in comparing unit prices on JOC bids against UPB estimates
- Additional Services
  - JOC program development to implement and administer a JOC Program
  - Technical, procurement, bid, and program support (such as providing bidding services, reviewing proposals, financial oversight, and post-award support)
  - Providing an automated job order contracting system capable of providing full project tracking, automated development of proposals and independent estimates, generation of all project documentation, providing project scheduling and budget/cost control, and generation of customized reports.

The University of California issued RFP #002013-MAY2020 on July 1, 2020, to establish a national cooperative contract for UC System-Wide Job Order Contracting (JOC Services).

The solicitation included cooperative purchasing language in Section II on page 2 and Exhibit A:

*"The University of California, as the Principal Procurement Agency, defined in Exhibit A, has partnered with OMNIA Partners, Public Sector ("OMNIA Partners") to make the resultant contract (also known as the "Master Agreement" in materials distributed by OMNIA Partners) from this solicitation available to other public agencies nationally, including state and local governmental entities, public and private primary, secondary and higher education entities, non-profit entities, and agencies for the public benefit ("Public Agencies"), through OMNIA Partners'*

*cooperative purchasing program. The University of California is acting as the contracting agency for any other Public Agency that elects to utilize the resulting Master Agreement. Use of the Master Agreement by any Public Agency is preceded by their registration with OMNIA Partners (a “Participating Public Agency”) and, by using the Master Agreement, any such Participating Public Agency agrees that it is registered with OMNIA Partners, whether pursuant to the terms of a Master Intergovernmental Purchasing Cooperative Agreement (MICPA), a form of which is attached hereto on Exhibit C, or as otherwise agreed to. Attachment A contains additional information about OMNIA Partners and the cooperative purchasing program.”*

Notice of the solicitation was sent to potential offerors and Historically Underutilized Businesses were notified. The solicitation was also advertised in the following:

- University of California website
- OMNIA Partners website
- USA Today, nationwide
- Arizona Business Gazette, AZ
- San Bernardino Sun, CA
- Honolulu Star-Advertiser, HI
- The Advocate – New Orleans, LA
- New Jersey Herald, NJ
- Times Union, NY
- Daily Journal of Commerce, OR
- The State, SC
- South Carolina website/newsletter (get from Chris White)
- Houston Community Newspapers, Cy Creek Mirror, TX
- Deseret News, UT
- Richmond Times, VA
- Seattle Daily Journal of Commerce, WA
- Helena Independent Record, MT
- Kennebec Journal, ME

On August 4, 2020 proposals were received from the following offerors:

- Gordian Group, Inc.
- Cannon/Parkin Inc.

The proposals were evaluated by an evaluation committee. Using the evaluation criteria established in the RFP, the committee elected to enter into negotiations with Gordian Group, Inc. and proceeding with contract award upon successful completion of negotiations.

The University of California, OMNIA Partners, and Gordian Group, Inc. successfully negotiated a contract, and The University of California executed the agreement with a contract effective date of January 8, 2021.

Term:

Initial term of five (5) years from January 8, 2021 through January 7, 2026 with five (5) successive one (1) year renewal periods (January 7, 2031).

Pricing/Discount:

Percent off fee.



UC SYSTEM-WIDE JOB ORDER CONTRACTING (JOC) SERVICES  
Executive Summary

**Lead Agency:** University of California

**Solicitation:** 002013-MAY2020

**RFP Issued:** July 1, 2020

**Pre-Proposal Date:** July 14, 2020

**Response Due Date:** August 4, 2020

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- Development of a Unit Price Book (UPB)
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- Technical Support
  - Preparing construction and technical specifications
  - Site-licensed software
  - Creating executive summary reports
- On-Going Support
  - Answering technical and support questions
  - Assist with billing inquiries and disputes
  - Assist in comparing unit prices on JOC bids against UPB estimates
- Additional Services
  - JOC program development to implement and administer a JOC Program
  - Technical, procurement, bid, and program support (such as providing bidding services, reviewing proposals, financial oversight, and post-award support)
  - Providing an automated job order contracting system capable of providing full project tracking, automated development of proposals and independent estimates, generation of all project documentation, providing project scheduling and budget/cost control, and generation of customized reports.

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*cooperative purchasing program. The University of California is acting as the contracting agency for any other Public Agency that elects to utilize the resulting Master Agreement. Use of the Master Agreement by any Public Agency is preceded by their registration with OMNIA Partners (a “Participating Public Agency”) and, by using the Master Agreement, any such Participating Public Agency agrees that it is registered with OMNIA Partners, whether pursuant to the terms of a Master Intergovernmental Purchasing Cooperative Agreement (MICPA), a form of which is attached hereto on Exhibit C, or as otherwise agreed to. Attachment A contains additional information about OMNIA Partners and the cooperative purchasing program.”*

Notice of the solicitation was sent to potential offerors and Historically Underutilized Businesses were notified. The solicitation was also advertised in the following:

- University of California website
- OMNIA Partners website
- USA Today, nationwide
- Arizona Business Gazette, AZ
- San Bernardino Sun, CA
- Honolulu Star-Advertiser, HI
- The Advocate – New Orleans, LA
- New Jersey Herald, NJ
- Times Union, NY
- Daily Journal of Commerce, OR
- The State, SC
- South Carolina website/newsletter (get from Chris White)
- Houston Community Newspapers, Cy Creek Mirror, TX
- Deseret News, UT
- Richmond Times, VA
- Seattle Daily Journal of Commerce, WA
- Helena Independent Record, MT
- Kennebec Journal, ME

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Term:

Initial term of five (5) years from January 8, 2021 through January 7, 2026 with five (5) successive one (1) year renewal periods (January 7, 2031).

Pricing/Discount:

Percent off fee.

## **Appendix EE**

### **Equal Employment Opportunities for Minorities and Women**

The provisions of this Appendix EE are hereby made a part of the document to which it is attached.

The Contractor shall comply with all federal, State and local statutory and constitutional anti-discrimination provisions. In addition, Local Law No. 14-2002, entitled "Participation by Minority Group Members and Women in Nassau County Contracts," governs all County Contracts as defined herein and solicitations for bids or proposals for County Contracts. In accordance with Local Law 14-2002:

(a) The Contractor shall not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status in recruitment, employment, job assignments, promotions, upgradings, demotions, transfers, layoffs, terminations, and rates of pay or other forms of compensation. The Contractor will undertake or continue existing programs related to recruitment, employment, job assignments, promotions, upgradings, transfers, and rates of pay or other forms of compensation to ensure that minority group members and women are afforded equal employment opportunities without discrimination.

(b) At the request of the County contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, union, or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability, or marital status and that such employment agency, labor union, or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein.

(c) The Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the County Contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

(d) The Contractor shall make best efforts to solicit active participation by certified minority or women-owned business enterprises ("Certified M/WBEs") as defined in Section 101 of Local Law No. 14-2002, for the purpose of granting of Subcontracts.

(e) The Contractor shall, in its advertisements and solicitations for Subcontractors, indicate its interest in receiving bids from Certified M/WBEs and the requirement that Subcontractors must be equal opportunity employers.

(f) Contractors must notify and receive approval from the respective Department Head prior to issuing any Subcontracts and, at the time of requesting such authorization, must submit a signed Best Efforts Checklist.

(g) Contractors for projects under the supervision of the County's Department of Public Works shall also submit a utilization plan listing all proposed Subcontractors so that, to the greatest extent feasible, all Subcontractors will be approved prior to commencement of work. Any additions or changes to the list of subcontractors under the utilization plan shall be approved by the Commissioner of the Department of Public Works when made. A copy of the utilization plan any

additions or changes thereto shall be submitted by the Contractor to the Office of Minority Affairs simultaneously with the submission to the Department of Public Works.

(h) At any time after Subcontractor approval has been requested and prior to being granted, the contracting agency may require the Contractor to submit Documentation Demonstrating Best Efforts to Obtain Certified Minority or Women-owned Business Enterprises. In addition, the contracting agency may require the Contractor to submit such documentation at any time after Subcontractor approval when the contracting agency has reasonable cause to believe that the existing Best Efforts Checklist may be inaccurate. Within ten working days (10) of any such request by the contracting agency, the Contractor must submit Documentation.

(i) In the case where a request is made by the contracting agency or a Deputy County Executive acting on behalf of the contracting agency, the Contractor must, within two (2) working days of such request, submit evidence to demonstrate that it employed Best Efforts to obtain Certified M/WBE participation through proper documentation.

(j) Award of a County Contract alone shall not be deemed or interpreted as approval of all Contractor's Subcontracts and Contractor's fulfillment of Best Efforts to obtain participation by Certified M/WBEs.

(k) A Contractor shall maintain Documentation Demonstrating Best Efforts to Obtain Certified Minority or Women-owned Business Enterprises for a period of six (6) years. Failure to maintain such records shall be deemed failure to make Best Efforts to comply with this Appendix EE, evidence of false certification as M/WBE compliant or considered breach of the County Contract.

(l) The Contractor shall be bound by the provisions of Section 109 of Local Law No. 14-2002 providing for enforcement of violations as follows:

- a. Upon receipt by the Executive Director of a complaint from a contracting agency that a County Contractor has failed to comply with the provisions of Local Law No. 14-2002, this Appendix EE or any other contractual provisions included in furtherance of Local Law No. 14-2002, the Executive Director will try to resolve the matter.
- b. If efforts to resolve such matter to the satisfaction of all parties are unsuccessful, the Executive Director shall refer the matter, within thirty days (30) of receipt of the complaint, to the American Arbitration Association for proceeding thereon.
- c. Upon conclusion of the arbitration proceedings, the arbitrator shall submit to the Executive Director his recommendations regarding the imposition of sanctions, fines or penalties. The Executive Director shall either (i) adopt the recommendation of the arbitrator (ii) determine that no sanctions, fines or penalties should be imposed or (iii) modify the recommendation of the arbitrator, provided that such modification shall not expand upon any sanction recommended or impose any new sanction, or increase the amount of any recommended fine or penalty. The Executive Director, within ten days (10) of receipt of the arbitrators award and recommendations, shall file a determination of such matter and shall cause a copy of such determination to be served upon the respondent by personal service or by certified mail return receipt requested. The award of the arbitrator, and the fines and penalties imposed by the Executive

Director, shall be final determinations and may only be vacated or modified as provided in the civil practice law and rules ("CPLR").

(m) The contractor shall provide contracting agency with information regarding all subcontracts awarded under any County Contract, including the amount of compensation paid to each Subcontractor and shall complete all forms provided by the Executive Director or the Department Head relating to subcontractor utilization and efforts to obtain M/WBE participation.

Failure to comply with provisions (a) through (m) above, as ultimately determined by the Executive Director, shall be a material breach of the contract constituting grounds for immediate termination. Once a final determination of failure to comply has been reached by the Executive Director, the determination of whether to terminate a contract shall rest with the Deputy County Executive with oversight responsibility for the contracting agency.

Provisions (a), (b) and (c) shall not be binding upon Contractors or Subcontractors in the performance of work or the provision of services or any other activity that are unrelated, separate, or distinct from the County Contract as expressed by its terms.

The requirements of the provisions (a), (b) and (c) shall not apply to any employment or application for employment outside of this County or solicitations or advertisements therefor or any existing programs of affirmative action regarding employment outside of this County and the effect of contract provisions required by these provisions (a), (b) and (c) shall be so limited.

The Contractor shall include provisions (a), (b) and (c) in every Subcontract in such a manner that these provisions shall be binding upon each Subcontractor as to work in connection with the County Contract.

As used in this Appendix EE the term "Best Efforts Checklist" shall mean a list signed by the Contractor, listing the procedures it has undertaken to procure Subcontractors in accordance with this Appendix EE.

As used in this Appendix EE the term "County Contract" shall mean (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of twenty-five thousand dollars (\$25,000), whereby a County contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the County; or (ii) a written agreement in excess of one hundred thousand dollars (\$100,000), whereby a County contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon. However, the term "County Contract" does not include agreements or orders for the following services: banking services, insurance policies or contracts, or contracts with a County contracting agency for the sale of bonds, notes or other securities.

As used in this Appendix EE the term "County Contractor" means an individual, business enterprise, including sole proprietorship, partnership, corporation, not-for-profit corporation, or any other person or entity other than the County, whether a contractor, licensor, licensee or any other party, that is (i) a party to a County Contract, (ii) a bidder in connection with the award of a County Contract, or (iii) a proposed party to a County Contract, but shall not include any



Subcontractor.

As used in this Appendix EE the term “County Contractor” shall mean a person or firm who will manage and be responsible for an entire contracted project.

As used in this Appendix EE “Documentation Demonstrating Best Efforts to Obtain Certified Minority or Women-owned Business Enterprises” shall include, but is not limited to the following:

- a. Proof of having advertised for bids, where appropriate, in minority publications, trade newspapers/notices and magazines, trade and union publications, and publications of general circulation in Nassau County and surrounding areas or having verbally solicited M/WBEs whom the County Contractor reasonably believed might have the qualifications to do the work. A copy of the advertisement, if used, shall be included to demonstrate that it contained language indicating that the County Contractor welcomed bids and quotes from M/WBE Subcontractors. In addition, proof of the date(s) any such advertisements appeared must be included in the Best Effort Documentation. If verbal solicitation is used, a County Contractor’s affidavit with a notary’s signature and stamp shall be required as part of the documentation.
- b. Proof of having provided reasonable time for M/WBE Subcontractors to respond to bid opportunities according to industry norms and standards. A chart outlining the schedule/time frame used to obtain bids from M/WBEs is suggested to be included with the Best Effort Documentation
- c. Proof or affidavit of follow-up of telephone calls with potential M/WBE subcontractors encouraging their participation. Telephone logs indicating such action can be included with the Best Effort Documentation
- d. Proof or affidavit that M/WBE Subcontractors were allowed to review bid specifications, blue prints and all other bid/RFP related items at no charge to the M/WBEs, other than reasonable documentation costs incurred by the County Contractor that are passed onto the M/WBE.
- e. Proof or affidavit that sufficient time prior to making award was allowed for M/WBEs to participate effectively, to the extent practicable given the timeframe of the County Contract.
- f. Proof or affidavit that negotiations were held in good faith with interested M/WBEs, and that M/WBEs were not rejected as unqualified or unacceptable without sound business reasons based on (1) a thorough investigation of M/WBE qualifications and capabilities reviewed against industry custom and standards and (2) cost of performance. The basis for rejecting any M/WBE deemed unqualified by the County Contractor shall be included in the Best Effort Documentation
- g. If an M/WBE is rejected based on cost, the County Contractor must submit a list of all sub-bidders for each item of work solicited and their bid prices for the work.
- h. The conditions of performance expected of Subcontractors by the County Contractor must also be included with the Best Effort Documentation

- i. County Contractors may include any other type of documentation they feel necessary to further demonstrate their Best Efforts regarding their bid documents.

As used in this Appendix EE the term “Executive Director” shall mean the Executive Director of the Nassau County Office of Minority Affairs; provided, however, that Executive Director shall include a designee of the Executive Director except in the case of final determinations issued pursuant to Section (a) through (l) of these rules.

As used in this Appendix EE the term “Subcontract” shall mean an agreement consisting of part or parts of the contracted work of the County Contractor.

As used in this Appendix EE, the term “Subcontractor” shall mean a person or firm who performs part or parts of the contracted work of a prime contractor providing services, including construction services, to the County pursuant to a county contract. Subcontractor shall include a person or firm that provides labor, professional or other services, materials or supplies to a prime contractor that are necessary for the prime contractor to fulfill its obligations to provide services to the County pursuant to a county contract. Subcontractor shall not include a supplier of materials to a contractor who has contracted to provide goods but no services to the County, nor a supplier of incidental materials to a contractor, such as office supplies, tools and other items of nominal cost that are utilized in the performance of a service contract.

Provisions requiring contractors to retain or submit documentation of best efforts to utilize certified subcontractors and requiring Department head approval prior to subcontracting shall not apply to inter-governmental agreements. In addition, the tracking of expenditures of County dollars by not-for-profit corporations, other municipalities, States, or the federal government is not required.

## Appendix L

### Certificate of Compliance

In compliance with Local Law 1-2006, as amended (the "Law"), the Contractor hereby certifies the following:

1. The chief executive officer, or, if no chief executive officer, the individual that acts in the same capacity as a chief executive officer, of the Contractor is:

William L. Pollak  
30 Patewood Drive, Suite 350  
Greenville, South Carolina 29615  
864.752.4547

2. The Contractor agrees to either (1) comply with the requirements of the Nassau County Living Wage Law or (2) as applicable, obtain a waiver of the requirements of the Law pursuant to section 9 of the Law. In the event that the Contractor does not comply with the requirements of the Law or obtain a waiver of the requirements of the Law, and such Contractor establishes to the satisfaction of the Department that at the time of execution of this Agreement, it had a reasonable certainty that it would receive such waiver based on the Law and Rules pertaining to waivers, the County will agree to terminate the contract without imposing costs or seeking damages against the Contractor
3. In the past five years, Contractor \_\_\_\_\_ has   X   has not been found by a court or a government agency to have violated federal, state, or local laws regulating payment of wages or benefits, labor relations, or occupational safety and health. If a violation has been assessed against the Contractor, describe below:

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4. In the past five years, an administrative proceeding, investigation, or government body-initiated judicial action \_\_\_\_\_ has   X   has not been commenced against or relating to the Contractor in connection with federal, state, or local laws regulating payment of wages or benefits, labor relations, or occupational safety and health. If such a proceeding, action, or investigation has been commenced, describe below:

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5. Contractor agrees to permit access to work sites and relevant payroll records by authorized County representatives for the purpose of monitoring compliance with the Living Wage Law and investigating employee complaints of noncompliance.

I hereby certify that I have read the foregoing statement and, to the best of my knowledge and belief, it is true, correct and complete. Any statement or representation made herein shall be accurate and true as of the date stated below.

8/19/21  
Dated

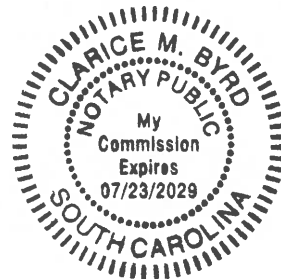
Ammon T. Leshner  
Signature of Corporate Officer

Ammon T. Leshner  
Name of Corporate Officer

Sworn to before me this

19<sup>th</sup> day of August, 2021.

Clarice M. Byrd  
Notary Public My commission expires July 23, 2029





## Nassau County Interim Finance Authority

### **Contract Approval Request Form (As of January 1, 2015)**

**1. Vendor: The Gordian Group, Inc.**

**2. Amount requiring NIFA approval: \$1,190,000.00**

**Amount to be encumbered: \$100,000.00**

Slip Type: New

If new contract - \$ amount should be full amount of contract

If advisement - NIFA only needs to review if it is increasing funds above the amount previously approved by NIFA

If amendment - \$ amount should be full amount of amendment only

**3. Contract Term: to From execution to January 7, 2026, unless extended as per its terms.**

Has work or services on this contract commenced? No

If yes, please explain:

**4. Funding Source:**

General Fund (GEN)		Grant Fund (GRT)
Capital Improvement Fund (CAP)	X	Other
Federal %	0	
State %	0	
County %	100	

Is the cash available for the full amount of the contract? No

If not, will it require a future borrowing? Yes

Has the County Legislature approved the borrowing? Yes

Has NIFA approved the borrowing for this contract? No

**5. Provide a brief description (4 to 5 sentences) of the item for which this approval is requested:**

Job Order Contract. The Department of Public Works would like to have a new type of contract available to the Department to address buildings repair and remedial needs. Currently, any work done outside the ability of in-house staff is either done by a work order issued to our requirements contractor, or by a lump sum bid contract. Payments under the requirements contracts are solely based on a time and materials. The Department is concerned that while existing staff has the expertise to manage such a contract, in the near future, Department staff may not yet be experienced enough to verify the contractor's proposal. Secondly, the Department has received a negative reaction after making time and materials-based payments when seeking reimbursement through federal programs after emergency declarations. Finally, lump sum contracts cannot be done quickly and is not an ideal tool in an emergency. The JOC arrangement would address the above-described difficulties by providing a unit price for multiple items the Department will likely use. The Department anticipates setting an annual cap for JOC contracting between \$7 to \$10 million per year with no individual work order exceeding \$1 to \$1.5 million. The final established contracts and scope will determine the set limits.

**6. Has the item requested herein followed all proper procedures and thereby approved by the:**

Nassau County Attorney as to form Yes

Nassau County Committee and/or Legislature

**Date of approval(s) and citation to the resolution where approval for this item was provided:**

**7. Identify all contracts (with dollar amounts) with this or an affiliated party within the prior 12 months:**

Contract ID	Posting Date	Amount Added in Prior 12 Months
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## AUTHORIZATION

To the best of my knowledge, I hereby certify that the information contained in this Contract Approval Request Form and any additional information submitted in connection with this request is true and accurate and that all expenditures that will be made in reliance on this authorization are in conformance with the Nassau County Approved Budget and not in conflict with the Nassau County Multi-Year Financial Plan. I understand that NIFA will rely upon this information in its official deliberations.

CNOLAN

07/11/2022

**Authenticated User**

**Date**

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## COMPTROLLER'S OFFICE

To the best of my knowledge, I hereby certify that the information listed is true and accurate and is in conformance with the Nassau County Approved Budget and not in conflict with the Nassau County Multi-Year Financial Plan.

Regarding funding, please check the correct response:

I certify that the funds are available to be encumbered pending NIFA approval of this contract.

**If this is a capital project:**

I certify that the bonding for this contract has been approved by NIFA.

Budget is available and funds have been encumbered but the project requires NIFA bonding authorization.

**Authenticated User**

**Date**

---

## NIFA

Amount being approved by NIFA:

Payment is not guaranteed for any work commenced prior to this approval.

**Authenticated User**

**Date**

---

**NOTE: All contract submissions MUST include the County's own routing slip, current NIFS printouts for all relevant accounts and relevant Nassau County Legislature communication documents and relevant supplemental information pertaining to the item requested herein.**

**NIFA Contract Approval Request Form MUST be filled out in its entirety before being submitted to NIFA for review.**

**NIFA reserves the right to request additional information as needed.**

Elaine Phillips  
Comptroller



OFFICE OF THE COMPTROLLER  
240 Old Country Road  
Mineola, New York 11501

## COMPTROLLER APPROVAL FORM FOR PERSONAL, PROFESSIONAL OR HUMAN SERVICES CONTRACTS

*Attach this form along with all personal, professional or human services contracts, contract renewals, extensions and amendments.*

CONTRACTOR NAME: \_\_\_\_\_

CONTRACTOR ADDRESS: \_\_\_\_\_

FEDERAL TAX ID #: \_\_\_\_\_

**Instructions:** Please check the appropriate box ("☑") after one of the following roman numerals, and provide all the requested information.

**I. ☐ The contract was awarded to the lowest, responsible bidder after advertisement for sealed bids.** The contract was awarded after a request for sealed bids was published in \_\_\_\_\_ [newspaper] on \_\_\_\_\_ [date]. The sealed bids were publicly opened on \_\_\_\_\_ [date]. \_\_\_\_\_ [#] of sealed bids were received and opened.

**II. ☐ The contractor was selected pursuant to a Request for Proposals.**

The Contract was entered into after a written request for proposals was issued on \_\_\_\_\_ [date]. Potential proposers were made aware of the availability of the RFP by advertisement in \_\_\_\_\_ [newspaper], posting on industry websites, via email to interested parties and by publication on the County procurement website. Proposals were due on \_\_\_\_\_ [date]. \_\_\_\_\_ [state #] proposals were received and evaluated. The evaluation committee consisted of: \_\_\_\_\_

\_\_\_\_\_ (list # of persons on committee and their respective departments). The proposals were scored and ranked. As a result of the scoring and ranking, the highest-ranking proposer was selected.

**III. ☐ This is a renewal, extension or amendment of an existing contract.**

The contract was originally executed by Nassau County on \_\_\_\_\_[date]. This is a renewal or extension pursuant to the contract, or an amendment within the scope of the contract or RFP (copies of the relevant pages are attached). The original contract was entered into after \_\_\_\_\_

\_\_\_\_\_[describe procurement method, i.e., RFP, three proposals evaluated, etc.] Attach a copy of the most recent evaluation of the contractor's performance for any contract to be renewed or extended. If the contractor has not received a satisfactory evaluation, the department must explain why the contractor should nevertheless be permitted to continue to contract with the county.

**IV. ☐ Pursuant to Executive Order No. 1 of 1993, as amended, at least three proposals were solicited and received. The attached memorandum from the department head describes the proposals received, along with the cost of each proposal.**

- ☐ **A.** The contract has been awarded to the proposer offering the lowest cost proposal; **OR:**
- ☐ **B.** The attached memorandum contains a detailed explanation as to the reason(s) why the contract was awarded to other than the lowest-cost proposer. The attachment includes a specific delineation of the unique skills and experience, the specific reasons why a proposal is deemed superior, and/or why the proposer has been judged to be able to perform more quickly than other proposers.

**V. ☐ Pursuant to Executive Order No. 1 of 1993 as amended, the attached memorandum from the department head explains why the department did not obtain at least three proposals.**

- ☐ **A.** There are only one or two providers of the services sought or less than three providers submitted proposals. The memorandum describes how the contractor was determined to be the sole source provider of the personal service needed or explains why only two proposals could be obtained. If two proposals were obtained, the memorandum explains that the contract was awarded to the lowest cost proposer, or why the selected proposer offered the higher quality proposal, the proposer's unique and special experience, skill, or expertise, or its availability to perform in the most immediate and timely manner.
- ☐ **B.** The memorandum explains that the contractor's selection was dictated by the terms of a federal or New York State grant, by legislation or by a court order. (Copies of the relevant documents are attached).
- ☐ **C.** Pursuant to General Municipal Law Section 104, the department is purchasing the services required through a New York State Office of General Services contract no. \_\_\_\_\_, and the attached memorandum explains how the purchase is within the scope of the terms of that contract.



- ☐ **D.** Pursuant to General Municipal Law Section 119-o, the department is purchasing the services required through an inter-municipal agreement.

**VI. ☐ This is a human services contract with a not-for-profit agency for which a competitive process has not been initiated.** Attached is a memorandum that explains the reasons for entering into this contract without conducting a competitive process, and details when the department intends to initiate a competitive process for the future award of these services. For any such contract, where the vendor has previously provided services to the county, attach a copy of the most recent evaluation of the vendor's performance. If the contractor has not received a satisfactory evaluation, the department must explain why the contractor should nevertheless be permitted to contract with the county.

In certain limited circumstances, conducting a competitive process and/or completing performance evaluations may not be possible because of the nature of the human services program, or because of a compelling need to continue services through the same provider. In those circumstances, attach an explanation of why a competitive process and/or performance evaluation is inapplicable.

**VII. ☐ This is a public works contract for the provision of architectural, engineering or surveying services.** The attached memorandum provides details of the department's compliance with Board of Supervisors' Resolution No. 928 of 1993, including its receipt and evaluation of annual Statements of Qualifications & Performance Data, and its negotiations with the most highly qualified firms.

**Instructions with respect to Sections VIII, IX and X:** All Departments must check the box for VIII. Then, check the box for either IX or X, as applicable.

**VIII. ☐ Participation of Minority Group Members and Women in Nassau County Contracts.** The selected contractor has agreed that it has an obligation to utilize best efforts to hire MWBE sub-contractors. Proof of the contractual utilization of best efforts as outlined in Exhibit "EE" may be requested at any time, from time to time, by the Comptroller's Office prior to the approval of claim vouchers.

**IX. ☐ Department MWBE responsibilities.** To ensure compliance with MWBE requirements as outlined in Exhibit "EE", Department will require vendor to submit list of sub-contractor requirements prior to submission of the first claim voucher, for services under this contract being submitted to the Comptroller.

**X. ☐ Vendor will not require any sub-contractors.**

**In addition, if this is a contract with an individual or with an entity that has only one or two employees:** ☐ a review of the criteria set forth by the Internal Revenue Service, *Revenue Ruling No. 87-41, 1987-1 C.B. 296*, attached as Appendix A to the Comptroller's Memorandum, dated February 13, 2004, concerning independent contractors and employees indicates that the contractor would not be considered an employee for federal tax purposes.

  
\_\_\_\_\_  
Department Head Signature

\_\_\_\_\_  
Date

**NOTE:** Any information requested above, or in the exhibit below, may be included in the county's "staff summary" form in lieu of a separate memorandum.



COUNTY OF NASSAU

POLITICAL CAMPAIGN CONTRIBUTION DISCLOSURE FORM

1. Has the vendor or any corporate officers of the vendor provided campaign contributions pursuant to the New York State Election Law in (a) the period beginning April 1, 2016 and ending on the date of this disclosure, or (b), beginning April 1, 2018, the period beginning two years prior to the date of this disclosure and ending on the date of this disclosure, to the campaign committees of any of the following Nassau County elected officials or to the campaign committees of any candidates for any of the following Nassau County elected offices: the County Executive, the County Clerk, the Comptroller, the District Attorney, or any County Legislator?

YES ☐ NO ☒ If yes, to what campaign committee?

Electronically signed and certified at the date and time indicated by:

Ammon T. Leshner [A.LESHER@GORDIAN.COM]

Dated: 01/02/2024 02:06:43 pm

Vendor: The Gordian Group, Inc.

Title: Chief Operating Officer

### **Business History Form**

The contract shall be awarded to the responsible proposer who, at the discretion of the County, taking into consideration the reliability of the proposer and the capacity of the proposer to perform the services required by the County, offers the best value to the County and who will best promote the public interest.

In addition to the submission of proposals, each proposer shall complete and submit this questionnaire. The questionnaire shall be filled out by the owner of a sole proprietorship or by an authorized representative of the firm, corporation or partnership submitting the Proposal.

**NOTE: All questions require a response, even if response is "none" or "not-applicable." No blanks.**

(USE ADDITIONAL SHEETS IF NECESSARY TO FULLY ANSWER THE FOLLOWING QUESTIONS).

Date: 01/10/2024

1) Proposer's Legal Name: The Gordian Group, Inc.

2) Address of Place of Business: 30 Patewood Drive, Bldg. 2, Suite 350

City: Greenville State/Province/  
Territory: SC Zip/Postal  
Code: 29615

Country: US

3) Mailing Address (if different): \_\_\_\_\_

City: \_\_\_\_\_ State/Province/  
Territory: \_\_\_\_\_ Zip/Postal  
Code: \_\_\_\_\_

Country: \_\_\_\_\_

Phone: \_\_\_\_\_

Does the business own or rent its facilities? Rent If other, please provide details:

--

4) Dun and Bradstreet number: 868729716

5) Federal I.D. Number: 58-1900371

6) The proposer is a: Corporation (Describe) \_\_\_\_\_

7) Does this business share office space, staff, or equipment expenses with any other business?

YES [ ] NO [X] If yes, please provide details:

--

8) Does this business control one or more other businesses?

YES ☒ NO ☐ If yes, please provide details:

All For Profit the businesses are:

- 1) 4 Clicks Solutions (84-1585720) - 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
- 2) The Gordian Group Corp. (78-4298929) 60 Wellington Street West, Suite 4100, Toronto, Ontario MSK 187
- 3) Sightlines, LLC (06-1594910) - 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
- 4) R.S. Means Company, LLC (04-2848934) - 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
- 5) EZIQC, LLC (26-3178651) - 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
- 6) The Gordian Group International, Inc. (26-1542092) - 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
- 7) VFA, Inc. (04-3570054) - 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
- 8) VFA Canada Corporation - 3700 Steeles Ave. West, Suite 400, Vaughn, Ontario L4L 8K8
- 9) VFA Limited (UK) - Nautilus House Redburn Court, Earl Grey Way, North Shields, Tyne & Wear NE29 6AR
- 10) NSR - Bizspace Suite 15.5, Linford Forum, Rockingham Drive, Linford Wo

- 9) Does this business have one or more affiliates, and/or is it a subsidiary of, or controlled by, any other business?

YES ☒ NO ☐ If yes, please provide details:

The Gordian Group, Inc. is an operating company and wholly owned subsidiary of Fortive Corporation. Fortive Corporation owns numerous operating companies which are listed here - <https://fortive.com/our-businesses/business-directory>. Fortive Corporation is a public company and all financial and corporate information can be found here <https://investors.fortive.com/overview/default.aspx>. The Gordian Group, Inc. is 100% owned by TGG Sub Inc, a holding company.

- 10) Has the proposer ever had a bond or surety cancelled or forfeited, or a contract with Nassau County or any other government entity terminated?

YES ☐ NO ☒ If yes, state the name of bonding agency, (if a bond), date, amount of bond and reason for such cancellation or forfeiture: or details regarding the termination (if a contract).

- 11) Has the proposer, during the past seven years, been declared bankrupt?

YES ☐ NO ☒ If yes, state date, court jurisdiction, amount of liabilities and amount of assets

- 12) In the past five years, has this business and/or any of its owners and/or officers and/or any affiliated business, been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency? And/or, in the past 5 years, have any owner and/or officer of any affiliated business been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency, where such investigation was related to activities performed at, for, or on behalf of an affiliated business.

YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.

- 13) In the past 5 years, has this business and/or any of its owners and/or officers and/or any affiliated business been the subject of an investigation by any government agency, including but not limited to federal, state and local regulatory agencies? And/or, in the past 5 years, has any owner and/or officer of an affiliated business been the subject of an investigation by any government agency, including but not limited to federal, state and local regulatory agencies, for matters pertaining to that individual's position at or relationship to an affiliated business.

YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.

- 14) Has any current or former director, owner or officer or managerial employee of this business had, either before or during such person's employment, or since such employment if the charges pertained to events that allegedly occurred during the time of employment by the submitting business, and allegedly related to the conduct of that business:

a) Any felony charge pending?

YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.

b) Any misdemeanor charge pending?

YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.

c) In the past 10 years, you been convicted, after trial or by plea, of any felony and/or any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business?

YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.

d) In the past 5 years, been convicted, after trial or by plea, of a misdemeanor?

YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.

e) In the past 5 years, been found in violation of any administrative, statutory, or regulatory provisions?

YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.

- 15) In the past (5) years, has this business or any of its owners or officers, or any other affiliated business had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held?

YES ☐ NO ☒ If yes, provide details for each such investigation, an explanation of the circumstances and corrective action taken.

- 16) For the past (5) tax years, has this business failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges?

YES ☐ NO ☒ If yes, provide details for each such year. Provide a detailed response to all questions checked 'YES'. If you need more space, photocopy the appropriate page and attach it to the questionnaire.

- 17) Conflict of Interest:

a) Please disclose any conflicts of interest as outlined below. NOTE: If no conflicts exist, please expressly state "No conflict exists."

(i) Any material financial relationships that your firm or any firm employee has that may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No

(ii) Any family relationship that any employee of your firm has with any County public servant that may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No

(iii) Any other matter that your firm believes may create a conflict of interest or the appearance of a conflict of interest in acting on behalf of Nassau County.

No

- b) Please describe any procedures your firm has, or would adopt, to assure the County that a conflict of interest would not exist for your firm in the future.

Please see our Conflicts of Interests policy attached.

1 File(s) uploaded: Conflicts of Interest Policy.pdf

- A. Include a resume or detailed description of the Proposer's professional qualifications, demonstrating extensive experience in your profession. Any prior similar experiences, and the results of these experiences, must be identified.

Have you previously uploaded the below information under in the Document Vault?

YES [ ] NO [X]

Is the proposer an individual?

YES [ ] NO [X] Should the proposer be other than an individual, the Proposal MUST include:

- i) Date of formation;

05/31/1990

- ii) Name, addresses, and position of all persons having a financial interest in the company, including shareholders, members, general or limited partner. If none, explain.

None, we are 100% owned and controlled by a holding company, TGG Sub, Inc which purchased all the outstanding shares of stock on December 11, 2007.

- iii) Name, address and position of all officers and directors of the company. If none, explain.

Directors - Rajesh Yadava and Christopher M. Mulhall - 6920 Seaway Blvd, Everett, WA 98203

Officers:

William Pollak (Group President); Kristina Gorriaran (President); James Mackerer (CFO & Treasurer); Ammon T. Leshner (Chief Operating Officer); Angie Michelini (Vice President, Secretary, General Counsel); - 30 Patwood Drive, Bldg. 2, Suite 350, Greenville, SC 29615

2 File(s) uploaded: Gordian Board Resolutions.pdf, Officers and Directors of The Gordian Group(updated 2.1.23).pdf

- iv) State of incorporation (if applicable);

GA

- v) The number of employees in the firm;

884

vi) Annual revenue of firm;

287512648.97

vii) Summary of relevant accomplishments

Please see the attached list

1 File(s) uploaded: Summary of Relevant NYC JOC Projects SJ.pdf

viii) Copies of all state and local licenses and permits.

B. Indicate number of years in business.

33.5

C. Provide any other information which would be appropriate and helpful in determining the Proposer's capacity and reliability to perform these services.

N/A

D. Provide names and addresses for no fewer than three references for whom the Proposer has provided similar services or who are qualified to evaluate the Proposer's capability to perform this work.

Company	Capitol Region Council of Governments		
Contact Person	Kimberly A. Bona, Program Manager		
Address	241 Main Street, 4th Floor		
City	Hartford	State/Province/Territory	CT
Country	US		
Telephone	(860) 724-4292		
Fax #			
E-Mail Address	kbona@crcog.org		
Company	City of White Plains		
Contact Person	Stefania Mignone, Commissioner		
Address	255 Main Street		
City	White Plains	State/Province/Territory	NY
Country	US		
Telephone	(914) 422-1210		
Fax #			
E-Mail Address	smignone@whiteplainsny.gov		
Company	NYC School Construction Authority		
Contact Person	Gordon Tung, P.E., VP, Construction Management		
Address	30-30 Thomson Avenue		
City	Long Island	State/Province/Territory	NY
Country	US		
Telephone	(718) 472-8685		
Fax #			
E-Mail Address	gtung@nycsca.org		





I, Ammon T. Leshner , hereby acknowledge that a materially false statement willfully or fraudulently made in connection with this form may result in rendering the submitting business entity and/or any affiliated entities non-responsible, and, in addition, may subject me to criminal charges.

I, Ammon T. Leshner , hereby certify that I have read and understand all the items contained in this form; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this form; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this form as additional inducement to enter into a contract with the submitting business entity.

#### **CERTIFICATION**

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

Name of submitting business: The Gordian Group, Inc.

Electronically signed and certified at the date and time indicated by:  
Ammon T. Leshner A.LESHER@GORDIAN.COM

Chief Operating Officer  
Title

01/10/2024  
Date

<b>Title:</b> Conflicts of Interest	
<b>Type:</b> Global Policy	<b>Functional Owner:</b> Legal/Compliance
<b>Version #:</b> 1	<b>Effective Date:</b> 09/29/2021

## **Fortive Conflicts of Interest Policy**

### **Purpose**

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Consistent with our Core Values, we are committed to conducting our relationships with each other, Fortive, our Operating Companies, and outside organizations and individuals with objectivity, honesty, transparency, and integrity. We are people with interests, activities, and relationships outside of work, but we do not let them interfere with business decisions we make as employees of Fortive or its Operating Companies.

The purpose of this Policy is to set out our individual responsibilities to identify each actual or potential conflict of interest, properly disclose it, and follow guidance on how to mitigate the risk of that conflict. This policy will explain those responsibilities, from identification to disclosure to review and resolution.

A conflict of interest can occur when personal interests (or interests of a family member or close friend) interfere – or even appear to interfere – with the interests of Fortive or an Operating Company (collectively “Fortive” or the “Company”). This Policy and our Core Values require each of us to be transparent about situations where it could appear that we are not wholly objective and independent, even when we believe we are or can be. Disclosing even the appearance of a conflict protects us each as individuals and protects Fortive and its Operating Companies. In many situations, disclosure of the potential or actual conflict is the only necessary action. In other cases, Fortive or its Operating Companies, after reviewing the disclosure, will assess the risk and take protective or preventative steps to mitigate the risk.

### **Scope**

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This policy applies to all employees and contractors of Fortive. This policy is a supplement to the Code of Conduct and does not replace anything described therein.

### **Policy**

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#### **Understanding When a Conflict of Interest May Arise**

A conflict of interest occurs when your personal interests interfere or appear to interfere with your duties on behalf of the Company. The decisions you make on behalf of the Company must be governed by sound and objective judgment, free from the influence, or the appearance of influence, created by your personal interests.

The Company defines conflicts of interest broadly to include:

- Actual conflicts of interest (you face a real, existing conflict);
- Potential conflicts of interest (you are in or could be in a situation that may result in a conflict); and
- Perceived conflicts of interest through a third party's eyes (you are in or could be in a situation that may appear to be a conflict to others, even if this is not the case).

Remember, a personal interest can be a direct benefit to you or a benefit to a family member or close friend. You have an obligation to avoid any activity that creates, or appears to create, a conflict between your personal interests and the interests of the Company.

The best way to avoid a conflict of interest is to know about and avoid the kinds of situations in which conflicts frequently can occur. Where it is not possible to fully avoid a conflict, the Company may take steps to safeguard its interests and mitigate any potential conflict. Although it is not possible to specify every situation that might create a conflict of interest, this policy sets forth below the ones that most frequently present problems.

### **Examples of Conflicts of Interest**

Examples of common actual or potential conflicts of interest include (but are not limited to):

#### **Outside Activities**

- Taking a second job or role, whether paid or unpaid, (i) with a customer, supplier, or competitor of the Company; or (ii) which prevents you from giving your best efforts to your Company responsibilities;
- Taking a role with another company as a director, officer or advisor that may or does interfere with your obligations to the Company;
- Using Company property, resources or information to support a personal interest;
- Pursuing an opportunity for yourself that should belong to the Company;
- Acting as an advisor or consultant to any trade association, government agency or other body with regulatory or supervisory power over the Company; or
- Referral of the Company's business to a company (such as a supplier or vendor) controlled by any person who is your family member or with whom you have a close, personal relationship.

#### **Financial Interests**

*Printed copies are for reference only. Please refer to the electronic copy for the latest version.*

- Holding (or a family member holding) a substantial financial interest in a business that competes with the Company, or buys from or sells to the Company. A substantial financial interest includes ownership or control of a company, or the ownership or control of a 5% or greater interest in the stock or equity of a company; or
- Having a financial interest in a business venture that requires significant time or participation that may prevent you from giving your full attention and best efforts to your Company responsibilities.

### Personal Relationships

- Hiring (or transferring or promoting) a family member, romantic partner, or close friend for a Company job;
- *This is limited to your **direct** or **indirect** involvement in hiring a candidate with whom you have a familial or close personal relationship. This is distinct from a referral situation where you are merely relaying candidate information but are not otherwise influencing or involved in making any hiring decisions. We often hire such referrals -always based on their individual merit - but we still must monitor this process closely.*
- Instances where a family member, romantic partner or close friend works for or holds a significant interest in a vendor, supplier, distributor or competitor of the Company; or
- Having a romantic relationship with someone in your work group or someone who you supervise or for whom you influence their performance evaluation and/or compensation.

**Be Aware:** The term family member means your spouse, domestic partner, parents, siblings, children, other relatives who reside in the same household, or any other familial relationships that could create an actual conflict or the appearance of a conflict.

### Business Courtesies

- Soliciting or accepting anything of value, including, but not limited to payments, fees, loans or special services from a supplier or other potential business partner which is seeking or securing a business relationship with the Company; or
- Accepting anything of value, including gifts, from either an individual or company seeking to do or doing business with the Company, unless allowed under the Fortive Gift and Entertainment policy and any similar Operating Company or local policy.

### Participating in Public Service and Political Activities

- Participating in a non-Company sponsored community service activity that prevents you from giving your best efforts to your Company responsibilities;
- Serving as a board member for a charitable organization which is seeking donations from the Company; or

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- Seeking or holding political office.

**Take Note: When Identifying Potential Conflicts of Interest - Ask yourself:**

- Could this situation interfere—or appear to interfere—with my Company responsibilities?
- Might it affect, or appear to affect, the decisions I make on behalf of the Company?
- Could the actual or potential conflict impact my commitment to our Core Values?
- Is there any chance my judgment or decisions might be compromised?
- How would or *could* this situation be perceived by someone else?

If the answer to any of these is “yes” or “I’m not sure,” or “it might look suspicious,” a potential conflict exists that must be disclosed. If there is any doubt as to whether something constitutes a potential conflict, thus requiring disclosure, please consult with your Operating Company or Fortive Legal or Compliance department for guidance.

**Disclosing and Resolving Conflicts of Interest**

For the Company to assess potential conflicts of interest, you must disclose any actual or potential conflicts of interest, as well as any situations that reasonably could be perceived as a conflict by a third party. A conflict of interest is not necessarily a violation of this policy, but the failure to disclose an actual or potential conflict is a violation. In many cases, following timely disclosure, the only necessary action is review by the Legal/ Compliance or other assigned resources (“Conflict Reviewer”). In some instances, however, the organization may provide additional guidance to you or require additional steps be taken to protect the Company’s interests in light of the conflict.

If you identify a potential conflict of interest, you must immediately disclose the conflict by requesting the COI disclosure form by sending an email to [COIDisclosure@Fortive.com](mailto:COIDisclosure@Fortive.com) and then completing and submitting the form provided. For example, if the prospective vendor is a close friend, you should recuse yourself from the vendor selection process until the Conflict Reviewer has provided an opinion and any guidance. If you realize a conflict of interest already existed when this policy went into effect, please request and fill out a disclosure form immediately and note that you believe a conflict currently exists. In addition, the COI disclosure form may be sent to you periodically for completion and update. However, you should not wait for the annual process to disclose any known potential or actual conflicts that have not been previously reported on a COI disclosure form. If your situation changes in any way, you must promptly request and submit an updated form and seek reassessment. All information provided in the disclosure form will be maintained pursuant to the Company’s internal policies and privacy requirements.

Once you have disclosed a conflict of interest situation, the Conflict Reviewer will create appropriate controls based on guidance from Legal/Compliance, which will vary depending upon the particular facts. In some instances, any risk to the Company’s interests may be sufficiently

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<b>Conflicts of Interest</b>	Version 1
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remote that the Company need only remind you to guard against inadvertently disclosing confidential information to the other party. In other situations, stronger controls, such as removing you from a position of decision-making authority or from involvement in the conflict situation, may be required. In some cases, the conflict may be so significant that it must be avoided entirely.

Through this conflict review and resolution process, the Conflict Reviewer will work with you to ensure that the Company's interests are appropriately protected and that you have proper guidance. You will be required to follow the controls determined necessary and provided to you by the Conflict Reviewer.

## Resources and Contact Information

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### Advice and Questions

If you have questions about this Policy or completing a COI disclosure form, please consult a member of your Operating Company or Fortive Legal / Compliance Department. It is always best to reach out for support as soon as you realize you have questions or concerns. If you believe that a coworker has a conflict of interest, Speak Up!

**Speak Up!** If you have questions about the right thing to do, or if you see something that doesn't seem right, talk to your manager or any of these other resources:

- *Another manager or supervisor*
- *The Human Resources, Legal or Compliance team at your OpCo or Fortive*
- *Fortive Internal Audit staff*

You may also contact Speak Up!, a resource you can reach online or via phone to raise a concern 24 hours a day, 7 days a week. Dedicated phone staff speak over 20 languages, and you may report anonymously, unless prohibited by local law. The Company thoroughly and professionally investigates all allegations of misconduct, disclosing information only on a "need to know" basis in accordance with applicable law in order to solve the issue. Log a concern at [www.fortive.ethicspoint.com](http://www.fortive.ethicspoint.com)

### Discipline for Non-Compliance

Failure to comply with this Policy may lead to discipline, up to and including termination.

## Revision History

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*[Update when any revisions are made.]*

Date	Policy Version Number	Revisions Made	Revised By	Approved by
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**THE GORDIAN GROUP, INC.**

**ACTION BY UNANIMOUS WRITTEN CONSENT IN LIEU OF  
A MEETING OF THE BOARD OF DIRECTORS**

**May 1, 2021**

Pursuant to Section 14-2-704 of the Georgia Business Corporation Code and in lieu of a meeting of the directors for such purposes, the undersigned, constituting all the directors of The Gordian Group, Inc. (the "Company"), do hereby consent to the adoption of, and do hereby adopt, the following resolutions:

**Appointment of Officers**

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to remove Kate Morgan as Vice President, Chief Financial Officer and Secretary of the Company; and

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to appoint Ammon Leshner as Secretary of the Company.

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to appoint Mark Schiff as Senior Vice President of the Company.

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to appoint Noam Reininger as Chief Product Officer of the Company.

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to appoint James Mackerer as Chief Financial Officer and Treasurer of the Company; and

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to appoint Kathryn Hilton as Vice President – Marketing and Retail Sales of the Company.

**NOW, THEREFORE, BE IT HEREBY RESOLVED**, that effective upon the execution of this Consent, Kate Morgan is hereby removed as Vice President, Chief Financial Officer and Secretary of the Company, Ammon Leshner is appointed as Secretary of the Company, Mark Schiff is appointed as Senior Vice President of the Company, Noam Reininger is appointed as Chief Product Officer of the Company, James Mackerer is appointed as Chief Financial Officer and Treasurer of the Company and Kathryn Hilton is appointed as Vice President – Marketing and Retail Sales of the Company, to serve until the earlier of their resignation, removal or death.

**General**

**RESOLVED**, that the officers of the Company be, and each of them hereby is, authorized and directed, for and on behalf of the Company, to take such actions and to execute all such documents that any of such officers deems to be necessary or appropriate to carry out the intents and purposes of the foregoing resolutions and to carry on the business of the Company; and

**FURTHER RESOLVED**, that the Secretary or any Assistant Secretary of the Company, in his or her capacity as such be, and each of them hereby is, authorized to certify that the foregoing resolutions were duly consented to and adopted as of the latest date set forth on the signature page hereto, and that the Secretary or any Assistant Secretary of the Company shall be, and hereby is, authorized and directed to

insert, or cause to be inserted, this unanimous written consent, or a copy thereof, in the minutes of proceedings of the Board of Directors of the Company.

**IN WITNESS WHEREOF**, each of the undersigned has executed this consent as of the date set forth above.

DocuSigned by:

*Rajesh Yadava*

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Rajesh Yadava

DocuSigned by:

*Chris Mulhall*

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Chris Mulhall

**THE GORDIAN GROUP, INC.**

**ACTION BY UNANIMOUS WRITTEN CONSENT IN LIEU OF  
A MEETING OF THE BOARD OF DIRECTORS**

**August 16, 2021**

Pursuant to Section 14-2-704 of the Georgia Business Corporation Code and in lieu of a meeting of the directors for such purposes, the undersigned, constituting all the directors of The Gordian Group, Inc. (the "Company"), do hereby consent to the adoption of, and do hereby adopt, the following resolutions:

**Appointment of Officers**

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to remove Ammon Leshner as General Counsel and Secretary of the Company; and

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to appoint Angela Michelini as Vice President, General Counsel and Secretary of the Company.

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to appoint Ammon Leshner as Vice President of the Company.

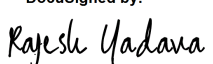
**NOW, THEREFORE, BE IT HEREBY RESOLVED**, that effective upon the execution of this Consent, Ammon Leshner is hereby removed as General Counsel and Secretary of the Company, Angela Michelini is hereby appointed as Vice President, General Counsel and Secretary of the Company and Ammon Leshner is appointed as Vice President of the Company, to serve until the earlier of their resignation, removal or death.

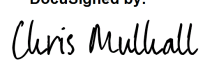
**General**

**RESOLVED**, that the officers of the Company be, and each of them hereby is, authorized and directed, for and on behalf of the Company, to take such actions and to execute all such documents that any of such officers deems to be necessary or appropriate to carry out the intents and purposes of the foregoing resolutions and to carry on the business of the Company; and

**FURTHER RESOLVED**, that the Secretary or any Assistant Secretary of the Company, in his or her capacity as such be, and each of them hereby is, authorized to certify that the foregoing resolutions were duly consented to and adopted as of the latest date set forth on the signature page hereto, and that the Secretary or any Assistant Secretary of the Company shall be, and hereby is, authorized and directed to insert, or cause to be inserted, this unanimous written consent, or a copy thereof, in the minutes of proceedings of the Board of Directors of the Company.

**IN WITNESS WHEREOF**, each of the undersigned has executed this consent as of the date set forth above.

DocuSigned by:  
  
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Rajesh Yadava

DocuSigned by:  
  
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Chris Mulhall

**THE GORDIAN GROUP, INC.**

**ACTION BY UNANIMOUS WRITTEN CONSENT IN LIEU OF  
A MEETING OF THE BOARD OF DIRECTORS**

**September 29, 2021**

Pursuant to Section 14-2-704 of the Georgia Business Corporation Code and in lieu of a meeting of the directors for such purposes, the undersigned, constituting all the directors of The Gordian Group, Inc. (the "Company"), do hereby consent to the adoption of, and do hereby adopt, the following resolutions:

**Appointment of Officers**

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to remove Noam Reininger as Chief Product Officer of the Company; and

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to remove William Pollak as President of the Company; and

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to remove Mark Schiff as Senior Vice President of the Company; and

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to appoint William Pollak as Group President of the Company.

**WHEREAS**, the Board deems it advisable and in the best interest of the Company to appoint Mark Schiff as President of the Company.

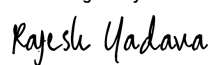
**NOW, THEREFORE, BE IT HEREBY RESOLVED**, that effective upon the execution of this Consent, Noam Reininger is hereby removed as Chief Product Officer of the Company, William Pollak is hereby removed as President of the Company, Mark Schiff is hereby removed as Senior Vice President of the Company, William Pollak is hereby appointed as Group President of the Company and Mark Schiff is hereby appointed as President of the Company, to serve until the earlier of their resignation, removal or death.

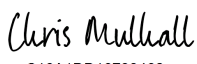
**General**

**RESOLVED**, that the officers of the Company be, and each of them hereby is, authorized and directed, for and on behalf of the Company, to take such actions and to execute all such documents that any of such officers deems to be necessary or appropriate to carry out the intents and purposes of the foregoing resolutions and to carry on the business of the Company; and

**FURTHER RESOLVED**, that the Secretary or any Assistant Secretary of the Company, in his or her capacity as such be, and each of them hereby is, authorized to certify that the foregoing resolutions were duly consented to and adopted as of the latest date set forth on the signature page hereto, and that the Secretary or any Assistant Secretary of the Company shall be, and hereby is, authorized and directed to insert, or cause to be inserted, this unanimous written consent, or a copy thereof, in the minutes of proceedings of the Board of Directors of the Company.

**IN WITNESS WHEREOF**, each of the undersigned has executed this consent as of the date set forth above.

DocuSigned by:  
  
Rajesh Yadava  
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DocuSigned by:  
  
Chris Mulhall  
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## **Officers and Directors of The Gordian Group, Inc.**

<u>Officers Name and Title</u>	<u>Address</u>
William Pollak, Group President	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
Kristina Gorriaran , President	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
James Mackerer, CFO & Treasurer	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
Ammon T. Leshar, Chief Operating Officer	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
Angie Michelini, VP, Secretary, General Counsel	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615

<u>Directors</u>	<u>Address</u>
Rajesh Yadava	6920 Seaway Blvd., Everett, WA 98203
Christopher M. Mulhall	6920 Seaway Blvd., Everett, WA 98203

## Summary of Relevant NYC JOC Projects

NYC Department of Sanitation	
Title: Staten Island Garage 3 - Boiler Replacement	Cost: \$990,056.23
Location: Staten Island Garage 3	Issued: 5/31/2018
Brief Scope: The Contractor was tasked with providing a 250 HP temporary boiler and replacing two (2) oil/natural gas boilers, (2) burners, an expansion tank, pumps, air dampers, valves, and controls.	

NYC Department of Environmental Protection	
Title: Emergency Reconstruction of Secondary Bypass Valve and Actuator	Cost: \$118,141.64
Location: Owls Head Wastewater Treatment Plant	Issued: 7/28/2020
Brief Scope: The Contractor was tasked with removing and disposing the existing 30" plug valve and actuator on the Combine Sludge Line – and installing a new 30" gate valve with one actuator in its place. The Contractor also had to test the concentration of lead in paint of the existing pipe prior to construction.	

NYC School Construction Authority	
Title: K151 JOC AC Initiative Electrical Work - Electrical	Cost: \$330,924.93
Location: PS K151, Brooklyn	Issued: 7/31/2020
Brief Scope: As part of the A/C Initiative for the SCA, the contractor was tasked with installing a new electrical panel and providing power for A/C Window units by furnishing and installing the required receptacles, control switches and wiring conduit throughout the building. This project included asbestos abatement and scanning for all penetrations required.	

NYC Housing Authority	
Title: Ventilation Work at Sack Wern Houses	Cost: \$402,229.09
Location: Sack Wern Houses, Bronx	Issued: 6/3/2021
Brief Scope: As part of the Ventilation Upgrades/Roof Top Fan replacements for NYCHA, the contractor was tasked with replacing existing Roof Top Fan including asbestos abatement, replacing backdraft dampers, installing new fan curb adapters, and making necessary electrical repairs making sure proper operation of newly installed roof fans throughout the development. This project included replacement of 104 various sizes roof fans.	

Memorial Sloan Kettering	
Title: Renovation of Apartment 9F	Cost: \$93,436.27
Location: 401 E 89th Street, Manhattan	Issued: 4/28/2022
Brief Scope: Renovation of residential apartment including; complete demolition and reconstruction of Kitchen and Bathroom, installation of new flooring throughout, installation of new doors & plastering & painting of apartment in entirety, electrical upgrade to facilitate new kitchen appliances.	

## **PRINCIPAL QUESTIONNAIRE FORM**

All questions on these questionnaires must be answered by all officers and any individuals who hold a ten percent (10%) or greater ownership interest in the proposer. Answers typewritten or printed in ink. If you need more space to answer any question, make as many photocopies of the appropriate page(s) as necessary and attach them to the questionnaire.

**COMPLETE THIS QUESTIONNAIRE CAREFULLY AND COMPLETELY. FAILURE TO SUBMIT A COMPLETE QUESTIONNAIRE MAY MEAN THAT YOUR BID OR PROPOSAL WILL BE REJECTED AS NON-RESPONSIVE AND IT WILL NOT BE CONSIDERED FOR AWARD**

1. Principal Name: Ammon T. Leshner  
Date of birth: 06/01/1979  
Home address: 403 Holly Tree Lane

City: Simpsonville State/Province/Territory: SC Zip/Postal Code: 29681  
Country: US

Business Address: 30 Patewood Drive, Bldg. 2, Suite 350  
City: Greenville State/Province/Territory: SC Zip/Postal Code: 29615  
Country: US  
Telephone: 8008742291

Other present address(es):  
City: \_\_\_\_\_ State/Province/Territory: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_  
Country: \_\_\_\_\_  
Telephone: \_\_\_\_\_

List of other addresses and telephone numbers attached

2. Positions held in submitting business and starting date of each (check all applicable)

President	_____	Treasurer	_____
Chairman of Board	_____	Shareholder	_____
Chief Exec. Officer	_____	Secretary	_____
Chief Financial Officer	_____	Partner	_____
Vice President	<u>08/26/2013</u>		
(Other)			

Type Chief Operating Officer  
Description \_\_\_\_\_  
Start Date 02/01/2023

Type Other  
Description General Counsel  
Start Date 08/26/2013



3. Do you have an equity interest in the business submitting the questionnaire?

YES ☐ NO ☒ If Yes, provide details.

4. Are there any outstanding loans, guarantees or any other form of security or lease or any other type of contribution made in whole or in part between you and the business submitting the questionnaire?

YES ☐ NO ☒ If Yes, provide details.

5. Within the past 3 years, have you been a principal owner or officer of any business or notfor-profit organization other than the one submitting the questionnaire?

YES ☒ NO ☐ If Yes, provide details.

VP from 8/26/2013 - current to TGG Sub Inc and TGG Holdings, Inc. located at 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615  
Director from 2/10/2016 - current to The Gordian Group Corp. located 66 Wellington street, West, Suite 4100, Toronto ON M5K 187  
VPI from 10/20/2015 -current to Sightlines, LLC located at 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615  
VP from 7/17/2014 - current to R.S. Means Company, LLC located at 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615  
VP from 11/30/2012 - current to The Gordian Group International, Inc and EZIQC LLC located at 30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615  
VP - 5/1/2021 to current of VFA Inc. located at 30 Patewood Drive, Bldg.2, Suite 350, Greenville, SC 29615  
VP - 5/1/2021 to current of VFA Canada Corporation at 3700 Steeles Avenue West, Suite 400, Vaughan, ON L4L 8K8  
VP - 5/1/2021 to current of VFA Limited at Nautilus House Redburn Court, Earl Grey Way, N. Shields, Tyne & Wea

1 File(s) uploaded: Ammon Leshner.pdf

6. Has any governmental entity awarded any contracts to a business or organization listed in Section 5 in the past 3 years while you were a principal owner or officer?

YES ☒ NO ☐ If Yes, provide details.

The Gordian Group, Inc as well as several of our listed entities are awarded hundreds of contracts by governmental entities; too many to list. However, we do currently hold contracts with the following agencies in New York: New York City Department of Design and Construction, NYC Department of Environmental Protection, NYC Department of Sanitation, New York City Department of Education, New York City School Construction Authority, New York City Housing Authority, New York State Department of Environmental Conservation, New York State Department of Transportation, New York State Office of General Services, New York State University Construction Fund, NYC Health & Hospitals Corporation, Dormitory Authority of the State of New York, Columbia University.

NOTE: An affirmative answer is required below whether the sanction arose automatically, by operation of law, or as a result of any action taken by a government agency. Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

7. In the past (5) years, have you and/or any affiliated businesses or not-for-profit organizations listed in Section 5 in which you have been a principal owner or officer:

- a. Been debarred by any government agency from entering into contracts with that agency?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- b. Been declared in default and/or terminated for cause on any contract, and/or had any contracts cancelled for cause?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- c. Been denied the award of a contract and/or the opportunity to bid on a contract, including, but not limited to, failure to meet pre-qualification standards?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- d. Been suspended by any government agency from entering into any contract with it; and/or is any action pending that could formally debar or otherwise affect such business's ability to bid or propose on contract?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
8. Have any of the businesses or organizations listed in response to Question 5 filed a bankruptcy petition and/or been the subject of involuntary bankruptcy proceedings during the past 7 years, and/or for any portion of the last 7 year period, been in a state of bankruptcy as a result of bankruptcy proceedings initiated more than 7 years ago and/or is any such business now the subject of any pending bankruptcy proceedings, whenever initiated?  
YES ☐ NO ☒ If 'Yes', provide details for each such instance. (Provide a detailed response to all questions check "Yes". If you need more space, photocopy the appropriate page and attached it to the questionnaire.)
- 9.
- a. Is there any felony charge pending against you?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- b. Is there any misdemeanor charge pending against you?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- c. Is there any administrative charge pending against you?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- d. In the past 10 years, have you been convicted, after trial or by plea, of any felony, or of any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.
- e. In the past 5 years, have you been convicted, after trial or by plea, of a misdemeanor?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- f. In the past 5 years, have you been found in violation of any administrative or statutory charges?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- 10 In addition to the information provided in response to the previous questions, in the past 5 years, have you been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency and/or the subject of an investigation where such investigation was related to activities performed at, for, or on behalf of the submitting business entity and/or an affiliated business listed in response to Question 5?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- 11 In addition to the information provided, in the past 5 years has any business or organization listed in response to Question 5, been the subject of a criminal investigation and/or a civil anti-trust investigation and/or any other type of investigation by any government agency, including but not limited to federal, state, and local regulatory agencies while you were a principal owner or officer?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- 12 In the past 5 years, have you or this business, or any other affiliated business listed in response to Question 5 had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- 13 For the past 5 tax years, have you failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

I, Ammon T. Leshner , hereby acknowledge that a materially false statement willfully or fraudulently made in connection with this form may result in rendering the submitting business entity and/or any affiliated entities non-responsible, and, in addition, may subject me to criminal charges.

I, Ammon T. Leshner , hereby certify that I have read and understand all the items contained in this form; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this form; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this form as additional inducement to enter into a contract with the submitting business entity.

**CERTIFICATION**

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

The Gordian Group, Inc.

Name of submitting business

Electronically signed and certified at the date and time indicated by:

Ammon T. Leshner A.LESHER@GORDIAN.COM

Chief Operating Officer

Title

01/02/2024 02:17:19 pm

Date

As of 2/1/2023, Ammon was promoted to Chief Operating Officer and holds that position for the following entities:

Sightlines, LLC

R.S. Means Company, LLC

The Gordian Group International, Inc.

EZIQC LLC

VFA, Inc.

VFA Canada Corporation

VFA Limited

Director and Chief Operating Officer for The Gordian Group Corp.

## **PRINCIPAL QUESTIONNAIRE FORM**

All questions on these questionnaires must be answered by all officers and any individuals who hold a ten percent (10%) or greater ownership interest in the proposer. Answers typewritten or printed in ink. If you need more space to answer any question, make as many photocopies of the appropriate page(s) as necessary and attach them to the questionnaire.

**COMPLETE THIS QUESTIONNAIRE CAREFULLY AND COMPLETELY. FAILURE TO SUBMIT A COMPLETE QUESTIONNAIRE MAY MEAN THAT YOUR BID OR PROPOSAL WILL BE REJECTED AS NON-RESPONSIVE AND IT WILL NOT BE CONSIDERED FOR AWARD**

1. Principal Name: James L. Mackerer  
Date of birth: 08/30/1977  
Home address: 24123 W. Greystone Ln.

City:	<u>Woodway</u>	State/Province/ Territory:	<u>WA</u>	Zip/Postal Code:	<u>98020</u>
Country:	<u>US</u>				

Business Address: 30 Patewood Drive, Bldg. 2, Suite 350

City:	<u>Greenville</u>	State/Province/ Territory:	<u>SC</u>	Zip/Postal Code:	<u>29615</u>
Country:	<u>US</u>				
Telephone:	<u>800.874.2291</u>				

Other present address(es): \_\_\_\_\_

City:	_____	State/Province/ Territory:	_____	Zip/Postal Code:	_____
Country:	_____				
Telephone:	_____				

List of other addresses and telephone numbers attached

2. Positions held in submitting business and starting date of each (check all applicable)

President	_____	Treasurer	_____
Chairman of Board	_____	Shareholder	_____
Chief Exec. Officer	_____	Secretary	_____
Chief Financial Officer	<u>05/01/2021</u>	Partner	_____
Vice President	_____		
(Other)	_____		

3. Do you have an equity interest in the business submitting the questionnaire?

YES ☐ NO ☒ If Yes, provide details.

\_\_\_\_\_

4. Are there any outstanding loans, guarantees or any other form of security or lease or any other type of contribution made in whole or in part between you and the business submitting the questionnaire?

YES ☐ NO ☒ If Yes, provide details.

\_\_\_\_\_

5. Within the past 3 years, have you been a principal owner or officer of any business or notfor-profit organization other than the one submitting the questionnaire?  
YES ☒ NO ☐ If Yes, provide details.

Served as Interim CFO at Fluke Corporation from March 2020 thru October 2020

6. Has any governmental entity awarded any contracts to a business or organization listed in Section 5 in the past 3 years while you were a principal owner or officer?  
YES ☐ NO ☒ If Yes, provide details.

NOTE: An affirmative answer is required below whether the sanction arose automatically, by operation of law, or as a result of any action taken by a government agency. Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

7. In the past (5) years, have you and/or any affiliated businesses or not-for-profit organizations listed in Section 5 in which you have been a principal owner or officer:

- a. Been debarred by any government agency from entering into contracts with that agency?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- b. Been declared in default and/or terminated for cause on any contract, and/or had any contracts cancelled for cause?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- c. Been denied the award of a contract and/or the opportunity to bid on a contract, including, but not limited to, failure to meet pre-qualification standards?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- d. Been suspended by any government agency from entering into any contract with it; and/or is any action pending that could formally debar or otherwise affect such business's ability to bid or propose on contract?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

8. Have any of the businesses or organizations listed in response to Question 5 filed a bankruptcy petition and/or been the subject of involuntary bankruptcy proceedings during the past 7 years, and/or for any portion of the last 7 year period, been in a state of bankruptcy as a result of bankruptcy proceedings initiated more than 7 years ago and/or is any such business now the subject of any pending bankruptcy proceedings, whenever initiated?

YES ☐ NO ☒ If 'Yes', provide details for each such instance. (Provide a detailed response to all questions check "Yes". If you need more space, photocopy the appropriate page and attached it to the questionnaire.)

9.

- a. Is there any felony charge pending against you?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

b. Is there any misdemeanor charge pending against you?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

c. Is there any administrative charge pending against you?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

d. In the past 10 years, have you been convicted, after trial or by plea, of any felony, or of any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

e. In the past 5 years, have you been convicted, after trial or by plea, of a misdemeanor?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

f. In the past 5 years, have you been found in violation of any administrative or statutory charges?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

10 In addition to the information provided in response to the previous questions, in the past 5 years, have you been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency and/or the subject of an investigation where such investigation was related to activities performed at, for, or on behalf of the submitting business entity and/or an affiliated business listed in response to Question 5?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

11 In addition to the information provided, in the past 5 years has any business or organization listed in response to Question 5, been the subject of a criminal investigation and/or a civil anti-trust investigation and/or any other type of investigation by any government agency, including but not limited to federal, state, and local regulatory agencies while you were a principal owner or officer?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

12 In the past 5 years, have you or this business, or any other affiliated business listed in response to Question 5 had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

13 For the past 5 tax years, have you failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.



I, James L. Mackerer , hereby acknowledge that a materially false statement willfully or fraudulently made in connection with this form may result in rendering the submitting business entity and/or any affiliated entities non-responsible, and, in addition, may subject me to criminal charges.

I, James L. Mackerer , hereby certify that I have read and understand all the items contained in this form; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this form; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this form as additional inducement to enter into a contract with the submitting business entity.

**CERTIFICATION**

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

The Gordian Group, Inc.

---

Name of submitting business

Electronically signed and certified at the date and time indicated by:

James L. Mackerer J.MACKERER@GORDIAN.COM

---

Chief Financial Officer

---

Title

01/02/2024 05:12:37 pm

---

Date

**PRINCIPAL QUESTIONNAIRE FORM**

All questions on these questionnaires must be answered by all officers and any individuals who hold a ten percent (10%) or greater ownership interest in the proposer. Answers typewritten or printed in ink. If you need more space to answer any question, make as many photocopies of the appropriate page(s) as necessary and attach them to the questionnaire.

COMPLETE THIS QUESTIONNAIRE CAREFULLY AND COMPLETELY. FAILURE TO SUBMIT A COMPLETE QUESTIONNAIRE MAY MEAN THAT YOUR BID OR PROPOSAL WILL BE REJECTED AS NON-RESPONSIVE AND IT WILL NOT BE CONSIDERED FOR AWARD

1.

Principal Name:

Kristina Kimsey Gorriaran

Date of birth:

09/08/1964

Home address:

'716 S Castleridge Way

City:

Portland

State/Province/Territory:

OR

Zip/Postal Code:

97219

Country:

US

Business Address:

'716 S Castleridge Way

City:

Portland

State/Province/Territory:

OR

Zip/Postal Code:

97219

Country:

US

Telephone:

503-704-3879

Other present address(es):

City:

State/Province/Territory:

Zip/Postal Code:

Country:

Telephone:

List of other addresses and telephone numbers attached

2.

Positions held in submitting business and starting date of each (check all applicable)

President

09/24/2022

Treasurer

Chairman of Board

Shareholder

Chief Exec. Officer

Secretary

Chief Financial Officer

Partner

Vice President

(Other)

3.

Do you have an equity interest in the business submitting the questionnaire?

YES [ ] NO [X] If Yes, provide details.

4.

Are there any outstanding loans, guarantees or any other form of security or lease or any other type of contribution made in whole or in part between you and the business submitting the questionnaire?

YES [ ] NO [X] If Yes, provide details.

5. Within the past 3 years, have you been a principal owner or officer of any business or notfor-profit organization other than the one submitting the questionnaire?  
YES ☒ NO ☐ If Yes, provide details.

See attached document

1 File(s) uploaded: Officer Positions Held for Kris Gorriaran.pdf

6. Has any governmental entity awarded any contracts to a business or organization listed in Section 5 in the past 3 years while you were a principal owner or officer?  
YES ☐ NO ☒ If Yes, provide details.

NOTE: An affirmative answer is required below whether the sanction arose automatically, by operation of law, or as a result of any action taken by a government agency. Provide a detailed response to all questions checked "YES". If you need more space, photocopy the appropriate page and attach it to the questionnaire.

7. In the past (5) years, have you and/or any affiliated businesses or not-for-profit organizations listed in Section 5 in which you have been a principal owner or officer:

- a. Been debarred by any government agency from entering into contracts with that agency?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- b. Been declared in default and/or terminated for cause on any contract, and/or had any contracts cancelled for cause?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- c. Been denied the award of a contract and/or the opportunity to bid on a contract, including, but not limited to, failure to meet pre-qualification standards?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

- d. Been suspended by any government agency from entering into any contract with it; and/or is any action pending that could formally debar or otherwise affect such business's ability to bid or propose on contract?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

8. Have any of the businesses or organizations listed in response to Question 5 filed a bankruptcy petition and/or been the subject of involuntary bankruptcy proceedings during the past 7 years, and/or for any portion of the last 7 year period, been in a state of bankruptcy as a result of bankruptcy proceedings initiated more than 7 years ago and/or is any such business now the subject of any pending bankruptcy proceedings, whenever initiated?  
YES ☐ NO ☒ If 'Yes', provide details for each such instance. (Provide a detailed response to all questions check "Yes". If you need more space, photocopy the appropriate page and attached it to the questionnaire.)

9. a. Is there any felony charge pending against you?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

b. Is there any misdemeanor charge pending against you?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

c. Is there any administrative charge pending against you?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

d. In the past 10 years, have you been convicted, after trial or by plea, of any felony, or of any other crime, an element of which relates to truthfulness or the underlying facts of which related to the conduct of business?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

e. In the past 5 years, have you been convicted, after trial or by plea, of a misdemeanor?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

f. In the past 5 years, have you been found in violation of any administrative or statutory charges?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

10 In addition to the information provided in response to the previous questions, in the past 5 years, have you been the subject of a criminal investigation and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency and/or the subject of an investigation where such investigation was related to activities performed at, for, or on behalf of the submitting business entity and/or an affiliated business listed in response to Question 5?  
YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

11 In addition to the information provided, in the past 5 years has any business or organization listed in response to Question 5, been the subject of a criminal investigation and/or a civil anti-trust investigation and/or any other type of investigation by any government agency, including but not limited to federal, state, and local regulatory agencies while you were a principal owner or officer?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

12 In the past 5 years, have you or this business, or any other affiliated business listed in response to Question 5 had any sanction imposed as a result of judicial or administrative proceedings with respect to any professional license held?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

13 For the past 5 tax years, have you failed to file any required tax returns or failed to pay any applicable federal, state or local taxes or other assessed charges, including but not limited to water and sewer charges?

YES ☐ NO ☒ If yes, provide an explanation of the circumstances and corrective action taken.

I, Kristina K. Gorriaran , hereby acknowledge that a materially false statement willfully or fraudulently made in connection with this form may result in rendering the submitting business entity and/or any affiliated entities non-responsible, and, in addition, may subject me to criminal charges.

I, Kristina K. Gorriaran , hereby certify that I have read and understand all the items contained in this form; that I supplied full and complete answers to each item therein to the best of my knowledge, information and belief; that I will notify the County in writing of any change in circumstances occurring after the submission of this form; and that all information supplied by me is true to the best of my knowledge, information and belief. I understand that the County will rely on the information supplied in this form as additional inducement to enter into a contract with the submitting business entity.

**CERTIFICATION**

A MATERIALLY FALSE STATEMENT WILLFULLY OR FRAUDULENTLY MADE IN CONNECTION WITH THIS QUESTIONNAIRE MAY RESULT IN RENDERING THE SUBMITTING BUSINESS ENTITY NOT RESPONSIBLE WITH RESPECT TO THE PRESENT BID OR FUTURE BIDS, AND, IN ADDITION, MAY SUBJECT THE PERSON MAKING THE FALSE STATEMENT TO CRIMINAL CHARGES.

The Gordian Group, Inc.

Name of submitting business

Electronically signed and certified at the date and time indicated by:

Kristina K. Gorriaran KRIS.GORRIARAN@GORDIAN.COM

President

Title

01/03/2024 11:15:25 am

Date

Question 5 – Principal Questionnaire Form –

Officer positions held within the past 3 years:

President/Chairman of Board from 7/23/2018 – 9/23/2022 to ALSA Dosimetria S. De R.L. de C.V.

Director from 5/31/2016 – 9/23/2022 to Unfors RaySafe AB

Director from 10/01/2018 – 9/23/2022 to Nagase-Landauer, Ltd.

Director from 6/20/2018 – 9/23/2022 to Landauer Radiopharmaceuticals Pty Ltd.

Director from 6/1/2019 – 9/23/2022 to Landauer Europe, Ltd.

Director from 6/20/2018 – 9/23/2022 to Landauer Australasia Pty Ltd.

Director from 5/12/2020 – 9/23/2022 to Beijing New Landauer Dosimetry Co., Ltd.

Director from 7/31/2018 – 9/23/2022 to ALSA Dosimetria S. de R.L. de C.V.

COUNTY OF NASSAU

CONSULTANT'S, CONTRACTOR'S AND VENDOR'S DISCLOSURE FORM

1. Name of the Entity: The Gordian Group, Inc.

Address: 30 Patewood Drive, Bldg. 2, Suite 350

City: Greenville State/Province/Territory: SC Zip/Postal Code: 29615

Country: US

2. Entity's Vendor Identification Number: 58-1900371

3. Type of Business: Other (specify) Privately held corporation

4. List names and addresses of all principals; that is, all individuals serving on the Board of Directors or comparable body, all partners and limited partners, all corporate officers, all parties of Joint Ventures, and all members and officers of limited liability companies (attach additional sheets if necessary):

1 File(s) uploaded: Officers and Directors of The Gordian Group(updated 2.1.23).pdf

5. List names and addresses of all shareholders, members, or partners of the firm. If the shareholder is not an individual, list the individual shareholders/partners/members. If a Publicly held Corporation, include a copy of the 10K in lieu of completing this section.

If none, explain.

The Gordian Group, Inc. is a privately held corporation owned and controlled by the holding company, TGG Sub Inc. TGG Sub Inc. purchased all of the outstanding shares of stock for The Gordian Group, Inc. on December 11, 2007.

6. List all affiliated and related companies and their relationship to the firm entered on line 1. above (if none, enter "None"). Attach a separate disclosure form for each affiliated or subsidiary company that may take part in the performance of this contract. Such disclosure shall be updated to include affiliated or subsidiary companies not previously disclosed that participate in the performance of the contract.

The Gordian Group, Inc. is an operating and wholly owned subsidiary of Fortive Corporation. Fortive Corporation owns numerous operating companies which are listed here: <https://fortive.com/our-businesses/business-directory>. Fortive Corporation is a public company and all financial and corporate information can be found here: <https://investors.fortive.com/overview/default.aspx>. The Gordian Group is 100% owned by TGG Sub Inc, a holding company. The Gordian Group, Inc. does not have any other subsidiary company or affiliated company that will take part in the performance of the contract.

7. List all lobbyists whose services were utilized at any stage in this matter (i.e., pre-bid, bid, post-bid, etc.). If none, enter "None." The term "lobbyist" means any and every person or organization retained, employed or designated by any client to influence - or

promote a matter before - Nassau County, its agencies, boards, commissions, department heads, legislators or committees, including but not limited to the Open Space and Parks Advisory Committee and Planning Commission. Such matters include, but are not limited to, requests for proposals, development or improvement of real property subject to County regulation, procurements. The term “lobbyist” does not include any officer, director, trustee, employee, counsel or agent of the County of Nassau, or State of New York, when discharging his or her official duties.

Are there lobbyists involved in this matter?  
YES [ ] NO [X]

(a) Name, title, business address and telephone number of lobbyist(s):

(b) Describe lobbying activity of each lobbyist. See below for a complete description of lobbying activities.

(c) List whether and where the person/organization is registered as a lobbyist (e.g., Nassau County, New York State):

8. VERIFICATION: This section must be signed by a principal of the consultant, contractor or Vendor authorized as a signatory of the firm for the purpose of executing Contracts.

The undersigned affirms and so swears that he/she has read and understood the foregoing statements and they are, to his/her knowledge, true and accurate.

Electronically signed and certified at the date and time indicated by:  
Ammon T. Leshar [A.LESHER@GORDIAN.COM]

Dated: 01/02/2024 04:01:57 pm

Title: Chief Operating Officer



**The term lobbying shall mean any attempt to influence:** any determination made by the Nassau County Legislature, or any member thereof, with respect to the introduction, passage, defeat, or substance of any local legislation or resolution; any determination by the County Executive to support, oppose, approve or disapprove any local legislation or resolution, whether or not such legislation has been introduced in the County Legislature; any determination by an elected County official or an officer or employee of the County with respect to the procurement of goods, services or construction, including the preparation of contract specifications, including by not limited to the preparation of requests for proposals, or solicitation, award or administration of a contract or with respect to the solicitation, award or administration of a grant, loan, or agreement involving the disbursement of public monies; any determination made by the County Executive, County Legislature, or by the County of Nassau, its agencies, boards, commissions, department heads or committees, including but not limited to the Open Space and Parks Advisory Committee, the Planning Commission, with respect to the zoning, use, development or improvement of real property subject to County regulation, or any agencies, boards, commissions, department heads or committees with respect to requests for proposals, bidding, procurement or contracting for services for the County; any determination made by an elected county official or an officer or employee of the county with respect to the terms of the acquisition or disposition by the county of any interest in real property, with respect to a license or permit for the use of real property of or by the county, or with respect to a franchise, concession or revocable consent; the proposal, adoption, amendment or rejection by an agency of any rule having the force and effect of law; the decision to hold, timing or outcome of any rate making proceeding before an agency; the agenda or any determination of a board or commission; any determination regarding the calendaring or scope of any legislature oversight hearing; the issuance, repeal, modification or substance of a County Executive Order; or any determination made by an elected county official or an officer or employee of the county to support or oppose any state or federal legislation, rule or regulation, including any determination made to support or oppose that is contingent on any amendment of such legislation, rule or regulation, whether or not such legislation has been formally introduced and whether or not such rule or regulation has been formally proposed.

## **Officers and Directors of The Gordian Group, Inc.**

<u>Officers Name and Title</u>	<u>Address</u>
William Pollak, Group President	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
Kristina Gorriaran , President	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
James Mackerer, CFO & Treasurer	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
Ammon T. Leshar, Chief Operating Officer	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615
Angie Michelini, VP, Secretary, General Counsel	30 Patewood Drive, Bldg. 2, Suite 350, Greenville, SC 29615

<u>Directors</u>	<u>Address</u>
Rajesh Yadava	6920 Seaway Blvd., Everett, WA 98203
Christopher M. Mulhall	6920 Seaway Blvd., Everett, WA 98203



2022 ANNUAL REPORT





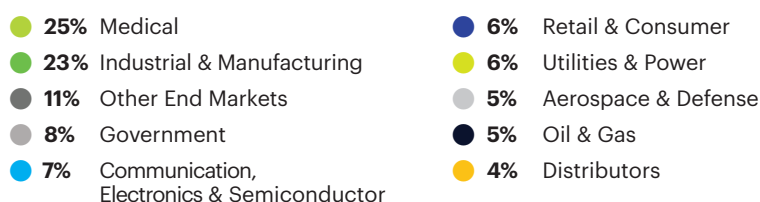
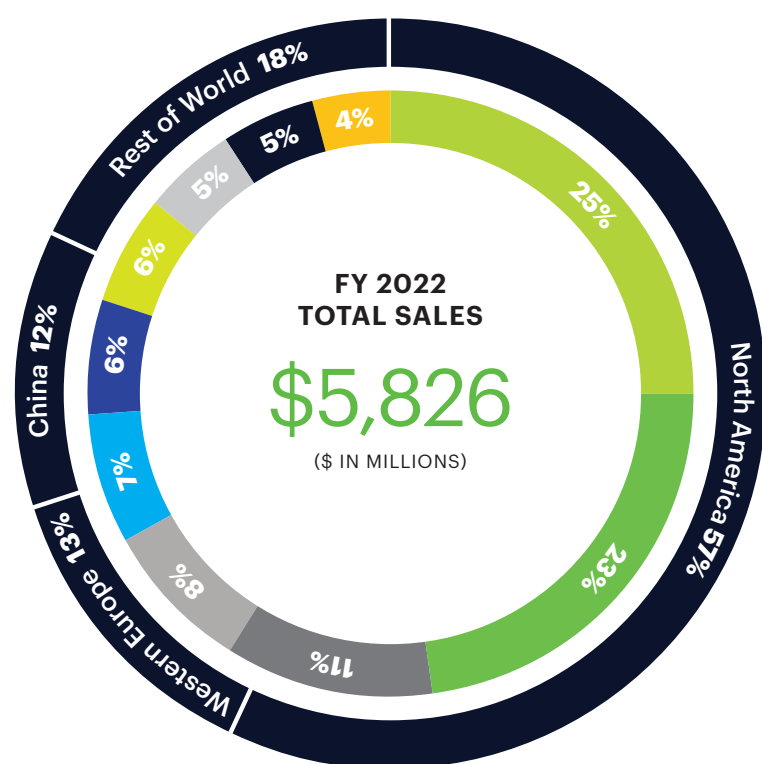
## **Essential technology for the people who accelerate progress.**

Fortive's essential technology makes the world stronger, safer, and smarter. We accelerate progress in high-impact fields like industrial manufacturing, workplace safety, facility and asset management, product development, and healthcare.



# Financial Highlights

for Fiscal Year Ended December 31, 2022



End market data based on management's estimates. The sum of the parts may not equal due to rounding.

**24.3%**

Adjusted Operating Profit Margin

**\$0.28**

Annual Cash Dividend Rate Per Share

**\$1,133**

Adjusted Net Earnings\*

**\$1,207**

Free Cash Flow\*

**\$3.15**

Adjusted Diluted Net Earnings Per Share

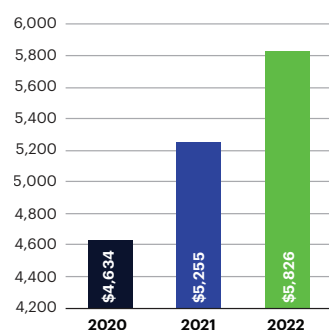
**\$64.25**

Share Price As Of 12/30/22

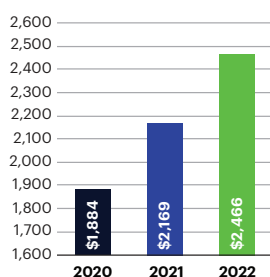
# Financial Performance Over Three Years

## Revenue\* (GAAP)

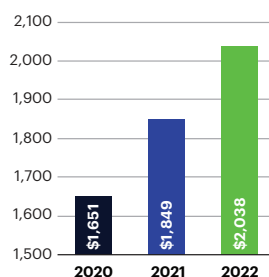
### Fortive



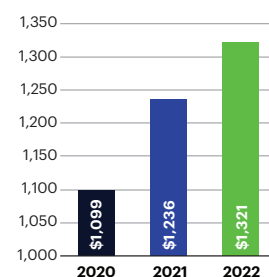
### Intelligent Operating Solutions



### Precision Technologies

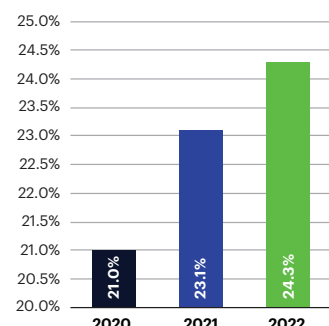


### Advanced Healthcare Solutions

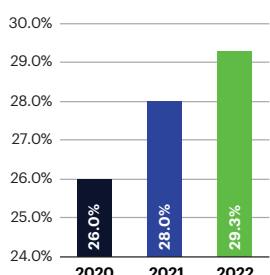


## Adjusted Operating Profit Margin (NON-GAAP)

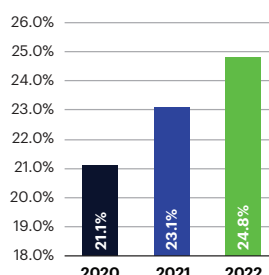
### Fortive



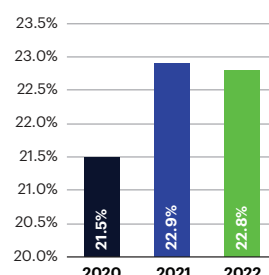
### Intelligent Operating Solutions



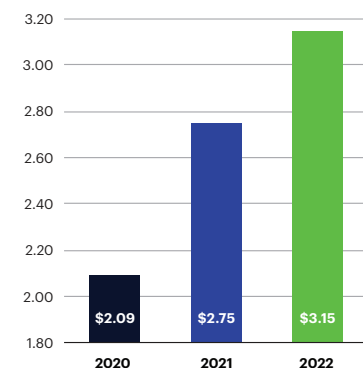
### Precision Technologies



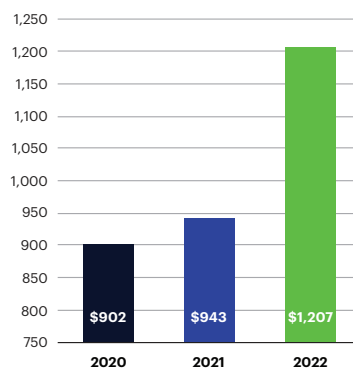
### Advanced Healthcare Solutions



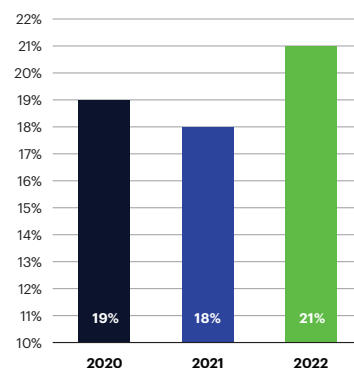
## Adjusted Earnings Per Share



## Free Cash Flow\*



## Free Cash Flow Margin



\* The financial results are presented on a continuing operations basis. All dollar figures are shown in millions except per share values. The sum of the parts may not equal due to rounding.

## About Fortive

Fortive Corporation delivers essential technology and connected workflow solutions across a range of attractive end markets. The company's businesses and strategic segments—Intelligent Operating Solutions, Precision Technologies, and Advanced Healthcare Solutions—are built on leading brand names, innovative technologies, and established market positions. Fortive is based in Everett, Washington, with research and development, manufacturing, sales, distribution, service, and administrative operations in more than 50 countries. Fortive's global team of more than 18,000 employees is united by a powerful shared purpose, **essential technology for the people who accelerate progress.**

# Fellow Shareholders,



**James A. Lico**  
President and Chief Executive Officer

When we set out as a public company over six years ago, we recognized the power of our shared purpose – essential technology for the people who accelerate progress – and the megatrends that underpin that progress. This goal would shape our strategy and portfolio transformation, positioning the Company for higher and more durable growth. By all measures, 2022 demonstrated our strategy is working and is yielding differentiated results.

Two words that describe the year across Fortive are resiliency and optimism. Resiliency given the continued supply chain and COVID challenges we overcame throughout the year, and optimism in our ability to realize our vision and unlock tremendous value. Our teams' relentless focus on execution allowed us to provide critical solutions to our customers, enabling them to make our world stronger, safer, and more productive.

Fortive's success is directly tied to our enviable culture of continuous improvement, and dedication to the Fortive Business System (FBS). By harnessing our unique competitive advantages, we remained accountable to customers and delivered outstanding revenue growth and operating performance for our shareholders.



## 2022 HIGHLIGHTS

### In 2022, we delivered exceptional results across all key financial metrics:

- Record core revenue growth of 10%, with 9% software annual recurring revenue growth
- Adjusted operating margin expansion of 120 basis points
- Adjusted earnings per share growth of 15%
- Free cash flow of \$1.2 billion, a year-over-year increase of 28%, and free cash flow margins greater than 20%

### Harnessing the Power of FBS

FBS is our strongest competitive advantage. Our teams' leadership allowed us to innovate in our operations, countermeasure obstacles, and drive sustainable improvements across our businesses.

FBS is so much more than a set of tools – it's our mindset! *Kaizen*, or continuous improvement, is our way of life. In 2022, we saw a return to in-person *Kaizen* activities broadly across the Company and an associated improvement in impact. For example, 2022's CEO *Kaizen* event in October brought together over 400 team members from around the world, including our most senior business leaders, to collaborate on our biggest opportunities. For five intensive days, the *Kaizen* teams focused on driving improvements in growth, margin, free cash flow, and innovation, delivering sustained project results across several of our businesses.

We are proud of the results directly attributed to our *Kaizen* events throughout 2022, and this is only one example of the kind of work we do every day at Fortive. Our FBS growth tools are accelerating innovation cycles to drive share gains and maximize research and development returns, and we are building extraordinary teams through the rigorous and disciplined use of FBS to create and sustain our competitive advantage. Launched in 2021, the FBS process Lean Portfolio Management (LPM) is having an outsized impact, reducing our sustaining engineering to free up capacity, increase our rate of innovation, and accelerate core growth.

FBS is also making a particularly large impact at our software companies. For example, Provation, the

newest Fortive operating company, leveraged voice of the customer research and experimentation to launch an innovative software cloud offering, driving increased SaaS adoption. As the last six years have shown, FBS has evolved to meet the needs of our portfolio, enabling best-in-class results in both our hardware and software companies.

### Resilient Operating Performance

Our focused segment strategies, which align to durable growth drivers, are creating a more resilient Fortive with enduring growth and further margin expansion opportunities. Across our three segments, we drew upon our core competitive advantages, including our culture of continuous improvement, to deliver exceptional growth and operating performance in 2022:

- Fortive's **Intelligent Operating Solutions** accelerates safety, reliability, and productivity, as well as provides operating intelligence with data analytics across a range of markets and environments. The success of this strategy in 2022 drove 12% core revenue growth, an increase in our recurring revenue profile to the low 30% range, as well as strong margin expansion with adjusted operating margins approaching 30%.
- **Precision Technologies** provides mission critical technologies to a broad set of vertical markets, enabling customers to accelerate the development of innovative products and solutions. Precision Technologies is leveraging its expertise in new energy and electrification markets to solve customers' toughest innovation challenges. This strategy resulted in 13% core revenue growth, with adjusted operating margins approaching 25% in 2022.

• **Advanced Healthcare Solutions** serves hospitals and clinicians with leading brands that enable safe, efficient, and timely delivery of quality healthcare. Despite what continued to be a very challenging hospital environment in 2022, we saw accelerated growth and profitability as we moved through the year. In Q4, we had mid-single digit core growth, a high recurring revenue profile, and adjusted operating margins in the mid-20%.

This year, all of our segments demonstrated success through effective execution of their strategies, benefitting from favorable secular tailwinds and durable business models yielding industry-leading profitability and free cash flow margins.

## Accelerated Returns

Over the past six years, Fortive has successfully deployed substantial capital and accelerated our strategy, innovation, and market penetration through our acquisitions. Our approximately \$2.2 billion of acquired revenue over this period is faster growing, and Fortive overall is generating approximately 50% more free cash flow per dollar of revenue on a year-over-year basis. We focus on creating platforms that enhance our revenue, margin, earnings, and free cash flow profile while unleashing FBS to improve our new companies' business processes, driving confidence in our ability to accelerate returns in the future.

One example of our successful deployment of capital is our Facility and Assets Lifecycle (FAL) workflow, designed to help meet the demand for data-driven decision-making across the built environment, which sits in our Intelligent Operating Solutions segment. At over \$600 million of revenue in 2022, FAL has a focused growth strategy aligned to favorable secular trends, operating in a more than \$10 billion addressable market. The FAL performance is a testament to FBS and its ability to drive product innovation, commercial success, and productivity while maintaining operating discipline. As a result, the FAL acquisitions yielded accelerated capital returns in 2022, and we expect that trend to continue over the next few years.

From a technology perspective, our centralized data science hub, The Fort, is using artificial intelligence and machine learning capabilities to make our customers more successful and deepen Fortive solutions into their workflows. The Fort drives more efficient new product innovation in software and data analytics, yielding higher return on investment and net dollar retention across our software businesses in 2022.

## Setting a High Bar for Sustainability

Fortive has made Sustainability a priority since its founding. Our Sustainability Report is now aligned to the top three reporting frameworks – GRI, SASB and TCFD – and our progress includes the early achievement of our 2025 GHG goal and the adoption of our new ambitious goal to reduce absolute Scope 1 and 2 GHG emissions 50% by 2029, from 2019 levels.

Our Sustainability ratings continue to increase, including achieving a “B” rating with our CDP climate disclosure in 2022, and we recently entered into a sustainability-linked credit facility offering improved pricing based on the achievement of our environmental targets. Additionally, over 60% of our revenue enables more sustainable outcomes that are aligned with the United Nations' sustainable development goals.

These successes exemplify our commitment to accelerating progress toward a sustainable future. As recognition for our efforts, we were proud to appear on *Newsweek's* list of America's Most Responsible Companies for the fourth year in a row.

## Advancing Our Inclusive Growth Culture

An inclusive, diverse, and equitable (IDE) culture is part of Fortive's DNA and a central aspect of what makes FBS so successful. Demonstrating the importance across our leadership team and our Board of Directors, 33% of our Board is female and 44% is racially or ethnically diverse, which includes the recent appointments of Eric Branderiz and Wright Lassiter III. Eric brings tremendous financial acumen and a deep knowledge of the technology and energy sectors. Wright brings deep healthcare expertise as well as executive management experience in strategic planning and execution.

In 2022, we published clear, aspirational goals to increase our diverse supplier spend, gender representation, BIPOC representation, and senior leader diversity by 2025. We have embedded IDE accountability into operating company leadership goals and require unconscious bias training for all employees. We introduced our new inclusive leader experience for our senior leaders, giving them the tools and support they need to build an inclusive culture and lead diverse, high-performing teams. Kaizen truly is our way of life at Fortive, and we live inclusion in every Kaizen event we do, ensuring that every voice is heard and all contribute to drive the best outcomes.

Our employee experience measures continue to provide valuable feedback through quarterly touchpoints and leader accountability, reinforcing our employee value proposition – *For you. For us. For growth.* In the fourth quarter of 2022, 83% of our team completed our biannual, full census survey, delivering steady gains in Engagement and Inclusion & Belonging, resulting in historically high ratings of 78% and 82%, respectively.

Given the importance of career opportunities to our team, we improved on our nearly top quartile rating by those who feel that their career goals can be met at Fortive. These actions have resulted, in part, in a five-point increase in our employee engagement scores from pre-pandemic levels.

### Looking To Fortive's Future

In the spirit of setting high expectations, I am excited about Fortive's future and what that means for our employees, customers, and shareholders. We are actively fueling our future success by building on the transformation, progress, and learning that has taken place over the last six years.

FBS is more robust than ever, with powerful new capabilities to bring breakthrough innovations for our customers faster and drive strong financial performance. The continued evolution of our strong free cash flow is the currency we use to measure our success, affording us ample opportunities to further accelerate our strategy and unlock incremental growth across our portfolio.

These factors culminate in a powerful formula for value creation – with a high-quality portfolio of desirable brands, segment strategies favorably aligned to sustainable secular trends, industry-leading margins and free cash flow, and best-in-class execution – enabling Fortive to make a real difference in the world and deliver exceptional results in the years to come.

Thank you for joining us on this bold journey, and for putting your trust in us.



**James A. Lico**  
President and Chief Executive Officer

The continued evolution of our strong free cash flow is the currency we use to measure our success, affording us ample opportunities to further accelerate our strategy and unlock incremental growth across our portfolio.

# Intelligent Operating Solutions

Solar energy is one of the fastest growing renewable energy resources worldwide. From grid-tied and off-grid, to hybrid and backup systems, critical infrastructure must be maintained for reliability and efficiency. Fluke provides solar industry solutions with the right tools and skills.



At the forefront of accelerating progress for our tens of thousands of customers in mission-critical workflows, Fortive's **Intelligent Operating Solutions** uses advanced instrumentation, software and services to keep much of the world running safely, efficiently, and more sustainably. We have leading positions in electrical test and measurement, facility and asset lifecycle software applications, and connected worker safety, connecting workflows, real-time data, and powerful analytics to keep customers and critical infrastructure maintained, minimize downtime, and supercharge their productivity.



## TOTAL SALES

# \$2,466

(\$ IN MILLIONS)

## SECULAR TRENDS



REGULATION,  
SAFETY, ESG



AUTOMATION &  
DIGITIZATION



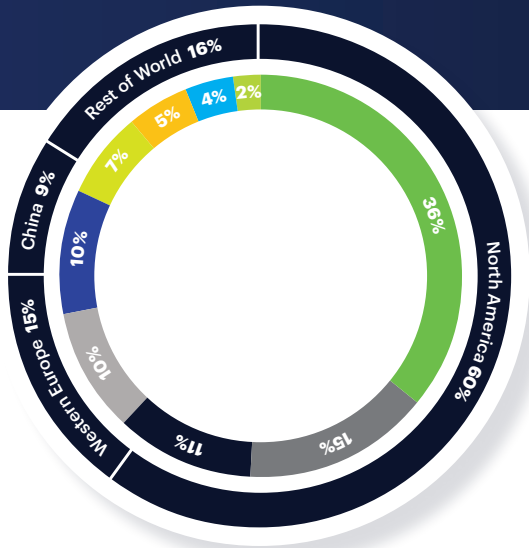
ELECTRIFICATION  
OF EVERYTHING



RESHORING/  
MANUFACTURING



DEMOGRAPHICS &  
LABOR MARKETS



- 36% Industrial & Manufacturing
- 15% Other End Markets
- 11% Oil & Gas
- 10% Government
- 10% Retail & Consumer
- 7% Utilities & Power
- 5% Distributors
- 4% Communication, Electronics & Semiconductor
- 2% Medical

**Accruent Machine Learning for ADCR (Anomaly Detection in Commercial Refrigeration):**  
Employs sophisticated Machine Learning (ML) techniques to examine key telemetry data with a view to determining poorly performing assets in advance of failure to avoid losing trade value of assets in refrigerator, putting assets at risk, and priority failures with higher costs and disruptions.



# Precision Technologies

At Tektronix, the investments we have made in our platform strategy, as well as the rigorous application of FBS product development tools, have enabled faster releases of new and innovative products, including the 2 Series and 6 Series B Mixed Signal Oscilloscopes.

**2 Series:** Entry level oscilloscopes are used in diverse applications for signal capture, waveform visualization, and analysis. The 2 Series simplifies the portfolio and buying experience, improves customer and partner workflow, and partner workflow, and accelerates strategy based on a new hardware platform that uses commercial parts. The flexibility and usability offered by 2 Series is unmatched.

**6 Series:** Featuring the highest analog bandwidth for its class, the 6 Series B enables users to confidently evaluate and debug embedded systems, precision capture RF spectrums, and perform extensive power integrity analysis for systems such as electric vehicles.



Turning the spark of an idea into a world-changing product requires bold vision, a rigorously customer-centric approach, and specialized expertise in materials, methods, and measurement. Fortive's **Precision Technologies** help solve tough technical challenges to speed breakthroughs in a wide range of applications, from food and beverage production and manufacturing to next-generation electric vehicles and clean energy, as our customers seek new test solutions to enable the electrification and connectivity of everything. From deep sea to deep space, engineers and product developers depend on Fortive's advanced technologies for safety, precision, and reliability, even in the most demanding and dynamic conditions.

## TOTAL SALES

# \$2,038

(\$ IN MILLIONS)

## SECULAR TRENDS



REGULATION,  
SAFETY, ESG



AUTOMATION &  
DIGITIZATION



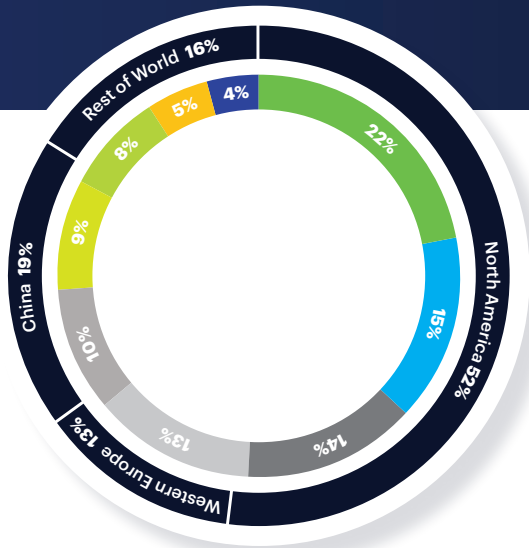
ELECTRIFICATION  
OF EVERYTHING



RESHORING/  
MANUFACTURING



DEMOGRAPHICS &  
LABOR MARKETS



- 22% Industrial & Manufacturing
- 15% Communication, Electronics & Semiconductor
- 14% Other End Markets
- 13% Aerospace & Defense
- 10% Government
- 9% Utilities & Power
- 8% Medical
- 5% Distributors
- 4% Retail & Consumer

**Qualitrol SmartSub:** Unique software system which aims to deliver a holistic real-time picture of the health condition of electric grid assets such as transformers, breakers and other substation equipment. As the grid become more complex, customers need to triage the troubled assets first to prioritize their resources and allocate budgets.





# Advanced Healthcare Solutions

**CensisAI2 Productivity Platform:** Next-generation of analytical reporting delivers fast return-on-investment by improving sterile processing departments throughput to increase surgical capacity. It puts faster decision making in the hands of organizations and delivers exceptional insights to achieve higher quality and productivity across the enterprise.



As patient care delivery evolves globally, Fortive's **Advanced Healthcare Solutions** is enabling health care providers to deliver exceptional patient care more efficiently with industry-leading instrument sterilization solutions, instrument tracking, cell therapy equipment design and manufacturing, biomedical test tools, radiation safety monitoring, and end-to-end clinical productivity solutions. Hospitals, ambulatory surgical centers (ASCs), and laboratories need these intelligent technologies to help ensure critical safety standards are met, instruments and operating rooms are working at peak performance, and complex procedures are followed accurately in these mission-critical healthcare environments.



