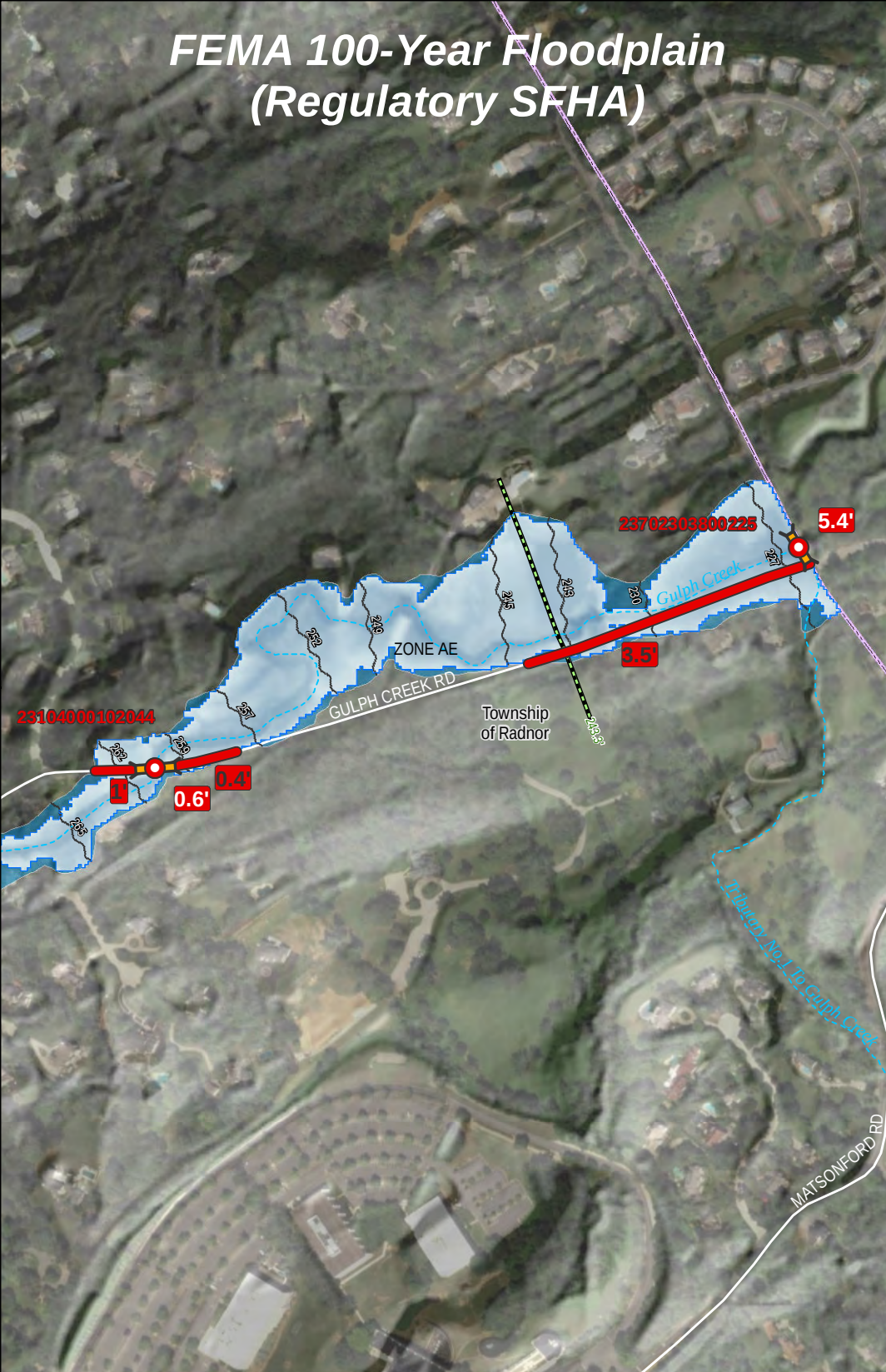
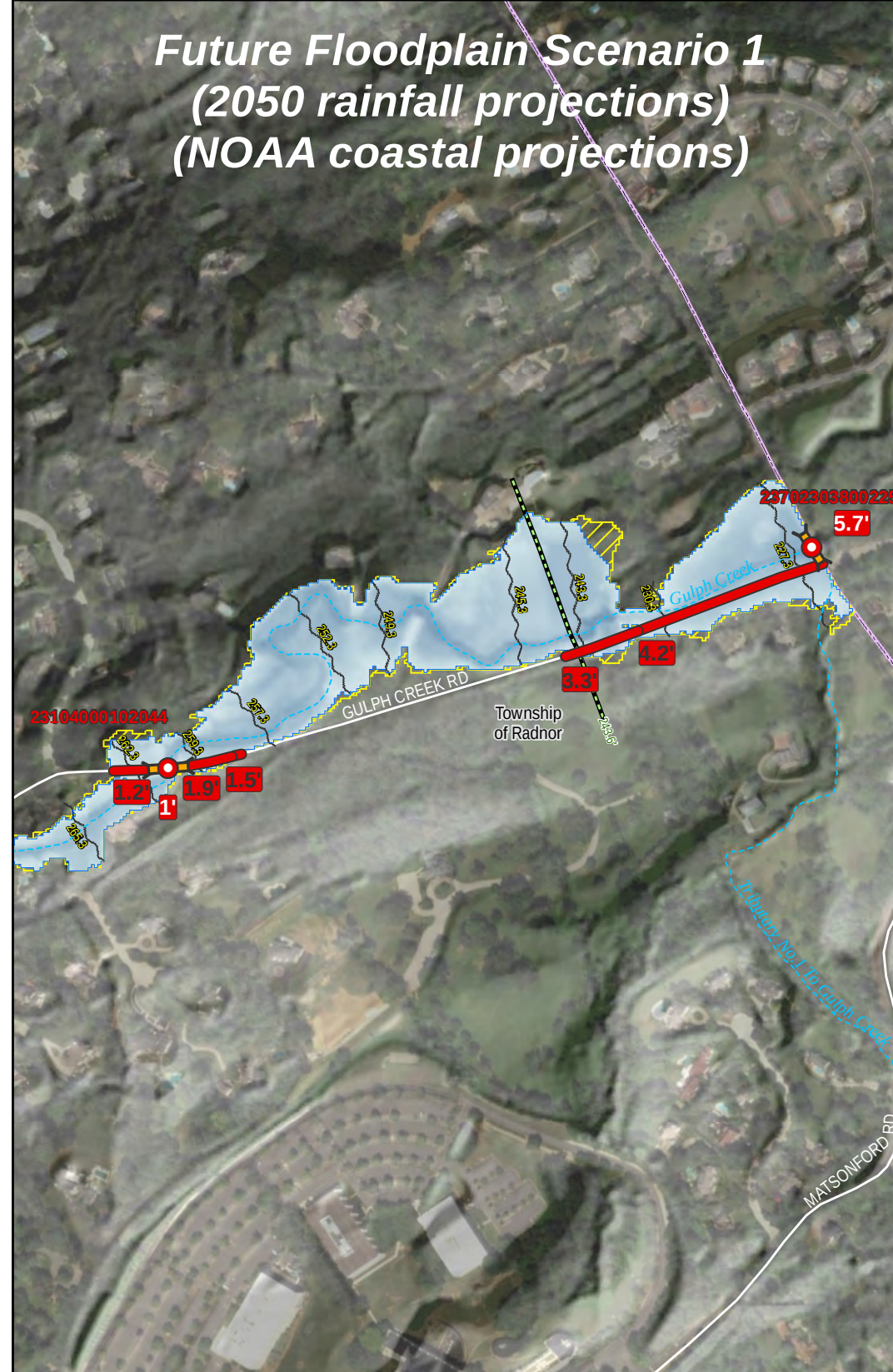


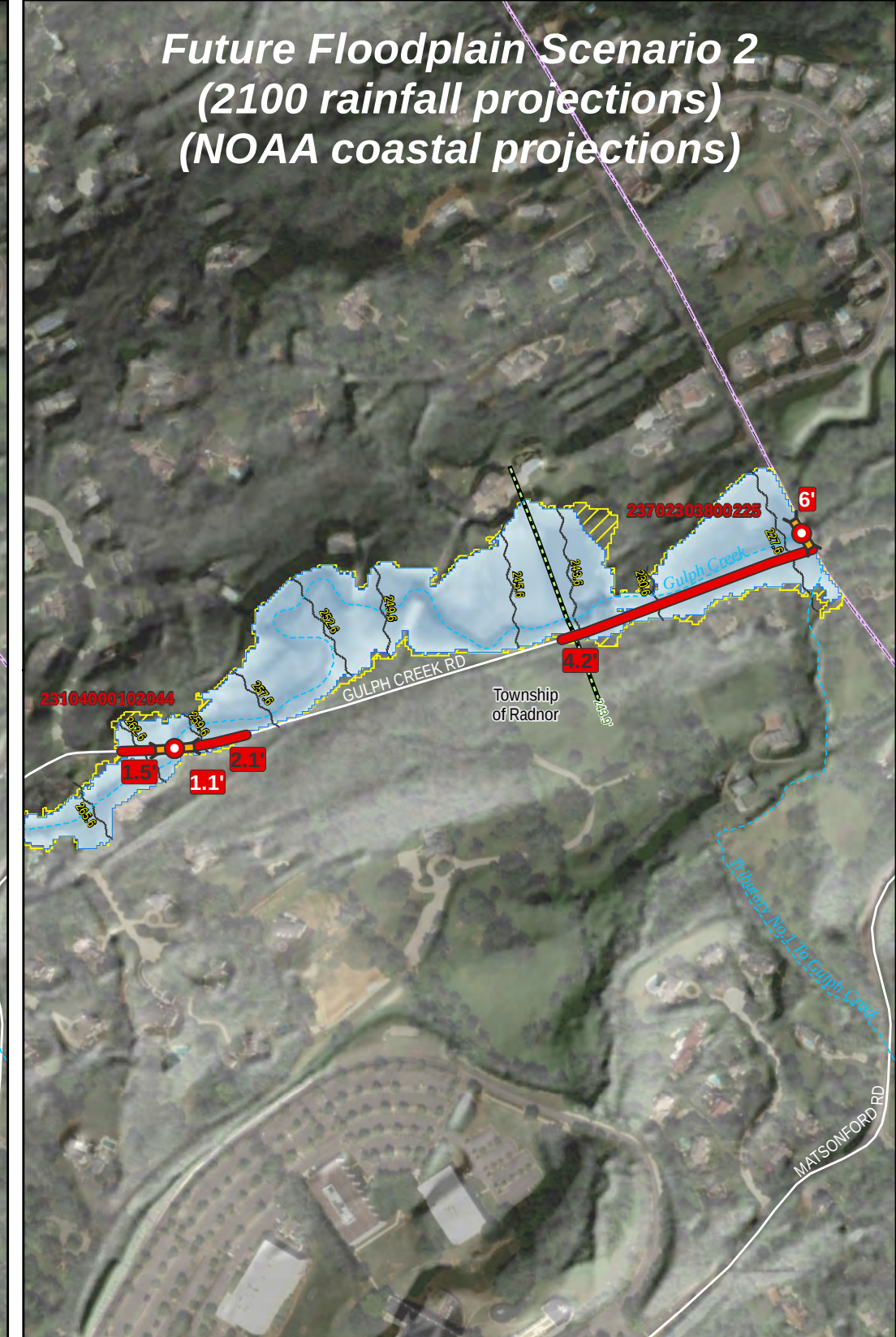
FEMA 100-Year Floodplain (Regulatory SFHA)



Future Floodplain Scenario 1 (2050 rainfall projections) (NOAA coastal projections)



Future Floodplain Scenario 2 (2100 rainfall projections) (NOAA coastal projections)



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS

(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS

(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

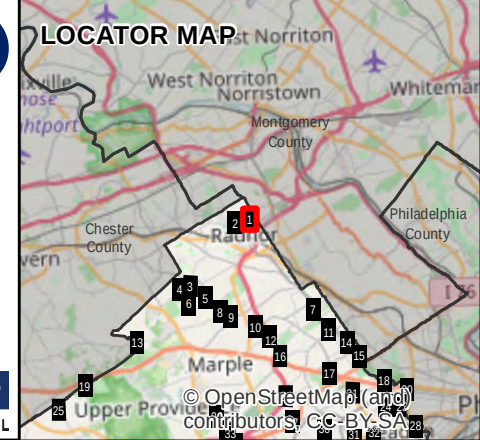
Sheet 1 of 125

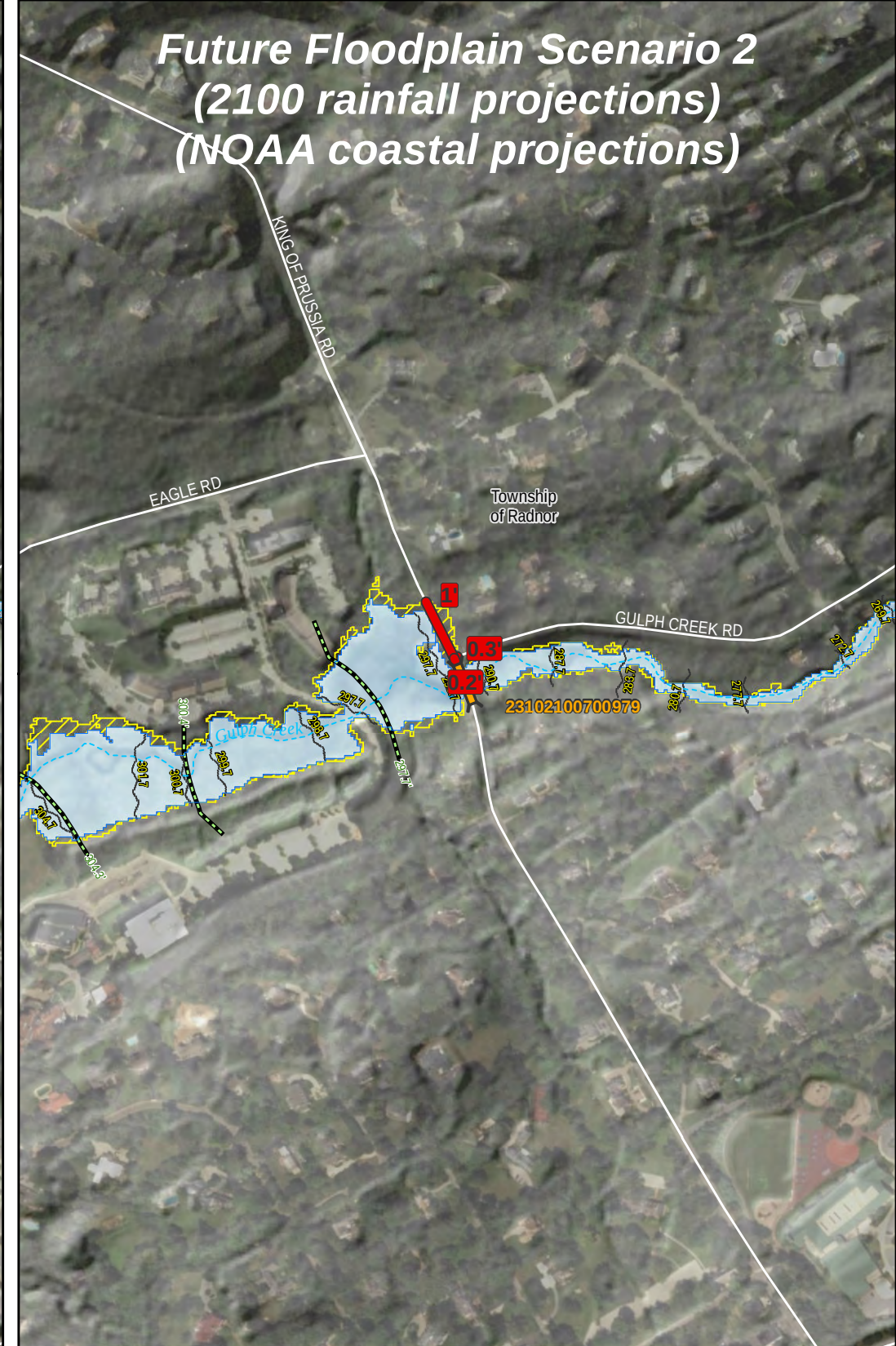
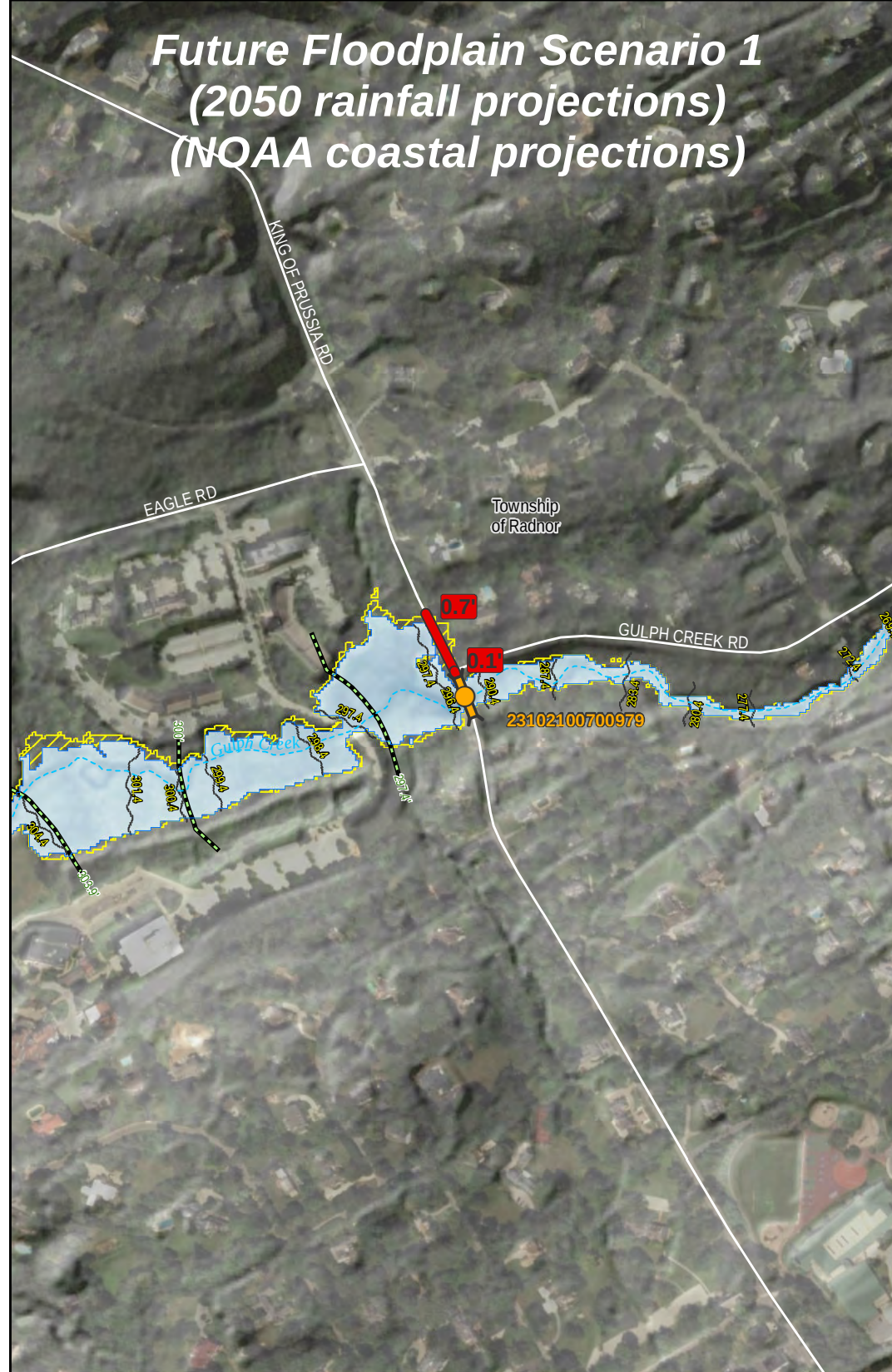
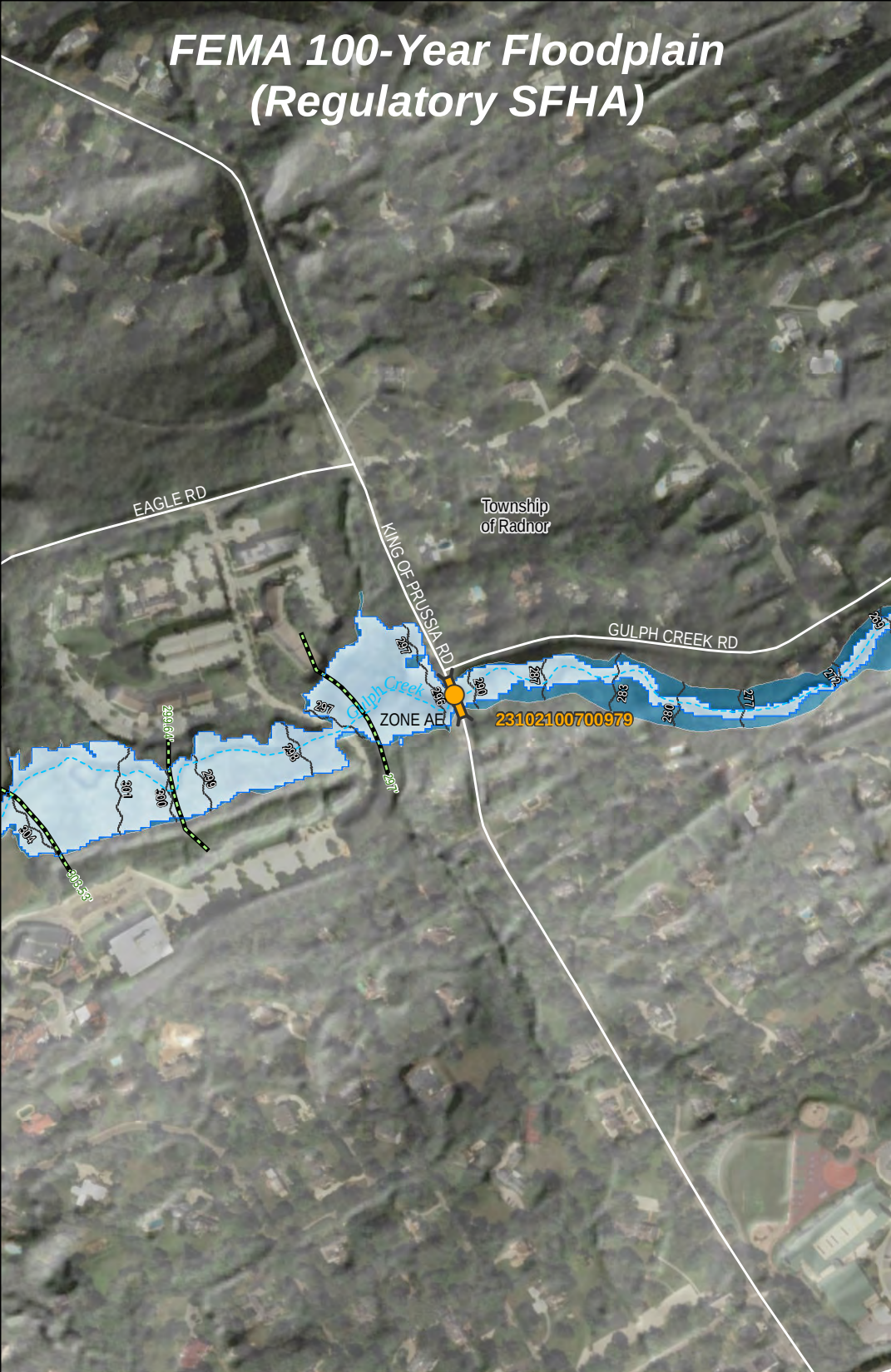


DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

**Michael Baker
INTERNATIONAL**





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
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- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS
(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS
(Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis

Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 2 of 125

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
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FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS

- Existing Conditions SFHA Extents

FUTURE CONDITIONS

- Projected SFHA Extents

0 Feet
1,000

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

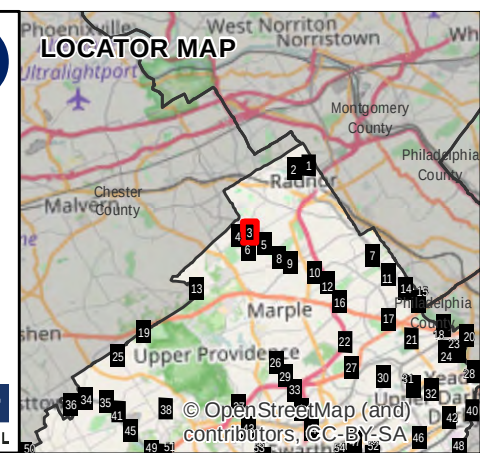
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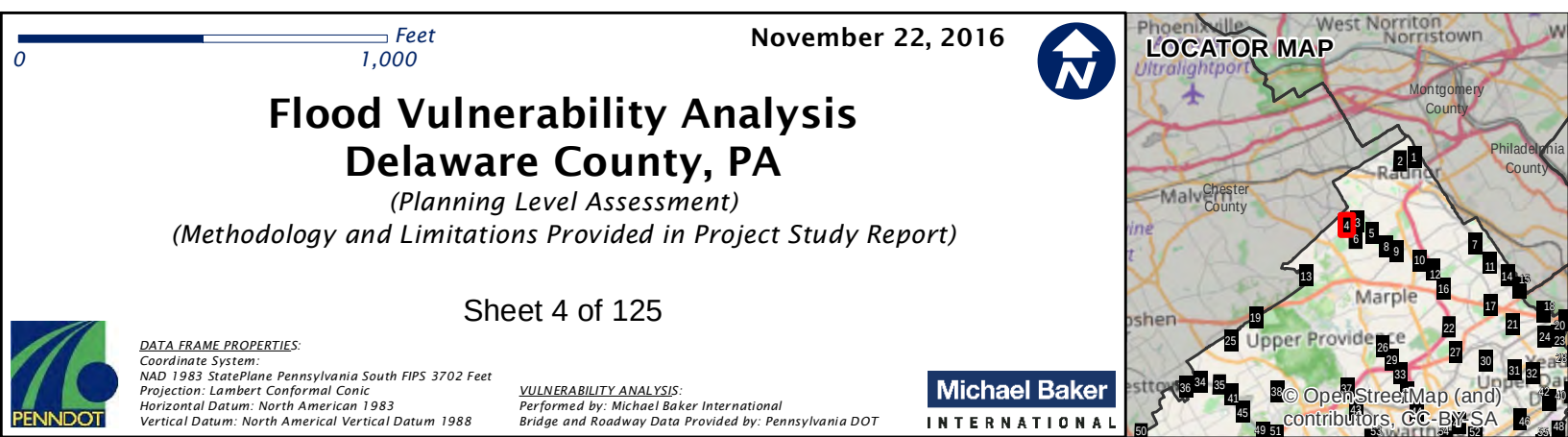
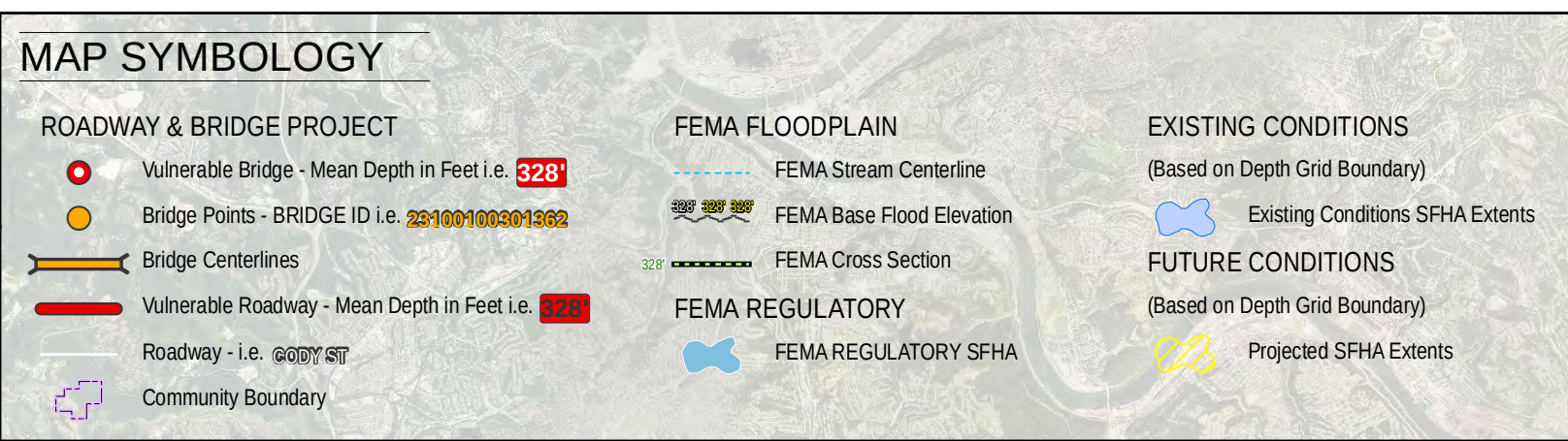
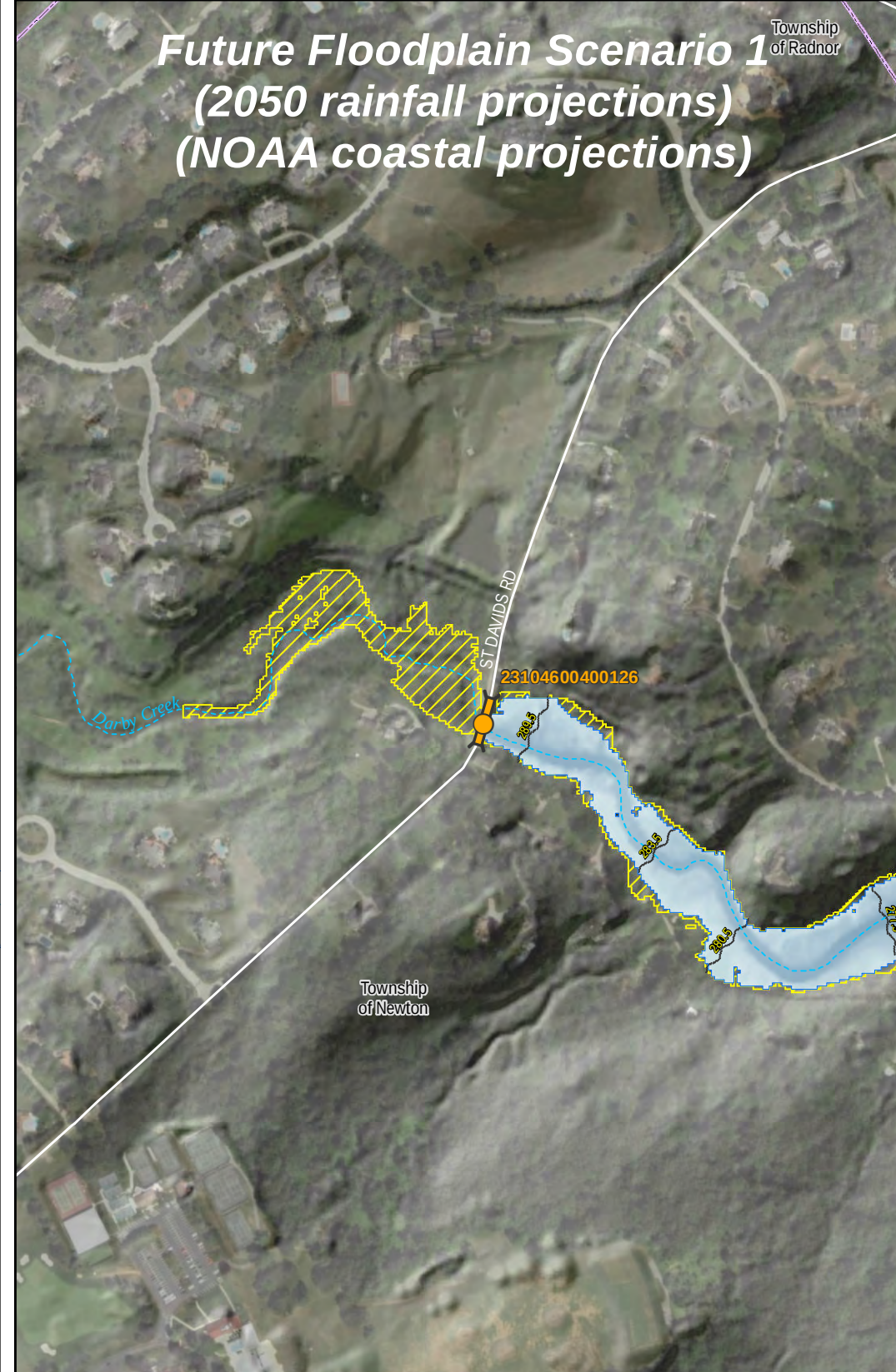


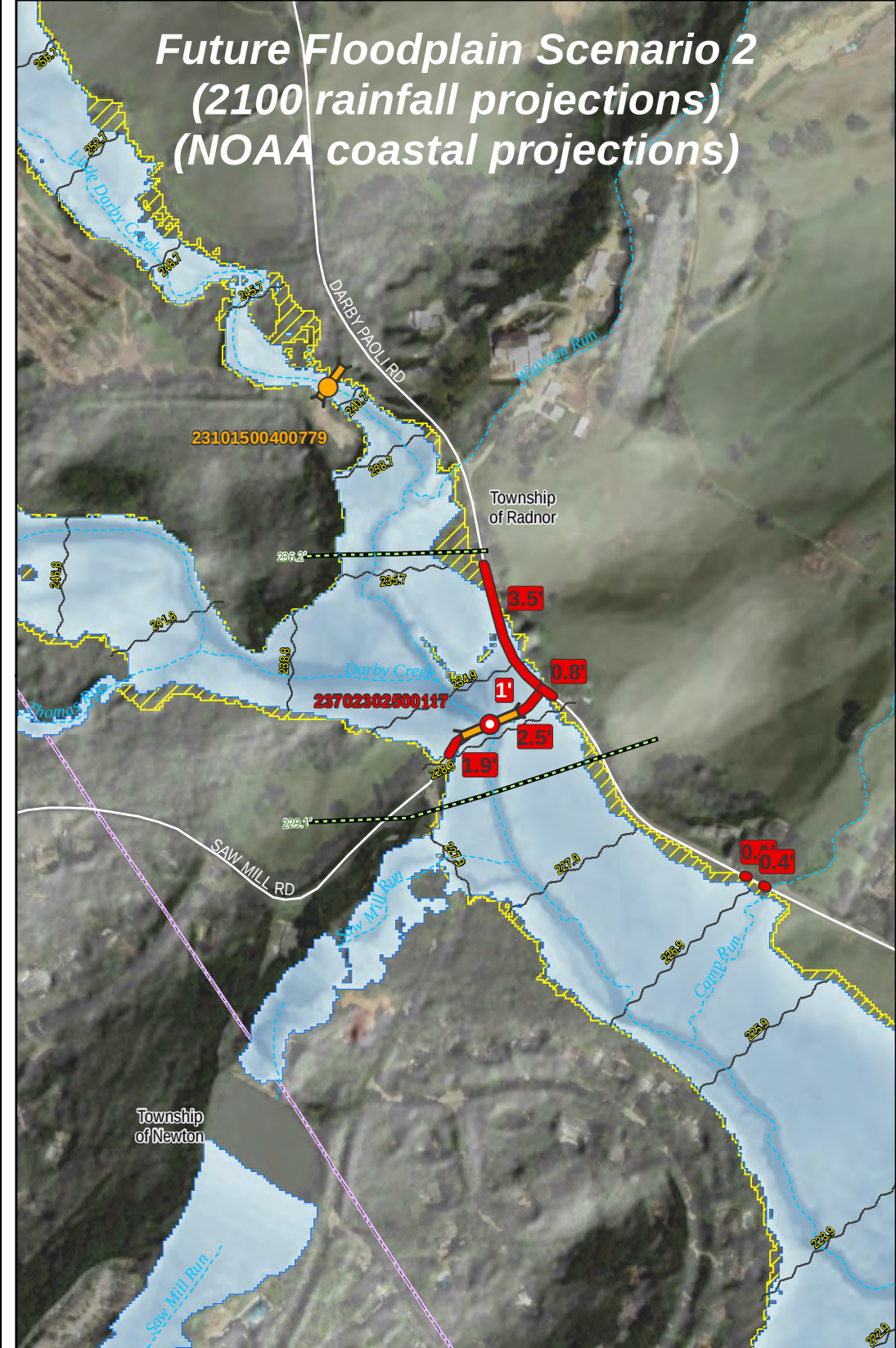
DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

**Michael Baker
INTERNATIONAL**







MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	
	Vulnerable Bridge - Mean Depth in Feet i.e. 328'
	Bridge Points - BRIDGE ID i.e. 23100100301362
	Bridge Centerlines
	Vulnerable Roadway - Mean Depth in Feet i.e. 328'
	Roadway - i.e. CODY ST
	Community Boundary

FEMA FLOODPLAIN	
	FEMA Stream Centerline
	FEMA Base Flood Elevation
	FEMA Cross Section
FEMA REGULATORY	
	FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)	
	Existing Conditions SFHA Extents
FUTURE CONDITIONS (Based on Depth Grid Boundary)	
	Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

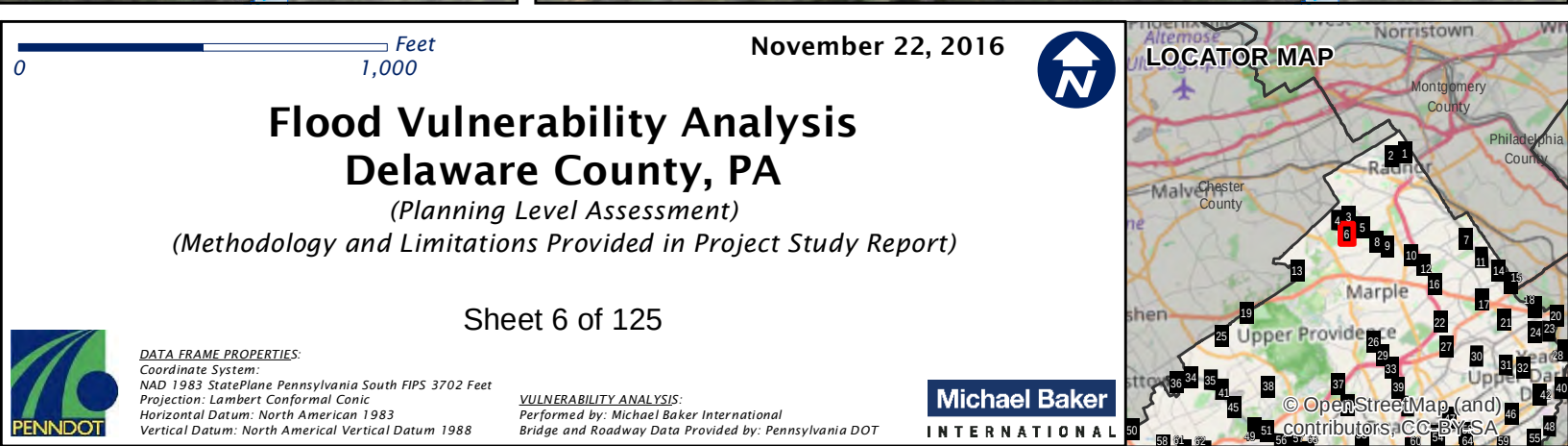
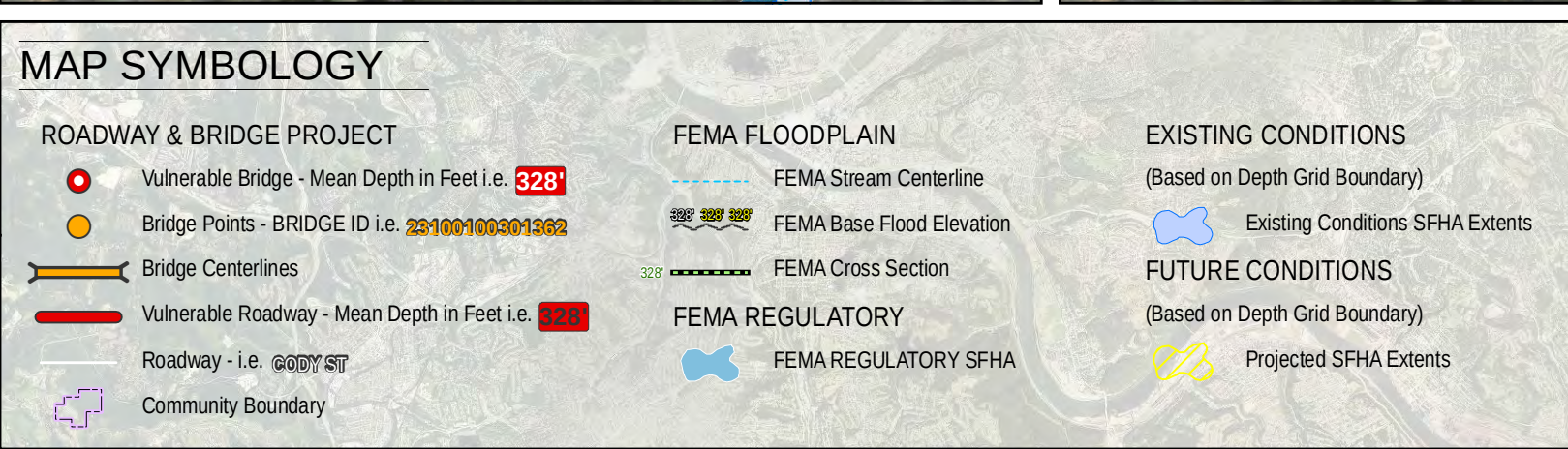
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

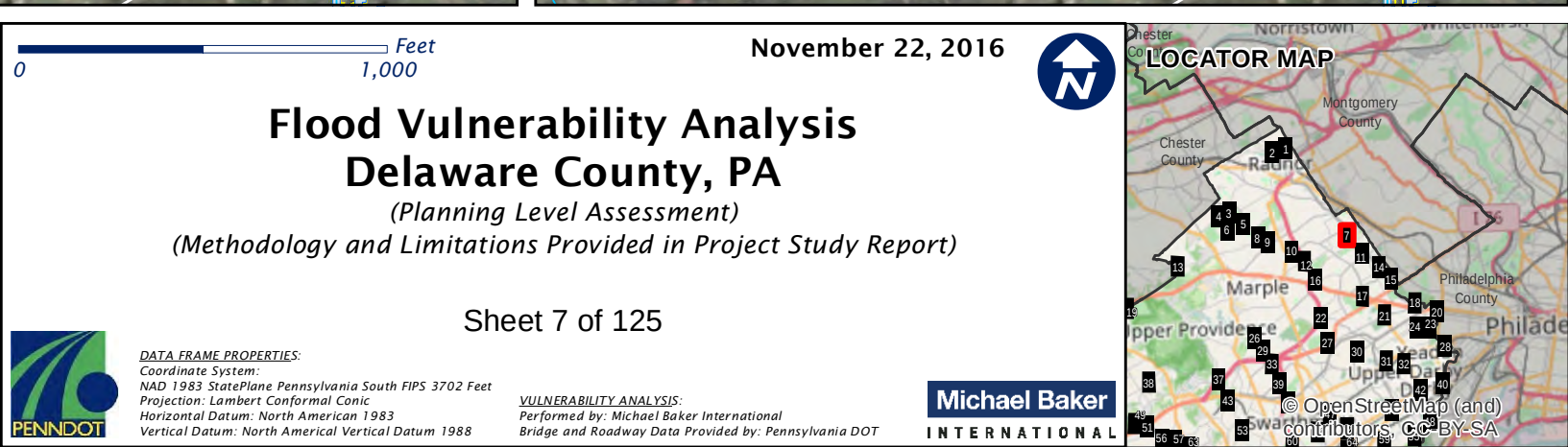
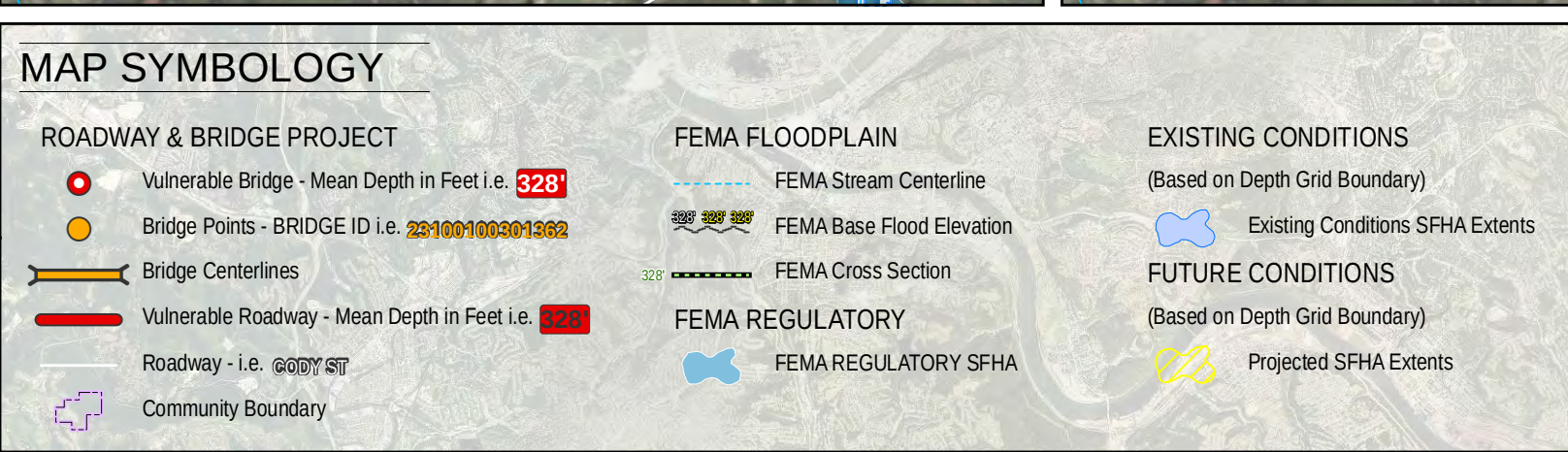
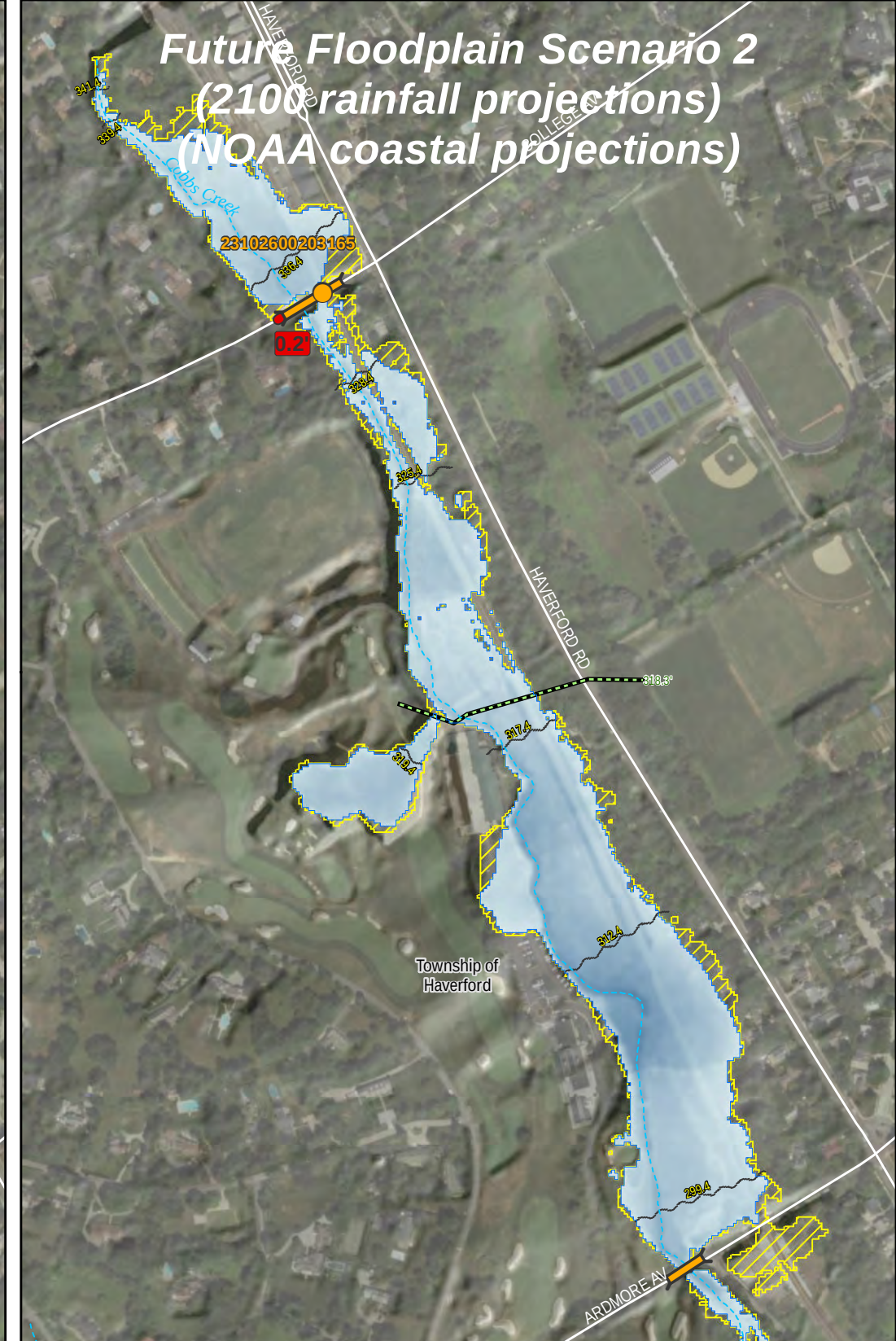
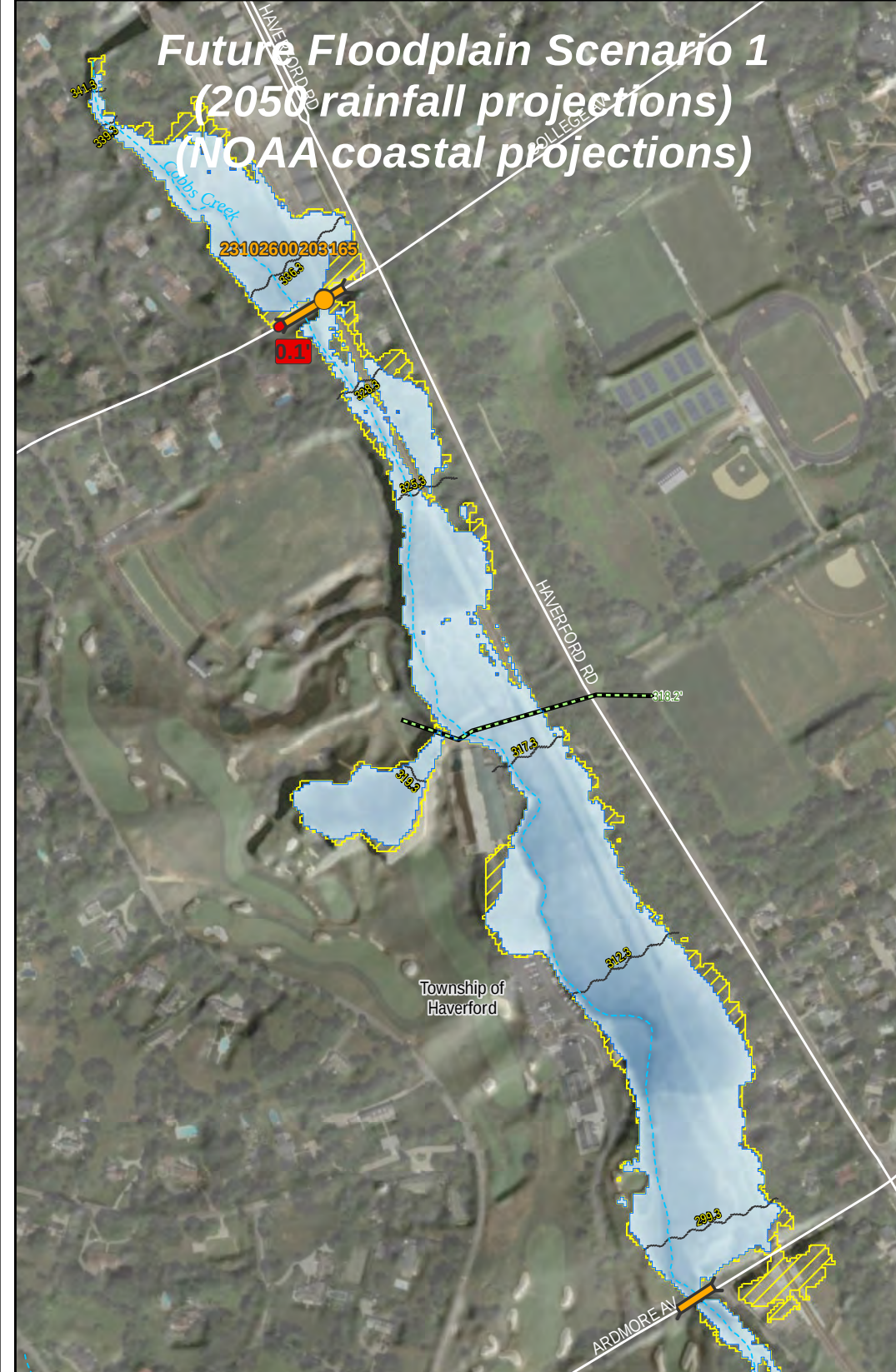
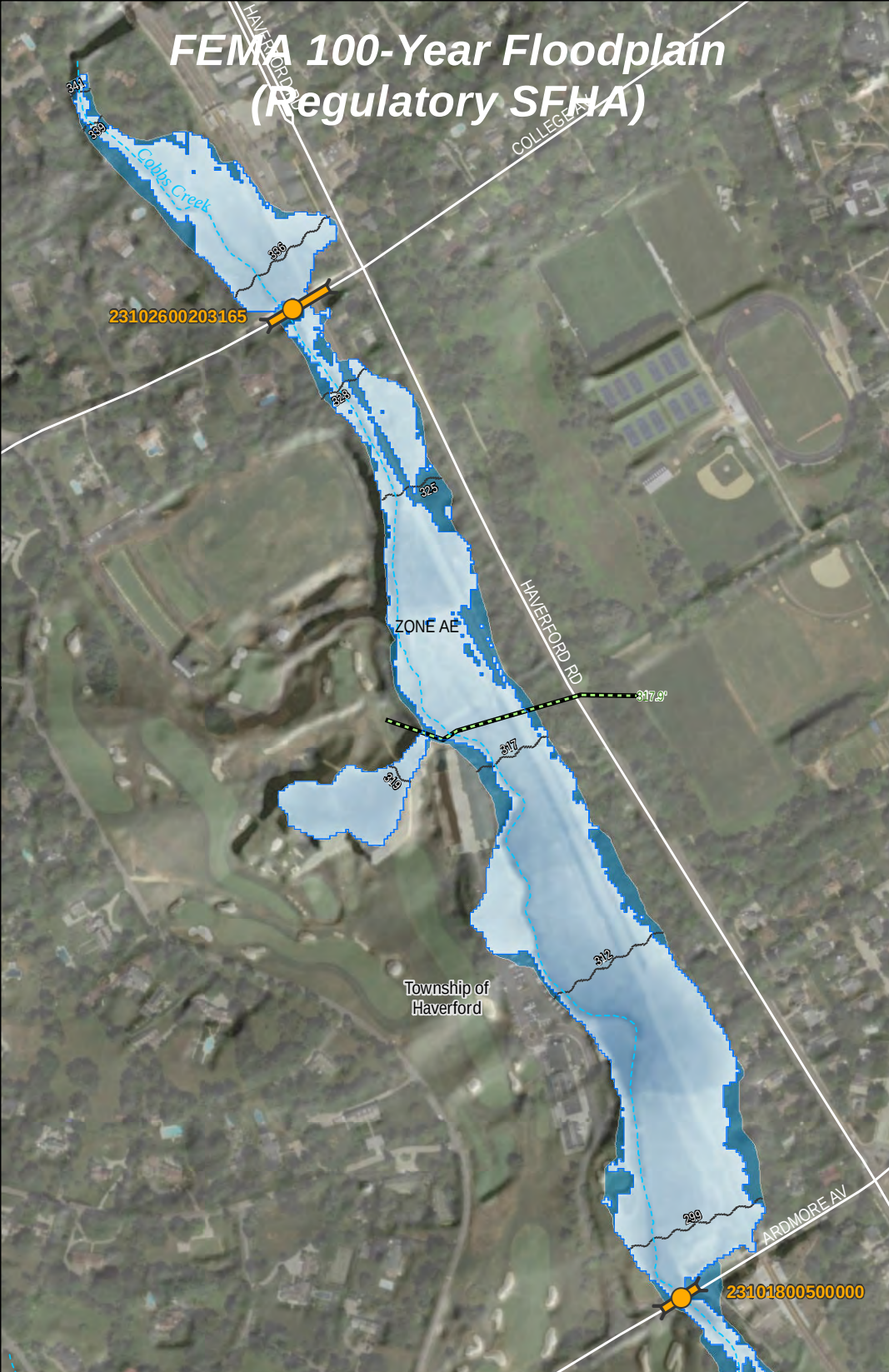
Sheet 5 of 125

