

**SCHEDULE 4
SERVICES PROTOCOLS AND SPECIFICATIONS**

1. DEFINITIONS

In this Schedule 4, in addition to the terms defined in Schedule 1 [Definitions and Interpretation]:

“Equipment-Only Outage” means any or a combination of the following that renders the NG-KIH System not Available at any Site: (i) a condition with the Equipment that results in a total loss of traffic (xWDM, Ethernet, or IP/MPLS services), or (ii) a complete loss of traffic or routing capabilities due to an equipment outage;

“Fiber Outage” means a physical break that renders the NG-KIH System not Available at any Site caused by any event (including digging, rodent damage and environmental circumstances) which impairs the performance of fiber optic cable;

“Operating Period Representative” has the meaning set out in Section 2.1(a) of this Schedule 4;

“Operating Plan” has the meaning set out in Section 4.1 of this Schedule 4;

“Outage” means an Equipment-Only Outage or a Fiber Outage;

“Performance Monitoring Plan” means the performance monitoring plan prepared by Project Co, as revised and updated by Project Co from time to time; and

“Performance Monitoring Program” has the meaning set out in Section 6.1 of this Schedule 4.

2. ADMINISTRATION

2.1 Operating Period Representatives

- (a) Each party will, by October 31, 2015, designate in writing a person (the **“Operating Period Representative”**) to be the party’s single point of contact with respect to the Services. Project Co’s Operating Period Representative will be a Key Individual. Except as otherwise set out in this Project Agreement, each Party will bear all of its costs or expenses incurred by or with respect to a party’s Operating Period Representative.
- (b) Subject to Section 2.8 of this Project Agreement in respect of Key Individuals, a party may, at any time and in its own discretion by notice to the other party, change the person appointed as the party’s Operating Period Representative. If, for any reason, a party’s Operating Period Representative is unable or unwilling to continue, then the party will immediately appoint a replacement Operating Period Representative. If, at any time, a party objects to an Operating Period Representative of the other party, then the other party will give reasonable consideration to replacing the Operating Period Representative with a person reasonably acceptable to the objecting party.
- (c) A party’s Operating Period Representative will have full authority to act on behalf of and bind the party with respect to the Operating Period under this Project

Agreement, including giving any review, acceptance, approval or confirmation which may be given by the Authority. Notwithstanding the above, a party's Operating Period Representative will not have the authority to execute or agree to any amendments of or to give any waivers under this Project Agreement.

2.2 Annual Review

At least once per year during the Operating Period, the Parties shall meet to review the Project and this Project Agreement, including all applicable thresholds and timelines.

2.3 Authority Not Responsible for the Services

The Authority's rights of review, acceptance, approval or confirmation of compliance with respect to any aspect of the Services will be for the Authority's benefit only, and no acceptance, approval or confirmation of compliance by the Authority's Operating Period Representative or other representative of the Authority will in any way relieve Project Co of its obligation for all aspects of the Services except as may be expressly set out in this Project Agreement.

3. PERFORMANCE OF SERVICES

3.1 Delivery of Services

Project Co will, at all times during the Operating Period, provide the Services in accordance with the specifications set out in this Schedule 4 and Appendix 4A [Services Specifications], this Project Agreement and the Operating Plan then in effect.

3.2 Standards

Project Co will, at all times during the Operating Period, provide the Services:

- (a) in accordance with the standards set out in Schedule 3 [Design and Construction Specifications] and this Schedule 4 [Services Protocols and Specifications];
- (b) in compliance with all applicable Laws;
- (c) in compliance with all applicable Permits, including all reporting obligations thereof; and
- (d) in a manner based on sound technical and operational procedures in accordance with Customary Industry Practice.

If one or more of the foregoing standards is applicable to any particular Service, then the highest of such standards will apply, provided that, in all cases, such standard or standards will be applied taking into account the age, use and reasonable wear and tear of the NG-KIH System, but without altering the specifications or the Services required to be provided in accordance with this Project Agreement.

4. OPERATING PLAN

4.1 Operating Plan

Project Co will prepare an operations and maintenance plan (the "**Operating Plan**").

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4.2 Preparation of Operating Plan

Project Co will work co-operatively with the Authority's Operating Period Representative in the preparation of the Operating Plan, and any amendments thereto. The Operating Plan, and any amendments, must be reasonable having regard to the requirements of this Project Agreement and will be developed and finalized as follows:

- (a) the Authority will, acting reasonably, make itself available to consult with Project Co in connection with the development of the Operating Plan, and any amendments thereto;
- (b) Project Co will deliver a draft of the Operating Plan to the Authority on or prior to October 31, 2015;
- (c) the Authority will provide its comments, if any, on the draft Operating Plan to Project Co on or prior to December 31, 2015;
- (d) Project Co will deliver a revised draft of the Operating Plan to the Authority on or prior to January 31, 2016;
- (e) on or prior to February 19, 2016, the Authority will, advise Project Co whether the Authority accepts the Operating Plan, or, if the Authority does not accept the Operating Plan, the Authority will provide its reasons for such non-acceptance in sufficient detail to allow Project Co to address them;
- (f) if the Authority does not accept the Operating Plan, the parties will, acting reasonably, diligently work together with a view to revising the Operating Plan to address the Authority's reasons for non-acceptance; and
- (g) if the Authority has not accepted the Operating Plan by the date that is February 29, 2016, Project Co may refer the Dispute to the Dispute Resolution Procedure to determine whether Project Co's proposed Operating Plan is reasonable.

4.3 Amendment of the Operating Plan

Project Co will follow the review procedure described in Section 4.2 prior to amending any Operating Plan, except the date in Section 4.2(b) above will instead refer to the date that the amendment to the Operating Plan is delivered by Project Co to the Authority (the "**Delivery Date**"), the date in Section 4.2(c) will be removed and the new date will be 30 days from the Delivery Date, the date in Section 4.2(d) will be removed and the new date will be 50 days from the Delivery Date, the date in Section 4.2(e) will be removed and the new date will be 75 days from the Delivery Date and the date in Section 4.2(g) will be removed and the new date will be 4 months from the Delivery Date.

4.4 Authority Comments

Any comments provided by the Authority proposing changes to the Operating Plan submitted to it by Project Co under the review procedure described in Section 4.2 of this Schedule 4 are not considered Changes and will be completed at Project Co's cost and expense, unless any such proposed change would constitute a material change to this Project Agreement, in which case, the terms of Schedule 6 [Changes, Minor Works and Innovation Proposals] will apply and such

proposed change will not be implemented except under a Change Certificate issued by the Authority. If and to the extent the Authority requires an amendment to the Operating Plan that it has previously reviewed and commented on (other than an amendment required to bring the Services into conformity with these Services Protocols and Specifications), such amendment will be a Change and the terms of Schedule 6 [Changes, Minor Works and Innovation Proposals] will apply.

5. SERVICES

5.1 Described Services

Project Co will perform the services described in Appendix 4A [Services Specifications].

5.2 Additional Services

Project Co agrees that, in addition to the Services, it will provide all other ancillary and additional services as may be reasonably required to achieve the Services Specifications, but such ancillary and additional services do not include providing the Services on third party equipment or fiber.

6. PERFORMANCE MONITORING AND REPORTING

6.1 Project Co Performance Monitoring

Project Co will develop and at all times during the Operating Period have in place a performance monitoring program in accordance with the Performance Monitoring Plan (the "**Performance Monitoring Program**").

6.2 Reporting Requirements

Project Co will submit reports to the Authority's Operating Period Representative in accordance with the reporting requirements set out in Appendix 4A [Services Specifications] and Schedule 14 [Records and Reports].

6.3 Authority Inspection and Audit

Project Co will, on reasonable notice from the Authority:

- (a) permit the Authority to access, review and audit all records, information and reports maintained by Project Co in accordance with this Schedule 4;
- (b) ensure that the Performance Monitoring Program stores information and generates reports such that they are capable of, and readily available for, audit; and
- (c) facilitate and assist the Authority with any audit or inspection of the NG-KIH System, the Services or the Performance Monitoring Program undertaken by the Authority.

6.4 Increased Monitoring

If:

- (a) Project Co incurs Deductions of:
 - (1) \$275,000 (Index Linked) or more in any 1 month period;
 - (2) \$810,000 (Index Linked) or more in any 3 consecutive month period;
 - (3) \$1,600,000 (Index Linked) or more in any 6 consecutive month period; or
 - (4) \$3,250,000 (Index Linked) or more in any 12 consecutive month period;
or
- (b) a Reporting Error (whether related to the same type of Reporting Error or not) occurs on more than three occasions in any 12 consecutive month period,

the Authority may increase its monitoring of the performance by Project Co under this Project Agreement and carry out any inspections and audits which it reasonably requires for a period of up to 90 days. Project Co will reimburse the Authority for all reasonable costs and expenses incurred by the Authority in carrying out such additional monitoring, inspections and audits within 5 Business Days after the Authority delivers an invoice to Project Co for such amounts.

6.5 Authority's Right of Access

The Authority may, at all times during the Operating Period, without notice, access, audit and inspect the NG-KIH System and Project Co's delivery of the Services to confirm the performance by Project Co of its obligations under this Project Agreement and that the NG-KIH System is being maintained in accordance with the terms of this Project Agreement, provided that:

- (a) the Authority does not unreasonably interfere with the performance by Project Co of its obligations under this Project Agreement; and
- (b) the Authority complies with Project Co's safety and security policies, provided that Project Co has delivered copies of such policies to the Authority and such policies do not unreasonably impair or limit the Authority's ability to access all aspects of the NG-KIH System.

If the Parties agree, or if it is determined in accordance with the Dispute Resolution Procedure, that Project Co is performing its obligations under this Project Agreement and the NG-KIH System is being maintained in accordance with the terms of this Project Agreement, then, to the extent that the Authority's exercise of its rights under this Section 6.5 has materially interfered with Project Co's ability to perform the Services, such interference will be treated as an Excusing Event.

7. HANDBACK

7.1 Handback Requirements

Project Co will carry out the Handback Requirements in accordance with Appendix 4B [Handback Requirements].

