TABLE OF CONTENTS

C6.1 Introduction............................................................................................................................................. C6-1
C6.2 Purpose.................................................................................................................................................. C6-1
C6.3 Regulatory Compliance and Procedures................................................................................................. C6-2
C6.4 Blasting Plan Guidance........................................................................................................................... C6-2
C6.5 Safety Procedures..................................................................................................................................... C6-4
C6.6 Mitigation Measures ................................................................................................................................. C6-6
C6.7 Literature Cited......................................................................................................................................... C6-11
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIA</td>
<td>Bureau of Indian Affairs</td>
</tr>
<tr>
<td>BLA</td>
<td>Blasting protection measure</td>
</tr>
<tr>
<td>BLM</td>
<td>Bureau of Land Management</td>
</tr>
<tr>
<td>CIC</td>
<td>Compliance Inspection Contractor</td>
</tr>
<tr>
<td>Company</td>
<td>PacifiCorp</td>
</tr>
<tr>
<td>POD</td>
<td>Plan of Development</td>
</tr>
<tr>
<td>Project</td>
<td>Energy Gateway South Transmission Project</td>
</tr>
<tr>
<td>USFS</td>
<td>U.S. Forest Service</td>
</tr>
</tbody>
</table>
C6.1 Introduction

The Blasting Plan Framework outlines methods to mitigate risks and potential impacts associated with blasting procedures that may be required for construction of the Energy Gateway South Transmission Project (Project). Also included in this section is a preliminary outline for the Blasting Plan to be prepared by the Construction Contractor(s) and submitted to PacifiCorp (Company) if blasting is required. The Compliance Inspection Contractor (CIC) and the Bureau of Land Management (BLM) or U.S. Forest Service (USFS) would be notified in advance of any required blasting so the area can be cleared. If blasting is to occur on federal lands, the Company will submit the Blasting Plan to the federal land-management agencies for final review and approval.

C6.1.1 Plan Framework Updates

This plan framework will support the draft Plan of Development (POD) sufficiently to complete and execute the Bureau of Land Management (BLM) and U.S. Forest Service (USFS) Records of Decision, the BLM right-of-way grant, USFS special-use authorization, and the Bureau of Indian Affairs (BIA) encroachment permit and grant of easement for the Project. This plan framework serves as baseline document to guide development of the complete Blasting Plan developed with the POD before issuance of the Notice(s) to Proceed and commencement of construction. The complete Blasting Plan will be developed by the Construction Contractor(s) in consultation with the Company and the agencies as detailed engineering design of the Project is completed and will contain the detailed information necessary for site-specific guidance. This plan framework provides Project-specific guidance for development of the complete Blasting Plan by identifying treatments and measures required to avoid, minimize, and mitigate Project-related impacts; prevent unnecessary degradation of the environment; ensure blasting activities comply with federal, state, or other agency requirements; and meet any stipulations of the Records of Decision, BLM right-of-way grant, USFS special-use authorization, and BIA encroachment permit and grant of easement. The Company/Construction Contractor(s) will be responsible for preparing and implementing the complete Blasting Plan.

C6.2 Purpose

Once completed, the Blasting Plan will provide construction crews, the CIC, and environmental monitors with Project-specific information concerning blasting procedures, including the safe use and storage of explosives. The objective of the Blasting Plan is to prevent adverse impacts on human health and safety, property, and the environment that could potentially result from the use of explosives during Project construction.

