



# Hazus Inventory National Database

Data Dictionary

February 2023



FEMA

This page intentionally left blank (*FEMA Blank Page Note* style)

---

## Table of Contents

<b>Purpose</b> .....	<b>1</b>
1.1. Introduction.....	1
<b>Boundaries</b> .....	<b>2</b>
2.1. CensusBlock .....	2
2.2. CensusTract .....	2
2.3. Communities.....	2
2.4. Counties.....	3
2.5. States.....	3
2.6. Watersheds.....	4
<b>Essential Facilities</b> .....	<b>5</b>
3.1. Care Facilities .....	5
3.2. Emergency Center Facilities.....	6
3.3. Fire Station Facilities .....	8
3.4. Police Station Facilities.....	9
3.5. School Facilities.....	11
<b>Transportation Systems</b> .....	<b>14</b>
4.1. Airport Facilities .....	14
4.2. Airport Runways.....	15
4.3. Bus Facilities.....	16
4.4. Ferry Facilities.....	17
4.5. Highway Bridges.....	18
4.6. Highway Segments.....	20
4.7. Highway Tunnels.....	20
4.8. Light Rail Bridges.....	21
4.9. Light Rail Facilities.....	22
4.10. Light Rail Segments.....	23
4.11. Port Facilities .....	24

4.12.	Railway Bridges.....	25
4.13.	Railway Facilities.....	26
4.14.	Railway Segments.....	26
4.15.	Railway Tunnels .....	27
<b>Utility Systems .....</b>		<b>29</b>
5.1.	Communication Facilities.....	29
5.2.	Electric Power Facilities .....	30
5.3.	Natural Gas Facilities.....	31
5.4.	Natural Gas Pipelines .....	33
5.5.	Oil Facilities.....	33
5.6.	Potable Water Facilities .....	34
5.7.	Wastewater Facilities.....	35
<b>Aggregated Data .....</b>		<b>37</b>
6.1.	Building’s Content Full Replacement Value by Occupancy at Census Block Level .	37
6.2.	Building’s Content Full Replacement Value by Occupancy at Census Tract Level ..	39
6.3.	Building Count by Occupancy (Census Block).....	41
6.4.	Building Count by Occupancy (Census Tract) .....	42
6.5.	Building (Without Content) Full Replacement Value by Occupancy at Census Block Level.....	44
6.6.	Building (Without Content) Full Replacement Value by Occupancy at Census Tract Level.....	46
6.7.	Demographics by Census Block.....	49
6.8.	Demographics by Census Tract .....	53
6.9.	Square Footage by Occupancy at Census Block Level .....	57
6.10.	Square Footage by Occupancy at Census Tract Level .....	59
<b>Appendix A – General/All-Hazard Tables .....</b>		<b>62</b>
	Table A.1 Building Occupancy Classes.....	62
	Table A.2 Essential Facilities Classification .....	63
	Table A.3 High Potential Loss Facilities Classification .....	64
	Table A.4 Highway System Classification .....	64

Table A.5 Railway System Classification .....	65
Table A.6 Light Rail System Classification.....	66
Table A.7 Bus System Classification .....	67
Table A.8 Port and Harbor System Classification.....	68
Table A.9 Ferry System Classification .....	68
Table A.10 Airport System Classification.....	68
Table A.11 Potable Water System Classification .....	69
Table A.12 Waste Water System Classification.....	70
Table A.13 Oil System Classification .....	70
Table A.14 Natural Gas System Classification .....	71
Table A.15 Electric Power System Classification.....	71
Table A.16 Communication Classification.....	72
<b>Appendix B .....</b>	<b>73</b>
Table B.1 Site (Soil) Classes.....	73
Table B.2 Structural Building Classifications .....	73
Table B.3 Earthquake Foundation Type .....	75
Table B.4 Landslide Susceptibility Category .....	75
Table B.5 Liquefaction Susceptibility Category .....	76
Table B.6 Earthquake Design level .....	76
Table B.7 Anchor .....	76
Table B.8 Building-Specific Data Earthquake Building Classifications .....	77
<b>Appendix C .....</b>	<b>78</b>
Table C.1 Flood Module Building Type .....	78
Table C.2 Flood Module Design Level .....	78
Table C.3 Flood Module Foundation Type .....	78

# Purpose

The purpose of this document is to provide background reference data to support the national databases released from FEMA's Hazus Program. The Hazus Program has been providing national baseline datasets consisting of aggregated building stock, demographics, and infrastructure data since 1997.

The data are developed from publicly available sources; however, significant work is done by the Hazus Team to develop and improve the attribution required for risk assessment, including adding valuation data and vulnerability attributes supporting earthquake, flood, hurricane, and tsunami loss estimation.

This document outlines the deliverables of these data that consist of Esri formatted File Geodatabases. These can also be opened and used in QGIS. Within the Hazus GUI, these data are presented in views that help label and define the attributes that include data dictionary tables and FGDC compliant metadata for each file. Since this separate release of nationwide data does not include those features, this document provides supporting documentation that will be required by users of the data.

## 1.1. Introduction

Each layer in the Hazus Inventory National Database is listed and described below in a table. The tables use the following fields to describe the data:

- **Field Name** – the name of each field in the layer
- **Field Description** – a description of the data for that field
- **Required** – explains if this is a required field when uploading data in CDMS
- **Units** – the units associated with each field
- **Default** – the default value for this field in Hazus
- **Hazard** – explains which hazard models in Hazus use this information

# Boundaries

## 2.1. CensusBlock

These Census blocks contain the Hazus dasymetric geometries. Please refer to the [Hazus Inventory Technical Manual](#) for more details. The original TIGER Census Block data can be accessed from the following links:

Field Name	Field Description	Required	Units	Default	Hazard
StateAbbr	State Abbreviation	TRUE			
Tract	Census Tract ID	TRUE			
CensusBlock	Census Block ID	TRUE			

- Overall 2020 data: <https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.2020.html#list-tab-FMM7UH7FII6HLZVA8F>
- 2020 Census Block Geometries by State: <https://www2.census.gov/geo/tiger/TIGER2020/TABBLOCK20/>

## 2.2. CensusTract

Field Name	Field Description	Required	Units	Default	Hazard
StateAbbr	State Abbreviation	TRUE			
Tract	Census Tract ID	TRUE			

## 2.3. Communities

The Community layer is a composite of three FEMA datasets:

- 1) Community layer of participating National Flood Insurance Program (NFIP) jurisdictions,
- 2) Community layer of participating NFIP Tribal Governments,
- 3) Community layer of participating NFIP Special Land Use Areas (SLUAs).

It was determined that all communities were to be represented, whether they had a Community Identification Number (CID) or not. CID was used where available and a customized Area\_ID was developed for others. The three layers were merged with the appropriate attributes for each column.

Since each community needs a unique Area\_ID, polygons with the same Area\_ID values were merged. The community names for these areas sometimes contained slightly different community names. Therefore, during the dissolve, the first name was selected. See the [Hazus Inventory Technical Manual](#) for more information on this layer.

Field Name	Field Description	Required	Units	Default	Hazard
Area_ID	NFIP Community ID Number	TRUE			
CommunityName	NFIP Community Name	FALSE			
CommunityType	NFIP Community Type	FALSE	0 = NFIP MPP Jurisdictions 1 = Tribal 2 = SLUA		

## 2.4. Counties

Field Name	Field Description	Required	Units	Default	Hazard
CountyFips	County FIPs Value	TRUE			
CountyFips3	County FIPs 3 Digit Value	FALSE			
CountyName	County Name	FALSE			
State	State Abbreviation	FALSE			
StateFips	State FIPs Value	FALSE			
NumTracts	Number of Tracts	FALSE			
TSCounty	Tsunami County Flag	FALSE			

## 2.5. States

Field Name	Field Description	Required	Units	Default	Hazard
StateFips	State FIPs Value	TRUE			
StateID	State Abbreviation	FALSE			



Field Name	Field Description	Required	Units	Default	Hazard
StateName	State Name	TRUE			
EorW	East or West EQ Attenuation Function	TRUE			
Region	Western Region Flag	FALSE			
NumCounties	Number of Counties	FALSE			
HUState	Hurricane State Flag	FALSE			
TSSState	Tsunami State Flag	FALSE			

## 2.6. Watersheds

The [USGS National Watershed Boundary Dataset \(WBD\)](#) is a comprehensive aggregated collection of hydrologic unit data consistent with the national criteria for delineation and resolution. It defines the areal extent of surface water drainage to a point. The WBD covers the entire U.S. The Watershed layer was created using the latest eight-digit hydrologic unit code (HUC-8) watersheds from the USGS National Watershed Boundary Dataset.

Field Name	Field Description	Required	Units	Default	Hazard
HUC	Watershed HUC-8 value	TRUE			
Name	Watershed name value	FALSE			

# Essential Facilities

## 3.1. Care Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			
Address	Address	FALSE			All
BldgDamageFnId	Structure Damage Function Id	TRUE		474	FL
BldgType	Flood Building Type	TRUE		WOOD	FL
CareFtyId	Hazus Internal ID	TRUE		Auto	All
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
ContDamageFnId	Contents Damage Function	TRUE		309	FL
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
eqDesignLevel	EQ Design Level	TRUE		LC	EQ
EfClass	Facility Class	TRUE		MDFLT	All
eqBldgType	EQ Building Type	TRUE		DFLT	EQ
FirstFloorHt	Height of the First Occupied Floor	TRUE	Feet	3	FL
FloodProtection	Protection In terms of return period	TRUE		0	FL
flFoundationType	Flood Structure Foundation Type	TRUE		4	FL
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
NumBeds	Number of Beds	FALSE			All
PhoneNumber	Telephone Number	FALSE			All
SoilType	Soil Type	TRUE		D	EQ

Field Name	Field Description	Required	Units	Default	Hazard
Tract	Census Tract	FALSE			All
Use	Primary Function	FALSE			All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
MedianYearBuilt	Median Year Built	FALSE			All
Zipcode	ZIP Code	FALSE			All
BldgArea_sqft	Building Area (sqft)	FALSE	SqFt		All
UATYP	Urbanized Area Type	FALSE			All
BldgSchemesId	Structure Scheme Id	FALSE			All
hifld_ID	HIFLD Hospitals ID	FALSE			All
hifld_COUNTY	County Name	FALSE			All
hifld_NAICS_CODE	NAICS Code	FALSE			All
hifld_SOURCE	Source	FALSE			All
hifld_SOURCEDATE	Source Date	FALSE			All
hifld_VAL_METHOD	Validation Method	FALSE			All
hifld_VAL_DATE	Validation Date	FALSE			All
hifld_WEBSITE	Website Hyperlink	FALSE			All
hifld_OWNER	Owner Type	FALSE			All
hifld_TRAUMA	Trauma Levels	FALSE			All
hifld_HELIPAD	Helipad	FALSE			All

### 3.2. Emergency Center Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
Area	Area	FALSE			All
BackupPower	Back-up Power Yes(1) or No(0)	FALSE			All
BldgDamageFnId	Structure Damage Function Id	TRUE		640	FL
flBldgType	Flood Building Type	TRUE		WOOD	FL
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
ContDamageFnId	Content Damage Function Id	TRUE		477	FL
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
eqDesignLevel	Design Level	TRUE		LC	EQ
EfClass	Facility Class	TRUE		EDFLT	All
EocId	Hazus Internal ID	TRUE		Auto	All
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
FirstFloorHt	First Occupied Floor Height	TRUE	Feet	0	FL
flFoundationType	Flood Structure Foundation Type	TRUE		4	FL
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
NumStories	Number of Stories	FALSE			All
PhoneNumber	Telephone Number	FALSE			All
eqSoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
MedianYearBuilt	Median Year Built	FALSE			All
Zipcode	ZIP Code	FALSE			All
hifld_NAICSCODE	NAICS Code	FALSE			All
hifld_GENERATOR	Generator	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
hifld_BASEMENT	Basement	FALSE			All
hifld_LVLGOVOP	Government Operations Level	FALSE			All
hifld_WEBSITE	Website Hyperlink	FALSE			All
hifld_DIRECTIONS	Directions	FALSE			All
BldgSchemesId	Structure Scheme Id	FALSE			All
UATYP	Urban Rural Type	FALSE	U = Urbanized Area R = Not U		All