## TOTAL SALES

# \$1,321

(\$ IN MILLIONS)

## SECULAR TRENDS



REGULATION,  
SAFETY, ESG



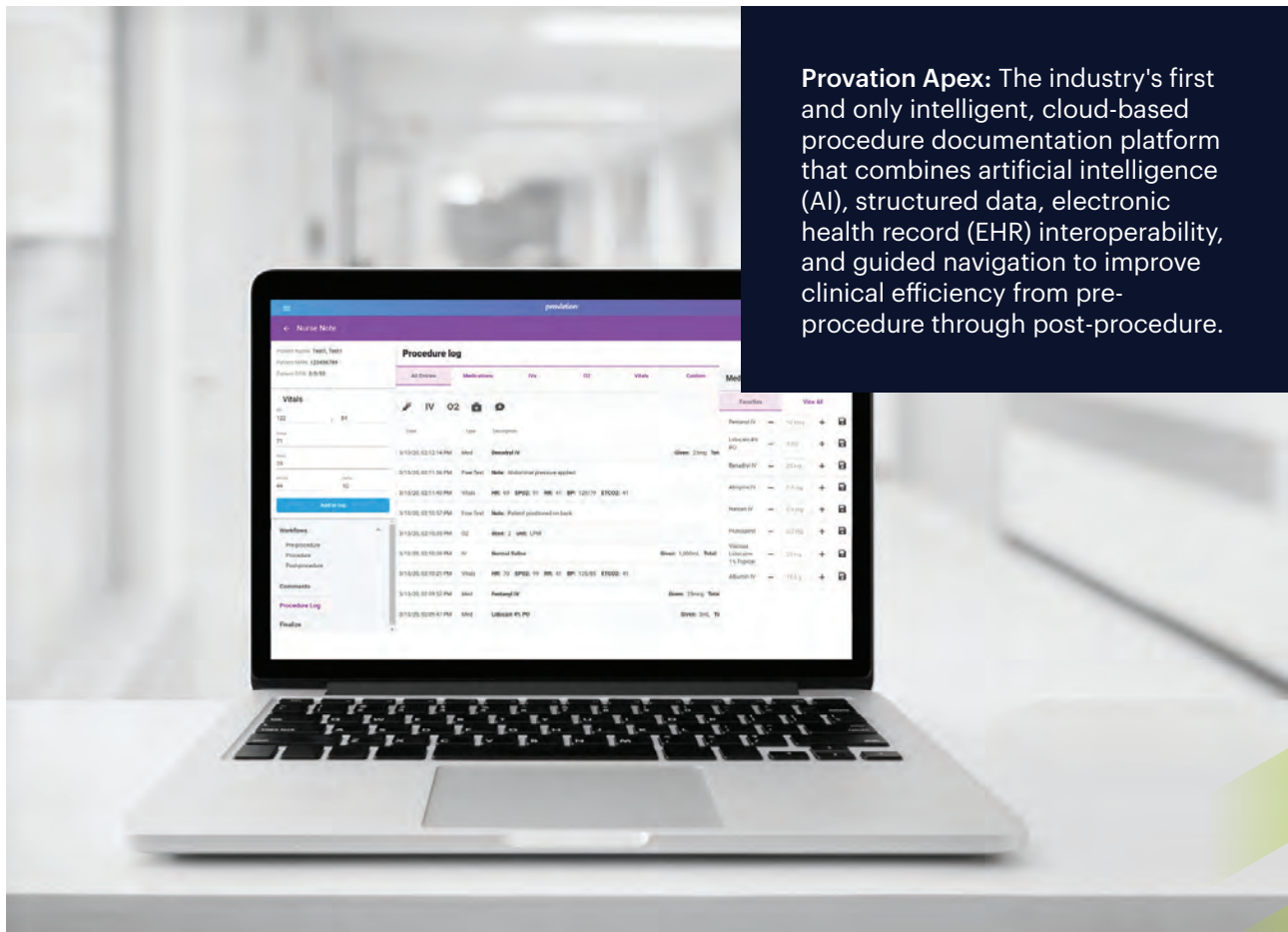
AUTOMATION &  
DIGITIZATION



DEMOGRAPHICS &  
LABOR MARKETS



- 94% Medical
- 3% Government
- 2% Industrial & Manufacturing
- 1% Distributors



**Provation Apex:** The industry's first and only intelligent, cloud-based procedure documentation platform that combines artificial intelligence (AI), structured data, electronic health record (EHR) interoperability, and guided navigation to improve clinical efficiency from pre-procedure through post-procedure.

# Increasing Our Impact by Living Our Values

## We build **extraordinary teams** for extraordinary results.

We are more together, and we all have something unique to offer. Using FBS along with our strong, inclusive culture enables us to come together to solve problems no one could solve alone.

Across Fortive, engagement scores improved 5 points since 2019 to 78%.

We achieved a 100% score on the Human Rights Campaign Foundations Corporate Equality Index (CEI) for the sixth consecutive year.

As a testament to our leadership development experiences, we filled 90% of our operating company president roles from inside the company.



### Core Value Award Winner: Provation

The Provation team exemplified our extraordinary teams value through their best-in-class approach and results in engaging and retaining their people. They have consistently prioritized a strong, caring, and winning culture, resulting in a top quartile engagement score of 87% in our most recent survey.

## Customer success inspires our innovation.

Our culture of continuous improvement enables us to drive innovation and deliver transformative technologies that break down barriers and forge new paths for our customers and the world.

Lean Portfolio Management (LPM) resulted in almost \$700M of new market opportunities.

LPM also drove customer improvements such as a 16% increase in on-time delivery.

Operationalized customer impact projects out of The Fort, our centralized data science hub, including a simulation at Censis to identify sterilization bottlenecks.



### Core Value Award Winner: Tektronix

Through their breakthrough innovation – Valkyrie, the 6 Series Mixed Signal Oscilloscope – Tektronix served as a role model for customer obsession and use of FBS to innovate with impact. This re-imagined scope simplifies and accelerates testing, making our product development engineer customers even more productive.

## We compete for **shareholders**.

We believe that prioritizing trust, sustainability, and positive impact creates long-term value for all our stakeholders – our customers, our employees, our shareholders, and our communities.

Free cash flow of \$1.2 billion, a year-over-year increase of 28%, and free cash flow margins greater than 20%

The makeup of our Board of Directors represents our commitment to diversity. The Board is 33% female and 44% racially or ethnically diverse.

Over 60% of the revenue from our products and services contribute to more sustainable outcomes for our customers.



### Core Value Award Winner: Gordian

Through a relentless focus on customers, Gordian's team delivered exceptional revenue growth and operating margin expansion over the last two years: more than 30% and over 1,000 basis points, respectively. We all aspire to this level of value creation, as we unleash FBS and our inclusive culture.

# Kaizen is Our Way of Life

The Fortive Business System (FBS) is core to who we are. It is a foundational philosophy that shapes what we do and how we approach challenges. Our commitment to continuous improvement inspires us to keep growing and learning.



**Core Value Award Winner: Industrial Scientific (ISC)**

## **INDUSTRIAL SCIENTIFIC**

The Industrial Scientific team demonstrated what's unique about Kaizen at Fortive: transformational improvements with material positive impact for our customers, our employees, and the business overall. In one recent Kaizen event on their repairs business, ISC generated a 432% increase in productivity, improved first pass yield by 21%, resulting in on-time delivery rates of 99%.

ServiceChannel achieved a SaaS Customer Health Score of 98 through rigorous application of FBS tools.

With a Kaizen event focused on winning talent, Tektronix China increased the acceptance rate of employment offers by 18%.

Gems/Setra invested in the continued development of their team and deep adoption of FBS to deliver logistics savings of almost 6%.

## **2022 CEO KAIZEN**

This annual event strengthens our strong culture of continuous improvement and reinforces the unique advantage FBS provides to our companies, people, and shareholders.

Over 400 team members, including our most senior leaders, across four operating companies joined forces in late 2022 at our CEO Kaizen event. As members on 28 Kaizen teams, our people collaborated to drive significant improvements in growth, margin, free cash flow, and breakthrough innovations. These teams produced meaningful results in the week and are sustaining results that will continue to generate value for years to come. Highlights of our results:

**20%** Improvement  
In Quality

**50%** Reduction In Past  
Due Orders

**25%** Improvement In  
On-Time Delivery

**50%** Improvement In Feature  
Release Time

**80%** Improvement  
In Quote  
Turnaround Time



**2022 FORM**

**10-K**

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- S !: L: 86CCDI 69>J H DI GB 6CJ;68IJ GC< 86E68>N H E E A N8=6C B 6C6<: B: C I DGI=: E J G=>H HG FJ>G9 ;DGI G B 6CJ;68IJ GC< 68I>K I> HIDG;A8I 8=6C<: H>C B 6C@ I 8DC9>I>DCH 8J HDB: C9: B 6C9 6C9 H E E A N8=6C DGI G CHEDG 6I>DC 9>HJ E I>DCH DI GEDQ>67>A N B 6NH::: G
- ' J G;>C6C8>6AGH A H6G H 7?: 8I ID;A8IJ 6I>DCH>C I=: 8DH 6C9 6K6>A7>A I N D, 8DB B D9>I> HDG8DB EDC CIH I=6I L: J H >C DI GDE: G I>DCH
- , =: HEG 69 D 6C9 I=: GB: 9>6A::;DGHG A I: 9 ID ' ' ! >C8: G6<C;DG>C>J GH>8I>DCH6G 8DC I>C I>C< ID=6K 6C 69K GH >B E68I DC DI G7J HC HH6C9 GH AHD DE: G I>DCH
- ' J G<G I I=: 8DI A H::: G> I=: B 6C@ IH>C I D L=>8= L: H A D I G EOD J 8IH6C9 H CK8: H9: 8AC 9DC I <G I 6H 6C I8>E6I: 9 DG ME: G C8: 8N8A86A N
- / : ;68: >C I: CH 8DB E I>DC 6C9 > L: 6G J C67A ID8DB E I: :::: 8I>K A N L: B 6N: ME: G C8: 9: 8G 6H 9 9: B 6C9 6C9 9: 8G 6H 9 B 6C@ I H6G K C> L: 8DB E I: :::: 8I>K A N L: B 6N7: G FJ>G9 IDG9J 8: EG8: H;DGI G EOD J 8IH6C9 H CK8: H
- ' J G<G I I=: 9: E C9H>C E6G DC I=: I>B: A N9: K AEB: C I 6C9 8DB B: G>6A G I>DC 6C9 8J HDB: G688: E I6C8: D C L 6C9 : C=6C8: 9 EOD J 8IH6C9 H CK8: H76H 9 DC I: 8=CD A<86A C C D K 6I>DC

- !; L: 6G J C67A IDG8CJ I 6C9 GI6C @N: B E A N : H D J G7J H C: H B 6N7: =6C B : 9
- H < C > ; 86C I 9 > H J E I > D C > C D G7G 68= > C H 8J G I N D, D J G < C; D B 6 I > D C I: 8= C D A < N I N H: B H 8D J A 69K C H A N 6;; 8I D J G 7J H C: H I
- :;; 8I H 6C9 J C 6C I > 8 E 6I: 9 J H D G < C 9: F J 6I: 9 > H A D H G L > = G H E: 8I I D D J G E C D J 8I H > C 8 A I 9 > C < H J, I L 6G D G H C K 8: H 8D J A 69K C H A N 6;; 8I D J G7J H C: H I G E I I 6 I > D C 6C9 ; > C 6 C 8 > 6 A H 6I: B : C I H
- 9K C H 8=6C <: H < C D J G G A I > D C H > E H L > = D G I =; ; > C 6 C 8 > 6 A 8 D C 9 > I > D C E: G D B 6C 8: E J C > = 6 H C < E 6 I I: C H D G < C K: C I D N A K: A H D, @ N 9 > H G 7 J I D H 6 C 9 D I =: C 8 = 6 C C: A E 6 C C: C H 8 D J A 69K C H A N 6;; 8I D J G; > C 6 C 8 > 6 A H 6I: B : C I H
- ' J G G H G 8 I J G C < 6 8 I > K I > ; H 8 D J A = 6 K A D C < I: C B 69K C H :;; 8I H D C D J G7J H C: H I
- / D C @ H D E E 6 <: H L D C @ H 8 D J C 8 > A 8 6 B E 6 < > C H 6 C 9 D I =: G A 67 D C 9 > E J I: H 8 D J A 69K C H A N > B E 6 8 I D J G E C D J 8 I > K I N 6 C 9 G H A H D, D E: G I > D C H
- !; L: H :;; G A D H I D D J G; 6 8 > A I > H H E E A N 8 = 6 < C H 9 > H G 7 J I > D C H N H: B H D G < C; D B 6 I > D C I: 8 = C D A < N I N H: B H 9 J: I D 8 6 I 6 H C E =: D G D I =: G: K C I H D J G D E: G I > D C H 8 D J A 7: H G D I H N = 6 C B : 9
- !; L: 9 D C D I D G 8 6 C C D I 69: F J 6I: A N E C D I: 8I D J G < C I: A A 8 I J 6 A E C D E: C I N D G; I = > 9 E 6 C > H < C; G C <: D J G < C I: A A 8 I J 6 A E C D E: C I N G < = I H L: B 6 N H :;; G 8 D B E I > K > > C J G N D G: M E: C 9 H < C > ; 86C I G H D J C >: H: C; D C > < < D J G C < = I H
- , = > 9 E 6 C > H B 6 N 8 > 6 B I = 6 I L: 6 G > C; G C < < < D G B > H E E C E G 6 I > C I = > G < C I: A A 8 I J 6 A E C D E: C I N G < = I H 6 C 9 L: 8 D J A H :;; G H < C > ; 86C I A I > 6 I > D C: M E: C H H A D H I H D G A 8: C H C <: M E: C H H D G 7: E G K: C I: 9 ; C B H A C < E C D J 8 I H D G H C K 8: H
- / : 6 G H 7 ? 8 I I D 6 K 6 G I N D, A I > 6 I > D C 6 C 9 D I =: G A < 6 A 6 C 9 G < J A I D G N E C 8: > 9 < < H < C I =: 8 D J C H D, D J G7J H C: H I I = 6 I 8 D J A 69K C H A N 6;; 8I D J G; > C 6 C 8 > 6 A H 6I: B : C I H

S A B 6I: 8=6C <: D G A < 6 A D G G < J A I D G N B: 6 H G I D 699 G H H 8 A B 6I: 8=6C <: B 6 N C < 6 I > K A N 6;; 8I J H

\* H @ \* : A I: 9 I D D J G I C I: C 6 I > D C 6 A' E: G I > D C H

- ! C I: C 6 I > D C 6 A: 8 D C D B > 8 E D A I > 8 6 A A < 6 A 8 D B E A 6 C 8: 6 C 9 7 J H C: H I; 6 8 I D H 8 D J A C < 6 I > K A N 6;; 8I D J G; > C 6 C 8 > 6 A H 6I: B : C I H
- , C 9: G A I > D C H 7: I L: : C = > C 6 C 9 I =: - C I: 9 + I 6I: H 8 D J A = 6 K 6 B 6I: G 6 A 69K C H :;; 8I D C D J G7J H C: H H 6 C 9 ; > C 6 C 8 > 6 A H 6I: B : C I H
- D G > C 8 J G C 8 N: M 8 = 6 C <: G I: H > C 8 A I 9 > C < I =: K D A I A I N I =: G D, B 6 N 69K C H A N 6;; 8I D J G; > C 6 C 8 > 6 A H 6I: B : C I H

\* H @ \* : A I: 9 I D ' J G 8 F J > H I > D C H ! C K: H B: C I H 6 C 9 > H E D H I > D C H

- C N > C 67 > A I N I D 8 D C H B B 6I: 6 8 F J > H I > D C H 6 I D J G 6 C I > 8 E 6I: 9 G I: 6 C 9 6 I 6 E E C E G 6 I: E G 8: H 8 D J A C < 6 I > K A N > B E 6 8 I D J G < C E I = G I: 6 C 9 H D 8 @ E G 8:
- ' J G 6 8 F J > H I > D C D, 7 J H C: H I H > D C I K: C I J G H 6 C 9 H G I: < 8 G A I > D C H > E H 8 D J A C < 6 I > K A N > B E 6 8 I D J G; > C 6 C 8 > 6 A H 6I: B : C I H
- , =: > 9: B C > ; 8 6 I > D C E C K H D C H D, 6 8 F J > H I > D C 6 < G: B: C I H 7 N L => 8 = L: = 6 K 6 8 F J > 9 9 8 D B E 6 C > H B 6 N C D I ; J A N E C D I: 8 I J H 6 C 9 6 H 6 G H A L: B 6 N; 6 8: J C: M E: 8 I: 9 A 67 > A I > H
- > K H > J G H D G D I =: G 9 > H E D H I > D C H 8 D J A C < 6 I > K A N > B E 6 8 I D J G7J H C: H I 6 C 9 8 D C I > C <: C I A 67 > A I > H; C B 7 J H C: H I H I = 6 I L: = 6 K H A 8 D J A 69K C H A N 6;; 8I D J G; > C 6 C 8 > 6 A H 6I: B : C I H
- ( D I: C I > 6 A > C 9: B C > ; 8 6 I > D C A 67 > A I > H I D, D C I > G E J C H 6 C I I D I =: H E 6 G I > D C 6 < G: B: C I 8 D J A B 6I: G 6 A N 6 C 9 69K C H A N 6;; 8I D J G7J H C: H I H; > C 6 C 8 > 6 A 8 D C 9 > I > D C G H A H D, D E: G I > D C H 6 C 9 8 6 I > ; A L H

\* H @ \* : A I: 9 I D \* : < J A I D G N 6 C 9 D B E A 6 C 8: % 6 I I: C H

- = 6 C <: H < C > 9 J H C N H 6 C 9 69H 6 C 9 < D K: C B: C I 6 A G < J A I > D C H B 6 N G 9 J 8: 9: B 6 C 9 ; D G D J G E C D J 8 I H D G H C K 8: H D G > C 8 G 6 H D J G: M E: C H H

- ' JGG EJI6LDC 67>AINID9D7JHC: HH 6C9 ;>C6C8>6AH6I: B: CHB 6N7: >B E6>G9 7N>B EDE: C8DC9J 8I 7N6CND, DI G : B EADN : H 6<: CH DG7JHC: HHE6QC: CH
- ' JGDE: 6L>DCH EDDJ8IH 6C9 HCK8: H: MEDH JHIDI=: GH@D : CKQCB: CI6A=: 6A= 6C9 H6;: INA67>AI> H 8DHH 6C9 KDA6L>DCHI=6I 8DI A 69K CHAN6;: 8I DI GGEJI6LDC 6C9 ;>C6C8>6AH6I: B: CH
- ' JG7JHC: HH H6G H7?: 8I ID: M: CHK: G<J A6LDC ;>6AG ID8DB EANL >= I= DH G<J A6L>DCH8DI A 69K CHAN6;: 8I DI G ;>C6C8>6AH6I: B: CH6C9 GEJI6LDC

\* >H@\*: AI: 9 ID' JG 6M6C9 88DI CI<C< % 6II: CH

- =6C<: H<C DI G ;: 8L>K I6M6I: HDG: MEDH G ID699>L>DC6A>C8DB: I6MA67>AI> HDG6HH HB: CH8DI A 6;: 8I DI G EDD>67>AIN !C699>L>DC 6J9>IH7NI6M6JI=DGI> H8DI A G H A>C699>L>DC6AI6ME6NB: CH; DGEGDGE: GD9H
- / : 8DI A >C8J GH<C>;>86CI A67>AIN>; 6CND, DI GHE66LDC; QEB 6C6=: G DI GHE66LDC D, DI G JIDB 6LDC 6C9 +E: 8>6AN7JHC: HHGDI GHE66LDC D. DCI> G 8DA>8L>K AN I=: W: E66LDC, 6CH68L>DCHK >H9: I: 6>C 9 ID7: 6 I6M67A I6CH68LDC
- =6C<: H<C- + ( 8DI A 69K CHAN6;: 8I DI GGEDG: 9 ;>C6C8>6AGH AH6C9 B6NGFJ >G H<C>;>86CI 8=6C<: HIDDJ G >CI: 66A688DI CI<C< HNH: B H6C9 EGB8: HH H
- / : B6N7: GFJ >G9 IDG8D<CQ >B E6>B: CI 8=6G<: H; DGDJ G<DD9L >A6C9 DI=: G<CI6C<>7A 6HH IH

\* >H@\*: AI: 9 ID' JG >C6C8<C< 8L>K>: H

- / : =6K >C8J 69 6 H<C>;>86CI 6B DI CI D 9: 7I 6C9 DI G9: 7I D7A>6L>DCH >C8A9>C< I=: 8DH D H 8= 9: 7I L >A>C8G6H ;J G=: G> L: >C8J G699>L>DC6A9: 7I 6C9 9DCI G L G : MHC< 9: 7I DG> I=: 6EEA867A >CI: GH 6I: H8DCI>CI: IDGH

% ' )

) " \* ( # ((

7@TB>

DQ>K DEDG6LDC>H6 ECK9: GD : HH CI>6AI: 8=CDAD> H; DG8DCC: 8I: 9 L DQ@AL HDA L>DCH68GH6 6C<: D 6IIG8L>K : C9 B 6C@IH' JGH6I: <8 H<B: CH !CI: A>C: CI' E: 6LDC< +DA L>DCH ( G8HDC, : 8=CDAD> H 6C9 9K6C8: 9 : 6A=86G +DA L>DCH >C8A9: L: A@DL C76C9HL >= A69>C< EDH>DCH>CI=: >GB 6C@IH' JG7JHC: HH H9: H<C 9: K AEB 6CJ; 68IJ G 6C9 HCK8: EDD: HHDC6A6C9 : C>C: G9 EDDJ8IH HD IL 6G 6C9 HCK8: H 7J >A>C< JEDC A69>C< 76C9 C6B: H >CCDK6L>K: I: 8=CDAD> H 6C9 H<C>;>86CI B 6C@I EDH>DCH / : 6G =: 69FJ 6C: G9 >C K GII / 6H>C< IDC 6C9 : B EADN 6I: 6B D B DG I=6C GH 6C8= 6C9 9: K AEB: CI B 6CJ; 68IJ GC> H6AH 9>HG7J LDC HCK8: 6C9 69B >CHG6L>K : B EADN: H<C B DG I=6C 8DI CIG: H66C9 I=: L DQ>

' C' 8ID7: G L: 8DB EAI: 9 I=: HE66LDC D. DCI> G DQEDG6LDC W DCI> QX I=: : CI>NL: 8G6I: 9 ID=DA DI G; DQ>: G !C9JHG6A : 8=CDAD> HH <B: CI I=: W: E66LDCX , =: 688DI CI<C< GFJ >GB: CH; DGGEDG6C< I=: . DCI> G7JHC: HH6H6 9>H8DCI>CI: 9 DE: 6L>DCL: G B: I L=: CI=: +: E66LDC L 6H8DB EAI: 9 88D9>C<AN I=: 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CHG; A8I I=: GH AHD, I=: . DCI> G7JHC: HH6H6 9>H8DCI>CI: 9 DE: 6LDC; DG6AE: GD9HEGH CI: 9

DQ>K DEDG6LDC>H6 : AL 6G 8DQEDG6LDC 6C9 L 6H>C8DQEDG6I: 9 >C >C8DCC: 8I>DCL >= I=: HE66LDC D DQ>K ; QEB 6C6=: G DQEDG6LDC W 6C6=: CKDGW DQ>: G ( 6G CIX DC "JAN 6H6C>C9: E C9: CI EJ7A8ANIG69: 9 8DB E6CN AH: 9 DC I=: &: L 1 DQ@+ID8@ M8=6C<:

!CI=>H CCJ 6A\*: EDG I=: I: 6HWDQ>K XDGI=: W DB E6CNXG;: GID: >=: G DQ>K DQEDG6LDC DGID DQ>K DQEDG6LDC 6C9 >H8DCHDA96I: 9 H7H9>6G: H 6HI=: 8DCI: M GFJ >GH - CAHDI=: 6L >H >C9>86I: 9 6A6B DI CH>CI=>H CCJ 6A\*: EDG G;: GID 8DCI>CI>C< DE: 6L>DCH

ADEH7 GE@7HE( KH7?

' JGI: 6B H68GHDI GDE: 6L>C< 8DB E6C> H6G JCI: 9 7NDJ G8J AI G D 8DCI>CI DI H>B ECK B: CI 6C9 7>6H; DG68LDC I=6I >H : B7D9>9 >CI=: DQ>K JHC: HH+NH: B W +X , =QJ <= G<DDJ H6EEA86LDC D I=: EDEG: I6GNH I D <6L I= A6C 6C9 A69: GH>E IDDAH6C9 EGB8: HH HI=6I 8DB EGH + L: 8DCI>CI DI HN>B ECK 7JHC: HHE: GDGB 6C8: >CI=: 8GI>86A6G6HD >CCDK6LDC EDDJ8I 9: K AEB: CI 6C9 8DB B: 6>6A66LDC <A76AH FEAN8=6C H6AH6C9 B 6C@L< 8DQEDG6I: 9: K AEB: CI

=JB 6C86EJ6AB 6C<: B: CI H H6<C67>AIN:;;DGH 6C9 A69: GH>E 9: K AEB: CI ' J G8DB B>B: CI ID + =6H: C67A9 J HID9GK  
8JHDB: GH6H68HDC 6C9 ECD>67>AIN 6C9 <: C GI: H<C>:86CI >B ECK B: CIH<C>CDK6HDC <GL I= 6C9 8DG DE: GI<C<  
B 6G<CH 99>HDC6AN + =6H=: AE: 9 JH: M8J I: 6 9>H>EAC 9 68FJ>H>DCHGI: <N6C9: ME6C9 DJ GEDQ;DAD>C IDC L 6C9  
6H68H K B 6C@ IHL =>A 8G6H< AD< I: CB H=6G=DQ: GK6A:

%GBA7 3G +3>G7E

/ : 6G <J>: 9 7NDJ GH=6G9 EJ EDH ID9: AK G: H CI>6AI: 8=CDAD<N; DGI=: E DEA L=D688: AGI: ECD>GHH GK C7NDJ G  
H=6G9 EJ EDH L: HGK ID688: AGI: IGCHDCB 6HDC>C=>=>B E68I ;>AH H 8= 6HLDG6A8: H6: IN : C>C: GC< 6C9  
=: 6A=86G 9: AK GC<=>=> I: 8= HDAH DCH6C9 =>=>B E68I ;DG: C>C: GH H8: CIHH ;DCIAC: L DG@ GH 6C9 E6H> CIH6CDI C9 I=:  
LDQ

/ >= DJ GH=6G9 EJ EDH 9:;>CC<L=6I L: 9D I=: ;DAIL>C< 8DG K6A: H<J>: =DL L: 9: AK G: K QN96N;DGDJ GH6@=DQ: GH

/ : 7J>Q: MGDQ>C6NI: 6B H;DG: MGDQ>C6NGH AH

/ : 7: A K L: 6G B DG ID< I=: G 6C9 L: 6A=6K HDB: I=>C< J CFJ: IDD;: G6HL: 8DB: ID< I=: GIDHAK ECD7AB HCDDC:  
8DJ A HAK 6AD 8DB B>I: 9 ID6 HGC< 6C9 >C8AHK 8J AJ G

JHDB: GH 88: H<CH>GHDI G<CDK6HDC

/ : 7: A K DJ GB DH >B EDC6CI 7G6@=CDI <=H6G I=: DC HI=6I=: AE DJ G8JHDB: GH 88: 9 6C9 L: HGK ID7G6@9DL C  
7G6: GH6C9 ;DG: C L E6I=HIDLQ 8=6C<C< >CDK6HDC HDB DK DJ G8JHDB: GH;DGL 6C9

#6Q C>HDI GL6ND A:

/ : 7: A K I=: C MI>B: 86C6A 6NH7: 7: II: G 6C9 DJ G8DB B>B: CI ID8DC>CJ DI H>B ECK B: CI >CH>GHJ HID@: E <GL>C<  
6C9 A6GC<

/ : 8DB E: I: ;DGDJ GH=6G=DQ: GH

/ : 7: A K >CEGDGL>OC< IGH H H6<C67>AIN 6C9 EDH>K >B E68I ID8G6I: AD< I: CB K6A: ;DG6AD DJ GH6@=DQ: GH  
>C8A9>C< DJ GH=6G=DQ: GH DJ G: BEAN: H DJ G8JHDB: GH6C9 DJ G8DB B J C>H

' 7BAE34> (79? 7GE

/ : DE: GI: 6C9 GEDQ DJ GG H AH>CI=G: H<B: CIH !CI: A<: CI' E GI<C<+DAH DCH ( G8HDC, : 8=CDAD> H 6C9 9K6C8: 9  
: 6A=86G +DAH DCH: 68=D L=>8= >H;J G=: C9: HG7: 9 7: AL

@7>97@F\$ B7DBE@ ( A>GEA@

' J G!CI: A<: CI' E GI<C<+DAH DCHH<B: CI ECK9: H69K6C8: 9 >CHGB: CI6HDC HD IL 6G 6C9 H K8: HIDI: CHD I=DI H6C9HD  
8JHDB: GH: C67AC< I=: >B>HDC 8GI>86AL DG@AL H, =: H D:; GC>H>C8A9: : A8IG86AI: H B: 6HGB: CI ;68>AIN6C9 6HI I  
A: 8N8A HD IL 6G 6EEA86HDC 8DC: 8I: 9 LD@GH6: IN6C9 8DB EA6C8: HDAH DCH68GH6 GC<: D K C86A C9 B 6C@ IH  
>C8A9>C< B 6CJ ;68IJ GC< ECD8: H6C9 JHG: H =: 6A=86G JI>AI> H6C9 EDL: G 8DB B J C86HDC 6C9: A8IGC8H 6B DC< DI=: GH  
, NE>86AH HDI I=: H H6: IN ECDJ 8H KIN6C9 H H6<C67>AIN HDAH DCH>C8A9: : A8IG86A C>C: GH: A8IG86CH: A8IGC8  
I: 8=C8>6CH + ECD: HHC6AH C IL DG@I: 8=C8>6CH ;68>AINB 6C6<: GH ;>GH G HEDC9: GH 6C9 B 6CI: C6C8: ECD: HHC6AH

( CDJ 8IH6C9 H K8: HL>=>C DJ G!CI: A<: CI' E GI<C<+DAH DCHH<B: CI 6G B 6C@I: 9 J C9: G6 K6G: IND A69>C< 7G6C9H  
>C8A9>C< \*- &, \$- # ' \* ! & !& - +, \*! \$ + ! &, !! !&, \$ 0 (\*- , & !# 6C9  
+ \*. ! && \$

%D5:EA@) 75: @A9:7E

' J G( G8HDC, : 8=CDAD> HH<B: CI =: AEHDAK IDI<= I: 8=C86A8=6AC<: HIDHE: 9 7G6@=CDI <=H6C6L>9: GC<: D  
6EEA86HDC ;GB ;DD9 6C9 7: K G<: ECDJ 8HDC 6C9 B 6CJ ;68IJ GC< IDC M <: C GI>DC: A8IG8 K =>8AH6C9 8A6C: C GN 6H  
DJ G8JHDB: GH: @C L I: H HDAH DCHID: C67A I=: : A8IG>86HDC 6C9 8DC: 8L K IND: K GN=>C< ' J G: ME: GH >CB 6I: G6AI  
B: I=DI H6C9 B: 6HGB: CIH6G G;A8I: 9 >DJ G: A8IG86AI: H B: 6HGB: CI H CHC< 6C9 B 6I: G6AI: 8=CDAD> HD;: G9 ID6  
7G69 HI D 8JHDB: GH6C9 K C86A C9 B 6C@ IH >C8A9>C< >C9 JHG6AEDL: G6C9: C GN 6HDB DK B: 9>86A FJ>EB: CI ;DD9  
6C9 7: K G<: 6: GHE68: 6C9 9: ;: CH H B>DC9 J 8IDG 6C9 DI=: G<: C GA>C9 JHG: H JHDB: GH;DGI=: H ECDJ 8IH6C9 H K8: H  
>C8A9: 9: H<C: C>C: GH;DG69K6C8: 9: A8IGC8 9: K8: H6C9: FJ>EB: CI ECD8: H6C9 FJ 6AIN: C>C: GH;D8J H9 DC>B ECK 9

ECB: HH86E67>AIN6C9 ECDJ8LKIN ;68>AINB6<C: C6C8: B6C<: CH9GK<>C8G6H9 JEDB: 6C9 DI=: G8JHDB: CH;DGL=DB  
EG8>H B: 6HGB: CI GA67>AIN6C9 8DBEA6C8: 6G 8GL86ACI=: >G6EEA86LDCH

( CDJ8IH6C9 HCK8: H<CDJG G8HDC, : 8=CDAD> HH<B: CI 6G B6C@I: 9 J C9: G6 K6G: IND, 7G6C9H>C8A9>C< & \*+' &  
& \$ %++ , \* & +, \$ \* 1 & ( \* ) - \$!, \*' \$ ( !! + ! & !! # !, \$ 1 6C9  
, #, \*' &!0

6HB@576 73>E 53D/ ( A>GEA@

' JG 9K6C8: 9 : 6A=86G +DAIDCHH<B: CI HEEA>H8GL86ALDC@AL HDAIDCH: C67AC<=: 6A=86G ECK9: CHID9: AK G  
: M8: ELDCEAE6L> CI 86G BDG :;;>8>CIAN' JGD:; GC<H>C8A9: >CHGB: CI H: GA6LDCHDAIDCH>CHGB: CI IG68@C< 8: AA  
I=: GEN: FJ>EB: CI 9: H<C6C9 B6CI;68IJGC< 7>DB: 9>86A: H IDAH G9>6LD9: I: 8LD6C9 H6: INBDCIDGC< 6C9: C9 ID: C9  
8AC86AECDDJ8LKINH,IL 6G 6C9 HDAIDCH' JG=: 6A=86G D:; GC<H: AE: CHG 8GL86AH6: INH6C96G6H6G B: I >CHGB: CIH  
6C9 DE: GLC< GDB H6G LDC@C< 6I E: 6@E: GDB 6C8: 6C9 8DBEAMEGD8: 9JGH6G ;DADL: 9 688JGL: AN>CI=: H B>HDC  
8GL86A=: 6A=86G : CKGDCB: CIH

( CDJ8IH6C9 HCK8: H<CDJG 9K6C8: 9 : 6A=86G +DAIDCHH<B: CI 6G B6C@I: 9 J C9: G6 K6G: IND, 7G6C9H>C8A9>C< +(  
&+!+ &+!, \* .', \$- # !' % ! \$ !& , \$ & - \* (\*' . ,! & \* 1+ 6C9  
+, \*\*

, =: ;DADL>C< 9>HJHDC>C8A9: H<C;DGB 6LD8DB BDCID6AD, DJGH<B: CIH

" 3F7D3>E

' JGB 6CI;68IJGC< DE: GLDCH: BEAN6L>9: K6G: IND, GL B6I: G6AH>C8A9>C<: A8IGC8 8DBEDC: CIH H: AE6H8H6C9 DI=: G  
E: IDAJB 76H9 ECDJ8IH6AB>CJB 6C9 8DEE: G ( G8: HD, DA6C9 <6H6:; 8I DJG8DHH;DG;G>=I 6C9 JLA>: H/ : EJG=6H  
GL B6I: G6AH;GB 6 AG: CJB 7: GD >C9: E: C9: CI HJG8: H6CJ C9 I=: LDC@ , 6G;H6:; 8I DJG8DHH;DG>B E68I: 9 B6I: G6AHDG  
8DBEDC: CIHL: >BEDG>CIDI=: - C: 9 +I6I: H 6H9 DC6AD86LD9: 6CJ 6AHE: C9 6BDC< DJG6GDI HHEEA>CH CDHC<A  
HHEEA>GHB 6I: G6A DL: K G HDB: 8DBEDC: CIH=6I GFJ>G E6G8J AGHE: 8>86LDCHDGFI 6A>86LDCH6G 9: E: C9: CI DC6  
HC<A HHEEA>GDG6 AB>: 9 CJB 7: GD, HHEEA>CHI=6I 86CG69>ANECK9: H8= 8DBEDC: CIH/ : JLAO 6CJB 7: GD, I: 8=CFJ: HID  
699GHEDI: CI6A9>HJELDC>C6C9 DI=: GGHGAGALC< IDDJGHEAN8=6C >C8A9>C< >C8: G6C86H HI=: JH D H6: INHD8@  
6A: G6L>K B6I: G6AH=6I B: : I I=: FJ 6AIN6C9 G<J AIDNGFJ>GB: CIH 6C9 FJ 6A>86LD9: BJA>EA HHEANHI G8: H/ =>A I=:  
GB: 9>6LD9: ;DHI6@C7N8: G6C>JGH>8LDCH>CGHEDCH IDI=: ' . ! E6C9: B>86C9 I=: 9>HJELDCH;GB I=: - @G6C:  
\* JH6 8DC;A8I=6K G6H9 B6I: G6A6C9 H>EEC< 8DHH DJGHEAN8=6CL6GHGHDCHK IDI=: H 9NC6B>8H6C9 L:  
>BEAB: CI: 9 HDAIDCH>C8A9>C< I=CDJ <= + 6C9 LDC@C< 8DA67DGLK: ANL>= DJGHEEA>CH ID: ;: 8L>K ANHEDG DI G  
DE: GLDCH 6C9 =: AE 8DI CI: GB: 6H G ECDJ8LD9 B6I: G6AH>D6<: H6C9 9>HG7JLDC AB>6LDCH DG6;JG=: G9>HJHDCD, GHG  
GAL: 9 IDI=: B6I: G6A6C9 8DBEDC: CHGFJ>G9 ;DGD GDE: GLDCH EA6H G:; GIDWI: B \*>H@ 68IDGHX

@7>75K3>%DAB7DK

/ : DLCCJB: CDHE6I: CIH IG9: B6C@H 8DENG<=IH 6C9 IG9: H8GIH6C9 =DA A8: CHHIDJH >CI: AA8IJ 6AEGE: GNDLC: 9 7N  
DI=: CH A=DI <= >C6<<G<6I: DI GCI: AA8IJ 6AEGE: GN>HB EDG6CI IDDJGDE: GLDCH L: 9DCDI 8DCH9: G6CNHC<A E6I: CI  
IG9: B6C@ 8DENG<=I IG9: H8GI DGA8: CH ID7: D B6I: G6AB EDG6C8: ID6CNH<B: CI DGDI=: 7JHC: HH6H6L=DA GB  
LB: IDLB: L: : C<6<: >CAI>6LDCEDE: 8I DJGCI: AA8IJ 6AEGE: GNG<=IH DG6>HJHDCD, GHGAGAL: 9 IDDJG  
>CI: AA8IJ 6AEGE: GN EA6H G:; GIDWI: B \*>H@ 68IDGHX AA86EJ6AO 9 7G6C9H6C9 ECDJ8I C6B: HI=CDJ <=DI I=: H  
9D8JB: CI 6G IG9: B6C@HDL C: 9 7N DGA8: CH9 ID DCK

A? B7EEA@

/ : 7: A>K I=6I L: 6G 6 A69: GCB 6CND, DJGHCK 9 B6C@IH A=DI <= DJG7JHC: HHH<: C GANDE: GL: >C=>=AN8DBE: L>K  
B6C@IH DJG8DBE: L>K EDHEDC 86CCDI 7: 9: I: GB>C 9 688JGL: AN>CI=: 6<<G<6I: DG7NH<B: CI HC8: CDC D DJG  
8DBE: LIDGH:; G6AD, I=: H6B: ECDJ8I 6C9 HCK8: AC: HDGHCK 6AD, I=: H6B: B6C@IH6HL: 9D :86JH D I=: GC<: D  
I=: ECDJ8IH6C9 HCK8: HL: HA6C9 I=: K6G: IND, B6C@IHL: HCK L: : C8DI CI: G6L>9: K6G: IND, 8DBE: LIDGH>C8A9>C<  
AG: G8DB E6C> HDG9>KHDCD, AG: G8DB E6C> HL>= H7H6CL6AH6AH B6C@L< GH6G= 6C9 ;>C6C8>A86E67>AL>H 6HL: AA  
6HL: AA: H67AH: 9 G<DC6A8DBE: LIDGHL=D6G BDG HE: 8>6AO 9 I=6CL: 6G >E6G8J AGCB 6C@IH/ : ;68: >C8G6H9  
8DBE: L>DC>C6CJB 7: GD, DJGHCK 9 B6C@IH6H6GHAD, I=: CQND, 8DBE: LIDGH76H9>CAL 8DH B6CI;68IJGC<  
AD86LDCH 6C9 >C8G6HC< 8DCHDA96LD>CE6G8J AGCB 6C@IH, =: CJB 7: GD, 8DBE: LIDGHK6G: H7NECDJ8I 6C9 HCK8: AC ' JG  
B6C<: B: CI 7: A>K HI=6I L: =6K 6 B6C@IA69: GH>E EDHEDC>CB DH D, I=: B6C@IHL: HCK #: N8DBE: L>K ;68IDGHK6G  
6BDC< DJG7JHC: HHH6C9 ECDJ8I 6C9 HCK8: AC: H7JI>C8A9: I=: HE: 8>8 ;68IDGHCI: 9 67DK: L>= GHE: 8I ID: 68= E6G8J AG  
7JHC: HH6C9 INE86AN6AD>C8A9: EG8: FJ 6AIN E: GDB 6C8: 9: AK: GNE: 9 6EEA86LDCH: ME: GH 9>HG7JLDC 8=6CC A



688: HH HCK8: 6C9 H EEDG I: 8=CDAD<N6C9 >CCK6LDC 7G69I= D, ECDJ8I HCK8: 6C9 HJIL6G D,: GC<H 6C9 7G6C9 C6B: G8D<C>DC DG69>HJHEDC, GHGHA: 9 ID8DBE: L>DC EA6H G,: GIDWI: B \*>H@ 68IDCHX

( 73EA@># 3FGD7 A8 GE@FE

: C: GA: 8DCDB>8 8DC9>DCH>B E68I DJ G7JHC: HH6C9 :>C6C8>6AGH AH 6C9 8: G6<C D, DJ G7JHC: HH H: ME: G: C8: H 6HDC6A6C9 DI=: GIGC9HGHA: 9 IDI=: >CJHG: H6C9 : C9 B 6C@IHI=6I I=: NHCK DG: MBEA H6AHD, 86E>6A FJ>EB: CI 6C9 H: GA6LDC 8DCH B 67AH6G DI: CHGC<: GC I=: ;DJ G= 86AC96GFJ 6C: G6C9 H6AHID' % H6G DI: CHGC<: G>B B: 9>6I: ANEG8: 9>C< 6C9 ;DAIL>C< I=: AJ C8=D, C L ECDJ8IH DL: K G 6H6 L=DA L: 6G CDI H 7? 8I IDB 6I: G6AH 6HDC6AIN

G? 3@ 3B;B>" 3@97? 7@F

DDK>H6<A76AI: 6B 6EECDMB 6I: AN HGC< : C: G<O 9 7N6 H6G9 EJCEDH ' JG: DEA HGI: <N8: CI: CHDC : B E L: GC< HGC< >C8AHK I: 6B HLDGC< ID< I=: GIDHDK: ECDJAB HCDDC: 8DJAHDK: 6AD< / : >CI: C>DC6ANH: @DJ I 9>,: GCI H>AH 768@CJ C9H 6C9 KD8: HID9: AK GG H AH;DGDJ C8JHDB: CH6C9 ;JA>ADJ G B E AN: ECD>H U DGNDJ DGJH DG<GL I= ' JG: DEA HGI: <N>H9: ;>C 9 7NDJ G C8AHK <GL I= 8J AJ G 69K6C8: 9 I=CJ <= + DJ GI6ACI 6C9 GL 6C9 HNH: B H 6C9 B: 6H G9 7NDJ G B E AN: : ME: G: C8: ECD8: HH H, =: H @N: AB: CIH: C67A JHID688: AGI: ECD>GH;DGDJ G 8JHDB: GH DJGI: 6B H 6C9 I=: L DCA 6CJ C9 JH

!C8AHK GL I= JAJG

/ : 7: AK L: 6G BDG ID< I=: G' J C8J AJ G H IHI=: IDC ;DG DDK>YH( : DEA HGI: <N6C9 9GK H DDK>YH 88: HH !C8AHDC >K: GHN 6C9 FJ>N W X 6G 8DG E>AKGD, DJGHGI: <N6C9 8J AJ G

M @>GEA@ : K AEDJGI: 6B HID7J>A 6 DDK L=: G NDJ 86C7: NDJHA 6C9 9DNDJG7: H LDC@

- ;H7DEHK J>A 69>K GH DDK I=CJ <= =>GC< 9: K AEC< 6C9 GI6<C< 6 HGC< 6C9 9>K GH I: 6B

- CGHK J>A 6 8J AJ G D: FJ>NI=6I: C67AH<G 6I: G CCK6LDC 6C9 E GDCB 6C8: ;DG8JHDB: CH6C9 ;DGI=: L DCA

/ : 688: AGI: 9 I=: >B E68I D ! >C 7N>CJ C9J8< >DJGC L >C8AHK A69: G ME: G: C8: IDDJ GH C DGA69: GH68CHHI=: DG<6C6LDC , =>H9: K AEB: CI: ME: G: C8: ECDK9: HI=: IDDAH6C9 H EEDG ID7J>A 6C>C8AHK 8J AJ G 6C9 EGE6GHA69: GHID A69 9>K GH =>E: GDCB>C< I: 6B H / : 6AD8DCI>CJ: 9 ID: ME6C9 I=: >B E68I D, DJ G B E AN: G: C9H6C9 \*: HDJ G: H CJEH W \* YK ID>C8G6H >C8AHDC 6C9 7: AC>C< L >=>C6C9 ;DGDJ GJ C9: GEGH CI: 9 8DBBJ C>H

, D9GK + 8DCI>CJ DI H>B ECDK B: CI 6C9 ! 688DJ CI 67>AIN 6I 6AAK AHD, DJGDG<6C6LDC DJ G ( !C8AHDC >K: GHN 6C9 FJ>N L DCAH8ADHANL >= DJGH C DGB 6C6<: B: CI DJG! DJ C8>A 6C9 DJG! ECD8L>DC GH / : 6AD86H869: 6CCI 6A ! <D6A>CID: M8J LK 6C9 H C DGA69: GE: GDCB 6C8: B: 6HGH 99>DCA6AN DJ G D6C9 D >G8IDGH6C9 DJ G DBE: CHLDC DB B>I: DK GH: DJG! :;;DGH6HE6GD, DJ G: DEA HGI: <N6C9 B: 6HGB: CI 68L>DCH

/ : 6G 8DB B>I: 9 ID8DCI>CJ: 9 IGCH6G C8N7NEJ 7A8ANH6GC< DJ GL DCA>D8: GEGH CI 6LDC 6C9 >C8AHDC GH AH6C9 6H>GLDC6A<D6AH=CJ <= DJ G GDN ' GEDG L: 7HE: 6C9 6CCI 6A>JH6>C67>AIN\*: EDG

JHC: HH, 6ACI 6C9 \*: L6C9 +NH: B H

' J C8J AJ G D, 8DCI>CJ DI H>B ECDK B: CI >CHE>GHJHID@: E: ME: GB: CI>C< <GL>C< 6C9 A6C<C< ' JG + 6C9 C7JH I6ACI 6C9 GL 6C9 HNH: B H69K6C8: DJGE: DEA HGI: <H7N6IIG8LDC< <GL>C< 6C9 GI6<C< I=: I6ACI L: C: 9 CIL 6C9 >CI=: ;JIG , D< I=: GI=: H 7JHC: HH6C9 I6ACI HNH: B HHGC<I=: C DJ G: B E AN: K6A: ECDH>DC 6C9 7J>A DJ G: B E AN G7G6C9 L=>A 9: AK GC< C L: ME: G: C8: HIDDJ G: B E AN: H6C9 GH AH;DGDJ C8JHDB: GH

' JG: GDCB 6C8: 6C9 : K AEB: CI ;DG GL I= ECD8: HH H9GK GH AH6C9 86G: G<GL I=: DGDJ G<A76AI: 6B H ( : GDCB 6C8: ;DG GL I= G<DCAHN9: EANDJ GHGI: <H>CID86H869: 9 <D6AH=CJ <= DJ I I=: DG<6C6LDC L=>A : K AEB: CI ;DG GL I= IGCHGI: HDJG7: A: H6C9 K6A: H>CID9: HG9 A69: G8DBE: I: C8>H, D< I=: GI=: H ECD8: HH HECDK9: 6 C69B 6E;DGI=: L6NL: LDC@9: AK GG H AH 6C9 7J>A =>E: GDCB>C< I: 6B H

99>DCA6AN L: 9: H>C DJ G, D6A\*: L 6GHECD>GB HID6IIG8I 6C9 GI6<CI6ACI: 9 8JGDJHE: DEA L>= 6 <GL I= B>C9HI 6C9 6 E6HDC;DG>CCK6LDC 8DA67DGLDC 6C9 8DCI>CJ DI H>B ECDK B: CI / : D,: GA69>C< ECD>GB HI=6I >CHE>G 6C9 GL 6C9 H E: GDGE: GDCB 6C8: 6G : FJ>A7A 6C9 ;DH: G6C>C8AHK 9>K GH 6C9 =: 6A>N<A76AL DCA>D8:

/ : 6AD>CK H>C DJGE: DEA 6I: K GNAK AI=CJ <= DJ G<GL I= 6C9 9: K AEB: CI: ME: G: C8: H, =: H : ME: G: C8: HG<C< ;CD B A69: GH>E A6C<C< 6C9 +>B B: GHDC ID=6C9HDC H>A7J>A>C>C: 68=D, DJGI=G: +E>AKGH <GL I= A6C 6C9 A69: GH>E DAA8L>K AN I=: H : ME: G: C8: H7J>A H>AH HG<I=: CE: GDCB 6C8: 6C9 EGE6G DJ G: B E AN: H;DC8=6AAC>C< DEEDG C>H

BEAN: ME G: C8: 6C9 DBBJC86LDC

' JGEGB>H ID:BEAN:H>H- DGNDJ DGJH DG<GLI= , D68=>K I=>HEGB>H DJGA69: GH6I 6AAK AID I=: DG<6C<6LDC 68L>K ANH: @::: 9768@>GB DJG: BEAN: H6C9 DI=: GH6@=>D9: GHIDHGC<I=: C<DJG8J AJG ' JG: BEAN: : ME G: C8: HCK NH 6G DC D I=: B6CNL6NHL: 68L>K ANHDA8>I>CEJI

' JG: BEAN: : ME G: C8: HCK N6EECD68= 8DCI<J: HIDB 6IJ G I=<DJ =< FJ 6G: GNIDI8=EDCIH6C9 A69: G688DI C67>AIN !CI=: ;DJ G= FJ 6G: GD DK G D DJG<A76AI: 6B 8DB EAI: 9 DJG7>6CJ 6A: J A8: CHHHCK N 9: AK GC<H: 69N<6CHC7DI= DK GA: C<6<: B: CI 6C9 >C>C8AHDC 6C9 7: AC>C< I=6I GHA: 9 >C=>HDG86AN=>=>6LDC<HD 6C9 GHE: 8L>K AN DCHH: CI L>=>EGDGN 6CH DJGGH AH8DCI<J: ID>C>DGB 7DI= B 6C6<: B: CI 6C9 DJG D6C9 D >G8IDHDC 6EECEG6I: 68L>DCH ID: C=6C8: DJG: BEAN: : ME G: C8:

AH7D@ 7@F A@H85HE

A=DI =< I=: H7H6CI>6AB 6TDGNDJ DJGGK CJ: >C L 6H:GB 8JHDB: GHI=: GI=6C<DK GB: CI6A: CI>H: 68= D DJG H<B: CIH=6H6<G: B: CIHG ALC< IDI=: H5A D EGDJ 8IHI D<DK GB: CI: CI>H H6 GH A L: 6G H7? 8I IDK6GDJ HH6IJ I: H 6C9 G<J A6L>DCHI=6I 6FEANID8DB E6C: H9DC< 7JHC HHL>=>DK GB: CIH6C9 <DK GB: CI DL C: 9: CI>H DG6 9>HJHDCD, GHGHG A6I: 9 ID<DK GB: CI 8DCI68L>C< GFJ>GB: CIH EA6H G:: GIDWI: B \*>H@ 68IDGHX

' 79G>FAIK" 3H7IE

/ : ;68: : M: CHK <DK GB: CI G<J A6L>DC7DI= L>=>C6C9 DJIH9: I=: - C>9 +I6I: HG ALC< IDI=: 9: K AEB: CI B6CJ; 68IJ G B6C@L>C< H5A 6C9 9>HG7J LDCD, DJGEODJ 8IHI D, IL 6G 6C9 HCK8: H, =: ;DAIL>C< H8L>DCH9: H6G7: 8: G6<CH<C>: 86CI G<J A6L>DCHI=6I L: 6G H7? 8I ID, =: H 6G CDI I=: DCANG<J A6L>DCHI=6I DJG7JHC HHBJH 8DB EANL>=> DG6 9: H8GFI>DCD, I=: GHGHG A6I: 9 IDI=: G<J A6L>DCHI=6I DJG7JHC HH6G H7? 8I ID EA6H G:: GIDWI: B \*>H@ 68IDGHX

- , I+ / 4 ->I+ "- / => 4 / 76:

% 6CNDJ DJGEODJ 8IHI C I=: 9K6C8: 9 : 6A=86G +DAIL>DCHH<B: CI 6G 8A6H>: 9 6HB: 9>86A9: K8: H6C9 6G H7? 8I ID GHG8L>DCHJ C9: G9DB: H>8 6C9 ;DG>C A6L H G A H G<J A6L>DCH H A G<J A6IDGN 8D9: H 8>CJ A6H 6C9 D9: GH>C8A9>C< 7JI CII AB>I: 9 ID I=: - + DD9 G< 6C9 DB: L8 8I I=: W X , =: GFJ>GHI=: H EGDJ 8IHI L=: CHDA>C I=: - C>: 9 +I6I: H ID7: H>: 6C9 : ; ; 8L>K ;DGI=: >G<I: C9: 9 JH H6C9 ID8DB EANL>=> I=: G<J A6L>DCH 69B>CH: G9 7NI=: - + DD9 6C9 G< 9B>CHG6LDC W X , =: G<J A6I: HI=: 9: H<C 9: K AEB: CI GH 6C8= EG 8AC 86A6C9 8AC 86AI: H<C> >CIODJ 8L>DC B 6CJ; 68IJ G 69K GHC< A67: AC< E68G<C< B 6C@L>C< 9>HG7J LDC >B EDG 6C9 : MEDG 6C9 G8D9 @: E<C< ;DG H8= EGDJ 8IHI

%: 9>86A9: K8: H86C7: B 6C@I: 9 DCAN; DGI=: >C9>86L>DCH; DGL=>8= I=: N6G 8A6G9 DG6EECK 9 ;I: G6 9: K8: =6HG8: >K 9 @ 8A6G6C8: ;DG6 HE: 8>8>C I: C9: 9 JH 6CN8=6C<: DGB D9>: 86L>DC I=6I H<C>: 86CIAN6::: 8IHI>H>H>: INDG: ;: 8L>K C HI H8= 6H6 H<C>: 86CI 8=6C<: >C I=: 9: H<C B 6I: G6AI B: I=D9 D B 6CJ; 68IJ G DG<I: C9: 9 JH B 6NGFJ>G 6 C L @ 8A6G6C8: 6C9 E6NB: CI D 6C JHG:::

% 6C@I 688: HH H5AH 6C9 B 6C@L>C< D B: 9>86A9: K8: H<C CDC - + 8DJ CIG: H6G H7? 8I ID; DG>C G<J A6IDNG FJ>GB: CIHI=6I K6CNL>9: AN; GB 8DI CIONID 8DI CION DG M6EA >C I=: JGE: 6C 8DCDB>8 G6 W X 6B: 9>86A9: K8: BJHB:: I I=: %: 9>86A : K8: H >G8L>K YH W% X HI C6A\*: FJ>GB: CIHDG; DGC L 9: K8: HEA8: 9 DCI=: B 6C@I 6; I: G% 6N I=: %: 9>86A : K8: H\*: <J A6L>DCH W% \* X : C GA+6:: IN6C9 ( : GDGB 6C8: \*: FJ>GB: CIH6HL: A6HDI=: GG FJ>GB: CIHHI DI I>C I=: % % \* 9: E: C9>C< DCI=: 9: K8: YHGH>8A6H : ;DG EA8>C< 6 B: 9>86A9: K8: DCI=: B 6C@I I=: B 6CJ; 68IJ G GB JH EG E6G 6 9: 8A6G6LDCD, 8DC, DGB >N 8: G>N< I=6I I=: 9: K8: 8DB EA>HL>=> I=: % % \* 6C9 BJHI=: C 6:: MI=: B 6C@, =: CIL>: 9 7D9NINE>86AN 6J 9>H6C9 : M6B>C HI=: 9: K8: YHI: 8=C86A9D8JB: CI6L>DC 6C9 I=: FJ 6AIN HNH: B ;DGI=: B 6CJ; 68IJ G 9: H<C 6C9 ;>C6ACHE: 8L>DCD I=: GAK6CI 9: K8: 7: ;DG>HI>C< 6 8: G>: 86I: DAIL>C< I=: >HI 6C8: D I=>H 8: G>: 86I: B 6CJ; 68IJ G GHB 6NEGE6G I=: 9: 8A6G6LDCD, 8DC, DGB >N 6C9 6:: MI=: B 6C@IDI=: 9: K8: H 8DK G9 7NI=>H 8: G>: 86I: +>B>AGGFJ>GB: CIH6EEAN>C I=: - # DG688: HIDI=: - # B 6C@I B 6CJ; 68IJ G GHB JH D7I6>C 6 - # : G>: 86I: 6C9 6:: M6 - # B 6C@IDI=: >GB: 9>86A9: K8: H DL: K GI=: YH B 6C@L>A7: 688: EI: 9>C I=: - # JCI>A"JAN

CNB: 9>86A9: K8: HL: B 6CJ; 68IJ G 6C9 9>HG7JI: 6G H7? 8I IDE: CK6HK 6C9 8DCI<J>C< G<J A6L>DC 7NI=: 6C9 8: G6< H6I: 6C9 8: G6<DI=: G8DB E6G7A ;DG>C 6JI I=DGI>H H6B: 9>86A9: K8: B 6CJ; 68IJ G G DJGB 6CJ; 68IJ GC<: 68>A> H6G H7? 8I ID>CH: 8L>DCDC 6 G L>C: 76HH7NI=: 6C9 DI=: G8DB E6G7A ;DG>C 6JI I=DGI>H6HL: A6H6J 9>H7NDJ GCDI>: 9 7D9N / : 6G GFJ>G9 ID69=: G IDI=: JGC I DD9 % 6CJ; 68IJ GC< ( G8L8: HG FJ>GB: CIH 6HHI; DI=: >C I=: ) J6AIN+NH: BH \*: <J A6L>DC 6HL: A6HDI=: G6EEA867A H6C9 6GHL=>8= GFJ>G B 6CJ; 68IJ G GH>C8A9>C< I=>G E6CNB 6CJ; 68IJ G GH ID; DAIL HGC<: CI 9: H<C I: H<C< 8DCI 6A9D8JB: CI6L>DC 6C9 DI=: GFJ 6AIN 6HI G6C8: EGB: 9J GH9J GC< 6AE=6H HD, I=: 9: H<C 6C9 B 6CJ; 68IJ GC< EGB: HH

/ : B J H 6AD8DBEANL X= <AD76AEDH B 6C@I H C K >A6C8: G <J A L DCH X C A 9>C< 69K GH : K C I GEDD C< G F J >G B : C H L =>8= G F J >G I =6 L : G K >L 6C9 GEDG I D I=: 6C9 D I=: C8DB E6G7A ;DG <C 6 J I=D G I> H6CN <X 9>: C I >C L =>8= D J GEDD J 8IHB 6N =6K 86J H 9 DG8DCI G7J I: 9 ID 6 9: 6I= DGH G D J H C T J C N / : B J H 6ADG E D G I 6CN <X 9>: C I >C L =>8= D J GEDD J 8I =6H B 6A J C8I D C: 9 > I=6 I B 6A J C8I D C L D J A A @AN 86J H DG8DCI G7J I: ID 6 9: 6I= DGH G D J H C T J C N > > L: G I D G 8J G

\$ 67: AC< 6C9 EGB D I D C 6A68I K I> H6G H 7?: 8I IDH G I D C N 7N I=: 6C9 D I=: C8DB E6G7A ;DG <C 6 J I=D G I> H6C9 >C 8: C 6<C 8>G J B H 6C8: H 7N I=: : 9: G A, G 9: D B B >H D C 6C9 D I=: C8DB E6G7A ;DG <C G <J A L DCH %: 9>86A9: K 8: H6EEDK 9 DG 8A6G 9 7N I=: ;DG <C G <J A L DCH D G I G C I> > 9 7D 9N B 6N C I 7: EGB D I: 9 ;D G I C 9 D 8 J B: C I: 9 J C 6EEDK 9 D G I C 8A 6G 9 J H H D I=: G L H @C D L C 6H V D; A 7: A X EGB D I D C , =: D I=: G + 6< C 8> H 6C9 D I=: C8DB E6G7A ;DG <C 6 J I=D G I> H 68I K A N: C, D 8: I=: A L H 6C9 G <J A L DCH E D =>7 > C< I=: EGB D I D C D, D; A 7: A J H H

0-: -)40+):- )?;

/ : 6G H 7?: 8I IDK 6G D J H=: 6A=86G G A L: 9 A L H G <J A L D C< ;G 9 6C9 67J H G H 6G= 6C9 9: K AEB: C I EGB <C 6C9 H 6A H 6C9 B 6C@I C< EGB I 8: H 6C9 I=: EGB 68N 6C9 H 8J G I N D, =: 6A= >C; DGB 6I D C !C E 6G 8J A G I=: - + : 9: G A C I># >8@68@+I 6J I: E D =>7 J H E: G H C H; G B @C L <C <A N 6C9 L >A J A N H D A 8 I C< D;: G C< G 8: >K C< D G E D K 9>C< G B J C G I D C >C A 9>C< 6C N @8@68@D G 7 G 7: 9>G 8I A N D G C 9>G 8I A N >C: M=6C< ;D G D I D >C 9 J 8: : >A: G I=: G;: G A D, 6C <C 9>K 9 J 6A D G I=: ;J C H >C< D G 6G G C<C< ;D G 6 <D D G H C K 8: ;D G L =>8= E 6N B: C I B 6N 7: B 69: >C L =D A D G C E 6G J C 9: G 6: : 9: G A=: 6A=86G E D C G B H 8= 6H %: 9>86G D G %: 9>86> E: G H C D G: C I N 9 D H C I C: 9 ID=6K 68J 6A C D L A 9< D I=: H 6J I: D G H E: 8>8>C I: C I D K D A I: > > C D 9: G I D=6K 8D B B >I: 9 6 K D A I D C +>B >A G A L H 6C9 G <J A L DCH 6E E A N >C B 6C N; D G <C 8D J C I G: H

, =: : 6A= !C H G C 8: (D G 67>A N 6C9 88D J C I 67>A N 8I D, W ! ( X E D =>7 J H @C L <C <A N 6C9 L >A J A N : M 8J I C< D G 6I: B E I C< I D: M 8J I: 6 H >: B: I D 9: ;G 9 6C N=: 6A=86G 7: C: ;>I E D C G B >C A 9>C< E G K 6I: E 6N D H D G : 6A H; N C< 8D C 8: 6A C< D G 8D K G C< J E 6 B 6I: G 6A; 68I D G B 6C< 6C N B 6I: G 6A N; 6A H : >8I >D J H D G; G 9 J A C I H 6I: B: C I >C 8D C 8I D C L >I=: 9: A K C N D, D G E 6N B: C I ;D G=: 6A=86G 7: C: ;>H >: B H D G H C K 8: H ! C 699>J D C ! ( 6H 6B: C 9: 9 7N I=: : 6A= !C; DGB 6I D C, : 8=C D A >N; D G 8D C B >8 6C9 A C 86A : 6A= 8I D, 6A D G H G 8I H I=: J H 6C9 9>8A H G D, E 6I: C I >9: C I> >7A =: 6A= >C; DGB 6I D C B 6C9 6I: H I=: 69D E I D C D, H 6C9 6G H G A L C< I D I=: E G K 68N 6C9 H 8J G I N D, E 6I: C I >9: C I> >7A =: 6A= >C; DGB 6I D C 6C9 G F J >G H I=: G E D C <C< D, 8: C 6<C H 8J G I N 7G 68=: H L >: G H E: 8I IDH 8= >C; DGB 6I D C +>B >A G I D I=: - + : 9: G A C I># >8@68@+I 6J I: 6 E: G H C D G: C I N 9 D H C I C: 9 ID=6K 68J 6A C D L A 9< D I=: =: 6A=86G ;G 9 H 6J I: >B E A B: C I: 9 J C 9: G ! ( D G H E: 8>8>C I: C I D K D A I: > > C D 9: G I D=6K 8D B B >I: 9 6 K D A I D C +>B >A G A L H 6C9 G <J A L DCH 6E E A N >C B 6C N; D G <C 8D J C I G: H

, =: 6A H A >B H 8I >B E D H A 67>A N D C 6C N E: G H C D G: C I N I=6I 6B D C< D I=: G I=>C <H @C L <C <A N E G H C I H D G 86J H H I D 7: E G H C I: 9 6; 6A H D G; G 9 J A C I 8A >B ; D G E 6N B: C I 7N 6: : 9: G A=: 6A=86G E D C G B @C L <C <A N B 6@H J H H D G 86J H H I D 7: B 69: D G J H 9 6; 6A H G 8D 9 D G H 6I: B: C I B 6I: G 6A I D 6; 6A H D G; G 9 J A C I 8A >B D G @C L <C <A N B 6@H 6; 6A H H 6I: B: C I I D 6K D 9 9: 8G 6H D G 8D C 8: 6A 6C D 7A <6I D C I D E 6N B D C N I D I=: - + : : 9: G A >D K G B: C I , =: F J >I 6B E D K H D C H D I=: 6A H A >B H 8I 6A D L 6 E G K 6I: >C 9>K 9 J 6A I D 7G C< 68I D C H D C 7: =6A D I=: : 9: G A >D K G B: C I 6A <C< I=6I I=: 9: : : C 96C I =6H H 7B >I: 9 6; 6A H 8A >B I D I=: : 9: G A >D K G B: C I 6C9 I D H 6G >C 6C N B D C I 6N G 8D K C N ! C 699>J D C I=: <D K G B: C I B 6N 6H G I=6I 6 8A >B >C A 9>C< >: B H 6C9 H C K 8: H G H A <C< ;G B 6 K D A I D C D I=: - + : 9: G A C I># >8@68@+I 6J I: 8D C H J I: H 6; 6A H D G ;G 9 J A C I 8A >B ; D G E J G E D H D I=: 8>K A 6A H A >B H 8I +>B >A G A L H 6C9 G <J A L DCH 6E E A N >C B 6C N; D G <C 8D J C I G: H

: 9: G A 8D C H B: G E D I: 8I D C 6C9 J C; 6>8D B E: I >D C A L H 7G 69 A N G <J A L: B 6C@I E A 8: 68I K I> H 6C9 68I K I> H I=6I E D I: C I 6A N =6C 8D C H B: G H C 6A <D J H: + H 6I: A L H 6C9 G <J A L DCH H 8= 6H H 6I: 6C I>@8@68@6C9; 6A H 8A >B H A L H 6A D B 6N 6E E A N I D D I G 7J H C: H E G 8I 8: H >C A 9>C< 7J I C I A B >: 9 ID G H 6G= 9 H G 7J I D C H 6A H 6C9 B 6C@I C< 6G G C< B: C I H 6C9 8A >B H >K D A C<=: 6A=86G >: B H D G H C K 8: H G >B 7J G H 9 7N 6C N I=>9 E 6G N E 6N D G >C A 9>C< E G K 6I: >C H G H J C I=: G I=: G 6G H 6I: A L H I=6I G F J >G B: 9>86A9: K 8: B 6C I; 68J G G H I D 8D B E A N L X= I=: K D A C I 6N 8D B E A 6C 8: <J 9: A C: H 6C9 I=: G A K 6C I 8D B E A 6C 8: <J 9>6C 8: EGB J A 6I: 9 7N I=: - + : : 9: G A >D K G B: C I D G I=: G L H G H G 8I E 6N B: C I H I=6I B 6N 7: B 69: ID =: 6A=86G E D K 9: H 6C9 D I=: G E D I: C I 6A G;: G A H D I 8: H H 6I: A L H 6C9 G <J A L DCH I=6I G F J >G B 6C I; 68J G G H I D; A G E D G H G A L C< I D E G 8<C< 6C9 B 6C@I C< >C; DGB 6I D C L =>8= G F J >G H I G 8@C< < >I H 6C9 D I=: G G B J C G I D C 6C9 >: B H D, K 6A: E D K 9: 9 ID=: 6A=86G E D; H H D C 6A H 6C9: C I>: H H 6I: 6C9 A 86A A L H G F J >C< I=: G <H G I D C D, H 6A H G E G H C I 6I K H 6C9 H 6I: A L H <D K G C< I=: E G K 68N 6C9 H 8J G I N D, =: 6A= >C; DGB 6I D C >C 8: C 6<C 8>G J B H 6C8: H B 6C N D, L =>8= 9>;: G; G B: 68= D I=: G C H <C>: 86C I L 6N H 6C9 D I: C 6G C I E G: B E I: 9 7N ! ( +>B >A G A L H 6C9 G <J A L DCH 6E E A N >C B 6C N C D C - + 8D J C I G: H

6d : I\*:A)6, 6d 7: =8>76 )?;

>K C I=: >C I: G 6I D C 6A H 8E: D, D E: G I D C L: 6G H 7?: 8I IDK 6G D J H: + 6C9 C D C - + A L H D I A L <C 7G 7: H @8@68 G H E 6N D; H 6C9 D I=: G B E D E: G E 6N B: C I H !C E 6G 8J A G I=: - + D G <C D G E I ( G 8I 8: H 8I W ( X I=: - # G 7: C N 8I 6C9 D I=: G H B >A G A L H C D I=: G 7J G H >8I DCH E D =>7 > 8D B E 6C: H I=: >D; >8: H 6C9 : B E A N : H 6C9 I=: >C I: G B: 9>6G: H; G B B 6C@C >B E D E: G E 6N B: C I H I D E J 7A 8 D; >8>6A H I D >C; A: C 8: I=D H D; >8>6A H D G H 8J G 6C >B E D E: G 69 K 6I C<: >C D 9: G I D D 7I 6<C D G G I 6<C 7J H C: H H !C I=: E 6H H K G A N 6G H I=: G =6H 7: : C 6 H 7H 6C I 6A C 8G 6H >C I=: : C, D 8: B: C I D I=: H <A 76A 6C I>7G 7: C N 6C9 6C I>8D G E I D C A L H ' J G D E: G I D C H I=C I <=D J I I=: L D G >C A 9>C< >C 9: K A E C< 8D J C I G: H L X= : >: >C I: C 9 G H D H



8DGGELDC 6C9 >C: G8IDCHL >= >C9>K9J6AHL=D6G 8DCH9: G9 EJ7A8 D;>8>6AU C9: GI=: H A6L H H 8= 6H=: 6A=86G  
EQD: HHDC6AHC8DI CIG: HL >= H6I: C C=: 6A=86G HNH: B H: MEDH JHIDI=: GH@D, KDA6DC< I=: H A6L H. >DA6IDCHD, I=: H  
A6L HDG: K C 6AA<6IDCHD, KDA6IDCHD, I=: H A6L H8DI A EDH GEJ I6IDC6AGH H 7?: 8I JHID>CK H>6IDCH6C9 G A6I: 9  
A6I>6IDC 86J H 9>HJ ELDCHIDDI G7J HC: HH 6C9 G H A>C B DC: I6CN;>C: H6C9 96B 6<: H6C9 DI=: GH6C8IDCH

) > ! : > > + A ) 6, # - + =: I A ) ? :

H6 <A76ADG>6C6IDC L: 6G H 7?: 8I ID96I6 EGK68N6C9 H 8J GIN A6L H G<J A6IDCH 6C9 8J HDB: G>B EDH 9 8DCIDAH<C  
CJB: GDI H7J GH>8IDCH6H6 G H A D, =6K< 688: HHID6C9 EGB: HHC< 8DC;>9: C>6AE: GDC6A 6C9 DGH CHH>K 96I6 >CI=: 8DI GH  
D, DI G7J HC: HH

6I6 EGK68N6C9 H 8J GIN A6L H6G GE9AN: KDKC< !CE6G8J AG 6 7G69 EGK68N A6L >C 6A>DC6 I=: 6A>DC6 DCH B: G  
( GK68N 8I W ( X 86B: >CD::;>8I >C"6CI 6CN , =: ( =6HDB: D, I=: H6B: ;: 6IJ GH6HI=: (\* 9>HJ HH 9  
7: A6L 6C9 =6H6AG 69NEGB EI: 9 H K GADI=: GH6I: HID8DCH9: GHB>AGA<H6IDC , =: ( =6H6AG 69N7:: C 6B: C9: 9  
H K GAD B: H >C8A9>C< I=GD <= 6 &DK B 7: G 76A6I >C>6I>K 86A9 I=: 6A>DC6 ( GK68N\* >=IH 8I W (\* X L=>8=  
7: 86B: ;::;>8I>K >C"6CI 6CN

8GHI=: JGE: 6C- CDC I=: :C GA 6I6 ( GE: 8IDC\*: <J A6IDC W (\* X >BEDH HHG8I GFJ>GB: CHC=DL L: 8DA8I  
IGCHB> EGB: HH 6C9 GI6>CE: GDC6A96I6 >C8A9>C< 6B DC< DI=: GI=>C>H >C8: C6>C8>CJ B H6C8: H6 GFJ>GB: CI ;DGEGB EI  
CI>:>86IDC D, 96I6 7G 68=: HIDH IE: CKHDN 6J I=DI>: H6C9 DGID96I6 H 7?: 8IH L >= I=: GH@D, H>C>: 86CI >C H: DGDC  
8DB EA6C8: 99>IDC6AN 6I: G6 "JAN 9: 8HDC: GB I=: DI G D, "JH8: D, I=: JGE: 6C- CDC JGE: 6C G<J AIDCH6G  
GFJ>GC< 699>IDC6AH>: <J 6CHID; 68>A6I: I=: IGCH: GD, E: GDC6A>C; DGB 6IDC: GB I=: JGE: 6C- CDC IDI=: - CI: 9 +I6I: H  
6C9 DI=: G8: C6>C 7J GH>8IDCH

+ : K GADI=: G8DI CIG: HH 8= 6H =>C6 \* JH6 6C9 GOA=6K E6H 9 6C9 DI=: G8DI CIG: H6G 8DCH9: GC< E6HC< A6L HI=6I  
B: 6C<C>JAN: ME6C9 I=: 8DB EA6C8: GFJ>GB: CH6GD C9 8DC;>9: C>6AE: GDC6A 6C9 DGH CHH>K 96I6 I=6I L: B 6N=6K 688: HH  
IDDGEGB: HH>CI=: 8DI GH D, DI G7J HC: HH !C =>C6 6C9 \* JH6 EGK68N6C9 H 8J GIN A6L HB 6NGFJ>G 6 8DEND, E: GDC6A96I6  
G A6I>C< ID8>O CHID7: B 6>CI6>C 9 DC A86AH CK GH6C9 >BEDH 699>IDC6A96I6 IGCH: GG H68IDCH GOAH>: > : GA9:  
( GE: QPD9: 69DH W ( X >C8G 6H H8DB EA6C8: GFJ>GB: CHG A6I: 9 IDEGK68N 96I6 EGB: 8IDC 6C9 >C; DGB 6IDCH 8J GIN  
>DG7J HC: HH HI=6I 6G A86I: 9 DG9D7J HC: HHL >=C GOA A=DI <= I=: \$ ( H=6G HHB >AGI>: HL >= I=: (\* >6AD  
8DCI6>CH6 CJB 7: GD, JCFJ: ;: 6IJ GH >C8A9>C< HE: 8>8 A<6A76H HCDI ;DI C9 >CI=: (\* I=6I 6A6L 6C DG>6C6IDC ID  
EGB: HHE: GDC6A96I6 6C9 GFJ>GB: CH; DI=: GA D, 6 96I6 EGB: 8IDC D;>8: G !CI=: H 8DI CIG: H6C9: AIL=: G I=: A6L H  
6EEA867A ID96I6 EGK68N6C9 H 8J GIN B 6NGFJ>G 8=6C<: HID7J HC: HHEG8I8: HDG699>IDC6A>CK HB: CI ;D8DB EA6C8:  
EJ EDH H

6>I: 765 -644 ) ? : ) 6, "- / => 476:

' JGE: GIDCH6C9 EGB: G: H6G H 7?: 8I ID A6L H6C9 G<J A6IDCHG A6I>C< ID: CKGCB: CI6AEB: 8IDC >C8A9>C< I=DH  
<DK>CC< 6G: B>HEDCH L 6I: C9>H=6G: H6C9 L 6H: B 6C<: B: CI 6C9 LDGEA8: =: 6A= 6C9 H6: IN DG6 9>HJ HEDC, I=:  
>CKGCB: CI6A6L H6C9 G<J A6IDCHI=6I DI GDE: GIDCH EGB 9 8IH 6C9 H CK8: H6G H 7?: 8I ID6C9 DI=: G: CKGCB: CI6A  
8DCI>C: C8>H EA6H G:: GID&DI: IDI=: 8DCH A96I: 9 ;>C6C8>6AH6I: B: CH>C8A9: 9 >CI=>H CCJ 6A\*: EDG DG6 9>HJ HEDC  
D, GHGAG A6I: 9 ID8DB EA6C8: L >=: CKGCB: CI6A6C9 =: 6A= 6C9 H6: IN A6L H6C9 GHGAG A6I: 9 IDE6H DG; JIJ G GA6H HD, DG  
>MEDH GHID =6G6C9 DI HH 7H6C8: H EA6H G:: GIDWI: B \*>H@ 68IDHX

G7:< 5 87:< 75 84) 6+

/ : 6G GFJ>G9 ID8DB EANL >= K6GDJ H- + : MEDG >BEDG 8DCID A6C9 : 8DCDB >8 H6C8IDCH A6L H H 8= 6H

S I=: !CI: G6IDC6A G;>8>C GBH\*: <J A6IDCH69B>CH: G9 7NI=: - + : E6GB: CI D, +I6I: >G8IDG: D, ;: CH  
, G9: DDCIDAL =8= 6B DC< DI=: GI=>C>H >BEDH A8: CH GFJ>GB: CHDCI=: : MEDG; GB I=: - CI: 9 +I6I: HD,  
9: ;: CH 6G8AH6C9 9: ;: CH H CK8: HAH: 9 DCI=: - CI: 9 +I6I: H%J C>DCH\$>H

S I=: MEDG 9B>CHG6IDC\*: <J A6IDCH69B>CH: G9 7NI=: - + : E6GB: CI D, DB B: G: JG6J D, !C9 JHGN6C9  
+: 8JGIN L=8= 6B DC< DI=: GI=>C>H >BEDH A8: CHC< GFJ>GB: CHDCI=: : MEDG >C 8DI CIGNIGCH: G 6C9 G : MEDG D,  
8: C6>C9J 6AJH <DDH I: 8=CD A>N 6C9 HD, IL 6G L=8= 6G >: B HI=6I=6K 7DI= 8DB B: G>6A6C9 B>A6CNDG  
EGB>: GIDC 6EEA86IDCH

S I=: G<J A6IDCH69B>CH: G9 7NI=: - + : E6GB: CI D, G6HGN' ;>8: D, DG>C HH IH DDCIDAL =8=>BEAB: CI  
>8DCDB >8 H6C8IDCH>BEDH 9 6<6>CH 9: H>C6I: 9 8DI CIG: H <DK>GB: CH 6C9 E: GDC H 76H 9 DC- CI: 9 +I6I: H; DG>C  
EDA8N6C9 C6IDC6AH 8JGIN 8DCH9: GIDCH 6C9

S I=: >BEDG G<J A6IDCH69B>CH: G9 7N- + JHDB H6C9 DG: G (GE: 8IDC

' I=: GC6L>DCH<DK GB: CIH=6K >B EAB: CI: 9 HB >AG: MEDG >B EDG 8DCIDA6C9: 8DCDB >8 H6C8L>DC G<J A6L>DCH L=>8= B 6N  
6;;: 8I DJ GDE: G6L>DCHG6CH68L>DCHH 7? 8I IDI=: >G7 GH9>8L>DCH DG6 9>HJ HEDC D, GHGAG AI: 9 ID: MEDG >B EDG 8DCIDA6C9  
>: 8DCDB >8 H6C8L>DCHAL H EA6H G;;: GIDWI: B \* >H@ 68IDGHX

@7D@3FA@>\$ B7DBFA@E

' J GEDD9J 8IH6C9 H CK8: H6G 6K6>A7A >CB 6C@ IHL DQAL >9: 6C9 DJ GEGC8>E6AB 6C@ IHDJ IH9: I=: - C\$: 9 +I6I: H6G >C J OE:  
6C9 H6 / : 6AD=6K DE: G6L>DCH6C9 I=: L DQAL 6C9 I=>H<: D<GE=>8 9>K GHN6ADL HJ HID9GL DCI=: H@AHD, 6  
L DQAL >9: L DQ@D8: ECK9: H<G 6I: GH67>AINIDJ GDE: G6L>DCH 6ADL HJ HID9GK : 8DCDB >HD, H6A ECK9: HGK CI:  
HG6B HI=6I B 6N=: AE D; HI: 8DCDB >8 IG C9 HI=6I 6G HE: 8>8 ID>C9>K9J 6A: 8DCDB >H 6C9 D;;: GHJ H6C DEEDGJ CAINID688: HI  
C L B 6C@ IH; DGEDD9J 8IH !C 699>JDC L: 7: A K I=6I DJ G; JIJ G <GL I= 9: E: C9H>CE6G DC DJ G67>AINID8DC>CI: 9: K AE>C<  
EDD9J 8IH6C9 H6AHB D9: AII=6I H 88: HJ ANI6G: I=>=< <GL I= B 6C@ IH

, =: B 6CC: GCL=>8= DJ GEDD9J 8IH6C9 H CK8: H6G HD9 DJ IH9: I=: - C\$: 9 +I6I: H9>;: GH7N7J HC: H6C9 7NG<DC %DH D, DJ G  
H6AH>CDC - + B 6C@ IH6G B 69: 7NDJ GH 7H9>6G: HAX86I: 9 DJ IH9: I=: - C\$: 9 +I6I: H I=DI <= L: 6ADH A9>G8IAN; GB I=:  
- C\$: 9 +I6I: H CIDCDC - + B 6C@ IHI=DI <= K6GDJ HGEH G C6L>K H6C9 9>HG7J IDGH6C9 >CHB: 86H H 9>G8IAN !C8DJ CIG: H  
L>= AL H6AHKDA B: H L: <: C GANH AN=DI <= GEGH C6L>K H6C9 9>HG7J IDGH

IB;>34> @AD 3FA@

/ : B 6C6>C6C>CI: GE IL: 7HI: 6I LLL ; DQK 8DB L=: G L: B 6@ 6K6>A7A ; G: D, 8=6G: DJ G6CCJ 6AGEDGHDC DDB #  
FJ 6G: GNGEDGHDC DDB ) 6C9 8J G6CJ GEDGHDC DDB # 6C9 6B: C9B: CIHIDI=DI GEDGH ;>A9 DG; JGH: 9 EIGH 6CI  
ID+: 8L>DC 6 DG 9 D, I=: M=6C<: 8I 6HHDC 6HG 6HDC67ANEG68L>867A 6; I: G; >AC< H 8= B 6I: G6AL >= DG; JGH>C<  
H 8= B 6I: G6AID I=: + ' JG>CI: GE IL: 7HI: 6C9 I=: >C; DDB 6L>DC 8DCI6>C: 9 >C DGAC@9; GB I=6I L: 7HI: 6G CII  
>C8DEEDGI: 9 7NG;;: GC8: >CIDI=>H DDB #

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( 7=; 07>4 +): -.: >4A+76; L -: 0- : L 3; ) 6, >6+: >J 6>4; , -; : >I\*-, \*->4? >7/- 0-: ? I 0 0- 6.7: 5 ) >76 6>4, -, ->4-? 0-: - 6  
>0I: 66=>4"-87:>76 7: 5 ) 6, 7 0-: , 7>+5-6>? - .H ? I 0 0- # \$ 0- : L 3; ) 6, >6+: >J 6>4; , -; : >I\*-, \*->4? ):-  
>07;- 0) <? - 0) > L -6>4L, ); 5 ) <=: I 4 \*=<): - 67<0- 764A: L 3; ) 6, >6+: >J 6>4; .) +6/ => => \*=>6-;; I: ) 47; =>\*2+<7  
/-6-:) 4: L 3; ) 6, >6+: >J 6>4; 0) <:..>+5 ) 6A 7 0-: +75 8) 6L; ;=>0 ) 5 ) : 3- <+76, 1>76; - +7675 1+>76, 1>76; /-7874L+ ) 4  
->6> >+0) 6/ -; 6 4? ) : -/ >4 >76; 7: ) +7>6>4/ :>4; .>4+< ) >76; 6 6<=: ; < ) <=: 7: L 5 ? ) ; 7: +76.4L+> 5 ) 27:  
0-) 40 +76+>6; 6) <=: 4, I; ) <=: 7: 7 0-: , L: =>8>76; 7: - @->+< , \*=>6-;; +76, 1>76; , , 1>76) 4: L 3; ) 6, >6+: >J 6>4; 67<  
+>=: -6>4A 367? 6 >7 => 7: 0) <? - +>=: -6>4A \*->4L > ):- I 5 ) <=: I 4) 475 ) A I 5 8) I: 7=> \*=>6-;; 6>4, 6/ 7=: -; =>4; 7.  
78-:) >76; 40>= L 1A ) 6, .6) 6>4) 4>76, 1>76

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' J G7J HC: HH>HB E68I: 9 7N<: C: GA 8DCDB >8 8DC9>J DCH 6C9 69K GH : 8DCDB >8 8DC9>J DCH6GHC< ; GB 6CNHAL : G<A76A  
>: 8DCDB >8 <GL I= G9J 8: 9 9: B 6C9 DG8DCH B: G8DC>9: C8: : C: G N B 6CJ ; 68IJ GC< DG8DB EDC: CI H EEA N8DCHG>CH6GHC<  
>GB I=: - @>C \* J H6 8DC; A8I DG ' . ! >C; 8L>DC GI: H6C9 GB: 9>6L>DC: ; ; DGH =>=< >C; A6L>DC GI: H6C9 I=:  
8DG HEDC9>C> >CI: GH GI: EDA8> H KD6L>AIN>C 8J G6C8N6C9 8G9>I B 6C@ IH 68IJ 6ADG6C>8>E6I: 9 9: ; 6J A DC HDK G>C9: 7I  
8=6C<: H>C <A76AIG9: EDA8> H J C B E A N B: CI 6C9 J C9: G B E A N B: CI GI: H G9J 8: 9 AK AHD, 86E>6A ME: C9>J GH 8=6C<: H>C  
<DK GB: CI ; >H6A6C9 B DC: I6C NEDA8> H <DK GB: CI 9: ; >8J G9J 8L>DC 6C9 7J 9<: I C: <D>6L>DC 9NC6B >8H H FJ: H G L>DC DI=: G  
6J H: GINB: 6H GH EDA>86A6C9 HD8>6A>CH67>AIN DI=: G<: DEDA>86A8DC; A8I H6C8L>DCH C6IJ GA9>H H: GH I: GEGH 6I 68GH 6C9  
DI=: G8=6AAC<: H6;;: 8I J H6C9 DJ G9>HG7J IDGH 8J HDB: GH 6C9 H EEA> GH >C8A9>C=>6K>C I=: ; ; ; 8I D

- S G9J 8>C: 9: B 6C9 ; DGDJ GEDD9J 8IH HD, IL 6G 6C9 H CK8: H AB>J C< I=: ; >C6C8>C< 6K6>A7A IDDJ G8J HDB: GH6C9  
H EEA> GH >C8G6HC< D9: C86C8: A6L>DCH 6C9 GH A>C< >C A C<: GH6AH8N8AH6C9 HAL : G69DEL>DC D, C L I: 8=CDAD>: H
- S >C8G6HC< I=: 9>;: >8J AN>C 8DAA8L>C< 688DJ CHG8: >K67A 6C9 I=: GH@D; M8: HH6C9 D7HAI: >CK CIDG: H
- S >C8G6HC< EG8: 8DB E: L>DC>C DJ GH CK 9 B 6C@ IH
- S H EEA>CI: GE L>DCH L=>8= 8DI A 9>HJ EI DJ G67>AINIDEDD9J 8: DJ GEDD9J 8IH
- S >C8G6HC< I=: GH@D, >B E6>GB: CI D, <DD>L>A6C9 DI=: GAC< AK 9 6HH IH 6C9 I=: GH@I=6I L: B 6N CII 7: 67A ID; J AN  
G8DK GI=: K6A: D, DI=: G6HH IHH 8= 6HG6A H6I: 6C9 I6M6HH IH
- S >C8G6HC< I=: >B E68I D, 8J G6C8NIG6CH6L>DC 6C9

S >C8G6HC<I=: GH@I=6I 8DI CI: E6C>: HIDDI G8DCI68IJ 6A6C6C<: B: CIHL >A7: 8DB: >CHDK CI DGI=: G>H J C67A ID  
;JA>AI=: >G8DCI68IJ 6AD7A<6I>DCHL=>8= >C699>JDC ID>C8G6HC<I=: GH@I9: CI>9 67DK 8DI A G H A>CEG:: GC8:  
68I>DCH6<6>CH JH

!C699>JDC 69K GH < C: G6A: 8DCDB >8 8DC9>J>DCHB 6NA69 ID>CH67>AIN>C- + 6C9 <A76A86E>A6A6C9 8G9>J B 6C@IH >C8A9>C<  
B 6C@I9>H>EIDCH AB>J: 9 AFJ >9>IN 6C9 >CI: GH G6I: KD6I>AIN !; L: 6G J C67A ID688: H86E>A6A6C9 8G9>J B 6C@IHDCI: G H  
I=6I 6G 688: EI67A IDJHDGDI GAC9: GH6G J C67A IDEGK9: ;>C6C8>C< >C688D9>6C8: L>I=: >G8DCI68IJ 6AD7A<6I>DCH L: B 6N  
CDI 7: 67A IDB 6@ 8: G6>C>CK HB: CHHDG68FJ >H>DCHDGJ AN: M8J I: DI G7J HC: HEEA>CH6C9 H6I: <>H J C=: G DG DI G  
H EEA>GH6C9 8JHDB: GH6G 6AD9: E C9: CI J EDCI=: 86E>A6A6C9 8G9>J B 6C@IH \$>B >6I>DCHDCI=: 67>AIND, 8JHDB: GH  
H EEA>GH DG;>C6C8>6A8DI CI: E6C>: HID688: H8G9>J 6I >CI: GH G6I: H6C9 DCI: G HI=6I 6G 688: EI67A IDI=: B 8DI A A69 ID  
>CHDK C8>HD, @NH EEA>GH6C9 8JHDB: GH AB>J DGEK K CI 8JHDB: GH;GB D7I6>C<C< 8G9>J ID;>C6C8: EI G=6H HD, DI G  
EODJ 8IH6C9 H C8>H: H 6C9 86J H 9: ANH>CI=: 9: AK GND, @NEODJ 8IH;GB H EEA>GH

!; <GLI=>CI=: <A76A 8DCDB NDG>C6CND, I=: B 6C@IHL: H C>K H6L H;DG6 H>C>;>86CI E GD9 >I=: G >HH>C>;>86CI  
9: I: GDG6I>DC>CI=: <A76A 8DCDB NDGH 8= B 6C@IH >I=: G >H>CH67>AIN>C<<A76A86E>A6A6C9 8G9>J B 6C@IH DG>;  
>B ECK B: CH>CI=: <A76A 8DCDB N9DCDI 7: C: >I=: B 6C@IHL: H C>K DI G7J HC: H6C9 ;>C6C8>6AH6I: B: CIHL DI A 7:  
69K GH AN6;;: 8I: 9

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\*,) # #&3' 3-/ , ( ##( )/, , & ( /\*)( -)&), & # -)/, - ) -/\*\*&), ,. # ' . ,#& ')\*) ( (-  
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/ : EJ G=6H B 6I: G6A8 8DB EDC: CIH 6C9: FJ>EB: CI ;GB I=>9 E6C>H;DGJ H >C DI GB 6CI ;68IJ GC< DE: G6I>DCH' J G C8DB:  
8DI A 7: 69K GH AN>B E68I: 9 >L: 6G J C67A ID69>J H DI GEJ G=6H H6C9 H EEA N8=6>C B 6C6<: B: CI IDG;A8I 6CNH EEA N8=6>C  
DCI G6CHEDG6I>DC9>H>EIDCHDC8=6C<: H>C 8JHDB: G9: B 6C9 6C9 B 6C@I;A8IJ 6I>DCH >C8A9>C<I=DIH 86J H 9 7NI=: ' . !  
E6C9: B >8 <: DEDAI>86A9>H>EIDCH >C8A9>C<I=: - G6C> \* JH6 8DC;A8I H K G L: 6I=: G: K CIH >C8G6H H>C9: B 6C9 DI IE68>C<  
H EEA N86E67>AI>H A67DG H>DG6<: H H 6HDC6AINDC8N8A86AIN J GC< 6 B 6C@I J EIJ GDCG<: C: G6A H EEA N8=6>C9>H>EIDCH  
H EEA>GH=6K : M: C9: 9 A69 I>B: H AB>J: 9 H EEA>H DG>C8G6H 9 EG8: H I; L: 86CDDI EJ G=6H H;;>8>CI EODJ 8IH6I  
8DB E: I>K EG8: H6C9 FJ 6AIN6C9 DC 6 I>B: AN: CDI <= 76HHIDB:: I9: B 6C9 ;DGI GEODJ 8IH L: B 6NCDI 7: 67A IDH6I>HN  
B 6C@I9: B 6C9 EODJ 8I H>EB: CHB 6N7: 9: AN 9 DI G8DHHB 6N>C8G6H DGL: B 6N7G68= DI G8DCI68IJ 6A8DB B>B: CH  
6C9 >C8J GA67>AI>H

DC>K GH AN >CD9: GIDH 8J G H EEA>H;DGI=: EODJ 8I>DCD, EODJ 8IH L: HDB: I>B: H: CI: G>CIDDC86C8: A7A EJ G=6H  
8DB B>B: CIHL>I=: K C9DCH L=>8= 8DI A>B E68I DI G67>AINID69>J H DI G>CK CIDNIDG;A8I 9: 8ACC>B 6C@I9: B 6C9 H !;  
9: B 6C9 ;DGI GEODJ 8IH>HAHI=6CL: : ME: 8I L: B 6N: ME: G: C8: 699>JDC6A: M8: H6C9 D7HAI: >CK CIDG>H6C9 7: ;D8: 9 ID  
>C8J G699>JDC6A8=6G: H6C9 DI GEOD>A67>AINB 6NH;;: G

!C699>JDC HDB: D, DI G7J HC: H H EIJ G=6H 8: G6>C>GFJ>GB: CIH;GB HDA DGAB>J: 9 HDI G: H EEA>GH;DGG 6HDCHD, FJ 6AIN  
6HI G6C8: 8DH::;: 8I>K C: HI 6K6>A7>AIN 8DCI68IJ 6AD7A<6I>DCHDGJ CFJ: C: HDI 9: H>C !; I=: H DGI=: GH EEA>GH: C8DI CI: G  
;>C6C8>6ADE: G6C< FJ 6AIN DGI=: G9>;>8J A>HDG> DI GG A6I>DCH>E L>I=: B 8=6C<: H >C8A9>C< 6H6 G H A D, 8DCI68IJ 6A  
9>HEI I: H L: B >X=I CDI 7: 67A IDFJ >8@AN: H67AH> DG FJ 6A>NGE A8: B: CI HDI G: HD, H EEA N , =: H EEA N8=6>CH;DGI G  
7J HC: H H8DI A 6AD7: 9>H>EI: 9 7NH EEA>C86E68>IN8DCHG>CIH DE: G6I>DC6ADGFJ 6AIN>H: H 76C@E I8NDG: M>C< D, I=:  
7J HC: H;DGI=: GG 6HDCH 9: 8G6H 9 6K6>A7>AIND, @NGL B 6I: G6A HDG8DB B D9>H 6C9: M: G6A: K CIH H 8= 6HC6IJ G6A  
9>H6H: GH H K G L: 6I=: G: K CIH I=6I 6G D8J G6< B DG ;GFJ: CI ANDGL>I=: B DG >CI: CH::;: 8IH6H6 G H A D, <A76A8AB 6I:  
8=6C<: E6C9: B >8 =: 6A> >H: H L 6GI: G6GH 68I>DCH <DK GB: CI 6A68I>DCH 6C9 A>H6I>K DGG<J AIDON8=6C<: H 6B DC<  
DI=: GH CND, I=: H ;68IDH8DI A G H A>CEODJ 8I>DC>CI: G EIDCH 9: ANH: M: C9: 9 A69 I>B: H 6C9 >C::>8>C8>H

: 86J H L: 86CDDI 6A 6NH>B B: 9>6I: AN696EI DI GEODJ 8I>DC 86E68>IN6C9 G AI: 9 8DH HG 8IJ GHID8=6C<C< B 6C@I  
8DC9>J>DCH DI GB 6CI ;68IJ GC< 86E68>INB 6N6I I>B: H: M8: : 9 DG;6AH>DG I, DI GEODJ 8I>DC GFJ>GB: CIH CNDG6AD, I=: H  
EODJ AB H8DI A G H A>CI=: A>HID, 8JHDB: GH ECK9: 6C DEEDGJ C>N;DG8DB E: I>C< EODJ 8IHID<6>C B 6C@I 688: EI6C8: 6C9  
DI=: G>H 69K GH AN6;;: 8I DI GEOD>A67>AIN

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H9>HJ H9 >CI=: H 8I>DC: CI A9 W J HC: H H% 6I: G6AIXDI GB 6CI ;68IJ GC< 6C9 DI=: GDE: G6I>DCH: B EADN 6 L>9: K6G: IND,  
8DB EDC: CIH G6I B 6I: G6A8 6C9 DI=: G8DB B D9>H ( G8: H;DG6C9 6K6>A7>AIND, I=: H 8DB EDC: CIH G6I B 6I: G6A8 6C9 DI=: G  
8DB B D9>H>H=6K ;A8IJ 6I: 9 H>C>;>86CI AN>CI=: E6H !CE6C8>J A6GI=: L>9: HEG 69 H EEA N8=6>C8=6AC<: H9J: ID A67DG G6I  
B 6I: G6A 6C9 8DB EDC CI H>DG6<: H 6HL: A6HL>9: HEG 69 AD>H8H>H: H 6;;: 8I: 9 B J AEA >C9J HG: H G6H 9 B 6I: G6A 6C9  
H>EEC< 8DHH AB>J: 9 I=: FJ 6CI>H6K6>A7A 6C9: M: C9: 9 I=: A69 I>B: GFJ>G9 ;DGH EEA>H6C9 9: AK G: H CNH H6C9 9

×CI: GJELDC×CI=: HEEAND, I=: H ×: B H×C8A9×C< 6H6 G H A D, <: C G A H F E A N 8=6<C 8 D C H G C H ×C8 G 6 H C< 9: B 6 C 9 D I E 6 8<C< H F E A × H D G 8 D C I G 8 I J 6 A 9 ×E J I: H L ×=: H F E A × G H D G K: C 9 D G H 8 D I A 6 9 K G H A N 6;; 8 I D I G 7 J H C: H H ! C 6 9 9 ×D C 9 J: I D I=: ××=A N 8 D B E: I ×K: C 6 I J G D, I=: ×C 9 J H G: H I=6 I L: H C K: I=: 8 D H 8 D C I G C B: C I:: D G H D, D I G 8 J H D B: G H 6 C 9 I=: I: G B H D, 8: G 6<C 8 D C I G 8 I H L: 6 G E 6 G N I D ×, 8 D B B D 9 ×N D G 8 D B E D C: C I E G 8: H G H L: B 6 N 7: J C 6 7 A I D E 6 H H 6 A D C< 8 D H ×C8 G 6 H H I=Q J <= ××=: G E G 8: H !, L: 6 G J C 6 7 A I D, J A N G 8 D K G=××=: G 8 D B B D 9 ×N D G 8 D B E D C: C I 8 D H I=Q J <= E G 8: ×C8 G 6 H H D G D, H I I=: H ×C8 G 6 H H I=Q J <= 8 D H G 9 J 8 I D C H D G ×, I=: G ×H 6 I B: 9: A 6 N 7: I L:: C I=: ×C8 G 6 H ×C8 D H H 6 C 9 D I G 6 7 ×A I N I D G 8 D K G D G D, H I I=: H 8 D H H L: 8 D I A: M E: G: C 8: A L: G B 6 G<C H 6 C 9 E Q, ×6 7 ×A I N 6 C 9 D I G: ×C6 C 8 6 A H 6 I: B: C H 8 D I A 7: 6 9 K G H A N 6;; 8 I: 9

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D C I C I: 9 H E G 6 9 D, 6 C 9 ::, D G H I D B ×>6 I: ' . ! ×C8: G 6<C @ N 8 D I C I G: H ×C8 A 9 ×C< =C 6 =6 K 8 6 J H 9 J H D I G H F E A × G H 6 C 9 8 J H D B: C H I D 6 A C 8 D B B: G 6 A 6 8 I K I × H 6 C 9 J I A 6 I D C D, ; 6 8 A I × H 6 C 9 B 6 C I ; 6 8 I J G C< H E: H 6 9 K G H A N ×B E 6 8 I C< D I G 6 7 ×A I N I D B 6 C I ; 6 8 I J G H A I G C H E D I G 6 C 9 H C K 8: D I G E Q J 8 I H; G B I=: ×B E 6 8 I: 9 8 D I C I G: H ! C 6 9 9 ×D C G H 9 J 6 A B E 6 8 I I D <A 7 6 A H F E A N 8=6<C 6 C 9 I G C H E D I G 6 I D C; G B I=: E G D G G B: 9>6 I D C::, D G H 8 D C I C I: I D ×B E 6 8 I I=: H I G C< D, G I L B 6 I: G 6 A H 8 D B E D C: C H 6 C 9 I G C H E D I G 6 I D C; D G D I G E Q J 8 I H / =A I=: G B: 9>6 I D C::, D G H C G H E D C H I D I=: ' . ! E 6 C 9: B ×=6 K H 7 H 9: 9 ×C B D H 8 D I C I G: H ×C8 A 9 ×C I=: - C I: 9 +I 6 I: H L: 8 D C I C I: I D: M E: G: C 8: 6 9 K G H ×B E 6 8 I H I D I G 7 J H C: H H 6 H 6 G H A D, G H 9 J 6 A H F E A N 8=6<C 9 ×H J E L D C H ×, A I D C 6 C 9 G 9 J 8: 9 ×C E: G H C 8 D A 6 7 D G I D C::, D G H

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' J G<G L I=: 9: E: C 9 H C E 6 G D C I=: <G L I=: D I=: B 6 C @ I H L =8=L: H C K: 6 C 9 K H 7 ×A I N ×C I D D I G B 6 C @ I H H A B ×: 9 E 6 G 8 J A G N ; D G B 6 C @ I H C I D L =8=L: H A I =Q J <= 9 H G 7 J I D C ' J G F J 6 G: C N H 6 A H 6 C 9 E Q, ×H 9: E: C 9 H 7 H 6 C I 6 A N D C I=: K D A B: 6 C 9 I B ×C< D D 9: G H G 8: K 9 9 J G C< I=: ; ×H 6 A F J 6 G: G L =8= 6 G 9 ×; ×J A I D; D G 8 6 H C N 9: 8 A C: D G A L: G I=6 C: M E: 8 I: 9 <G L I=: × D I G H C K 9 B 6 C @ I H 8 D I A 9 ×B ×C H 9: B 6 C 9 ; D G D I G E Q J 8 I H 6 C 9 H C K 8: H L =8= 8 D I A 6 9 K G H A N 6;; 8 I D I G: ×C6 C 8 6 A H 6 I: B: C H : G 6<C D, D I G 7 J H C: H H H D E: G I: ×C 9 J H G: H I=6 I B 6 N: M E: G: C 8: E: G D 9 ×8 N 8 A 8 6 A 9 D L C I J G H ! C 6 9 9 ×D C ×C8: G 6<C D, D I G 7 J H C: H H H 9: B 6 C 9 9: E: C 9 H D C 8 J H D B: G H 8 6 E I 6 A F E: C 9 ×C 7 J 9<: I H 6 C 9 E Q J 8 I 6 C 9: 8 D C D B ×8 N 8 A H 8 6 C 6;; 8 I I=: H E: C 9 ×C 9: 8 H D C H D, I=: H: C I ×: H : B 6 C 9 ; D G D I G E Q J 8 I H 6 C 9 H C K 8: H H 6 A D H C H I K: I D 8=6 C<: H C 8 J H D B: G D 9: G E 6 I: G H L =8= B 6 N 7: 6;; 8 I: 9 7 N 6 C C I C 8: 9 E G 8: 8=6 C<: H 8=6 C<: H C ×C 8: C I K: E Q C G B H C L E Q J 8 I ×C I Q J 8 I D C H 6 C 9 8 J H D B: G ×C K: C I D N A K: A I C N D, I=: H: ; 6 8 I D H 8 D I A 6 9 K G H A N 6;; 8 I D I G<G L I=: 6 C 9 G H A H D, D E: G I D C H C 6 C N <K C E: G D 9

#. (-)' \* .# # ( ( # 1 , / ( & . ) ) ' \* . .# & 1 ' 3 2\* , # ( , - ' ( ( , - ' , %.- " , 0 ( # 1 ) ' \* . .# & 1 ' 3 , +/ # . ) , / \* , # - ) , / , \* ) / - ( - , 0 # -