APPENDIX 4A SERVICES SPECIFICATIONS

1. DEFINITIONS

In this Appendix 4A, in addition to the terms defined in Schedule 1 [Definitions and Interpretation]:

“**Access Point**” means a component of the NG-KIH System that transmits and receives data;

“**AHR Services**” means Advanced Hardware Replacement Services, as described in Section 3.2(b) of this Appendix 4A;

“**Change Control Request**” means the request to provide a change in the configuration of services to a Site Location and is described in Section 2.2(d)(2);

“**Circuit**” means the Access Point or section between two or multiple terminals over which one-way or two-way communications may be provided. A complete path may terminate between an access point “A” and a destination point “Z” and transverse over multiple access points. Each transition point or, section, between access points which the path is required to be configured is determined as a circuit. A circuit is also assigned a unique identifier between each termination point and section;

“**Complex Remote Change**” means a change affecting multiple supported devices, circuits, routing tables or users that can be performed remotely by a NOC provisioning technician, involves an element of risk and require a back out plan in the event problems are encountered and precautionary measures such as device backups are performed;

“**CPE**” means Customer Premise Equipment managed by Project Co unless otherwise stated;

“**Emergency Change**” means an immediate change in the logical or physical configuration of the NG-KIH System to accommodate an Emergency;

“**Equipment List**” means the list of equipment to be installed in the NG-KIH System;

“**Field Locations**” has the meaning set out in Section 2.1(b)(4) of this Appendix 4A;

“**MACD**” has the meaning set out in Section 2.3 of this Appendix 4A;

“**Monthly Fault History Report**” means the report described in Section 2.2(c) of this Appendix 4A;

“**Monthly Incident Report**” means the report described in Section 2.2(a) of this Appendix 4A;

“**Monthly Inventory Report**” means the report described in Section 2.2(b) of this Appendix 4A;

“**Monthly Service Request Report**” means the report described in Section 2.2(d) of this Appendix 4A;

“**NOC**” means the Network Operations Center provided by Project Co or a third party on behalf of Project Co;

“**NOC Incident Ticket**” has the meaning set out in Section 2.1(b)(1) of this Appendix 4A;

“**Product Service Catalog**” has the meaning set out in Schedule 3 [Design and Construction Specifications];

“**Service Request**” has the meaning set out in Section 2.3(a) of this Appendix 4A;

“**Service Request Order**” means the request to provide services to a Site and is described in Section 2.3(c)(3) of this Appendix 4A;

“**Simple Remote Change**” means a change affects a single supported device or circuit and can be performed remotely by a NOC provisioning technician;

“**Simple Remote Speed Change**” means a change that can be made remotely to existing circuits on a single device requiring only a change to the configuration profile of a device within the parameters and capabilities of the existing hardware and within the specifications of the Product Service Catalog;

“**Site Access Plan**” has the meaning set out in Schedule 3 [Design and Construction Specifications];

“**Ticketing System**” has the meaning set out in Section 2.1(b)(2) of this Appendix 4A; and

“**Web Portal**” means the web portal provided by Project Co and accessible by the Authority through the Authority’s two (2) licensed seats providing read-only remote access as further described in Section 2.2(f) of this Appendix 4A.

2. SCOPE OF WORK - OPERATIONS

2.1 Fault Management

(a) Overview

The combination of fault management, incident restoration, problem management, and configuration management fall under the overall umbrella of network management. Project Co will follow Customary Industry Practice network management, maintenance and incident resolution practices to meet or exceed the requirements set out in Section 2 of this Appendix 4A. This fault management is provided through dedicated, redundant and secure Multi-Protocol Label Switching (MPLS) connections between the two (2) geographically diverse NOC data networks and the two (2) geographically diverse Authority gateway elements operating on the NG-KIH System. Project Co will not take responsibility for failures in third party equipment or fiber.

(b) Scope

(1) Fault Management Services

Project Co shall utilize the NOC to remotely monitor the NG-KIH System 7 days a week x 24 hours per day x365 days per year to proactively manage potential network issues. The system monitoring, management

and reporting systems will receive, filter and correlate events and alarms generated by the NG-KIH System when threshold levels as defined in the Operating Plan are exceeded. Incidents may also be reported to the NOC by telephone or email. When an alarm is triggered, the NOC will generate an incident ticket (“**NOC Incident Ticket**”). If the Incident does not clear within 5 minutes a NOC Engineer will be assigned to the ticket to initiate troubleshooting and restoration efforts and will dispatch the ticket to the appropriate workgroup. The Authority’s designated point(s) of contact will be notified of the issue.

(2) Incident and Alarm Notifications

A NOC Incident Ticket will indicate all available information in respect of the incident identified by Project Co’s device management software tools deployed. At a minimum when the NOC Incident Ticket is first created it will include a time stamp and a description of the system impacted to the extent such information is available.

Project Co will correlate and filter incoming alarms based on the capabilities of the specific tools used for monitoring.

As soon as a network fault is detected, a NOC Incident Ticket will be opened in the NOC’s event tracking system which generates all tickets (the “**Ticketing System**”).

(3) NOC Incident Restoration

NOC Incident Restoration includes the activities necessary to correct abnormal and service effecting situations within the NG-KIH System. The NG-KIH System is an end-to-end network composed of network hardware and software, including the Node Sites and Service Level 1 Sites and Service Level 3 Sites. NOC Incident Restoration encompasses these components.

(4) NOC Dispatch Process

If necessary, the NOC personnel will confirm with the Authority’s Operating Period Representative and, in accordance with the Site Access Plan, to obtain Access or make escort arrangements in order for the field technician to gain Access to the relevant Site, or the field locations that are applicable to the Project (the “**Field Locations**”). Once Access is confirmed or escort arrangements are made with the Authority’s Operating Period Representative, the NOC personnel will contact the dispatch organization in the specific region required for the appropriate response time listed for the relevant Site or Field Locations.

If applicable, the Authority escort information will be provided to the dispatch field technician and/or construction crew by the NOC personnel. Arrangements for arrival time and any specific details for Access to the Site or Field Locations will be coordinated directly with the dispatched

technician and/or construction crew and the Authority appointed escort in accordance with the Site Access Plan.

Once at the relevant Site or Field Location, the dispatched field technician's and/or construction crew's arrival time is recorded by the NOC and they will contact the Authority's escort, if applicable, and gain Access to the Equipment at the Site so NOC Incident Restoration can be performed with the NOC.

The NOC will work closely with the field technicians and/or construction crew to coordinate the technician's troubleshooting actions through restoration at the relevant Site.

If an Authority person is available to assist at the Site, at the request of Project Co, the NOC may also work with an Authority person to verify power, provide a visual assessment of any equipment lamp indicators or reset the power on a piece of Equipment. For clarity, the Authority person's involvement will have no impact on how an Incident Ticket is managed or the Deduction regime.

(5) Problem Management

The problem management methodology is used to capture systemic issues that generate repeat NG-KIH System incidents, identify and isolate their root causes and define workarounds or temporary solutions while implementing permanent solutions. Project Co will utilize industry standard tools and techniques to find and eliminate these issues before they become critical issues. Critical issues are those issues that impact multiple Site Locations.

(6) Configuration Management

Configuration management is the detailed recording and updating of information that captures hardware and software configuration details. Such information typically includes the design and configurations of the NG-KIH System, hardware and software revisions, circuit routing information and other information needed for network remediation, restoration and proactive management. Details will be captured regularly and stored within the NOC's inventory list of Equipment. This information is then readily available for disaster recovery, network element recovery, product change notice validation, network simulation and other critical needs as they arise.

2.2 Standard Reporting

Project Co will provide standard reports at regular intervals in a consistent format that includes a statement of purpose, a summary of findings, data collection, conclusions and key recommendations from Project Co's Operating Period Representative. The following standard reports shall be provided as part of Project Co's Fault Management Services within fifteen (15) Business Days after the end of each reporting period:

(a) Monthly Incident Report

This report is designed to track and report the incidents that occur with each item of Equipment and tracked by Project Co monitoring tools and team. This will include the current status of individual Equipment incidents that are logged and tracked within the NOC's Ticketing System. In addition to the structure of the report as described above (Standard Reporting), this report shall include the following data:

- (1) Ticket number
- (2) Device name
- (3) Device type
- (4) Alarm severity (Minor, Major or Critical) if applicable
- (5) Incident description
- (6) Ticket open, issue restored and closed dates
- (7) Ticket status or state (open, closed, restored or pending)
- (8) Time to restore or resolve problem (MTTRespond or MTTRestore), if applicable

(b) Monthly Inventory Report

This report is designed to track and report on the NG-KIH System identified by Project Co's monitoring tools and team. In addition to the structure of the report as described above (Standard Reporting), this report shall include the following data:

- (1) Device name
- (2) Device location
- (3) Product type
- (4) Product software version
- (5) Product hardware version
- (6) Product software revision
- (7) Product hardware revision
- (8) Product IP address

(c) Monthly Fault History Report

This report is designed to track and report the alarms that are being opened and tracked by the NOC monitoring tools and team. This will include the current status by having the individual device alarms logged and tracked within the NOC's Ticketing System. The information gathered will be reviewed and analyzed by Project Co's NOC problem management team. Project Co's Operating Period Representative will report any trends found by Project Co's NOC problem management team and provide recommendations to address findings such as chronic problem resolution. In addition to the structure of the report as described above (Standard Reporting), this report shall include the following data:

- (1) Device name
 - (2) Device type
 - (3) Alarm severity (Minor, Major or Critical), including a time stamp of when the incident as reported
 - (4) Alarm type
 - (5) Alarm description
 - (6) Problem summary
 - (7) Problem status
 - (8) Problem restoration, including a time stamp of when the incident is restored
 - (9) Analysis
- (d) Monthly Service Request Reports

Changes within the NG-KIH System will be tracked and reported by the service request (provisioning) and change control process and reporting. In addition to the structure of the report as described above (Standard Reporting), these reports shall include the following data:

- (1) Monthly Service Request Report - The monthly service request report is designed to include any devices or services that are added to the NG-KIH System in accordance with Schedule 6 [Changes, Minor Works and Innovation Proposals] and will include data such as:
 - (i) Ticket number
 - (ii) Device name
 - (iii) Device type
 - (iv) Circuit ID
 - (v) Site address

- (vi) Status
 - (vii) Number of circuits to configure
 - (viii) Create date
 - (ix) Closed date
 - (x) Time to complete
- (2) Change Control Request Report - The change control request report will cover the changes within the existing environment of the NG-KIH System currently monitored by the NOC and will include such data as:
- (i) Ticket number
 - (ii) Device name
 - (iii) Device type
 - (iv) Circuit ID
 - (v) Change type
 - (vi) Summary
 - (vii) Status
 - (viii) Create date
 - (ix) Closed date

(e) Other Reports

An inventory report is a report that lists the inventory/assets within the managed NG-KIH System. Not all details may be available for all Equipment or Sites. Details will be captured automatically or manually by database backups from the Equipment or applications. Inventory reports are comprised of information input manually or available electronically.

Manual: device TID/hostname/system address, physical locations including site address, GPS coordinates, floor, aisle, rack and shelf location information.

Automatic: device type, serial number, date-of-manufacture, release or version numbers and quantity.

A circuit report which lists the circuit details within the managed NG-KIH System. Not all details may be available for all Equipment or Sites. Details will be captured automatically or manually by database backups from the Equipment or applications. Circuit reports are comprised of information input manually or available electronically

Manual: device TID/hostname/system address, physical locations including site address, GPS coordinates, floor, aisle, rack and shelf location information.

Automatic: device type, serial number, date-of-manufacture, release or version numbers and quantity.

(f) Remote Customer View

Two (2) licenses will be provided for remote customer view via the Web Portal accessed via the internet using a two factor authentication. With remote customer view access, the Authority will have the capability to view the status of the NG-KIH System, generate alarm, condition, configuration, and inventory reports, and other reports as may be developed in accordance with the Enhanced Performance Management. Date and query fields available include device status, IP address, device type, system name, and location. Fields are available for view access only and are restricted from updates. The Authority will be provided access to view tickets along with details of the trouble issue. The Authority's access will provide authorized users with "view-only access" to query, sort and select tickets for further review including the ability to view the ticket's various fields with their respective status and notes.