### 3.3. Fire Station Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
Area	Area	FALSE			All
BldgDamageFnId	Structure Damage Function	TRUE		640	FL
BldgType	Flood Building Type	TRUE		Concrete	FL
City	City	FALSE			All
ContDamageFnId	Contents Damage Function	TRUE		477	FL
Cost	Replacement cost (thous. \$)	FALSE	Thous. \$		All
flDesignLevel	Flood Pre/Post FIRM Design Level	TRUE		0	FL
eqDesignLevel	Design Level	TRUE		LC	EQ
FacilityClass	Facility Class	TRUE		FDFLT	All
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
FireStationId	Hazus Internal ID	TRUE		Auto	All

FirstFloorHt	First Occupied Floor Height	TRUE	Feet	0	FL
FoundationType	Flood Structure Foundation Type	TRUE		7	FL
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
NumStories	Number of Stories	FALSE			All
SoilType	Soil Type	TRUE		D	EQ
Tract	Census Tract	FALSE			All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
MedianYearBuilt	Median Year Built	FALSE			All
Zipcode	ZIP Code	FALSE			All
hifld_PERMANENT_IDENTIFIER	Permanent Identifier	FALSE			All
hifld_SOURCE_FEATUREID	Source Feature Id	FALSE			All
hifld_SOURCE_DATASETID	Source Dataset Id	FALSE			All
hifld_SOURCE_DATADESC	Source Data Description	FALSE			All
hifld_SOURCE_ORIGINATOR	Source Originator	FALSE			All
UATYP	Urban Rural Type	FALSE	U = Urbanized Area R = Not U		All
Volunteer	Volunteer	FALSE			All

### 3.4. Police Station Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
Area	Area	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
BldgDamageFnId	Structure Damage Function Id	TRUE		640	FL
BldgType	Flood Building Type	TRUE		Concrete	FL
City	City	FALSE			All
ContDamageFnId	Content Damage Function Id	TRUE		477	FL
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
flDesignLevel	Flood Pre/Post FIRM Design Level	TRUE		0	FL
eqDesignLevel	Design Level	TRUE		LC	EQ
EfClass	Facility Class	TRUE		PDFLT	All
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
FirstFloorHt	First Occupied Floor Height	TRUE	Feet	0	FL
flFoundationType	Flood Structure Foundation Type	TRUE		4	FL
eqFoundationType	Foundation Type	FALSE		0	EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
PhoneNumber	Telephone Number	FALSE			All
PoliceStationId	Hazus Internal ID	TRUE		Auto	All
SoilType	Soil Type	TRUE		D	EQ
Tract	Census Tract	FALSE			All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
MedianYearBuilt	Median Year Built	FALSE			All
Zipcode	ZIP Code	FALSE			All
hifld_TYPE	Type	FALSE			All
hifl_NAICS_CODE	NAICS Code	FALSE			All
hifld_NAICS_DESC	NAICS Description	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
hifld_TRIBAL	Tribal	FALSE			All
hifld_SOURCE	Source	FALSE			All
hifld_SOURCEDATE	Source Date	FALSE			All
hifld_VAL_METHOD	Validation Method	FALSE			All
hifld_VAL_DATE	Validation Date	FALSE			All
hifld_FTSWORN	Full Time Sworn	FALSE			All
hifld_FTCIV	Full Time Civilian	FALSE			All
hifld_PTSWORN	Part Time Sworn	FALSE			All
hifld_PTCIV	Part Time Civilian	FALSE			All
hifld_CSLLEA08ID	Census Agency ID	FALSE			All

### 3.5. School Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
Area	Area	FALSE			All
BldgDamageFnld	Structure Damage Function Id	TRUE		643	FL
BldgType	Flood Building Type	TRUE		Masonry	FL
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
ContDamageFnld	Contents Damage Function	TRUE		480	FL
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
flDesignLevel	Flood Pre/Post FIRM Design Level	TRUE		0	FL
eqDesignLevel	Design Level	TRUE		LC	EQ
EfClass	Facility Class	TRUE		SDFLT	All



Field Name	Field Description	Required	Units	Default	Hazard
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
FirstFloorHt	Height of the First Occupied Floor	TRUE	Feet	0	FL
flFoundationType	Flood Structure Foundation Type	TRUE		7	FL
eqFoundationType	Foundation Type	FALSE			EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
NumStories	Number of Stories	FALSE			All
NumStudents	Number of Students	FALSE			All
PhoneNumber	Phone Number	FALSE			All
SchoolId	Hazus Internal ID	TRUE		Auto	All
SoilType	Soil Type	TRUE		D	EQ
Tract	Census Tract	FALSE			All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
MedianYearBuilt	Median Year Built	FALSE			All
Zipcode	ZIP Code	FALSE			All
hifld_POPULATION	Population	FALSE			All
hifld_TOT_ENROLL	College and University Total Enrollment	FALSE			All
hifld_ENROLLMENT	K-12 Enrollment	FALSE			All
hifld_FT_TEACHER	K-12 Full Time Equivalent Teachers	FALSE			All
hifld_TOT_EMP	College and University Total Employees	FALSE			All
hifld_STATUS	Status	FALSE			All
hifld_SOURCE	NCES Hyperlink	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
hifld_SOURCEDATE	Source Date	FALSE			All
hifld_SourceFile	HIFLD Data Name	FALSE			All
hifld_VAL_METHOD	Validation Method	FALSE			All
hifld_VAL_DATE	Validation Date	FALSE			All
hifld_WEBSITE	Website Hyperlink	FALSE			All
hifld_NAICS_CODE	NAICS Code	FALSE			All
BldgSchemesId	Tract Building Schemes Id	FALSE			All
SqftperStudent	Square Feet per Student	FALSE			All
ContentCost_1kDollars	Contents Replacement Cost (1,000 US Dollars)	FALSE	Thous. \$		All
Combined_Cost_1kDollars	Combined Building and Contents Cost (1,000 US Dollars)	FALSE	Thous. \$		All

# Transportation Systems

## 4.1. Airport Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
AirportFlytId	Hazus Internal ID	TRUE		Auto	All
Cargo	Capacity (tons/day)	FALSE	Tons/day		All
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
Contact	Contact Person	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
NumFlights	Capacity (flights/day)	FALSE	Flights/day		All
NumPassengers	Capacity (passengers/day)	FALSE	Passangers/day		All
Owner	Facility Owner	FALSE			All
PhoneNumber	Telephone Number	FALSE			All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
TranspFcltyClass	Analysis Class	TRUE		ADFLT	All
Use	Primary Function	FALSE			All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
Zipcode	ZIP Code	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
OwnerType	Owner Type	FALSE			All
UATYP	Urbanized Area Type	FALSE	U = Urbanized Area C = Urban Clusters R = Not U or C		All
Arrivals	Number of Flight Arrivals	FALSE			All
Departures	Number of Flight Departures	FALSE			All

## 4.2. Airport Runways

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
AirportId	Airport Identifier	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Runway Name	FALSE			All
RunwayId	Hazus Internal ID	TRUE		Auto	All
RunwayLength	Runway Length (ft)	FALSE	Fet		All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
TranspFclyClass	Analysis Class	TRUE			All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
Area	Runway Area (sq yd)	FALSE	SqYd		All
CostPerSqYd	Cost Per Square Yard (\$)	FALSE	\$ per SqYd		All
FullName	Full Runway Name	FALSE			All
Width	Runway Width	FALSE			All
SrfcType	Runway Surface Type	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
SrfcTrtmnt	Runway Surface Treatment	FALSE			All
RwyLghts	Runway Lights	FALSE			All

### 4.3. Bus Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
BusFityId	Hazus Internal ID	TRUE		Auto	All
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
Owner	Facility Owner	FALSE			All
PhoneNumber	Telephone Number	FALSE			All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
Traffic	Daily Traffic (bus/day)	FALSE			All
TranspFcltyClass	Analysis Class	TRUE		BDFLT	All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
Zipcode	ZIP Code	FALSE			All
Source	Source	FALSE			All
CbsaCode	Core Based Statistical Areas Code	FALSE			All

#### 4.4. Ferry Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State	FALSE			All
Address	Address	FALSE			All
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
Contact	Contact Person	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
FerryFtyId	Hazus Internal ID	TRUE		Auto	All
FoundationType	Foundation Type	FALSE		0	EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
NumStories	Number of Stories	FALSE			All
Owner	Facility Owner	FALSE			All
PhoneNumber	Telephone Number	FALSE			All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
TranspFcltyClass	Analysis Class	TRUE		FDFLT	All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
YearBuilt	Year Built (Between 1500 and 2100)	FALSE	1500 to 2100		All
Zipcode	ZIP Code	FALSE			All

## 4.5. Highway Bridges

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
BridgeClass	Analysis Class	TRUE		HDFLT	All
BridgeType	Structure Type	FALSE			All
Comment	Misc. Comments	FALSE			All
Condition	General Condition Rating	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
FoundationType	Flood Structure Foundation Type	FALSE		4	All
HighwayBridgeld	Hazus Internal ID	TRUE		Auto	All
Latitude	Latitude	FALSE			All
Length	Bridge Length (m)	FALSE	Meters		All
Longitude	Longitude	FALSE			All
MaxSpanLength	Maximum Span Length (m)	FALSE	Meters		All
Name	Bridge Name	FALSE			All
NumSpans	Number of Spans	FALSE			All
Owner	Bridge Owner	FALSE			All
ScourIndex	Scour Index	FALSE			All
SkewAngle	Skew Angle (degrees)	FALSE	Degrees		All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
Traffic	Daily Traffic (cars/day)	FALSE	Cars/day		All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ

Field Name	Field Description	Required	Units	Default	Hazard
Width	Bridge Width (m)	FALSE	Meters		All
YearBuilt	Year Built	FALSE			All
YearRemodeled	Year Bridge Was Remodeled	FALSE	1500 to 2100		All
FunctionallyObsolete	Functionally Obsolete	FALSE			All
hifld_APPR_ROAD_EVAL_072	Approach Roadway Alignment	FALSE			All
hifld_APPR_SPANS_046	Number of Approach Spans	FALSE			All
hifld_CULVERT_COND_062	Culvert Condition	FALSE			All
hifld_DECK_COND_058	Deck Condition	FALSE			All
hifld_DECK_GEOMETRY_EVAL_068	Deck Geometry Evaluation	FALSE			All
hifld_DECK_WIDTH_MT_052	Deck Width (meters)	FALSE			All
hifld_MAIN_UNIT_SPANS_045	Number of Spans in Main Unit	FALSE			All
hifld_SERVICE_ON_042A	Type of Service on Bridge	FALSE			All
hifld_STRUCTURAL_EVAL_067	Structural Evaluation	FALSE			All
hifld_STRUCTURE_KIND_043A	Kind of Material/Design	FALSE			All
hifld_STRUCTURE_TYPE_043B	Type of Design/Construction	FALSE			All
hifld_SUBSTRUCTURE_COND_060	Substructure Condition	FALSE			All
hifld_SUPERSTRUCTURE_COND_059	Superstructure Condition	FALSE			All
hifld_UNDCLEARENCE_EVAL_069	Underclear, Vertical & Horizontal	FALSE			All



Field Name	Field Description	Required	Units	Default	Hazard
hifld_WATERWAY_EVAL_071	Waterway Adequacy	FALSE			All
hifld_YEAR_RECONSTRUCTED_106	Year Reconstructed	FALSE			All
StructurallyDeficient	Structurally Deficient	FALSE			All

