

**EXHIBIT A**  
**Consensus Design Concept**  
**for Construction of the Pojoaque Basin Regional Water System**

**I. Overview**

With funding available under the Agreement Pursuant to Section 611(g) of Title VI of the Claims Resolution Act of 2010 (Agreement) and the Cost-Sharing and System Integration Agreement as amended pursuant to the terms of this Agreement (Cost-Sharing Agreement), the Bureau of Reclamation (Reclamation) will build the Pojoaque Basin Regional Water System (PBRWS) consistent with this Consensus Design Concept (Consensus Project). The Consensus Project will be constructed in three major phases that may be broken down further into smaller stages. Phase 1 includes the intake system, raw water transmission line, water treatment plant (WTP), transmission and distribution pipe, three new storage tanks, and three pump stations in San Ildefonso and Pojoaque Pueblos and parts of Santa Fe County (County). Limited construction of Phase 1, as set forth in Exhibit C, will be initiated first. Phase 2 includes four new storage tanks, five pump stations, transmission pipe, and distribution pipe in the same trench as transmission in Pojoaque, Nambé, and Tesuque Pueblos and parts of Santa Fe County. Phase 3 includes distribution pipe throughout the project area. While the designs for the PBRWS will include provisions for the full supply of 4,000 acre-feet per year (afy) of water described in the Settlement Act, the Consensus Project will only include features to supply 2,500 afy initially. As set forth in Section IV below, features in addition to the Consensus Project will be constructed as necessary in the future without using Federal or non-Federal funds provided for in the Cost-Sharing Agreement, or this Agreement<sup>1</sup> (Deferred Features), unless such funding remains for construction of the Deferred Features.

**II. Cost-Share**

The Federal and non-Federal cost-share of the Consensus Project are approximately 72% and 28% respectively<sup>2</sup>, and will be described in detail in the Engineering Report, Exhibit B.

**III. Consensus Design Concept Cost-saving Measures**

The Pueblos of Pojoaque, Nambé, San Ildefonso, and Tesuque (collectively the “Pueblos”), and the County negotiated and agreed to the following cost-saving measures that are incorporated into this Consensus Design Concept and will be incorporated into the overall design of the Consensus Project.

- 1) Build the necessary number of collector wells (CW) at the intake (all four will be designed) to achieve a system demand of 2,500 afy pursuant to modified performance requirements

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<sup>1</sup> The County’s commitment to construct deferred County distribution, currently valued at \$24 million, is provided for in this Agreement, and the Cost-Sharing Agreement.

<sup>2</sup> Although the overall cost-share, based on funding commitments in this Agreement and the Cost-Sharing Agreement indexed to 2018, is approximately 67% Federal and 33% non-Federal, the cost-share for constructing the Consensus Project is 72% Federal and 28% non-Federal because the County’s contribution of \$24 million of currently obligated non-Federal funds is in the form of deferred construction of County distribution and is therefore not factored into the cost-share for constructing the Consensus Project. See Section IV below.

contained in Contract No. R17PC00023, between Reclamation and CDM Constructors Inc. Reclamation will share a draft of the modified performance requirements with the Pueblos and the County for their review and comment.

- 2) Reduce nanofiltration capacity at the WTP by one feed pump and one skid. Three nanofiltration skids will be installed initially and space provided for four additional skids to be installed in the future to meet water demand growth.
- 3) Use DR25 equivalent pipe where water modelling identifies it as appropriate.
- 4) Reduce minimum pipe backfill cover from 5-feet to 4-feet.
- 5) Use native soil for pipe backfill in lieu of controlled low-strength material (CLSM) where appropriate.
- 6) Buried valves greater than 12" to be butterfly valves; valves 12" or less to be gate valves.
- 7) Eliminate flushing hydrants; use typical blow off instead.
- 8) Steel tanks to be glass-fused, bolted tanks.
- 9) Exclude chlorine booster systems in Phase 2 where feasible based on water age analysis (space provisions for future installation are accounted for in the design).
- 10) Eliminate bullet resistant materials at the Electrical, WTP, and Pump Station buildings.
- 11) Use "prepackaged" pump station buildings where possible.
- 12) Incorporate existing Pueblo distribution pipes where feasible.
- 13) \$24 million of County distribution system will be Deferred Features.
- 14) County to pay \$4.0 million for upsizing. (e.g., pipe; Pojoaque South, Camel Rock, and Tesuque Pump Stations; forebay tanks) pursuant to Section IV.B. of this Agreement. Reclamation to provide blind flange connection points at each of the pump stations for the reverse flow option to be designed and constructed by the County.

#### **IV. Deferred Features**

The Deferred Features are not included as part of the Consensus Project construction; however, if available funds remain after the Consensus Project is completed, Reclamation will expend such remaining funds to help construct Deferred Features, as agreed to by Reclamation, the Pueblos and the County. The Deferred Features include the following, as set forth in the Engineering Report:

- 1) Additional CWs needed to achieve full capacity of 4000 afy.
- 2) Additional nanofiltration feed pumps and skids at the WTP.
- 3) Additional chlorine booster systems in Phase 2.
- 4) Additional service connections.
- 5) Additional County distribution.