(g) Root Cause Analysis

Upon request, root cause analysis reports will be provided to the Authority in accordance with the Standard Reporting requirements set out in Section 2.2 of this Appendix 4A.

2.3 Service Provisioning

(a) Overview

Project Co shall perform remote provisioning work within the NG-KIH System. For the purposes of this Appendix 4A, Service Provisioning is referred to as logical Move, Add, Change and Disconnect (MACD). MACD requests are made by the Authority, implemented remotely by Project Co and characterized as Simple Remote Change, Complex Remote Change or Simple Remote Speed Change (the "**Service Request**"). MACD requests are performed remotely on Equipment and may include changes to one or more of the following parameters:

- (1) Circuits
- (2) Ports
- (3) Termination points
- (4) Routing tables
- (5) Access lists
- (6) Passwords

(b) Information Requirements from the Authority

Complete Services Request Form including the required information for provisioning into the NG-KIH System.

(c) Scope

(1) Project Co will be responsible for engineering the Service Request to ensure there is sufficient capacity in the NG-KIH System to implement the Service Request. In the event that a Service Request is not achievable given the NG-KIH System's configuration at the time of the request, the Authority can withdraw the Service Request or proceed in accordance with the terms of Schedule 6 [Changes, Minor Works and Innovation Proposals]. Project Co will undertake the following activities in accordance with the Operating Plan to determine whether the Service Request is achievable in the existing configuration of the NG-KIH System at the time such request is submitted by the Authority:

(i) Complete the pre-engineering service request with specific details necessary to satisfy the Service Request.

(ii) Method of procedures will be coordinated and completed in advance of scheduled need, when applicable.

(2) MACDs are pre-engineered and performed remotely by Project Co, subject to receipt from the Authority of the information described in Section 2.3(b).

(i) Move: The function of remotely moving an existing circuit from one termination point to another in the NG-KIH System.

(ii) Add: The function of remotely adding a new circuit, activating new groups/slots/ports, IP route, routing tables or users within the NG-KIH System.

(iii) Change: The function of remotely changing a group configuration, user level settings, circuit parameters for operations, IP routing in a switched network or DNS Proxy block/unblocks.

(iv) Logical Disconnect: The disconnect of a logical or virtual circuit. The requested action is to remotely disconnect a logical circuit when circuit resources are no longer required. Logical disconnect examples include configuration changes relating to the disconnection or deletion of a port, circuit, or other resources which no longer have purpose on the NG-KIH System.

(3) Project Co will implement remote, logical MACD tasks via the NOC. A service request ticket will be created by the NOC which will be used for scheduling, tracking, notification and detailing the specifics of the Service Request (a "**Service Request Order**").

- (4) Details of the requested change will be documented within the relevant Service Request Order.
 - (5) Notification of start and finish times to the Service Request will be sent to the Authority.
 - (6) Service Request Orders are processed during business hours Monday-Friday, Central time, excluding the NOC's observed holidays. MACDs with any maintenance requiring after-hours or weekend work will require special scheduling. MACDs will be conducted during pre-arranged timeframes after confirmation of request and Project Co personnel assignments have been established. Partial, incorrect and/or incomplete requests are excluded from these timeframes and will be returned for resubmission. For further clarity, the provisioning provided during the initial transition to the NG-KIH System and any System Refresh are not considered MACDs.
 - (7) Project Co administrators will work with the Authority for scheduling MACD implementations. Timeframes for Authority MACD requests will be established as agreed to between the parties and, if possible, within the established timeframes listed in Section 2.6 of this Appendix 4A.
- (d) Simple Remote Speed Change
- (1) A Simple Remote Speed Change is made remotely to existing circuits on a single device requiring only a change to the configuration profile of the device within the parameters and capabilities of the existing hardware and within the specifications of the Product Service Catalog.
 - (2) Simple Remote Speed Changes require existing circuit information be available to the NOC.
 - (3) Changes are made to the configuration of a circuit profile enabling port speed increase or decrease for the requested circuit.
- (e) Expedited Requests
- (1) Expedited requests can be either simple or complex type changes. These requests are based around network security requirements, emergency rerouting of services, removal of terminated employee access codes and other requirements which can be implemented remotely.
 - (2) Expedited requests scheduling – Scheduled within one business day after all specific details are received verified and accepted for the change requested.
 - (3) Number of expedited requests cannot exceed more than 20% of the total monthly requests (i.e. 4 per month to a maximum of 24 per year).
 - (4) Incomplete requests will be returned to the requestor to complete and return prior to scheduling the Service Request.

(f) MACD Quantities

- (1) Project Co will perform, when requested, a total of 120 annual MACDs as part of the Services. The Authority can only request a maximum of twenty (20) MACDs to be completed per month of the 120 annual MACDs included in the Services. Requested MACDs from one month and implemented in the following month will be calculated against the implemented period's MACD quantity. Unused MACDs will expire at the end of Contract Year.
- (2) Additional blocks of MACDs may be purchased as set out in subsection (3) below. An increase over the limit of 20 MACDs in a month can be requested via Schedule 6 [Changes, Minor Works and Innovation Proposals] with 20 Business Days' notice.
- (3) Additional blocks of ten (10) MACDs may be purchased at a price of \$5,250 through the Minor Works process set out in Schedule 6 [Changes, Minor Works and Innovation Proposals].

(g) Scope Exclusions

Requests for device additions, deletions, or complex requests with on-site services for installation or testing are not considered as simple MACD requests and will be supported as a Change. Examples:

- (1) Device addition or deletion from the managed network
- (2) On-site turn-up or testing requirements
- (3) Complex MACD requests which require multiple areas of scheduling, such as:
 - (i) Optical Wavelength Degree Addition
 - (ii) On-site assistance
 - (iii) Fiber testing
 - (iv) Splicing
 - (v) Equipment ordering and distribution
 - (vi) Carrier or provider coordination

2.4 Enhanced Performance Management

(a) Overview

Enhanced performance management aids in the maintenance, operations, and trouble clearing of the Node Sites and Service Level 1 Sites within the NG-KIH System. The performance management functions refer to in-service monitoring of equipment conditions and transmission quality using performance

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management parameter data registers. The enhanced performance management data is collected for critical equipment, SNMP traps as well as for facility section, line and path parameters.

(b) Scope

Project Co's Operating Period Representative will report any trends found by the Project Co's performance management team and provide recommendations to address findings such as chronic problem resolution. Performance management provides monitoring, evaluation, and reporting capabilities for network status and activity. Performance management services have been categorized into the following areas:

- (1) Performance monitoring - Performance monitoring entails providing a near real-time view of the NG-KIH System's performance. Proactive optical performance data such as circuit bit error rate, error seconds for path and other performance data will be reported.
- (2) Trend analysis – Is the process of reporting on long-term performance trends and performance degradation on the NG-KIH System based on historical reporting from archived data. Multiple and periodic conditions, alarms and performance data reported will be analyzed. If alarms, conditions or performance data is observed, they will be tracked, managed and reported as a trend. If a trend is identified, Project Co will work to identify and resolve the issue(s) causing the trend.
- (3) Proactive monitoring – Is the process of early notification of potential network problems based on historical performance statistics and threshold levels. The statistics of alarms, conditions and performance data will be used for proactive management and trend analysis.
- (4) Bandwidth utilization – Project Co shall provide graphical port based bandwidth utilization, errors and discard information (Packet Loss) for each service received by the Node Sites and Service Level 1 Sites.
- (5) Dynamic Reporting – Dynamic reporting provides performance monitoring dashboards and reports that provide analysis and provide near real-time health snapshots of the Equipment. Project Co's performance analyst will utilize a web-based interface to design, build, schedule and deliver reports.
- (6) Alarms, conditions and performance data reported are dependent on the equipment and element management system capability and/or software release capabilities.
- (7) The Authority will be provided with two (2) licenses that provide the ability to view the dynamic reports outlined in Section 2.2(f) on the Web Portal.

2.5 Emergency Requests

Emergency Requests are intended to address Emergencies as declared by the Authority. Examples include a network configuration to accommodate the setup of a government building as an emergency shelter or in the event of a disaster the reconfiguration of data center connections to accommodate increased bandwidth requirements. These requests can be processed outside the NOC's regular operating periods as defined in Section 2.3(c)(6) at the Minor Works Rates (Overtime Hourly Rates) in Schedule 6 [Changes, Minor Works and Innovation Proposals]. Within the NOC's operating periods as defined in Section 2.3(c)(6), the Minor Works Rates (Regular Hourly Rates) in Schedule 6 [Changes, Minor Works and Innovation Proposals] will apply. Project Co will process Emergency Service Request Orders working with the Authority to gather information required to meet the Authority requirements. Project Co will seek to expedite Emergency Requests with timing dependent on the scope and complexity of the request.

2.6 Service Level Objectives

Project Co will be responsible for meeting the performance standards identified in Section 2 of Schedule 8 [Payments]. Any breach of the SLOs set out below will not constitute a Project Co Material Breach. The Service Level Objectives are specified solely for the purpose of setting parameters for high level service to the Sites and do not form any part of the Deduction Metrics set out in Schedule 8 [Payments].

	SLO	Monthly Target Condition	Monthly Boundary Condition
Enhanced Performance Management	Latency		
	End-to-End Service Delay	25ms for 3 consecutive polls 90% of the time	250% of target condition
	Jitter	10ms ±15% for 3 consecutive polls 90% of the time	300% of target condition
	Packet Loss		
	% of packets failed to be delivered on the Core network	<=0.1% 90% of the time.	>15% for 3 consecutive polls 90% of the time.
	Inbound / Outbound Metrics based on <80% utilization		
	Errors	<0.1% delivery failure 90% of the time.	>=0.1% for 3 consecutive polls 90% of the time.
	Discards	<0.1% delivery failure 90% of the time	>=0.1% for 3 consecutive polls 90% of the time

Provisioning	Simple Remote Change	90% scheduled within 5 business days and commissioned within 10 business days	50% scheduled within 5 business days and commissioned within 10 business days
	Simple Remote Speed Change	90% scheduled within 1 business days and commissioned within 5 business days	50% scheduled within 1 business days and commissioned within 5 business days
	Complex Remote Change	90% scheduled within 10 business days and commissioned within 30 business days	50% scheduled within 10 business days and commissioned within 30 business days
	Expedited Requests	90% scheduled within 1 business days and commissioned within 5 business days	50% scheduled within 1 business days and commissioned within 5 business days
Notification			
	Existing SLO	As outlined in Schedule 4 Appendix 4a	

Operation of the SLOs:

- (a) Provisioning and Notification SLOs will apply to all the Sites. All other SLOs apply only to the Rings, Node Sites and Service Level 1 Sites, in accordance with Section 2.4(a) of this Appendix 4A.
- (b) Project Co will track and record any breaches of the boundary conditions on a monthly basis and notify the Authority as part of the Performance Monitoring Plan.

2.7 Lab Services – Integration/Version Control

- (a) Overview

Project Co will build and maintain a lab environment to validate processes and procedures for software releases, replicate and test network management systems and tools, validate new functionality and feature release of software upgrades and resolution of trouble situations solely in respect of the NG-KIH System.