#### 4.6. Highway Segments

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
HighwaySegId	Hazus Internal ID	TRUE			All
SegmentClass	Analysis Class	TRUE			All
CountyFips	County FIPS	TRUE			All
Name	Highway Segment Name	FALSE			All
Owner	Owner of Highway Segment	FALSE			All
Length	Section Length (km)	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE			All
NumLanes	Number of Lanes	FALSE			All
Comment	Misc. Comments	FALSE			All

#### 4.7. Highway Tunnels

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
HighwayTunnelId	Hazus Internal ID	TRUE		Auto	All
Latitude	Latitude	FALSE			All
Length	Tunnel Length (m)	FALSE	Meters		All

Field Name	Field Description	Required	Units	Default	Hazard
Longitude	Longitude	FALSE			All
Name	Tunnel Name	FALSE			All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
TunnelClass	Analysis Class	TRUE		HDFLT	All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
YearBuilt	Year Built (Between 1500 and 2100)	FALSE	1500 to 2100		All
TunnelDiameterMeters	Tunnel Diameter	FALSE	Meters		All
IRTEHORZCL	Tunnel Diameter	FALSE	Meters		All
NGAID	NGA ID	FALSE			All

#### 4.8. Light Rail Bridges

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
LightRailBridgId	Hazus Internal ID	TRUE		Auto	All
BridgeClass	Analysis Class	TRUE		LDFLT	All
Tract	Census Tract	FALSE			All
Name	Bridge Name	FALSE			All
BridgeType	Structure Type	FALSE			All
Width	Bridge Width (m)	FALSE	Meters		All
NumSpans	Number of Spans	FALSE			All
Length	Total Bridge Length (m)	FALSE	Meters		All
MaxSpanLength	Maximum Span Length (m)	FALSE	Meters		All
SkewAngle	Skew Angle (degrees)	FALSE	Degrees		All
YearBuilt	Year Built (Between 1500 and 2100)	FALSE	1500 to 2100		All

Field Name	Field Description	Required	Units	Default	Hazard
PierType	Pier Type	FALSE			All
ScourIndex	Scour Index	FALSE			All
Traffic	Daily Traffic (cars/day)	FALSE	Cars/day		All
Condition	General Condition Rating	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
SoilType	Soil Type	FALSE		D	EQ
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ

#### 4.9. Light Rail Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
City	City	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
Latitude	Latitude	FALSE			All
LightRailFtyId	Hazus Internal ID	TRUE		Auto	All
Longitude	Longitude	FALSE			All
Name	Name	FALSE			All
SoilType	Soil Type	TRUE		D	EQ
Tract	Census Tract	FALSE			All
TranspFcltyClass	Analysis Class	TRUE		LDFLT	All

Field Name	Field Description	Required	Units	Default	Hazard
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
Zipcode	ZIP Code	FALSE			All
hifld_STATIONURL	Station URL	FALSE			All
System	System	FALSE			All
hifld_SYS_AGENCY	System Agency	FALSE			All
hifld_SOURCE	Source URL	FALSE			All
hifld_SOURCEDATE	Source Date	FALSE			All
hifld_STATIONSYS	Stations System	FALSE			All

#### 4.10. Light Rail Segments

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
LightRailSegId	Hazus Internal ID	TRUE			All
SegmentClass	Analysis Class	TRUE		LTR	All
CountyFips	County Fips	TRUE			All
RTE_NAME	Track Segment Name	FALSE			All
SYSTEM	Track Segment Owner	FALSE			All
Length_km	Section Length (km)	FALSE	Kilometer		All
Cost_1kDollars	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
SYSTEM_URL	System Url	FALSE			All
SYS_AGENCY	System Agency	FALSE			All
RTE_URL	Route URL	FALSE			All
MODE	Mode	FALSE			All
SOURCE	Source URL	FALSE			All
SOURCEDATE	Source Date	FALSE			All
CensusRegion	Census Region	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
CensusDivision	Census Division	FALSE			All
CostMultiplier	Cost Multiplier	FALSE			All

#### 4.11. Port Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
Owner	Facility Owner	FALSE			All
PortFtyId	Hazus Internal ID	TRUE		Auto	All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
TranspFcltyClass	Analysis Class	TRUE		PDFLT	All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
YearBuilt	Year Built (Between 1500 and 2100)	FALSE	1500 to 2100		All
Zipcode	ZIP Code	FALSE			All
FacilityType	Facility Type	FALSE			All
PortName	Port Name	FALSE			All
Commodities	Commodities	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
Construction		FALSE			All

#### 4.12. Railway Bridges

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
BridgeClass	Analysis Class	TRUE		RDFLT	All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Bridge Name	FALSE			All
Owner	Bridge Owner	FALSE			All
RailwayBridgeld	Hazus Internal ID	TRUE		Auto	All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
YearBuilt	Year Built (Between 1500 and 2100)	FALSE	1500 to 2100		All
hifld_NAICSCODE	NAICS Code	FALSE			All
hifld_NAICSDESCR	NAICS Description	FALSE			All
hifld_FEATURE_TY	Feature Type	FALSE			All
hifld_GNIS_NAME	Geographic Names Information System Name	FALSE			All
hifld_GNIS_ID	Geographic Names Information System Id	FALSE			All
hifld_RAILWAY_NM	Railway Name	FALSE			All

### 4.13. Railway Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
RailFiltyld	Hazus Internal ID	TRUE		Auto	All
TranspFclyClass	Analysis Class	TRUE		RDFLT	All
Tract	Census Tract	FALSE			All
Name	Facility Name	FALSE			All
Address	Address	FALSE			All
City	Facility City	FALSE			All
Zipcode	ZIP Code	FALSE			All
Owner	Facility Owner	FALSE			All
Usage	Primary Function	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Comment	Misc. Comments	FALSE			All
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
DesignLevel	Design Level	TRUE		LC	EQ
FoundationType	Foundation Type	FALSE		0	EQ
SoilType	Soil Type	FALSE		D	EQ
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ

### 4.14. Railway Segments

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
RailwaySegId	Hazus Internal ID	TRUE			All
SegmentClass	Analysis Class	TRUE		RTR	All

Field Name	Field Description	Required	Units	Default	Hazard
CountyFips	County FIPS	TRUE			All
Name	Track Segment Name	FALSE			All
Length_km	Section Length (km)	FALSE	Kilometers		All
Cost_1kDollars	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
CensusRegion	Census Region	FALSE			All
CensusDivision	Census Division	FALSE			All
CostMultiplier	Cost Multiplier	FALSE			All
UrbanFlag	Urban	FALSE			All
SourceFile	HIFLD Source	FALSE			All

#### 4.15. Railway Tunnels

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Comment	Misc. Comments	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
Latitude	Latitude	FALSE			All
Length	Tunnel Length (m)	FALSE	Meters		All
Longitude	Longitude	FALSE			All
Name	Tunnel Name	FALSE			All
Owner	Tunnel Owner	FALSE			All
RailwayTunnelId	Hazus Internal ID	TRUE		Auto	All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
Traffic	Traffic Index	FALSE			All
TunnelClass	Analysis Class	TRUE		RDFLT	All



<b>Field Name</b>	<b>Field Description</b>	<b>Required</b>	<b>Units</b>	<b>Default</b>	<b>Hazard</b>
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
Width	Tunnel Width (m)	FALSE	Meters		All
YearBuilt	Year Built (Between 1500 and 2100)	FALSE	1500 to 2100		All

# Utility Systems

## 5.1. Communication Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
CommunicationFtyld	Hazus Internal ID	TRUE		Auto	All
UtilFctyClass	Analysis Class	TRUE		CDFLT	All
Tract	Census Tract	FALSE			All
Name	Facility Name	FALSE			All
Address	Address	FALSE			All
City	City	FALSE			All
Zipcode	ZIP Code	FALSE			All
Owner	Facility Owner	FALSE			All
Contact	Contact Person	FALSE			All
PhoneNumber	Telephone Number	FALSE			All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
FoundationType	Foundation Type	FALSE		0	EQ
SoilType	Soil Type	FALSE		D	EQ
Usage	Primary Function	FALSE			All
YearBuilt	Year Built	FALSE	1500 to 2100		All
Cost	Replacement Cost (Thous. \$)	FALSE	Thous. \$		All
WaterDepth	Water Depth in Meters	FALSE	Meters	5	EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Comment	Comment	FALSE			All

## 5.2. Electric Power Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
Capacity	Capacity	FALSE			All
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
Contact	Contact Person	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
ElectricPowerFtyld	Hazus Internal ID	TRUE		Auto	All
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
flFoundationType	Flood Structure Foundation Type	FALSE		7	FL
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Name	FALSE			All
Owner	Owner	FALSE			All
PhoneNumber	Telephone Number	FALSE			All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
UtilDamageFnld	The assigned damage function	FALSE		60	FL
UtilFcltyClass	Analysis Class	TRUE		EDFLT	All
UtilIndicator	Utility Indicator	FALSE		0	FL
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
Zipcode	Zipcode	FALSE			All
hifld_PLANT_CODE	Plant Code	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
hifld_STATUS	Status	FALSE			All
hifld_NAICS_CODE	NAICS Code	FALSE			All
hifld_NAICS_DESC	NAICS Description	FALSE			All
hifld_SOURCE	Source	FALSE			All
hifld_SOURCEDATE	Source Date	FALSE			All
hifld_VAL_METHOD	Validation Method	FALSE			All
hifld_VAL_DATE	Validation Date	FALSE			All
hifld_OPERAT_ID	Operator Id	FALSE			All
hifld_OPER_CAP	Operating Capacity	FALSE			All
hifld_SUMMER_CAP	Summer Capacity	FALSE			All
hifld_WINTER_CAP	Winter Capacity	FALSE			All
hifld_PLAN_CAP	Planned Capacity	FALSE			All
hifld_PRIM_FUEL	Primary Fuel	FALSE			All
hifld_SEC_FUEL	Secondary Fuel	FALSE			All
hifld_NET_GEN	Net Generated	FALSE			All

### 5.3. Natural Gas Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
City	City	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
flFoundationType	Flood Structure Foundation Type	TRUE		7	FL
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
Name	Facility Name	FALSE			All
NaturalGasFtyId	Hazus Internal ID	TRUE		Auto	All
Owner	Facility Owner	FALSE			All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
UtilDamageFnld	The assigned damage function	TRUE		59	FL
UtilFctyClass	Analysis Class	TRUE	Table A.16	GDFLT	All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
Zipcode	ZIP Code	FALSE			All
hifld_NGPPID	NGPPID	FALSE			All
hifld_TYPE	Type	FALSE			All
hifld_STATUS	Status	FALSE			All
hifld_NAICS_CODE	NAICS Code	FALSE			All
hifld_NAICS_DESC	NAICS Description	FALSE			All
hifld_SOURCE	Source	FALSE			All
hifld_SOURCEDATE	Source Date	FALSE			All
hifld_VAL_METHOD	Validation Method	FALSE			All
hifld_VAL_DATE	Validation Date	FALSE			All
hifld_WEBSITE	Website	FALSE			All
hifld_FACID	Facility Id	FALSE			All
hifld_COMPNAME	Company Name	FALSE			All
hifld_EPA_ID	EPA ID	FALSE			All
hifld_GCOMPID	Compressor Facility ID	FALSE			All
hifld_PIPECO	Pipe Company	FALSE			All

## 5.4. Natural Gas Pipelines

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation				ALL
Comment	Misc. Comments				ALL
Cost	Replacement Cost (thous. \$)		Thous. \$		ALL
CountyFips	County FIPS ID				ALL
Operator	Pipeline Operator				ALL
NaturalGasPIId	Hazus Internal ID				ALL
Length_Kilometers	Pipe Length (Km)		Kilometers		ALL
PipelineClass	Pipeline Class				ALL
RegionCostFactor	Region Cost Factor				ALL