% 6 C N D, D I G 7 J H C: H H H D E: G I: ×C 9 J H G: H I=6 I 6 G ×C I: C H A N 8 D B E: I ×K: 6 C 9 =6 K 7:: C H 7? 8 I I D 8 D C H A 9 6 I D C : 8 6 J H D, I=: G 6<: D I=: E Q J 8 I H 6 C 9 H C K 8: H L: H A 6 C 9 I=: K 6 G: I N D, B 6 C @ I H L: H C K: L: : C 8 D I C I: G 6 L 9: K 6 G: I N D, 8 D B E: I D G H E A 6 H H: I=: H 8 I D C: C I A 9 W J H C: H H D B E: I ×D C X; D G 6 9 9 ×D C 6 A 9: I 6 A H ! C D 9: G I D 8 D B E: I: ::; 8 I K: A N L: B J H G I 6 C A D C<H 6 C 9 ×C G A I D C H ×E H L ×= B 6 I D G 8 J H D B: G H 6 C 9 8 D C I C I: I D <G L D I G 7 J H C: H H 7 N: H 6 7 A H C< G A I D C H ×E H L ×= C L 8 J H D B: G H 8 D C I C I 6 A N 9: K A E C< C L D G: C=6 C 8: 9 E Q J 8 I H 6 C 9 H C K 8: H I D B 6 C I 6 C 6 C 9: M E 6 C 9 D I G 7 G 6 C 9 G 8 D C I D C 6 C 9 A 6 9: G H ×E E D H I D C ×C K 6 G D I H E Q J 8 I 6 C 9 H C K 8: 8 6 I: <D G: H 6 C 9 E: C I G I C< C L B 6 C @ I H ×C8 A 9 ×C< =××= <G L I=: B 6 C @ I H ' J G ; 6 A G I D 8 D B E: I: ::; 8 I K: A N 6 C 9 D G E G 8 C< E G H J G H G H A C< ; G B 8 D B E: I ×D C B 6 N 6 9 K G H A N ×B E 6 8 I D I G: ×C6 C 8 6 A H 6 I: B: C H 6 C 9 D I G: M E 6 C H E C ×C I D C: L B 6 C @ I H B 6 N G H A ×C<G 6 I: G I=6 C: M E: 8 I: 9 G H 6 A 6 7 ×A I × H 6 C 9: M E: C H H

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- S 6 8 8 J G I: A N 9: C I ×N 8 J H D B: G C: 9 H 6 C 9 E G:: G C 8: H 6 C 9 E G 9 8 I ; J I J G C: 9 H 6 C 9 E G:: G C 8: H
- S 6 A D 8 6 I: D I G G H 6 C 8=6 C 9 9: K A E B: C I ; J C 9 ×C I D E Q J 8 I H 6 C 9 H C K 8: H L ×= ××=: G <G L I=: E Q H E: 8 I H
- S 6 C I 8 E 6 I: 6 C 9 G H E D C 9 I D D I G 8 D B E: I D G H Y 9: K A E B: C I D, C L E Q J 8 I H 6 C 9 H C K 8: H 6 C 9 I: 8=C D A D <8 6 A C C D K 6 I D C H
- S 9 ×:: G C I 6 I: D I G D, ; G C<H ; G B D I G 8 D B E: I D G H Y D, ; G C<H 6 C 9 6 K D 9 8 D B B D 9 ×D 6 I D C
- S ×C D K 6 I: 6 C 9 9: K A E C L I: 8=C D A D < H 6 C 9 6 E E A 8 6 I D C H 6 C 9 6 8 F J ×G D G D 7 I 6 C G <=I H I D I =C 9 E 6 G N I: 8=C D A D <: H I=6 I B 6 N =6 K: K 6 A 6 7 A 6 E E A 8 6 I D C H C D I G H C K 9 B 6 C @ I H
- S D 7 I 6 C 6 9: F J 6 I: ×C I: A 8 I J 6 A E Q E: G N G <=I H L ×= G H E: 8 I I D @ N I: 8=C D A D < H 7:: D G D I G 8 D B E: I D G H 9 D



S H88: HJ AN8DB B: 6AO C L I: 8=CDAD> H<C 6 L B: ANB 6CC G EG8: I= B 8DB E: L<K AN 6C9 8DH :;; 8L<K AN B 6CJ; 68IJ G 6C9 9: AK GH :;; 8> C KDAB: HD, C L EDDJ 8IHD, 6EEDEG6I: FJ 6AINDCI B: 6C9

S H<B J A6I: 8J HDB: G9: B 6C9 ; DG6C9 8DCK<8: 8J HDB: GHID 69DEI C L I: 8=CDAD> H

!C 699>EDC > L: ; 6AID 688J G6I: AEG9>8I ; JIJ G 8J HDB: GC: 9H6C9 EG:; GC8: HDG; 6AIDEEDJ 8: K67A I: 8=CDAD> H L: B 6N >CK H=; 6K AN>C G H 6G= 6C9 9: K AEB: C I D, EDDJ 8IH6C9 H CK8: HI=6I 9DCI A 69 IDH<C>; 86CJ G K C I: L=8= L D I A 69K CH AN 6;; 8I D I GEDJ >67>AIN K C> L: H 88: HJ AN>CDK6I: 6C9 9: K AEB C L 6C9 : C=6C8: 9 EDDJ 8IH6C9 H CK8: H L: B 6N>C8J GH 7H6CJ 6A8DHH<9DC< HD 6C9 D I GEDJ >67>AIN B 6NH:;; G

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%J8= D, D I G, JIJ G H 88: HH6C9 D I G67>AINIDG 6AO I=: 7: C: ; A D, D I G68FJ>HE DCH6C9 : M8J I: D I GEDJ; DADH G6I: <N9: E C9H DC D I G67>AINID 6IIG68I 6C9 G I6<C @N: B EADN : H <8A9>C< D I G H C DGB 6C6<: B: C I !CE6C8J A G I=: B 6C@IH; DG=>C=ANH@AA9 : B EADN : H6C9 A69: GH<C I=: I: 8=CDAD>N6C9 =: 6A=86G >C9JHG: H6G : MGB: AN8DB E: L<K J G I=: G D G I=: L D G@D8: HEDG6<: >C I=: - C I: 9 +I6I: H6C9 >C D I=: G7J GH>8I DCH=6H<C8G 6H9 I=: DK 6A8DB E: L<K C H6C9 8DH D, G I6<C< 6C9 6IIG68I<C< FJ 6A>9 : B EADN : H' J G7G6C9 D I G8J A J G D I G67>AINIDECK9: 8DB E: L<K 8DB E: CH6I DC D I GAD86I DCHD, DE: G6I DCH 6C9 D I GGEJ I6I DC 6G >B EDI6C I D I G67>AINIDG 8G J 6C9 G I6<C @N: B EADN : H<C I=: H 8DB E: L<K B 6C@IH6C9 9JGC< E: GD9HD, L D G@D8: HEDG6<: H !; L: 6G C I 8DB E: L<K DGH 88: HJ A C D I GG8G J >C< :;; DGH > L: 86C C I 6IIG68I DG G I6<C @N: B EADN : H DG> L: 9DCI 69: FJ 6I: AN: CH G :;; 8L<K H 88: HEDCEA6CC< DGIGCH: GD @DLA9< : DGDJ G@N : B EADN : H D I G67>AINID9: AK G6C9 : M8J I: DC D I GDE: G I D C 6A9: K AEB: C I DGEDJ; DADH G6I: <> HL D I A 7: 69K CH AN 6;; 8I: 9

-#(## ( . #, / \* . # ( # ), , " # - / , #3 ) ) / , # ), ' . # ( . " ) & ! 3 - 3 . ' - ) / & 0 , - & . ) / , /-# --

/ : G ANDC>C, DGB 6I DCI: 8=CDAD>NHH: B H HDB: D, L=8= 6G B 6C6<: 9 7NI=>9 E6C> H6C9 HDB: D, L=8= 6G B 6C6<: 9 DC6 9: 8: C I GAO 9 >C9: E C9: C I 76HH7NDI GDE: G I C< 8DB E6C> H IDEED8: HH IG6CB J 6C9 HDG : A8I C C8 >C, DGB 6I DC >C8A9>C< H CH<K: 96I6 H 8= 6H8D<: 9: C I >6A7J HC: H<C, DGB 6I DC 6C9 E: GDC6AN>9: C I> >67A 96I6 G A I C< ID: B EADN : H 8J HDB: GH 6C9 DI=: G7J HC HIE6QC GH 6C9 IDB 6C6<: DGH EEDG 6 K6G: IND, 8GI>86A7J HC HIEED8: HH H6C9 68I<K>: H, =: H HNH: B HB 6N7: 96B 6<: 9 9>HJ EI: 9 688: HI 9 DGH J I 9DL C9J: ID 6IIG68I 7N8DB EI: G=68@CH C6I DC H6I: H 8N7: G8GB >C6A I 8DB EI: G K G H H: GGDGDB 6A: 6H6C8: 7N: B EADN : DG, DGB: G B EADN : H EDL: GD I6< H =69L 6G ; 6A G H I: A8DB B J C86I DC DGJ IAIN ; 6A G H 86I6HCE=: H DGI=: GHB >AG: K CH 6C9 >C6CNH 8= 8<8J B H6C8: HDJ GHH: B G9J C96C8N6C9 DI=: G9>6H: GG8DK: GN EA6CC< B 6N7: >C: ;;; 8L<K DG<69: FJ 6I: !C 699>EDC H 8J GIN 7G68=: HD, D I GHH: B HDGA8@D, H: ;;; 8> C I 8DCI D A C D I G HNH: B H DGI=: HNH: B HD, D I G8J HDB: GH HEEA: GH DGI=: G7J HC: HIE6QC GH 8DI A GH A>C I=: B >HEEDEG6I DC 8=6C<: H 9: HG 8I DC DGJ C6J I=DGO 9 9>H A H G D, 8DC>9: C I >6A C; DGB 6I DC DGE: GDC6A96I6 7: AC<<C< ID J HDG I D I G B EADN : H E6QC GH 8J HDB: GH DGH EEA: GH \$>@ B 6CNB J A C6I DC6A8DGEDG I DCH D I G C; DGB 6I DC I: 8=CDAD>NHH: B H=6K 7: : CH 7? 8I ID8DB EI: GK G H H B 6A8>D I H8D9: H J C6J I=DGO 9 688: HH 6C9 DI=: G8N7: G6IIG68I 6C9 6A=DI <= 6HD, : 8: B 7: G H 8= 6IIG68I 6K C I =69 6 B 6I: G6A B E68I DC D I GDE: G I DCHDG; >C6C8>6AGH AH L: : ME: 8I ID7: H 7? 8I IDHB >AGC89: CH<C I=: ; JIJ G 6HH 8= 6IIG68I 7: 8DB: B DG HDE=>H 86I: 9 6C9 ; G FJ: C I 6CND, L=8= B 6N=6K 6 B 6I: G6A69K GH >B E68I DC D I G 7J HC: H8DCI C I >N DE: G I DCHDG; >C6C8>6AGH AH CND I=: 6IIG68I 7G68=: H DGI=: G9>HJ EI DCHD C9 6B 6<: 9: H 67: 9 67DK 6HL: A6H8DGG HEDC9>C< GB: 9>6I DC: :;; DGH 86C<C I: G I EI D I GDE: G I DCH 9: ANEDD J 8I DC 6C9 H>EB: CH GH A>C I=: ; I D, D I G6C9 D I G8J HDB: GH<C I: AA8J 6AEGE: GN 6C9 IG69: H 8G I H 96B 6<: 8J HDB: G6C9 7J HC: HIE6QC GG A I DCH>EH6C9 D I G GEJ I6I DC DGGH A>C9: ;;; 8L<K EDDJ 8IHDGH CK8: H A<6A8A>B H6C9 EED8: 9>C<H A67>AIN6C9 E: C6A: HJ C9: GEGK68N A6L H 6C9 >C8G 6H 9 8DHH; DGH 8J GIN 6C9 GB: 9>6I DC : 68=D, L=8= 8DI A 69K CH AN 6;; 8I D I G7J HC: HH6C9 ; >C6C8>6AH6I: B: CH

.- ( / ( (.## . /- ), # +/ . # & - / , I #", - \* .. ) ) / , \* ) / - # & # ! - ) . I , ), - , 0# - ) / & 0 , - & . ) / , /-# -- , \* / . # ( ( # ( # & . . ' ( . -

%6CJ; 68IJ GC< D9: H<C9: ; 8IH>B E68DC< H6; IN 8N7: GH 8J GIN DGFJ 6AIN>HH: H DGI=: E G: E I DC D, H 8= >HH: H ; DGJ G EDDJ 8IH6C9 H CK8: H86C A69 IDE: GDC6A C I GN 9: 6I= EGE: GN 96B 6<: 96I6 AHH DGI=: G96B 6<: H, =: H : K CH8DI A A69 IDG 86AHDGH6; INDGI=: GEJ 7A8 6AGH GH A>CEDJ 8I DGH CK8: 9DL C I B: DGI=: I: B EDG6NDGE: GB 6C C I GB DK6AD, 6 EDDJ 8I DGH CK8: ; GB I=: B 6C@I 6C9 GH A>CEDJ 8I A67>AINDGHB >AG8A>B H7: >C< 7C I <= I 6<6<CH J H \*: 86AH 9DL C I B: GB DK6AI 6C9 EDDJ 8I A67>AIN6C9 HB >AG8A>B H G<69AHD, I=: >GK6A9>INDGJ A B 6I: D I 8DB: 86C GH A>C H<C>; 86C I 8DHH 6HL: A6HC <6I<K EJ 7A8>IN6C9 96B 6<: ID D I GGEJ I6I DC I=6I 8DI A G9J 8: 9: B 6C9 ; DGJ GEDJ 8IH6C9 H CK8: H

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: G6<C D, D I G7J HC: HH HH A6 H<C>; 86C I 6B D I C I D, I=: >GEDJ 8IHID @N9>HG7J IDGH6C9 DI=: G8=6CC AE6QC GHI=6I =6K K6A 67A G A I DCH>EHL>= 8J HDB: GH6C9 : C9 J H GH +DB: D, I=: H 9>HG7J IDGH6C9 DI=: GE6QC GH 6ADH A D I C8DB E: I DGH EDDJ 8IHD8DB E: I: L>= J H9>G 8IAN 6C9 > I=: N: 6KDG8DB E: L<C EDDJ 8IH; DG6CNG 6HDC I=: NB 6N; 6AID B 6C@I D I GEDJ 8IH :;; 8L<K AN 9K GH 8=6C<: H<C D I GG A I DCH>EHL>= I=: H 9>HG7J IDGH6C9 DI=: GE6QC GH DG69K GH 9: K AEB: CH<C I=: >G

;C6C8:6A8DC9>DC E: GDCB 6C8: DGEJ G=6HC< E6II: GH 8DJ A 69K: GH AN6;; 8I DJ G>C6C8:6AH6I: B: CIH, =: AK: AHD  
>CK: CIDNB 6<C6C: 9 7NDJ G>HG7J IDH6C9 DI=: C8=6CC: AE6QC: GH 6C9 8=6C<: H<CI=DIH AK: AI 86C 6ADH<C>;86CIAN>B E68I  
DI GG H AHD: DE: G6IDCH<C6CN<K C E: GD9 !C 699>DC I=: 8DCHDA96IDC D, 9>HG7J IDH6C9 8J HDB: GH<C8: D6<CD, I=:  
>C9JHG: H<CL=8=L: DE: G6I: 8DJ A 69K: GH AN>B E68I DI GED, >67>AN

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/ : =6K >B EAB: CI: 9 6C9 B 6N8DCI<CI: ID>B EAB: CI H<C>;86CI GHG 8IJ GC< 68IKI>; H68GHDJ G7J HC: HI HID 697H DJ G  
8DH HG 8IJ G, =: H H<C>;86CI GHG 8IJ GC< 68IKI>; H6HL: A6HDI GG<J AGDC<DC< 8DH G9J 8IDC 68IKI>; H >C8A9>C<>C  
8DCC: 8IDCL>=I=: >CI: <G6IDC D, 68FJ>G9 7J HC: HI H G9J 8: DI G6K6>A7A I6ACI 6HI IH 6C9 DI=: GG HDJ G: H6C9 8DJ A HDL  
>B ECK: B: CIH<C DI GEDJ 8IH6C9 H CK8: H 69K: GH AN6;; 8I DJ G67>AN ID G HEDC9 ID 8J HDB: GH 6C9 AB>I DI G67>AN ID>C8G 6H  
EDJ 8IDC FJ>8AN>; 9: B 6C9 ;DGDJ GEDJ 8IH<C8G 6H H !C 699>DC 9: ANH<C>B EAB: CI<C> E6CC: 9 GHG 8IJ GC< 68IKI>; HDG  
DI=: GEDJ 8IKIN>B ECK: B: CIH J C ME: 8I: 9 8DHH DG, >A G IDB: ;I I6G: I: 9 >B ECK: B: CIH B 6N9>B>C H I=: DE: G6IDC6ADG  
>C6C8:6A7: C: ;IHL: G6AO ;GB H 8= 68IDCH CND, I=: 8>GJ B H6C8: H9: H6G7: 9 67DK: 8DJ A 69K: GH AN>B E68I DI G7J HC: HI  
6C9 ;>C6C8:6AH6I: B: CIH

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/ : =6K K6GDI HCCD - + 8DA8IK: A7DG6G<C: B: CIH / : 6G H 7? 8I IDEI: CI 6AL DG@HDEE6<: H L DG@H8DI C8>A86B E6>CH  
6C9 DI=: G67DG9>EJI: I H 6CND, L=8= 8DJ A 69K: GH AN>B E68I DI GEDJ 8IKIN GH AHD: DE: G6IDCH 6C9 GEJI6IDC

I -/ , &--.) )/, #/#- -/\*& " # - #, #/ .#(- -3-. ' - ), # ), ' .#( . '()& !3-3-. ' - / .) .-.,)\*\*  
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' J G;68>AI> H H EEN8=6CH 9>HG7J IDCHNH: B H 6C9 >C; DGB 6IDCI: 8=CDAD>NHNH: B H6G H 7? 8I ID86I6HGE=8 ADH9J: ID  
>G ;ADD: 6CI=FJ6@ =J G686C: EJ 7A8 =: 6A= 8GHH L 6G I: GEGHB DGI=: GC6IJ GADGB 6C B 69: 9>H6H: GH >C8A9>C< I=DI  
86J H 9 7N8AB 6I: 8=6C<: 6C9 DI=: C8AB 6I: G6I: 9 86J H H !: 6CND, I=: H ;68>AI> H H EEN8=6CH DGHNH: B HL: G ID  
>ME: G: C8: 6 86I6HGE=8 ADH >I 8DJ A 9>HJ EI DI GDE: G6IDCH 9: ANEDJ 8IDC 6C9 H>EB: CIH GH A>C9: ;: 8IK: EDJ 8IHGD  
H CK8: H 96B 6<: 8J HDB: GG A6IDCH>EH6C9 DI GGEJI6IDC 6C9 GH A>CA<6A MEH G 6C9 AG: GE6GDGGEA8: B: CI  
>ME: CH H, =: I>G E6GN>CH G6C8: 8DK G<: I=6I L: B 6CI6<CL>AK6GN;GB LB: IDLB: >C7DI=INE: 6C9 6B DI CI 9: E C>C<  
DC 8DH 6K6>A7>AN 6C9 DI G9: 8>HDCG<6C9>C> GH@GI: CI DC 6C9 B 6N7: J C6K6>A7A DG>CH;;>8> CI IDECI: 8I J H6<6CH  
ADHH

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/ : DL C CI B: GDI HE6I: CIH IG9: B 6G@H 8DENG<=IH IG9: H 8G IH 6C9 DI=: G<CI: A8IJ 6AEDE: GN 6C9 A8: CH HID>CI: A8IJ 6A  
EDE: GN DL C 9 7NDI=: GH L=8=>C6<<G<6I: 6G >B EDG6CI ID DI G7J HC: HI, =: >CI: A8IJ 6AEDE: GNG<=IHI=6I L: D7I6<C  
=DL: K G B 6N CI 7: H;;>8> CIAN7G69 DGI=: G L>H B 6N CI ECK9: J H6 H<C>;86CI 8DB E: I>K: 69K6CI6<: 6C9 E6I: CIH B 6N  
CI 7: >HH: 9 ;DGE: C9>C> DG;J IJ G E6I: CI 6EEA86IDCHDL C 9 7NDGA8: CH 9 IDJ H !C 699>DC I=: H: EHI=6I L: 6C9 DI G  
A8: CHDH=6K I6@C IDB 6CI6<C 6C9 ECI: 8I DI G<CI: A8IJ 6AEDE: GN B 6N CI EG K CI I ;GB 7: >C<8=6AAC<: 9 >CK6A96I: 9  
8>GJ B K CI: 9 9: H<C 9 6CJ C9 DG7: 8DB >C< H 7? 8I ID8DB EJ ADGNA8: CH<C> E6C8J A6CN>C8DI CI G: HL=: G >CI: A8IJ 6A  
EDE: GNG<=I H6G CI =>=AN9: K ADE: 9 DGECI: 8I: 9 !CHDB: 8>GJ B H6C8: H: C, DG8: B: CI B 6N CI 7: 6K6>A7A IDJ H7: 86J H  
6C>C, GC<: G=6H6 9DB >C6CI >CI: A8IJ 6AEDE: GNEDH>DC DG;DGI=: G7J HC: HHG 6HCH DG8DI CI G: HB 6NG FJ>G 8DB EJ ADG  
A8: CH<C> D DI G<CI: A8IJ 6AEDE: GN / : 6ADG ANDC DC9>HADH G 6C9 CDC8B E: I>DC6<G: B: CIHL>=: B EADN: H  
8DCH A6CIH 6C9 DI=: GE6G: HI DECI: 8I >CE6G IG9: H 8G IH6C9 DI=: GEDEG: I6NG<=IH, =: G 86C7: CD6HI G6C8: I=6I I=: H  
6<G: B: CIHL>A69: FJ 6I: ANECI: 8I DI GIG9: H 8G IH6C9 DI=: GEDEG: I6NG<=IH6C9 L>ACI 7: 7G68=: 9 I=6I L: L>A=6K  
69: FJ 6I: GB: 9>H; DG6CN7G68= I=6I DI=: GHL>ACI >C9: E C9: CIAN9: K ADE H 7H6CI6AN: FJ >K6ACI EDEG: I6GN>C; DGB 6IDC  
DGI=6I I>G E6C> HL>ACI DI=: G L>H <6C688: HI DDJ GIG9: H 8G IHDGI=: GEDEG: I6NG<=IH' J G, >A G ID D7I6<C DG  
B 6CI6<C>CI: A8IJ 6AEDE: GNG<=IHI=6I 8DCK N8DB E: I>K: 69K6CI6<: 69: FJ 6I: ANECI: 8I DI G<CI: A8IJ 6AEDE: GNDG9: I: 8I DG  
EG K CI 8>GJ B K CI>DC DGJ C6J I=DDG 9 J H D, H 8= ECI: GN 6C9 I=: 8DH D: C, DG8>C> DI G<CI: A8IJ 6AEDE: GNG<=IH8DI A  
69K: GH AN>B E68I DI G8DB E: I>K: EDH>DC 6C9 ;>C6C8:6AH6I: B: CIH

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GB LB: IDLB: L: G8: K C D8: H;GB I>G E6G: H6AA<C>>CI: A8IJ 6AEDE: GN>C, GC<: B: CI DGB >H EDEG6IDC CN  
9>EJI: DGA>6IDC G<6C9>C>CI: A8IJ 6AEDE: GN 8DJ A 7: 8DHAN 6C9 LB: 8DCH B>C>9J: IDI=: 8DB EAMIND, B 6CND, DI G  
I: 8=CDAD>: H6C9 I=: J C8: G6CIND, >CI: A8IJ 6AEDE: GNAI>6IDC ' J G<CI: A8IJ 6AEDE: GNEDE; DADB 6N CI 7: J H ;J A<C  
6HI G<C> 6 8DI CI: G6B DG C<DI6I<C> 6 A8: CH >C G HEDCH ID 6 8A>B D, >C, GC<: B: CI DGB >H EDEG6IDC !C 699>DC 6H6

G H A D, H 8= 8A6B HD, >C, GC< B: C I DGB >H E E G E G 6 I D C L: 8 D I A A H D J G G< I H I D 8 G I 8 6 A I: 8= C D A D< N 7: J C 6 7 A I D A 8: C H  
8 G I 8 6 A I: 8= C D A D< N D G H A 8 G I 8 6 A E C D J 8 I H 6 C 9 H C K 8: H 7: G F J>G 9 I D E 6 N H 7 H 6 C I 6 A 9 6 B 6< H D G A 8: C H ;: H L >= G H E: 8 I I D  
I=: >C, GC<: 9 G<= I H D G 7: G F J>G 9 I D G 9: H<C D J G E C D J 8 I H 6 I H 7 H 6 C I 6 A 8 D H 6 C N D, L=>8= 8 D I A 6 9 K C H A N>B E 6 8 I D J G  
8 D B E I>K E D H I D C 6 C 9;>C 6 C 8>6 A H 6 I: B: C I H K C> L: H 8 8: H J A N 9: ;: C 9 6<6>C H 8 A 6 B H D, >C, GC<: B: C I D G  
B >H E E G E G 6 I D C L: B 6 N>C 8 J G H<C>;>8 6 C I 8 D H H 6 C 9 9>K G H D C D, B 6 C<: B: C I 6 I I: C I D C 6 C 9 G H D I G: H L=>8= 8 D I A 6 9 K C H A N  
6 ;: 8 I D J G;>C 6 C 8>6 A H 6 I: B: C I H

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/ : 6 G H 7 ? 8 I I D 6 K 6 G< I N D, A I>6 I D C 6 C 9 D I=: G A<6 A 6 C 9 G<J A I D G N E C 8: : 9>C>H<C 8 9: C I 6 A I D D J G 7 J H C: H H D G I=: 7 J H C: H H  
D E: G I D C H D, E G K D J H N I L C 9: C I>: H >C 8 A 9>C< 8 A 6 B H; D G 9 6 B 6<: H 6 G H C< D I I D, I=: J H D, E C D J 8 I H D G H C K 8: H 6 C 9 8 A 6 B H  
G A I>C< I D>C I: A 8 I J 6 A E C D E: C N B 6 I I: C H: B E A N B: C I B 6 I I: C H I 6 M B 6 I I: C H 8 D B B: C>8 A 9>E J I: H 9>E J I: H L >= D J G H E E A G D G  
K: C 9 D G H 8 D B E I>D C 6 C 9 H 6 A H 6 C 9 I G 9>C< E G 8 I 8: H: C K C C B: C I 6 A B 6 I I: C H E: G H C 6 A C 7 C N >C H G C 8: 8 D K G<: 6 C 9  
6 8 F J>H E D C D G 9>K H J J G G A I: 9 B 6 I I: C H 6 H L: A 6 H G<J A I D G N>C K: H<6 I D C H D G: C, D 8: B: C I / : B 6 N 6 A D 7: 8 D B: H 7 ? 8 I I D  
A 6 L H>H 6 H 6 G H A D, E 6 H D G, J I J G 6 8 F J>H E D C H D G 6 H 6 G H A D, A 6 7>A I> H G I 6 C 9: >C B D G G E G H C I 6 I D C H L 6 G G C I> H D G  
>C 9: B C I> H E C K 9: 9>C 8 D C C 8 I D C L >= 9>K H: 9 7 J H C: H I H, =, H A 6 L H>H B 6 N>C 8 A 9: 8 A 6 B H; D G 8 D B E: C H I D N 9 6 B 6<: H  
E J C I>K 6 C 9 8 D C H F J: C I 6 A 9 6 B 6<: H 6 C 9 D G C 7 C 8 I>K G A>; , =: 9: ;: C H D, I=: H A 6 L H>H B 6 N 9>K: G D I G B 6 C<: B: C I H  
6 I I: C I D C L: B 6 N>C 8 J G H<C>;>8 6 C I: M E: C H H<C 9: ;: C 9>C< I=: H A 6 L H>H L: B 6 N: M E: G C 8: 9>H J E I D C>C H E E A N D G H 6 A H 6 C 9  
L: B 6 N 7: G F J>G 9 I D E 6 N 9 6 B 6<: 6 L 6 G H D G H I I A B: C I H D G 7: 8 D B: H 7 ? 8 I I D: F J>6 7 A G B: 9>H I=6 I 8 D I A 6 9 K C H A N 6 ;: 8 I  
D J G D E: G I D C H 6 C 9;>C 6 C 8>6 A H 6 I: B: C I H % D G D K: G 6 C N>C H G C 8: D G C 9: B C>;>8 6 I D C G<= I H I=6 I L: B 6 N=6 K B 6 N 7:  
>C H ;: >8>C I D G I C 6 K 6>A 7 A I D E C I: 8 I J H 6<6>C H H 8= A D H H ! C 6 9 9>I D C 9: K A E B: C I H<C E C 8: : 9>C>H<C 6 C N<K C E: G D 9 B 6 N  
G F J>G J H I D 6 9 7 J H I=: A H 8 D C I C<: C 8 N: H B 6 I: H I=6 I L: =6 K G 8 D 9: 9>C D J G;>C 6 C 8>6 A H 6 I: B: C I H G 8 D 9: H B 6 I: H; D G  
A 6 7>A I> H D G 6 H I H I=6 I L: L: G E G K D J H N J C 6 7 A I D: H B 6 I: D G E 6 N 8 6 H H I I A B: C I H D G 7 9>B: C I H C N D, I=: H  
9: K A E B: C I H 8 D I A 6 9 K C H A N 6 ;: 8 I D J G;>C 6 C 8>6 A H 6 I: B: C I H<C 6 C N E 6 G 8 J A G E: G D 9 / : 8 6 C C I 6 H I G N D I I=6 I D J G A 6 7>A I> H  
>C 8 D C C 8 I D C L >= A I>6 I D C 6 C 9 D I=: G A<6 A 6 C 9 G<J A I D G N E C 8: : 9>C>H L>A C I: M 8: : 9 D J G: H B 6 I: H D G 6 9 K C H A N 6 ;: 8 I D J G  
>C 6 C 8>6 A H 6 I: B: C I H 6 C 9 G E J I 6 I D C

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! C 6 E E C M B 6 I: A N D, D J G H 5 A H L: G 9: G K 9: >C B 8 J H D B: G H D I H 9: I=: - C I: 9 + I 6 I: H ' J G E C 8 E 6 A B 6 C @ I H D I H 9:  
I=: - C I: 9 + I 6 I: H 6 G >C J C E: 6 C 9 H 6 ! C 6 9 9>I D C B 6 C N D, D J G B 6 C I> 6 8 I J G C< D E: G I D C H H E E A: C H 6 C 9: B E A N: H 6 G  
A 8 6 I: 9 D I H 9: I=: - C I: 9 + I 6 I: H +>C 8: D J G<C I I=: H G I: <N 9: E C 9 H<C E 6 G D C D J G 6 7>A I N I D: J C I: G E: C I G I: B 6 C @ I H D I H 9:  
I=: - C I: 9 + I 6 I: H 6 C 9>C 8 G 6 H I=: A 8 6 A 6 I D C D, D J G E C D J 8 I H 6 C 9 H C K 8: H L: : M E: 8 I I D 8 D C I C I: I D>C 8 G 6 H D J G H 5 A H 6 C 9  
E G H C 8: D I H 9: I=: - C I: 9 + I 6 I: H E 6 C 8 J A G N L>C=>=<C I I=: B 6 C @ I H H 8=6 H 6 H: C J C E: I=: % 9 9 A 6 H ; G 8 6 \$ 6 I C  
B: G 8 6 6 C 9 H 6 ' J G C I: C 6 I D C 6 A 7 J H C: H H >C 8 A 9>C< D J G 7 J H C H B C=>=<C I I=: B 6 C @ I H D I H 9: I=: - C I: 9 + I 6 I: H H  
H 7 ? 8 I I D G H I H I=6 I 6 G 8 J H D B 6 G A N: C 8 D I C I: G 9>C D C - + D E: G I D C H 6 H L: A 6 H<C 8 G 6 H 9 G H H 9 J: I D H<C>;>8 6 C I  
J C 8: C 6 C I> H G A I: 9 I D E D A I 8 6 A 6 C 9: 8 D C D B>8 8=6 C<: H >C 8 A 9>C<

S >C I: G H E I D C>C I=: I G C H E D I 6 I D C D, B 6 I: G 6 A I D J H 6 C 9;>C H: 9 <D 9 H I D D J G 8 J H D B: C H

S >B E 6 8 I D, < D E D A I 8 6 A 8 D C, A 8 I >C 8 A 9>C< I=: - C C C: \* J H 6 8 D C, A 8 I

S 9>;: G C 8: H<C I: C B H D, H 6 A >C 8 A 9>C< E 6 N B: C I I: C B H

S A 8 6 A E C D J 8 I E G ;: G C 8: H 6 C 9 E C D J 8 I G F J>G B: C I H

S 8=6 C<: H<C 6 8 D I C I N H D G G<D C Y H E D A I 8 6 A D G: 8 D C D B>8 8 D C 9>D C H>C 8 A 9>C< 8=6 C<: H<C G A I D C H>E L >= I=: - C I: 9  
+ I 6 I: H E 6 C 8 J A G N L >= G H E: 8 I I D =>C 6

S I G 9: E C I: 8 I D C B: 6 H G H H 6 C 8 I D C H>C 8 G 6 H 9 I G 9: 7 6 G: C H>B E D H I D C D, H<C>;>8 6 C I 6 G ;: H D C>B E D G H D G: M E D G H  
: B 7 6 G D H 6 C 9>B E D G I D G: M E D I G H G 8 I D C H 6 C 9 G F J>G B: C I H

S C L 8 D C 9>D C H I D 6 C 9 E D H 7 A G H G 8 I D C H D: : M H C<: G: I G 9: 6<G: B: C I H

S : E 9: B>8 H H 8=6 H I=: 8 D C C 6 K G H D I 7 G 6 @ I=6 I 6 9 K C H A N>B E 6 8 I I G K A E C D J 8 I D C D 9: B 6 C 9

S J C M E: 8 I: 9 8=6 C<: H<C A 6 L H D G G<J A I D G N G F J>G B: C I H >C 8 A 9>C< C <6 I>K 8=6 C<: H<C I 6 M A 6 L H C I=: - + 6 C 9>C I=:  
8 D I C I G: H<C L=>8= L: B 6 C I> 6 8 I J G D G H A D J G E C D J 8 I H

S I=: >B E 6 8 I D, I=: - # Y H: M I; >C B I=: - G M I D C I=: D B E 6 C N Y H 7 J H C: H I D E: G I D C H C I=: - # 6 C 9 J C E:  
>C 8 A 9>C< I=: ;: ;: 8 I H D, I=: , G 9: 6 C 9 D D E: G I D C <G: B: C I 7: I L: : C I=: J C E: 6 C- C D C I=: J C E: 6 C I D B>8  
C G N D B B J C I N 6 C 9 I=: - C I: 9 #>C<9 D B H<C 9 D C : 8: B 7: G

S A B>6 I D C H D C I L C G H>E 6 C 9 D C G E 6 I G 6 I D C D, : 6 C C<H 6 C 9 8 6 H

S I=: E D I: C I 6 A: D G C 6 I D C 6 A 6 I D C D, : C I: G E G H H

S AB>6L>DCHDC A<6AG<=IH6C9 DJ G67>AINID: C,D8: H 8= G<=IH  
S 9>;>8J AN>CH6;;>C< 6C9 B 6C6<C< L>9: HEG 69 DE: 6L>DCH  
S 9>;: GC< 67DGG<J 6L>DCH  
S 9>;>8J A> H<C>B EAB: C<C< G HG 8IJ GC< 68L>DCHDC 6 L>B: ANDG8DB EG=: CHK: 76HH 6C9  
S 9>;: GC< E6E: 8L>DCD, >C<: A8IJ 6AE6E: GN

CND, I=: H GH>H8DI A C<6L>K AN6;;: 8I DJ G;>C6C8>6AH6I: B: CH6C9 <6L I=

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DI GIDI6AH6AH;DGI=: N 6G !C 699>JDC L: =6K CJB: 6DI H;68>A> H<C =>C6 B 6CND, L=>8= H C< BJA>EA D6K: DE: 6L<C<  
8DB E6C> H<C B 6C< ;68IJ GC< 9>HG7J LDC E6DJ 8I 9: H<C 6C9 H A<C< <: C 6A6C9 69B>CH6L>K ;JC8L>DCH

, =: G 8DCI>CI: HID7: H<C>;>86CI J C8: 66<CN 67DI I=: ;JIJ G G 6L>DCH>E7: IL:: CI=: - C<: 9 +I6I: H6C9 =>C6 >C8A9>C< L>I= GHE: 8I IDI 69: EDA8> H IG 6I> H <DK: 6B: CI G<J 6L>DCH 6C9 I6G;>H !CE6C8J 6G I=: G 8DCI>CI: HID7: J C8: 66<CN 67DI I- + ;DG>C I 69: EDA8NL >= GHE: 8I ID =>C6 >C8A9>C< 6CN8=6C<: HIDI=: I 69: EDA8> HI=6I B 6N7: 69DEI: 9 7NI=: >9: C 69B>CH6L>DC CN>C8G 6H 9 I 69: 76G> GHGG HG8L>DCHDC <A76AIG69: : HE: 8>6ANNI 69: L>= =>C6 8DI A 69K GH AN>B E68I DI G7J HC: HH6C9 ;>C6C8>6AH6I: B: CH

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+6AH6C9 EJ 6=6H H<C 8J 6C8> HDI=: GI=6CI=: - + 9DA6G: MEDH J HID;A8IJ 6L>DCH>C;DG>C 8J 6C8> HG 6L>K IDI=: - + 9DA6G6C9 B 6N 69K GH AN6;;: 8I DJ G;>C6C8>6AH6I: B: CH' K 6A>HG C<I=: C<C< D, I=: - + 9DA6C9J GC< B DH D ;>86AN 6G =6H<C8G 6H 9 I=: :;;: 8L>K: EG8: D, DI GEDJ 8I HHDA>C- + 9DA6GH>CIDI=: C8DI CI G: H L=>8= B 6NGFJ>G J HIDAL: G DI GEG8: HDG69K GH AN6;;: 8I H6AHIDI=: : M: CI L: 9DCI>C8G 6H A86A8J 6C8NEG8: H : 8G 6H 9 HG C<I= D, I=: - + 9DA6G 8DI A 69K GH AN6;;: 8I I=: 8DH D, B 6I: G6AH E6DJ 8I H6C9 H C<8: HL: EJ 6=6H DK GH 6H +6AH6C9 : ME: CH HD, DI GCCD - + 7J HC: HH H6G 6ADI 6CH6I: 9 >CID- + 9DA6GH;DGG EDG<C< EJ 6EDH H6C9 I=: HG C<I=: C<C< DGL: 6@C<C< D, I=: - + 9DA6G 8DI A GH A>C J C, 6KD 67A I 6CH6L>DC::: 8IH !C 699>JDC 8: 66<C D, DI G7J HC: HH HI 6CH68I>C 6 8J 6C8NDI=: GI=6CI=: 7J HC: HH;JC8L>DC6A8J 6C8N 6C9 B DK: B: CH>C I=: I 6CH68L>DC 8J 6C8NG 6L>K IDI=: ;JC8L>DC6A8J 6C8N 8DI A 6ADGH A>C J C, 6KD 67A : M=6C<: 6I: :;;: 8IH / : 6AD;68: : M=6C<: 6I: GH@;6B DI G<C KB: CH>C H 7H9>6G: HDL C: 9 6C9 DE: 6I: 9 >C ;DG>C 8DI CI G: H6C9 7D6L>C<H9: CDB>6I: 9 >C;DG>C 8J 6C8> H

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' J G67>AINID<6L G K CI: H: 6C<C>H 6C9 86H;AL 6I DG67DK: DI G6CI>8E6I: 9 6I: H9: E: C9H<E6G J EDC DI G67>AINID >9: CI>N6C9 H 88: HHJ AN 68FJ>G 6C9 >C<: <6I: 7J HC: HH H6I 6EE6EG6I: EG8: H6C9 G 6AQ 6CI>8E6I: 9 HNC G>H / : B 6NCDI 7: 67A ID 8DCH B B 6I: 68FJ>H L>DCH6I 6I: H6CI>8E6I: 9 L=>8= 8DI A 69K GH AN>B E68I DI G<6L I= 6I: 6C9 DI GH D8@EG8: 8FJ>H L>DCHI=6I 6A>C L>= DI GEDJ;DADH 6I: <NB 6N7: 9>;>8J A ID>9: CI>N6C9 : M 8JI: ;DG6 CJB 7: GD, G 6HDC H>C8A9>C< =>C= K6A 6L>DCH 8DB E: L>DC 6B DC< E6E: 8L>K: 7J N GH I=: 6K6>67>AIND, 6;D9 67A ;JC9>C< >C I=: 86E>6AB 6C<@IH6C9 I=: C: : 9 ID H6L>HN 6EEA867A 8AHC< 8DC9>JDC H6C9 D7I6<C 6CHG H 6C9 DI=: GG<J AIDN 6EE6K 6AHC 688: EI 67A I: 6B H !C 699>JDC 8DB E: L>DC;DG 68FJ>H L>DCH B 6NGH A>C=>C=;GEJ 6=6H EG8: H =6C<: H<C 688DI C<C< DG<J AIDN GGFJ>GB: CH DG >CH67>AIN>C I=: 8G 9>A B 6C<@IH 8DI A 6AD 69K GH AN>B E68I DI G67>AINID 8DCH B B 6I: 68FJ>H L>DCH

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HE6GD, DI G7J HC: HH 6I: <NL: 68FJ>G 7J HC: HH H6C9 : CI: GDI=: GH 6I: <8 G 6L>DCH>EH>C I=: D9>C6N 8DI GH H B: D, L=>8= B 6N7: B 6I: G6A EA 6H H: W% 6C6<: B: C>YH >8J H6C 6C9 C6ANHHI> >C6C8>6A DC9>JDC 6C9 \*: H AHD, ' E: 6L>DCH W% X ;DG 699>JDC 6A9: I6>A I, =: H 68FJ>H L>DCH 6C9 H 6I: <8 G 6L>DCH>EH>C KDA< 6 CJB 7: GD ;>C6C8>6A 688DI C<C< B 6C6<: G6ADE: 6L>DC 6A A<6A 8DB EA 6C8: 6C9 DI=: GG H 6C9 8=6A<C<: H>C8A9>C< I=: ;DAIL>C< 6CND, L=>8= 8DI A 69K GH AN6;;: 8I DJ G;>C6C8>6AH6I: B: CH

S 6CN 68FJ>G 9 7J HC: HH I: 8=CDAD>N H C<8: DGE6DJ 8I 8DI A J C9: GE: GDCB G 6L>K ID DI G: ME: 8I 6L>DCH 6C9 I=: EG8: I=6I L: E6>9 ;DG H DGCDI E: GDCB >C 688D9 6C8: L>= DI G6CI>8E6I: 9 L>B: I 67A

S L: B 6N>C8J GDG 6HH B: H<C>;>86CI 9: 7I>C 8DCC: 8L>DC L>= DI G68FJ>H L>DCH DG H 6I: <8 G 6L>DCH>EH

S 68FJ>H L>DCH DG H 6I: <8 G 6L>DCH>EH 8DI A 86J H DI G;>C6C8>6AGH AHID 9>;: G;6B DI GDL C DGI=: >C KB: CI 8DB B J C>NYH: ME: 8I 6L>DCH>C 6CN>K C E: GD> DGDK GI=: AD< I: 6B



S EG 8ADHC< 6C9 EDH 8ADHC< : 6CC<H8=6G: H8DJ A 69K CH AN>B E68I DE: G6C< GH AH<C 6CN<K CE: GD 6C9 I=: >B E68I B 6N7: H 7H6C6AAN9>;: G C I ; GDB E: GD9 IDE: GD9

S 68FJ>HEDCHDGHG6I: <8 G A6I>DCH>EH8DJ A 8G6I: 9: B 6C9HDC DJ GB 6C6<: B: C I DE: G6I>DC6AG HJ G: H 6C9 ;>C6C8>6A 6C9 >C I: G6A8DCI G6AHN: B HI=6I L: 6G J C67A ID: ;:: 8I>K AN 699GH

S L: 8DJ A : ME: G: C8: 9>;>8J AN>C>C I: <G6C< E: GHCC: A DE: G6I>DCH 6C9 ;>C6C8>6A6C9 DI=: G8DCI G6AH6C9 HN: B H6C9 GI6<C< @N: B EADN: H6C9 8J HDB: CH

S L: B 6N7: J C67A ID 68=>K 8DH H6K<HDGDI=: GHNC: G> H6C6I>8>E6I: 9 >C 8DCC: 8I>DCL >= 6C 68FJ>HEDCHDGHG6I: <8 G A6I>DCH>E

S L: B 6N6HH B: 7N68FJ>HEDCHDGHG6I: <8 G A6I>DCH>E J C@DL C A67>AI> H @DL C 8DCI>C<: C I A67>AI> HI=6I 7: 8DB: G6AO 9 @DL C A67>AI> HI=6I E6K <G6I: GI=6C 6C6I>8>E6I: 9 >C I: G6A8DCI G6A9: ;>8> C8> H DG: MEDH G IDG<J A6IDON H6C8I>DCHGH A<C< ; GDB I=: 68FJ>G 9 8DB E6CNH68I>K I> H6C9 I=: G6A6I>DCH 6CND I=: H A67>AI> HDG9: ;>8> C8> H B 6N>C8G6H DJ G: ME: CH H 69K CH AN6;;: 8I DJ G;>C6C8>6AEDH>DC DG86J H J HID; 6>AIDB:: I DJ GEJ 7A8 ;>C6C8>6A GED6C< D7A>6I>DCH

S >C 8DCC: 8I>DCL >= 68FJ>HEDCH L: B 6N: C I: G>CIDEH 8ADHC< ;>C6C8>6A6G6C<: B: CHH 8= 6HEJ G=6H EG8: 69J HB: CH: 6C DI I D7A>6I>DCH 6C9 >9: B C>86I>DC D7A>6I>DCH L=>8= B 6N=6K J CEG9>8I67A ;>C6C8>6AG H AH

S >C 8DCC: 8I>DCL >= 68FJ>HEDCH L: =6K G8D9: 9 H<C>86C I<DD9L>A6C9 DI=: G>C6C<7A 6HIHDC DJ G76A6C8: H=: I 6C9 >L: 6G C I 67A IDG6AO I=: K6A: D I=: H 6HHIHL: B 6N7: GFJ>G 9 ID>C8J G8=6G: HG A6C< IDI=: >B E6>G: C I D I=: H 6HHIHL 6C9

S L: B 6N=6K >C I: GHHI=6I 9>K G: ; GDB I=H D H G6I: <8 E6OC: GH6C9 L: B 6N C I 7: 67A ID9>G 8I I=: B 6C6<: B: C I 6C9 DE: G6I>DCHD I=: H G6I: <8 G A6I>DCH>E >C I=: B 6CC GL: 7: A K >HB DH 6EEGEG6I: : MEDH< J HID 699>D6A GH@

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: G6<C D I=: 68FJ>HEDCH 6<G: B: CH7NL=>8= L: =6K 68FJ>G 9 8DB E6C> HG FJ>G I=: ;DB: GDL C: GHID>9: B C>NJ H6<6CH 8: G6<C A67>AI> HG A6I: 9 IDI=: DE: G6I>DC D I=: 8DB E6CN7: ;DG L: 68FJ>G 9 >I !C B DH D I=: H 6<G: B: CH=DL: K G I=: A67>AIND I=: ;DB: GDL C: GH HAB >: 9 6C9 8: G6<C>DB: GDL C: GH B 6N7: J C67A IDB:: I I=: >G>9: B C>86I>DC G HEDCH7>AI> H / : 86C C I 6HH G ND I=6I I=: H >9: B C>86I>DC E6K HDCHL>AEC I: 8I J H; J ANDG6I 6AA 6C9 6H6 GH AL: B 6N; 68: J C ME: 8I: 9 A67>AI> HI=6I 69K CH AN6;;: 8I DJ G;>C6C8>6AH6I: B: CH

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/ : 8DCI>C I 6A6H HH I=: H G6I: <8 ;>I D DJ G: MH<C 7J HC: HH H6C9 B 6N9>K H DGDI=: G L>H 9>EDH D 7J HC: HH HI=6I 6G 9:: B: 9 C I ID: >I L>= DJ GHG6I: <8 E6C DG6G C I 68=>K C< I=: 9: HG 9 G I J C6DC>C K HB: C I DG: M6B EA >C L: HEA D; B DH D DJ G6I IDB 6I>DC 6C9 HE: 8>6ANE A6I; DB >C 6\*: K GH %DG H, GH IGCH68I>DCL >= AG !C J HG6A% DI>DC DGE 6C9 >C L: HEJ C D; DJ G; DB: G I>C J HG6A: 8=CDAD> HH <B: C I , =: H IGCH68I>DCHEDH GH H6C9 8=6A C<: HI=6I 8DJ A C <6I>K AN>B E68I DJ G7J HC: HH DG: M6B EA L=: CL: 9: 8>9: IDH A DGI=: G L>H 9>EDH D 67J HC: HH DG6H HH L: B 6N7: J C67A ID9DHDCH H6I>H68IDGNI: G HL >=C DJ G6C I>8>E6I: 9 I B: ; G B: DG6I 6AA 6C9 : K C 6; I: GG 68=>C< 69: ;>C I>K 6<G: B: C I IDH A D C9>EDH 67J HC: HH I=: H A>HINE>86AAN H 7? 8I IDH6I>H68I>DCL EG 8ADHC< 8DC9>DCHL=>8= B 6N C I 7: 8DB: H6I>H>9 !C 699>DCH 9>K H>J G HDGDI=: C9>EDHEDCH B 6N9>AI: DJ G: 6C<C>HE: GH>6G =6K DI=: G69K CH ;>C6C8>6A6C9 688DI C<C> >B E68IH6C9 9>HG68I B 6C6<: B: C I 6C9 9>HEI I: HB 6N6GH L>= 7J N GH !C 699>DCL L: =6K GI6<C 9 G HEDCH7>AIN ;DG6C9 DG=6K 6<G: 9 ID>9: B C>N7J N GH 6<6CH H B: @DL C 6C9 J C@DL C 8DCI>C<: C I A67>AI> HG A6I: 9 ID6 C I B 7: GD 7J HC: HH HL: =6K HD A D C9>EDH 9 , =: G H A I>DCL I=: H 8DCI>C<: C8> H=6H C I =69 6 B 6I: G6A: ;:: 8I DC DJ G;>C6C8>6A H6I: B: CH7J I L: 86C C I 7: 8: G6<C I=6I I=: H; 6K DG 7A E6I: G L>A8DCI>C I:

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/ : : C I: G 9 >CD 6 H E6G6I>DC 6C9 9>HG7J I>DC 6<G: B: C I 6C9 G A6I: 9 6<G: B: CHL >= . DCI> GID<DK C I=: H E6G6I>DC 6C9 9>HG7J I>DC D . DCI> G6C9 I=: G A6I>DCH>E 7: IL:: C I=: IL D 8DB E6C> H<DC< ;DL 6C9 , =: H 6<G: B: CH E6K 9: ;DGE: 8>8 >9: B C I N 6C9 A67>AIND 7A>6I>DCHD: 68= E6GN 6C9 8DJ A A69 ID9>HEI I: H7: IL:: C J H !; L: 6G GFJ>G 9 ID>9: B C>N. DCI> G J C9: GI=: 8>G J B H6C8: HH I ;DG=>C I=: H 6<G: B: CH L: B 6N7: H 7? 8I IDH 7H6C6I>6AA67>AI> H !C 699>DCL L>= GHE: 8I ID I=: A67>AI> H; DGL=>8= . DCI> G=6H 6<G: 9 ID>9: B C>N J H I C9: GI=: H 6<G: B: CH I=: G 86C 7: CD 6H I G6C8: I=6I I=: >9: B C I NG<=IHL: =6K 6<6CH . DCI> GL>A7: H ;>8> C I IDEG I: 8I J H6<6CH I=: ;J A6B DJ C I D I=: A67>AI> H DGI=6I . DCI> G L>A7: 67A ID; J AN H6I>HN>H>C9: B C>86I>DC D7A>6I>DCH 68= D I=: H GH H8DJ A C <6I>K AN6;;: 8I DJ G7J HC: HH H ;>C6C8>6A 8DC9>DCH GH AHD, DE: G6I>DCH 6C9 86H ;>AL H

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/ : 8DBE I: >CB6@IH<CL=>8=L: 6C9 DJG8JHDB: GHB JH 8DBE ANL >= HEG6C6LDC6A:: 9: 6AH6I: A86A6C9 DI=: G  
7GH>8LDC6AG<J A6LDC H 8= 6HG<J A6LDC<DK <C<= 6A= 6C9 H5: IN I=: : CK<CB: CI 6C9 : A8I6C8 8DB BJC86LDC H  
6C9 B6@IH6C96C9>6LDC H / : 9: K AEB 8DC:>JG 6C9 B6@I DI GE6DJ 8IH6C9 HCK8: H1DB:: I 8JHDB: GC: 9H8G6I: 9 7N  
I=: H G<J A6LDC H6C9 H6C96CH, = H G<J A6LDC H6C9 H6C96CH6G 8DBEAM8=6C<: ;GFJ: CIAN =6K I: C9: 9 ID7: 8DB: B DG  
HGC<: CI DK GLB: 6C9 B6N7: >8DCHH: CI 68CH7GH>8LDC H CNH<C>:86CI 8=6C<: DG9: AN<C>B EAB: CI6LDC>C6CND,  
I=: H G<J A6LDC HDGH6C96CH DG<CI=: >CI: GEG I6LDC 6EEA86LDC DG: C,D8: B: CI I=: GD, 8DJ A G9J8: DG9: AN9: B 6C9 ;DG  
DI GE6DJ 8IH6C9 HCK8: H>C8G6H DI G8DHHD, E6DJ 8<C< DG9: ANI=: >CI6DJ 8LDC D, C L DGB D9>: 9 E6DJ 8IH6C9 HCK8: H  
DG8DJ A G H8I DI G: MH<C< 68LKH> H E6DJ 8IH6C9 HCK8: H !C699>DC >C8: G6<C D, DI GB 6@I HDI G<CL I=: 9: E: C9H<CE6G  
JEDCI=: >CI6DJ 8LDC D, C L G<J A6LDC HDG>B EAB: CI6LDC D, >CJ HCNH6C96CHDCI=: LB: AC L: : ME 8I !CI=: H B6@IH  
I=: 9: ANDG, 6AG D, <DK <CB: CI6A6C9 DI=: G: CI>: HID69DEI DG: C,D8: C L G<J A6LDC HDG>CJ HCNH6C96CH DGI=: 69DEI>DC  
D, C L G<J A6LDC HDG>CJ HCNH6C96CH L=>8= DI GE6DJ 8IH6C9 HCK8: H6G CDI EDH>DC 9 ID699GH 8DJ A 69K CHAN6:: 8I  
9: B 6C9 !C699>DC G<J A6IDON9: 69AC HDG>CJ HCNH6C96CH >B EAB: CI6LDC LB: AC HB 6NGH A>CH 7H6CI6AN9>:: G CI  
AK AH, 9: B 6C9 ;DGDJ GE6DJ 8IH6C9 HCK8: H;CB E: GD9 IDE: GD9

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/ : 86CDDI ECK9: 6HJ G6C: I=6I DJ GCI: G6A8DCI6H6C9 8DBEA6C8: HNH: B HL >A6A 6NHECI: 8I JH;CB 68IH8DB B >I: 9 7N  
: BEAN: H 6<: CH DG7JHC HHE6GC: GH, DI GH DGD, 7JHC HH HL: 68FJ>G DGE6GC: GL>= I=6I L DI A KDAI: - + 6C9 DGDC  
- + A6LH>C8A9>C I=: A6LH<DK <C< E6NB: CHID<DK <CB: CI D;>8>6A 7G7: GN ;GJ 9 @8@68CH 6C9 ;6A 8A>B H 6AH6C9  
B6@LDC>EG8L8: H 8DC;A8IHD, >CI: GH 8DBE I>DC : MEDG 6C9 >BEDG 8DBEA6C8: B DC NAI C9: GC< 6C9 96I6 ECK68N !C  
E6C8J A6I=: - + DG>C DG EI (G8L8: H 8I I=: - # G7: GN 8I 6C9 HB >AG6CI>7G7: GN A6LH<CI=: G7GH>8LDC H  
<: C 6ANEC>7J 8DBE6C: H6C9 I=: >CI: CB: 9>6G: H;CB B6@C>B ECE: GE6NB: CHID<DK <CB: CI D;>8>6A;DGI=: EJ EDH  
D, D7I6<C< DGGI6<C< 7JHC: HH 6C9 L: DE: G6I: >CB 6CNE6CH, I=: L D>A I=6I =6K : ME: G: C8: 9 <DK <CB: CI6A8DG EI>DC ID  
HDB: 9: <G: CNH 8=>B ECE: G68LDC HDG6A<6LDC HD, H 8= 68IH8DJ A 96B 6<: DI GGEI I6LDC 6C9 H7?: 8I JHID8KADG  
8GB>C6A<K: H>6LDC H CI=: - CI: 9 +I6I: H6C9 >CI=: G7GH>8LDC H6C9 GAI: 9 H6G=D9: GAI L H >H 8DJ A A69 IDH 7H6CI6A  
8K A6C9 8GB >C6A B DC: I6CN6C9 CDC B DC: I6CNE: C6A: H6C9 8DJ A 86J H JHID>C8J GH<C>:86CI A<6A6C9 >CK H>6IDON:: H !C  
699>DC I=DI <= L: G ANDC DI GH EEA: GHID69=: G ID DI GH EEA: GH6C96CH, 8DC9J 8I B 6I: G6AK>6LDC HD, H 8= H6C96CH,  
8DC9J 8I 8DJ A D88J GI=6I 8DJ A =6K 6 B 6I: G6A:: 8I DC DI G:>C6C8>6AH6I: B: CH

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' J GDE: 6LDC H E6DJ 8IH6C9 HCK8: H6G H7?: 8I ID: CK<CB: CI6A6L H6C9 G<J A6LDC H L=>8= >BEDH AB >6LDC HD CI=:  
9>8=6G: D, ED A I6CH>CI DI=: : CK<CB: CI 6C9 : H67AH> H6C96CH;DGI=: JH <: C 6LDC IG 6IB: CI HDG<: 6C9 9>EDH6AD,  
=66C9DI H6C9 CDC =66C9DI HL 6H: H / : B JH 6AD8DB EANL >= K6GDI H=: 6A= 6C9 H5: ING<J A6LDC H CI=: - CI: 9 +I6I: H6C9  
67C69 >C8DCC: 8LDC L >= DI GDE: 6LDC H !C699>DC HDB: D, DI GDE: 6LDC H GFJ>G I=: 8DCI6A9 JH D, =66C9DI HDG  
: C G: L8 B 6I: G6AH<CI=: 9: K AEB: CI B 6CI ;68IJ GC< DG HCK8<C< D, DI GE6DJ 8IH / : 86CDDI 6HJ G ND I=6I DJ G  
: CK<CB: CI6A=: 6A= 6C9 H5: IN 8DB EA6C8: E6C<GB =6H7: : C DGL >A6I 6ALB: H7: :;; 8I>K 6AG ID8DB EANL >= 6CND,  
I=: H A6LH8DJ A G H A>C8KA6C9 8GB >C6A B DC: I6CN6C9 CDC B DC: I6CNE: C6A: H6C9 96B 6<: ID DI GGEI I6LDC !C699>DC  
L: 86CDDI ECK9: 6HJ G6C: I=6I DJ G8DHHD, 8DB EAN<L >= 8J GCI DG;J IJ G: CK<CB: CI6AECI: 8LDC 6C9 =: 6A= 6C9 H5: IN  
A6LHL >ACDI: M8: : 9 DI G: H>B 6I: HDG69K CHAN6:: 8I DI G:>C6C8>6AH6I: B: CH % DG DK G 6CN6889: CI I=6I G H AH<CH<C>:86CI  
E: GDC6A>CJ ONDGECE: CN96B 6<: L=: I=: GD88J G<C< 9J GC< 9: K AEB: CI B 6CI ;68IJ GC< HCK8<C< JH DGHDG<: D, DI G  
E6DJ 8IH B 6NGH A>CH<C>:86CI E6DJ 8LDC >CI: G EI>DC 9: ANH DG8A>B H;DGH 7H6CI6A96B 6<: H86J H 9 7NE: GDC6A>CJ G: H  
DGECE: CN96B 6<: =6CB ID DI GGEI I6LDC 6C9 G9J 8LDC>C B DGA 6B DC>DI G: BEAN: H 6CND, L=>8= B 6N69K CHAN6C9  
B 6I: G6AN6:: 8I DI GGH AHD, DE: 6LDC H

!C699>DC L: B 6N>C8J G8DHG AI: 9 IDGB: 9>6A:: DHDG6A<: 9: CK<CB: CI6A96B 6<: 6HD8>6I: 9 L >= E6H DG8J GCI  
L 6H: 9>EDH6AEG8L8: HDGDI=: G=66C9DI HB 6I: G6AH=6C9AC>EG8L8: H / : 6G 6AD;CB LB: ID LB: E6GNIDE: GDC6A>CJ ON  
DGI=: G8A>B H7GJ <=I 7NEG6I: E6C: H6A<C< >CJ GN9J: IDI=: EG H C8: D, DG: MEDH G ID=66C9DI HH 7H6C8: H / : B 6N  
6AD7: 8DB: H7?: 8I ID699>DC6AGB: 9>6A8DB EA6C8: DGE: GDC6A>CJ ON8DH9J: ID;J IJ G: K CHH 8= 6H8=6C<: H<C: MH<C<  
A6L HDGG<J A6LDC H 8=6C<: H<C 6<: C8N9>G 8LDC DG: C,D8: B: CI EDA8> H 9: K AEB: CH<CGB: 9>6LDC I: 8=CDAD> H 8=6C<: H<C  
I=: 8DC9J 8I D, DI GDE: 6LDC H6C9 8=6C<: H<C 688DI CI<C< G AH DG699>DC6A>CJ DGB 6LDC G<6C9>C I=: H GHG EA6H G:: GID  
&DI: IDI=: 8DCHA96I: 9 :>C6C8>6AH6I: B: CH / : 86CDDI 6HJ G ND I=6I DI GA67>AI: H6GHC<: CB E6H DG;J IJ G GA6H HD,  
DG: MEDH GHID =66C9DI HH 7H6C8: HL >ACDI: M8: : 9 DI G: H>B 6I: HDG69K CHAN6:: 8I DI GGEI I6LDC 6C9 :>C6C8>6AH6I: B: CH

DGI=6I L: L>ACDI 7: H 7? 8I ID 699>1DC6A8A6B H; DGE: GDC6A<CJ QNDGGB: 9>61DC>CI=: ;J IJ G 76H9 DC D J GE6H EG H C I DG ;J IJ G 7J HC: HH68L<K> H

/, /-# -- - , -/ \$ ..) 2. (-# , !/&.#( #, .) )' \*8I#".")- , !/&.#(- )/& 0 , - 8 ..) /, # ( #& . ' (.- ( , \*/. .#(

!C 699>1DCIDI=: :CK<DCB: C1A=: 6A= H5: IN 6C1>8DCG F1DC 6C9 DI=: GG<J A1DCHCI: 9 67DK D J G 7J HC: H H6G H 7? 8I ID : M: CHK: G<J A1D<C 7N- + 6C9 CDC- + <DK CEB: C1A6C9 H A G<J A1DON: C1> H6I I=: H EG6C1DC6A: ;9: 6AH6I: A86A 6C9 DI=: G7J G H 8I DC6AAK A H >C8A9>C< I=: ;D A L >C<

S L: 6G GFJ>G9 ID8DB E A N L >= K6G D J H B E D G A L H6C9 : MEDG 8DCIQA6C9 : 8DCDB >8 H6C81DCH A L H L =>8= B 6N6; ; 8I D J G I G C H 68I DCH L >= 8: G6<C 8J HDB: G H 7J HC: H H6G C: G H 6C9 DI=: GE: GDC H6C9 9: 6AC<H7: IL: : C D J G: B E A N : H6C9 H 7H9>6G: H !C8: G6<C 8J B H6C8: H : MEDG 8DCIQA6C9 : 8DCDB >8 H6C81DCH G<J A1DCH B 6NEC=>7>I I=: : MEDG D, 8: G6<C E C D J 8I H H C K8: H 6C9 I: 8=C D A >: H !C D I=: G8<C J B H6C8: H L: B 6N7: GFJ>G9 ID D 7I6<C 6C: MEDG A8: C H 7: ;DG : MEDG <C I=: 8DCIQA6C9 >: B D B E A6C8: L >= I=: K6G D J H B E D G A L H I=6I 6E E A N I D J G 7J HC: H H86C G H G8I D J G688: H I D 6C9 >C8G6H I=: 8D H D, D 7I6<C < 8: G6<C E C D J 8I H6C9 6I L B: H86C>C I: G E I D J G H E A N D, >B E D G: 9 >C K C I D G N

S L: 6AD=6K 6<G: B: C H I D H A E C D J 8I H6C9 H C K8: H I D <DK CEB: C I: C I> H6C9 6G H 7? 8I I D K6G D J H H6I I: H6C9 G<J A1DCH I=6I 6E E A N I D 8DB E6C: H9D C< 7J HC: H L >= <DK CEB: C I: C I> H, =: A L H <DK CEB< <DK CEB: C I 8DCI G8I H9>; G: CEB I=: A L H <DK CEB< E G K6I: 8DCI G8I H DG: M B E A B 6C N <DK CEB: C I 8DCI G8I H 8DCI 6<C E G8<C< 6C9 DI=: G I: G H6C9 8DC9>1DCH I=6I 6G C D I 6E E A 867A I D E G K6I: 8DCI G8I H' J G6<G: B: C H L >= <DK CEB: C I: C I> H B 6N7: H 7? 8I I D I: G >C6I DC G9J 8I DC DGB D9>; >86I DC 6I I=: 8DCK C>C8: D I=: <DK CEB: C I D G C I=: : K C I D, 8=6C: H <DK CEB: C I G F J >G B: C H G9J 8I DCH C: ;9: 6A H E: C9<C 6C9 DI=: G 68I D H 6C9 L: B 6N J C9: G H B 6I: D J G 8D H I D, E G D B >C< J C9: G I=: 8DCI G8I DK CEB: C I 8DCI G8I H I=6I=6K 7: : C 6L 6C9: 9 I D J H; D A L >C< 6 7>9 E C8: H I 8D J A 7: 8DB: I=: H 7? 8I D, 6 7>9 E C I: H 7N6 A H C< 7>9: G L=>8= 8D J A G H A >C A H I D, I=: 8DCI G8I / : 6G 6AD H 7? 8I I D >C K H >6I DC 6C9 6J9>; D G8DB E A6C8: L >= I=: G F J >G B: C H <DK CEB< <DK CEB: C I 8DCI G8I H

S L: 6G 6AD G F J >G9 ID8DB E A N L >= >C8G6H C< A N 8DB E A M 6C9 8=6C<C< 96I6 E G K68N G<J A1DCH C B J A E A 7J G H 8I DCH I=6I G<J A1 I=: 8D A 8I DC J H E C I: 8I DC 6C9 I G C H: G D, E: GDC6A96I6 >C8A9>C< I=: I G C H: G D, E: GDC6A96I6 7: IL: : C D G B D C< 8D J C I G: H !C E6<C 8J A G I=: : C 6A 6I6 ( C I: 8I DC \*: <J A1D C 7: 86B: : ; ; 8I K >C I=: J G E: 6C- C D C >C % 6N 6C9 I=: 6A D G 6 DCH B: G G K68N 8I 7: 86B: : ; ; 8I K >C "6C I 6C N / : B 6N6AD; 68: 6J9>H D G C K H >6I DCH 7NDC: DGB DG 9DB: H 8 DG; DG>C <DK CEB: C I 6<C8> H G A L C< I D D J G 8DB E A6C8: L >= I=: H G<J A1DCH C 69K G H D I 8DB: J C9: G6C N H 8= >C K H >6I DC D G 6J9>J 8D J A H 7? 8I J H I D; >C: H D G I=: GE: C6A> H, =6I D G I=: G8<C J B H6C8: H G A I: 9 I D D I G8D A 8I DC J H 6C9 I G C H: G D, E: GDC6A96I6 8D J A 86J H 6 A H I D, G E J I 6I DC>C I=: B 6C@I 6C9 D G 69K G H A N 6; ; 8I D J G 7J HC: H H6C9 ; >C6C8>6A E D H I DC

S 8: G6<C D, D J G E C D J 8I H6G B: 9>86A9: K8: H I=6I 6G H 7? 8I I D G<J A1D C 7N I=: - + 7N D I=: G: 9: 6A6C9 H6I: <DK CEB: C1A6<C8> H 7N8DB E6G7A 6<C8> H D, D I=: G8D J C I G: H6C9 G<DCH 6C9 7N8: G6<C 688G9>I C< 7D9> H, D K6C N C< 9: <G: H I=: H G<J A1D H G F J >G J H I D 8DB E A N L >= A L H6C9 G<J A1DCH <DK CEB< I=: 9: K A E B: C I I: H <C< B 6C I; 68I J G C< A7: A C< B 6C@I C< 9>H G 7J I DC 6C9 E D H B 6C@I C< H C K >A6C8: D, D J G E C D J 8I H DK CEB: C I 6J I=D G I> H B 6N8DC8A9: I=6I D J G 7J HC: H H6G8I8: H9D C I 8DB E A N L >= 8J G C I D G; J I J G H6I I: H G<J A1DCH 6<C8N <J >6C8: D G86H A L 6A G I D D 7I6<C G F J >G9 G<J A1D N 8A6G C8: H D G6E E C K6A H7: ;DG B 6C@I C< D J G E C D J 8I H DG 7: ;DG >B E A B: C I C< B D9>; >86I DCH I D G E G B D I C< 699>1DC6A<C9>86I DCH D G I H D, D J G E C D J 8I H D I=: G K D A I DCH D, A L H D G G<J A1DCH ; 6A G I D G B: 9>6I: >C H E: 8I DC6A D 7H C K6I DCH I D I=: H I H 68I DC D, I=: H G<J A1D N 6J I=D G I> H 6C9 G6ADGE: 8: K 9: ; ; 868N D G H; ; IN8DC8: G H D G I G C9H D, 69K G H: K C H L >= G H E: 8I I D D J G E C D J 8I H: K C6; I: G D 7I6<C < 8A6G C8: ; D G >H G 7J I DC 86C A 69 I D L 6C C< A I I: G H C D 8: H I D 8J H D B: G H 9: 8A C C< H A H A H I D, 8J H D B: G H A H I D, B 6C@I H 6G G B: 9>6I DC 6C9 >C8G6H 9 8DB E A6C8: 8D H H G86A H I >J G H; >C: H: M E: C H H >C J C8I DCH 8K A E: C6A> H 8GB >C6A E: C6A> H 8DCH C I 9: 8G: H 69B >C H G I K 9: I: C I DCH G; J H A I D E: G B >B E D G 6I DCH E6C6A D G I D 6A H J I 9D L C D, E C D J 8I DC; 68A> H D G I=: >B E A B: C I 6I DC D, D E: G I C< G H G8I DCH C6G I L >C< D, E: G B >I: 9 J H H; D G6 E C D J 8I G; J H A D, I=: <DK CEB: C I I D <G C I 8A6G C8: 6C9 H H E: C H D C D G L >= 9 G L 6A D, 6E E C K6A H J C=: G9: ; ; C9<C 6<6<C H 6C N H 8= 68I DCH 86C7: 8D H A N 6C9 I B: 8DCH B <C 6C9 B 6N G F J >G H <C>; >86C I E: G D C C: A G H I G: H, =; G; DG : K C > L: 6G H 88: H J A C 9: ; ; C9<C 6<6<C H 6C N H 8= 68I DCH 7D J <= I 6<6<C H J H D J G 7J HC: H H6N7: >B E6G9 6C9

S L: 6G 6AD G F J >G9 ID8DB E A N L >= K G8=6C<C< A7D G6C9 : B E A N B: C I A L H6C9 G<J A1DCH C B J A E A 7J G H 8I DCH, =: H 8=6C<: H8D J A C <6I K A N >B E6I D J G 7J HC: H H D G; >C6C8>6A E D H I DC

, =: H 6G C I I=: D C A N G<J A1DCH I=6I D J G 7J HC: H H B J H 8DB E A N L >=, =: G<J A1DCH L: 6G H 7? 8I I D =6K I: C9: 9 I D 7: 8DB: B D G H G C< C I D K G L B: 6C9 B 6N7: >C8DCH H: C I 68G H 7J G H 8I DCH / : D J G G E G H C I 6I K H 6C9 I=: >C9J H G: H <C L=>8=L: D E: G I: B 6N6I L B: H7: J C9: G G K> L 6C9 D G C K H >6I DC 7N G<J A1D N 6J I=D G I> H 6A G I D 8DB E A N D G6C N 6A < 9 DGE: 8: K 9; 6A G I D 8DB E A N L >= I=: G<J A1DCH G; ; G C8: 9 67DK D G6C N D I=: G G<J A1DCH 8D J A G H A >C 8K A6C9 8GB >C6A B D C: I 6C N 6C9 C D C B D C: I 6C N E: C6A> H 6C9 6C N H 8=; 6A G D G6A < 9; 6A G D G7: 8DB <C H 7? 8I I D 6 G<J A1D N: C; D G8: B: C I



×CK H×6BDC 8DJ A 6AD96B 6<: DJ GGEJ I6BDC 9>HJ EI DJ G7J HC: HH AB×DJ G67>AINIDB 6CI; 68IJ G >BEDQ: MEDQ 6C9 H AA  
EEDJ 8IH6C9 H CK8: H G H A>C AHDH, 8J HDB: CH6C9 9>H7GB: CI; GB H AAC< ID8: Q6C<; 9: GA6<: C8> H6C9 86J H JHID>C8J G  
H<C>; 86CI A<6A6C9 >CK H×6IDN<;: H DB EA6C8: L×= I=: H 6C9 DI=: GG<J A6BDCB 6N6AD6<;: 8I DJ GG IJ CHDC>CK HB: CI  
G FJ>G JHID>C8J GH<C>; 86CI: ME: CH H DGB D9>NDJ G7J HC: H B D9: ADG>B E6>GDJ G; AM7>AIN>C B D9>N< EEDJ 8I  
B 6C@I<: EG8<: DGD I=: GHG I: < H; DG<GL>C< DJ G7J HC: HH' J GEEDJ 8IH6C9 DE: G6BDCB 6ADD I: CH 7? 8I DI I=: GAH  
D >CJ HG6AH6C9 6C9H7D9> HH 8= 6HI=: !CI: G6BDC6A+I6C9 6C9H' G6C6BDC 6C9; 6AG ID8DB EANL×= I=: H GAH8DJ A  
G H A>CL×=9GL 6AD 8: C>; 86BDCB: 9: 9 IDH ADJ GEEDJ 8IH6C9 H CK8: H6C9 DI=: CL>H 69K CH AN>B E68I DJ G>C6C8>6A  
H6I: B: CH

DC699>BDC6AC; DGB 6BDC G<6C>C< I=: H GHG H EA6H G>; GDI I=: H 8BDC: CJA9 W JHC: HH\*: <J AIDN% 6II: GHX

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AB 6I: 8=6C<: G H A<C>; GB >C8G6H9 8DC8: CIG6BDCB, 86GDC9>DM9: 6C9 DI=: G>G: C=DI H <6H H C I=: 6B DHE=: G 8DJ A  
EG H CI GHG H IDJ GDE: G6BDCB (=NH86AGH>G H A<C>; GB 68J I: 8=6C<: H H 8= 6H=J G686C: IDG69D L>A>;>G DG; AD9>C< DG  
8=DC8 8=6C<: H H 8= 6H9CJ <=IH=: 6I L 6K HDGH 6 AK: A8=6C<: H >C8AB 6I: E6II: CH86C 69K CH AN>B E68I DJ G; 68A>: H6C9  
DE: G6BDCB 6C9 9>HJ EI DJ GH E6AN 8=6CH6C9 9>HG7J I>DCB NH: B H DC8: G DK: G8AB 6I: 8=6C<: 86C6ADG H A>C C L DG  
699>BDC6AA<6ADGG<J AIDN G FJ>GB: CH9: H<C: 9 IDG9J 8: <G: C=DI H <6H: B>HDCB 6C9 DGB>×6I: I=: :;; 8IHD, 8AB 6I:  
8=6C<: DC I=: : CK GCB: CI H 8= 6HI6M6BDCD, DG86EHDC I=: J H D, 86GDC 76H9: C GN CNH 8= C L DG699>BDC6AA<6A  
DGG<J AIDN G FJ>GB: CHB 6N>C8G6H I=: 8DHH6HDB 6I: 9 L×= DG9>HJ EI HJ G<C< B 6CI; 68J GC< 6C9 9>HG7J I>DCD, DJ G  
EEDJ 8IHL=8= B 6N69K CH AN6>;: 8I DJ G7J HC: H6C9; >C6C8>6AH6I: B: CH !C699>BDC 6CN; 6AG ID69: FJ 6I: AN699GH  
H6@>DQ: G ME: 8I6BDCB L×= G HE: 8I ID: CK GCB: C I6AHD8>6A6C9 <DK G6C8: B 6II: CHB 6NGH A>C I=: AHDH, 7J HC: HH  
69K CH GEJ I6BDC6AB E68IH 9>AI: 9 B 6C@I K6A6BDCB 6C9 8=6AC<: H C 6IIG6BDC< 6C9 G I6C<C< 8J HDB: CH6C9 I6ACI: 9  
: B EAN: H

#% &. .) /, 2 ( )/(.#! .. , -

" (! - #) /, .# . 2, . -), 2\*) -/, .) ##( &# )' . 2 & #&# -), -- --' (-) /& .) /,  
\*,) # #&3 ( ##( / #- 3. 2 /."), ##- ) /&, - /&# ##( & 2 \* 3' (-), \*, #, \*, # -

/ : 6G H 7? 8I ID>C8DB: 6C9 IG6H8BDC I6MH C I=: - CI: 9 +I6I: H6C9 >C B J A>EA; DG>C J GH9>8BDCB HH 8= 8=6C<: HID  
6EEA867A I6M6L HDGEDA8> H >C8A9>C> CI: GEG I6BDCB DGG IG6B8I K: 6EEA86BDCB I=: GD, 8DJ A G H A>C 6 B 6I: G6A8=6C<: >C  
DJ G I6MECKHDC 86H I6MHE69 6C9 :;; 8I K: I6MGI: JCI: GB DG 8: Q6C I6M6L H6G >C=: GCI AN6B 7>J DJ HG FJ>GC<  
H 7? 8I K> CI: GEG I6BDCB DC I=: 6EEA86BDCB I=: GD, ' J GCI: GEG I6BDCB 6C9 I=: 8DGG HEDC9>C< 6B DJ CI D, >C8DB: I6MHL: E6N>H  
6C9 B 6N>C I=: ; JIJ G 8DCB CI: ID7: H 7? 8I ID 6J 9>H7N- + :; 9: GAH 6I: 6C9 A86A I6M6J I=DGI> H6C9 7NDCB - + I6M  
6J I=DGI> H !; I=: H 6J 9>HGH A>CE6NB: CHDC6H H B: CH9>;: GCI; GB DJ GGH CK H DJ G; JIJ G G H AHB 6N>C8A9:  
J C; 6KDG 7A 69J HB: CHID DJ G I6MA67>A>: H6C9 DJ G>C6C8>6AH6I: B: CH8DJ A 7: 69K CH AN6>;: 8I: 9

DG>C G B>I6C8: I6MH=6K CI 7: : CECK9: 9; DGDCJ 9>HG7J I: 9: 6GC<HD, 8: Q6C D, DJ GDCB - + H 7H9>6G: HID I=:  
: ME: CI H 8=: 6GC<H6G 8DCH9: G9 ID7: >C9: >CJ: ANG>CK H: 9>C I=: DE: G6BDCB I=DI H 7H9>6G: H !; DJ GCI: C>DCB  
G<6C>C< G>CK HB: CI D H 8=: 6GC<H8=6C<: DGL: 9: I: GB>C: IDG E6IG6I: : 6GC<H; GB; DG>C J GH9>8BDCB I=6I=69  
EG KDJ HN7: : C8DCH9: G9 E: GB 6C: CI ANG>CK H: 9 J C9: G: MHC< 688DJ CI<C< H6C9 6C9H I=: C DJ G C8DB: I6MECKHDC 86H  
I6MHE69 6C9 :;; 8I K: I6MGI: 8DJ A >C8G6H

!C699>BDC 8=6C<: H7NI=: - + >C G A6BDC ID>CI: G6BDC6A I6MG; DGB 8DJ A >C8G6H J C8: Q6CIN6C9 B 6N69K CH AN6>;: 8I DJ G  
>C8DB: I6MECKHDC 86H I6MHE69 6C9 :;; 8I K: I6MGI: DB EG=: CHK: I6MG; DGB L 6H: C8I: 9 I=CI <= I=: , 6M JIH6C9  
"DJ H 8I D I=: W " X L=8=>C8A9: H C J B: GJ HECKHDC I=6I>B E68I - + 8DGEDG I: I6MGI: H 7J HC: HHG A I: 9  
: MAHDCB 9: 9J 8BDCB 6C9 8G9>H, =: I6MC< 6J I=DGI> H8DCB CI: ID>H: G<J A6BDCB 6C9 <J>6C8: HDB: L×= G I GHE: 8I K:  
6EEA86BDC ID I=: ECKHDCB I=: , " 6C9 L: : ME: 8I I=HID8DCB CI: ; DGI=: ; DG H: 67A; JIJ G CN; JIJ G 69J HB: CH  
G H A<C>; GB G I GHE: 8I K: G<J A6BDCB 6C9 <J>6C8: >H: 9 L>A7: 8DCH9: G9 69>HGI: >C8DB: I6M ME: CH DG7: C; >C I=:  
E: GD <J>6C8: >H>H: 9 DG MBEA I=: , " : AB>C I: 9 I=: 9: 9J 8BDCB 8: Q6C9DB: H 8 6C9; DG>C G H 6C8=6C9  
9: K AEB: CI: ME: C9>J GH7: <CC>C< DC"6CI 6CN 6C9 G FJ>G H86E>6A6BDC 6C9 6B DG6BDCB H 8=: ME: C9>J GHDK G  
6 HE: 8>9 6 E: GD 6CNGKHDC G<J A6BDC DG C L <J>6C8: ID I=HG A B 6N>B E68I DJ G; JIJ G >C8DB: I6MECKHDC 86H  
I6MHE69 6C9 :;; 8I K: I6MGI:

JCI: GB DG 8=6C<: H C B J A>AI: GA6>G: B: CH6C9 I=: I6M6L HD; DG>C J GH9>8BDCB 8DJ A 6GH 6H6 G H A D, I=: 76H  
: CHDC 6C9 ECD, I H>B>C< ECD: 8I J C9: Q6C C7NI=: ' G6C6BDC; DG 8DCB>8 D DE: G6BDCB 6C9 : K AEB: CI I=: W X  
6C9 8DJ A H<C>; 86CI AN>C8G6H DJ G I6MECKHDC 86H I6MHE69 6C9 :;; 8I K: I6MGI: , =: ' =6H>H: 9 H<C>; 86CI  
<A76A I6MEDA8N 8=6C<: HI=6I >C8A9: 7DI=: ME6C9: 9 GEDC< 6HL: A6HI: 8=C86A>A76A I6MEDA8N 8=6C<: H6C9 B 6CN  
8DJ CI G: H C L=8= L: DE: G I: =6K >BEAB: CI: 9 I6M6L 6C9 69B>CHG I K: 8=6C<: HID6A C L×= C L ' EDA8> H DG  
: MBEA >C' 8ID7: G ' 6CCD C8: 9 6C6>G: 9; GB: L DC>DG6C: ME6CHDCB I=: I6MC< G<=IHD, B 6C@I 8DJ CI G: H

6C9 ID: H67AH: 6 <A76AB>C B J B 8DCEDG: I6MGI: !C : 8: B 7: G EJ 7AH: 9 9: I6A9 B D9: AG AH: DG <A76A  
B>C B J B 8DCEDG: I6MGI: D ;>I: C E: G: C I L=>L>AG FJ>G B J A>M: GA6<G: B: C I H 6C9 DG8D J C N H E: 8>8 A<H6I>K  
68IDC ID7: : ;: 8I>K <A76AB>C B J B 8DCEDG: I6MGI: 6C9 6CNDI: G B EAB: C: 9 8=6C<: H8D J A H<C>: 86CIAN>C8G6H I6M  
J C8: G6CIN9J: ID9>;: GC<>C: GGI6I>DCH6C9 >C8G6H9 6J9J H8C I>CN

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/-# --), )/, - \*, .#( ) )(.# , ) & .#0 & ." 5 \*, .#( , (- .#(-6 # . , ' # .) . 2 &., (- .#(

/ : =6K G8: K 9 6CDE>C>D; GB DJ IH9: I6M8DI CHAIDI=: : ;: 8I I=6I: 68=D I=: +: E6GI>DC, GCH8I>DCHFJ 6A>H6H  
IGCH8I>DCI=6I>H9: H8G7: 9>C+: 8I>DCH 6 6C9 6 D I=: !C: G6A\*: K C I: D9: , =: DE>C>D G A>HDC8: G6<C  
>68IH 6HI B E I>DCH GEGH C I6I>DCH 6C9 J C9: G6<C>H; GB I=: 6EEA867A E6C>HG<6C9>C< I=: E6H 6C9 ; J I J G 8DC9 J 8I D I=:  
8DB E6C>HYGHE: 8I>K 7J HC: H I H6C9 DI=: GB 6I: CH !; 6CND I=: H ; 68IH 6HI B E I>DCH GEGH C I6I>DCH DGJ C9: G6<C>H6G  
>C8DG 8I DG C I H I>H>9 DJ GH D8@D>: GH6C9 L: B 6NCI 7: 67A ID G A NDC I=: 6EEA867A DE>C>D C D I6M8DI CHA6C9 8DI A 7:  
H I 7? 8I ID H<C>: 86CI I6MA67>A>H & D I L>A=H6C9>C< I=: DE>C>D C D I6M8DI CHAL: =6K G8: K 9 I=: !\*+ 8DI A 9 I: GB>C DC  
6J9J I=6I 6CND I=: +: E6GI>DC, GCH8I>DCH H I6M67A >A 9 I: GB>C HI=6I 6CND I=: 8DG HEDC9>C< >68IH 6HI B E I>DCH  
GEGH C I6I>DCH DGJ C9: G6<C>H6G C I 8DG 8I DG=6K 7: : C K D A I: 9 DG> A 9>H<G: HL>A= I=: 8DC8A H DCH>C 6CND I=:  
6EEA867A DE>C>DCH !; 6CND I=: +: E6GI>DC, GCH8I>DCH>H9: I: GB>C 9 ID7: I6M67A ; DG- + ; 9: GA>C8DB: I6MEJ GEDH H L:  
6HL: A6HDI GH D8@D>: CH I=6I 6G H 7? 8I ID- + ; 9: GA>C8DB: I6ML D I A>C8J GH<C>: 86CI - + ; 9: GA>C8DB: I6M  
A67>A>H

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/ : EGE6G DI G8DCHA96I: 9 ;>C6C8>6AH6I: B: C I H<C 8DC; D B>A N L>A=< C: GA N 688: EI: 9 688DI C I>C< EGC8>EAH>C I=: - C I: 9  
+I6I: HD B: G86 W ( X , =: H EGC8>EAH6G H I 7? 8I ID>C I: GGI6I>DC 7NI=: >C6C8>6A 88DI C I>C< +I6C9 6C9 H D6C9  
W + X I=: + 6C9 K6GDI H7D>H; D B: 9 ID>C I: GGI6C9 8G6I: 6EEGEG6I: 688DI C I>C< EGC8>EAH6C9 <J>96C8: C N C: L  
DG6B: C9: 9 H6C9 6C9 H B 6N G H A>C 9>;: G C I 688DI C I>C< EGC8>EAH L=>8= B 6NH<C>: 86CIAN>B E68I DI GGEDC: 9 G H A HDG  
8DI A G H A>C K D A I N D I G ;>C6C8>6AGH A H

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HD : 8: B 7: G I=: C I 86GNC< K6A: D, DI G<DD9L>A6C9 DI=: G C I6C<7A 6HI IHDI6A9 6EEGMB 6I: AN  
7>A D C !C 688D96C8: L>A= ( L: E: GD9>86AN 6HI HI I=: H 6HI IHID9: I: GB>C > I=: N6G >B E6>G9 +>C>: 86CI C <6I>K  
>C9 J H G N D G: 8DCB>8 IG C9 H 9>H I E I>DCHID DI G7J HC: H I>C67>A N I D: : ;: 8I>K AN>C I: <G I: 68FJ>G9 7J HC: H I H J C: ME: 8I: 9  
H<C>: 86CI 8=6C<: HDGE>ACC: 9 8=6C<: H C J H D, DI G6HI H 8=6C<: H C I=: H G 8I J G D, DI G7J HC: H I 9>K H>J G H B 6C@I  
86E I A G I D C 9: 8AC: H DG C8G 6H H C 6HD8>6I: 9 9>H D I C I G I: HB 6N>B E6>GDI G<DD9L>A6C9 DI=: G C I6C<7A 6HI IH CN  
8=6G: HG A I C< ID H 8=>B E6>GB: C I H L D I A 69K CH AN 6; ;: 8I DI GG H A H D, DE: G I>DCH>C I=: E: GD9HG 8D>C Q 9 \*: ;: GID>D I:  
6C9 & DI: ID I=: 8DCHA96I: 9 ;>C6C8>6AH6I: B: C I H; DG 9: H8GEI>D C D, DI GED A8>HG A I C< ID<DD9L>A6C9 68FJ>G9  
>C I6C<7A H

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HD : 8: B 7: G L: =69 6EEGMB 6I: AN 7>A D C D, A D C< I: GB 9: 7I >C8A9>C< I=: 8J G C I E D G D C D, A D C< I: GB 9: 7I  
DC 6 8DCHA96I: 9 76HH / : B 6N6A D D I 6>C 699>J D C6A A D C< I: GB 9: 7I 6C9 AC: HD, 8G9>A ID B: : I; J I J G ;>C6C8>C< C: 9H ' J G  
9: 7I A K A6C9 G A I: 9 9: 7I H C K8: D7A>6I>DCH8DI A =6K C<6I>K 8DCHFJ: C8: H>C8A9>C<

S GFI>GC< J H I D9: 9>86I: H<C>: 86CI 86H>A L ; GB DE: G I>DCHID I=: E6NB: C I D EGC8>E6A6C9>C I: G H D C D I C9: 7I  
L=>8= L D I A G9J 8: I=: ; J C9HL: =6K 6K6>A7A ; D G I I=: GEJ GED H H 8= 6H68FJ>H I>DCH

S B 6C<C>A B D G 9>;>8J A ; D G I H I D H I>H N D I G D7A>6I>DCH L>A= G H E: 8I ID D I C9: 7I

S EA8>C< J H 6I 6 8DB E: I>K 9>H69 K6CI6<: 8DB E6G9 ID D I G8DB E: I D G I I=6I 6G C I 6H=>A N A K G<: 9

S AB>A>C< DI G67>A N I D 7 D G I L 699>J D C6A ; J C9 H

S G9J 8>C< DI G A M7>A N>C E A G C C< ; D G D G G 68I>C< ID 8=6C<: H C D I G7J HC: H I 6C9 B 6C@I 8DC9>J DCH

S : MEDHC< J H I D>C I: G H G I: GH>H C8: 6 E D G D C D, DI C9: 7I D7A>6I>DCH6G 6I K6G67A G I: H 6C9

S G H A C<>C6C: K C I D 9: ; 6J A>L: ; 6AID H I>H N D I G D7A>6I>DCH J C9: G D I C9: 7I DG>6AID 8DB E A N L>A= I=: ;>C6C8>6ADG  
G H G 8I>K 8DK C6CI H8DCI6>C 9>C D I C9: 7I>CH G B: C I H L=>8=: K C I D 9: ; 6J A 8DI A G H A>C 6A D, DI C9: 7I 7: 8DB>C<  
>B B: 9>6I: AN9J: 6C9 E6N67A 6C9 8DI A E: GB>A 8: G6>C D, DI G A C9: CH I D; DG 8A H D C D I G6HI IH 8J GC< H 8=9: 7I

' JG67>AINIDH6LHNDI GD7A<6L>DCH9: E: C9HDC DJ G; JIJ G DE: 6L< E: GDOB 6C8: 6C9 DC: 8DCDB>8 ;>C6C8>6A8DBE: I>K 6C9 DI=: G; 68IDGH7: NDC9 DJ G8DCIQA' JG7JHC: HHB 6NCDI<: C 6L: H;;>8> CI 86H< ;AL IDB:: I I=: H D7A<6L>DCH !; L: 6G J C67A IDH C<8: DI G9: 7I DG7I6<C 699>D6A>C6C8< L: B 6N7: ;D8: 9 ID9: ANH6L: <8 68FJ>H>DCH 86E46A: ME: C9>IJ GH DG GH 6G= 6C9 9: K AEB: CI: ME: C9>IJ GH/ : B 6NCDI 7: 67A ID7I6<C 699>D6A>C6C8< DCI: 6B H688: EI67A IDJ HDG6I 6AA

99>D66AN I=: 6<G: B: CIH<DK: 6C< DI G9: 7I GFJ>G I=6I L: B 6<CI6<C8: 6C<C;>C6C8>6A6L>DH 6C9 8DCI6<C 6;>;>B 6L>K 6C9 C<6L>K 8DK: C6CHI=6I GHG8I DI G68I>K> H7N 6B DC< DI=: GAB>6L>DCH AB>C< DI G67>AINID>C8J G699>D66A>C9: 7I: 9C: HI B 6@>CK HB: CIH 8G6I: A>CH H A6HH IH 6C9: CI: G<CDI G6H8I>DCHL>A>6;>;>A6I: H, =: 8DK: C6CHI<C DI G8G9>I 6<G: B: CI>C8A9: 6 9: 7I ID !, 6L>D (A 6H G;>; GID>DI: IDI=: 8DCHA96I: 9;>C6C8>6AH6I: B: CIH; DG699>D66A9: I6>AI

' JG67>AINID8DBEANL>A>I=: H GHG8I>DCH6C9 8DK: C6CHB 6N7: 6;;: 8I: 9 7N: K CIH7: NDC9 DJ G8DCIQA' JG>6>AG ID 8DBEANL>A>6CNDI I=: H GHG8I>DCHDC8DK: C6CHB 6NGH A>C 6C: K CI D 9:>6I AJ C9: GI=: 6EEA867A 9: 7I>CHGB: CI L=>8=>8DI A>E: 6B>I 688: A6L>DCD I=: 9: 7I J C9: GI=6I>CHGB: CI 6C9 GFJ>G JHIDEGE6NI=6I 9: 7I 7I: ;DG>HHB=: 9J A9 9J: 96I: AD 6C688: A6L>DCD I=: 9: 7I J C9: GDC: D DI G9: 7I>CHGB: CHL DI A IG<< G6C: K CI D 9:>6I AJ C9: GDI=: GD DI G9: 7I>CHGB: CIH

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' JG6B: C9: 9 6C9 GH6I: 9 8: C>86I: D >C8DGED6L>DC W: H6I: 9 : C>86I: D !C8DGED6L>DCX 6C9 6B: C9: 9 6C9 GH6I: 9 7N6L H W B: C9: 9 6C9 \*: H6I: 9 N6L HK 8DCI6<C 6C9 : 6L 6G 6L 8DCI6<CH E6K>H>DCHI=6I 6G>CI: C9: 9 ID9: I: G8D 6>K I6@DK: GEG8I8: H6C9>C69: FJ 6I: I6@DK: G7>9H6C9 ID: C8DI 6<: E6HE: 8I>K 68FJ>G CHIDC<DI>6I: L>A>I=: D6C9 D >G8IDGH I=: W D6C9 X 6L=: GI=6C ID6I: B EI 6C J CHD>A>8: 9 I6@DK: GCDI 6EE6K: 9 7NI=: D6C9 , =: H E6K>H>DCH>C8A9: 6B DC< DI=: GH

S I=: >C67>AIND, DI GH>6G=D>A>: GHID 68I 7NL GH: C 8DCH CI

S G A HG<6C9>C<=DL H>6G=D>A>: CHB 6NEG H CI E6EDH>AHDG CDB>C6I: 9>G 8IDGH; DG: A8I>DC 6I H>6G=D>A>: GB:: I<C<H

S I=: G<=I D I=: D6C9 ID>HI: EG:: 6G9 HD8@L>A>DI I H>6G=D>A>: G6EE6K 6A 6C9

S I=: 67>AIND, DI G9>G 8IDGH 6C9 CDI H>6G=D>A>: CH ID;>AK 686C8>H>C8A9>C<I=DI GH A>C<;>6B 6C: C>6G: B: CI D I=: D6C9 DCI=: D6C9

!C 699>D6 7: 86I H L: =6K CDI 8=DH CID7: : MBEI;>6B +: 8I>DC DI I=: : 6L 6G : C 6A D6ED6L>DC\$ 6L I=: W \$ X I=>HE6K>H>DC 8DI A 6AD9: ANDGEG K CI 6 8=6C<: D 8DCIQA I=6I NDJ B 6N; 6KD G +: 8I>DC E6K9: HI=6I H 7? 8I IDAB>A>9: M8: EI>DCH E: GHCHI=6I 68FJ>G DG6G 6;>;>A6I: 9 L>A>I=: 6 E: GDCI=6I 68FJ>GH B DG I=6C DI I=: DI IH6C9>C< KDI<C< HD8@D 6 : 6L 6G 8DGED6L>DC 6C WCI: GH: 9 HD8@>A>: 6X H=6A CDI: C<6<: >C 6CN 7J HC: H8DB 7>C6I>DCL>A>I=6I 8DGED6L>DC>C8A9>C< 7NB: G: G 8DCHA96I>DC DG 68FJ>H>DCHD, 699>D66AH>6GH; DG 6 I=G: N 6GE: GD ;>A6L>C<I=: 96I: DCL=>8=I=: E: GDC 7: 86B: 6C>CI: GH: 9 HD8@>A>: G J CAH > EGDGDH 8= I>B: I=: 7D6C9 D 9>G 8IDGH, H 8= 8DGED6L>DC 6EE6K 9: >A>I=: GI=: 7J HC: H8DB 7>C6I>DC DI=: IG6H8I>DCI=6I GH A: 9>CI=: HD8@>A>: G7: 8DB>C<6C>CI: GH: 9 HD8@>A>: G>> JEDC 8DCH B B 6I>DCD I=: IG6H8I>DCI=6I GH A: 9>CI=: HD8@>A>: G7: 8DB>C<6C>CI: GH: 9 HD8@>A>: GI=: >CI: GH: 9 HD8@>A>: GDL C: 9 6I A 6H DI I=: KDI<C< HD8@D H 8= 8DGED6L>DC 6I I=: I>B: I=: IG6H8I>DC 8DB B: C8: 9 : M8A9>C<;>DG EI 6EDH HD 9: I: 6>C>C<I=: KDI<C< HD8@DI IH6C9>C<> 7J I CDI I=: DI IH6C9>C< KDI<C< HD8@DL C: 9 7NI=: >CI: GH: 9 HD8@>A>: G I=: KDI<C< HD8@DL C: 9 7N9>G 8IDGH L=D 6G 6ADD;>8: GH DG=: A>C: B EADN: 7: C;>I E6CH>C L=>8=I=: : B EADN: H9DCI =6K 6 8DC>9: C>6AG<=I IDI: C9: GDG KDI: HD8@=: A 7NI=: E6C DG>> DC DGH 7H FJ: CI IDH 8= I>B: I=: 7J HC: H8DB 7>C6I>DC>H 6EE6K 9 7NI=: 7D6C9 D 9>G 8IDGH, H 8= 8DGED6L>DC 6C9 6I I=DG 9 6I 6 B:: I<C<D H>6G=D>A>: CH 7NI=: 6;>;>B 6L>K KDI: D 6I A 6H IL DI=>9HD I=: DI IH6C9>C< KDI<C< HD8@D H 8= 8DGED6L>DC CDI DL C: 9 7NI=: >CI: GH: 9 HD8@>A>: G

/ : 7: A>K I=: H E6K>H>DCHL>AEGCI: 8I DI GH>6G=D>A>: GH;>6B 8D 6>K DGD I=: 6L>H J C; 6>GI6@DK: GI 68I>H 7N G FJ>GC< EDI: CI>6A 68FJ>G CHIDC<DI>6I: L>A>I=: D6C9 6C9 7NE6K9>C<I=: D6C9 L>A>I=: B DG I>B: ID 6HI H 6CN 68FJ>H>DCE6EDH 6A , =: H E6K>H>DCH 6G CDI>CI: C9: 9 IDB 6@ DI G8DB E6CN>B B J C; >6B I6@DK: GH DL: K G I=: H E6K>H>DCHL>A6EEAN: K C>; I=: D;;>GB 6N7: 8DCH9: G9 7: C;>8>6A 7N HB: H>6G=D>A>: GH 6C9 8DI A 9: ANDGEG K CI 6C 68FJ>H>DC I=6I I=: D6C9 9: I: 6>C: H>HCDI>CI=: 7: H>CI: GH HD, DI G8DB E6CN 6C9 DI GH>6G=D>A>: GH, =: H E6K>H>DCH B 6N 6A DEG K CI DG>H 8DI 6<: 6II: BEIHID G B DK: 6C9 GE68: >C8J B 7: CI 9>G 8IDGH

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' JG8DGEDG6I: =: 69FJ 6C: GH>HAD86I: 9 >C K GII / 6H<C<IDC>C6; 68>ANI=6I L: DLC HD: : 8: B7: G DJ G; 68>AI> H >C8A9: 9 6EECMB 6I: AN H<C>:86C; 68>AI> H L=8= 6G JH9 ;DGB 6C; 68IJ GC< 9>HG7J I>DC L 6G=DJ HC< GH 6C8= 6C9 9: K AEB: CI <C: GA69B>CHG6I>K 6C9 DGH6AH; J C8I>DCH EECMB 6I: AN D I=: H ;68>AI> H6G A86I: 9 >CI=: - C: 9 +I6I: H<C H6I: H6C9 6EECMB 6I: AN 6G A86I: 9 DJ IH9: I=: - C: 9 +I6I: H<C DK: G 8DI CIG>H>C8A9>C< 6C696 6C9 8DI CIG>H<C H6( 68>8 JGE: 6C9 \$ 6I>C B: G86 , =H ;68>AI> H8DK: G6EECMB 6I: AN B>AADC HFJ 6G :: I D, L=8= 6EECMB 6I: AN B>AADC HFJ 6G :: I 6G DLC 9 6C9 6EECMB 6I: AN B>AADC HFJ 6G :: I 6G A6H9 ( 6G8J A6CNDJ IH9: I=: - C: 9 +I6I: H ;68>AI> HB 6NH C< B DG I=6C DC: 7J HC: HHH<B: CI 6C9 B 6N7: JH9 ;DGB J AEA EJ GEDH H H8= 6H 69B>CHG6I>DC H6AH B 6C; 68IJ GC< L 6G=DJ HC< 6C9 D9>HG7J I>DC , =: 6EECMB 6I: CJB 7: GD, H<C>:86C; 68>AI> H7N 7J HC: HHH<B: CI>H !CI: A<: CI' E: G6C<+DAI>DCH (G8>HDC, :8=CDA>>H 6C9 9K6C8: 9 : 6A=86G +DAI>DCH

/ : 8DCH9: GDJ G; 68>AI> HHH>67A 6C9 69: FJ 6I: ;DGI=: EJ GEDH H; DGL=>8= I=: N6G JH9 6C9 9DCI 6CI>8>E6I: 9>;>8J AN>C GC L>C<: MH<C< A6H H6HI=: N: ME>G DG<C; >C9>C< 6A: C6I>K: ;68>AI> H/ : 7: A>K: DI GEDE: C> H6C9: FJ>EB: CI =6K 7: : C L: AAB 6CI 6C: 9 ( A6H G: ;GID&DI: IDI=: 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CH; DG699>B>DC6A>C; DGB 6I>DC L>= GHE: 8I IDDI G A6H 8DB B>B: CH

) " ! ! % \$ # (

/ : 6G ;GB I>B: IDI>B: H I7? 8I ID6 K6G> IND: AI>6I>DC 6C9 DI=: GA<6A6C9 G<J AIDGNEC8: : 9>C<H6C9 8A6B H>C8>9: CI6AID DI G7J HC: HH 6H9 JEDC DI G: ME: G: C8: 8J G6CI>C; DGB 6I>DC 6C9 6EEA867A A6L L: 9DCI 7: A>K: I=6I I=: H EGD8: : 9>C<H6C9 8A6B HL>A=6K 6 B 6I: G6A: :: 8I DC DI G;>C6C8>6AEDHI>DC GH AHD: DE: G6I>DCHDG86H: ;A6L H

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+;I;DQ=7:AX 6G I=:C6B:H6<:HEDH>DCH6C9:ME G:C8: D,DI G:M8JLK: D;>8:GH6HD :7G6CN AAD,DI G  
:M8JLK: D;>8:GH=DA D;>8: 6I I=:EA6HG D,DI G D6G

#3? 7	97	%AFA@	\$ 88,57D( ;@57
"6B:H \$>8D		(GH9:CI 6C9 =>; M8JLK: ' ;;>8:G	
=6CAH %8\$6J<=AC		+:CDG :>8:(GH9:CI U =>; >C6C8>6A' ;;>8:G	
(6IG8@# %JCE=N		(GH9:CI 6C9 ' D 9K6C8:9 :6A=86G+DAI>DCH	
,6B6G+ &:L8DB7:		(GH9:CI 6C9 ' D (G8>HDC, :8=CDAD>H	
"DC6I=6C\$ +8=L6G		+:CDG :>8:(GH9:CI U DQEDG6I: :K AEB:CI	
9L6G* +>BBDCH		+:CDG :>8:(GH9:CI U+IGI:<N	
' AB>9: +DQEN		(GH9:CI 6C9 ' D !CI:AA<CI' E G6C<+DAI>DCH	
(:I:G - C9:GLDD9		+:CDG :>8:(GH9:CI U :C GA DI CHA	
+I68:N / 6A@G		+:CDG :>8:(GH9:CI U JB6C*:HI G:H	

"6B:H \$>8D=6HHCK9 6H =>; M8JLK: ' ;;>8:G6C9 (GH9:CI 6HL:AA6H6B:B7:GD, I=:D6G HC8:"JAN (GDGID  
"JAN %G\$>8DHCK9 >CA69:GH=>EDH>DCH>C6 K6G:IND,9>;:GCI;JC8I>DCH6C9 7JHC:HHH6I 6C6=:G6;I:GDCC<  
6C6=:G6C >C8A9>C<6H M8JLK: .>8:(GH9:CI ;@B ID

=6CAH %8\$6J<=AC=6HHCK9 6H+:CDG :>8:(GH9:CI =>; >C6C8>6A' ;;>8:GH8:"JAN (GDGID"JAN %G  
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"JAN 6C9 6H+:CDG :>8:(GH9:CI =>; >C6C8>6A' ;;>8:GD, 6C6=:GH :8@B6C DIA:G7JHC:HH;@B "JAN ID"JAN