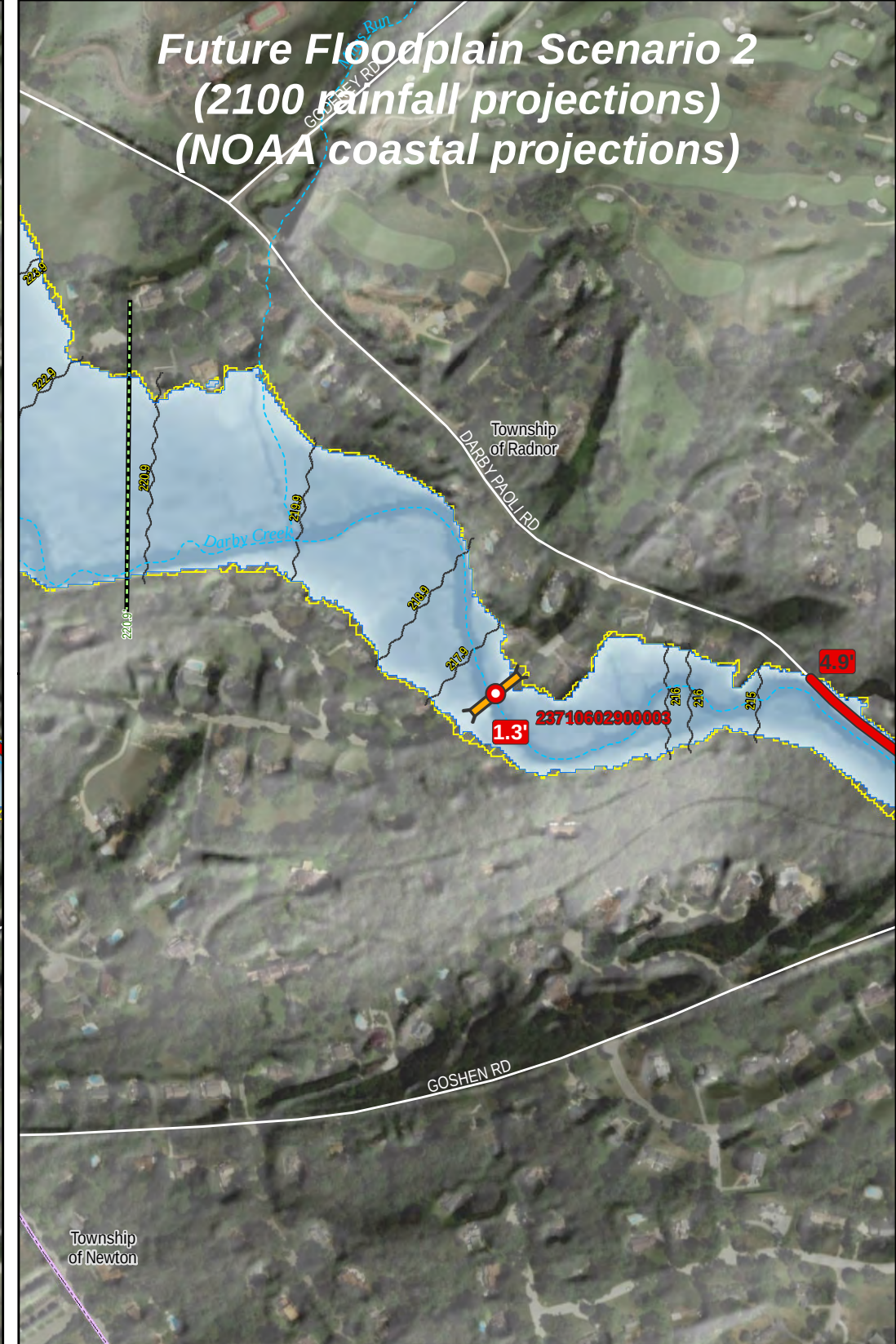
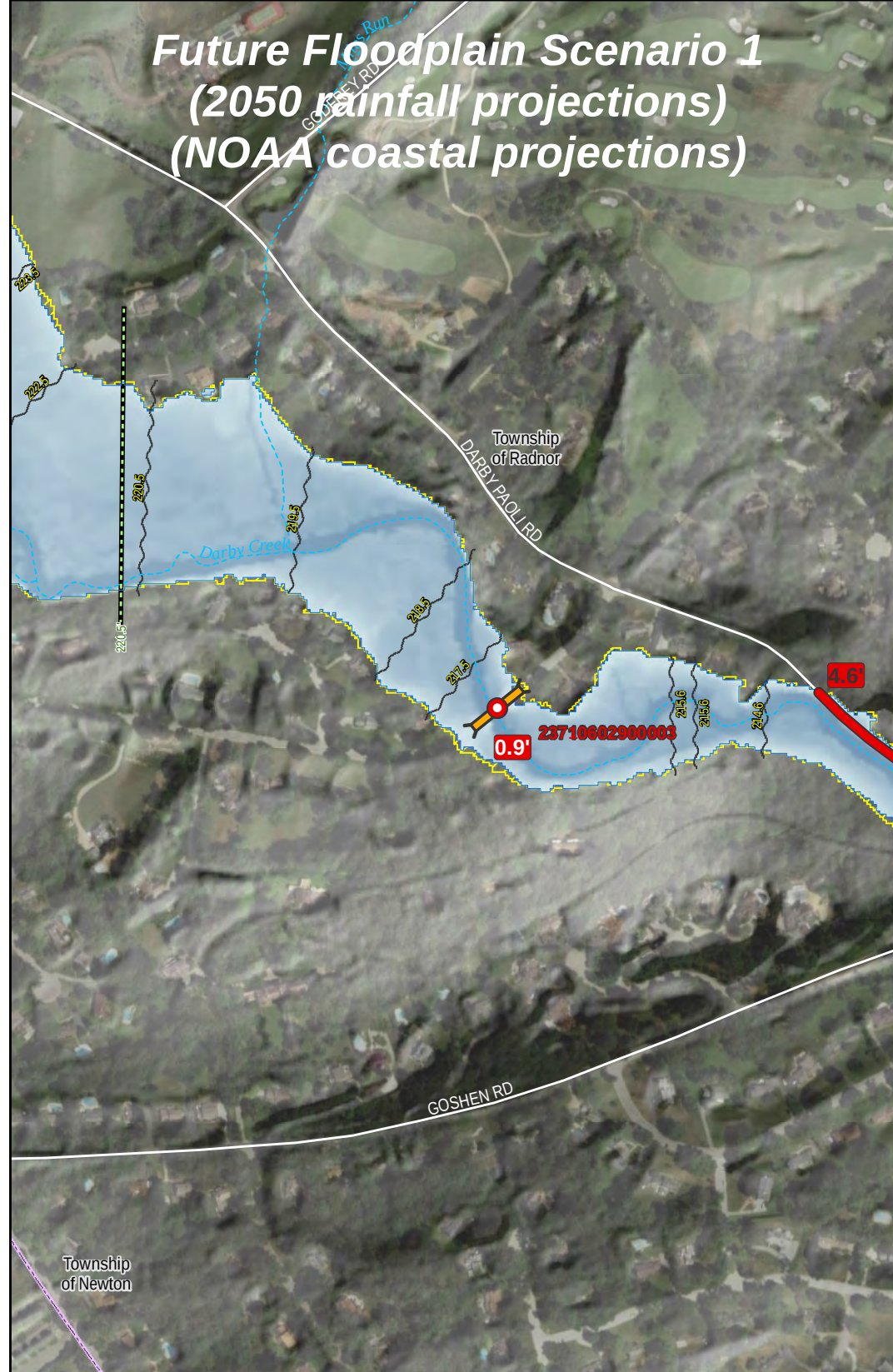
DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
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VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP







MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
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FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 8 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

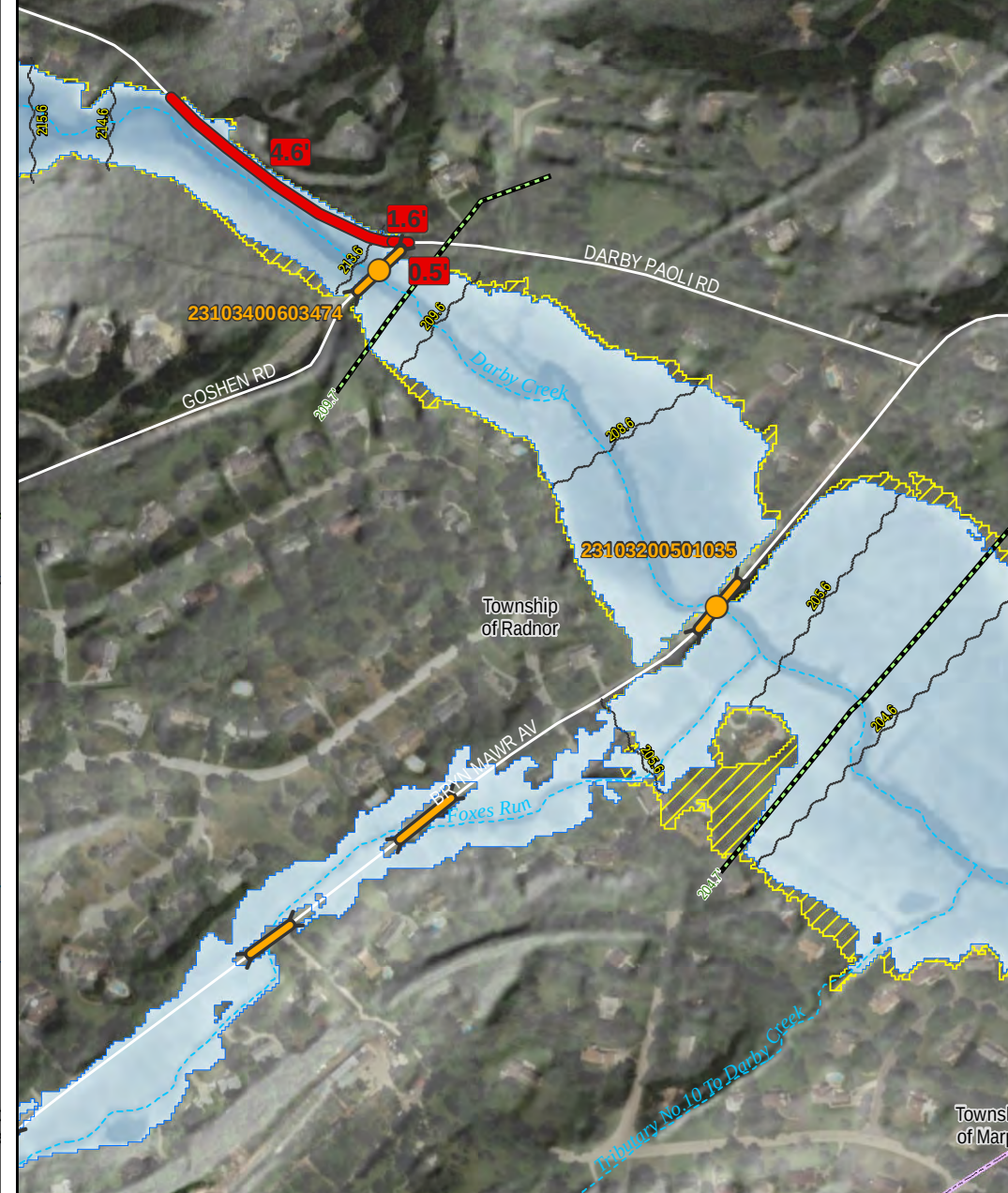
VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP

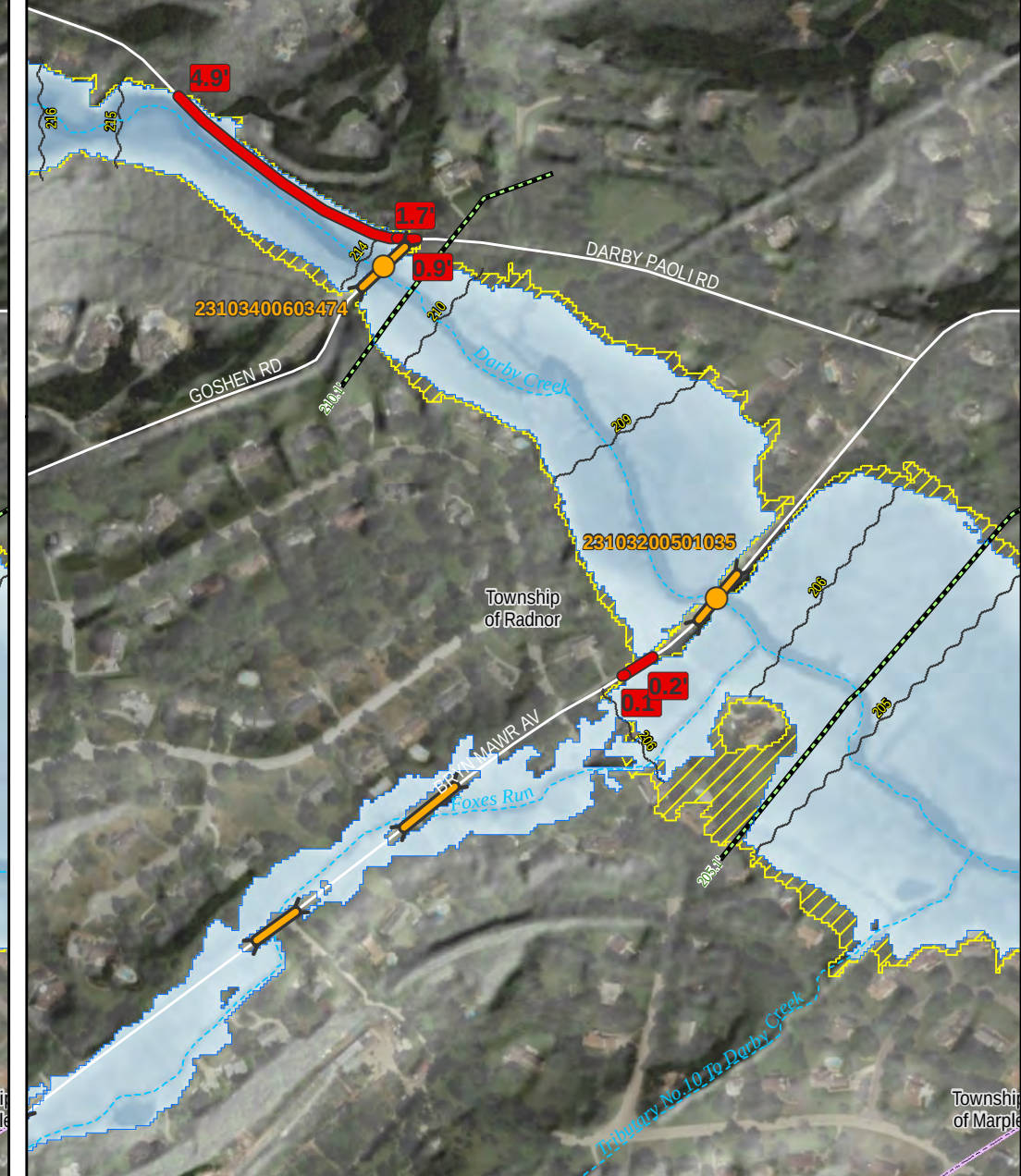
FEMA 100-Year Floodplain (Regulatory SFHA)



Future Floodplain Scenario 1 (2050 rainfall projections) (NOAA coastal projections)



Future Floodplain Scenario 2 (2100 rainfall projections) (NOAA coastal projections)



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

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FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS

(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS

(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 Feet
1,000

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

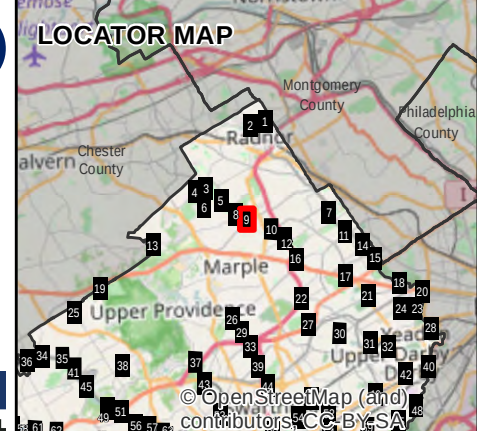
Sheet 9 of 125

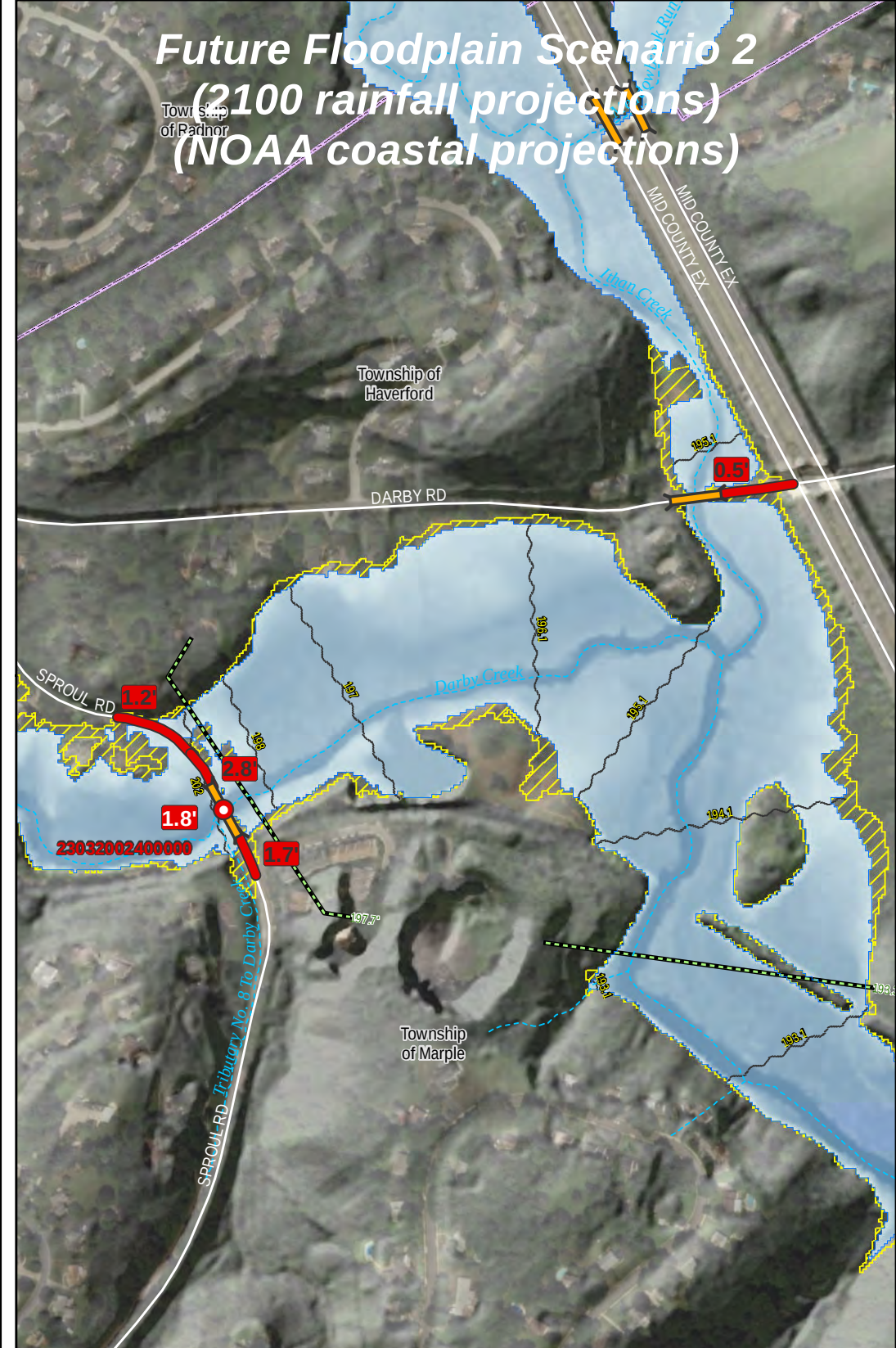


DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

**Michael Baker
INTERNATIONAL**





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
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FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

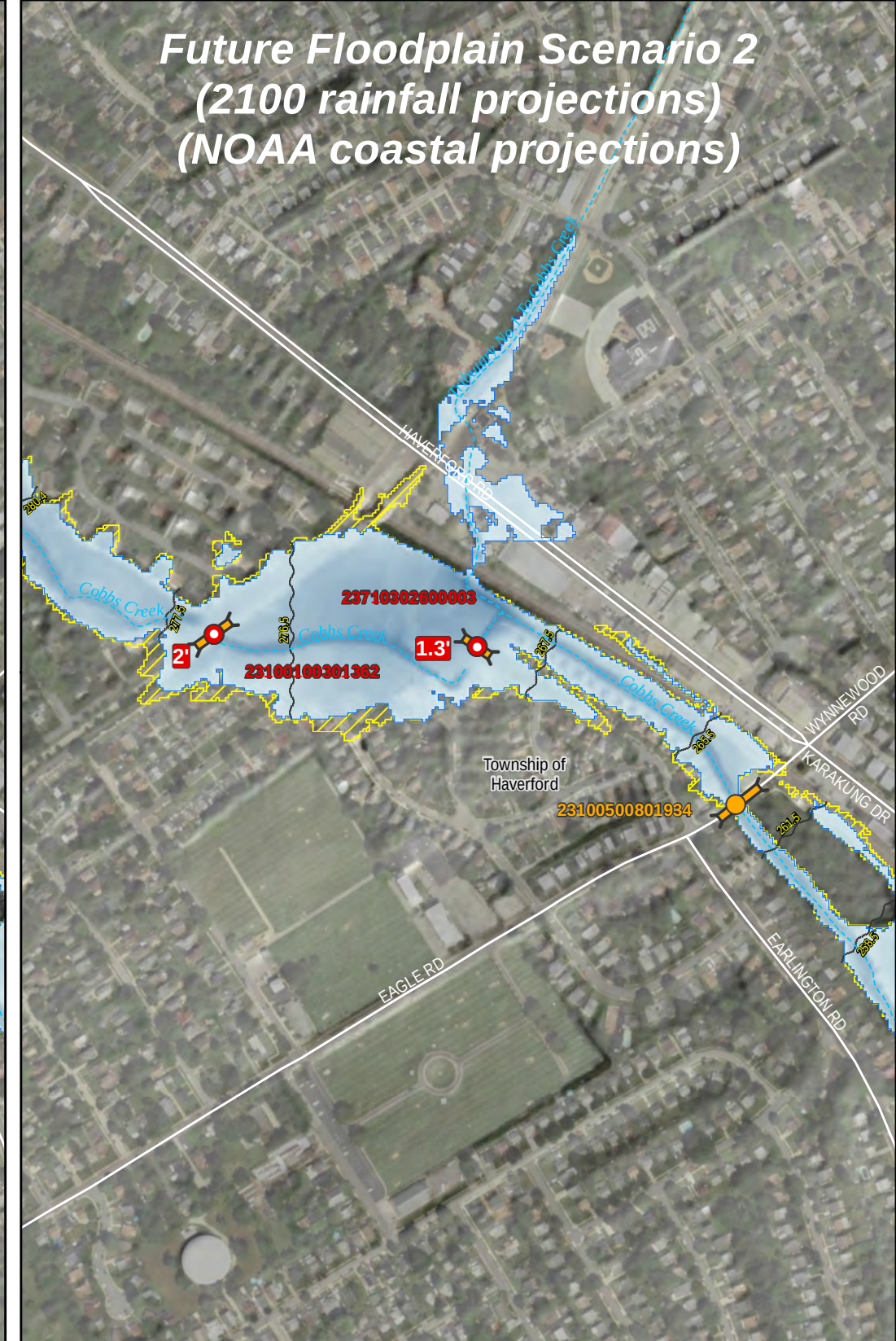
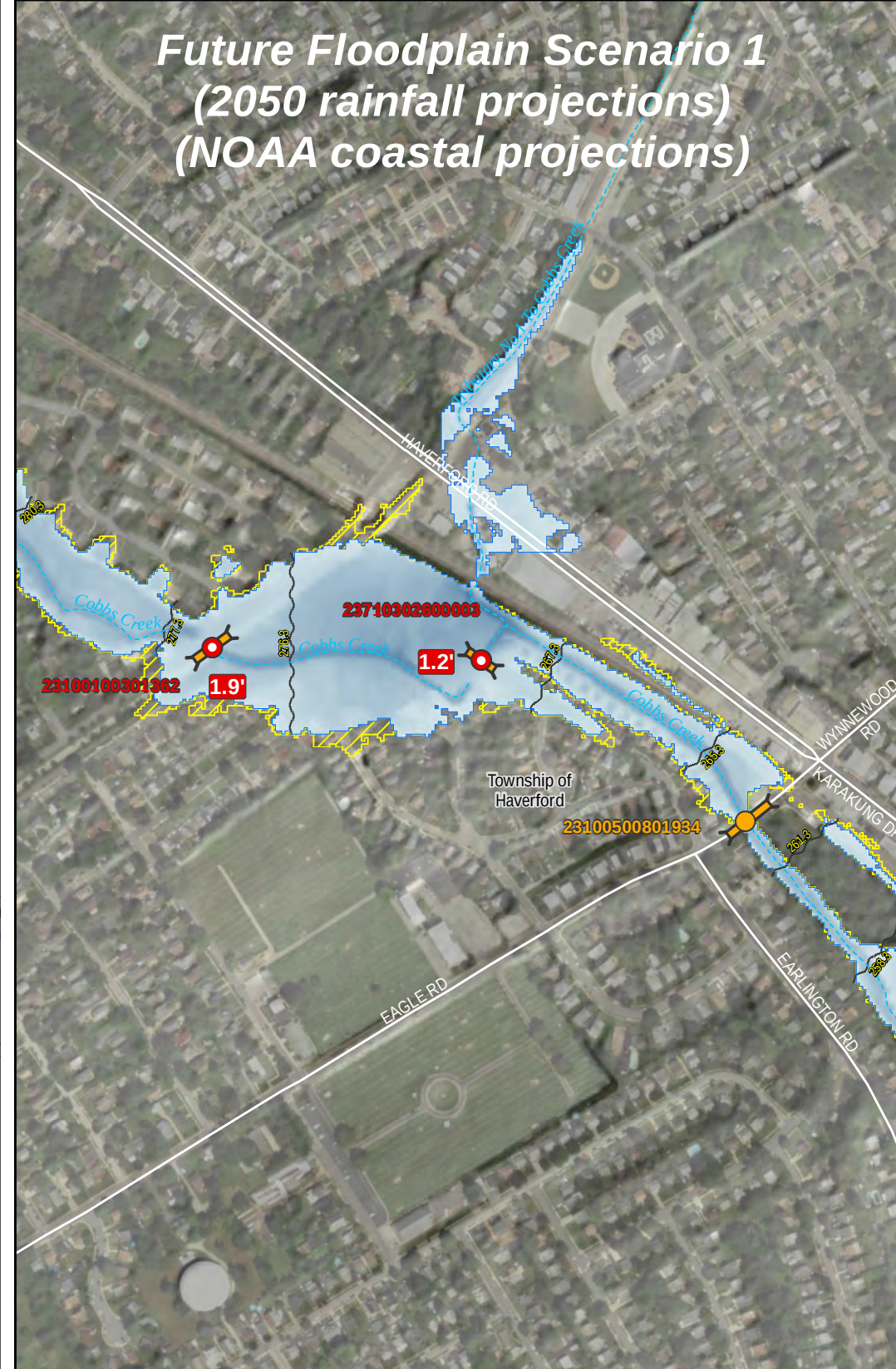
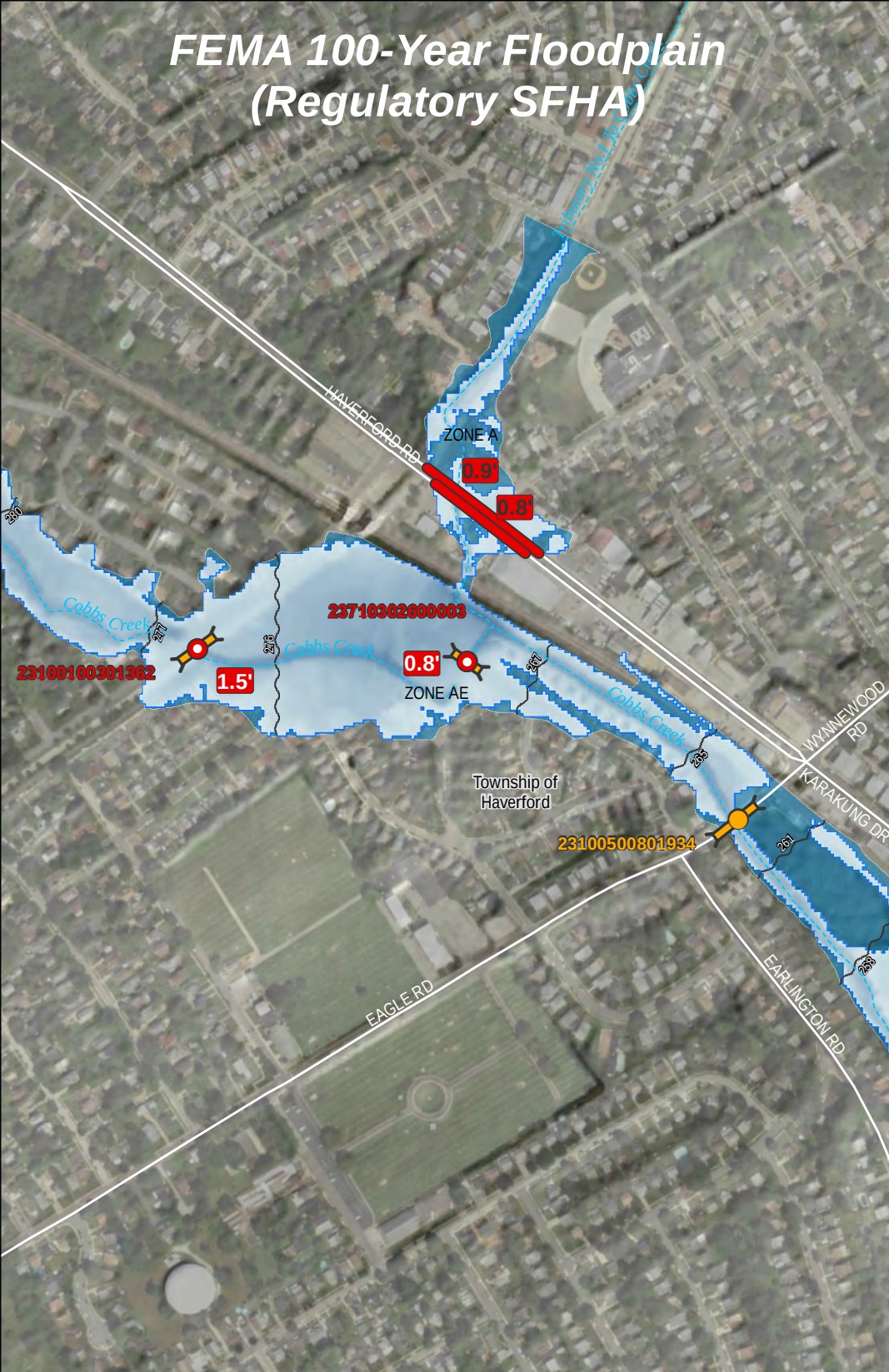
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 10 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

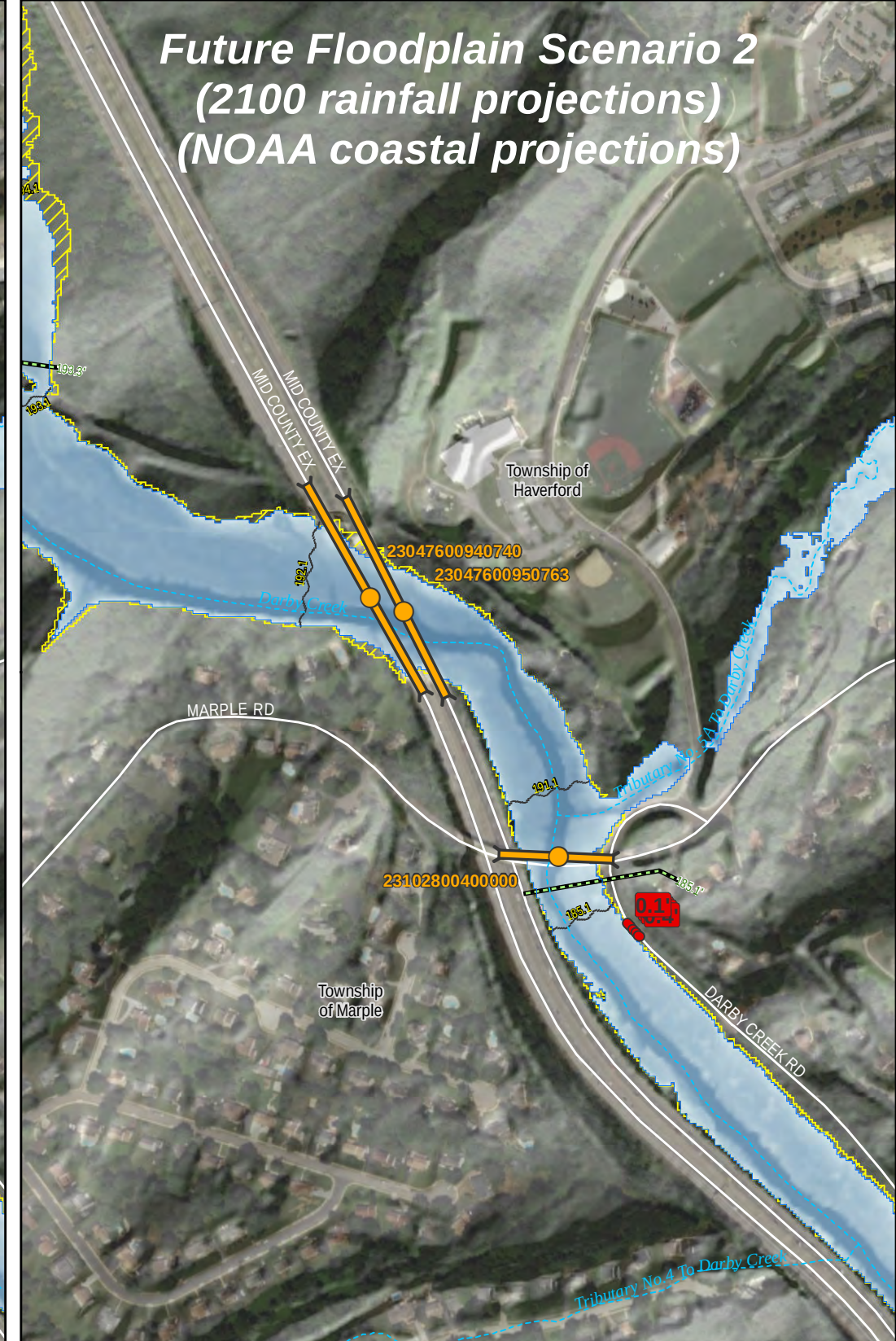
Sheet 11 of 125

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INTERNATIONAL**

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	
	Vulnerable Bridge - Mean Depth in Feet i.e. 328'
	Bridge Points - BRIDGE ID i.e. 23100100301362
	Bridge Centerlines
	Vulnerable Roadway - Mean Depth in Feet i.e. 328'
	Roadway - i.e. 60DY ST
	Community Boundary

FEMA FLOODPLAIN	
	FEMA Stream Centerline
	FEMA Base Flood Elevation
	FEMA Cross Section
FEMA REGULATORY	
	FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)	
	Existing Conditions SFHA Extents
FUTURE CONDITIONS (Based on Depth Grid Boundary)	
	Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

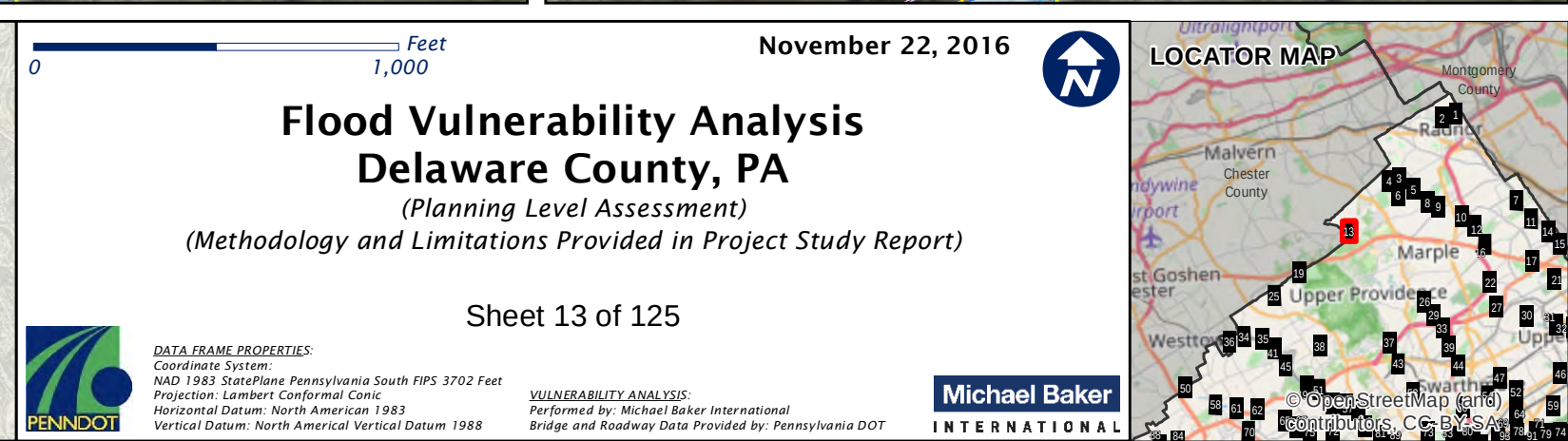
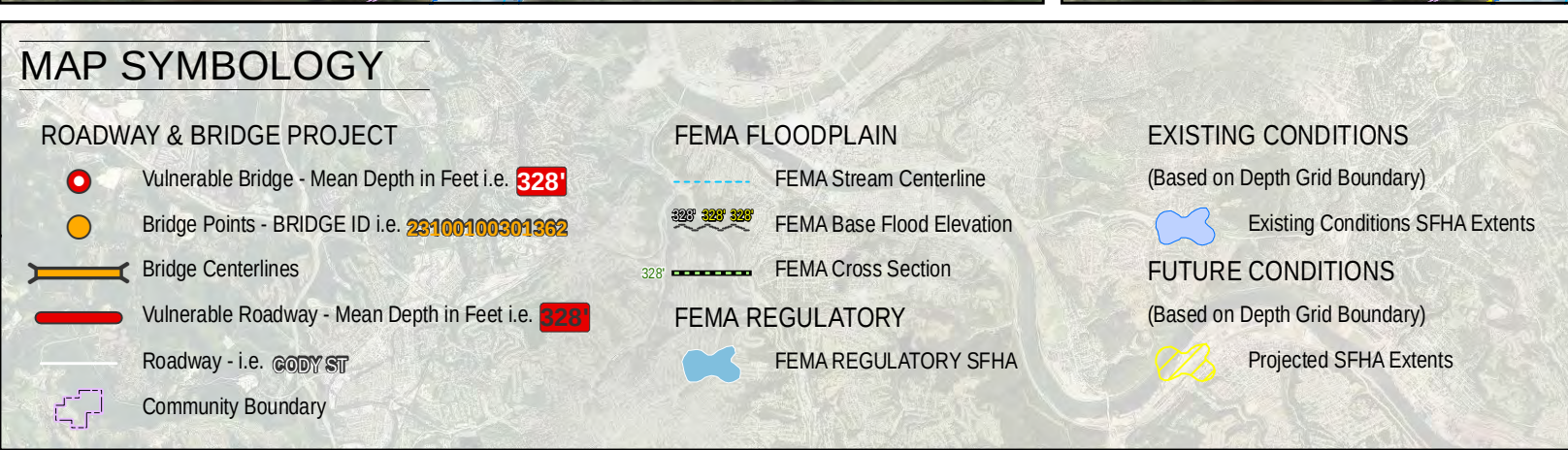
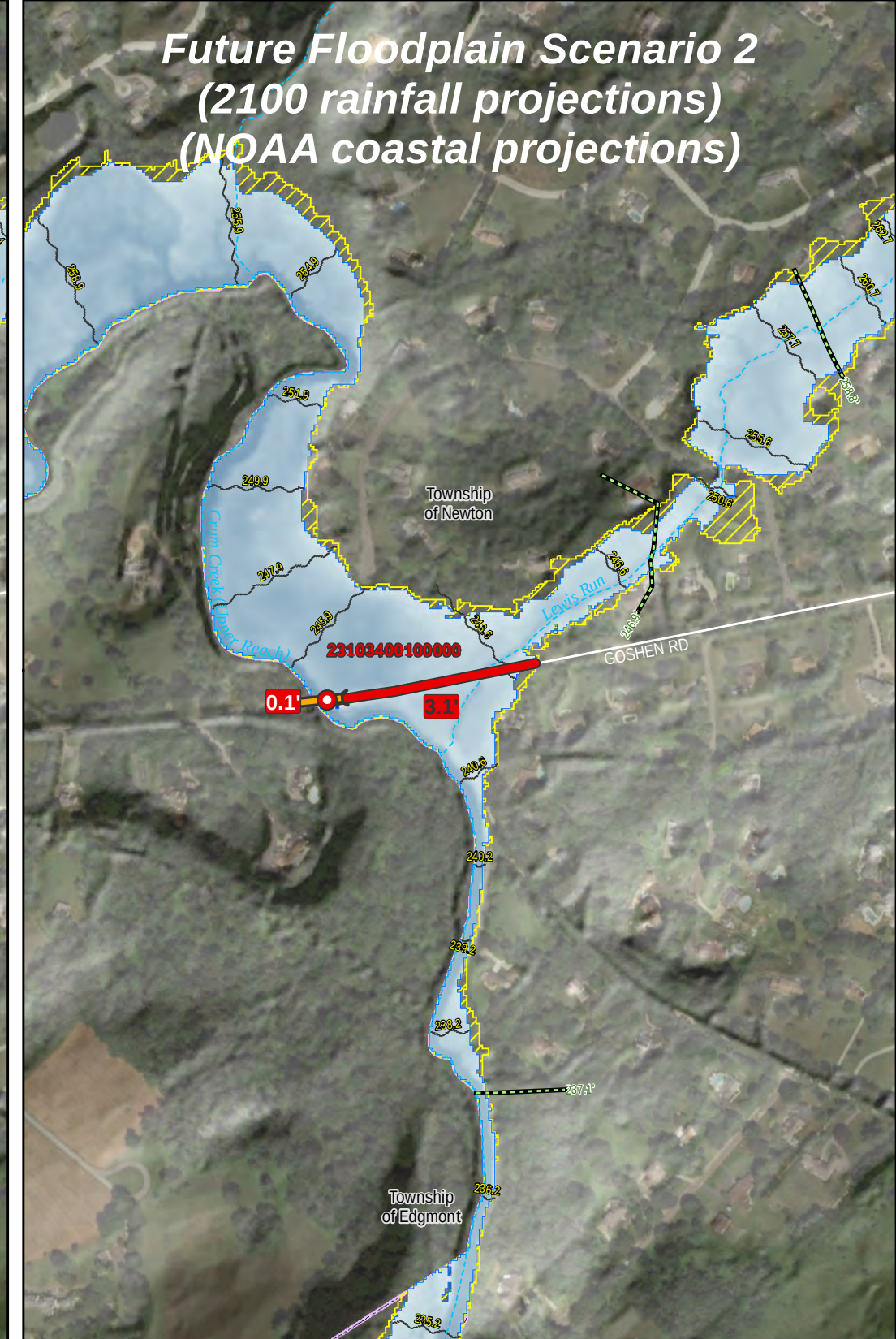
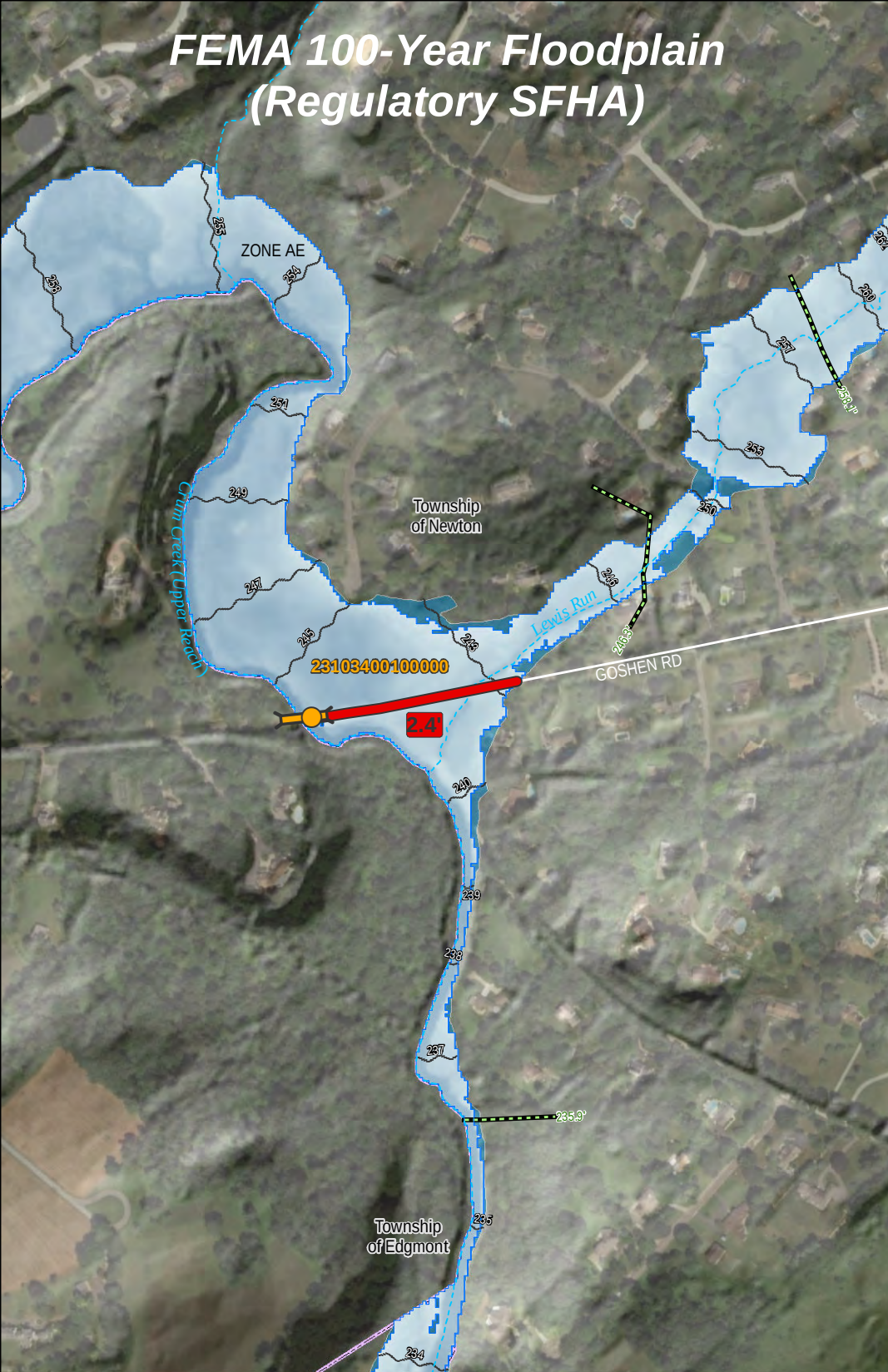
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

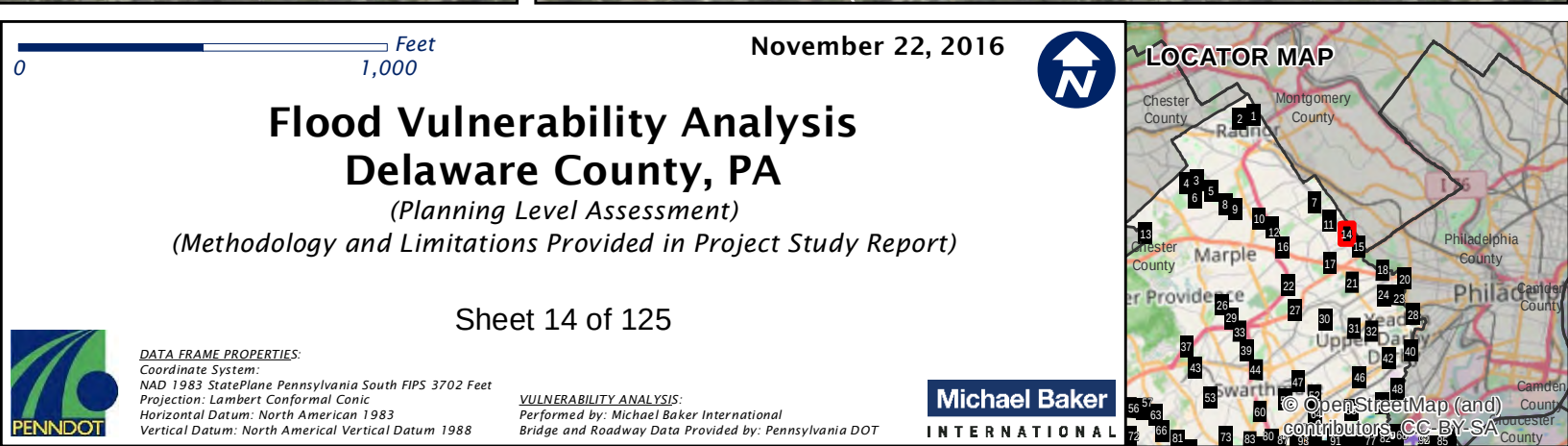
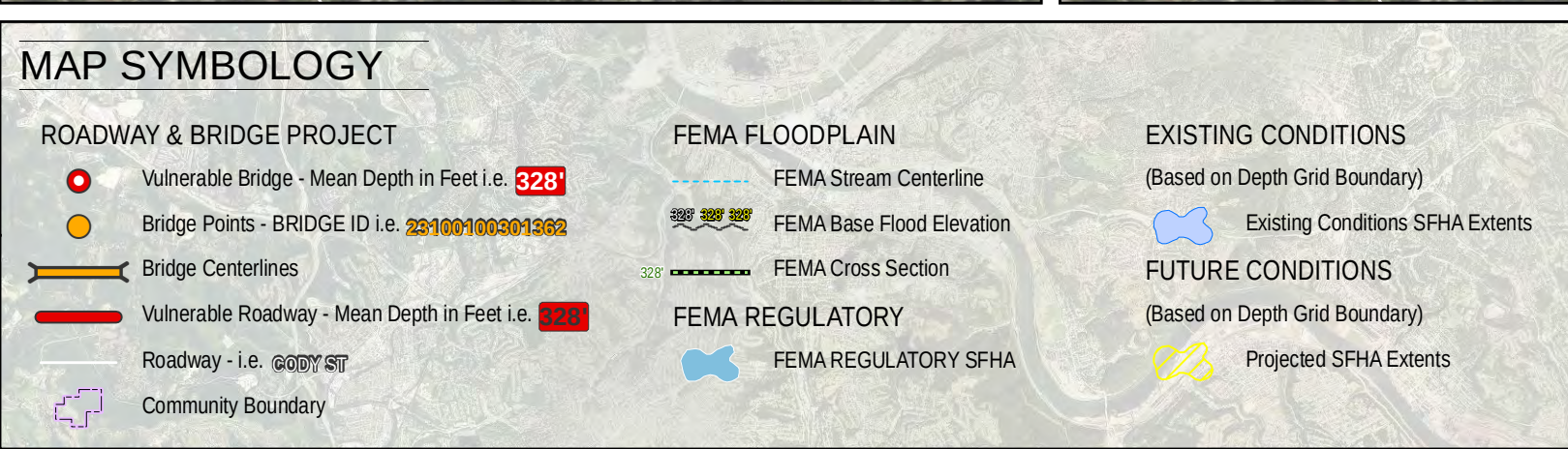
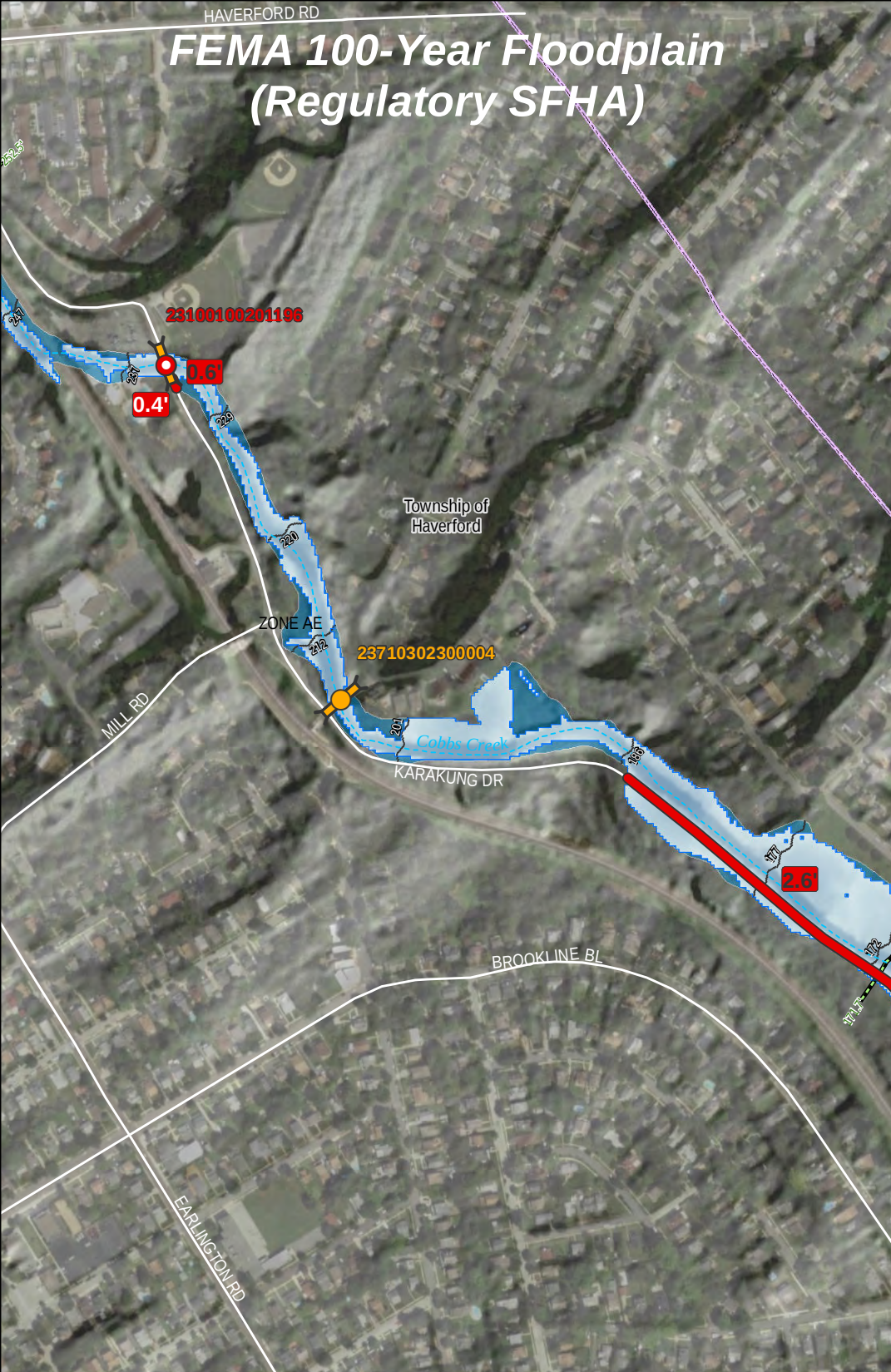
Sheet 12 of 125