## 5.5. Oil Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State	FALSE			All
Address	Address	FALSE			All
Capacity	Capacity (Thous. Barrels/Day)	FALSE	Thous.		All
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
Contact	Contact Person	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
flFoundationType	Flood Structure Foundation Type	FALSE			FL
eqFoundationType	Foundation Type	FALSE		0	EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All

Field Name	Field Description	Required	Units	Default	Hazard
Name	Facility Name	FALSE			All
NumStories	Number of Stories	TRUE		0	FL
OilFtyId	Hazus Internal ID	TRUE		Auto	All
Owner	Facility Owner	FALSE			All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
Use	Primary Function	FALSE			All
UtilDamageFnId	The assigned damage function	TRUE		48	FL
UtilFcityClass	Analysis Class	TRUE		ODFLT	All
WaterDepth	Water Depth in Meters between 0 - 1000	FALSE	Meters	5	EQ
YearBuilt	Year Built (Between 1500 and 2100)	FALSE	1500 to 2100		All
Zipcode	ZIP Code	FALSE			All

## 5.6. Potable Water Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
Capacity	Capacity (Million Gallons/Day)	FALSE	Million		All
City	City	FALSE			All
Comment	Misc. Comments	FALSE			All
Contact	Contact Person	FALSE			All
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ

Field Name	Field Description	Required	Units	Default	Hazard
EquipmentHt	Average Height Electrical Equipment	FALSE	Feet	0	FL
flFoundationType	Flood Structure Foundation Type	FALSE			FL
eqFoundationType	Foundation Type	FALSE		0	EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
NumStories	Number of Stories	FALSE			All
Owner	Facility Owner	FALSE			All
PotableWaterFtyld	Hazus Internal ID	TRUE		Auto	All
SoilType	Soil Type	FALSE		D	EQ
SystemId	Identifier for Water System	FALSE			All
Tract	Census Tract	FALSE			All
Use	Primary Function	FALSE			All
UtilDamageFnld	The assigned damage function	TRUE		4	FL
UtilFctyClass	Analysis Class	TRUE		PDFLT	All
UtilIndicator	Utility Indicator	FALSE		0	FL
WaterDepth	Water Depth in Meters	FALSE	Meters	5	EQ
YearBuilt	Year Built	FALSE	1500 to 2100		All
Zipcode	ZIP Code	FALSE			All

## 5.7. Wastewater Facilities

Field Name	Field Description	Required	Units	Default	Hazard
State	State Abbreviation	FALSE			All
Address	Address	FALSE			All
City	City	FALSE			All



Field Name	Field Description	Required	Units	Default	Hazard
Cost	Replacement Cost (thous. \$)	FALSE	Thous. \$		All
DesignLevel	Design Level	TRUE		LC	EQ
eqBldgType	Earthquake Building Type	TRUE		DFLT	EQ
Latitude	Latitude	FALSE			All
Longitude	Longitude	FALSE			All
Name	Facility Name	FALSE			All
SoilType	Soil Type	FALSE		D	EQ
Tract	Census Tract	FALSE			All
UtilDamageFnId	Utility Damage Function ID	TRUE	Table A.14	45	FL
UtilFcltyClass	Analysis Class	TRUE		CDFLT	All
WasteWaterFtyId	Hazus Internal ID	TRUE		Auto	All
WaterDepth	Water Depth in Meters	FALSE	Meters	5	EQ
Zipcode	ZIP Code	FALSE			All
hifld_SOURCE_ID	Source ID	FALSE			All
hifld_CWP_STATUS	CWP Status	FALSE			All
hifld_CWP_PERMIT	CWP Permit	FALSE			All
hifld_CWP_PERM_1	CWP Permit 1	FALSE			All
hifld_CWP_PERM_2	CWP Permit 2	FALSE			All

# Aggregated Data

## 6.1. Building's Content Full Replacement Value by Occupancy at Census Block Level

Field Name	Field Description	Required	Type	Units	Default	Hazard
CensusBlock	Census Block	TRUE	Text(15)	Text		All
AGR1I	AGR1 - Agriculture	TRUE	Long Integer	Thous. \$		All
COM10I	COM10 - Parking	TRUE	Long Integer	Thous. \$		All
COM1I	COM1 - Retail Trade	TRUE	Long Integer	Thous. \$		All
COM2I	COM2 - Wholesale Trade	TRUE	Long Integer	Thous. \$		All
COM3I	COM3 - Personal and Repair Services	TRUE	Long Integer	Thous. \$		All
COM4I	COM4 - Professional/Technical Services	TRUE	Long Integer	Thous. \$		All
COM5I	COM5 - Banks	TRUE	Long Integer	Thous. \$		All
COM6I	COM6 - Hospital	TRUE	Long Integer	Thous. \$		All
COM7I	COM7 - Medical Office/Clinic	TRUE	Long Integer	Thous. \$		All
COM8I	COM8 - Entertainment & Recreation	TRUE	Long Integer	Thous. \$		All
COM9I	COM9 - Theaters	TRUE	Long Integer	Thous. \$		All
EDU1I	EDU1 - Grade Schools	TRUE	Long Integer	Thous. \$		All
EDU2I	EDU2 - Colleges/Universities	TRUE	Long Integer	Thous. \$		All
GOV1I	GOV1 - General Services	TRUE	Long Integer	Thous. \$		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
GOV2I	GOV2 - Emergency Response	TRUE	Long Integer	Thous. \$		All
IND1I	IND1 - Heavy	TRUE	Long Integer	Thous. \$		All
IND2I	IND2 - Light	TRUE	Long Integer	Thous. \$		All
IND3I	IND3 - Food/Drugs/Chemicals	TRUE	Long Integer	Thous. \$		All
IND4I	IND4 - Metals/Minerals Processing	TRUE	Long Integer	Thous. \$		All
IND5I	IND5 - High Technology	TRUE	Long Integer	Thous. \$		All
IND6I	IND6 - Construction	TRUE	Long Integer	Thous. \$		All
REL1I	REL1 - Churches and Other Non-profit Org.	TRUE	Long Integer	Thous. \$		All
RES1I	RES1 - Single Family Dwelling	TRUE	Long Integer	Thous. \$		All
RES2I	RES2 - Manufactured Housing	TRUE	Long Integer	Thous. \$		All
RES3AI	RES3A - Duplex	TRUE	Long Integer	Thous. \$		All
RES3BI	RES3B - Triplex / Quads	TRUE	Long Integer	Thous. \$		All
RES3CI	RES3C - Multi-dwellings (5 to 9 units)	TRUE	Long Integer	Thous. \$		All
RES3DI	RES3D - Multi-dwellings (10 to 19 units)	TRUE	Long Integer	Thous. \$		All
RES3EI	RES3E - Multi-dwellings (20 to 49 units)	TRUE	Long Integer	Thous. \$		All
RES3FI	RES3F - Multi-dwellings (50+ units)	TRUE	Long Integer	Thous. \$		All
RES4I	RES4 - Temporary Lodging	TRUE	Long Integer	Thous. \$		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
RES5I	RES5 - Institutional Dormitory	TRUE	Long Integer	Thous. \$		All
RES6I	RES6 - Nursing Home	TRUE	Long Integer	Thous. \$		All

## 6.2. Building's Content Full Replacement Value by Occupancy at Census Tract Level

Field Name	Field Description	Required	Type	Units	Default	Hazard
Tract	Census Tract	TRUE	Text(11)	Text		All
AGR1I	AGR1 - Agriculture	TRUE	Long Integer	Thous . \$		All
COM10I	COM10 - Parking	TRUE	Long Integer	Thous . \$		All
COM1I	COM1 - Retail Trade	TRUE	Long Integer	Thous . \$		All
COM2I	COM2 - Wholesale Trade	TRUE	Long Integer	Thous . \$		All
COM3I	COM3 - Personal and Repair Services	TRUE	Long Integer	Thous . \$		All
COM4I	COM4 - Professional/Technical Services	TRUE	Long Integer	Thous . \$		All
COM5I	COM5 - Banks	TRUE	Long Integer	Thous . \$		All
COM6I	COM6 - Hospital	TRUE	Long Integer	Thous . \$		All
COM7I	COM7 - Medical Office/Clinic	TRUE	Long Integer	Thous . \$		All
COM8I	COM8 - Entertainment & Recreation	TRUE	Long Integer	Thous . \$		All
COM9I	COM9 - Theaters	TRUE	Long Integer	Thous . \$		All
EDU1I	EDU1 - Grade Schools	TRUE	Long Integer	Thous . \$		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
EDU2I	EDU2 - Colleges/Universities	TRUE	Long Integer	Thous . \$		All
GOV1I	GOV1 - General Services	TRUE	Long Integer	Thous . \$		All
GOV2I	GOV2 - Emergency Response	TRUE	Long Integer	Thous . \$		All
IND1I	IND1 - Heavy	TRUE	Long Integer	Thous . \$		All
IND2I	IND2 - Light	TRUE	Long Integer	Thous . \$		All
IND3I	IND3 - Food/Drugs/Chemicals	TRUE	Long Integer	Thous . \$		All
IND4I	IND4 - Metals/Minerals Processing	TRUE	Long Integer	Thous . \$		All
IND5I	IND5 - High Technology	TRUE	Long Integer	Thous . \$		All
IND6I	IND6 - Construction	TRUE	Long Integer	Thous . \$		All
REL1I	REL1 - Churches and Other Non-profit Org.	TRUE	Long Integer	Thous . \$		All
RES1I	RES1 - Single Family Dwelling	TRUE	Long Integer	Thous . \$		All
RES2I	RES2 - Manufactured Housing	TRUE	Long Integer	Thous . \$		All
RES3A I	RES3A - Duplex	TRUE	Long Integer	Thous . \$		All
RES3B I	RES3B - Triplex / Quads	TRUE	Long Integer	Thous . \$		All
RES3C I	RES3C - Multi-dwellings (5 to 9 units)	TRUE	Long Integer	Thous . \$		All
RES3D I	RES3D - Multi-dwellings (10 to 19 units)	TRUE	Long Integer	Thous . \$		All
RES3E I	RES3E - Multi-dwellings (20 to 49 units)	TRUE	Long Integer	Thous . \$		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
RES3FI	RES3F - Multi-dwellings (50+ units)	TRUE	Long Integer	Thous . \$		All
RES4I	RES4 - Temporary Lodging	TRUE	Long Integer	Thous . \$		All
RES5I	RES5 - Institutional Dormitory	TRUE	Long Integer	Thous . \$		All
RES6I	RES6 - Nursing Home	TRUE	Long Integer	Thous . \$		All

### 6.3. Building Count by Occupancy (Census Block)

Field Name	Field Description	Required	Type	Units	Default	Hazard
CensusBlock	Census Block	TRUE	Text(15)			All
AGR1I	AGR1 - Agriculture	TRUE	Integer		0	All
COM10I	COM10 - Parking	TRUE	Integer		0	All
COM1I	COM1 - Retail Trade	TRUE	Integer		0	All
COM2I	COM2 - Wholesale Trade	TRUE	Integer		0	All
COM3I	COM3 - Personal and Repair Services	TRUE	Integer		0	All
COM4I	COM4 - Professional/Technical Services	TRUE	Integer		0	All
COM5I	COM5 - Banks	TRUE	Integer		0	All
COM6I	COM6 - Hospital	TRUE	Integer		0	All
COM7I	COM7 - Medical Office/Clinic	TRUE	Integer		0	All
COM8I	COM8 - Entertainment & Recreation	TRUE	Integer		0	All
COM9I	COM9 - Theaters	TRUE	Integer		0	All
EDU1I	EDU1 - Grade Schools	TRUE	Integer		0	All
EDU2I	EDU2 - Colleges/Universities	TRUE	Integer		0	All
GOV1I	GOV1 - General Services	TRUE	Integer		0	All