(6IG8@# %JCE=N=6HHCK9 6H(GH9:CI 6C9 ' D 9K6C8:9 :6A=86G+DAI>DCHHC8:"6CI 6CN 6H(GH9:CI 6C9  
' D (G8>HDC, :8=CDAD>H;@B "JAN ID :>8:B7:G 6C9 6H6+:CDG :>8:(GH9:CI ;@B "JAN ID"JAN  
(GDGID"JAN %G%JCE=NHCK9 6H6 @JE (GH9:CI D, 6C6=:G6;I:GDCC< 6C6=:G6C%6G= JCI>A"JAN  
(GDGID'DCC< 6C6=:G=:HCK9 6H ' D &>9:8%IIDG DQEDG6I>DC6C9 (GH9:CI D, I=: !% FEA6C8: DBB:G\$6A  
6C9 !C9JHG6A%IIDG JHC:HH- CI D, &>9:8 DQEDG6I>DC 6B6CI;68IJ GGD, 8DBB:G\$6A>C9JHG6A6C9 6EEA6C8: BDIHG6C9  
8DQDAH;@B JCI>A 8ID7:G

,6B6G+ &:L8DB7: =6HHCK9 6H(GH9:CI 6C9 ' D (G8>HDC, :8=CDAD>HHC8:"6CI 6CN (GDGID"6CI 6CN  
%H&:L8DB7: L6H @JE (GH9:CI ;@B %6N ID :>8:B7:G (GH9:CI D, :@GCM;@B EGA ID :>8:B7:G  
6C9 DBB:G\$6A (GH9:CI D, :@GCM;@B :7G6CN ID EGA (GDGID'DCC<, :@GCM% H&:L8DB7:  
L6H :>8:(GH9:CI D, +6AH6I >BD>NH:BH!C8 ;@B &DK B7:G ID :7G6CN

"DC6I=6C\$ +8=L6G=6HHCK9 6H+:CDG :>8:(GH9:CI DQEDG6I: :K AEB:CI HC8: :7G6CN 6C9 6H :>8:(GH9:CI  
+IGI:<N6C9 DQEDG6I: :K AEB:CI ;@B EGA ID :7G6CN 6C9 6H :>8:(GH9:CI DQEDG6I: :K AEB:CI ;@B  
"JAN ID EGA (GDGID"JAN %G+8=L6GCHCK9 6H :>8:(GH9:CI DQEDG6I: :K AEB:CI D, 6C6=:G;@B  
ID"JAN

9L6G\* +>BBDCH=6HHCK9 6H+:CDG :>8:(GH9:CI +IGI:<ND, DQK HC8: :7G6CN @B "JC ID  
:>8:B7:G %G+>BBDCHL6HI=: (GH9:CI D, >H6 DCH>A< @JE;DG >H6 FJ>N(6GC:GH 6A69>C<EGK6I:  
>CK HB:CI ;>B ;D8JH9 DCH;IL 6G 96I6 6C9 I:8=CDAD>N:C67A9 7JHC:HHH!C69>I>DC ;@B +:EI:B7:G I=@<=%6N  
%G+>BBDCHHCK9 6H6 (6GC:GD 6C DBE6CNL=:G=:HCK9 6H6 >G8IDG>C>H( GK6I: FJ>N( G8I>8: 6C9 A9  
>H, :8=CDAD>N %:>9>6 6C9, :A8DBBJC86I>DCHEG8I>8:

' AB>9: +DQEN =6HHCK9 6H(GH9:CI 6C9 ' D !CI:AA<CI' E G6C<+DAI>DCHHC8: J>JH (GDGID'DCC<  
DQK %G+DQEN L6HI=: %6C6<C< >G8IDGD, I=: (QE:GN!CI:AA<C8: 6C9 \*>H2%6C6<B:CI H<B:CI D, DG\$D>8 ;@B  
+:EI:B7:G ID J>JH

(:I:G - C9:GLDD9=6HHCK9 6H+:CDG :>8:(GH9:CI :C GA DI CHAD, DQK HC8: %6N (GDGID'DCC< DQK  
%G- C9:GLDD9 HCK9 6H :>8:(GH9:CI :C GA DI CHA6C9+:8G16CND, \*: <6A :AD DQEDG6I>DC 6B6CI;68IJ GGD,  
:A8IG8BDIGH;@B I=@<=%6N

+I68:N / 6A@G=6HHCK9 6H6+:CDG :>8:(GH9:CI JB6C\*:HI G:HD, DQK HC8:"JAN (GDGID"JAN %H  
/ 6A@GHCK9 6H :>8:(GH9:CI, 6ACI%6C6<B:CI D, 6C6=:G;@B "6CI 6CN ID"JAN 6;I:GHK6<6H :>8:  
(GH9:CI, 6ACI(A<CC<;@B :>8:B7:G ID :>8:B7:G 6C9 6H :>8:(GH9:CI JB6C\*:HI G:H;DG 6C6=:GH  
=:BIG6I 7JHC:HH;@B ID&DK B7:G

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' JG8DB BDC HD8@=6H7:: C1G9: 9 DCI=: &: L 1 DG@+ID8@ M=6C<: JC9: GI=: HNB 7DA , . HC8: "JAN HD,  
: 7G 6CN I=: G L: G 6EEGMB 6I: AN =D9: CHD, G8D9 D, DJG8DB BDC HD8@

/ : =6K =>HDG86AN E6> 9 6 FJ 6G: QN9>K9: C9 D, E: GH+6G D, DJG8DB BDC HD8@ CN; JIJ G E6NB: CHD, 9>K9: C9HDC  
DJG8DB BDC HD8@L>A7: 9: I: G>C: 9 7NDJ G D69 D, >G8IDGH6C9 L>A9: E: C9 DC DJG7JHC: HH8DC9>DCH; >C6C8>6AGH AH  
6C9 DI=: G; 68IDGH DJG D69 9:: B HGAK6CI

HG7D%GDE: 3E7EA8 CGRK( 75GDE7E

' C : 7G 6CN I=: DB E6CNH D69 D, >G8IDGH6EEGK 9 6 H+6G GEJG=6H EGD<GB 6JI=DGOC< I=: DB E6CNID  
GEJG=6H JEID B>ADCH+6GHD, I=: DB E6CNHDIH6C9>C< 8DB BDC HD8@; GB I>B: IDI>B: DCI=: DE: CB 6G@IDG<C  
EGK6I: ANC<DI>6I: 9 IGCH68IDCH, =: G>HCD: ME>GIDC 96I: ;DGI=: GEJG=6H EGD<GB 6C9 I=: I>B>C< 6C9 6B DJ CI D,  
GEJG=6H HJ C9: GI=: EGD<GB 6G 9: I: G>C: 9 7NI=: DB E6CNHB 6C6<: B: CI 76H 9 DC B 6G@I 8DC9>DCH6C9 DI=: G; 68IDGH  
, =: GEJG=6H EGD<GB B 6N7: H HE: C9: 9 D9>H8DCI: 9 6I 6CNI>B: 7NI=: D69 D, >G8IDGH

JGC< I=: ;H6AN 6G: C9: 9 : 8: B 7: G I=: DB E6CNEJG=6H 9 H+6G HD, >H8DB BDC HD8@6I 6C 6K G<:  
H+6G EG8: D, >C8A9>C< H+6GH6I 6C 6K G<: H+6G EG8: D, 9JGC< I=: ;DJ G= FJ 6G: GD, A6K<>  
B>ADCH+6GH6I=DGQ 9; DGEJG=6H JC9: GI=: H+6G GEJG=6H EGD<GB 6HD, : 8: B 7: G

, =: ;DAIL>C< I67A ECK9: H9: I6>A167DI DJ GH+6G GEJG=6H H9JGC< I=: ;H6AFJ 6G: G: C9: 9 : 8: B 7: G

%7D,A6		) AB>@G? 47D A8E 3D7E ADG@HE BGDE: 3E76		H7D897 BD57 B3;6 B7DE 3D7 ADG@F		) AB>@G? 47D A8E 3D7E ADG@HE BGDE: 3E76 3EB3IFA8BG4>5>K 3@@AG@576 B>3@EAD BD9ID? E		" 3I;? G? @G? 47D AD3BBDAI;? 3F7 6A>8D HB>G7 A8E 3D7E ADG@HE F 3F? 3KK7F47 BGDE: 3E76 G@7DE 7 B>3@EADBD9ID? E	
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DG>K DEDGIDC I=: W DB E6CNXWDG>K XVL: XWJ GX6C9 WHK >H6 ECK9: GD, : HH CI>6AI: 8=CDAD> H; DG8DCC 8I: 9  
LDG@AL HDAI>DCH68GHH6 G<C: D, 6IG68I>K : C9 B 6G@IH' JGHG6I: <8 H<B: CIH !CI: A>C: CI' E: GIDC<+DAI>DCH ( G8>HDC  
, : 8=CDAD> H 6C9 9K6C8: 9 : 6A=86G +DAI>DCH >C8A9: L: A@CLC 7G69HL>= A69>C< EDH>DCH>CI=: >GB 6G@IH' JG  
7JHC: HH H9: H>C 9: K AEB B 6CI; 68IJ G 6C9 H CK8: EGD; HHDC6A6C9 : C>C: G9 EGDJ 8IH HD, IL 6G 6C9 H CK8: H 7J>A>C<  
JEDCA 69>C< 7G69 C6B: H>CCK6I>K I: 8=CDAD> H 6C9 H>C>; 86CI B 6G@I EDH>DCH / : 6G =: 69FJ 6G: G9 >C K GII  
/ 6H>C<IDC 6C9 : BEAN 6I: 6B D, B DG I=6C GH 6G= 6C9 9: K AEB: CI B 6CI; 68IJ GC< H6AH 9>HG7J I>DC H CK8: 6C9  
69B>CHG6I>K : BEAN : HCB DG I=6C 8DI CI G: H6GD C9 I=: LDG

, =>H% >H9: H>C 9 IDECK9: 6 G 69: GD, DJ G;>C6C8>6AH6I: B: CHL>= 6 C6G6I>K ;GB I=: E GE: 8I>K D, B 6C6<: B: CI  
' JG% >H9>K9: 9 >IDHK CH 8I>DCH

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S \* : H A H D , ' E : G L D C H

S > C 6 C 8 > 6 A ' C H G B : C H 6 C 9 \* > H @ % 6 C 6 < : B : C I

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D O > K > H 6 B J A > C 6 I D C 6 A 7 J H C : H H L > > < A 7 6 A D E : G L D C H L > > 6 E E C M B 6 I : A N D J G H 5 A H 9 : G K 9 ; > C B 8 J H D B : G H D I H 9 : I = : - C I : 9 + I 6 I : H < C H 6 8 D B E 6 C N L > > < A 7 6 A D E : G L D C H D J G 7 J H C : H H 6 G 6 ; : : 8 I : 9 7 N L D O A L > 9 : G < D C 6 A 6 C 9 > C 9 J H C N H E : 8 > > 8 : 8 D C B > 8 6 C 9 E D A L 8 6 A : 6 8 I D C H ' J G < : D > G E = > 8 6 C 9 > C 9 J H C N 9 > > C H N 6 H L : A 6 H I = : G C < : D E C 9 J 8 I H H D I L 6 G 6 C 9 H C K 8 : H L : D ; : G I N E > 8 6 A N = : A E A B > I I = : > B E 6 8 I D 6 C N D C : > C 9 J H C N D G I = : : 8 D C B N D 6 C N H C < A 8 D J C I C N : M 8 : E I ; D G I = : - C I : 9 + I 6 I : H D C D J G D E : G L < > G H A H > > K C I = : 7 C 6 9 G C < : D E C 9 J 8 I H B 6 C I ; 6 8 I J G 9 H D I L 6 G 6 C 9 H C K 8 : H E C K 9 : 9 6 C 9 < : D > G E = > H H C K 9 L : 9 D C I J H 6 C N > > 8 : H D I = : G I = 6 C < : C G A : 8 D C B > 8 I G C 9 H I D E G 9 > 8 I I = : D K : G A D J I A D @ ; D G I = : D B E 6 C N ' J G > > > 9 J 6 A 7 J H C : H H B D C I D G @ N 8 D B E : I D C H 6 C 9 8 J H D B : G H > C 8 A 9 > > C < I = : > G H 5 A H I D I = : : M : C I E D H 7 A I D < > G I < : G A L > K E : G D B 6 C 8 : 6 C 9 I = : D I A D @ ; D G I = : ; J I J G

H 6 G H A D , D J G < : D > G E = > 8 6 C 9 > C 9 J H C N 9 > > C H N L : ; 6 8 : 6 K 6 G : I N D , D E E D G J C I > : H 6 C 9 8 = 6 A C < : H > C 8 A 9 > > C < I : 8 = C D A < > 8 6 A 9 : K A E B : C I > C B D H D , I = : B 6 C @ I H L : H C K I = : M E 6 C H D C 6 C 9 : K A I > D C D , D E E D G J C I > : H < > > > < G L I = B 6 C @ I H I G C 9 H 6 C 9 8 D H H 6 H D 8 > 6 I : 9 L > > 6 < A 7 6 A > 7 D G ; D 8 : 6 C 9 8 D C H A 9 6 I > D C D , D J G 8 D B E : I D C H / : 9 : ; > C > > > < G L I = B 6 C @ I H 6 H 9 : K A E < < B 6 C @ I H D , I = : L D O A : M E : G : C 8 < < : M : C 9 : 9 E : G D 9 H D , 6 8 8 : A G L : 9 < G L I = > > < G H 9 D B : H > 8 E C 9 J 8 I 6 C 9 > > > G H G 8 I J G L = > 8 = > C 8 A 9 : 6 H : G J O E : I = : % > 9 9 A 6 H ; > 8 6 > 6 I < B : > 8 6 6 C 9 H 6 L > > I = : : M 8 : E I > D C D , " 6 E 6 C 6 C 9 J H G A 6 / : D E : G L : > C 6 = > > > A N 8 D B E : I > > 7 J H C : H H : C K > C B : C I > C B D H B 6 C @ I H 6 C 9 D J G A C < I : G < G L I = 6 C 9 E C J > 6 7 > A I N L > A 9 : E C 9 > C E 6 C 8 J A G D C D J G 6 7 > A I N I D : M E 6 C 9 D J G 7 J H C : H H 6 8 G H H < : D > G E = > H 6 C 9 B 6 C @ I H < B : C H > 9 : C I > N 8 D C H B B 6 I : 6 C 9 > C I : < G L : 6 E E C E G 6 I : 6 8 F J > H > D C H 9 : K A E > C C K 6 I > > 6 C 9 9 > ; : G C I > 6 I : 9 C L E C 9 J 8 I H H C K 8 : H 6 C 9 H D I L 6 G : M E 6 C 9 6 C 9 > B E C K I = : ; : ; 8 I > K C H D , D J G H 5 A H ; D 8 : 8 D C I < > : I D G 9 J 8 : 8 D H H 6 C 9 > B E C K : D E : G L < < ; : > 8 > C 8 N 6 C 9 F J 6 A I N 6 I I G 8 I G A K 6 C I 6 A C I 6 C 9 G I 6 < < G L 6 C 9 : B E D L : G D J G I 6 A C I : 9 L D C @ D 8 : 6 C 9 : ; : 8 I > K A N 6 9 9 G H I = : 9 : B 6 C 9 H D , 6 C > C 8 G 6 H C < A N G < > J A I : 9 : C K > C B : C I / : 6 G B 6 C @ < H < > > 8 6 C I > C K H B : C H D G < 6 C 8 6 A N 6 C 9 I = G I < < 6 8 F J > H > D C H I D 6 9 9 G H I : 8 = C D A < > 8 6 A 8 = 6 C < : > C I = : B 6 C @ I H L : H C K 6 C 9 I D > B E C K : D J G B 6 C I ; 6 8 I J G < > G H 6 C 8 = 6 C 9 9 : K A E B : C I 6 C 9 8 J H D B : G ; 6 8 < < G H D J G : H < D 9 : G I D 7 : G H E D C H K : I D D J G 8 J H D B : G H I = G I < < < D I I = : L D O A

" = ; J ) % 3 : ) K - 7 6 . 4 <

! C : 7 G 6 C N \* J H H 6 C ; D 8 : H < C K 6 9 : 9 - @ > C : W J H H 6 - @ > C : D C ; A 8 I X G H A < < > C 7 C 6 9 : 8 D C B > 8 H 6 C 8 I D C H 7 : > < > B E D H 9 D C \* J H H 6 ! C I = : H 8 D C 9 F J 6 C : G D I = : D B E 6 C N : M I : 9 7 J H C : H H D E : G L D C H < > \* J H H 6 D I = : G I = 6 C ; D G + ( Y H H : G A G L D C E C 9 J 8 I H L = > 8 = 6 G : M B E I ; > C B > C I : G L > D C 6 A H 6 C 8 I D C H 6 H = J B 6 C I 6 G 6 C E C 9 J 8 I H ' J G 7 J H C : H < > \* J H H 6 6 C 9 - @ > C : 6 8 8 D J C I : 9 ; D G A H I = 6 C D I D 6 A G K C I : 6 C 9 A H I = 6 C D I D 6 A 6 H I H ; D G I = : N 6 G : C 9 : 9 : 8 : B 7 : G J G < < I = : N 6 G : C 9 : 9 : 8 : B 7 : G I = : D B E 6 C N G 8 D 9 : 9 E G I 6 M 8 = 6 C : H D , B > A D C E G B 6 G A N G A L < < I D I = : L G I : D ; D : C I 6 H I H I = : L G I : D ; D I = : 8 J B J A I > K I G C H 6 I D C 6 9 7 J H B : C I > > : 6 C < < > H ; D G A < < 6 A C I > > H 9 : : B : 9 H 7 H 6 C I 6 A N A F J > 6 I : 9 6 C 9 I D G 8 D 9 E C K > H D C H ; D G : B E A N : H K > C 8 : 6 C 9 A < < 6 A D C L < < : C 8 > H , = : H 8 D H H 6 G > 9 : C I > > 9 6 H I = : W J H H 6 : M I 6 C 9 L > > 9 D L C 8 D H H K > > C I = : D C H A 9 6 I : 9 + I 6 I : B : C H D , 6 C < < > H + J 7 H 6 C I 6 A N 6 A G A I : 9 A 6 7 > A I > H L : G E > 9 6 C 9 H I I A 9 9 J G < < I = : N 6 G : C 9 : 9 : 8 : B 7 : G

7 6 ! - ) ; = - ;

! C I = H G E D I G ; : G C 8 : H I D H 5 A H ; > C B : M H < < 7 J H C : H H H G ; : G I D H 5 A H ; > C B D E : G L D C H 8 6 A J A I : 9 6 8 8 D 9 > > C < I D < : C G A N 6 8 8 : E I : 9 6 8 8 D J C L < > E G C 8 > E A H < > C I = : - C I : 9 + I 6 I : H W ( X 7 J I : M A 9 > > C < I = : > B E 6 8 I ; > C B 6 8 F J > 9 7 J H C : H H 6 C 9 I = : > B E 6 8 I D 8 J G C 8 N I G C H 6 I D C \* : ; : G C 8 : H I D H 5 A H 6 I I G 7 J I 6 7 A I D 6 8 F J > H > D C H D G 6 8 F J > 9 7 J H C : H H H G ; : G I D ( H 5 A H ; > C B 6 8 F J > 9 7 J H C : H H H G 8 D 9 : 9 E G D G I D I = : > G H 6 C C > > K G 6 C N D , I = : 6 8 F J > H > D C 6 C 9 I = : ; : ; 8 I D , E J G < < 6 H 6 8 8 D J C L < >

69JHB:CIH AHI=: 6B DJ CI D, H5AH6IIG7JI67A ID8: G6C9>K: H: 9 7JHC: HI HDGEG9J 8I AC: HCI 8DCH9: G9 9>HDCI>CI: 9  
DE: GEDCHEGEGIDI=: >H 6CC>K G6OND, I=: 9>K H>IJ G , =: EDCEDC D, H5AH6IIG7JI67A IDI=: >B E68I D, 8J G6C8NIGCH6IDC  
>H86AJ A6I: 9 6HI=: 9>; G C8: 7: IL:: C 6 I=: E GD9 IDE: GD9 8=6C<: >CH5AH: M8A9>C< H5AH>B E68I; >DB 68FJ>G9  
7JHC: HI H 6C9 7 I=: E GD9 IDE: GD9 8=6C<: >CH5AH: M8A9>C< H5AH>B E68I; >DB 68FJ>G9 7JHC: HI H 6I: G6EEAN< I=:  
8J G6CI E: GD9; DG>C: M8=6C<: G6I: HIDI=: EGDGN 6GE: GD9 +6AH; >DB: MH>C< 7JHC: HI HI>DI A 7: 8DCH9: G9 >C 699>JDC  
ID 6C9 CI 6H6 GE A68: B: CI; DGDGHE: GEGID H5AH 6C9 B 6NCDI 7: 8DB E6G7A IDHB >AGNI>A 9 B: 6H GHGEDC: 9 7NDI=: G  
8DB E6C> H

% 6C6<: B: CI 7: A> K HI=6I GEDC>C I=: CDC ( ;>C6C8>6AB: 6H G D, H5AH; >DB: MH>C< 7JHC: HI HECDK9: HI H; JA  
>C; >DB 6I>DC ID>CK: HDGH7N=: A>C< >9: CI>NJ C9: GNC< <GEL I= IG C9H>C DI G7JHC: HI 6C9; >8>A6I>C< 8DB E6GHDCHD, DI GH5AH  
E: GDOB 6C8: L>= DI GE: GDOB 6C8: >CEGDG6C9; JIJ G E: GD9H6C9 IDDI GE: >GH / : : M8A9: I=: :;; 8I D, 68FJ >H>DC 6C9  
9>K H>IJ G G A6I: 9 >A: B H7: 86J H I=: C6IJ G HQ 6C9 CI B 7: GD, H 8= IGCH68I>DCH86C K6CN9G6B 6I>86AN; >DB E: GD9 IDE: GD9  
6C9 7: IL:: CI H6C9 DI GE: >GH / : : M8A9: I=: :;; 8I D, 8J G6C8NIGCH6I>DC; >DB H5AH; >DB: MH>C< 7JHC: HI H7: 86J H I=:  
>B E68I D, 8J G6C8NIGCH6I>DC>HCI J C9: GB 6C6<: B: CI>H8DCI>A6C9 >H7? 8I IDKD6I>AIN % 6C6<: B: CI 7: A> K HI=:  
>M8A9>C D, I=: :;; 8I D, 68FJ >H>DCH6C9 9>K H>IJ G H6C9 8J G6C8NIGCH6I>DC B 6N; >8>A6I: I=: 6H H B: CI D, J C9: GNC<  
7JHC: HI IG C9H6C9 B 6N6HH >C 8DB E6GHDCHD, AC< I: >DB E: GDOB 6C8: \*:;; G C8: HIDH5AHKDA B: ; >DB: MH>C< 7JHC: HI H  
G;; GIDI=: >B E68I D, 7DI= EG8: 6C9 J CI H5AH

GE@HE%7D&AD 3G573G \$ GEAA=

=>I6-;; ! -.:7:5 ) 6+>

/ : : ME: G6: C8: 9 G7JH 9: B 6C9; DGDJ GEG9J 8IH6C9 H C K8: 9J GC< 6C9 9: HEI: 8=6AAC>C< B 68GD 8DCDB>8 8DC9>JDC H  
6C9 <A76AH EEN8=6C 8DCHG>CIH 6<<G <6I: N 6GDK: GN 6GH5AH>C8G6H9 L>= 8DCIG7J I>DCH; >DB 7DI=: MH>C< 6C9  
C: L AN 68FJ>G9 7JHC: HI H 6AAE6G66AND; HI 7NJ C; 6KDG7A 8=6C<: H>C; DG>C: M8=6C<: G6I: H I: 6GDK: GN 6GH5AH; >DB  
>MH>C< 7JHC: HI H>C8G6H9 G; A8I>C< HEC<: C9 B 6C@I 9: B 6C9; DGDJ GD;; GC<H6HL: A6H; D8J H 9: M8J I>DC DC  
EG9J 8I 6C9 H C K8: 9: AK: CN 6C9; 6KDG7A EG8>C<

: D>GE=86AN N 6GDK: GN 6GH5AH; >DB: MH>C< 7JHC: HI H>C9: K AE: 9 B 6C@IH>C8G6H9 AIL 9DI 7A 9>>H L>= AIL  
9DI 7A 9>>I <GEL I= >C 7DI= &DQ= B: G86 6C9 / : H: G J GE: GHE: 8I>K AN I: 6GDK: GN 6GH5AH; >DB: MH>C< 7JHC: HI H>C  
=>C< <GEL I= B 6C@IH>C8G6H9 AIL 9DI 7A 9>>H 9GK: C 7NAL IL: CI> H<GEL I= >C \$ 6I>C B: G86 6C9 AIL 9DI 7A 9>>I <GEL I=  
>C =>C6

!C 699>JDC ID>C8G6H 9 9: B 6C9 N 6GDK: GN 6GEG8: >C8G6H H8DCIG7JI: 9 IDH5AH<GEL I= 9J GC< 6H8DB E6G9 ID  
6C9 >HG; A8I: 9 6H6 8DB EDC: CI D I=: 8=6C<: >CH5AH; >DB: MH>C< 7JHC: HI H J GC< EG8: >C8G6H H: M8: : 9: 9  
>C; A6I>DC GN>C8G6H HI=6I L: : ME: G6: C8: 9 DCEJ G=6H 9 B 6I: G6AH

, =: HGC<I=: CC< D, I=: - + 9DA6GG A6I>K: IDDI=: G8J G6C8> HG9J 8: 9 DI GH5AH7N 9J GC< 6H8DB E6G9 ID  
6C9 B 6N8DCI>CI: ID>B E68I DI GGH AH>C; JIJ G E: GD9H

/ >9: HEG 69 H EEN8=6C 8=6AAC<: H6C9 >C; A6I>DC6NEGHI GHE: GHH: 9 I=DI <=DI I=: N 6GGH A>C< >C=>C=: G8DHH>C: 68= D,  
DI GI>G: H<B: CIH / : 8DCI>CI: ID6EEAN + ID=: AEB>>6I: I=: >B E68I D I=: H 8=6AAC<: H6C9 IDH C K: DI G8J HDB: GH, =:  
' , ! E6C9: B>8 >C8A9>C I=: B>>6I>DC::; DGH6C9 I=: 688: A G6I: 9 HEG 69 D I=: K G H>C =>C6 8DCI>CI: HID 69K GH AN  
>B E68I DI GGH AH6C9 8G 6I: HDE: G6I>C< 8=6AAC<: HL>= AD>H 8H B 6I: G6A6K6>A7>AIN 6C9 67H CI: : >B / : 6CI>8>E6I: I=6I I=:  
9>HJ EI>DCH86J H 9 7NI=: E6C9: B>8 L>A8DCI>CI: ID>B E68I; JIJ G E: GD9H

=>4773

: HEI: 6C: KDAK>C< B 68GD: CK>GCB: CI 6C9 8DCI>CI: 9 <: DEDAI>86A8DC A8I L: 6CI>8>E6I: >C8G6HC< 9: B 6C9; DGDJ GD;; GC<H  
L>A8DCI>CI: 6C9 6G EG9: 8I>C<; J AN 6GH5AHID<GEL DC 6 N 6GDK: GN 6G76HH7N 6EEGMB 6I: AN L>= N 6GDK: G  
N 6G<GEL I=: >DB: MH>C< 7JHC: HI HD, 6EEGMB 6I: AN / : : ME: 8I I=6I; DG>C: M8=6C<: G6I: HL>AGB 6C KDA6A  
>C 6C9 8DI A 8G 6I: J C; 6KDG7A GH AHG A6I>K ID; DG>C: M8=6C<: G6I: H>C 99>I>DC6AN I=HDI IAD>HH 7? 8I ID  
K6GDI H6HH B EI>DCH6C9 GH>H >C8A9>C< 7JI CI AB>: 9 IDI=: GH>A>C8: 6C9 9J G7>AIND I=: : 8DCDB>HD I=: - C I: 9 +I6I: H  
6C9 DI=: G8GI>86AG<DCH DC>DC< 8=6AAC<: HL>= <A76AAD>H 8H6C9 H EEN8=6CH>C8A9>C I=: 6K6>A7>AIND; A 8I G C8  
8DB EDC: CIH >C; A6I>DC6NEGHI GH I=: >B E68I D I=: ' , ! E6C9: B>8 I=: >B E68I D I=: \* JH6- @>C DC; A8I B 6C@I  
8DC9>JDC>C@N: C9 EG9J 8I H<B: CIH: A8I>K: H G: GN G6I: H 6C9 I=: >B E68I D: C GN9>HJ EI>DC>C J GE: / : L>A8DCI>CI:  
ID9: EAN + ID 68I>K: AN B 6C6<: EG9J 8I>DC 8=6AAC<: H 8DA67D G6I: L>= 8J HDB: GH6C9 H EEA: GHIDB>C B>9 >HJ EI>DCH6C9  
JL>AQ EG8: >C8G6H H6C9 DI=: G8DI CI: >B: 6H GHIDD; HI>C; A6I>DC6NEGHI GH !C 699>JDC L: : ME: 8I ID: M8J I: 9>HGI:  
GHG 8IJ GC< E A6CH6HL: A6HDI G>C: G A 8DH H6K>C< B: 6H GHIDEGE 6G; DG 6C9 GHEDC9 ID 6CNB 6I: G6A69K: GH <A76A  
>8DCDB>8 IG C9HI=6I B 6N9: K AE



/ : 8DCI>CI: IDB DCIDGI=: B 68GD 8DCDB>8 6C9 <: DEDAI>86A8DC9>DCHL=>8= B 6N>B E68I DI G7J HC: HH >C8A9>C< HEG 69 D I=:  
' . ! KQJ H 8DCI>CI: 9 <: DEDAI>86A8DC, A8I <A76A>C, A1>DC EDI: CI>6A69K QH <A76A> 8DCDB>8 IG C9H6C9 H CI>B: CIH  
B DC: I6GN6C9 ;>H6AEDA8> H>CI: G6I>DC6AIG9: 6C9 G A1>DCH7: IL:: CI=: - + =>C6 6C9 DI=: GC6I>DCH 6C9 >K HB: CI 6C9  
I6M1>DC EDA8N>C>I>6I>K H7: >C< 8DCH9: G9 >CI=: - CI: 9 +I6I: H6C9 7NI=: ' G>6C>6I>DC; DG 8DCDB>8 D DE: G1>DC 6C9  
: K AEB: CI W X

5CGEEFACE3G ;H7HKGJVE

\$0-:)>8A! 0A! I+; L>;>4<-:

' C+: EI: B7: G L: 8DB EAI: 9 I=: H5A D DI G, =: GEN( =N8HEC9J 8I AC L=>8= L6HG EDC: 9 >C DI G 9K6C8: 9  
: 6A=86G +DAI>DCHH<B: CI ID6CJ CG A1: 9 I=>C9 E6CN; DG86H: 8DCH9: G1>DC D B>ADC H6 G H A D I=: H5A 9J GC<  
I=: N 6G: C9: 9 :8: B7: G L: G8D9: 9 6 C I G 6A9 9 EG I6M<6 C IDI6AC< B>ADC C I D, IG C H 8I>DC 8DHH L=>8=  
>HG8D9: 9 6HW I=: GCDC DE: G1>C<: ME: CH C IX>CI=: DCHDA96I: 9 +I6I: B: CIHQ 6C>C>H, =: 9>K H: 9 7J HC: HH68DI CI: 9  
>DGAHHI=6C D I DI6AG K CI: 6C9 AHHI=6C D I DI6A6H I H; DGI=: N 6G: C9: 9 :8: B7: G , =: 9>K H>J G D,  
I=>HEC9J 8I AC: 9>9 CI GEG H CI 6 H G1: <8 H>I L>= 6 B 6DG: ;; 8I DCI=: DB E6CNHDE: G1>DCH6C9 ;>C6C8>6AG H AH6C9  
I=: G; DG I=: 9>K H: 9 EC9J 8I AC: >HCI GEDC: 9 6H6 9>HDCI>CI: 9 DE: G1>DC

#-:>I+ 0)66-4 +9=I; I476

' C J>JH L: 68FJ>G9 +: CK8: =6CC: A DA>C>H!C8 W: CK8: =6CC: AK 6 EGK6I: AN=: A <A76A>ECK9: GD, +66+  
76H9 BJA>HE: ;68>A1> HB 6>CI: C6C8: H CK8: HDAI>DCHL>= 6C>CI: <G1: 9 H CK8: ECK9: GC IL DC@, =: 68FJ>H1>DC D,  
+: CK8: =6CC: A7C69: CHDI GD;: GC< D, HD, IL 6G : C67A9 HDAI>DCH; DGI=: ;68>AIN 6C9 6HHI A: 8N8A LDC@AL , =: IDI6A  
8DCH9: G1>DC E69 L 6H6EEGMB 6I: AN 7>ADC C I D, 68FJ>G9 86H: 6C9 >C8A9: H6EEGMB 6I: AN B>ADC D, 9: ;>G9  
8DB E: CH1>DC 8DCH9: G1>DCL 6H7: >C< G8D>C>Q 9 G167ANDK G6 IL: AK B DCI= H CK8: E: GD9 , =: +: CK8: =6CC: A68FJ>H1>DC  
L 6HEGB 6GAN; >C6C8: 9 L>= 6K6>A7A 86H: 6C9 EDC8: : 9H; GB DI G; >C6C8>C< 68I>K1> H/ : G8D9: 9 6EEGMB 6I: AN B>ADC  
D, <DD9L>AG A1: 9 IDI=: +: CK8: =6CC: A68FJ>H1>DC L=>8= >HCI I6M9: 9J 8I>7A +: CK8: =6CC: A=69 GK CI: >C D,  
6EEGMB 6I: AN B>ADC 6C9 >H6C DE: G1>C< 8DB E6CNL>=>C DI G!CI: A<: CI' E: G1>C< +DAI>DCHH<B: CI

! : 7>) >76 +9=I; I476

' C :8: B7: G L: 68FJ>G9 ( CK6I>DC +D, IL 6G !C8 W CK6I>DCX 6 A69>C< ECK9: GD, 8AC86AL DC@AL HD, IL 6G  
HDAI>DCHH 9 >C=DE>6AH6C9 6B 7J AIDGNH G: ON8: CI: GH, =: 68FJ>H1>DC D, ( CK6I>DC: ME: C9HDI C9>A6AD;: GC< 6C9  
HD, IL 6G 86E67>A1> H>CI=: =: 6A=86G HE68: , =: IDI6A8DCH9: G1>DC E69 L 6H6EEGMB 6I: AN 7>ADC C I D, 68FJ>G9 86H:  
6C9 L 6HEGB 6GAN; >C6C8: 9 L>= EDC8: : 9H; GB DI G; >C6C8>C< 68I>K1> H6C9 6K6>A7A 86H: / : G8D9: 9 B>ADC D,  
<DD9L>AG A1: 9 IDI=: 68FJ>H1>DC L=>8= >HCI I6M9: 9J 8I>7A ( CK6I>DC=69 GK CI: >C D, 6EEGMB 6I: AN B>ADC  
6C9 >H6C DE: G1>C< 8DB E6CNL>=>C DI G 9K6C8: 9 : 6A=86G +DAI>DCHH<B: CI

&764: #>8):>) >76

' C' 8ID7: G L: 8DB EAI: 9 I=: +: E6G1>DC 7N9>HG7J I>C< D I=: DI IH6C9>C< H=6G HD, DCI> GIDDJ G  
HD8@DA: GHDC 6 EDC G16 76HH, D: ;: 8I I=: +: E6G1>DC L: 9>HG7J I: 9 IDDI GH8@DA: GHIL DI H=6G HD, DCI> G8DB B DC  
HD8@; DG: K ON; >K H=6G HD, DG>K 8DB B DC HD8@DI IH6C9>C<=: A DC+: EI: B7: G I=: G8D9 96I: ; DGI=:  
9>HG7J I>DC 6C9 GI6C: 9 D I=: H=6G HD, DCI> G8DB B DC HD8@B B: 9>6I: AN; DAIL>C< I=: +: E6G1>DC, =: 688DI CI>C<  
GFJ>GB: CIH; DGG EDC< I=: +: E6G1>DC D, DCI> G6H6 9>HDCI>CI: 9 DE: G1>DCL: G B: I L=: CI=: +: E6G1>DCL 6H8DB EAI: 9

' C+: EI: B7: G . DCI> G CI: G9 >CID 6 8G9>I 6<G: B: CI I=: W G9>I <G: B: CIX L>= 6 HNC9>86I: D, 76C>H 8DCHH>C<  
D, 6 I=G: N 6G B>ADC H C DGJ CH 8J G9 9: AN 9 9 G L I: CB A6C; 68>AIN I=: W=G: 1: 6G: : CB \$D6CHK 6 IL DN 6G  
7>ADC H C DGJ CH 8J G9 9: AN 9 9 G L I: CB A6C; 68>AIN I=: W L D 1: 6G: : CB \$D6CHK 6C9 ID> I=: GL>= I=: W=G: 1: 6G: : CB  
\$D6CHK I=: W: CB \$D6CHK 6C9 6 I=G: N 6G B>ADC H C DGJ CH 8J G9 BJA>8J G C8NG KDKC< 8G9>I; 68>AIN I=:  
W: KDKC< G9>I 68>AINX 6C9 ID> I=: GL>= I=: , : CB \$D6CH I=: W G9>I 68>A1> HK ' CI=: >HG7J I>DC 6I: . DCI> G9GL  
9DL CI=: JAA 7>ADC 6K6>A7A J C9: GI=: , : CB \$D6CH. DCI> GI H9 I=: EDC8: 9H; GB I=: , : CB \$D6CHID B 6@ E6NB: CIH  
IDI=: DB E6CN L>= 7>ADC J H9 6HE6C D I=: 8DCH9: G1>DC; DGI=: 8DCIG7J I>DC D, 8: G6>C 6HHI H6C9 A67>A1> HID  
. DCI> G7NI=: DB E6CN>C8DCC 8I>DCL>= I=: +: E6G1>DC 6C9 B>ADC J H9 6H6C 69>J HB: CI ; DG: M8: HH86H: 76A6C8: H  
GB 6>C< L>=. DCI> G 8DA8I>K AN I=: W 6H: DCH9: G1>DCX / : 6EEA 9 I=: 6H: DCH9: G1>DC IDGE 6N8: G6>C  
DI IH6C9>C< >9: 7I: 9C: HH>CI: GH DC8: G6>C9: 7I>CHQ B: CIH 6C9 IDE 6N8: G6>C D I=: DB E6CNH G<J AG FJ 6CI: AN 86H:  
9>K9: C9H\*: ;: GID & DI: IDI=: 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CIH; DGI=: 9: H8GEL>DC D I=: 9: 7I G E6NB: CIHB 69:

' C"6CJ6CN L: 8DBEAI:9 I=: :7I ;DG FJ>N M=6C<: D B>ADC H=6GHD, 8DB BDC HD8@D, . DCI>G  
GEGH CI<C< 6AD, I=: \*: I6<C 9 . DCI>G+=6GH ;DG 7>ADC>C6<<G<6I: EG8>E6A6B DJ CI D, >C9: 7I: 9C: HD, I=: DB E6CN  
=: A 7N DA9B 6C+68=H D >C8A9>C< > 6AA B>ADC D, I=: , : CB \$D6C9J: %6C= 6C9 >> B>ADC D, I=:  
, : CB \$D6C9J: %6N / : G8D9: 9 6 ADHDC: M<C<J H B: CI D, I=: 9: 7I>C8A9: 9>CI=: : 7I ;DG FJ>N M=6C<: D  
B>ADC>CI=: N 6G: C9: 9 : 8: B7: G 99>DC6AN 9J GC< I=: ;GH FJ 6G: GD L: G8D>C9 9 6<6C D  
B>ADC G AI: 9 IDI=: H 7H FJ: CI 8=6C<: >CI=: ;6GK6A: D, I=: \*: I6<C 9 . DCI>G+=6GH

!CEGE6GIDC;DG6C9 : M8JL< I=: +: E6GIDC I=: DB E6CN>C8J G9 B>ADC 6C9 B>ADC>C. DCI>GH6C9 JE 6C9  
HE6GIDC G AI: 9 IGCH68IDC8DHH9JGC< I=: N 6G: C9: 9 : 8: B7: G 6C9 GHE: 8I K AN L=>8=>6K 7:: C  
G8AH>9 ID9>HDCI: 9 DE: GIDCH>CI=: 688DB E6CN< 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CH, =: H H6C9 JE 6C9 HE6GIDC  
G AI: 9 8DHH6GB 6GANG AI: IDEQ: HHD6A6C9 69KHDON::: H6HD8>6I: 9 L>= EGE6GIDC D, G<J AIDON;>AC>H6C9 HE6GIDC  
68I K I> HL>=>C;>C6C8: I6MA<6A 6C9>C;DB 6IDCHNH: B ;J C8IDCH

!C8DCC: 8I>DCL>= I=: +: E6GIDC D I K 6C9 . DCI>G: CI: G9>CID K6GID H6<G: B: CHID::: 8I I=: +: E6GIDC 6C9 ECK9: 6  
;GB: LDC@;DG DCI>GHG AI>DCH>EL>= D I K 6I: GI=: +: E6GIDC>C8A9>C< 6 IGCH>DCH K8: H6<G: B: CI 6C: BEAN:  
B 6I: CH6<G: B: CI 6 I6MB 6I: CH6<G: B: CI 6C>CI: AA8IJ 6AECE: QNB 6I: CH6<G: B: CI 6 +A8: CH 6<G: B: CI 6C9 6  
HD8@D9: GH6C9 G<H GIDC G<=IH6<G: B: CI , =: H 6<G: B: CH>DK C I=: HE6GIDC7: IL::: C D I K 6C9 . DCI>GD, I=:  
6HI IH: BEAN: H A67>AI> H 6C9 D7A>6I>DCH>C8A9>C> >H>CK HB: CH ECE: QN 6C9: BEAN: 7: C:>H6C9 I6MG AI: 9 6HI IH  
6C9 A67>AI> H D D I K 6C9>HH 7H9>6G: H6IIG7JI67A IDE: GD9HEGDID 6I 6C9 6I: G DCI>GHHE6GIDC 6C9 6AD>DK C  
8: G6<CG AI>DCH>EH7: IL::: C D I K 6C9 . DCI>G6I: GI=: +: E6GIDC HD : 8: B7: G 6AGHEDCH7>AI> H6C9  
D7A>6I>DCHJ C9: G6A6<G: B: CH=6K 7:: CB 6I: G6ANH IIA9

\$ E 7D 5CGEFA@D7>3F76 " 3H7DE

' C EGA I=: WGC8>E6A AHC< 6I: X L: 68FJ>G9 I=: 69K6C8: 9 H: GAGIDCEQJ 8IH7JHC: HI W+( X D, "D=CHC  
"D=CHC 6 &: L ": GHN8DCEGIDC ( GDGIDJ G68FJ>H>EDC, +( "D=CHC "D=CHC G8: >K 9 6 >K A I K H>6I K  
: B 6C9 ;GB I=: - C I: 9 +I6I: H : E6GB: CI D, "JH8: W" "X G<6C9>C< 6 6AI A>B H 8I>CK H>6IDC 6GHC< ;GB 6  
L=HA7AL: GAI L H>E: G6<C< IDI=: EG8>C< FJ 6AIN B 6C@I< 6C9 EGB D I D C D, 8: G6<C D, +( YHEQJ 8IH 6H9 DCI=:  
IDI6AIN D, 6K6>A7A>C;DB 6IDC 6I I=: ( GC8>E6A AHC< 6I: 6C9 I=QJ <=DI I=: 6EEA867A B: 6HIGB: CI E GD B 6C6<: B: CI  
6AD86I: 9 B>ADC D, I=: 7>ADCEJ G=6H EG8: ID6 EDI: CI>6AA67>AING AI: 9 IDI=: 6;DG B: CI>DC 9 AI>6I>DC DAI L>C<  
I=: ( GC8>E6A AHC< 6I: B 6C6<: B: CI 8DCI>CI 6AN: K6A 6I: 9 I=: A@A=DD 6C9 B 6<CI J 9: D, I=: 6HI G: 9 8A>B H76H9 DC6CN  
C: L>C;DB 6IDC I=6I 7: 86B: 6K6>A7A !CI=: H8DC9 FJ 6G: GD ;DAI L>C< I=: JCH 6AC< D, I=: L=HA7AL: GAI L H>E 6C9  
" "YH9: 8AC6IDC ID>CI: CK C>CI=: AI>6IDC I=: E6<CI>; 9>B>H9 I=: L=HA7AL: GAI L H>E 6H9 DCI=: H 9: K AEB: CH  
B 6C6<: B: CI 9: G8D>C9 9 I=: AI>6IDC A67>AIN;GB DI G DCHDA96I: 9 6AC8: +=: I 6C9 G8D9: 9 6 6<DC AI>6IDC  
GHAI D C D, B>ADCL>=>C &DC DE: G I C<>C8DB: : ME: CH C I>C DI G DCHDA96I: 9 +I6I: B: CHD, 6C<C>H9JGC< I=:  
N 6G: C9: 9 : 8: B7: G

JGC< L: 68FJ>G9 : CHH, : 8=CDAD>: H W: CH I K I I=: 8AHC< 96I: D I=: EJ G=6H D : CHH 6 8DCIG8IJ 6AA67>AIN  
: MH: 9 L=>8= B 6C6<: B: CI 6AD86I: 9 IDI=: EJ G=6H EG8: 6C9 L6HG8D9: 9>C DI G DCHDA96I: 9 6AC8: +=: I JGC< I=:  
;DI G= FJ 6G: GD I=6I A67>AINL 6H9>H=6G: 9 ;DG 6C 6B DI CI AHHI=6CI=: 6B DI CI 6AD86I: 9 6C9 I=: : M8: HHL 6HG8D9: 9  
6H6 6<DC AI>6IDC GHAI D C D, B>ADCL>=>C &DC DE: G I C<>C8DB: : ME: CH C I>C DI G DCHDA96I: 9 +I6I: B: CHD,  
6C<C>H9JGC< I=: N 6G: C9: 9 : 8: B7: G

' (\*!)( \$ \$ % ' ) \$ # (

A? BA@GEA8( 3>E DAI E

	HE	HE
) AB>D7H7@G7 9DAI E %		
MHC< 7JHC: H I H &DC (		
8FJ>HEDCH &DC (		
JGC8N: M=6C<: GI: H &DC (		

\*::: GID!CI: A<: CI' E: G I C< +DAI DCH ( G8>HDC, : 8=CDAD>: H6C9 9K6C8: 9 : 6A=86G +DAI DCHH 8I DCH7: AI L ;DG;J G=: G  
9>HJ HHDC D, N 6GDK GN 6GH6AH<GL I=

\$ B7DBE@ %DA&F" 3D;@E

HE

' E: 6bC<EQD;A B 6G<CHL: G ;DGI=: N 6G: C9: 9 : 8: B 7: G 6C>C8G 6H D; 76HHED<CH 6H8DB E6G 9 ID  
>C L>= N 6GDK: GN 6GDE: 6bC<EQD;A B 6G<C 8DB E6GHDC H>B E68I: 9 7N

S 1: 6GDK: GN 6G<C8G 6H >CEG8: 6C9 H6AHKDA B: H;QB: MH<C< 7JHC: HH H6C9 <6CH;QB EQD9J 8I>KINB: 6H GH  
L=>8= L: G E6C6AND; HI 7N=>=: GN 6GDK: GN 6G: B EADN: 8DB E: CH6I>DC ;G>=I AD<H>8H6C9 B 6I: G6A8DHH6C9  
JC; 6KD67A ;DG>C: M8=6C<: 6I: HV ;6KD67A 76HHED<CH

S , =: N 6GDK: GN 6G: ;;: 8I D; 6B DQ66I>DC;QB: MH<C< 7JHC: HH HV ;6KD67A 76HHED<CH

S , =: N 6GDK: GN 6GC: I: ;;: 8I D; 68FJ>HI>DC G 6I: 9 IG<CH68I>DC 8DHHL=>8= L: G AL: G9J GC< V ;6KD67A  
76HHED<CH

S , =: N 6GDK: GN 6GC: I: ;;: 8I D; 68FJ>G9 7JHC: HH H>C8A9>C< 6B DQ66I>DC 6C9 68FJ>HI>DC G 6I: 9 ;6GK6A:  
69J HB: CIHV JC; 6KD67A 76HHED<CH

S , =: N 6GDK: GN 6G: ;;: 8I D; H<C;>86CI GHG 8IJ GC< 8DHHL=>8= L: G AL: G9J GC< V ;6KD67A 76HHED<CH

S \*JH6: MI 6C9 L>C9 9DL C8DHHI=6I L: G >C8J G9 9J GC< V JC; 6KD67A 76HHED<CH

HE

' E: 6bC<EQD;A B 6G<CHL: G ;DGI=: N 6G: C9: 9 : 8: B 7: G 6C>C8G 6H D; 76HHED<CH 6H8DB E6G 9 ID  
>C L>= N 6GDK: GN 6GDE: 6bC<EQD;A B 6G<C 8DB E6GHDC H>B E68I: 9 7N

S >=: GN 6GDK: GN 6GH6AHKDA B: H6C9 EG8: >C8G 6H H;QB: MH<C< 7JHC: HH H>C8GB: CI6AN 6GDK: GN 6G8DH  
H6K<C H6HD>6I: 9 L>= GHG 8IJ GC< 6C9 EQD9J 8I>KIN>B E6DK: B: CI>C>6I>K H6C9 ;6KD67A H6AHB>ML=>8= L: G  
E6C6AND; HI 7N=>=: GN 6GDK: GN 6G: G>=I 6C9 AD<H>8H8DHH: B EADN: 8DB E: CH6I>DC 6C9 + 8DHH L=>8=  
L: G G9J 8: 9 >C ID7: II: G6A<C 8DHHL>=9: B 6C9 >C GHEDCH IDI=: E6C9: B>8 V ;6KD67A 76HHED<CH

S , =: N 6GDK: GN 6GC: I: ;;: 8I D; 68FJ>HI>DC G 6I: 9 IG<CH68I>DC 8DHHL=>8= L: G AH6CI=: N 6G: C9: 9 : 8: B 7: G  
I=6CI=DH G8D<CQ 9 >CI=: 8DB E667A E: GD9 >C V ;6KD67A 76HHED<CH

S , =: N 6GDK: GN 6G: ;;: 8I D; 6B DQ66I>DC;QB: MH<C< 7JHC: HH HV ;6KD67A 76HHED<CH

S , =: N 6GDK: GN 6G: ;;: 8IHD; GHG 8IJ GC< 8DHHL=>8= L: G AH6C I=6CI=DH G8D<CQ 9 >C V ;6KD67A  
76HHED<CH

S , =: N 6GDK: GN 6G: ;;: 8I D; 68FJ>G9 7JHC: HH H>C8A9>C< 6B DQ66I>DC 6C9 68FJ>HI>DC G 6I: 9 ;6GK6A:  
69J HB: CIHD9: ;;: G9 G K CI: 6C9 >K CIDNL=>8= L: G >=: GC I=6CI=DH G8D<CQ 9 >C V  
JC; 6KD67A 76HHED<CH

GE@EE( 79? 7GE3@ 7A9DBB; ;5 D73 ' 7HSE

+6AH7N7JHC:HH<B:CI6C9<:D<GE=>86G6;DGI=:N6G:C9:9 :8:B7:G 6G6H;DA<LH >CB>ADCH

( 79? 7GE

!CI: A<: CI' E: G<L<+DA<LHCH

( G8>HDC, :8=<DA<L>:H

9K6C8:9 :6A=86G+DA<LHCH

, DI6A

7A9DBB; ;5 3D73

- C<: 9 +I6I: H

=<C6

AD<=: G: 68= 8DI<CN>C9>K9J6ANAHII=6C D, DI6AH6AH

, DI6A

#) !! #) \$ % ' ) # (\$!\*) \$#(

' JG!CI: A<: CI' E: G<L<+DA<LHCHH<B:CI ECK9: H69K6C8:9 >CHGB:CI6LDC HJ,IL6G 6C9 HCK8: HIDI: CHD, I=DI H6C9HD, 8JHDB: GH: C67AC<I=: >GB>HDC 8GI<86ALDC@ALH, =: H D,: GC<H>C8A9: : A8IG86AL: H B: 6HGB: CI ;68>AN6C9 6HI A<: 8N8A HJ,IL6G 6EEA86L>DCH 8DC: 8I: 9 LDC@GH<: IN6C9 8DBEA6C8: HDA<LHCH68GH6 G<C<: D, K G86A: C9 B6C@IH >C8A9>C< B6CJ;68IJGC< ECK8: H<C9JHG< H=: 6A=86G JI>A<: H6C9 EDL: G8DBBJC86L>DCH6C9: A8IGC<8H6BDC<DI=: GH

@7>97@F\$ B7DBE,@ ( A<GEACE( 7>5F76 ;@<G;3> 3EB

AD<E 7. 73D @76 757? 47D

>CB>ADCH

+6AH

' E: G<L<EQJ>I

: EG8>6LDC

BDC<G6LDC

' E: G<L<EQJ>I 6H6 D, H6AH

: EG8>6LDC6H6 D, H6AH

BDC<G6LDC6H6 D, H6AH

A? BA@GEA8( 3>7E DAI E

HE

HE

) AB>DVH7@G7 9DAI E %

MH<C<7JHC:HH &DC (

8FJ>H>DCH &DC (

JGGC8N: M8=6C<: G<I: H &DC (

\$ " % ' ) \$

1: 6GDK: GN 6GH6AH;GB : MH<C<7JHC: HH<C8G6H9 >C 6H8DB E6G9 ID ,=: N 6GDK: GN 6G<C8G6H L6H 9GK: C7NEG8: >C8G6HH6C9 8DCLCJ: 9 HCK<: 9: B 6C9 ;DGI: H 6C9 B: 6HGB: CI >CHGB: CI6LDC <6H9: I: 8LDCD,: GC<H 6C9 HJ,IL6G 6C9 GAI: 9 HCK8: H

: D<GE=>86AN H6AH;GB : MH<C<7JHC: HH<C9: K AE: 9 B6C@IH<C8G6H9 7NAL 9DI7A 9>>IH9JGC< 9GK: C7N B>9 I: : CH<GLI=>C/ : H: G JGE: 6C9 AL 9DI7A 9>>I <GLI=>C&DGI= B: G86 +6AH<C=>=<GLI= B6C@IH<C8G6H9 7N AL 9DI7A 9>>IH9JGC< 9GK: C7N=>=>HC<A 9>>IH<GLI=>C =>C6 AL IL: CI: H<GLI=>C\$6L< B: G86 6C9 B>9 I: : CH<GLI=>C' I=: G H6

1: 6GDK: GN 6GEG8: >C8G6HH<CDJG!CI: A<: CI' E: G<L<+DA<LHCHH<B:CI 8DCG7JI: 9 IDH6AH<GLI=>C 6H 8DB E6G9 ID 6C9 >HG;A8I: 9 6H6 8DB EDC: CI D, I=: 8=6C<: >CH6AH;GB : MH<C<7JHC: HH



' E: 6L< E0>1 B 6G<C>C8G 6H 9 76HHED<CH9J GC< 6H8DB E6G 9 ID L>= N 6GDK: GN 6GDE: 6L< E0>1 B 6G<C>8DB E6GHDCH>B E68I: 9 7N

S 1: 6GDK: GN 6G<C8G 6H >C EG8: 6C9 H<AHKDA B: ; <B: MH<C< 7J HC: HH H6C9 <6<CH; <B E0D9J 8L>KINB: 6H GH E6<6<AND; HI 7N=>=: GN 6GDK: GN 6G; G<=>I A<H>8H6C9 B 6I: G6A8DHH6C9: B EADN: 8DB E: CH6L>DC 8DHH 6C9 <6L I=>CK HB: CH<C\* H<AH6C9 B 6<@L<C< 6C9 J C; 6KD<7A ; DG>C: M<=6C<: 6L: HV ; 6KD<7A 76HH ED<CH

S , =: N 6GDK: GN 6G: ;: 8I D, 6B D<6<6L>DC; <B: MH<C< 7J HC: HH HV ; 6KD<7A 76HHED<CH

S , =: N 6GDK: GN 6G: ;: 8I D, 68FJ >H<DC G <6I: 9 IG<CH68L>DC 8DHH L=>8= L: G AL: G<C I=6C I=6H G8D<C0 9 >C V ; 6KD<7A 76HHED<CH

S , =: N 6GDK: GN 6G: ;: 8I D, 68FJ >G 9 7J HC: HH H >C A 9>C< 6B D<6<6L>DC V J C; 6KD<7A 76HHED<CH

S , =: N 6GDK: GN 6G: ;: 8I D, H<C>; <8C I GHG 8IJ GC< 8DHH L=>8= L: G AH<C I=6C I=6H G8D<C0 9 >C V ; 6KD<7A 76HHED<CH

\$ " % ' ) \$

1: 6GDK: GN 6GH<AH; <B: MH<C< 7J HC: HH H<C8G 6H 9 >C 6H8DB E6G 9 ID , =: N 6GDK: GN 6G<C8G 6H L 6H 9GK: C 7N 7<69 76H 9 >C8G 6H H<C9: B 6C9 E6<8J <6GN; <B DJ G<C9J HG6A8=6CC: AE6<C: CH 8GL>86AH<; IN ; 68>AL> H 6C9 B 6<C: C6C8: +66+ E0D9J 8I D;: GC<H 6C9 ED<67A <6H9: I: 8L>DC>CHG B: CH L=>8= L: G E6<6<AND; HI 7N 6 9: 8G 6H >C 9: B 6C9 ; DGI G<C9J HG6A B 6<C< E0D9J 8IH 6H9: B 6C9 ; DGI=6H E0D9J 8IHL 6H: AK6I: 9 9J GC< I=: 8DB E6<7A E: G09 >C ; DG ' . ! B D<C I DG<

: D<6E=>86AN 9: B 6C9 ; <B: MH<C< 7J HC: HH H<C DJ G! C: A<: C' E: 6L<C< +DA L>DCHH <B: C I >C8G 6H 9 >C 7DI= 9: K AE: 9 6C9 =>=> <6L I= B 6<@ IH9J GC< 9GK: C 7N <6L I=>C: K ONB 67DG< D<6E=>N 6C9 A 9 7N <D<= B: G86 J <E: =>C6 6C9 \$ 6L< B: G86

1: 6GDK: GN 6GE08: >C8G 6H H<C DJ G! C: A<: C' E: 6L<C< +DA L>DCHH <B: C I 8D<C G 7J I: 9 ID H<AH<6L I=>C 6H 8DB E6G 9 ID 6C9 >HG; A8I: 9 6H 6 8DB EDC: C I D, I=: 8=6C< >C H<AH; <B: MH<C< 7J HC: HH H

' E: 6L< E0>1 B 6G<C>C8G 6H 9 76HHED<CH9J GC< 6H8DB E6G 9 ID L>= N 6GDK: GN 6GDE: 6L< E0>1 B 6G<C>8DB E6GHDCH>B E68I: 9 7N

S >=: GN 6GDK: GN 6GH<AHKDA B: H; <B: MH<C< 7J HC: HH H EG8: >C8G 6H H 6 ; 6KD<7A H<AHB >M 8DH H6K<C<H 6HD8>6I: 9 L>= GHG 8IJ GC< 6C9 E0D9J 8L>KIN>B E0K B: C I >C>6L>K H L=>8= L: G E6<6<AND; HI 7N=>=: GN 6G DK: GN 6G: B EADN: 8DB E: CH6L>DC 6C9 + 8DHH9J: ID 7<69 8DH G9J 8L>DC: ;: DGH<C I=6I G9J 8: 9: ME: CH H ID7: II: G6A<C L>= G9J 8L>DCH<C9: B 6C9 6C9 >C8G 6H 9 >CK HB: C I >C @ N <6L I= 6C9 >CCK6L>DC>C>6L>K HV ; 6KD<7A 76HHED<CH

S , =: N 6GDK: GN 6G: ;: 8I D, 6B D<6<6L>DC; <B: MH<C< 7J HC: HH HV ; 6KD<7A 76HHED<CH

S , =: N 6GDK: GN 6G: ;: 8I D, GHG 8IJ GC< 68L>DCH L=>8= L: G AH<C I=6C I=6H G8D<C0 9 >C V ; 6KD<7A 76HHED<CH

S , =: N 6GDK: GN 6G: ;: 8I D, 68FJ >H<DC G <6I: 9 IG<CH68L>DC 8DHH L=>8= L: G =>=: G<C I=6C I=6H G8D<C0 9 >C V J C; 6KD<7A 76HHED<CH

S , =: N 6GDK: GN 6G: ;: 8I D, 68FJ >G 9 7J HC: HH H >C A 9>C< 6B D<6<6L>DC 6C9 68FJ >H<DC G <6I: 9 ; 6<GK6A: 69J HB: CHID9: ;: <69 G K C I: V J C; 6KD<7A 76HHED<CH

% ( \$ # ) # \$ ! \$ (

' J G< G8>HC, : 8=CDAD>: HH <B: C I=: A<HHD<K ID I<= I: 8=C86A8=6AAC<: HIDHE: : 9 7G 6<=C<D I<=H<C 6 L>9: <C<: D, 6EEA86L>DCH; <B: ID9 6C9 7: K <C<: E0D9J 8L>DC 6C9 B 6C I; 68IJ GC< IDC: M <: C 6L>DC: A8IG8 K=>8AH6C9 8A6C: C: GN 6H DJ G8J HDB: CHH: @C: L I: H HDA L>DCHID: C67A I=: : A8IG<86L>DC 6C9 8DCC: 8L>KIND: : K ON=>C< ' J G: ME: CH >C B 6I: G6A I B: I=6H6C9 B: 6H GB: CH6G G; A8I: 9 >C DJ G: A8IG86A I: H B: 6H GB: C I H CH<C< 6C9 B 6I: G6A I: 8=CDAD>: HD;: G9 ID 6 7<69 H I D, 8J HDB: CH6C9 K <86A: C9 B 6<@ IH >C A 9>C< >C9J HG6A EDL: G6C9: C: GN 6J ID B DL>K B: 9>86A FJ >EB: C I ; DD9 6C9 7: K <C<: 6: <6HE68: 6C9 9: ;: CH H B >DC9J 8IDG 6C9 DI=: G<: C: <6A<C9J HG< H

%D75;EA@) 75: @A9;7E( 7>5F76 ;@G;3> 3EB

ADP 7. 73D @76 757? 47D

>CB>ADCH

+6AH

' E: G6C<EQ>I

:EG8>6LDC

B DQ>6LDC

' E: G6C<EQ>I 6H6 D: H6AH

:EG8>6LDC 6H6 D: H6AH

B DQ>6LDC 6H6 D: H6AH

A? BA@GEA8( 3>7E DAI E

		HE	HE
) AB>D7H/G7 9DAI E	%		
MH< 7JHC: HH &DC	(		
8FJ>HEDCH &DC	(	V	V
JGG8N: M=6C<: G6I: H &DC	(		

\$ " % ' ) \$

1: 6GDK: GN 6GH6AH;QB: MH< 7JHC: HH<C8G6H9 >C, =: N 6GDK: GN 6GGH AHL: G 9GK: C7NEG8:  
>C8G6HH B 6C@I <GLI= 6C9 H=6G <6CHC @NK: Q>86AH6C9 >B ECK: 9 ECDJ 8LDC: M8JL>DCL >= DJG: C: G: L8 B 6I: G6AH  
ECDJ 8IH

:D>GE=>86AN H6AH;QB: MH< 7JHC: HH<C9: K AE: 9 B 6C@IH<C8G6H9 7NAL 9DJ 7A 9>>IH9JGC< 9GK: C7NAL  
9DJ 7A 9>>IH<GLI= >C &DQ= B: G86 6C9 B>9 I: CH<GLI= >C/ : H: G JQE: +6AH>C=>=<GLI= B 6C@IH<C8G6H9 7N  
=>=>I: CH9JGC< 9GK: C7NAL IL: C>H<GLI= >C =>C6

1: 6GDK: GN 6GEG8: >C8G6HH<DJG( G8>HDC, : 8=CDQ>: HH<B: C1 8DCG7JI: 9 IDH6AH<GLI= 9JGC< 6H  
8DB E6G9 ID 6C9 >HG;A8I: 9 6H6 8DB EDC: C1 D, I=: 8=6C<: >CH6AH;QB: MH< 7JHC: HH

' E: G6C<EQ>I B 6G>C>C8G6H9 76HHED>CH9JGC< 6H8DB E6G9 ID L>= N 6GDK: GN 6GDE: G6C<EQ>I  
B 6G>C8DB E6GHCH>B E68I: 9 7N

S >=: GN 6GDK: GN 6G>C8G6HH<CEG8: 6C9 KDAIB: E6G6AND;HI 7N=>=: GB 6I: G6A;G>=>I 6C9: B EADN:  
8DB E: CH6LDC 8DHH6C9 JC;6KDG7A: M=6C<: G6I: HV ;6KDG7A 76HHED>CH

S, =: N 6GDK: GN 6G: ;; 8I D, 6B DQ>6LDC;QB: MH< 7JHC: HH HV ;6KDG7A 76HHED>CH

S, =: N 6GDK: GN 6G: ;; 8I D, H<C>;>86CI GHG 8IJGC< 8DHHL=>8= L: G AHH< I=6CI=DH G8D>CQ 9 >C V  
;6KDG7A 76HHED>CH

\$ " % ' ) \$

1: 6GDK: GN 6GH6AH;QB: MH< 7JHC: HH<C8G6H9 >C, =: N 6GDK: GN 6GGH AHL: G 9GK: C7N7QD69 76H9  
9: B 6C9 ;DGI: H 6C9 B: 6H G B: C1 >CHG B: CH >C8G6H9 9: B 6C9 ;DGH CHC< I: 8=CDQ>: H<CI=: >C9JHG6A6C9 H B >8DC9J 8IDG  
>C9 B 6C@IH 6C9 >C8G6H9 9: B 6C9 ;DG: C: G: L8 B 6I: G6AH L=>8= L: G E6G6AND;HI 7N69: 8G6H >C9: B 6C9 >CI=: B: 9>86A  
>C9 B 6C@I;DGH CHC< 9: K8: HI=6I H EEDQ: 9 ' . ! E6I> C1 IG 6B: C1: ;;DGH<CI=: 8DB E6G7A E: GD9HD

:D>GE=>86AN 9: B 6C9 ;QB: MH< 7JHC: HH<C>DJG( G8>HDC, : 8=CDQ>: HH<B: C1 >C8G6H9 9JGC< >C7DI=  
9: K AE: 9 6C9 =>=<GLI= B 6C@IH L>= I: GH AH9GK: C7N<GLI= >C: K CNB 6TDG<: D>GE=N A9 7N&DQ= B: G86 H6  
6C9 JQE:

1: 6GDK: GN 6GEG8: >C8G6HH<DJG( G8>HDC, : 8=CDQ>: HH<B: C1 8DCG7JI: 9 IDH6AH<GLI= 9JGC< 6H  
8DB E6G9 ID 6C9 >HG;A8I: 9 6H6 8DB EDC: C1 D, I=: 8=6C<: >CH6AH;QB: MH< 7JHC: HH

' E: 6L< EQ>1 B 6G<C>8G 6H 9 76HHED<CH 9J GC< 6H8DB E6G 9 ID L>= N 6GDK GN 6GDE: 6L< EQ>1 B 6G<C>8DB E6GHDC>B E68I: 9 7N

S >=: GN 6GDK GN 6GH6AHKDA B: H; QB: MH< 7J HC: HH H EG8: >C8G 6H H 6C9 >C8GB: C16AN 6GDK GN 6C8DH H6K<H6HDB>6I: 9 L>= GHG 8IJ GC< 6C9 EGD 9J 8I>KIN>B EOK B: C1 >C>6I>K HL=>8= L: G E6G6AND; HI 7N=>=: G N 6GDK GN 6G: B EAD N: 8DB E: CH6I>DC 8DHH6C9 HE: C9>C< AK AH L=>8= L: G G9J8: 9 >C >C G HEDCH IDI=: ' . ! E6C9: B>8 6C9 6CJC, 6KD67A H6AHB>MV ; 6KD67A 76HHED<CH

S , =: N 6GDK GN 6G: ;: 8I D, 6B D6>6I>DC; QB: MH< 7J HC: HH HV ; 6KD67A 76HHED<CH

S , =: N 6GDK GN 6G: ;: 8I D, GHG 8IJ GC< 68I>DCHL=>8= L: G AH<C I=6CI=DI H 8D<C 9 >C V ; 6KD67A 76HHED<CH

+ # ! ) ' (\$ ! \* ) \$ # (

' JG 9K6C8: 9 : 6A=86G +DAI>DCHH<B: C1 H EEA>H8GL>86ALDC@AL HDAI>DCH: C67AC<= 6A=86G EOK9: CHID9: AK G : M8: EIDC6AE6I> C1 86G BDG : ;: >8>CIAN' JGD;: GC<H<C8A9: >CHGB: C1 H: GA6I>DC HDAI>DCH>CHGB: C1 IG8@C< 8: AA I=: GEN: FJ>EB: C1 9: H<C 6C9 B 6CI; 68IJ GC< 7>DB: 9>86AI: H IIDA H 69>6I>DC9: I: 8I>DC 6C9 H6: INB DCHDGC< 6C9: C9 ID: C9 8AC86AEOD 9J 8I>KINHD, IL 6G 6C9 HDAI>DCH' JG=: 6A=86G D;: GC<H=: AE: CH G 8GL>86AH6: INH6C9 69H6G B: I >CHGB: CH 6C9 DE: 6L< <QB H6G LDC@< 6I E: 6@E: GDB 6C8: 6C9 8DB EAMEGD8: 9JGH6G ; DAI: 9 688J 6I: AN>CI=: H B>HDC 8GL>86A=: 6A=86G : CK>QCB: CH

6HB<676 73>E 53D ( A>GEA>E ( 7>75H76 ; @<6;3> 3B

AD E 7. 73D 676 757? 47D

>CB>ADCH

+6AH

' E: 6L< EQ>1

: EG 8>6I>DC

B D6>6I>DC

' E: 6L< EQ>1 6H6 D, H6AH

: EG 8>6I>DC 6H6 D, H6AH

B D6>6I>DC 6H6 D, H6AH

A? BA@>GEA8 ( 3>7E DAI E

HE

HE

) AB>DIH7@G 9DAI E %

MH< 7J HC: HH H &DC (

8FJ>H>DCH &DC (

JGC8N: M8=6C< 6I: H &DC (

\$ " % ' ) \$

1: 6GDK GN 6GH6AH; QB: MH< 7J HC: HH H<C8G 6H 9 9J GC< EGB 6GAN 9GK: C7NEG8: >C8G 6H H6C9 6 HA<=I >C8G 6H >C KDA B: DC>C8G 6H 9 9: B 6C9 ; DGH: GA6I>DC EGD 9J 8IH6C9 69>6I>DC B DCHDGC< E6G6AND; HI 7N9: 8AC H<C 9: H<CH CK8: H =6GL 6G D;: GC<H6C9 FJ 6AIN 6HH GC8: : FJ>EB: C1

: D>GE=>86AN H6AH; QB: MH< 7J HC: HH H<C9: K AE: 9 B 6C@ IH<C8G 6H 9 7NAL HC<A 9>>IH9J GC< 9GK C7NAL HC<A 9>>I <GLI= >C &DQ= B: G86 6C9 6 HA<=I >C8G 6H >C/ : H: GE JQE: !C=>=> <GLI= B 6C@ IH H6AH<GLI=: QB : MH< 7J HC: HH HL 6H9DL CHA<=IAN L>= B>9 HC<A 9>>IH9: 8AC >C =>C6 6C9 =>=> I: CH9: 8AC >C %>9A 6H 6C9 ; G86 D; HI 7NAL IL: C>H<GLI= >C \$ 6I< B: G86

1: 6GDK GN 6GEG8: >C8G 6H H<C DI G 9K6C8: 9 : 6A=86G +DAI>DCHH<B: C1 8DCIG 7J I: 9 IDH6AH<GLI= 9J GC< 6H 8DB E6G 9 ID 6C9 >HG; A8I: 9 6H6 8DB EDC: C1 D, I=: 8=6C< >CH6AH; QB: MH< 7J HC: HH H

$$\begin{aligned} & \text{,} =: \text{N } 6\text{GDK:GN } 6\text{G}\times\text{C8G6H } \times\text{C} < \text{CHHEC} > \text{J } 9\text{JGC} < & 6\text{H8DBE6G9 ID } > \text{H9J: EGB } 6\text{G}\times\text{AND6 N } 6\text{GDK:GN } 6\text{G}\times\text{C8G6H } \times\text{C} \\ & \text{H6AHKDAB: H6C9 EG8: } \times\text{C8G6HH:GB } : \text{MH} < < 6\text{C9 C L AN68FJ } \times\text{G9 7JHC: HI L } = \text{L: G E6C6AND: HI 7N} = \times: \text{GB 6I: G6A} \\ & \text{:G} \times < \text{I } 6\text{C9: B EADN: } 8\text{DBE: CH6DC8DHH6C9 I: J C: 6KD67A } \times\text{B E68I D: DG} \times\text{C8JGC8N: M } = \text{C} <: \text{G6: H} \end{aligned}$$

, =: N 6GDK: GN 6G:C8G6H >C<QHEQJ 9JGC< 6H8DB E6G9 ID >H9J: EGB 6GANID=>=: GN 6GDK: GN 6GH6AH  
KDA B: H; >B: MH< 7JHC: HH H6AHKDA B: H; >B DJGG8: CI 68FJ >H>DCH EG8: >C8G6HH ; 6KD67A H6AHB >M AL: G  
DE: <GL< 8DHH6C9 <6>H; >B EODJ 8LKN>B ECK B: CIH 6AD, L =>8= L: G E6G6AND; HI 7N8=6C: H<C; DG>C8J <G8N  
>M=6C<: <GL: H6C9 =>=: GB 6L: G6A; G>=I 6C9 AD>H>8H8DHH

\$ % ' ) # - % # ( (

AD E 7. 73D <676 757? 47D

>CB>ANDH  
+6AH  
+: >AC< <: C <GA6C9 69B>CHGLK W X : ME: CH H  
\*: H6C8=6C9 9: K >EB: CI W X : ME: CH H  
\* JH6: MI 6C9 L>C9 9DL C8DHH V V  
+ 6H6 D, H6AH  
\* 6H6 D, H6AH

+ >C8G6H9 9JGC< 6H8DB E6G9 ID 9J: ID=>=: G<CI6C<7A 6B D6G6LDC 6C9 >C8GB: CI6A: ME: CH H; >B DJ G  
G8: CI 68FJ >H>DCH6C9 >C8G6H9 : B EADN : 8DB E: CH6LDC: ME: CH H 8J HDB: G68FJ >H>DC 6C9 B 6C@L< 8DHH E6G6AND; HI  
7NI=: >B E68I D 8=6C<: H<C8J <G8N: M8=6C<: <GL: H

' C6 N 6GDK: GN 6G76HH + GEGH CI: 9 6H6 E: <G: CI6<: D, H6AH9: 8G6H9 76HHEDCH JGC< L: >C8J <G9  
=>=: G6B D6G6LDC: ME: CH ; >B DJGG8: CI 68FJ >H>DCH L=>8= L6HB DG I=6CD; HI 7NAK <G: DC+ 8DHH L=>8=<GL  
6I 6 HGL: <GL: I=6C DJ GH6AH

+ : ME: CH H>C8G6H9 9JGC< 6H8DB E6G9 ID 9J: ID=>=: G<CI6C<7A 6B D6G6LDC 6C9 >C8GB: CI6A: ME: CH H  
>B DJGG8: CI 68FJ >H>DCH =>=: G: B EADN : 8DB E: CH6LDC 8DHH6C9 + : ME: CH H6I DJ G: MH< 7JHC: HH H9J: ID7 <G69  
8DH G9J 8LDC: ; <GL: M8J I: 9 > ID7: II: G6A<CL I=>G9J 8LDC>C9: B 6C9 6C9 I=: >B E68I D 8=6C<: H<C; DG>C8J <G8N  
>M=6C<: <GL: H 6AD, L =>8= L 6HE6G6AND; HI 7NG9J 8LDC>C: I 68FJ >H>DC G <GL: 9 8DHH6C9 >C8GB: CI6A H6K<H  
6H86L: 9 L I=>GHG 8J GC< 6C9 EODJ 8LKN>B ECK B: CI >C6L K H ' C6 N 6GDK: GN 6G76HH + : ME: CH H9: 8AC: 9 7N  
76HHEDCH 6H6 E: <G: CI6<: D, G K CI: L=: C8DB E6G9 ID G; A8L< I=6I 9: B 6C9 ; DGDJ GEDJ 8IH6C9 H <K8: H<GL  
6I 6 ; 6H: <GL: I=6C: ME: CH H

\* : ME: CH H 8DCHH< EG C8>E6AND, >CI: <GA6C9 8DCI <GL: C<C: <G< E: <GDC: A8DHH >C8G6H9 9JGC< 6H8DB E6G9  
ID 9J: ID>C8GB: CI6A8DHH; >B DJGG8: CI 68FJ >H>DCH >CK HB: CIHB 69: >C>CDK6LDC 6C9 @N>C6L K H6C9 =>=: G  
>B EADN : 8DB E: CH6LDC 8DHH ' C6 N 6GDK: GN 6G76HH \* : ME: CH H6H6 E: <G: CI6<: D, H6AH>C8G6H9 76HHEDCH<C  
6H8DB E6G9 ID DC DJGG8: CI 68FJ >H>DCH L=: G \* HE: C9>C>H=>=: G6H6 E: <G: CI6<: D, H6AH I=6C>C: MH< <  
7JHC: HH H6C9 AK <G: DC\* 8DHH L=>8=<GL 6I 6 HGL: <GL: I=6C DJ GH6AH

\* : ME: CH H 8DCHH< EG C8>E6AND, >CI: <GA6C9 8DCI <GL: C<C: <G< E: <GDC: A8DHH >C8G6H9 9JGC< 6H8DB E6G9  
ID 9J: ID I6G: I: 9 >CK HB: CIH<C @N<GL I=>C6L K H6C9 >CDK6LDC ' C6 N 6GDK: GN 6G76HH \* : ME: CH H6H6  
E: <G: CI6<: D, H6AH9: 8G6H9 76HHEDCH<C 6H8DB E6G9 ID G; A8L< 9: B 6C9 ; DGDJ GEDJ 8IH6C9 H <K8: HI=6I  
<GL 6I 6 ; 6H: <GL: I=6C DJ GCK HB: CIH<C @N<GL I=>C6L K H6C9 >CDK6LDC

' \* (( - ) # , # \$ , # \$ ) (

/ : >C8J <G9 EG I6M8DHH ID I6AC< B>AND>C EGB 6GAN>CI=: H8DC9 FJ 6G G; DGI=: 9: G8D>C>D C I 6H I H I=:  
8J B J <GL K I <GL H6LDC 69 J HB: CI ; DGA<6A: CI I>H9: : B: 9 H 7H6C I 6AN AFJ >6I: 9 6C9 ID G8D9 ECK HEDCH; DG: B EADN :  
H K <G8: 6C9 A<6A8DCL<: C8>H ' ; I=: B>AND>C8J <G9 6EEDMB 6I: AN B>AND>GEGH CIHDC 86H 8=6G: H6C9 >H  
G; A8L: 9 6HH 8=>CI=: DCHDA96I: 9 +I6I: B: CI D, 6H AL H, =: 8DHH L: G EGB 6GAN G <GL: 9 ID DJ GH<B: CIH 6H; DAD L H  
!CI: <A: CI ' E: <GL< +DAI DCH B>AND (G8>HDC, : 8=CDAD>H B>AND 6C9 9K6C8: 9 : 6A=86G +DAI DCH  
B>AND

#) ' ( ) \$ ) (

DG6 9>HJ HEDC, DJ GDJ IH6C9>C>C9: 7I: 9C: HH G; ; GID <DI: IDI=: 688DB E6CNC< 8DCHDA96I: 9 ; <C6C8>6AH6I: B: CIH

!CI: GH: ME: CH C I D, B>AND CL 6HG8D9: 9 9JGC< 8DB E6G9 ID B>AND 9JGC< 6C9 B>AND  
9JGC< 1: 6GDK: GN 6GCI: GH: ME: CH 9: 8G6H9 >C 9J: IDAL: GN 6GDK: GN 6G: ; ; 8L K >CI: GH <GL: HDC9: 7I  
>CHGB: CIH 9: HE: DK <GA=>=: G9: 7I 76A<C8: H6C9 GHC< >CI: GH <GL: H, =>H9: 8G6H L 6HEGB 6GAN 9GK: C 7NAL: GDC 86H  
>CI: GH: ME: CH DCI=: DCK <G7A +: CDG <DI: HL=: C8DB E6G9 ID <K CI=: CI: HL: G H IIA9 >CI=: >H FJ 6G: GD,



1: 6GDK GN 6G<C: GH: ME: CH 9: 8G6H9 >C 9J: ID8=6C<: H<CN 6GDK GN 6G6K <C: 9: 7I 76<C8: H!CI=: : K CI  
I=6I 699>JDC6AAFJ>9>N>HG FJ>G9 E6<8J A6GN>C8DCC: 8I>DCL >= 68FJ>H>DCH L: B 6N: CI: G<CID699>JDC6A7D<DL >C<HJ C9: G  
DJ G8DB B: <6AE6E: GED<GB HDG8G9>I; 68>A> H 6C9 DG688: HHI=: 86E>6AB 6C@ IH !; L: : CI: G<CIDH 8= 699>JDC6A>C6C8>C<  
IGCH8I>DCH I=: 6B DJ CI D, 6CCJ 6A<C: GH: ME: CH L>A>C8G6H

\*# ' ! / # \$ # #+ ( ) " #) # +\$#) ' \$ ' %\$ ' ) \$ #

' C' 8ID7: G L: 8DB EAI: 9 I=: . DCI> GHE6<GIDC 6C9 GI6<C: 9 D, I=: H<6GHD, . DCI> G8DB B DC HD8@  
>B B: 9>6I: AN; DADL>C< I=: +: E6<GIDC / : 9>9 CI GI6<C 6 8D<C<MAC< >CI: GH >C. DCI> G6C9 I=: G; DG I=: H 7H FJ: CI; <6GK6A:  
8=6C<: HD, I=: \*: I6<C: 9 . DCI> G+=6GH6G >C8A9: 9 >C DJ GG H AH; <DB 8DCI>CJ>C< DE: <GIDCH I : 8: B 7: G I=:  
\*: I6<C: 9 . DCI> G+=6GHL: G GB: 6H G9 6I; <6GK6A: 76H9 DC. DCI> GH8AHC< HD8@EG8: L>= JCG6AQ 9 <6<CHD,  
7>ADC G8DG: 9 >CI=: DCHA96I: 9 +I6I: B: CI D, 6<C<C<H

' C"6CI 6GN L: 8DB EAI: 9 6C: M=6C<: D, 6AD, I=: \*: I6<C: 9 . DCI> G+=6GH6HE6G D, 6 CDC86H= 9: 7I ; DG: FJ >N  
: M=6C<: I=6I G9J8: 9 DJ IH6C9>C< >C9: 7I: 9C: HD, DC<K 7N 7>ADC

# \$ " ) - (

7@DB>

!C8DB: I6M: ME: CH 6C9 9: ;: <G9 I6M6HH IH6C9 A67>A> HG; A8I B 6C<: B: CI>H6HH HB: CI D, JIJ G I6MH: ME: 8I: 9 ID7: E69  
DC>: B HG; A8I: 9 >C DJ G; <6C8>6AH6I: B: CIH / : G8DG I=: I6M: ;: 8I D, 9>HGI: >: B H6C9 >: B HI=6I 6G GEDQ: 9 C I D, I=: >G  
I6M: ;: 8IH<CI=: E: GD >CL=>8= I=: ND88J G

' JG: ;: 8I>K: I6M<G: 86C7: 6: ;: 8I: 9 7N 6B DC< DI=: GH 8=6C<: H<CI=: B>MD: 6<C<H<C 8DJ CI>: HL >= 9>;: <G< H6IJDNI6M  
<G: H >C8A9>C< 6H6 G H AD, 7J HC: HH68FJ>H>DCH6C9 9>HEDH>DCH 8=6C<: H<CI=: K6A 6I>DC D, 9: ;: <G9 I6M6HH IH6C9  
A67>A> H 688G 6AHG A: 9 ID8DC<C: CI I6MA67>A> H6C9 E: GD ID E: GD 8=6C<: H<CH 8= 688G 6AH I=: GH AHD, 6J 9>H6C9  
: M6B >C6I>DCHD, EG K DJ HN; >A9 I6MG IJ <GH 6H9>HJ H 9 7: AL I=: : ME<GIDC D, H6I I: HD, AB >6I>DCH I=: >B EAB: CI6I>DC D,  
I6ME<CC<C< H<G: < > H I6MG AC<H 8DJ G 9: 8>HDC H I IAB: CIHL >= I6M6I I=DGI> H 6C9 8=6C<: H<CI6M<AL H

, =: 6B DJ CI D, >C8DB: I6MHL: E6N>HH 7? 8I ID 6J 9J 7N: ;: 9: <GAH6I: 6C9 ; DG>C I6M6I I=DGI> H L=>8= B 6NGH A>C  
EGEDH 9 6HH HB: CIH, =: DB E6CN>HH 7? 8I ID: M6B >C6I>DC>CI=: - C>: 9 +I6I: H K6GDI HH6I: H6C9 ; DG>C >J GH9>8I>DC; DG  
I=: I6MN 6GH ID , =: H : M6B >C6I>DCH>C8A9: ; >AC<HD, I6MG IJ <HEGEGID DJ GH E6<GIDC; <DB 6C6=: G I6MG IJ <GH  
D, : CI: <EGH HCD AC<: G<C DJ GEDQ; DAD 6C9 I6MG IJ <GH; DCEG 68FJ>H>DCE: GD HD, : CI: <EGH H699: 9 ID DJ GEDQ; DAD  
+>C>; 86CI D7A<6I>DCH6G 9: I6>A9 >C DJ GI6MB 6II: GH<G: B: CIH<C 8DCC: 8I>DCL >= I=: HE6<GIDC D, DQ<K ; <DB 6C6=: GDC  
"JAN I=: HEAI D; D, I=: JIDB 6I>DC 6C9 +E: 8>AN 7J HC: HHD C' 8ID7: G 6C9 I=: . DCI> GHE6<GIDC DC' 8ID7: G  
/ : GK>L DJ G<AD76A I6MEDH>DCHDC 6 FJ 6G: GN 76HH 6H9 DC I=: H GK>L H I=: GH AHD, 9>HJ HHDCH6C9  
G H A I>DCHD, B 6II: GHL >= 8: <G6<I6M6I I=DGI> H I6MG AC<H6C9 8DJ G 9: 8>HDC 6C9 I=: : ME<GIDC D, H6I I: HD, AB >6I>DCH  
GH <K H; DG8DCI>C<: CI I6MA67>A> H6G 688G: 9 DG69>J H: 9 6HC: 8: H6GN

/ : 8DC9J 8I 7J HC: HH<AD76AN 6C9 6HE6G D DJ G<AD76A 7J HC: HH L: ; >A CJB: <DJ H<C8DB: I6MG IJ <GH CI=: - + : 9: <GA  
H6I: 6C9 ; DG>C >J GH9>8I>DCH' J G67>AN ID D7I6<C 6 I6M7: C ; >J >C8: <G6<C 8DJ CI>: HI=6I 8DCI>CJ: ID=6K AL: GH6IJDNI6M  
<G: HI=6CI=: - C>: 9 +I6I: H H9: E C9: CI DC DJ GAK AHD, I6M7A >C8DB: >CH 8=; DG>C 8DJ CI>: H / : 7: <K I=6I 6 8=6C<: >C  
I=: H6IJDNI6M<G: D, 6CN>C9>K 9J 6A; DG>C 8DJ CI>CN L DJ A CI INE>86AN=6K 6 B 6I: G6A: ;: 8I DC DJ G; <6C8>6AH6I: B: CIH  
<K CI=: < D<G6=>8 9>HE: GHEC D, DJ GI6M7A >C8DB:

=6C<: H7NI=: - + >C G A I>DC ID>CI: <G6I>DC6A I6MG; <DB 8DJ A >C8G6H J C8: <G6<CN 6C9 B 6N 69K GH AN6: ;: 8I DJ G<C8DB: I6M  
EGK HEDC 86H I6MHE69 6C9 : ;: 8I>K: I6M<G: DB EG=: CHK: I6MG; <DB L 6H: C68I: 9 J C9: GI=: , " L=>8= >C8A9: H  
CJB: <DJ HECK HEDCHI=6I 6: ;: 8I 7J HC: HH H6C9 >CI>DJ 8: H8=6C<: HI=6I >B E68I - + 8DGEDG: I6M<G: H 7J HC: HH G A: 9  
: M A I>DCH 9: 9J 8I>DCH 6C9 8G9>H, =: I6MC< 6I I=DGI> H8DCI>CJ: ID>H: G <J A I>DCH6C9 <J>96C8: HDB: L >= G I<GHE: 8I>K  
6EEA86I>DC ID I=: EGK HEDCHD, I=: , " 6C9 L: : ME: 8I I=HID8DCI>CJ: ; DGI=: ; DG H: 67A ; JIJ G CN; JIJ G 69>J HB: CIH  
GH A<C< ; <DB G I<GHE: 8I>K G <J A I>DCH6C9 <J>96C8: >H: 9 L>A7: 8DCH9: G9 6H9>HGI: >C8DB: I6M: ME: CH DG7: C ; >J >CI=:  
>CI: GB E: GD I=: <J>96C8: >HH: 9

JG=: <B DG 8=6C<: H<C B J A>A: <GA6<G: B: CIH6C9 I=: I6M<AL HD; DG>C >J GH9>8I>DCH8DJ A 6GH 6H6 G H AD, I=: 76H  
: <GHEC 6C9 ECD>I H>; LC< ECD: 8I J C9: <G6<C 7NI=: ' 6C9 8DJ A H<C>; <86CIAN>C8G6H DJ GI6MECK HEDC 86H I6MHE69  
6C9 : ;: 8I>K: I6M<G: , =: ' =6H>H: 9 H<C>; <86CI <AD76A I6MEDA8N 8=6C<: HI=6I >C8A9: 7DI=: ME6C9: 9 GEDQ<C< 6HL: AA  
6HI: 8=C86A<AD76A I6MEDA8N 8=6C<: H6C9 B 6CN 8DJ CI>: H<CL=>8= L: DE: <G: =6K >B EAB: CI: 9 I6M<AL 6C9 69B>CHG<K  
8=6C<: HHD 6A<CL >= C L ' EDA8>H, =: DB E6CNL>A8DCI>CJ: ID B DC HDG6C9: K6A 6I: I=: >B E68I D, ' EDA8N  
8=6C<: H

' C J<JH I=- + :C68I:9 I=- !C;A1DC\*:9J8IDC 8I D L=8= 6B DC< DI= GEDKSHDC H>B EAB: CH6  
8DEDG1: 6A G61K B>CBJB I6MDC7DD@>C8DB: DC8DEDG1DCHL=DH 6K G<: 6CCJ 6A69JH: 9 ;>C6C8>6AH6I: B: CI >C8DB:  
9JG< I=- B DH G8: CIAN8DB EAI: 9 I-G: N 6GE: GD: M8: 9H 7>ADC , =>HEGKSHDC H: ;: 8I K ;DGI6MN 6GH7: <CC<  
6;I: G :8: B7: G 6H9 JEDC DJ G6C6AHHD, I=- !C;A1DC\*:9J8IDC 8I D 6C9 H 7H FJ: CIANGA6H9 <J>6C8:  
L: 9DCI 7: A K I=- 8DEDG1: 6A G61K B>CBJB I6ML>A=6K 6 B 6I: G6A>B E68I DC DJ G;>C6C8>6AH6I: B: CH

DG6 9>HJHDC D, GHGAG1: 9 IDI=-: H 6C9 DI=-: GI6MB 6I: GH EA6H G:; GIDWI: B \*>H@ 68IDHX

A? B3DFA@A8F 7. 73IE @76 757? 47D 3@

' JG:;; 8I K I6MGI: ;DI=-: N 6CH: C9: 9 :8: B7: G 6C9 L6H 6C9 GHE 8I K AN

' JG:;; 8I K I6MGI: ;DG 9>; GH;GB I=- - + :; 9: GAH6IJDNGI: D 9J: EGB 6GANIDI=-: EDHI K 6C9 C: <6I K  
:;; 8IHD, I=- , " - + :; 9: GA E: GB 6C: CI 9>; G C8: H I=- :>B E68IHD, 8G9>H6C9 9: 9J8IDCHECK9: 9 7N A1L >C8A9>C< I=DH  
6H8>6I: 9 L>= H6I: >C8DB: I6MH 6C>C8G6H ID>C DJ GJ C8: G6>CI6MEDH>DCHG A1C< ID=>C=-: G>CI: GH GI: H 6C9 I=- :;; 8I D  
\* JH6: M1 6C9 L>C9 9DL C8DHI; DGL=>8= CDI6M7: C: ;>L 6HG8D>CQ 9

' JG:;; 8I K I6MGI: ;DG 9>; GH;GB I=- - + :; 9: GAH6IJDNGI: D 9J: EGB 6GANIDI=-: :;; 8I D I=- , " - +  
:; 9: GA E: GB 6C: CI 9>; G C8: H I=- :>B E68I D, 8G9>H6C9 9: 9J8IDCHECK9: 9 7N A1L : 6CC<HDJ IH9: I=- - C1: 9 +I6I: HI=6I 6G  
>C9: ;>C1: ANG>CK H: 9 6C9 I6M9 6I GI: HAL: GI=6CI=-: - + :; 9: GAH6IJDNGI: 6C9 6 E: GB 6C: CI 9>; G C8: DCI=-: G6A Q 9  
<6C DC DJ G\*: I6>C 9 . DC> G+=6GH9J: IDI=-: I6M;G: IG 6IB: CI D, DJ G>HEDH>DC D, I=-: H>6GHI=GI <= I=- : 7I ;DG FJ>N  
M8=6C<: I=6I L 6H8DB EAI: 9 DC "6CI 6CN , =: : 7I ;DG FJ>N M8=6C<: >C8A9: 9 6C: M8=6C<: D, 6AD, DJ G, DC> G  
8DB B DC HD8@DL C 9 6HD, :8: B7: G

' JG:;; 8I K I6MGI: ;DG 9>; GH;GB I=- - + :; 9: GAH6IJDNGI: D 9J: EGB 6GANIDI=-: :;; 8I D I=- , " - +  
:; 9: GA E: GB 6C: CI 9>; G C8: H I=- :>B E68I D, 8G9>H6C9 9: 9J8IDCHECK9: 9 7N A1L : 6CC<HDJ IH9: I=- - C1: 9 +I6I: HI=6I 6G  
>C9: ;>C1: ANG>CK H: 9 6C9 I6M9 6I GI: HAL: GI=6CI=-: - + :; 9: GAH6IJDNGI: D; HI 7NI6M8DHH6HD8>6I: 9 L>=  
GE6IG6I< 6 EDG DC D, DJ GEG K DJ HNG>CK H: 9 : 6CC<HDJ IH9: D, I=- - C1: 9 +I6I: H 6C9 6 E: GB 6C: CI 9>; G C8: DCI=-:  
JCG 6A Q 9 <6C DC DJ G\*: I6>C 9 . DC> G+=6GH9J: IDI=-: I6M;G: IG 6IB: CI D, DJ G>HEDH>DC D, I=-: H>6GHI=GI <= I=- : 7I  
;DG FJ>N M8=6C<: I=6I L 6H8DB EAI: 9 DC "6CI 6CN , =: : 7I ;DG FJ>N M8=6C<: >C8A9: 9 6C: M8=6C<: D, 6AD,  
DJ G, DC> G8DB B DC HD8@DL C 9 6HD, :8: B7: G

\$ " % # ( + # \$ "

DB EG=-: CHK >C8DB: >C8G6H9 7N B>ADC>C 6H8DB E6G9 ID EGB 6GAN9J: ID6C>C8G6H >C C I>C8DB: D  
B>ADC 6C9 ;6KD G7A 8=6C<: H>C E: CHC7: C: ;>J 69J HB: CHD, B>ADC E6C>6AND; HI 7NJ C; 6KD G7A 8=6C<: H>C  
;DG>C 8J G C8NI G CH6I DC 69J HB: CHD, B>ADC

DB EG=-: CHK >C8DB: 9: 8G6H9 7N 7>ADC>C 6H8DB E6G9 ID 9J: ID6 9: 8G6H >C C I: 6CC<HD, 7>ADC  
>C8A9>C< 7DI= 8DCI>C I>C< 6C9 9>HDCI>C I: 9 DE: GI DCH J C; 6KD G7A 8=6C<: H>C ;DG>C 8J G C8NI G CH6I DC 69J HB: CHD,  
B>ADC 6C9 ;6KD G7A 8=6C<: H>C E: CHC7: C: ;>J 69J HB: CHD, B>ADC , =: 9: 8G6H >C C I: 6CC<HL 6H9J: IDI=-:  
G8D>C I>DC D, 6 7>ADC JCG 6A Q 9 <6C DC I=-: \*: I6>C 9 . DC> G+=6GH>C

# # ! # ( ' \* " # ) ( # ' ( " # " # )

/ : 6G : MEDH 9 IDB 6@ I GH@; GB 8=6C<: H>C>CI: GH GI: H ;DG>C 8J G C8N: M8=6C<: GI: H 8G9>J GH@6C9 8DB B D>N  
EG8: H: 68= D, L=8= 8DI A >B E68I DJ G;>C6C8>6AH6I: B: CH / : <: C: GAN 699G HDJ G, MEDH G IDI=-: H GHGI=GI <= DJ G  
CDB 6ADE: GI>C< 6C9 ;>C6C8>C< 68I K I>: H ! C 699>J DC DJ G7 G69 76H9 7J HC: HH68I K I>: H=-: AE IDG 9J 8: I=-: >B E68I I=6I  
KD A1AN>C 6CNE6 G 8J A G6G 6 DGG A1: 9 6G6HB 6N=6K DC DJ GLE: GI>C< EQ>J 6H6 L=DA

@7DHF' 3F7' ;E=-

/ : B 6C6<: >CI: GH 8DH JHC< 6 B>MJ G D ;>M9 GI: 6C9 K6G67A GI: 9: 7I 8=6C<: >C>CI: GH GI: HDC AC< I: GB 9: 7I  
>B E68IHI=-: ;6GK6A: D, DJ G;>M9 GI: AC< I: GB 9: 7I 7I CI DJ G: 6CC<HDC86H> ;AL H7: 86J H I=-: >CI: GH DCH 8=9: 7I>H  
;>M9 : C: GAN I=-: ;6GB 6@ I K6A: D ;>M9 GI: 9: 7I L>A>C8G6H 6H>CI: GH GI: H; 6A6C9 9: 8G6H 6H>CI: GH GI: HGH H  
D :8: B7: G 6C>C8G6H D, 76HHEDCH>C>CI: GH GI: HL DJ A =6K 9: 8G6H9 I=-: ;6GK6A: D, DJ G;>M9 GI:  
AC< I: GB 9: 7I 7N6EEGMB 6I: AN B>ADC

HD :8: B7: G DJ G6G67A GI: 9: 7I D7A>6I DCH8DCHH D, - + 9DA6C9: CDB>C6I: 9 8DB B: G>6AE6E: G- + 9DA6G  
9: CDB>C6I: 9 9: AN 9GI I: GB A6C 6C9 H C DGJ CH 8J G9 I: GB ;>68A>H9: CDB>C6I: 9>C: J=-: G J CHD G' 6E6C: H 1: C G:; GID  
&DI: IDI=-: 8DCHA 96I: 9 ;>C6C8>6AH6I: B: CH; DG>C; DGB 6I>DC G>6C9>C< DJ GDI IH6C9>C< >C9: 7I: 9C: HH6HD, :8: B7: G  
H6 GH A DJ GEG B 6CN>CI: GH GI: : MEDH G GH AH; GB 8=6C<: H>C H>D I: GB >CI: GH GI: H HI=-: H H>D G 9J GI>DC

D7A<6DCHB6IJG L: 6C<8E6I: >H<C< 699>DD6AH<D<I: B 8DB B: C<6AE6E: GD7A<6DCH6C9 DGI: B A6CHIDG;>C6C8: 6AA  
DGE6GD I=: H 7DGL>C<H, =: 6C<I 6A::; 8I<K G<I: 6HD8<6I: 9 L>=: DJ GD<IH6C9>C< K6G67A G<I: D7A<6DCL6H  
6EEQMB 6I: AN L>= >C<I: GH: ME: CH D B>ADC ' C 6C6C<I 6AQ 9 76HH 6 =NED=: I86A 76HHED<CH<C8G6H >C  
B 6C<I>C<I: GH G<I: H6HD : 8: B 7: G DC<I GK6G67A G<I: 9: 7I D7A<6DCH6HD : 8: B 7: G L D<I A =6K  
>C8G6H9 D<I G<I: GH: ME: CH 7N B>ADC<

AD7;9@ GD7GK J5: 3@7' 3F' ;E=

/ : ;68: IGCH8I>DC6A M<6C<: G<I: GH@<DB IGCH8I>DCHL>= 8J HDB: CH<C8DI CIG: HD<IH9: D I=: - C<I: 9 +I6I: H6C9 ;DB  
>C<I: C8DB E6CNI<IGCH8I>DCH7: IL:: C6<;>A6I: H, GCH8I>DC6A M<6C<: G<I: GH@6GHH;DB I=: EJC<6H 6C9 H6A D <DD9H6C9  
H C<8: H<C8J G<C8> HDI=: GI=6C<DI G<J C8I>DC6A8J G<C8NDGI=: ;J C8I>DC6A8J G<C8ND 6C6EEA867A H 7H9>6C<N / : 6AD;68:  
IGCH8I>DC6A M<6C<: G<I: GH@G<A<I: 9 IDI=: IGCH8I>DC D; >C6C8<6AH6I: B: CHD<I G<I G<I DG>C<DE: G<I DCH<C<ID- + 9DA<G<H D<I G  
>J C8I>DC6A8J G<C8ND DH<H<C8J G<9 6C9 H6AHG8D9: 9 7NH 7H9>6G<I HDE: G<I C<D<I H9: D I=: - C<I: 9 +I6I: H6G IGCH8I: 9 >C<ID  
- + 9DA<G<H JHC<: M<6C<: G<I: H::; 8I<K 9JGC<I=: GHE: 8I<K E: GD H6G H A L: 6G : MEDH9 IDB DK B: CH<C<I=:  
>M<6C<: G<I: HD, K6GD<H8J G<C8> H6<6<CH I=: - + 9DA<G<I, =: ;::; 8I D 6 8<6C<: >C8J G<C8N: M<6C<: G<I: HDC<I G<I: I  
>CK HB: C I>C<I: G<I>DC6AH 7H9>6G<I H>HG<A8I: 9 >C<I=: 688J B J A<I: 9 DI=: C8DB EG=: CHK >C8DB: ADH 8DB EDC: C I D: FJ>N  
9: EG8<6I>DC>C B 6D<C8J G<C8> HG A<I K IDI=: - + 9DA<G<I HD : 8: B 7: G L D<I A =6K GH A: 9 >C 6 G9J 8I>DC  
D ;DG>C<8J G<C8N9: CDB>C6I: 9 C I 6H<IH6C9 HD8@<D9: GH: FJ>ND, 6EEQMB 6I: AN B>ADC

JGC<I=: H8DC9 FJ 6I: GD L: 9: H<C6I: 9 D<I GT 7>ADC 1: C 9: CDB>C6I: 9 K6G67A >C<I: GH G<I: I: B A6C6C9 D<I G  
Z B>ADC J D9: CDB>C6I: 9 K6G67A >C<I: GH G<I: I: B A6C6C9 D<I H6C9>C< 6HC I>CK HB: C I=: 9< HD<I G<I CK HB: C I>C  
8: G6<C<DG>C<DE: G<I DCH 88D9>C<AN ;DG>C<8J G<C8NI<IGCH8I>DC<6<CHDGADH HD<I=: 9: 7I L: G 9: ;: G9 >C<I=: ;DG>C<  
8J G<C8NI<IGCH8I>DC 8DB EDC: C I D 88J B J A<I: 9 DI=: C8DB EG=: CHK >C8DB: ADH W' !X 6H6C<I;H I DI=: ;DG>C<  
8J G<C8NI<IGCH8I>DC 69J HB: CHDC<I G<I CK HB: CH<C<I DG>C<CH 7H9>6G<I H !C L: G8D<CQ 9 6I: G6MA<H HD  
B>ADC<' I=: C8DB EG=: CHK >C8DB: ADH G A<I: 9 IDI=: C I>CK HB: C I=: 9< H

J G<C8N: M<6C<: G<I: HJ C<6KDG67AN>B E68I: 9 GEDG 9 H6AH7N 6H8DB E6G9 ID 6HI=: - + 9DA<G<I 6H DC  
6K G<I: HGDC: G6<6<CH B DH B 6D<C8J G<C8> H9JGC< 6H8DB E6G9 ID: M<6C<: G<I: AK A9JGC< ! I=: : M<6C<:  
G<I: H<C<::; 8I 6HD : 8: B 7: G L: G IDEG K6<A<I=DI <=DI 8J G<C8N: M<6C<: G<I: HL D<I A C<6I K AN>B E68I  
>H B 6I: 9 H6AH7N 6EEQMB 6I: AN G A<I K ID<I GE: GDB 6C8: >C !C<: C 6A 699>DD6AHG<C<I: C<C<D I I=:  
- + 9DA<G<I 6<6<CH DI=: GB 6D<C8J G<C8> HL D<I A ;J G<I: GC<6I K AN>B E68I D<I GH6AH6C9 G H AHD, DE: G<I DCHDC 6C DK 6A  
76HH6C9 6CNHG<C<I: C<C<D I I=: - + 9DA<G<I 6<6<CH DI=: GB 6D<C8J G<C8> HL D<I A 69K GH AN>B E68I D<I GH6AH6C9 G H AHD,  
DE: G<I DCH

/ : =6K <C: GAN 688: EI: 9 I=: : MEDH G ID: M<6C<: G<I: B DK B: CHL>=DI I JHC<9: GK6I K ;>C6C8<6A<CHG B: CHIDB 6C<:  
I=HGH@ DI=EDH<K 6C9 C<6I K B DK B: CH<C8J G<C8N: M<6C<: G<I: H6<6<CH I=: - + 9DA<G<I A<I=: G<I DG 8DC<C<I: ID  
6::; 8I I=: GEDG 9 6B D<I C I D, H6AH ED<I 6C9 6H<IH6C9 A67>A<I: H<C<DI G8DCHDA96I: 9 ;>C6C8<6AH6I: B: CH

