**Based on the given requirements, here is the supporting document for the ER diagram attached.**

**Access permission requirements are satisfied as follows:**

* Vendor\_Payment information will be accessible only to Campaign\_Staff from "Accounting" department.
* Only the staff that belongs to the “Campaign Manager” department can access records of voters that have made donations.
* Survey table records cannot be updated.
* Only a particular Staff member can update records in Staff\_Location table.

**Reporting capabilities are satisfied as follows:**

1. Monthly report of contributions by 'large' donors:

This report can be created using the Voter\_Identity, Voter and Donation table by using the Create\_Date field in Donation table for the month date range.

1. Monthly report on popularity of propositions by voter class:

This report can be created by using the Suvey, Survey\_Propositions, Voter\_Identity, Voter, Voter\_Category and Category tables. Popular propositions will be the ones that occur the most number of times in Survey\_Propositions table for the month.

1. Monthly report on identified "interesting" voter classes:

This report can be created using the Category and Voter\_Category tables.

1. Month end report on financial totals:

This report can be created from the donations for the month and also the vendor payments for that month.

1. Ad hoc queries about donors:

The entity design allows ad hoc queries about donors.

1. Ad hoc queries about classes of voters:

The entity design allows ad hoc queries about donors.

**Description of Relations:**

* Voter\_Identity and Donation entity relation is an optional 1:M relation. A voter may not have made any donations or have one or many donations.
* Voter\_Identity and Survey entity is an optional 1:M relation. A voter may not give any survey or may give one or more surveys.
* Proposition entity and Survery\_Proposition entity is a 1:M relation. One proposition can appear in multiple surveys.
* Campaign\_Staff entity and Staff\_Location entity is a 1:M relation.
* Vendor entity and Vendor\_Payment entity is a 1:M relation.

**Here is a brief description of the entities, attributes and constraints:**

Entities are given a ‘Create\_Date’ and ‘Modified\_Date’ attributes where applicable to keep track of when a record of that entity was created and stored in the database.

**Voter**

This entity stores the voter’s information from the state registry and survey.

Attributes:

Voter \_ID: Foreign key

First\_Name

Last\_Name

Date\_of\_Birth

Email\_ID

Phone\_No

Party Affiliation: We can know about voter’s choice

Father

Mother

First\_Child\_Name

Second\_Child\_Name

Third\_Child\_Name

Connections

Create\_Date: We need create date to generate reports

Modify\_Date: To keep track of all modification done to the attributes

**Voter\_Identity**

This entity stores the identity information of a voter

The primary source of this information will be from State’s Registry

Attributes:

Voter\_ID: Primary Key

Address:

Age: Voter’s Age

Family\_Status:

Tax\_ID: We will require Tax ID of Large Donors

Create\_Date: We will need create date to generate reports

**Category**

This entity stores the various categories that classify the voters.

Attributes:

Category\_ID: Primary Key

Category\_Description

Is\_Interesting

Date\_Determined\_Interesting

Create\_Date

**Voter Category**

This entity will keep record of the voter’s category. It will help to identify ‘interesting’ voter classes.

Key for this table is composite key with Voter\_ID and Category\_ID.

Attributes:

Voter\_ID

Category\_ID

Create\_Date

**Donation**

Donation stores the Donor’s information, Donation amount and Donation Date.

We will ask basic information from the donors (Voter\_Identity) table. If the donation amount is high, we will ask for more information.

Date on which the donation is made can be different than the date on which the entry is made in the system. Hence Donation entity has Date and Create\_Date.

For donations greater than $500 we will require Tax\_ID number of the donor.

Attributes:

Donation\_ID: Primary Key

Voter\_ID

Amount

Donation\_Date

Create\_Date

**Proposition**

Proposition entity will describe the Candidate Rabble Rouser O. Propositions, Competitors Propositions, Propositions suggested by the voters.

Attributes:

Proposition\_ID: Primary Key

Proposition\_Description

Is\_Original\_Proposition

Is\_Voters\_Suggested

Is\_Active

Deleted\_Date

Create\_Date

**Survey**

This entity will store voter’s survey information

Attributes:

Survey\_ID: Primary Key

Voter\_ID: Foreign Key

Survey\_Data Survey Information

Create\_Date

**Survey\_Proposition**

This entity will keep record of the propositions responses to know the popularity of the propositions by the voter class

Attributes:

Survey\_ID, Proposition\_ID: Composite Key

Response: Voters response to the propositions

Create\_Date

**Campaign\_Staff**

This entity will store staff information

Attributes:

Staff\_ID: Primary Key

Name

Title

Department\_ID

Phone\_No

Email\_ID

Campaign\_Goal

Create\_Date

**Location**

Location entity will describe where and when the campaign is going to held

Attributes:

Location\_ID: Primary Key

Venue

City

State

Zipcode

Create\_Date

**Staff\_Location**

Staff Location entity will keep track of all the campaign staff

Attributes:

Staff\_ID, Location\_ID, Location\_Date: Composite Key

Contact\_Number

Create\_Date

**Department**

Attribute:

Department\_ID: Primary Key

Department\_Name

Create\_Date

**Vendor**

Vendor Entity will store vendor’s information. Their name, service and Tax ID number

Attributes:

Tax\_ID: Primary Key

Vendor\_Name

Service

Vendor\_Payment

Create\_Date

**Vendor Payment**

Vendor payment entity will keep record when is vendor’s payment due and their payment amount

Attributes:

Vendor\_Payment\_ID

Tax\_ID

Payment\_Amount

Payment\_Date

Create\_Date