Field Name	Field Description	Required	Type	Units	Default	Hazard
GOV2I	GOV2 - Emergency Response	TRUE	Integer		0	All
IND1I	IND1 - Heavy	TRUE	Integer		0	All
IND2I	IND2 - Light	TRUE	Integer		0	All
IND3I	IND3 - Food/Drugs/Chemicals	TRUE	Integer		0	All
IND4I	IND4 - Metals/Minerals Processing	TRUE	Integer		0	All
IND5I	IND5 - High Technology	TRUE	Integer		0	All
IND6I	IND6 - Construction	TRUE	Integer		0	All
REL1I	REL1 - Churches and Other Non-profit Org.	TRUE	Integer		0	All
RES1I	RES1 - Single Family Dwelling	TRUE	Integer		0	All
RES2I	RES2 - Manufactured Housing	TRUE	Integer		0	All
RES3AI	RES3A - Duplex	TRUE	Integer		0	All
RES3BI	RES3B - Triplex / Quads	TRUE	Integer		0	All
RES3CI	RES3C - Multi-dwellings (5 to 9 units)	TRUE	Integer		0	All
RES3DI	RES3D - Multi-dwellings (10 to 19 units)	TRUE	Integer		0	All
RES3EI	RES3E - Multi-dwellings (20 to 49 units)	TRUE	Integer		0	All
RES3FI	RES3F - Multi-dwellings (50+ units)	TRUE	Integer		0	All
RES4I	RES4 - Temporary Lodging	TRUE	Integer		0	All
RES5I	RES5 - Institutional Dormitory	TRUE	Integer		0	All
RES6I	RES6 - Nursing Home	TRUE	Integer		0	All

#### 6.4. Building Count by Occupancy (Census Tract)

Field Name	Field Description	Required	Type	Units	Default	Hazard
Tract	Census Tract	TRUE	Text(11)			All

Field Name	Field Description	Required	Type	Units	Default	Hazard
AGR1I	AGR1 - Agriculture	TRUE	Integer		0	All
COM10I	COM10 - Parking	TRUE	Integer		0	All
COM1I	COM1 - Retail Trade	TRUE	Integer		0	All
COM2I	COM2 - Wholesale Trade	TRUE	Integer		0	All
COM3I	COM3 - Personal and Repair	TRUE	Integer		0	All
COM4I	COM4 - Professional/Technical	TRUE	Integer		0	All
COM5I	COM5 - Banks	TRUE	Integer		0	All
COM6I	COM6 - Hospital	TRUE	Integer		0	All
COM7I	COM7 - Medical Office/Clinic	TRUE	Integer		0	All
COM8I	COM8 - Entertainment &	TRUE	Integer		0	All
COM9I	COM9 - Theaters	TRUE	Integer		0	All
EDU1I	EDU1 - Grade Schools	TRUE	Integer		0	All
EDU2I	EDU2 - Colleges/Universities	TRUE	Integer		0	All
GOV1I	GOV1 - General Services	TRUE	Integer		0	All
GOV2I	GOV2 - Emergency Response	TRUE	Integer		0	All
IND1I	IND1 - Heavy	TRUE	Integer		0	All
IND2I	IND2 - Light	TRUE	Integer		0	All
IND3I	IND3 - Food/Drugs/Chemicals	TRUE	Integer		0	All
IND4I	IND4 - Metals/Minerals Processing	TRUE	Integer		0	All
IND5I	IND5 - High Technology	TRUE	Integer		0	All
IND6I	IND6 - Construction	TRUE	Integer		0	All
REL1I	REL1 - Churches and Other Non-	TRUE	Integer		0	All



Field Name	Field Description	Required	Type	Units	Default	Hazard
RES1I	RES1 - Single Family Dwelling	TRUE	Integer		0	All
RES2I	RES2 - Manufactured Housing	TRUE	Integer		0	All
RES3AI	RES3A - Duplex	TRUE	Integer		0	All
RES3BI	RES3B - Triplex / Quads	TRUE	Integer		0	All
RES3CI	RES3C - Multi-dwellings (5 to 9)	TRUE	Integer		0	All
RES3DI	RES3D - Multi-dwellings (10 to 19)	TRUE	Integer		0	All
RES3EI	RES3E - Multi-dwellings (20 to 49)	TRUE	Integer		0	All
RES3FI	RES3F - Multi-dwellings (50+ units)	TRUE	Integer		0	All
RES4I	RES4 - Temporary Lodging	TRUE	Integer		0	All
RES5I	RES5 - Institutional Dormitory	TRUE	Integer		0	All
RES6I	RES6 - Nursing Home	TRUE	Integer		0	All

### 6.5. Building (Without Content) Full Replacement Value by Occupancy at Census Block Level

Field Name	Field Description	Required	Type	Units	Default	Hazard
CensusBlock	Census Block	TRUE	Text(15)	Text		All
AGR1I	AGR1 - Agriculture	TRUE	Long Integer	Thous. \$		All
COM10I	COM10 - Parking	TRUE	Long Integer	Thous. \$		All
COM1I	COM1 - Retail Trade	TRUE	Long Integer	Thous. \$		All
COM2I	COM2 - Wholesale Trade	TRUE	Long Integer	Thous. \$		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
COM3I	COM3 - Personal and Repair Services	TRUE	Long Integer	Thous. \$		All
COM4I	COM4 - Professional/Technical Services	TRUE	Long Integer	Thous. \$		All
COM5I	COM5 - Banks	TRUE	Long Integer	Thous. \$		All
COM6I	COM6 - Hospital	TRUE	Long Integer	Thous. \$		All
COM7I	COM7 - Medical Office/Clinic	TRUE	Long Integer	Thous. \$		All
COM8I	COM8 - Entertainment & Recreation	TRUE	Long Integer	Thous. \$		All
COM9I	COM9 - Theaters	TRUE	Long Integer	Thous. \$		All
EDU1I	EDU1 - Grade Schools	TRUE	Long Integer	Thous. \$		All
EDU2I	EDU2 - Colleges/Universities	TRUE	Long Integer	Thous. \$		All
GOV1I	GOV1 - General Services	TRUE	Long Integer	Thous. \$		All
GOV2I	GOV2 - Emergency Response	TRUE	Long Integer	Thous. \$		All
IND1I	IND1 - Heavy	TRUE	Long Integer	Thous. \$		All
IND2I	IND2 - Light	TRUE	Long Integer	Thous. \$		All
IND3I	IND3 - Food/Drugs/Chemicals	TRUE	Long Integer	Thous. \$		All
IND4I	IND4 - Metals/Minerals Processing	TRUE	Long Integer	Thous. \$		All
IND5I	IND5 - High Technology	TRUE	Long Integer	Thous. \$		All
IND6I	IND6 - Construction	TRUE	Long Integer	Thous. \$		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
REL1I	REL1 - Churches and Other Non-profit Org.	TRUE	Long Integer	Thous. \$		All
RES1I	RES1 - Single Family Dwelling	TRUE	Long Integer	Thous. \$		All
RES2I	RES2 - Manufactured Housing	TRUE	Long Integer	Thous. \$		All
RES3AI	RES3A - Duplex	TRUE	Long Integer	Thous. \$		All
RES3BI	RES3B - Triplex / Quads	TRUE	Long Integer	Thous. \$		All
RES3CI	RES3C - Multi-dwellings (5 to 9 units)	TRUE	Long Integer	Thous. \$		All
RES3DI	RES3D - Multi-dwellings (10 to 19 units)	TRUE	Long Integer	Thous. \$		All
RES3EI	RES3E - Multi-dwellings (20 to 49 units)	TRUE	Long Integer	Thous. \$		All
RES3FI	RES3F - Multi-dwellings (50+ units)	TRUE	Long Integer	Thous. \$		All
RES4I	RES4 - Temporary Lodging	TRUE	Long Integer	Thous. \$		All
RES5I	RES5 - Institutional Dormitory	TRUE	Long Integer	Thous. \$		All
RES6I	RES6 - Nursing Home	TRUE	Long Integer	Thous. \$		All

### 6.6. Building (Without Content) Full Replacement Value by Occupancy at Census Tract Level

Field Name	Field Description	Required	Type	Units	Default	Hazard
Tract	Census Tract	TRUE	Text(11)	Text		All
AGR1I	AGR1 - Agriculture	TRUE	Long Integer	Thous. \$		All
COM10I	COM10 - Parking	TRUE	Long Integer	Thous. \$		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
COM1I	COM1 - Retail Trade	TRUE	Long Integer	Thous. \$		All
COM2I	COM2 - Wholesale Trade	TRUE	Long Integer	Thous. \$		All
COM3I	COM3 - Personal and Repair Services	TRUE	Long Integer	Thous. \$		All
COM4I	COM4 - Professional/Technical Services	TRUE	Long Integer	Thous. \$		All
COM5I	COM5 - Banks	TRUE	Long Integer	Thous. \$		All
COM6I	COM6 - Hospital	TRUE	Long Integer	Thous. \$		All
COM7I	COM7 - Medical Office/Clinic	TRUE	Long Integer	Thous. \$		All
COM8I	COM8 - Entertainment & Recreation	TRUE	Long Integer	Thous. \$		All
COM9I	COM9 - Theaters	TRUE	Long Integer	Thous. \$		All
EDU1I	EDU1 - Grade Schools	TRUE	Long Integer	Thous. \$		All
EDU2I	EDU2 - Colleges/Universities	TRUE	Long Integer	Thous. \$		All
GOV1I	GOV1 - General Services	TRUE	Long Integer	Thous. \$		All
GOV2I	GOV2 - Emergency Response	TRUE	Long Integer	Thous. \$		All
IND1I	IND1 - Heavy	TRUE	Long Integer	Thous. \$		All
IND2I	IND2 - Light	TRUE	Long Integer	Thous. \$		All
IND3I	IND3 - Food/Drugs/Chemicals	TRUE	Long Integer	Thous. \$		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
IND4I	IND4 - Metals/Minerals Processing	TRUE	Long Integer	Thous. \$		All
IND5I	IND5 - High Technology	TRUE	Long Integer	Thous. \$		All
IND6I	IND6 - Construction	TRUE	Long Integer	Thous. \$		All
REL1I	REL1 - Churches and Other Non-profit Org.	TRUE	Long Integer	Thous. \$		All
RES1I	RES1 - Single Family Dwelling	TRUE	Long Integer	Thous. \$		All
RES2I	RES2 - Manufactured Housing	TRUE	Long Integer	Thous. \$		All
RES3AI	RES3A - Duplex	TRUE	Long Integer	Thous. \$		All
RES3BI	RES3B - Triplex / Quads	TRUE	Long Integer	Thous. \$		All
RES3CI	RES3C - Multi-dwellings (5 to 9 units)	TRUE	Long Integer	Thous. \$		All
RES3DI	RES3D - Multi-dwellings (10 to 19 units)	TRUE	Long Integer	Thous. \$		All
RES3EI	RES3E - Multi-dwellings (20 to 49 units)	TRUE	Long Integer	Thous. \$		All
RES3FI	RES3F - Multi-dwellings (50+ units)	TRUE	Long Integer	Thous. \$		All
RES4I	RES4 - Temporary Lodging	TRUE	Long Integer	Thous. \$		All
RES5I	RES5 - Institutional Dormitory	TRUE	Long Integer	Thous. \$		All
RES6I	RES6 - Nursing Home	TRUE	Long Integer	Thous. \$		All

## 6.7. Demographics by Census Block

Field Name	Field Description	Required	Type	Units	Default	Hazard
StateAbbr	State Abbreviation	FALSE	Text(2)			All
CensusBlock	Census Block	TRUE	Text(15)			All
Population	Total Census Tract Population	FALSE	Long Integer			All
Households	Total Census Tract Households	FALSE	Long Integer			All
GroupQuarters	Population in Group Quarters	FALSE	Long Integer			All
MaleLess18	Males less than 18-yrs old	FALSE	Long Integer			All
Male18to64	Males between 18 and 64	FALSE	Long Integer			All
MaleOver64	Males over 64-yrs old	FALSE	Long Integer			All
FemaleLess18	Females less then 18-yrs old	TRUE	Long Integer			All
Female18to64	Females between 18 and 64	FALSE	Long Integer			All
FemaleOver64	Females over 64-yrs old	FALSE	Long Integer			All
MalePopulation	Total Male Population	FALSE	Long Integer			All
FemalePopulation	Total Female Population	FALSE	Long Integer			All
White	Population Stating White	FALSE	Long Integer			All
Black	Population Stating Black	FALSE	Long Integer			All
NativeAmerican	Population Stating Native American	FALSE	Long Integer			All
Asian	Population Stating Asian	FALSE	Long Integer			All