D76;F' ;E=

/ : 6G : MEDH9 IDEI: C<6A8G9>I ADH H<C<I=: : K C I D, CDE: GDB 6C8: 7N8DI C<I: G6G<I HD<I G<I >C6C8<6A<CHG B: CH  
>C6C8<6A<CHG B: CHI=6I EDI: C<6AN H 7? 8I J HID8G9>I GH<8DCH H D 86H 6C9 =>=AN AFJ>9 >CK HB: C I <G9: 86H  
>FJ>K6ACH6C9 G8: >K67AH;DB 8J HDB: GH/ : E68: 86H 6C9 86H: FJ>K6ACHL>= K6GD<I H>=> FJ 6AIN;>C6C8<6A<CH>I DCH  
I=DI <=DI I I=: L DQ 6C9: MEDH G HAB>I: 9 6I 6CND< >CH>I D<C A=DI <=L: INE86AN9D C<I D7I6<C8DA<I: GADGI=: G  
H8J GINIDH 8J G I=: H D7A<6DCH L: G<J A<G<NB DC<I G<I: I=>9 E6G9: EDHIDN>CH>I D<CHI=6I =DA D<I G86H 6C9 86H  
>FJ>K6ACH / : : BE=6HO H<I: IN6C9 AFJ>9>ND, EGC8<E6ADK GN: A DC I=DI ;J C9H !C 699>DD 8DC8: C<G<I DCHD, 8G9>I GH@  
6HC< ;DB G8: >K67AH;DB 8J HDB: GH6G AB>I: 9 9J: IDI=: 9K GHND, D<I G8J HDB: GH' J G7J HC H H HE: GDB 8G9>I  
>K6A6I>DCHD, I=: >G8J HDB: GH;>C6C8<6A8DC9>I DCH6H6EEGEG6I: 6C9 6AD D7I6<C8DA<I: GADGI=: GH 8J GIN L=: C 6EEGEG6I:

A2 ? A6;K%D57' ;E=

DC69>HJ HEDC, GH<HG A<I C< ID8DB B D9>NEG8: H G:: GIDWI: B \*>H@ 68IDGHX

! &\* ). # %) ! ' (\$\*' (

/ : 6H<HDI GA<I>9>IN>C<I: B HD<I G67>AINID<: C G<I: 86H ID<I C9 D<I GDE: G<I C< >CK H<C< 6C9 ;>C6C8<C< 68I<K> H / :  
<: C G<I: H 7H6C<I 6A86H ;DB DE: G<I C< 68I<K> H6C9 7: A K I=6I D<I GDE: G<I C< 86H ;AD 6C9 DI=: GHDI G<I: HD, AFJ>9>IN L=>8:  
8DCH H D 688: HIDI: B A6CH 8DB B: C<6AE6E: G 6C9 D<I GG KDA<C< 8G9>I ;68AIN >C 699>DD IDH<DI I: B AFJ>9>IN 7: C ;>H  
EDK9: 9 7N86H GE6IG6I DCL>A7: H::;>8<I ID6AD J HID8DC<C<I: ;J C9>C< 6C9 >CK H<C< >C<DI G<I: MH<C< 7J HC H H  
8DCH B B 6I: HG<I: <8 68FJ>H<DCH B 6@ >C<I: GH 6C9 EGC8<E6AE6NB: CHDC<I GD<I H6C9>C< >C9: 7I: 9C: HI ;J A>ADI G  
8DCI G8IJ 6AD7A<6DCH 6C9 B 6C6<: D<I C86E<I AHG 8IJ G DC 6 H<DI 6C9 AD< I: B 76HH



' C%6C= I=- + ::9: 6A<DK 6B: C: C68I: 9 I= DDC6K<GH >9 \*: A<; 6C9 8DCDB>8+: 8JGIN 8I I= W \* + 8IX 6C: B: G: C8N: 8DCDB>8 H>B J AHE68C<: >C G HEDCH IDI=: ' . ! DI I7G6@L=>8= 6BDC<DI=: GI=>C<H 8DCI6<CHCIB: 6D H>C8DB: I6MECK<H DCH6C9 H>DGI: 6 AFJ>9<N6HHH6C8: B: 6HGH JGC< L: 9:: 6G9 GB>I6C8: D 6EEQMB 6I: AN B>ADC>C E6NDAN I6ME6NB: CHL>=>6A H7HFJ: CIANGB>I: 9 >C :8: B7: GD 6C9 I=: GB6C9: G GB>I: 9 >C :8: B7: GD

/ =>A ' . ! =>6H8G6I: 9 KD6I>AIN6C9 JC8: 6<CIN>CI=: ;>C6C8>6AB 6C@IH>=>6HCDI=>69 6 H<C>;>86CI>B E68I DC DI G ;>C6C8>6AEDH>DC AFJ>9<N DG67>AINIDB:: I DI G9: 7I 8DK C6CH=>DL: K GL: 8DCI>CI: IDB DC>IDI=: 86E>A6AB 6C@IH6C9 <: C 6A<AD76A 8DCDB>8 8DC9>I DCH, =; >C6C8>6AB 6C@IHL DQNL>9: >C8A9>C<I=: - C>: 9 +I6I: H=>6K 7:: C>B E68I: 9 7N ' . ! 6C9 I=>HKD6I>AIN6C9 9>HJ E>DC 9JGC<I=: ;>CH=>6A D >B E68I: 9 7C69 688: HHIDI=: 86E>A6AB 6C@IH6C9 EG8>C<DC C L >C9: 7I: 9C: HH' JG8G9>I; 68>A>H>C8A9>C<DI GGKDKC<8G9>I; 68>AIN 6G EG9DB>C6I: ANL>=>CH>I>DCH I=>6I L: 7: A K=>6K 7:: CG>6I>K ANJ C6;; 8I: 9 7NI=: 9>HJ E>DC J: IDI=: KD6I>AIN6C9 9>HJ E>DC>CI=: 8DB B: 6>AE6E: G B 6C@IH9JGC<I=: ;>CH HMB DCI=>HD L: I: B EDG6ANG9J8: 9 DI GGA6C8: DCI=>HHDI 6: D; J C9>C< 6C9 8DCH FJ: CIAN E6>9 9DL C6C9 G;>C6C8: 9 DI GD I>H6C9>C<8DB B: 6>AE6E: GL>=>I=: , : 6 \$D6CI=>6I L6H>C>6AN9J: %6C=> 6C9 L6H GL>G9>CI=: :7I; DG FJ>N M=>6C<; !C J>JH L: GH B: 9 7DQEL>C<J C9: GD I G DB B: 6>A( 6E: G( Q<6B ID; J C9 68FJ>H>DCH6C9 ;DG<: C 6A8DQED6I: EJ QEDH H

;@6;@36 3B;B>) D@E35FA@

' C : 7G6CN I=: B 6I JGIN96I: D I=: DCK 67A +: C>DG>DI: H9J: DQK: GE69 >C86H 7>ADC >C DI I H6C9>C<EGC8>E6A6C9 688G: 9 >CI: GH I=: GDC

' C"JC L: : CI: G9 >CID6 I=G: N 6GT 7>ADCH C>DG I CH8J G9 I: 6B ;68>AIN W: C, : 6B \$D6CX ' CI=: H6B: 96N L: 9GL 6C9 8DCK Q: 9 I=: : C>G 6K6>A7A 76A6C8: J C9: GI=: ;68>AIN L=>8= N>A: 9 C I E C8: : 9HD B>ADC, =: 1: C, : 6B \$D6C>H9J: DC"JC 6C9>HEG E6N67A 6I DI GDEI>DC, =: 1: C, : 6B \$D6C7: 6H>CI: GH 6I 6 6I: D, D@D, : 6B \*H@ G: \*6I: W' \* X EAH 76HHEDCH ECK9: 9 =>DL: K GI=>6I I=: , ' \* B6NCI 7: AHI=>6C Q Q; DGI=: 1: C, : 6B \$D6C

' C"JC L: : CI: G9 >CID6 I=G: N 6GZ B>ADCH C>DG I CH8J G9 I: 6B ;68>AIN WJ Q, : 6B \$D6CX ' C"JC L: 9GL 6C9 8DCK Q: 9 I=: : C>G 6K6>A7A 76A6C8: J C9: GI=: ;68>AIN L=>8= N>A: 9 C I E C8: : 9HD B>ADC, =: J Q, : 6B \$D6C>H9J: DC"JC 6C9>HEG E6N67A 6I DI GDEI>DC, =: J Q, : 6B \$D6C7: 6H>CI: GH 6I 6 6I: D J Q !CI: G6C@' ;:: G9 \*6I: WJ G7DX EAH 76HHEDCH ECK9: 9 =>DL: K GI=>6I I=: J G7DCB 6NCI 7: AHI=>6C Q Q; DGI=: J Q, : 6B \$D6C

' C' 8ID7: G L: : CI: G9 >CID6 H8DC9 6B: C9: 9 6C9 GH6I: 9 8G9>I 6<G: B: CI I=: W B: C9: 9 6C9 \*: H6I: 9 G9>I <G: B: CI X: M: C9>C<I=: 6K6>A7>AINE: GD D I=: \*: KDKC< G9>I 68>AINID' 8ID7: G L>=>6C 699>I D C6AIL DDC N 6G: M: CHDC DEI>DCH6I DI GG FJ: H 6C9 L>=>I=: 8DCH CI D I=: AC9: CH, =: B: C9: 9 6C9 \*: H6I: 9 G9>I <G: B: CI 6AD 8DCI6>CH6C DEI>DC E: 6B>I>C<J HIDG FJ: H 6C>X8G6H >CI=: 6B DI CH6K6>A7A J C9: GI=: \*: KDKC< G9>I 68>AIN D, JE ID6C 6<<G<6I: 699>I D C6A 7>ADC

/ : 6G D7A>6I: 9 IDE6N6C6CCI 6A;68>AIN:: ;DGI=: \*: KDKC< G9>I 68>AIN D, 7: IL:: C 6C9 76HHEDCH K6ONC< 688D9>C< ID DI GAC< I: 6B 9: 7I 8G9>I 6I>C< DQEL>C<HJ C9: GI=: C L \*: KDKC< G9>I 68>AIN>C- + DAKH7: 6G>CI: GH 6I 6 6I: : FJ 6A6I DI GDEI>DC ID: >=>G, : 6B +: 8J G9' K C<=>I >C6C8>C<\*6I: W: 6B + ' \* X EAH6 76HHEDCH G9>I +EG69 9>I HB: CI W+ X EAH6 B6G>C D, 7: IL:: C 6C9 76HHEDCH 9: E C9>C<DC DI GAC< I: 6B 9: 7I 8G9>I 6I>C< DG I=: =>X=: H D, 6 I=: :9: 6A J C9 H6I: EAH 76HHEDCH 7 I=: EGB: 6I: 8, : 6B + ' \* EAH 76HHEDCH 6C9 9 EAH>C: 68=>86H 6 B6G>C7: IL:: C Q Q 6C9 76HHEDCH 9: E C9>C<DC DI GAC< I: 6B 9: 7I 8G9>I 6I>C<

!C699>I D C7: <CC>C<L>=>DI G E: GDB 6C8: G A6I>K ID DI G6CCI 6A>G: C=>DI H <6HG9J 8I>DC I6G: IH I=: >CI: GH 6I: DC 6CN7DQEL>C<H86C>X8G6H DQ9: 8G6H 7N 76HHEDCH 6C9 I=: ;68>AIN:: 86C>X8G6H DQ9: 8G6H 7N 76HHEDCH ;DG 6 B6MBJB >B E68I D, 6C>X8G6H DQ9: 8G6H D 76HHEDCH

, =: B: C9: 9 6C9 \*: H6I: 9 G9>I <G: B: CI GFJ>GHJ HIDB 6<CI6C6 8DCH A96I: 9 C I AK Q<: 6I>DD, 9: 7I ID8DCH A96I: 9 !, 6H9: ;>C9>CI=: G9>I <G: B: CI D AHI=>6C ID, =: B6MBJB 8DCH A96I: 9 C I AK Q<: 6I>DL>A7: >X8G6H9 ID ID ;DGI=: ;DI G8DCH 8J I>K; J A>H6AFJ 6G: CH B B: 9>6I: AN; DAIL>C<I=: 8DCH B B 6I>DC D, 6CN68FJ>H>DC 7NJH>C L=>8= I=: EJ 6=>H EG8: : M8: : 9H B>ADC, =: B: C9: 9 6C9 \*: H6I: 9 G9>I <G: B: CI 6AD8DCI6>CH8J HDB 6CN GEGH CI6>DCH L 6Q6CI>H 8DC9>I DCH EG8: 9: CI : K CHD, 9: ;6I A >C9: B C>H 6C9 6;;>6B 6I>K 6C9 C <6I>K 8DK C6CH

HD :8: B7: G L: L: G >C8DB EA6C8: L>=>6A8DK C6CHJ C9: GI=: B: C9: 9 6C9 \*: H6I: 9 G9>I <G: B: CI, =: B: C9: 9 6C9 \*: H6I: 9 G9>I <G: B: CI 8DCI>CI: 9 IDECK9: 8G9>I H EEDG ;DGI=: 8DB B: 6>AE6E: GEQ<6B H L=>8= IDI=: :M: CI CI DI=: 6I>H ECK9>C<8G9>I H EEDG ;DGI=: 8DB B: 6>AE6E: GEQ<6B H 86C6AD7: JH9 ;DGL DQ6C>86E>A6A6C9 DI=: G <: C 6A8DQED6I: EJ QEDH H

' C' 8ID7:G L: :CI:G9 >CID6 I:CB A6C8G9>I 6<G:B:CI L=>8=EGK9:H;DG6 96N9:AN 9 9GL I:CB A6C  
;68>AINJEID6C6<<G<6I:EGC8>E6A6BDI CI D 7>ADC DGL>C<HJ C9:GI=: :AN 9 GL , :CB \$D6C;68>AINB6N7:  
6H \* 6I: \$D6CH, :CB +:8JG9' K C<=I >C6C8<< \* 6I: W:CB + ' \* X \$D6CH DG+ ' \* 6>AN A6LC< \* 6I: \$D6CH6C9  
7:6CH<CI:GH 6H;DGL H , :CB + ' \* \$D6CH7:6G<CI:GH 6I 6 K6G67A GL: :FJ6AID, :CB + ' \* EAH6 G9>I+EG69  
9>IHB:CI D 76HHEDCI EAH6 HEG69 D 7:IL::C 6C9 76HHEDCI 9:E:C9>C<DCI=: DBE6CNHAC< I:CB  
8G9>I GLC< + ' \* 6>AN A6LC< \* 6I: \$D6CH A@, :CB + ' \* \$D6CH7:6G<CI:GH 6I 6 K6G67A GL: :FJ6AID, :CB + ' \*  
L>=6DC BDC=E:GD EAH6 G9>I+EG69 9>IHB:CI D 76HHEDCI EAH6 HEG69 D 7:IL::C 6C9 76HHEDCI  
9:E:C9>C<DCI=: DBE6CNHAC< I:CB 8G9>I GLC< 6C9 6H \* 6I: \$D6CH7:6G<CI:GH 6I I=: =>=:H D 6 I=: :9:GA  
;JC9HGL: EAH 76HHEDCIH 7 I=: EGB: GL: 8 , :CB + ' \* L>=6DC BDC=E:GD EAH 76HHEDCIH6C9 9  
EAHC:68=86H 6B6G<C7:IL::C O D6C9 76HHEDCIH9:E:C9>C<DCDI GAC< I:CB 9:7I 8G9>I GLC<

' C :8:B7:G L: 9GL 9DLCI=:JA 7>ADC9:AN 9 9GL HCDGI CH8JG9 I:CB ;68>AIN W:AN 9 GL , :CB  
\$D6C J: X 6H6, :CB + ' \* \$D6C , =:GE6NB:CI D I=:EGC8>E6A>H9J: DC :8:B7:G DOK 8DC8J GCIAN  
GE69 I=: 7>ADC>CDI IH6C9>C<EGC8>E6AD I=: :AN 9 GL , :CB \$D6C9J: 6C9 688G:9 >CI:GH I=:GDC  
DGL>C<HJ C9:GI=: :AN 9 GL , :CB \$D6C J: 6G EGE6N67A 6I DI GDEHDC>CL=DA DGCE6GL>=DI I EGB>JB DG  
E:6AN6C9 6BDI CH7DGL:9 B6NCI 7: G7DGL:9 DC8:GE69

;@G;@ 3G 3B;B>) D@B5FA@

' C"6CI6CN L: 8DBEAL:9 6CDC86H:M=6C<: I=:W:7I;DG FJ>IN M=6C<:X D H=6GHD, 8DB BDC  
HD8@D. DCI>G GEGH CI< 6AD I=: \*:I6<C 9. DCI>G+=6GH;DG 7>ADC>C6<<G<6I:EGC8>E6A6BDI CI D >C9:7I:9C HI  
D I=: DBE6CN=:A 7N D>B6C+68=H D >C8A9>C< >6AA B>ADC>CI:CB A6C DI IH6C9>C<JC9:GI=: B>ADC  
9:AN 9 9GL I:CB A6C;68>AIN W:CB \$D6C9J: %6C= X 6C9 >> B>ADC D I=: 7>ADC>CI:CB A6C  
DI IH6C9>C<JC9:GI=: 7>ADC9:AN 9 9GL I:CB A6C;68>AIN W:CB \$D6C9J: %6N X

' C"6CI6CN L: GE69 I=:GB 6CC< B>ADC DI IH6C9>C<D I=: , :CB \$D6C9J: %6N JHC< I=: 86H  
EGB:9HG8:K 9;GB . DCI>G CI=: +:E6GLDC , =: ::H6HD8:6I:9 L>=I=: EGE6NB:CI L:G >B B 6I:G6A

' C :7G6CN L: GEJG=6H9 B>ADC D I=: DCK G7A &DI:HI HC< I=:GB 6CC< 86H EGB:9HG8:K 9;GB  
. DCI>G CI=: +:E6GLDC 6C9 DI=:C86H DC=6C9 !C8DC:8HDL>=I=:GEJG=6H L: G8D9:9 6 AHDC:M<C<J>HB:CI D  
B>ADC>CI=: ;>H FJ 6I:GD

' C"JAN 6ADI IH6C9>C<H=6GHD, DI G %6C96IDN DCK G7A (G::G9+ID8@W% (+X 8DCK G:9 6I 6 GL: D  
8DB BDC H=6GHE:GH=6G D EG::G9 HD8>CID6C6<<G<6I: D 6EEGMB 6I:AN B>ADC H=6GH C I D ;G8I DC6A  
H=6GH D I=: DBE6CNH8DB BDC HD8@EJ GH 6CI DI I=: I:CB HD I=: :G>86I: D :H<C6I DC<DK CC< I=: +:G H  
(G::G9+ID8@ DOK>H:9 86H>C A J D ;G8I DC6AH=6GHD, 8DB BDC HD8@CI=: 8DCK GHDC , =:H E6NB:CIHL:G  
G8D9:9 6H6 G9J 8EDC ID699>IDC6AE69 >C86EIA6A, =: ;>C6A9>K9: C9 D E:GH=6G DG B>ADC>CI=: 6<<G<6I:  
L6HE69 DC"JAN , =: >B E68I D I=: % (+ 86AJ AI:9 JC9:GI=: > 8DCK G:9 B:I=D9 L6H6CI>9>AI>K ;DGI=: E:GDH>C  
EGDGID8DCK GHDC

!C J<JH L: GH B:9 7DGL>C<JC9:GD I G DB B:G>6A 6E:G (G<GB ID;JC9 >CE6G 68FJ>H>DC 68I>K>H

' C :8:B7:G L: :CI:G9>CD6I:CB AD6C8G9>I6<G:B:CI L=>8=ECK9:H;DG6 96N9:AN9 9GL I:CB AD6C  
;68>AINJEID6C6<<G<6I:EGC8>E6A6BDI CI D 7>ADC DGL>C>HJ C9:GI=:AN9 GL,:CB \$D6C;68>AINB6N7:  
6H\*6I:\$D6CH 6>AN AD6C<\$DC9DC!CI:G76C@::;G9\*6I:W\$!'\*X\$D6CHDG JCD9DAG\*6I:\$D6CH6C9 7:6G<CI:GH  
6H;DAILH JCD9DAG\*6I:\$D6CH7:6G<CI:GH 6I 6 K6G67A GI: :FJ6AIDI=: \$DC9DC>CI:G76C@D,:G9 GI:EAH6 B6G<C  
D 7:IL::C 6C9 76HHEDCIH9:E:C9<C DCI=: DBE6CNHAC<I:CB 9:7I8G9>I GLC< 6>AN AD6C<\$!'\*  
\*6I:\$D6CH A@ JCD9DAG\*6I:\$D6CH7:6G<CI:GH 6I 6 K6G67A GI: :FJ6AIDI=: \$DC9DC>CI:G76C@D,:G9 GI:EAH6 B6G<C  
D 7:IL::C 6C9 76HHEDCIH9:E:C9<C DCI=: DBE6CNHAC<I:CB 9:7I8G9>I GLC< 6C9 6H\*6I:\$D6CH7:6G  
>CI:GH 6I 6 K6G67A GI: :FJ6AIDI=: =>=:H D 6 I=: :9:GAJ C9HGI: 6HEI7AH:9 7NI=: :9:GA\*:HCK 6C@D &:L  
I DC@;CB I>B:IDI>B:EAH D 7 6C@D B:G86YHEGB:GI: 6HEI7A8AN6CDDI C8:9;CB I>B:IDI>B:6C9 8 I=:  
JCD9DAG\*6I: 6H9:>C9>CI=: G9>I <G:B:CI EAH ECK9:9 I=6I>C D:K CI L>AN=: JCD9DAG\*6I: 7: AHI=6C

/ :>BB:9>6I:AN9GL 9DL CI=: ;JA 7>ADC 6K6>A7A J C9:GI=: ;68>AIN6H6 96>AN;AD6C<\$!'\* GI:AD6C W:AN9  
GL,:CB \$D6CX L>=GE6NB:CI D I=:EGC8>E6A9J: :8:B7:G ,=: :AN9 GL,:CB \$D6C7:6H<CI:GH 6I 6  
K6G67A GI: :FJ6AIDI=: 96>AN\$!'\* GI:EAH6 HEG69 D 76HHEDCIH 76H9 DC DGK YHJ GCI 8G9>I GLC< DGL>C>H  
J C9:GI=: :AN9 GL,:CB \$D6C;68>AIN6G EGE6N67A 6I I=: DBE6CNHDEI>DC>CL=DA DGCE6GL>=DI I EGB>JB DG  
E:6AN6C9 6B DI CH7DGL:9 B6NCDI 7: G7DGL:9 DC8: GE6>9

;@&@3& 3B;B>) D@B5FA@

!CEGDGE GD9HL: <C GANHI>H>9 6CNH>DI I:CB AFJ>INC:9HI=6I 6G CII B:I I=CI<=DE:GLC<86H:;ALH6C9  
6K6>A7A 86H I=CI<=H H 6C8:HD 8DB B:G>6AE6:GI C9:GDJ G + 9DAG6C9 JCD9:CI B>C6I:9 8DB B:G>6AE6:GECD>GB H  
WDB B:G>6A 6E:G C D>GB H J:IDI=:KDA>AIN6C9 9>HJ EIDC>CI=: 8DB B:G>6AE6:GB 6C@IH9JGC<I=: ;GH HM  
B DCI=HD L: I:BEDG6GANG9J8:9 DI GGA6C8: DCI=>HDI G: D ;J C9>C 6C9 8DCH FJ:CIANE6>9 DLC6C9 G;>C6C8:9 DI G  
DIH6C9>C<8DB B:G>6AE6:GL>=I=: :CB \$D6C J: %6G= G9>I H EEDG;DGI=: DB B:G>6A 6E:G C D>GB H H  
ECK9:9 7N6;>K N 6G 7>ADCH C DGJ CH 8J G9 G KAKC<8G9>I;68>AINI=6I:MEGHDC &DK B7:G I=:  
W:KAKC< G9>I 68>AINX L=>8= IDI=: :M:CI CII DI=:GL H ECK9>C<8G9>I H EEDG;DGI=: 8DB B:G>6AE6:GECD>GB H  
86C6AD7: JH9 ;DGL DG@<86E>A6C9 DI=: G<:C GA8DGEDGI: EJCEDHH

' C EGA L: 6B:C9:9 I=:WB:C9B:CIH I=:8G9>I6<G:B:CI ;DG:68=D D J G> B>ADC9:AN9 9GL I:CB  
AD6C;68>AIN L=>8=>6H7::CGE6>9 6HD :8:B7:G W ,:CB \$D6CX >,:CB \$D6C J: %6N L>=  
7>ADC>CEGC8>E6A6BDI CI DIH6C9>C<6HD :8:B7:G >>>,:CB \$D6C9J: %6G= L>= B>ADC>C  
EGC8>E6A6BDI CI DIH6C9>C<6HD :8:B7:G 6C9 >K 7>ADC\*:KAKC< G9>I 68>AIN L>=CD7DGL>C>H  
I=:GJ C9:G6HD :8:B7:G 6H;DAILH

S DG6CN;DI G;>H6AFJ 6G:GH: C9>C<CI=: E GD9HDI:9 7:AL :68=6CW 9>JH:9 DI G) J 6G:GH I=6I: C9 EGDGDI I=:  
B 6IJGIN96I: D I=: 6EEA867A ;68>AIN I=: B 6MBJB E:CB >I:9 8DCHA96I:9 C IAK G<: GLD>D 8DCHA96I:9 C I  
;J C9:9>C9:7I:9C HHID8DCHA96I:9 !, L6H>C8G6H9;CB ID ID >L>=GHE:8IIDI=: ;DI G;>H6A  
FJ 6G:GH: C9>C<"JC +:EI: B7:G :8:B7:G DG EGA ID >>L>=  
GHE:8IIDI=: ;DI G;>H6AFJ 6G:GH: C9>C<"JAN ID >>L>=GHE:8IIDI=: ;DI G;>H6AFJ 6G:GH: C9>C<  
' 8ID7:G ID 6C9 >K L>=GHE:8IIDI=: ;DI G;>H6AFJ 6G:GH: C9>C< :8:B7:G ID  
ECK9:9 =DL:K GI=6I;DG6CN;DI G;>H6AFJ 6G:GH=6I 6G CII 6C 9>JH:9 DI G) J 6G:GH I=: B 6MBJB E:CB >I:9  
8DCHA96I:9 C IAK G<: GLD>GB 6CH6I ID 6HB6N7:>C8G6H9 ID ID ;DAIL>C<6 B 6I:G6A68FJ>HEDC  
I=:W C69>JH:9 %6MBJB \*6H>X

S ,=:B 6IJGIN96I: ;DGI=: :CB \$D6C J: %6N L6H:M: C9:9;CB J>JH ID%6N

S CB EGA ID :8:B7:G I=:B>CBJB \$DC9DC>CI:G76C@D,:G9 GI:W\$!'\*X;DG:68=D I=:  
;68>AI>HL>A>C8G6H ;CB ID 6C9 I=:B>CBJB 76H GI: ;DG:68=D I=: ;68>AI>HL>A>C8G6H ;CB  
ID !C699>JDC L>=GHE:8IIDI=: \*:KAKC< G9>I 68>AIN6C9 ;DG6CN 9>JH:9 DI G) J 6G:GH C  
L=>8=I=: 8DCHA96I:9 C IAK G<: GLD>H>G6I:GI=6CI=: - C69>JH:9 %6MBJB \*6H>D I=: 6EEA867A B 6G<C 6H  
9:I:CB >C9 76H9 DC DI GAC<I:CB 9:7I8G9>I GLC< ;DG6CN\$!'\* GI:AD6CHL>A>C8G6H ;CB 6 G<C: D 6C9  
76HHEDCIH6 G<C: D 6C9 76HHEDCIH6C9 ;DG6CN76H GI:AD6CH;CB 6 G<C: D 6C9  
76HHEDCIH6 G<C: D 6C9 76HHEDCIH JG=:CB DG L>=GHE:8IIDI=: :CB \$D6C J: %6N I=:  
6EEA867A B 6G<C 6H9:I:CB >C9 76H9 DC DI GAC<I:CB 9:7I8G9>I GLC< ;DG6CN\$!'\* GI:AD6CHL>A>C8G6H  
;CB 6 G<C: D 6C9 76HHEDCIH6 G<C: D 6C9 76HHEDCIH6C9 ;DG6CN76H GI:AD6CH;CB  
ID6 G<C: D 6C9 76HHEDCIH

S CB EGA ID :8:B7:G I=:B 6MBJB EGC8>E6A6BDI CI D H8JG9>C9:7I:9C HHID I=:GI=6C  
8:G6CINE:HD H8JG9>C9:7I:9C HH:MEGHANE:CB >I:9 J C9:G:68=8G9>I6<G:B:CI >H9:8G6H9;CB D DI G  
8DCHA96I:9 C I 6HHIHL=:C699:9 ID>I=:GL>=C9:7I:9C HH>C8J G9 DG>J 6GCI:9 7N6CNDI DI GH 7H9>6G:HI ID

D, DJG8DCHDA96I: 9 C I 6HH IH L=: C699: 9 ID< I=: GL J=>C9: 7I: 9C HHC8J G9 DG<J6GCI: : 9 7N6CND, DJG  
H7H9>G: H

!C8DCC 8IDCL J=>I=: B: C9B: CHL: >C8J G9 6EECMB 6I: AN B>ADC D, :: H' JG8G9 J; 68>AN6<G: B: CIHGFI>G  
6BDC<DI=: CHI I=6I L: B 6CI6C8: G6C;>C6C8>6A8DK C6CIH6C9 L: L: G >C8DB EA6C8: L J=> 6AD, DJG;>C6C8>6A8DK C6CIHDC  
: 8: B7: G

JGC< L: 8DBEAI: 9 I=: ;DADL>C<;>C6C8>C< 6C9 86EJ6AIGCH8IDCH

S ' C : 7G6CN L: : M: C9: 9 I=: B 6IJGIN D I=: , : CB \$D6C J: %6N ID J<JH 99>JDC6AN  
DC EGA L: ;JCI=: G M: C9: 9 I=: B 6IJGINID%6N / : L: G >C8DB EA6C8: L J=> DJG8DK C6CIH7DI=  
7: ;DG 6C9 6I: GI=: : M: CHDC , =, : CB \$D6C9J: %6N L6HCDI 86A67A 6C9 GB 6C 9 EGE6N7A 6I DJGDEIDC  
S ' C : 7G6CN L: EGE69 B>ADC 6C9 DC' 8ID7: G L: GE69 I=: GB 6C<C< B>ADC D, I=:  
, : CB \$D6C , =, :: H6HD8>6I: 9 L J=> 7DI= EGE6NB: CHL: G >B B 6I: G6A

S ' C %6C= L: : CI: G9 >CID6 8G9 J; 68>AN6<G: B: CI I=6I ECK9: 9 ;DGI=: , : CB \$D6C9J: %6C= >C6C  
6<<G<6I: EGC8>E6A6B DJCI D B>ADC ' CI=: H6B: 96N L: 9GL 9DLC B>ADC 6K6>67A JC9: GI=: , : CB  
\$D6C9J: %6C= / : H7HFJ: CIAN>C8G6H9 I=: HO D I=>H; 68>AN7N B>ADC DC EGA 6C9 9GL  
I=: 699>JDC6A B>ADC>C EGA GH A<C<>C6C DJIH6C9>C< 6B DJCI D B>ADC / : E69 6EECMB 6I: AN  
B>ADC>C9: 7I >HH 6C8: 8DHH6HD8>6I: 9 L J=>I=: , : CB \$D6C J: %6C= , =, 7DGL>C<H; CB I=>H8G9 J  
; 68>ANL: G JH9 ;DGH IAB: CI D, DJIH6C9>C< 8DB B: C>6AE6E G, : CB \$D6C9J: %6C= 7DG >CI: GH 6I 6  
K6G67A 6I: : FJ 6AID\$! ' \* EAH6 6LC>H76H9 B 6G>C8J GCIAN 6I 76HHEDCIH HD : 8: B7: G  
7DGL>C<HJ C9: GI=>H; 68>AN7DG 6C>CI: GH 6I: D E: G6CIB , =, : CB \$D6C9J: %6C= L6H9J: DC  
%6C= 6C9 EGE6N7A 6I DJGDEIDC / : 6G CIE: CB JI: 9 IDG 7DGL DC8: I=: I: CB A6C>HGE69 , =,  
I: CB H6C9 8DC9>JDC H>C8A9>C< 8DK C6CIH 6EEA867A IDI=: , : CB \$D6C9J: %6C= 6G H7H6CI>6ANHB >6GID  
I=DH 6EEA867A IDDJG\*: KDAK< G9 J 68>AN

S ' C' 8ID7: G L: GE69 B>ADC D, I=: DJIH6C9>C< B>ADC D, I=: , : CB \$D6C9J: %6C= , =,  
:: H6HD8>6I: 9 L J=>I=: EGE6NB: CI L: G >B B 6I: G6A

S ' C' 8ID7: G L: GE69 I=: DJIH6C9>C< T 7>ADC 76A6C8: D I=: 1: CK6G67A >CI: GH 6I: I: CB A6C9J:  
L=>8= 6EECMB 6I: 9 B>ADC

S ' C &DK B7: G L: G9: : B: 9 ;DG86H 6AA B>ADC 6<<G<6I: EGC8>E6AD, DJGDJH6C9>C< +: CDG  
&DI: H9J: I=: W&DI: HK >C688D96C8: L J=>I=: I: CB HD, I=: >C9: CIJ G <DK C<C<I=: &DI: H !C8DCC 8IDCL J=>  
I=: IGCH8IDC L: LCI: D; I=: GB 6C<C< JC6B DDC9 9: ;: G9 ;>C6C8>C< 8DHH D B>ADC 6C9 G8D9: 9 6 AHH  
DC: MCJ>HB: CI D, B>ADC

\$ H7DH7I A8 3E >AI E3@ ! ;CG6;HK

DAIL <C> >H6CDK CK> L D, DJ G86H< ;AL H6C9 AFJ >XN

. 73D @76 757? 47D

<CB>ADCH

, DI6ADE: GID< 86H ECK9: 9 7N8DCI>CI>C< DE: GIDCH

6H E6> ;DG68FJ >HIDCH C I D, 86H G8: >K 9

( 6NB : CIH;DG69>JIDCHIDECE: CN EA6CI 6C9 : FJ >EB : CI

( CB : 9H;CB H6A D, 7JHC: H6C9 ECE: CN

ADI=: G>CK H>C< 68IKI> H

, DI6ACK H>C< 86H JH9 >C8DCI>CI>C< DE: GIDCH

( CB : 9H;CB 7DGL>C<H B 6IJ GI> HAD<: GI=6C 96NH C I D, >HI 6C8:  
8DHH

&: I ECB: 9H;CB GE6NB: CHD, 8DB B: G>6AE6E: G7DGL>C<H

( 6NB : CI D, 8DCK G>7A H C>DCI: H9J:

\*: EJ G=6H D, 8DB B DC H>6GH

\*: E6NB: CI D, 7DGL>C<H B 6IJ GI> H<G6I: GI=6C 96NH

( 6NB : CI D, 8DB B DC HD8@86H 9>K9: C9 IDH>6G=D>: GH

( 6NB : CI D, B 6C96IDN8DCK G>7A EG:: G9 HD8@86H 9>K9: C9 ID  
H>6G=D>: GH

&: I 86H 8DCH9: GIDC G8: >K 9 ;CB . DCI> G+: E6GIDC

ADI=: G;>G6C8>C< 68IKI> H

, DI6A>G6C8>C< 86H JH9 >C ECK9: 9 7N8DCI>CI>C< DE: GIDCH

\$ B7DBE@ 5EHF7E

' E: GID< 86H< ;AL H;CB 8DCI>CI>C< DE: GIDCH86C;A8IJ 6I: H>C>;86CIAN;CB E: GD9 ID E: GD9 6HLDG@< 86EJ6AC: 9H6C9  
I=: IB>C< D, E6NB: CIH;DG>8DB: I6MH >CI: GH E: CHDC;J C9>C< 6C9 DI=: GJ: B H>B E68I GEDG: 9 86H< ;AL H

' E: GID< 86H< ;AL H;CB 8DCI>CI>C< DE: GIDCHL: G 6EEGMB 6I: AN 7>ADC>C GEGH CI>C< 6C>C8G6H D,  
B>ADC DG6EEGMB 6I: AN 6H8DB E6G9 ID 6C9 EGB 6GAN6IIG7JI67A IDI=: ;DAIL <C>;68IDGH

S 1: 6GDK GN 6G>C8G6H D, B>ADC>C' E: GID< 86H< ;AL ;CB C I: 6G>C<H;CB 8DCI>CI>C< DE: GIDCH C I D,  
CDC 86H< >: B H B DG6GIDC : EG8>6IDC +ID8@76H9 8DB E: CHIDC \$DHDC: M>C>J >HB: CI D, 9: 7I 6>C DC  
>CK HB: CI >C. DCI> G DEDGIDC 6>C DC AI>6IDC GHAI>DC 6C9 \* JH6: MI 6C9 L>C9 9DL C8DHH

S , =: 6<<G<6I: 8=6C<: H>C 688DI CHG8: >K7A >CK CIDG: H 6C9 IG9: 688DI CHE6N67A JH9 B>ADC D, 86H 9J GC<  
8DB E6G9 IDJHC< B>ADC D, 86H 9J GC< , =: 6B DI CI D, 86H< ;AL <: C G6I: 9 ;CB DGJH9 7NI=:  
6<<G<6I: D, 688DI CHG8: >K7A >CK CIDG: H 6C9 IG9: 688DI CHE6N67A 9: E: C9HJEDC=DL :;;: 8IK ANL: B 6C6<:  
I=: 86H 8DCK CHDC 8N8A L=>8=<: C: GAN GEGH CHI=: CI B7: GD, 96NH=6I: >EH ;CB I=: 96NL: E6N;DGI=:  
EJ G=6H D, GL B 6I: G6A6C9 8DB EDC: CHIDI=: 8DA8I>DC D, 86H< ;CB DI G8J HDB: GH 6C9 86C7: H>C>;86CIAN  
>B E68I: 9 7NI=: IB>C< D, 8DA8I>DCH6C9 E6NB: CH>C 6 E: GD9

S , =: 6<<G<6I: 8=6C<: >CEGE6>9 : ME: CH H6C9 DI=: G6HIH 688G: 9 : ME: CH H6C9 DI=: GA67>AI> H 6C9 8=6C<: H>C  
9:;;: G9 >C8DB: I6MHJH9 B>ADC D, 86H< >C 6H8DB E6G9 IDJHC< B>ADC>C , =: N 6GDK GN 6G  
8=6C<: HL: G 9GK C7N1B>C<9>;: G8: H>C I6ME6NB: CH6C9 : B EAN: 8DB E: CHIDC 6C9 7: C: ;JH

' E: GID< 86H< ;AL H;CB 8DCI>CI>C< DE: GIDCHL: G 6EEGMB 6I: AN B>ADC>C 6C>C8G6H D, B>ADC DG  
6EEGMB 6I: AN 6H8DB E6G9 ID , =HN 6GDK GN 6G8=6C<: >CDE: GID< 86H< ;AL H;CB 8DCI>CI>C< DE: GIDCHL 6H  
EGB 6GAN6IIG7JI67A IDI=: ;DAIL <C>;68IDGH

S DE: GID< 86H< ;AL HL: G >B E68I: 9 7NAL: GC: I: 6G>C<H;CB 8DCI>CI>C< DE: GIDCH6H8DB E6G9 ID  
L=>8=L: G 9GK C7N6 N 6GDK GN 6G>C8G6H >CDE: GID< ECG>JHD, B>ADC 6 9: 8G6H >C>CI: GH: ME: CH D,  
B>ADC 6HDS>6I: 9 L>=>I=: C I GE6NB: CI D, 9: 7I 6<6>C DI=: \*: I6>C 9 . DCI> G+=6GHID, B>ADC 6C9 6<6>C  
DC AI>6IDC GHAI>DC D, B>ADC L=>8=L: G E6G6AND;H1 7NI=: ADHDC: M>C>J >HB: CI D, 9: 7I D,  
B>ADC , =: <6>C DI=: \*: I6>C 9 . DCI> G+=6GH6C9 AI>6IDC9>HB >H6A6C9 H7H6CI>6AN6AD, I=: ADHDCI=:



:M<C>J H B: C I D, 9: 7I 6G CDC86H >A: B HI=6I >B E68I C I: 6G<C>HL >A=D I 6 8DG HEDC9>C< >B E68I ID DE: G I C< 86H< ;AL H

S , =: 6<<G<6I: D, 688DI CHG8: >K7A >C< CIDG: H 6C9 IG9: 688DI CHE6N67A J H9 B>ADC D, DE: G I C< 86H< ;AL H 9JGC< 8DB E6G9 IDECK9>C< B>ADC D, 86H< 9JGC< , =: 6B DI C I D, 86H< ;AL <: C: G I: 9 ;DB DGJ H9 7NI=: 6<<G<6I: D, 688DI CHG8: >K7A >C< CIDG: H 6C9 IG9: 688DI CHE6N67A 9: E: C9HJ EDC=DL :;;: 8I<K AN L: B 6C<: I=: 86H< 8DCK: G H C 8N8A L=>8=<: C: G AN G EGH C HI=: C I B 7: G D, 96NI=6I: A E H ;DB I=: 96NL: E6N< DG I=: E I G=6H D, G I B 6I: G 6A H 6C9 8DB EDC: C H I D I=: 8DA 8I D C D, 86H< ;DB DI G8J HDB: G H 6C9 86C 7: H<C>;86CI AN >B E68I: 9 7NI=: I B >C< D, 8DA 8I D C H 6C9 E6NB: C H C 6 E: G D J GC< L: : ME: G: C8: 9 6C>C8G 6H >C>C< CIDG 9J: >C E6G ID=>X=: G H<;: INHD8@AK: A I L=>8=L: G >C8G 6H9 ID7J;;: G I=: >B E68I D, H F E A N 8=6<C 6C9 A D<H 8H 8=6A C<: H 6C9 ID; J A>A 8J HDB: C9: B 6C9

S , =: 6<<G<6I: D, EGE69 : ME: C H H 6C9 DI=: G 6H I H 688G: 9 : ME: C H H 6C9 DI=: G A 67>A I> H 6C9 8=6<: H<C9: ;: G9 >C8DB: I 6M H J H9 B>ADC D, 86H< >C 6H8DB E6G9 IDECK9>C< B>ADC >C L>A= N 6GDK GN 6G 8=6<: A G: A N 9GK C 7NI=: ;J C9>C< D, 6 B>ADC 9: ;: G9 8DB E: C H I D C A 67>A I N L=>8=L 6H6HD8>6I: 9 L>A= I=: +: C K8: =6CC: A 68FJ>H I D C 6C9 L 6HE69 >CID: H 6C L J EDC 8A H C< D, I=: IGCH68I D C 6HL: A 6HDI=: G D I D C: 8=6<: H >C K 6GDI H8DB E: C H I D C 6C9 7: C ;>A E6NB: C H

@H7E;@ 5EHE7E

!CK H<C< 86H< ;AL H;DB 8DCI>C I>C< DE: G I D C H 8D C H H EGB 6G A N D, 86H< E69 ;DG68FJ>H I D C H 6C9 86E I 6A: ME: C9>J G H &: I 86H< J H9 >C>C< H<C< 68I<K I>H;DB 8DCI>C I>C< DE: G I D C H L 6H6E E C M B 6I: A N B>ADC 9JGC< 8DB E6G9 ID 6E E C M B 6I: A N 7>ADC 6C9 B>ADC D, C I 86H< J H9 >C 6C9 G H E: 8I<K A N , =: 9: 8G 6H >C>C< H<C< 86H< ;AL 9JGC< 6H8DB E6G9 ID L 6H9GK: C 7NDI G68FJ>H I D C D, +: C K8: =6CC: A 6C9 ( C K 6I D C >C L=>8=L 6H E6G 6A N D; H I 7N>C8G 6H9 86E I 6A: ME: C9>J G H D, 6E E C M B 6I: A N B>ADC >C

, =: G9J 8I D C >C 86H< J H9 ;DG<C< H<C< 86H< ;AL H<C 6H8DB E6G9 ID L 6H9GK: C 7NI=: 68FJ>H I D C H D, +: C K8: =6CC: A 6C9 ( C K 6I D C L=>8=D 8J G 9 >C 6C9 ID I 6A 9 6E E C M B 6I: A N 7>ADC E6G 6A N D; H I 7N 6 N 6GDK: G N 6C9: 8G 6H >C 86E I 6A: ME: C9>J G H D, B>ADC

6E I 6A: ME: C9>J G H 6G B 69: EGB 6G A N ;DG<C8G 6H C< 86E 68 I N G E A 8<C< 6<: 9: FJ>E B: C I H E E D C I C< E C D J 8I 9: K A E B: C I >C I>6I<K H;DG=6G L 6G 6C9 H D, I L 6G D;;: G C<H >B E G K C< >C;D B 6I D C I: 8=CD A D N H N H: B H 6C9 E I G=6H C<: FJ>E B: C I J H9 >C G K C I: 6G G C<: B: C H L >A= 8J HDB: G H 6E I 6A: ME: C9>J G H I D I 6A 9 B>ADC >C B>ADC >C 6C9 B>ADC >C / : : ME: 8I 86E I 6A H E: C9>C< ID 7: 7: I L: : C 6E E C M B 6I: A N B>ADC 6C9 B>ADC >C I=D I<= 68I J 6A : ME: C9>J G H L>A I A B 6I: A N 9: E: C9 D C 7J H C: H 8D C9>D C H

;@G5;@ 5EHE7E3@ @74F76@FE

>C6C8<C< 86H< ;AL H;DB 8DCI>C I>C< DE: G I D C H 8D C H H EGB 6G A N D, 86H< ;AL H 6H D 8>6I: 9 L>A= I=: >H I 6C8: D: FJ>A N I=: >H I 6C8: 6C9 G E 6N B: C H D, 9: 7I 6C9 8DB B: G=6A E 6E: G E 6N B: C H D, FJ 6G: C N 86H< 9>K9: C9H I D 8DB B D C 6C9 E G;;: G9 H=6G=D A: G H 6C9 86H< 8D C H 9: G I D C G 8: >K 9 ;DB I=: . D C I>G+: E 6G I D C >C6C8<C< 68I<K I>H;DB 8DCI>C I>C< DE: G I D C H J H9 86H< D 7>ADC >C <C: G I: 9 86H< D B>ADC >C 6C9 J H9 86H< D B>ADC >C

' C : 7G 6N I=: DB E6CNH D 6C9 D >G 8IDGH 6E E C K 9 6H 6G G E I G=6H E C D G B 6I I=D G O C< I=: DB E6CNID G E I G=6H J E ID B>ADC H 6G H D, I=: DB E6CNH D I H 6C9>C< 8DB B D C H D 8@;DB I B: ID I B: D C I=: DE: C B 6C@I D G C E G K 6I: A N C<D I 6I: 9 IGCH68I D C H, =: G >H C D: ME: G I D C 96I: ;D G I=: G E I G=6H E C D G B 6C9 I=: I B >C< 6C9 6B DI C I D, G E I G=6H H J C9: G I=: E C D G B 6G 9: I: C >C: 9 7NI=: DB E6CNH B 6C6<: B: C I 76H9 D C B 6C@I 8D C9>D C H 6C9 DI=: G; 68IDGH , =: G E I G=6H E C D G B B 6N 7: H H E: C9: 9 D C9>H 8DCI>C I>9 6I 6CNI B: 7NI=: D 6C9 D >G 8IDGH

>C6C8<C< 68I<K I>H;DB 8DCI>C I>C< DE: G I D C H 9JGC< G;A 8I: 9 I=: ;D A I L>C< IGCH68I D C H

S ' C "J C L: : C I: G9 >CID 6 I=G: N 6G T 7>ADC 1: C, : C B \$D 6C ' C I=: H 6B: 96N L: 9GL 6C9 8DCK G: 9 I=: : C G 6K 6>A 7A 6C8: J C9: G I=: ;68>A N L=>8=N>A: 9 C I E C 8: : 9H D, B>ADC

S ' C "J C L: : C I: G9 >CID 6 I=G: N 6G Z B>ADC J C, : C B \$D 6C ' C "J C L: 9GL 6C9 8DCK G: 9 I=: : C G 6K 6>A 7A 6C8: J C9: G I=: ;68>A N L=>8=N>A: 9 C I E C 8: : 9H D, B>ADC

S ' C : 7G 6N I=: B 6I J G I N 96I: D, I=: D C K: G 7A &D I: H L: G E 69 >C 86H< 7>ADC >C D I H 6C9>C< E G C 8>E 6A 6C9 688G: 9 >C I: G H I=: G D C

S ' C ' 8ID7: G L: : C I: G9 >CID 6 I: C B A 6C 8G 9 I 6<G: B: C I L=>8= E C K 9: H;DG6 96N9: A N 9 9G L I: C B A 6C;68>A N J E ID 6C<<G<6I: E G C 8>E 6A 6B DI C I D 7>ADC ' C : 8: B 7: G L: 9GL 9D L C I=: ;J A 7>ADC 9: A N 9 9G L H C D G I C H 8J G 9 I: C B ;68>A N W: A N 9 G L, : C B \$D 6C J: X 6H 6, : C B +' \* \$D 6C , =: G E 6N B: C I D I=: E G C 8>E 6A H 9J: D C : 8: B 7: G / : 8D C 8J G C I A N G E 69 I=: 7>ADC >C D I H 6C9>C< E G C 8>E 6A D, I=: : A N 9 G L, : C B \$D 6C 9J: 6C9 688G: 9 >C I: G H I=: G D C

S JGC< L: >C8G6H9 7D<G>C<H7N B>A<D<C<C I 8DB B: <6AE6E: GJ C9: GI=: - + 9DA<G9: CDB <C6I: 9  
8DB B: <6AE6E: GE<D<GB HD: :8: B 7: G I=: 8DB B: <6AE6E: G7D<G>C<H=69 6 L: >=I: 9 6K <G<:  
6C<J 6A::: 8I<K <G I: D 6C9 6 L: >=I: 9 6K <G<: B 6IJ GIND 6EE<D<MB 6I: AN 96NH  
S JGC< L: GEJ <6H9 B>A<D<H<6GHD, DI GDJ IH6C9>C< 8DB B DC HD8@;DG6EE<D<MB 6I: AN B>A<D<J C9: G  
DI GEJ 7A8AN 6C<D<J C8: 9 H<6G GEJ <6H E<D<GB  
S JGC< L: B 69: 9<K9: C9 E6NB: CHID8DB B DC H<6G=D<A: CHID6AC< B>A<D<

!C L: GE6<9 I=: GB 6<C< B>A<D<DI IH6C9>C< DC I=: :AN 9 <G L, : <B \$D6C J: GEJ <6H9  
B>A<D<D, I=: D<K: <67A +: C<D<G<D I: H9J: 6C9 G H B: 9 7D<G>C<J C9: GDJ G DB B: <6A( 6E: G( <D<GB H L >=  
E<D<8: :9H7: >C<J H9 ;DG68FJ >H<D<CH6C9 < C: <6A8D<E<D<G I: E J <E D H H JGC< I=: N 6G: C9: 9 :8: B 7: G L: E6<9  
B>A<D<D, 86H< 9<K9: C9 HID8DB B DC H<6G=D<A: <H 6C9 =D<A: <H D, DI G% (+

!C L: GE6<9 7>A<D<G A I: 9 ID I=: >H 6C8: D 8DB B: <6AE6E: GJ C9: GI=: DB B: <6A( 6E: G( <D<GB G8: <K 9  
E<D<8: :9H;<D<B 7D<G>C<H<D, B>A<D<G E6<9 7>A<D<D, 7D<G>C<H 6C9 E6<9 B>A<D<D, 86H< 9<K9: C9 HID  
H<6G=D<A: <H

\*::: GIDW \$>FJ >9>IN 6C9 6E<A6A\*: HDI <G: HKH 8H<D<67DK ;DG 9: H<G E I<D<D, DI G;>C6C8<C< 68I<K I> H<C 6C9

/ : < C: <6AN: ME 8I ID H<H<N 6CN H<D<G I: <B AFJ >9>INC: 9HI=6I 6G <D I B: I I=<D I =< DE: <G I<C< 86H< ;<A L H6C9 6K6<A7A 86H<  
EGB 6G A I=<D I =< I: <B A<D<CHD<G H 6C8: HD, 8DB B: <6AE6E: GJ C9: GI=: DB B: <6A( 6E: G( <D<GB H L >= 8G9>I H EED<G  
E<D<K9: 9 7NI=: \*: <D<K<C< G9>I 68>AN

, =: 86<GNC< K6A: D, ID I6A9: 7I DI IH6C9>C< 6HD, :8: B 7: G L 6H6EE<D<MB 6I: AN 7>A<D< / : =69 7>A<D<  
6K6<A7A J C9: GI=: \*: <D<K<C< G9>I 68>AN 6HD, :8: B 7: G \*::: GID <D I: ID I=: 8D<H A96I: 9 ;>C6C8<6A  
H6I: B: <H I;D<G<D<B 6I<D<G<6C9>C< DI G;>C6C8<C< 68I<K I> H6C9 >C9: 7I: 9C: H I

, =: 6K6<A7>AIND, I=: \*: <D<K<C< G9>I 68>AN 6H6 H6C9 7NAFJ >9>IN; 68>AN ID G E6NB 6IJ G<C< 8DB B: <6AE6E: G H6C  
>B E<D<G 6I ;68ID<G C B 6<C I6<C< I=: :MH<C< 8G9>I <G I<C<H<D, I=: DB B: <6A( 6E: G( <D<GB H L=: CL: =6K DI IH6C9>C<  
7D<G>C<H HD: :8: B 7: G 6C9 :8: B 7: G L: =69 B>A<D<6C9 B>A<D<7D<G>C<H DI IH6C9>C<  
J C9: GDJ G DB B: <6A( 6E: G( <D<GB G H E: 8I<K AN / : : ME 8I ID A B >I 6CN; J I J G 7D<G>C<H J C9: GI=: \*: <D<K<C< G9>I  
68>AN ID 6B DI <H I=6I L DI A A6K H;;>8>C I 8G9>I 6K6<A7A J C9: GI=: ;68>AN ID 6A<A L J HID 7D<G>C< >C: 9: 9 ID G E6N 6CN  
DI IH6C9>C< 8DB B: <6AE6E: G6H I B 6IJ G H

**;H67<E**

' C <D<K B 7: G L: 9: 8A<G9 6 G<J A<G FJ 6<G: <AN 9<K9: C9 D E: G8DB B DC H<6G E6<9 DC :8: B 7: G ID  
=D<A: <H D, G8D9 DC <D<K B 7: G

<<G<6I: 86H< E6NB: <H I;DG7DI= 8DB B DC 6C9 % (+ 9<K9: C9 HE6<9 ID H<6G=D<A: <H 9JGC< I=: N 6G: C9: 9 :8: B 7: G  
L: G B>A<D<6C9 L: G G8D9: 9 6H9<K9: C9 HID H<6G=D<A: <H<C I=: D<H A96I: 9 +I6I: B: <I D, =6C<: H<C FJ >IN  
6C9 I=: D<H A96I: 9 +I6I: B: <I D, 6H< <A L H

#=\*;-9=<6< >6<

' C"6C I 6CN L: 9: 8A<G9 6 G<J A<G FJ 6<G: <AN 86H< 9<K9: C9 D E: G H<6G E6N 7A DC % 6<G= ID 8DB B DC  
HD8@D<A: <H D, G8D9 DC :7C I 6CN

**3E 3<G 3E ' 7C<G D? 7<E**

);0

HD: :8: B 7: G L: =: A 6EE<D<MB 6I: AN 7>A<D<D, 86H< 6C9 86H<: FJ <K6A<H I=6I L: G >C<K H: 9 >C=>=AN AFJ >9  
>C<K HB: <I <69: >CHGB: <H L >= 6 B 6IJ GIND 96NH DGA H I, =: 6C<J 6A::: 8I<K <G I: L 6H<B B 6I: G6A EEE<D<MB 6I: AN  
D, DI G86H< 6I :8: B 7: G L 6H<: A >C I=: - +

/ : =6K 86H< G FJ >GB: CHID H EED<G L D<G<C< 86E<A6AC: 9H 86E<A6A: ME: C9>J G H6C9 68FJ >H<D<CH E6N<C I: G H 6C9 H <K8:  
9: 7I E6NI 6MH6C9 6CNG A I: 9 >C I: G H DGE: C6A>H ;J C9 DI GE: CHD<C A<CH6HG FJ >G9 E6N9<K9: C9 HID H<6G=D<A: <H 6C9  
H EED<G I D I=: G7J H C: H C: 9HDG D? 8I<K H/ >= G H E: 8I ID DI G86H< G FJ >GB: <H L: < C: <6AN>C I: C9 ID J H 6K6<A7A 86H< 6C9  
>C I: <G6AN< C: <G I: 9 ;J C9 HID B: : I I=: H 86H< G FJ >GB: <H 7J I >C I=: : K C I I=6I 699>I D<C6A A FJ >9>IN>H G FJ >G9 E6<8J A<G A<C  
8DCC 8H<D<C L >= 68FJ >H<D<CH L: B 6N 6A D 7D<G>C<J C9: GDJ G8DB B: <6AE6E: GE<D<GB HDG 8G9>I ;68>A> HDG: C I: G<C I D C: L  
8G9>I ;68>A> H6C9 :>=: G7D<G>C< 9<G 8I A N I=: G J C9: GDJ G H H 8= 8G9>I ;68>A> HID 768<H I D E 699>I D<C6A 7D<G>C< < 86E68>IN

J C9: GDJ G8DB B: G6AE6E: GECDGB H/ : 6ADB 6N; DB LB: IDLB: 688: HHI=: 86EJ6AB 6C@ IH >C8A9>C< IDI6@ 69K6C16<: D; ;6KD67A >CI: GH G1: : CKGCB: CHDGD1=: GB 6C@I 8DC9>DCH

DG>C8JB J A1K: 6CC<HGB 6CH 7? 8I ID; DG>CGB >I6C8: I6MH/ : =6K B 69: 6C: A8LDC G<6C>C< I=: 6B DJ CI D; : 6CC<HI=6I L: 9DCI >CI: C9 IDGE6I G6I: 9J: IDA86AL DC@C< 86EJ6AC: 9H A86A A1L GHG8L DCH =>=: DG>CGB >I6C8: 8DHH EGK DJ H>CK HB: CH>CE=NH86A6HI IH6C9 68FJ >H>DCH DG; JIJ G <GL I=C: 9H DGB DH D; DJ G; DG>CDE: G1DCH L: B6@ 6C6HI GDC G<6C>C< I=: 6B DJ CI D; : 6CC<H>C: M8: HHD; >CI: C9: 9 GE6I G6I DCI=6I 6G : ME: 8I: 9 ID7: =: A; DG>C9: >CI: G>CK HB: CI , =: 6B DJ CI D; ; DG>CGB >I6C8: I6MH=6I B 6N7: 6EEA867A IDH 8=: 6CC<H HCDI G69>A9: I: G>C67A <K C A86A A1L GHG8L DCH=6I B 6N6EEA ID6 EDGDC D; H 8=: 6CC<H J C@DL C 8=6C<: H>C; DG>C I6MA1L I=6I B 6ND88J G9J GC< I=: 6EEA867A GHG8L DCE: GD9H86J H 9 7N6EEA867A A86A8DGEDG1: A1L ; DG86H GE6I G6I DC 6C9 I=: K6GDJ HI6MEACC< 6A: G6I K HL: 8DJ A : B EAN> L: GE6I G6I: 9 I=: H : 6CC<H

); 0 "-9=I-5-6<

, =: ; DAXL >C< I67A H IH; DG= 6 H B B 6CND; DJ GH>DG I: G 6C9 AC< I: G 86H GFJ >GB: CH6HD; : 8: B 7: G J C9: G AC< I: G 9: 7I EG8>E6A6C9 >CI: GH D7A<6I DCH A6H H EJ G=6H D7A<6I DCH6C9 DI=: GAC< I: G A67>A1> HG; A8I: 9 DC DJ G76A6C8: H=: : I J C9: G ( : G6C D; DJ G68FJ >H>DCH B 6N>CKDK I=: EDI: C1>6AE6NB: CI D; 8DCI >C: CI 8DCH9: G1DC , =: I67A 7: A1L 9D HCDI G; A8I 6CNH 8= D7A<6I DCH 6HI=: LB >C< 6C9 6B DJ CHD; 6CNH 8= E6NB: CH6G J C8: G6C

G7 I ;E ;@A@  
K73DA8  
757? 47D  
G7 >H7DE 3@  
A@ K73D8DA?  
757? 47D

>CB>ADCH

) AB>

74F3G >73E7E

\$DC< I: G 9: 7I EG8>E6AE6NB: CH

!CI: GH E6NB: CHDC AC< I: G 9: 7I <sup>6</sup>

' E G1C< A6H D7A<6I DCH <sup>7</sup>

\$ E 7D

( J G=6H D7A<6I DCH <sup>8</sup>

' I=: GA67>A1> HG; A8I: 9 DCI=: 76A6C8: H=: : I J C9: G ( <sup>9</sup> :

, DI6A

<sup>6</sup> !CI: GH E6NB: CHDC AC< I: G 9: 7I 6G ECD? 8I: 9 ; DG; JIJ G E: GD9HJ HC< I=: >CI: GH G1: H>C: ;;; 8I 6HD; : 8: B 7: G : G6C D; I=: H ECD? 8I: 9 >CI: GH E6NB: CHB 6N9>;: GCI=: ; JIJ G 76H 9 DC 8=6C<: H>C B 6C@I >CI: GH G1: H

<sup>7</sup> !C8A9: H; JIJ G A6H E6NB: CH; DGDE: G1C< A6H H=6K< >C1>6ACDC86C8: A7A A6H I: G H>C: M8: HHD; DC: N 6G

<sup>8</sup> DCHH D; 6<G: B: CHIDEI G=6H <DD9HDGH CK8: HI=6I 6G : C; DG8: 67A 6C9 A<6AN7>C9>C< DC J H6C9 I=6I HE: 8>N6AA H>C>; 86CI I: G H >C8A9>C<; M9 DGB >C B J B FJ 6CI>; HID7: EJ G=6H 9 ;>M9 B >C B J B DGK6G67A EG8: ECKH DCH 6C9 I=: 6EEGMB 6I: LB >C< D; I=: IGCH8LDC

<sup>9</sup> ( GB 6GAN8DCHH D; D7A<6I DCHJ C9: GECDJ 8I H CK8: 6C9 L 6G6CINEDAS> H6C9 6ADL 6C8: H E: GDCB 6C8: 6C9 DE: G1C< 8DH <J 6GCI: : H: H B 6I: 9: CKGCB: C1AGB: 9>6I DC 8DHH H A >CH G6C8: 6C9 A1>6I DC 8A6B H EDH G1GB: CI 7: C: ;>H E: CHDC 7: C: ;>I D7A<6I DCH C I I6MA67>A1> H 6C9 9: ;: G9 8DB E: CH1DC D7A<6I DCH , =: LB >C< D; 86H ;>AL H6H D8>6I: 9 L>I=: H D7A<6I DCH H76H 9 J EDC B 6C6<: B: C1YH: H B 6I: HDK GI=: I: G HD; I=: H 6G6C<: B: CH6C9 >HAG: AN76H 9 J EDC=>H DG86A ME: G: C8:

' !C8A9: HCD C 8DCI G8IJ 6AD7A<6I DCHD; B>ADC D; CDCJ G6CI <CHJ CG8D>C Q 9 I6M7: C: ;>H DL: K GI=: LB >C< D; I=: H A67>A1> H HJ C8: G6C 6C9 I=: G; DG I=: N=6K 7: : C>C8A9: 9 >CI=: WJ: A1: GI=6C DC: N 6G; GDB : 8: B 7: G X8DA B C , =: 6B DJ CH6AD>C8A9: DJ GD7A<6I DC J C9: GI=: , " : DG I=: IGCH1DC I6MDC 8I B J A1K: ; DG>C : 6CC<H 6C9 ECD >H L =>8= L: : ME: 8I IDE6NDK G >=I N 6GH \*: ;: GID & DI: IDI=: 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CH; DG 699>D C6A C; DGB 6I DC DC J CG8D>C Q 9 I6M7: C: ;>H

!C 699>D CIDI=: D7A<6I DCHCDI: 9 67DK L: =6K >H: 9 <J 6GCI: : H 8DCHH>C< EGB 6GAND; DJ IH6C9>C< H6C9 7NAII: CHD; 8G9>I 76C@<J 6GCI: : H 6C9 E: GDCB 6C8: 6C9 7>9 7DC9H >C 8DCC 8I DC L>I=: 8: G6C 6G6C<: B: CHL>I=: K C9DGH 8J HDB: GH ;>C6C8>C< 8DJ CI: G6C> H 6C9 <DK G6: C1A: C1>; HIDH 8J G DJ GD7A<6I DCH6C9 DGE: GDCB 6C8: GFJ >GB: CHG A1: 9 ID HE: 8>; 8 IGCH8LDC , =: H <J 6GCI: : H6G C1 G 8D9: 9 DC DJ G76A6C8: H=: : I 6C9 B>ADC >C 8DB B>B: CH: ME G L>I=: C DC: N 6GD; : 8: B 7: G 6C9 B>ADC A1: GI=6C DC: N 6G; GDB : 8: B 7: G

J GC< L: 8DCIG J I: 9 B>ADC 6C9 B>ADC IDDI G + 6C9 CDC - + 9: ;>C 9 7: C: ;>I E: CHDCEA6CH G HE: 8I K AN J GC< DJ G86H 8DCIG J I DC GFJ >GB: CH; DGDI G + 6C9 CDC - + 9: ;>C 9 7: C: ;>I E: CHDCEA6CH G : ME: 8I: 9 ID7: 6EEGMB 6I: AN B>ADC 6C9 B>ADC G HE: 8I K AN , =: J A B 6I: 6B DJ CHL: L>A8DCIG J I: 9: E: C9 J EDC 6B DC> DI=: G I>C>H A<6AGFJ >GB: CH J C9: GANC> 6HI G IJ G H I=: E A6CH; J C9: 9 H6IJ H I=: 6CI 8>E6I: 9 I6M9: 9J 8I>AIND; I=: 8DCIG J I DC A86AEG8L8: H B 6C@I 8DC9>DCH >CI: GH G1: H 6C9 DI=: G; 68IDH



HD :8:B7:G L: :ME:8IID=6K H:;;>8:CI AFJ>9INIDH:HNIDJG86H: C:9H;DGI=: ;DGH:67A ;JIJG <8A9>C<  
DJG86H: C:9H:CI=: - C: 9 +16: H

! 793>%DA5776;@E

(A6H G:;GID&DI: IDI=: 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CIH;DG<C;DDB 6I>DC G<6C>C< A<6AEC8: :9>C<H6C9 8DCLC<: C8> H  
6C9 ;DG6 9>HJHHC D, GHGAGI: 9 IDA<6AEC8: :9>C<H6C9 8DCLC<: C8> H G:;GIDWI: B \*>H@ 68IDGHX

' ) ! \$ \* # ) # ( ) " ) (

%6C6<: B: CIYH9>HJHHC 6C9 6C6AHHD, DI G:>C6C8>6A8DC9>DC 6C9 GH AHHD, DE: 6I>DCH>H76H9 JEDC DI G8DCHDA96I: 9  
;>C6C8>6AH6I: B: CIH L=>8=>6K 7: :CEGE6G9 >C688D96C8: L>= ( , =: EGE66I>DC D, I=: H ;>C6C8>6AH6I: B: CIH  
GFJ>GHB 6C6<: B: CI IDB 6@ : H>B 6I: H6C9 >9<B: CIH=6I 6;: 8I I=: GEDC: 9 6B DI CHD, 6HH IH A67>AI> H G K CI: H6C9  
:ME: CH H 6C9 G AI: 9 9>H8AH G D, 8DCLC<: CI 6HH IH6C9 A67>AI> H / : 76H I=: H : H>B 6I: H6C9 >9<B: CHDC=>HDG86A  
:ME: G: C8: I=: 8J G CI: 8DCLC>8: CK>GCB: CI 6C9 DC K6GDJ HDI=: G6HH B EI>DCHI=6I 6G 7: A K 9 ID7: G6HDC67A J C9: GI=:  
8>GJB H6C8: H 8IJ 6AGH AHB 6N9>;: GB 6I: G6AN;>GB I=: H : H>B 6I: H6C9 >9<B: CIH

/ : 7: A K I=: ;DAIL>C< 688DJ CLC<: H>B 6I: H6G B DH 8GI>86AID6C J C9: GH6C9>C< D, DI G:>C6C8>6AH6I: B: CIH H>B 6I: H6G  
8DCH9: G9 ID7: 8GI>86A> I=: NB: :I 7DI= D, I=: ;DAIL>C< 8GI: G6 I=: H>B 6I: GFJ>GHH B EI>DCH67DI I B 6I: G6AB 6II: GH  
I=6I 6G J C8: G6>C 6I I=: LB: I=: : H>B 6I: >HB 69: 6C9 B 6I: G6A8=6C<: H>C I=: : H>B 6I: 6G G6HDC67ANA@AN;>GB E: GD9 ID  
E: GD9 DG6 9: I6>A9 9>HJHHC DCI=: 6EEA86I>DC D, I=: H 6C9 DI=: G688DJ CLC<: H>B 6I: H G:;GID&DI: IDI=: 8DCHDA96I: 9  
;>C6C8>6AH6I: B: CIH

88DI CH\*: 8: >K67A / : B: 6H G DI G6AIL 6C8: IDG;A8I: ME: 8I: 9 8G9>I AHH HDK GI=: GB 6>CC< 8DCLG8IJ 6AA>: D, I=:  
6HHI>C688D96C8: L>= +- &D 6)6+I) 4 6; <=5 -6< :-, I< 7;: -; \$78I+ -);=-5 -6<7. :-, I< 7;: -;  
76 6)6+I) 4 6; <=5 -6< / : EDDA6HH IHL>= HB>AGGH@8=6G8I: GH>8H;DGI=>HB: 6H GB: CI 76H9 DC 6IIG7JI: HI=6I B 6N  
>8A9: 6HHI INE: 9J G I>DC 6C9 DG8G9>I GH>GIDC< , =: ;JIJ G : ME: 8I: 9 AHH HD: 68= EDDA6G : H>B 6I: 9 76H9 DC CI B: G I H  
FJ 6CI>6I K 6C9 FJ 6AI>6I K ;68IDGHG;A8I>C< B 6C6<: B: CIYH: H>B 6I: D, 8DA>8I67>AINDK GI=: GB 6>CC< 8DCLG8IJ 6AA>: D, I=:  
EDDA9 6HHI H>8A9>C<

S 9J G I>DC  
S =>HDG86A 8J G CI 6C9 ;DG 86H: 9 ;JIJ G AHH: ME: G: C8: 7N6HHI INE:  
S =>HDG86A 8J G CI 6C9 ;DG 86H: 9 9: ACFJ: C8N6C9 L GI: D; IG C9H  
S =>HDG86A 8J G CI 6C9 ;DG 86H: 9 : 8DCLC>8 8DC9>DCH 6C9  
S =>HDG86A 8J G CI 6C9 ;DG 86H: 9 8G9>I GH>

/ : G>J A6CNE: GDCB 9: I6>A9 GK>: L HD, DI GIG9: 688DJ CH6C9 J C7>AA 9 G8: >K67A EDI;DADHID9: I: CB>C > 8=6C<: H>C I=:  
6;DGB: CI>DC: 9 FJ 6AI>6I K 6C9 FJ 6CI>6I K ;68IDCH=6K >B E68I: 9 I=: 69: FJ 68ND, I=: 6AIL 6C8: H

. DAI>AIN6C9 J C8: G6>CIN>CDK GAA>A76A: 8DCLC>8 8DC9>DCH6C9 L DQAL>9: 86E>6AB 6C@IHB 6NC: <6I K AN>B E68I DI G  
8JHDB: GH>67>AINIDE6N6C9 6H6 GH I A B 6N>C8G6H I=: 9>;>8J AN>C8DA>8I>C< IG9: 688DJ CH6C9 J C7>AA 9 G8: >K67AH / :  
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: C9: 9 :8: B7: G DG !; I=: ;>C6C8>6A8DC9>DCH D, DI G8JHDB: GHL: G ID9: I: GDGI: 7: NDC9 DI G8J G CI: H>B 6I: H  
GH I A>C< >C6C>B E6>GB: CI D, I=: >G67>AINIDB 6@ E6NB: CIH L: L DI A 7: GFJ>G9 IDL GI: D; 699>DCH6AG8: >K67A 76A6C8: H  
L=>8= L DI A 69K GH AN>B E68I DI GC I: 6C>C<H6C9 ;>C6C8>6A8DC9>DCH !CD9: GID: K6A 6I: I=: H CH I K I ND, I=: : H>B 6I: HJ H 9  
>CI=: 86AJ AI>DC D, DI G6AIL 6C8: L: 6EEA>9 6 =NED I=: L86A 9: 8G6H >C6C>8>E6I: 9 8DA>8I67>AIN CCLC< I=6I DI G  
6AIL 6C8: L DI A >C8G6H 7N6EECMB 6I: AN B>ADCL>= 6 8DG HEDC9>C< 8=6G: ID+

ME: 8I: 9 8G9>I AHH HD, I=: 6HHI HDG>C6I: 9 9J GC< I=: N 6G: C9: 9 :8: B7: G 6HL: A6H8=6C<: HID: ME: 8I: 9 AHH H  
9J GC< I=: H6B: E: GD9 H 6G G8D>CQ 9 >C: 6C>C<H;DGI=: N 6G: C9: 9 :8: B7: G

!CK CIDG: H / : G8D9>CK CIDN 6I I=: AL: GD, 8DH DGC I G6A67A K6A: L=>8= >HI=: : H>B 6I: 9 H A C< EG8: >CI=: D9>C6CN  
8DI GH D 7JHC: HI AHHG 6HDC67ANEG9>8I67A 8DHHHD, 8DB EAI>DC 9>HEDH A6C9 IGCHEDC6I>DC / : : H>B 6I: I=: C I G6A67A  
K6A: D, DI G>CK: CIDN 76H9 DC 6HH B EI>DCHD ;JIJ G 9: B 6C9 6C9 G AI: 9 EG8>C< H>B 6I>C< I=: C I G6A67A K6A: D  
>CK CIDN>H>C=: G CI AN J C8: G6>C7: 86J H AK AH D, 9: B 6C9 I: 8=CD>86A69K6C8: H 6C9 EG8>C< 8DB E: I>DC>C B 6CND, DI G  
B 6C@I H86C;A8IJ 6I: H>C>;>86CIAN;>GB E: GD9 IDE: GD9 9J: ID8>GJB H6C8: H7: NDC9 DI G8DCI DA!; 68IJ 6AB 6C@I 8DC9>DCH  
6G AHH;6KDC67A I=6CI=DI L: ECD>8I: 9 L: 8DI A 7: GFJ>G9 IDG9J8: I=: K6A: D, DI G>CK: CIDN L=>8= L DI A 69K GH AN  
>B E68I DI G:>C6C8>6AH6I: B: CIH !CD9: GID: K6A 6I: I=: H CH I K I ND, I=: : H>B 6I: HJ H 9>CI=: 86AJ AI>DC D, I=: C I G6A67A  
K6A: D, DI G>CK: CIDN L: 6EEA>9 6 =NED I=: L86A 9: 8G6H IDI=: 6C>8>E6I: 9 G6A6I>DC CCLC< I=6I DI G>CK: CIDN L DI A  
9: 8G6H 7N6EECMB 6I: AN B>ADCL>= 6 8DG HEDC9>C< 8=6G: ID DH D, <DD>HHD> \*:::;GID&DI: IDI=: 8DCHDA96I: 9  
;>C6C8>6AH6I: B: CIH;DG9: I6>A9 >C;DDB 6I>DC G<6C>C< DI G>CK: CIDN 76A6C8: H6HD, :8: B7: G

8FJ>G9 !C6C<7AH6C9 DD9L>A' JG7JHC:HH68FJ>HEDCHINE>86ANGH A>C I=: G8D<C>DCD, <DD9L>A9: K ADE: 9  
I: 8=<CD>N 6C9 DI=: G<C6C<7A 6HH IHL=>8=6;; 8I I=: 6B D I C I D, ;J I J G E: GD9 6B D D 66 I D C: ME: CH 6C9 EDH7A >B E6>C: C I  
8=6G: HI=6I L: B 6N>C8J G\*:;; GID>DI: H 6C9 ID I=: 8DCHA96I: 9 ;>C6C8>6AH6I: B: CH;DG6 9: H8GEI>DCD, DI GEDA8>: H  
G A I C< ID<DD9L>A 68FJ>G9 >C6C<7AH 6C9 68FJ>HEDCH

!CE: GDB>C< DI G<DD9L>A>B E6>C: C I I: H>C< L: : H>B 6I: I=: ;6>GK6A: D, DI GG ED C< J C I HEG B 6GANJHC< 6 B 6C@I 76H9  
6EECD68= / : : H>B 6I: ;6>GK6A: 76H9 DC B J A>EAHD, : 6C<C>H7: ;DG >C I: GH I6MH 9: EG8>6I D C 6C9 6B D D 66 I D C  
W !, X 9: I: C>C 9 7N8J C C I C G9>C< B 6C@I B J A>EAHD, : 6C<C>H;DG8DB E6C>: HDE: G I C< >C 7JHC: HH H H B >A G I D: 68=  
D, DI GG ED C< J C I H>C 699>I D C I D G 8: C I B 6C@I 6K6>A 7A H A I G C H 8 I D C H D, 8DB E6C7A 7JHC: HH H !C: K6A 6I C< I=:  
: H>B 6I: H9: GK 9 7NI=: B 6C@I 76H9 6EECD68= L: B 6@ 79>B: CH67DI I=: GAK6C8: 6C9 GA67>AIND, I=: B J A>EAH7N  
8DCH9: GC< ;68IDHJ C FJ: IDDI GG ED C< J C I H>C 8A9>C< DE: G I C< G H A H 7JHC: HIE A C H: 8DCD B>8 E C D: 8I D C H 6C I 8>E6I: 9  
;J I J G 86H> ;A L H 6C9 I G C H 8 I D C H 6C9 B 6C@I E A 8: 96I 6HL: A6H 79>B: CH67DI I=: 8DB E6C7>AIND, I=: B 6C@I E G M: H  
H A 8I: 9 !C8: G6>C8>C J B H 6C8: HL: 6AD: K6A 6I: DI=: G;68IDH>C 8A9>C< G H A H D, I=: : H>B 6I: 9 ;6>GK6A: J I A O C< 6  
9>H D I C I: 9 86H> ;A L 6C6A N H H>: 6C>C8DB: 6EECD68= B 6C@I E D H I D C H D, I=: 7JHC: HH H 8DB E6C7>AIND, B 6C@I H A H  
I G C H 8 I D C H 6C9 ;>C6C8>6A6C9 DE: G I C< E: GDB 6C8: >C D G: GID K6A96I: I=: G H A H D, I=: B 6C@I 6EECD68= , =: 9>H D I C I: 9  
86H> ;A L B D: AG FJ>G H 79>B: C I 6A6H I B E I D C H 67DI I E C D: 8I: 9 G K C I: <G L I=: ;J I J G DE: G I C< B 6C>C H 9>H D I C I G I: H 6C9  
I: C>C A K 6A: H, =: G 6G >C=: G C I J C8: G6>C I>: H G A I: 9 ID I=: H 6H I B E I D C H 6C9 B 6C<: B: C I Y H 79>B: C I >C 6EEA N C< I=: B ID  
I=: 6C6A N H D, <DD9L>A>B E6>C: C I

!C L: E: GDB: 9 <DD9L>A>B E6>C: C I I: H>C< ;DGDI GG ED C< J C I H>: E D C< J C I H G H A>C< ;C B G8: C I 68FJ>HEDCH  
<C C A N E G H C I I=: =>X=: H G H D, >B E6>C: C I / : 7: A>K I=: >B E6>C: C I G H 6 H D 8>6I: 9 L>I=: H G E D C< J C I H>C: C C A N  
9: 8G6H H 6HL: >C I: <G I: I=: H 7JHC: HH H 6C9 7: I I: G E D H I D C I=: B ;D G E D I: C I 6A J I J G : 6C<C>H<G L I=: H D, I=: 96I: D, I=:  
6C C I 6A>B E6>C: C I I: H I: 86G N C< K6A: D, <DD9L>A>C: 68= G E D C< J C I G C<: 9 ;C B B>A D C I D 7>A D C  
' J G C C I 6A>DD9L>A>B E6>C: C I 6C6A N H I C >C9>86I: 9 I=6I >C 6A>C H 6C8: H I=: ;6>GK6A: HD, DI GG ED C< J C I H: M>: 9: 9  
I=: >G86G N C< K6A: H 6C9 8DCH FJ: C I A N 9>9 C I G H A>C 6C>B E6>C: C I 8=6G:

, =: : M>: H D, I=: : H>B 6I: 9 ;6>GK6A: D K G86G N C< K6A: : MEG H I 9 6H6 E: C: C I 6<: D, 86G N C< K6A: ;D G I=: G H E: 8I>K  
G E D C< J C I ;D G: 68= D, DI GG ED C< J C I H 6H D, I=: 6C C I 6A I: H>C< 96I: C C<: 9 ;C B 6EECD M B 6I: A N ID 6EECD M B 6I: A N  
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=N E D I=: I 86A 9: 8G6H ID I=: ;6>GK6A: HD: 68= G E D C< J C I 6C9 8DB E6G9 I=DH =N E D I=: I 86A K 6A: H I D I=: G E D C< J C I  
86G N C< K6A: H 6H9 D C I=: H=N E D I=: I 86A 9: 8G6H I=: : M>: H D, I=: : H>B 6I: 9 ;6>GK6A: D K G86G N C< K6A: : MEG H I 9  
6H6 E: C: C I 6<: D, 86G N C< K6A: ;D G I=: G H E: 8I>K G E D C< J C I ;D G: 68= D, DI GG ED C< J C I H G C<: 9 ;C B 6EECD M B 6I: A N  
ID 6EECD M B 6I: A N / : : K6A 6I: 9 DI=: G;68IDH G A I C< ID I=: ;6>GK6A: D I=: G E D C< J C I H>C 8A9>C< 6H  
6EEA 867A G H A H D, I=: : H>B 6I: 9 ;6>GK6A: J H C< 6C>C8DB: 6EECD68= B 6C@I E D H I D C H D, I=: 7JHC: HH H 8DB E6C7>AIND,  
B 6C@I H A H I G C H 8 I D C H 6C9 ;>C6C8>6A6C9 DE: G I C< E: GDB 6C8: 6C9 8DC8A9: 9 CD>B E6>C: C I 8=6G: HL: G G FJ>G9

/ : G K>L >9: C I> >9 >C6C<7A 6HH I H;DG>B E6>C: C I L=: C K G: K C I H D G 8=6C<: H>C 8>C J B H 6C8: H>C9>86I: I=6I I=: G A I: 9  
86G N C< 6B D I C H B 6N C I 7: G 8D K G 7A : I: C>C< L=: I=: G6C>B E6>C: C I A I H D 88J C G 9 G FJ>G H 6 8DB E6G H D C, I=:  
86G N C< 6B D I C I D I=: H B D, J C 9>H D I C I: 9 86H> ;A L H: ME: 8I: 9 ID7: <C C G I: 9 7NI=: 6H I / : 6AD I: H>C6C<7A 6HH I H  
L>I=: >9: ;>C I: A K H 6I A 6H 6C C I 6A N ;DG>B E6>C: C I , =: H 6C6A N H G FJ>G B 6C<: B: C I D B 6@ 79>B: CH6C9 : H>B 6I: H  
67DI I ;J I J G G K C I: H: ME: CH H B 6C@I 8DC9>I D C H 6C9 9>H D I C I G I: H G A I: 9 ID I=: H 6H I H

!; 68I J 6AG H A H 6G C I 8DCH H: C I L>I=: B 6C<: B: C I Y H: H>B 6I: H 6C9 6H I B E I D C H <DD9L>A>6C9 DI=: G<C6C<7A 6HH I H B 6N7:  
D K G H 6I: 9 6C9 6 8=6G: L D I A C: 9 ID7: I 6@C 6<6>C H C I: 6C<C>H L=>8= L D I A 69K G H A N 6;; 8I D I G;>C6C8>6AH6I: B: CH

D C C<: C I \$>67>A I>H H9>H J H H 9>C>D I: ID I=: 8DCHA96I: 9 ;>C6C8>6AH6I: B: CH L: 6G ;C B I B: ID I B: H 7? 8I ID 6  
K6G>IND, A I>6I D C 6C9 H B >A G 8D C I C<: C I A 67>A I>: H>C89: C I 6A I D D I G 7JHC: HH D G I=: 7JHC: HH D E: G I D C H D, E G K D I H N I L C 9  
: C I>: H / : G 8D>C Q 6 A 67>A I N ;D G 6C N 8D C I C<: C 8N I=6I >H C D L C D G E C D 767A D, D 88J C G 8: 6C9 G 6H D C 7A N: H>B 67A , =: H  
6H H B: C I H G FJ>G 79>B: CH 8DC8: C C< B 6I I: G H I 8= 6H A I>6I D C 9: K A E B: C I H 6C9 D I 8DB: H I=: 6C I 8>E6I: 9 D I 8DB: D  
C <D I 6 I D C H I=: C I B 7: G D ;J I J G 8A>B H 6C9 I=: 8D H D, 7DI=: E C9>C< 6C9 ;J I J G 8A>B H !C 699>I D C 7: 86I H B D H  
8D C I C<: C 8>H 6G G H D K 9 D K G A C< E: G D H D, I B: A 67>A I>: H B 6N 8=6C<: >C I=: ;J I J G 9J: ID K 6G D I H ;68IDH>C 8A9>C< I=DH  
9>H J H H 9>C>D I: ID I=: 8DCHA96I: 9 ;>C6C8>6AH6I: B: CH !; I=: G H C K H L: : H 67A H: 9 L>I=: G H E: 8I ID I=: H 8D C I C<: C I  
A 67>A I>: H 6G >C 69: FJ 6I: L: L D I A 7: G FJ>G 9 ID>C 8J G 6C: ME: CH : FJ 6A I D I=: 6B D I C I D, I=: A I H I>C 8J C G 9>C: M>: H D, I=:  
G H C K H L=>8= L D I A 69K G H A N 6;; 8I D I G;>C6C8>6AH6I: B: CH

\*: K C I: \*: 8D>C I D C / : 9: G K G K C I: ;C B I=: H A D, E C D J 8I H 6C9 H C K 8: H \*: K C I: >H G 8D>C Q 9 L=: C 8D C I G A D K G I=:  
E C B >H 9 E C D J 8I H D G H C K 8: H H I G C H: C G 9 ID I=: 8J H D B: G C 6C 6B D I C I I=6I G;A 8I H I=: 8DCH9: G I D C I=6I L: : ME: 8I ID  
G 8: >C: M>=6C< ;D G I=DH <DD9H D G H C K 8: H !C 9: I: C>C< >8D C I A=6H I G C H: C G 9 L: 8DCH9: G L=: I=: G 8: G 6C  
>C9>86I D G H D, I=: I G C H: G D, 8D C I G A 6G E G H C I H 8= 6H I=: I G C H: G D, I A E G H C I G<=I I D E 6N B: C I H>C>86C I G H H 6C9  
G L 6C9 H D, D L C G H>E 6C9 8J H D B: G 688: E I 6C8: L=: C 688: E I 6C8: >H C I 6 ;D G B 6A I N , D 9: I: C>C I=: 8DCH9: G I D C I=6I I=:  
8J H D B: G D L: H J H L: B 6@ 79>B: C I H G<69>C< I=: 6B D I C I D, 8J H D B: G 6A L 6C8: H 6C9 G 76I: H 8DCH H C< E G B 6G A N D

KDAB: 9>HDI CH6C9 DI=: GHDI I: B >C8: CI>K EDC>GB H \*::: GID&DI: IDI=: 8DCHA96I: 9 ;>C6C8>6AH6I: B: CIH;DG6  
9: HGEIDCD, DI>GK CI: G8D>C>HDCEDA8>H

!; DI>G79<B: CIHG<6C><G K CI: G8D>C>HDCEDK >C8DG8I DI>GGEDG: 9 G K CI: H>CE6C8J AGE: GD9HB 6N7: 69K CHAN  
6;:: 8I: 9 >HDC86AN DI>G: H>B 6I: HD, G K CI: =6K 7:: CB 6I: G6AN8DCG8I

+ID8@ 6H9 DBE: CH6IDC DG69: HGEIDCD, DI>GHD8@76H9 8DBE: CH6IDC688DI CI>C< EG8I8: H G:: GID&DI: IDI=:  
8DCHA96I: 9 ;>C6C8>6AH6I: B: CIH :I: B >C<C<I=: 6EEDEG6I: ;6GK6A: B D9: A6C9 86AJ A6I>C<I=: ;6GK6A: D 8: C6C8HD8@  
76H9 E6NB: CI 6L 6CHGFJ>G H72: 8I>K 6HH B EIDCH >C8A9>C<I=: : ME: 8I: 9 A: D I=: 6L 6CH HD8@EG8: KDA6IAN 6C9  
: ME: 8I: 9 ;DG: >J G 6I: >K C DI GAB >: 9 IG9>C<=>HDGN;DAIL>C<I=: HE6G6IDC;CDB 6C6=: GH8@EG8: KDA6IANJ H9 ID  
86AJ A6I: I=: ;6GK6A: D HD8@DEIDCH>C I=: EDH HE6G6IDC: GD9 L 6H: H>B 6I: 9 76H9 DC6C6K <C<=>HDC86AHD8@EG8:  
KDA6IAND 6 <DI ED E: G8DB E6C>H ME: 8I: 9 KDA6IAN>H76H9 DC6L: >C I=: 9 6K <C<: 7AC9 D DI>G=>HDC86AHD8@EG8:  
KDA6IAN;CDB "JAN I=: 96I: D I=: 6C6=: GH E6G6IDC I=>DI <C I=: HD8@DEIDC<C6I 96I: 6C9 I=: 6K <C<=>HDC86A  
HD8@EG8: KDA6IAND 6 <DI ED E: G8DB E6C>H;DGI=: : ME: 8I: 9 I: B D I=: DEIDCH, =: 6HH B EIDCHJ H9 >C86AJ A6I>C<I=:  
;6GK6A: D HD8@76H9 E6NB: CI 6L 6CHGEH CI DI>G7: H: H>B 6I: H 7JI I=: H: H>B 6I: H>CKDAK >C=: G CI J C8: C6CI>H6C9 I=:  
6EEA86IDCD, 79<B: CI !; 68IJ 6AGH AH6G CII 8DCH: CI L >= DI>G6HH B EIDCH6C9: H>B 6I: H DI>G: FJ >N76H9 8DBE: CH6IDC  
: ME: CH 8DI A 7: B 6I: G6AN9>:: G CI >C I=: ;JIJ G

(: CHDC6C9' I=: G<DH BEANB: CI :C: >H DG69: HGEIDCD, DI>GE: CHDC688DI CI>C< EG8I8: H G:: GID&DI: IDI=:  
8DCHA96I: 9 ;>C6C8>6AH6I: B: CIH :C6C>D, DI>G + 6C9 CDC - + : BEAN: HE6C8>E6I: >C C C8DCIG7J IDGN9::>C: 9 7: C: >I  
E: CHDC EAC H 6AJ A6I>DCH, I=: 6B DI CI D E: CHDC8DHH6C9 D7A>6IDCH9: E C9 DCI=: 6HH B EIDCHJ H9 >C I=: 68IJ 6G6A  
K6A6IDCH >C8A9>C< 6HH B EIDCHG<6C><9>HDI CI 6I: H: ME: 8I: 9 GIJ <C DCEAC 6HH IH 6I: HD, H6AN>C8G6H H=: 6A= 86G  
8DH IG C9 6I: H B DG6AIN 6I: H 6C9 DI=: G;68IDGH !; I=: 6HH B EIDCHJ H9 >C86AJ A6I>C<E: CHDC6C9 DI=: GEDH G I>GB: CI  
7: C: >H8DHH6C9 D7A>6IDCH6G >C8DG8I DG: I=: ;68IDGHJ C9: GNC<I=: 6HH B EIDCH8=6C<: 6H6 GH A D 9>:: G C8: H>C  
68IJ 6A ME: G C8: 8=6C<: H>C @N: 8DCB >8 >9>86IDGH DGI=: G;68IDGH DI>G;>C6C8>6AH6I: B: CIH8DI A 7: B 6I: G6AN6;:: 8I: 9  
76HHEDCI G9J 8EDC>C I=: 9>HDI CI 6I: HJ H9 ;DGI=: EAC9J GC< L DI A =6K >C8G6H9 I=: C I D7A>6IDC7N  
B>ADC;CDB I=: 6B DI CIHG8D9: 9 >C I=: ;>C6C8>6AH6I: B: CIH6HD : 8: B 7: G

' JGEAC6HH IH8DCHH D K6GDI H>CH C6C8: 8DCIG8IH: FJ >N6C9 9: 7I H 8J G I: H6H9: I: B >C 9 7NI=: 69B >CHGIDGD: 68=  
EAC , =: H>B 6I: 9 AD<I: B 6I: D, GIJ <C;DGI=: EACHL 6H9: I: B >C 9 DC6 EAC7NEAC76HH76H9 DCI=: C6IJ G D I=: EAC  
6HH IH6C9 <C<: 9 ;CDB ID !; I=: : ME: 8I: 9 AD<I: B 6I: D, GIJ <C DCEAC6HH IH9J GC< L 6HG9J 8: 9 7N  
76HHEDCIH E: CHDC: ME: CH >C L DI A =6K >C8G6H9 7N B>ADC B>ADC DC6C6I: GI6M76HH

!C8DB: , 6MH DG69: HGEIDCD, DI>G C8DB: I6M688DI CI>C< EDA8>H G:: GID&DI: 6C9 &DI: IDI=: 8DCHA96I: 9 ;>C6C8>6A  
H6I: B: CIH

!C688D9C6C8: L >= ( 9:: <G9 I6M6HH IH6C9 A67>A I: H6G 9: I: B >C 9 76H9 DCI=: 9>:: G C8: 7: IL:: CI=: ;>C6C8>6A  
H6I: B: CI 6C9 I6M76HH, 6HH IH6C9 A67>A I: HJ HC<: C68I: 9 6I: H: ME: 8I: 9 ID7: >C::: 8I 9J GC<I=: N 6G<CL=>8=I=:  
9>:: G C8: HG K CH :: <G9 I6M6HH IH<C: GAN GEGH CI >: B HI=6I 86C7: J H9 6H6 I6M9: 9J 8IDC DG8G9 >C DI GI6MG IJ C  
>C;JIJ G N 6G;DGL=>8=I=: I6M7: C: >I =6H6AG 69N7:: C G;A8I: 9 >C DI G DCHA96I: 9 +I6I: B: CIH, 6CC<H :: <G9 I6M  
A67>A I: H<C: GAN GEGH CI >: B HI=6I =6K 6AG 69N7:: CI6@C6H6 9: 9J 8IDC DC DI GI6MG IJ C 7JI =6K CII N I7:: C  
G8D>CQ 9 6H6C: ME: CH >C DI G DCHA96I: 9 +I6I: B: CIH, 6CC<H, =: ::: 8I DC9:: <G9 I6M6HH IH6C9 A67>A I: H9J: ID6  
8=6C<: >CI6M6I: H>HG8D>CQ 9 >C >C8DB: I6M ME: CH >C I=: E: GD9 I=6I >C8A9: HI=: : C68IB: CI 96I:

' J G9:: <G9 I6M6HH IH6G G9J 8: 9 7N6 K6A6IDC6A DL 6C8: > 76H9 DCI=: L: >=I D 6K6>A7A: K9: C8: >I H B DG A@ANI=6C  
CII 6A@A=DD9 D B DG I=6C E: C8: CI I=6I H B: EDC>DC DG6AD I=: 9:: <G9 I6M6HH IHL>ACDI 7: G6AQ 9 / : : K6A6I:  
I=: G6AQ67>AND 9:: <G9 >C8DB: I6M6HH IH;DG: 68= D I=: 7GH9>8IDCH>CL=>8=L: DE: 6I: !; L: : ME: G C8: 8JBJ A6I>K  
EG I6M C8DB: >C6 E6C8J AG7 GH9>8IDC>C I=: I=G: N 6GE: GD9 >C8A9>C<I=: 8J <C CI 6C9 EGDGIL DN 6CH L: CDB 6AN  
8DC8A9: I=6I I=: 9:: <G9 >C8DB: I6M6HH IHL>AB DG A@ANI=6C CII 7: G6AQ67A 6C9 CD K6A6IDC6A DL 6C8: >HG8D>CQ 9  
JCAHI@C D C DGEACC 9 DE: 6I>C<9: K AEB: CIHL DI A A69 B 6C<B: CI ID8DC8A9: DI=: C L>H DL: K G>L: : ME: G C8:  
8JBJ A6I>K EG I6MAH H>C6 E6C8J AG7 GH9>8IDC>C I=: I=G: N 6GE: GD9 >C8A9>C<I=: 8J <C CI 6C9 EGDGIL DN 6CH L: I=: C  
8DCH9: G6 H G HD; 68IDGH>C I=: 9: I: B >C6IDCD, L=: I=: GI=: 9:: <G9 >C8DB: I6M6HH IH86C7: G6AQ 9 , =H ;68IDGH>C8A9:  
=>HDC86ADE: 6I>C<GH AH @C D C DGEACC 9 DE: 6I>C<9: K AEB: CIH I=: E: GD9 D I>B: DK GL=>8=8: C6CI: B EDCGN  
9>:: G C8: HL>AG K CH 8DCH9: 6IDCD, I=: JLA6IDCD, 8: C6C9:: <G9 >C8DB: I6MA67>A I: H I6MA6I 86GN768@86E67>AIN>C  
I=: E6C8J AG8DI CIGN 6C9 EG9: CI 6C9 ; 6H7A I6MEACC<H 6I: <H :I: G: K6A6IDCD, I=: H ;68IDGH>I=: 9:: <G9 >C8DB:  
I6M6HH IH6G : ME: 8I: 9 ID7: G6AQ 9 L>=>C I=: I6M86GN DGL 6C9 E: GD9 6A DL: 9 ;DGI=6I HE 8>8 8DI CIGN L: L DI A 8DC8A9:  
I=6I CD K6A6IDC6A DL 6C8: L DI A 7: GFJ>G9 , DI=: : ME: CI I=6I I=: 9:: <G9 >C8DB: I6M6HH IH: M8: 9 I=: 6B DI CI I=6I >H  
: ME: 8I: 9 ID7: G6AQ 9 L>=>C I=: I6M86GN DGL 6C9 E: GD9 ;DG6 E6C8J AG7 GH9>8IDC L: : H67AH=6 K6A6IDC6A DL 6C8:

/ : G8D>CQ I6M7: C: >H;CDB J C8: C6CI I6MEDH>DCHDCAN> >C DI G6HH B: CI >I H B DG A@ANI=6C CII I=6I I=: I6MEDH>DC  
L>A7: H H6C: 9 DC: M6B >C6IDC7NI=: I6MC>6I I=DGI>H 76H9 DCI=: I: 8=C86AB: GIHD, I=: EDH>DC , =: I6M7: C: >H



G8D<CQ9 >CI=: ;>C6C8>6AH6I: B: CIH;CB H8= EDH>DCH6G B: 6H G9 76H9 DCI=: A6G: H 7: C ;>I I=6I =6H6 <G6I: GI=6C  
A@A=DD9 D, 7: >C< G6AQ9 JEDCJA>B 6I: H I IAB: CI "J9<B: CI >HGFJ>G9 >C: K6A6I< I6MEDH>DCH6C9 9: I: CB>CC<>C8DB:  
I6MECK>HDC/ : G : K6A6I: I=: I: 8=C86AB: GHID, DI GI6MEDH>DCH6C9 B 6NG8D<CQ 6CJC8: Q6>CI6M7: C ;>I >C8: Q6>C  
8>CJB H6C8: H>C8A9>C<L=: C > 6 I6M6J9>I >H8DB EAI: 9 >> 6EEA867A I6MA6LH8=6C<: >C8A9>C< 6 I6M86H QAC< DG  
A<H6I>K <J>96C8: DG >>> I=: 6EEA867A H6IJI: D, AB >I6I>DCH: ME>GH/ : G8D<CQ EDI: C>6A688Q: 9 >CI: GH 6C9 E: C6A> H  
L>I= JCG8D<CQ9 I6MEDH>DCH>C>C8DB: I6M: ME: CH

!C699>JDC L: 6G QD>DC AN: M6B>C: 9 7NK6QDI H9DB: H8 6C9 >CI: Q6I>DC6AI6MC< 6JI=DI>H, =: 6B DI CI D, >C8DB: I6MHL:  
E6N>HH7?: 8I ID6J9>I 7N;,: 9: QAH6I: 6C9 ;DG>CI6M6JI=DI>H L=>8= B 6NGH A>CEQEDH 9 6HH HB: CIH H: W\*: H AHD,  
' E: QI>DCH !C8DB: , 6MHK6C9 &DI: IDI=: 8DCHA96I: 9 ;>C6C8>6AH6I: B: CIH / : GK>L DI G<A76AI6MEDH>DCHDC 6  
FJ6Q: QN76HH 6H9 DCI=: H GK>L HI I=: GH AHD, 9>HJH>DCH6C9 GHAI>DCHD, B 6II: QHL >= 8: Q6>CI6M6JI=DI>H I6M  
QAC>H 6C9 8DI Q9: 8>HDC H6C9 I=: : ME>QI>DC D, H6IJI: HD, AB >I6I>DCHGH K>H; DG8DCI>C<: CI I6MA67>AI>H6G 688Q: 9 DG  
69>IH: 9 6HC: 8: H6GN

C>C8G6H >CDI>G :;;: 8I>K I6M6I: D, LDI>A=6K: GH A>9 >C6C699>JDC6A>C8DB: I6MECK>HDC;DI=: N 6G: C9: 9  
: 8: B7: G D, 6EEQMB 6I: AN B>ADC

# , \$\*#) # () # ' (

DG69>HJH>DCD, C: L 688DI C>C< H6C96QHGA K6CI IDDI G7JHC: HH H G;: GID&DI: IDI=: 8DCHA96I: 9 ;>C6C8>6A  
H6I: B: CIH

) " &\* #) ) ) + # &\* ! ) ) + ( !\$( \*' ( \$\* ) " ' ) ' (

, =: >C>DB 6I>DCGFJ>G9 7NI=>HH: B >H>C8A9: 9 JC9: GWI: B %6C6<: B: CIYH >HJH>DC 6C9 C6ANHHI, >C6C8>6A DC9>JDC  
6C9 \*: H AHD, ' E: QI>DCHX

) " # # ! ( ) " # ) ( # ( \* % % " # ) ' . )

' 7BADEA8" 3@97? 7@FA@ ADEH7 ADBADEA@E @7D@> A@DA>\$ H7D ;@@5;3>' 7BADE@

, =: B6C6<: B: CI D, I=: DBE6CN>HGHECH7A ;DG: H67AH>C< 6C9 B6>C6C< 69: FJ 6I: >CI: C6A8DCI@ADK G;>C6C8>6A  
GEDC<;DGI=: DBE6CN !CI: C6A8DCI@ADK G;>C6C8>6AGEDC<>H9:;;>C: 9>C\*JAH 6 ; 6C9 9 ; E@BJA6I: 9  
JC9: GI=: +: 8JGI>H M=6C< 8ID,

, =: DBE6CNYHB 6C6<: B: CI 6HHH9 I=: :;;: 8I>K C: HHD, I=: DBE6CNYH>CI: C6A8DCI@ADK G;>C6C8>6AGEDC< 6HD,  
: 8: B7: G !CB6@<I=>H6HHHB: CI I=: DBE6CNYHB 6C6<: B: CI JH9 I=: 8GI: G6HI ;DI= 7NI=: DBB>I: : D  
+EDCHDG<' G6C@6D>DCHD, I=: , G69L6N DBB>HDC W' +' X>C>WCI: C6A DCI@A!CI: <GI: 9 GB: LD@X  
;GB: LD@ 6H9 DCI=>H6HHHB: CI B6C6<: B: CI 8DC8A9: 9 I=6I 6HD, : 8: B7: G I=: DBE6CNYH>CI: C6A8DCI@A  
DK G;>C6C8>6AGEDC<>H: :;;: 8I>K

, =: DBE6CNYH>C9: E: C9: CI G<H: G9 EJ7A8 688DI CI>C<;>B =6H>H: 9 6C6J9>J GEDGDCI=: :;;: 8I>K C: HHD, I=: DBE6CNYH  
>CI: C6A8DCI@ADK G;>C6C8>6AGEDC< , =>HGEDG96I: 9 :7G6CN 6EE: 6GHDCE6< D, I=>H DGB #



' 7BAIFA8 @67B7@7@F' 79;F7D76 %G4>5 55AG@;@ ;D'

, DI=: +=6G=DA: CH6C9 I=: D6C9 D >G8IDCHD, DQK DEDG6DC

\$ B;@A@A@ @7D@> A@DA>\$ H7D ;@@;3>' 7BAIF;@

/ : =6K 6J9>:9 DQK DEDG6DC6C9 H7H9>6G: HY>CI: @6A8DCI@ADK G;>C6C8>6AGEDG<6HD :8: B7: G 76H9  
DC8G: G6: H67AH: 9 >C!CI: @6A DCI@A!CI: <G: 9 @B: LDC@HI: 9 7NI=: DB B>I: : D +EDCHDG<' G6C@6DCHD I=:  
, G69L6N DB B>HDC ;@B: LDC@ I=: ' + 8G: G6 !C D GDE>C>C DQK DEDG6DC6C9 H7H9>6G: H I=:  
DB E6CN B6C6C: 9 >C6AB6I: G6AGHE: 8IH: ;: 8I>K >CI: @6A8DCI@ADK G;>C6C8>6AGEDG<6HD :8: B7: G  
76H9 DCI=: ' + 8G: G6