- (b) Scope

- (1) Obtain vendor software updates upon availability.
 - (2) Perform software upgrades and validate interoperability on equipment provided by Project Co as set out in the Equipment List New feature verification and/or regression testing, where applicable.
 - (3) Creation of documented test plan.
 - (4) Setup lab environment with respective equipment, configuration(s), and cabling to match the customer network environment.
 - (5) Document results of test plan for each element and sign-off approval.
 - (6) Verification of design functionality for new equipment refreshes.
 - (7) Testing of issues external to the NG-KIH System (i.e. the Authority applications, equipment, configurations) can be performed at an additional fee and as scheduling permits.
 - (8) Lab Location: The lab will be located at a third party facility.
 - (9) Equipment: The lab equipment and software required for the lab testing will be provided and owned by a third party.
- (c) Scope Exclusions

Testing will be limited to items directly pertaining to NG-KIH System infrastructure performance but does not include any testing of fiber provided by a Third Party Infrastructure Provider.

3. SCOPE OF WORK – MAINTENANCE

The maintenance scope of work referred to in this Section 3, includes the following activities, all of which are further described in the “Overview” sections set out below: Remote Technical Support, Equipment Advanced Hardware Replacement, Equipment On-Site Maintenance and Break/Fix, OSP Maintenance Break Fix, OSP Pole Attachments and OSP Cable Locates.

3.1 Remote Technical Support (RTS)

- (a) Overview

Project Co will provide unlimited remote technical support via the Web Portal and telephone support, through Project Co’s technical assistance center on the equipment supplied by Project Co as part of the NG-KIH System.

- (b) Scope

- (1) RTS telephone support includes:
 - (i) 7 days per week x 24 hours per day x 365 days per year phone access to an Project Co TSE (technical support engineer)

- (ii) Escalation to higher levels of expertise after reasonable investigation time
 - (iii) Escalation to an applicable product support engineer after reasonable investigation time by Tier II or Tier III technical support engineers
- (2) Automated escalation notifications to management (via e-mail) as set out in the Operating Plan
- (i) Overdue CSR state
 - (ii) Outage CSR logged
 - (iii) Outage CSR change of state

(3) Engineering Investigation Request (EIR)

EIRs are used as the primary means to request investigation of design issues found in product that has been released for deployment. The investigation is conducted by the product development team in cooperation with other Project Co organizations including, but not limited to the product support team and the technical assistance center.

(4) Unit Investigation Request (UIR)

UIRs are used as the primary means to request investigation of hardware product issues. The UIR process is designed to provide the Authority and Project Co employees with problem and failure analysis reporting for problems with any equipment listed in the Equipment List.

(5) Access to the Web Portal for online technical information and Customer Service Request management

The Web Portal provides access to the Authority to access product documentation, technical information bulletins (TIBs), product change notices (PCNs) and customer information releases (CIRs), browse the training catalog, schedule training, download product software, track product orders and create online return material authorizations (RMAs). Additionally, through the Web Portal the Authority can view CSRs, including categorized as trouble, maintenance or Service Requests. Service Requests are categorized as a move, add, change or disconnect.

(6) Software Maintenance

Project Co will provide the major, minor, and maintenance release level software that becomes generally available for the equipment set out in the Equipment List and only to Sites. Project Co will monitor major, minor and maintenance software releases that become available by the OEM for the licensed features on the equipment. Quarterly, Project Co will provide a report with the software updates for review by the Authority. Project Co

and the Authority will jointly develop a release plan for lab testing and implementation of software releases within the NG-KIH System.

3.2 Equipment Advanced Hardware Replacement

(a) Overview

This service includes the strategic stocking of new or refurbished fully tested equipment replacement spare units required for dispatch to the Project Co supported break/fix equipment at Sites when required.

(b) Scope

Project Co shall perform the AHR Services in accordance with the provisions of this Appendix 4A. AHR Services are comprised of the delivery of spare equipment to each Site for break/fix repair as well as the warehousing and inventory control of the Project Co supported equipment spares. The required spares are maintained in brick and mortar depots for delivery to the Sites 24 hours per day, 7 days per week, and 365 days per year. Once the NOC validates the need for spare equipment to be delivered to a Site, Project Co will deliver each spare(s) in accordance with the Design and Construction Specifications and these Services Specifications. Project Co will obtain and position required spares in the appropriate storage depots to meet the requirements set out in Section 3.3(b) of this Appendix 4A.

- (1) Project Co storage depots will be setup to house the supported Project Co and OEM equipment spares required to support the Node Sites, Service Level 1 Sites and Service Level 3 Sites within range of specified requirements set out in Section 3.3(b) of this Appendix 4A. Spares coverage will be sufficient to ensure Project Co can achieve the requirements of the Design and Construction Specifications and these Services Specifications.
- (2) Unless otherwise noted, the need for dispatching of any spare equipment shall be determined by the NOC.
- (3) The equipment spares required to manage the Node Sites, Service Level 1 Sites and Service Level 3 Sites will be owned and managed by Project Co and allocated to the NG-KIH System. The Authority defective units shall be traded for Project Co provided working spares based on a one for one swap in ownership.
- (4) Project Co will bear repair costs of defective units taken in trade from the Authority for advanced spare units supplied by Project Co to the Authority and restore repaired units to the Project Co AHR inventory.
 - (i) Defective units shall be returned to Project Co's customer returned goods department for repair and factory certification.
 - (ii) Project Co will manage the return of failed equipment for repair of defective units with the required equipment vendor.

- (iii) The refurbished units are brought up to the latest class “A” and “AC” product change notices per industry standards in GR-209-CORE, or the equivalent thereof.
- (iv) A database of serial numbers is maintained on repair items to identify any units that show chronic problems. These cards are pulled out of circulation and replaced.

3.3 Equipment On-Site Maintenance and Break/Fix

(a) Overview

On-site maintenance service supplements the fault management service through dispatch of experienced telecommunications field technicians with appropriate test equipment to the relevant Site when required for incident restoration. Under the direction of the NOC personnel, the dispatched field technicians will assist with troubleshooting as necessary to promptly return the NG-KIH System back to operational status prior to noted event failures or alarm conditions as seen by the NOC.

(b) Scope

- (1) Through incident restoration efforts, the NOC will identify that on-site assistance is required to isolate trouble within the NG-KIH System.
- (2) Depending on the nature and severity of the alarm, incident or trouble report condition noted by the NOC, the non-emergency restoration efforts will be scheduled within a mutually agreed maintenance window.
- (3) Emergency maintenance windows to implement emergency break/fix repairs to the NG-KIH System will be requested as needed and with as much advance notice as possible. It is understood these requests may occur at any time of any day.
- (4) The NOC personnel will, in accordance with the Site Access Plan, obtain Access or make escort arrangements for a field technician to gain Access to a Site or a Field Location.
- (5) Once Access or escort arrangements, if applicable, are made with the Authority’s Operating Representative the NOC personnel will contact the dispatch organization in the specific region required for the appropriate response time for the relevant Site.
- (6) The Authority escort information, if applicable, will be provided to the dispatch field technician by the NOC personnel. Arrangements for arrival time and any specific details for Access will be worked directly with the dispatched technician and the Authority appointed escort when required.
- (7) Once at the Site, the dispatched field technician’s arrival time will be recorded by the NOC and they will contact the Authority’s escort, if

applicable, and gain Access to the equipment location so event resolution can be performed with the NOC.

- (8) The field technicians will work closely with the NOC to coordinate the technician's troubleshooting actions through restoration and release from Site.
 - (9) Project Co will perform generator maintenance per manufacturer's specifications.
- (c) Prerequisites
- (1) The Authority contact is responsible for facilitating Project Co personnel access upon their arrival to the Site where the support is to be provided. If Project Co is unable to obtain Access to the relevant Site, the Authority agrees that Project Co has the right to invoice the Authority, and the Authority agrees to pay for dispatch fee including (living expenses, if applicable) for the applicable trip made by Project Co dispatched personnel. Provided a Project Co NOC or field technician follows the Site Access Plan, the fee charged to the Authority will not exceed \$150 (hotel, and meal) per diem for any single event. The Authority will not be charged unless the aggregate costs for all such events exceed \$10,000 per annum.
 - (2) If the Authority requests equipment that the Authority wants to have covered by this service to a site other than one already identified in Appendix 7A, Project Co will not be obligated to meet the mutually agreed upon response time until the Authority has advised Project Co of the new location and then the sooner of (a) Project Co advising the Authority that it has completed the deployment requirements for applicable personnel; or (b) 30 days elapse after the Authority advises Project Co of the new site.

3.4 OSP Maintenance Break Fix

(a) Overview

OSP on-site maintenance (OSP OSM) service supplements the fault management service through dispatch of experienced telecommunications field technicians with appropriate test equipment to the relevant Sites when required for incident restoration. Project Co is responsible for OSP OSM and break/fix as part of the Services. Subcontractors may perform some or all of the functions while responding to and addressing OSP OSM network "trouble" issues.

(b) Scope

Project Co will provide skilled, trained crews with working knowledge of the network, properly equipped and available 24 hours a day, 7 days a week, 365 days a year to provide OSP OSM and emergency break/fix repairs for the NG-KIH System. The field technicians and construction crews will work closely with the NOC personnel who will coordinate the field technicians' actions during their

time at the Site. The field technicians and crews will be equipped with appropriate testing and construction equipment and required supplies to complete repairs in a timely manner.

Once the NOC has made Access arrangements in accordance with the Site Access Plan with the Authority, the NOC will contact the Project Co technician and provide Access and escort information, as necessary. Arrangements for arrival time and any specific details for Access will be worked directly between the technician and the Authority's appointed escort when required. This may include access approval from local public emergency responders.

Once at the relevant Site or the Field Location, the dispatched field technicians will report arrival time to the NOC and the NOC will contact the Authority's escort, if applicable, and gain Access to the affected Site or Field Location so event resolution can be performed with the NOC.

Project Co is responsible for the following tasks, unless it is specifically indicated otherwise:

- (1) The materials and equipment shall be applied, installed, connected, erected, utilized, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator or processor, except as otherwise provided in Schedule 3 [Design and Construction Specifications].
- (2) Project Co and their contractors will be responsible for any traffic control, flagmen, traffic control plans and traffic control permits that are necessary for each repair event.
- (3) Project Co will conduct the work, provide traffic control and safe working conditions as required by permit, municipal, county, state, or federal regulations, industry standards, and as otherwise outlined in this Appendix 4A.
- (4) Project Co will provide collection and disposal of the equipment associated with the repair event.
- (5) Project Co will coordinate and work with the other utilities, local municipalities, county, city, state agencies or other third parties that may be involved in the work required.
- (6) Project Co shall carry a copy of Permits as required.
- (7) Project Co will be responsible for the restoration materials such as sod, decorative bark, concrete or asphalt repairs.
- (8) Project Co will require spare dark fibers equal, at a minimum, to 25% of the NG-KIH System's capacity for temporary traffic restoration. Spare dark fibers will be used on all backbone segments, spur fiber routes to the Service Level 1 Sites and spur routes to the Service Level 3 Sites. It will be the Authority's responsibility to fund capacity expansion should the

25% minimum be breached. For the purposes of planning for capacity expansion, Project Co will notify the Authority when there is less than 40% spare capacity available on any single segment. If the 25% minimum is breached, capacity will be evaluated and increased as mutually agreed to via a Change in accordance with Schedule 6 [Changes, Minor Works and Innovation Proposals].