Field Name	Field Description	Required	Type	Units	Default	Hazard
Hispanic	Population Stating Hispanic	FALSE	Long Integer			All
PacificIslander	Population Stating Pacific Islander	FALSE	Long Integer			All
OtherRaceOnly	Population Stating Other Race Only	FALSE	Long Integer			All
TwoOrMoreRaces	Population Stating Two Or More Races	FALSE	Long Integer			All
IncLess10	Income Less then 10K	FALSE	Long Integer			All
Inc10to20	Income between 10K and 20K	FALSE	Long Integer			All
Inc20to30	Income between 20K and 30K	FALSE	Long Integer			All
Inc30to40	Income between 30K and 40K	FALSE	Long Integer			All
Inc40to50	Income between 40K and 50K	FALSE	Long Integer			All
Inc50to60	Income between 50K and 60K	FALSE	Long Integer			All
Inc60to75	Income between 60K and 75K	FALSE	Long Integer			All
Inc75to100	Income between 75K and 100K	FALSE	Long Integer			All
IncOver100	Income over 100K	FALSE	Long Integer			All
ResidDay	Population Residing by Day	FALSE	Long Integer			All
ResidNight	Population Residing by Night	FALSE	Long Integer			All
Hotel	Population in Hotels	FALSE	Long Integer			All
Visitor	Visitor Population	FALSE	Long Integer			All

Field Name	Field Description	Required	Type	Units	Default	Hazard
WorkingCom	Pop Working in Commercial Occup	FALSE	Long Integer			All
WorkingInd	Pop Working Industrial Occupancies	FALSE	Long Integer			All
Commuting5Pm	Population Commuting at 5pm	FALSE	Long Integer			All
OwnerSingleUnits	Owner Occupied Single Family Units	FALSE	Long Integer			All
OwnerMultUnits	Owner Occupied Multi-Family Units	FALSE	Long Integer			All
OwnerMultStructs	Owner Occup Multi-Family Structures	FALSE	Long Integer			All
OwnerMHs	Owner Occupied Manufactured Housing	TRUE	Long Integer			All
RenterSingleUnits	Renter Occupied Single Family Units	TRUE	Long Integer			All
RenterMultUnits	Renter Occupied Multi-Family Units	TRUE	Long Integer			All
RenterMultStructs	Renter Occupied Multi-Family Structures	TRUE	Long Integer			All
RenterMHs	Renter Occupied Manufactured Housing	TRUE	Long Integer			All
VacantSingleUnits	Vacant Single Family Units	TRUE	Long Integer			All
VacantMultUnits	Vacant Multi-Family Units	TRUE	Long Integer			All
VacantMultStructs	Vacant Multi-Family Structures	TRUE	Long Integer			All
VacantMHs	Vacant Manufactured Housing	TRUE	Long Integer			All



Field Name	Field Description	Required	Type	Units	Default	Hazard
BuiltBefore40	Units Built Before 1940	TRUE	Integer			All
Built40to49	Units Built Between 1940 and 1949	TRUE	Integer			All
Built50to59	Units Built Between 1950 and 1959	TRUE	Integer			All
Built60to69	Units Built Between 1960 and 1969	TRUE	Integer			All
Built70to79	Units Built Between 1970 and 1979	TRUE	Integer			All
Built80to89	Units Built Between 1980 and 1989	TRUE	Integer			All
Built90to99	Units Built Between 1990 and 1999	TRUE	Integer			All
Built00to09	Units Built Between 2000 and 2009	TRUE	Integer			All
Built10to13	Units Built Between 2010 and 2013	TRUE	Integer			All
BuiltAfter13	Units Built After 2013	TRUE	Long Integer			All
MedianYearBuilt	Median Year Built (Units)	TRUE	Integer			All
AvgRent	Average Cash Rent	TRUE	Long Integer			All
AvgValue	Average Home Value	TRUE	Long Integer			All
SchoolEnrollmentCollege	College and University Enrollment	FALSE	Long Integer			All
SchoolEnrollmentKto12	School Enrollment up to High School	FALSE	Long Integer			All

Field Name	Field Description	Required	Type	Units	Default	Hazard
IncomeRatio	The Census block group median income divided by the average median income for the State.	FALSE	Long Integer			All

## 6.8. Demographics by Census Tract

Field Name	Field Description	Required	Type	Units	Default	Hazard
StateAbbr	State Abbreviation	FALSE	Text(2)			
Tract	Census Tract	TRUE	Text(11)			All
Population	Total Census Tract Population	FALSE	Long Integer			All
Households	Total Census Tract Households	FALSE	Long Integer			All
GroupQuarters	Population in Group Quarters	FALSE	Long Integer			All
MaleLess18	Males less than 18-yrs old	FALSE	Long Integer			All
Male18to64	Males between 18 and 64	FALSE	Long Integer			All
MaleOver64	Males over 64-yrs old	FALSE	Long Integer			All
FemaleLess18	Females less than 18-yrs old	TRUE	Long Integer			All
Female18to64	Females between 18 and 64	FALSE	Long Integer			All
FemaleOver64	Females over 64-yrs old	FALSE	Long Integer			All
MalePopulation	Total Male Population	FALSE	Long Integer			All
FemalePopulation	Total Female Population	FALSE	Long Integer			All
White	Population Stating White	FALSE	Long Integer			All

Field Name	Field Description	Required	Type	Units	Default	Hazard
Black	Population Stating Black	FALSE	Long Integer			All
NativeAmerican	Population Stating Native American	FALSE	Long Integer			All
Asian	Population Stating Asian	FALSE	Long Integer			All
PacificIslander	Population Stating Pacific Islander	FALSE	Long Integer			All
OtherRaceOnly	Population Stating Other Race Only	FALSE	Long Integer			All
TwoOrMoreRaces	Population Stating Two Or More Races	FALSE	Double			All
Hispanic	Population Stating Hispanic	FALSE	Long Integer			All
IncLess10	Income Less then 10K	FALSE	Long Integer			All
Inc10to20	Income between 10K and 20K	FALSE	Long Integer			All
Inc20to30	Income between 20K and 30K	FALSE	Long Integer			All
Inc30to40	Income between 30K and 40K	FALSE	Long Integer			All
Inc40to50	Income between 40K and 50K	FALSE	Long Integer			All
Inc50to60	Income between 50K and 60K	FALSE	Long Integer			All
Inc60to75	Income between 60K and 75K	FALSE	Long Integer			All
Inc75to100	Income between 75K and 100K	FALSE	Long Integer			All
IncOver100	Income over 100K	FALSE	Long Integer			All
ResidDay	Population Residing by Day	FALSE	Long Integer			All

Field Name	Field Description	Required	Type	Units	Default	Hazard
ResidNight	Population Residing by Night	FALSE	Long Integer			All
Hotel	Population in Hotels	FALSE	Long Integer			All
Visitor	Visitor Population	FALSE	Long Integer			All
WorkingCom	Pop Working in Commercial Occup	FALSE	Long Integer			All
WorkingInd	Pop Working Industrial Occupancies	FALSE	Long Integer			All
Commuting5Pm	Population Commuting at 5pm	FALSE	Long Integer			All
OwnerSingleUnits	Owner Occupied Single Family Units	FALSE	Long Integer			All
OwnerMultUnits	Owner Occupied Multi-Family Units	FALSE	Long Integer			All
OwnerMultStructs	Owner Occup Multi-Family Structures	FALSE	Long Integer			All
OnwerMHs	Owner Occupied Manufactured Housing	TRUE	Long Integer			All
RenterSingleUnits	Renter Occupied Single Family Units	TRUE	Long Integer			All
RenterMultUnits	Renter Occupied Multi-Family Units	TRUE	Long Integer			All
RenterMultStructs	Renter Occupied Multi-Family Structures	TRUE	Long Integer			All
RenterMHs	Renter Occupied Manufactured Housing	TRUE	Long Integer			All
VacantSingleUnits	Vacant Single Family Units	TRUE	Long Integer			All
VacantMultUnits	Vacant Multi-Family Units	TRUE	Long Integer			All

Field Name	Field Description	Required	Type	Units	Default	Hazard
VacantMultStructs	Vacant Multi-Family Structures	TRUE	Long Integer			All
VacantMHs	Vacant Manufactured Housing	TRUE	Long Integer			All
BuiltBefore40	Units Built Before 1940	TRUE	Integer			All
Built40to49	Units Built Between 1940 and 1949	TRUE	Integer			All
Built50to59	Units Built Between 1950 and 1959	TRUE	Integer			All
Built60to69	Units Built Between 1960 and 1969	TRUE	Integer			All
Built70to79	Units Built Between 1970 and 1979	TRUE	Integer			All
Built80to89	Units Built Between 1980 and 1989	TRUE	Integer			All
Built90to99	Units Built Between 1990 and 1999	TRUE	Integer			All
Built00to09	Units Built Between 2000 and 2009	TRUE	Integer			All
Built10to13	Units Built Between 2010 and 2013	TRUE	Integer			All
BuiltAfter13	Units Built After 2013	TRUE	Long Integer			All
MedianYearBuilt	Median Year Built (Units)	TRUE	Integer			All
AvgRent	Average Cash Rent	TRUE	Long Integer			All
AvgValue	Average Home Value	TRUE	Long Integer			All
SchoolEnrollmentCollege	College and University Enrollment	FALSE	Long Integer			All

Field Name	Field Description	Required	Type	Units	Default	Hazard
SchoolEnrollmentKto12	School Enrollment up to High School	FALSE	Long Integer			All

### 6.9. Square Footage by Occupancy at Census Block Level

Field Name	Field Description	Required	Type	Units	Default	Hazard
CensusBlock	Census Block	TRUE	Text(15)	Text		All
AGR1F	AGR1 - Agriculture	FALSE	Single	Thous.sq ft		All
COM10F	COM10 - Parking	FALSE	Single	Thous.sq ft		All
COM1F	COM1 - Retail Trade	FALSE	Single	Thous.sq ft		All
COM2F	COM2 - Wholesale Trade	FALSE	Single	Thous.sq ft		All
COM3F	COM3 - Personal and Repair Services	FALSE	Single	Thous.sq ft		All
COM4F	COM4 - Professional/Technical Services	FALSE	Single	Thous.sq ft		All
COM5F	COM5 - Banks	FALSE	Single	Thous.sq ft		All
COM6F	COM6 - Hospital	FALSE	Single	Thous.sq ft		All
COM7F	COM7 - Medical Office/Clinic	FALSE	Single	Thous.sq ft		All
COM8F	COM8 - Entertainment & Recreation	FALSE	Single	Thous.sq ft		All
COM9F	COM9 - Theaters	FALSE	Single	Thous.sq ft		All
EDU1F	EDU1 - Grade Schools	FALSE	Single	Thous.sq ft		All
EDU2F	EDU2 - Colleges/Universities	FALSE	Single	Thous.sq ft		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
GOV1F	GOV1 - General Services	FALSE	Single	Thous.sq ft		All
GOV2F	GOV2 - Emergency Response	FALSE	Single	Thous.sq ft		All
IND1F	IND1 - Heavy	FALSE	Single	Thous.sq ft		All
IND2F	IND2 - Light	FALSE	Single	Thous.sq ft		All
IND3F	IND3 - Food/Drugs/Chemicals	FALSE	Single	Thous.sq ft		All
IND4F	IND4 - Metals/Minerals Processing	FALSE	Single	Thous.sq ft		All
IND5F	IND5 - High Technology	FALSE	Single	Thous.sq ft		All
IND6F	IND6 - Construction	FALSE	Single	Thous.sq ft		All
REL1F	REL1 - Churches and Other Non-profit Org.	FALSE	Single	Thous.sq ft		All
RES1F	RES1 - Single Family Dwelling	FALSE	Single	Thous.sq ft		All
RES2F	RES2 - Manufactured Housing	FALSE	Single	Thous.sq ft		All
RES3AF	RES3A - Duplex	FALSE	Single	Thous.sq ft		All
RES3BF	RES3B - Triplex / Quads	FALSE	Single	Thous.sq ft		All
RES3CF	RES3C - Multi-dwellings (5 to 9 units)	FALSE	Single	Thous.sq ft		All
RES3DF	RES3D - Multi-dwellings (10 to 19 units)	FALSE	Single	Thous.sq ft		All
RES3EF	RES3E - Multi-dwellings (20 to 49 units)	FALSE	Single	Thous.sq ft		All
RES3FF	RES3F - Multi-dwellings (50+ units)	FALSE	Single	Thous.sq ft		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
RES4F	RES4 - Temporary Lodging	FALSE	Single	Thous.sq ft		All
RES5F	RES5 - Institutional Dormitory	FALSE	Single	Thous.sq ft		All
RES6F	RES6 - Nursing Home	FALSE	Single	Thous.sq ft		All