/ : 6AD=6K 6J9>:9 >C688D96C8: L>= I=: H6C96C9HD I=: ( J7A8 DB E6CN 88DI>C<' K @<=I D6C9 - C>: 9 +I6I: H  
( ' I=: 8DCHA96I: 9 76AC8: H=: IHD I=: DB E6CN6HD :8: B7: G 6C9 I=: G@I: 9 8DCHA96I: 9  
H6I: B: CHD: : 6C<C>H 8DB EG=: CHK >C8DB: 8=6C<: H>C: FJ>N6C9 86H: ;AL H;DG: 68=D I=: I=G: N 6H>CI=: E: GD9: C9: 9  
>8: B7: G 6C9 I=: G@I: 9 CI: H6C9 >C6C8>6AH6I: B: CI H>: 9JA AH: 9 >CI=: !C9: M6I !I: B 6 6C9 DI GG EDI  
96I: 9 :7G6CN : MEGH9 6CJCFJ 6A>9 DE>C>CI=: GDC

3EE8AD\$ B;@A@

, =: DB E6CNYHB 6C<: B: CI >HG HEDCH7A ;DCB 6>C6>C<: ;: 8I>K >CI: @6A8DCI@ADK G;>C6C8>6AGEDG<6C9 ;DG>H  
6HI HB: CI D I=: ;: 8I>K C HHD >CI: @6A8DCI@ADK G;>C6C8>6AGEDG< >C8A9: 9 >CI=: 688DB E6CN< \* : EDG D  
%6C<: B: CI DC DQK DEDG6DCYH!CI: @6A DCI@A' K G >C6C8>6A\* : EDG< ' J GG HEDCH7>AIN>HIID: MEGH6C DE>C>C DC  
I=: DB E6CNYH>CI: @6A8DCI@ADK G;>C6C8>6AGEDG< 76H9 DC DI G6J9> / : 6G 6 EJ7A8 688DI>C< >B G<H: G9 L>= I=:  
( ' 6C9 6G GFJ>G9 ID7: >C9: E: C9: CI L>= GHE: 8I IDI=: DB E6CN>C688D96C8: L>= I=: - + : 9: @AH8JG>: H@L H6C9  
I=: 6EEA867A @AH6C9 G>J @DCHD I=: +: 8JG>: H6C9 M=6C<: DB B>HDC 6C9 I=: ( ' >

/ : 8DC9J8I: 9 DI G6J9> >C688D96C8: L>= I=: H6C96C9HD I=: ( ' , =DH H6C96C9HG FJ>G I=6I L: EAC6C9 E: GDB I=:  
6J9> ID7I6>C G6HDC7A 6HI @C8: 67DI I L=: I=: G: ;: 8I>K >CI: @6A8DCI@ADK G;>C6C8>6AGEDG< L 6HB 6>C6C: 9 >C6A  
B6I: G6AGHE: 8IH

' J G6J9> >C8A9: 9 D7I6>C< 6CJ9: CH6C9>C< D >CI: @6A8DCI@ADK G;>C6C8>6AGEDG< 6HI HHC< I=: GH@I=6I 6 B6I: G6A  
L: 6@: HI: MHI I: H>C< 6C9: K6A6C< I=: 9: H>C6C9 DE: @D<: ;: 8I>K C HHD >CI: @6A8DCI@A76H9 DCI=: 6HI H9 GH@ 6C9  
E: GDB >C< H 8= DI=: GEC8: 9J G H6HL: 8DCH9: G9 C 8: H6CN>CI=: 8>JB H6C8: H/ : 7: A> K I=6I DI G6J9> ECK9: H6  
G6HDC7A 76HH;DGI GDE>C>C

78;@FA@3@ ! ;? ;BEACEA8 @7D@> A@DA>\$ H7D ;@@;3>' 7BAIF;@

8DB E6CNYH>CI: @6A8DCI@ADK G;>C6C8>6AGEDG< >H6 EG8: HH9: H>C: 9 IDECK9: G6HDC7A 6HI @C8: G<6C>C< I=:  
G A67>AIND ;>C6C8>6AGEDG< 6C9 I=: EG E6G6DCD ;>C6C8>6AH6I: B: CIH;DG: M: @6AEJ @EDH H>C 688D96C8: L>= <: C @AN  
688: EI: 9 688DI>C< EG C8>EAH 8DB E6CNYH>CI: @6A8DCI@ADK G;>C6C8>6AGEDG< >C8A9: HI=DH EDA8> H6C9 EG8: 9J GH  
I=6I E: @C6CIDI=: B6C: C6C8: D G8D9HI=6I >C G6HDC7A 9: I6>A 688J @I: AN6C9 ;6CANG;A8I I=: IGCH58I>DCH6C9  
9>HEDH>DCHD I=: 6HI IHD I=: 8DB E6CN ECK9: G6HDC7A 6HI @C8: I=6I IGCH58I>DCH6G G8D9: 9 6HC 8: H6CNIDE: @>  
EG E6G6DCD ;>C6C8>6AH6I: B: CIH>C 688D96C8: L>= <: C @AN688: EI: 9 688DI>C< EG C8>EAH 6C9 I=6I G8: >IH6C9  
>ME: C9>J GHD I=: 8DB E6CN6G 7: >C< B69: DCAN>C 688D96C8: L>= 6JI=DG6I>DCHD B6C<: B: CI 6C9 9>G8IDCHD I=:  
8DB E6CN 6C9 ECK9: G6HDC7A 6HI @C8: G<6C>C< EG K: CI>C DGB>: AN9: I: 8I>DCD J C6JI=DG9 68FJ>H>DC JH DG  
9>HEDH>DCHD I=: 8DB E6CNYH6HI IHI=6I 8DI A =6K 6 B6I: G6A: ;: 8I DCI=: ;>C6C8>6AH6I: B: CIH

: 86JH D >H>C=: GCI AB >6I>DCH >CI: @6A8DCI@ADK G;>C6C8>6AGEDG< B6NCI EG K: CI DG9: I: 8I B>H6I: B: CIH AD  
ED: 8I>DCHD 6CN: K6A6I>DCD :;: 8I>K C HIID;J IJ G E: GD9H6G H7? 8I IDI=: GH@I=6I 8DCI@AHB 6N7: 8DB: >C9: FJ6I:  
7: 86JH D 8=6C<: H>C 8DC9>DCH DGI=6I I=: 9: <G: D 8DB EA6C8: L>= I=: EDA8> HDGE C8: 9J GHB 6N9: I: GDGI:

H @H 1 DI>C< \$\$ (

+ : 6IIA / 6H>C< IDC

: 7G6CN

' 7BAIFA8 @67B7@67@F' 79;F7D76 %G4>5 55AG@;@ ;D'

, DI=: +=6G=D9: GH6C9 I=: D6C9 D, >G8IDGHD, D@K: D@ED@D@C

\$ B;@A@A@E 7 ;@5;3>( BF7? 7@E

/ : =6K 6J9>: 9 I=: 688DB E6CN< 8DCHA96I: 9 76A6C8: H=: IHD, D@K: D@ED@D@C 6C9 H7H9>6G: H I=: DB E6CN 6HD  
: 8: B7: G 6C9 I=: G A6I: 9 8DCHA96I: 9 H6I: B: CHD, : 6C<C<H 8DB EG=: CHK >C8DB: 8=6C<: H<C: FJ >N6C9  
86H<: >DL H; DG: 68=D, I=: I=G: N 6GHC I=: E: GD: : C9: 9 : 8: B7: G 6C9 I=: G A6I: 9 C: H6C9 ;>C6C8>6AH6I: B: C  
H<=: 9JA AH: 9 >C I=: !C9: M6I !I: B 6 8DA8I>K: ANG:: <G9 ID6HI=: W8DCHA96I: 9 ;>C6C8>6AH6I: B: CHK !C D J GDE<C D C  
I=: 8DCHA96I: 9 ;>C6C8>6AH6I: B: CH EG H C I ;>6C N >C 6AB 6I: G6AG HE: 8IH I=: ;>C6C8>6AEDH<D C D I=: DB E6CN 6I : 8: B7: G  
6C9 6C9 I=: G H AHD, >HDE: @D<DCH6C9 >H86H<: >DL H; DG: 68=D, I=: I=G: N 6GHC I=: E: GD: : C9: 9 : 8: B7: G  
>C8DC; DB >N L <= - + <: C: @AN688: EI: 9 688D J C<C< EGC8>EAH

/ : 6AD=6K 6J9>: 9 >C 688D96C8: L>= I=: H6C9 6C9HD, I=: ( J7A8 DB E6CN 88D J C<C< ' K: CH<=I D6C9 - C<: 9 +I6I: H  
( ' I=: DB E6CNH<C I: @6A8DCI@ADK G;>C6C8>6AGED@< 6HD, : 8: B7: G 76H9 DC8G<: G6: H67AH<: 9 >C  
!C I: @6A DCI@A!C I: <@I: 9 @B: L D@>H I: 9 7NI=: DB B>I: D, +EDCHG<' G6C@D<DCHD, I=: , G69L6N DB B>HED  
;@B: L D@ 6C9 D J GGED@96I: 9 : 7G 6CN : MEGH9 6C J CFJ 6A>9 DE<C D C I=: GDC

3EE8AD\$ B;@A@

, =: H ;>C6C8>6AH6I: B: CH6G I=: GHEDCH7>AIND, I=: DB E6CNHB 6C6<: B: C I ' JGGHEDCH7>AIN>HID: MEGHH6CDE<C D C D C  
I=: DB E6CNH;>C6C8>6AH6I: B: CH76H9 DC D J G6J9>H/ : 6G 6 EJ7A8 688D J C<C<;>B G<H: G9 L>= I=: ( ' 6C9 6G  
GFJ>G9 ID7: >C9: E: C9: C I L>= GHE: 8I ID I=: DB E6CN>C 688D96C8: L>= I=: - + ;: 9: @AH8J G<: H A6L H6C9 I=: 6EEA867A  
GAH6C9 G<J A6I<DCHD, I=: +: 8J G<: H6C9 M=6C<: DB B>HED 6C9 I=: ( ' <

/ : 8DC9J8I: 9 D J G6J9>H<C 688D96C8: L>= I=: H6C9 6C9HD, I=: ( ' , =DH H6C9 6C9HG FJ >G I=6I L: E A6C 6C9 E: G D B I=:  
6J9>I DD7I6<C G6HDC67A 6H J @C8: 67D J I L=: I=: GI=: ;>C6C8>6AH6I: B: CH6G ;G: D, B 6I: G6AB >H6I: B: C I L=: I=: G9J: ID  
: @EGDG; @J9 ' J G6J9>H<C8A9: 9 E: G D B >C< EGC8: 9JGHID6HHI=: GH@HD, B 6I: G6AB >H6I: B: C I D, I=: ;>C6C8>6A  
H6I: B: CH L=: I=: G9J: ID: @EGDG; @J9 6C9 E: G D B >C< EGC8: 9JGH I=6I GHEDC9 ID I=DH GH@H +J8= EGC8: 9JGH<C8A9: 9  
: M6B>C<C< DC6I: H 76HH: K9: C8: G<6C9>C< I=: 6B D J CH6C9 9>H A H GH<C I=: ;>C6C8>6AH6I: B: CH ' J G6J9>H6AD<C8A9: 9  
: K6A6D<C< I=: 688D J C<C< EGC8>EAH J H9 6C9 H<C>;86C I: H B 6I: HB 69: 7NB 6C6<: B: C I 6HL: A6H: K6A6D<C< I=: DK: @A  
EGH C I6I<D C D I=: ;>C6C8>6AH6I: B: CH / : 7: A K I=6I D J G6J9>HEDK9: 6 G6HDC67A 76HH; DGD J GDE<C D C

DE53> G6;F" 3H7IE

, =: 8GE86A6J9>J B6II: GH8DB B J C86I: 9 7: AL 6G B 6II: GH6GHC<;@B I=: 8J @C I E: GD 6J9>J D, I=: ;>C6C8>6AH6I: B: CHI=6I  
L: G 8DB B J C86I: 9 DGG FJ >G9 ID7: 8DB B J C86I: 9 ID I=: 6J9>J 8DB B>I: : 6C9 I=6I G A6I: ID 688D J CHD C9>H A H GHI=6I  
6G B 6I: G6AID I=: ;>C6C8>6AH6I: B: CH6C9 >CKDAK 9 D J G: HE: 8>@AN8=6AAC>C< H7? 8I>K: DGB EAM J 9>B: CH, =:  
8DB B J C86I<D C D, 8GE86A6J9>J B6II: GH9D H C I 6A: G C 6CN L 6N D J GDE<C D C D C I=: 8DCHA96I: 9 ;>C6C8>6AH6I: B: CH I6@C 6H  
6L=DA 6C9 L: 6G C I 7N8DB B J C86I<C< I=: 8GE86A6J9>J B6II: GH7: AL ECK9>C< H E6@I: DE<C DCHDC I=: 8GE86A6J9>J  
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, =: DBE6CNH: K6A6I>DCD, <DD9L>A>DG>B E6>GB: CI >CKDAK HI=:  
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: HB 6I: I=: ;6>GK6A: B 6C6< B: CI JHH6 B 6C@I 6EECD68= 76H9 DC  
BJA>EAHD, : 6C>C<H7: ;DG >CI: GH I6MH9: EG8>6I>DC 6C9 6B D>6I>DC  
!, !C8: G6>C8>GJB H6C8: H B 6C6< B: CI 8DB EJI: HI=: : HB 6I: 9  
;6>GK6A: I=>CI <= 69>HDI CI: 9 86H: ;AL 6C6ANHIDK6A96I: I=: GH AHD,  
I=: B 6C@I 6EECD68= , =: <DD9L>A> K6A6I>DC>HE: GDB: 9 DC 6C 6CCJ 6A  
76HH DGB DG ;GFJ: CIAN> 6 IG<<: GC<: K CI >H9: CI> 9 H9: H67: 9 >  
&DI: I=: DBE6CNH<DD9L>A>76A6C8: >H 7>ADC 6HD, : 8: B 7: G

J9>C<I=: DBE6CNH6CCJ 6A<DD9L>A>B E6>GB: CI 6HH HB: CI >H  
8DB EAM6C9 =>=AN>J9<B: CI 6A9J: IDI=: H>C>86CI: HB 6I>DC GFJ>G9 >  
9: I: >C>C<I=: ;6>GK6A: D, I=: GED>C< JCIH !CE6C8J A6I=:  
: HB 6I: 9 ;6>GK6A: >HH CH>K IDI=: H>C>86CI 6HH B EI>DCHG A6I: 9 IDI=:  
HA8I>DCD, B 6C@I BJA>EAH6C9 ECD: 8I: 9 ;>C6C8>6A>C, DGB 6I>DC =>=  
9: <G: D, 6J9>J>J9<B: CI 6C9 6C>C8G6H9: M: CI D, ;, DG>C8A9>C<I=:  
C: 9 ID>CKDAK: DI G; 6>GK6A: HE: 8>6AHHL 6HGFJ>G9

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/ : I: H: 9 8DCI>AHDK: GB 6C6< B: CIYH<DD9L>A>B E6>GB: CI 6HH HB: CI  
, =>H>C8A9: 9 8DCI>AHDG A6I: 9 IDB 6C6< B: CIYH; DG 86H>C< 6C9 HA8I>DCD,  
B 6C@I BJA>EAH

, DI: H I=: 6CCJ 6A: K6A6I>DCD, <DD9L>A>6B DC< DI=: GEG8: 9J GHL:  
: K6A6I: 9 I=: G6HDC67AC: IID, B 6C6< B: CIYH; DG 86HH I: H: 9 I=:  
8DB EAI: C: HH6C9 688J G8ND, I=: JC9: GNC< 96I6 JH9 ID9: K A6I I=:  
;DG 86H 6C9 I: H: 9 I=: 86GNC< K6A: D, I=: GED>C< JCIH' JG; 6>GK6A:  
HE: 8>6AHH6HH: 9 JHL>= DI GI: H>C< D, B 6C6< B: CIYH HA8I: 9 !,  
BJA>EAH; DGI=: 6CCJ 6A<DD9L>A> K6A6I>DC / : 6AD: K6A6I: 9 I=:  
DBE6CNH9>H8A>HGH>C8A9: 9 >C&DI: IDI=: 8DCHA96I: 9 ;>C6C8>6A  
H6I: B: CH>C G A6I>DC IDI=: H B 6II: GH

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/ : =6K HCK 9 6HI=: DBE6CNH6J9>IDGHC8:

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3 6 E 3 D 7 E ; @ ? ; > A 6 E 7 J 5 7 B F B 7 D E 3 D 7 3 ? A G 6 E

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V

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B > A D C > H I : 9 B > A D C 6 C 9 B > A D C D I H 6 C 9 > C < 6 I : 8: B 7: G 6 C 9  
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& D C 8 D C I D A C < > C I : G H H

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, D 6 A A 6 7 > A I > H 6 C 9 : F J > I N

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+6AHD, E 9 J 8 I H 6 C 9 H, I L 6 G

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. 73D @76 757? 47D

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DG>C8JGC8NIGCH6DC69JHB: CIH

(: CHDC69 EDH G1GB: C EAC7: C ;>I 69JHB: CIH

, D6ADI=: G8DB EG=: CHK >C8DB: ADH C I D, >C8DB: I6MH

DB EG=: CHK >C8DB:

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	%4787DD76 ( E45=		A2 ? A@ ( E45=		66:EA@> %3;6 @ 3B;B>	) D73HJK ( : 3D/E	' 7B;@76 3D@&@E	55G2 G3I76 \$ E 7D A2 B07: 7@EH ! AE		# A@5A@HDA>@ @7D7HE
	( : 3D/E	? AG@F	( : 3D/E \$ GH3@;@	? AG@F						
3-3@57 757? 47D		V				V				
9DEHDCD +-	V	V	V	V	V	V		V		V
3-3@57 3@G3IK		V				V				
&: I: 6@C<H;DGI=: E GD	V	V	V	V	V	V		V		V
>K9: C9HID8DB B DC H+6G=D@: GH	V	V	V	V	V	V		V		V
% 6C96IDN8DCK @7A EG:: @9 9>K9: C9H	V	V	V	V	V	V		V		V
' I=: G8DB EG=: CHK >C8DB :	V	V	V	V	V	V	V			V
DB B DC HD8@76H9 6L 6@ 68L-KIN	V	V		V		V	V	V		V
+6GHL A=: A ;DGI6MH	V	V	V	V		V	V	V		V
. DCI> G+: E6@BDC 6C9 DI=: G	V	V	V	V		V	V			V
=6C< >C D C8D C @AC< >CI: GHH	V	V	V	V	V	V	V	V		
3-3@57 757? 47D		V				V				
&: I: 6@C<H;DGI=: E GD	V	V	V	V	V	V		V		V
>K9: C9HID8DB B DC H+6G=D@: GH	V	V	V	V	V	V		V		V
% 6C96IDN8DCK @7A EG:: @9 HD8@8JBJ A@K 9>K9: C9H	V	V	V	V	V	V		V		V
DCK @HDCD % 6C96IDN 8DCK @7A EG:: @9 HD8@ID 8DB B DC HD8@		V			V	V		V		V
' I=: G8DB EG=: CHK >C8DB :	V	V	V	V	V	V	V			V
DB B DC HD8@76H9 6L 6@ 68L-KIN	V	V		V		V	V	V		V
+6GHL A=: A ;DGI6MH	V	V	V	V		V	V	V		V
6@N: M@<J>HB: C D H C D G8DCK @7A CI: H9J:	V	V	V	V		V	V	V		V
. DCI> G+: E6@BDC 6C9 DI=: G	V	V	V	V		V	V	V		V
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3-3@57 757? 47D	V	V				V				
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3-3@57 3@G3IK	V	V				V				
&: I: 6@C<H;DGI=: E GD	V	V	V	V	V	V		V		V
>K9: C9HID8DB B DC H+6G=D@: GH	V	V	V	V	V	V		V		V
' I=: G8DB EG=: CHK >C8DB :	V	V	V	V	V	V	V			V
DB B DC HD8@76H9 6L 6@ 68L-KIN	V	V		V		V	V	V		V
DB B DC HD8@GEJ @=6HH	V	V		V	V		V	V		V
+6GHL A=: A ;DGI6MH	V	V		V		V	V	V		V
=6C< >C D C8D C @AC< >CI: GHH	V	V	V	V	V	V	V	V		
3-3@57 757? 47D	V	V								

+:: I=: 688DB E6CNC< &DI: HIDI=: DCHDA96I: 9 >C6C8>6A+I6I: B: CH

\$ ' ) + \$ ' % \$ ' ) \$ # # ( \* ( ' ( \$ # ( \$ ! ) ( ) ) " # ) ( \$ ( ! \$ , ( ; @ ? ; > A C E

. 73D @676 757? 47D

6H: ;AL H;GB DE: GLC< 68LKI>: H

&: I: 6CC<H;GB 8DCI>C< DE: GLDCH

&DC86H: ;: B H

B DC<GLD<

: EG8<GLD<

+ID8@76H9 8DB E: CH6LDC: ME: CH

\* JH6: M6C9 L>C9 9DLC8DHH

V

V

\$ DHDC: MC<J>H>B: CI D, 9: 7I

V

V

6<CDC>CK HB: CI >C. DCI> G DEDGLD<

V

V

6<CDCAL>6LD<GHDALD<

V

V

- CG6AQ 9 <6<CDC>CK HB: CI >C. DCI> G DEDGLD<

V

V

6<CDCH6A D, BGE: GN

V

V

=6C< >C9: ;: G9 >C8DB: I6MH

=6C< >C688DI CHG8: >K67A C: I

=6C< >C>CK CIDG: H

=6C< >CI G9: 688DI CHE6N67A

=6C< >CEGE69: ME: CHH6C9 DI=: G6HHIH

=6C< >C688G: 9: ME: CHH6C9 DI=: GA67>AL>: H

, DI6ADE: GLC< 86H> ECK9: 9 7N8DCI>C< DE: GLDCH

, DI6ADE: GLC< 86H> JH9 >C ECK9: 9 7N9>HDCI>C< 9 DE: GLDCH

V

# 7F53E BDAH676 4KAB7DBE@ 35EHF7E

6H: ;AL H;GB >CK H>C< 68LKI>: H

6H> E69: DG68FJ>HLDCH C: I D, 86H> G8: >K 9

( 6NB: CIH;DG699>LDCHIDECE: GN E6CI 6C9: FJ>EB: CI

( GB: : 9H;GB H6A D, 7JHC: HH6C9 ECE: GN

ADL=: G>CK H>C< 68LKI>: H

V

V

, DI6ACK H>C< 86H> JH9 >C8DCI>C< DE: GLDCH

, DI6ACK H>C< 86H> JH9 >C9>HDCI>C< 9 DE: GLDCH

V

V

# 7F53E G676 ;@;@7H;@ 35EHF7E

6H: ;AL H;GB ;>C6C8< 68LKI>: H

( GB: : 9H;GB 7DGL>C>H B 6IJ GL>: H>G6I: GI=6C 96NH C: I D, >H6C8: 8DHH

&: I GB: : 9H;GB G E6NB: CIHD, 8DB B: >6AE6E: G7DGL>C>H

( 6NB: CI D, 8DCK G>7A H C>DGL: H9J:

V

V

\*: EJ G=6H D, 8DB B DCH>6GH

V

V

\*: E6NB: CI D, 7DGL>C>H B 6IJ GL>: H>G6I: GI=6C 96NH

( 6NB: CI D, 8DB B DCHD8@86H> 9>K9: C9 IDH>6G=D9: GH

( 6NB: CI D, B 6C96IDGN8DCK G>7A EG: ; G9 HD8@86H> 9>K9: C9 IDH>6G=D9: GH

V

&: I 86H> 8DCH9: GLD<G8: >K 9 ; GB . DCI> G+: E6GLD<

V

V

ADL=: G>C6C8< 68LKI>: H

, DI6A>C6C8< 86H> JH9 >C ECK9: 9 7N8DCI>C< DE: GLDCH

, DI6A>C6C8< 86H> JH9 >C9>HDCI>C< 9 DE: GLDCH

V

V

# 7F53E G676 ;@ BDAH676 4K8>@G;@ 35EHF7E

::: 8I D: M=6C< GL: 8=6C< HDC86H> 6C9: FJ>K6ACH

&: I 8=6C< >C86H> 6C9: FJ>K6ACH

: <CC< 766C8: D, 86H> 6C9: FJ>K6ACH

C9>C< 766C8: D, 86H> 6C9: FJ>K6ACH

+JEEAB: CI6A9>HDAH G

, GCH: GD, CDC86H> C: I A67>AL>: HIID. DCI> G DEDGLD<

V

V

+: I=: 688DB E6CN<> &DI: HIIDI=: DCHDA96I: 9 >C6C8>6A+I6I: B: CIH

# \$ ) ( ) \$ ) \$ # ( \$ ! ) # # ! ( ) ) " # ) (

# \$ ) \* ( # ( ( \$ + ' + , # ( ( \$ ' % ( # ) ) \$ #

DC>K: DEDG6DC WDC>K: XW=: DB E6CNXWZ: XWHXDGWD\>K >H6 EOK9: GD: ;HH<6AI: 8=CDAD> H;DG8DCC: 8I: 9  
LDC@AL HDAIDCH68DCH6 G<: D: 6IG68I>K: ;C9 B6C@IH' JGH6I: <8 H<B: CH !CI: A<: CI' E: G<C<+DAIDCH (G8>HDC  
, : 8=CDAD> H6C9 9K6C8: 9 : 6A=86G +DAIDCH >C8A9: L: A@CLC7G6C9HL>= A69>C< EDH>DCH>CI=: >GB6C@IH' JG  
7JHC: HH9: H<C 9: K AEB B6CJ;68IJ G 6C9 HCK8: EOD; HHDC6A6C9: C<C: ;G9 EODJ8IH HD,IL 6G 6C9 HCK8: H7J>A>C<  
JEDCA69>C<7G6C9 C6B: H>CCK6I>K: I: 8=CDAD> H6C9 H<C>;>86CI B6C@IEDH>DCH/ : 6G =: 69FJ6G: G9 >C K GII  
/ 6H>C<IDC6C9: BEAN6I: 6B D, B DG I=6C GH6G=6C9 9: K AEB: CI B6CJ;68IJ G< H6AH9>HG7J>DC HCK8: 6C9  
69B>CHG6I>K: BEAN: HCB DG I=6C 8DI6G: H6C9I9 I=: LDC>

3EEA8%DTF7@BEA@

, =: 688DB E6CNC< 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CHEGHC I DI G>HDC86A;>C6C8>6AEDH>DC GH AHD, DE: GIDCH 8=6C<: H<C  
: FJ>N6C9 86H>;AL H>C 688D96C8: L>= 688DI CI<C< EGC8>EAH<: C: GAN688: EI: 9 >CI=: - CI: 9 +I6I: HD, B: G86 W (X  
: G6C G8AH>;>86I>DCH=6K 7: ;CB 69: IDEGDCN 6G;>C6C8>6A>C;DCB 6I>DC ID8DC;DCB IDI=: 8J G6CI E: GD9 EGH CI6I>DC  
- CAHDI=: G>H >9>86I: 9 6A6B DI CH>CI=: CI: HIDI=: 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CHG;; GID8DCI>CI>C< DE: GIDCH

, =: ;>C6C8>6AH6I: B: CH>C8A9: DI G688DI CH6C9 I=: 688DI CHD, DI GH 7H9>6G: H A<CI: GDB E6CN76A6C8: H6C9 IG6H8I>DCH  
=6K 7: ;C: AB>C6I: 9 JEDC8DCHDA96I>DC , =: 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CH6ADG;A8I I=: >BE8I D, CDCDCI>DAC<  
>CI: GHH>DC8DCI>DAC<>CI: GHH9DCI =6K 6 H<C>;>86CI >BE8I DC DI G8DCHDA96I: 9 GH AHD, DE: GIDCH I=: G;DG C I  
: 6G<C>H6C9 C I: 6G<C>HE: GH>6G 6IIG7JI67A IDCDC8DCI>DAC<>CI: GHH6G CI EGH CI: 9 HE6GI: AN>CI DI G DCHDA96I: 9  
+I6I: B: CHD, 6G<C>H &: I: 6G<C>H6IIG7JI67A IDCDC8DCI>DAC<>CI: GHH=6K 7: ;CG;A8I: 9 >C+: A<C< <: C: GA6C9  
69B>CHG6I>K: ME: CH H6C9 L: G >CH>C>;>86CI >C6AE: GD9EGH CI: 9

+A67D( 7B3DBEA@3G ;EAC@G76 \$ B7DBEA@

' C' 8ID7: G L: 8DBEAI: 9 I=: HE6GIDCD, DCI>G DEDG6DC WDCI>K I=: ;CI>NL: 8G6I: 9 ID=DA DI G;DCB: G  
!C9JHG6A: 8=CDAD> HH<B: CI I=: W: E6GIDCX , =: 688DI CI<C< GFI>GB: CH;DGGEDC<I=: . DCI>G7JHC: HH6H6  
9>HDCI>CI: 9 DE: GIDCL: G B: IL=: CI=: +: E6GIDCL 6H8DBEAI: 9 88D9>C>AN I=: 8DCHDA96I: 9 ;>C6C8>6AH6I: B: CHG;A8I  
I=: GH AHD, I=: . DCI>G7JHC: HH6H6 9>HDCI>CI: 9 DE: GIDC;DC6AE: GD9EGH CI: 9

' C"6CI6CN L: 8DBEAI: 9 6C:M=6C<: I=: W: 7I;DG FJ>N M=6C<: X D, B>ADC H>6GH D, 8DB B DC HD8@D,  
. DCI>G GEGH CI<C< 6AD, I=: \*: I6C: 9 . DCI>G+=6GH;DG 7>ADC>C6<<G<6I: EGC8>E6A6B DI CI D >C9: 7I: 9C: HD, I=:  
DB E6CN=: A 7N DA9B 6C+68=H D >C8A9>C< >6A B>ADC, I=: I: B A6C DI IH6C9>C< J C9: GI=: 6N, ;CB  
\$D6C G9> <G: B: CI 96I: 9 6HD, %6G= W: B \$D6C9J: %6G= X 6C9 >> B>ADC, I=: 7>ADC  
D I: B A6C DI IH6C9>C< J C9: GI=: , ;B \$D6C G9> <G: B: CI 96I: 9 6HD, %6G= I=: W: B \$D6C J: %6N X

' GE3 \* =DB;@ AC>5F

!C : 7G6CN \*JH6C;DC: HCK69: 9 - @<C: WJH6 - @<C: DC>A8IX GH A<C>C7C69: 8DCDB>8 H6C8I>DCH7: >C<  
>BEDH9 DC>JH6 !CI=: H8DC9 FJ6G: GD, I=: DB E6CN: MI: 9 7JHC: HIDE: GIDCH>C>JH6 DI=: GI=6C;DG +(YH  
H: GAGIDCEODJ8IHL=8=6G: MBEI;>CB>CI: G6I>DC6AH6C8I>DCH6H=JB 6CI6G6CEODJ8IH' JG7JHC: HIC>\*JH6 6C9  
- @<C: 688DI CI: 9 ;DGAHI=6C D, IDI6AGK CI: 6C9 AHI=6C D, IDI6A6HIH;DGI=: N 6G: C9: 9 : 8: B7: G

JGC<I=: N 6G: C9: 9 : 8: B7: G I=: DB E6CNG8D9: 9 EG I6M8=6G: HD, B>ADC EGB 6GANG6I>C< IDI=:  
LGI: D;D, C I 6HIH I=: LGI: D;D, I=: 8JBJA6I>K IGCH6I>DC 69>JHB: CI>C: 6G<C>H;DGA<6A CI>;H9: ;B: 9 H7H6CI>6AN  
AFJ>96I: 9 6C9 IDG8D9 EOKH>DCH;DG: BEAN: HK G6C8: 6C9 A<6A8DCI>C<: C8>H, =: H 8DHH6G >9: CI>;>9 6HI=: WJH6  
: MI 6C9 L>C9 9DLC8DHIK>CI=: DCHDA96I: 9 +I6I: B: CHD, 6G<C>H +J7H6CI>6AN 6AG6I: 9 A67>AI> HL: G E6>9 6C9 HIIA9  
9JGC<I=: N 6G: C9: 9 : 8: B7: G

(79? 7@%DTF7@BEA@

/ : DE: GI: 6C9 GEDG DI GGH AHC I=G: H<B: CH !CI: A<: CI' E: G<C<+DAIDCH (G8>HDC, : 8=CDAD> H6C9 9K6C8: 9  
: 6A=86G +DAIDCH: 68= D, L=8= >H;JG=: C9: H6G7: 9 7: AL

' JG!CI: A<: CI' E: G<C<+DAIDCH <B: CI EOK9: H69K6C8: 9 >CHG B: CI6I>DC HD,IL 6G 6C9 HCK8: HIDI: CHD, I=DI H6C9HD,  
8JHDB: GH: C67AC<I=: >GB>HDC 8GI>86AL DC@AL H, =: H D;; GC>H>C8A9: : A8IG86AI: H B: 6HGB: CI ;68>AN6C9 6HI  
A>;8NA HD,IL 6G 6EEA86I>DCH 8DCC: 8I: 9 LDC@GH>;IN6C9 8DB EA6C8: HDAIDCH68DCH6 G<: D, K G86A: C9 B6C@IH  
>C8A9>C< B6CJ;68IJ G< EOD: HH>C9JHG: H=6A=86G JI>AI> H6C9 EDL: G 8DB BJC86I>DCH6C9: A8IGC8H 6B DC>DI=: GH



' JG( G8HDC, :8=CDAD<: HH<B: CI=: AHHDAK IDI<= I: 8=C86A8=6AAC<: HIDHE: 9 7G6@=CDI<=H<C6L>9: GC<: D;  
6EEA86L>DCH;GB;DD> 6C9 7: K GC<: EGDJ8L>DC6C9 B6CI;68IJ GC< IDC M<: C: G1>DC: A8IG8 K=>8AH6C9 8A6C: C GN 6H  
DI>G8JHDB: GH: @C L I: H HDAI>DCHID: C67A I=: : A8IG>86L>DC6C9 8DCC: 8L>KIND: K GN=>C< ' JG: ME: GH >C B 6I: G6AI  
B: I=>D>H6C9 B: 6H GB: CH6G G:A8I: 9 >C DI G: A8IG86AI: H B: 6H GB: CI HCH< 6C9 B 6I: G6AI: 8=CDAD<: HD;: G9 ID6  
7GD69 HI D 8JHDB: GH6C9 K G86A: C9 B6C@IH >C8A9>C< >C9JHG6AEDL: G6C9: C GN 6I DB DK: B: 9>86A: FJ>EB: CI ;DD>  
6C9 7: K GC<: 6: GHE68: 6C9 9:;: CH HB>8DC9J8IDG6C9 DI=: G<: C: GA>C9JHG: H

' JG 9K6C8: 9 :6A=86G +DAI>DCHH<B: CI HEEA>H8GI>86ALDQ@AL HDAI>DCH: C67AC<=: 6A=86G ECK9: CHID9: AK G  
: M8: EL>DC6AE6I> CI 86G B DG :;: >8> CIAN' JGD;: GC<H>C8A9: >CHGB: CI H: GA6L>DCHDAI>DCH>CHGB: CI IG8@C<: 8: AA  
I=: GEN: FJ>EB: CI 9: H<C6C9 B6CI;68IJ GC< 7>DB: 9>86AI: H IDDAI G9>6L>DC9: I: 8L>DC6C9 H6: INB DCHDG< 6C9 : C9 ID: C9  
8AC>86AEDD9J8L>KINH,IL 6G 6C9 HDAI>DCH' JG=: 6A=86G D;: GC<H=: AE: CH G 8GI>86AH6: INH6C969H6G B: I >CHGB: CH  
6C9 DE: G1>C< GDB H6G L DG@C< 6I E: 6@E: GDB 6C8: 6C9 8DB EAMED8: 9JGH6G ;DAIL: 9 688J GI: AN>CI=: H B>HDC  
8GI>86A=: 6A=86G : CK>GCB: CH

# \$ ) ( \* " " ' . \$ ( # # ) \$ \* # ) # % \$ ! (

- H D H>B 6I: HV , =: EGE6G1>DCD; ;>C6C8>6AH6I: B: CH>C8DC;DDB>NL>= ( GFJ>GHB 6C6<: B: CI IDB 6@ : H>B 6I: H  
6C9 79>B: CHI=6I 6;: 8I I=: GEDQ: 9 6B DI>CHID, 6HI IH A67>AI> H G K CI: H6C9 : ME: CH H 6C9 G AI: 9 9>8AH G D 8DCI<: CI  
6HI IH6C9 A67>AI> H / : 76H I=: H : H>B 6I: HDC=>HDG86A: ME: G: C8: I=: 8J GC CI: 8DCDB>8: CK>GCB: CI 6C9 DC K6GDI HDI=: G  
6HI B EL>DCHI=6I 6G 7: A K 9 ID7: G6HDC67A J C9: GI=: 8>GJ B H6C8: H DL: K G J C8: G6<CI> H6HD8>6I: 9 L>A I=: H : H>B 6I: H  
: MH 6C9 68IJ 6AG H AHB 6N9>;: G;GB I=: H : H>B 6I: H

\_ 6H 6C9 FJ>K6ACHV / : 8DCH9: G6AA=>=>ANAFJ>9>CK HB: CHL>A= 6 B 6IJ GIND, I=G: B DCI=HDGAHH6I I=: 96I: D E J G=6H  
ID7: 86H: FJ>K6ACH

88DI>CH\*: 8: >K67A 6C9 AML 6C8: H: DG DI>7I: JA 88DI>CHV !C"J C I=: + >H: 9 +- &D K) 6+I) 4  
6; <=>5-6< :-, I< 7; :-; \$78I+ -); :-, 5-6<7. :-, I< 7; :-; 76 K) 6+I) 4 6; <=>5-6< W+- X L=>8=  
6B: C9: 9 I=: >B E6>GB: CI B D9: A7NGFJ>GC<: CI>: HIDJ H 6; DGL 6C9 ADQ@C< 6EEQD8= 76H9 DC: ME: 8I: 9 AHH H ID: H>B 6I:  
8G9>A AHH HDC 8: G6<C INE: HD; ;>C6C8>6A>CHGB: CH >C8A9>C< ;>C6C8>C< IG9: 688DI>CH 6C9 J C7>AA 9 G8: >K67AH' C"6CI 6CN  
L: 69DEI: 9 +- 6C9 G8D>CQ 9>C DI G DCHDA96I: 9 6AC8: +=: I 6HD, "6CI 6CN 6C>C8G6H >CI=:  
6AML 6C8: ;DGI G9: 688DI>CH J C7>AA 9 6C9 ;>C6C8>C< G8: >K67AHD B>ADC D L=>8= B>ADC G AI: 9 IDDI G  
8DCI>CI>C< DE: G1>DCH6C9 L 6HG AI: 9 EGB 6G>ANIDIG9: 688DI>CH 6C9 J C7>AA 9 G8: >K67AHL>A= 6 8DG HEDC9>C< C I D I6M  
69>JHB: CI ID7: <CCC> GI6<C 9: 6CC>C>HD B>ADC

;I: GI=: 69DEI>DCD, +- DC"6CI 6CN L: B: 6H G DI>G6AML 6C8: IDG;A8I: ME: 8I: 9 8G9>A AHH HDK GI=:  
GB 6C<C< 8DCI>G8IJ 6AA>: D I=: 6HI I / : EDDA6HH IHL>A= HB>AGGH@8=6G8I: GH>8H; DGI=>HB: 6H GB: CI 76H9 DC 6IIG7JI: H  
I=6I B 6N>C8A9: 6HI I NE: 9J G1>DC 6C9 DC8G9>A GH>G1>DC< , =: JIJ G : ME: 8I: 9 AHH HD: 68= EDDA6G : H>B 6I: 9 76H9 DC  
CI B: G1>HFJ 6CI>6I>K 6C9 FJ 6AI>6I>K ;68IDGHG;A8I>C< B 6C6<: B: CI>H: H>B 6I: D 8DA>8I67>AINDK: GI=: GB 6C<C< 8DCI>G8IJ 6A  
A>: D I=: EDDA 9 6HI IH >C8A9>C<

S 9J G1>DC

S =>HDG86A 8J GC CI 6C9 ;DG 86H: 9 ;JIJ G AHH: ME: G: C8: 7N 6HI I NE:

S =>HDG86A 8J GC CI 6C9 ;DG 86H: 9 9: AC FJ: C8N 6C9 L GI: D; IG C9H

S =>HDG86A 8J GC CI 6C9 ;DG 86H: 9 : 8DCDB>8 8DC9>DCH 6C9

S =>HDG86A 8J GC CI 6C9 ;DG 86H: 9 8G9>A GH@

ME: 8I: 9 8G9>A AHH HD, I=: 6HI IH DG<C6I: 9 9J GC< I=: N 6G: C9: 9 : 8: B 7: G 6HL: AA6H8=6C<: HID: ME: 8I: 9 AHH H  
9J GC< I=: HB: E: GD9H 6G G8D>CQ 9>C: 6CC>C>H; DGI=: N 6G: C9: 9 : 8: B 7: G

AAIG9: 688DI>CH 6C9 J C7>AA 9 G8: >K67AH6G GEDQ: 9>CI=: DCHDA96I: 9 6AC8: +=: I 69>JH: 9 ;DG 6CNL GI: D; H6C9 C I  
D 6AML 6C8: H; DC8G9>A AHH H , =: 6AML 6C8: H; DC8G9>A AHH H GEGH CI B 6C6<: B: CI>H7: H: H>B 6I: D I=: 8G9>A AHH H  
: ME: 8I: 9 ;GB DI>GJ C7>AA 9 6C9 IG9: 688DI>CH G8: >K67A EDQ;DAI>HDK: GI=: A>: D I=: J C9: GNC< 6HI IH : I: GB>C6I>DCD, I=:  
6AML 6C8: HG FJ>GHI HD: MGB>H 79>B: CI 67DI I I=: H K GIND, 8G9>A AHH H L=>8=>C8A9: H 79>B: CHG<6C9>C< I=: GH@  
EDQ>A D : 68= J C9: GNC< G8: >K67A 6C9 : ME: 8I6L>DCHG<6C9>C< I=: >B E68I D 8J GC CI 6C9 ;JIJ G : 8DCDB>8 8DC9>DCHDC I=:  
8G9>AL DG=>C: HD; DI>C8JHDB: GH / : G<J AGNE: GDB 9: I6>A9 G K>L HD; DI>GEDQ;DAI>HD: K6A 6I: I=: 8DA>8I67>AIND,  
G8: >K67AH 76H9 DC 6 8DB 7>C6I>DCD, E6H 8J GC CI 6C9 ;JIJ G ;>C6C8>6A6C9 FJ 6AI>6I>K ;68IDGH I=6I B 6N6;: 8I 8JHDB: GH  
67>A INIDE 6N >C8A9>C< 8JHDB: GH; >C6C8>6A8DC9>DCH 8DAI: GA9: 7I H CK8>C< 67>A IN E6NB: CI: ME: G: C8: 8G9>A 7J G 6I  
>C; DDB 6L>DC 6C9 : 8DCDB>8 8DC9>DCH !C8>GJ B H6C8: HL=: G L: 6G 6L 6G D, 6 HE: 8>8 8JHDB: GH>C67>A IN IDB:: I>H  
; >C6C8>6AD7A>C6I>DCH 6 HE: 8>8 GH>CK>HG 8D9: 9 6<6CH 6B DI>CH 9J: IDG 9J 8: I=: G8D>CQ 9 G8: >K67A IDI=: 6B DI>CI

G6HDC67AN: ME: 8I: 9 ID7: 8DA8I: 9 99>DCHIDI=: 6ADL 6C8: H6G 8=6G: 9 ID8J GCI E: GD9: 6CC<H 6B DJ CIH9: I: CB <C 9 ID 7: J C8DA8I>7A 6G 8=6G: 9 9>G8IAN6<6CH I=: 6ADL 6C8: H L =>A 6B DJ CIHG8DK G9 DCEG KDI HANL GH: C D; ; 688DI CH >C8G6H I=: 6ADL 6C8: H

, =: ;DAIL <C> >H6 CADL 6C9 D I=: 6<<G<6I: 9 6ADL 6C8: ;DC8G9>I ADH HG AI: 9 IDDI GIG9: 688DI CHG8: >K7AH6HD, : 8: B 7: G >CB >ADCH

3>3 57 757? 47D

( GKHDC

/ GI: D;H

DG>C8J GGC8N: M=6C<:

3>3 57 757? 47D

, =: 6ADL 6C8: ;DGJ C7>A9 G8: >K7AHL 6H>B B 6I: G6A; DG6AE: GD9H

/ : 9DCI 7: A K I=6I 688DI CHG8: >K7A GEGH CI H<C>; >86CI 8DC8: CIGI>DCHD, 8G9>I GH@7: 86JH D I=: 9>K: GH>; 9 EDC; DAD D >C9>K9J 6A8J HDB: GH6C9 <: D>GE=>86A6G6H / : G8DG9: 9 B >ADC B >ADC 6C9 B >ADC D; : ME: CH 6HD8>6I: 9 L >= 9DI 7I; J A688DI CH; DGI=: N 6GH: C9: 9 : 8: B 7: G 6C9 GHE: 8I>K AN

!CK CIDN. 6A6I>DCV !CK CIDG: H>C8A9: I=: 8DHHD, B 6I: G6A; 67DG 6C9 DK G: 69 DB: H>8 >CK CIDG: H6G H6I: 9 6I I=: AL: GD, 8DH DGC I G 6A67A K6A: EGB 6GANJ HC< I=: ;>CH >C ;>CH DI I W! ' X B: I=D9 L >= 8: C6<C 7J HC: HH H6EEAN< I=: A6H >C ;>CH DI I B: I=D9 W\$! ' X ID K6A: >CK CIDN !CK CIDG: H=: A DI IH9: I=: - C>: 9 +I6I: H6G H6I: 9 6I I=: AL: GD, 8DH DG C I G 6A67A K6A: EGB 6GANJ HC< I=: ! ' B: I=D9

( GE: GN ( A6I 6C9 FJ>EB: CIV ( GE: GN E6CI 6C9 : FJ>EB: CI 6G 86G: 9 6I 8DH , =: ECKHDC; DG9: EG8>6I>DC =6H7: : C 8DB EJ I: 9 EGC8>E6AN 7NI=: HG<=>I AC: B: I=D9 76H9 DCI=: : H>B 6I: 9 JH; J AAK HD, I=: 9: EG8>67A 6HHIH6H; DAIL H

3F79AIK

\* E78G>! ;87

J>A>C<H

N 6CH

\$: 6H9 6HHIH6C9 A6H=D9 >B ECK B: CIH

B DG>O 9 DK: GI=: AHH GD, I=: 8DCDB >8 A>; D I=: 6HHI DGI=: I: CB D I=: A6H

% 68=>C: GN : FJ>EB: CI 6C9 DI=: G

U N 6CH

H>B 6I: 9 JH; J AAK H6G E: GD>86ANG K>L: 9 6C9 L=: C 6EECEG6I: 8=6C<: HIID: H>B 6I: H6G B 69: ECKE: 8I>K AN B DG>O 6I>DCD, >C6C8: A6H 6HHIH>H>C8A9: 9 >C9: EG8>6I>DC: ME: CH 6H6 8DB EDC: CI D, +: AAC< <: C 6A6C9 69B >CHGI>K : ME: CH H>CI=: DCHD96I: 9 +I6I: B: CHD, 6CC<H

!CK HB: CIH / : 688DI CI ;DG>CK HB: CHL: =6K H<C>; >86CI >C; A: C8: DK: G7JI 9DCI =6K 6 8DCI>DAC< ;>C6C8>6A>CI: GH >C J C9: GI=: : FJ>NB: I=D9 L=>8= GFJ>GHJ HIDG 8DG >CK HB: CH6I 8DH 6C9 H 7HFJ: CI AN 69>JH I=: >CK HB: CI 76A>C8: : 68= E: GD9 ;DGI GH>6G D I=: >CK H: : YH>C8DB: DGADH6C9 9>K9: C9HG8: >K 9 ;CB I=: >CK H: : / : G8DG9 DI G>CI: GH >CI=: C I : 6CC<HD, DI G FJ>NB: I=D9 >CK H: : HL >=>C' I=: GDC DE: GIC<: ME: CH H>C I >CI=: DCHD96I: 9 +I6I: B: CHD, 6CC<H 6C9 GK>L DI G FJ>NB: I=D9 >CK HB: CH; DG>B E6>CB: CI L=: C: K G; 68IDH>C9>86I: I=6I I=: 86GNC< 6B DI CI D I=: >CK HB: CI B >=>I CI 7: G8DK 67A

!C8: C6<C 8>JB H6C8: H 6 G 69>AN9: I: CB >C67A ;>6GK6A: >HDI 6K6>A7A ;DGI G>CK HB: CH 6C9 L: G8D>C O I=DH >CK HB: CH6I 8DH AHH6CNH 7HFJ: CI >B E6>CB: CI 6C9 69>JH I=: >CK HB: CI 76A>C8: ID; >6GK6A: L=: C D7H C67A EG8: 8=6C<: H>C>9: CI>86ADGHB >AG>CK HB: CHD88J G

' I=: G HHIHV ' I=: G6HHIHEGC8>E6AN>C8A9: DE: GIC< A6H G<=>I D, JH 6HHIH CDC8J GCI 8DCIG8I 6HHIH 9: ;: G9 I6M 6HHIH 6C9 DI=: G>CK HB: CH

6G 6A: D >C6C8>6A>CHGB: CIHV ' J G>C6C8>6A>CHGB: CH8DCHH EGB 6GAN D, 86H 6C9 86H: FJ>K6ACH IG9: 688DI CH G8: >K7A CDCFJ 6A>; 9 9: ;: G9 8DB E: CH6I>DCEA6CH D7A>6I>DCHJ C9: GIG9: 688DI CHE6N67A 6C9 H>DG 6C9 AD< I: CB 9: 7I J: IDI=: >GH>DI I: CB C6IJ G I=: 86GNC< K6A: H; DGI G9: 688DI CHG8: >K7A IG9: 688DI CHE6N67A 6C9 H>DI I: CB 9: 7I 6EEQMB 6I: ;>6GK6A: / =>A DI IH6C9>C< L: GB: 6H G9 DI G>CK HB: CI >C. DCI> G8DB B DCHD8@6I ;>6GK6A: 76H9 DC . DCI> GH8AHC< HD8@EG8: DCI=: B: 6H GB: CI 96I: L>=>J CG6AO 9 <6CHG8DG9: 9 >CI=: DCHD96I: 9 +I6I: B: CI D, 6CC<H \*::: GID>DI: ;DGI=: ;>6GK6A: HD, DI GDI=: GD7A>6I>DCH

DD9L>A6C9 ' I=: G!CI6C<7A HHIHV DD9L>A6C9 DI=: GCI6C<7A 6HHIHGH A; >CB DI G68FJ>H>DCD, : MH>C< 7J HC: HH H !C 688DG6C8: L >= 688DI CI>C< H6C9 6C9 HG AI: 9 ID 7J HC: HH8DB 7>C6I>DCH <DD9L>A6C9 >C9: ;>C>: AK 9 >CI6C<7A 6HHIH6G

CDI 6B DQO 9 =DL: K G 8: Q6C;>C: AK 9 >9: C>7A >Q6C>7A 6HH IH EGB 6GAN 8J HDB: GG AI DCH>EH6C9 68FJ >G9  
I: 8=CDAD>N 6G 6B DQO 9 DK GI=: >G: H>B 6I: 9 JH;JAAK H !C EGB: HHG H 6G= 6C9 9: K AEB: CI W( \* X >H>C>6AN  
86EJ6AQ 9 6I;6GK6A: 6C9 L=: CI=: !( \* EOD: 8I >H8DB EAI: I=: 6HH I>H8DCH9: G9 6;>C: AK 9 >Q6C>7A 6HH I 6C9  
6B DQO 9 DK GIH: H>B 6I: 9 JH;JAA: !; 6C!( \* EOD: 8I >H676C9DC: 9 6C>B E6>B: CI AHH: FJ 6AID I=: K6A: D I=:  
>Q6C>7A 6HH I>HG8D9: 9 >CI=: E GD9 D: 676C9DCB: CI / : G K>L >9: C>7A >Q6C>7A 6HH IH;DG>B E6>B: CI L=: C K G  
: K CHDG8=6C<: H>C 8>8J B H6C8: H>C9>86I: I=6I I=: G AI: 9 86GNC< 6B DI CHB 6NCDI 7: G8DK G7A / : 6ADI: H>Q6C>7A  
6HH IHL >=: >C9:>C: AK H6C9 <DD9L>A6I A6H 6CCI 6AN;DG>B E6>B: CI \*:;>: GID &DI: 6C9 &DI: ;DG699>DC6A>C;DGB 6I>DC  
67DI DI G<DD9L>A6C9 DI=: G>Q6C>7A 6HH IH

\*: K CI: \*: 8D<C>JDCV / : 9: GK GK CI: ;GB I=: H6A D: EODJ 8IH6C9 H K8: H \*: K CI: >HG8D<CQ 9 L=: C8DCIDAD  
EGB >H9 EODJ 8IHDGH K8: H>HI GCH: G9 ID8J HDB: GH>C 6C 6B DI CI I=6I G;A8IH=: 8DCH9: G I>DCL: : ME: 8I ID7: : CI>A9 ID  
>C: M8=6C<: ;DGI=DH EODJ 8IHDGH K8: H

( EODJ 8I H6AH>C8A9: GK CI: ;GB I=: H6A D: EODJ 8IH6C9 : FJ>EB: CI L=>8=>C8A9: HDI GH>IL 6G 6C9 HD>IL 6G 6H6 H K8:  
W66+X EODJ 8I D;: GC>H6C9 : FJ>EB: CI G CI 6AH

+ : K8: H6AH>C8A9: GK CI: H;GB : M: C9: 9 L 6GGC>H EDH 8DCI G8I 8J HDB: GH>EEDG W +X B 6>CI: C6C8: 8DCI G8I HDG  
H K8: H 8DCI G8I A7DGI DE: GDB DC>D< H K8: 6I 6 8J HDB: GA86I>DC 6C9 H K8: HG AI: 9 IDEG K>DI HN>A9 EODJ 8IH

DGG K CI: G AI: 9 ID6 EODJ 8I DGH K8: ID FJ 6A>N;DGG 8D<C>JDC L: B JH=6K 6C: C;D8: 67A 8DCI G8I L>= 6 8J HDB: GI=6I  
9:;>C HI=: <DD9HDGH K8: HI D7: IGCH: G9 6C9 I=: E6NB: CI I: GB HG AI: 9 IDI=DH <DD9HDGH K8: H J G=: G8DA>8I>DC D;  
H I 7H6CI 6AN 6A8DCH9: G I>DC;DGI=: <DD9HDGH K8: HI GCH: G9 B JH 7: EOD 67A 76H9 DC I=: 8J HDB: GH>CI: CI 6C9 67>AN  
IDE6NI=: EGB >H9 8DCH9: G I>DC / : 6EEAN 79>B: CI >C9: I: GB >C< I=: 8J HDB: GH 67>AN 6C9 >CI: CI>DC IDE6N L=>8=>H  
76H9 DC 6 8DB 7>C6I>DC D; >C6C8>6A6C9 FJ 6AI 6I>K ;68IDH >C8A9>C I=: 8J HDB: GH;>C6C8>6A8DC9>J>DC 8DA>AI: G A9: 7I  
H K8>C< 67>AN E6H E6NB: CI: ME: G: C8: 6C9 8G9>J 7J G 6I >C;DGB 6I>DC

J HDB: G6A>L 6C8: H6C9 G76I: H 8DCH>C> EGB 6GAN D: KDAI B: 9>HDI CH6C9 DI=: GH>DG I: GB >C8: CI>K EOD>GB H 6G  
8DCH9: G9 >C9: I: GB >C< I=: IGCH 8I>DC EGB: ;DGI=: 8DCI G8I , =H 6A>L 6C8: H6C9 G76I: H6G G;A8I: 9 6H6 G9J 8I>DC>CI=:  
8DCI G8I IGCH 8I>DC EGB: +>C>86CI 79>B: CI >H: M G>H9 >C9: I: GB >C< EODJ 8I GI>GH 8J HDB: G6A>L 6C8: H 6C9 G76I: H  
6C9 6G : H>B 6I: 9 76H9 DC=>HDG86A: ME: G: C8: 6C9 @DL CIG C9H

% DH D: DI GH 6AH8DCI G8I H8DCI 6>C H6C9 6C9 I: GB H6C9 8DC9>J>DCH / : : K6A 6I: 8DCI G8I HD>9: CI>N9>H>C8I <DD9H6C9 H K8: H  
EGB >H9 >CI=: 8DCI G8I E: GDB 6C8: D7A>6I>DCH +DB: I>B: HI=>H: K6A 6I>DC>CKDAK H 79>B: CI ID9: I: GB >C: L=: I=: GI=:  
<DD9HDGH K8: H6G =>=>AN9: E: C9: CI DC DG=>=>AN>CI: G AI: 9 L>= DC: 6CI=: G DGL =: I=: GH 8=> <DD9HDGH K8: H  
H>C>86CI AN B D>9>NDG8J HDB >Q DC: 6CI=: G : Q6>C 8J HDB: G6GGC<: B: CH>C8A9: B J AEA E: GDB 6C8: D7A>6I>DCH  
INE>86AN=6Q L 6G >CH6A>I>DC IG>C< 8DCH A>C< DI=: GH K8: H 6C9 DG( + : C: GAN I=: H : AB: CH6G 9: AK G9 L>=>C  
I=: H6B: GED>C< E: GD9 : M8: EI ( + 6C9 DI=: GH K8: H / : 6A86I: I=: 8DCI G8I IGCH 8I>DC EGB: ID: 68=E: GDB 6C8:  
D7A>6I>DC JHC< I=: D7H K67A EG8: I=6I I=: <DD9 DGH K8: H AI>DG H E6G I: AN>CHB >AG8>8J B H6C8: H6C9 IDHB >AG  
8J HDB: GH 6C9 DG6 GH9J 6A6EEG68= L=: CI=: D7H K67A H A>C< EG8: D: 6 <DD9 DGH K8: >HDI @DL C 6C9 >H: >=: G>=>AN  
K6G67A DGI C8: Q6>C A86I>C< I=: IGCH 8I>DC EGB: ID: 68=E: GDB 6C8: D7A>6I>DCH B: I>B: HG FJ>G HH>C>86CI 79>B: CI

\*: K CI: ;GB H6AHD =>6Q L 6G >HG8D<CQ 9 L=: C8DCIDAGCH: GHDI=: 8J HDB: GL=>8=>H>C: C: GAN L=: CI=: EODJ 8I >H  
H>EE: 9 !; 6CNH>C>86CI D7A>6I>DC IDI=: 8J HDB: GL>= GHE: 8I ID6 H6AHIGCH 8I>DC GB 6CHID7: ;J A>A9 ;DA>L>C<  
H>EB: CI INE>86AN>CH6A>I>DC DI=: GH K8: HCDI: 9 67DK DG688: EI 6C8: 7NI=: 8J HDB: G GK CI: G8D<C>JDC H9:;>: G9  
J CI>AH 8=>D7A>6I>DCH=6K 7: : C;J A>A9 J G=: G GK CI: G AI: 9 IDHE 6G I: ANEG8: 9: M: C9: 9 L 6GGCIN 6C9 EODJ 8I  
B 6>CI: C6C8: 6>G: B: CH>H9:;>: G9 L=: C6EEGEG6I: 6C9 G8D<CQ 9 6HGK CI: DK GI=: I: GB D I=: 6>G: B: CI

+>EEC< 6C9 6C9AC>V +>EEC< 6C9 =6C9AC< 8DHH6G >C8A9: 9 6H6 8DB EDC: CI D: DH D: H6AH>CI=: DCHDA96I: 9  
+I6I: B: CHD 6GGC>H \*: K CI: 9: GK 9;GB H>EEC< 6C9 =6C9AC< 8DHH7>A9 ID8J HDB: GH>H>C8A9: 9 >C+6AHD EODJ 8IH  
>CI=: DCHDA96I: 9 +I6I: B: CHD 6GGC>H

\_ 9K GHC>V 9K GHC> 8DHH6G : ME: CH9 6H>C8J G9

\*: H6G= 6C9 : K AEB: CIV / : 8DC9J 8I GH 6G= 6C9 9: K AEB: CI 68I>K>H>H>DGI=: EJ GEDH D: 9: K AEB>C< C L EODJ 8IH  
: C=6C8>C< I=: ;J C8I>DC6AIN :;>: 8I>K C: HI: 6H D: JH 6C9 GA67>AIN D: DI G: MH>C< EODJ 8IH 6C9 : ME6C9>C< I=: 6EEA86I>DCH  
;DGL=>8= J H HD: DI GEDJ 8IH6G 6EEGEG6I: \*: H6G= 6C9 9: K AEB: CI 8DHH6G : ME: CH9 6H>C8J G9

\*: HG 8IJ GC>V / : E: GD9>86AN>C>I>6I: GHG 8IJ GC> 68I>K>H>H>DGI=: ANEDH>DC DI G8DH 76H G AI>K: IDEG K6>AC<  
: 8DCDB>8 8DC9>J>DCH6C9 6H8>6I: 9 8J HDB: C9: B 6C9 6HL: A6H>C 8DCC: 8I>DCL>=: 8: Q6>C 68FJ>H>DCH DHH6HD8>6I: 9 L>=H  
GHG 8IJ GC> 68I>DCH86C>C8A9: DC: I>B: I: GB >C6I>DC7: C:;>H6C9 G AI: 9 8=6G: H >C699>J>DC ID;68>AIN 8ADH G 8DCI G8I

I: B>C6I>DC 6C9 DI=: GG>AI: 9 68I>KI> H / : G8D9 I=: 8DH D I=: GHG 8IJ GC< 68I>KI> HL=: CI=: 6HD8>6I: 9 A67>AIN>H  
>C8J G9 \*:;; GID>DI: ;DG699>J>DC6A>C;DGB 6I>DC

\_\_DG>C J G>C8N, G>CH6I>DC 6C9 , G>CH68I>DCHV M=6C<: G I: 69>J HB: CIHG H A>C<; GEB ;DG>C 8J G>C8NIG>CH68I>DCH6G  
G8D>CQ 9 >C &: I: 6G>C>HL=: G6H:;;; 8IHG H A>C<; GEB I=: IG>CH6I>DC D ;>C6C8>6AH6I: B: CIH6G G; A8I: 9 6H6 8DB EDC CI  
D 88JBJ A I: 9 DI=: C8DB EG=: CHK ADHL>J>C+ID8@>DA: GH: FJ>N H I IH6C9 A67>AI> HD, H 7H9>6G: HDE G I>C< DI IH9:  
I=: - C I: 9 +I6I: HL>J>6; J C8I>DC6A8J G>C8NDI=: GI=6C- + 9DA>GH6G IG>CH6I: 9 >CID- + 9DA>GHJ HC< N 6G: C9 : M=6C<:  
G I: H6C9 >C8DB: H6I: B: CI 688DI CIH6G IG>CH6I: 9 6I L: >=I: 9 6K G<: : M=6C<: G I: H &: I ;DG>C 8J G>C8NIG>CH68I>DC ADH H  
L: G B>ADC; DGI=: N 6G: C9: 9 : 8: B 7: G &: I ;DG>C 8J G>C8NIG>CH68I>DC <6>CHDGAH HL: G CI B 6I: G6A  
;DGI=: N 6G: C9: 9 : 8: B 7: G DG

\_\_88DI C I>C<; DG+ID8@ 6H9 DBE: CH6I>DCV / : 688DI CI ;DGHD8@76H9 8DBE: CH6I>DC7NB: 6H GC< I=: 8DH D : BEAN :  
H C K8: HG8: K>9 >C: M=6C<: ;DG6A: FJ>N 6L 6C9 H<G CI: 9 >C8A9>C< HD8@DEI>DCH GHG8I: 9 HD8@J C I H W+- HK 6C9  
E: GDDB 6C8: HD8@J C I H W+- HK 76H9 DCI=: ;6GK6A: D I=: 6L 6C9 6HD I=: <G CI 96I: FJ>N 76H9 8DBE: CH6I>DC  
: ME CH >HG8D>CQ 9 C I D 6C: H>B 6I: 9 ;DG: >J G G I: DC 6 H G<=>I AC: 76HHDK: GI=: GFJ>H: H C K8: E: GD9 D I=: 6L 6C9  
DG6L 6C9 HH 7? 8I ID<G9: 9 K H C< 8DBE: CH6I>DC: ME CH >HG8D>CQ 9 H E6G I: ANDK: G 68= K H C< IG C8=: D I=: 6L 6C9  
GH A>C<>C6C688: A G I: 9 : ME CH G8D>C I>DCE6I: G \*:;; GID>DI: ;DG699>J>DC6A>C;DGB 6I>DC

!C8DB: , 6MHV !C688D9 6C8: L>J>= ( 9:;; G9 I6M6HI IH6C9 A67>AI> H6G 9: I: B>C: 9 76H9 DCI=: 9>; G C8: 7: IL:: C  
I=: ;>C6C8>6AH6I: B: CI 6C9 I6M76HHD, 6H I IH6C9 A67>AI> HJ HC<: C8I: 9 G I: H: ME: 8I: 9 ID7: >C:;;; 8I 9J GC< I=: N 6G C L=>8=  
I=: 9>; G C8: HG K CH :;; G9 I6M6HI IH<: C GAN GEGH C I>J>: B HI=6I 86C7: J H 9 6H6 I6M9: 9J 8I>DC DG8G9>J>C DI GI6M  
G IJ G>C>J IJ G N 6G I: DGL=>8=I=: I6M7: C: >J>=6H6 A G9N7: : C G; A8I: 9 DC DI G DCHDA96I: 9 +I6I: B: CIHD 6G C<H :;; G9  
I6MA67>AI> H<: C GAN GEGH C I>J>: B HI=6I =6K 6A G9N7: : CI6@C6H6 9: 9J 8I>DC DC DI GI6M G IJ G>J I =6K CI N I 7: : C  
G8D>CQ 9 6H6C: ME CH >C DI G DCHDA96I: 9 +I6I: B: CIHD 6G C<H, =: :;; 8I DC9: : G9 I6M6HI IH6C9 A67>AI> H9J: ID6  
8=6C<: >CI6MGI: H>HG8D>CQ 9 >C>C8DB: I6M ME CH >C I=: E: GD9 I=6I >C8A9: HI=: : C8IB: CI 96I:

' J G9: : G9 I6M6HI IH6G G9J 8: 9 7N6 K6A6I>DC 6A I L 6C8: > 76H9 DCI=: L: >=I D, 6K6>A7A : K9: C8: >J>HB DG A@ ANI=6C  
CI 6A@ A=DD9 D B DG I=6C E: G: CI I=6I H B: EDI>DC DC6A D, I=: 9:;; G9 I6M6HI IHL>ACDI 7: G6AQ 9 / : : K6A6I:  
I=: G6AQ67>AIND, 9:;; G9 >C8DB: I6M6HI IH; DG: 68= D I=: >J G9>8I>DCH>C L=>8= L: DE: G I: !; L: : ME: G C8: 8JBJ A I>K  
EG I6M C8DB: >C 6 E6C8J A G I>G9>8I>DC>C I=: I=G: N 6GE: GD9 >C8A9>C< I=: 8J G C I 6C9 EGDGIL DN 6H L: CDB 6AN  
8DC8A9: I=6I I=: 9:;; G9 >C8DB: I6M6HI IHL>AB DG A@ ANI=6C CI 7: G6AQ67A 6C9 CD K6A6I>DC 6A I L 6C8: >HG8D>CQ 9  
J CAHI@C L C DGEA C C: 9 DE: G I>C< 9: K AEB: CIHL DI A A69 B 6C6< B: CI ID8DC8A9: DI=: G I>H DL: K G> L: : ME: G C8:  
8JBJ A I>K EG I6MAH H C 6 E6C8J A G I>G9>8I>DC>C I=: I=G: N 6GE: GD9 >C8A9>C< I=: 8J G C I 6C9 EGDGIL DN 6H L: I=: C  
8DCH9: G6 H G: HD ; 68IDH>C I=: 9: I: B>C6I>DC D, L=: I=: GI=: 9:;; G9 >C8DB: I6M6HI IH86C7: G6AQ 9 , = H ; 68IDH>C8A9:  
=>HDG86ADE: G I>C< G H A H @C L C DGEA C C: 9 DE: G I>C< 9: K AEB: CIH I=: E: GD9 D I>B: DK GL=>8= 8: G6C I: B EDG C N  
9>; G C8: HL>AG K CH 8DCH9: G I>DC D, I=: J I>A6I>DC D, 8: G6C9: : G9 >C8DB: I6MA67>AI> H I6M A L 86G N 768@86E67>AIN>C  
I=: E6C8J A G C8DI C I C N 6C9 EG 9: CI 6C9 ; 6H7A I6ME A C C< H G I: <=>H : I: G K6A6I>DC D, I=: H ; 68IDH>J I=: 9:;; G9 >C8DB:  
I6M6HI IH6G : ME: 8I: 9 ID7: G6AQ 9 L>J>=C I=: I6M86G N D L 6C9 E: GD9 6A I L: 9 ; DGI=6I HE: 8>8 8DI C I C N L: L DI A 8DC8A9:  
I=6I CD K6A6I>DC 6A I L 6C8: L DI A 7: GFJ>G9 , DI=: : ME: CI I=6I I=: 9:;; G9 >C8DB: I6M6HI IH: M8: 9 I=: 6B DI CI I=6I H  
: ME: 8I: 9 ID7: G6AQ 9 L>J>=C I=: I6M86G N D L 6C9 E: GD9 ; DG6 E6C8J A G I>G9>8I>DC L: : H67A H 6 K6A6I>DC 6A I L 6C8:

/ : G8D>CQ I6M7: C ;>H: GEB J C8: G6C I6MEDHI>DCHDCAN> >J>HB DG A@ ANI=6C CI I=6I I=: I6MEDHI>DCL>A7: H H6C: 9 DC  
: M6B>C6I>DC7NI=: I6MC< 6I I>DGI>H 76H9 DCI=: I: 8=C86AB: GIHD, I=: EDHI>DC , = I6M7: C ;>HG8D>CQ 9 >C I=:  
8DCHDA96I: 9 ;>C6C8>6AH6I: B: CIH: GEB H 8= EDHI>DCH6G B: 6H G9 76H9 DCI=: AG: H 7: C ;>J I=6I =6H6 <G6I: GI=6C  
A@ A=DD9 D, 7: >C G6AQ 9 JEDC J A B 6I: H I IAB: CI "J9>B: CI >HG FJ>G9 >C: K6A6I>C I6MEDHI>DCH6C9 9: I: B>C< >C8DB:  
I6ME G K H DCH / : G: K6A6I: I=: I: 8=C86AB: GIHD, DI GI6MEDHI>DCH6C9 B 6NG8D>CQ 6C J C8: G6C I6M7: C ;>J>C8: G6C  
8: 8J B H6C8: H >C8A9>C< L=: C 6 I6M6J 9>J>H8DB EAI: 9 6EEA867A I6M A L H8=6C<: >C8A9>C< 6 I6M86H G A C< DG  
A<H6I>K <J>96C8: DG I=: 6EEA867A H6I I: D AB>6I>DCH: ME>G H / : G8D>CQ EDI: CI>6A688G: 9 >CI: GH 6C9 E: C6A>H  
6HD8>6I: 9 L>J>= JCG8D>CQ 9 I6MEDHI>DCH>C>C8DB: I6M ME CH \*:;; GID>DI: ;DG699>J>DC6A>C;DGB 6I>DC

\_\_88JBJ A I: 9' I=: G DB EG=: CHK \$ DHV DG>C 8J G>C8NIG>CH6I>DC 69>J HB: CIH6G <: C GAN CI 69>J H: 9 ;DG>C8DB:  
I6M H6HI=: NG A I: ID>9: ;>C I: >CK HB: CI>C CDC - + H 7H9>6G: H J GC< I=: H8DC9 FJ 6G: GD L: 9: H>C6I: 9 DI G  
T 7>ADC I: C9: CDB>C6I: 9 K6G67A >CI: GH G I: I: B A6C 6C9 DI GZ B>ADC J G9: CDB>C6I: 9 K6G67A >CI: GH G I:  
I: B A6C DI IH6C9>C 6HC I>CK HB: CI = 9< HD, DI G>CK HB: CI>C8: G6C ;DG>C DE: G I>DCH 88D9>C>AN ;DG>C 8J G>C8N  
IG>CH68I>DC <6>CHDGAH HDI=: 9: 7I L: G 9: : G9>C I=: ;DG>C 8J G>C8NIG>CH6I>DC 8DB EDC CI D 88JBJ A I: 9 DI=: G  
8DB EG=: CHK >C8DB: ADH W' !X 6H6C D; H I IDI=: ;DG>C 8J G>C8NIG>CH6I>DC 69>J HB: CIHDC DI G>CK HB: CI>C  
;DG>C H 7H9>6G: H !C L: G8D>CQ 9 6I: GI6MAH HD, B>ADC>C' I=: C8DB EG=: CHK >C8DB: ADH G A I: 9 IDI=:  
C I>CK HB: CI = 9< H

/ =>A D I H 6 C 9 > C < L : 9 : H < C 6 I : 9 D I G E G K D I H J 0 9 : C D B > C 6 I : 9 8 D B B : 8 > 6 A E 6 E : G 6 C 9 T 7 > A D C H C > D G I C H 8 J G 9 I : B  
; 6 8 > A I N A 6 C 6 H C : I > C K H B : C I = : 9 < : H D I G > C K H B : C I > C 8 : 0 6 > C ; D G > C D E : 6 I > D C H / : : M E : 9 D I G J 0 9 : C D B > C 6 I : 9  
8 D B B : 8 > 6 A E 6 E : G E D H > D C H 9 J G C < I = : H 8 D C 9 F J 6 G : G D 6 C 9 G E 6 > 9 D I G T 7 > A D C H C > D G I C H 8 J G 9 I : B ; 6 8 > A I N A 6 C  
9 J G C < I = : ; D I G = F J 6 G : G D ! C L : G 8 D > C 0 9 < 6 > C H D B > A D C > C ' I = : G 8 D B E G = : C H K > C 8 D B : A H H G A 6 I : 9 I D  
D I G E G K D I H 9 : H < C 6 I : 9 C : I > C K H B : C I = : 9 < : H / : G 8 D 9 : 9 C D > C ; ; : 8 I > K C H H ; C D B D I G C : I > C K H B : C I = : 9 < : H 9 J G C < I = :  
N 6 G : C 9 : 9 : 8 : B 7 : G 6 C 9 / : 9 > 9 C D I 9 : H < C 6 I : 6 C N C : I > C K H B : C I = : 9 < : H 9 J G C < I = : N 6 G : C 9 : 9 : 8 : B 7 : G  
C N 6 B D I C H 9 : ; : 6 9 > C ' ! L > A G B 6 > C J C I > A I = : = : 9 < : 9 > C K H B : C I > H D A 9 D G H 7 H 6 C I > 6 A N A F J > 9 6 I : 9  
, = : 8 > 6 C < : H > C ' ! 7 N 8 D B E D C : C I 6 G H B B 6 G 0 9 7 : A D L > C B > A D C H



3>3@57 3@G3DK

' I=: G8DB EG=: CHK >C8DB: ADH 7:;DG G8AHH;>86LDCH

!C8G6H 9: 8G6H

!C8DB: I6MB E68I

V

' I=: G8DB EG=: CHK >C8DB: ADH 7:;DG G8AHH;>86LDCH C I D, >C8DB: I6MH

B DJ CHG8AHH;>9 ;QB 688JBJA: 9 DI=: G8DB EG=: CHK >C8DB: ADH

!C8G6H

V

6

!C8DB: I6MB E68I

V

B DJ CHG8AHH;>9 ;QB 688JBJA: 9 DI=: G8DB EG=: CHK >C8DB: ADH C I D, >C8DB: I6MH

V

&: I 8J GCI E: GD DI=: G8DB EG=: CHK >C8DB: ADH

. DCI> G+: E6GLDC

3>3@57 757? 47D

' I=: G8DB EG=: CHK >C8DB: ADH 7:;DG G8AHH;>86LDCH

!C8G6H 9: 8G6H

!C8DB: I6MB E68I

V

' I=: G8DB EG=: CHK >C8DB: ADH 7:;DG G8AHH;>86LDCH C I D, >C8DB: I6MH

B DJ CHG8AHH;>9 ;QB 688JBJA: 9 DI=: G8DB EG=: CHK >C8DB: ADH

!C8G6H

V

6

!C8DB: I6MB E68I

V

B DJ CHG8AHH;>9 ;QB 688JBJA: 9 DI=: G8DB EG=: CHK >C8DB: ADH C I D, >C8DB: I6MH

V

&: I 8J GCI E: GD DI=: G8DB EG=: CHK >C8DB: ADH

3>3@57 757? 47D

' I=: G8DB EG=: CHK >C8DB: ADH 7:;DG G8AHH;>86LDCH

!C8G6H 9: 8G6H

!C8DB: I6MB E68I

V

' I=: G8DB EG=: CHK >C8DB: ADH 7:;DG G8AHH;>86LDCH C I D, >C8DB: I6MH

B DJ CHG8AHH;>9 ;QB 688JBJA: 9 DI=: G8DB EG=: CHK >C8DB: ADH

!C8G6H

6

!C8DB: I6MB E68I

V

B DJ CHG8AHH;>9 ;QB 688JBJA: 9 DI=: G8DB EG=: CHK >C8DB: ADH C I D, >C8DB: I6MH

&: I 8J GCI E: GD DI=: G8DB EG=: CHK >C8DB: ADH

3>3@57 757? 47D

<sup>6</sup> , =H8DB EDC: CI D ' ! H:C8A9:9 >CI=: 8DB EJ I6LDCH C I E: GD>8 E: CHDC 8DH G:; GID&DI:

<sup>7</sup> !C8A9: H76AC8: HGALC< ID9: ;>C 9 7: C ;>I EA6CH HEEAB: CI6A: M8J LK: GLGB: CI EA6CH 6C9 DI=: GEDHG LGB: CI : BEAN: 7: C ;>I EA6CH

(.: CHDCV / : B: 6HJ G DI GE: CHDC 6HH IH6C9 D7A<6LDCHID9: I: CB >C I=: ;J C9: 9 H6IJ H6HD, : 8: B7: G H: 68= N 6G 6C9 G8D<CQ 6C6HI I;DG6CDK: GJ C9: 9 H6IJ HDG6 A67>AIN;DG6CJ C9: GJ C9: 9 H6IJ H<C DI G DCHDA96I: 9 6AC8: +=: : IH =6C<: H >CI=: ;J C9: 9 H6IJ HD, I=: E: CHDC EA6CH6G G8D<CQ 9 >CI=: N 6GCL=>8= I=: 8=6C<: HD88J G6C9 6G GEDX: 9 >C' I=: G 8DB EG=: CHK >C8DB: ADH \*:;: GID&DI: ;DG699>JDC6A<C;QB 6LDCH C I E: CHDC EA6CH C8A9>C< 6 9>HJ H8CD, 68IJ 6G6A6HI B ELDCH DI GEDA8N;DGG8D<COC< 6HD8:6I: 9 <6CH6C9 ADH H 6C9 I=: B: I=DJ JH 9 ID: HLB 6I: HCK8: 6C9 >CI: GH 8DH 8DB EDC: CH

/ : GEDG 6A8DB EDC: CHD, C I E: GD9>8 E: CHDC8DHH L >= I=: :M: E>DCD, HCK8: 8DHH >CDI=: GDC DE: GDC< : ME: CH H6H  
6 8DB EDC: CI D, CDC DE: GDC< >8DB: >CI=: 688DB E6CN< DCHD96I: 9 +I6I: B: CHD, 6CC<H+: CK8: 8DHH6G GEDG: 9 >  
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8AHH>86IDCD, I=: E6C8>E6CIYH8DB E: CHEDC

' 757@EK HG76 55AG@, @ ( B@3D6

!C J<JH I=: >C6C8>6A 88DI<C<+I6C969H D69 >HI: 9 88DI<C<+I6C969H- E96I: &D - \*B - \* <? I40  
76>.: /76) 6, 0-: 8>76; #=>78I+ ) 6, -: > > > ; ) 6, -, / B / B 76<)+< B 64AC ? 6 9=IA #=>78I+  
+7=6>6/ .7: 76>.: >4 6; <=5 -6< ) 6, 76<)+< B ) 6 64AC ? 6 9=IA W+- X L=>8= 6B: C9H  
I=: 688DI<C<; DG8: C6C< >C6C8>6A>CHG B: CHL >= 8=6C8I: GH8HD, A67>A> H6C9: FJ>N >C8A9>< 8DCK: C7A >CHG B: CH  
6C9 8DCI68IH<C6C: CI>NHL C: FJ>N' C "6CI 6CN L: 69DEI: 9 +- JHC< 6 B D9> > 9 GIGHE: 8I>K 6EEC68=  
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B>ADC 6C9 >C8G6H 9: 7I 7N B>ADC L >= 6 8DG HEDC>< C I D, I6M69>HB: CI ID7: <CC< G I6C: 9: 6CC<HD  
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DCANDI IH6C9>< >CHG B: CH>B E68I: 9 7NI=: C L H6C969 6I I=: LB: D, 69DEI>DC

\*: H A H; DGG EDC< E: GD9H7: <CC< "6CI 6CN G; A8I I=: 69DEI>DCD, +- L=>A EGDGE: GD9 6B DI CHL: G  
CI 69>H: 9 6C9 8DCI<CI: ID7: GEDG: 9 >C 688D96C8: L >= DI G=>HDG86A688DI<C< EG8I>8: H

( GGDIDDI G69DEI>DCD, +- DC "6CI 6CN L: G8D<CQ 9 I=: ;6GK6A: D I=: CDC8DCK: C7A 9: 7I 8DB EDC: CI  
D, DI G DCK: C7A &DI: HH7? 8I IDI=: 86H> 8DCK: CHDC< >96C8: 6H9: 7I 6C9 6IIG7JI: 9 I=: GH9J 6AK6A: IDI=: 8DCK: CHDC  
:: 6IJ G L=>8= L6HG8D<CQ 9 >C (! +J7H FJ: CI IDI=: >H 6C8: D, DI G DCK: C7A &DI: H<C : 7G 6CN L: 688GI: 9 I=:  
9: 7I 9>HDI CI 6HDC 86H> >CI: GH: ME: CH >CDI G+I6I: B: CHD, 6CC<H J C=: GL: 6EEA> 9 I=: IG6H GNHD8@B: I=>D IDDI G  
DCK: C7A &DI: HL=: C86A>A I<C<: 6CC<HE: GH>6G W( +X >C6AE: GD9HEGDIDDI G69DEI>DCD, +- ;I: GDJ G  
69DEI>DCD, +- L: 688DI CI ; DG8DCK: C7A 9: 7I >CHG B: CHL=>DAN 6H9: 7I JCAH6 8DCK: C7A >CHG B: CI 8DCI6>CH  
:: 6IJ GHI=>6I GFJ >G 7>J G8I>DC 6H6 9: GK6I>K J C9: G + DG 8DCK: C7A 9: 7I >CHG B: CI >HH: 9 6I 6 H 7H6C<6A  
EGB>B

' C "6CI 6CN L: G8AHH> > 9 I=: JC6B D6>O 9 8DH 76HHD, DI GDJ IH6C9>< DCK: C7A &DI: HL=>DAN 6H9: 7I L=>8=  
H7H FJ: CIANB 6IJ G9 6C9 L: G H IIA9 DC : 7G 6CN / : 6EEA> 9 I=: > 8DCK: C7 9 B: I=>D ID6A8DCK: C7A >CHG B: CH  
L=: C86A>A I<C< (+ ; DGI=: N 6G: C9: 9 : 8: B7: G HD : 8: B7: G L: =69 CD8DCK: C7A >CHG B: CH  
DI IH6C9>< H7? 8I IDI=: < >96C8: >C +-

# \$ ) & \* ( ) \$ # ( # + ( ) ) \* ' (

/ : 8DCI<CI 6AN: K6A6I: EDI: CI>6AB: G: GH 68FJ >H>DCH 6C9 9>K H>J GHI=>6I 6A>CL >= DI GHG I: <N6C9 : ME: 9>I: I=: : KDAI>DC  
D, DI GEDG; DADD, 7JHC: HH H>C I D C L 6C9 6IIG8I>K 6G6H / : =6K 8DB EAI: 9 6 CI B 7: GD, 68FJ >H>DCHI=>6I =6K 7: : C  
688DI CI: 9 ; DG6HEI G=>6H HD, 7JHC: HH H6C9 G H A: 9 >CI=: G8D<C>DCD, <DD>L >A>C DI G; >C6C8>6AH6I: B: CH, =>H<DD>L >A  
6GH H7: 86J H I=: EI G=>6H EG8: ; DG: 68= 68FJ >G9 7JHC: HHG; A8IH6 CI B 7: GD; 68IDGH>C8A9>< I=: 8DB EAB: CI6CN; I  
688: A6I>DCD, DI GHG I: <N6C9 HNC: G> HI=: 7JHC: HH7GC>HL >= GHE: 8I IDDI G: MH<C< DE: G I>DCH I=: ; JIJ G : 6CC<H6C9  
86H> ; A I EDI: CI>6AD, I=: 7JHC: HH I=: EDI: CI>6AID699 DI=: GHG I: <86AN8DB EAB: CI6CN68FJ >H>DCHIDI=: 68FJ >G9 7JHC: HH  
I=: H6G: DGJ CFJ: C6IJ G D I=: 7JHC: HH>C>HB 6C@ IH 8DB E: I>DC ID68FJ >G I=: 7JHC: HH I=: K6A6I>DCD, HB >AG  
7JHC: HH H<CI=: B 6C@ IEA8: 6HG; A8I: 9 >C 6 B J A>EA D, G K CI: H: 6CC<H DG86H> ; A I H 6C9 I=: 6KD96C8: D I=: I>B: 6C9  
8DHH L=>8= L DI A 7: GFJ >G9 6C9 I=: 6HD8>6I: 9 GH>HI=>6I L DI A 7: : C8DI CI: G9 ID: C=6C8: DI G: MH<C< D; ; GC>HID @N  
I6G: I B 6C@ IH6C9 9: K A E C L 6C9 ECD>A7A 7JHC: HH H

/ : B 6@ 6C>C I>6A6A86I>DCD, I=: EI G=>6H EG8: 6I I=: 96I: D, 68FJ >H>DC 76H9 DC DI GI C9: GH6C9>< D, I=: ;6GK6A: D I=:  
68FJ >G9 6HI IH6C9 6HI B: 9 A67>A> H / : D7I6>C I =>H C; DDB 6I>DC 9J GC< 9J: 9>A> C8: 6C9 I=>C I =>DI=: GHJ G: H !CI=:  
B DCI=>H6I: C8AHC< 6HL: D7I6>C 699>D C6A>C, DDB 6I>DC 67DI I=: H 6HI IH6C9 A67>A> H >C8A9>< I=>C I =>I6C>7A 6C9  
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6C9 B DG 688J G I: AN 6A86I: I=: EI G=>6H EG8: ' CAN; 68IH6C9 8>GJ B H6C8: HI=>6I: MH: 9 6HD, I=: 68FJ >H>DC 96I: 6G  
8DCH9: G9 ; DGH 7H FJ: CI 69>HB: CI , =: 9: I: G>C6I>DCD, I=: ;6GK6A: D I=: 68FJ >G9 >CI6C>7A 6HI IH>CKDAK H7J >B: CI  
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K6A6I>DC B D9: AH 6C9 6G 6; ; 8I: 9 7NJ C8: G6>C I: H67DI I: JIJ G B 6C@ I 6C9 : 8DCB >8 DC9>DCH / : B 6@ 6EEGEG6I:  
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5CGEEA@

, =: ; DAI>< 9: HBG7: HDJ GH<C> >86CI 68FJ >H>DC 68I>KIN; DGI=: N 6GH: C9: 9 : 8: B7: G

6C9

! :7>) <76

' C :8: B7: G L: 68FJ>G9 ( <K6L>DC+D,IL 6G !C8 W<K6L>DCX 6 A69>C< ECK9: GD, 8AC86AL DQ@AL HD,IL 6G  
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#-:>A+ 0) 66-4

' C J<JH L: 68FJ>G9 +: <K8: =6CC: A DA>C>H !C8 W: <K8: =6CC: AK 6 EGK6I: AN=: A <A76AECK9: GD, +66+  
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+: <K8: =6CC: A7<EB9: CHDI GD,,: GC< D, HD,IL 6G : C67A9 HDAI>DCH;DGI=: ;68>AIN6C9 6HI I A>: 8N8A L DQ@AL , =: IDI6A  
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D, 6EE<MB 6I: AN B>ADC 6C9>H6CDE: <L>C< 8DB E6CNL>=>C DI G!CI: AK: CI' E: <L>C< +DAI>DCHH <B: CI

\*: K CI: 6C9 DE: <L>C< ADH6IIG7J I67A IDI=: H 68FJ>H>DCHL: G B>ADC 6C9 B>ADC;DGI=: N 6G: C9: 9  
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D, I<G>H>L>DC 6C9>CI: <<L>DC 8DHH EGB 6CN8DB EGH 9 D, 8DB E: CH>L>DC 8DH; DG: B EADN: GI: C>DC 6C9 6B DI CHE6>9 IDI=>9  
E6QN69KH DCH L=>8=>6G G8DQ: 9>C+: AK< <: C <A6C9 69B>CH<L>DC: ME: CH H

, =: ;DAI>L>C< I67A H B B 6GO HI=: : H>B 6I: 9 68FJ>H>DC 96I: ;6>GK6A: HD, I=: 6HI IH68FJ>G9 6C9 A67>AI> H6HI B: 9 ;<EB  
68FJ>H>DCH9>HJ HI 9 67DK 6HD, : 8: B7: G >C B>ADCH

	%DABEA@	( 7DH57 :3@>	) AB>
88DI CHG8: >K67A			
DD9L>AA			
' I=: G>CI6C>>7A 6HI IH EGB 6GAN8J HDB: GG AI>DCH>EH I: 8=CDAD>N 96I676H 6C9 I<G9: C6B: H			
::: <G9 G K CI: 8J <G CI			
::: <G9 I6MA67>AI> H			
' I=: G6HI IH6C9 A67>AI> H C I			
&: I 86H< 8DCH9: <L>DC			

+9=I; I<76; #=>5 5 ):A

, =: ;DAI>L>C< H B B 6GO HI=: : H>B 6I: 9 ;6>GK6A: HD, I=: 6HI IH68FJ>G9 6C9 A67>AI> H6HI B: 9 ;DG6A68FJ>H>DCH  
8DCH B B 6I: 9 9J GC< I=: N 6GH: C9: 9 : 8: B7: G 6A6C8: HEGH CI: 9 7: AL G;A8I;>C6AB: 6H GB: CI E: GD9 69>J HB: CH  
>C B>ADCH

88DI CHG8: >K67A		
!CK: CIDG: H		
( <GE: GN EA<CI 6C9 : FJ>EB: CI		
DD9L>AA		
' I=: G>CI6C>>7A 6HI IH EGB 6GAN8J HDB: GG AI>DCH>EH I<G9: C6B: H6C9 I: 8=CDAD>N , <G9: 688DI CHE6N67A		
' I=: G6HI IH6C9 A67>AI> H C I		
&: I 86H< 8DCH9: <L>DC		

0-: +9=I; I<76 :-4 <, ) <<::



' C EGA I= WGC8E6A AHC< 6I: X L: 68FJ>G9 I=: 69K6C8: 9 H: GA6I>DCEDJ8IH7JHC: HH W +( X D "D=CHC  
"D=CHC 6 &: L ": GHN8DDEDG6I>DC ( GDGIDJ G68FJ>H>DCD +( "D=CHC "D=CHC G8: K 9 6 K A I C K H < 6 I K  
: B 6 C 9 ; C B I= : - C I: 9 + I 6 I: H : E 6 C B : C I D "J H: 8: W ' "X G < 6 C 9 < 6 6 A H A > B H 8 I > C K H < 6 I > D C 6 G H C < ; C B 6  
L => H A 7 A L : G A L H > I E: C 6 < C < I D I=: E G 8 < C < F J 6 A I N B 6 C < I < C < 6 C 9 E C B D I > D C D 8: C 6 < C D +( Y H E C D J 8 I H 6 H 9 D C I=:  
I D I 6 A I N D 6 K 6 > A 7 A > C D B 6 I > D C 6 I I=: ( G C 8 > E 6 A A H C < 6 I: 6 C 9 I = C I < = D I I I=: 6 E E A 8 6 7 A B : 6 H I G B : C I E: G D 9 B 6 C < : B : C I  
6 A D 8 6 I: 9 B > A D C D I=: 7 > A D C E J C < 6 H E G 8: I D 6 E D I: C < 6 A A 6 7 > A I N G A I: 9 I D I=: 6: D G B : C I > D C 9 A I < 6 I > D C D A I L > C <  
I=: ( G C 8 > E 6 A A H C < 6 I: B 6 C < : B : C I 8 D C I < C I 6 A N: K 6 A 6 I: 9 I=: A @ A = D D 9 6 C 9 B 6 < C I J 9: D I=: 6 H I C: 9 8 A > B H 7 6 H 9 D C 6 C N  
C L > C D B 6 I > D C I = 6 I 7: 8 6 B: 6 K 6 > A 7 A ! C I=: H 8 D C 9 F J 6 C: G D ; D A I L > C < I=: J C H 6 A C < D I=: L => H A 7 A L : G A L H > I 6 C 9  
' "Y H 9: 8 A C 6 I > D C I D < C I: C K C < C I=: A I < 6 I > D C I=: E A < C I: 9 > B > H 9 I=: L => H A 7 A L : G A L H > I 6 H 9 D C I=: H 9: K A E B: C H  
B 6 C < : B : C I 9: G 8 D < C 9 9 I=: A I < 6 I > D C A 6 7 > A I N: C B D I G D C H A 9 6 I: 9 6 A C 8: +=: I 6 C 9 G 8 D 9: 9 6 H 6 6 < C D C A I < 6 I > D C  
G H A I > D C D B > A D C L > I = C & D C D E: G I C < > C 8 D B: : M E: C H C I < C D I G D C H A 9 6 I: 9 + I 6 I: B: C I H D 6 C < C < H 9 J G C < I=:  
N 6 G: C 9: 9 : 8: B 7: G

J G C < L: 68 F J > G 9 : C H H , 8 = C A D < > H W : C H K I I=: 8 A H C < 9 6 I: D I=: E J C < 6 H D : C H H 6 8 D C I G 8 I J 6 A A 6 7 > A I N  
: M H: 9 L = 8 = B 6 C < : B : C I 6 A D 8 6 I: 9 I D I=: E J C < 6 H E G 8: 6 C 9 L 6 H G 8 D 9: 9 > C D I G D C H A 9 6 I: 9 6 A C 8: +=: I J G C < I=:  
; D I G = F J 6 C: G D I = 6 I A 6 7 > A I N L 6 H 9 > H = 6 G: 9 ; D G 6 C 6 B D I C I A H I I = 6 C I=: 6 B D I C I 6 A D 8 6 I: 9 6 C 9 I=: M 8: H L 6 H G 8 D 9: 9  
6 H 6 6 < C D C A I < 6 I > D C G H A I > D C D B > A D C L > I = C & D C D E: G I C < > C 8 D B: : M E: C H C I < C D I G D C H A 9 6 I: 9 + I 6 I: B: C I H D  
6 C < C < H 9 J G C < I=: N 6 G: C 9: 9 : 8: B 7: G

; H / H K G D E

\$ 0 - : ) 8 A ! 0 A ! I: > : < < -

' C +: E I: B 7: G L: 8 D B E A I: 9 I=: H 5 A D D I G , =: G E N ( = N 8 H E C D J 8 I A C L => 8 = L 6 H G E D G: 9 > C D I G 9 K 6 C 8: 9  
: 6 A = 8 6 G + D A I > D C H H < B : C I I D 6 C J C G A I: 9 I => 9 E 6 C N ; D G 8 6 H 8 D C H 9: G I > D C D B > A D C H 6 G H A D I=: H 5 A 9 J G C <  
I=: N 6 G: C 9: 9 : 8: B 7: G L: G 8 D 9: 9 6 C I G 6 A Q 9 E G I 6 M < 6 < C I D I 6 A C < B > A D C C I D I G C H 6 8 I > D C 8 D H H L = 8 =  
> H G 8 D 9: 9 6 H W I=: G C D C D E: G I C < : M E: C H C I X < C I=: D C H A 9 6 I: 9 + I 6 I: B: C I H D 6 C < C < H , =: 9 > K H: 9 7 J H C: H 6 8 8 D I C: 9  
; D G A H I I = 6 C D I D I 6 A G K C I: 6 C 9 A H I I = 6 C D I D I 6 A 6 H I H ; D G I=: N 6 G: C 9: 9 : 8: B 7: G , =: 9 > K H > J G D  
I = H E C D J 8 I A C 9 > 9 C I G E G H C I 6 H G I: < 8 H > I L > 6 B 6 D G: ; ; 8 I D C I=: D B E 6 C N H I D E: G I > D C H 6 C 9 ; < 6 C 8 > 6 A G H A H 6 C 9  
I=: G ; D G I=: 9 > K H: 9 E C D J 8 I A C > H C I G E D G: 9 6 H 6 9 > H D C I C I: 9 D E: G I > D C

# \$ ) ( \$ # ) # \* \$ % ' ) \$ # ( # ( % \$ ( ) \$ # (

+ A C E 7 D ( 7 B 3 D B E A @

' C ' 8 I D 7: G L: 8 D B E A I: 9 I=: . D C I > G +: E 6 G I > D C 7 N 9 > H G 7 J I < < D I=: D I I H 6 C 9 < < H = 6 G H D , D C I > G I D D < K  
H D 8 @ D 9: G H D C 6 E C D G I 6 7 6 H H , D: ; ; 8 I I=: +: E 6 G I > D C L: 9 > H G 7 J I: 9 I D D I G H D 8 @ D 9: G H I L D H 6 G H D , D C I > G 8 D B B D C  
H D 8 @; D G: K C N ; > K H = 6 G H D , D I G 8 D B B D C H D 8 @ D I I H 6 C 9 < < =: A D C +: E I: B 7: G I=: G 8 D 9 9 6 I: ; D G I=: 9 > H G 7 J I > D C  
/ : G I 6 C: 9 D I=: H = 6 G H D , D C I > G 8 D B B D C H D 8 @ B B: 9 > 6 I: A N ; D A I L > C < I=: +: E 6 G I > D C I=: W : I 6 C: 9 . D C I > G  
+= 6 G H K

' C +: E I: B 7: G . D C I > G C I: G 9 > C I D 6 8 G 9 > I 6 < G: B : C I I=: W G 9 > I < G: B : C I X L > 6 H C 9 > 8 6 I: D 7 6 C < H 8 D C H H < <  
D 6 I = G: N 6 G B > A D C H C > D G I C H 8 J G 9 9: A N 9 9 G L I: C B A D C ; 6 8 A I N I=: W = G: 1: 6 G: C B \$ D 6 C K 6 I L D N 6 G  
7 > A D C H C > D G I C H 8 J G 9 9: A N 9 9 G L I: C B A D C ; 6 8 A I N I=: W L D 1: 6 G: C B \$ D 6 C K 6 C 9 I D < I=: G L > I=: , = G: 1: 6 G  
, C B \$ D 6 C H I=: W: C B \$ D 6 C K 6 C 9 6 I = G: N 6 G B > A D C H C > D G I C H 8 J G 9 B J A > 8 J C G 8 N G K D K < < 8 G 9 > ; 6 8 A I N I=:  
W: K D K < < G 9 > I 6 8 A I N X 6 C 9 I D < I=: G L > I=: , C B \$ D 6 C H I=: W G 9 > I 6 8 A I > H K ' C I=: > H G 7 J I > D C 6 I: . D C I > G 9 G L  
9 D L C I=: ; J A 7 > A D C 6 K 6 > A 7 A J C 9: G I=: , C B \$ D 6 C H . D C I > G I H 9 I=: E G 8: 9 H ; C B I=: , C B \$ D 6 C H I D B 6 @ E 6 N B: C H  
I D I=: D B E 6 C N L > 7 > A D C J H 9 6 H E 6 C D I=: 8 D C H 9: G I > D C ; D G I=: 8 D C I G 7 J I > D C D 8: C 6 < C 6 H I H 6 C 9 A 6 7 > A I > H I D  
. D C I > G 7 N I=: D B E 6 C N < 8 D C C 8 I > D C L > I=: +: E 6 G I > D C 6 C 9 B > A D C J H 9 6 H 6 C 6 9 J H B: C I ; D G: M 8: H H 8 6 H 7 6 A C 8: H  
G B 6 < C < L > . D C I > G 8 D A 8 I > K A N I=: W 6 H > D C H 9: G I > D C X / : 6 E E A 9 I=: 6 H > D C H 9: G I > D C I D G E 6 N 8: C 6 < C  
D I I H 6 C 9 < < > 9: 7 I: 9 C: H H < C I: G H D C 8: C 6 < C 9: 7 I > C H C I B: C I H 6 C 9 I D E 6 N 8: C 6 < C D I=: D B E 6 C N H G < J A G F J 6 C: C A N 8 6 H  
9 > K 9: C 9 H \* : ; ; G I D & D I: ; D G I=: 9: H 8 G E I > D C D I=: 9: 7 I G E 6 N B: C H B 6 9: H 7 H F J: C I D I=: > H G 7 J I > D C 6 I: ! C I: G H  
: M E: C H 6 C 9 : M C < J > H B: C I 8 D H G A I: 9 I D I=: 9: 7 I G I > G 9 J G C < I=: ; D I G = F J 6 C: G D J H C < I=: 6 H > D C H 9: G I > D C L 6 H  
6 A D 8 6 I: 9 I D 9 > H D C I C I: 9 D E: G I > D C H ; D G 6 A E: G D 9 H E G H C I: 9

/ : G I 6 C: 9 D I=: H = 6 G H D , D C I > G 8 D B B D C H D 8 @ B B: 9 > 6 I: A N ; D A I L > C < I=: +: E 6 G I > D C / : 9 > 9 C I G I 6 C 6  
8 D C I D A C < < C I: G H > C . D C I > G 6 C 9 I=: G ; D G I=: ; 6 G K 6 A: D D I G G I 6 C: 9 H = 6 G H 6 C 9 H 7 H F J: C I ; 6 G K 6 A: 8 = 6 < : H 6 G > C 8 A 9: 9  
> C D I G 6 H I H D 6 C 9 G H A H ; C B 8 D C I < C < D E: G I > D C H G H E: 8 I > K A N I : 8: B 7: G D I G C K H B: C I < C . D C I > G 8 D B B D C  
H D 8 @ L 6 H G B: 6 H I G 9 6 I ; 6 G K 6 A: 7 6 H 9 D C . D C I > G H 8 A H C < H D 8 @ E G 8: L > J C G 6 A Q 9 < 6 C H D 7 > A D C G 8 D 9: 9 > C I=:  
D C H A 9 6 I: 9 + I 6 I: B: C I D 6 C < C < H

, =: 688DJ CI<C< GFJ>GB: CH;DGGEDC< I=: . DCI> G7JHC: HH6H6 9>HDCI>CI: 9 DE: GIDCL: G B: IL=: CI=: . DCI> G  
+: E6GIDCL 6H8DB EAI: 9 88D9>C<AN I=: 8DCHA96I: 9 ;>C6C8>6AH6I: B: CIHG;A8I I=: GH AHD, I=: . DCI> G7JHC: HH6H6  
9>HDCI>CI: 9 DE: GIDC;DG6AE: GD9HEGH CI: 9

' C"6CI 6GN L: 8DB EAI: 9 I=: : 7I ;DG FJ>N M=6C<: D B>ADC H>6GHD, 8DB BDC HD8@D. . DCI> G  
GEGH CI<C< 6AD, I=: \*: I6<C: 9 . DCI> G+=6GH ;DG 7>ADC>C6<<G<6I: EGCS>E6A6B DI CI D, >C9: 7I: 9C: HD, I=: DB E6CN  
=: A 7N D9B 6C+68=H D >C8A9>C< > 6AA B>ADC D, I=: , : B \$D6C9J: %6C= 6C9 >> B>ADC D, I=:  
, : B \$D6C9J: %6N / : G8D9: 9 6 ADHC: MC<J H>B: CI D, I=: 9: 7I >C8A9: 9 >CI=: : 7I ;DG FJ>N M=6C<: D,  
B>ADC>CI=: N 6G: C9: 9 : 8: B 7: G 99>DC6AN 9JGC< I=: ;>GH FJ 6C: GD L: G8D>C9 9 6<6C D,  
B>ADC G AI: 9 IDI=: H 7HFJ: CI 8=6C<: >CI=: ;>6GK6A: D, I=: \*: I6<C: 9 . DCI> G+=6GH

!CEGE6GIDC;DG6C9: M8J I<C I=: +: E6GIDC I=: DB E6CN>C8J G9 B>ADC>C. DCI> GH6C9 JE 6C9 HE6GIDC G AI: 9  
IGCH8I>DC 8DHH9JGC< I=: N 6GH: C9: 9 : 8: B 7: G L=>8=L: G G8D9: 9 >CI=: +: AAC< <: C G6A6C9 69B>CHG I K:  
>ME: CH H8DB EDC: CI D, 6CC<H;GB 9>HDCI>CI: 9 DE: GIDCH C I D, >C8DB: I6MH>CI=: DCHA96I: 9 +I6I: B: CIHD, 6CC<H  
, =: H H6C9 JE 6C9 HE6GIDC G AI: 9 8DHHEGB 6GANG AI: IDEC; HHC6A;: H6HD8>6I: 9 L>= EG E6GIDC D, G<J AIDCN;>AC<H  
6C9 IGCH8I>DC: M8J I>DC 6C9 HE6GIDC 68I K I> HL>A>C;>C6C8: I6MA<6A6C9 >C;DGB 6I>DCHNH: B ;J C8I>DCH

&764: 5 8) I 5 -6< 0):/-

H6 GH A D, I=: >CI: GB >BE>GB: CI I: H>C<E GDB: 9 L: 8DC8A9: 9 I=6I I=: : H>B 6I: 9 ;>6GK6A: D, I=: , : AB 6I>8H  
GEDC< J CI L 6HAHI=6C>H86GN< K6A: 6HD, %6C= 6C9 G8D9: 9 6 CDC86H< DD9L>AB E6>GB: CI 8=6G<: D  
B>ADC9JGC< I=: I=G: B DCI=E: GD9: C9: 9 %6C= , =: , : AB 6I>8HGEDC< J CI L 6H>C8A9: 9 >CI D I G;DGB: G  
!C9JHG6A: : 8=CD>C> HH<B: CI 6C9 E6G D, I=: . DCI> G+: E6GIDC 88D9>C<AN I=: >BE>GB: CI 8=6G<: >HG8D9: 9 >  
6CC<H;GB 9>HDCI>CI: 9 DE: GIDCH C I D, >C8DB: I6MH>CI=: DCHA96I: 9 +I6I: B: CI D, 6CC<H