Blasting may be needed in certain areas with rocky terrain to excavate tower footings, prepare series compensation station pads, and to construct access roads. Blasting will be used only in areas where traditional excavation and earth-moving equipment and practices are unable to accomplish the excavation. If hard rock is encountered within the planned drilling depth, blasting may be required to loosen or fracture the rock to reach the required depth to install the structure foundations. Precise locations where blasting is expected would be identified based on a site-specific geotechnical investigation carried out as part of detailed design. In addition, the Construction Contractor(s) may elect to use implosive sleeves during line-stringing activities to fuse conductor wire together.
C6.3 Regulatory Compliance and Procedures
The Company/Construction Contractor(s) will be responsible for preparing and implementing the Blasting Plan and must comply with all applicable federal, state, and local laws and regulations. No blasting operations will be undertaken until approval and appropriate permits have been obtained from the applicable agencies. Failure to comply with such laws could result in substantial financial penalty and/or imprisonment.

The Construction Contractor(s) will use qualified, experienced, and licensed blasting personnel who will perform blasting using current and professionally accepted methods, products, and procedures to maximize safety during blasting operations. Blasting procedures will be carried out according to, and in compliance with, applicable laws and will be closely monitored by the CIC.

C6.4 Blasting Plan Guidance
Prior to blasting, the Construction Contractor(s) shall prepare a Blasting Plan for review and approval by the Company, BLM, USFS, CIC, and any other relevant jurisdictional organization, as applicable. The plan will address safety as well as design for production and controlled blasting. The Blasting Plan also will contain the full details of the drilling and blasting patterns, as well as the controls the Construction Contractor proposes to use for both controlled and production blasting. Review of the plan by the parties shall not relieve the Construction Contractor(s) of the responsibility for the accuracy and adequacy of the Blasting Plan when implemented in the field. A minimum of 2 weeks should be allowed for review and approval of the Blasting Plan by the BLM, USFS, and other appropriate agencies. If at any time changes are proposed to the Blasting Plan, the Construction Contractor(s) shall submit them to the Company, who will then submit the proposed changes to the federal land-management agencies and CIC for review and approval.

C6.4.1 Overview of Blasting Principles
C6.4.1.1 Locations
The Construction Contractor(s) will avoid blasting in potential rockslide/landslide areas to the maximum extent possible and will consult with a geologist before blasting in such areas. A common practice for fusing conductor wire together is the use of implosive sleeves, which use explosive materials. The Construction Contractor(s) should be knowledgeable about this practice and should coordinate with the CIC, particularly with regard to the locations of these practices.

C6.4.1.1 Materials
The Construction Contractor(s) will determine the specific materials needed for blasting operations. These materials will be included on the hazardous materials list for the Project, and their use and storage will comply with applicable federal, state, and local laws and regulations.

C6.4.2 Blasting Plan Contents
The Blasting Plan prepared by the Construction Contractor(s) shall contain the following minimum information in the following format:

1. Purpose
2. Scope of the Blasting
3. Definitions
4. Responsibilities
   4.1 Management Organization
   4.2 Authority Responsibility
   4.3 Blaster in Charge (licensed in Utah, Colorado, and Wyoming)

5. Location of Blasting Area
   5.1 Description of Blasting Area
   5.2 Description of Bedrock and Geological Problems
   5.3 Description of Adjacent Utility Facilities

6. Environmental Considerations

7. Safety Considerations
   7.1 General
   7.2 Warning Signs and Signals
   7.3 Procedures around Adjacent Utility Facilities
   7.4 Traffic Control
   7.5 Emergency Blast Initiation
   7.6 Safety Publications
   7.7 Fire Prevention
   7.8 Safety Hazards
   7.9 Emergency Services and Communication
   7.10 Minor or Nonemergency Medical Care
   7.11 First Aid

8. Risk Management
   8.1 Protection of Adjacent Utility Facilities
   8.2 Lightning
   8.3 Flyrock (Note: Flyrock will be controlled with blasting mats.)
   8.4 Carbon Monoxide
   8.5 Ground Vibrations
   8.6 Seismically Sensitive Receptors
   8.7 Preblast Survey and Inspection
   8.8 Blast Damage Complaints
   8.9 Airblast