- (9) Maintenance of generators installed during Construction at the Huts includes 4 preventative maintenance routines annually.

(c) Scope Exclusions

Preventative maintenance at COLO Sites includes equipment and/or cabling installed by Project Co.

- (1) HVAC Break/Fix and Maintenance at Huts and COLO Sites
- (2) Fire Suppression PM's and Maintenance/Break Fix
- (3) Housekeeping/Janitorial Services at the shelter locations
- (4) Landscaping, Weed Abatement and Snow Removal
- (5) Locks, Gates, Security and Fencing of compounds

3.5 OSP Pole Attachments

(a) Scope

Project Co will be responsible for maintaining current as-built drawings with utility pole attachment identification and pole ownership. The Pole Attachment Fees will be verified through continually updated OSP design records and periodic audits. Project Co, on behalf of the Authority, will make payment to the pole owners for the Pole Attachment Fees.

(b) Scope Exclusions

Pole replacements that exceed \$25,000 in aggregate over the Term and Pole Owner/Right of Way owner relocations of the Outside Plant facilities including but not limited to Aerial OSP fiber cable and attachments, underground conduit and manhole/handholes and fiber cable.

3.6 OSP Cable Locates

(a) Overview

Project Co or the Service Provider is an active member of the Kentucky811 utility locate network. This service provides a single phone number or Web access for scheduling the location and marking of the utility services.

(b) Scope

Services provided through membership in the Kentucky811 service kentucky811.org combined with cable locating and marking services that will be performed by Project Co. The Kentucky811 fee per locate request cost as well as the locate service per ticket cost will be the responsibility of Project Co.

Once the 811 service request is logged, a field technician will be dispatched to locate NG-KIH OSP underground conduit based fiber network facilities using a locating wire or metallic component of the fiber cable.

APPENDIX 4B HANDBACK REQUIREMENTS

1. DEFINITIONS

In this Appendix 4B, in addition to the definitions set out in Schedule 1 [Definitions and Interpretation] to this Agreement:

“**Handback Inspections**” has the meaning set out in Section 2.2(a) of this Appendix 4B;

“**Handback Requirements**” means the requirements for the condition of the NG-KIH System on the Expiration Date described in Section 2.1 of this Appendix 4B;

“**Handback Works**” has the meaning set out in Section 2.2(a)(2) of this Appendix 4B;

“**Handback Workplan**” has the meaning set out in Section 2.3(b) of this Appendix 4B; and

“**Operational**” means the NG-KIH System is free of alarm conditions.

2. NG-KIH SYSTEM HANDBACK

2.1 Handback Requirements

On the Expiration Date, the NG-KIH System shall be Operational.

2.2 Handback Inspections

- (a) Prior to the Expiry Date, Project Co and the Authority will conduct two joint inspections of the NG-KIH System (the “**Handback Inspections**”) that:
 - (1) identify the condition of the NG-KIH System and each of its equipment and software elements as of the date of such Handback Inspection in relation to the Handback Requirements; and
 - (2) identify any works required to ensure the NG-KIH System and its equipment and software elements will meet the Handback Requirements as at the Expiry Date (the “**Handback Works**”).
- (b) The first Handback Inspection shall take place at a time, specified by the Authority following consultation with Project Co, that is no more than 18 months and not less than 12 months prior to the Expiration Date. The second Handback Inspection shall take place at a time, specified by the Authority following consultation with Project Co, that is no more than 6 months and not less than 3 months prior to the Expiration Date.

2.3 Procedure Following Handback Inspections

- (a) Within 60 days following the first Handback Inspection and within 30 days following the second Handback Inspection, if the relevant Handback Inspection indicates that any Handback Works are required, Project Co shall prepare and deliver to the Authority a comprehensive work plan and schedule that details

Project Co's plans for completing the Handback Works identified during the relevant Handback Inspection.

- (b) The Authority shall review and provide any comments on the work plan within 10 days following the receipt of the work plan described in Section 2.3(a). Once agreed upon between the parties, acting reasonably, such work plan will be considered the "**Handback Workplan**".
- (c) The Handback Workplan will only apply to equipment set out in the Equipment List and only to Sites.
- (d) Project Co shall carry out the Handback Workplan so as to meet the Handback Requirements on the Expiration Date.

**SCHEDULE 5
INSURANCE REQUIREMENTS**

1. DEFINITIONS

In this Schedule 5, in addition to the terms defined in Schedule 1 [Definitions and Interpretation]:

“**Actual Coverage Amount**” has the meaning set out in Section 4.12 of this Schedule 5;

“**Notifying Party**” has the meaning set out in Section 4.12 of this Schedule 5; and

“**Prudent Coverage Amount**” has the meaning set out in Section 4.12 of this Schedule 5.

2. CONSTRUCTION PERIOD INSURANCE REQUIREMENTS

2.1 “All Risks” Builder’s Risk Insurance

During the Construction Period, Project Co shall, at its own expense, take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, course of construction insurance against “all risks” of physical loss or damage except to extent such loss or damage is caused by a Compensation Event, including delay in start-up covering all materials, property, structures and equipment purchased for, entering into or forming part of the NG-KIH System, while located anywhere within the United States of America during construction, erection, installation and testing of the NG-KIH System, which will include the following terms:

- (a) coverage in an amount not less than \$100,000,000 per occurrence and in the aggregate to replace the NG-KIH System to a minimum of all applicable codes, subject to the following principle extensions and sublimits:
 - (1) replacement cost valuation (property);
 - (2) most recent technology replacement cost valuation (equipment);
 - (3) flood (to policy limit with annual aggregate permitted);
 - (4) natural or man-made earth movement, including earthquake, landslide or subsidence (to policy limit with annual aggregate permitted);
 - (5) for property insured under the policy and stored at an off-site location or in transit in the United States of America – minimum \$10,000,000 sublimit;
 - (6) the full value of all materials and equipment forming part of the NG-KIH System lifted on-site by cranes during the Construction;
 - (7) professional fees – minimum \$2,500,000 sublimit;
 - (8) firefighting expenses – minimum \$250,000 sublimit;
 - (9) debris removal and clean up – minimum \$1,000,000 sublimit;

- (10) expediting expenses – limited to 25% of damage/claim, subject to maximum \$2,000,000 sublimit;
 - (11) extra and expediting expenses – maximum \$5,000,000 sublimit;
 - (12) change in ordinance, including demolition, increased cost of repairs and replacement – minimum \$15,000,000 sublimit;
 - (13) valuable papers – minimum \$500,000 sublimit;
 - (14) accounts receivable;
 - (15) contamination clean-up or removal – minimum \$250,000 sublimit;
 - (16) \$10,000,000 of recurring soft costs;
 - (17) margin of profit for contractors;
 - (18) off premises services interruption (minimum 4 weeks);
 - (19) civil authority (minimum 4 weeks);
 - (20) prevention of ingress / egress (minimum 4 weeks);
 - (21) underground services, temporary buildings and structures, temporary boilers and pressure vessels, scaffolding, false work, forms, excavation, site preparation, landscaping and similar work;
 - (22) electronic data processing equipment and media, including the cost to restore from the application of by-laws or ordinances;
 - (23) non-vitiation;
 - (24) waiver of subrogation in favor of all named and unnamed insureds, including but not limited to Project Co, the Authority, Operations Co, the Project Contractors, the Collateral Agent, the Sub-Contractors, consultants and design professionals; and
 - (25) permit use and occupancy of the incomplete NG-KIH System by Project Co, Operations Co, the Project Contractors, the Sub-Contractors and the Authority prior to the relevant Site Completion Date, Lateral Completion Date or Ring Completion Date, as applicable;
- (b) delay in start-up coverage:
- (1) in an amount not less than \$31,200,000, sufficient to compensate Project Co for additional capital payments, additional interest for the extension of financing necessary for the completion of the Design and Construction, legal and accounting expenses, insurance premiums, building permits and other miscellaneous costs, various incurred fees, fixed operation and maintenance expenses, additional commissions, advertising, margin of profit for Operations Co, caused by the delay in Site Completion, Ring

- Completion or System Completion resulting from any perils insured under (a) above;
- (2) having an indemnity period not less than 12 months in respect of the NG-KIH System; and
 - (3) having a waiting period of not greater than 14 days;
- (c) deductibles, per occurrence, not exceeding the following amounts;
- (1) flood – \$500,000;
 - (2) earthquake – \$250,000;
 - (3) LEG 3 – \$250,000;
 - (4) for all other insured perils – \$100,000; and
 - (5) if more than one event occurs, only the highest deductible applies;
- (d) include, as named insureds, as their interests may appear the following entities:
- (1) Project Co;
 - (2) the Authority;
 - (3) Operations Co and the Project Contractors;
 - (4) all Sub-Contractors, consultants and sub-consultants as their interests may appear; and
- (e) include Lender Endorsements substantially in the form set out in Appendix 5A, including, without limitation, naming the Collateral Agent as additional insured and loss payee, and, with respect to the delay in start-up coverage referred to in Section 2.1(b) of this Schedule 5, name Project Co and the Collateral Agent as the exclusive loss payees.

2.2 Project Specific Commercial General Liability Insurance

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, project specific commercial general liability insurance ISO form CG 00 01 4/13 on a wrap-up basis, which will include the following terms:

- (a) coverage in an amount of not less than \$2,000,000 per occurrence and \$4,000,000 in the annual aggregate for bodily injury, death and damage to property, including loss of use thereof, subject to the following principle extensions and sublimits:
 - (1) products & completed operations for a minimum of 10 years after the relevant Site Completion Date, Lateral Completion Date or Ring Completion Date, as applicable;

- (2) ongoing operations coverage during the warranty period;
 - (3) medical payments – \$10,000 per occurrence / \$10,000 aggregate;
 - (4) blanket written contractual liability;
 - (5) personal injury and advertising;
 - (6) cross liability and severability of interests;
 - (7) hazardous operation XCU (excavating / underpinning / pile driving / shoring / caisson work / work below ground surface / tunneling / grading and similar operations;
 - (8) watercraft (not in excess of 25 ft.) unless insured elsewhere, as applicable;
 - (9) non-vitiation; and
 - (10) waiver of subrogation in favor of all named and additional insureds as required by contract, including but not limited to Project Co, the Authority, Operations Co, the Project Contractors, all Sub-Contractors and the Collateral Agent;
- (b) a deductible not exceeding \$25,000 per occurrence and \$500,000 in the aggregate;
 - (c) include, as additional named insureds, using appropriate endorsements, Project Co, the Authority, Operations Co, the Project Contractors and the Sub-Contractors; and
 - (d) include Lender Endorsements substantially in the form set out in Appendix 5A, including, without limitation, naming the Collateral Agent as additional insured.