, =: @N8DB EDC: CIHD, >C8DB: ;GB 9>HDCI>CI: 9 DE: GIDCH;DGI=: N 6GH: C9: 9 : 8: B 7: G L: G 6H;DAILH >CB>ADCH

+6AH	V	V	
DH D, HAH	V	V	
+: AAC< <: C G6A6C9 69B>CHG I K : ME: CH H	V		
*: H 6C= 6C9 9: K AEB: CI : ME: CH H	V	V	
DD9L>AB E6>GB: CI	V	V	
!CI: GH: ME: CH 6C9 DI=: G	V		
6CC<H AHH 7: ;DG >C8DB: I6MH	V		
!C8DB: I6MH	V		
6CC<H;GB 9>HDCI>CI: 9 DE: GIDCH C I D, >C8DB: I6MH	V		

# \$ ) # + # ) \$ ' (

, =: 8AH HHD, >CK CIDGN 6HD, : 8: B 7: G 6G HBB 6GQ 9 6H;DAILH >CB>ADCH

>CH: 9 <DD9H			
/ DG@CEGB: HH			
* 6L B 6I: G6AI			
, DI6A			

HD, : 8: B 7: G 6C9 I=: 9>;: GC8: 7: IL:: C>CK CIDG: HK6A: 9 6I \$! ' 6C9 I=: K6A: D, I=6I H6B: >CK CIDGN>  
I=: ! ' B: I=D9 =69 7:: CJH 9 L 6HCI H>C>;86CI , =: AFJ>96I>DC D, \$! ' >CK CIDGN9> CI =6K 6 H>C>;86CI >BE68I DC DI G  
GH AHD, DE: GIDCH>C 6CNE: GD9 EGH CI: 9

# \$ ) % \$ % ' ) . % # ) # & \* % ' # )

, =: 8A6HHHD, EDE: GN EA6CI 6C9 : FJ EB: CI 6HD, : 8: B 7: G 6G H B B 6GQ 9 6H; DADLH >CB>ADCH

\$ 6C9 6C9 >B ECK B: CIH

J>A>C>H6C9 A6H=D9 >B ECK B: CIH

% 68=>C: GN : FJ EB: CI 6C9 DI=: G

GDHEDE: GN EA6CI 6C9 : FJ EB: CI

\$: HH 688JBJA6I: 9 9: EG8>6IDC

( DE: GN EA6CI 6C9 : FJ EB: CI C: I

# \$ ) \$ \$ , ! ! # \$ ) ' # ) # ! ( ( ) (

H9>HJHH9 >C&DI: <DD9L>A6GHH;DB I=: EJC=6H EC8: ;DG68FJ>G9 7JHC: HH: M8:: 9>C<I=: ;6GK6A: D, I6C>7A 6C9 >C6C<7A 6HHIH68FJ>G9 AHH6HHB: 9 A67>A>H/ : 6HHI=: <DD9L>AD: : 68= D, DI GGEDC<JCIH;DG>B E6>CB: CI 6I A6H 6CCJ 6AN6HD, I=: ;>H 96ND, I=: ;DI C= FJ 6C: G6C9 6HVG<< GC<X: K CIHD88J GI=6I >C9>86I: I=6I >HBDG A@>NI=6C CI I=6I 6C>B E6>CB: CI: MHH/ : E: GDCB: 9 7DI= FJ 6AI6I>K: 6C9 FJ 6CI>6I>K: >B E6>CB: CI I: HH;DGGEDC<JCIH 6H9: I: CB>C: 9 ID7: 6EEGEG6I:

/ : : H>B 6I: I=: ;6GK6A: D, DI GGEDC<JCIHEGB 6GANJHC< 6 B 6C@I 6EEQ68= 76H9 DCBJA>EAHD: : 6CC<H7:: DG >CI: GH I6MH9: EG8>6IDC 6C9 6BD>6IDC W !, X 9: I: CB>C: 9 7N8JGCI IG9>C< B 6C@I BJA>EAHD: : 6CC<H;DG 8DB E6>C>HDE: G6C<>C 7JHC: HH HHB>AGID: 68= D, DI GGEDC<JCIH >C699>DCIDG8: CI B 6C@I 6K6>A7A H6A IG6CH8IDCH D, 8DB E6G7A 7JHC: HH H!C8: G6C8>GJB H6C8: HL: 6AD: K6A 6I: DI=: G;68IDGH>C8A9>C< GH AHD, I=: : H>B 6I: 9 ;6GK6A: JI>AOC< 69>HDI CI: 9 86H: ;AL 6C6ANHH>: 6C>C8DB: 6EEQ68= B 6C@I EDHI>DCH, I=: 7JHC: HH H 8DB E6G7>AIND, B 6C@I H6AHI GCH8IDCH 6C9 ;>C6C8>6A6C9 DE: G6C<>E: GDCB 6C8: >CD9: GIDK6A96I: I=: GH AHD, I=: B 6C@I 6EEQ68= !; I=: : H>B 6I: 9 ;6GK6A: D, I=: GEDC<JCI>HAHHI=6C>H86GNC< K6A: L: L>A>B E6>GI=: <DD9L>A>DGI=: 6B DI CI D, I=: 86GNC< K6A: >C: M8: HD, I=: ;6GK6A:

/ : : E: GDCB: 9 <DD9L>A>B E6>CB: CI I: H>C<;DGDJGGEDC<JCIH HD, I=: 96I: D, I=: 6CCJ 6A>B E6>CB: CI I: H I=: 86GNC< K6A: D, <DD9L>A>C: 68= GEDC<JCI G6C<: 9 ;DB B>ADC ID6EEQMB 6I: AN 7>ADC &D<DD9L>A>B E6>CB: CI 8=6G: HL: G G8D9: 9 ;DG8DCI>CI>C< DE: G6IDCH;DGI=: N 6GH: C9: 9 : 8: B 7: G 6C9 6C9 CD WG<< GC<X: K CIH=6K D88JG9 H 7HFJ: CI IDI=: E: GDCB 6C8: D, I=: 6CCJ 6A>B E6>CB: CI I: H , =: ;68IDGHJH 9 7N B 6C6< B: CI>C>H>B E6>CB: CI 6C6ANHH6G >C=: GCIANH 7? 8I IDJC8: G6CIN !; 68IJ 6AGH AH6G CI 8DCHH: CI L>B B 6C6< B: CI>H: H>B 6I: H6C9 6HH B EIDCH <DD9L>A>6C9 DI=: GCI6C<7A 6HHIHB 6N7: DK: GH6I: 9 6C9 6 8=6G: LDI A C: : 9 ID 7: I6@C 6<6CH C: I: 6CC<H \*::; GID&DI: ;DG>C;DGB 6IDC DC <DD9L>A>B E6>CB: CI 8=6G: H;DG9>H8DCI>CI: 9 DE: G6IDCH

, =: ;DAIL>C< >H6 CDADL 6C9 D, DJ G<DD9L>A7NH<B: CI >CB>ADCH

	67>97@ \$ B7DBF@ (A>GEA@	%175:EA@ ) 75: @A9;7E	6HB@576 73>F 53D7 (A>GEA@	) AB>
3>3@57 3@G3DK				
%: 6HGB: CI E: GD9 69JHB: CH;DG 68FJ>HEDCH		V		
IIG7JI67A ID 68FJ>HEDCH		V		
DG>C8JGEC8NIG6CH6LDC6C9 DI=: G				
3>3@57 757? 47D				
%: 6HGB: CI E: GD9 69JHB: CH;DG 68FJ>HEDCH		V		
IIG7JI67A ID 68FJ>HEDCH6C9 9>K HJGH	V			
DG>C8JGEC8NIG6CH6LDC6C9 DI=: G				
3>3@57 757? 47D				

>CI: AK 9 >CI6C<7A 6HHIH6G 6B DQO 9 DK: GI=: H>DI: GD, I=: >GA<6ADG H>B 6I: 9 JH;JAAK H, =: ;DAIL>C< HBB6GO H I=: <EH86GN< K6A: 6C9 688JBJA I: 9 6B DQO 6LDC;DG: 68= 6B7DC86I: <DND, >CI6C<7A 6HHI 6HD, :8: B 7: G >C B>ADCH

	DAE 3DK@ ? AG@F	55G? G3F76 ? ADEL3EA@	DAE 3DK@ ? AG@F	55G? G3F76 ? ADEL3EA@
>CI: AK 9 >CI6C<7AH				
( 6I: CH6C9 I: 8=CDAD>N				
JHDB: GGALDCH>EH6C9 DI=: G>CI6C<7AH				
, 69: B6CH6C9 IG9: C6B: H				
, DI6A>CI: AK 9 >CI6C<7AH				
!C9: ;>CI: AK 9 >CI6C<7AH				
, 69: B6CH6C9 IG9: C6B: H		V		V
, DI6A>CI6C<7AH				

, DI6A>CI6C<7A 6B DQO 6LDC: ME: CH >C 6C9 L6H B>ADC B>ADC 6C9 B>ADC GHE 8IK AN 6H9 DCI=: >CI6C<7A 6HHIHG8D9: 9 6HD, :8: B 7: G 6B DQO 6LDC: ME: CH >H: H>B 6I: 9 ID7: B>ADC 9JGC< B>ADC 9JGC< B>ADC 9JGC< B>ADC 9JGC< 6C9 B>ADC 9JGC<

# \$ ) ' + ! \* " ( \* ' " # ) (

88DI>C< H6C96C9H9: ;>C :>6GK6A: 76H9 DC6C: MI EG8: B D9: A: H67AH: 6 ;>GB: LDQ@;DGB: 6HGC<;>6GK6A: ;>DG6HHIH 6C9 A67>AL> HG FJ>G9 ID7: 86G: 9 6I;>6GK6A: 6C9 EGK9: ;>DG8: G6<C9>H8DH GHG AI: 9 IDI=: K6A 6LDCB: I=D9HJH 9 L>I>CI=: K6A 6LDC=>G6C=N6H: H67AH: 9 L>I>CI=: 688DI>C< H6C96C9H, =>H=>G6C=NEGDCI>Q HI=: >CEJIH>CDI=G: 7C69 AK AH6H;DAIL H

- S \$: K: A >CEJIH6G FJDI: 9 EG8: H J C69JH: 9 >C68IK: B 6C@ IH;DG9: CI>86A6HHIHDGA67>AL> H
- S \$: K: A >CEJIH6G FJDI: 9 EG8: H;DGHB>AG6HHIH6C9 A67>AL> H>C 68IK: B 6C@ IH FJDI: 9 EG8: H;DG9: CI>86ADGHB>AG 6HHIH>C>B 6C@ IHI=6I 6G CDI 68IK: DGD I=: GD7H CK67A 8=6C8I: GH>8H;DGI=: 6HHI DGA67>AN >C8A9>C<>CI: GH 6I: H N: A 8JCK H6C9 8G9>A GHGH DG>CEJIHI=6I 6G 9: GK 9 EG8>E6AN;DB DG8DGD7DGI: 9 7N D7H CK67A B 6C@ I 96I6 I=GD <= 8DCG 6LDC
- S \$: K: A >CEJIH6G JCD7H CK67A >CEJIH76H9 DC DI G6HH B ELDCH ;>C6C8>6A6HHI DGA67>ANNH8AHH;>86LDCL I>=>C I=: =>G6C=N>H9: I: GB>C: 9 76H9 DCI=: AL: H AK A>CEJI I=6I >HH>C>;>86CI IDI=: ;>6GK6A: B: 6HGB: CI>C>H :>C>GIN

>C6C8>6A6HHIH6C9 A67>AI> HI=6I 6G B: 6H G9 6I ;6>GK6A: DC6 G8J <76HHL: G 6H;DML H >CB>ADCH

	&GA76 %D57E ;@ 5EH7 " 3D=7F ! 7H7>	(;9@853@F\$ E 7D \$ 4E7DB4>7 @BGE ! 7H7>	(;9@853@F * @4E7DB4>7 @BGE ! 7H7>	) AE3>
757? 47D				
::: C69 8DB E: CH6IDC A67>AI> H	V		V	
757? 47D				
::: C69 8DB E: CH6IDC A67>AI> H	V		V	

: G6<CB 6C6<: B: CI: B EAN: HE6G8>E6I: >C DJ GDC FJ 6A>9 9::: C69 8DB E: CH6IDCEDC<GB HI=6I E: C B>I H 8=: B EAN: HID  
9::: G6 EDCDCD, I=: >G8DB E: CH6IDC DC6 EG I6M76HH JCI>A6;I: GI=: >GI: C B>C6IDCD, : B EANB: CI A6B DI CIH9::: C69 JC9: G  
H 8= EA6CH6G JC;JC9: 9 JCH8JG9 D7A>6IDCH6C9 6G EG H CI: 9 6H6 8DB EDC: CI D, DI G8DB E: CH6IDC 6C9 DI=: GEDH  
GIDGB: CI 7: C: >H688G 6AIDC8A9: 9 >C' I=: GADC< I: C B A67>AI> H>CI=: 688DB E6CNC< DCHDA96I: 9 6A6C8: +=: : IH  
( 6C8>E6CIHB 6N8=DDH 6B DC< 6A: C6I>K: : 6C6C< GI: H;DGI=: 6B DI CIHI=: N9::: GL=>8= 6G EGB 6GAN76H9 DC>CK HB: CI  
DEIDCHL>=>C DI G9::: >C 9 8DCIG7JIDCEA6CH;DGI=: 7: C: >I D, - + : B EAN: H W @ ( C D>GB HK : M: EI I=6I I=: : 6C6C<H  
GI: H;DG6B DI CIH8DCIG7J I: 9 JC>AI: GAN7NI=: DB E6CN6G : CI>GAN76H9 DC8=6C< H>CI=: K6A: D, DOK 8DB B DC HID8@  
=6C< H>CI=: 9::: C69 8DB E: CH6IDC A67>AINJ C9: GI=: H EDC<GB H6G G8D<CQ9 76H9 DC8=6C< H>CI=: ;6>GK6A: D, I=:  
E6C8>E6CIH7688DI CH L=>8= 6G 76H9 DCI=: 6EEA867A: 6C6C<HGI: H

# A@D75GD,@ 3;D+3>G7 " 73RGD7? 7GE

: G6<CDC;>C6C8>6A6HHIH6G GFJ>G9 ID7: 6HHH9 ;DGB E6>C B: CI L=: C K G: K CHDG8>GJB H6C8: HC9>86I: I=6I I=: >G  
86CNC< K6A: B 6NCDI 7: ;JANG8DK: G7A / : : K6A6I: 9 : K CH6C9 8>GJB H6C8: HI=6I 6HD, +: EI: B 7: G >C9>86I: 9  
I=: 86CNC< K6A: D, 6C: FJ>IN>CK HB: CI >C 6 I=>9 E6GN: C IN=: A 7NDI G!CI: A>C: CI' E: GIDC<+DAIDCHH<B: CI L 6HCD  
ADC: GG8DK: G7A H6 GH A 9JGC< I=: N 6G: C9: 9 : 8: B 7: G L: G8D9: 9 6 EG I6MB E6>C B: CI AHHI  
B>ADCIDLGI: 9DL CI=: >CK HB: CI ID;6>GK6A: , =: AHHL 6HG8D9: 9 >CW I=: GDC DE: GIDC<: ME: CH C IX>C DI G  
DCHDA96I: 9 +I6I: B: CI D, 6C6C<H

3;D+3>G7 A8\$ E 7D ;@<5;3> CHDG? 7GE

, =: 86CNC< 6B DI CIH6C9 ;6>GK6A: HD, >C6C8>6A>CHGB: CIH6HD, : 8: B 7: G L: G 6H;DML H >CB>ADCH

	3DK@ ? AG@F	3;D +3>G7	3DK@ ? AG@F	3;D +3>G7
J GCI EDCDCD, ADC< I: C B 9: 7I				
\$DC< I: C B 9: 7I C I D, 8J GCI B 6IJ GI>H				

HD, : 8: B 7: G 6C9 : 8: B 7: G I=: 8J GCI EDCDCD, ADC< I: C B 9: 7I 6C9 ADC< I: C B 9: 7I C I D, 8J GCI  
B 6IJ GI>HL: G 86I: <DGO 9 6H\$: K A

, =: ;6>GK6A: D, I=: ADC< I: C B 7DGEI>C>HL: G 76H9 DCFJDI: 9 B 6C@IEG8: H, =: 9>;: GC8: 7: IL:: CI=: ;6>GK6A: 6C9 I=:  
86CNC< 6B DI CIHD, ADC< I: C B 7DGEI>C>HB 6N7: 6IIG7JI67A ID8=6C<: H>CB 6C@I>CI: GH GI: H6C9 DGDIG8G9>I GIDC<H  
H 7HFJ: CI IDI=: 7DGEI>C>, =: ;6>GK6A: D, 86H 6C9: FJ>K6ACIH IG9: 688DI CHG8: >K67A C I 6C9 IG9: 688DI CHE6N67A  
6C9 8DB B: C>6AE6E: G6EEDMB 6I: HI=: >C86CNC< 6B DI CI 9J: IDI=: H>DI I: C B B 6IJ GI>HD, I=: H >CHGB: CIH

\*::: GID&DI: ;DG>C;DOB 6IDCG A6I: 9 IDI=: ;6>GK6A: D, I=: DB E6CN HEDCHG9 9: >C 9 7: C: >I E: CHDCEA6C 6HHIH

# \$ ) ' \* - % # ( ( # \$ ) ' ! ! ) (

88G: 9 : ME: CH H6C9 DI=: GA67>A1> H6HD, : 8: B 7: G L: G 6H; DADL H >CB>ADCH

	GD/CF	! A@ F7D	GD/CF	! A@ F7D
::; G9 GK CI:				
DB E: CH6DC 6C9 DI=: GEDH GLGB: CI 7: C ;>H				
, 6MH>C8DB: 6C9 DI=: G				
' E: GLC< A6H A67>A1> H				
+6AH6C9 ECDJ 8I 6ADL 6C8: H	V		V	
/ 6GGCIN				
A>B H>C8A9>C< H A >CH GC8: 6C9 A1>61DC				
(: CHDC D7A>61DCH				
' I=: G				
, D6A				
' )::)6A				

/ : <: C: GAN688G: : H>B 6I: 9 L 6GGCIN8DHH6I I=: LB: D, H6A !C<: C: GAB 6CI; 68IJ G9 ECDJ 8IH6G L 6GGCI: 9 6<6CH  
9::; 8IH>CB 6I: G6A6C9 L DGB 6CH>E L=: CEDE: GNIJ H9 ;DGI=: >GCI: C9: 9 EJCEDH >CH6AA9 8DC8IAN 6C9 6EECEG6I: AN  
B 6CI6C: 9 / 6GGCINE: GD9 I: GB H9: E: C9 DCI=: C6IJ G D, I=: ECDJ 8I 6C9 GC<: ;GB 96NHJEIDI=: A<: D, I=: ECDJ 8I  
, =: 6B DI CI D, I=: 688G: 9 L 6GGCINA67>AIN>H9: I: GB >C: 9 76H9 DC=>HDG86A>C; DGB 61DC H 8= 6HE6H: ME: G< C8: ECDJ 8I  
;6AG 6I: HDGCI B 7: GD, JCIHGE6G9 : H>B 6I: 9 8DH D, B 6I: G6A6C9 A7DG 6C9 >C8: G6C>CH6C8: H: H>B 6I: 9 EDE: CIN  
96B 6<: , =: 688G: 9 L 6GGCINA67>AIN>HGK<L: 9 DC 6 FJ 6CI: GNI76HH6C9 B 6N7: 69J H: 9 6H699>DC6A>C; DGB 61DC  
G<6C>C<: ME: 8I: 9 L 6GGCIN8DHH7: 8DB: H@DL C

, =: ;DADL>C< >H6 DADL 6C9 D, DI G688G: 9 L 6GGCINA67>AIN >CB>ADCH

3>G7 3@G3IK			
88G 6A; DGL 6GGCI> H>H: 9 9J GC< I=: N 6G			
+: IIA B: CHB 69:			
::; 8I D, ;DG>C 8J GC8NIGCH61DC			
3>G7 757? 47D			

# \$ ) ' ! ( (

/ : 9: I: GB >C > 6C 6GGC<: B: CI >HDG8DCI6>CH6 A6H 6I >C8: E1DC 6C9 G8D>CQ 6 G<I D, JH W' - X 6HHI 6C9 6 A6H  
A67>AIN; DG6AA 6H HL >I: GB H>G 6I: GI=6C B DCI=H/ : =6K DE: GLC< A6H H; DGD; >8: HE68: L 6G=DJ H H 9>HG7J 1DC  
8: CI: GH GH 6C= 6C9 9: K AEB: CI; 68>A1> H B 6CI; 68IJ GC< A861DCH 6C9 8: G6C: FJ >EB: CI EGB 6GAN 6J IDB D7>AH % 6CN  
A6H H>C8A9: DE1DC6AI: GB H GC<C<; GB DE1DCHIDI: GB >G6I: I=: A6H >CAHI=6C DC: N 6GID DE1DCHID: M: C9 I=: A6H ;DG  
JEID N: 6CH/ : >C8A9: DE1DC6AE: GD9H6HE6GD, I=: A6H I: GB L=: CL: 9: I: GB >C I=6I L: 6G G6HDC67AN8: G6C ID  
: MGB H I=: GC L 6ADE1DC DGL: L>ACDI: 6GNI: GB >G6I: I=: A6H \*: 6HDC67AN8: G6C >H76H9 DC: 8DCDB >8 >C8: CI>K H6C9  
GEGH CIH6 >=>= I=GH DA / : =6K A6H 6<G: B: CHL >= A6H 6C9 CDC A6H 8DB EDC: CH 6C9 L: =6K : A8I: 9 I=: EG8I>86A  
: ME: 9>CI ;DG6AJ C9: GNI< 6HHI 8AHH IID 688DI CI; DGI=: A6H 6C9 GAI: 9 CDC A6H 8DB EDC: CI H 6H6 HC>A A6H  
8DB EDC CI

\$: 6H GAI: 9 76A C8: H6G EGH CI: 9 >CI=: ;DADL>C< I=G: AC >J: B HDCI=: DCHDA96I: 9 6A C8: +=: I >' I=: G6HHIH >>  
88G: 9 : ME: CH H6C9 ' I=: G8J GC CI A67>A1> H 6C9 >>> ' I=: GAC< I: GB A67>A1> H

' E: GLC< A6H 8DH L 6H B>ADC B>ADC 6C9 B>ADC; DGI=: N 6GH: C9: 9 : 8: B 7: G 6C9  
GHE: 8I>K AN

JGC< I=: N 6GH: C9: 9 : 8: B 7: G 6C9 86H E69 ;DGDE: GLC< A6H H>C8A9: 9 >CDE: GLC< 86H ;AL HL 6H  
B>ADC 6C9 B>ADC GHE: 8I>K AN ' E: GLC< A6H \*' - 6HHI HD7I6C: 9 >C: M=6C<: ;DGDE: GLC< A6H A67>A1> HL: G



, = ; ~~DADL~~ < I67A EGH CIH I=: B 6IJ GL> HD, DI GDE: ~~GLC~~ < A6H A67> ~~AL~~ > H6HD, : 8: B 7: G <CB> ~~ADCH~~

, DI6ADE: G1C< A6H A67>A1> H

, =: 86GNC< K6A: D, I=: 8DB EDC: CIHD, DI GAC< I: CB 9: 7I 6HD, :8: B 7: G L: G 6H: DADLH >CB>ADCH

$$\$DC<I:\mathbb{B}9:7I\ C\ I\ D,8J\mathbb{G}\mathbb{C}\mathbb{I}\ B6\mathbb{J}\mathbb{G}\mathbb{I}\mathbb{H}$$

G9J HEEG;DGI=: DBB:G86A(6E G( G6BHHECK9:9 7N6;>K N 6G 7>ADCHC>DGI CH8JG9 GKDKC<8G9J  
;68>ANI=6I:MEGHDC' 8ID7:G I=:W:KDKC< G9J 68>AN HD :8B7:G CD7DGLC<HL:G  
DIH6C9>C<J9:GI=:\*:KDKC< G9J 68>AN \*::;GDI=:H8EDC7:AL ;DGJG=:G9JHJHDCDCI=:\*:KDKC< G9J  
68>AN

, =: 9:I6>AID, DI G DB B: 6A 6E: G (D<GB H6HD, :8: B 7: G L: G 6H; DADL H >CB>ADCH

3IDK@ H>G7

, 7:9: F76 3H7D97  
3@@G3>78875EH7 DIF7

, 7:9: F76 3H7D97  
? 3KQJHK ;@63KE

- + 9DA6G9: CDB>C6I: 9 8DB B: 6AE6E: G

, =: 6K6>A7>AIND, I=: \*:KDAK< G9J 68>AIN6H6 H6C97NAFJ>9>IN;68>AINIDGE6NB 6IJGC< 8DB B: 6AE6E: G>H6C  
>BEDG6C1;68IDG>CB 6>C6>C<I=: DB B: 6A 6E: G (D<GB H8G9J 6C<H/ : : ME: 8I IDAB>J 6CN;JIJ G 7DGL>C<HJ C9: G  
I=: \*:KDAK< G9J 68>AINID6B DI CHI=6I L DI A A6K H;;>8>CI 8G9J 6K6>A7A J C9: GI=: ;68>AINID6ADL J HID7DGL >  
C: :9: 9 IDGE6N6CNDI IH6C9>C< 8DB B: 6AE6E: G6HJ B 6IJ GH

' JG67>AINID688: HI=: 8DB B: 6AE6E: GB 6C@I 6C9 I=: G6I: 9 8DHHDI, I=: H 7DGL>C<H>H6;;: 8I: 9 7NI=: HG C<I= D, DI G  
8G9J 6C< 6C9 B 6C@I 8DC9>DCH CN9DL C<G9: >CDI G8G9J 6C< L DI A >C8G6H I=: 8DH DI, 7DGL>C< J C9: GDI G  
8DB B: 6AE6E: GECD<GB H6C9 I=: G9J <G: B: CI 6C9 8DI A AB>J DGE8A9: DI G67>AINID>HI: 8DB B: 6AE6E: G!; DI G  
688: HHDI=: 8DB B: 6AE6E: GB 6C@I>H69K>GHAN6;;: 8I: 9 9J: ID 69DL C<G9: 8=6C<: >CB 6C@I 8DC9>DCH DGI=: G>H L:  
L DI A : ME: 8I IDGANDC 6 8DB 7>C6I>DCD, 6K6>A7A 86H> DE: 6C< 86H>;AL 6C9 I=: \*:KDAK< G9J 68>AINIDECK9:  
H>DG I: G>;J C9>C< !CH 8=: K CI I=: 8DH DI, 7DGL>C<HJ C9: GI=: \*:KDAK< G9J 68>AIN8DI A 7: =>=: GI=6CI=: =>HDC8  
8DH DI, 8DB B: 6AE6E: G7DGL>C<H

/ : 86H>;>9 DI G7DGL>C<HDI IH6C9>C< J C9: GI=: DB B: 6A 6E: G (D<GB H6HD, :8: B 7: G 6HAC< I: G 9: 7I>C  
I=: 688DB E6CNC< DCHDA96I: 9 6AC8: +=: IH6HL: =6K I=: >CI: CI 6C9 67>AIN 6HH EEDC: 9 7N6K6>A7>AINJ C9: GI=:  
\*:KDAK< G9J 68>AING;;: GC8: 9 67DK IDG;>C6C8: I=: H 7DGL>C<H;DG6I A6H DC: N 6G;GB I=: 76AC8: H=: I 96I:

( G8:: 9H;GB 7DGL>C<HJ C9: GI=: 8DB B: 6AE6E: GECD<GB H6G INE>86AN6K6>A7A ;DG<: C G8DGEDG6I: EJ GEDH H  
>C8A9>C< 68FJ>H>DCH

D76:F 35;>E7E

"->74>6/ :-, I< ) +H4A

' C"JC L: : CI: G9>CD6;>K N 6G 7>ADC\*:KDAK< G9J 68>AINI=6I: ME>G9 DC"JC ' C  
&DK B 7: G L: : CI: G9>CD6C 6B: C9: 9 6C9 GH6I: 9 6<G: B: CI: M: C9>C<I=: 6K6>A7>AINE: GD9 D, I=: \*:KDAK<  
G9J 68>AINID&DK B 7: G 6C9>C8G6H9 I=: ;68>AINID 7>ADC ' C' 8ID7: G L: : CI: G9>CD6 H 8DC9  
6B: C9: 9 6C9 GH6I: 9 8G9J 6<G: B: CI I=: W B: C9: 9 6C9 \*:H6I: 9 G9J <G: B: CX: M: C9>C<I=: 6K6>A7>AINE: GD9 D,  
I=: \*:KDAK< G9J 68>AINID' 8ID7: G L>= 6C 699>J>DC6AIL DDC: N 6G: M: CHDC DEI>DCH6I DI GG FJ: H 6C9 L>= I=:  
8DCH CI D, I=: AC9: GH, =: B: C9: 9 6C9 \*:H6I: 9 G9J <G: B: CI 6AD8DCI6>CH6C DEI>DCE: G>J>C< J HIDG FJ: H 6C  
>C8G6H >CI=: 6B DI CH6K6>A7A J C9: GI=: \*:KDAK< G9J 68>AIND, JE ID6C6<<G<6I: 699>J>DC6A 7>ADC

/ : 6G D7A>6I: 9 IDE6N6C6CJ 6A;68>AIN;;: ;DGI=: \*:KDAK< G9J 68>AIND, 7: IL:: C 6C9 76HHED>CIH6CNC<  
688D9>C< IDDI GAC< I: G 9: 7I 8G9J 6C< DGL>C<HJ C9: GI=: C L \*:KDAK< G9J 68>AIN>C- + DA6CH7: 6G>CI: GH  
6I 6 G6I: : FJ 6A6I DI GDEI>DC ID: >=: G , >GB +: 8J G9' K G<=I >C6C8>C<\* 6I: W>:GB + ' \* X EAH6 76HHED>CIH  
G9J +EG 69 9>JHB: CI W+ X EAH6 B 6G>CD, 7: IL:: C 6C9 76HHED>CIH 9: E C9>C< DC DI GAC< I: G 9: 7I  
8G9J 6C< DG I=: =>=: H D, 6 I=: :9: G6AJ C9HGI: EAH 76HHED>CIH 7 I=: EGB: G6I: 8 , >GB + ' \* EAH  
76HHED>CIH6C9 9 EAH>C: 68=86H 6 B 6G>C7: IL:: C Q D6C9 76HHED>CIH9: E C9>C< DC DI GAC< I: G 9: 7I 8G9J  
6C<

!C 699>J>DC 7: <CC><L>= DI G E GDCB 6C8: G6I>K IDDI G6CJ 6A>G: C=DI H <6HG9J 8I>DCI6G: IH I=: >CI: GH G6I: DC  
6CN7DGL>C<H86C>C8G6H DC9: 8G6H 7N 76HHED>CIH6C9 I=: ;68>AIN;;: 86C>C8G6H DC9: 8G6H 7N 76HHED>CIH;DG  
6 B 6MBJB >BE68I D, 6C>C8G6H DC9: 8G6H D, 76HHED>CIH

, =: B: C9: 9 6C9 \*:H6I: 9 G9J <G: B: CI GFJ>GHJ HIDB 6>C6>C 6 8DCHDA96I: 9 C I AK G<: G6I>DD, 9: 7I ID8DCHDA96I: 9  
!, 6H9:>C>9>CI=: G9J <G: B: CI D AHI=6C ID , =: B 6MBJB 8DCHDA96I: 9 C I AK G<: G6I>DL>A7:  
>C8G6H9 ID ID ;DGI=: ;DI G8DCH 8J I>K ;JA>;H6AFJ 6G>GH B B: 9>6I: AN;DADL>C<I=: 8DCH B B 6I>DCD, 6CN 68FJ>H>DC  
7NJH>C L=>8=I=: EJ G6H EG8: : M8:: 9H B>ADC , =: B: C9: 9 6C9 \*:H6I: 9 G9J <G: B: CI 6AD8DCI6>CH8J HDB 6CN  
GEGH CI6I>DCH L 6G6C>H 8DC9>DCH EG8: 9: CI : K CHD, 9: ;6J A >C9: B C>H 6C9 6;;>GB 6I>K 6C9 C: <6I>K 8DK C6CIH

HD, :8: B 7: G 6C9 :8: B 7: G L: L: G >C8DB EA6C8: L>= 6A8DK C6CHJ C9: GI=: B: C9: 9 6C9 \*:H6I: 9  
G9J <G: B: CI



-4A, :)? \$-:5 7)6

' C :8:B7:G L: :CI:G9>CID6I:CB AD6C8G9>I6<G:B:CI L=8=EDK9:H;DG6 96N9:AN9 9GL I:CB AD6C  
;68>ANJEID6C6<<G<6I:EGC8>E6A6BDI CI D 7>ADC / :>BB:9>6I:AN9GL 9DL CI=:JAA 7>ADC6K6>A7A J C9:GI=:  
;68>AN6H696>AN;AD6C>\$! ' \* GL: AD6C W:AN9 GL , :CB \$D6C J: X L>GE6NB:CI D I=:EGC8>E6A9J:  
:8:B7:G , =: :AN9 GL , :CB \$D6C J: 7DG>CI:GH 6I 6 K6G67A GL: :FJ6AID I=:96>AN\$! ' \* GL: EAH  
6HEG69 D 76HHED>CIH 76H9 DC DOK YHJ GCI 8G9>I GL< DGDL>C>HJ C9:GI=: :AN9 GL , :CB \$D6C;68>AN  
L:G EGE6N67A 6I I=: DB E6CNHDE>DC>CL=DA DG>CE6GL>=DI EGB>JB DGE: C6AN6C9 6B DI CH7DGL:9 B 6N CI 7:  
G7DGL:9 DC8: GE69

' C' 8ID7:G L: :CI:G9>CID6I:CB AD6C8G9>I6<G:B:CI L=8=EDK9:H;DG6 96N9:AN9 9GL I:CB AD6C  
;68>ANJEID6C6<<G<6I:EGC8>E6A6BDI CI D 7>ADC DGDL>C>HJ C9:GI=: :AN9 GL , :CB \$D6C;68>ANB 6N7:  
6H \* 6I: \$D6CH, :CB +:8JG9' K C>=I >C6C>C \* 6I: W:CB + ' \* X \$D6CH DG+ ' \* 6>AN AD6C>\* 6I: \$D6CH6C9  
7:6H>CI:GH 6H;DADLH , :CB + ' \* \$D6CH7:6G>CI:GH 6I 6 K6G67A GL: :FJ6AID, :CB + ' \* EAH6 G9>I+EG69  
9>IHB:CI D 76HHED>CIAH6 HEG69 D 7:IL::C 6C9 76HHED>CI 9:E:C9>C>DCI=: DB E6CNHAD<I:CB  
8G9>I GL< + ' \* 6>AN AD6C>\* 6I: \$D6CH A@ , :CB + ' \* \$D6CH7:6G>CI:GH 6I 6 K6G67A GL: :FJ6AID, :CB + ' \*  
L>=6DC BDCI=E:GD EAH6 G9>I+EG69 9>IHB:CI D 76HHED>CIAH6 HEG69 D 7:IL::C 6C9 76HHED>CI  
9:E:C9>C>DCI=: DB E6CNHAD<I:CB 8G9>I GL< 6C9 6H \* 6I: \$D6CH7:6G>CI:GH 6I I=:>X=:HD 6 I=: :9:GA  
;JC9HGL: EAH 76HHED>CIH 7 I=: EGB: GL: 8 , :CB + ' \* L>=6DC BDCI=E:GD EAH 76HHED>CIH6C9 9  
EAHC:68=86H 6B6G>C7:IL::CO D6C9 76HHED>CIH9:E:C9>C>DCI>GAC<I:CB 9:7I 8G9>I GL<

' C :8:B7:G L: 9GL 9DL CI=:JAA 7>ADC9:AN9 9GL HCDGJCH8JG9 I:CB ;68>AN W:AN9 GL , :CB  
\$D6C J: X 6H6, :CB + ' \* \$D6C , =: GE6NB:CI D I=:EGC8>E6A>H9J: DC :8:B7:G DOK 8DC8J GCIAN  
GE69 I=: 7>ADC>CDI H6C9>C>EGC8>E6AD I=: :AN9 GL , :CB \$D6C9J: 6C9 688G:9>CI:GH I=:GDC  
DGDL>C>HJ C9:GI=: :AN9 GL , :CB \$D6C J: 6G EGE6N67A 6I DI GDEI>DC>CL=DA DG>CE6GL>=DI EGB>JB DG  
E: C6AN6C9 6B DI CH7DGL:9 B 6N CI 7: G7DGL:9 DC8: GE69

=7\$-:5 7)6

' C"JC L: :CI:G9>CID6I=G: N 6GZ B>ADCHCDGJCH8JG9 I:CB ;68>AN WJ@, :CB \$D6CX ' C"JC  
L: 9GL 6C9 8DCK C:9 I=: CI>G 6K6>A7A 76A6C8: J C9:GI=: ;68>AN L=8=N: A:9 C I E C8: :9HD B>ADC , =:  
J@, :CB \$D6C>H9J: DC"JC 6C9>HEG E6N67A 6I DI GDEI>DC , =: J@, :CB \$D6C7:6H>CI:GH 6I 6 GL: D J@  
!CI:G6C@ ;::G9 \* 6I: WJG7DOK EAH 76HHED>CIH ECK9:9 =DL:K GI=6I I=: JG7DGB 6N CI 7: AHI=6C O@;DGI=:  
J@, :CB \$D6C

(-6\$-:5 7)6

' C"JC L: :CI:G9>CID6I=G: N 6GT 7>ADCHCDGJCH8JG9 I:CB ;68>AN W: C, :CB \$D6CX ' CI=: H6B:  
96N L: 9GL 6C9 8DCK C:9 I=: CI>G 6K6>A7A 76A6C8: J C9:GI=: ;68>AN L=8=N: A:9 C I E C8: :9HD B>ADC , =: 1:C  
, :CB \$D6C>H9J: DC"JC 6C9>HEG E6N67A 6I DI GDEI>DC , =: 1:C, :CB \$D6C7:6H>CI:GH 6I 6 GL: D, D@D, :CB  
\* H@ G: \* 6I: W' \* X EAH 76HHED>CIH ECK9:9 =DL:K GI=6I I=: , ' \* B 6N CI 7: AHI=6C O@;DGI=: 1:C, :CB  
\$D6C

\$-:5 7)6, = )A

' C"6CI 6CN L: GE69 I=: GB 6CC< B>ADC DI H6C9>C>D I=: , :CB \$D6C9J: %6N ;CB I=: 86H-  
EC8: :9HG8:K 9;CB . DCI>G CI=: . DCI>G+:E6GLDC , =: ;::H6HD8:6I:9 L>=I=: EGE6NB:CI L:G >B B 6I:G6A

-\*<7: 9=IA @0)6/-

' C"6CI 6CN L: 8DBEAI:9 I=: :7I;DG FJ>N M=6C< D B>ADCH>6GHD, 8DB BDC HD8@D. DCI>G  
GEGH CI>C<6AD I=: \*:I6>C:9. DCI>G+=6GH;DG 7>ADC>C6<<G<6I:EGC8>E6A6BDI CI D >C9:7I:9C HDI I=: DB E6CN  
=:A 7N DAB 6C+68=H D >C8A9>C> >6AA B>ADC D I=: , :CB \$D6C9J: %6C= 6C9 >> B>ADC D I=:  
, :CB \$D6C9J: %6N / : G8D9:9 6 AHD C: M C>J H B:CI D I=: 9:7I>C8A9:9>CI=: :7I;DG FJ>N M=6C< D  
B>ADC>CI=: N 6G: C9:9 :8:B7:G

76>:<4 #-6I7: 7<;

' C :7G 6CN L: >HI:9 7>ADC>C6<<G<6I:EGC8>E6A6BDI CI D DI G DCK C>7A +: C D G & DI: H9J:  
I=: WDCK C>7A & DI: HK >C8A9>C< B>ADC>C6<<G<6I:EGC8>E6A6BDI CI GH A>C<;CB 6C: M C>H >C;JAD, 6CDK: G  
6AD B:CI DEI>DC , =: DCK C>7A & DI: HL:G >HI:9>C6 ECK6I: EA68: B:CI ID8: C6>C>C>6AEI C>=6H GH;DGG H5A ID FJ 6A>9  
>CHJ I>DC6A7J N GHEI GH 6CI ID \* JA J C9:GI=: +:8J GL>H 8I

, =: DCK G7A &DI: H7: 6GCI: GH 6I 6 GI: D E: GN 6GE6N7A HB>6CCJ 6AN>C 6G6GHDC : 7G 6CN 6C9 J<JH  
D: 68=N 6G7: <CCC< DC J<JH ' ; I=: 7>ADC>EGC8>E6A6B DI CI ; DB I=: >HH 6C8: D I=: DCK G7A &DI: H  
7>ADCL 6H8A6H>9 6H9: 7I 6C9 B>ADCL 6H8A6H>9 6H: FJ>N JHC< 6C 6HB: 9 :;; 8I>K >CI: GH GI: D  
: 7I>HH 6C8: 8DHH, B>ADCL: G EGEDC6I: AN 6AD86I: 9 ID9: 7I 6C9 : FJ>N

' C : 7G 6CN L: GEJ G=6H9 B>ADC, I=: DCK G7A &DI: HJ HC< I=: GB 6>CC< 86H EGD8: 9HG8: >K 9 ; DB  
. DI> GCI=: +: E6GI>DC 6C9 DI=: C86H DC=6C9 !C8DC: 8I>CL>= I=: GEJ G=6H L: G8D9: 9 6 ADHDC9: 7I: M>C>J>H>B: CI  
9JGC< D B>ADC !C699>JDC JEDC GEJ G=6H L: G8D9: 9 B>ADC 6H6 G9J8I>DC ID699>JDC 6AE6>9 >C  
86EJ6AG 6I: 9 IDI=: : FJ>N 8DB EDC CI D, I=: GEJ G=6H9 DCK G7A &DI: H

' C"6CI 6CN L: 69DEI: 9 +- 6HJCI=: G9: I6>A9 >C&DI: / : G8A6H>9 I=: 86GNC< K6A: D I=:  
>CHGB: CI L=DANID9: 7I : AB>C6I>C I=: K6A: ; DB: GN 6IIG7J I67A IDI=: 8DCK: GHDC:; 6IJ G 6C9 I=: 6HD8: 6I: 9 9: 7I>HH 6C8:  
8DHHI=6I L: G EGKDI HN 8A6H>9 6H: FJ>N

' C : 7G 6CN I=: B 6IJGIN96I: D I=: DCK G7A &DI: H DI>K GE6>9 >C86H 7>ADC>C DI>H6C9>C< EGC8>E6A  
6C9 688G: 9 >CI: GH I=: GDC / : G8D>CQ 9 B>ADC>C>CI: GH: ME: CH 9JGC< I=: N 6G: C9: 9 :8: B7: G D  
L=>8= B>ADC G 6I: 9 IDI=: 8DCI G8IJ 6A8DI EDC GI: D B>ADCL 6H6IIG7J I67A IDI=: 6B DI>C6I>DC D, 9: 7I  
>HH 6C8: 8DHH / : G8D>CQ 9 B>ADC>C>CI: GH: ME: CH 9JGC< I=: N 6G: C9: 9 :8: B7: G D L=>8= B>ADC  
G 6I: 9 IDI=: 8DCI G8IJ 6A8DI EDC GI: D B>ADCL 6H6IIG7J I67A IDI=: 6B DI>C6I>DC D, 9: 7I>HH 6C8: 8DHH 6C9  
B>ADCL 6H6IIG7J I67A IDI=: 6B DI>C6I>DC D, I=: 9>HDI CI

' 79;H7D76 # A7E

HD : 8: B7: G L: =69 DI>H6C9>C< I=: ; DML>C< H C>DCCI: H 8DA 8I>K ANI=: W: <H: G9 &DI: HK

S B>ADC 6<<G<6I: EGC8>E6A6B DI CI D, H C>DCCI: H9J: "JC >HH: 9 6I D I=: >EGC8>E6A  
6B DI CI 6C9 7: 6GC<>CI: GH 6I I=: GI: D E: GN 6G

S B>ADC 6C9 B>ADC 6<<G<6I: EGC8>E6A6B DI CI HD, H C>DCCI: H9J: "JC >HH: 9 6I 6C9  
GHE: 8I>K AN D I=: >EGC8>E6A6B DI CI H6C9 7: 6GC<>CI: GH 6I I=: GI: D E: GN 6G

!CI: GH DCI=: \*: <H: G9 &DI: H>HE6N7A HB>6CCJ 6AN>C 6G6GHDC "JC 6C9 : 8: B7: G D: 68=N 6G

AH@GHE3@ ' 767? BEA@%DAHEA@E BB>534>7 EA' 79;H7D76 # A7E

/ : B 6NG9: : B I=: \*: <H: G9 &DI: HD, I=: 6EEA867A H G: H>CL=DA DG>CE6G 6I 6CN I>B: EGDGI DI I=: 96I: HHE: 8>9>9 >CI=:  
\*: <H: G9 &DI: H>C9: CIJ G I=: W 6A 6I: HK 7NE6NC< I=: EGC8>E6A6B DI CI 6C9 I=: VB 6@ L=DAXEGB>J B HE: 8>9>9 >CI=:  
\*: <H: G9 &DI: H>C9: CIJ G EA H688G: 9 6C9 JCE6>9 >CI: GH 99>JDC6AN L: B 6NG9: : B 6ADG6CNE6G D, I=: \*: <H: G9  
&DI: HD, I=: 6EEA867A H G: HDC DG6; I: GI=: 6A 6I: HL>=DI I E6NC< I=: VB 6@ L=DAXEGB>J B HE: 8>9>9 >CI=: \*: <H: G9  
&DI: H>C9: CIJ G

' 79;H7D76 # A7E( 7D7E

	3> 3HE
H C>DGJ CH 8J G9 CI: H9J:	% 6G=
H C>DGJ CH 8J G9 CI: H9J:	: 8: B7: G

!; 68=6C<: D, 8DCI GAI G<<: GC<: K CI D88J GH L: L>A>C8: G6>C8>GJ B H6C8: H 7: GFJ>G9 IDB 6@ 6CD:; GIDGEJ G=6H I=:  
\*: <H: G9 &DI: H6I 6 EJ G=6H EG8: : FJ 6AID D I=: EGC8>E6A6B DI CI EA H688G: 9 6C9 JCE6>9 >CI: GH 8=6C<: D,  
8DCI GAI G<<: GC<: K CI>H9: ;>C 9 6HI=: D88J G G8: D, 7DI= 68=6C<: D, 8DCI GAI G9 6 GI>C<: K CI : 68= 6H9: ;>C 9 >CI=:  
\*: <H: G9 &DI: H>C9: CIJ G M: EI>C 8DCC: 8I>CL>= 68=6C<: D, 8DCI GAI G<<: GC<: K CI I=: \*: <H: G9 &DI: H9DCI =6K  
6CN 8G9>J GI>C< 9 DL C>G9: IG<<: GHI=6I L DI A 688: A GI: I=: B 6IJ GIND, I=: \*: <H: G9 &DI: H

, =: \*: <H: G9 &DI: H8DCI 6>C8J HDB 6CN 8DK C6CIH>C8A9>C< AB>HDCI=: >C8J G G8: D 8: G6>CH 8J G9 9: 7I 6C9 H 6A  
A 6H 768@IGCH 8I>DCH &DC: D I=: H 8DK: C6CIH 6G 8DCH9: G9 GHG 8I>K IDDI GDE: GI>DCH 6C9 6HD : 8: B7: G L:  
L: G >C 8DB EA6C8: L>= 6AD, DI G8DK: C6CIH

\$ E 7D

/ : B 69: >CI: GH E6NB: CIH>C8A9>C< 6B DI CI H6AD86I: 9 ID>CI: GH: ME: CH ; DB 9>HDCI>CI: 9 DE: GI>DCH 9J GC< D,  
B>ADC / : =69 CD>CI: GH E6NB: CIH; DB 9>HDCI>CI: 9 DE: GI>DCH 9J GC< DG

, =: G 6G 7>ADC D, B>C B J B EGC8>E6AE6NB: CH9J: J C9: GDJ GID6AADC< I: CB 9: 7I 9J GC< , =: ;JIJG B>C B J B EGC8>E6AE6NB: CH9J: 6G EGH CI: 9 >CI=: ;DACL >C< I67A

	) 7P ! A3@E	' 79;E7D76 # AF7E	) AF3>
		V	
	V	V	V
		V	
	V		
	V	V	V
, =: G6;I: G	V		
, D6AEGC8>E6AE6NB: CH <sup>6</sup>			

6 &DI >C8A9: 9 >CI=: I67A 67DK: 6G 9>HDI CH C: I D, EGB >J B H6C9 >HJ 6C8: 8DHH6HD8>6I: 9 L>I=: \*: <H: G9 &DI: H 6C9 DBB: &6A 6E: GL=>8= IDI6A9 B>ADC6HD :8: B7: G 6C9 =6K 7:: CG8D9: 9 6H6CD;HI IDI=: 86GNC< 6BDI CI D, I=: G 6I: 9 9: 7I >CI=: 688DB E6CNC< DCHD96I: 9 6AC8: +=: I 6HD, :8: B7: G !C699>DC I=: I67A 67DK 9D HCD >C8A9: EGC8>E6A76AC8: D, B>ADCJ C9: GI=: DBB: &6A 6E: G( CD<GB

# \$ ) % # ( \$ # % # (

: G6C: BEAN: HE6G>8>E6I: >C CDC8DCIG7J IDN9: ;>C 9 7: C ;>I E: CHDCE6CH !C<: C GADI GEDA8N>HID;J C9 I=: H E6CH 76H9 DC8DCH9: GI>DCHG 6IC< IDA<6AGFJ>GB: CH J C9: GNC< 6HI I GIJ CHI=: E6CYH;J C9: 9 H6IJ HI=: 6CI>8>E6I: 9 9: 9J8I>7>AIND, I=: 8DCIG7J I>DC AD86AEG68I8: HB 6C@I 8DC9>I>DCH >CI: GH GI: H 6C9 DI=: G;68IDCH' JG- + E: CHDCE6CH6G ;CD C 6C9 6HH8= I=: G 6G CDDC<DC< 7: C ;>I 688G 6A6HD8>6I: 9 L>I=: - + E: CHDCE6CH, =: ;DACL >C< 9: H6G7: HDI G H<C>;>86CI E: CHDCE6CH6HD, :8: B7: G 6C9

, =: ;D&L>C< H I H; D I =: ; J C 9: 9 H 6 I J H D; D I G E A C H 6 C 9 6 B D I C H G 8 D 9: 9 >C 88 J B J A I: 9 D I=: G 8 D B E G=: C H K: >C 8 D B: A H H 6 H D; I=: B D H G 8: C I 6 8 I J 6 G 6 A K 6 A 6 I D C H J H C< B: 6 H G B: C I 9 6 I: H D: : 8: B 7: G >C B>A D C H

	* ( %7@EA@ 7@8&HE	# A@* ( %7@EA@ 7@8&HE	
: 3@7;@B7@EA@47@7&FA4>93EA@			
: C ;>I D7A<6I>D C 6 I 7: <C C C< D; N 6 G			
+: C K 8: 8 D H	V	V	
!C I: G H 8 D H			
B E A N : 8 D C I G 7 J I D C H	V	V	
: C ;>I H E 6 9 6 C 9 D I=: G E A C 8 D H H			
8 I J 6 G 6 A A D H <6 C			
B : C 9 B: C H H I I A B: C H 6 C 9 8 J G 6>A B: C H	V	V	
( A C 6 8 F J>H I D C H 6 C 9 D I=: G	V		
D G>C: M 8=6 C<: G I: >B E 6 8 I	V	V	
7@7&FA4>93EA@3F7@ A 8 K 7 3 D			

: 3@7;@B>3@3H7HE			
6 G K 6 A: D; E A C 6 H I H 6 I 7: <C C C< D; N 6 G			
8 I J 6 A G I J C I D C E A C 6 H I H			
B E A N G 8 D C I G 7 J I D C H			
B E A N : 8 D C I G 7 J I D C H	V	V	
B : C 9 B: C H 6 C 9 H I I A B: C H	V	V	
: C ;>I H E 6 9 6 C 9 D I=: G E A C 8 D H H			
( A C 6 8 F J>H I D C H 6 C 9 D I=: G	V	V	V
D G>C: M 8=6 C<: G I: >B E 6 8 I	V	V	
3;D I B>G 7 A 8 B>3@3H7HE3F7@ A 8 K 7 3 D			
G@G 7 6 H B I C E			

, =: 9>; G C 8: 7: I L:: C I=: 6 8 8 J B J A I: 9 7: C ;>I D 7 A<6 I D C 6 C 9 I=: E C D: 8 I: 9 7: C ;>I D 7 A<6 I D C 6 H D: : 8: B 7: G 6 C 9 >H B B 6 I: G 6 A

	* ( %7@EA@ 7@8&HE	# A@* ( %7@EA@ 7@8&HE	
? A G C H E D 7 5 A D 6 7 6 ;@E 7 A C E A>6 3 F 7 6 3>3 C 5 7 ( : 7 7 E 3 E A 8 7 5 7? 4 7 D			
' I=: G 6 H I H	V	V	
8 8 C: 9: M E: C H H 6 C 9 D I=: G 8 J G C I A 6 7>A I> H			
' I=: G A C< I: C B A 6 7>A I> H			
# 7 F 3? A G C F			
? A G C H E D 7 5 A D 6 7 6 ;@ \$ 3 E A 8 7 5 7? 4 7 D			
( G D G H C K 8: 8 D H	V	V	
&: I <6 C A D H			
) A E 3>B D 7 E B J 3? A G C F			

, 7;9: F76 3H7D97 3HKG? BEA@E76 FA67F7D ;@ 47@8FA4>93FA@E3F63F7 A8? 73HGD7? 7@

\* ( %7@A@%3@

# A@\* ( %7@A@%3@

HDI CI GI:

\* 6I: D 8DB E: CHD<C8G6H

&

&

A? BA@7EA8 @FB7DA6;5 B7@A@5AF

, =: ;D&L>C< H IH;DI I=: 8DB EDC CIHD, C I E: GD>8 E: CHD<8DH ;DGI GE&CH;DGI=: N 6GH: C9:9 :8: B 7: G >C  
B>ADCH

\* ( %7@A@ 7@8HE

# A@\* ( %7@A@ 7@8HE

+: CK8: 8DH

V

V

V

!CI: GH 8DH

ME: 8I: 9 GIJ C DCE&C 6HH IH

B D<6H<DCD, C I ADH

V

B D<6H<DCD, EGDGH CK8: 8DH

V

V

V

&: I 8J G6>B: CI 6C9 H IAB: CI ADH  
G8D<CQ 9

V

V

&: I E: GD>8 E: CHD<8DH

V

, 7;9: F76 3H7D97 3HKG? BEA@E76 FA67F7D ;@ @FB7DA6;5 B7@A@5AF3F63F7 A8? 73HGD7? 7@

\* ( %7@A@%3@

# A@\* ( %7@A@%3@

HDI CI GI:

ME: 8I: 9 GIJ C DCE&C 6HH IH

\* 6I: D 8DB E: CHD<C8G6H

&

&

&

, =: 9>HDI CI GI: HG;A8I I=: B 6C@I GI: DC :8: B 7: G ;DG=>= FJ 6AIN;>M9 >C8DB: >CK HB: CIHL >= B 6IJ GI> H  
8DG HE D<9>C< IDDI G7: C: ;I D7A<6DCH6C9 6G H 7? 8I ID8=6C< : 68= N 6G DGDC - + E&CH GI: H6EECEG6I: ;DG: 68= E&C  
6G 9: I: C>C 9 76H9 DC>CK HB: CI <C9: >CHG B: CIHL >= B 6IJ GI> H6EECEMB 6I: AN: FJ 6AIDI=: 6K C<: ME: 8I: 9 7: C; ;I  
E6NDI IJ C9: GI=: E&C

, =: : ME: 8I: 9 GI: HD, GIJ C G;A8I I=: 6HHI 6AD86LDCD, I=: E&CH6C9 C<: 9 ;CB ID >C ID  
>C 6C9 ID >C , =: 9DB: H 8 E&C GI: >H76H9 EGB 6GANDC 7C69 EJ 7A8ANI G69: 9 : FJ >N6C9 ;>M9  
>C8DB: >C9>8: H6C9 ;DQ 6C9 ADD@C<: H>B 6I: HD, 68I<K EDQ;DAD 6C9 >CK HB: CI B 6C<: B: CI , =: : ME: 8I: 9 GI: HD, GIJ C DC  
6HHI 6HHI B EL>DCH;DGI=: CDC - + E&CHL: G 9: I: C>C 9 DC 6 E&C 7NE&C 76HH76H9 DCI=: 8DB EDH>DCD, 6HH IH

/ : GEDJ 6A8DB EDC CIHD, C I E: GD>8 E: CHD<8DHH L >= I=: : M: ELDCD, H CK8: 8DHH >C' I=: GCDC DE: C<C<: ME: CH H  
C I >CI=: DCHDA96I: 9 +I6I: B: CIHD, 6C<C<H;DC6AE: GD9HEGH CI: 9 +: CK8: 8DHH6G GEDQ: 9 >C DH D, H6AH6C9 +: A<C<  
<: C 6A6C9 69B >CHG<K : ME: CH H<CI=: DCHDA96I: 9 +I6I: B: CIHD, 6C<C<H688D9>C< IDI=: 8A6H< ;86LDCD, I=:  
E6C8>E6CIYH8DB E: CHD<C

%3@ H7HE

( &C 6HH IH6G >CK H: 9 >C K6GDI H>CH C68: 8DQ C68IH6C9 : FJ >N6C9 9: 7I H 8J GI> H6H9: I: C>C 9 7NI=: 69B >CHGIDGD : 68=  
E&C +DB: D I=: H >CK HB: CIH 8DCHH<C< D B JIJ 6A;J C9H6C9 DI=: GECK6I: >CK HB: CIH 6G K6A: 9 J HC< I=: C I 6HHI K6A:  
W& . X B: I=D9 6H6 EG8L86A: ME: 9>CI , =: >CK HB: CIHK6A: 9 J HC< I=: & . B: I=D9 6G 6AD86I: 9 68CHH6 7C69 6C6ND,  
;J C9H6C9 9>K CH;NI=: EDQ;DAD , =: K6A: D I=: E&C 6HH IH9>G 8IAN6;; 8IHI=: ;J C9: 9 H6IJ HD, DI GE: CHDCE&CHG 8D9: 9 >C  
I=: ;>C6C8>6AH6I: B: CIH

, =: ;6GK6A: HD, DJ GE: CHDCEAC6HHIH6HD, :8: B7: G 7N6HHI86I: <DNL: G 6H;DMLH >C  
B>ADCH

	&GAF76 %D57E;@ 5EH7 " 3D-7F ! 7H7>	( ;9@853@F\$ E 7D \$ 4E7DB4>7 @BGE ! 7H7>	( ;9@853@ * @4E7DB4>7 @BGE ! 7H7>	) AB>
6H 6C9 : FJ >K6ACH		V	V	
%JIJ6A;JC9H	V		V	
!CH6C8: 8DCI68IH	V		V	
, D6A			V	
!CK HB: CHB: 6HG9 6I & . 6				
%JIJ6A;JC9H				
' I=: GEGK6I: >CK HB: CH				
, D6A6HHIH6I ;6GK6A:				

6, =: ;6GK6A: 6BDI CHEGHCI: 9 >CI=: I67A 67DK 6G >CI: C9: 9 IDE: GB I G8DC8>A6IDCD, I=: ;6GK6A: => 6G=NIDI=:  
IDI6A;6GK6A: D, EAC6HHIH

, =: ;6GK6A: HD, DJ GE: CHDCEAC6HHIH6HD, :8: B7: G 7N6HHI86I: <DNL: G 6H;DMLH >CB>ADCH

	&GAF76 %D57E;@ 5EH7 " 3D-7F ! 7H7>	( ;9@853@F\$ E 7D \$ 4E7DB4>7 @BGE ! 7H7>	( ;9@853@ * @4E7DB4>7 @BGE ! 7H7>	) AB>
6H 6C9 : FJ >K6ACH		V	V	
%JIJ6A;JC9H	V		V	
!CH6C8: 8DCI68IH	V		V	
, D6A			V	
!CK HB: CHB: 6HG9 6I & . 6				
%JIJ6A;JC9H				
*: 6A H6I: ;JC9H				
' I=: GEGK6I: >CK HB: CH				
, D6A6HHIH6I ;6GK6A:				

6, =: ;6GK6A: 6BDI CHEGHCI: 9 >CI=: I67A 67DK 6G >CI: C9: 9 IDE: GB I G8DC8>A6IDCD, I=: ;6GK6A: => 6G=NIDI=:  
IDI6A;6GK6A: D, EAC6HHIH

: 6CBJIJ6A;JC9H6G K6A: 9 6I I=: FJDI: 9 8AHC< EG8: GEDQ: 9 DCI=: 68I>K B 6C@I DCL=>8= I=: >C9>K9J 6AH8J GI> H6G  
IG9: 9 DB B DC HD8@ 8DGED6I: 7DC9H 6C9 BJIJ6A;JC9HI=6I 6G CII IG9: 9 DC 6C 68I>K B 6C@I 6G K6A: 9 6I FJDI: 9 EG8: H  
GEDQ: 9 7N>CK HB: CI 7C@ CH6C9 9: 6AGH76H9 DCI=: JC9: CNI< I: GB HD, I=: H8J GIN6C9 8DB E6GHDCIDHB >6GH8J GI> H  
IG9: 9 DC 6C 68I>K B 6C@I

: 6CBJIJ6A;JC9H G6A H6I: ;JC9H 6C9 DI=: GEGK6I: >CK HB: CH6G K6A: 9 JHC< & . 76H9 DCI=: >C;DDB 6I>DCBCK9: 9  
7NI=: 6HHI ;JC9 B 6C<: GHL=>8= G;A8IHI=: EACYHH6G D, I=: ;6GK6A: D, I=: C I 6HHIH, I=: >CK HB: CI

JB75F76 A@D4GEA@E

JGC< L: 8DCIG7JI:9 B>ADC 6C9 B>ADC IDDI G + 6C9 CDC - + 9::C 9 7: C ;J E: CHDCEA6CH GHE: 8I:K AN  
JGC< DI G86H 8DCIG7JI DC GFJ >GB: CH;DGDJ G + 6C9 CDC - + 9::C 9 7: C ;J E: CHDCEA6CH6G : ME: 8I: 9 ID7:  
6EEGMB 6I: AN B>ADC 6C9 B>ADC GHE: 8I:K AN

, =: ;DACL >C< H IH;DI= 7: C ;J E6NB: CHIDE6G8E6CH L=8= G;A8I: ME: 8I: 9 ;JIJ G H CK8: 6H6EECEG6I: : ME: 8I: 9 ID7:  
E6> 7NI=: E6CH>CI=: E: GD9H>C9>86I: 9 >CB>ADCH

\* ( %7GEA@%3GE #A@\* ( %7GEA@%3GE >%7GEA@%3GE

78@76 A@D4GEA@%3GE

/ : 69B>CH: G6C9 B 6>CI6C @ ECD<GB H6C9 8DCIG7JI DCHIDI=: @ ECD<GB H6G 9: I: GB>C: 9 76H9 DC 6 E: GB: CI6<: D;  
8DB E: CH6IDC / : G8D<CQ 9 8DB E: CH6IDC: ME: CH ;DGDJ GE6G8E6LC<- + : B EAN: H>CI=: @ ECD<GB HIDI6AC<  
B>ADC>C B>ADC>C 6C9 B>ADC>C

# \$ ) ( ! (

/ : 9: GK GK CI: EGB 6GAN;GB I=: H5AHD, ECDJ 8IH6C9 HDIL 6G 6C9 H CK8: H\*: K CI: >HG8D<CQ 9 L=: C8DCIDAD,  
ECB>H9 ECDJ 8IHDGH CK8: H>HI6CH: G9 ID8J HDB: G>C 6C 6B DI CI I=6I G;A8IH=: 8DCH9: G6IDCL: : ME: 8I ID7: : CHA9 ID  
>C: M8=6C<: ;DGI=DH ECDJ 8IHDGH CK8: H

\_DCIG8I\_HIHV !C8: G6>C8>GJ B H6C8: H L: G8D9 8DCIG8I 6HIHL=8= >C8A9: JC7>A9 6B DI CHINE>86ANG H A C< ;GB  
H5AHJ C9: G8DCIG8IHL=: CGK K CI: G8D<CQ 9 : M8:: 9HI=: 6B DI CI 7>A9 IDI=: 8J HDB: G 6C9 G<I IDE6NB: CI >HDI DCAN  
H7?: 8I IDI=: E6H6<: D, I B: DCIG8I 6HIHL: G B>ADC 6HD, : 8: B 7: G 6C9 B>ADC 6HD, : 8: B 7: G

\_DCIG8I\_DHHV / : >C8J G>C8GB: CI6A8DHHID D7I6>C8: G6>C8DCIG8IH INE>86ANH5AHG A I: 9 8DB B>HIDCH6C9 8DHH  
6HD8>6I: 9 L>= 6HI IHJ H9 7NDJ G8J HDB: G>C8: G6>CH CK8: 6G6C<: B: CIH :: G9 H5AHG A I: 9 8DB B>HIDCH6G <: C GAN  
CI 86E>6AQ 9 6HI=: 6B DI G6I>DCE: GD9 >HDC: N 6GDGAH 6C9 L: : A8I: 9 IDJH I=: EG8I>86A ME: 9> CI ID: ME: CH I=: H H5AH  
8DB B>HIDCH6H>C8J G9 HD, : 8: B 7: G L: =69 B>ADC>C I GK CI: G A I: 9 8DCIG8I 6HI IHEGB 6GAN G A I: 9  
ID8: G6>CH;IL 6G 8DCIG8IHG 8D9: 9 >C( GE6>9 : ME: CH H6C9 DI=: G8J G6CI 6HIH6C9 ' I=: G6HI IH>C DI G DCHA96I: 9 6A6C8:  
+=: I ' JGC I GK CI: G A I: 9 8DCIG8I 6HIH6I : 8: B 7: G L: G B>ADC, =: H 6HIH=6K: H>B 6I: 9 JH;JAAK: H  
7: IL:: C 6C9 N 6CH

\_DCIG8I \$>67>A I> HV ' JG8DCIG8I A67>A I> H8DCHH D 9:: G9 GK CI: <: C GAN G A I: 9 ID( + 6C9 : M: C9: 9 L 6G6CINH5AH  
L=: G >CB DH 86H HL: G8: >K JE ;GCI E6NB: CI 6C9 G8D<CQ GK CI: DK GI=: H EEDGI: GB / : 8A6H>N9:: G9 GK CI: 6H  
8J G6CI DGDC8J G6CI 76H9 DCI=: I B>C< D, L=: CL: : ME: 8I IDG8D<CQ GK CI: , =: CDC8J G6CI EDDDC D 9:: G9 GK CI:  
>H>C8A9: 9 >C' I=: GAC< I: GB A67>A I> H>CI=: DCHA96I: 9 6A6C8: +=: I H

' JG8DCIG8I A67>A I> H6HD, : 8: B 7: G 8DCHH: 9 D, I=: ;DACL >C< >CB>ADCH

::: G9 GK CI: 8J G6CI

::: G9 GK CI: CDC8J G6CI

, DI6A8DCIG8I A67>A I> H

!CI=: N 6G: C9: 9 : 8: B 7: G L: G8D<CQ 9 B>ADC D, GK CI: G A I: 9 IDDI G8DCIG8I A67>A I> H6I "6CI 6CN  
, =: 8=6C<: >CDI G8DCIG8I A67>A I> H;GB : 8: B 7: G ID : 8: B 7: G L HEGB 6GAN 9J: IDI=: I B>C< D,  
7>AC<H6C9 G8D<C>DC 6HGK CI: D, H7H>GEL>DC 76H9 HDIL 6G 8DCIG8IH ( + 6C9 : M: C9: 9 L 6G6CINH CK8: H

\*:B6<CC<(:GDCB6C8:'7A<6L>DCHV 'JGG B6<CC<E:GDCB6C8:D7A<6L>DCHGEGH C I I=:IG<CH<8I>DCEG8:D ;>GB  
CDC86C8:A7A D9:GH6C9 I=:6K G<:8DCIG8I K6A: ;DGH,IL 6G 8DCIG8IH ;DGL=>8=LDG@=6HCD 7::CE:GDCB:9 / : =6K  
:M8A9:9 E:GDCB6C8: D7A<6L>DCHL I= 6CDG<C6A ME:8I:9 9J G<L>DC D, DC: N 6GDGAH;GB I=: 6B D<CH7: AL  
, =: 6<<G<6I: GB6<CC<E:GDCB6C8: D7A<6L>DCH6IG7J I67A ID: 68=D, D<GH<B: CH6HD, :8: B7: G :H6H;D<AL H  
>CB>ADCH

!CI: A<: CI' E: G<C<+D<AL>DCH

( G8>HDC, :8=CD<D>H

9K6C8:9 :6A=86G +D<AL>DCH

, DI6AG B6<CC<E:GDCB6C8: D7A<6L>DCH

, =: B6>DGIND, GB6<CC<E:GDCB6C8: D7A<6L>DCH6G G A I: 9 IDH7H8GEI>DC 76H9 HD,IL 6G 8DCIG8IH 6C9 H C K8: 6C9 H I EEDG  
8DCIG8IH L=>8=L: : ME: 8I ID;JA>A6EECDMB 6I: AN E: G: C I L I=>C I=: C M I L D N 6CH 6EECDMB 6I: AN E: G: C I L I=>C I=:  
C M I=G: N 6CH 6C9 H 7H6C<6AN 6AL I=>C;DI GN 6CH

;E399D793FA@A8' 7H7CG7

/ : 9>H<<G<6I: GK C I: ;GB 8DCIG8IHL I= 8J HDB: CH7NH6AHD, ECDJ 8I 6C9 H C K8: H <: D<GE=>8 A86I>DC 6C9: C9 B6C@I  
;DG: 68=D, D<GH<B: CH6HL: 7: A K I 7: H9: E8IH=DL I=: C6IJ G 6B D<CI I>B>C< 6C9 J C8: G6<CIND, D<GGK C I: 6C9 86H  
;AL H6G 6;;: 8I: 9 7N: 8DCDB>8 ;68IDCH



5<<G<6IDCD, GK CJ: ;DGI=: N 6G: C9: 9 : 8: B 7: G

HEGH CI: 9 6H;DADLH >CB>ADCH

@7>97@  
\$ B7D8F@  
( A>GE,AGE

%D5;EA@  
) 75: @A>9;7E

6HB@576  
73>E 53D7  
( A>GE,AGE

) AB>

( 3>7E

+6AHD, E@9J 8IH6C9 HD,IL 6G

+6AHD, H@K8: H

, D6A

7A9DBB: ;5

- C: 9 +I6I: H

=>C6

ADI=: G : 68= 8DJ CIGN>C9>K9J 6ANAHH  
I=6C D, ID6AH6AH

, D6A

@ ? 3D=7HE

>G8I H6AH<sup>6</sup>

%; 9>86A

!C9JHG6A % 6CJ;68IJGC<

- I>A>: H ( DL: G

V

DK @B: C

DBBJC86IDC A8IDC8H  
+: B>8DC9J 8IDG

: @HE68: :;; CH

V

' >A 6H

V

\*: I6>A DCHB: G

V

' I=: G

, D6A9>G8I H6AH

>HG7JIDCH

) AB>

6 >G8I +6AH6AD>C8A9: H6AHB 69: I=@<= I=>9 E6CN9>HG7JIDCHIDI=: H : C9 B 6@IH

5<<G<6IDCD, GK CJ: ;DGI=: N 6G: C9: 9 : 8: B 7: G

HEGH CI: 9 6H; DADLH >CB>ADCH

@7>97@  
\$ B7D8E@  
( A>GE, A>E

%D5;EA@  
) 75: @A>9;7E

6HB@576  
73>E 53D7  
( A>GE, A>E

) AB>

( 3>7E

+6AHD, ECDJ 8IH6C9 HD, IL 6G

+6AHD, HCK8: H

, D6A

7A9DBB: ;5

- C: 9 +I6I: H

=>C6

ADI=: G : 68= 8DJ CIGN>C9>K9J 6ANAHH  
I=6C D, IDI6AH6AH

, D6A

@ ? 3D=7HE <sup>3</sup>

>G8I H6AH

%; 9>86A

!C9JHG6A % 6CJ; 68IJ GC<

- I>A>: H ( DL: G

V

DK: CB: C

DBBJC86IDC A8IDC8H  
+: B>8DC9J 8IDG

: GHE68: : ;: CH

V

V

' >A 6H

V

\*: I6>A DCHB: G

V

' I=: G

, D6A9>G8I H6AH

>HG7JIDCH

) AB>

6 >G8I +6AH6AD>C8A9: H6AHB 69: I=CI <= I=>C E6CN9>HG7JIDCHIDI=: H : C9 B 6C@IH

H5<<G<6IDCD, GK CJ: ;DGI=: N 6G: C9: 9 :8: B 7: G

HEGH CI: 9 6H; DML H >CB>ADCH

@7>97@  
\$ B7D8E@  
( A>GE,AE

%D5;EA@  
) 75: @A>9;7E

6HB@576  
73>E 53D7  
( A>GE,AE

) AB>

( 3>7E

+6AHD, ECDJ 8IH6C9 HD,IL 6G

+6AHD, HCK8: H

, D6A

7A9DBB: ;5

- CI: 9 +I6I: H

=>C6

ADI=: G : 68= 8DJ CIGN>C9>K9J 6ANAHH  
I=6C D, IDI6AH6AH

, D6A

@ ? 3D=7HE <sup>3</sup>

>G8I H6AH

%: 9>86A

!C9JHG6A % 6CI;68IJGC<

- I>A>H ( DL: G

V

DK: CB: CI

DBBJC86IDC A8IGCC8H  
+: B>8DC9J8IDG

: GHE68: :;: CH

V

' >A 6H

V

\*: I6>A DCHB: G

V

' I=: G

V

, D6A9>G8I H6AH

>HG7JIDCH

) AB>

6 >G8I +6AH6AD>C8A9: H6AHB 69: I=CI <= I=>C E6CIN9>HG7JIDCHIDI=: H : C9 B 6C@IH

# \$ ) # \$ " ) - (

3D@>E3@ @A? 7) 3J7E

6CC<H;CB 8DCI>CI>C< DE: GIDCH7:;DG >C8DB: I6MH;DGI=: N 6GH: C9: 9 :8: B 7: G L: G 6H;DML H >CB>ADCH

- CI: 9 +I6I: H

!CI: G6IDC6A

, D6A

, =: 8DC\>C< DE: 6\>DCH&K\HDC;DG>C8DB: I6MH;DGI=: N 6GH: C9: 9 :8: B 7: G L: G 6H;D&L H >CB>ADCH

JGCI

:9: 6A +

&DC - +

+I6I: 6C9 AD86A

::: 69

:9: 6A +

&DC - +

+I6I: 6C9 AD86A

!C8DB: I6ME&K\HDC

8875EH? @A? 7) 3J' 3F7

, =: 8DC\>C< DE: 6\>DCH::: 8\>K >C8DB: I6M6I: ;DGI=: N 6GH: C9: 9 :8: B 7: G K6G: H;6B I=: - + H6I\IDN:::9: 6A >C8DB: I6M6I: 6H;D&L H

%7DF7@B97 A8%D7BJ 3DQ@E

+I6I\IDN:::9: 6A>C8DB: I6M6I:

!C8G6H 9: 8G6H >CI6M6I: GH\A<>;6B

+I6I: >C8DB: I6MH C I D;::9: 6A>C8DB: I6M7: C; ;\

DG>C>C8DB: I6M9 6I 9>;: GCI 6I: HI=6C- + H6I\IDN6I:

- + :::9: 6AE: 6B 6C CI 9>;: GC8: HG 6I: 9 IDI=: , "

DB E: CH\>DC G 6I: 9

' I=: G

::: 8\>K >C8DB: I6M6I: 7::;DG 69J HB: CHG 6I: 9 IDI=: JCG 6AQ 9 <6>C DCI=: \* :I6>C 9 . DCI> G+=6GH

9J HB: CI ;DGI=: JCG 6AQ 9 <6>C DCI=: \* :I6>C 9 . DCI> G+=6GH

V

8875EH? ;@A? 7 BJ DBF 38F7D36<GH? 7@ED7>3F76 EAE 7 G@D73>L76 93;@A@  
E 7' 7B;@76 +A@7D( : 3D7E

' JG::: 8\>K I6M6I: ;DG 9>;: GH;6B I=: - + :::9: 6AH6I\IDN6I: D 9J: EGB 6GANIDI=: EDH\>K 6C9 C: <6\>K :::: 8IHD I=: , 6M JIH6C9 "D7H 8I W " X - + :::9: 6AE: 6B 6C CI 9>;: GC8: H I=: >B E68IHD 8G9>H6C9 9: 9J 8\>DCH E&K9: 9 7N 6I >C8A9>C< I=DH 6HD8>6I: 9 L >= H6I: >C8DB: I6MH 6C>C8G6H ID>C DI GJ C8: 6>C I6MEDH\>DCHG 6I<>C ID >=>=: G>CI: GH 6I: H 6C9 I=: ::: 8I D \* JH6: M 6C9 L >C9 9DLC 8DHH;DGL =>8= CD I6M7: C; ;\ L 6HG8D>CQ 9

' JG::: 8\>K I6M6I: ;DG 9>;: GH;6B I=: - + :::9: 6AH6I\IDN6I: D 9J: EGB 6GANIDI=: ::: 8I D I=: , " - + :::9: 6AE: 6B 6C CI 9>;: GC8: H I=: >B E68I D 8G9>H6C9 9: 9J 8\>DCH&K9: 9 7N 6I : 6>C>C<HDJ IH9: I=: - C I: 9 +I6I: HI=6I 6G >C9: ;>C I: ANG>K H: 9 6C9 I6M9 6I 6I: HAL: GI=6CI=: - + :::9: 6AH6I\IDN6I: 6C9 6 E: 6B 6C CI 9>;: GC8: DCI=: G 6AQ 9 <6>C DC DI G\* :I6>C 9 . DCI> G+=6GH9J: IDI=: I6M;G: IG 6IB: CI D DI G9>EDH\>DC D I=: H>6GHI=6I <= I=: :7I ;DG FJ>N M=6C<: I=6I L 6H8DB EAI: 9 DC "6CI 6CN , =: :7I ;DG FJ>N M=6C<: >C8A9: 9 6C: M=6C<: D 6AD DI G DCI> G 8DB B DC HD8@DL C: 9 6HD :8: B 7: G

' JG::: 8\>K I6M6I: ;DG 9>;: GH;6B I=: - + :::9: 6AH6I\IDN6I: D 9J: EGB 6GANIDI=: ::: 8I D I=: , " - + :::9: 6AE: 6B 6C CI 9>;: GC8: H I=: >B E68I D 8G9>H6C9 9: 9J 8\>DCH&K9: 9 7N 6I : 6>C>C<HDJ IH9: I=: - C I: 9 +I6I: HI=6I 6G >C9: ;>C I: ANG>K H: 9 6C9 I6M9 6I 6I: HAL: GI=6CI=: - + :::9: 6AH6I\IDN6I: D;HI 7N I6M8DHH6HD8>6I: 9 L >= GE 6IG 6I<>C 6 EDG DC D DI GEG K DI HNG>K H: 9 : 6>C>C<HDJ IH9: D I=: - C I: 9 +I6I: H 6C9 6 E: 6B 6C CI 9>;: GC8: DCI=: JCG 6AQ 9 <6>C DC DI G\* :I6>C 9 . DCI> G+=6GH9J: IDI=: I6M;G: IG 6IB: CI D DI G9>EDH\>DC D I=: H>6GHI=6I <= I=: :7I ;DG FJ>N M=6C<: I=6I L 6H8DB EAI: 9 DC "6CI 6CN , =: :7I ;DG FJ>N M=6C<: >C8A9: 9 6C: M=6C<: D 6AD DI G DCI> G 8DB B DC HD8@DL C: 9 6HD :8: B 7: G

/ : 8DC9J 8I 7J HC: HH<AD76AN 6C9 6HE6G D DI G<AD76A7J HC: HH L: ;>A CJB: 6I H>C8DB: I6MGI\GH>CI=: - + :::9: 6AH6I: 6C9 ;DG>C>T GH>8\>DCH ;I: GI=: , " DI G67>AN ID D7I6>C 6 I6M7: C; ;\ >C8: 6>C 8DI CI G: HI=6I 8DC\>C I: ID=6K AL: G H6I\IDN I6M6I: HI=6CI=: - C I: 9 +I6I: H>H9: E: C9: CI DC DI GAK AI D I6M7A >C8DB: >CH 8=: ;DG>C 8DI CI G: H / : 7: A K I=6I

6 8=6C<: >C I=: H6IJ IDN I6MGI: D, 6CN>C9>K9J 6A>DG>C 8DI C I N L D I A C I I N E=86AN=6K 6 B 6I: G6A :;; 8I DC D I G;>C6C8>6A  
H6I: B: C I H<K: C I=: <: D>GE=>8 9>E: G H C D, D I G I 6 M 7 A >C8DB:

/ : 6G G I L C: AN: M6B>C 9 7N K6GDI H9DB: H=8 6C9>C I: G6I>DC6A I6MC< 6I I=DI>H, =: 6B D I C I D, >C8DB: I6MHL: E6N>H  
H 7? 8I ID 6J 9>I 7N:: 9: G A H6I: 6C9>DG>C I6M6I I=DI>H L=>8= B 6N G H A>C E G E D H 9 6H I H B: C I H, =: D B E6CN>H  
H 7? 8I ID: M6B>C6I>DC>C I=: - C I: 9 +I6I: H K6GDI H H6I: H 6C9>DG>C I G I 9>8I>DCH; DGI=: I6MN 6G H ID, =: H  
: M6B>C6I>DCH>C8A9: ;>AC>HD, I6MG I J C H E G D G I D I G H E6G I>DC; G B 6C6=: G I6MG I J G H D, : C I: G E G H C D A C<: G C D I G  
E D G; D A D 6C9 I6MG I J G H; D G E G 68F J>H I>D C E: G D 9 H D, : C I: G E G H H699: 9 I D I G E D G; D A D +>C>;>86C I D 7 A>6I>DCH6G 9: I6>A9>C  
I=: I6MB 6I I: G H6<G: B: C I H>C 8 D C C: 8I>D C L>A I=: H E6G I>DC D, D I>K: ; G B 6C6=: G D C "J A N I=: H E A I D; D I=: +  
7J H C: H I D C' 8 I D 7: G 6C9 I=: . D C I>G H E6G I>DC D C' 8 I D 7: G / : G K>L D I G>A D 7 A I6 M E D H I>DCH D C 6 F J 6G: G N  
76H H 6H9 D C I=: H G K>L H I=: G H A H D, 9>H J H H DCH6C9 G H A I>DCH D, B 6I I: G H L>A I=: 8: G6>C I6M6I I=DI>H I6M G A C>H6C9  
8 D I G 9: 8>H DCH 6C9 I=: : M E G I>DC D, H6I J I: H D, A B>A I6>DCH G H C K H; D C 8 D C I>C<: C I I6M A67>A I>H6G 688G: 9 D G69>I H: 9 6H  
C 8: H6CN

/ : B 69: >C8DB: I6ME6NB: C I H G A I: 9 I D 8 D C I>C I>C< D E: G I>DCH D, B>A D C B>A D C 6C9 B>A D C 9 J G C< I=: N 6G H  
: C9: 9 :8: B 7: G :8: B 7: G 6C9 :8: B 7: G G H E: 8I>K A N

' C J>J H I=: - + : C68I: 9 I=: !C>A I>DC\*: 9J 8I>DC 8I D L=>8= 6B D C< D I=: G E G K>H DCH>B E A B: C I H6  
8 D E D G I: 6A G6I>K B>C B J B I6M D C 7 D D>C8DB: D C 8 D E D G I>DCH L=>D H 6K G<: 6 C C I 6 A69>I H: 9 ;>C6C8>6A H6I: B: C I>C8DB:  
9 J G C< I=: B D H G 6C: C I A N 8 D B E A I: 9 I=G: N 6GE: G D 9: M8: 9 H 7>A D C, =>H E G K>H D C>H: ;;; 8I>K: ; D G I6M N 6G H 7: <C C C<  
6; I: G :8: B 7: G 6H9 J E D C I J G6C A N H H D, I=: !C>A I>DC\*: 9J 8I>DC 8I D 6C9 H 7 H F J: C I A N G A 6 H 9 <J>96C8:  
L: 9 D C I 7: A K I=: 8 D E D G I: 6A G6I>K B>C B J B I6M L>A I=6K 6 B 6I: G6A B E68I D C D I G;>C6C8>6A H6I: B: C I H

78 I D 76 ) 3 J H E 7 E 3 @ ! ; 34 ;>E 7 E

A A9:;; G9 I6M6H I H6C9 A67>A I>H=6K 7:; C 8 A H I>9 6 H C D C 8 J G C I 6C9 6G>C8A9: 9>C' I=: G6H I H6C9' I=: G A C< I: G B  
A67>A I>H>C I=: D C H A 96I: 9 6 A C8: +>:: I H :;; G9>C8DB: I6M6H I H6C9 A67>A I>H; G B 8 D C I>C I>C< D E: G I>DCH 6 H D,  
:8: B 7: G L: G 6H; D A I L H>C B>A D C H

::: G9, 6M H I H		
' E: G I>C< A6H A67>A I>H		
!C K C I D G: H		
( : C H D C 7: C :>H		
+I D 8@76H9 8 D B E: C H I>DC: M E: C H		
6E I6A Q 9: M E: C H H		
, 6M8G9>I 6C9 A H 86C N D L 6C9 H		
88C I 6A I E G E6NB: C I H 6C9 D I=: G		
. 6A I6I>DC 6A I L 6C8: H		
, D I6A9:;; G9 I6M6H I H		
::: G9, 6M \$>67>A I>H		
( G E: G N E A C I 6C9: F J>E B: C I		
' E: G I>C< A6H G< I D, J H 6H I H		
!C H G C8: >C8A9>C>H A>C H G C8:		
D D 9 L>A D I=: G C I6C<7 A H 6C9 D I=: G		
, D I6A9:;; G9 I6M A67>A I>H		
&: I 9:;; G9 I6M A67>A I N		

!C 688 D 96C8: L>A= ( 9:;; G9 I6M6H I H6C9 A67>A I>H6G 9: I: G B>C 9 76H9 D C I=: 9>; G C8: 7: I L:: C I=: ;>C6C8>6A  
H6I: B: C I 6C9 I6M7 6 H H D, 6H I H6C9 A67>A I>H J H C<: C68I: 9 G I: H: M E: 8I: 9 I D 7: >C: ;;; 8I 9 J G C< I=: N 6G C L=>8= I=:  
9>; G C8: H G K G H :;; G9 I6M6H I H<: C G A N G E G H C I>A B H I=6I 86C7: J H 9 6H6 I6M9: 9J 8I>D C D G8G9>I>C D I G I6M G I J G  
>C; J I J G N 6G H; D G L=>8= I=: I6M7: C: >A=6H6 A G69N7:: C G; A8I: 9>C D I G D C H A 96I: 9 +I6I: B: C I H D, 6G C C>H :;; G9 I6M  
A67>A I>H<: C G A N G E G H C I>A B H I=6I=6K 6 A G69N7:: C I6@C 6H6 9: 9J 8I>D C D C D I G I6M G I J G 7 J I=6K C I N I 7:: C  
G 8 D>C Q 9 6H6C: M E: C H>C D I G D C H A 96I: 9 +I6I: B: C I H D, 6G C C>H, =: ;;; 8I D C 9:;; G9 I6M6H I H6C9 A67>A I>H9J: I D 6  
8=6C<: >C I6M G I: H H G 8 D>C Q 9>C>C8DB: I6M M E: C H>C I=: E: G D 9 I=6I>C8A9: H I=: : C68I B: C I 96I:

' JG9:: G9 I6M6HHI6G G9J8: 9 7N6 K6A6LDC6ADL6C8: > 76H9 DCI=: L: <=I D 6K6A7A :K9: C8: > HB DG A@ANI=6C  
CDI 6A@A=DD9 D B DG I=6C E G: CI I=6I HDB: EDGDCDG6AD I=: 9:: G9 I6M6HHIHL>ACDI 7: G6AO9 / : : K6A6L  
I=: G6AO67>AND 9:: G9 >C8DB: I6M6HHIH:DG: 68=D I=: 7 GH>8LDC>CL=>8=L: DE: G: !; L: : ME: G: C8: 8JBJA6L  
EGI6M6C8DB: >C6 E6G8J AG7 GH>8LDC>CI=: I=G: N 6GE: GD9 >C8A9>< I=: 8J GCI 6C9 EGDGIL DN 6CH L: CDB 6AN  
8DC8A9: I=6I I=: 9:: G9 >C8DB: I6M6HHIHL>AB DG A@ANI=6C CDI 7: G6AO67A 6C9 CDK6A6LDC6ADL6C8: >HG8D<CQ 9  
JCAHI@DL CDGEACC: 9 DE: G: <9: K AEB: CIHL DJ A A69 B 6C<: B: CI ID8DC8A9: DI=: G: H DL: K G> L: : ME: G: C8:  
8JBJA6L: EGI6MAHHH>C6 E6G8J AG7 GH>8LDC>CI=: I=G: N 6GE: GD9 >C8A9>< I=: 8J GCI 6C9 EGDGIL DN 6CH L: I=: C  
8DCH9: G6 H G: HD; >8IDCH>CI=: 9: I: G>C6LDCD L=: I=: G=: 9:: G9 >C8DB: I6M6HHIH86C7: G6AO9 , =: H ;>8IDCH>C8A9:  
=>HDG86ADE: G: < G H AH @DL CDGEACC: 9 DE: G: <9: K AEB: CIH I=: E: GD9 D I B: DK GL=>8= 8: G6CI: B EDG6N  
9>; G C8: HL>AGK G H 8DCH9: G: LDCD I=: J LA6LDCD 8: G6C9:: G9 >C8DB: I6MA67>A: H I6MA6L 86GN768@86E67>AN>  
I=: E6G8J AG8DI C6N 6C9 ED9: CI 6C9 ; 6H7A I6MEACC< H G: < H : I: G K6A6LDCD I=: H ;>8IDCH> I=: 9:: G9 >C8DB:  
I6M6HHIH6G : ME: 8I: 9 ID7: G6AO9 L>=>CI=: I6M86GN DL 6C9 E: GD9 6ADL: 9 ; DGI=6I HE: 8>8 8DI C6N L: L DI A 8DC8A9:  
I=6I CDK6A6LDC6ADL6C8: L DI A 7: GFJ>G9 , DI=: : ME: CI I=6I I=: 9:: G9 >C8DB: I6M6HHIH: M8: : 9 I=: 6B DI CI I=6I >H  
: ME: 8I: 9 ID7: G6AO9 L>=>CI=: I6M86GN DL 6C9 E: GD9 ; DG6 E6G8J AG7 GH>8LDC L: : H67AH: 6 K6A6LDC6ADL6C8:

EEAN< I=: 67DK B: I=D9DAD>N K6A6LDC6ADL6C8: H=6K 7:: C: H67AH: 9 ; DG8: G6C9:: G9 >C8DB: I6M6HHIHDI=:  
: ME: CI I=: N6G CDI: ME: 8I: 9 ID7: G6AO9 L>=>CI=: E6G8J AGI6M86GN DL 6C9 E: GD9

::: G9 I6MH6HD8>6I: 9 L>= - + : CI> H; G8 8DCI>CI>< DE: G: LDC8DCHH D C I 9:: G9 I6MA67>A: HD 6EEGMB 6I: AN  
B>ADC6C9 B>ADC>C8AHK: D K6A6LDC6ADL6C8: HD B>ADC6C9 B>ADC6HD : 8: B7: G 6C9  
: 8: B7: G GHE: 8L>K AN ::: G9 I6MH6HD8>6I: 9 L>= CDC - + : CI> H; G8 8DCI>CI>< DE: G: LDC8DCHH D C I  
9:: G9 I6MA67>A: HD B>ADC6C9 B>ADC>C8AHK: D K6A6LDC6ADL6C8: HD B>ADC6C9 B>ADC6HD  
: 8: B7: G 6C9 : 8: B7: G GHE: 8L>K AN ' JGK6A6LDC6ADL6C8: >C8G6H9 7N B>ADC6C9 7N B>ADC  
9JG< I=: N 6GH: C9: 9 : 8: B7: G 6C9 : 8: B7: G GHE: 8L>K AN 9J: EGB6GANID; DG>C C I DE: G: < A>HH  
>C7DI= N 6GH6C9 68FJ>G9 9DB: H: 8 I6M6IIG7JI: H>C

HD : 8: B7: G DJG- + 6C9 CDC- + C I DE: G: < A>HH86GN DL 6C9HIDI6A9 7>ADC D L=>8= B>ADC>H  
GAI: 9 ID:: 9: GAC I DE: G: < A>HH86GN DL 6C9H B>ADC>HGAI: 9 IDH6I: C I DE: G: < A>HH86GN DL 6C9H 6C9  
B>ADC>HGAI: 9 IDCDC- + C I DE: G: < A>HH86GN DL 6C9H !C8A9: 9 >C9:: G9 I6M6HHIH6HD : 8: B7: G 6G I6M  
7: C: >H; DG- + 6C9 CDC- + C I DE: G: < A>HH86GN DL 6C9HIDI6AC< B>ADC 7: ; DG 6EEA867A K6A6LDC6ADL6C8: HD  
B>ADC : G6CD I=: H A>HH86C7: 86G: 9 ; DL 6C9 >C9:: >CI: AN6C9 DI=: GH86C7: 86G: 9 ; DL 6C9 IDK6GDI H96I: H; G8  
I=GI <= \* : 8D>C>LDCD HDB: D I=: H A>HH86GN DL 6C9H>HH7? 8I ID6C6CCI 6AAB> L=>8= B6N86JH I=: B ID  
: ME: G 7: ; DG I=: N6G JH9

HD : 8: B7: G DJG- + 6C9 CDC- + I6M8G9>I 86GN DL 6C9HIDI6A9 B>ADC L=>8= >HEGB 6GANGAI: 9 ID- +  
I6M8G9>I 86GN DL 6C9H : G6CD I=: H 8G9>H86C7: 86G: 9 ; DL 6C9 >C9:: >CI: AN6C9 DI=: G86C7: 86G: 9 ; DL 6C9 IDK6GDI H  
96I: H; G8 I=GI <= HD : 8: B7: G L: B 6>C6C6 B>ADC K6A6LDC6ADL6C8: GAI: 9 ID8: G6C I6M  
8G9>I 86GN DL 6C9H

\* @75A9@L76 ) 3J 7@8HE

/ : G8D<CQ I6M7: C: >H; G8 J C8: G6CI6MEDH>DCHDCAN> >C DI G6HHB: CI > HB DG A@ANI=6C CDI I=6I I=: I6MEDH>DC  
L>A7: H H6C: 9 DC: M6>C6LDC7NI=: I6MC< 6I I=DGI> H 76H9 DCI=: I: 8=C86AB: G: HD I=: EDH>DC , =: I6M7: C: >H  
G8D<CQ 9 >CI=: >C6C8>6AH6I: B: CIH; G8 H 8= EDH>DCH6G B: 6H G9 76H9 DCI=: AG: H 7: C: >I I=6I =6H <G6I: GI=6C  
A@A=DD9 D 7: >C G6AO9 JEDCJ A B 6I: H IAB: CI "J9>B: CI >HGFI>G9 >C: K6A6LDC< I6MEDH>DCH6C9 9: I: G>C<> >C8DB:  
I6MEGKHDC/ : G : K6A6L I=: I: 8=C86AB: G: HD DI GI6MEDH>DCH6C9 B 6NG8D<CQ 6CJ C8: G6CI6M7: C: >I >C8: G6C>  
8: G6C8>GJ B H6C8: H >C8A9>< L=: C > 6 I6M6J9>I >H8DB EAI: 9 >> 6EEA867A I6MA6LH8=6C< >C8A9>< 6 I6M86H GAC<  
DGA<H6L>K <J>6C8: DG >>> I=: 6EEA867A H6JI: D AB >6LDC: ME>GH/ : G8D<CQ EDI: CI>6A68G: 9 >CI: GH 6C9  
E: C6A> H6HD8>6I: 9 L>= JCG8D<CQ 9 I6MEDH>DCH>C>C8DB: I6M: ME: CH

HD : 8: B7: G <GHIJ CG8D<CQ 9 I6M7: C: >H; DG8DCI>CI>< 6C9 9>HDCI>CI> 9 DE: G: LDCI: G B>ADC  
B>ADCIDI6A>C8A9>< B>ADC6HD8>6I: 9 L>= >CI: GH 6C9 E: C6A> H 6C9 C I D I=: >B68I D B>ADC D >C>G8I I6M  
7: C: >H HD : 8: B7: G <GHIJ CG8D<CQ 9 I6M7: C: >H; DG8DCI>CI>< 6C9 9>HDCI>CI> 9 DE: G: LDCI: G  
B>ADC B>ADCIDI6A>C8A9>< B>ADC6HD8>6I: 9 L>= >CI: GH 6C9 E: C6A> H 6C9 C I D I=: >B68I D B>ADC D  
>C>G8I I6M7: C: >H / : G8D<CQ 9 6EEGMB 6I: AN B>ADC B>ADC6C9 B>ADC>EDI: CI>6A>CI: GH 6C9 E: C6A> H  
6HD8>6I: 9 L>= J C8: G6CI6MEDH>DCH9JG< 6C9 GHE: 8L>K AN , DI=: : ME: CI I6MH6G CDI 6HHI9 L>=  
GHE: 8I IDJ C8: G6CI6MEDH>DCH H 7H6CI>6AN6A6B DI CH688G: 9 >C8A9>< >CI: GH 6C9 E: C6A> H6C9 C I D >C>G8I D; H IH  
L>A7: G9J8: 9 6C9 G; A8I: 9 6H6 G9J8LDCD I=: DK GAC8DB: I6MEGKHDC - CG8D<CQ 9 I6M7: C: >H6C9 6HD8>6I: 9  
688G: 9 >CI: GH 6C9 E: C6A> H6G >C8A9: 9 >CI G>C8DB: I6MEGKHDC

, =: DBE6CN>HH7? 8I ID: M6B>C6I>DC>CI=: - C<: 9 +I6I: H K6GDI HH6I: H 6C9 ;DG>C>T GH>8I>DCH;DGI=: I6MN 6GH ID  
, =: H : M6B>C6I>DCH>C8A9: ;>AC>HD, I6MGUJ GHEGDGIDDI GH E6G6I>DC;GB 6C6=: G I6MGUJ GHD; : CI: GEGH HCD  
AC<: G<C DI GEDG;DAD 6C9 I6MGUJ GH;DGE 68FJ>H>DC E: GD>HD; : CI: GEGH H699: 9 IDDI GEDG;DAD +>C>;86CI D7A>6I>DCH  
6G 9: I6A9>C I=: I6MB 6II: GH6<G: B: CH>C8DCC 8I>DCL>=>I=: HE6G6I>DCD, DGI>K;GB 6C6=: GDC"JAN I=: HEAI  
D; D I=: +7JHC: HHC' 8ID7: G 6C9 I=: . DCI>GHE6G6I>DCDC' 8ID7: G +DB: : M6B>C6I>DCHB 6N8DC8A9:  
>CI=: C M IL: AK: B DCI=H6C9 I=: JCG8D>CQ 9 I6M7: C ;>HGH8D9: 9>CGA6I>DCIDI=: 6J9>HB 6N9>;: G;GB 68U 6AH IAB: CI  
6B DI CIH !I>HDI EG68I>86AID: H>B 6I: I=: :;; 8I > 6CN D, 6CN 6B DI CI D, H 8= 8=6C<: 9JGC< I=: C M IL: AK: B DCI=HID  
EG KDI HNG8D9: 9 J C8: G6>C I6MEDHI>DCH>C8DCC 8I>DCL>=>I=: 6J9>H, =: DBE6CN9D HCDI 6CI>8E6I: I=6I I=: G L>A7: 6  
B 6I: G6AC8G6H DG9: 8G6H>C I=: IDI6A6B DI CI D, JCG8D>CQ 9 I6M7: C ;>H>CI=: C M IL: AK: B DCI=H

G8DC8A6I>DCD, I=: 7: <CCC> 6C9 : C9>C 6B DI CI D, JCG8D>CQ 9 I6M7: C ;>H: M8A9>C 6B DI CIH688G: 9 ;DGEI: CI>6A  
>CI: GH 6C9 E: C6A>H>H6H;DAIL H >C B>ADCH

- CG8D<CQ 9 I6M7: C ;>H 7: <CCC> D, N 6G			
99>X>DCH76H9 DC I6MEDHI>DCHG AI: 9 IDI=: 8J GCI N 6G			
99>X>DCH;DGI6MEDHI>DCHD, EGDGN 6GH			
*: 9J 8I>DCH;DGI6MEDHI>DCHD, EGDGN 6GH			
\$6EH D, H6U I: D, AB>I6I>DCH			
+: IAB: CH		V	
::: 8I D ;DG>C8J GGC8NIGCH6I>DC			
+: E6G6I>DCG AI: 9 69>J HB: CH <sup>6</sup>		V	V
- CG8D<CQ 9 I6M7: C ;>H: C9 D, N 6G			
<sup>6</sup> - CG8D<CQ 9 I6M7: C ;>J GH>K H9: 8G6H9>C		7N	B>ADCJEDCHE6G6I>DC;GB . DCI>G<C 688D96C8: L>=>I=:
<G: B: CH			

' 7B3H,3EA@3G \* @I? ;H76 3D@>E

, =: , " : AB>C6I: 9 I=: - + I6M8DH;DGFJ 6A>9 GE6IG6I>DC7: <CCC>>C 7JI;DG>C8JBJ AI>K : 6CC>HGB 6C  
H7? 8I ID;DG>CGB>I6C8: I6MH HD : 8: B7: G L: G8D9: 9 : H>B 6I: 9>C8GB: CI6A;DG>CGB>I6C8: I6MHD,  
B>ADCDCI=: EACC: 9 GE6IG6I>DCD, B>ADC D, EG KDI HNJ CGB>I: 9: 6CC>H;GB 6C9 EGDGE: GD>H  
, =: , " >BEDH9 6;>C6A + I6MDC8JBJ AI>K : 6CC>H;GB DI G;DG>CDE: G6I>DCHI=6I L: =6K EG KDI HNB 69: 6C  
6HI G6I>DCG<6C9>C I=: 6B DI CI D, H 8=: 6CC>H>CI: C9: 9 ;DG>C9: ;>CI: G>CK HB: CI HD : 8: B7: G I=: : 6CC>H  
L: EACIDG>CK H>C9: ;>CI: ANDI H9: D I=: - C<: 9 +I6I: H;DGL=>8=: DG>C9: ;: G9 I6MH=6K CI 7: : CEGK9: 9 L 6H  
>H>B 6I: 9 6I 7>ADC &DEGKH>DCH;DG;DG>CGB>I6C8: I6MH=6K 7: : CB 69: L>=>GHE: 8I ID: 6CC>HI=6I 6G EACC: 9 ID  
7: G>CK H: 9>C9: ;>CI: AN, =: 6B DI CI D; DG>CGB>I6C8: I6MHI=6I B 6N7: 6EEA867A IDH 8=: 6CC>H>HCDI G69>AN  
9: I: GB>C67A <K C A86A6L GHG8I>DCHI=6I B 6N6EEANID6 EDG6DCD, H 8=: 6CC>H J C@DL C 8=6C<: H>C;DG>C I6MA6L I=6I  
B 6ND88J G9JGC< I=: 6EEA867A GHG8I>DCE: GD9H86J H 9 7N6EEA867A A86A8DGED6I: 6L ;DG86H: GE6IG6I>DC 6C9 I=:  
K6GDI HI6MEACC< 6A: G6I>K HL: 8DI A : B EAN> L: GE6IG6I: 9 I=: H : 6CC>H



# \$ ) ' ( ) ' \* ) \* ' # # \$ ) ' ' ! ) ' (

, =: C6IJ G D, DI GB 6I: G6AG HG 8IJ GC< 6C9 G AI: 9 68IKI> H C I AI: 9 >C 6C9 L: G 7GD9 AN 8DCHH: CI I=CI <=DI I DI G  
H<B: CH 6C9 ;D8J H 9 DC>B ECK B: CH C DE: GI DC 6A: ;;>8> C8NI=CI <= I6G: I: 9 L DG@DG: G9J 8IDCH 6C9 ;68>AIN  
8DCHDA96IDCH 6C9 8AH GH / : >C8J G 9 I=: H 8DHHIDEH I DC DI GH AK: HIDECK 9: H E: GDGECDJ 8IH 6C9 H CK 8: HIDDJ G  
8J HDB: CH C 6 8DH : ;;>8> CI B 6CC: GL =A I6@C< >CID 8DCH9: GI DC I=: >B E68I D I=: H E6GI DC D, . DI> G6C9 I=: 7GD9  
: 8DCDB >8 J C8: CI C I> H >C8A9>C< I=DH 8G 6I: 9 7NI=: ' . ! E6C9: B>8 AEAKC: 9 GHG 8IJ GC< 68IKI> H C I AI: 9 >CI=:  
6C9 EAKH=6K 7:: C8DB EAI: 9 7N :8: B 7: G / : 9>9 CI >C I AI: 6I: G6AG HG 8IJ GC< 68IKI> H C

\*: HG 8IJ GC< 6C9 DI=: GG AI: 9 8=6G: H; DGI=: N 6CH: C9: 9 :8: B 7: G L: G 6H; DAHL H >CB>ADCH

BEAN: HK GC8: G AI: 9		
68>AIN: MI 6C9 DI=: GG AI: 9		
, DI6AG HG 8IJ GC< 6C9 DI=: GG AI: 9 8=6G: H		

\*: HG 8IJ GC< 6C9 DI=: GG AI: 9 8=6G: HG 8D9: 9 ;DGI=: N 6CH: C9: 9 :8: B 7: G 7NH<B: CI L: G 6H; DAHL H >CB>ADCH

!CI: AK< CI' E: GIC< +DAIDCH		
( G8>HDC, :8=CDAD> H		
9K6C8: 9 :6A=86G +DAIDCH		
, DI6A		

, =: I67A 7: AL H B B 6G HI=: 688CI 6A76AKC8: 6C9 JI>A6IDC 7NINE: D, GHG 8IJ GC< 8DH 6HDB 6I: 9 L I= DI G  
GHG 8IJ GC< 68IDCH >CB>ADCH