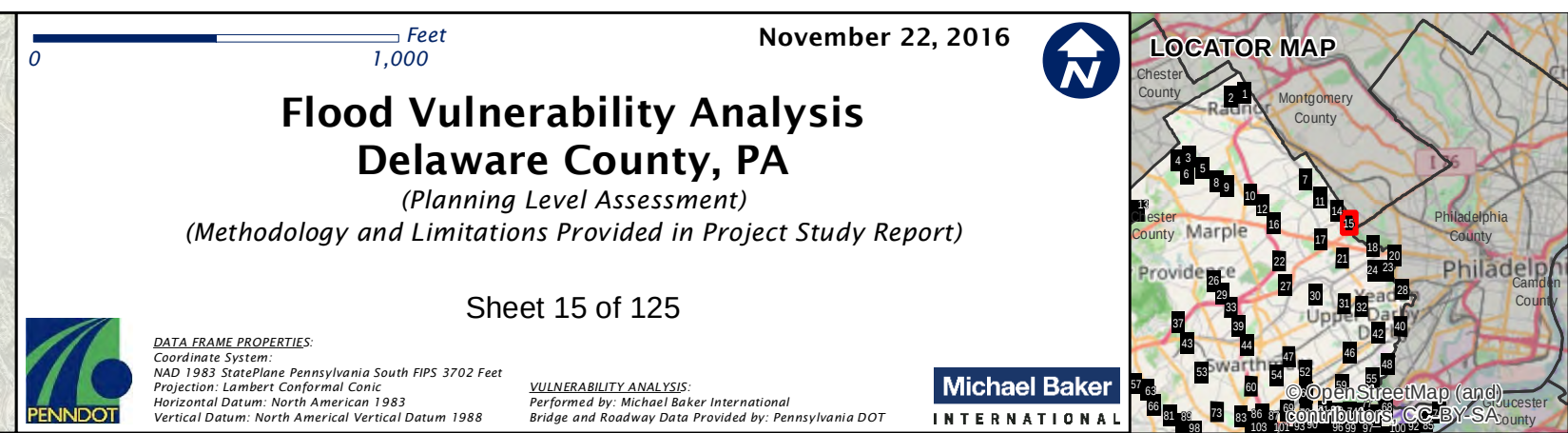
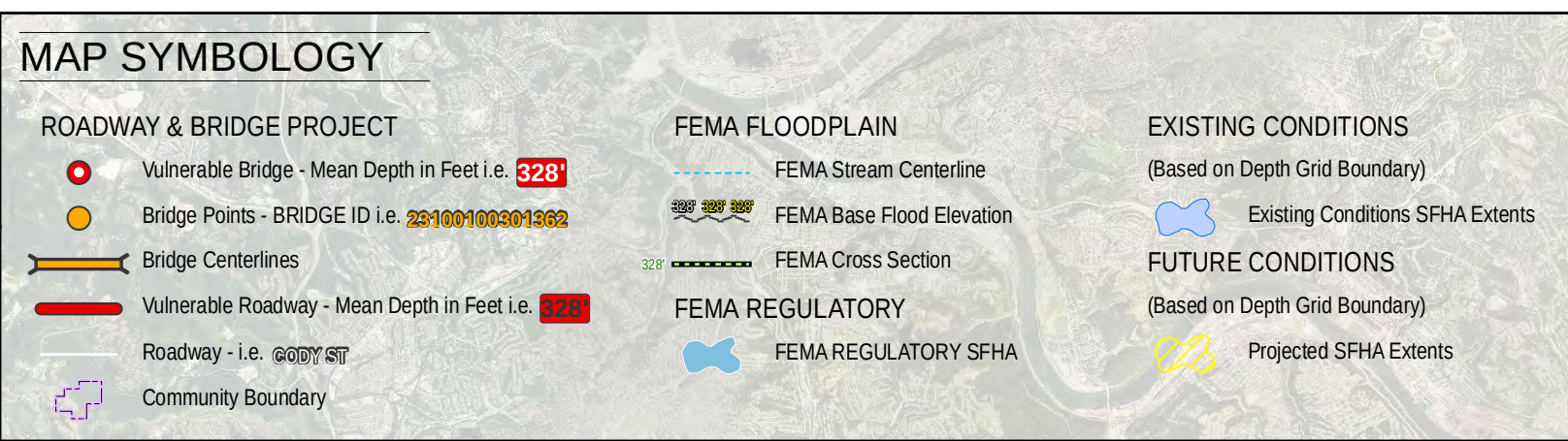
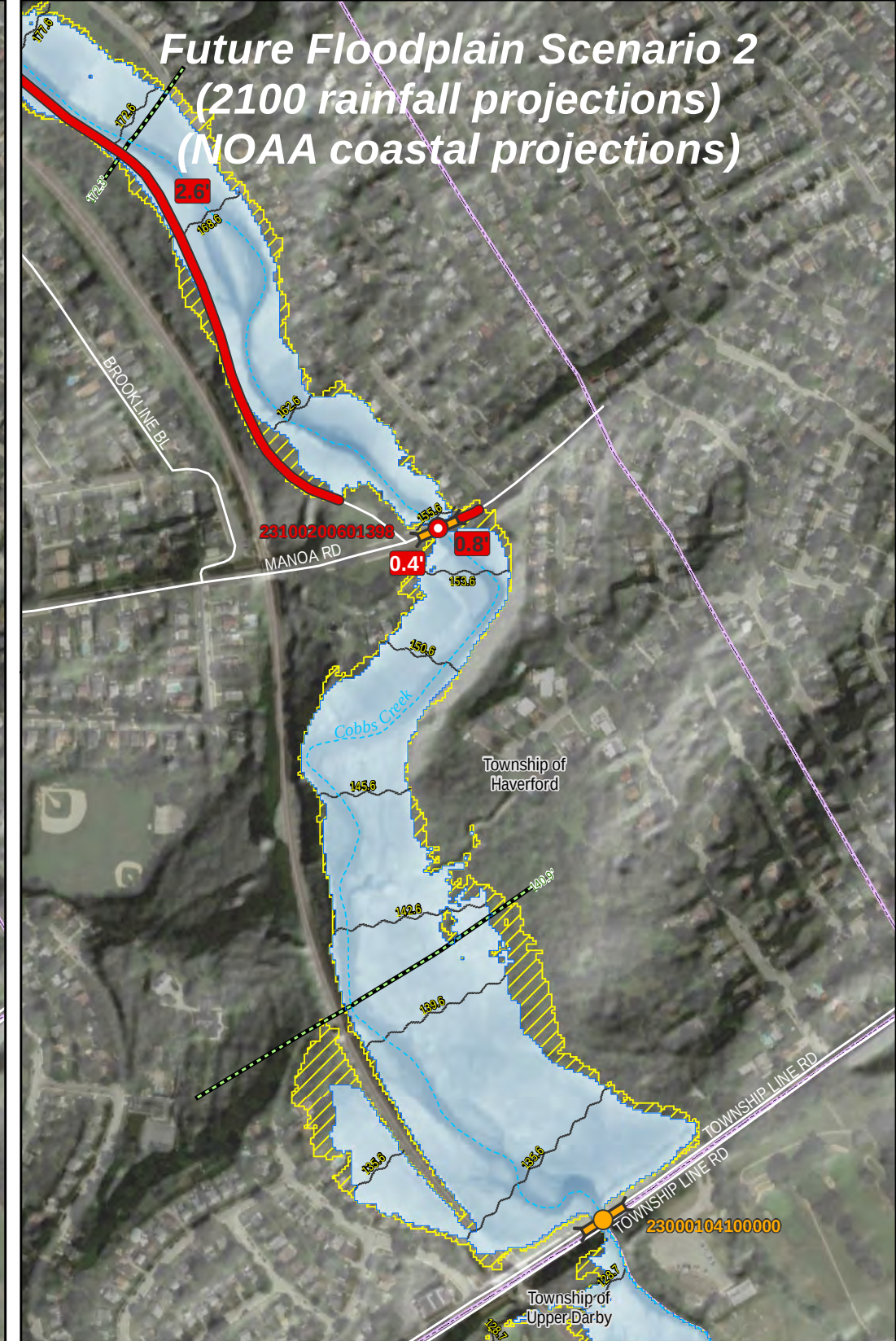
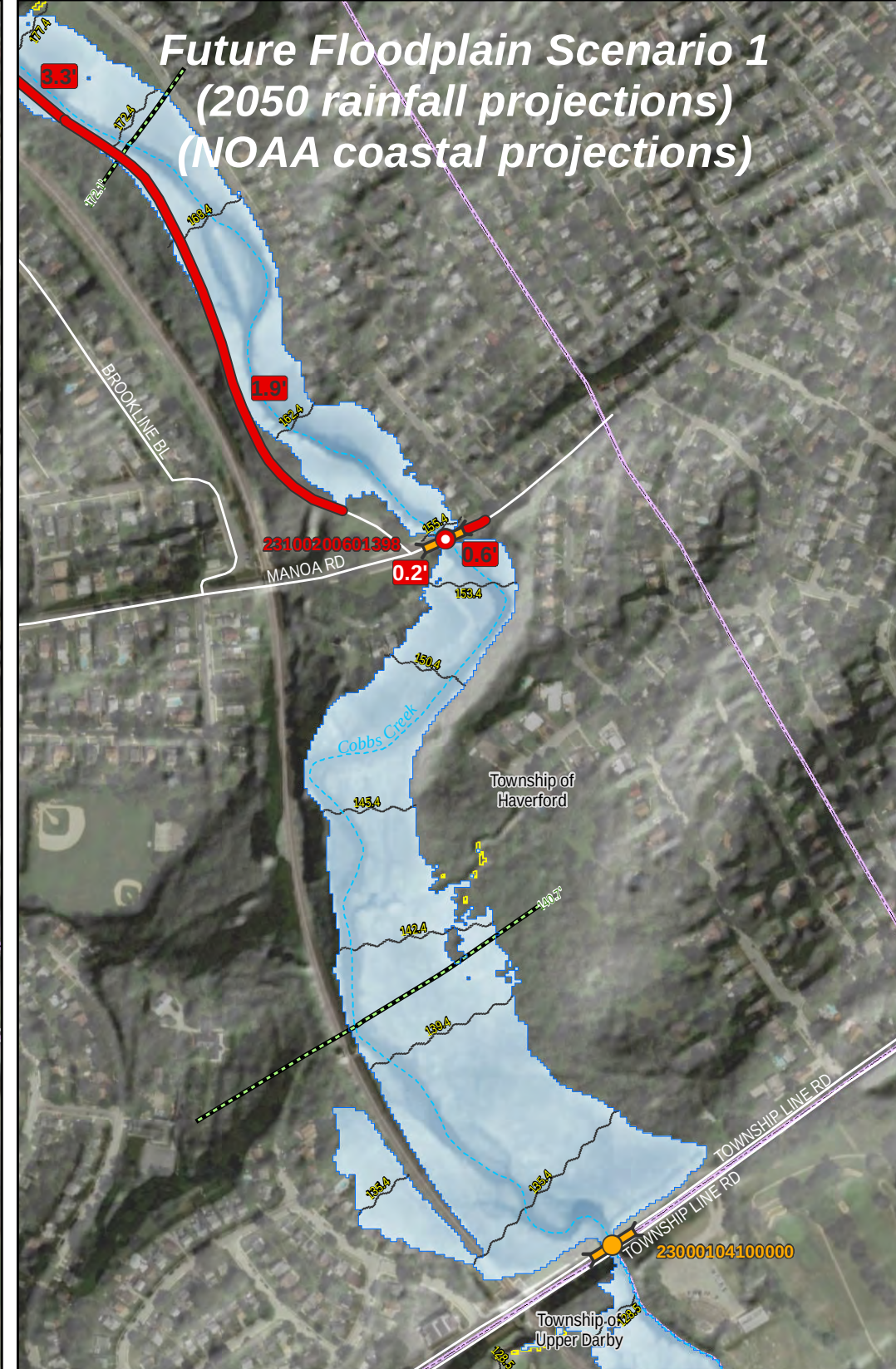
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Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

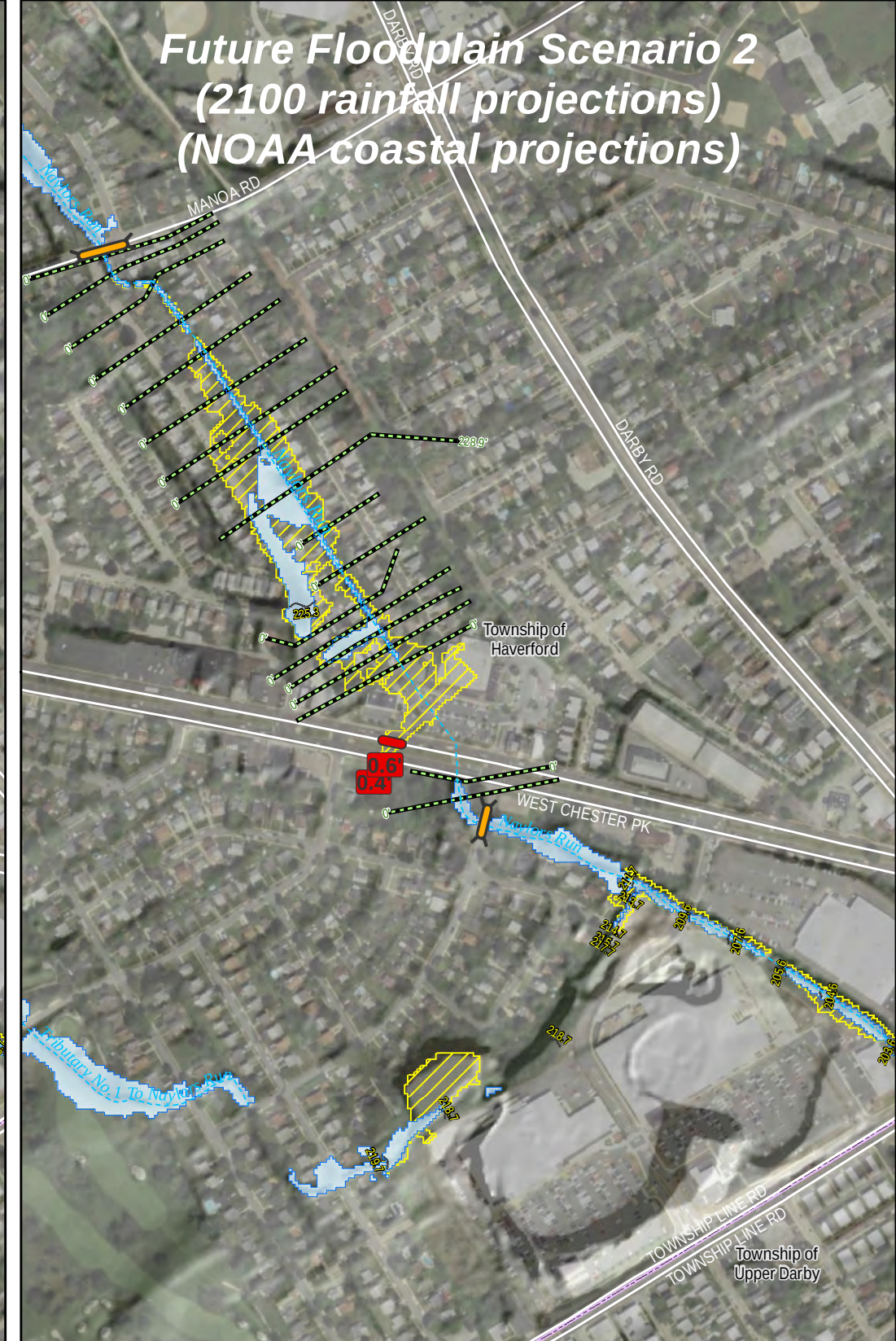
VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP









MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

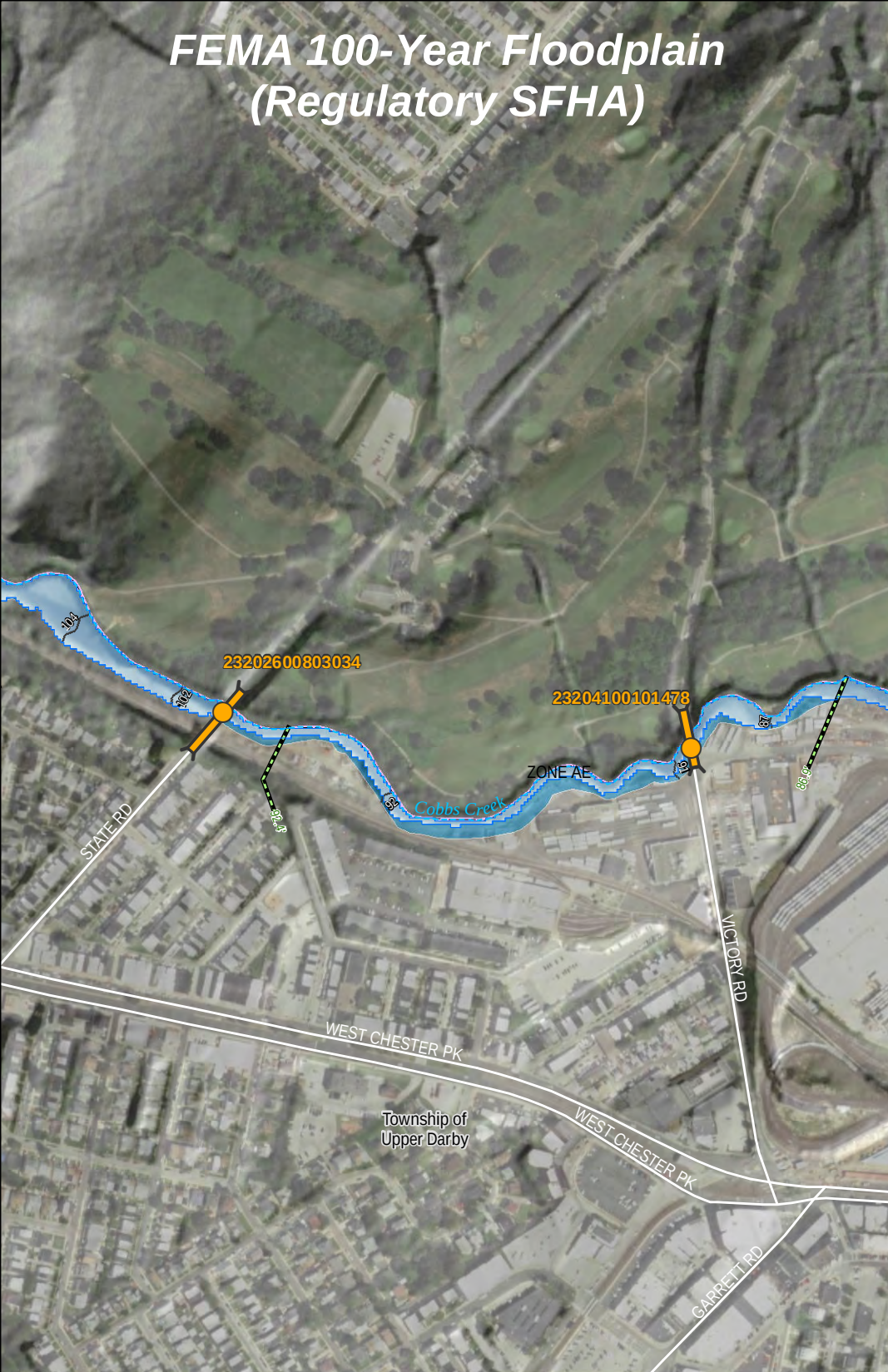
Sheet 17 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

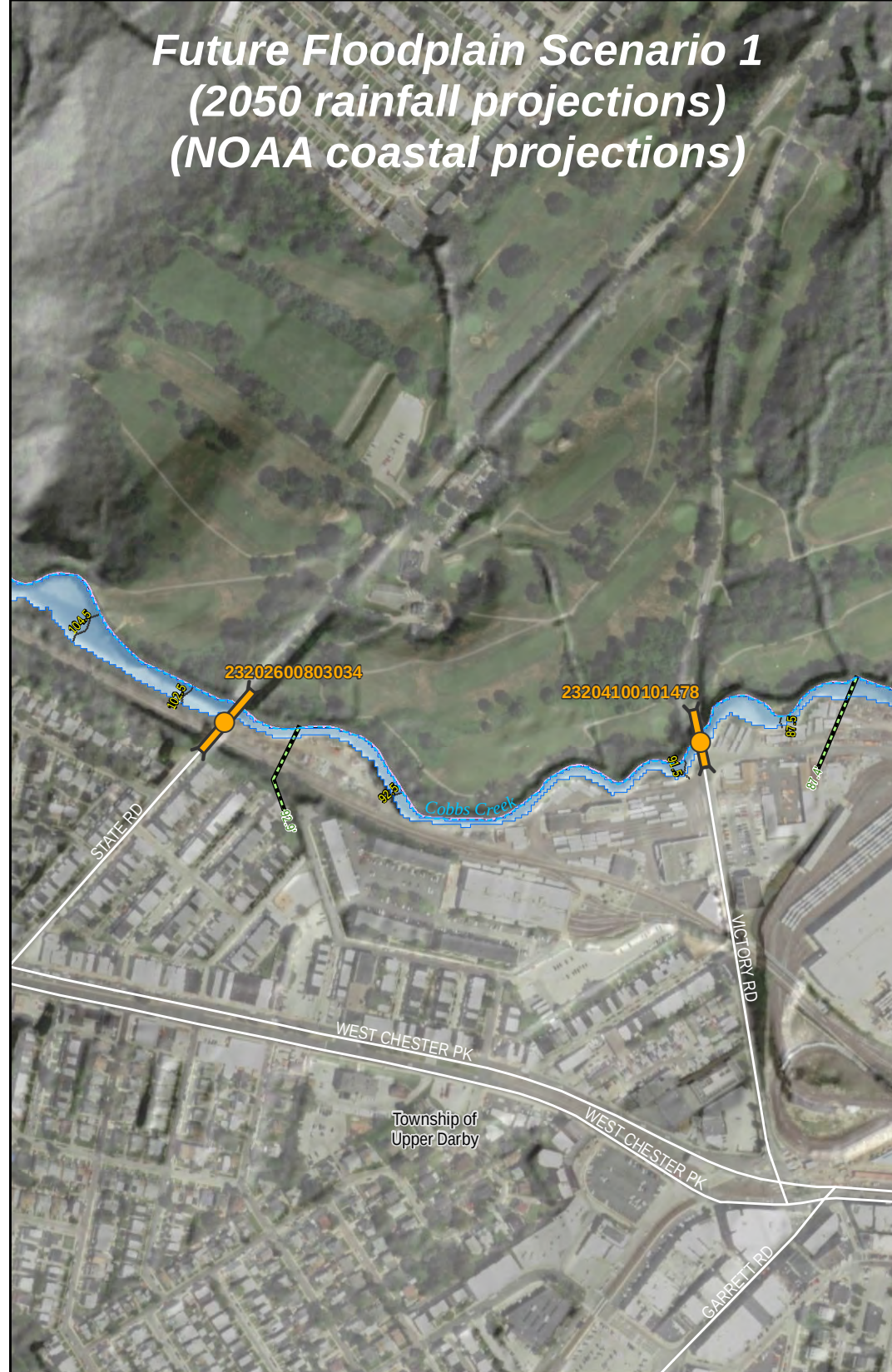
VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP

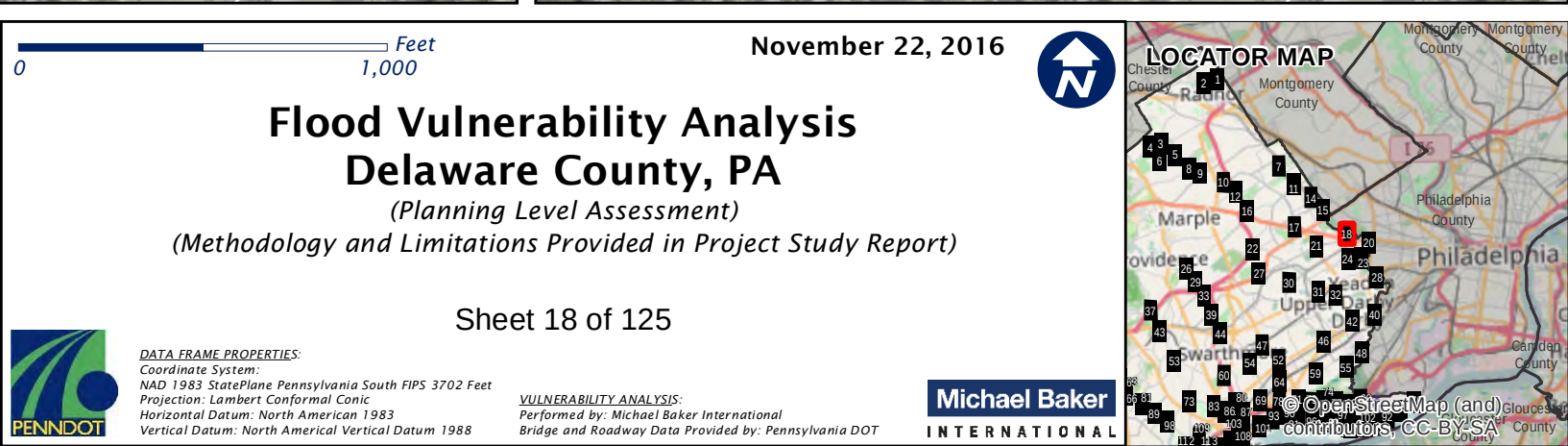
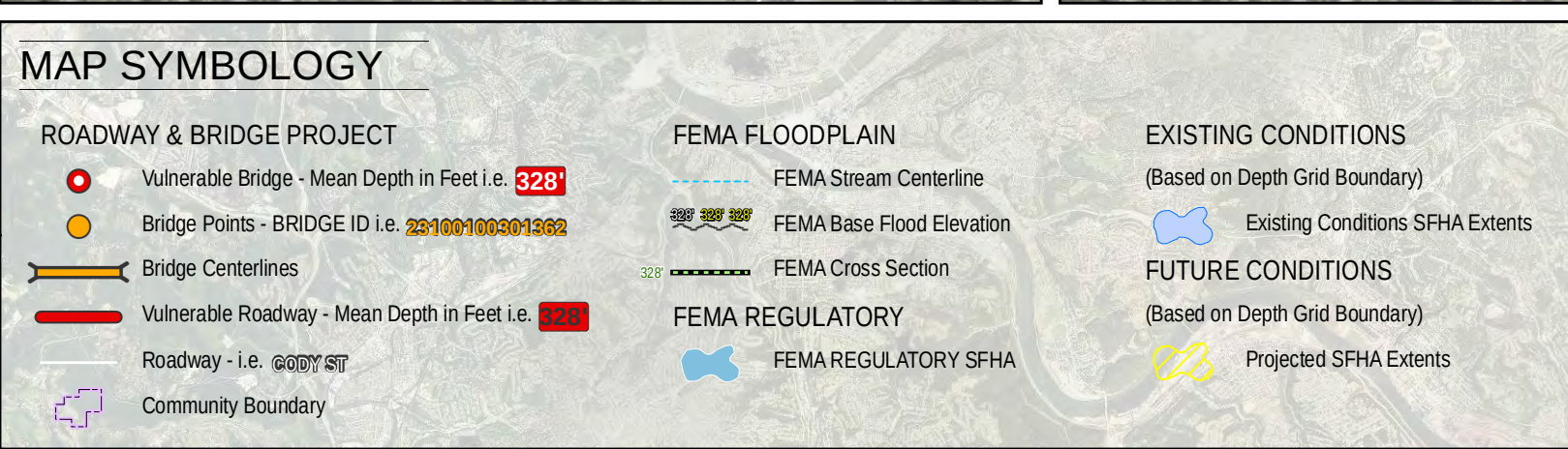
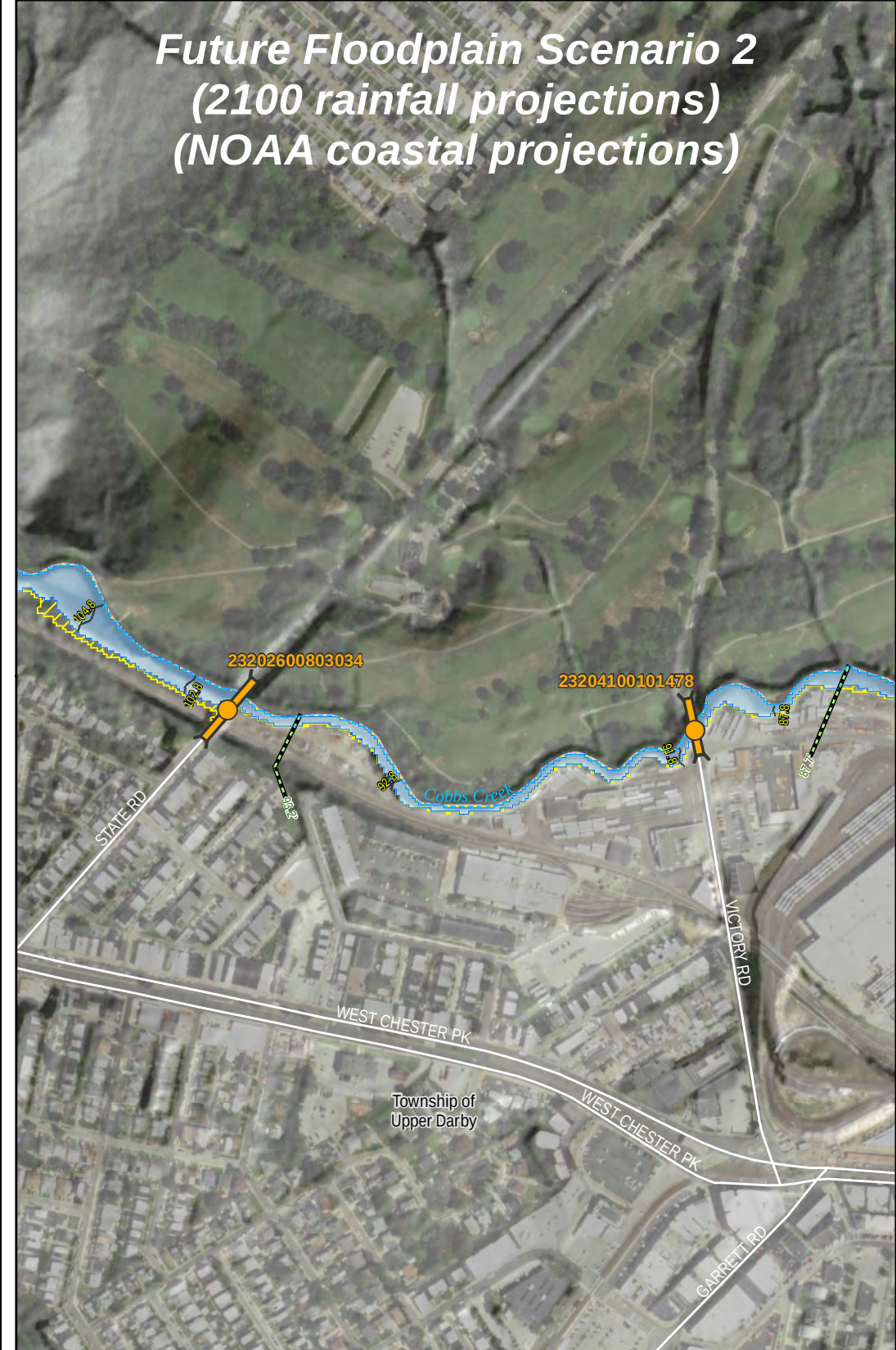
FEMA 100-Year Floodplain (Regulatory SFHA)

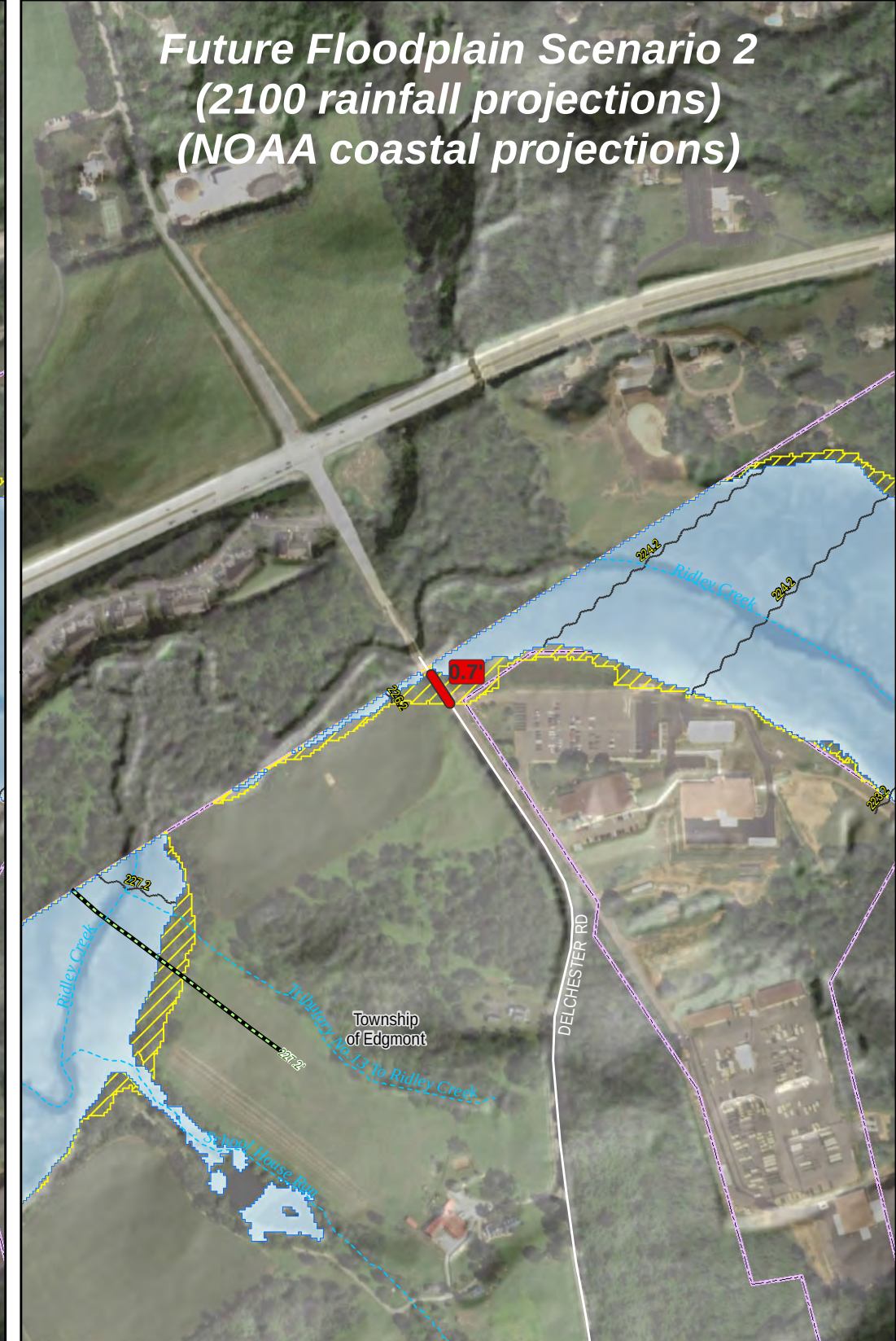


Future Floodplain Scenario 1 (2050 rainfall projections) (NOAA coastal projections)



Future Floodplain Scenario 2 (2100 rainfall projections) (NOAA coastal projections)





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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VULNERABILITY ANALYSIS:
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FEMA 100-Year Floodplain (Regulatory SFHA)



Future Floodplain Scenario 1 (2050 rainfall projections) (NOAA coastal projections)



Future Floodplain Scenario 2 (2100 rainfall projections) (NOAA coastal projections)



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

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FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS

(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS

(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 Feet
1,000

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

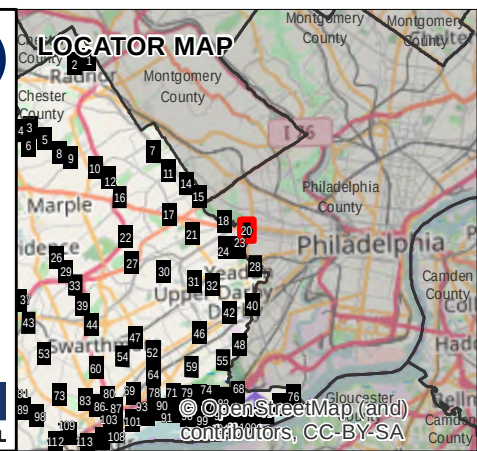
Sheet 20 of 125

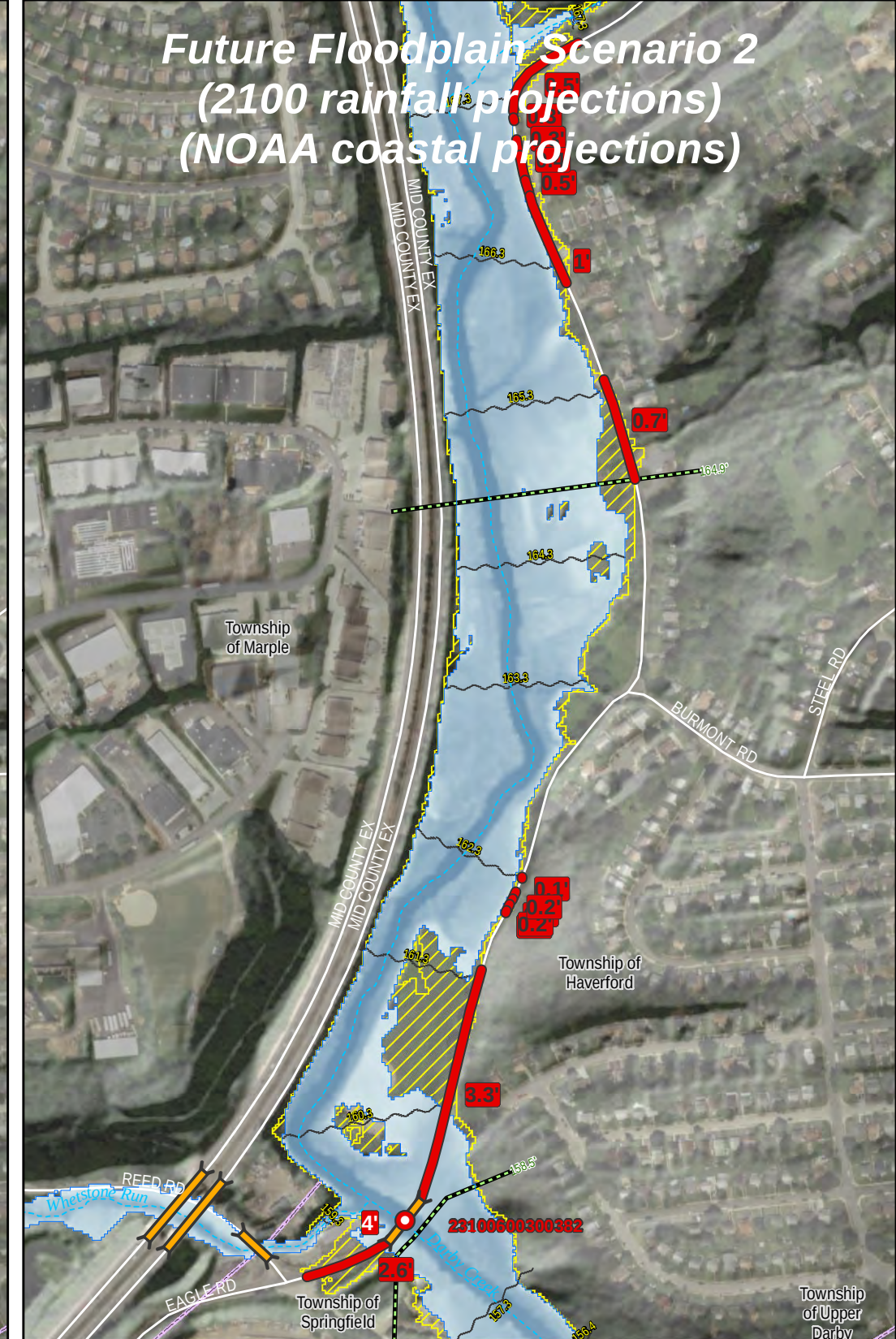
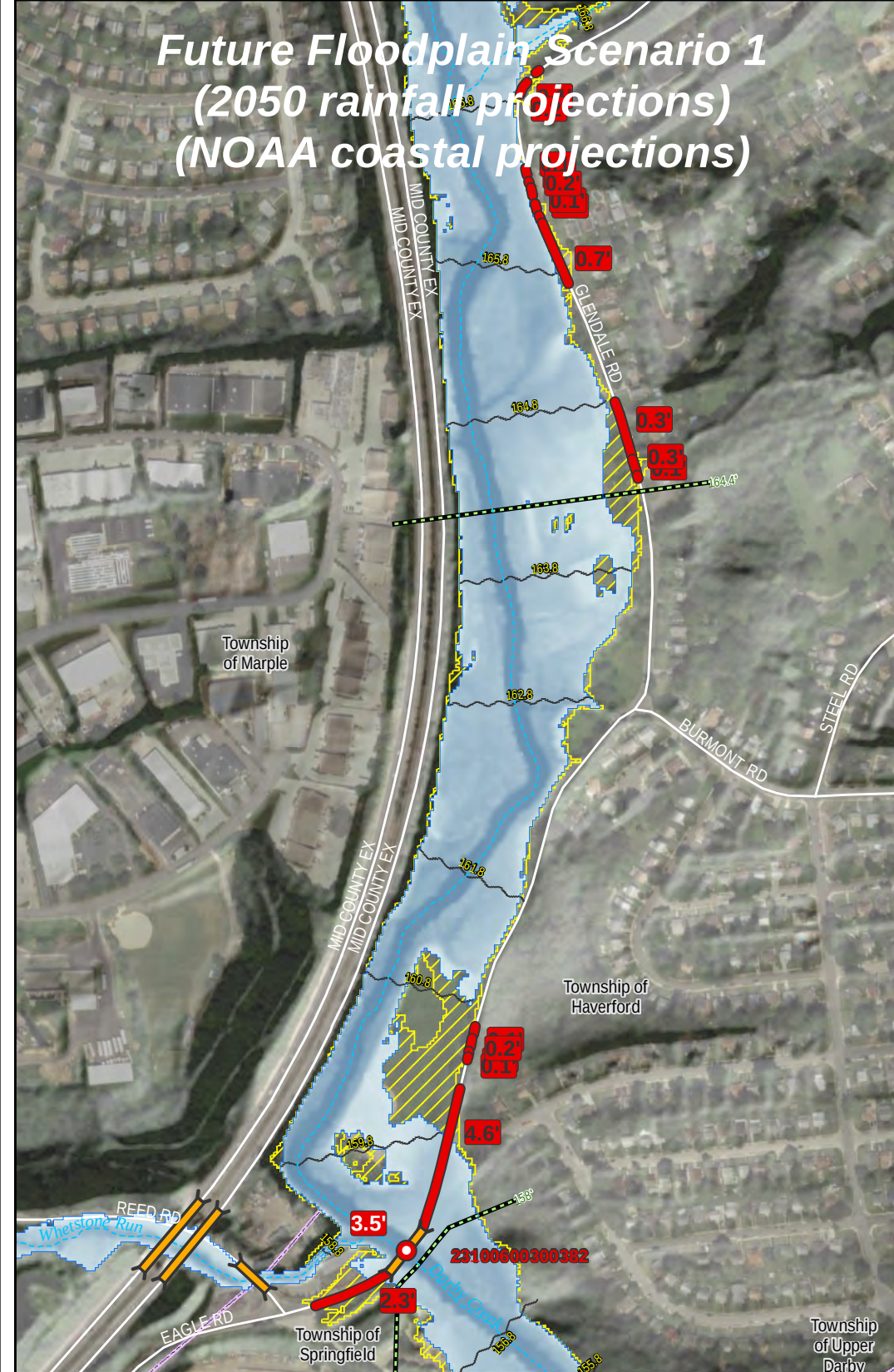


DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

**Michael Baker
INTERNATIONAL**





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **3.28'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **3.28'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS

(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS

(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 Feet
1,000

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

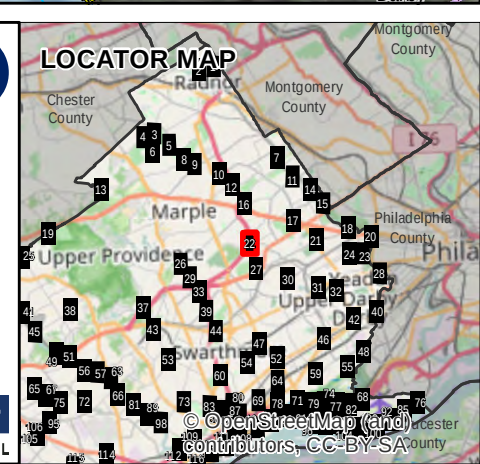
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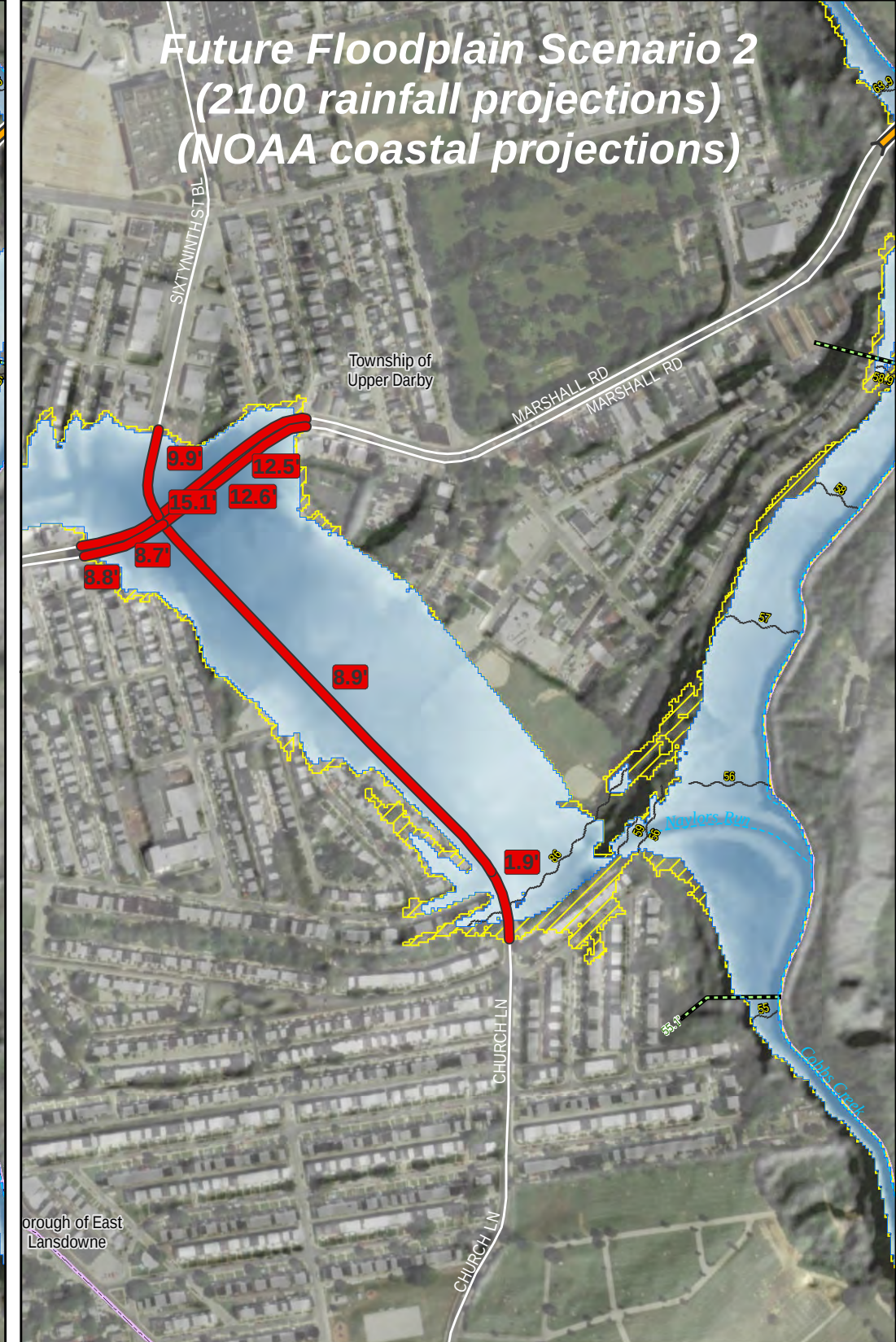
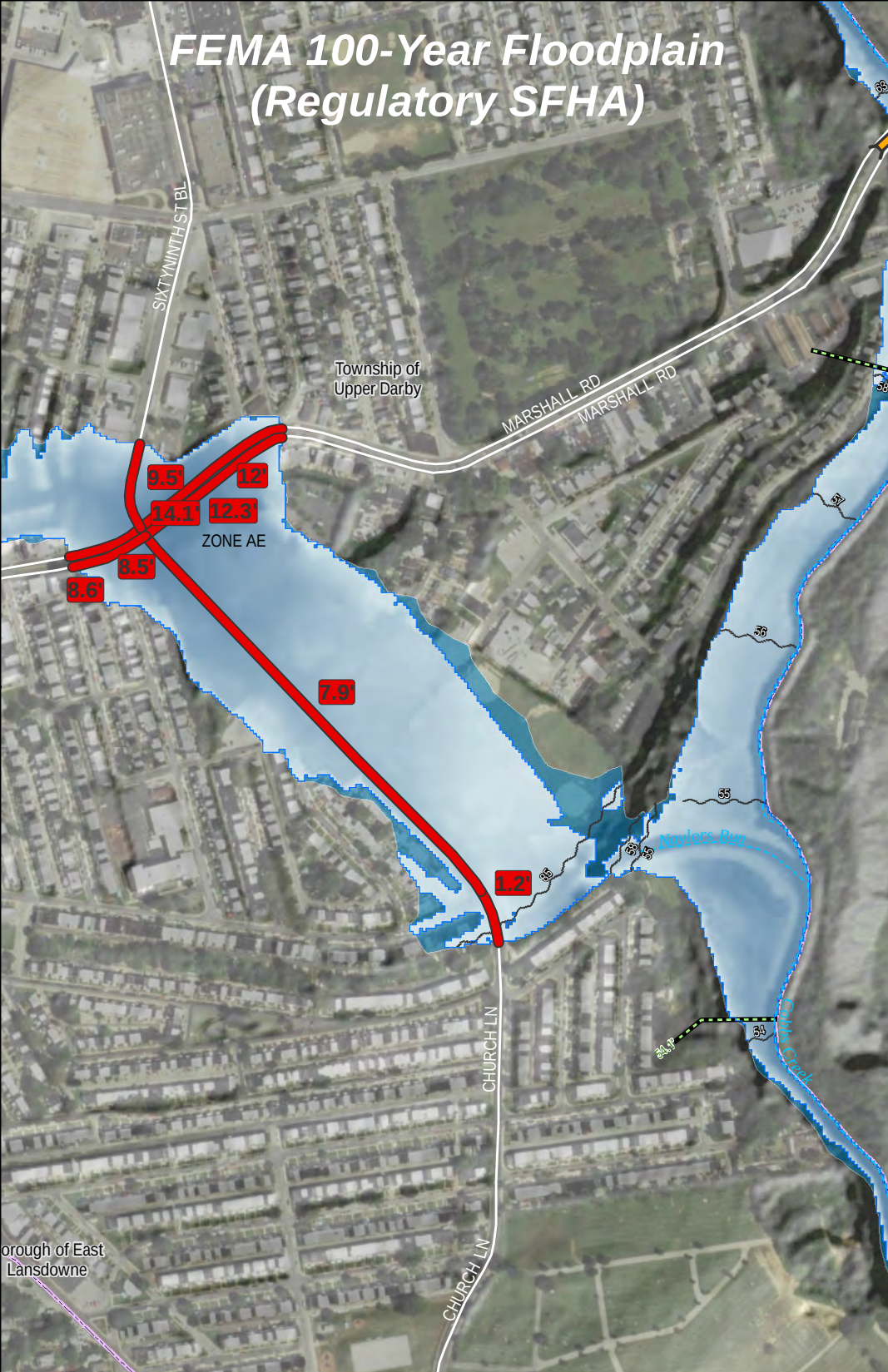


DATA FRAME PROPERTIES:
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NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

**Michael Baker
INTERNATIONAL**





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **3.28'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **3.28'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS
(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS
(Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis

Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

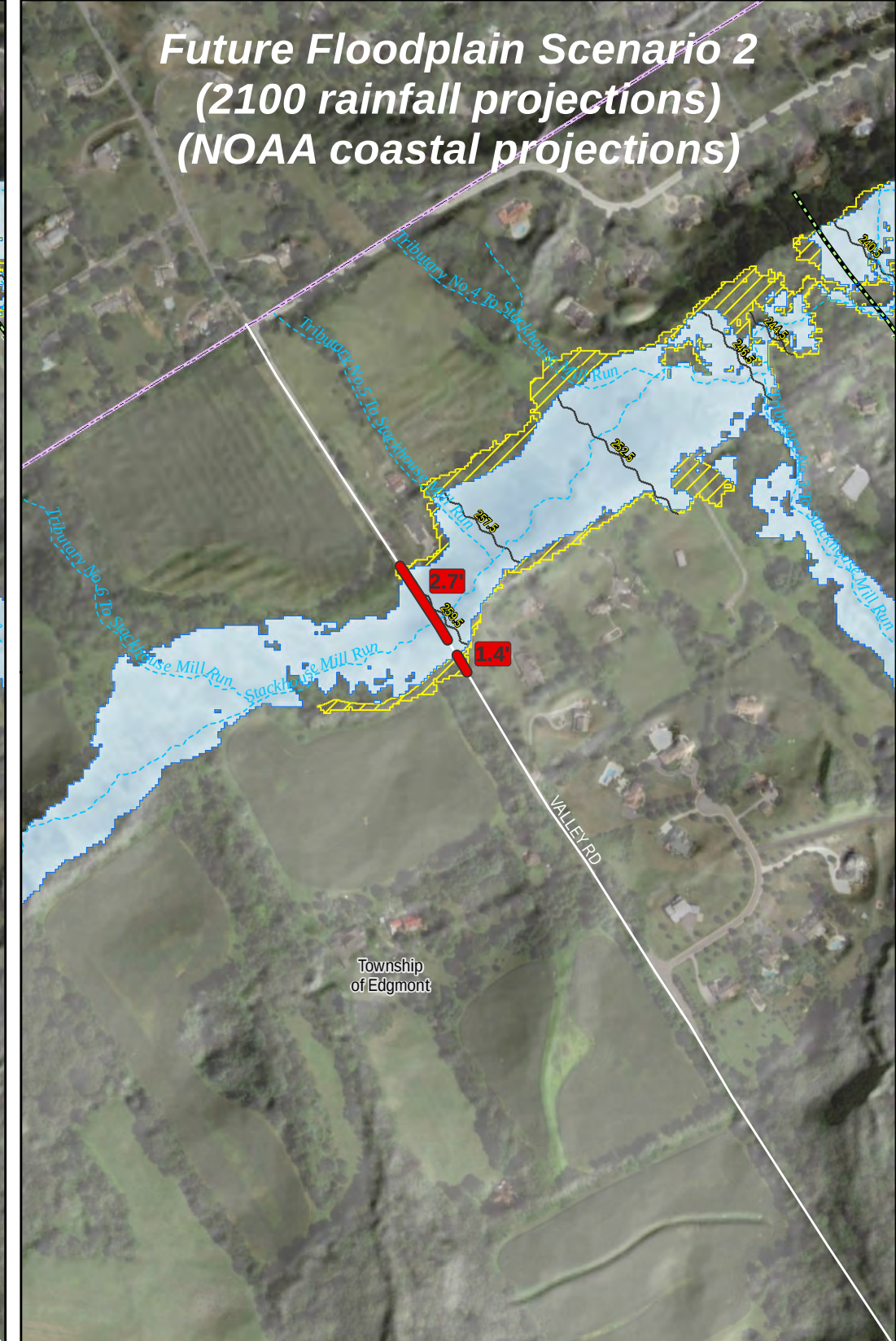
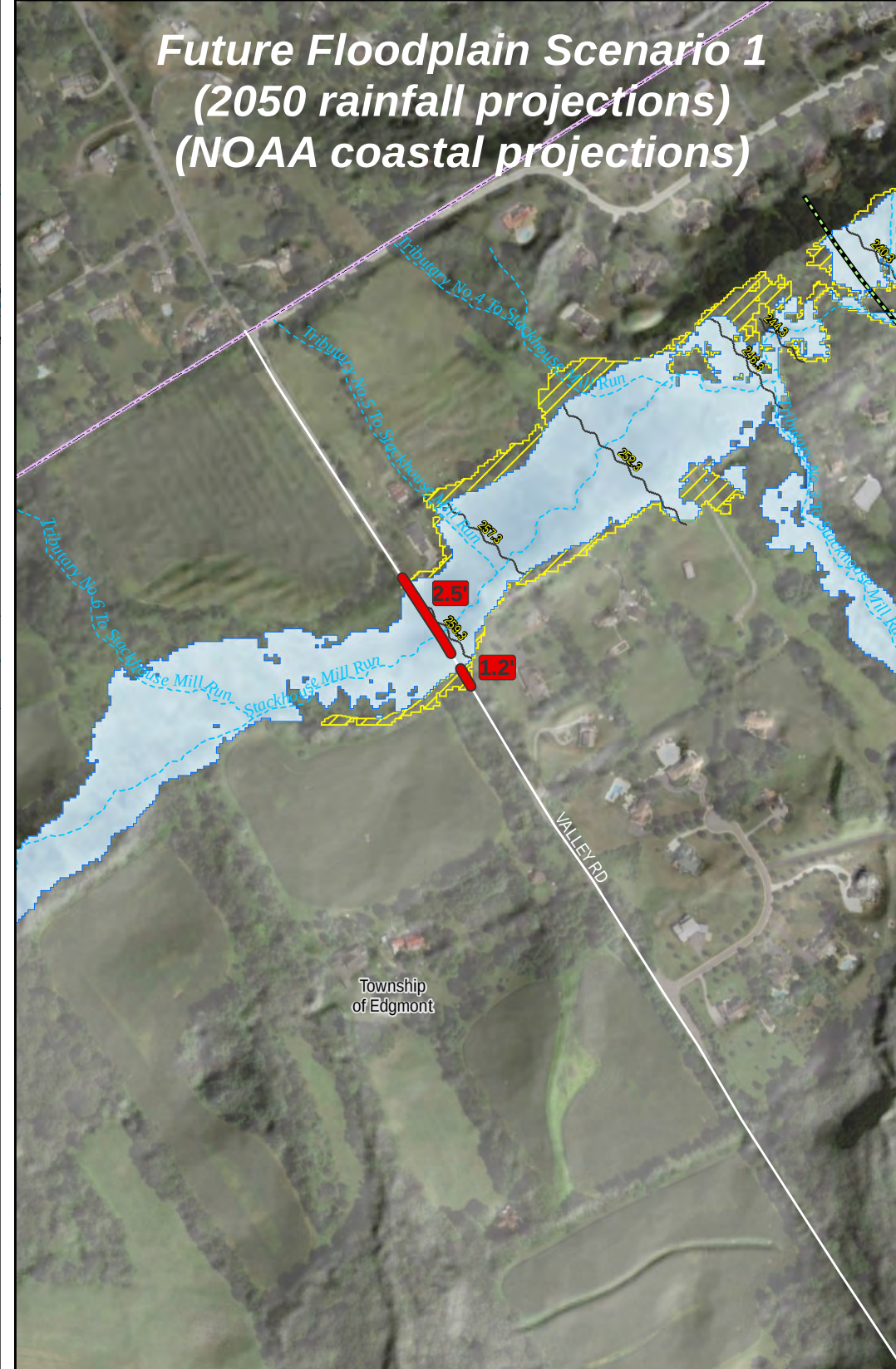
Sheet 23 of 125

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

Michael Baker
INTERNATIONAL

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS
(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS
(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

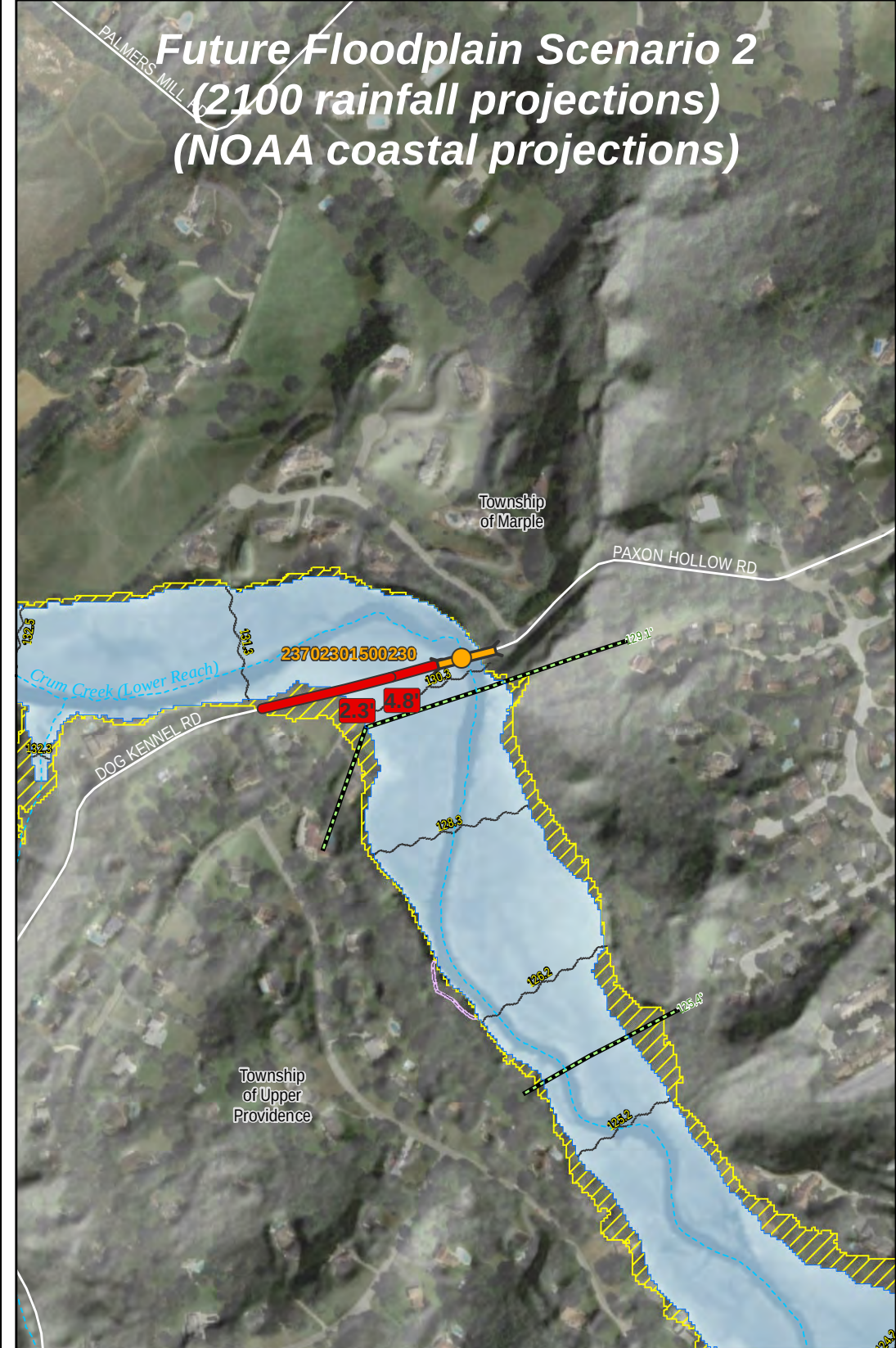
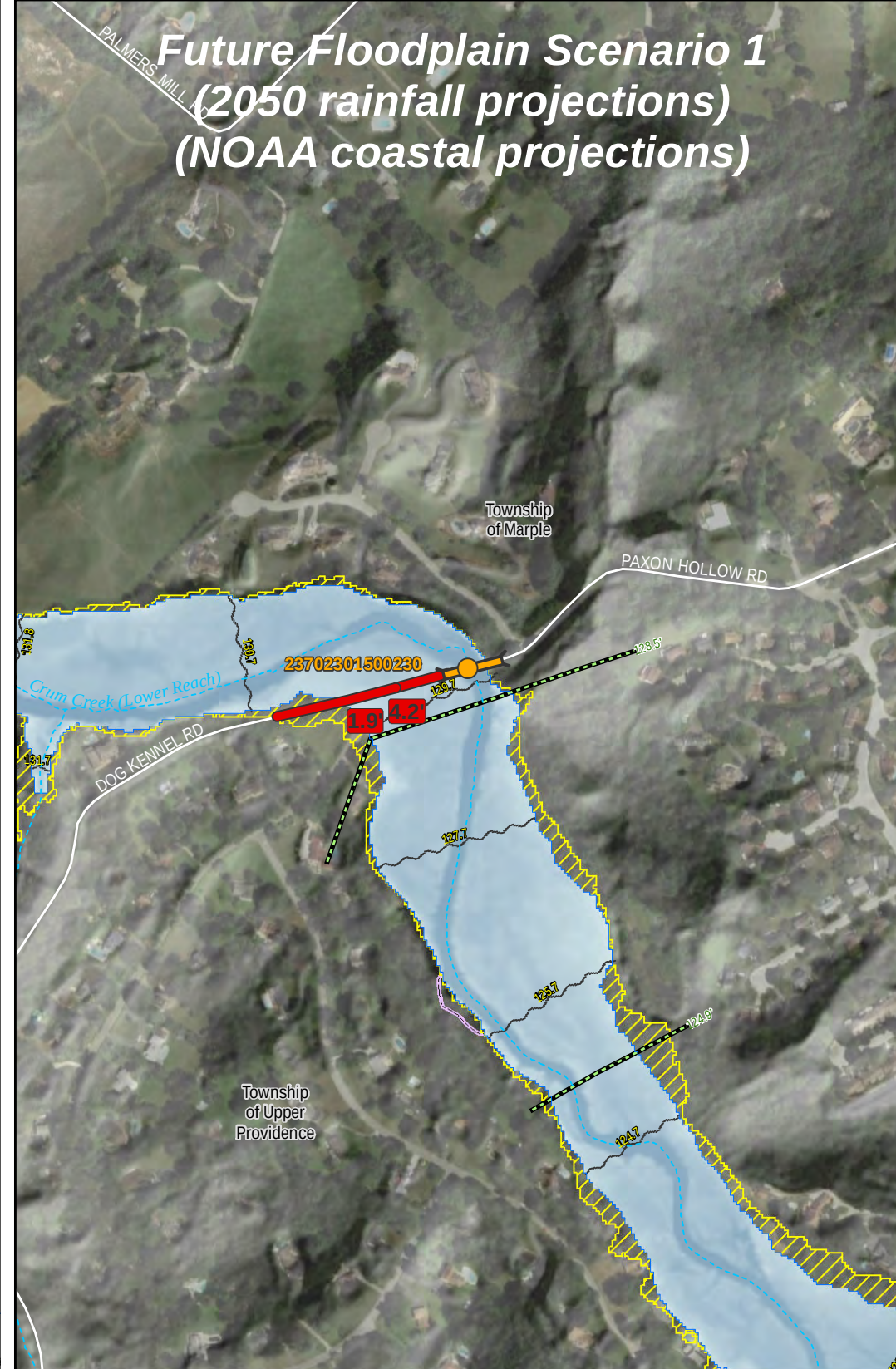
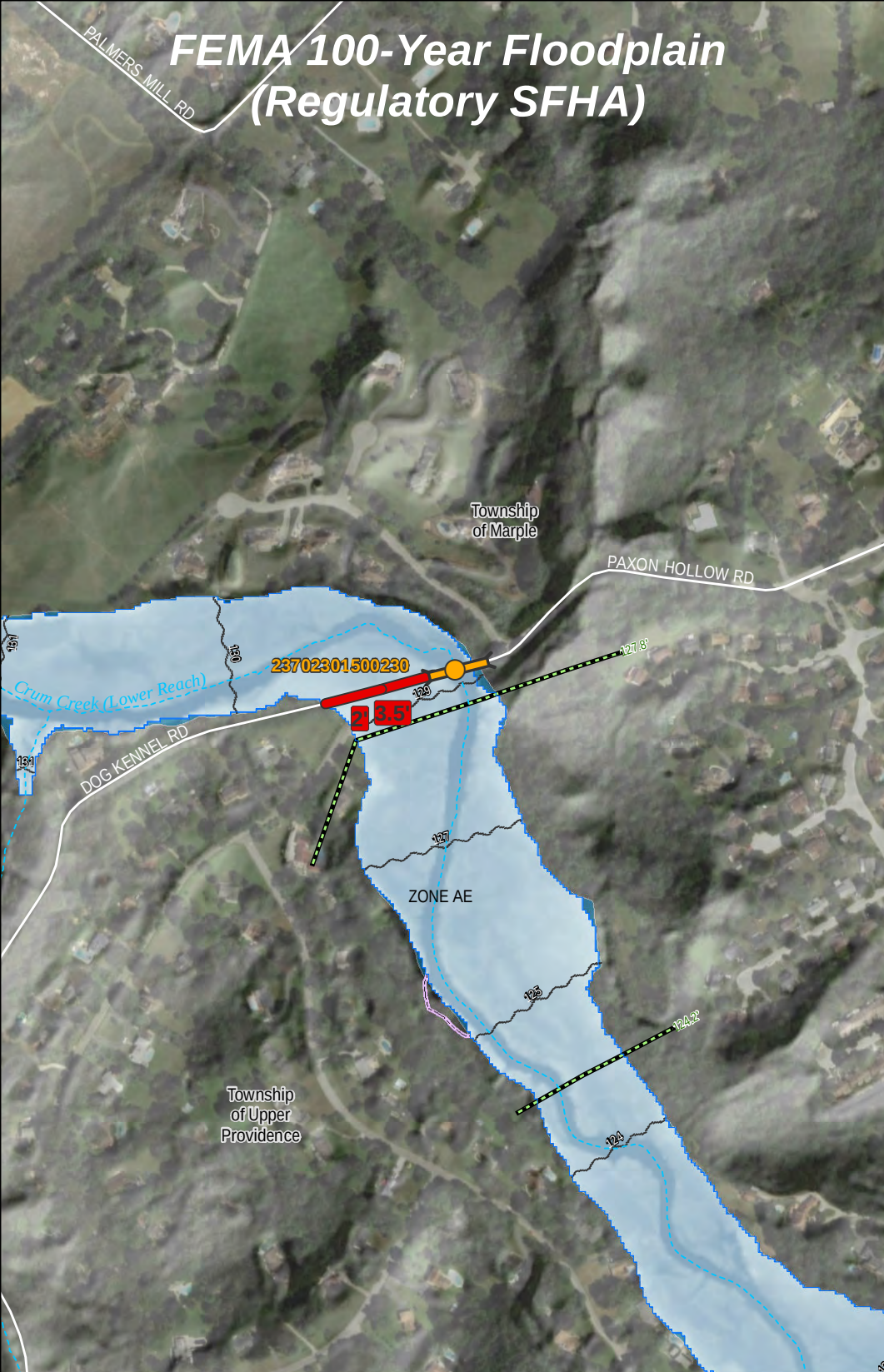
**Flood Vulnerability Analysis
Delaware County, PA**
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 25 of 125

**Michael Baker
INTERNATIONAL**

November 22, 2016

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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Michael Baker INTERNATIONAL

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

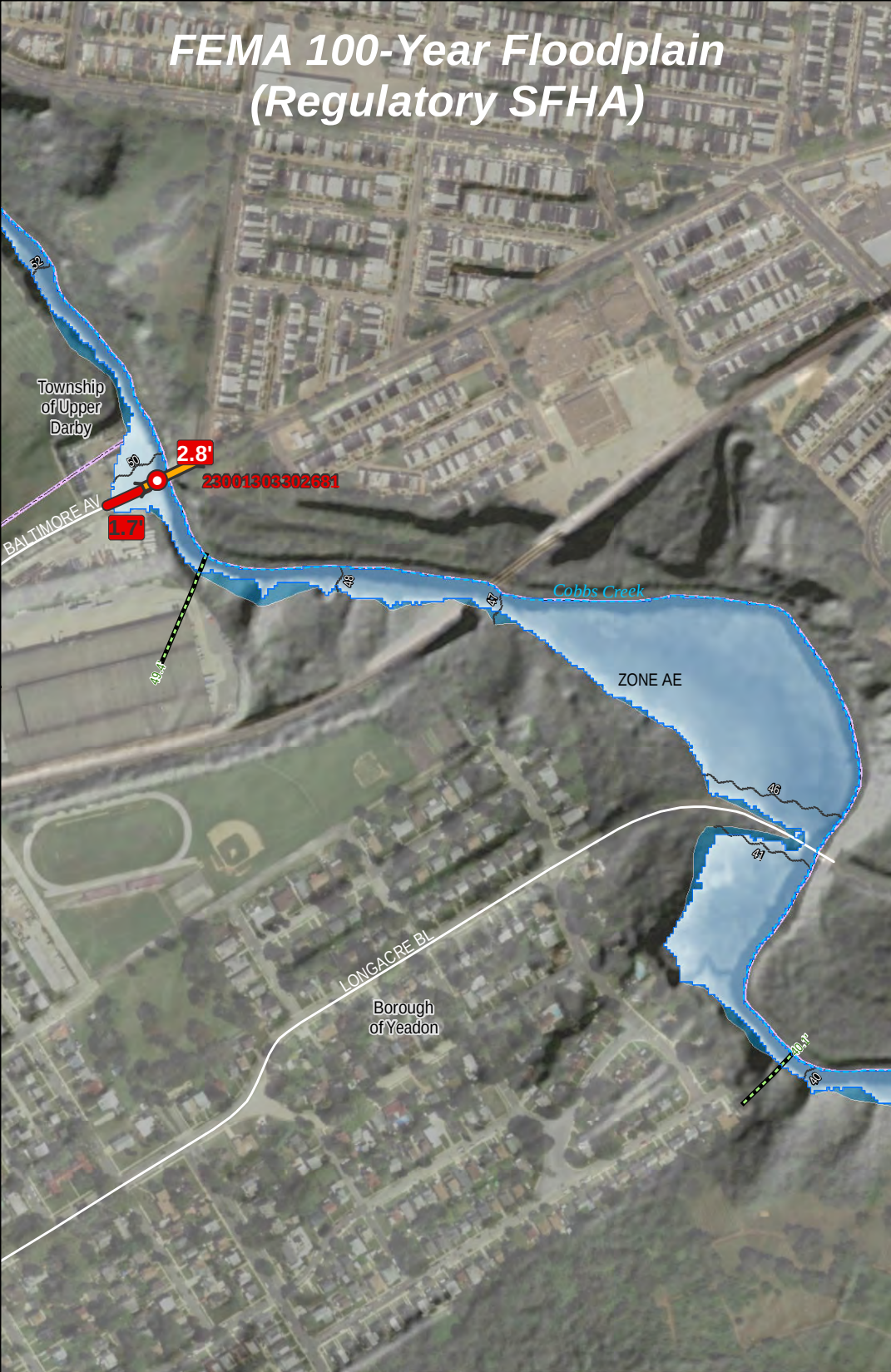
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(Methodology and Limitations Provided in Project Study Report)

Sheet 27 of 125

DATA FRAME PROPERTIES:
Coordinate System:
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Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
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Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 28 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS
(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS
(Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

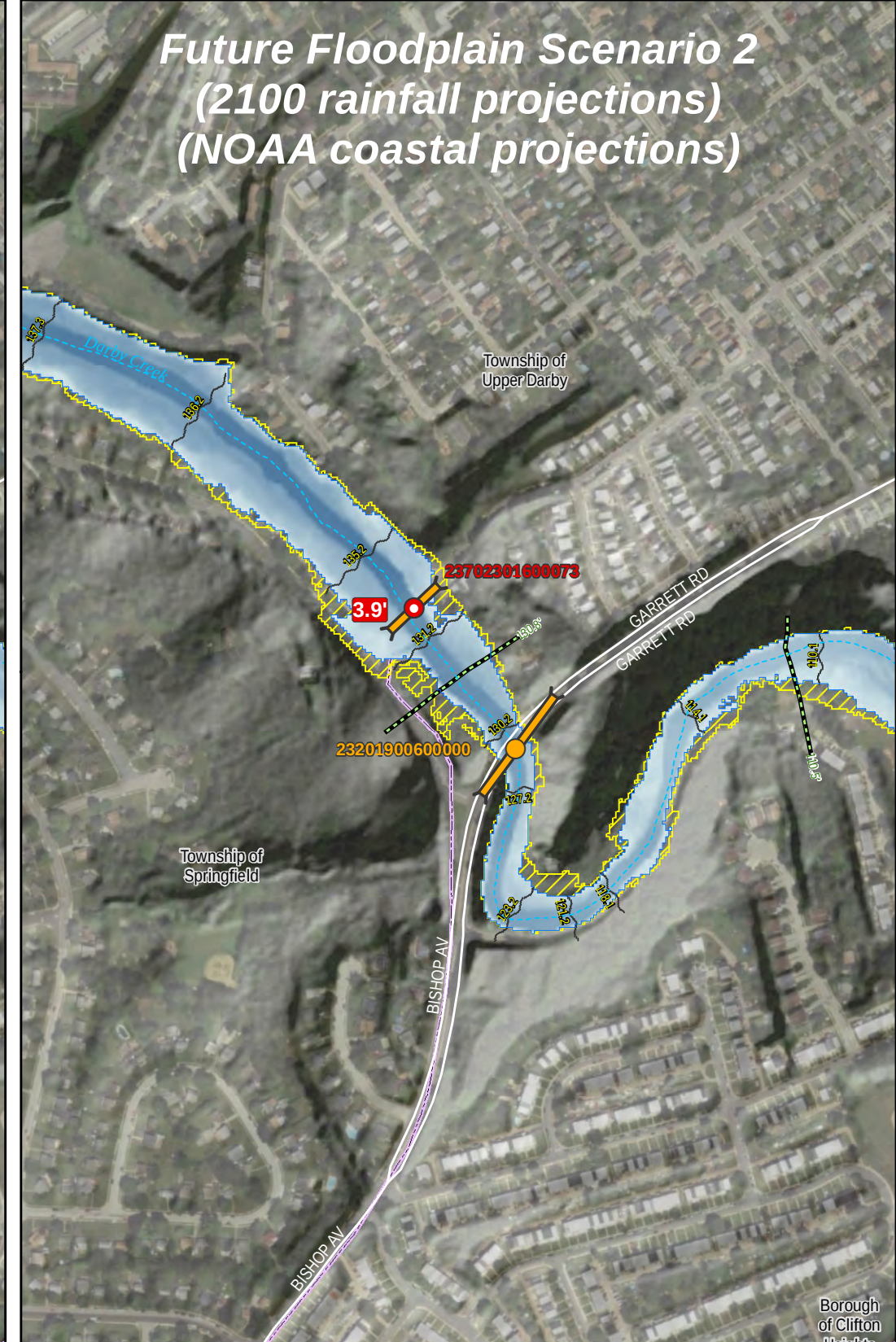
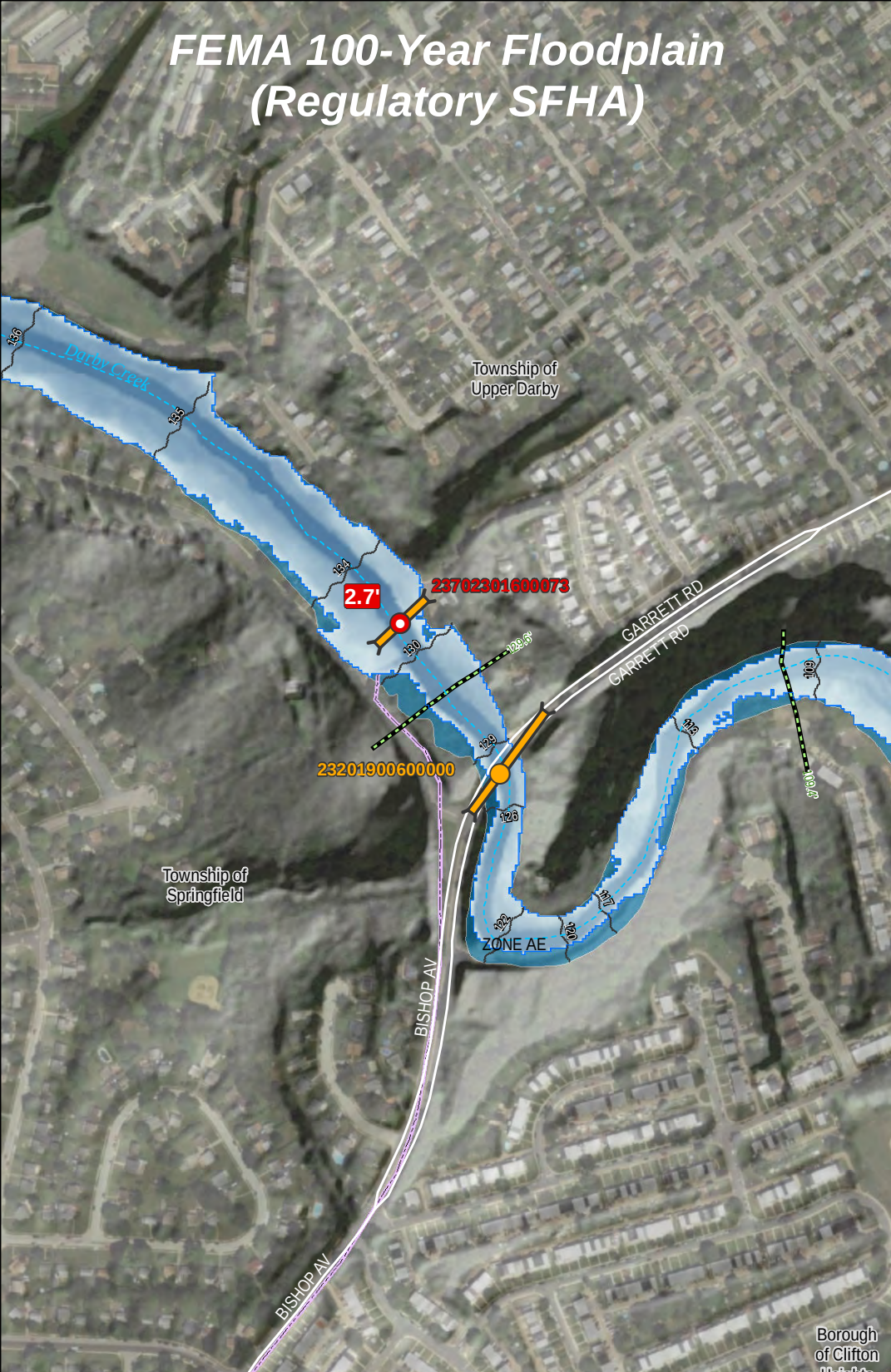
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(Methodology and Limitations Provided in Project Study Report)

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DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

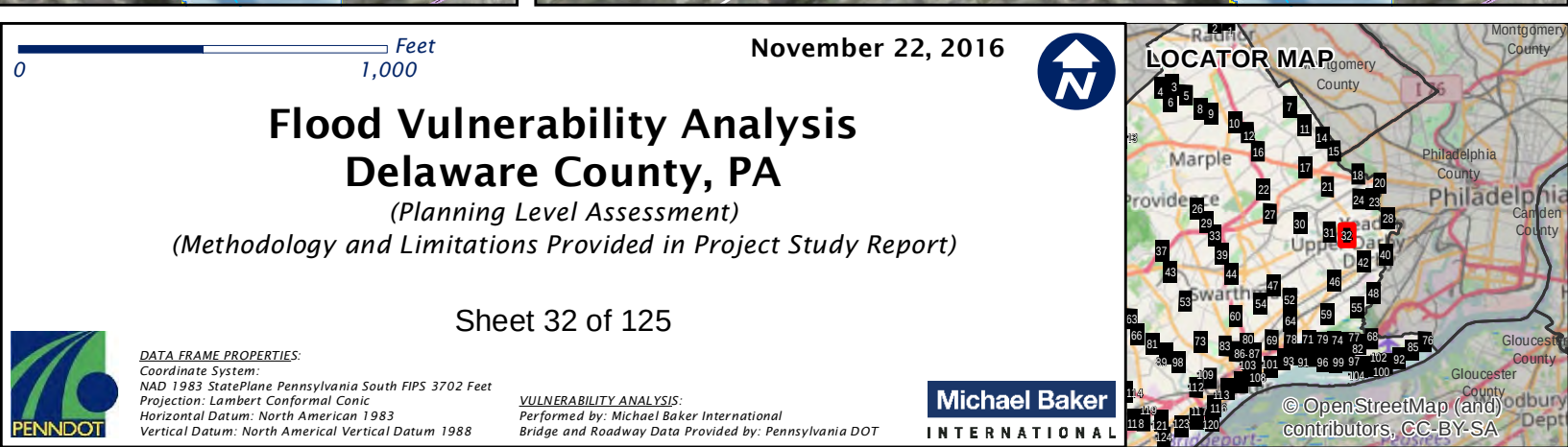
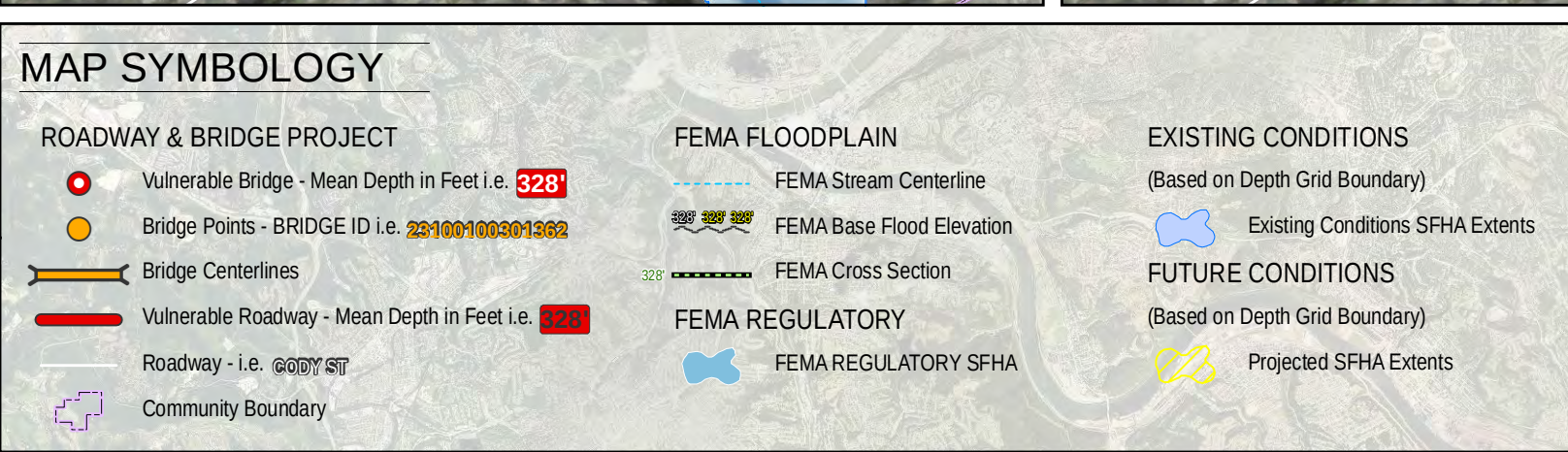
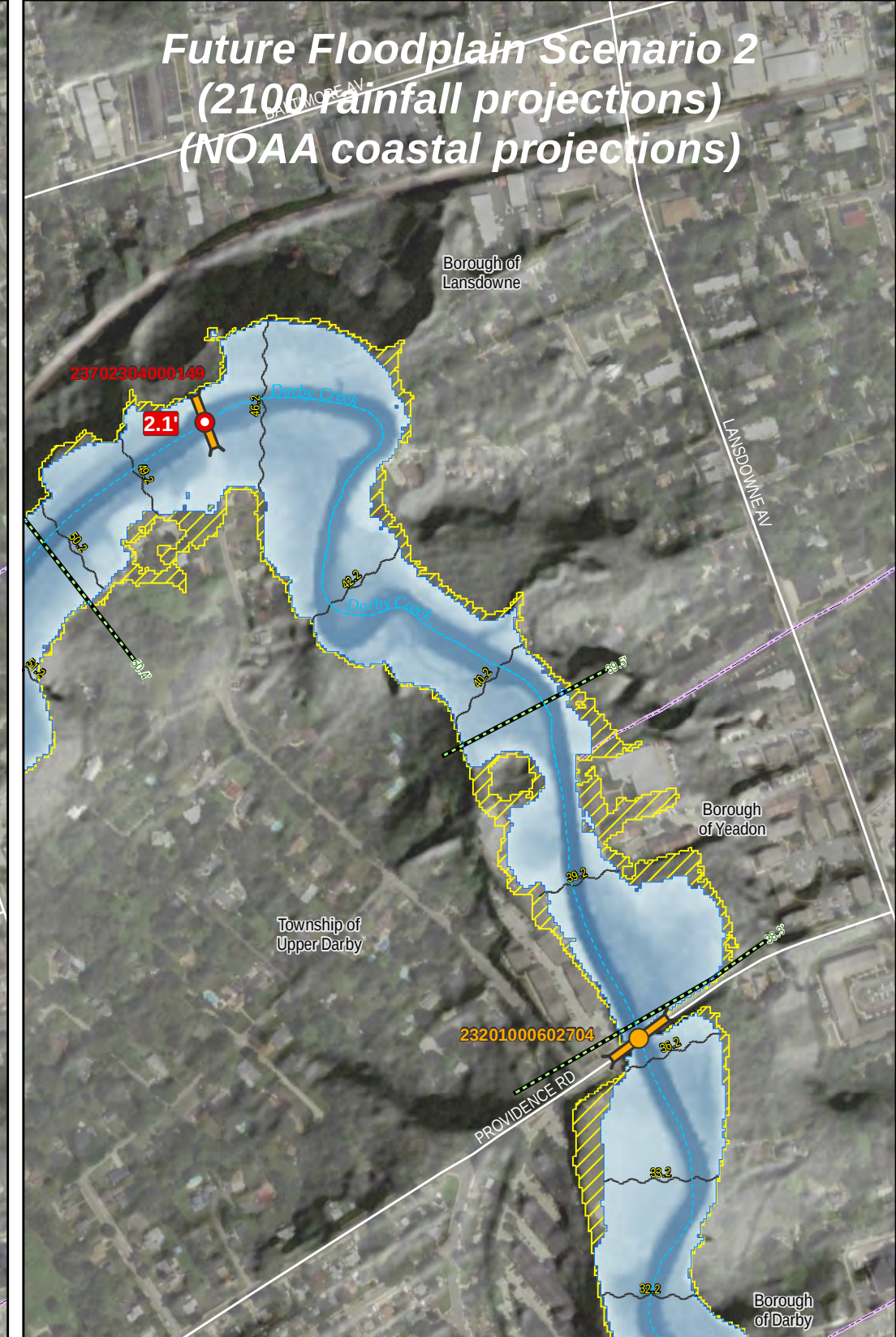
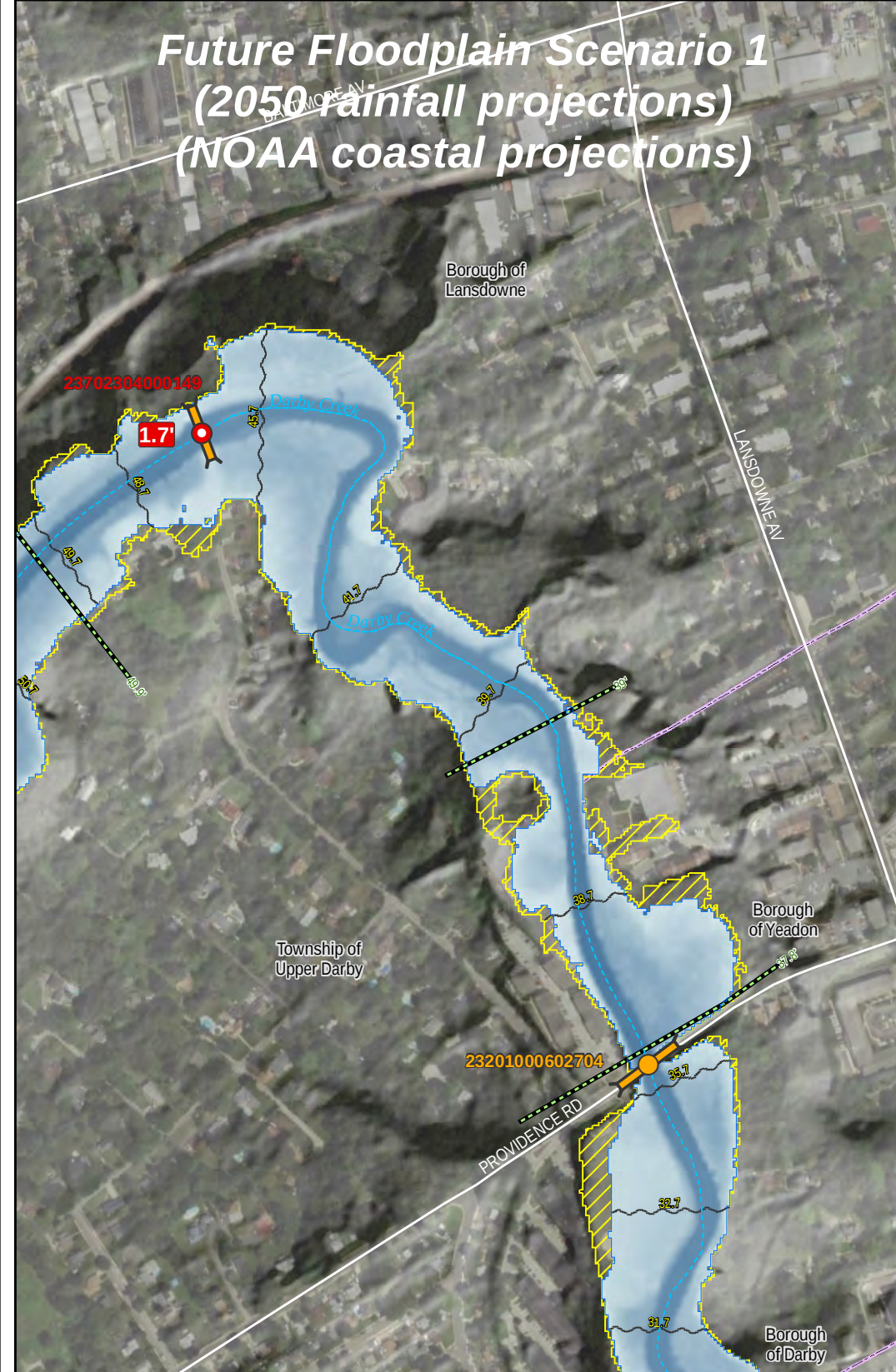
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(Methodology and Limitations Provided in Project Study Report)

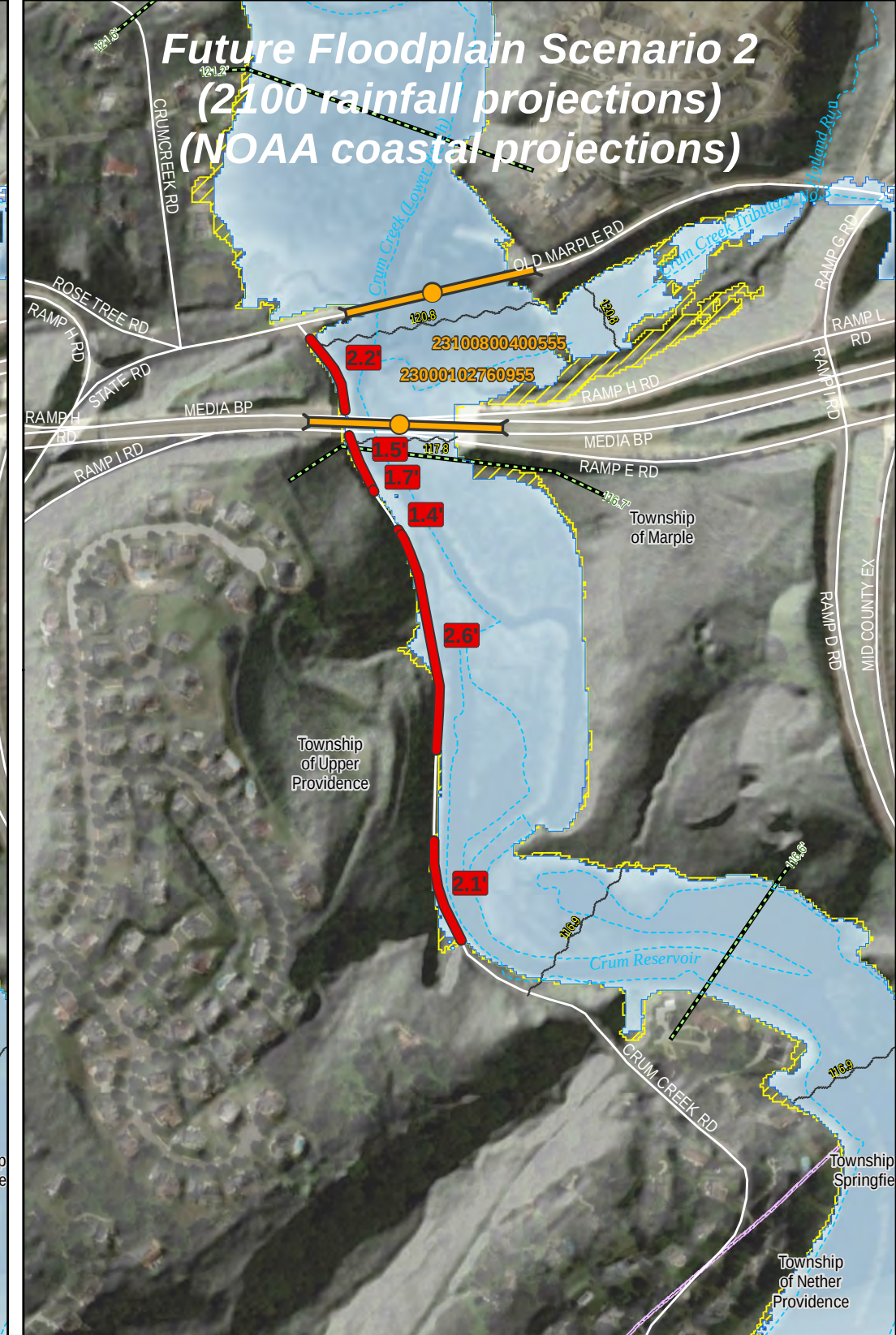
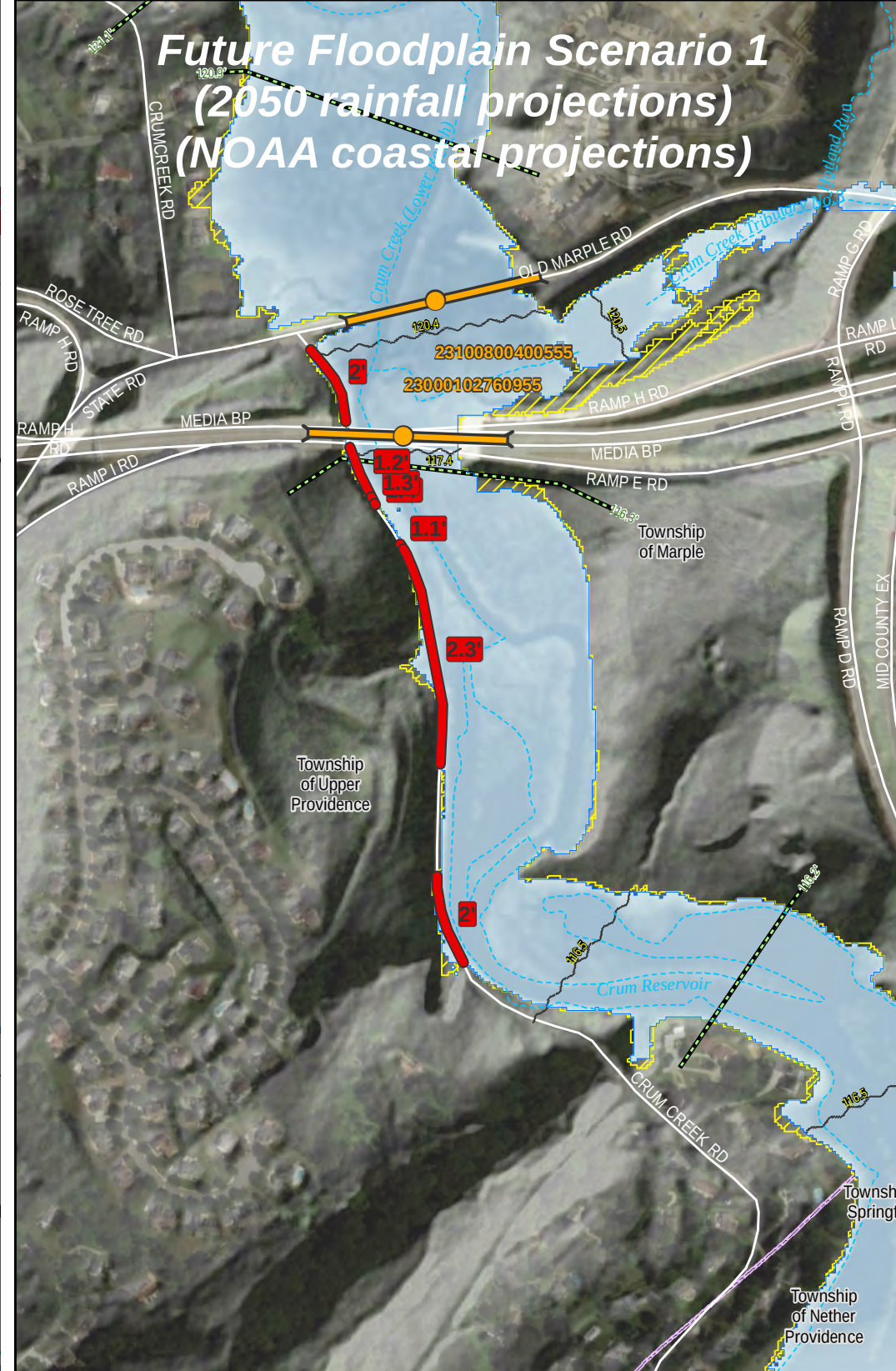
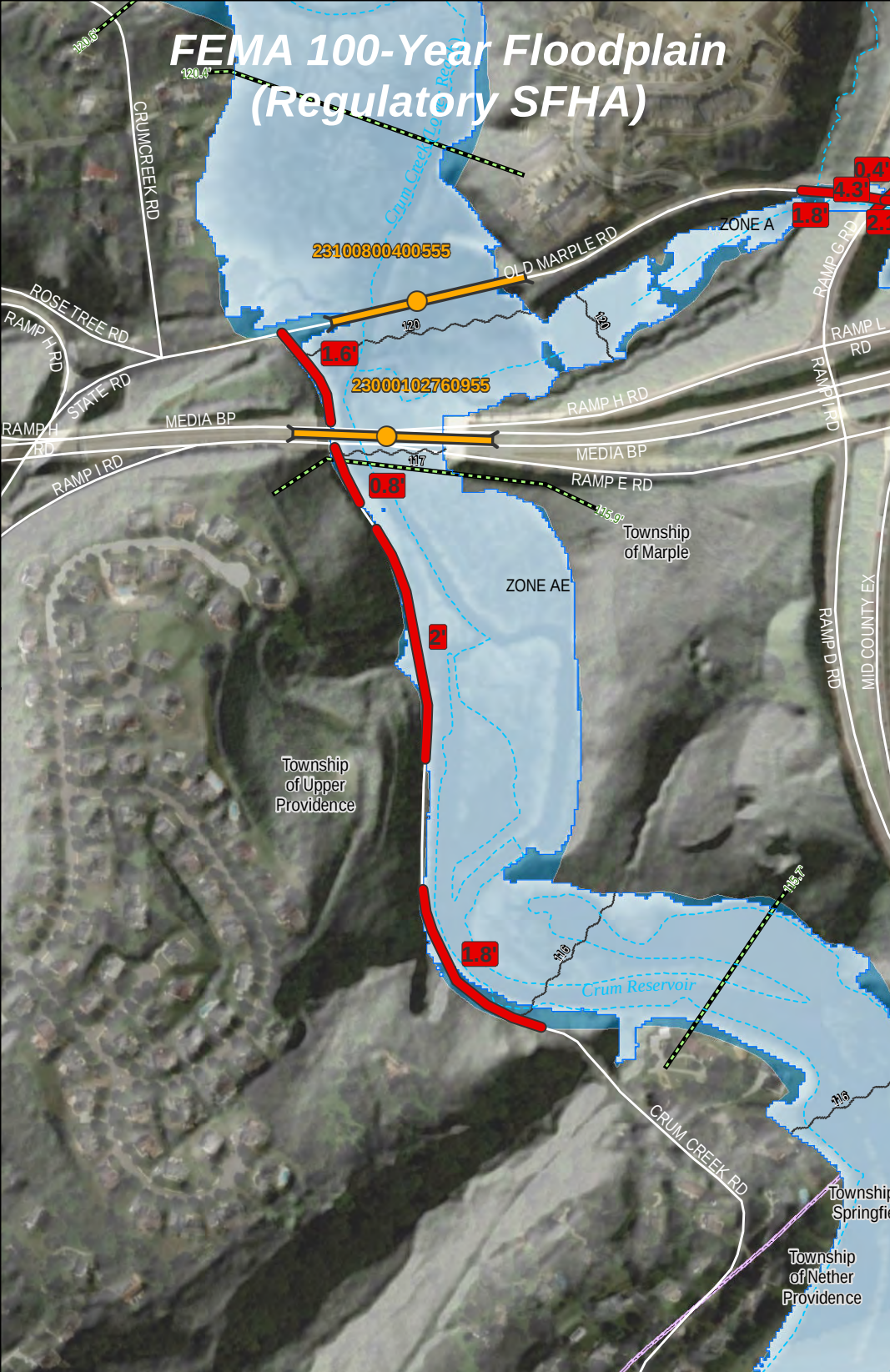
Sheet 30 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS

(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS

(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 Feet
1,000

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

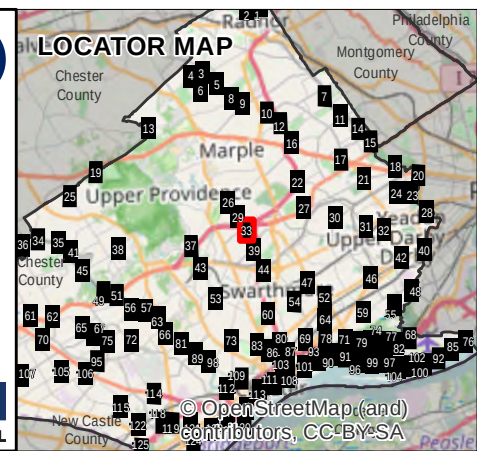
Sheet 33 of 125

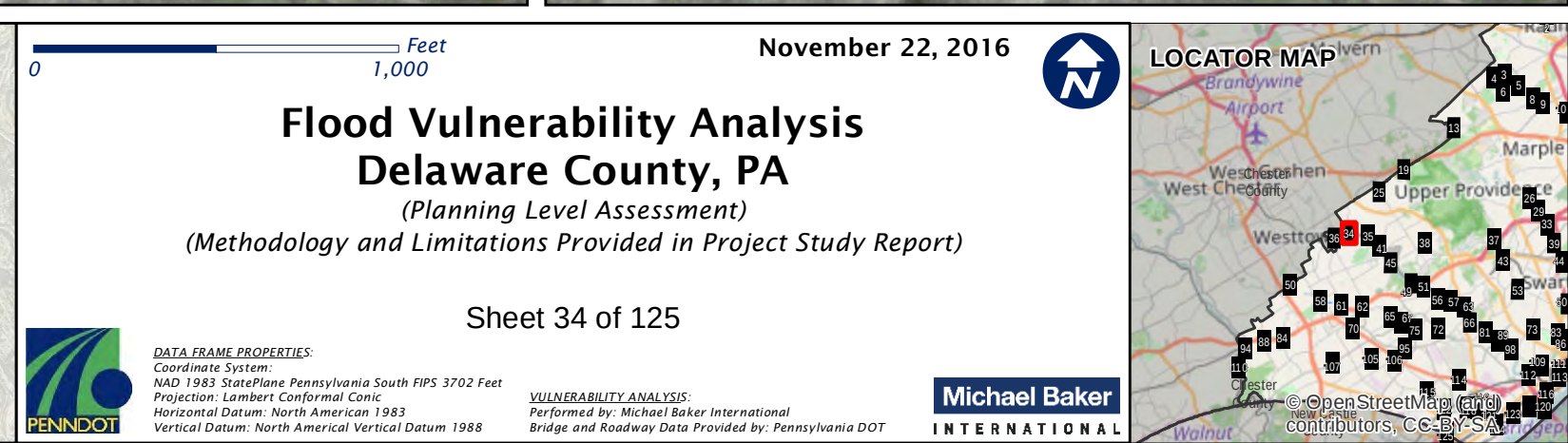
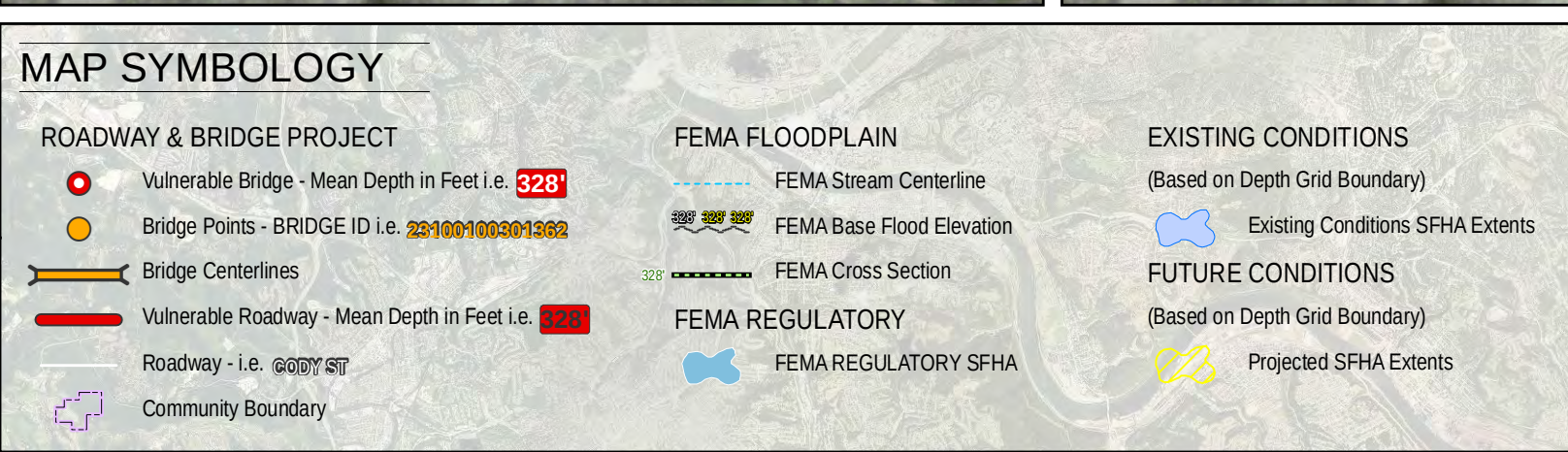
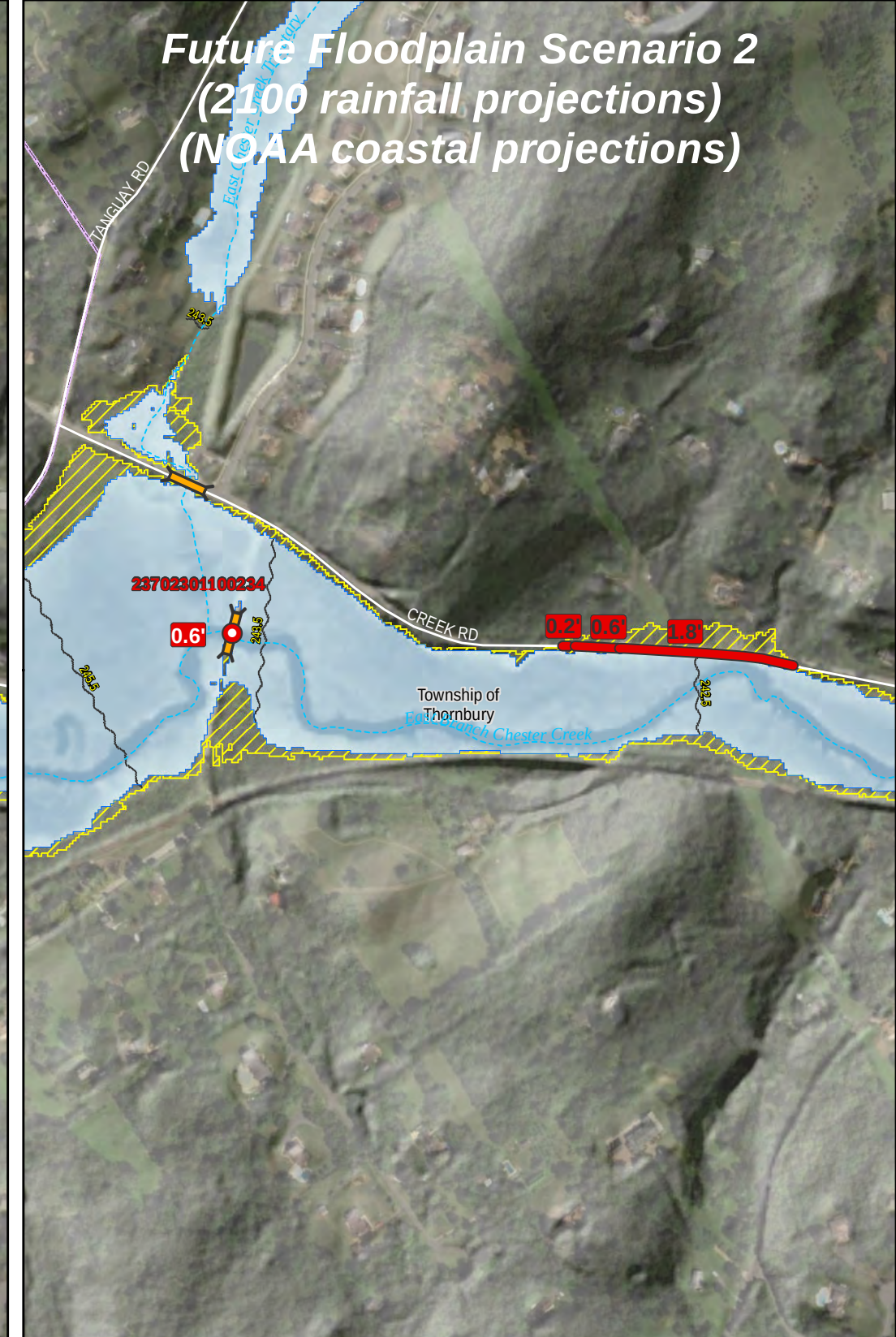


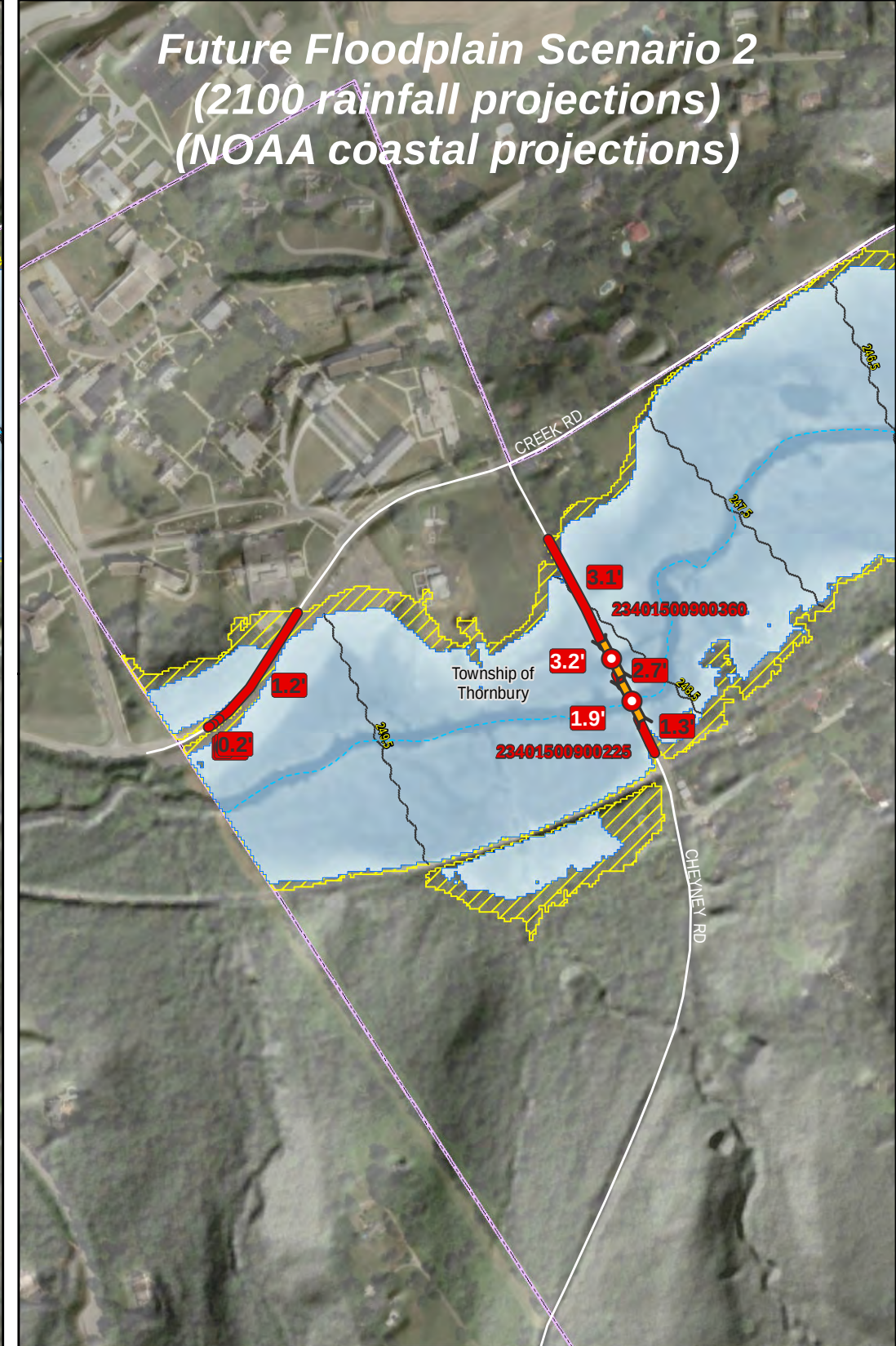
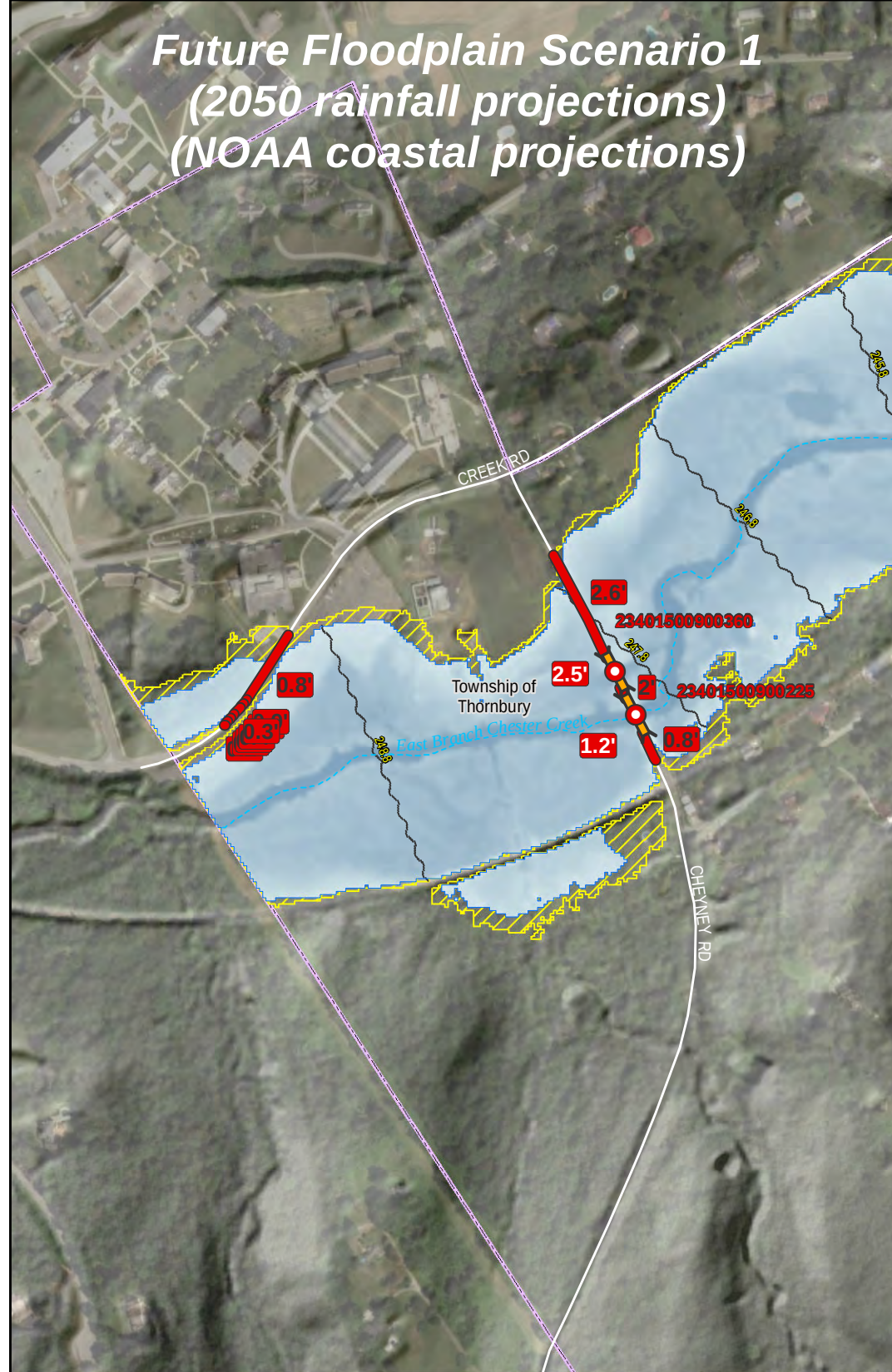
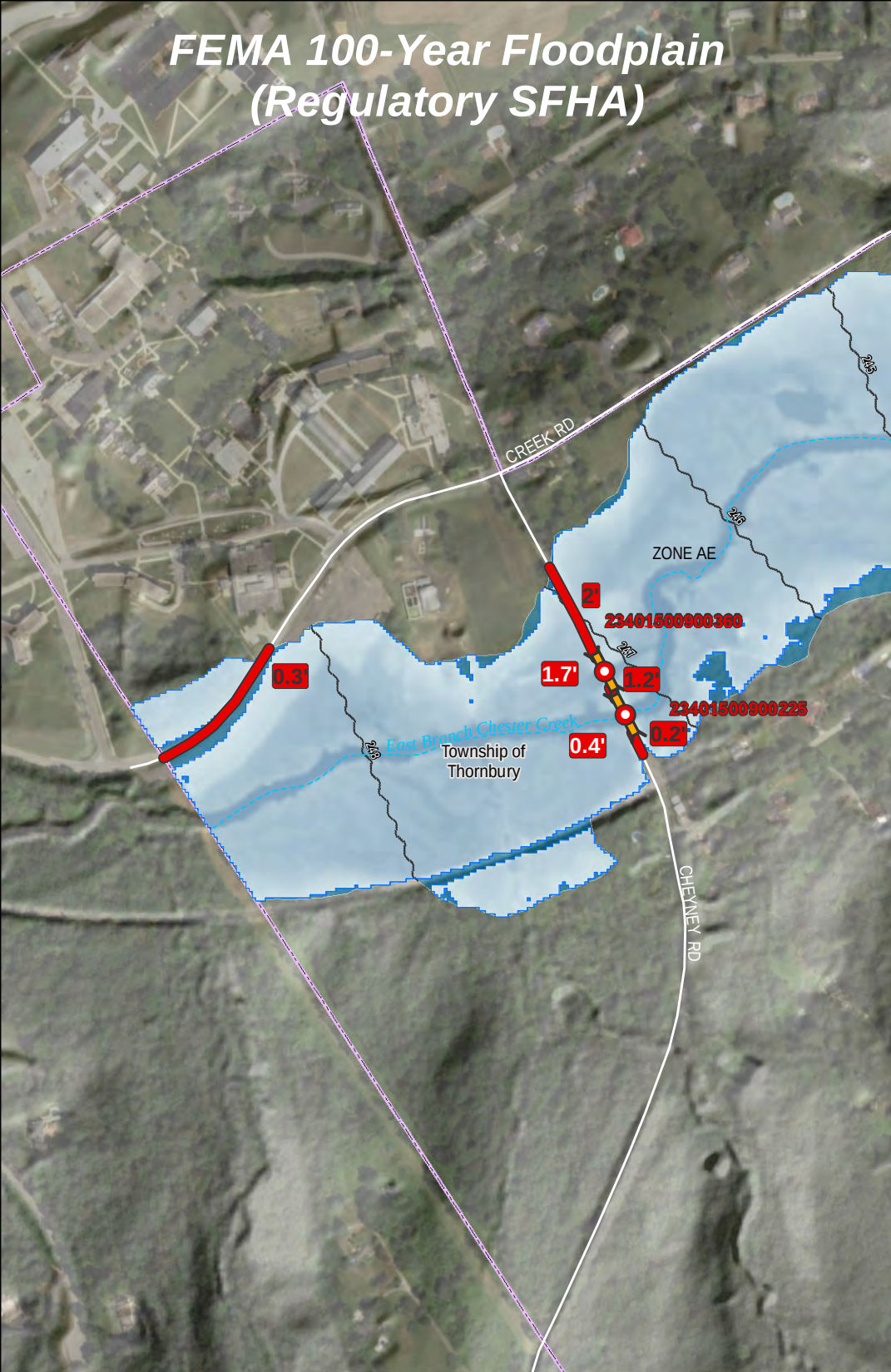
DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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Horizontal Datum: North American 1983
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VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

**Michael Baker
INTERNATIONAL**







MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **60D ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

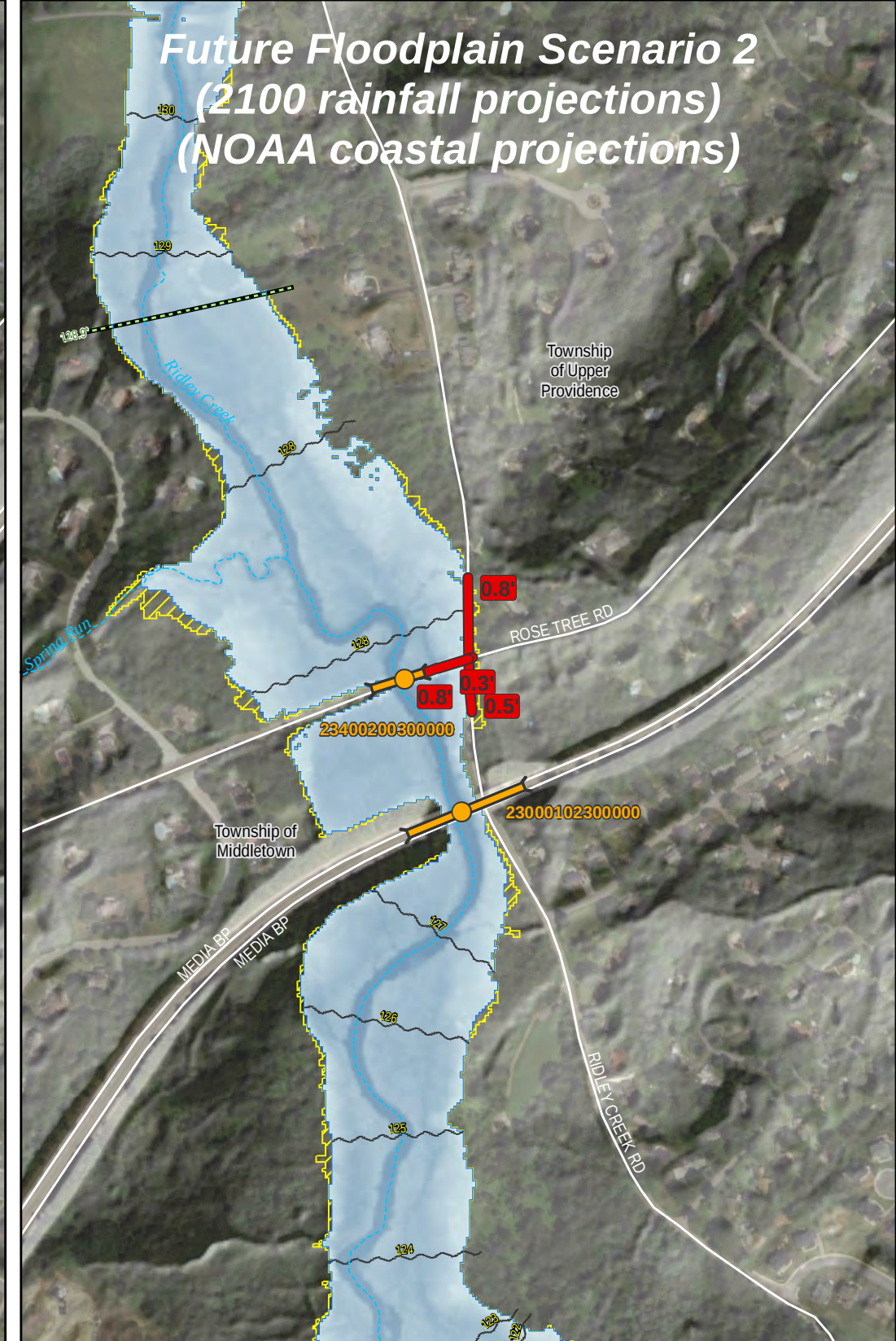
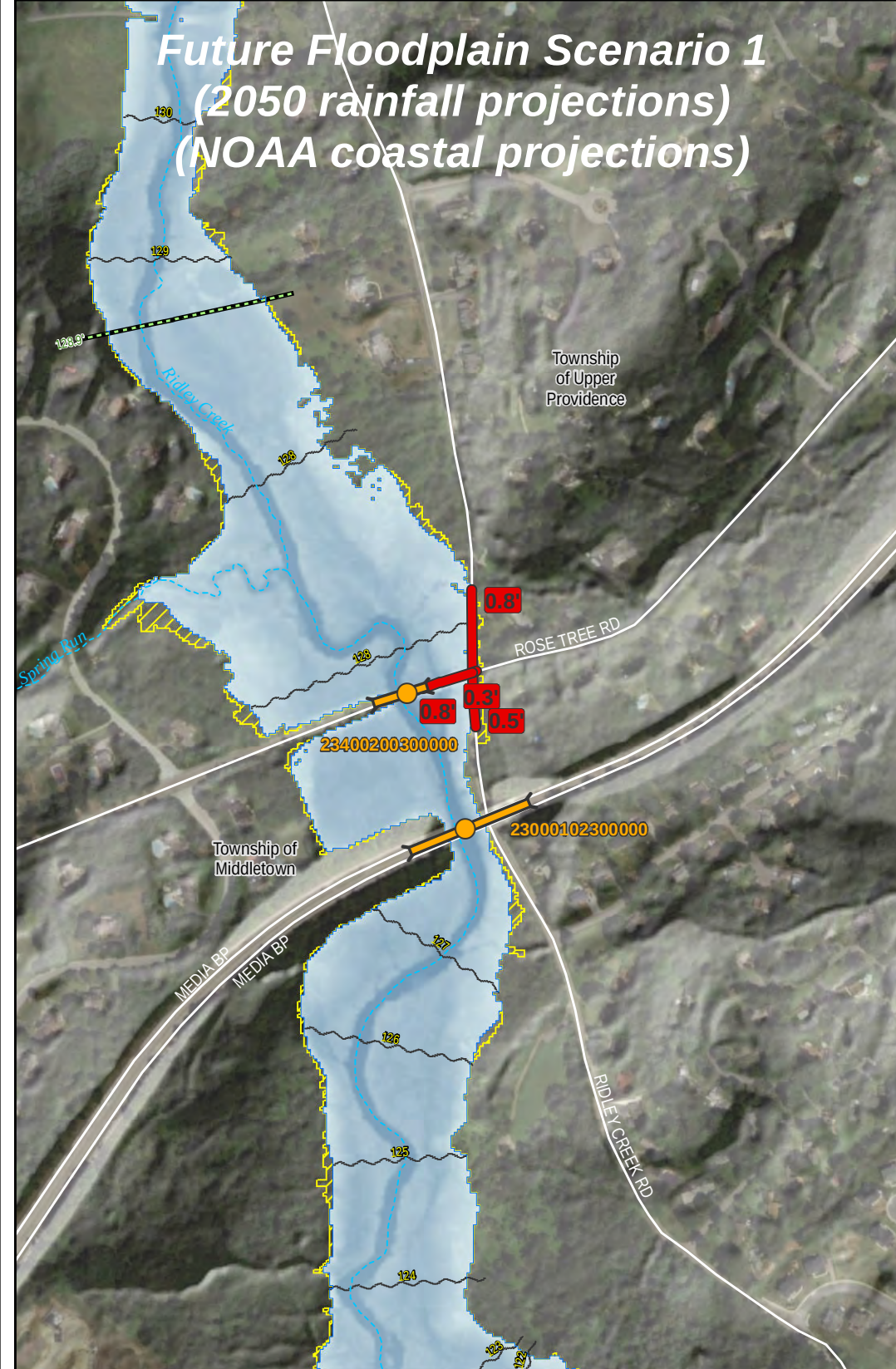
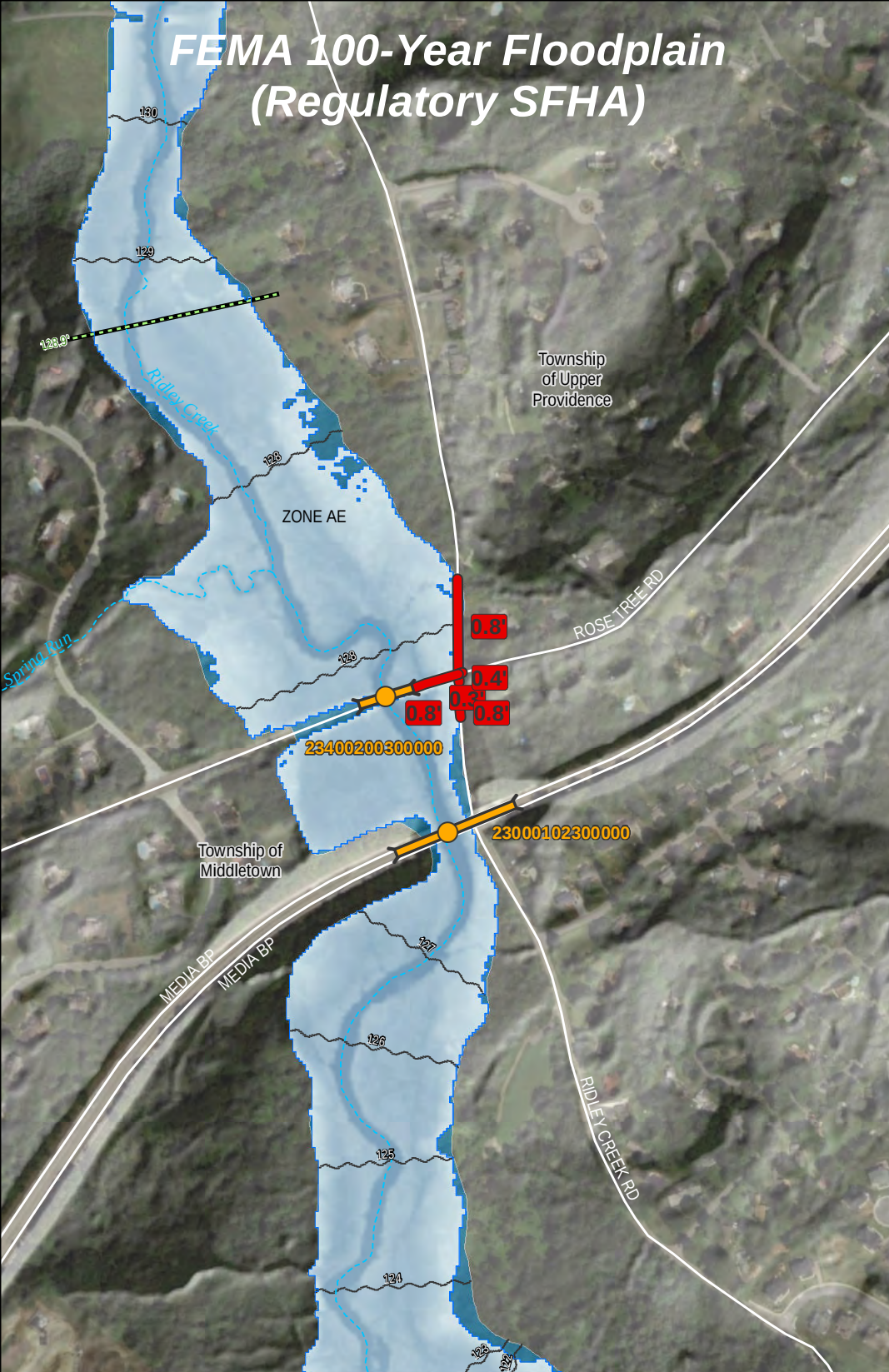
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 36 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

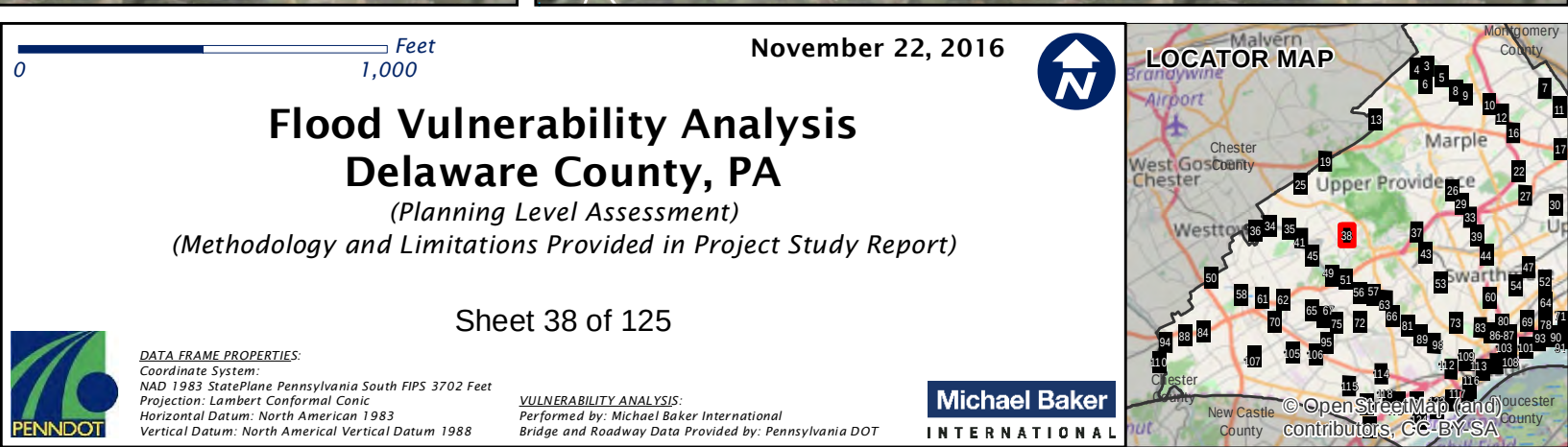
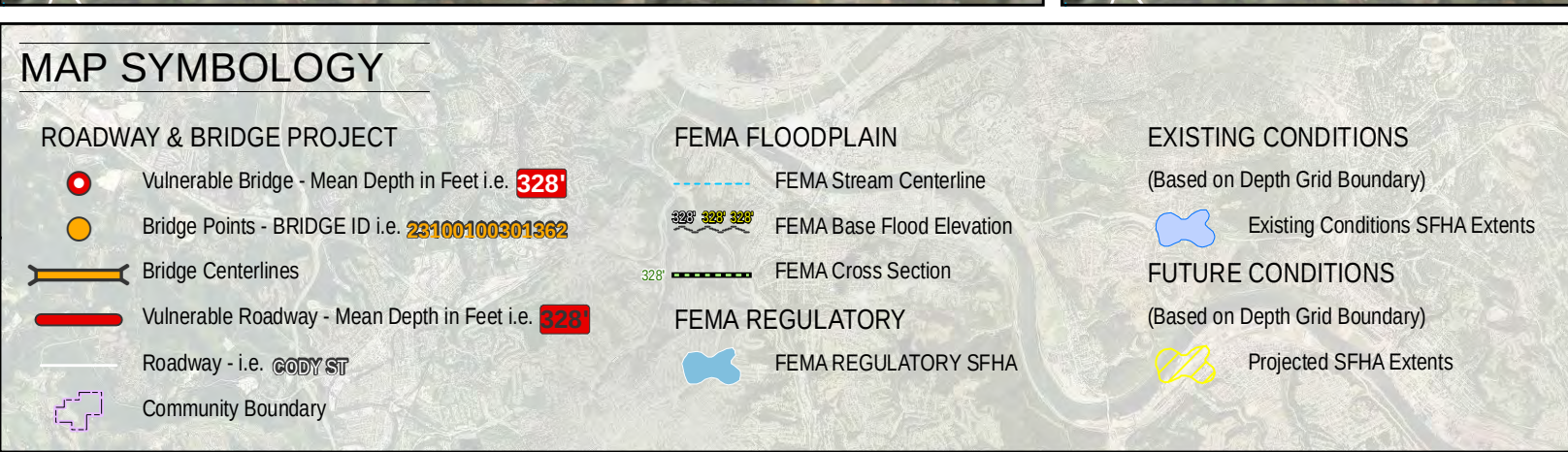
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(Methodology and Limitations Provided in Project Study Report)

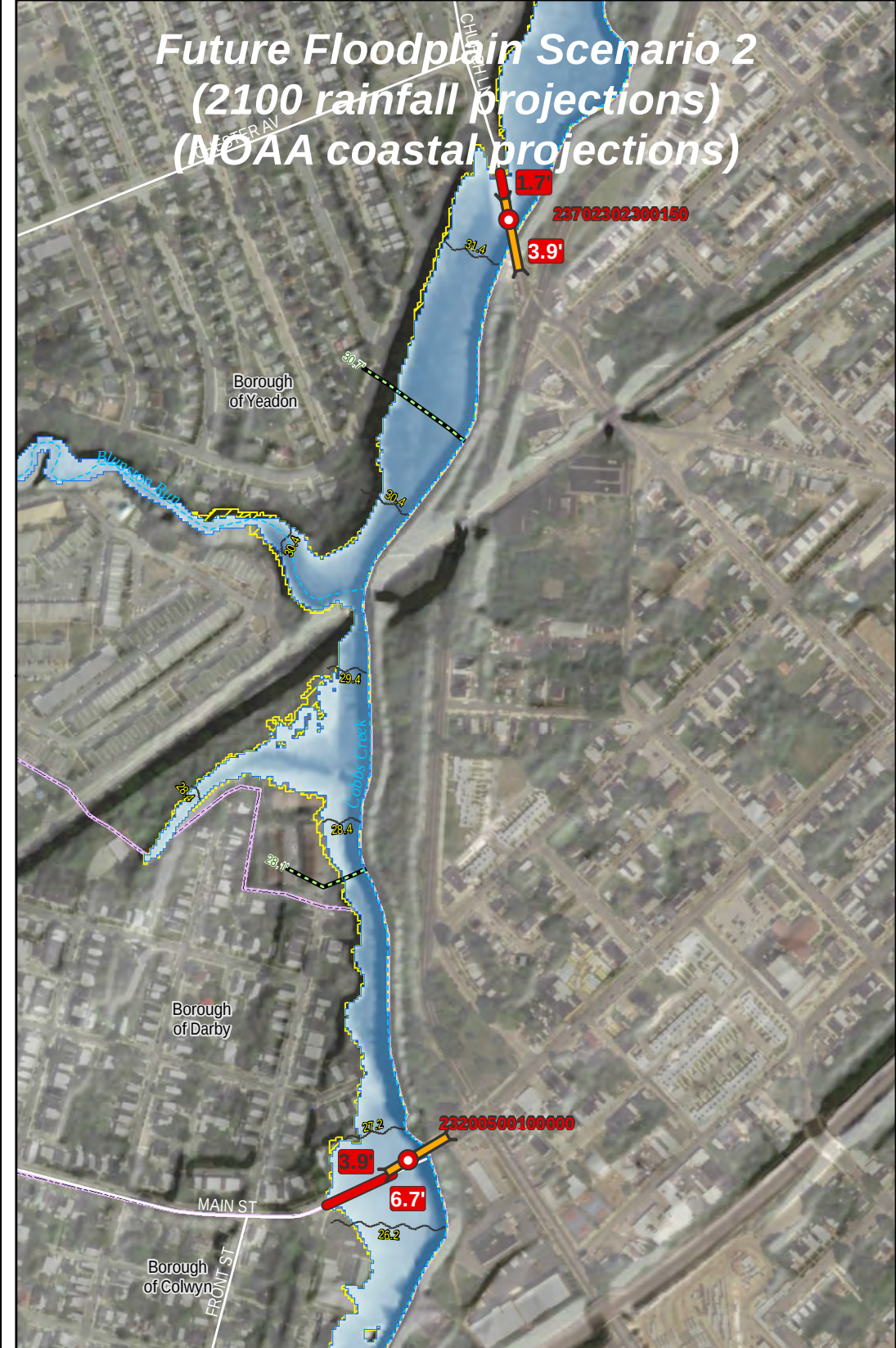
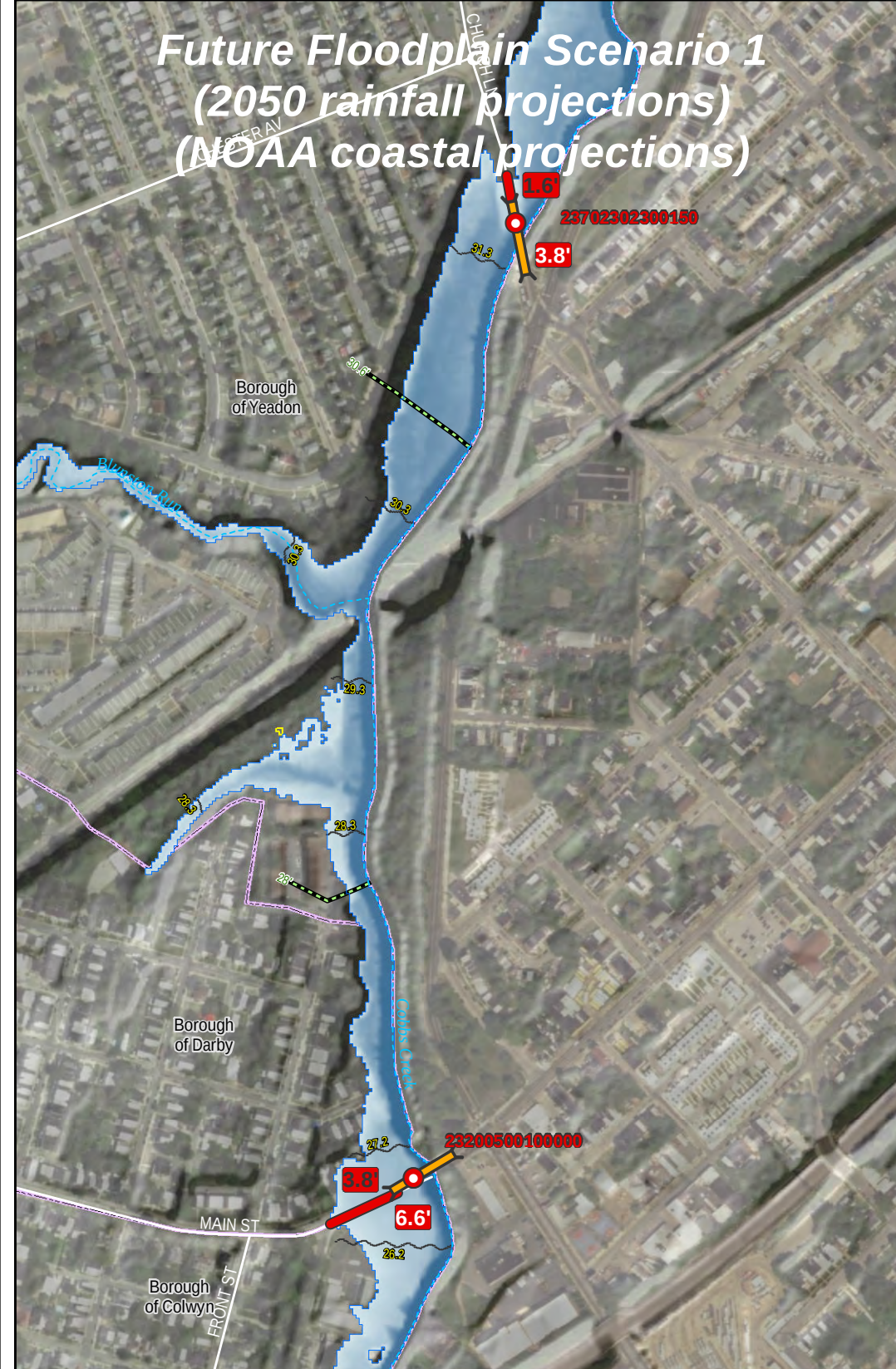
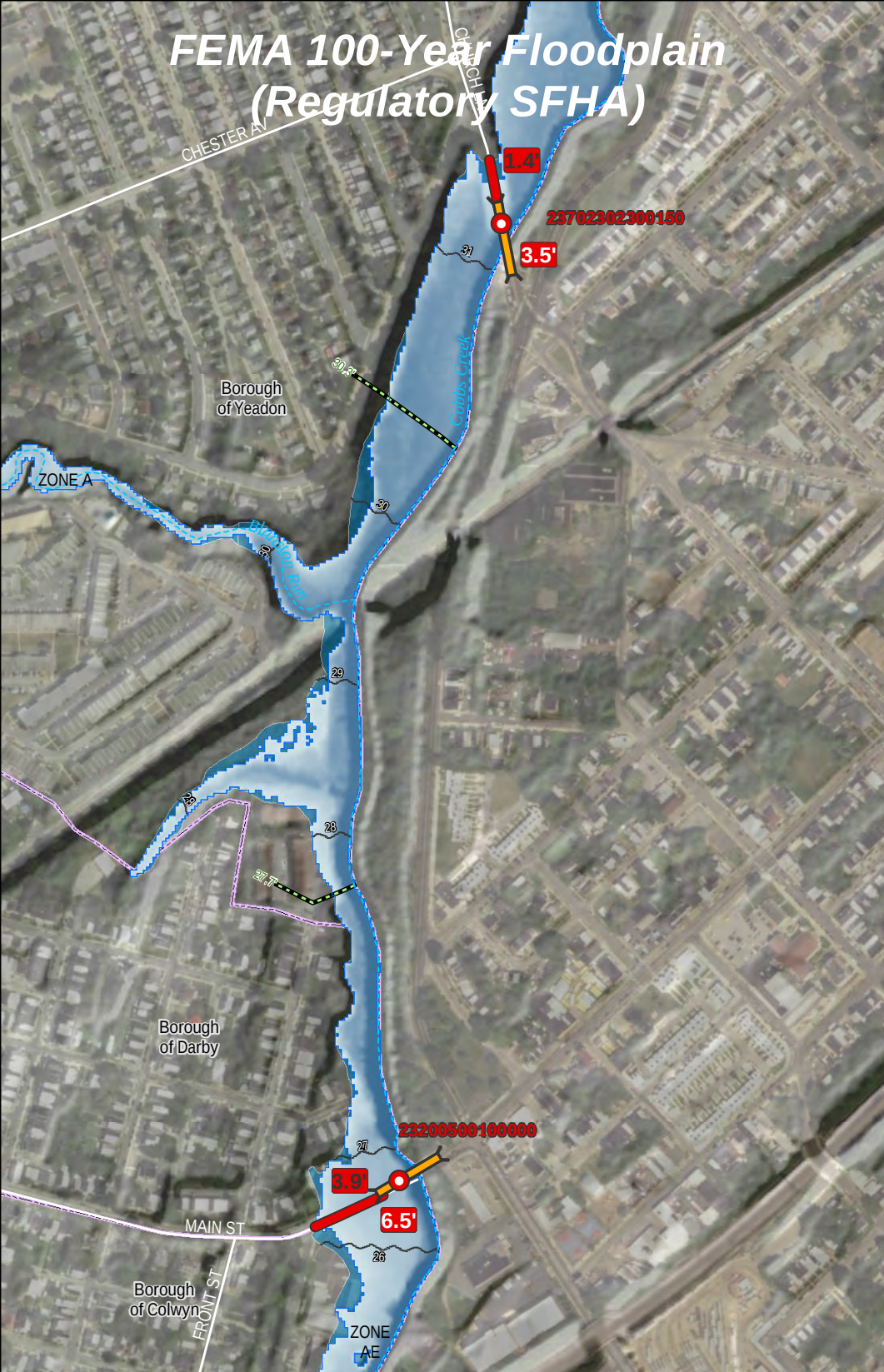
Sheet 37 of 125

DATA FRAME PROPERTIES:
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VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

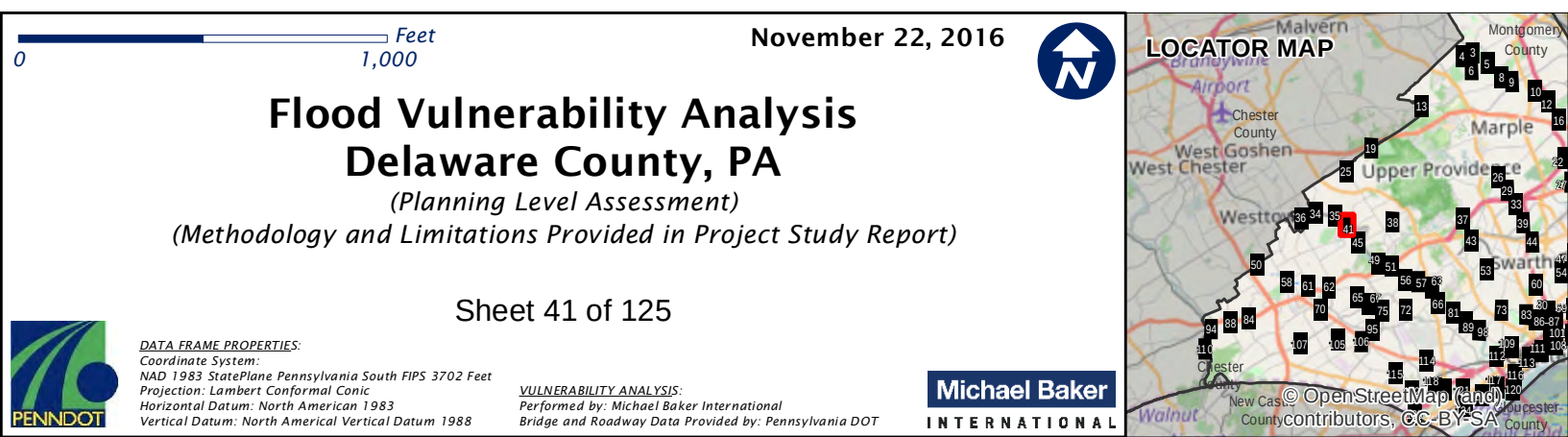
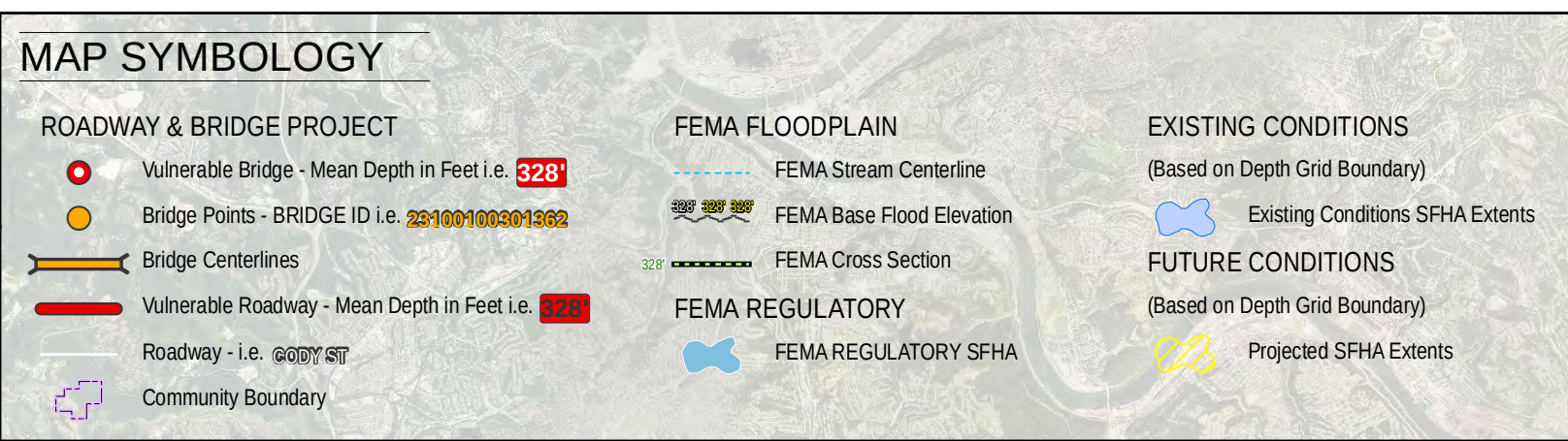
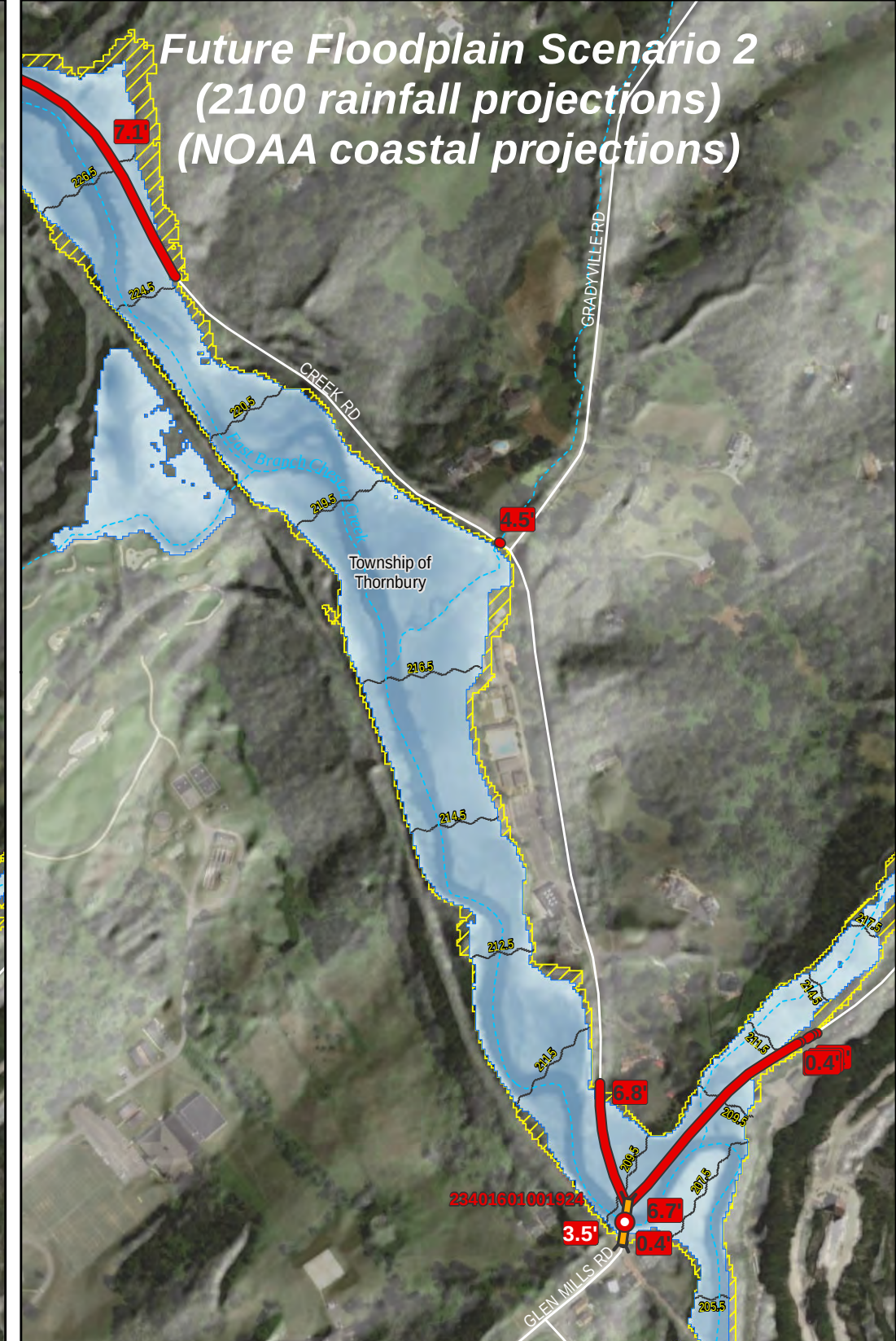
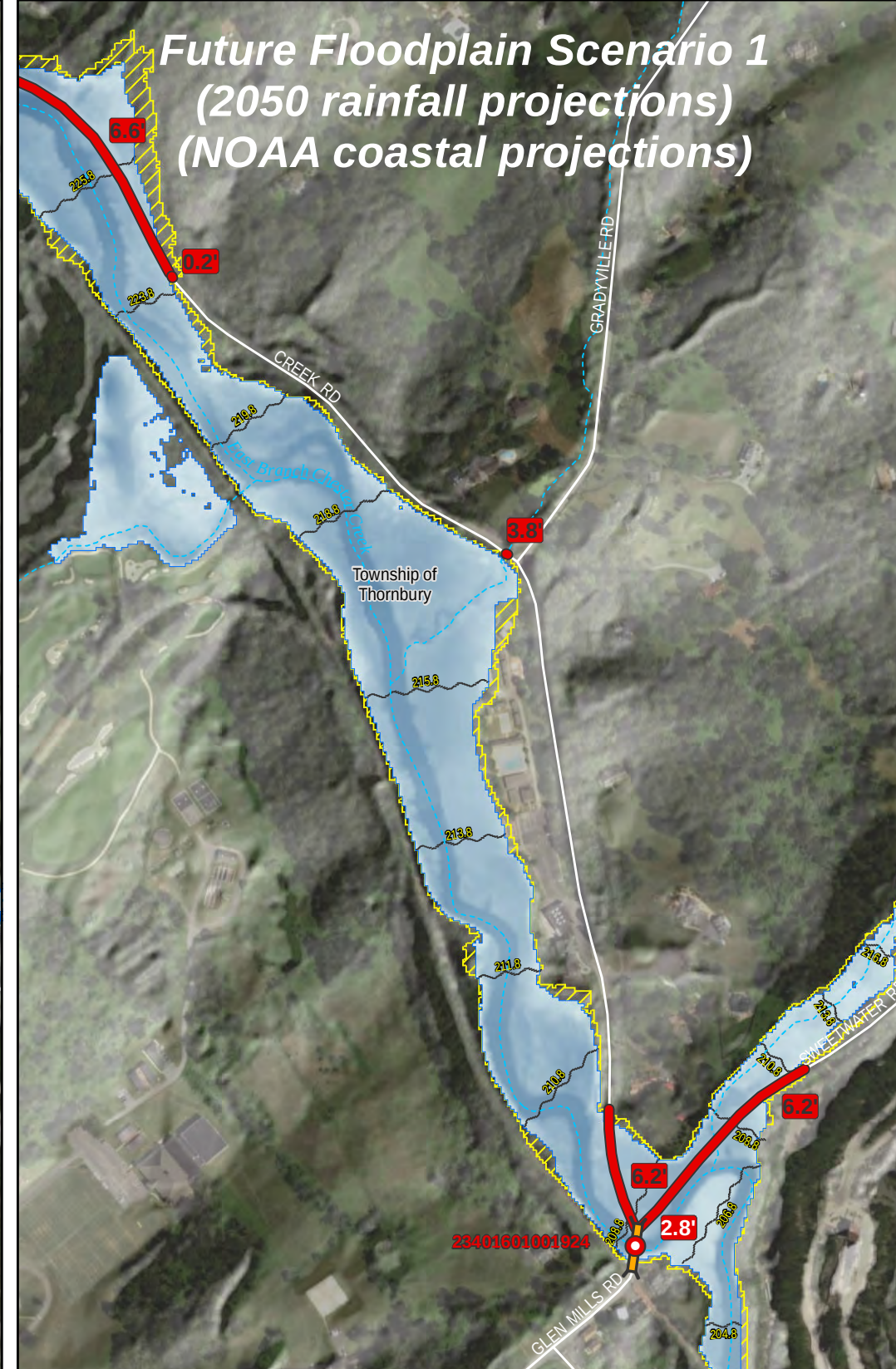
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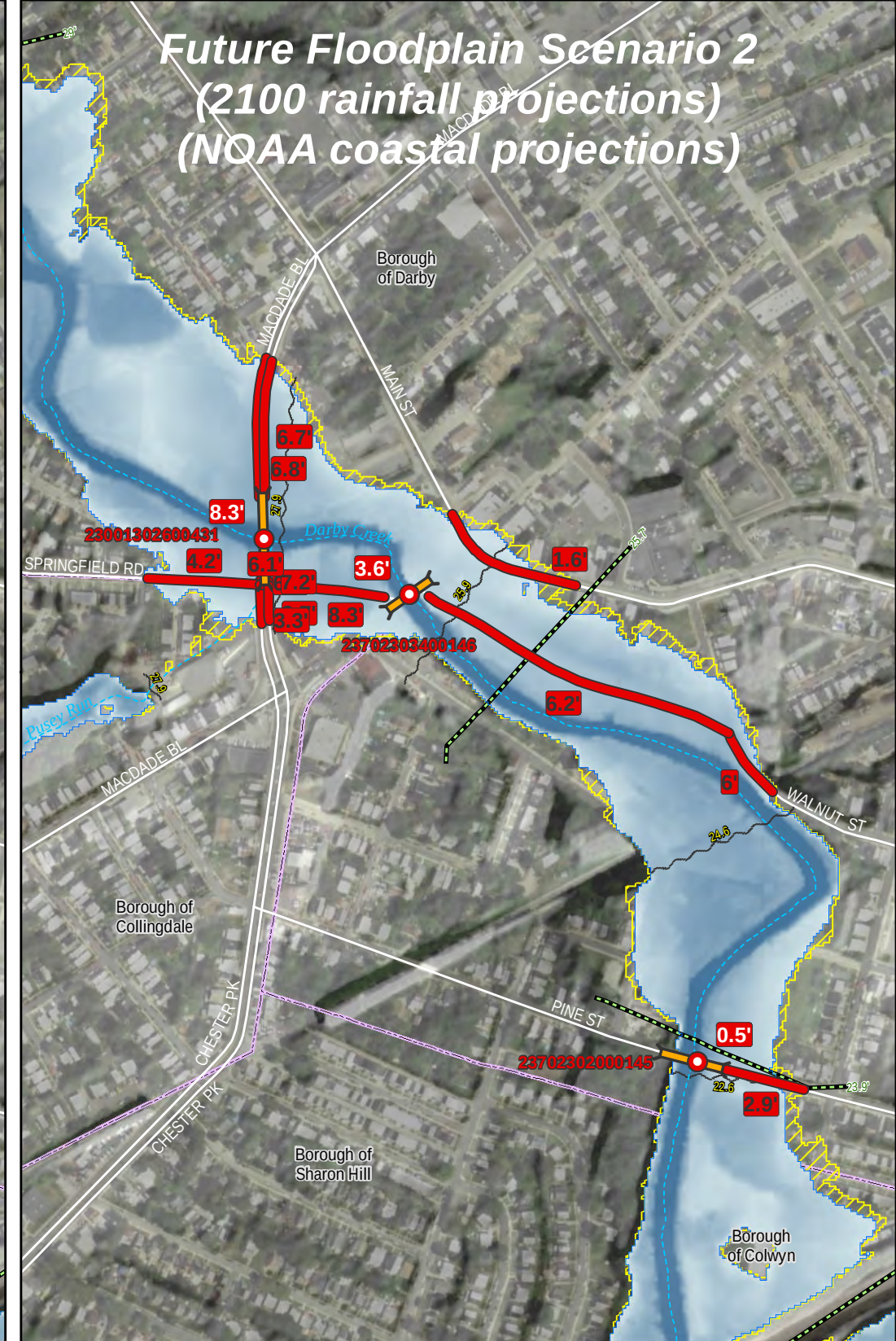
Sheet 40 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS
(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS
(Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis

Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

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MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

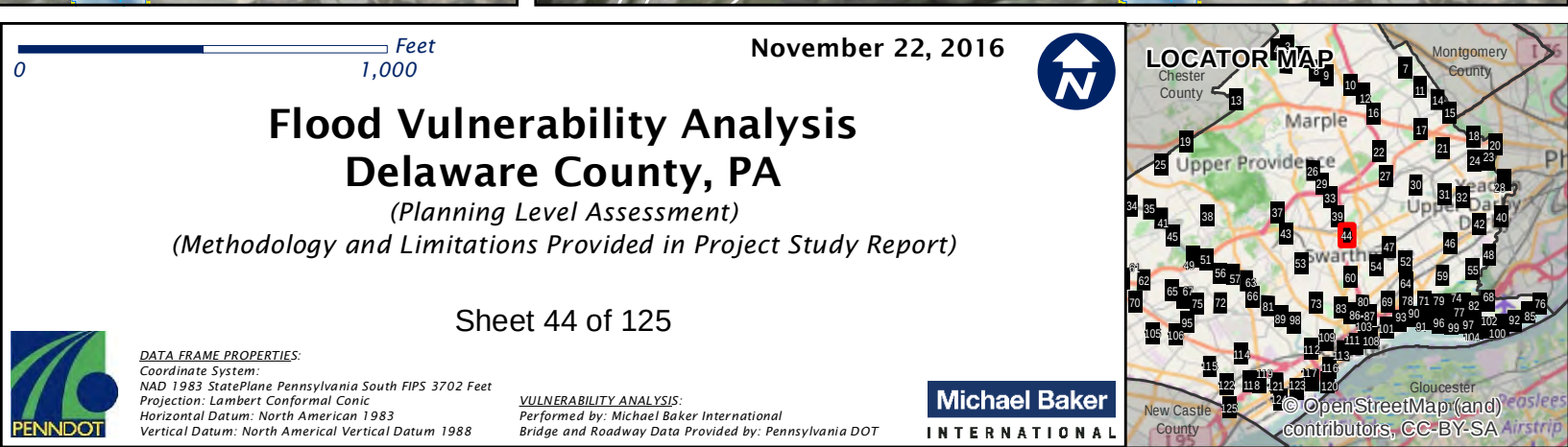
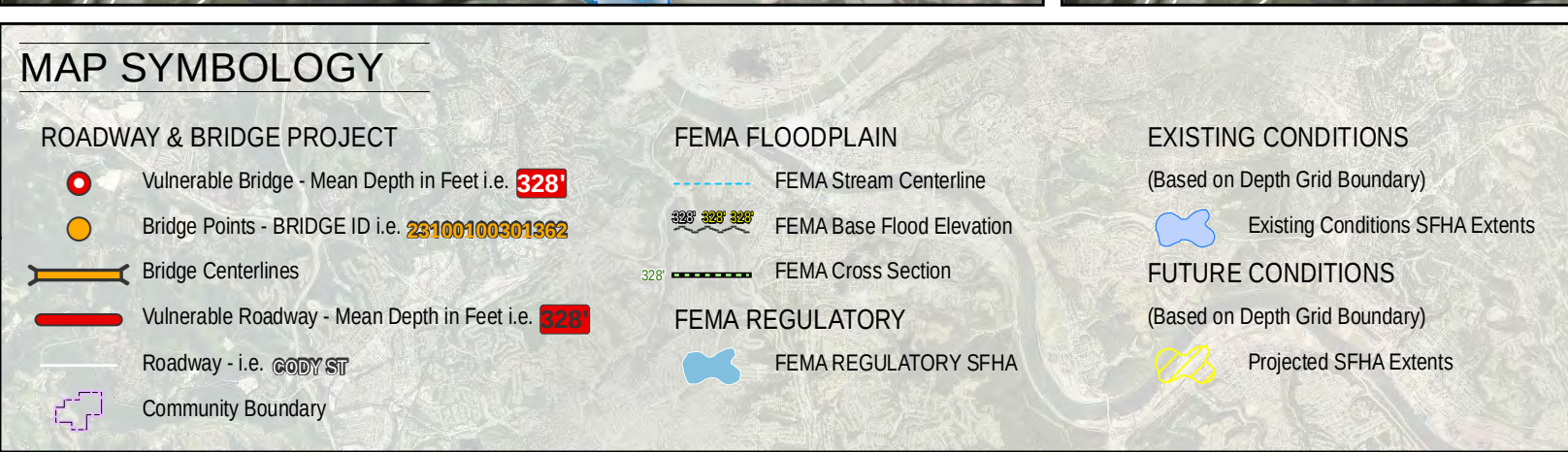
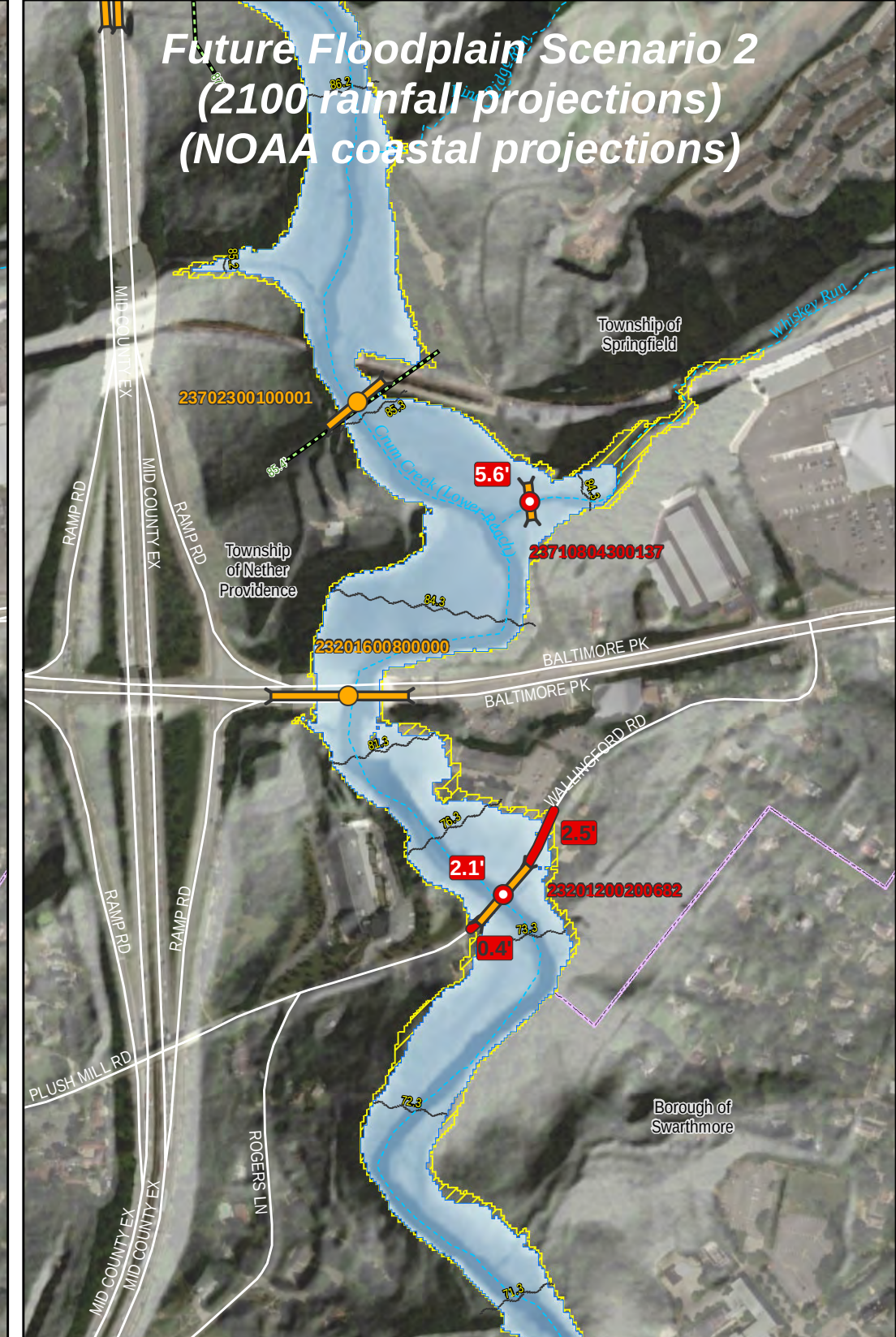
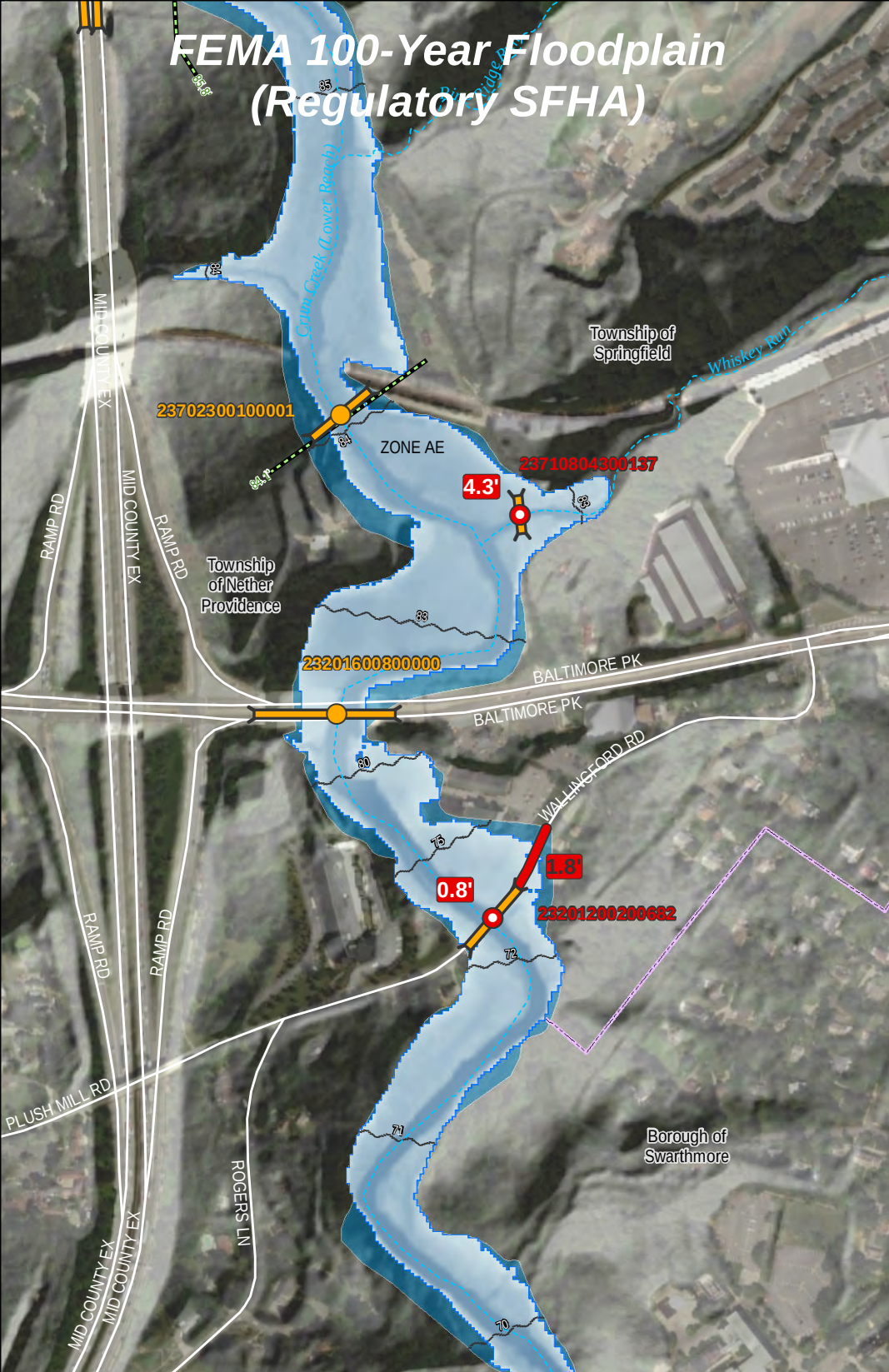
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

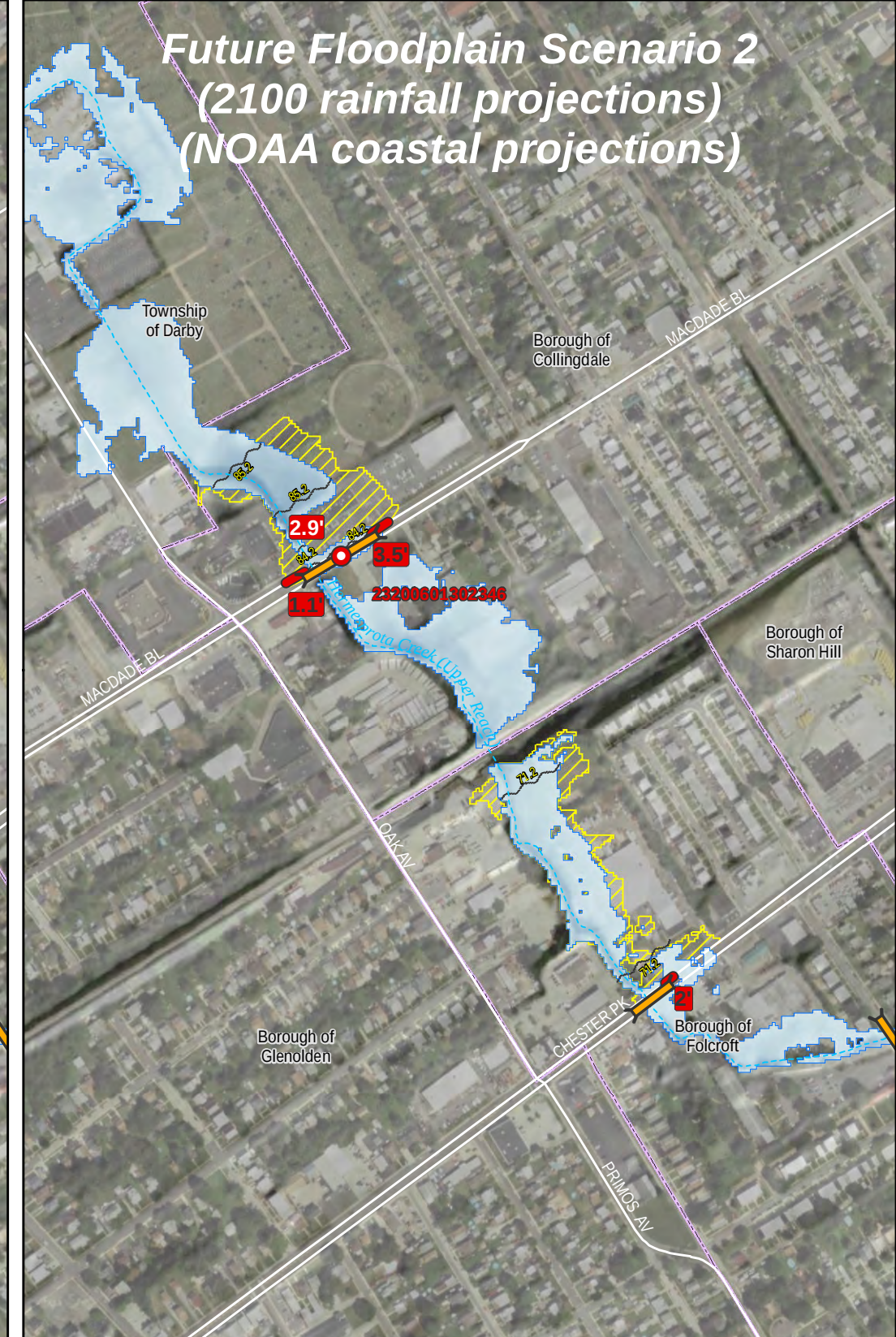
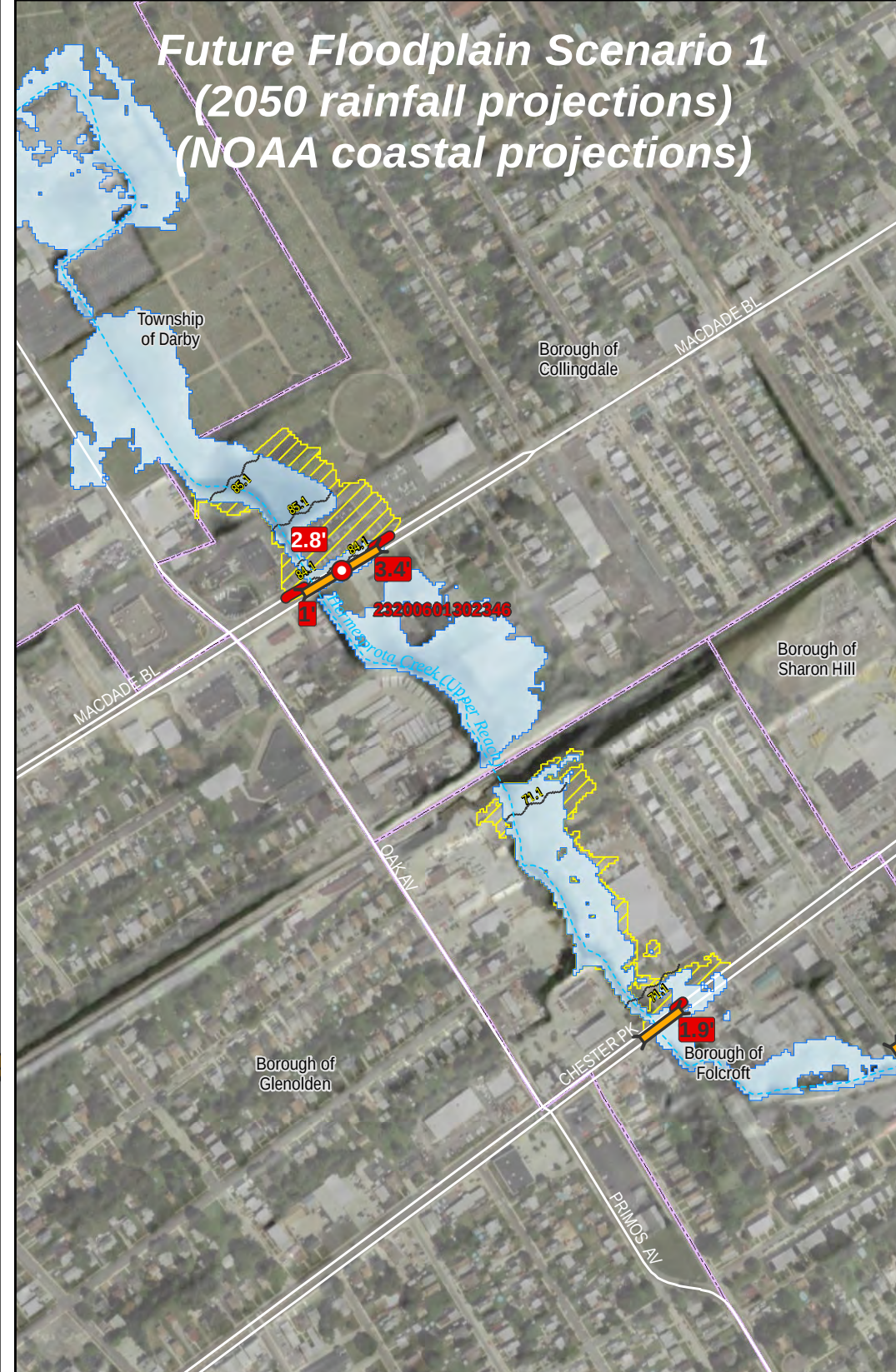
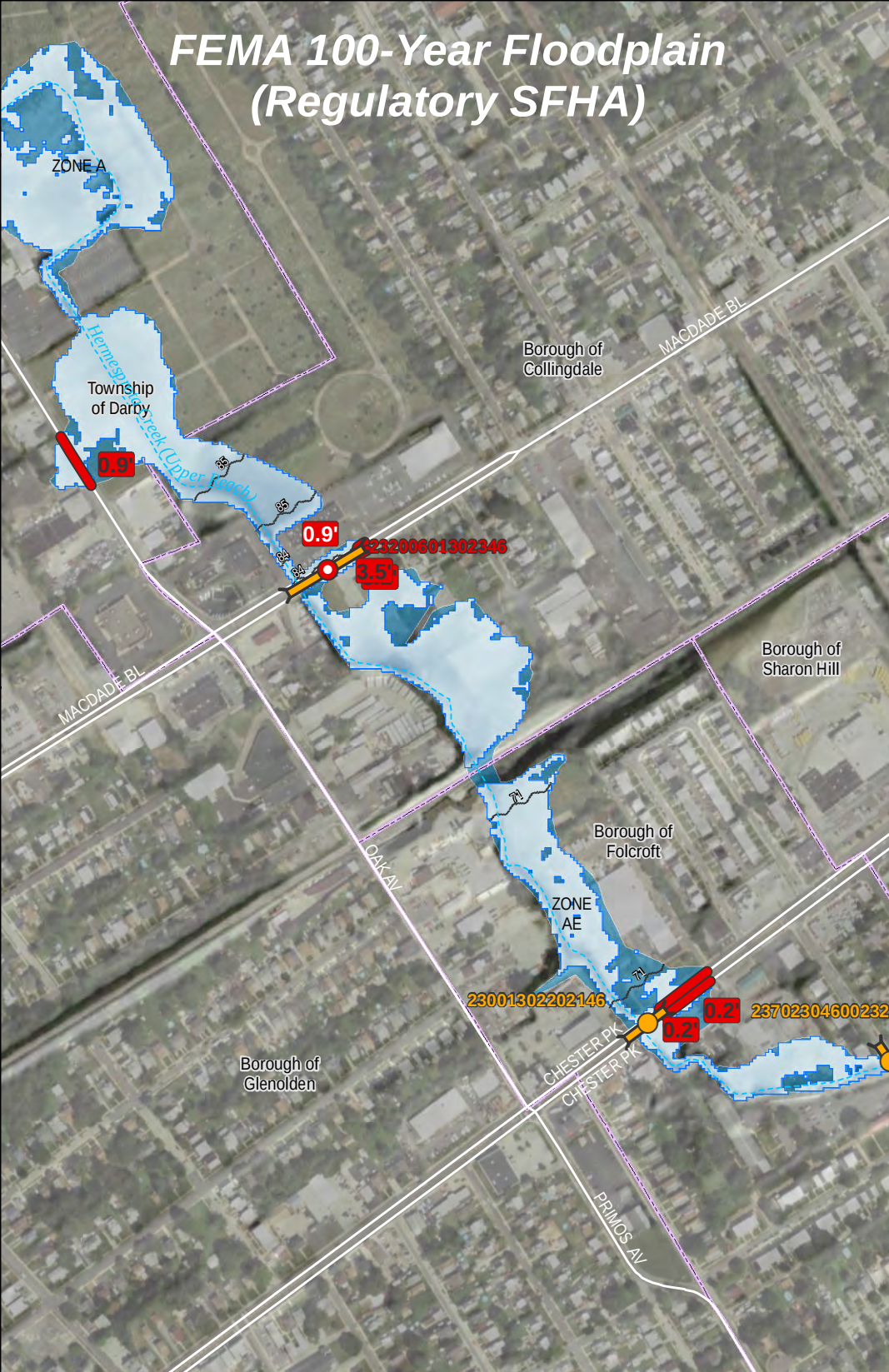
Sheet 43 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

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- FEMA REGULATORY SFHA

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- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

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0

1,000

Feet

November 22, 2016

Flood Vulnerability Analysis

Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 46 of 125

DATA FRAME PROPERTIES:

Coordinate System:
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Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:

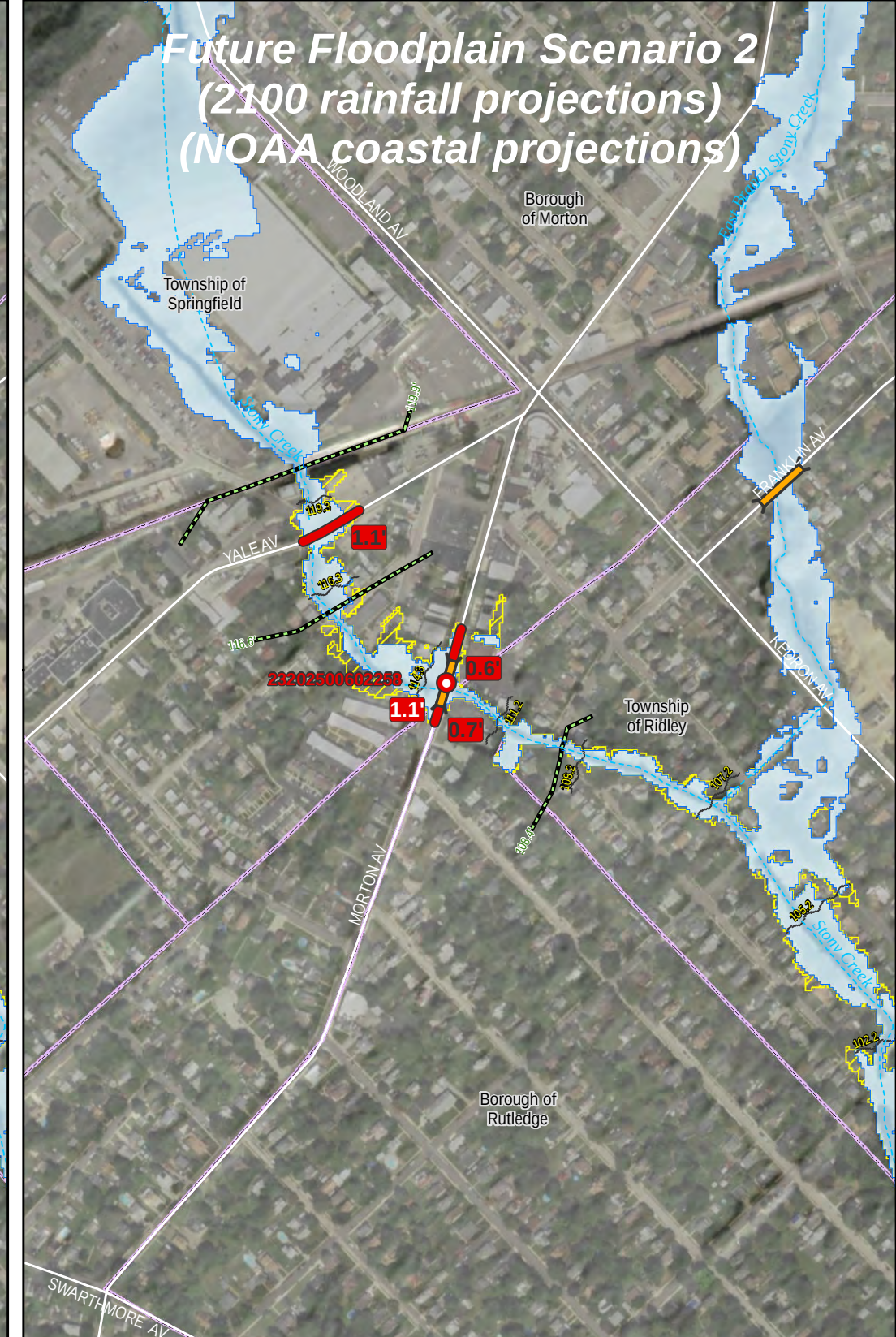
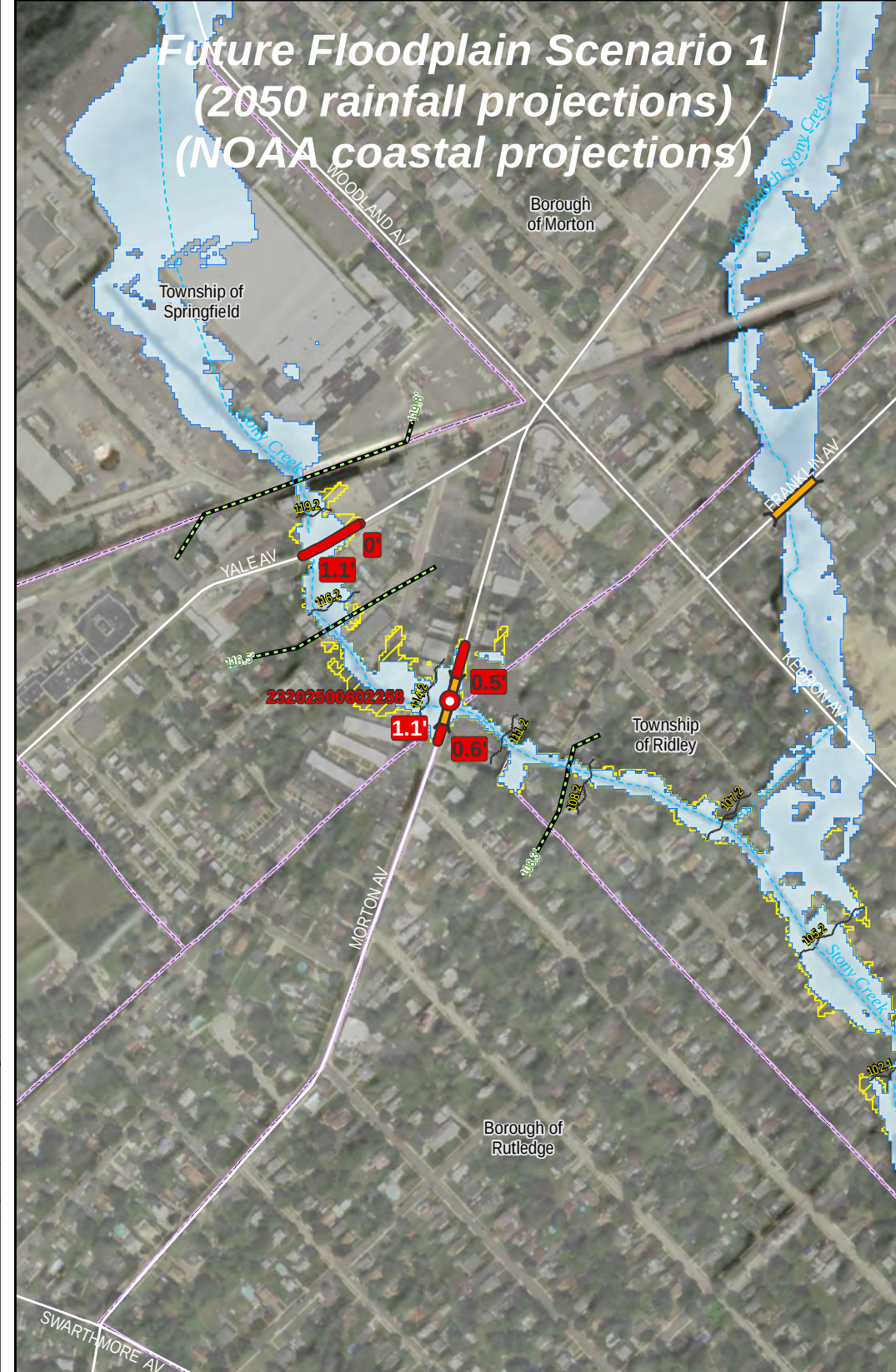
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

Michael Baker

INTERNATIONAL

LOCATOR MAP

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MAP SYMBOLOGY

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0

1,000

Feet

November 22, 2016



Flood Vulnerability Analysis

Delaware County, PA

(Planning Level Assessment)

(Methodology and Limitations Provided in Project Study Report)

Sheet 47 of 125



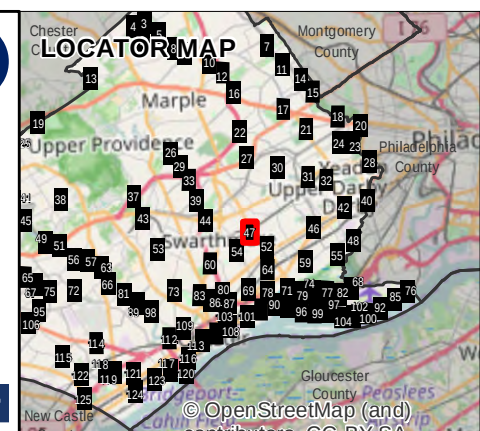
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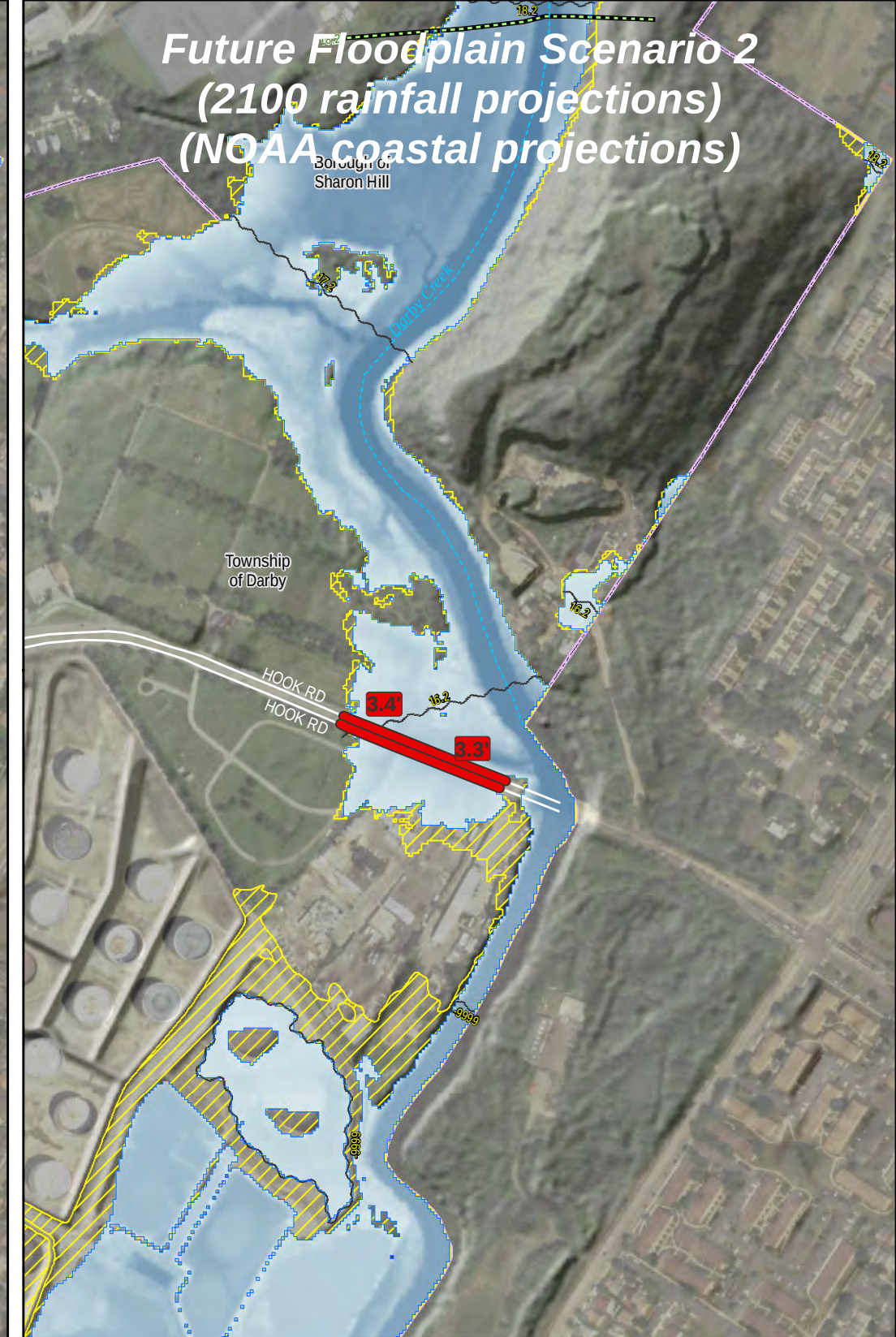
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NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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Horizontal Datum: North American 1983

VULNERABILITY ANALYSIS:

Performed by: Michael Baker International

Michael Baker





MAP SYMBOLOGY

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0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 48 of 125

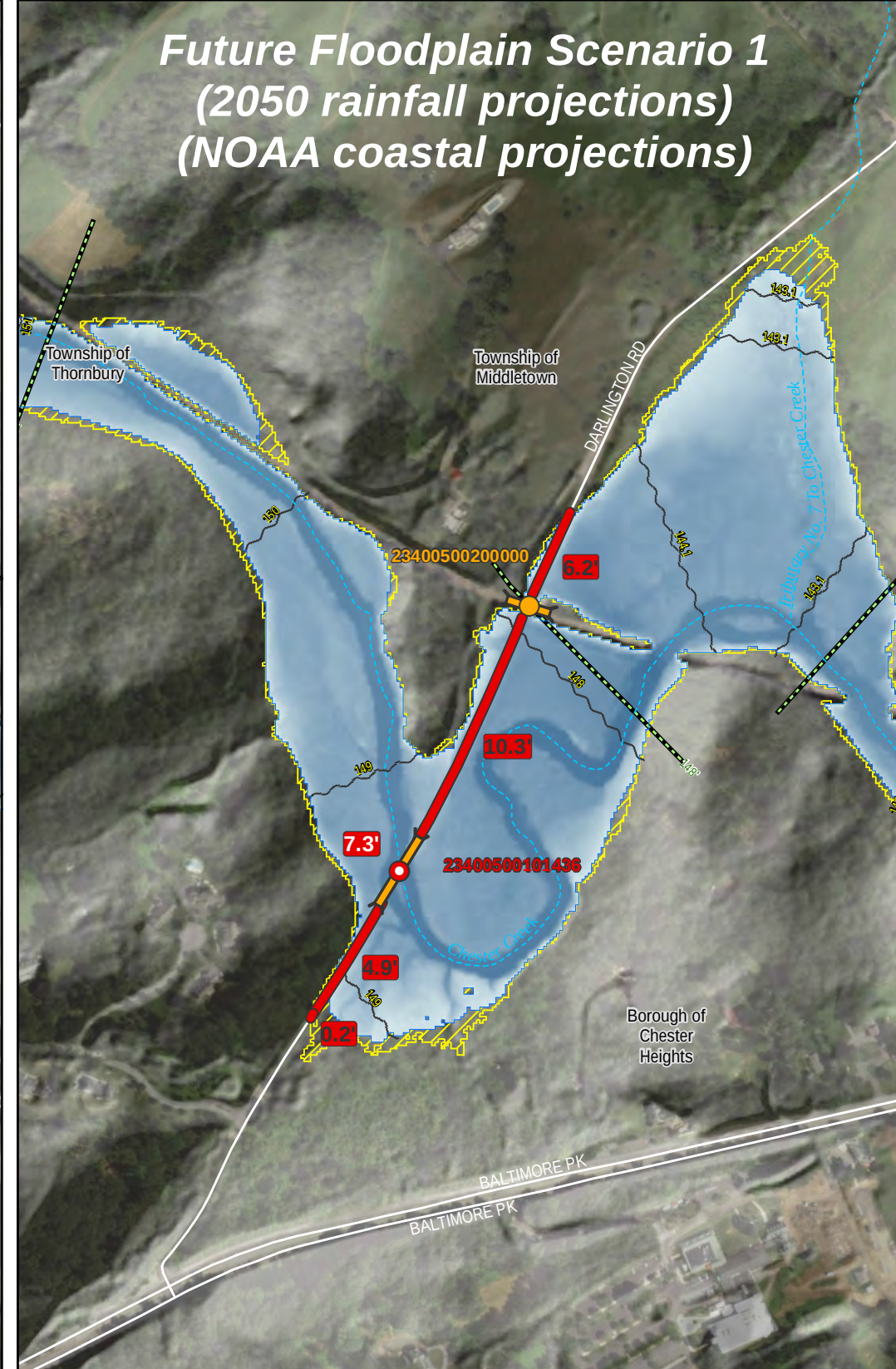
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Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

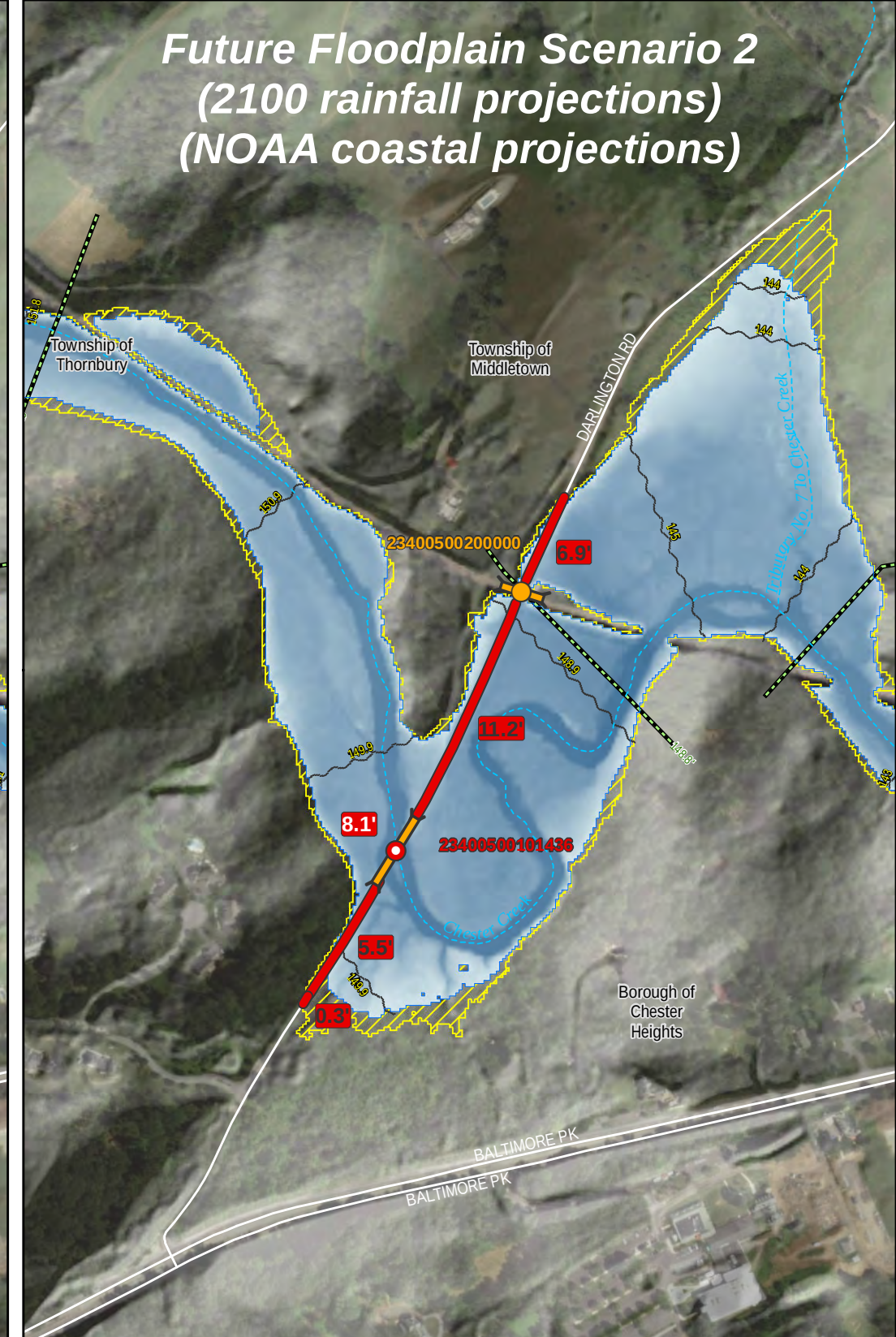
FEMA 100-Year Floodplain (Regulatory SFHA)



Future Floodplain Scenario 1 (2050 rainfall projections) (NOAA coastal projections)



Future Floodplain Scenario 2 (2100 rainfall projections) (NOAA coastal projections)



MAP SYMBOLOGY

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0 Feet
1,000

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

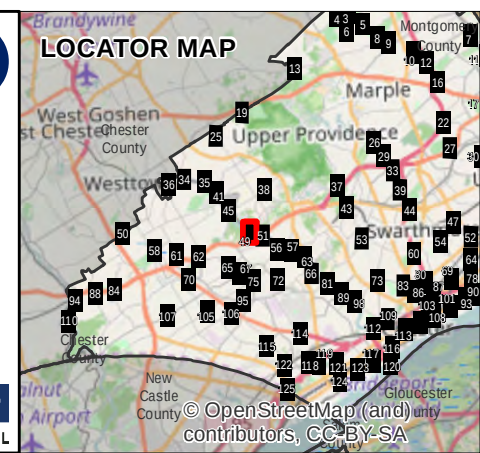
Sheet 49 of 125



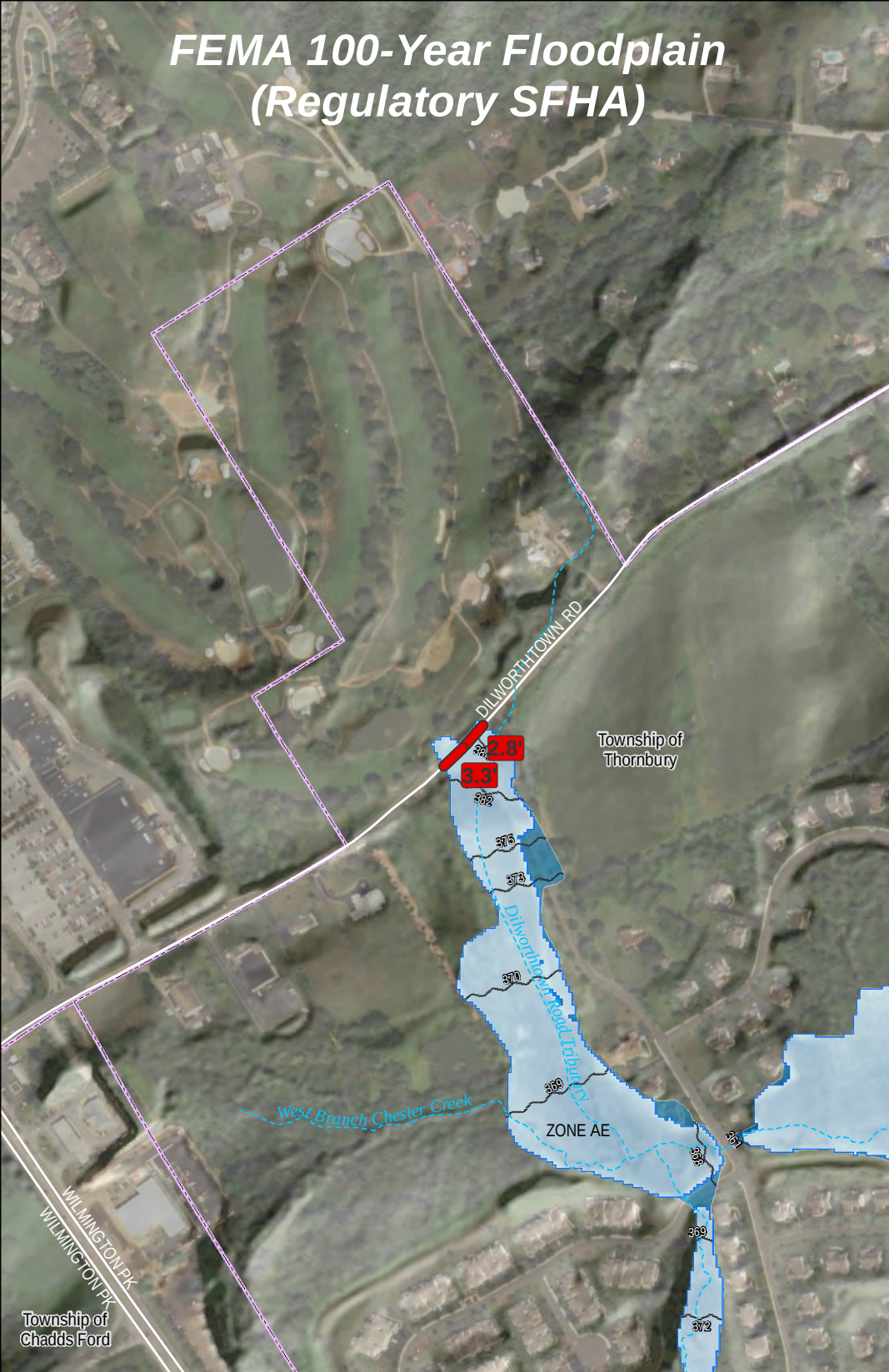
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VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