2.3 Worker's Compensation

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, worker's compensation insurance for each employee in conformance with applicable Law, which will include the following terms:

- (a) a voluntary compensation endorsement;
- (b) an alternative employer endorsement;
- (c) an endorsement extending coverage to all states operations on an "in any" basis; and
- (d) if any work is over or adjacent to navigable waters, coverage for any claims arising from the Longshore and Harbor Workers' Compensation Act and/or the Merchant Marine Act of 1920.

2.4 Employer's Liability

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, employer's liability insurance, which will include the following terms:

- (a) coverage in the amount of not less than \$1,000,000 per claim and in the aggregate against liability for death, bodily injury, illness or disease for all employees working on or about any Lands or otherwise engaged in the Design and Construction;
- (b) a deductible not exceeding \$1,000,000 per claim; and
- (c) include Project Co, Operations Co and the Authority as additional insureds.

2.5 Automobile Liability

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, automobile liability coverage, which will include the following terms:

- (a) coverage in the amount of not less than \$1,000,000 per claim and in the aggregate, inclusive of defense, for accidental death, bodily injury, and property damage liability arising from the ownership, maintenance or use of all owned, non-owned, and hired vehicles used in the performance of the Design and Construction, including loading and unloading;
- (b) a deductible not exceeding \$1,000,000 per claim; and
- (c) include Project Co, Operations Co and the Authority as designated insureds.

2.6 Excess Liability

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, umbrella/excess liability insurance in the amount of \$50,000,000 per occurrence/annual aggregate. Such policy or policies shall be excess of and follow form over the primary insurance required in Section 2.2.

2.7 Railroad Protective Liability

During the Construction Period, Project Co will take out, maintain in force and extend, or cause the Design-Builder and its Sub-Contractors, as appropriate, to take out, maintain in force and extend, railroad protective liability coverage as may be required by any railroad in connection with the Design and Construction performed across, under or adjacent to the railroad's tracks or railroad's right-of-way, which is in a form acceptable to the railroad and shall name the railroad as named insured.

2.8 Professional Liability

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, project specific professional liability insurance, which will include the following terms:

- (a) coverage in an amount of not less than \$15,000,000 per claim and in the aggregate (inclusive of defense and related costs and supplementary payments) for all architectural, engineering, land surveying, environmental, landscape architectural, interior design /space planning, soil and material testing services, geotechnical services and procurement services, including their replacements and/or sub-consultants of any tier subject to the following principle extensions:
 - (1) primary insurance extension;
 - (2) include as insureds any present or former partner, executive officer, director, shareholder of any named insured while acting within their scope of duties for the named insured;
 - (3) claim defined as a written or oral demand for money or a written or oral allegation of liability or responsibility for a breach of professional duty in the rendering or failure to render professional services by an insured and resulting from a single error, omission or negligent act;
 - (4) lawyer fees and associated expenses incurred in the investigation, defense, settlement, arbitration or litigation of claims;
 - (5) duty to defend, even if the allegations are groundless, false or fraudulent;
 - (6) indemnification endorsement covering the vicarious liability of Project Co and Operations Co; and
 - (7) extended reporting period – minimum 60 months after the System Completion Date;
- (b) a deductible not exceeding \$500,000 per claim; and
- (c) include, as named insureds, the Project Contractors and all Sub-Contractors (as appropriate) and all engineering, architecture and other professional consultants that provide professional design services in connection with the Project.

2.9 Project Specific Pollution Liability (Contractor's Pollution Liability Wrap-up)

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, project specific contractor's pollution liability wrap-up insurance, which will include the following terms:

- (a) coverage in the amount of not less than \$25,000,000 per claim and in the aggregate inclusive of defense and all costs and expenses subject to the following principle extensions:

- (1) third party bodily injury and third party contamination;
 - (2) hazardous substances released or exacerbation of pre-existing contamination at the NG-KIH System or the Lands due to construction activities during the policy period;
 - (3) microbial matter (including fungus/mold);
 - (4) release from unknown underground / above ground storage tanks due to construction activities;
 - (5) disposal site (reporting required);
 - (6) emergency response costs – minimum \$1,000,000 sublimit;
 - (7) completed operations period – minimum 10 years after the System Completion Date; and
 - (8) waiver of subrogation in favor of all additional insureds, including but not limited to any and all indemnified parties where required by contract and the Collateral Agent;
- (b) a deductible not exceeding \$50,000 per claim and \$200,000 in the aggregate;
- (c) include, as named insureds, the following entities:
- (1) Project Co;
 - (2) the Authority;
 - (3) Operations Co and the Project Contractors; and
 - (4) all Sub-Contractors, consultants and sub-consultants; and
- (d) include Lender Endorsements substantially in the form set out in Appendix 5A, including, without limitation, naming the Collateral Agent as additional insured.

For clarity, the pollution liability wrap-up insurance shall only include coverage for environmental risks relating to the exacerbation of pre-existing contamination and any new pollutants related to the Project. The remediation of pre-existing contamination shall be the responsibility of the Authority.

2.10 Aircraft Liability

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, aircraft liability insurance (if applicable), which will include the following terms:

- (a) coverage in the amount of not less than \$10,000,000 per occurrence for all owned and non-owned aircraft, including \$10,000,000 per occurrence for passenger hazard subject to the following principal extensions:

- (1) all aviation risks including the use of fixed or variable winged aircraft and helipads (if applicable);
 - (2) waiver of subrogation in favor of all additional insureds, including but not limited to Project Co, the Authority, Operations Co, the Project Contractors, the Collateral Agent, the Sub-Contractors; and
 - (3) include coverage for Project Co, Operations Co, the Project Contractors and all Sub-Contractors, as additional insureds, as applicable;
- (b) a deductible not exceeding an amount acceptable to the Authority, acting reasonably; and
- (c) include, as additional insureds, the Authority and the Collateral Agent.

2.11 Aircraft Cargo Insurance

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, aircraft cargo insurance (if applicable) for losses arising from the physical damage to cargo while it is in transit by air for any of the materials, equipment or property supplied under or used during the Project and which are critical to achieve System Completion, which will include the following terms:

- (a) coverage in an amount not less than the full replacement value of the shipment subject to the following principal extensions;
 - (1) subject to the conditions of the Institute Cargo Clauses (all risks), including war and strikes extensions and including transit and storage where applicable;
 - (2) 50/50 clause; and
 - (3) warehouse to warehouse clause;
- (b) coverage for Project Co, Operations Co, the Project Contractors and all Sub-Contractors;
- (c) a deductible not exceeding an amount acceptable to the Authority, acting reasonably;
- (d) delay in start-up arising from the loss of a shipment subject to a minimum indemnity period acceptable to the Authority, acting reasonably; and
- (e) include, as loss payees, the Authority and the Collateral Agent, as their interests may appear.

2.12 Watercraft Liability

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, watercraft liability insurance (if applicable), which will include the following terms:

- (a) coverage in the amount of not less than \$10,000,000 per occurrence for all owned and non-owned watercraft, including \$10,000,000 per occurrence for passenger hazard subject to a waiver of subrogation in favor of all named and unnamed insureds, including but not limited to, Project Co, the Authority, Operations Co, the Project Contractors, the Collateral Agent and the Sub-Contractors;
- (b) a deductible not exceeding an amount acceptable to the Authority, acting reasonably; and
- (c) include, as additional insureds, the Authority and the Collateral Agent.

2.13 “All Risks” Ocean Marine Cargo

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, “all risks” ocean marine cargo insurance (if applicable) for any of the materials, equipment or property supplied under or used during the Project and which are critical to achieve System Completion, which will include the following terms:

- (a) coverage in an amount not less than the full replacement value of the shipment;
- (b) a deductible not exceeding an amount acceptable to the Authority, acting reasonably;
- (c) delay in start-up arising from the loss of a shipment subject to a minimum indemnity period acceptable to the Authority, acting reasonably; and
- (d) include, as loss payees, the Authority and the Collateral Agent, as their interests may appear.

2.14 Employee Dishonesty (Crime)

During the Construction Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, employee dishonesty insurance against the fraudulent acts of employees of Project Co, which will include coverage in the amount of not less than \$1,000,000 per claim and will include the following principal extensions:

- (a) broad form money and securities;
- (b) money orders and counterfeit paper;
- (c) depositors’ forgery;
- (d) computer fraud and funds transfer fraud;
- (e) audit expenses; and
- (f) credit card forgery.

3. OPERATING PERIOD INSURANCE REQUIREMENTS

3.1 Project Specific Commercial General Liability Insurance

During the Operating Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, project specific commercial general liability insurance ISO Form CG 00 01 04/13 on a wrap-up basis, which will include the following terms:

- (a) coverage in an amount of not less than \$1,000,000 per occurrence and \$2,000,000 in the annual aggregate for bodily injury, death and damage to property including loss of use thereof subject to the following principle extensions and sublimits;
 - (1) product and completed operations – \$2,000,000 in the aggregate;
 - (2) medical payments – \$10,000 (any one person);
 - (3) blanket written contractual liability;
 - (4) advertising and personal injury – \$1,000,000 (any one person);
 - (5) cross liability and severability of interests;
 - (6) hazardous operation XCU (excavating / underpinning / pile driving / shoring / caisson work / work below ground surface / tunneling / grading and similar operations;
 - (7) watercraft (not in excess of 25 ft.) unless insured elsewhere, as applicable;
 - (8) non-vitiation; and
 - (9) waiver of subrogation in favor of all additional insureds, including but not limited to the Collateral Agent;
- (b) a deductible not in excess of \$25,000 per occurrence and \$150,000 in the aggregate;
- (c) include, as additional named insureds, Project Co, the Authority, Operations Co and the Service Provider; and
- (d) include Lender Endorsements substantially in the form set out in Appendix 5A, including, without limitation, naming the Collateral Agent as additional insured.

3.2 Worker's Compensation

During the Operating Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, worker's compensation insurance for each employee in conformance with applicable Law, which will include the following terms:

- (a) a voluntary compensation endorsement;

- (b) an alternative employer endorsement;
- (c) an endorsement extending coverage to all states operations on an “in any” basis; and
- (d) if any work is over or adjacent to navigable waters, coverage for any claims arising from the Longshore and Harbor Workers' Compensation Act and/or the Merchant Marine Act of 1920.

3.3 Employer’s Liability

During the Operating Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, employer’s liability insurance, which will include the following terms:

- (a) coverage in the amount of not less than \$1,000,000 per claim and in the aggregate against liability for death, bodily injury, illness or disease for all employees working on or about any Lands or otherwise engaged in the Services;
- (b) a deductible not exceeding \$1,000,000 per claim; and
- (c) include Project Co, Operations Co and the Authority as additional insureds.

3.4 Automobile Liability

During the Operating Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, automobile liability coverage, which will include the following terms:

- (a) coverage in the amount of not less than \$1,000,000 per claim and in the aggregate, inclusive of defense, for accidental death, bodily injury, and property damage liability arising from the ownership, maintenance or use of all owned, non-owned, and hired vehicles used in the performance of the Services, including loading and unloading;
- (b) a deductible not exceeding \$1,000,000 per claim; and
- (c) include Project Co, Operations Co and the Authority as designated insureds.