9. Blast Design Concept
   9.1 Station limits of proposed shot
   9.2 Plan and section views of proposed drill pattern, including free face, burden, blasthole spacing, blasthole diameter, blasthole angles, lift height, and sub-drill depth
   9.3 Loading diagram showing type and amount of explosives, primers, initiators, and location and depth of stemming
   9.4 Initiation sequence of blastholes, including delay times and delay system
   9.5 Manufacturers’ data sheets for all explosives, primers, and initiators to be employed

10. Procedures
    10.1 Delivery of Explosives
    10.2 Storage of Explosives and Blasting Agents
    10.3 Blast Hole Drilling
    10.4 General Handling of Explosives
    10.5 Blast Hole Loading
    10.6 Notification
C6.5  Safety Procedures

Safe storage and use of explosive materials will be a top priority during construction. The safety measures discussed in this section are intended to prevent theft and/or vandalism of the explosive materials, protect against fire, and prevent personal injury and property damage. These measures are intended as general guidelines and specific safety requirements will be identified by the construction contractor prior to construction.

C6.5.1 Storage

Explosives must be stored in an approved structure (magazine) and kept cool, dry, and well-ventilated. The Company’s Construction Contractor(s) will provide the respective states’ Bureau of Alcohol, Tobacco, Firearms, and Explosives office with a list of dates and locations for the explosives and blasting-agent storage facilities to be used on the Project at least 14 days before the establishment of such storage facilities.

At a minimum, the following storage requirements will be implemented:

- Explosives must be stored in an approved structure (magazine), and storage facilities will be bullet, weather, theft, and fire resistant.
- Magazine sites will be located in remote (out-of-sight) areas with restricted access; will be kept cool, dry, and well ventilated; and will be properly labeled and signed.
- Detonators will be stored separately from other explosive materials.
- The most stringent spacing between individual magazines will be determined according to the guidelines contained in the Bureau of Alcohol, Tobacco, Firearms, and Explosives publication or state or local explosive storage regulations.
- Both the quantity and duration of temporary onsite explosives storage will be minimized.

The Construction Contractor(s) will handle and dispose of dynamite storage boxes in accordance with relevant federal, state, and local laws.

C6.5.2 Blasting Notification and Safety Procedures

The Construction Contractor(s) will obtain a permit from the appropriate county as needed, for the period when blasting may occur and will comply with the following requirements developed by the federal land-management agencies:

- The holder shall publish a proposed blasting schedule in the local newspaper 1 week prior to any blasting taking place. The schedule shall identify the location, dates, and times blasting will occur. No blasting shall occur outside of the published schedule, except in emergency situations.

- The holder shall post warning signs at all entry points for the Project. Warning signs shall include information on blasting, including the general hours blasting might take place, and audible signals to be used warning of impending blasting and to indicate the site is all clear.
- Access points to areas where blasting will take place will be blocked to prevent access by the public at least 30 minutes prior to blasting. The site shall be swept 5 minutes prior to blasting to ensure no unauthorized personnel have wandered onto the site. An audible warning signal, capable of carrying for 0.5 mile, shall be used at least 2 minutes prior to blasting. An “all-clear” signal will be given once it has been determined the area is safe.

- Blasting in the vicinity of pipelines will be coordinated with the pipeline operator and will follow operator-specific procedures, as needed.

- Damages that result solely from the blasting activity will be repaired or the owner fairly compensated.

A determination that the blasting area is all clear of danger will be derived once the blasting area has been inspected for undetonated or misfired explosives. The blasting area also will be inspected for hazards, such as falling rock and rock slides. Once the area has been inspected and these issues have been addressed, the all-clear signal as described above will sound and persons will be able to safely re-enter the blast zone.

Additional safety precautions will be developed to address site-specific conditions at the time of the blast. Special attention will be given to preventing potential hazards in the blasting area resulting from flying rock, destabilized walls or structures, presence of low flying aircraft, and dispersion of smoke and gases.