#### **V. Construction Phases**

##### **A. Construction Phase 1**

This group of interdependent assets includes the following features, along with their appurtenant roads, valves, hydrants, buildings, SCADA, and other equipment:

- 1) Source water intake system, including
  - a. Collector wells and equipment needed to achieve 2,500 AFY capacity

- b. Electrical building
- 2) Raw water transmission line and nanofiltration concentrate return line
- 3) WTP
- 4) Transmission and distribution lines from the WTP to the following three new storage tanks and two new forebay tanks
  - a. El Rancho
  - b. Turtle
  - c. Pojoaque Industrial Park
  - d. Nambé Forebay
  - e. Pojoaque South Forebay
- 5) Transmission and distribution lines from the WTP to the following six existing storage tanks
  - a. New Pajarito
  - b. Black Mesa
  - c. Tewa
  - d. White Sands
  - e. Lower Pojoaque Tank #30
  - f. Lower Pojoaque Tank #31
- 6) Two pump stations
  - a. Finished Water at the WTP
  - b. Pojoaque Industrial Park Booster
- 7) New distribution lines installed in the same trench as transmission lines to include service connection tap from the new distribution line and service line to the meter can, but not including meters or service line to the residence.

## **B. Construction Phase 2**

In Phase 2, three groups of interdependent assets will be constructed in stages. Stage 1 of Construction Phase 2 consists of the South Pojoaque, South Nambé Development Area, Camel Rock Casino, and Tesuque Pueblo reaches. Stage 2 of Construction Phase 2 consists of the Nambé Village and Nambé Pueblo reaches. Stage 3 of Construction Phase 2 consists of the Bishop's Lodge Extension. These groups of interdependent assets include the following features, along with their appurtenant roads, valves, hydrants, buildings, SCADA, and other equipment:

- 1) Construction Phase 2, Stage 1 – South Pojoaque, South Nambé Development Area, Camel Rock Casino, Tesuque Pueblo
  - a. Transmission and distribution lines to and from the following two new distribution storage tanks and two new forebay tanks
    - i. Nambé South
    - ii. Camel Rock Casino
    - iii. Tesuque Forebay
    - iv. Camel Rock Forebay
  - b. Transmission and distribution lines to and from the following four existing tanks
    - i. Buffalo Thunder Tank #22
    - ii. IGC
    - iii. Oweenge Day School Tank #18

- iv. Tesuque Casino
  - c. Three pump stations with provisions for future reverse flow modifications by the County
    - i. Pojoaque South
    - ii. Camel Rock
    - iii. Tesuque
  - d. Transmission and distribution lines to and from the above facilities (new distribution lines to be installed in the same trenches as transmission lines and to include service connection tap from the new distribution line and service line to the meter can, but not including meters or service line to the residence)
- 2) Construction Phase 2, Stage 2 – Nambé Village and Nambé Pueblo
- a. Nambé pump station
  - b. Nambé storage tank and transmission and distribution lines to and from the tank
  - c. Transmission and distribution lines to and from two existing storage tanks
    - i. Nambé Tank #25
    - ii. Nambé Tank #27
  - d. Distribution and connection lines to and from the above facilities (new distribution lines to be installed in the same trenches as transmission lines and to include service connection taps and service line to the meter can, but not including meters or service line to the residence)
- 3) Construction Phase 2, Stage 3 – Bishop’s Lodge Extension
- a. Transmission and distribution lines to and from RKM Tank (new distribution lines to be installed in the same trenches as transmission lines)
  - b. RKM forebay/storage tank
  - c. RKM pump station
  - d. Transmission and distribution lines to and from Bishop’s Lodge Tank #15

### **C. Construction Phase 3**

Phase 3 consists of new distribution lines, to include service connection taps and service lines to the meter can, but not including meters or service lines to residences. The first area to be completed would include distribution lines serving members of the Pueblo de San Ildefonso, in compliance with the Settlement Act’s funding priority requirement (§617(a)(3)(A)). This Consensus Design Concept prioritizes completing Pueblo distribution as set forth in the Settlement Act. Prior to beginning construction of Phase 3 Reclamation, the Pueblos and the County will make the final decisions on how to group Phase 3 reaches, non-Pueblo distribution and service connections, and which reaches may be deferred for later construction by the County.

### **VI. Pojoaque River Irrigation System at the Pueblo de San Ildefonso**

The existing infiltration gallery located near the Pojoaque River Barrier Dam is no longer able to convey the Pueblo’s allotted water into the Pueblo of San Ildefonso’s irrigation system. Several alternatives to improve water flow into the irrigation system were studied and presented to the San Ildefonso in a report prepared by the Reclamation, “Pojoaque Barrier Dam – Extension Alternatives,” dated September 2014. The resulting selected alternative would combine a new infiltration gallery and conveyance pipeline located at the east boundary of San Ildefonso, on Pueblo-owned lands, on the south side of the

Pojoaque River. The purpose of the Rio Pojoaque Irrigation Improvements is to improve flow into the existing Pueblo of San Ildefonso irrigation system. Modifications to the design have caused the construction estimate to increase beyond the indexed ceiling amount. The Pueblo de San Ildefonso has indicated that they will seek non-Federal funding to cover the shortfall.

**VII. Rio Tesuque Channel Modifications**

The preferred alternative for the Rio Tesuque Channel Modifications would increase the flow capacities under the TP-806 Bridge. Due to high levels of sediment transport along the Rio Tesuque, the waterway upstream and under the TP-806 Bridge has experienced a buildup of sediment that reduces the flow capacity below the bridge. Along with this sediment transport, there is a large spoils stockpile in the right side of the channel. In the preferred alternative, the stockpile and the sediment under the bridge would be removed and hauled offsite to be used elsewhere in Tesuque Pueblo. By removing the sediment and stockpile, the Rio Tesuque will be able to convey higher flows under the TP-806 bridge and reduce the amount of sediment buildup under the bridge. The majority of Federal funding for this project was exhausted in the development of the feasibility study with the outcome being the preferred alternative described above. The Pueblo of Tesuque has indicated that they will pursue other funding to implement the preferred alternative.