3.5 Excess Liability

During the Operating Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, umbrella/excess liability insurance in the amount of \$25,000,000 per occurrence/annual aggregate. Such policy or policies shall be excess of and follow form over the primary insurance required in Section 3.1.

3.6 Project Specific Pollution Liability Insurance

During the Operating Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, project specific pollution liability insurance covering the Service Provider’s or any Sub-Contractor’s acts or omissions causing or exacerbating pollution, which will include the following terms:

- (a) coverage in the amount of not less than \$5,000,000 per claim and in the annual aggregate (multi-year policies will be allowed) inclusive of defense and all costs and expenses subject to the following principle extensions:
 - (1) hazardous substances occurring or emanating from the Project that are due to a release(s) associated with restoration or maintenance of the NG-KIH System or the Lands during the operations activities;
 - (2) microbial matter (including fungus/mold);
 - (3) unknown underground / above ground storage tanks due to operations activities;
 - (4) disposal site (reporting required);
 - (5) emergency response costs – minimum \$1,000,000 sublimit; and
 - (6) optional extended reporting period – minimum 12 months in the event of termination of the Policy or termination of the Project Agreement;
- (b) waiver of subrogation in favor of all additional insureds, including but not limited to the Collateral Agent;
- (c) a deductible not exceeding \$250,000 per claim;
- (d) include, as named insureds, Project Co, the Authority, Operations Co and the Service Provider; and
- (e) include Lender Endorsements substantially in the form set out in Appendix 5A, including, without limitation, naming the Collateral Agent as additional insured.

For clarity, the pollution liability insurance shall only include coverage for environmental risks relating to the exacerbation of pre-existing contamination and any new pollutants related to the Project. The remediation of pre-existing contamination shall be the responsibility of the Authority.

3.7 Employee Dishonesty

During the Operating Period, Project Co will take out, maintain in force and extend, or cause to be taken out, maintained in force and extended, employee dishonesty insurance against the fraudulent acts of employees of Project Co which will include coverage in the amount of not less than \$1,000,000 per claim and will include the following principal extensions:

- (a) broad form money and securities;
- (b) money orders and counterfeit paper;
- (c) depositors' forgery;
- (d) computer fraud and funds transfer fraud;
- (e) audit expenses; and

- (f) credit card forgery.

3.8 Other Operating Period Insurance

During the Operating Period when construction, rehabilitation or major repair work is being carried out by or on behalf of Project Co under this Project Agreement and the risks associated with such work are not insured by the insurance described in the policies described in Section 2 (Construction Period Insurance Requirements) or Section 3 (Operating Period Insurance Requirements) of this Schedule 5, Project Co will, subject to Section 2 (Construction Period Insurance Requirements) of this Schedule 5, take out, maintain in force and renew or will cause to be taken out, maintained in force and renewed such insurance described in Section 2 (Construction Period Insurance Requirements) in such amounts, as a prudent owner would reasonably require, as determined by the Authority, acting reasonably, at least 10 Business Days before the commencement of the applicable period during which the insurance is required. To the extent such work is undertaken pursuant to a Change Certificate and such work is not covered in the policies described in Section 2 (Construction Period Insurance Requirements) or Section 3 (Operating Period Insurance Requirements) of this Schedule 5, the Change Certificate for such work will include such insurance coverage as the Authority, acting reasonably, considers necessary in the circumstances.

4. GENERAL INSURANCE PROVISIONS

4.1 Insurance Representative

Before commencing any Construction, Project Co will appoint an insurance representative who will communicate with the Authority and keep the Authority advised of all material matters related to insurance, including claims, possible claims and policy changes or amendments. Project Co will at all times maintain such a representative throughout the Term and Project Co will advise the Authority promptly of any change in such representative during the Term.

4.2 Cooperation with Insurer's Consultants

If an insurer or an insurer's appointed consultant, for underwriting purposes, in connection with a claim or as a term or condition of an insurance policy, needs to review any part of the performance of this Project Agreement, then the Authority and Project Co shall, and each of them shall require the Authority Persons and the Project Co Persons, respectively, to:

- (a) cooperate with the insurer and its consultant, including providing them with such information and documentation as they may reasonably require; and
- (b) allow the insurer and its consultant to attend meetings between Project Co and the Authority (or, as applicable, and if reasonably required by the insurer, between Project Co and those engaged by or through Project Co).

Project Co and the Authority covenant and agree with each other to do all acts, matters and things as may be reasonably necessary or required to expedite the adjustment of any claim for loss or damage covered by insurance hereunder so as to expedite the release and disposition of such insurance in the manner and for the purposes herein contemplated.

4.3 Additional Insurance

Except where specifically provided, none of the insurance coverage amounts or sublimits specified in this Schedule 5 limit the liability of Project Co with respect to any obligations of Project Co to the Authority arising under this Project Agreement. Project Co will obtain and maintain, or cause to be obtained and maintained, at its cost, all such other policies of insurance required by Law or which Project Co deems necessary having regard for the policies of insurance which prudent owners and operators of projects of similar scope and magnitude to the Project would maintain and obtain, or cause to be obtained and maintained, including directors and officers liability and corporate indemnification insurance.

4.4 Insurers and Terms of Policies

Project Co will ensure that all policies for the insurance pursuant to this Schedule 5 are obtained and maintained with Qualified Insurers and, subject to this Schedule 5, are in such forms and contain such terms and conditions which are equal to or better than those that would be obtained by prudent owners and operators of projects of similar scope and magnitude to the Project and, in addition to the required inclusions or permitted exclusions for each policy specifically described in this Schedule 5, include such other inclusions and exclusions as such prudent owner or operator would require or permit.

4.5 Downgrade of Insurer

In the event that any insurer's financial strength rating falls below B+ with A.M. Best, Project Co will, as soon as reasonably practicable and, in any event, within 30 Business Days, obtain and maintain a replacement for the relevant policy of insurance from a Qualified Insurer.

4.6 Particular Requirements of Policies

Without limiting the generality of this Schedule 5 and the provisions of Section 6 (Insurance, Damage and Destruction) of this Project Agreement, each project specific commercial policy of insurance required under this Project Agreement will:

- (a) bear an endorsement such that the insurer:
 - (1) will not effect any adverse material change or amendment to the policy without first giving at least 75 days' prior written notice by registered mail to the Authority and each of the other named insureds and loss payees;
 - (2) will provide at least 30 days' prior written notice of cancellation for non-payment of premium; and
 - (3) will provide at least 75 days' prior written notice of cancellation prior to the expiration of the term of such policy,

provided that all Construction Period insurances required under Sections 2.1 through 2.9 of this Schedule 5 will be non-cancellable except for non-payment of premium, material misrepresentation or concealment of facts;

- (b) contain an endorsement such that the policy will not be invalidated and coverage thereunder will not be denied to any insureds by reason of any breach or

violation of representations, declarations or conditions contained in the policy other than as a result of a negligent act, misrepresentation or omission of such insured; and

- (c) be primary and not require the sharing of any loss by any insurer of the Authority or any other named insured.

4.7 Evidence of Insurance

In respect of those policies of insurance required to be maintained by Project Co pursuant to this Schedule 5, upon the issue of each such policy and within 60 days following every renewal of each such policy, Project Co will deliver to the Authority a certificate of insurance or, with respect to project specific policies only, a certified copy of each such policy or other satisfactory evidence of adequate insurance. No review or approval of any insurance certificate or insurance policy by the Authority will derogate from or diminish such party's rights under this Project Agreement.

4.8 Claims

Project Co will:

- (a) in accordance with Schedule 14 [Records and Reports], maintain an electronic register of all claims and incidents that might reasonably result in a claim under any of the policies of insurance required by this Project Agreement and will allow the Authority to inspect such register at any time, which register will, for clarity, exclude any Protected Personal Information in accordance with applicable Law; and
- (b) notify the Authority and provide full particulars (excluding, for clarity, any Protected Personal Information in accordance with applicable Law) of any incident giving rise to a claim:
 - (1) within 5 Business Days after making any claim under any of the policies for the insurance required by this Project Agreement where the value of the claim exceeds \$25,000; or
 - (2) immediately:
 - (A) after any property loss; and
 - (B) after any claim (regardless of the value of the claim) involving personal injury or death, accompanied by full particulars of the incident giving rise to the claim.

4.9 Deductibles

Project Co will be responsible for the deductible portion of, or waiting period for, any claim made on any policy of insurance described in this Schedule 5.

4.10 Compliance

- (a) Project Co will comply with the terms, conditions and requirements of all policies for the insurance required by this Schedule 5 and will not do or omit to do, or permit to be done or omitted by any Project Co Person, anything on or with respect to the NG-KIH System or the Lands that could reasonably be expected to result in the cancellation of any insurance described in this Schedule 5, or that would reasonably be expected to entitle any insurer to refuse to pay any claim under the policy for any such insurance.
- (b) The Authority will not do, or permit to be done by any Authority Person, anything on or with respect to the NG-KIH System or the Lands that could reasonably be expected to result in the cancellation of any insurance described in this Schedule 5, or that would reasonably be expected to entitle any insurer to refuse to pay any claim under the policy for any such insurance.
- (c) The Authority and Project Co will, and Project Co will cause Operations Co, the Project Contractors and the Sub-Contractors to, comply with all insurance policy warranties made known to them.

4.11 Failure to Insure

Subject to Section 6.10 (Consequences of Risks becoming Uninsurable) of this Project Agreement, if Project Co fails or refuses to obtain or maintain in force any insurance required to be effected by it under this Schedule 5, or to provide evidence of such insurance and renewals in relation thereto as and when required and in accordance with this Schedule 5, the Authority will, without prejudice to any of its other rights under this Project Agreement or otherwise, have the right itself to procure such insurance, in which event any amounts paid by the Authority for that purpose together with all reasonable costs incurred by the Authority in procuring such insurance will become due and payable by Project Co to the Authority and the Authority may set off such amounts against any payments due by the Authority to Project Co under this Project Agreement.

4.12 Increase in Amount of Coverage

The Authority and Project Co will ensure that, throughout the Operating Period, the amounts of coverage in respect of the policies of insurance required to be obtained and kept in force under Section 3 of this Schedule 5 are not less than the greater of the amounts:

- (a) specified in Section 3.1; and
- (b) of coverage that would be obtained from time to time by prudent owners and operators of projects of similar scope and magnitude as the Project in respect of such policies of insurance,

(each, a **“Prudent Coverage Amount”**). If, at any time, a party (the **“Notifying Party”**) determines that the amount of coverage then in effect (the **“Actual Coverage Amount”**) in respect of any commercial policy of insurance required to be obtained and kept in force by a party under Section 3 of this Schedule 5, as applicable, is or will be less than the Prudent Coverage Amount, the Notifying Party will notify the other party in writing of such determination and, if both parties agree, or it is determined under the Dispute Resolution Procedure, that the

Actual Coverage Amount is or will be less than the Prudent Coverage Amount, the party responsible for effecting and maintaining such policy of insurance will forthwith cause the amount of coverage in respect thereof to be increased to an amount equal to at least the Prudent Coverage Amount.