### 6.10. Square Footage by Occupancy at Census Tract Level

Field Name	Field Description	Required	Type	Units	Default	Hazard
Tract	Census Tract	TRUE	Text(11)	Text		All
AGR1F	AGR1 - Agriculture	FALSE	Single	Thous.sq ft		All
COM10F	COM10 - Parking	FALSE	Single	Thous.sq ft		All
COM1F	COM1 - Retail Trade	FALSE	Single	Thous.sq ft		All
COM2F	COM2 - Wholesale Trade	FALSE	Single	Thous.sq ft		All
COM3F	COM3 - Personal and Repair Services	FALSE	Single	Thous.sq ft		All
COM4F	COM4 - Professional/Technical Services	FALSE	Single	Thous.sq ft		All
COM5F	COM5 - Banks	FALSE	Single	Thous.sq ft		All
COM6F	COM6 - Hospital	FALSE	Single	Thous.sq ft		All
COM7F	COM7 - Medical Office/Clinic	FALSE	Single	Thous.sq ft		All
COM8F	COM8 - Entertainment & Recreation	FALSE	Single	Thous.sq ft		All
COM9F	COM9 - Theaters	FALSE	Single	Thous.sq ft		All



Field Name	Field Description	Required	Type	Units	Default	Hazard
EDU1F	EDU1 - Grade Schools	FALSE	Single	Thous.sq ft		All
EDU2F	EDU2 - Colleges/Universities	FALSE	Single	Thous.sq ft		All
GOV1F	GOV1 - General Services	FALSE	Single	Thous.sq ft		All
GOV2F	GOV2 - Emergency Response	FALSE	Single	Thous.sq ft		All
IND1F	IND1 - Heavy	FALSE	Single	Thous.sq ft		All
IND2F	IND2 - Light	FALSE	Single	Thous.sq ft		All
IND3F	IND3 - Food/Drugs/Chemicals	FALSE	Single	Thous.sq ft		All
IND4F	IND4 - Metals/Minerals Processing	FALSE	Single	Thous.sq ft		All
IND5F	IND5 - High Technology	FALSE	Single	Thous.sq ft		All
IND6F	IND6 - Construction	FALSE	Single	Thous.sq ft		All
REL1F	REL1 - Churches and Other Non-profit Org.	FALSE	Single	Thous.sq ft		All
RES1F	RES1 - Single Family Dwelling	FALSE	Single	Thous.sq ft		All
RES2F	RES2 - Manufactured Housing	FALSE	Single	Thous.sq ft		All
RES3AF	RES3A - Duplex	FALSE	Single	Thous.sq ft		All
RES3BF	RES3B - Triplex / Quads	FALSE	Single	Thous.sq ft		All
RES3CF	RES3C - Multi-dwellings (5 to 9 units)	FALSE	Single	Thous.sq ft		All
RES3DF	RES3D - Multi-dwellings (10 to 19 units)	FALSE	Single	Thous.sq ft		All

Field Name	Field Description	Required	Type	Units	Default	Hazard
RES3EF	RES3E - Multi-dwellings (20 to 49 units)	FALSE	Single	Thous.sq ft		All
RES3FF	RES3F - Multi-dwellings (50+ units)	FALSE	Single	Thous.sq ft		All
RES4F	RES4 - Temporary Lodging	FALSE	Single	Thous.sq ft		All
RES5F	RES5 - Institutional Dormitory	FALSE	Single	Thous.sq ft		All
RES6F	RES6 - Nursing Home	FALSE	Single	Thous.sq ft		All

# Appendix A – General/All-Hazard Tables

**Table A.1 Building Occupancy Classes**

Label	Occupancy Class	Example
	Residential	
RES1	Single Family Dwelling	House
RES2	Mobile Home	Mobile Home
RES3	Multi Family Dwelling RES3A Duplex RES3B 3-4 Units RES3C 5-9 Units RES3D 10-19 Units RES3E 20-49 Units RES3F 50+ Units	Apartment/Condominium
RES4	Temporary Lodging	Hotel/Motel
RES5	Institutional Dormitory	Group Housing (military, college), Jails
RES6	Nursing Home	
	Commercial	
*COM1	Retail Trade	Store
COM2	Wholesale Trade	Warehouse
COM3	Personal and Repair Services	Service Station/Shop
COM4	Professional/Technical Services	Offices
COM5	Banks	
COM6	Hospital	
COM7	Medical Office/Clinic	
COM8	Entertainment & Recreation	Restaurants/Bars
COM9	Theaters	Theaters

Label	Occupancy Class	Example
COM10	Parking	Garages
	Industrial	
IND1	Heavy	Factory
IND2	Light	Factory
IND3	Food/Drugs/Chemicals	Factory
IND4	Metals/Minerals Processing	Factory
IND5	High Technology	Factory
IND6	Construction	Office
	Agriculture	
AGR1	Agriculture	
	Religion/Non/Profit	
REL1	Church/Non-Profit	
	Government	
GOV1	General Services	Office
GOV2	Emergency Response	Police/Fire Station/EOC
	Education	
EDU1	Grade Schools	
EDU2	Colleges/Universities	Does not include group housing

**Table A.2 Essential Facilities Classification**

Label	Occupancy Class	Example
Medical Care Facilities		
EFHS	Small Hospital	Hospital with less than 50 Beds
EFHM	Medium Hospital	Hospital with beds between 50 & 150
EFHL	Large Hospital	Hospital with greater than 150 Beds
EFMC	Medical Clinics	Clinics, Labs, Blood Banks
Emergency Response		

Label	Occupancy Class	Example
EFFS	Fire Station	
EFPS	Police Station	
EFE0	Emergency Operation Centers	
Schools		
EFS1	Grade Schools	Primary/ High Schools
EFS2	Colleges/Universities	

**Table A.3 High Potential Loss Facilities Classification**

Label	Description
Military Installations:	
HPMI	Military Installations

**Table A.4 Highway System Classification**

Label	Description
Highway Bridges	
HWB1	Major Bridge - Length > 150m (Conventional Design)
HWB2	Major Bridge - Length > 150m (Seismic Design)
HWB3	Single Span - (Not HWB1 or HWB2) (Conventional Design)
HWB4	Single Span - (Not HWB1 or HWB2) (Seismic Design)
HWB5	Concrete, Multi-Column Bent, Simple Support (Conventional Design), Non-California (Non-CA)
HWB6	Concrete, Multi-Column Bent, Simple Support (Conventional Design), California (CA)
HWB7	Concrete, Multi-Column Bent, Simple Support (Seismic Design)
HWB8	Continuous Concrete, Single Column, Box Girder (Conventional Design)
HWB9	Continuous Concrete, Single Column, Box Girder (Seismic Design)
HWB10	Continuous Concrete, (Not HWB8 or HWB9) (Conventional Design)
HWB11	Continuous Concrete, (Not HWB8 or HWB9) (Seismic Design)

Label	Description
HWB12	Steel, Multi-Column Bent, Simple Support (Conventional Design), Non-California (Non-CA)
HWB13	Steel, Multi-Column Bent, Simple Support (Conventional Design), California (CA)
HWB14	Steel, Multi-Column Bent, Simple Support (Seismic Design)
HWB15	Continuous Steel (Conventional Design)
HWB16	Continuous Steel (Seismic Design)
HWB17	PS Concrete Multi-Column Bent, Simple Support - (Conventional Design), Non-California
HWB18	PS Concrete, Multi-Column Bent, Simple Support (Conventional Design), California (CA)
HWB19	PS Concrete, Multi-Column Bent, Simple Support (Seismic Design)
HWB20	PS Concrete, Single Column, Box Girder (Conventional Design)
HWB21	PS Concrete, Single Column, Box Girder (Seismic Design)
HWB22	Continuous Concrete, (Not HWB20/HWB21) (Conventional Design)
HWB23	Continuous Concrete, (Not HWB20/HWB21) (Seismic Design)
HWB24	Same definition as HWB12 except that the bridge length is less than 20 meters
HWB25	Same definition as HWB13 except that the bridge length is less than 20 meters
HWB26	Same definition as HWB15 except that the bridge length is less than 20 meters and Non-CA
HWB27	Same definition as HWB15 except that the bridge length is less than 20 meters and in CA
HWB28	All other bridges that are not classified (including wooden bridges)
Highway Tunnels:	
HTU1	Highway Bored/Drilled Tunnel
HTU2	Highway Cut and Cover Tunnel

**Table A.5 Railway System Classification**

Label	Description
Railway Bridges:	

Label	Description
RLB1	Steel, Multi-Column Bent, Simple Support (Conventional Design), Non-California (Non-
RLB2	Steel, Multi-Column Bent, Simple Support (Conventional Design), California (CA)
RLB3	Steel, Multi-Column Bent, Simple Support (Seismic Design)
RLB4	Continuous Steel (Conventional Design)
RLB5	Continuous Steel (Seismic Design)
RLB6	Same definition as HWB1 except that the bridge length is less than 20 meters
RLB7	Same definition as HWB2 except that the bridge length is less than 20 meters
RLB8	Same definition as HWB4 except that the bridge length is less than 20 meters and Non-
RLB9	CSame definition as HWB5 except that the bridge length is less than 20 meters and in CA
RLB10	All other bridges that are not classified Railway Urban Station
RST	Rail Urban Station (with all building type options enabled)
Railway Tunnels:	
RTU1	Rail Bored/Drilled Tunnel
RTU2	Rail Cut and Cover Tunnel
Railway Facility	
RFF	Rail Fuel Facility (different combinations for with or without anchored components)
RDF	Rail Dispatch Facility (different combinations for with or without anchored components)
RMF	Rail Maintenance Facility (with all building type options enabled)

**Table A.6 Light Rail System Classification**

Label	Description
Light Rail Bridges:	
LRB1	Steel, Multi-Column Bent, Simple Support (Conventional Design), Non-California
LRB2	Steel, Multi-Column Bent, Simple Support (Conventional Design), California (CA)

Label	Description
LRB3	Steel, Multi-Column Bent, Simple Support (Seismic Design)
LRB4	Continuous Steel (Conventional Design)
LRB5	Continuous Steel (Seismic Design)
LRB6	Same definition as HWB1 except that the bridge length is less than 20 meters
LRB7	Same definition as HWB2 except that the bridge length is less than 20 meters
LRB8	Same definition as HWB4 except that the bridge length is less than 20 meters and
LRB9	Same definition as HWB5 except that the bridge length is less than 20 meters and
LRB10	All other bridges that are not classified
Light Rail Tunnels	
LTU1	Light Rail Bored/Drilled Tunnel
LTU2	Light Rail Cut and Cover Tunnel
Light Rail Facility	
LDC1	Light Rail DC Substation w/ Anchored Sub-Components
LDC2	Light Rail DC Substation w/ Unanchored Sub-Components
LDF	Light Rail Dispatch Facility (different combinations for with or without anchored
LMF	Maintenance Facility (with all building type options enabled)