### C6.5.3 Fire Safety

The presence of explosive materials on the Project site could potentially increase the risk of fire during construction. Special precautions will be taken to minimize this risk in conjunction with the Fire Protection Plan (Appendix B8), including the following:

- Prohibiting ignition devices within 50 feet of explosives storage areas
- Properly maintaining magazine sites so they are clear of fuels and combustible materials, well ventilated, and fire-resistant
- Protecting magazines from wildfires that could occur in the immediate area
- Posting fire suppression personnel at the blast site during high-fire danger periods
- Prohibiting blasting during extreme fire danger periods

### C6.5.4 Transportation of Explosives

Transportation of explosives will comply with all applicable federal, state, and local laws, including Title 49 of the Code of Federal Regulations, Chapter III. These regulations are administered by the U.S. Department of Transportation and govern the packaging, labeling, materials compatibility, and safety of transported explosives, as well as driver qualifications. In general, these regulations require vehicles carrying explosive materials be well-maintained, properly marked with placards, and have a nonsparking floor. Materials in contact with the explosives will be nonsparking, and the load will be covered with a fire- and water-resistant tarpaulin. Vehicles also must be equipped with fire extinguishers and a copy of the Emergency Response Guidebook (U.S. Department of Transportation 2008). Every effort will be made to minimize transportation of explosives through congested or heavily populated areas.

Prior to loading an appropriate vehicle for carrying explosives, the vehicle shall be fully fueled and inspected to ensure its safe operation. Refueling of vehicles carrying explosives shall be avoided. Smoking shall be prohibited during the loading, transporting, or unloading of explosives. In addition, the following specific restrictions apply to transport of other items in vehicles carrying explosives:
- Tools may be carried in the vehicle, but not in the cargo compartment.
- Detonation devices can, in some cases, be carried in the same vehicle as the explosives, but they must be stored in a specially constructed compartment(s).
- Batteries and firearms shall never be carried in a vehicle with explosives.
- Vehicle drivers must comply with the specific laws related to the materials being transported.

Vehicles carrying explosives shall not be parked or left unattended except in designated parking areas with approval of the State Fire Marshall. When traveling, vehicles carrying explosives will avoid congested areas to the maximum extent possible.

C6.6 Mitigation Measures

Section C6.6.1 – Design Features of the Project for Environmental Protection, Section C6.6.2 – Selective Mitigation Measures, and Section C6.6.3 – Other Specific Stipulations and Methods will serve as the baseline measures for inclusion in the complete Blasting Plan to be developed by the Company/Construction Contractor(s).

C6.6.1 Design Features of the Project for Environmental Protection

Design features of the Project for environmental protection are applied project-wide and will address many of the concerns associated with blasting. Design Features of the Project for Environmental Protection are developed in accordance with federal land-management agencies’ standards. Following is a description of design features of the Project for environmental protection that relate to blasting during the construction and operation of Project facilities.

- Design Feature 2. In construction areas where there is ground disturbance or where recontouring is required, surface reclamation will occur as required by the landowner or land-management agency. The method of reclamation normally will consist of, but will not be limited to, returning disturbed areas to their natural contour, reseeding, installing cross drains for erosion control, placing water bars in the road, and filling ditches.

All areas on lands administered by federal agencies disturbed as a part of the construction and/or maintenance of the Project will be seeded with a seed mixture appropriate for those areas. The federal land-management agency will approve a seed mixture that fits each range type. Seeding methods typically will include drill seeding, where practicable; however, the federal land-management agency may recommend broadcast seeding as an alternative method in some cases.

A Reclamation, Revegetation, and Monitoring Framework Plan identifying reclamation stipulations will be developed and incorporated into the POD, which will be approved by the affected federal land-management agency prior to the issuance of a right-of-way grant (BLM), special-use authorization (USFS), encroachment permit and grant of easement (BIA), etc.