	3>3 3EAS 3>3 3EAS 3>3 3EAS	AHE 6GDI76	%3:6 ( 7HE76	3>3 3EAS 757? 47D	%3:6 ( 7HE76	3>3 3EAS 757? 47D
BEAN: HK GC8: 6C9 G AI: 9						V
68>AIN: MI 6C9 DI=: GG AI: 9						V
, DI6A						V

, =: GHG 8IJ GC< 6C9 DI=: GG AI: 9 8=6G: H C8J G 9 J GC< 6C9 L: G H 7H6CI 6AN 6A86H 8=6G: H, =: H 8=6G: H  
6G G; A8I: 9 >CI=: ;DAHL >C< 86EIDCH CI=: DCHDA96I: 9 +I6I: B: CHD, 6G C<H >CB>ADCH

DH D, HAH		
+: AK< <: C: GA 6C9 69B>CHG I K: ME: CH H		
, DI6A		

# \$ ) ! ) ) \$ # # \$ # ) # # (

/ : 6G ;GB I B: ID I B: H 7? 8I ID 6 K6G IND, AI>6IDC 6C9 DI=: GECD8: :9>C<H C8>9: CI 6AIDDJ G7J HC: HI >C8A9>C< AI L H>H  
>CKDK< 8AK B H; DG9 6B 6<: H6GHC< DI I D I=: J H D, DI GECDJ 8IH HD, IL 6G 6C9 H CK 8: H 8AK B HG AI DC< ID>CI: AA 8IJ 6A  
ECEE: CNB 6II: GH: BEANB: CI B 6II: GH 8DB B: G>6A9>HEI I: H 6C9 E: GDC6A C J CN 6HL: AA 6HG<J AI DGN>CK: H>6IDCH DG  
: C; D8: B: CI / : B 6N 6AD7: 8DB: H 7? 8I ID AI L H>H 6H6 GH A D, E6H DG; JIJ G 68FJ>H I DCH DG 6H6 GH A D, A67>AI> H  
GI 6C 9 ;GB DGGEGH CI 6IDCH L 6G CI> H DG C9: B CI> HECK 9: 9 >C 8DCC 8IDCL I= 9>K H: 9 7J HC: HH H +DB: D I=: H  
AI L H>H B 6N>C8A9: 8AK B H; DGEI C I K: 6C9 8DCH FJ: CI 6A 6HL: AA 6H 8DB E: CH 6IDGN 9 6B 6<: H 6H 9 J EDC DI G: ME: G: C8:  
8J G CI> C; DGB 6IDC 6C9 6EEA 867A AI L: 9 DCDI 7: AK I=6I I=: H ECD8: :9>C<H 6C9 8AK B HL>AA=6K 6 B 6I: G6A 69K GH : ;;>8I  
DC DI G; >C8>6AEDH I DC GH AHD, DE: GI DCH DG 86H> ;AI L H

/ =>A L: B 6CI 6C L DG@ GH 8DB E: CH 6IDC ECEE: CN 86GD 6J IDB D7>A 8GB: ;>9J 8>6CN ECDJ 8I <: C: GA 6C9 9>G 8IDCH 6C9  
D; ;>8: GYA 67>AIN>CH GC8: 6C9 =6K 68FJ>G 9 G<=IHJ C9: GH B>AGEDA 8>H C 8DCC 8IDCL I= 8: CI 6C 68FJ>H I DCH I=6I 8DK G6  
EDG DC D I=: H 8AK B H I=H>CH GC8: B 6N 7: >CH ;;>8> CI DGJ C6K 6A 7A ID 8DK GH 8= ADH H !C 699>DC L=>A L: 7: AK L:  
6G : CIA 9 ID>C9: B C>86IDC; GB I=>C9 E6G> H; DGHDB: D I=: H 8AK B H I=: H G<=IHB 6N 6AD7: >CH ;;>8> CI DGJ C6K 6A 7A ID  
8DK GH 8= ADH H / : B 6CI 6C I=>C9 E6GN>CH GC8: EDA 8> HJ E ID 8: CI 6C AB>HID 8DK G8: CI 6C A67>AIN 8DHH C: M8: HHD,



EG9: I: B>C: 9 G16C: 9 6B DICH DGB DH>CH G9 GHHL: EJG=6H DIH9: >CH G8: 8DK G<: DCAN; DGH K G AHH H HDE  
ADH>CH G8: 6C9 GHCK HB JH 7: : H67AH: 9 6C9 B 6C16C: 9 L>= GHE: 8I ID6B DICH L>=C I=: HA >CH G9 GI: C>DC

!C688D9 6C8: L>= 688DICH<<J>96C8: L: G8D9 6 A67>AIN>C DICH DCH A96I: 9 ;>C6C8>6AH6I: B: CH; DGADH8DCH<: C8> H  
L=: C6 ADH>H>C DICH DCH9: G9 E0767A 6C9 I=: 6B DICH 86C7: G6HDC67AN: H>B 6I: 9 !; I=: G6HDC67A: H>B 6I: D, 6  
C DICH DCH9 67A ADH>H6 G<: 6C9 CD6B DICH L>=C I=: G<: >H67: II: G: H>B 6I: I=6C6CNDI=: GI=: B>CB JB 6B DICH D,  
I=: G<: >H68G: 9 !; 6 ADH9D HCDI B:: I I=: C DICH DCH9 67A AK A7JI >HG6HDC67AN EDH7A 6C9 6 ADHDCG<: D, ADH  
86C7: G6HDC67AN: H>B 6I: 9 I=: : H>B 6I: 9 ADHDCG<: D, ADH>H9>H>AH 9 , =: H GHCK H8DCHH D, HE 8>; 8 GHCK H; DG  
>C9>K9J 6A8A>B H6C9 699>DCH6A6B DICH; DG6C1>8E6I: 9 9: K AEB: CHD, I=: H 8A>B H6HL: A6H; DG>C8J G9 7JI C DICH N I  
GEDG: 9 8A>B H, =: HE 8>; 8 GHCK H; DG>C9>K9J 6A C DICH 8A>B H6G FJ 6C1>; 9 L>= I=: 6HH6C8: D, A<6A8DICH A6C9  
DIH9: GH>CH G8: E07: HHD6AHL=: G 6EEDEG6I: !C699>DCH DIH9: GH>CH G8: E07: HHD6AHL 6N6HHI>C I=:  
9: I: B>C1>DCD, GHCK H; DG>C8J G9 7JI C DICH N I GEDG: 9 8A>B HI=C DICH<=: K6A6I>DCD, DICH GHE 8>; 8 ADH>HDCN 68IJ 6A8A>B H  
GEDG: 9 6C9 >C9J HONIG C9H6B DC<H6I>H86A6C9 DI=: G, 68IDGH \*: HCK : H>B 6I: H6G 697H: 9 6H699>DCH6A>C; DCH 6I>DC  
G<6C9>C< 6 8A>B 7: 8DB: H C DICH / =>A L: 68I>K ANEJGH: ;>C6C8>6AG8DK G: H; GEB >CH G8: E0K9: GH L: 9DCI  
G8D>CQ 6CNG8DK G: HJ C I>AG6A9 6C9 C I>AH 8= I>B: 6H6 H H6C: 9 E6I: C DICH, 8DA8I>DCHH: H67AH: 9 G A6I: 9 ID=>HDC86A  
B 6I: CHD, 6 HB>AGC6IJ G 6C9 B 6C I>9: !; GH>CH G8: GHCK HL: =6K : H67AH: 9 6G >C9: FJ 6I: L: L DICH 7: GF>G9  
ID>C8J G6C: ME: CH : FJ 6AIDI=: 6B DICH D, I=: ADH>C8J G9 >C: M8: HD, I=: GHCK HL=>8= L DICH 69K CHAN6;; 8I DICH I  
: 6C<C>H \*: ; GID>DI: ; DG>C; DCH 6I>DC 67DICH I=: 6B DICH D, DICH 688G 6A; DGH A>CH G8: 6C9 AI>6I>DC A67>AIN

!C699>DCH DICH GDE: G I>DCH E09J 8IH 6C9 HCK8: H6G H 7?: 8I ID: CK GCB: C I6A6L H6C9 G<J A I>DCH>C K6GDI H7I GH9>8I>DCH  
L=>8= >BEDH AB>6I>DCHDC I=: 9>H>6G: D, ED A I6C I>C I=: : CK GCB: C I6C9 : H67AH: H6C9 6C9H; DGI=: <: C G I>DC JH  
IG6I>B: C I HDG<: 6C9 9>HEDH A D, =6069DI H6C9 CDC =6069DI HL 6H: H CJB 7: GD, DICH GDE: G I>DCH>CKDAK I=: =6C9AC<  
B 6C1>; 68IJ G< JH DGH6A D, H7H6C8: HI=6I 6G DCH DICH 7: 8A>H>; 9 6H=6069DI HB 6I: G6AHL>=C I=: B: 6C<C< D, 6EEA867A  
A6LH / : B JH 6AD8DB EANL>= K6GDI H: 6A= 6C9 H>; ING<J A I>DCH>C 7DI I=: - C I: 9 +I6I: H6C9 67DCH9 >C8DCC: 8I>DCH L>=  
DICH GDE: G I>DCH DB EA6C8: L>= I=: H A6L H6C9 G<J A I>DCH=6HCDI =69 6C9 76H9 DC 8I G C I>C; DCH 6I>DC 6C9 I=: 6EEA867A  
A6L H6C9 G<J A I>DCH 8I G C I>AN>C: ;;; 8I >HCDI: ME: 8I: 9 ID=6K 6 B 6I: G6A: ;;; 8I DICH G86E A6A: ME: C9>J GH: 6C<C>H DG  
8DB E: I>K EDH I>DC 6C9 L: 9DCI 6C1>8E6I: B 6I: G6A86E A6A: ME: C9>J GH; DG: CK GCB: C I6A8DICH A6A; 68A>H

!C699>DCH ID: CK GCB: C I6A8DB EA6C8: 8DHH; GEB I>B: ID I>B: L: >C8J G8DHHG A6I: 9 ID6A<: 9 96B 6<: H6H8>6I: 9 L>=  
E6H DG8J G C I 6H: 9>HEDH AEG8I>8: HDGDI=: G=6069DI HB 6I: G6AHL=6C9AC< EG8I>8: H DG: M B EA <: C G I>DCH D, =6069DI H  
H7H6C8: H; DICH >C9>HEDH A H: H6I L=>8= : CK GCB: C I6AEDICH AB H6G 6A<: 9 ID: MH 6HL: A6HI=: 8J G C I 6C9 ; DCH: G  
DL C: CHD, I=DI H: H6C9 8: G6C DI=: G8A6H HD, E G DCH 6G H 7?: 8I ID8A>B H7DICH<=I 7NH6I: 6C9 ; 9: GAG<J A I>DCH 6<: C8> H  
EJGH 6C I DICH 6I>DCH 6I=DI N / : =6K G8: >K 9 C I>; 86I>DC; GEB I=: - C I: 9 +I6I: H CK GCB: C I6A C I: 8I>DC <: C8N 6C9  
>GEB H6I: 6C9 CDC - + : CK GCB: C I6A6<: C8> H I=6I 8DCH>DCH 6I 8: G6C H: HL=: G L: 6C9 DI=: GHEG K DICH H9>HEDH 9 D  
=6069DI HL 6H: H6C9 DG6G DGL: G EDE: GNDL C GHG FJ>G 8A6C JE 6C9 DI=: GEDH7A GB: 9>6A8I>DC >C8A9>C> HE: HL=: G  
L: =6K 7:: C>9: C>; 9 6H6 EDI: C I6ANG HEDCH7A E6GNIJ C9: G- C I: 9 +I6I: H: 9: G A6C9 H6I: : CK GCB: C I6A6LH / : =6K  
E07: 8I HJ C9: G L 6N6I 6 C I B 7: GD, 8J G C I 6C9 ; DCH: G, 68A>H: H>C 7DI I=: - C I: 9 +I6I: H6C9 67DCH9 ID>CK H>6I: 6C9  
GB: 9>6I: : CK GCB: C I6A8DICH 6B>C6I>DC GH A>C< ; GEB E6H DE: G I>DCH \*: B: 9>6I>DC 68I>K I>H<: C G A6A A6I: IDH A6C9 DG  
<DICH 9L 6I: G8DICH 6B>C6I>DC 6C9 B 6N>C8A9: EG GB: 9>6A8I>K I>H 8= 6H; 68I ;>C9>C< 6C9 >CK H>6I>DC GH>6H HB: C I  
; 6H7>AIN HJ 9N6C9 DCH: H>C 6HL: A6HGB: 9>6I>DC 68I>DCH 8= 6H8DICH 6B>C6I G B DK6A B DC I>DC< 6C9 DG>CH6A I>DC  
DE: G I>DC 6C9 B 6C I: C6C8: D, A>C<: GI: G GB: 9>6I>DC H: B H GEB I>B: ID I>B: L: 6G 6ADE6CNI DE: GDC6A C I>NDGDI=: G  
8A>B H7DICH<=I 7NEG6I: E6C>H6A<C>>C I>GN9J: IDI=: EGH C8: D, DG: MEDH G ID =6069DI HH 7H6C8: H

/ : =6K G8D9: 9 6 E0KSHDC; DG: CK GCB: C I6A>CK H>6I>DC 6C9 GB: 9>6I>DC 6C9 : CK GCB: C I6AG A6I: 9 8A>B HL>= GHE: 8I ID  
HI: HL: 6C9 DICH H7H9>6G: HDL C 9 DG; DCH: GNDL C 9 6C9 I=>9 E6GNIH: HL=: G L: =6K 7:: C9: I: B>C: 9 ID7: 6 EDI: C I6AN  
GHEDCH7A E6GNI / : <: C G A6NB 6@ 6C6H HB: C I D, I=: 8DHH>CKDAK 9; DGD I>GB: 9>6I>DC: ; DGH76H 9 DC: CK GCB: C I6A  
HJ 9>H 6HL: A6HDI GEGDG: ME: G: C8: L>= HB>AGHE: H, =: J A B 6I: 8DH D, HI: 8A6C I E H9>; >J A I>DEG 9>8I <K C I=:  
J C8: G6C I> HD, DICH GCKDAK B: C I>C8: G6C H: H J C8: G6C I> HG<6C9>C< I=: : M: C I D, I=: GFJ>G9 8A6C I E I=: 6K6>A7>AIN D,  
6A: G6I>K 8A6C I E B: I=DI H K6G6I>DCH C I=: >C I: GEG I6I>DC D, 6EEA867A A6L H6C9 G<J A I>DCH I=: EDH7>AIN D, >CH G8:  
G8DK G: HL>= GHE: 8I ID8: G6C H: H6C9 I=: ; 68I I=6I >BEDH I>DC D, DICH 6C9 H K G A A67>AIN L>= G<=I D, 8DICH 7J I>DC H  
EDH7A J C9: GI=: DB EG=: CHK CK GCB: C I6A\*: HEDCH DB E: CH I>DC 6C9 \$>67>AIN 8I D, 6C9 DI=: G: CK GCB: C I6A  
A6L H6C9 G<J A I>DCH !; L: 9: I: B>C: I=6I EDI: C I6A A67>AIN; DG6 E6C8J AGHE: DGL>= GHE: 8I ID6 E: GDC6A C I>GN8A>B >H  
C DICH DCH9: G9 E0767A 6C9 G6HDC67AN: H>B 67A L: 688G: I=: ID6A: H>B 6I: 9 ADH>C8A9>C> >CK H>6I>DC 6C9  
GB: 9>6I>DC 8DHH 6H8>6I: 9 L>= I=: HE: DCH A>B HD, 7DI=: : 8: B 7: G 6C9 L: =69 GHCK HD, B>ADC  
>C8A9: 9>C 88G: 9: ME: CH H6C9' I=: GA67>A I>H>C I=: DCH A96I: 9 6A6C8: +=: IH; DG: CK GCB: C I6AB 6I: CHI=6I 6G C DICH  
DCH9: G9 E0767A 6C9 G6HDC67AN: H>B 67A L=>8= G; A8IHDICH 7: H: H>B 6I: D, I=: 8DHHID7: >C8J G9 L>= GHE: 8I ID  
H 8= B 6I: CHDC 6C I C9>HDI C I: 9 76HH

AGHCK H; DG: CK GCB: C I6A A67>A I>H=6K 7:: CG8D9: 9 L>=DI I<K<<: ;;; 8I ID6CNE DH7A ; JIJ G I=>9 E6CNG8DK G: H  
/ =>A L: 68I>K ANEJGH: >CH G8: G8DK G: H 6HL: A6HG8DK G: H; GEB DI=: GED: C I6ANG HEDCH7A E6C>H L: 9DCI

G8D<CQ 6CN>CH6C8: G8DK G: H; DG: CK6CDB: C6AA67>AN8A6B HJ C<AG6AO 9 DGJ C<AH 8= I>B: 6H6 H H6<C: 9 E6II: C<D, 8DA8I>DCH>H: H67AH: 9 G A<I: 9 ID=>HDG86AB 6II: CHD, 6 HB>AGC6IJ G 6C9 B 6<C>IJ 9:

HD, : 8: B 7: G 6C9 L: =69 6EEGMB 6I: AN B>ADC 6C9 B>ADC GHE: 8I>K: AN D, <J 6G<I: : H8DCHH<C< EGB 6GAND, DI IH6C9>C< H6C97NAII: CHD, 8G9J 76C@<J 6G<I: : H 6C9 E: GDB 6C8: 6C9 7>9 7DC9H, =: H <J 6G<I: : H=6K 7:: C ECK9: 9 >C 8DCC: 8I>DCL>= 8: G6<C 6G<C: B: CHL>= K: C9DGH 8J HDB: GH>;>C6C8<C 8DI C<I: G6C>: H 6C9 <DK: GB: C6A: C>: H IDH 8J G DI GD7A<6I>DCH6C9 DGE: GDB 6C8: GFJ>GB: CHG A<I: 9 IDHE: 8>;>8 IGCH68I>DCH / : 7: A: K I=6I > I=: D7A<6I>DCH J C9: GI=: H >CHG B: CHL: G IG<<: G9 I=: NL DI A C<I =6K 6 B 6I: G6A>;: 8I DC DI G8DCHDA96I: 9 >;>C6C8>6AH6I: B: CH

/ : =6K : C<I: G9 >ID6<G: B: CHIDEI G=6H <DD9HDGH CK8: HI=6I 6G : C,DG8: 67A 6C9 A<6AN7>C9>C< DC J H6C9 I=6I HE: 8>N 6AH<C>;>86C I: G B H >C8A9>C<;>M9 DGB>C B J B FJ 6C I>: HID7: EJ G=6H9 >;>M9 B>C B J B DGK6G67A EG8: ECK>HDCH6C9 I=: 6EEGMB 6I: I>B>C<D I=: IGCH68I>DCH ( J G=6H D7A<6I>DCH: M A9: 6<G: B: CHI=6I 6G 86C8: A67A 6I 6CNI>B: L>=DI I E: C6AN HD, : 8: B 7: G I=: 6<<G<6I: 6B DI C I D, DI GEJ G=6H D7A<6I>DCHIDI6A9 B>ADC D L=8= B>ADC 6G : ME: 8I: 9 ID7: HIIA9 L>=C D<C: N 6GD, : 8: B 7: G

# \$ ) ( ) \$ ( \$ " % # ( ) \$ #

, =: +ID8@!C8: C<K ( A<C I=: WID8@ ( A<CX ECK9: H; DGI=: <G<I D, HID8@6EEG8>6I>DCH G<=IH GHG8I: 9 HD8@J C>IH W+> HK 6C9 E: GDB 6C8: HID8@J C>IH W+> HK 8DA8I>K: AN WID8@ L 6G>HK HID8@DEI>DCH DG6CNDI=: CHD8@76H9 6L 6C9 IDI6AD, B>ADC H=6G HD, DI G8DB B DC HD8@=6K 7:: C 6I I=DOQ 9 ;DG>HI 6C8: J C9: GI=: +ID8@ ( A<C HD, : 8: B 7: G 6EEGMB 6I: AN B>ADC H=6G HD, DI G8DB B DC HD8@GB 6<C 6K6>A7A ;DG>HI 6C8: J C9: GI=: +ID8@ ( A<C

+ID8@DEI>DCHJ C9: GI=: +ID8@ ( A<C< C: GANK: H ECG6I6 DK: G6 ;DI GN 6GDG>K: N 6GE: GD9 6C9 I: G>C6I: N 6GH>GB I=: <G<I 96I: I=DI <= I=: HE: 8>;>8 I: G HD, : 68= <G<I 6G 9: I: G>C: 9 7NI=: DB E: CH6I>DCH DB B>I: : D, DI G D6C9 D, >G8IDGH ' J G: M8I>L>K: D>;>8: CH6C9 8: G6<C DI=: G: B EADN: HB 6N7: 6L 6C9: 9 HD8@DEI>DCHL>= 9>;: G C I K H>C< 8GI: G6 6C9 HD8@ DEI>DCH<G<I: 9 IDCC: B EADN: 9>G8IDGH6G ;J ANK H: 9 6HD, I=: <G<I 96I: M G>H EG8: H; DGHD8@DEI>DCH<G<I: 9 J C9: G I=: +ID8@ ( A<C L: G : FJ 6AIDI=: 8AHC< EG8: D, DG>K: YH8DB B DC HD8@DC I=: &1 + DC I=: 96I: D, <G<I L=>A HD8@DEI>DCH>HI: 9 6H8DCK: GHDC 6L 6C9 H>C 8DCC: 8I>DCL>= I=: HE 6G6I>DCH>GB 6C6=: GL: G EG8: 9 IDB 6<C 6>C I=: : 8DCDB>8 K6A: 7:: DG 6C9 6I: GI=: HE 6G6I>DCH

\* +> H<G<I: 9 J C9: GI=: +ID8@ ( A<C ECK9: ;DGI=: >HI 6C8: D, 8DB B DC HD8@6I CD8DH IDI=: =D9: G \* +> H<G<I: 9 ID : B EADN: H<: C: GANK: H DK: G DI GDG>K: N 6GH 6A=DI <= 8: G6<C DI=: G: B EADN: H6C9 CDC: B EADN: 9>G8IDGH 6N7: 6L 6C9: 9 \* +> HL>= 9>;: G C I B: 76H9 K H>C< 8GI: G6 : G6<C B: B 7: CHD, DI GH C>DGB 6C6<: B: C I 6G 6AD 6L 6C9: 9 >C8GB: C6A \* +> HH 7? 8I IDE: GDB 6C8: 76H9 K H>C< 8GI: G6 ( GDGID K H>C< \* +> H9DCI =6K 9>K9: C9: FJ>K6ACI G<=IH 9DCI =6K KDI>C< G<=IH 6C9 I=: H=6GHJ C9: GNC< I=: \* +> H6G C<I 8DCH9: G9>HI: 9 DGDJ IH6C9>C<

( +> H<G<I: 9 J C9: GI=: +ID8@ ( A<C ECK9: ;DGI=: >HI 6C8: D, 6 H=6G D, I=: DB E6CNYH8DB B DC HD8@6I CD8DH IDI=: =D9: G 6C9 L>AK: H 6I ID D, I=: I6G: I H=6G 6B DI C I 76H9 DC 68=> K B: C I D, E: GDB 6C8: I6G: IH GCHB 69: EGDGID 6G : 6G< 9 76H9 DC I=: DB E6CNYHIDI6AH=6G=D9: GG IJ C G C@< G A<I>K IDI=: + ( !C9: MDK: G6 E: GDB 6C8: E: GD9 D, 6EEGMB 6I: AN I=G: N 6GH DG<GCHB 69: >C I=: E: GDB 6C8: I6G: I>H76H9 DC 6 B>MD, 7DI= 68=> K B: C I D, 6C>C<I: G6A<GL I= B: IG8 6C9 I=: DB E6CNYHIDI6AH=6G=D9: GG IJ C G C@< 7DI= DK: G6 E: GDB 6C8: E: GD9 D, 6EEGMB 6I: AN I=G: N 6GH (+> H>HI: 9 6G H 7? 8I ID 6C 699>DCH6A=D9>C< E: GD9 D, JE IDIL DN 6GH6C9 6G : C I A9 ID9>K9: C9: FJ>K6ACI G<=IH, = ( +> 9>K9: C9: FJ>K6ACI G<=IH 6G H 7? 8I IDI=: H6B: K H>C< 6C9 E6NB: C I GHG8I>DCH6HI=: G A<I: 9 H=6GH 7JI 9D C<I =6K KDI>C< G<=IH 6C9 I=: H=6GHJ C9: GNC< I=: (+> H6G C<I 8DCH9: G9>HI: 9 6C9 DI IH6C9>C<

' I=: GI=6CEJ GH 6C I D 6CNGI>GB: C I 7: C>;>HECK9: 9 J C9: GDJ G+ID8@ ( A<C I=: : FJ>N8DB E: CH6I>DCH 6L 6C9 H<G<I: 9 7NI=: DB E6CN<: C: GANK: H DCAN> I=: : B EADN: >H: B EADN 9 7NJH DG C I=: 86H D, 9>G8IDGH I=: 9>G8IDG8DCI>C<I: HIDH CK: DC I=: D6C9 DC I=: K H>C< 96I: , D8DK GI=: : M G>H D, HID8@DEI>DCH K H>C< D, \* +> H6C9 (+> H 6C9>HI 6C8: HD, \* +> H L: <: C: GAN>HI: H=6GH6J I=DOQ 9 7J I EG K DI HNJ C>HI: 9 6A=DI <= L: B 6N>CH: 69>HI: IG 6HI ONH=6GH ECK9: 9 =DL: K G I=6I: >=: GINE: D, >HI 6C8: L DI A: FJ 6AN G9J 8: I=: C I B 7: GD, H=6GH6K6>A7A J C9: GDJ G+ID8@ ( A<C

/ : 688DI C<I: DGHD8@76H9 8DB E: CH6I>DCH 7NB: 6H GC< I=: 8DH D, : B EADN: H CK8: HG8: >K 9>C: M=6C<: ;DG6A: FJ>N 6L 6C9 H<G<I: 9 76H9 DC I=: ;6GK6A: D, I=: 6L 6C9 6HD, I=: <G<I 96I: / : G8D<CQ I=: 8DB E: CH6I>DCH: ME: CH DK GI=: GFJ>HE: H CK8: E: GD9 L=8= H<: C: GAN I=: K H>C< E: GD9 7JI B 6N7: H>DG: GI=6C I=: K H>C< E: GD9 ;DG: MBEA > I=: : B EADN: 7: 8DB: HGI>GB: C I: A>7A 7: ;DG I=: : C9 D, I=: K H>C< E: GD9

, =: ;6GK6A: D, \* +> H6C9 E: GDB 6C8: 76H9 (+> H>H86A>I A<I: 9 J HC< I=: 8AHC< EG8: D, DG>K: 8DB B DC HD8@DC I=: 96I: D, <G<I \* +> YH6G ;J G=: G69>J H: 9 ;DGI=: >BE8I D, \* +> H C<I =6K< 9>K9: C9 G<=IHEGDGID K H>C< , =: ;6GK6A: D, B 6C>I 76H9 (+> H>H86A>I A<I: 9 J HC< 6 % DCI: 6CADI EG8<C B D9: A, =: ;6GK6A: D, I=: HID8@DEI>DCH<G<I: 9>H86A>I A<I: 9 J HC< 6 A8@+8=DAH%: GDC W A8@+8=DAHK DEI>DCH EG8<C B D9: A

(FA5= 43E76 A2 B7@B3EA@ JB7@7

+ID8@76H9 8DBE:CH6DC=6H7::CG8D<CQ9 6H6 8DB EDC:CI D,+:AAC< <:C GA6C9 69B>CH6IK:ME:CHH<CI=:  
DCHD96I:9+I6I:B:CHD, 6C<C<H,=:6B DI CI D, HD8@76H9 8DB E:CH6DC:ME:CH G8D<CQ9 9JGC<6E:GD9 >H76H9 DC  
I=:EDH<CD, I=:6L6QH I=6I 6G JAB 6I:AN:ME:8I:9 IDK H / : :H>B 6I:EG K H<C<;DG:>JGH6I I=:I>B: D, <6CI 7N  
6C6AOC<=>HDG86A96I6 6C9 GKH I=DIH: H>B 6I:H<CH 7H FJ:CI E:GD9H>;68IJ 6A;DG:>JGH9>;:G;DB I=DIH: H>B 6I:H  
- AB 6I:AN I=:ID6A:ME:CH G8D<CQ9 DK GI=:KH<C<E:GD9 L>A: FJ 6AI=:>6GK6A: D, 6L6QH I=6I 68IJ 6AANK H  
,=:;>DAIL>C<H>B B 6GO HI=:8DB EDC:CHD, DI GHID8@76H9 8DB E:CH6DC:ME:CH JC9:GI=:+ID8@(>AC;DGI=:N 6GH: C9:9  
:8:B 7:G >CB>ADCH

+ID8@ L6QH			
(GI6M8DB E:CH6DC:ME:CH			
!C8DB:I6M7:C;>I			
+ID8@ L6Q:ME:CH C I D,>C8DB:I6MH			
+ID8@DEI>DCH			
(GI6M8DB E:CH6DC:ME:CH			
!C8DB:I6M7:C;>I			
+ID8@DEI>DC:ME:CH C I D,>C8DB:I6MH			
,DI6AHD8@76H9 8DB E:CH6DC			
(GI6M8DB E:CH6DC:ME:CH			
!C8DB:I6M7:C;>I			
,DI6AHD8@76H9 8DB E:CH6DC:ME:CH C I D,>C8DB:I6MH			

/=:CHD8@DEI>DCH6G:MCH9 7NI=:BEAN:DG+ID8@ L6QHK H L:9:GK:6I6M9:9J8I>DCB:6H G9 7NI=:M8:HHI,  
I=:B6C@I K6A: DCH 8=96I:DK GI=:<6CI 96I:EG8: 88D9>C<AN L:G8D9 I=:M8:HHI I=:I6M7:C;>I GAI:9 IDI=:  
:MCH H D,HD8@DEI>DCH6C9 K H<C<D,+ID8@ L6QHDK GI=:ME:CH G8D9:9;DG:>C6C8>6AH6I:B:CI GEDG<EJ EDH H I=:  
WM8:HH, 6M :C;>IX 6H6 8DB EDC:CI D,!C8DB:I6M:ME:CH 6C9 6H6CDE:GL<C<86H>C,AIL>CI=:8DCHD96I:9;>C6C8>6A  
H6I:B:CH JGC<I=:N 6GH: C9:9 :8:B 7:G 6C9 L:G6AQ 9 6C M8:HH, 6M :C;>I D, B>ADC  
B>ADC 6C9 B>ADC GHE:8I>K AN GAI:9 IDHD8@DEI>DCHI=6I L:G:MCH9 6C9 +ID8@ L6QH I=6I K H:9

,=:;>DAIL>C<H>B B 6GO HI=:JCG8D<CQ9 8DB E:CH6DC8DH;DGI=:+ID8@(>AC6L6QH6HD, :8:B 7:G ,=>H  
8DB E:CH6DC8DH>H:ME:8I:9 ID7:G8D<CQ9 DK:G6 L:>=>I:9 6K G<:E:GD9 D,6EEGMB 6I:ANIL DN 6GH GEGH CI<C<I=:  
GB 6C<C<H CK8:E:GD9 GAI:9 IDI=:6L6QH JIJ G 8DB E:CH6DC6B DI CHL>A7:69JH:9;DG6CN8=6C<:H<C: H>B 6I:9  
>DG:>JGH >CB>ADCH

+ID8@ L6QH			
+ID8@DEI>DCH			
,DI6AJCG8D<CQ9 8DB E:CH6DC8DH			

(FA5= \$ BEACE

,=:;>DAIL>C<H>B B 6GO HI=:6H I B EI>DCH I H9>CI=:A68@+8=DAHB D9: AID K6A: HD8@DEI>DCH<6CI:9 JC9:GI=:+ID8@  
(AC9JGC<I=:N 6GH: C9:9 :8:B 7:G

*H@;G:>CI:GH GI:			
.D6I>AIN <sup>6</sup>			
K9: C9 N>A <sup>7</sup>			
ME:8I:9 N 6CHJ CI>A MCH			

<sup>6</sup> ME:8I:9 KD6I>AIN>H76H9 DC6 L:>=>I:9 6K G<:7AC9 D, I=:8DB E6CNYH=>HDG86AHD8@EG8:KD6I>AIN;>DB "JAN  
I=:96I: D,HE6GI>DC;>DB 6C6=:G I=DI<=>I=:HD8@DEI>DC<6CI 96I:6C9 I=:6K G<=>HDG86AHD8@EG8:KD6I>AIND,  
6<DI>ED, E=:G8DB E6C>H;DGI=:ME:8I:9 I:CB D, I=:DEI>DCH  
<sup>7</sup>,=:9K9: C9 N>A>H86AJ AI:9 7N9>K9>C>DI G6CCI 6A9>K9: C9 76H9 DCI=:BDH G8:CI FJ 6G:AN9>K9: C9 GI: 7N  
DI>K YH8AHC<HD8@EG8:DCI=:<6CI 96I:

, =; ~~DADL~~ < H B B 6GQ HDEI > DC 68L < K > NJ C9: GI=: +ID8@ ( AC > CB > ADCH : M8: EI EG8: E: GH=6G 6C9 CJB 7: GHD, N 6GH

**, 7;9: F76  
H7D897**

, 7;9: F76	' 7? 3;@@	
H7D897	A@H85K3>	99D793F7
J7D5;E7	) 7D	@D@E5
%D57	K73DE	+ 3>G7

**\$ BF,AE**

\$ GEE3 @6 ; @ 3EA8 3 @G3DK

GC: 9

M8-H9

6C8: A9 ;DG: 9

\$ GHE3@6;@ 3EA8 757? 47D

GC: 9

M8-H9

6C8: A9 ;DG: 9

\$ GEE3@6;@ 3EA8 757? 47D

+7EF76 3@6 7JB75F76 FAH7EF3EA8 757? 47D

3

**+7EF6 3EA8 757? 47D**

6, =, WME: 8I: 9 IDK: HXDEL>DCH6G I=: C: I JCK: H: 9 DEL>DCH I=6I GB 6<C 6;I: G6FEANC< I=: ;DG: >J G 6I: 6HI B EL>DC ID ID6A  
JCK H: 9 DEL>DCH

, =: 6<<G<6I: >IGCH8 K6A: H<C I=: I67A 67DK GEGH C I=: ID6AEG I6M<IGCH8 K6A: I=: 9>:: GC8: 7: IL:: C I=: 8AHC< HD8@EG8: D DG<K 8DB B DC HD8@DC I=: A6H I69<C<96ND, 6C9 I=: M<SH EG8: B J A EA<9 7NI=: C I B 7: GD, <C I=: B DC NDELDCH I=6I LDI A =6K 7:: CG8: <K 9 7NI=: DE<DC=D A: GH=69 6A<DE<DC=D A: GH: M<SH 9 I=: >GDELDCHDC :8: B 7: G, =: 6B DI C I D, 6<<G<6I: >IGCH8 K6A: L A8=6C<: 76H 9 DC I=: EG8: D DG<K YH8DB B DC HD8@

' EI>DCHDI IH6C9>C< 6HD, :8: B7: G 6G H B B 6GQ 9 7: AL >CB >ADCH : M8: EI EG8: E: GH+6G 6C9 CJB7: GD, N 6GH

\$ GEEB @6; @9

+ 7E76

H7D897

' 7? 3;@;@

! ;87  
©172DE

**J7D5;E7 %Q57**

( : 3D7E

H7D897

J7D5;E7  
04D57

0.57

! ;87  
©172DE

H7D897

J7D5;E7  
04D57

0.57

$$, D(6A) \neq 6GH$$

, =: >DAD < > H B B 6 G H 6 < < G < 6: > C G C H 8 K 6 A: 6 C 9 8 6 H G 8: > E H G A 6 I: 9 I D H D @ D E I D C H I = 6 I L: G: M C H 9 J C 9: G I =:  
+ I D 8 @ < A C: D G I =: N 6 C H: C 9: 9 : 8: B 7: G : > C B > A D C H

<<G<6I: >CIGCH8 K6A: D, HD8@DEI>DCH: M C&H 9

6H G8: >EIH;GB HD8@DEI>DCH: M(8>H9

, =; DADL <C H B B 6 G H C; D B 6 L D C G A L: 9 ID+ID8@ L 6 C 6 8 I K I N J C 9: G I=: +ID8@ ( A C; D G I=: N 6 G H: C 9: 9 : 8: B 7: G 6 C 9 <C B > A D C H: M 8: E I E G 8: E: G H: 6 G

* @7F76 3EA8 3@3DK	
GC: 9	
. : H: 9	
DG: 1: 9	
* @7F76 3EA8 757? 47D	
GC: 9	
. : H: 9	
DG: 1: 9	
* @7F76 3EA8 757? 47D	

<<G<6I: 86H E6NB :CIH,DGI=: 9K9: C9HE6-9 IDH=6G=D9: GH6G G8D9: 9 6H9-K9: C9HIDH=6G=D9: GH-CDI G DCHDA96I: 9 +I6I: B: CIHD =6C<: H-C FJ >N6C9 DCHDA96I: 9 +I6I: B: CIHD 6H= AXLH



#0);- "-8=+0);- !:7/ :)5

' C :7G6N I=: DBE6CNH D6G D, >G8IDGH6EECK:9 6 H=6G GEJG=6H ECD<GB 6JI=DGOC<I=: DBE6CNID  
GEJG=6H JEID B>ADC H=6GHD, I=: DBE6CNHDI IH6C9<C<8DB BDC HD8@;GB I:B: IDI:B: DCI=: DE: CB6C@IDG<  
EKG6I: ANC: <DI6I: 9 IGCH68IDCH, =: G >HCD: ME<GIDC96I: ;DGI=: GEJG=6H ECD<GB 6C9 I=: IB<C<6C9 6B DI CI D,  
GEJG=6H HJ C9: GI=: ECD<GB 6G 9: I: GB<C: 9 7NI=: DBE6CNHB 6C6<: B: CI 76H9 DC B6C@I 8DC9>IDCH6C9 DI=: G;68IDGH  
, =: GEJG=6H ECD<GB B6N7: HHE: C9: 9 DG9>HDCI: 9 6I 6CNI:B: 7NI=: D6G D, >G8IDGH JGC<I=: N 6G: C9: 9  
:8: B7: G I=: DBE6CNEJG=6H9 B>ADC H=6GHD, >H8DB BDC HD8@6I 6C6K G<: H=6G EG8: D, HD,  
:8: B7: G I=: G L: G B>ADC H=6GHGB 6C<C<;DGGEJG=6H J C9: GI=: ECD<GB

( G4E7CG7@F H7@E

' C"6CI6CN L: 9: 8AG9 6 G<JAGFJ6G: CN86H=9K9: C9 D, E: GH=6G E6N67A DC%6G= ID8DB BDC  
HD8@DA: GHD, G8D9 DC :7G6CN

" 3G63FAIK ACH7ID4>7 %D787ID76 (FA5=

' C"JC L: >HI:9 H=6GHD, %6C96IDGN DCK G7A (G:: G9 +ID8@+: G: H W% (+X L>= 6 E6G  
K6A: D, E: GH=6G 6C9 AFJ>6IDCEG:: GC8: D, E: GH=6G L=>8=>C8A9: 9 I=: MCGH D, 6CDK: G6ADB: CI DEI>DC  
>C;JANDEJG=6H H=6GH/ : G8: K: 9 C I 7>ADC>CEC8: 9H;GB I=: >HI 6C8: D I=: % (+ : M8A9>C<  
B>ADC, >HI 6C8: 8DHH/ : JH9 I=: C I E C8: 9H;GB I=: >HI 6C8: D % (+ ID;J C9 DI G68FJ>H>DC 68IDKID>H6C9 ;DG  
<: C G8ADDED6I: EJ CEDHH >C8A9>C< GE6NB: CI D, 9: 7I LDC<C< 86E46A 6C9 86E46A ME: C9>JGH

' C"JAN 6ADJ IH6C9<C< H=6GHD, DI G %6C96IDGN DCK G7A (G:: G9 +ID8@ W% (+X 8DCK: G: 9 6I 6 GI: D,  
8DB BDC H=6GHE: GH=6G D, EG:: G9 HD8@<ID6C6<<G<6I: D, 6EEGMB 6I: AN B>ADC H=6GH C I D, ;G8IDC6A  
H=6GH D, I=: DBE6CNH8DB BDC HD8@EJ GH 6CI IDI=: I: GB HD, I=: : G>86I: D, : H<C6IDC<DK: CC<I=: +: G: H  
(G:: G9 +ID8@ DCK: >HI: 9 86H=>C&J D, ;G8IDC6AH=6GHD, 8DB BDC HD8@<CI=: 8DCK GHDC, =: H E6NB: CHL: G  
G8D9: 9 6H6 G9J8IDCID699>IDC6AE69 >C86E46A, =: ;>C6A9K9: C9 D, E: GH=6G DG B>ADC>CI=: 6<<G<6I:  
L6HE69 DC"JAN, =: >B E68I D, I=: % (+ 86AJ 6I: 9 J C9: GI=: > 8DCK: G: 9 B: I=D9 L6H6C<9>AIK; DGI=: E: GD9HC  
EGDGID8DCK GHDC

/ : 9: 8AG9 6C9 E69 86H=9K9: C9HDC DI G% (+ 9JGC<I=: E: GD9HEGH CI: 9 6H;DAILH

	:H67G %7D %D787ID76 (: 3D7	? AGCF ;@? ;>A@E
>GH FJ 6G: G		
+ : 8DC9 FJ 6G: G		
, =>9 FJ 6G: G	V	V
DI G= FJ 6G: G	V	V
, DI6A		

# 7F 3D@>E%7D(: 3D7

6H8 C I: 6CC<HE: GH=6G W(+X >H86AJ 6I: 9 7N9>K9>C< C I: 6CC<H6IIG7JI67A ID8DB BDC HD8@DA: GH7NI=:  
L: >=I: 9 6K G<: CI B7: GD, H=6GHD, 8DB BDC HD8@DI IH6C9<C<;DGI=: 6EEA867A E: GD9 >AI: 9 (+ >HHB>6CN86AJ 6I: 9  
: M8: EI I=6I I=: 86AJ 6IDC>C8A9: HI=: 9>AIK: ;;;: 8I D, I=: 6HJB: 9 >HI 6C8: D, H=6GHJ C9: GHD8@76H9 8DB E: CHIDCEA<CH  
J C9: GI=: IG6HGNHD8@B: I=D9 : M8: EI L=: G I=: >C8AHDC, H8= H=6GHL DI 9 =6K 6C6C<9>AIK: >B E68I

DGI=: N 6G: C9: 9 :8: B7: G 6C9 I=: 6CI>9>AIK DEI>DCHIDEJG=6H H=6GH: M8A9: 9 ;GB I=: 9>AI: 9  
(+ 86AJ 6IDCL: G B>ADC H=6GH B>ADC H=6GH 6C9 B>ADC H=6GH GHE: 8IK AN, =: >B E68I D, DI G% (+  
86AJ 6I: 9 J C9: GI=: > 8DCK: G: 9 B: I=D9 L6H9>AIK; DGI=: N 6G: C9: 9 :8: B7: G 6C9 I=: G;DG I=: B>ADC  
H=6GHL: G >C8A9: 9 >CI=: 86AJ 6IDCD, 9>AI: 9 (+

H9: H8G7: 9 >C &DI: JEDC8DCK GHDCD, I=: DCK G7A &DI: H=DA: GHL: G: CIA9 IDG8: K 86H H6GHD, DJG  
8DB BDC HD8@ DG6 8DB 7>C6IDCI=: GD, 6IDJG: A8IDC H9: H8G7: 9 >C &DI: EGDGIDDJ G69DEIDCD, +- DC  
"6CI 6GN L: 688DI CI: 9 ;DGI=: 8DCK GHDC:; 6IJ G J C9: GI=: IG6H GNHD8@B: I=D9 >C DJ G86AJ AIDCD, (+ HC8: L:  
>CI: C9: 9 6C9 =69 I=: 67>ANIDH IIA H 8= 8DCK GHDCI=CI <= 86H JE IDI=: EGC8>E6A6B DJ CI D, I=: DCK G7A &DI: H6C9 >  
6EEA867A I=CI <= H6GHD, DJ G8DB BDC HD8@; DG8DCK GHDC K6A: > 6CN >C: M8: HD, I=: EGC8>E6A6B DJ CI D, I=:  
DCK G7A &DI: H : 86JH I=: ;6GK6A: D, DJ G8DB BDC HD8@L6H7: AL I=: 8DCK GHDC EG8: I=: DCK G7A &DI: H=69 CD  
>B E68IDC DJ G: 6GC<HE: GH6G ;DGI=: N 6G: C9: 9 : 8: B 7: G - EDC69DEIC< +- DC "6CI 6GN L:  
688DI CI: 9 ;DGI=: DCK G7A &DI: HJ C9: GI=: > 8DCK G: 9 B: I=D9 >C DJ G86AJ AIDCD, 9>AI: 9 (+ 6HG FJ >G9 J C9: GI=: C L  
<J >6C8:

!C; DGB 6IDC G AI: 9 IDI=: 86AJ AIDCD, C I: 6GC<HE: GH6G D, 8DB BDC HD8@HH B B 6G9 9 6H; DAI L H 6C9 H6GH C  
B >ADCH: M8: EI E: GH6G 6B DJ CH

	. 73D 676 757? 47D		
# G? 7DBFAD			
&: I: 6GC<H; DB 8DCI CI >C< DE: GIDCH			
% 6C96IDN8DCK G7A EG;: G9 HD8@8J B J AI K 9>K9: C9H	V		
&: I: 6GC<H6IIG7J I67A ID8DB BDC HD8@DA: GH; DB 8DCI CI >C< DE: GIDCH JH9 >C 76H8: 6GC<HE: GH6G			
99 768@ % 6C96IDN8DCK G7A EG;: G9 HD8@8J B J AI K 9>K9: C9H W;	V	V	
8DCK G: 9XB: I=D9			
99 768@ DCK G7A CI: >CI: GH 699 768@ W; 8DCK G: 9XB: I=D9		V	V
&: I: 6GC<H6IIG7J I67A ID8DB BDC HD8@DA: GH; DB 8DCI CI >C< DE: GIDCH 6C9 6HJ B: 9 8DCK GHDCI JH9 >C9>AI: 9 : 6GC<HE: GH6G			

7@A? ;@EAD			
/ : >=I: 9 6K G<: 8DB BDC H6GHDJ IH6C9>C< JH9 >C 76H8: 6GC<HE: GH6G			
!C8GB: C6A8DB BDC H6GH; DB			
HHB: 9: M8H D, 9>AI K: DEIDCH6C9 K H C< D, 9>AI K: +ID8@ L 69H			
DCK GHDCD, 8DCK G7A CI: H > 8DCK G: 9 B: I=D9		V	V
HHB: 9 8DCK GHDCD, DJ IH6C9>C< B 6C96IDN8DCK G7A EG;: G9 HD8@	V	V	
/ : >=I: 9 6K G<: 8DB BDC H6GHDJ IH6C9>C< JH9 >C9>AI: 9 : 6GC<HE: GH6G			

&: I: 6GC<H; DB 8DCI CI >C< DE: GIDCHE: G8DB BDC H6G 6H8  
&: I: 6GC<H; DB 8DCI CI >C< DE: GIDCHE: G8DB BDC H6G >AI: 9

# \$ ) ( " # ) # \$ ' " ) \$ #

/ : GEDG DJ GGH AH CI=G: HE6GI: 7JHC: HH <B: CH8DCH H C< D !CI: A<: CI' E: GIC< +DAIDCH ( G8>HDC, : 8=CDAD> H  
6C9 9K6C8: 9 : 6A=86G +DAIDCH' E: GIC< EGD, J GEGH CHIDI6AG K CI: HAHDE: GIC<: ME: CHH: M8A9>C< DI=: G<C8DB:  
: ME: CH >CI: GH 6C9 >C8DB: I6MH, =: >: CI> >67A 6HH IH7NH <B: CI 6G I=DH JH9 >C: 68= H <B: CIYHDE: GIDCH !CI: G  
H <B: CI 6B DJ CH6G CI H C< >86CI 6C9 6G : AB >CI: 9 >CI=: 8DB 7>C: 9 IDI6AI B DJ CH C I=: ' I=: G86I: <DN8DCH H D  
J C6AD86I: 9 8DGEDGI: 8DHH6C9 DI=: G8DHH CI 8DCH9: G9 E6G D, DJ G: K6A 6IDCD, GEDG 67A H <B: CI DE: GIC< E: GIDB 6C8:

+: <B: CI GH AH6G H<L C7: AL    >CB >ADCH

. 73D @76 757? 47D

( 3>7E

!CI: A<: CI ' E: G<C< +DAI<DCH

( G8>HDC, : 8=CD<D<: H

9K6C8: 9 : 6A=86G +DAI<DCH

, D6A

\$ B7DBE@ %DA&F

!CI: A<: CI ' E: G<C< +DAI<DCH

( G8>HDC, : 8=CD<D<: H

9K6C8: 9 : 6A=86G +DAI<DCH

' I=: G

\* JH6: MI 6C9 L>C9 9DL C8DHH<sup>6</sup>

, D6A

( 79? 7@F3EE7E

!CI: A<: CI ' E: G<C< +DAI<DCH

( G8>HDC, : 8=CD<D<: H

9K6C8: 9 : 6A=86G +DAI<DCH

, D6AH<B: CI 6HHIH

' I=: G

HHIHD, >HDCI>CI: 9' E: G<DCH

, D6A6HHIH

7BD75;3FA@3@ 3? ADI3FA@

!CI: A<: CI ' E: G<C< +DAI<DCH

( G8>HDC, : 8=CD<D<: H

9K6C8: 9 : 6A=86G +DAI<DCH

' I=: G

, D6A

3B;B>7JB7@;KQ7E 9DAE

!CI: A<: CI ' E: G<C< +DAI<DCH

( G8>HDC, : 8=CD<D<: H

9K6C8: 9 : 6A=86G +DAI<DCH

' I=: G

, D6A

<sup>6</sup> \* : ;: GID&DI: ;DG;J G=: C9: I6>ADC\* JH6: MI 6C9 L>C9 9DL C8DHH



\$ B7DBEACE;@ 7A9DBB;5 D73E

. 73D 676 757? 47D

>CB>ADCH

( 3>7E

- CI: 9 +I6I: H

=>C6

ADI=: G : 68= 8DI CIGN>C9>K9J 6ANAHII=6C D, IDI6AH6AH

, DI6A

%DAB7IHK B3@F3@ 7CG;B? 7@ @7F

- CI: 9 +I6I: H

+L>IQ 66C9

ADI=: G : 68= 8DI CIGN>C9>K9J 6ANAHII=6C D, IDI6AEQDE: GN E6CI  
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AIIGCH8IDCHL>= GAI: 9 E6G> H6G : M8JI: 9 >CI=: D9>C6CN8DI>GH D, 7JHC: HI

: <CC< 9JGC< I=: I=>C9 FJ 6G: GD, DB B DC+E>GI : 6A= B: II=: 8GI: G6 ;DGG8D<C>DC 6H6 GAI: 9 E6GN9J: ID  
DB B DC+E>GIYH8=>; : M8JI>K: D;>8: GHE6G>8>E6I>DCDC D>K: YH D6C9 D, >G8IDGH/ : : CI: G9 >CIDIGCH8IDCH>CI=:  
D9>C6CN8DI>GH D, 7JHC: HIL>= DB B DC+E>GI : 6A= 6C9 B 69: H6AHD, 6EEQMB 6I: AN B>ADC>C

/ : : CI: G>CIDIGCH8IDCH>CI=: D9>C6CN8DI>GH D, 7JHC: HIL>= 6C6=: G JGC< 6C9 L: =69 ILD7D6C9 B: B7: GH  
DC7DI= DI>G D6C9 D, >G8IDGH6C9 6C6=: GH D6C9 D, >G8IDGH L=>8= GHIA 9>C 6C6=: GB:: I>C< I=: 8GI: G6 ;DG  
G8D<C>DC 6H6 GAI: 9 E6GN JGC< 6C6=: GCDAC<: GB: II=: 8GI: G6 ;DGG8D<C>DCD, 6 GAI: 9 E6GN !CI=: E: GD9  
>CL=>8= 6C6=: GB: II=: 8GI: G6 6H6 GAI: 9 E6GN L: B 69: H6AHD, 6EEQMB 6I: AN B>ADC6C9 B>ADCID 6C6=: G>C  
6C9 GHE: 8I>K: AN6C9 EIJ>G=6HID, 6EEQMB 6I: AN B>ADC6C9 B>ADC>C 6C9 GHE: 8I>K: AN



) " # ( # # ( ' " # ) ( , ) \$ \* # ) # ( \$ # \$ \* # ) # # # # !  
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' JGB 6C<: B: C L >= I=: E6C8>E6DCD I=: ( GH9: C 6C9 =>; M8J LK ' ;;8: G6C9 +: C>G >8: ( GH9: C 6C9 =>;  
>C6C8>6A' ;;8: G=6H: K6A6I: 9 I=: ;;: 8L>K C HHD D I G9>H8AH G 8DCIQA6C9 EDB: 9JGH 6HH 8= I: B >H9: ;>C 9 >C  
\*JAH 6 : 6C9 9 : J C9: GI=: +: 8JGI>H M8=6C<: 8I D 6H6B: C9: 9 I=: WM8=6C<: 8IX 6HD I=: : C9 D  
I=: E: GD 8DK G9 7NI=HG EDG 6H9 DCH 8=: K6A6I>DC I=: ( GH9: C 6C9 =>; M8J LK ' ;;8: G6C9 +: C>G >8:  
( GH9: C 6C9 =>; >C6C8>6A' ;;8: G=6K 8DC8A9: 9 I=6I 6HD I=: : C9 D H 8= E: GD I=: H 9>H8AH G 8DCIQA6C9  
EDB: 9JGHL: G ;;: 8L>K

% 6C<: B: C IYHCCJ 6AG EDG DC >H>C I: C6A8DCIQA6C G;>C6C8>6AG EDG C< 6HH 8= I: B >H9: ;>C 9 >C \*JAH 6 : J C9: G  
I=: M8=6C<: 8I 6C9 I=: >C9: E: C9: C I G<H: G9 EJ 7A8 688DI C<C<; >B YH6J 9>J G EDG DC I=: ;;: 8L>K C HHD I=: DB E6CNYH  
>C I: C6A8DCIQA6C G;>C6C8>6AG EDG C< 6G >C8A9: 9 >C ! I: B >C6C8>6A+I6I: B: C IYH6C9 +JEEAB: C I6N 6I6 J C9: GI=:  
=: 69>C>HW: EDG D % 6C<: B: C I DC D G>K D EDG6I>DCH I: C6A DCIQA K G >C6C8>6A\*: EDG C<X6C9 W: EDG D  
!C9: E: C9: C I \*: <H: G9 ( J7A8 88DI C<C< >B XGHE: 8L>K AN 6C9 6G >C8D EDG6I: 9 =: G>C7NG;; G C8:

, =: G =6K 7:: C CD8=6C<: H>C D I G>C I: C6A8DCIQA6C G;>C6C8>6AG EDG C< I=6I D88J G9 9JGC< I=: B DH G8: C I 8DBEAI: 9  
;>H6AFJ 6G: GI=6I =6K B 6I: G6AN6;;: 8I: 9 DG6G G6HDC7ANA@ANIDB 6I: G6AN6;;: 8I D I G>C I: C6A8DCIQA6C G;>C6C8>6A  
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I: +7; =- ! =; =) 6<>7 #- +76 : 7. 0- #- += I4; @0) 6/- +<7.

+ : 8I>DC G D I=: M8=6C<: 8I GFJ>GH6C>H I: GID9>H8AH 8: C6C>C>DB 6I>DC>C>H E: GD9>8 GEDGH; >J DG6CND >H  
6;;>A6I: H C D L >C>AN: C<6<: 9 >C8: C6C>C68I>K I>H I G C H 8 I DCH DG9: 6AC>HL >= >C9>K9J 6AHDG: C I>: HH 7? 8I IDE: 8>;8 - +  
: 8DCDB >8 H6C8I>DCH9JGC< I=: GEDG C< E: GD : K CL=: C I=: 68I>K I>H I G C H 8 I DCH DG9: 6AC>H6G 8DC9J 8I: 9 >C8DB EA6C8:  
L >= 6EEA867A A6L

' C % 6C= I=: - + <DK C B: C I 9: H>C6I: 9 I=: \*JH6C : 9: G A+: 8JGIN+: C K8: I=: W+ X 6H6 7A8@9 E6CINJ C9: G  
M8J LK ' C9: G C I=: H6B: 96N I=: - + : E6C B: C I D I=: , G6H CNYH' ;;8: D DG>C H I H DCIQA>H I: 9  
>C: G A\$>8: CH &D I=: W : C: G A\$>8: CH X L=>8=< C: G AN 6I I= DGO H- + 8DB E6C: HID: C<6<: >C8: C6C  
I G C H 8 I DCH6C9 9: 6AC>HL >= I=: + C 8: H6CN 6C9 D9>C6G A>C89: C I DG FJ: H>C< DG D7I6>C< A8: CH H E: B >H  
8: G>;86I>DCH DG C I>: >86I>DCH>H I: 9 DG G<H: G9 7NI=: + ; DGI=: >B EDG6I>DC 9>HG7J I>DC DG J H D >C>DB 6I>DC I: 8= C D A>N  
ED9J 8I H>C \*JH6C H6 G H A +: 8I>DC G D I=: M8=6C<: 8I C D L GFJ>GH9>H8AH G D 9: 6AC>HL >= + : K CL=: G  
I=: 68I>K I>H L: G 8DC9J 8I: 9 >C8DB EA6C8: L >= 6EEA867A A6L H6C9 G<J A I>DCH

HE: B >I: 9 6C9 6I I= DGO 9 7NI=: ' : C: G A\$>8: CH L >= GHE: 8I ID + ( HH: G A6I>DC ED9J 8I H I=6I 6G : M B E I ; C B  
>C I: C6I>DC A H 6 C 8 I DCH 6 H = J B 6 C I 6 G 6 C ED9J 8I H 8: C6C D I=: DB E6CNYH 7H9>6G: H: DGI=: + ( DE: G I DCH B 6N; >A  
C I>: >86I>DCH L >= DG6EEAN; DG>B EDG A8: CH H6C9 E: B >H; C B I=: + 6HG FJ>G9 EJ C H 6 C I D \*JH6C: C8CNEI>DC ED9J 8I  
>B EDG 8DCIQA; DGI=: EJ C E D H D : C67AC>H 8= H 7H9>6G: HDGI=: >C8=6CC: AE6C: CHID>B EDG 6C9 9>HG7J I: + ( H  
H: G A6I>DC ED9J 8I H>C I=: \*JH6C : 9: G I>DC , =: G 6G CD<C I H G K C I: HDGC I ED>H9>G 8I AN 6H D8>6I: 9 L >= I=: H  
68I>K I>H L >= I=: + 6C9 C >= I=: DB E6CNC DG6CND >H H 7H9>6G: H9>HG7J I: DGH A E C D J 8I HDGE C K 9: H C K 8: H I D I=:  
+

) " ( ! \$ ( \* ' ' ' # \$ ' # \* ' ( ) \$ # ( ) ) % + # ) # ( % ) \$ # (

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% ' )

) " ' ) \$ ' ( - \*) + \$ ' ( # \$ ' % \$ ' ) \$ + ' # #

' I=: GI=6CI=: >C>DB 6I>DC7: AL I=: >C>DB 6I>DC GFJ>G9 7NI=H I I: B >H C 8 D G E D G I: 9 7NG;; G C8: ; C B I=: H 8 I DCH: C I A9  
# .), - ( , ), \*, . ) 0, ( ( >C I=: ( C M N +I6I: B: C I; D G I G 6C C J 6A B:: I C< 6C9 I D I=: >C>DB 6I>DC J C9: GI=:  
86E I>DC W C>DB 6I>DC 67D I I D I G M8J LK ' ;;8: G K>C ( 6G ! =: G D & D C B >C: ; DG9>G 8 I D G L 6 H H A 8 I: 9 EJ C H 6 C I D 6 C N  
6 C G C<: B: C I DG J C9: CH 6C9>C<7: IL:: C I=: C D B >C: 6C9 6CNE: G H C D I=: GI=6CI=: DB E6CNEJ C H 6 C I D L =8= H 8= E: G H C>H  
D G L 6 H I D 7: H A 8 I: 9 6 H 6 9>G 8 I D G D C C B >C:



A67A8 F;5E

/ : =6K 69DEI: 9 6 8D9: D; 7JHC: H8DC9J 8I 6C9 : I=8H; DC9>G 8IDCH D; ;8: GH >C8A9>C< DQK: YHEGC8>E6A: M8JL>K D; ;8: G EGC8>E6A;>C6C8>6AD; ;8: G6C9 EGC8>E6A688DI>C<C< D; ;8: G 6C9 : BEAN : H @DL C6HI=: DQK: D9: , =: DQK: D9: >H 6K6>A7A >CI=: W JG J A I G !CI: <GIN DB EA6C8: XH8I>DCD, DI>GL: 7HE: 6I L L L ;DQK: 8DB

/ : >CI: C9 ID9>H A H 6CN6B: C9B: CI IDI=: DQK: D9: I=6I G A I: HI D6CN: AB: CI D I=: 8D9: D: I=8H9: ;>C I>DC : C I B: G I: 9 >C I!: B 7 D \*: <J A I>DC + # 6C9 6CN L 6K G; G B 6 E G K>HDC D I=: DQK: D9: <G CI: 9 ID 6CN 9>G 8IDG EGC8>E6A: M8JL>K D; ;8: G EGC8>E6A;>C6C8>6AD; ;8: G EGC8>E6A688DI>C<C< D; ;8: G DG6CND, DI>GI=: G: M8JL>K D; ;8: GH >CI=: W JG J A I G !CI: <GIN DB EA6C8: XH8I>DCD, DI>GL: 7HE: 6I L L L ;DQK: 8DB L>A>C; DI>G7JHC: H96NH; D A I L>C< I=: 96I: D H 8= 6B: C9B: CI DGL 6K G

) " - \*) + \$ " % # ( ) \$ #

, =: >C; DQB 6I>DC GFJ>G9 7NI=>H I!: B >H>C8DGEDG I: 9 7NG; ; GC8: ; G B I=: H8I>DCH: C I>A9 )' \* (- .# ( # / --# ( ( ( G-# )' \* (- .# ( )' ' #. \*), . 2 / .# )' \* (- .# ( &- 3 .# # &-/, 3 0 , -/- , ), ' ( # &-/, 6C9 # .), )' \* (- .# ( >CI=: ( G M N + I 6I: B: C I ; D G I>G 6C C I 6AB:: I>C< DI=: GI=6CI=: DB E: C H I>DC D B B>I: : \* : EDG L=>8= H=6 A C I 7: 9: : B: 9 ID 7: W>A9X

) " ( \*' ) . \$ , # ' ( %\$ ' ) # # ! \$ , # ' ( # " # " # ) # ' ! ) ( ) \$ \$ ! ' " ) ) ' (

, =: >C; DQB 6I>DC GFJ>G9 7NI=>H I!: B >H>C8DGEDG I: 9 7NG; ; GC8: ; G B I=: H8I>DCH: C I>A9 I ( , -' # ) / , . ) % 6C9 + / # 3 )' \* (- .# ( & ( ( ) , ' .# ( >CI=: ( G M N + I 6I: B: C I ; D G I>G 6C C I 6AB:: I>C<

) " ' ) # ' ! ) \$ # ( % # ' ! ) )' # ( ) \$ # ( # ' ) \$' # % # #

, =: >C; DQB 6I>DC GFJ>G9 7NI=>H I!: B >H>C8DGEDG I: 9 7NG; ; GC8: ; G B I=: H8I>DCH: C I>A9 ), \*), . ) 0 , ( ( # .), ( \* ( ( 6C9 , . # & .# ( -' # - ( & , ( - .# ( - >CI=: ( G M N + I 6I: B: C I ; D G I>G 6C C I 6AB:: I>C<

) " % # % ! \$ \* # ) # ) ( # ( ' + (

, =: >C; DQB 6I>DC GFJ>G9 7NI=>H I!: B >H>C8DGEDG I: 9 7NG; ; GC8: ; G B I=: H8I>DC: C I>A9 .## .# ( ) ( \* ( ( ! #. , / & ) / ( .# ! #' >CI=: ( G M N + I 6I: B: C I ; D G I>G 6C C I 6AB:: I>C<

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6 , =: ; D A I L>C< 9 D 8 J B: C I H 6 G ;>A9 6 H E 6 G D I=H G E D G

>C6C8>6A+I6I: B: C I H , =: ;>C6C8>6A H 6I: B: C I H >C8A9>C< I=: G E D G D ,>C9: E: C9: C I G<H: G9 E I 7 A 8 688DI>C<C< ;>B ( ' ! 6G H I ; D Q = J C9: G W I: B >C6C8>6A+I6I: B: C I H 6C9 +JEEAB: C I 6Q 6I 6X D I=>H C C I 6A\*: E D G I>DC D B #

+8=: 9J A H C>C9: M D, M>7>H 6C9 +8=: 9J A H>HDC E6<: D, I=>H G E D G +8=: 9J A H D I=: GI=6CI=DH A H: 9 7: A I L =6K 7: : C D B>I: 9 ; G B I=>H C C I 6A\*: E D G I>DC D B # 7: 86I H I=: N 6G C I G F J>G9 6G C I 6EEA867A D G I=: G F J>G9 >C; DQB 6I>DC>H>C8A9: 9 >CI=: ;>C6C8>6A H 6I: B: C I H D G I=: C I: H I=: G I D

M>7>H , =: : M>7>H A H: 9 >CI=: 688D B E 6 C N>C< M>7>I ! C9: M 6G ;>A9 D G>C8DGEDG I: 9 7NG; ; GC8: 6 H E 6 G D I=>H C C I 6A\*: E D G I>DC D B #

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. 6A6LDC6C9) J6A&NC< 88DJCH

- ) # -

J:;4:F  
#G2 47D

7E5DBFA@

+:E6G1DC6C9 >HG7J1DC <G:B:CI 96I:9 6HD  
' 8ID7:G 7N6C9 7:IL::C. DCI>G  
DEEDG1DC6C9 DGK DEEDG1DC

!C8DEEDG1:9 7NG::GC8:;GB M>7I ID DGK  
DEEDG1DCYH JGCI\*:EDGDC DB # ;>A9 DC  
' 8ID7:G DBB>HDC >A &JB7:G

\*:H6I:9 :G>86I: D !C8DEEDG1DCD DGK  
DEEDG1DC

!C8DEEDG1:9 7NG::GC8:;GB M>7I ID DGK  
DEEDG1DCYH) J6G:GN\*:EDGDC DB ) ;DG I=  
FJ6G:G: C9:9 "JAN DBB>HDC >A &JB7:G

B:C9:9 6C9 \*:H6I:9 N6LHD DGK  
DEEDG1DC

!C8DEEDG1:9 7NG::GC8:;GB M>7I ID DGK  
DEEDG1DCYH JGCI\*:EDGDC DB # ;>A9 DC  
&DK B7:G DBB>HDC >A &JB7:G

!C9:CIJ G 96I:9 6HD "JC 7:IL::C  
DGK DEEDG1DC 6H>H:G 6C9, =: 6C@D &:L  
1 DG@%:ADC, GH DBE6CN & 6HIGH::

!C8DEEDG1:9 7NG::GC8:;GB M>7I ID DGK  
DEEDG1DCYH JGCI\*:EDGDC DB # ;>A9 DC  
"JC DBB>HDC >A &JB7:G

:H8ELDCD +:8JGI>H

+:8DC9 B:C9:9 6C9 \*:H6I:9 G9I <G:B:CI  
96I:9 6HD ' 8ID7:G 6BDC< DGK  
DEEDG1DC 6C@D B:G86 & 6H  
9B>CHG1K <:CI 6C9 - + +L>C<\$>C \$:C9:G  
6C@D B:G86 & \$DC9DC GC8= 6H  
A:G6IK JGC8N+L>C<\$>C \$:C9:G 6C9 I=  
AC9:GHG::G9 IDI=:G>C

!C8DEEDG1:9 7NG::GC8:;GB M>7I ID DGK  
DEEDG1DCYH JGCI\*:EDGDC DB # ;>A9 DC  
' 8ID7:G DBB>HDC >A &JB7:G

6N,:GB \$D6C G9I <G:B:CI 96I:9 6HD  
' 8ID7:G 6BDC< DGK DEEDG1DC 6C@  
D B:G86 & 6H 9B>CHG1K <:CI 6C9 I=  
AC9:GHG::G9 IDI=:G>C

!C8DEEDG1:9 7NG::GC8: ID M>7I ID DGK  
DEEDG1DCYH JGCI\*:EDGDC DB # ;>A9 DC  
' 8ID7:G DBB>HDC >A &JB7:G

DGK DEEDG1DC +ID8@!C8:CIK (AC 6H  
6B:C9:9 6C9 GH6I:9

!C8DEEDG1:9 7NG::GC8:;GB M>7I ID  
DGK DEEDG1DCYH CCJ6A\*:EDGDC DB # ;DG  
I=:N 6G:C9:9 :8:B7:G DBB>HDC >A  
&JB7:G

DB D DK DOEDC(:GDG6C: +ID8@- C  
<G:B:C

!C8DOEDG:9 7NG::GC8: ;GB M-7J ID DK  
DOEDC) J6G: GN\*: EDG DC DB ) ;DG I=  
N 6G: C9: 9 EGA DB B>HDC >A &JB 7: G

DB D DK DOEDC&DC BEAN:  
>G8IDGH\*: HG8I: 9 +ID8@- C <G:B:C

!C8DOEDG:9 7NG::GC8: ;GB M-7J ID DK  
DOEDC) C6A\*: EDG DC DB # ;DG I=  
N 6G: C9: 9 :8: B7: G DB B>HDC >A  
&JB 7: G

DB D DK DOEDC\*: HG8I: 9 +ID8@ G  
<G:B:C

!C8DOEDG:9 7NG::GC8: ;GB M-7J ID  
B: C9B: C &D ID DK DOEDC)  
\*: <HGDC+I6I: B: C DC DB ;>A9 DC EGA  
DB B>HDC >A &JB 7: G

DB D DK DOEDC\*: HG8I: 9 +ID8@- C  
<G:B:C

!C8DOEDG:9 7NG::GC8: ;GB M-7J ID  
DK DOEDC) C6A\*: EDG DC DB # ;DG  
I=: N 6G: C9: 9 :8: B7: G DB B>HDC >A  
&JB 7: G

DB D DK DOEDC&DC BEAN:  
>G8IDGH+ID8@ EDC <G:B:C

!C8DOEDG:9 7NG::GC8: ;GB M-7J ID  
DK DOEDC) C6A\*: EDG DC DB # ;DG  
I=: N 6G: C9: 9 :8: B7: G DB B>HDC >A  
&JB 7: G

DB D DK DOEDC+ID8@ EDC  
<G:B:C

!C8DOEDG:9 7NG::GC8: ;GB M-7J ID  
DK DOEDC) C6A\*: EDG DC DB # ;DG  
I=: N 6G: C9: 9 :8: B7: G DB B>HDC >A  
&JB 7: G

DK DOEDC B: C9: 9 6C9 \*: H6I: 9  
M8JJK !C8: CJK DBE: CH6DC( AC

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DOQA AC; DG ::>8: GH

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&JB7:G



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+:8IDC D I=: +6G6C H' MAN 8ID

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. 73D @76 757? 47D

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ADL6C8: ;DG8G9I AHH H V

. 73D @76 757? 47D

ADL6C8: H9: 9J8I: 9 ;CB 6HHI 688DJ CH  
ADL6C8: ;DG8G9I AHH H

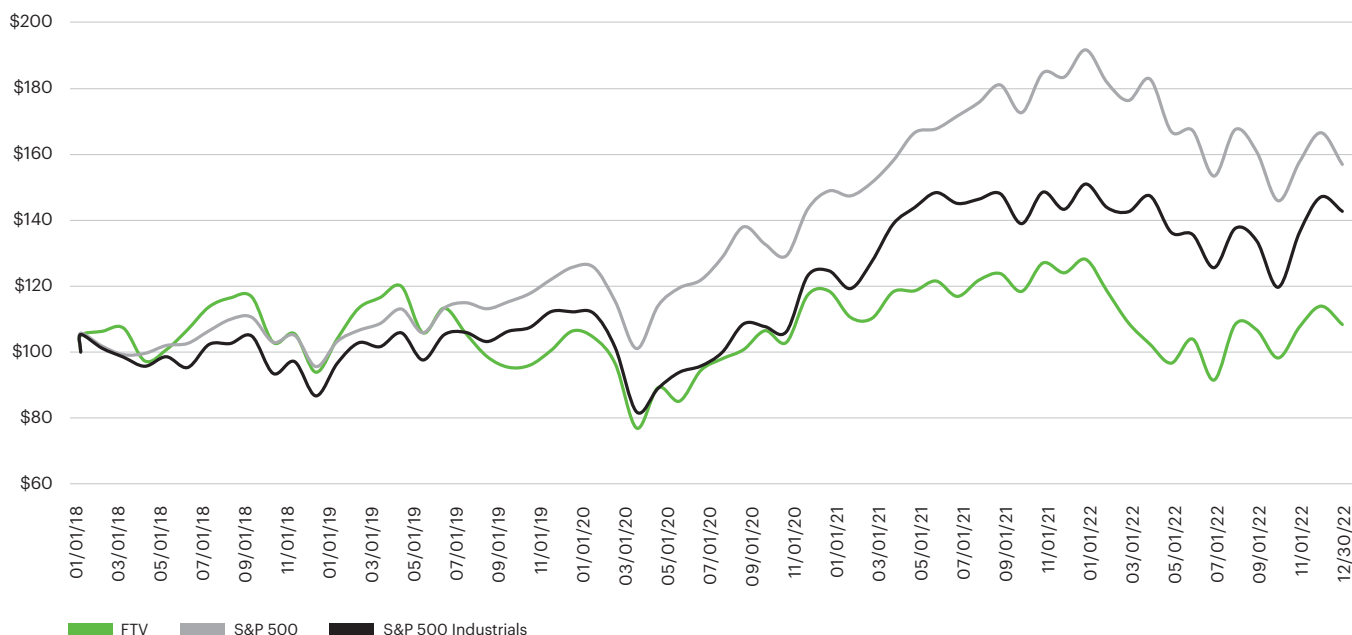
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ADL6C8: H9: 9J8I: 9 ;CB 6HHI 688DJ CH  
ADL6C8: ;DG8G9I AHH H

<sup>6</sup> B DJ CH6G G A I: 9 ID7J HC: HH H68FJ >G9 !C699>DC I=: N 6G: C9: 9 : 8: B 7: G >C8A9: H6C>C8G6H >CI=:  
6ADL6C8: ;DGI@9: 688DJ CHG8: >K67AHD, B >ADC G8D<CQ 9 JEDCI=: 69DEI>DCD, +- DC "6CJ 6GN

## Comparison of 5-Year Cumulative Total Shareholder Return

Assumes Initial Investment of \$100



	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/30/2022
<b>Fortive Corporation</b>	93.86	106.36	118.41	128.05	108.32
<b>S&amp;P 500</b>	95.62	125.72	148.85	191.58	156.88
<b>S&amp;P 500 Industrials</b>	86.71	112.17	124.59	150.89	142.63

## Reconciliation of Non-GAAP Financial Information of Corresponding Financial Information Presented in Accordance with GAAP on a Continuing Operations Basis

### Components of Revenue Growth

	Year Ended 12/31/2022
<b>Total Revenue Growth (GAAP)</b>	<b>10.9%</b>
Core (Non-GAAP)	10.1%
Acquisitions (Non-GAAP)	3.9%
Impact of currency translation (Non-GAAP)	-3.1%

## Adjusted Operating Profit & Adjusted Operating Profit Margin

	Year Ended 12/31/2022				
(\$ in millions)	Intelligent Operating Solutions	Precision Technologies	Advanced Healthcare Solutions	Corporate	Total Fortive
<b>Revenue (GAAP)</b>	<b>\$2,466.1</b>	<b>\$2,038.2</b>	<b>\$1,321.4</b>	<b>—</b>	<b>\$5,825.7</b>
<b>Operating Profit (GAAP)</b>	<b>\$519.4</b>	<b>\$491.3</b>	<b>\$107.9</b>	<b>\$(131.2)</b>	<b>\$987.4</b>
Acquisition and Other Transaction Costs	17.7	—	8.7	—	26.4
Russia Exit and Wind Down Costs	—	—	—	17.9	17.9
Acquisition-Related Fair Value Adjustments to Inventory	—	—	0.7	—	0.7
Amortization of Acquisition-Related Intangible Assets	184.5	13.5	184.2	—	382.2
Discrete Restructuring Charges	—	—	—	—	—
<b>Adjusted Operating Profit (Non-GAAP)</b>	<b>\$721.6</b>	<b>\$504.8</b>	<b>\$301.5</b>	<b>\$(113.3)</b>	<b>\$1,414.6</b>
<b>Operating Profit Margin (GAAP)</b>	<b>21.1%</b>	<b>24.1%</b>	<b>8.2%</b>		<b>16.9%</b>
<b>Adjusted Operating Profit Margin (Non-GAAP)</b>	<b>29.3%</b>	<b>24.8%</b>	<b>22.8%</b>		<b>24.3%</b>

	Year Ended 12/31/2021				
(\$ in millions)	Intelligent Operating Solutions	Precision Technologies	Advanced Healthcare Solutions	Corporate	Total Fortive
<b>Revenue (GAAP)</b>	<b>\$2,169.4</b>	<b>\$1,848.9</b>	<b>\$1,236.4</b>	<b>—</b>	<b>\$5,254.7</b>
<b>Operating Profit (GAAP)</b>	<b>\$408.5</b>	<b>\$408.0</b>	<b>\$101.9</b>	<b>\$(105.6)</b>	<b>\$812.8</b>
Acquisition and Other Transaction Costs	30.2	—	29.7	—	59.9
Russia Exit and Wind Down Costs	—	—	—	—	—
Acquisition-Related Fair Value Adjustments to Inventory	—	—	6.9	—	6.9
Amortization of Acquisition-Related Intangible Assets	163.3	16.4	141.1	—	320.8
Discrete Restructuring Charges	5.9	2.5	3.8	—	12.2
<b>Adjusted Operating Profit (Non-GAAP)</b>	<b>\$607.9</b>	<b>\$426.9</b>	<b>\$283.4</b>	<b>\$(105.6)</b>	<b>\$1,212.6</b>
<b>Operating Profit Margin (GAAP)</b>	<b>18.8%</b>	<b>22.1%</b>	<b>8.2%</b>		<b>15.5%</b>
<b>Adjusted Operating Profit Margin (Non-GAAP)</b>	<b>28.0%</b>	<b>23.1%</b>	<b>22.9%</b>		<b>23.1%</b>

## Adjusted Operating Profit & Adjusted Operating Profit Margin (CONTINUED)

	Year Ended 12/31/2020				
	Intelligent Operating Solutions	Precision Technologies	Advanced Healthcare Solutions	Corporate	Total Fortive
<i>(\$ in millions)</i>					
<b>Revenue (GAAP)</b>	<b>\$1,883.7</b>	<b>\$1,651.3</b>	<b>\$1,099.4</b>	<b>—</b>	<b>\$4,634.4</b>
Acquisition-Related Fair Value Adjustments to Deferred Revenue	7.6	—	5.3	—	12.9
<b>Adjusted Revenue (Non-GAAP)</b>	<b>\$1,891.3</b>	<b>\$1,651.3</b>	<b>\$1,104.7</b>	<b>—</b>	<b>\$4,647.3</b>
<b>Operating Profit (GAAP)</b>	<b>\$317.8</b>	<b>\$321.7</b>	<b>\$2.1</b>	<b>\$(102.2)</b>	<b>\$539.4</b>
Acquisition and Other Transaction Costs	0.9	0.1	70.6	—	71.6
Acquisition-Related Fair Value Adjustments to Deferred Revenue and Inventory	7.8	—	19.5	—	27.3
Amortization of Acquisition- Related Intangible Assets	151.1	17.2	141.6	—	309.9
Discrete Restructuring Charges	13.7	9.7	4.2	—	27.6
<b>Adjusted Operating Profit (Non-GAAP)</b>	<b>\$491.3</b>	<b>\$348.7</b>	<b>\$238.0</b>	<b>\$(102.2)</b>	<b>\$975.8</b>
<b>Operating Profit Margin (GAAP)</b>	<b>16.9%</b>	<b>19.5%</b>	<b>0.2%</b>		<b>11.6%</b>
<b>Adjusted Operating Profit Margin (Non-GAAP)</b>	<b>26.0%</b>	<b>21.1%</b>	<b>21.5%</b>		<b>21.0%</b>

## Free Cash Flow Margin

(\$ in millions)

	Year Ended 12/31/2022	Year Ended 12/31/2021	Year Ended 12/31/2020
<b>Continuing Operations Free Cash Flow:</b>			
<b>Operating Cash Flows from Continuing Operations (GAAP)</b>	<b>\$1,303.2</b>	<b>\$992.9</b>	<b>\$977.7</b>
Less: purchases of property, plant & equipment (capital expenditures) from continuing operations (GAAP)	(95.8)	(50.0)	(75.7)
<b>Free Cash Flow from Continuing Operations (Non-GAAP)</b>	<b>\$1,207.4</b>	<b>\$942.9</b>	<b>\$902.0</b>
<b>Revenue (GAAP)</b>	<b>\$5,825.7</b>	<b>\$ 5,254.7</b>	<b>\$ 4,647.3</b>
<b>Adjusted Free Cash Flow Margin (Non-GAAP)</b>	<b>20.7%</b>	<b>17.9%</b>	<b>19%</b>

## Adjusted Net Earnings From Continuing Operations

(\$ in millions)

	Year Ended 12/31/2022	Year Ended 12/31/2021	Year Ended 12/31/2020
<b>Net Earnings From Continuing Operations Attributable to Common Shareholders (GAAP) <sup>(a)</sup></b>	<b>\$755.2</b>	<b>\$579.7</b>	<b>\$1,452.2</b>
Dividends on the mandatory convertible preferred stock to apply if-converted method <sup>(a)</sup>	—	34.5	—
<b>Net Earnings from Continuing Operations (GAAP)</b>	<b>\$755.2</b>	<b>\$614.2</b>	<b>\$1,452.2</b>
Interest on the Convertible Notes to apply if-converted method <sup>(b)</sup>	2.1	—	—
Tax effect of the Convertible Notes to apply if-converted method <sup>(c)</sup>	(0.3)	—	—
<b>Diluted Net Earnings from Continuing Operations (GAAP)</b>	<b>\$757.0</b>	<b>\$614.2</b>	<b>\$1,452.2</b>
Pretax amortization of acquisition-related intangible assets	382.2	320.8	309.9
Pretax acquisition-related items <sup>(d)</sup>	27.1	66.8	98.9
Pretax losses from equity investments <sup>(e)</sup>	17.3	11.6	4.3
Pretax Russia exit and wind down costs	17.9	—	—
Pretax (gain) loss on sale of business	(0.5)	—	—
Pretax interest expense on Convertible Notes to reverse the if-converted method <sup>(b)</sup>	(2.1)	—	—
Pretax loss on debt extinguishment, net of gain on Vontier common stock	—	47.9	(1,119.2)
Pretax gain on litigation resolution	—	(29.9)	—
Pretax non-cash interest expense associated with our 0.875% Convertible Notes	—	29.1	34.1
Pretax discrete restructuring charges	—	12.2	27.6
Pretax gain on disposition of assets	—	—	(5.3)
Tax effect of the adjustments reflected above <sup>(c)</sup>	(65.9)	(76.3)	(70.8)
Noncash discrete tax expense adjustment resulting from the Separation of Vontier	—	—	20.2
<b>Adjusted Net Earnings from Continuing Operations (Non-GAAP)</b>	<b>\$1,133.0</b>	<b>\$996.4</b>	<b>\$751.9</b>

(a) On July 1, 2021, all outstanding shares of our MCPS converted at a rate of 14.0978 common shares per share of preferred stock into an aggregate of approximately 19.4 million shares (net of fractional shares). The MCPS were anti-dilutive for the year ended December 31, 2021 and as such GAAP net earnings per share was calculated using net earnings from continuing operations attributable to common stockholders.

(b) Beginning with our adoption of ASU 2020-06 on January 1, 2022 we assumed share settlement of our outstanding Convertible Notes under the if-converted method when calculating GAAP diluted net earnings per share. Since we settled the Convertible Notes in cash on February 15, 2022 and no common share conversion occurred, we have reversed the impacts of applying the if-converted method and included the actual cash interest expense in calculating the adjusted net earnings per share.

(c) The dividend on the MCPS is not tax deductible. The gain on the fair value change in Vontier common stock had no tax effect. The tax effect of the adjustments includes all other line items.

(d) Includes pretax Transaction Costs and acquisition-related fair value adjustments to inventory related to significant acquisitions.

(e) Includes pretax losses from equity method investments and, an \$8.1 million pretax impairment loss on an equity investment in the third quarter of 2022.



## Adjusted Diluted Net Earnings Per Share From Continuing Operations

	Year Ended 12/31/2022	Year Ended 12/31/2021	Year Ended 12/31/2020
<b>Net Earnings Attributable to Common Stockholders from Continuing Operations (GAAP) <sup>(b)</sup></b>	<b>\$2.10</b>	<b>\$1.65</b>	<b>\$4.05</b>
Dividends on the mandatory convertible preferred stock to apply if-converted method <sup>(b)</sup>	—	0.10	—
Assumed dilutive impact on the Diluted Net Earnings Per Share Attributable to Common Stockholders if the MCPS Converted Shares had been outstanding <sup>(b)</sup>	—	(0.05)	—
<b>Net Earnings from Continuing Operations (GAAP)</b>	<b>\$2.10</b>	<b>\$1.70</b>	<b>\$4.05</b>
Interest on the Convertible Notes to apply if-converted method <sup>(c)</sup>	—	—	—
Tax effect of the Convertible Notes to apply if-converted method <sup>(c)</sup>	—	—	—
<b>Diluted Net Earnings Per Share from Continuing Operations (GAAP)</b>	<b>\$2.10</b>	<b>\$1.70</b>	<b>\$4.05</b>
Pretax amortization of acquisition-related intangible assets	1.06	0.89	0.86
Pretax acquisition-related items <sup>(d)</sup>	0.08	0.19	0.28
Pretax losses from equity investments <sup>(e)</sup>	0.05	0.03	0.01
Pretax Russia exit and wind down costs	0.05	—	—
Pretax (gain) loss on sale of business	—	—	—
Pretax loss on debt extinguishment, net of gain on Vontier common stock	—	0.13	(3.12)
Pretax gain on litigation resolution	—	(0.08)	—
Pretax non-cash interest expense associated with our 0.875% Convertible Notes	—	0.08	0.09
Pretax discrete restructuring charges	—	0.03	0.08
Pretax gain on disposition of assets	—	—	(0.01)
Tax effect of the adjustments reflected above <sup>(f)</sup>	(0.19)	(0.21)	(0.20)
Noncash discrete tax expense adjustment resulting from the Separation of Vontier	—	—	0.06
<b>Adjusted Diluted Net Earnings Per Share from Continuing Operations (Non-GAAP)</b>	<b>\$3.15</b>	<b>\$2.75</b>	<b>\$2.09</b>

(a) Each of the per share adjustments below was calculated assuming the MCPS Converted Shares had converted at the beginning of the period prior to their conversion on July 1, 2021. The 0.875% convertible notes did not have an impact on the adjusted diluted shares outstanding.

(b) Prior to their conversion on July 1, 2021, the MCPS were anti-dilutive for the year ended December 31, 2021, and as such GAAP net earnings per share was calculated using net earnings from continuing operations attributable to common stockholders.

(c) Beginning with our adoption of ASU 2020-06 on January 1, 2022 we assumed share settlement of our outstanding Convertible Notes under the if-converted method when calculating GAAP diluted net earnings per share. Since we settled the Convertible Notes in cash on February 15, 2022 and no common share conversion occurred, we have reversed the impacts of applying the if-converted method and included the actual cash interest expense in calculating the adjusted net earnings per share. The impact of the after tax adjustment to GAAP diluted net earnings per share for the twelve months ended December 31, 2022 rounds to zero.

(d) Includes pretax Transaction Costs and acquisition-related fair value adjustments to inventory related to significant acquisitions.

(e) Includes pretax losses from equity method investments and, an \$8.1 million pretax impairment loss on an equity investment in the third quarter of 2022.

(f) The dividend on the MCPS is not tax deductible and the convertible note interest is calculated on a net of tax basis. The gain on the fair value change in Vontier common stock had no tax effect. The tax effect of the adjustments includes all other line items.

The sum of the components of adjusted diluted net earnings per share may not equal due to rounding.

# Directors

## **Eric Branderiz**

Former Executive Vice President  
and Chief Financial Officer  
*Enphase Energy, Inc.*

## **Daniel L. Comas**

Advisor and Executive Vice President  
and Chief Financial Officer  
*Danaher Corporation*

## **Sharmistha Dubey**

Former Chief Executive Officer  
*Match Group, Inc.*

## **Rejji P. Hayes**

Executive Vice President and  
Chief Financial Officer  
*CMS Energy Corporation*

## **Wright L. Lassiter III**

Chief Executive Officer  
*CommonSpirit Health*

## **James A. Lico**

President and Chief Executive Officer  
*Fortive Corporation*

## **Kate D. Mitchell**

Partner and Co-Founder  
*Scale Venture Partners*

## **Jeannine P. Sargent**

Operating Partner  
*Katalyst Ventures*

## **Alan G. Spoon**

Chairman of the Board  
*Fortive Corporation*

# Executive Officers

**James A. Lico**

President and Chief Executive Officer

**Charles E. McLaughlin**

Senior Vice President,  
Chief Financial Officer

**Patrick K. Murphy**

President and Chief Executive Officer,  
Advanced Healthcare Solutions

**Tamara S. Newcombe**

President and Chief Executive Officer,  
Precision Technologies

**Jonathan L. Schwarz**

Senior Vice President,  
Corporate Development

**Edward R. Simmons**

Senior Vice President,  
Strategy

**Olumide O. Soroye**

President and Chief Executive Officer,  
Intelligent Operating Solutions

**Peter C. Underwood**

Senior Vice President,  
General Counsel

**Stacey A. Walker**

Senior Vice President,  
Chief Human Resources Officer

## Our Transfer Agent

**Computershare** manages a variety of shareholder services such as: change of address, lost stock certificates, transfer of stock to another person, and other administrative transactions. Computershare can be reached at:

P.O. Box 43006 | Providence, RI 02940-3006

Toll-free: 800.568.3476 | Outside the U.S.: +1.781.575.3120 | [www.computershare.com](http://www.computershare.com)

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## Investor Relations

This annual report, along with a variety of other financial materials, can be viewed at [www.fortive.com](http://www.fortive.com). Additional inquiries can be directed to Fortive's Investor Relations team:

6920 Seaway Boulevard | Everett, WA 98203

Phone: 425.446.5000 | E-mail: [investors@fortive.com](mailto:investors@fortive.com)

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## Annual Meeting

Fortive's annual shareholder meeting will be held on **June 6, 2023**, in virtual only meeting format. For more information, contact Fortive's Investor Relations team by calling 425.446.5000 or emailing [investors@fortive.com](mailto:investors@fortive.com).

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## Auditors

Ernst & Young, LLP | Seattle, WA

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## Stock Listing

New York Stock Exchange Symbol: **FTV**







# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
07/01/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION** IS **WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Marsh USA, Inc 1301 5th Avenue Seattle, WA 98101 Attn: Fortive.certrequest@marsh.com	<b>CONTACT NAME:</b> ... <b>PHONE (A/C, No. Ext):</b> <b>E-MAIL ADDRESS:</b>	<b>FAX (A/C, No):</b>
CN117677530-GORD1-GAWUC-22-	GORD	
<b>INSURED</b> The Gordian Group, Inc. 30 Patewood Drive, Suite 350 Greenville, SC 29615		
<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
<b>INSURER A:</b> ACE American Insurance Company		22667
<b>INSURER B:</b> N/A		N/A
<b>INSURER C:</b> ACE Fire Underwriters Insurance Company		20702
<b>INSURER D:</b> Indemnity Insurance Company of North America		43575
<b>INSURER E:</b> N/A		N/A
<b>INSURER F:</b>		

**COVERAGES**      **CERTIFICATE NUMBER:** SEA-003577874-20      **REVISION NUMBER:** 6

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liability <input checked="" type="checkbox"/> Broad Form PD GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:			HDOG27631307	07/01/2022	07/01/2023	EACH OCCURRENCE \$ 3,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 3,000,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 3,000,000 GENERAL AGGREGATE \$ 6,000,000 PRODUCTS - COMP/OP AGG \$ 6,000,000
A	<input checked="" type="checkbox"/> <b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			ISAH08869030	07/01/2022	07/01/2023	COMBINED SINGLE LIMIT (Ea accident) \$ 5,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> <b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <input type="checkbox"/> <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
D A A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N	N/A	WLRC68931551 (AOS) SCFC68931575 (WI) WLRC68931563 (AZ, CA, MA)	07/01/2022 07/01/2022 07/01/2022	07/01/2023 07/01/2023 07/01/2023	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 2,000,000 E.L. DISEASE - EA EMPLOYEE \$ 2,000,000 E.L. DISEASE - POLICY LIMIT \$ 2,000,000
C	Professional Liability			G73579569 002 Self-Insured Retention: \$50,000	07/01/2022	07/01/2023	Limit 3,000,000

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)**

Nassau County is listed as Additional Insured with respects to the General Liability Policy where required by written contract.

## CERTIFICATE HOLDER

Nassau County  
Department of Public Works  
Attn: Joseph Davenport  
1194 Prospect Avenue  
Westbury, NY 11590

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

*Marsh USA Inc.*

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# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
07/10/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must have **ADDITIONAL INSURED** provisions or be endorsed. If **SUBROGATION** IS **WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> MARSH USA, LLC 1301 5th Avenue Seattle, WA 98101 Attn: Fortive.certrequest@marsh.com	<b>CONTACT NAME:</b> ... <b>PHONE (A/C, No. Ext):</b> <b>FAX (A/C, No):</b> <b>E-MAIL ADDRESS:</b>
CN117677530-GORD1-GAWUC-23- <b>INSURED</b> The Gordian Group, Inc. 30 Patewood Drive, Bldg. 2, Suite 350 Greenville, SC 29615	<b>INSURER(S) AFFORDING COVERAGE</b> <b>INSURER A:</b> ACE American Insurance Company <b>INSURER B:</b> N/A <b>INSURER C:</b> ACE Fire Underwriters Insurance Company <b>INSURER D:</b> Indemnity Insurance Company of North America <b>INSURER E:</b> N/A <b>INSURER F:</b>
GORD	<b>NAIC #</b> 22667 N/A 20702 43575 N/A

## COVERAGES

CERTIFICATE NUMBER:

SEA-003577874-26

REVISION NUMBER: 6

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Contractual Liability <input checked="" type="checkbox"/> Broad Form PD GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:			HDOG27631812	07/01/2023	07/01/2024	EACH OCCURRENCE \$ 3,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 3,000,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 3,000,000 GENERAL AGGREGATE \$ 6,000,000 PRODUCTS - COMP/OP AGG \$ 6,000,000
A	<input checked="" type="checkbox"/> <b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			ISAH08871279	07/01/2023	07/01/2024	COMBINED SINGLE LIMIT (Ea accident) \$ 5,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> <b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <input type="checkbox"/> <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
D	<input checked="" type="checkbox"/> <b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y / N <input checked="" type="checkbox"/> N	N / A	WLRC68932361 (AOS) SCFC68932385 (WI) WLRC68932373 (AZ, CA, MA)	07/01/2023 07/01/2023 07/01/2023	07/01/2024 07/01/2024 07/01/2024	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 2,000,000 E.L. DISEASE - EA EMPLOYEE \$ 2,000,000 E.L. DISEASE - POLICY LIMIT \$ 2,000,000
C	Professional Liability			G73579569 003 Self-Insured Retention: \$100,000	07/01/2023	07/01/2024	Limit 3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Nassau County is listed as Additional Insured with respects to the General Liability Policy where required by written contract.

## CERTIFICATE HOLDER

## CANCELLATION

Nassau County Department of Public Works Attn: Joseph Davenport 1194 Prospect Avenue Westbury, NY 11590	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE  <i>Marsh USA LLC</i>
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**COMMERCIAL GENERAL LIABILITY  
CG 20 10 12 19****THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.****ADDITIONAL INSURED – OWNERS, LESSEES OR  
CONTRACTORS – SCHEDULED PERSON OR  
ORGANIZATION**

This endorsement modifies insurance provided under the following:

**COMMERCIAL GENERAL LIABILITY COVERAGE PART****SCHEDULE**

<b>Name Of Additional Insured Person(s) Or Organization(s)</b>	<b>Location(s) Of Covered Operations</b>
Any Owner, Lessee or Contractor whom you have agreed to include as an additional insured under a written contract, provided such contract was executed prior to the date of loss.	All locations where you are performing ongoing operations for such additional insured pursuant to any such written contract.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

**A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

**B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:**

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

**C. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we

will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable limits of insurance;

whichever is less.

This endorsement shall not increase the applicable limits of insurance.

**COUNTY OF NASSAU**  
**DEPARTMENT OF PUBLIC WORKS**  
**Inter-Departmental Memo**

**TO:** Office of the County Executive  
Att: Edward W. Powers, Deputy County Executive

**FROM:** Department of Public Works

**DATE:** May 11, 2022

**SUBJECT:** Job Order Contracting (JOC)  
Management Contract with Gordian Group

The Department of Public Works would like to have a new type of contract available to the Department to address buildings repair and remedial needs. Currently, any work done outside the ability of in-house staff is either done by a work order issued to our requirements contractor, or by a lump sum bid contract. Payments under the requirements contracts are solely based on a time and materials. The Department is concerned that while existing staff has the expertise to manage such a contract, in the near future, Department staff may not yet be experienced enough to verify the contractor's proposal. Secondly, the Department has received a negative reaction after making time and materials-based payments when seeking reimbursement through federal programs after emergency declarations. Finally, lump sum contracts cannot be done quickly and is not an ideal tool in an emergency. The JOC arrangement would address the above-described difficulties by providing a unit price for multiple items the Department will likely use. The Department anticipates setting an annual cap for JOC contracting between \$7 to \$10 million per year with no individual work order exceeding \$1 to \$1.5 million. The final established contracts and scope will determine the set limits.

The Department previously had a contract with Gordian Group for this type of contract work, but the program was terminated due to concerns of the local trade unions. We have discussed this concern with the Building Trade Council, addressed its concerns, and now believe that this type of contract will not be opposed by the trades. The Department is proposing to enter into a contract with Gordian Group to establish and manage construction contracts that will utilize a JOC agreement.

There was no advertised solicitation for this proposed contract. National Intergovernmental Purchasing Alliance Company, a Delaware corporation d/b/a OMNIA Partners, ("OMNIA") is a national service cooperative created to provide programs and services to members in education and government, and is authorized to establish competitively awarded cooperative purchasing contracts, through a lead agency model, on behalf of itself and its member agencies. Gordian and the University of California have entered into a competitively awarded agreement, Contract Number 2021002786 dated January 8, 2021 (the "Master Agreement"), for the purchase of JOC Services. the Master Agreement provides that any OMNIA members may purchase JOC Services directly from Gordian at the prices stated in the Master Agreement. The County is an OMNIA member. OMNIA members may engage Gordian directly under the Master Agreement. The County, as an OMNIA member will contract with Gordian to receive the goods and services as described in the Master Agreement. ("County Contract")



Office of the County Executive

Att: Edward W. Powers, Deputy County Executive

May 11, 2022

Page two

SUBJECT: Job Order Contracting (JOC)  
Management Contract with Gordian Group

The County Contract shall include both the establishment, (Required Services) and management (Optional Program Management Services) of JOCs contracts to address general, HVAC, plumbing, electrical, roof and parks amenity work. The fee schedule for the Required Services is set at 6.25% of the value of the work ordered and this fee will be paid via a license agreement from the JOC Contractor. The fee schedule for the Optional Program Management Services is set at 5.95% of the value of the construction work ordered and will be paid to Gordian by the County. The term of this contract will commence upon execution and terminate on January 7, 2026 – unless extended as per its terms.

The maximum amount to be paid directly to Gordian from the County for its services is One Million One Hundred Ninety Thousand Dollars (\$1,190,000.00).

If you approve or disapprove of the above request, please signify below and return this memo to this office for appropriate action.



Kenneth G Arnold  
Commissioner

KGA:RD:jd

c: Roseann D'Alleva, Deputy Commissioner  
Douglas Tuman, Deputy Commissioner  
Loretta Dionisio, Assistant to Deputy Commissioner  
Jane Houdek, Attorney for Public Works

APPROVED:



Edward W. Powers  
Deputy County Executive

Date

DISAPPROVED:

\_\_\_\_\_  
Edward W. Powers Date  
Deputy County Executive



REQUEST FOR QUALIFICATIONS/REQUEST FOR PROPOSAL/REQUEST FOR BID CONTRACT

PART I: Approval by the Deputy County Executive for Operations must be obtained prior to ANY RFQ/RFP/RFBC  
☐ RFQ ☐ RFP ☐ RFBC ☐ In-House or Requirements Work Order

Project Title: Job order Contracting

Department: Public Works Project Manager: Date:

Service Requested: Provide unit pricing for multiple items to address building repairs and remedial needs not to exceed individual work order by 1.5 million . The contract shall include both the establishment ,(required services ) and management (optional Program Management Services) of JOC's contracts to address general, HVAC, plumbing,electrical,roof and parks amenity work.

Justification: According the Staford Act regulations , the use of Time and material contract expenses are not reimbursable beyond the first 72 hours of a declaration of emergency. A JOC contract can verify the contractor's proposals in the absence of knowable staff and allows increased efficiency as lump sum contracts are not ideal tools in an emergency, do to procurement proci

Requested by: K Arnold ☒ Department ☐ Agency ☐ Office

Project Cost for this Phase/Contract: (☐ Plan ☐ Design ☒ Construction ☐ CM ☐ Equipment)   
Select appropriate phase

Total Project Cost: \$100,000 /Total amt :1.19m Includes, design, construction and CM Date Start Work: Duration:   
Phase being requested Phase being requested

Capital Funding Approval: YES ☒ NO ☐   
SIGNATURE DATE

Funding Allocation (Capital Project):   
See Attached Sheet if multiyear ☐

NIFS Entered: AIM Entered:   
SIGNATURE DATE SIGNATURE DATE

Funding Code: 90400 -000 Timesheet Code:   
use this on all 'encumbrances use this on timesheets

State Environmental Quality Review Act (SEQRA):   
Type II Action ☒ or, Environmental Assessment Form Required ☐   
Supplemental Environmental Documentation

Department Head Approval: YES ☒ NO ☐   
SIGNATURE

DCE/Ops Approval: YES ☐ NO ☐   
SIGNATURE

PART II: To be submitted to Chief Deputy County Executive after Qualifications/Proposals/Contracts are received from Responding vendors.

Vendor	Quote	Comment	See Attached Sheet <input type="checkbox"/>
1.			
2.			
3.			
4.			

DCE/Ops Approval: YES ☐ NO ☐ Signature

**COUNTY OF NASSAU**  
**DEPARTMENT OF PUBLIC WORKS**  
**Inter-Departmental Memo**

**TO:** Douglas Tuman, Deputy Commissioner  
Raymond Webb, Deputy Commissioner

**FROM:** Office of the Commissioner

**DATE:** July 8, 2022

**SUBJECT:** CSEA Sub-Contracting Approval  
**C22-0186 – Proposed Contract Number: CFPW22000005**  
*Job Ordering Contract*

Please be aware in accordance with Section 32-3 of the CSEA/County CBA, the Department has met with CSEA representatives to discuss your proposed DPW contract referenced above. The Department has determined that it will proceed with the above-referenced contract known as **C22-0186**.

Please prepare the necessary documentation to proceed with your work. Once the advisement is certified you may issue the contractor a Notice to Proceed.

*Roseann D'Alleva*

Roseann D'Alleva  
Deputy Commissioner

RD:jd

c: Kenneth G. Arnold, Commissioner  
Loretta Dionisio, Assistant to Deputy Commissioner



**COUNTY OF NASSAU**  
**DEPARTMENT OF PUBLIC WORKS**  
**Inter-Departmental Memo**

C22-0186

**TO:** Civil Service Employees Association, Nassau Local 830  
Att: Ronald Gurrieri, President

**FROM:** Department of Public Works

**DATE:** July 8, 2022

**SUBJECT:** CSEA Notification of a Proposed DPW Contract  
Proposed Contract No: CFPW22000005 Job Order Contracting

The following notification is to comply with the spirit and intent of Section 32 of the County/CSEA contract. It should not be implied that the proposed DPW authorization is for work, which has "historically and exclusively been performed by bargaining unit members."

1. DPW plans to recommend a contract/agreement for the following services: Job order Contracting
2. The work involves the following: To provide unit pricing for multiple items to address building repairs and remedial needs. The contract shall include both the establishment (required services) and management (optional program management Services) of Job order contracts (JOC) to address general,HVAC,plumbing,electrical,roof and amenity work.
3. An estimate of the cost is: \$1,500,000
4. An estimate of the duration is: Three (3) years

Should you wish to propose an alternative to the proposed contract/agreement, please respond within ten (10) days to: Department of Public Works, Att: Roseann D'Alleva, Deputy Commissioner, telephone 1-0525, fax 1-9657.

*Roseann D'Alleva*

Roseann D'Alleva  
Deputy Commissioner

RD:DT:jd

c: Jose Lopez, Director, Office of Labor Relations  
Seth Blau, Deputy Director, Office of Labor Relations  
Douglas Tuman, Deputy Commissioner  
Raymond Webb, Deputy Commissioner  
Loretta Dionisio, Assistant to Deputy Commissioner  
Christopher Yansick, Unit Head, Financial Management Unit  
Diane Pyne, Unit Head, Human Resources Unit  
Elizabeth Cotton, Office of Labor Relations