4.13 Project Contractors and Sub-Contractors

Project Co will determine the applicable insurance coverage to be obtained by the Project Contractors and Sub-Contractors, provided that such insurance coverages will be consistent with insurance that prudent sub-contractors would be required to maintain for projects of similar scope and magnitude to the Project. Without limiting the generality of the foregoing, Project Co will cause the Project Contractors to take out, maintain in force and extend technology errors and omissions liability insurance during both the Construction Period and the Operating Period.

**APPENDIX 5A
LENDER ENDORSEMENTS**

With respect to any policy of insurance noted in Schedule 5 as requiring these Lender Endorsements, Project Co will use all reasonable efforts to have the underwriters of such policies include terms and endorsements substantially similar to those set out in this Appendix 5A with such changes and amendments as may reasonably be required in the context of the coverage provided under, and the wording contained in, each such policy.

Notwithstanding any other provision of this Policy, the following endorsement shall apply:

1. Definitions

In this endorsement:

“Authority” means The Commonwealth of Kentucky;

“Collateral Agent” means U.S. Bank National Association, a national banking association, in its capacity as collateral agent on behalf of itself and the other Senior Secured Creditors;

“Collateral Agency and Account Agreement” means the collateral agency and account agreement dated as of September 1, 2015 between Project Co, U.S. Bank National Association, as senior bonds trustee, U.S. Bank National Association, as subordinate bonds trustee, and the Collateral Agent;

“Insurance Proceeds Account” has the meaning set out in the Collateral Agency and Account Agreement;

“Insured” means those parties so described in the policy declarations;

“Insurers” means the insurer or insurers underwriting this Policy;

“Project” means the project described in the declarations to this Policy;

“Project Agreement” means the project agreement dated September 3, 2015 between Project Co and the Authority relating to the design, construction, financing, operation and maintenance of the NG-KIH System;

“Project Co” means KentuckyWired Infrastructure Company, Inc.; and

“Senior Secured Creditors” has the meaning given in the Collateral Agency and Account Agreement.

2. Separate Policy

All the provisions of this Policy (except for those relating to limits of liability) shall operate as if there were a separate policy covering each Insured. Accordingly, the liability of the Insurers under this Policy to any one of the Insured shall not be conditional upon the due observance and fulfillment of any other Insured of the terms of this Policy and of any duties imposed upon it relating thereto and shall not be affected by any failure in such observance or fulfillment of any such other Insured.

3. Interest of the Collateral Agent and the Authority

- 3.1 The Insurers acknowledge that the Collateral Agent and (in respect of third party liabilities) its officers, directors, employees, secondees and assigns are each additional insureds under this Policy and that the premium specified in this Policy provides consideration for their being insured parties.
- 3.2 The Insurers acknowledge that the Authority and (in respect of third party liabilities) its officers, directors, employees, secondees and assigns are each additional insureds under the sections of this Policy relating to property damage and third party liability risks and that the premium specified in this Policy provides consideration for their being insured parties.

4. Liability for Premium

Neither the Collateral Agent, nor the other Senior Secured Creditors, shall be liable for the payment of any premium under this Policy although they may choose to pay the premium.

5. Disclosure

- 5.1 The Collateral Agent shall have no duty of disclosure to Insurers in relation to the Policy.
- 5.2 The Insurers acknowledge to the Collateral Agent alone that (i) they have received adequate information in order to evaluate the risk of insuring Project Co in respect of the risks hereby insured on the assumption that such information is not materially misleading, (ii) there is no information which has been relied on or is required by Insurers in respect of their decision to co-insure the Collateral Agent or its officers, directors, employees, secondees and assigns, and (iii) in agreeing to enter into this Policy, they have not relied upon or taken into account any information supplied to them by the Collateral Agent. The acknowledgements provided by the Insurers in this Section 5.2 shall have no effect on any rights that Insurers might have had under or in relation to the Policy against any party (including Project Co) other than the Collateral Agent in the absence of such acknowledgements.
- 5.3 Non-disclosure or misrepresentation by one Insured shall not be attributable to any other Insured who did not actively participate in that non-disclosure or misrepresentation. Without prejudice to the protections afforded to the Insured by this endorsement, no one Insured represents or warrants the adequacy or accuracy of any information provided or representation made by or on behalf of any other Insured.

6. Non-Vitiation

- 6.1 The Insurers undertake to each Insured that the Policy will not be invalidated as regards the rights and interests of such Insured and that the Insurers will not seek to avoid any liability under this Policy because of any act, neglect, error or omission made by any other Insured, including any failure by any other Insured to disclose any material fact, circumstance or occurrence, any misrepresentation by any other Insured or any breach or non-fulfillment by any other Insured of any condition, warranty or provision contained in the policy.

6.2 The Insurers agree that no Insured shall be penalized or prejudiced in any way by any unintentional or inadvertent misrepresentation, non-disclosure, want of due diligence or breach of any declaration, terms, condition or warranty of this Policy (together “the Relevant Matter”), but that this shall not apply as regards the individual Insured responsible for the Relevant Matter if that Insured fails to notify the Insurers or the brokers through whom the Policy was placed as soon as reasonably practicable after the management or managers of that Insured become aware or are made aware of the Relevant Matter.

7. Cancellation

The Insurers agree that they will adhere to the cancellation provisions set out in Section 4.6(a) of Schedule 5 to the Project Agreement.

8. Changes in Cover

The Insurers shall give the Collateral Agent and the Authority at least 30 days’ notice in writing before any reduction in cover or increase in excess or deductible under this Policy takes effect. Nothing in this clause shall give the Insurers any right which they do not otherwise have to reduce cover or increase any excess or deductible under this Policy.

9. Amendments to Endorsement

During the term of this Policy, the provisions of this endorsement may only be amended by written agreement between Project Co, the Insurers and the Collateral Agent, such amendment to be endorsed on the Policy.

10. Notice of Claims

Notice of claim by the Authority, the Collateral Agent or any other party entitled to indemnity under the Policy shall, in the absence of manifest error, be accepted by Insurers as a valid notification of claim on behalf of all other Insureds subject to the full terms of the Policy.

11. Claim Payments/Loss Payee

11.1 Payments made in accordance with this Section 11 shall, to the extent of the payment, discharge the Insurers’ liability to pay Project Co or any other Insured.

11.2 In respect of property and machinery risks only, all claim payments or return premium shall be paid into the Insurance Proceeds Account or to such other account as the Collateral Agent may specify in writing.

11.3 In respect of the insurance under this Policy of third party liability risks only, all claim payments in respect of a third party liability shall be paid to person(s) whose claim(s) constitute the risk or liability insured against except in the case where the Insured has properly discharged its liability to such person(s), in which case the claim payment shall be paid to the Insurance Proceeds Account or such account as the Collateral Agent directs in writing.

- 11.4 In respect of the insurance under this Policy of loss of revenue risks only, all claim payments or return premiums shall be paid to the Insurance Proceeds Account or such other account as the Collateral Agent directs in writing.
- 11.5 Any return premiums shall be paid to the Insurance Proceeds Account or such other account as the Collateral Agent directs in writing.

12. Waiver of Subrogation

The Insurers waive all rights of subrogation howsoever arising which they may have or acquire against any Insured described within the appropriate Schedules arising out of any occurrence in respect of which any claim is admitted and is insured hereunder for the benefit of such Insured except against any:

- (a) such Insured (or officer, director, employee, agent or assign) who has caused or contributed to such an occurrence or claim by fraud, deliberate misrepresentation, deliberate non-disclosure or deliberate breach of policy condition; or
- (b) consultant or equivalent professional party to the extent that their professional errors, omissions or activities not covered by this Policy have caused or contributed to a loss covered under this Policy; or
- (c) supplier or manufacturer to the extent that their errors, omissions or activities not covered by this Policy have caused or contributed to a loss covered under this Policy; or
- (d) such Insured to the extent that they are entitled to recover in respect of a loss under cover falling within sub-clause 13(a)–(e) below (or would be so insured if cover in the terms set out in this Policy had not been taken out).

13. Primary Insurance

The Insurers agree that this insurance provides the primary cover for risks insured under this Policy. In the event that any risk insured under this Policy is also insured under any other policy of insurance effected by any Insured, the Insurers agree to indemnify the Insured as if such other policy of insurance did not exist except in respect of:

- (a) excess layers of third party cover effected specifically for the Project;
- (b) any third party liability claim against the Insured which exceeds the applicable limit of indemnity under this Policy, in which case the liability of the Insurers for additional legal costs and expenses shall be limited to the proportion that the applicable limit of indemnity bears to the total claim against the Insured;
- (c) any claim under this Policy to which a Marine 50/50 Clause applies, if any;
- (d) any claim made under a Contingent Motor Liability extension to this Policy, if any;
or

- (e) any claim relating to a loss which is insured against (or would be insured but for a double insurance provision or similar or the application of a deductible) under:
 - (i) any other policy specifically effected for the construction or operational phase(s) of the Project; or
 - (ii) a latent or inherent defects policy or engineering or mechanical breakdown policy specifically effected for the Project;or a related business interruption insurance policy.

14. Notice of Security Interest

The Insurers acknowledge that, by an assignment contained in a general security agreement dated on or about the date hereof, Project Co assigned by way of security to the Collateral Agent all benefits and rights in respect of this insurance and all claims and returns of premiums in respect thereof to which the Insured is or may at a future time become entitled. The Insurers confirm that they have not been notified of any other assignment of or security interest in Project Co's interest in this insurance.

15. Notice

15.1 All notices or other communications under or in connection with the Policy will be given by fax, email or post. Any such notice given by Insurers will be deemed to be given on the earlier of:

15.1.1 if by fax or email, when transmitted but only if the sender's fax machine confirms successful transmission (if applicable); and

15.1.2 if by post, within 2 business days of release from the relevant Insurer's office.

15.2 The address, fax number and email address of the Collateral Agent for all notices under or in connection with the Policy are those notified from time to time by the Collateral Agent for this purpose to the insurance broker at the relevant time. The initial address, fax number and email address of the Collateral Agent is as follows:

Address: U.S. Bank National Association
Global Corporate Trust Services
One Financial Square
Louisville, KY 40202

Fax No: 502-562-6371
Attention: Amy Anders, Vice President
Email amy.anders@usbank.com

15.3 The address and email address of the Authority for all notices under or in connection with the Policy are those notified from time to time by the Authority for this purpose to the insurance broker at the relevant time. The initial address and email address of the Authority is as follows:

Address: The Commonwealth of Kentucky

Office of the Secretary
Finance and Administration Cabinet
702 Capitol Avenue
Capitol Annex Room 383
Frankfort, KY 40601

Attention: Secretary of the Finance and Administration Cabinet

With a copy to:

Office of Procurement Services
Finance and Administration Cabinet
702 Capitol Avenue
Capitol Annex Room 096
Frankfort, KY 40601

Attention: Stephanie Williams, Buyer
Email: StephanieR.Williams@ky.gov

16. Governing Law and Jurisdiction

The Policy shall be governed and interpreted in accordance with the laws of Kentucky. This endorsement overrides any conflicting provision in this Policy.