**Table A.7 Bus System Classification**

Label	Description
	Bus Urban Station
BPT	Bus Urban Station (with all building type options enabled)
	Bus Fuel Facility
BFF	Bus Fuel Facility (different combinations for with or without anchored
	Bus Dispatch Facility
BDF	Bus Dispatch Facility (different combinations for with or without anchored
	Bus Maintenance Facility
BMF	Bus Maintenance Facilities (with all building type options enabled)



**Table A.8 Port and Harbor System Classification**

Label	Description
	Waterfront Structures
PWS	Waterfront Structures
	Cranes/Cargo Handling Equipment
PEQ1	Stationary Port Handling Equipment
PEQ2	Rail Mounted Port Handling Equipment
	Warehouses
PWH	Port Warehouses (with all building type options enabled)
	Fuel Facility
PFF	Port Fuel Facility (different combinations for with or without anchored

**Table A.9 Ferry System Classification**

Label	Description
	Water Front Structures
FWS	Ferry Waterfront Structures
	Ferry Passenger Terminals
FPT	Passenger Terminals (with all building type options enabled)
	Ferry Fuel Facility
FFF	Ferry Fuel Facility (different combinations for with or without anchored
	Ferry Dispatch Facility
FDF	Ferry Dispatch Facility (different combinations for with or without
	Ferry Maintenance Facility
FMF	Piers and Dock Facilities (with all building type options enabled)

**Table A.10 Airport System Classification**

Label	Description
	Airport Control Towers

Label	Description
ACT	Airport Control Tower (with all building type options enabled)
Airport Terminal Buildings	
ATB	Airport Terminal Building (with all building type options enabled)
Airport Parking Structures	
APS	Airport Parking Structure (with all building type options enabled)
Fuel Facilities	
AFF	Airport Fuel Facility (different combinations for with or without anchored components)
Airport Maintenance & Hangar Facility	
AMF	Airport Maintenance & Hangar Facility (with all building type options enabled)
ARW	Airport Runway
	Airport Facilities - Others
AFO	Gliderport, Seaport, Stolport, Ultralight or Balloonport Facilities
AFH	Heliport Facilities

**Table A.11 Potable Water System Classification**

Label	Description
Pumping Plants	
PPPL	Large Pumping Plant ( > 50 MGD ) [different combinations for with or without anchored components]
PPPM	Medium Pumping Plant ( 10 to 50 MGD ) [different combinations for with or without anchored
PPPS	Small Pumping Plant ( < 10 MGD ) [different combinations for with or without anchored components]
Wells	
PWE	Wells
	Water Storage Tanks (Typically, 0.5 MGD to 2 MGD)
PSTAS	Above Ground Steel Tank

Label	Description
PSTBC	Buried Concrete Tank
PSTGC	On Ground Concrete Tank
PSTGS	On Ground Steel Tank
PSTGW	On Ground Wood Tank
Water Treatment Plants	
PWTL	Large WTP ( > 200 MGD ) [different combinations for with or without anchored components]
PWTM	Medium WTP ( 50-200 MGD ) [different combinations for with or without anchored components]
PWTS	Small WTP ( < 50 MGD ) [different combinations for with or without anchored components]

**Table A.12 Waste Water System Classification**

Label	Description
Waste Water Treatment Plants	
WWTL	Large WWTP ( > 200 MGD ) [different combinations for with or without anchored
WWTM	Medium WWTP ( 50-200 MGD ) [different combinations for with or without anchored
WWTS	Small WWTP ( < 50 MGD ) [different combinations for with or without anchored
Lift Stations	
WLSL	Large Lift Stations ( > 50 MGD ) [different combinations for with or without anchored
WLSM	Medium Lift Stations ( 10 MGD - 50 MGD) [different combinations for with or without
WLSS	Small Lift Stations ( < 10 MGD ) [different combinations for with or without anchored

**Table A.13 Oil System Classification**

Label	Description
Refineries	
ORFL	Large Refinery ( > 500,000 lb./day ) [different combinations for with or without anchored

Label	Description
ORFM	Medium Refinery ( 100,000 - 500,000 lb./ day) [different combinations for with or without
ORFS	Small Refinery ( < 100,000 lb./day ) [different combinations for with or without anchored
Pumping Plants	
OPP	Pumping Plant [different combinations for with or without anchored components]
Tank Farms	
OTF	Tank Farms with Anchored Tanks [different combinations for with or without anchored

**Table A.14 Natural Gas System Classification**

Label	Description
Compressor Stations	
NGC	Compressor Stations [different combinations for with or without anchored

**Table A.15 Electric Power System Classification**

Label	Description
Transmission Substations	
ESSL	Low Voltage (115 KV) Substation [different combinations for with or without anchored components]
ESSM	Medium Voltage (230 KV) Substation [different combinations for with or without anchored
ESSH	High Voltage (500 KV) Substation [different combinations for with or without anchored components]
Distribution Circuits	
EDC	Distribution Circuits (either Seismically Designed Components or Standard Components)
Generation Plants	
EPPL	Large Power Plants ( > 500 MW ) [different combinations for with or without anchored components]

<b>Label</b>	<b>Description</b>
EPPM	Medium Power Plants ( 100 - 500 MW ) [different combinations for with or without anchored
EPPS	Small Power Plants ( < 100 MW ) [different combinations for with or without anchored components]

**Table A.16 Communication Classification**

<b>Label</b>	<b>Description</b>
Central Offices	
CCO	Central Offices (different combinations for with or without anchored components and/or with or without backup power)
Stations or Transmitters	
CBR	AM or FM radio stations or transmitters
CBT	TV stations or transmitters
CBW	Weather stations or transmitters
CBO	Other stations or transmitters

# Appendix B

**Table B.1 Site (Soil) Classes**

Site Class	Site Class Description
A	Hard Rock
B	Rock
C	Very Dense Soil and Soft Rock
D	Stiff Soils
E	Soft Soils
F	Soils Requiring Site Specific Evaluations

**Table B.2 Structural Building Classifications**

No.	Label	Description	Height Range		Typical	
			Name	Stories	Stories	Feet
1	W1	Wood, Light Frame (less than 5,000 sq.ft.)		1 - 2	1	14
2	W2	Wood, Greater than 5,000 sq. ft.		All	2	24
3	S1L	Steel Moment Frame	Low-Rise	1 - 3	2	24
4	S1M		Mid-Rise	4 - 7	5	60
5	S1H		High-Rise	8+	13	156
6	S2L	Steel Braced Frame	Low-Rise	1 - 3	2	24
7	S2M		Mid-Rise	4 - 7	5	60
8	S2H		High-Rise	8+	13	156
9	S3	Steel Light Frame		All	1	15
10	S4L	Steel Frame with Cast-in-Place Concrete Shear Walls	Low-Rise	1 - 3	2	24
11	S4M		Mid-Rise	4 - 7	5	60
12	S4H		High-Rise	8+	13	156

No.	Label	Description	Height Range		Typical	
13	S5L	Steel Frame with Unreinforced Masonry Infill Walls	Low-Rise	1 - 3	2	24
14	S5M		Mid-Rise	4 - 7	5	60
15	S5H		High-Rise	8+	13	156
16	C1L	Concrete Moment Frame	Low-Rise	1 - 3	2	20
17	C1M		Mid-Rise	4 - 7	5	50
18	C1H		High-Rise	8+	12	120
19	C2L	Concrete Shear Walls	Low-Rise	1 - 3	2	20
20	C2M		Mid-Rise	4 - 7	5	50
21	C2H		High-Rise	8+	12	120
22	C3L	Concrete Frame with Unreinforced Masonry Infill Walls	Low-Rise	1 - 3	2	20
23	C3M		Mid-Rise	4 - 7	5	50
24	C3H		High-Rise	8+	12	120
25	PC1	Precast Concrete Tilt-Up Walls		All	1	15
26	PC2L	Precast Concrete Frames with Concrete Shear Walls	Low-Rise	1 - 3	2	20
27	PC2M		Mid-Rise	4 - 7	5	50
28	PC2H		High-Rise	8+	12	120
29	RM1L	Reinforced Masonry Bearing Walls with Wood or Metal Deck Diaphragms	Low-Rise	1-3	2	20
30	RM2M		Mid-Rise	4+	5	50
31	RM2L	Reinforced Masonry Bearing Walls with Precast Concrete Diaphragms	Low-Rise	1 - 3	2	20
32	RM2M		Mid-Rise	4 - 7	5	50
33	RM2H		High-Rise	8+	12	120
34	URML	Unreinforced Masonry Bearing Walls	Low-Rise	1 - 2	1	15
35	URMM		Mid-Rise	3+	3	35
36	MH	Mobile Homes		All	1	10

**Table B.3 Earthquake Foundation Type**

Label	Description
0	Unknown
1	Slab
2	Perimeter (shallow)
3	Combined Footing
4	Single column footing
5	Pile
6	Drilled pier
7	Elevated pier
8	Caisson
9	None

**Table B.4 Landslide Susceptibility Category**

Label	Description
0	None
1	Category I - Minimal
2	Category II
3	Category III - Low
4	Category IV - Medium
5	Category V
6	Category VI
7	Category VII
8	Category VIII
9	Category IX
90	Category X - High



**Table B.5 Liquefaction Susceptibility Category**

Label	Description
0	Unknown
1	None
2	Very Low
3	Low
4	Moderate
5	High
6	Very High

**Table B.6 Earthquake Design level**

Label	Description
HC	High - Code
MC	Moderate - Code
LC	Low - Code
PC	Pre - Code
HS	Special High - Code
MS	Special Moderate - Code
LS	Special Low - Code

**Table B.7 Anchor**

Label	Description
NULL	Unknown
1	The equipment is anchored
0	The equipment is not anchored

**Table B.8 Building-Specific Data Earthquake Building Classifications**

Label	Description
W	Wood
W1	Wood, Light Frame (≤ 5,000 sq.ft.)
W2	Wood, Greater than 5,000 sq. ft.
S	Steel
S1	Steel Moment Frame
S2	Steel Braced Frame
S3	Steel Light Frame
S4	Steel Frame with Cast-in-Place Concrete Shear Walls
S5	Steel Frame with Unreinforced Masonry Infill Walls
C	Concrete
C1	Concrete Moment Frame
C2	Concrete Shear Walls
C3	Concrete Frame with Unreinforced Masonry Infill Walls
PC1	Precast Concrete Tilt-Up Walls
PC2	Precast Concrete Frames with Concrete Shear Walls
M	Masonry
RM1	Reinforced Masonry Bearing Walls with Wood or Metal
RM2	Reinforced Masonry Bearing Walls with Precast
URM	Unreinforced Masonry Bearing Walls
MH	Mobile Homes

# Appendix C

**Table C.1 Flood Module Building Type**

Label	Description
WOOD	Wood Building
STEEL	Steel Building
CONCRETE	Concrete Building
PRECAST	Precast Concrete Building
MASONRY	Masonry Building
RMASONRY	Reinforced Masonry Building
URMASONRY	Unreinforced Masonry Building
MOBILE	Mobile Home
MANUFHOUSING	Manufactured Housing

**Table C.2 Flood Module Design Level**

Label	Description
0	Unknown
1	Prior - 1950
2	1950 - 1970
3	Post 1970

**Table C.3 Flood Module Foundation Type**

Label	Description
1	Pile
2	Pier
3	Solid Wall
4	Basement/Yard

Label	Description
5	Crawl Space
6	Fill
7	Slab on Grade