- Design Feature 6. Avoid vegetation clearing and other construction and maintenance activities when possible during the migratory bird nesting season, between February 1 and August 31, however, dates may vary depending on species, current environmental conditions, results of preconstruction surveys, and approval by agency biologists or agency-approved environmental inspectors in coordination with agency biologists.

- Design Feature 7. If vegetation clearing and other construction and maintenance activities cannot be avoided during the migratory bird nesting season (between February 1 and August 31), migratory bird and nest surveys will be required within 7 days of any ground-disturbing activities.
A spatial nest buffer will be placed around each active nest detected during the surveys until such time as the nest is determined through monitoring to be no longer occupied. Appropriate spatial nest buffers (by species or guild) and nest monitoring requirements will be identified using the best available scientific information through coordination with the U.S. Fish and Wildlife Service and other appropriate agencies and will be provided in a nest management plan incorporated into the POD.

- **Design Feature 28.** Prior to construction, the CIC will instruct all personnel on the protection of cultural, paleontological, ecological, and other natural resources, such as (a) federal and state laws regarding antiquities, paleontological resources, and plants and wildlife, including collection and removal; (b) the importance of these resources; (c) the purpose and necessity of protecting them; and (d) reporting and procedures for stop work.

- **Design Feature 29.** All requirements of those entities having jurisdiction over air-quality matters will be adhered to. Any necessary dust-control plans will be developed and permits for construction activities will be obtained. Open burning of construction trash will not be allowed unless permitted by the appropriate authorities.

- **Design Feature 30.** Hazardous material will not be drained onto the ground or into streams or drainage areas. Totally enclosed containment will be provided for all trash. All construction waste will be removed to a disposal facility authorized to accept such materials within 1 week of Project completion. A Spill Pollution Prevention, Containment, and Countermeasures Plan Framework, will be developed as part of the POD.

Refueling and storing potentially hazardous materials will not occur within a 100-foot radius of a water body, a 200-foot radius of all identified private water wells, and a 400-foot radius of all identified municipal or community water wells. Spill preventive and containment measures or practices will be incorporated as needed.

- **Design Feature 32.** Watering facilities (tanks, natural springs and/or developed springs, water lines, wells, etc.) will be repaired or replaced if they are damaged or destroyed by construction and/or maintenance activities to their predisturbed condition as required by the landowner or land-management agency. Should construction and/or maintenance activities prevent use of a watering facility while livestock are grazing in that area, then the Company will provide alternate sources of water and/or alternate sources of forage where water is available.

- **Design Feature 33.** Consistent with BLM Riparian Management Policy, surface-disturbing activities within 328 feet (100 meters) of riparian areas (defined as areas of land directly influenced by permanent surface or subsurface water having visible vegetation or physical characteristics reflective of permanent water influence, including wetlands, stream banks, and shores of ponds or lakes) in Utah and Colorado will be required to meet exception criteria defined by the BLM, such as acceptable measures to protect riparian resources and habitats by avoiding or minimizing stormwater runoff, sedimentation, and disturbance of riparian vegetation, habitats, and wildlife species. In Wyoming, surface-disturbing activities within 500 feet of all perennial waters and/or wetland and riparian areas and 100 feet (30 meters) of all ephemeral channels also will be required to meet exception criteria in association with the BLM Rawlins Field Office Resource Management Plan (BLM 2008). Mitigation measures will be developed on a site-specific basis, in consultation with the affected federal land-management agency, and incorporated into the POD.
If any disturbance is anticipated within 20 feet of the edge of a riparian area or other wetland habitat, a silt fence or certified weed-free wattle will be installed along the travel route on the wetland side unless the wetland is up-gradient.

- **Design Feature 35.** State standards for abandoning drill holes will be adhered to where groundwater is encountered.

### C6.6.2 Selective Mitigation Measures

Selective Mitigation Measures are applied in select areas to further address concerns associated with blasting that the Design Features of the Project for Environmental Protection don’t address. Following is a description of selective mitigation measures that relate to blasting during the construction and operation of Project facilities.

- **Selective Mitigation Measure 7 (Span and/or Avoid Sensitive Features).** Within the limits of standard tower design and in conformance with engineering and the Company’s requirements, structures will be located to allow conductors to clearly span identified sensitive features. Structures will be placed so as to avoid sensitive features, including wetlands, riparian areas, water courses, hazardous substance remediation, and cultural sites, to the extent possible. Avoidance measures may include selective tower placement, spanning sensitive features, or realigning access routes.

- **Selective Mitigation Measure 10 (Helicopter-assisted Construction).** Helicopter-assisted placement of towers during construction and helicopter patrol and maintenance may be used where practicable to reduce surface impacts in environmental constraint or steep terrain locations.

- **Selective Mitigation Measure 16.** Soil amendments, mineral emulsions, or asphalt emulsions will be applied, or grading techniques, such as slope rounding and slope scarification, will be used to blend road and structure work area cuts into the landscape in areas of steep terrain where grading is necessary, in rocky areas, or where soil color will create strong landscape contrasts.

### C6.6.3 Other Specific Stipulations and Methods

Blasting has the potential to cause environmental impacts. The following blasting (BLA) protection measures are additional stipulations and methods to further reduce potential effects from blasting required for the Project.

- **BLA-1** The Blasting Plan will identify blasting procedures, including safety, use, storage, and transportation of explosives that will be employed where blasting is needed, and will specify the locations of needed blasting.

- **BLA-2** All blasting will be performed by registered licensed blasters who will be required to secure all necessary permits and comply with regulatory requirements in connection with the transportation, storage, and use of explosives and blast vibration limits for nearby structures, utilities, wildlife, and fish (where blasting is conducted in waterbodies).

- **BLA-3** Appropriate flags, barricades, and warning signals will be used to ensure safety during blasting operations. Blast mats will be used when needed to prevent damage and injury from flyrock.

- **BLA-4** Blasting in the vicinity of pipelines will be coordinated with the pipeline operator and will follow operator-specific procedures, as needed.
BLA-5 Damage that results from blasting will be repaired or the owner fairly compensated.

BLA-6 Proper blasting techniques, including proper cover of charges, should be followed.

BLA-7 Matting will be used in rock blasting operations to minimize and control dust.

BLA-8 Notification of blasting activities will be provided to nearby residents within 72 hours.

BLA-9 The Construction Contractor(s) will prepare site-specific blasting plans.

BLA-10 The blasting plan for the Project also will stipulate the following:

- Explosives will not be stored on federal land without prior written permission from the land-management agency. Copies of this permission will be posted on each magazine.
- Seventy-two hours’ advance notice of blasting activities will be given to the land-management agency, railroads, highway departments, and local communities; occupants of nearby residences, buildings, and businesses; and local farmers.
- Warning signs will be erected and maintained at all approaches to the blast areas and flaggers will be stationed on all roadways passing within 1,000 feet of blasting activities.
- Explosives will not be primed or fused until just before use.
- Blasting will take place during daylight hours only and will be monitored with three axis seismographs to ensure safe vibration levels are not exceeded.
- Vibration measured as peak particle velocity will not exceed 4 inches per second adjacent to an underground pipeline and 2 inches per second for any aboveground structure (including water wells).

Stipulations developed by the federal land-management agencies will be followed for protection of sensitive species as well as the required notification discussed above in Section C6.5.2 – Blasting Notification and Safety Procedures. The Construction Contractor(s) will notify the CIC and environmental monitors 72 hours prior to scheduled blasting and comply with the permit requirements for notification by appropriate counties, including any requirements for dust abatement. Regular field meetings during the blasting schedule will be held with the CIC and environmental monitors to review the process and its implementation. If changes are needed to the notification process, changes will be made to facilitate protection of environmental resources.
C6.7 Literature Cited