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INTERNATIONAL**



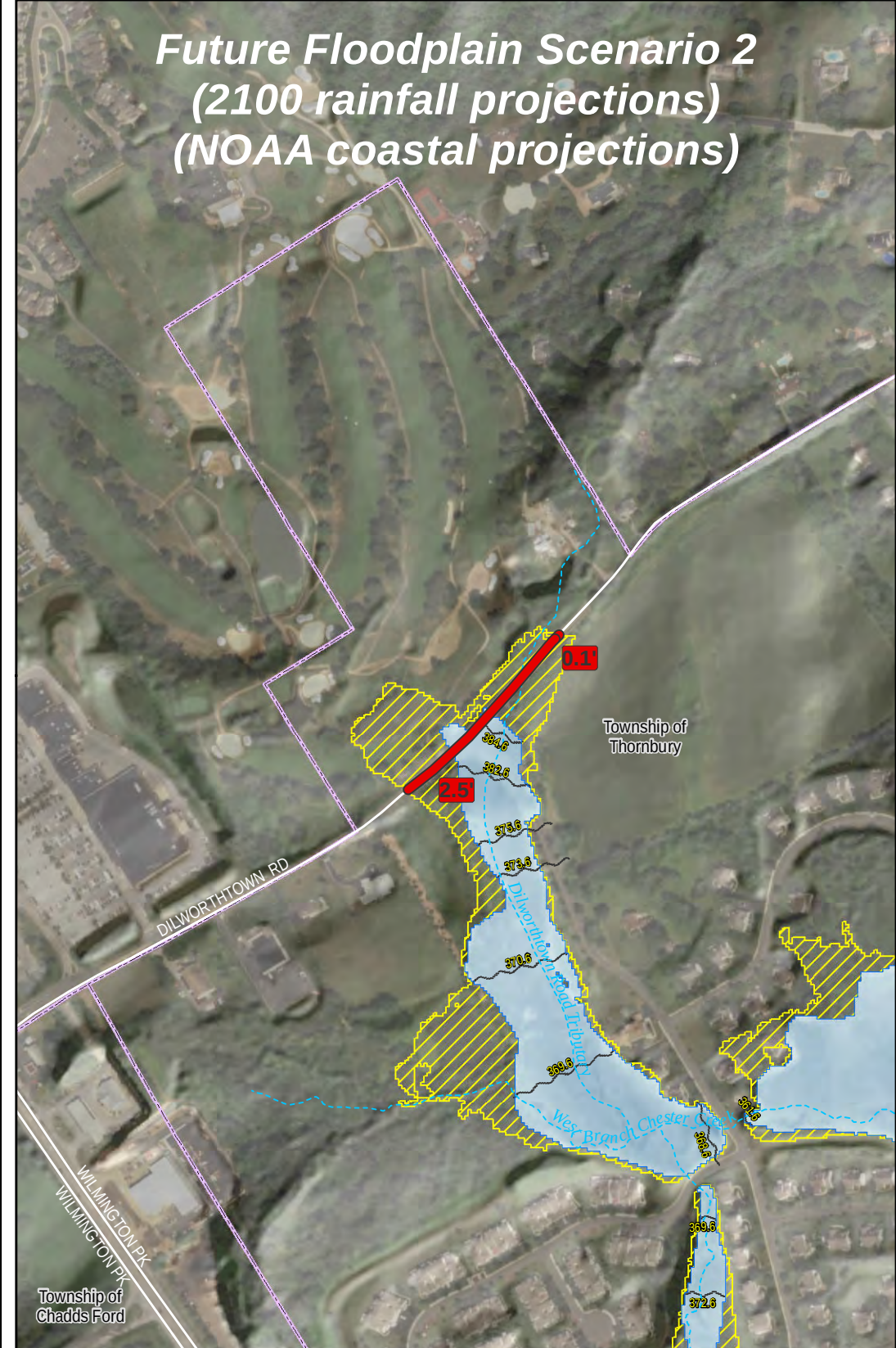
FEMA 100-Year Floodplain (Regulatory SFHA)



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(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

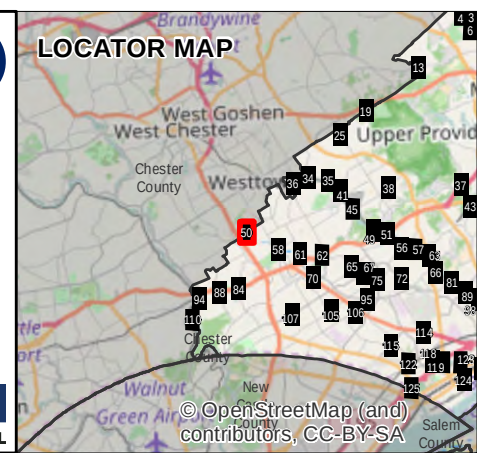
Sheet 50 of 125

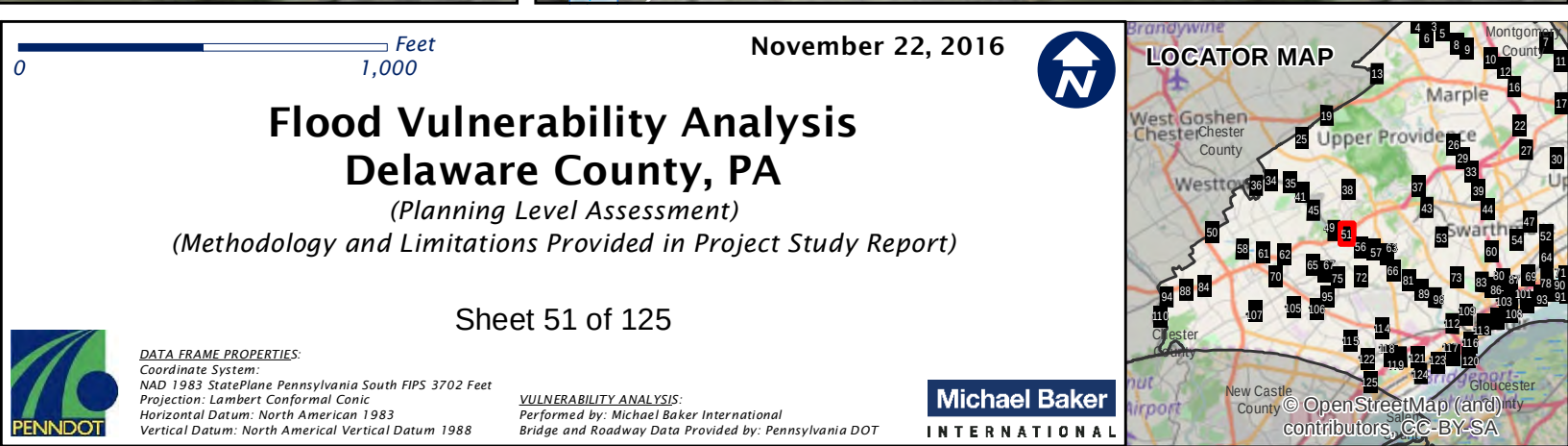
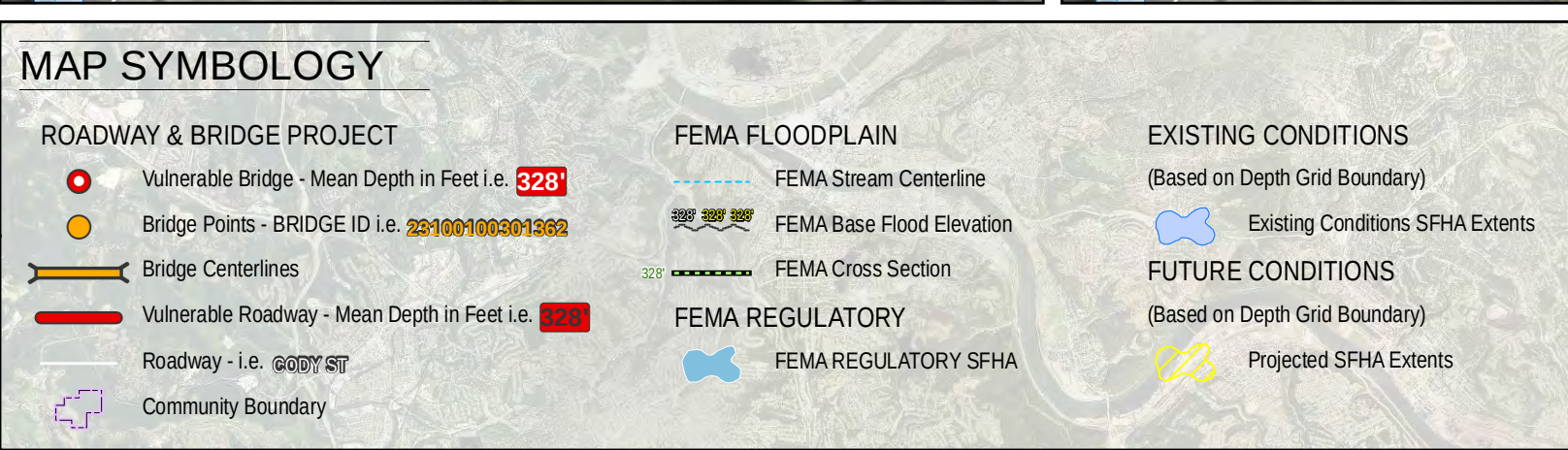


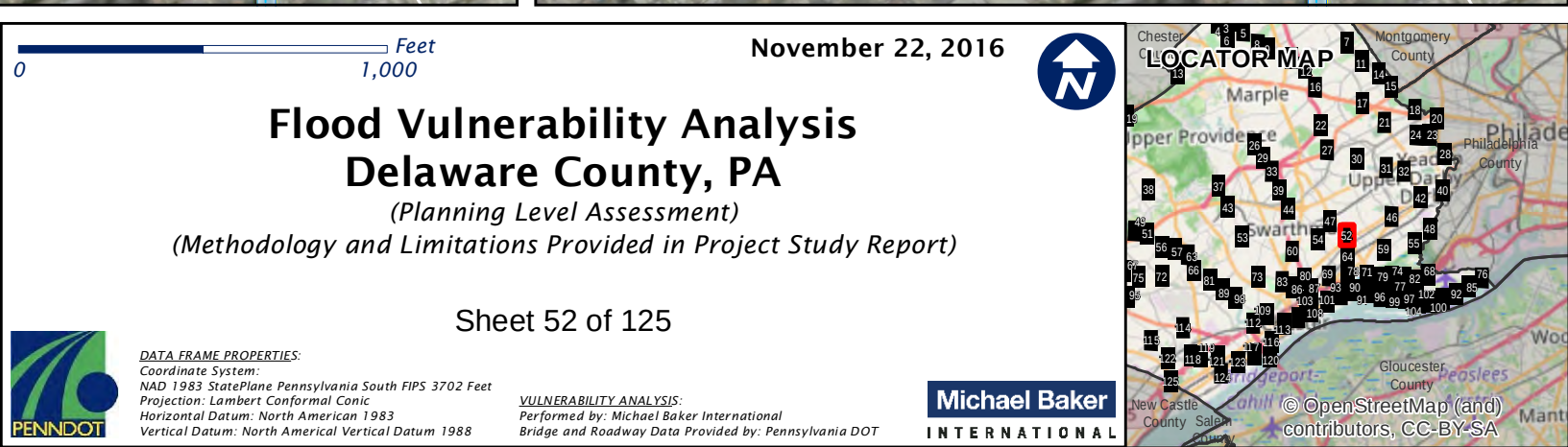
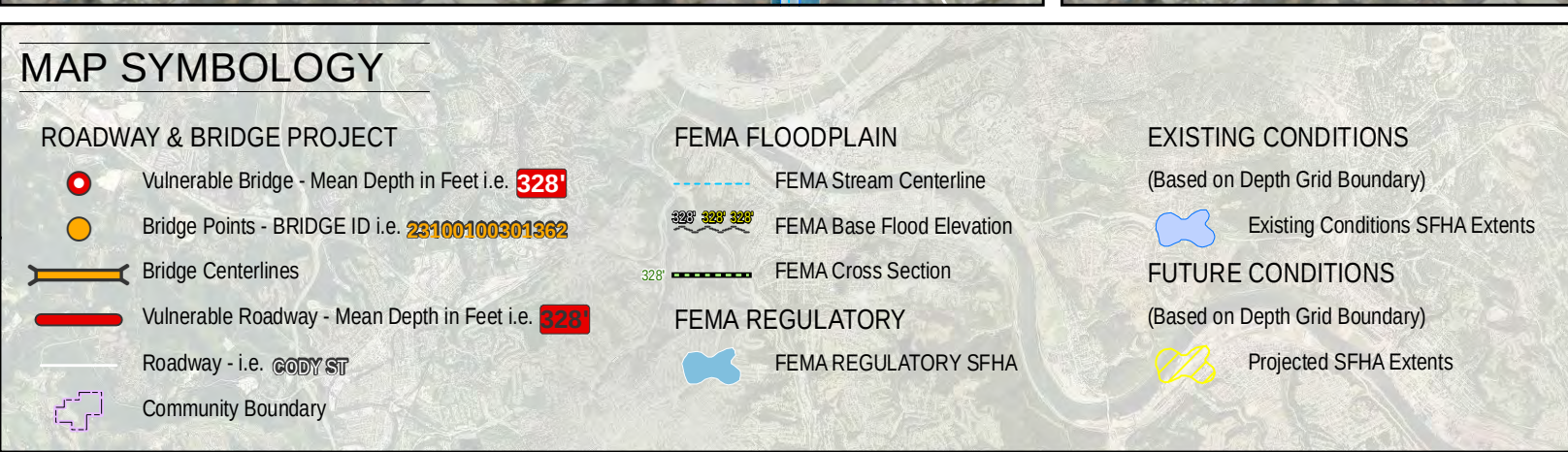
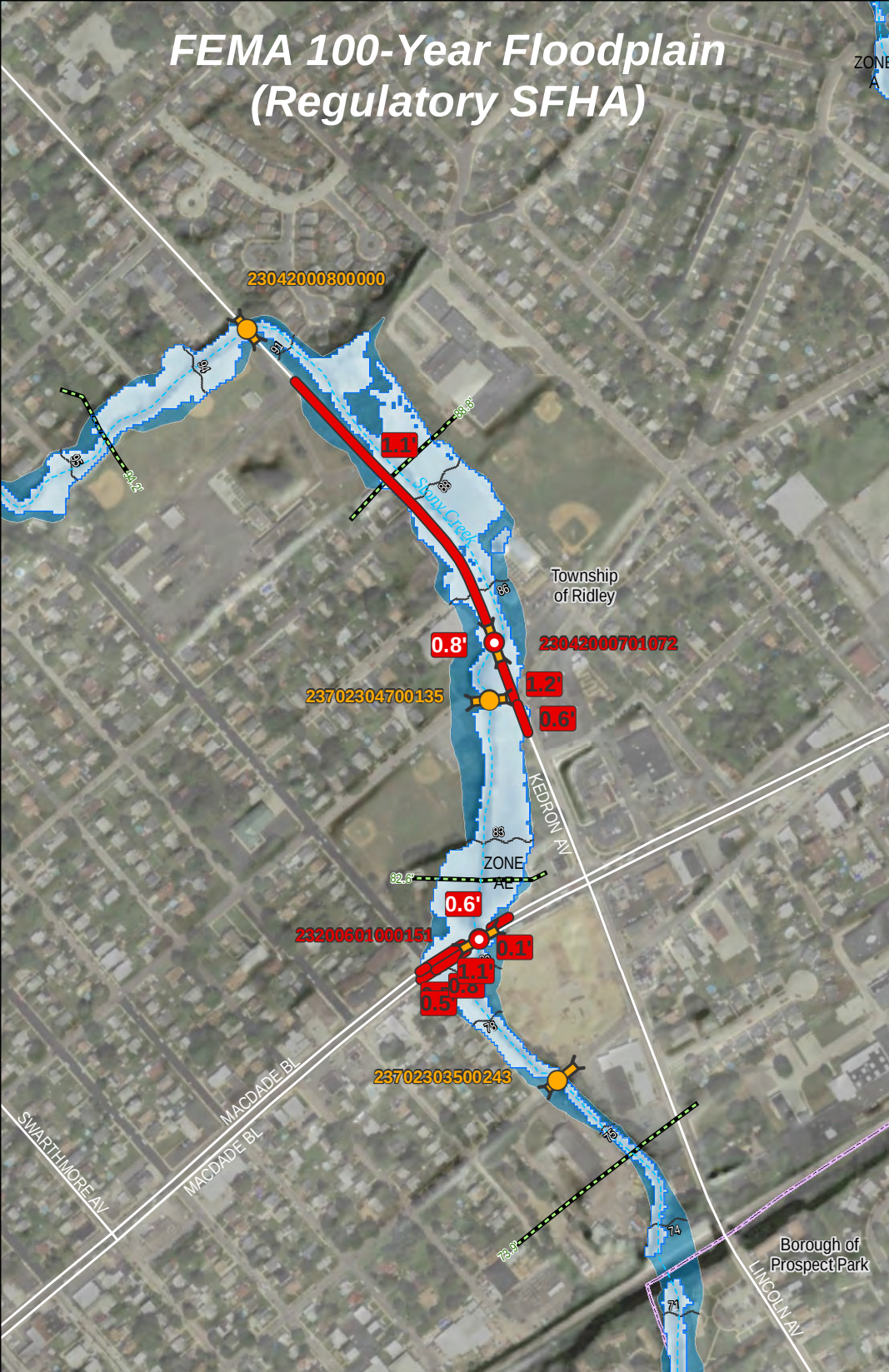
DATA FRAME PROPERTIES:
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NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

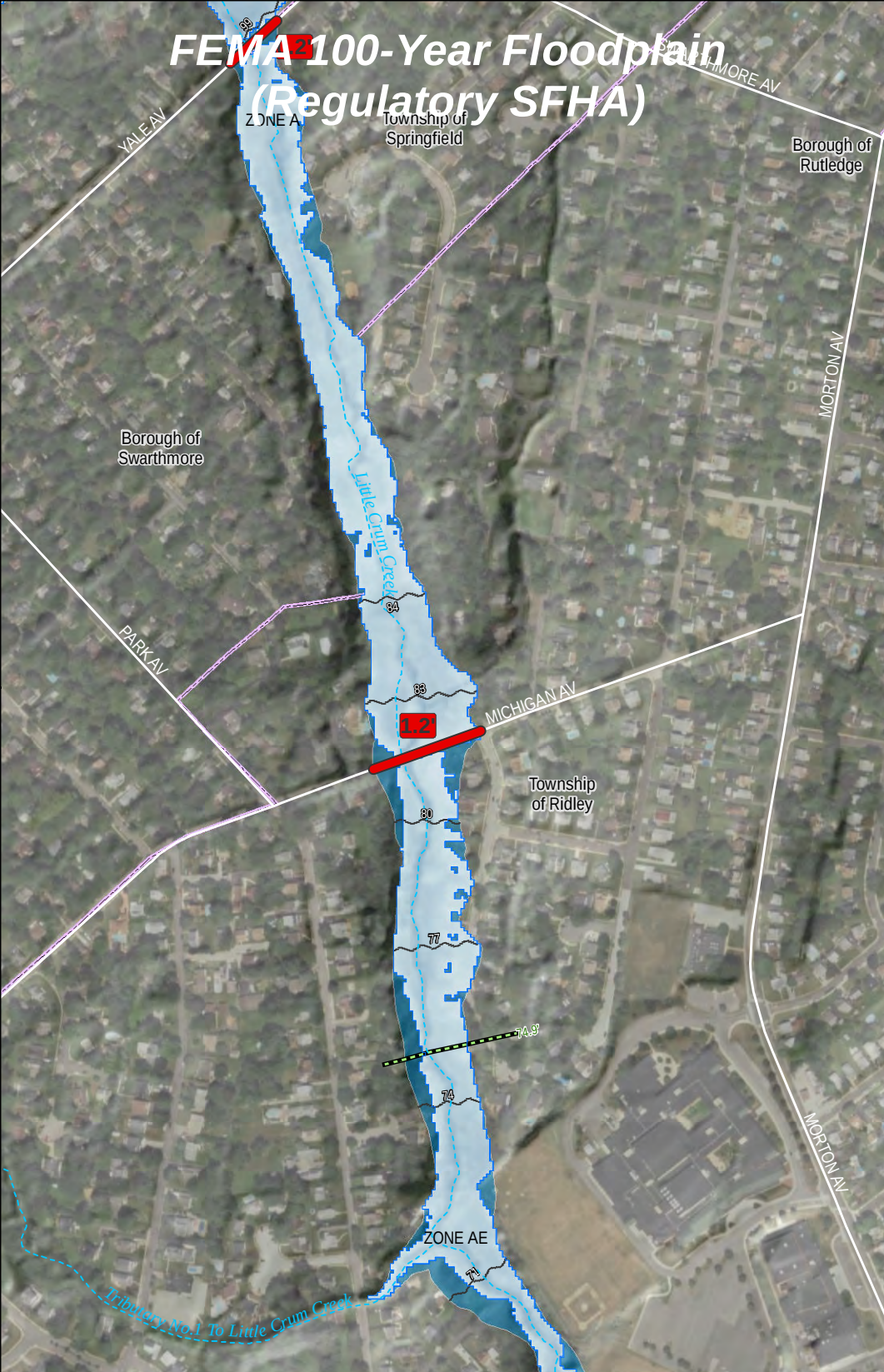
VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

**Michael Baker
INTERNATIONAL**









MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
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FEMA FLOODPLAIN

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FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

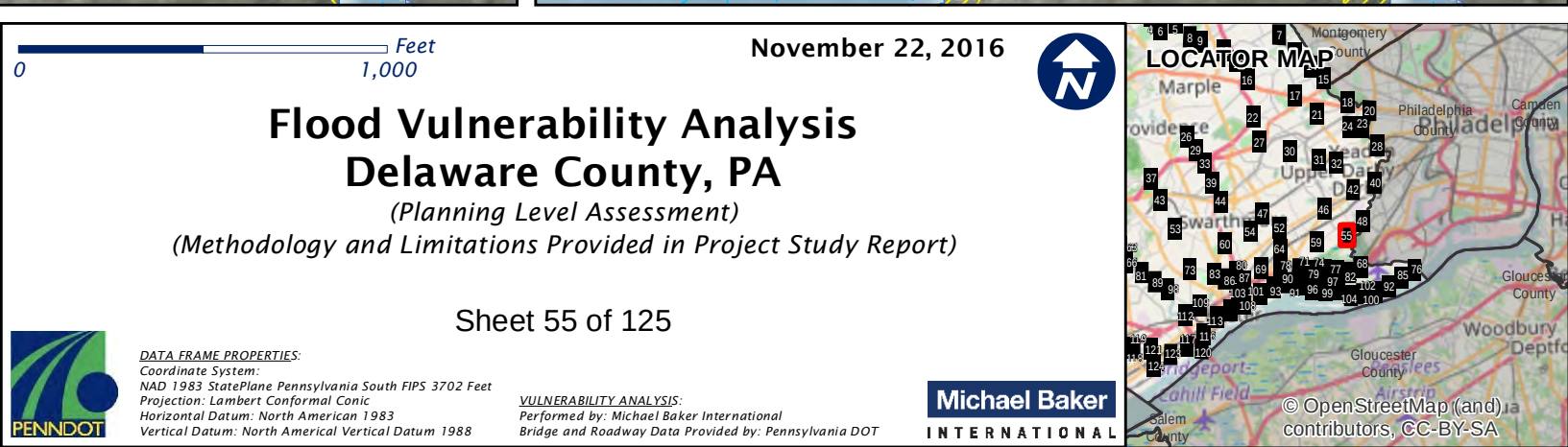
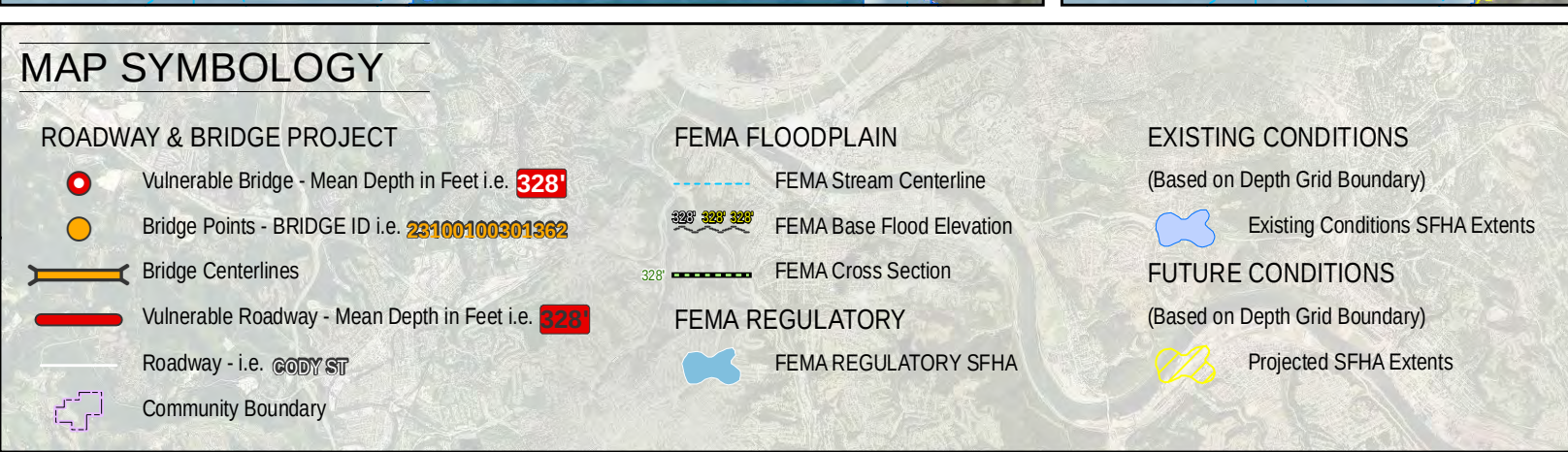
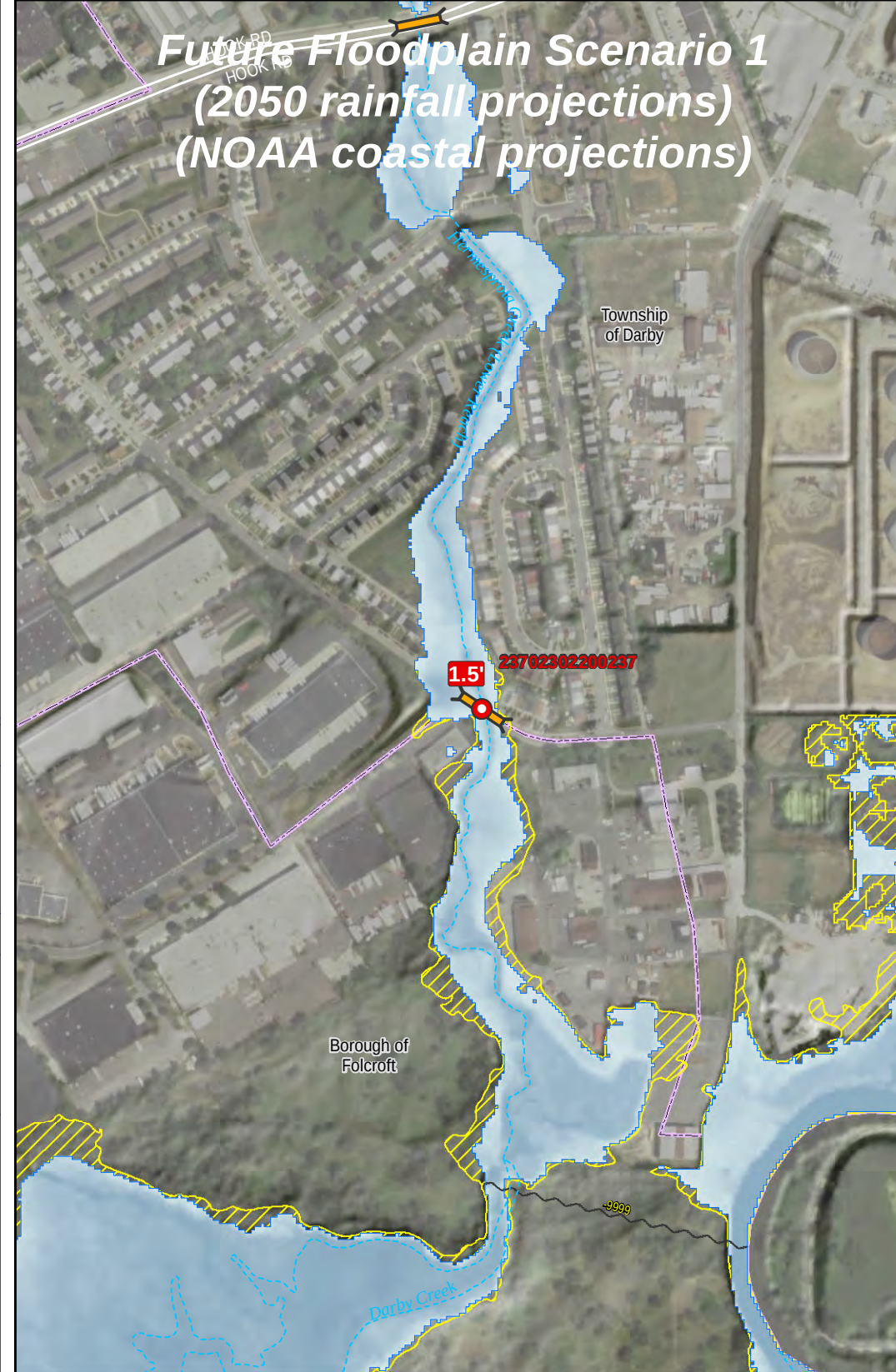
Flood Vulnerability Analysis Delaware County, PA

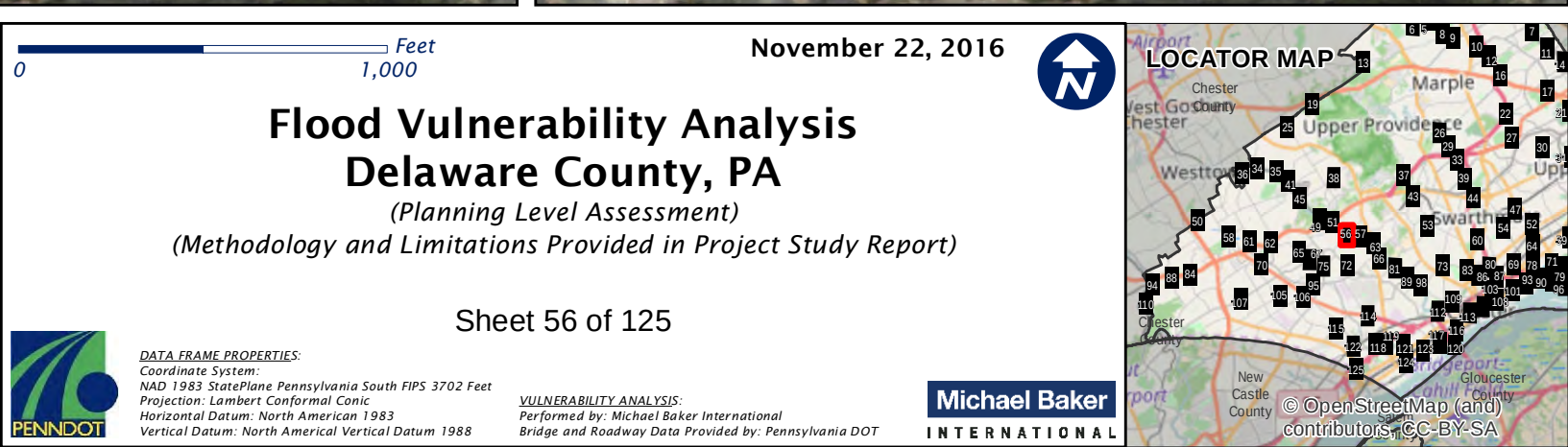
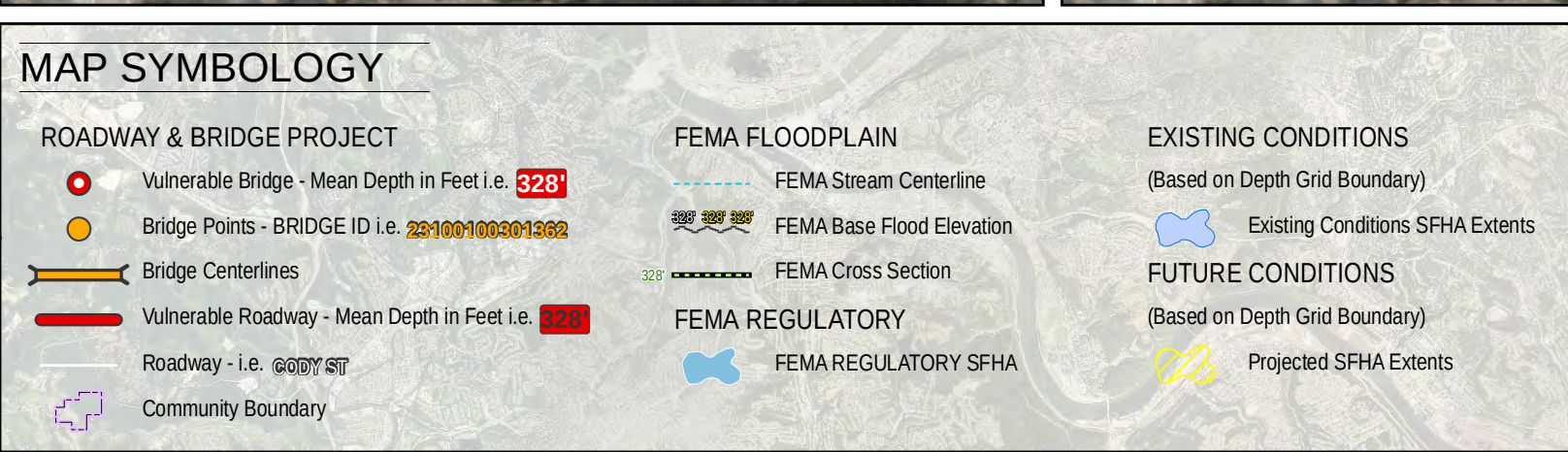
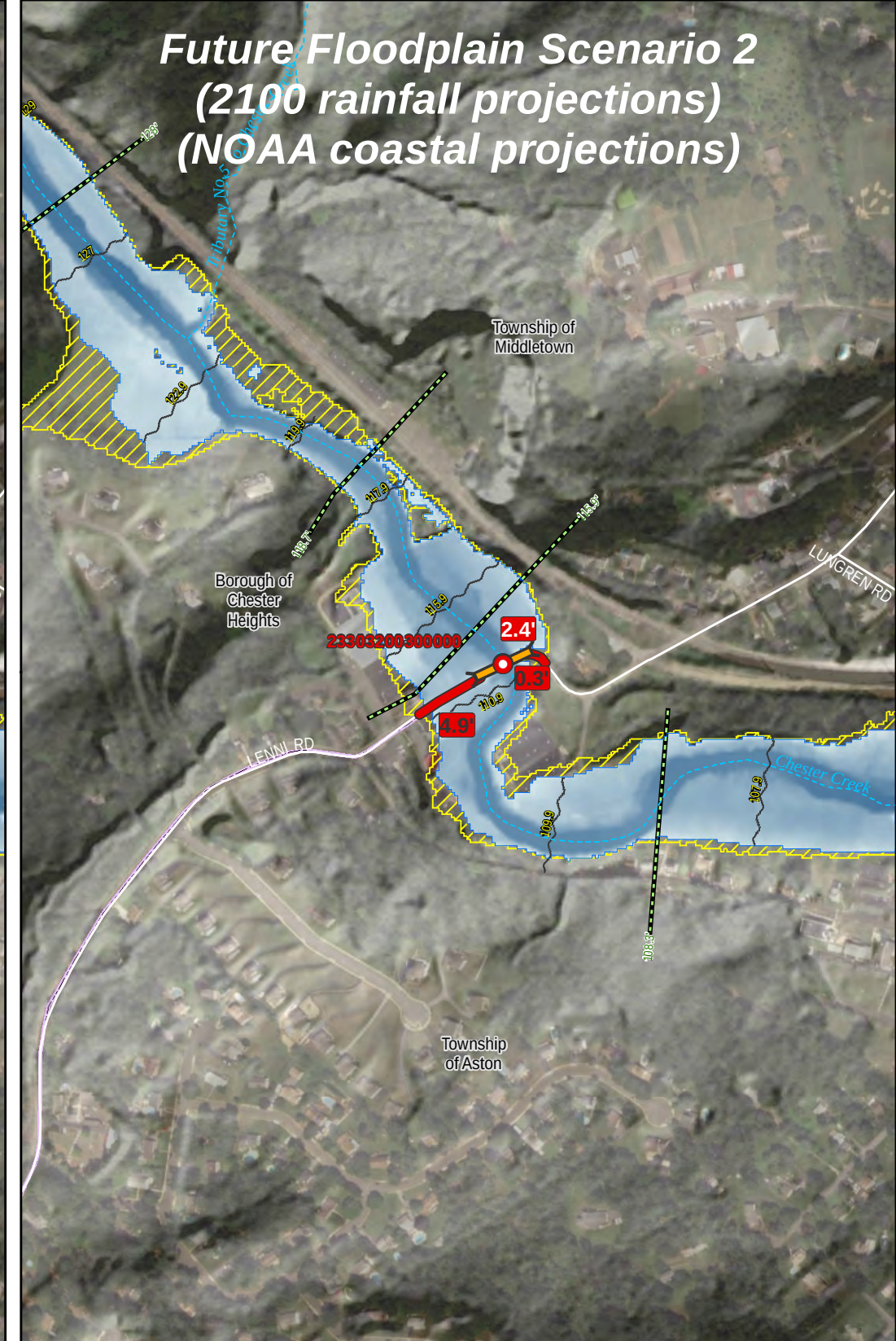
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 54 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

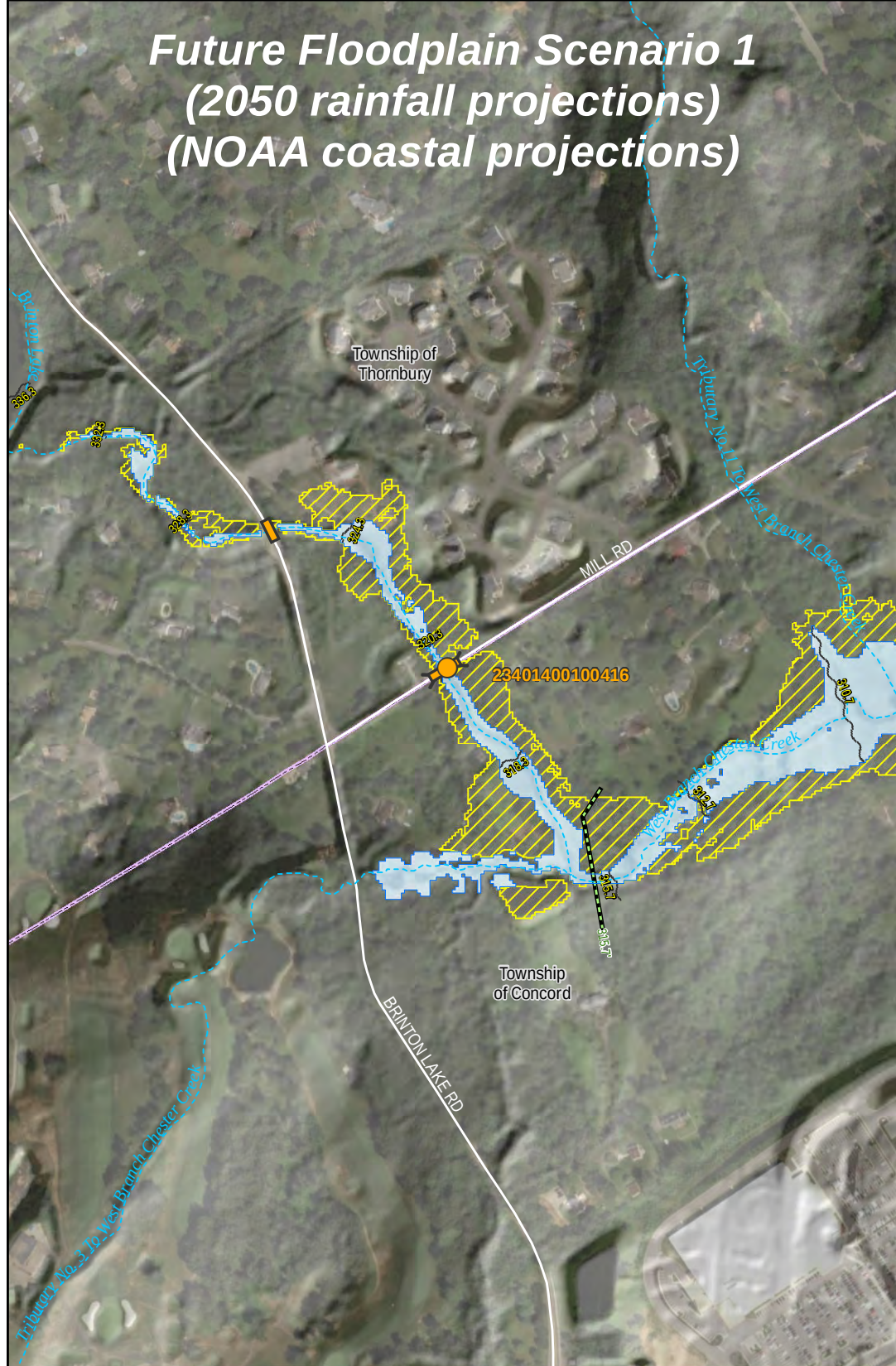




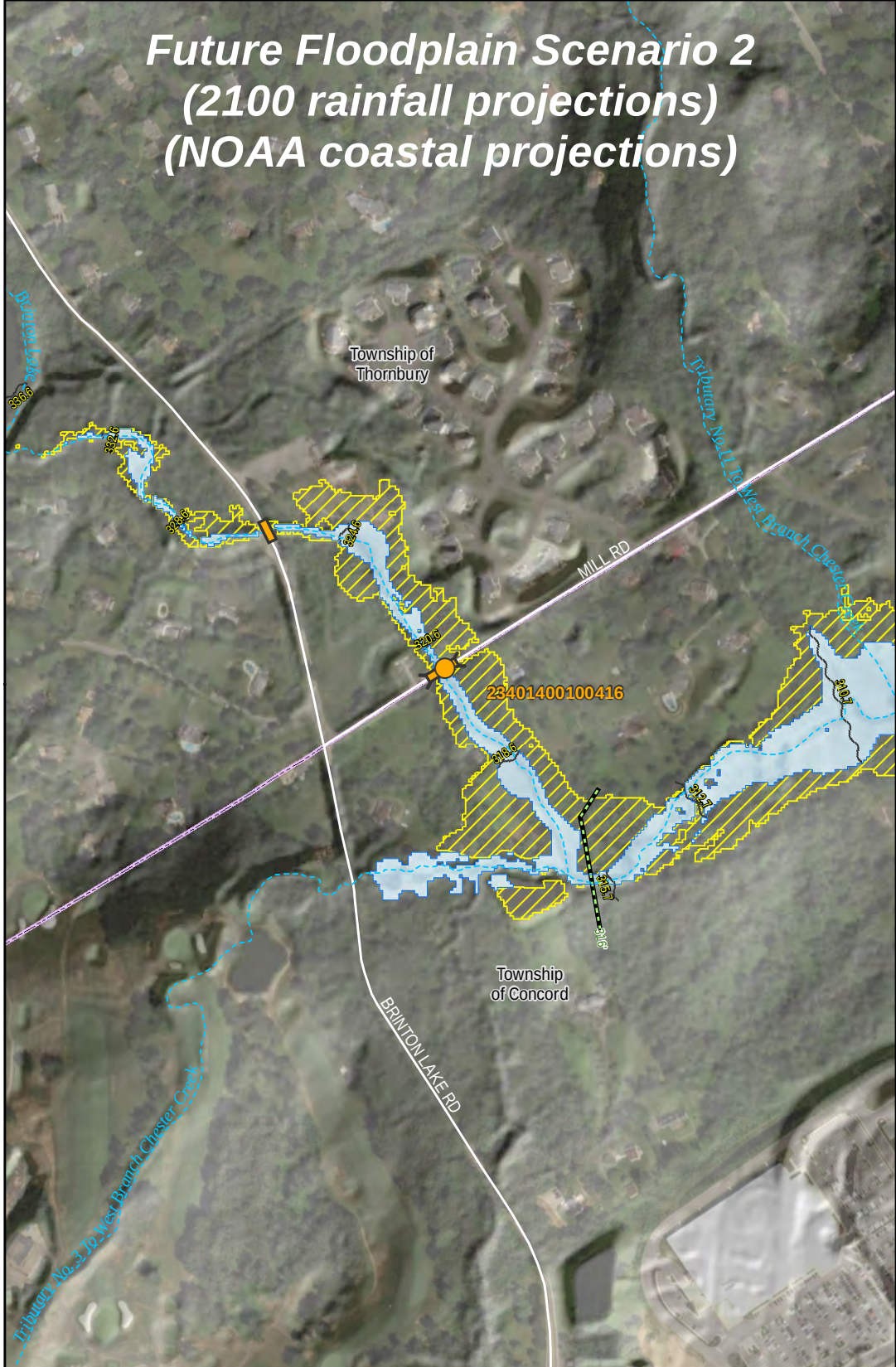
FEMA 100-Year Floodplain
(Regulatory SFHA)



Future Floodplain Scenario 1
(2050 rainfall projections)
(NOAA coastal projections)



Future Floodplain Scenario 2
(2100 rainfall projections)
(NOAA coastal projections)



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. 328'
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- Roadway - i.e. 60Y ST
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FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
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FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS

(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS

(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016



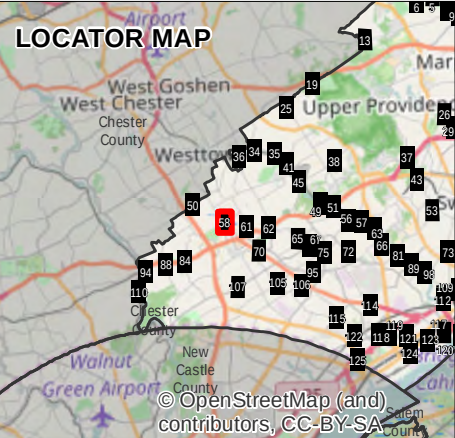
Flood Vulnerability Analysis
Delaware County, PA
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

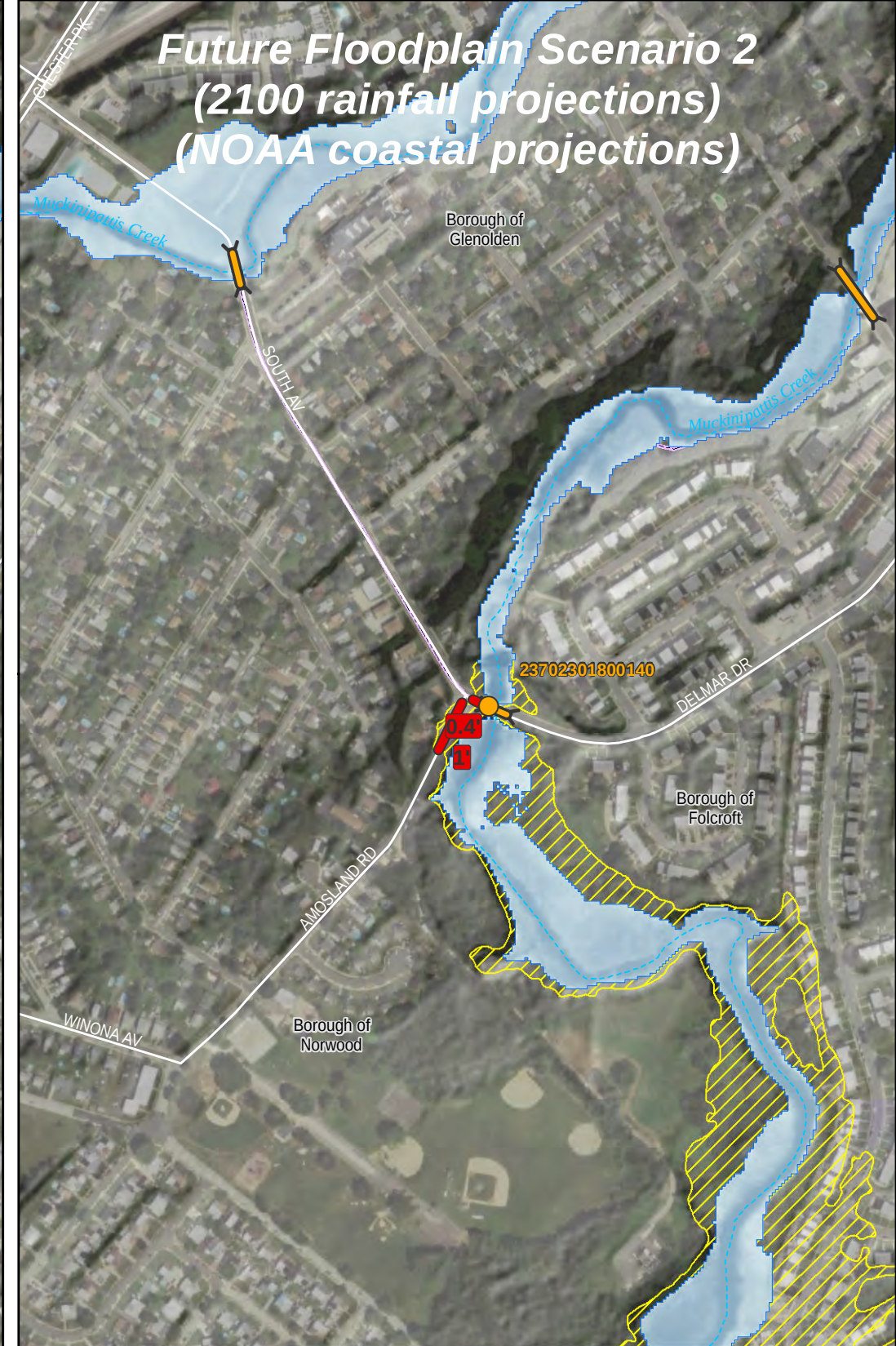
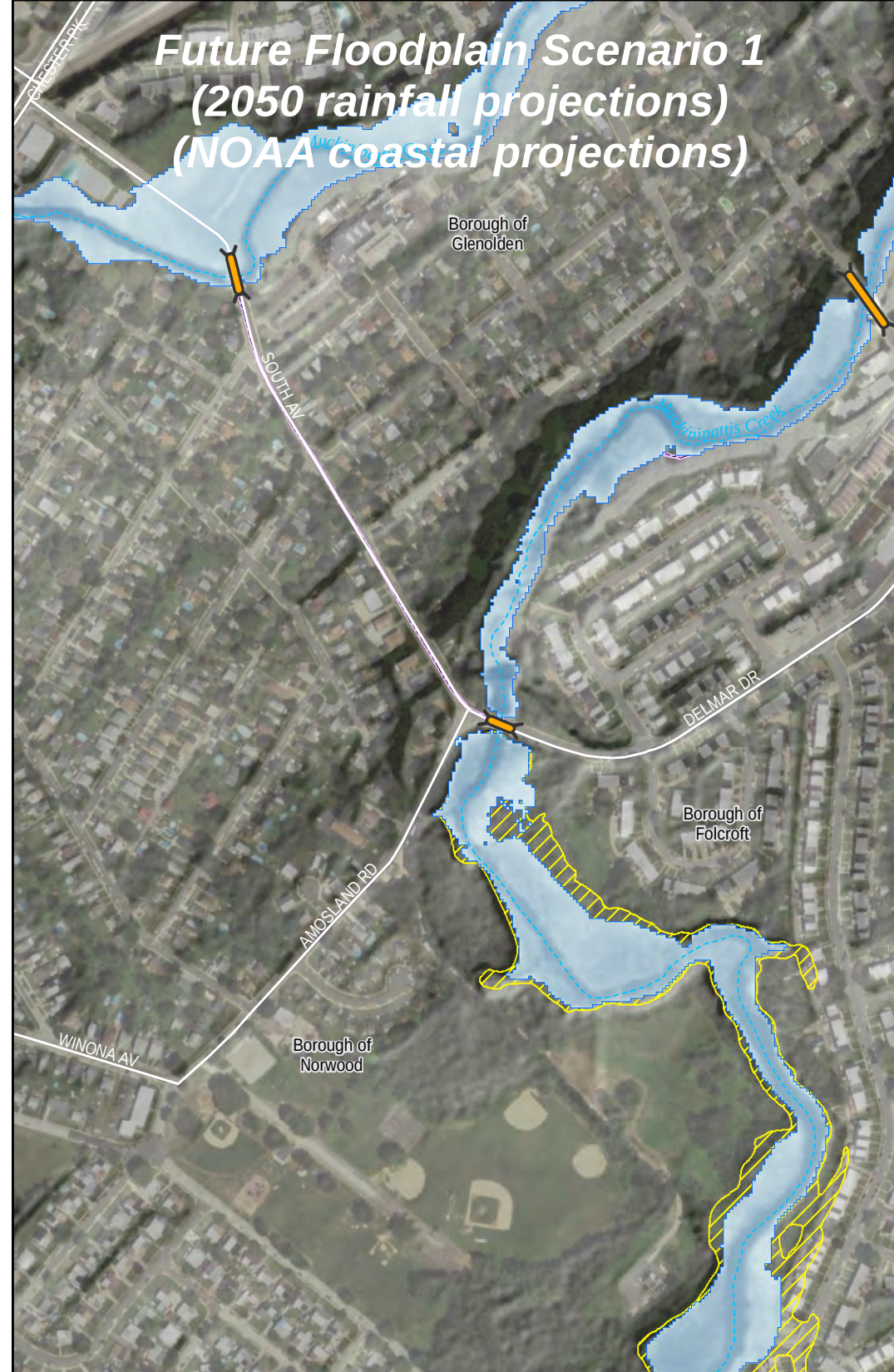
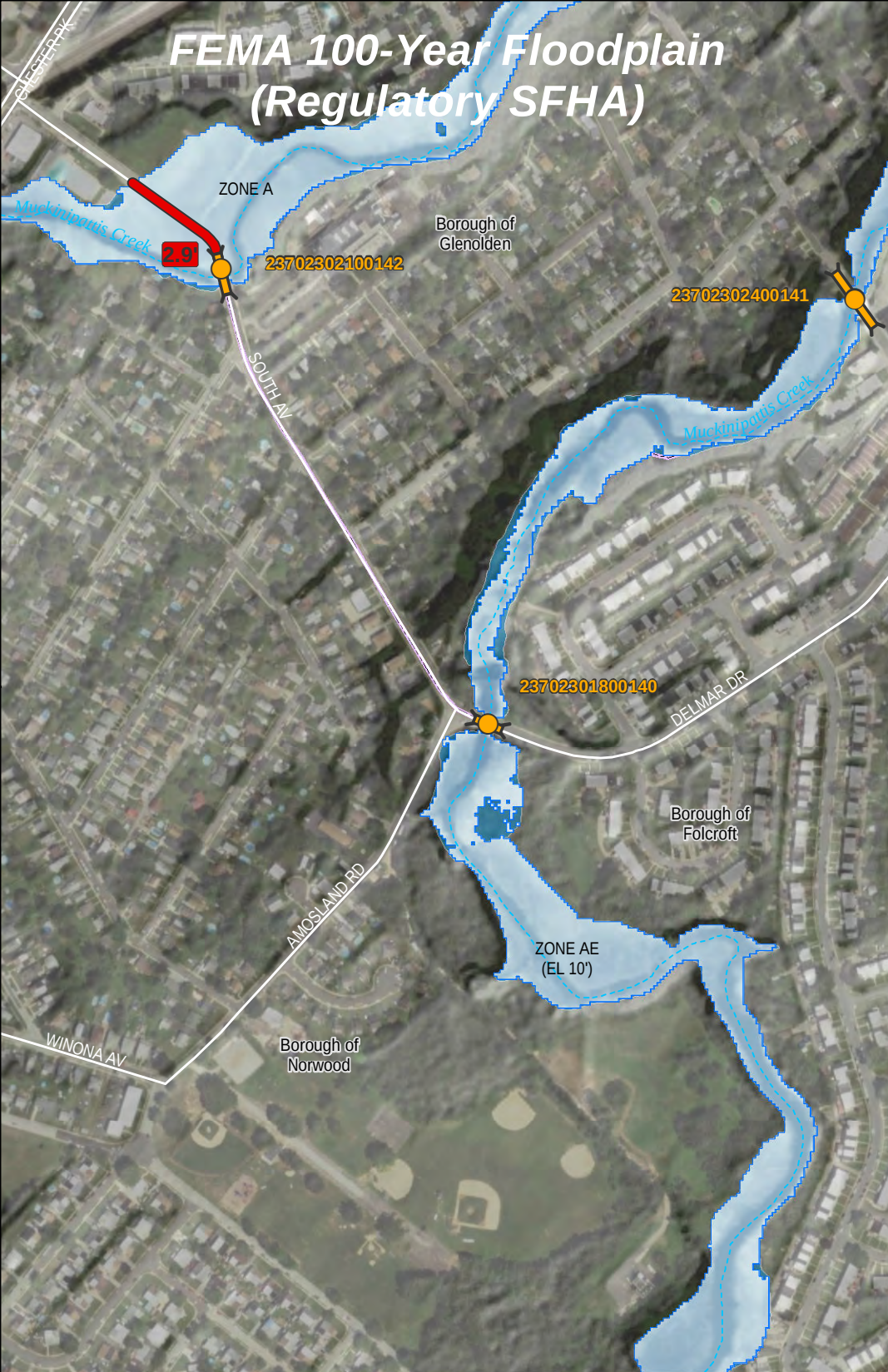
Sheet 58 of 125



DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
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MAP SYMBOLOGY

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0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis

Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

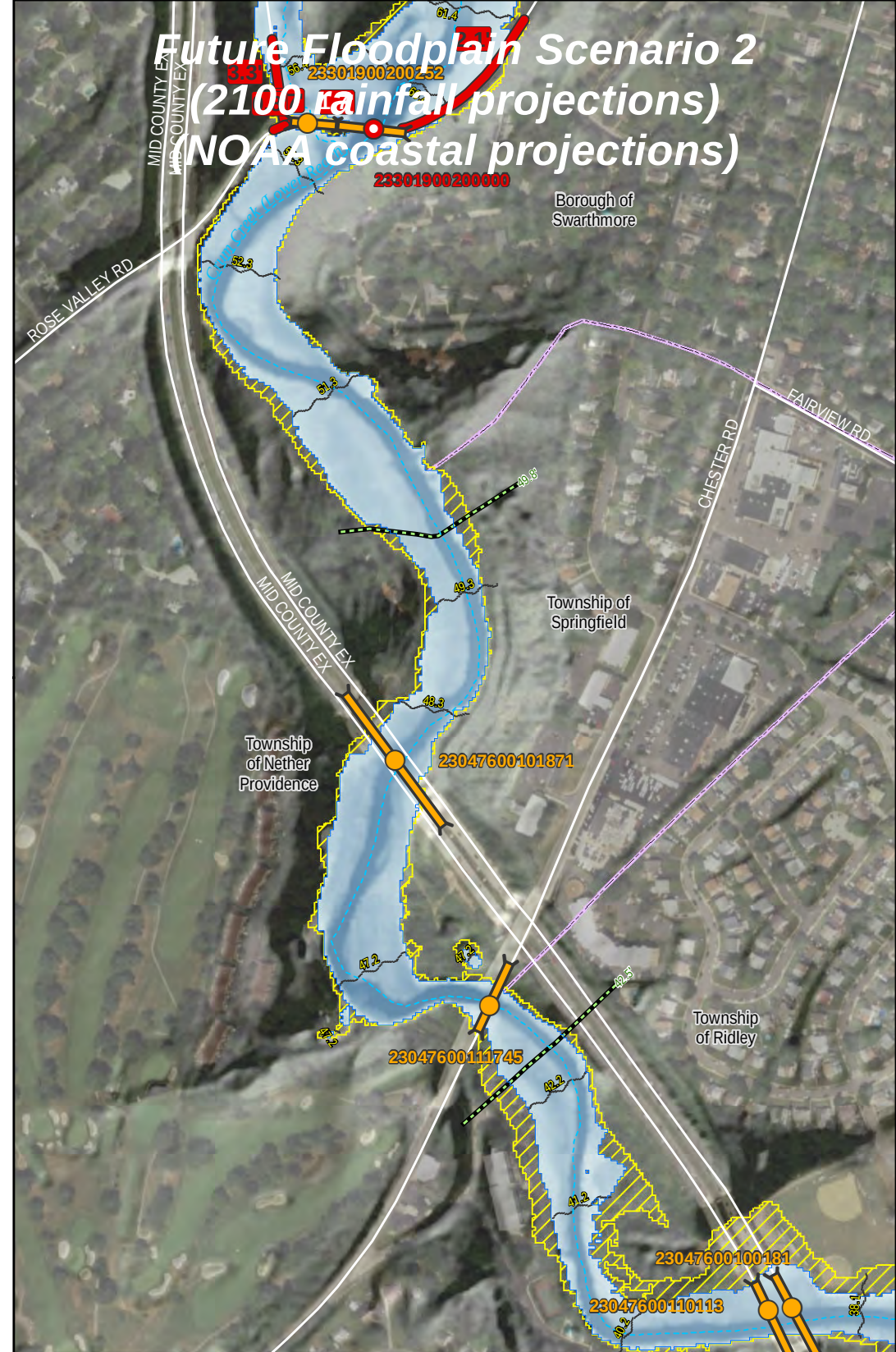
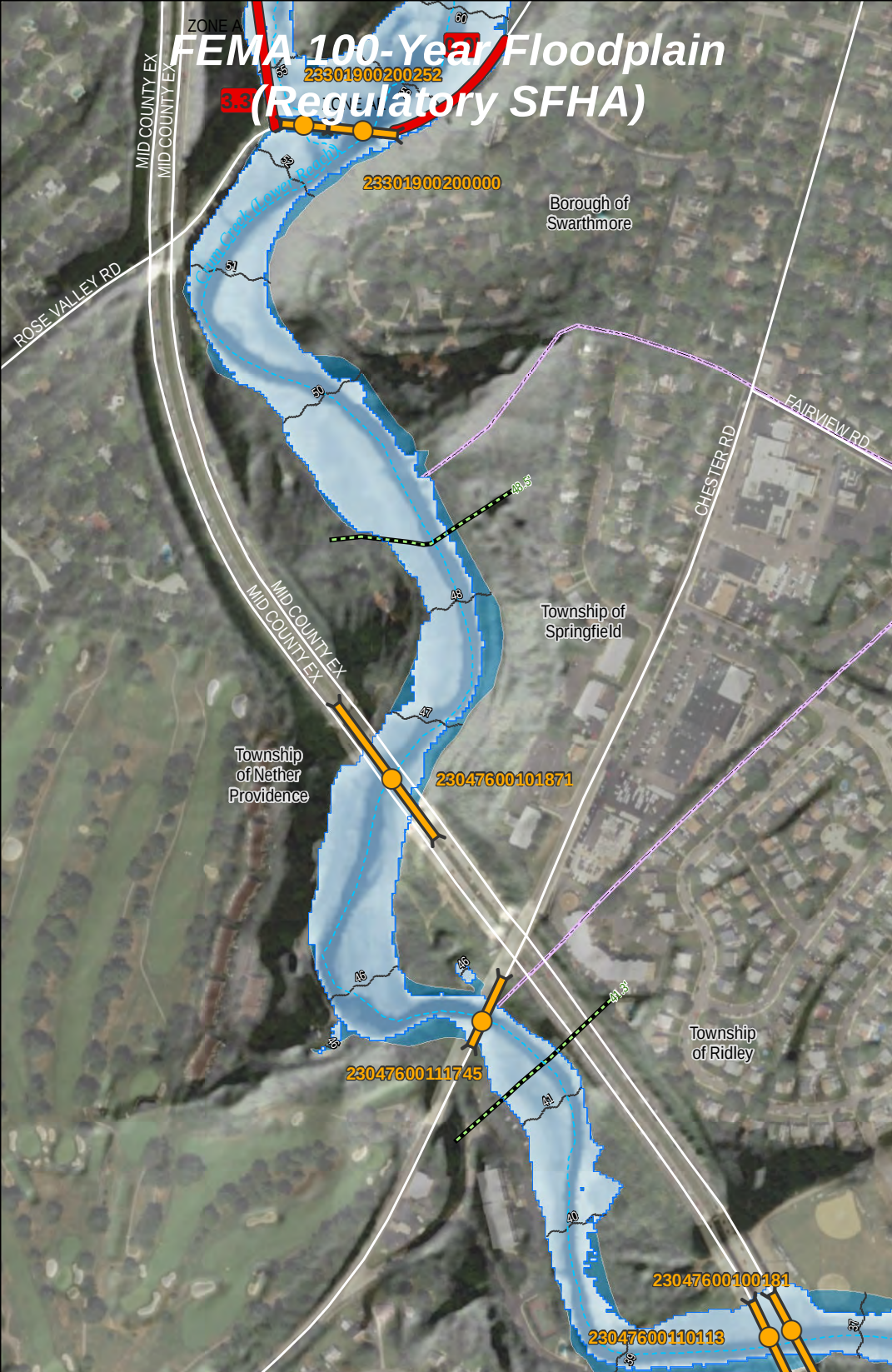
Sheet 59 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

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LOCATOR MAP

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MAP SYMBOLOGY

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November 22, 2016

Flood Vulnerability Analysis

Delaware County, PA

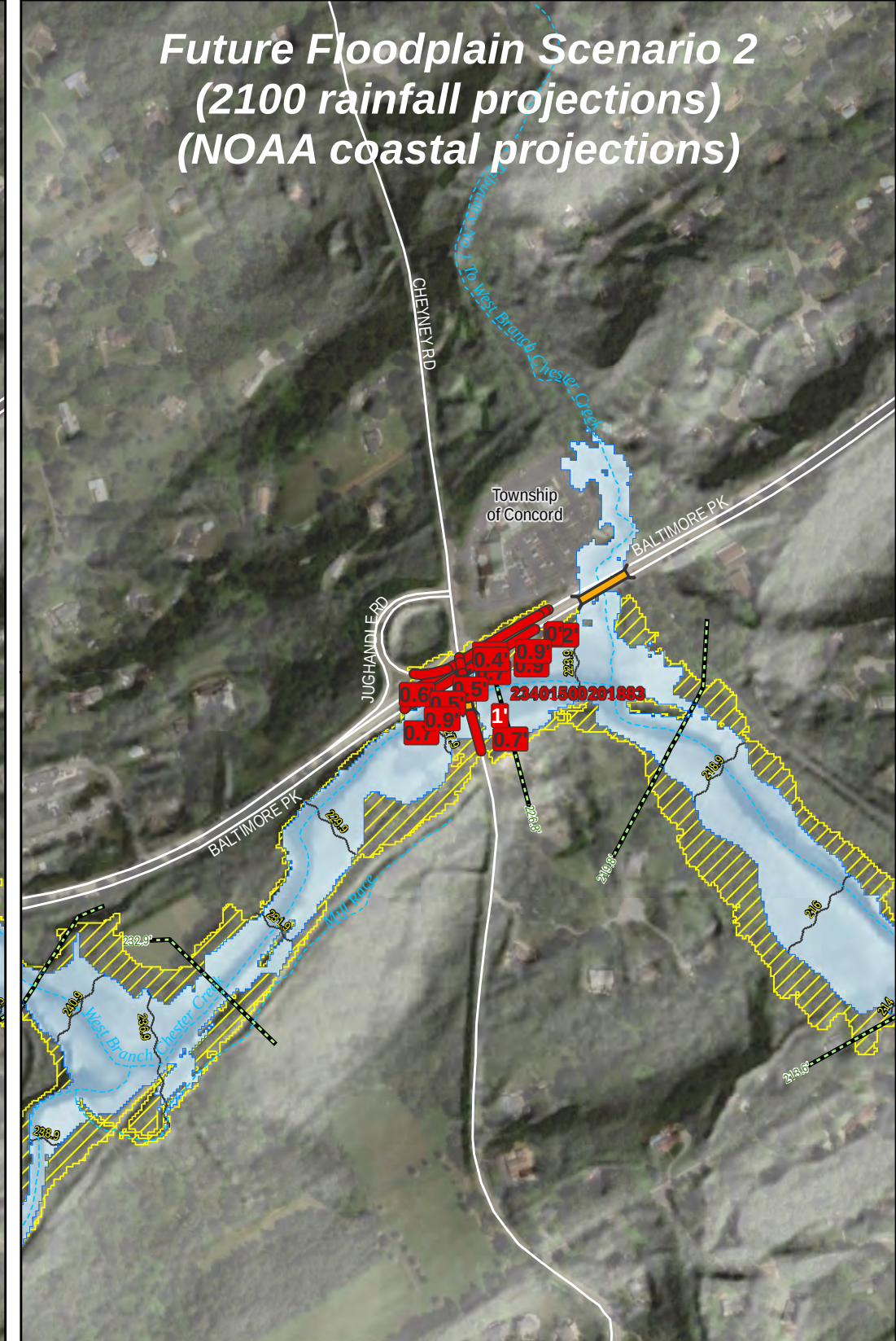
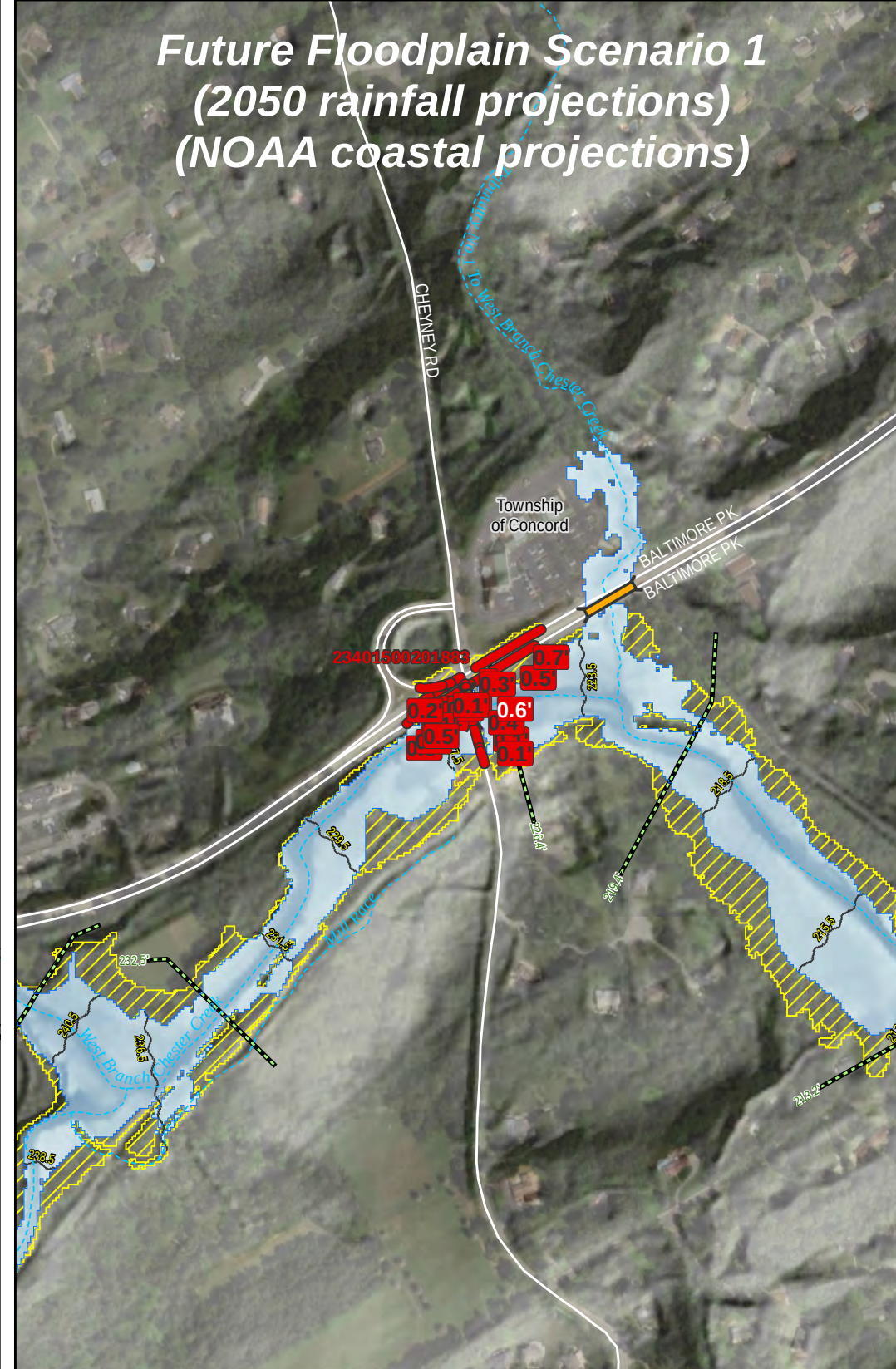
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(Methodology and Limitations Provided in Project Study Report)

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DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
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Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
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LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
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Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. 60DY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

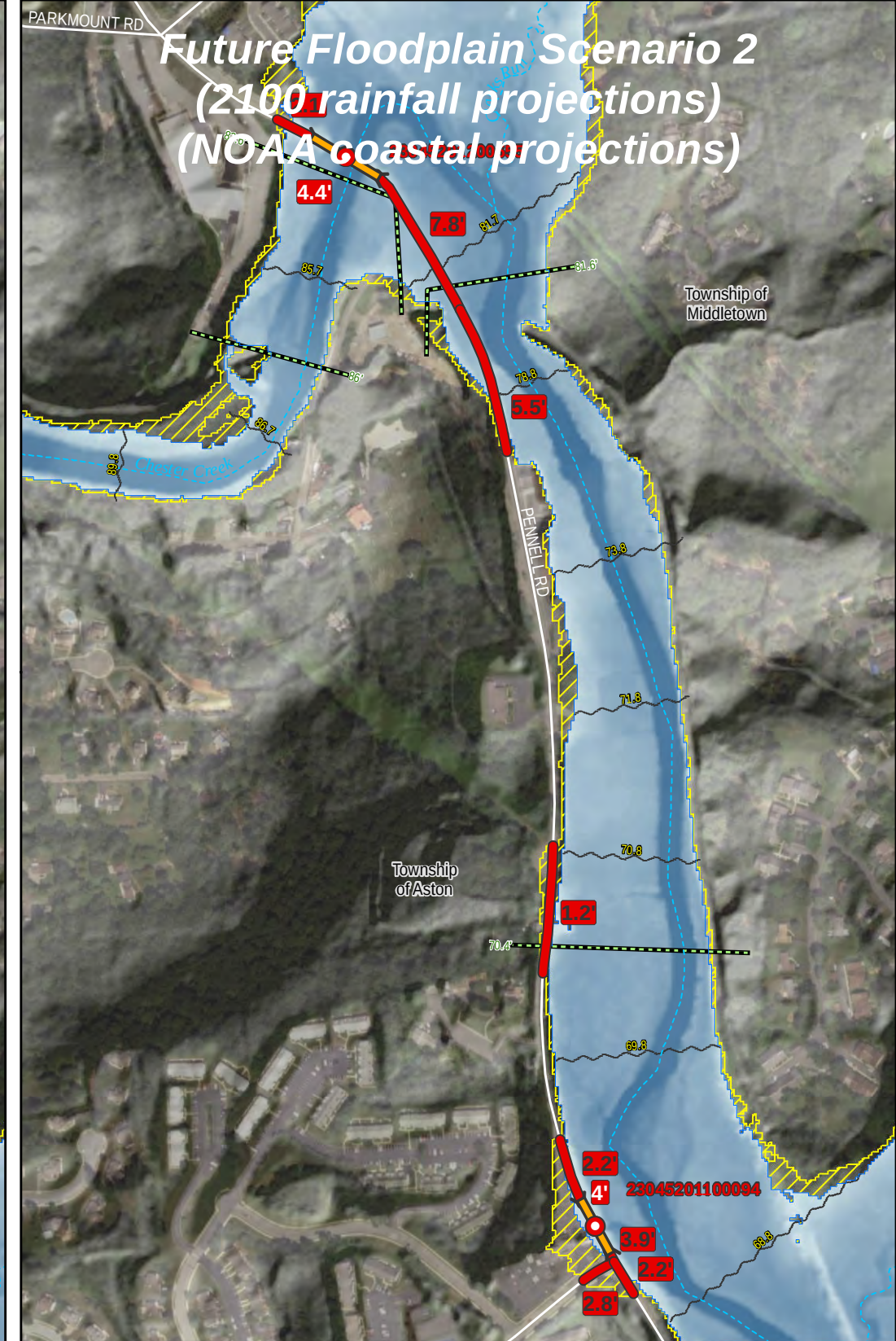
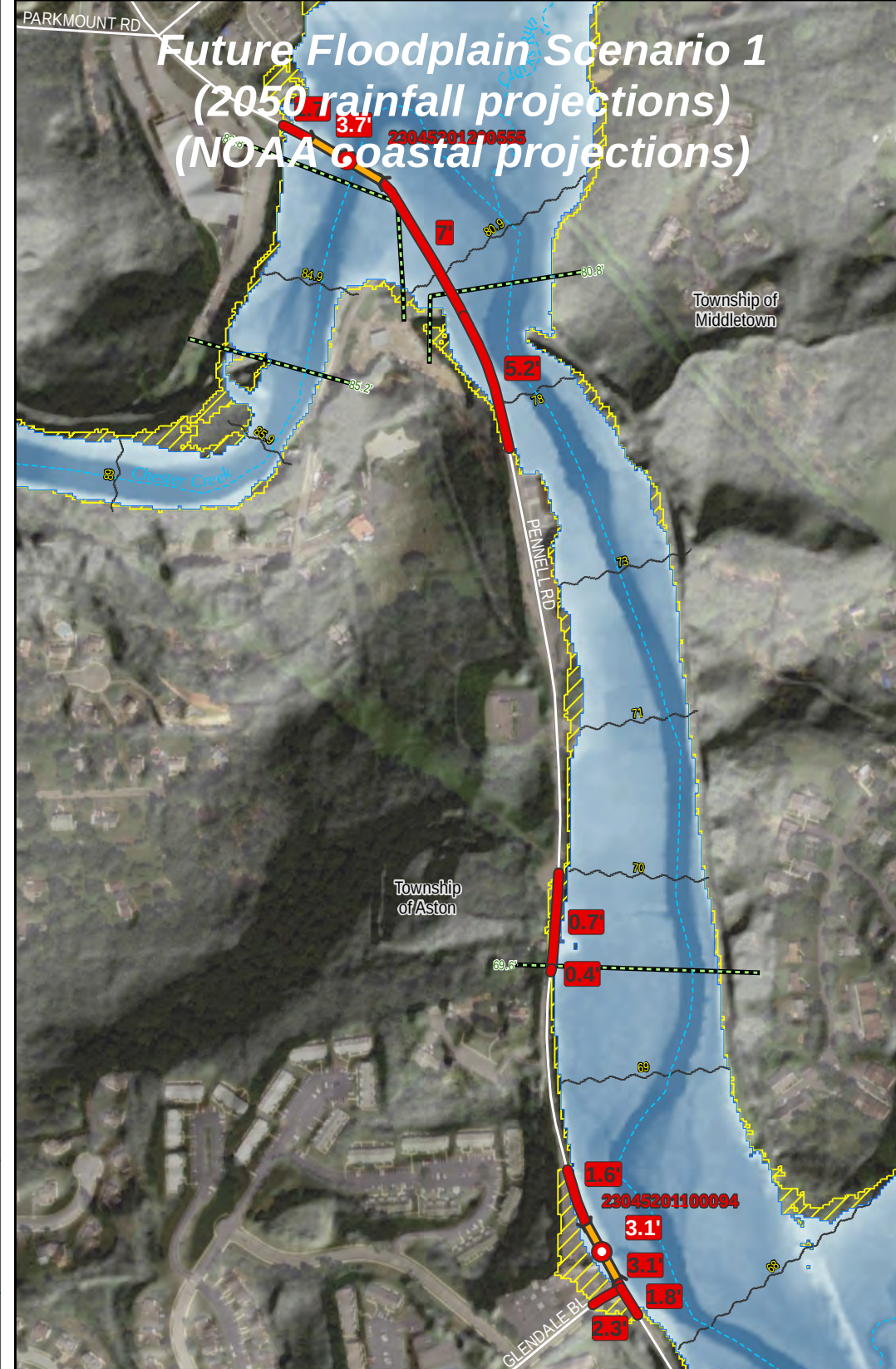
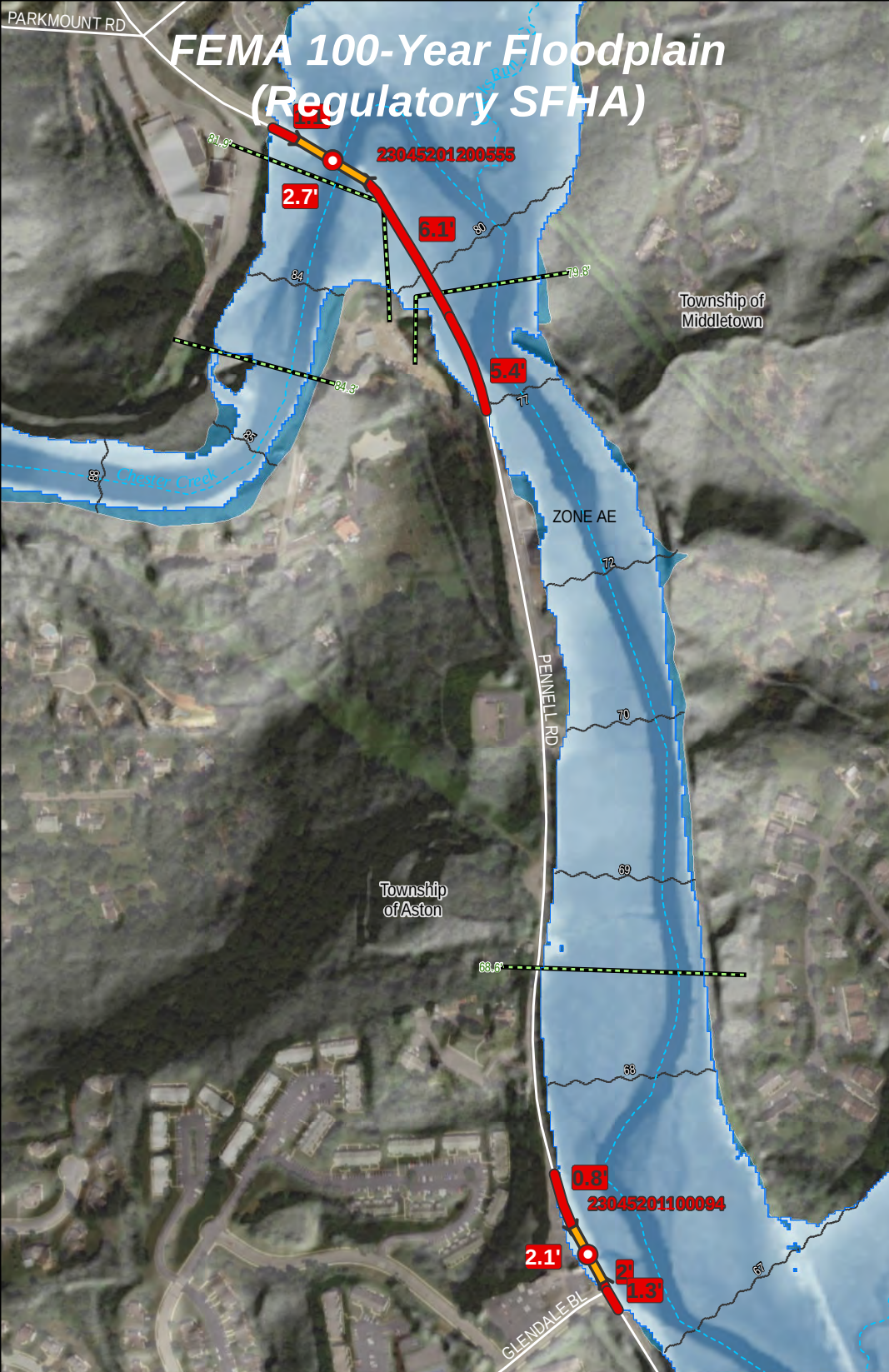
Sheet 62 of 125

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LOCATOR MAP

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0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis

Delaware County, PA

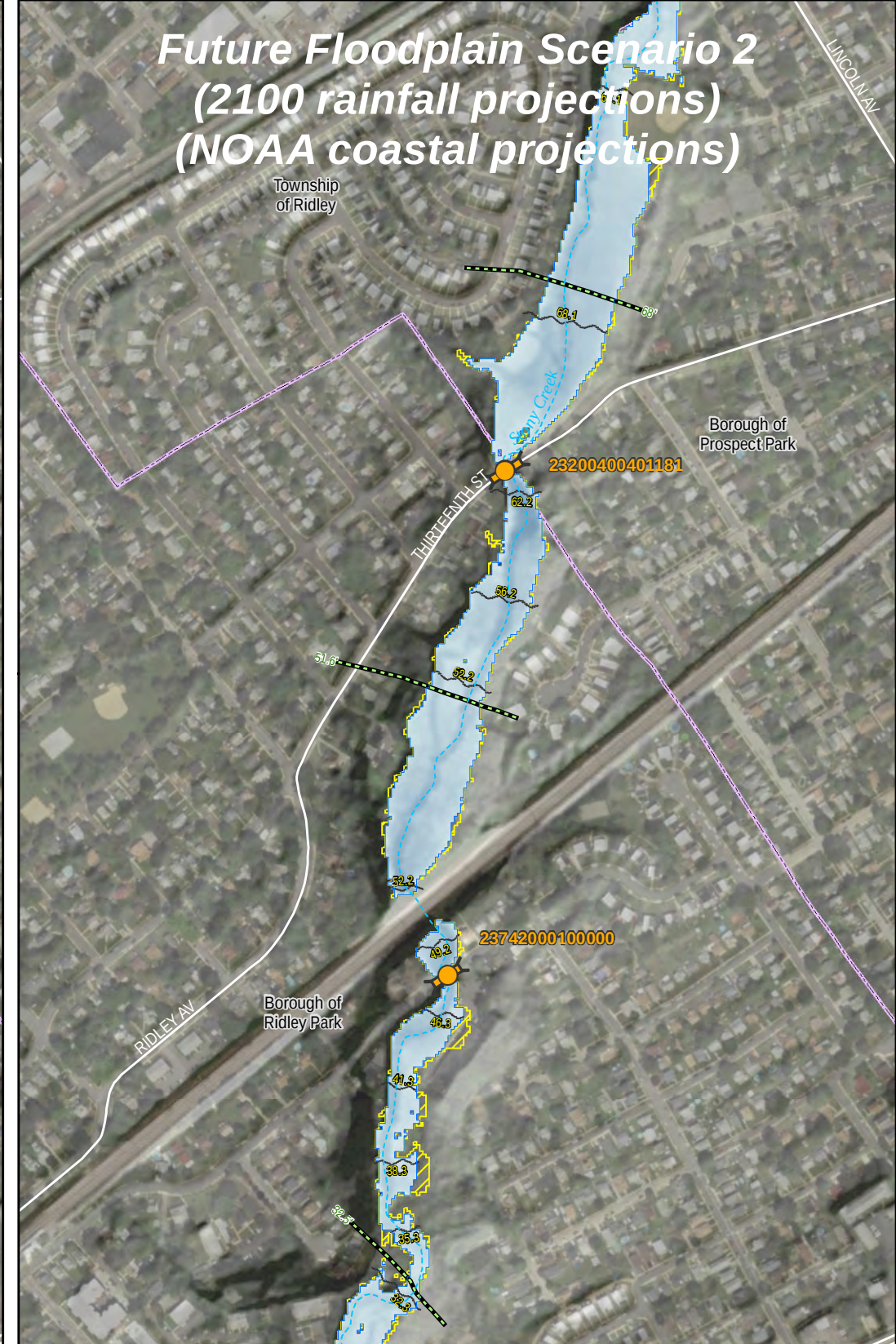
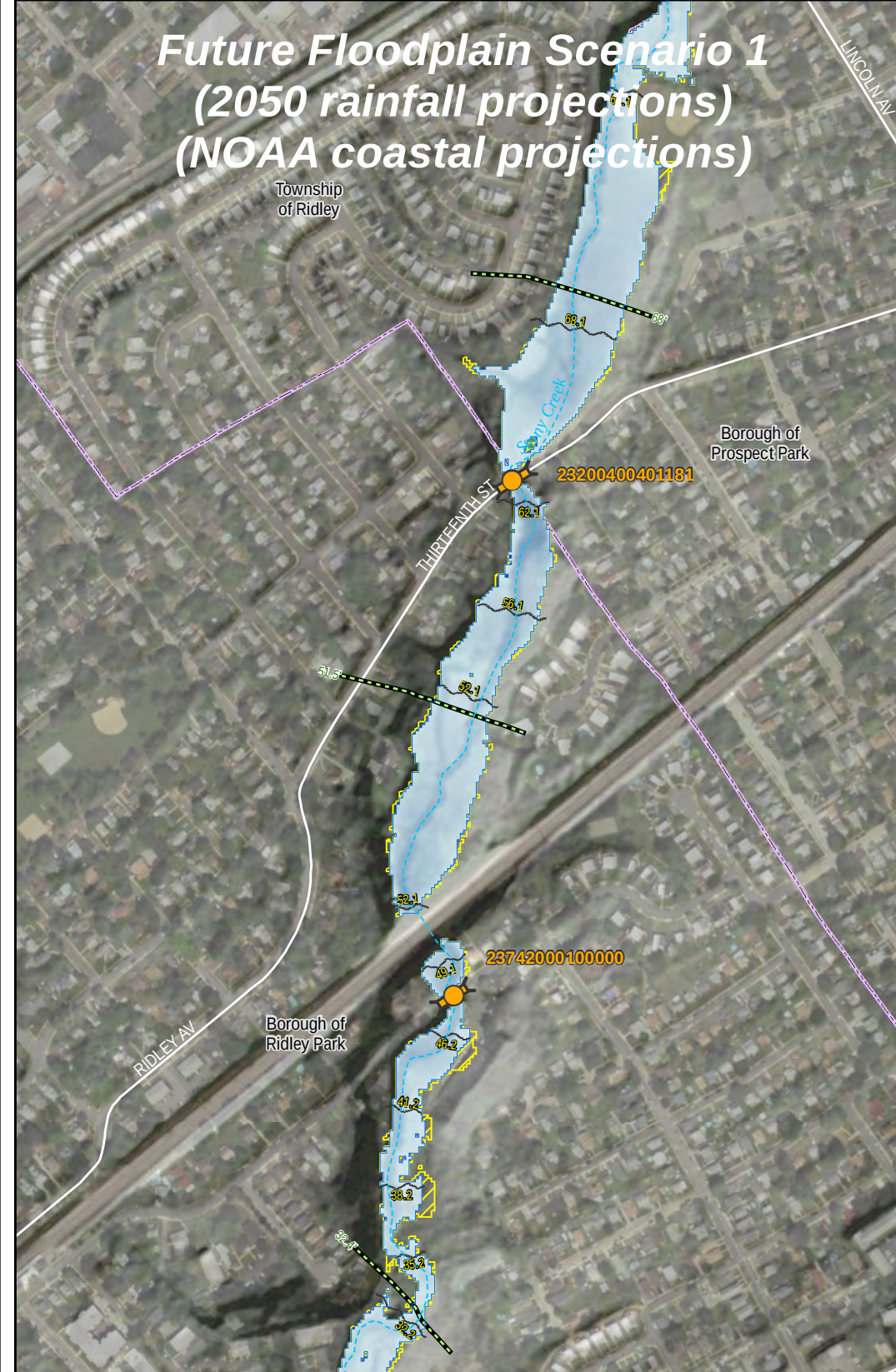
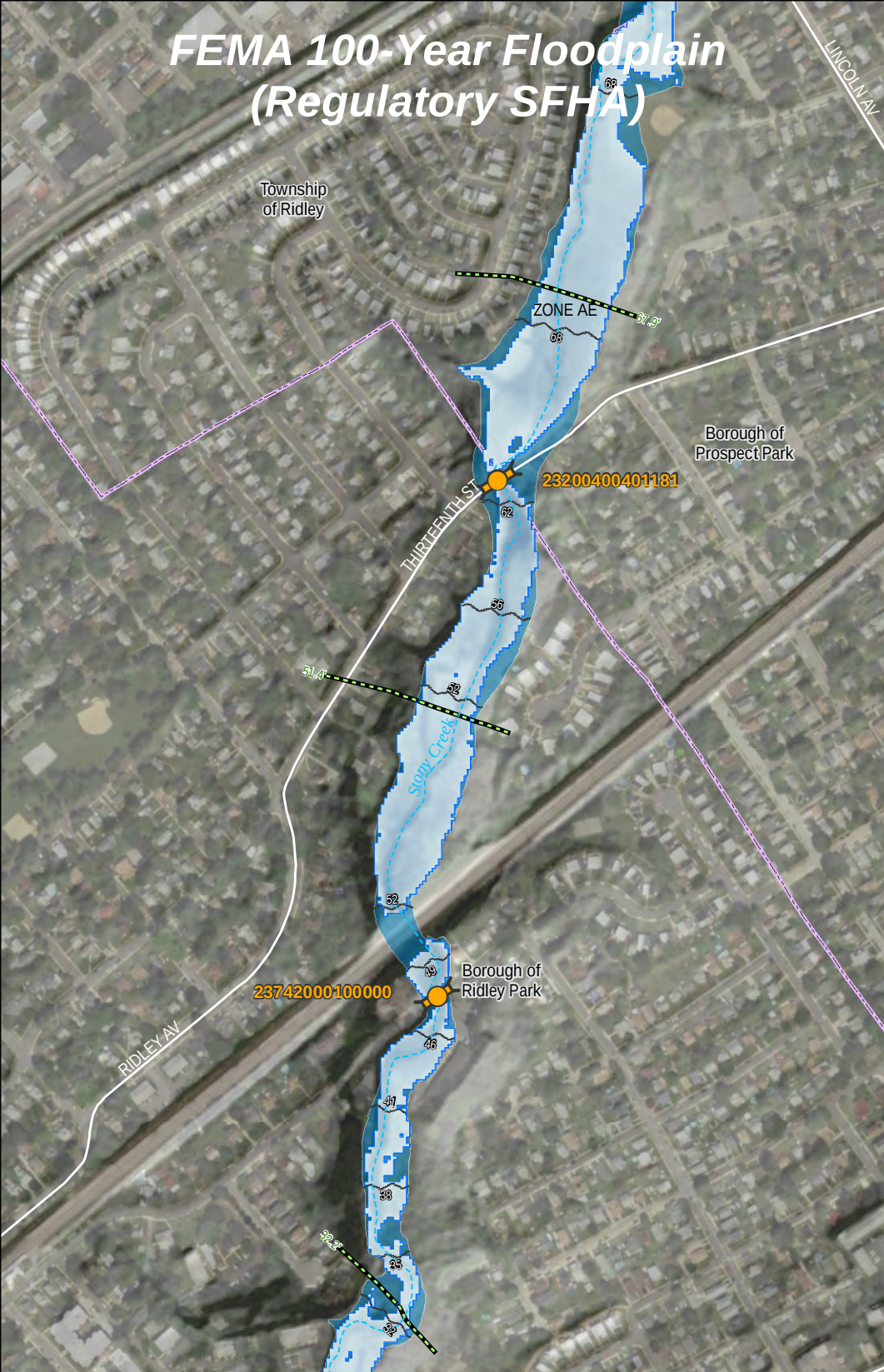
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 63 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

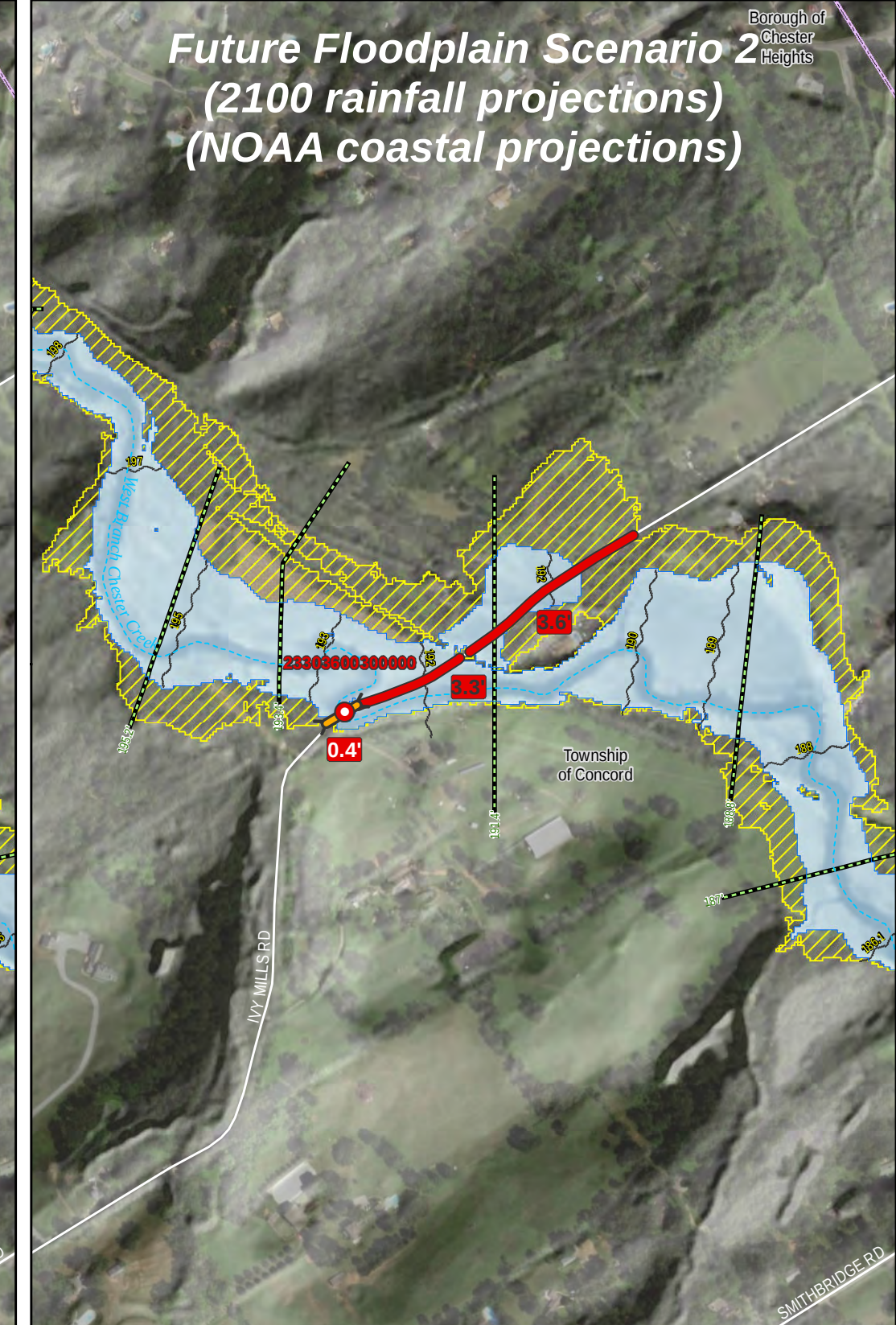
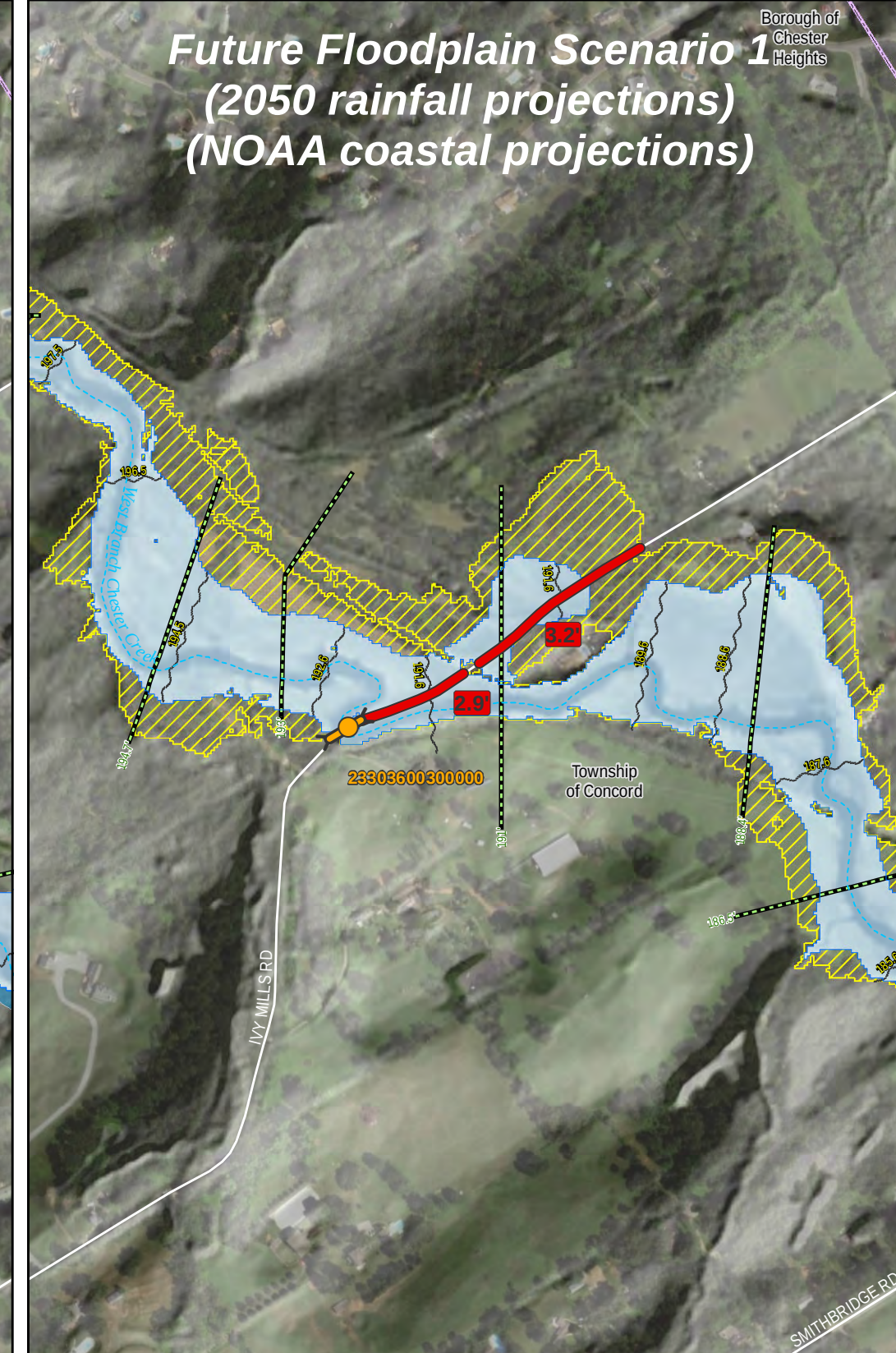
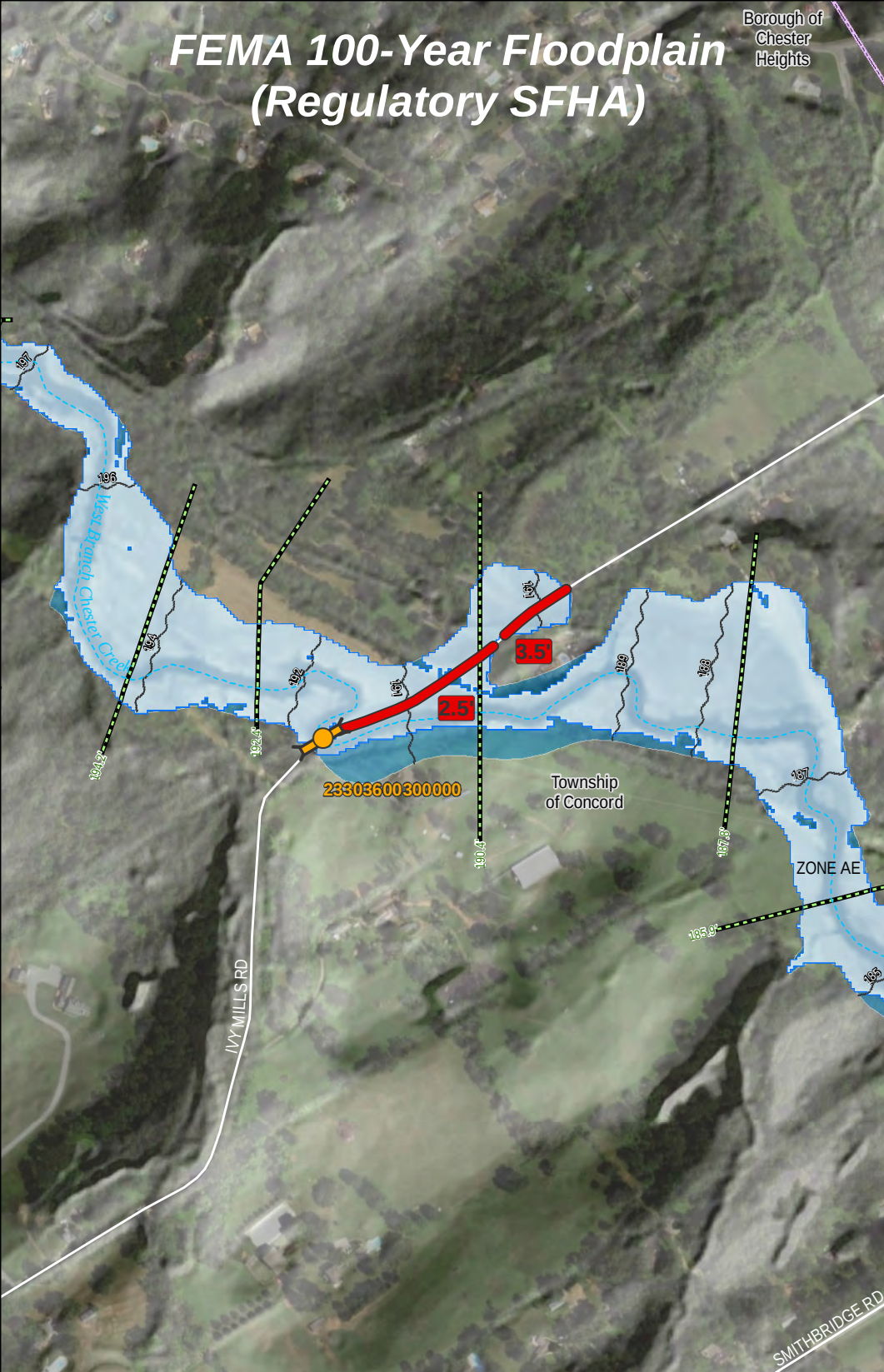
Sheet 64 of 125

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LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **60DY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS
(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS
(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

**Flood Vulnerability Analysis
Delaware County, PA**
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

November 22, 2016

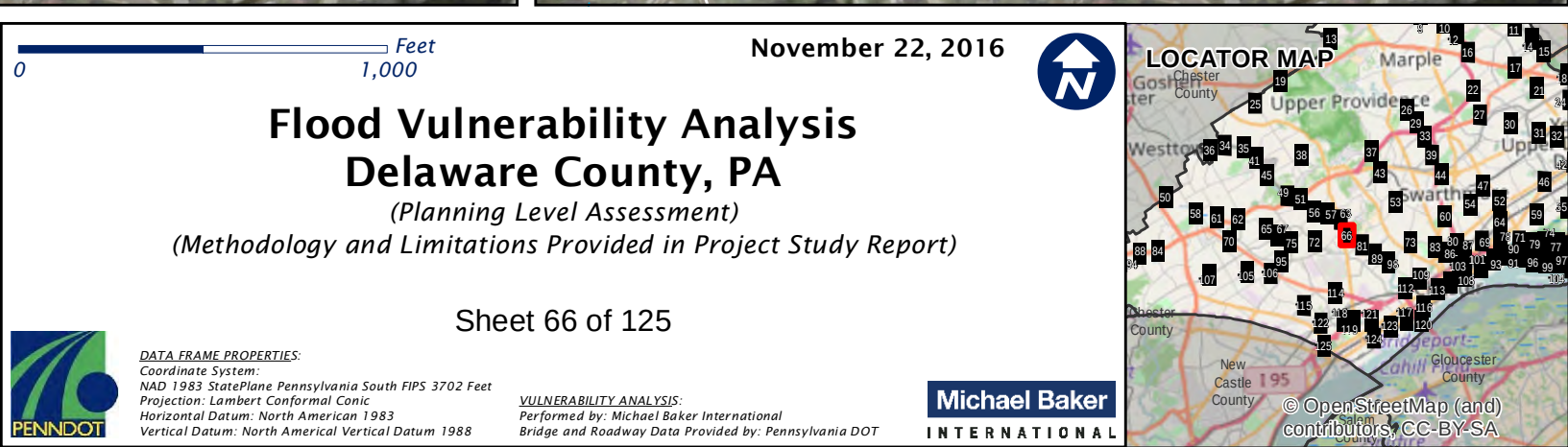
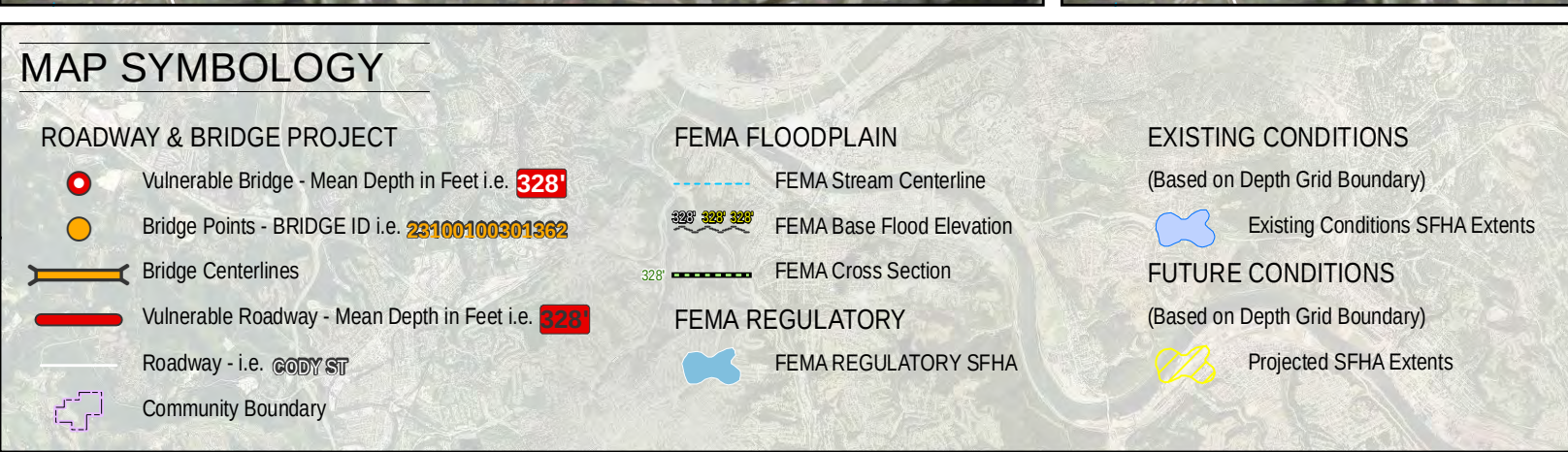
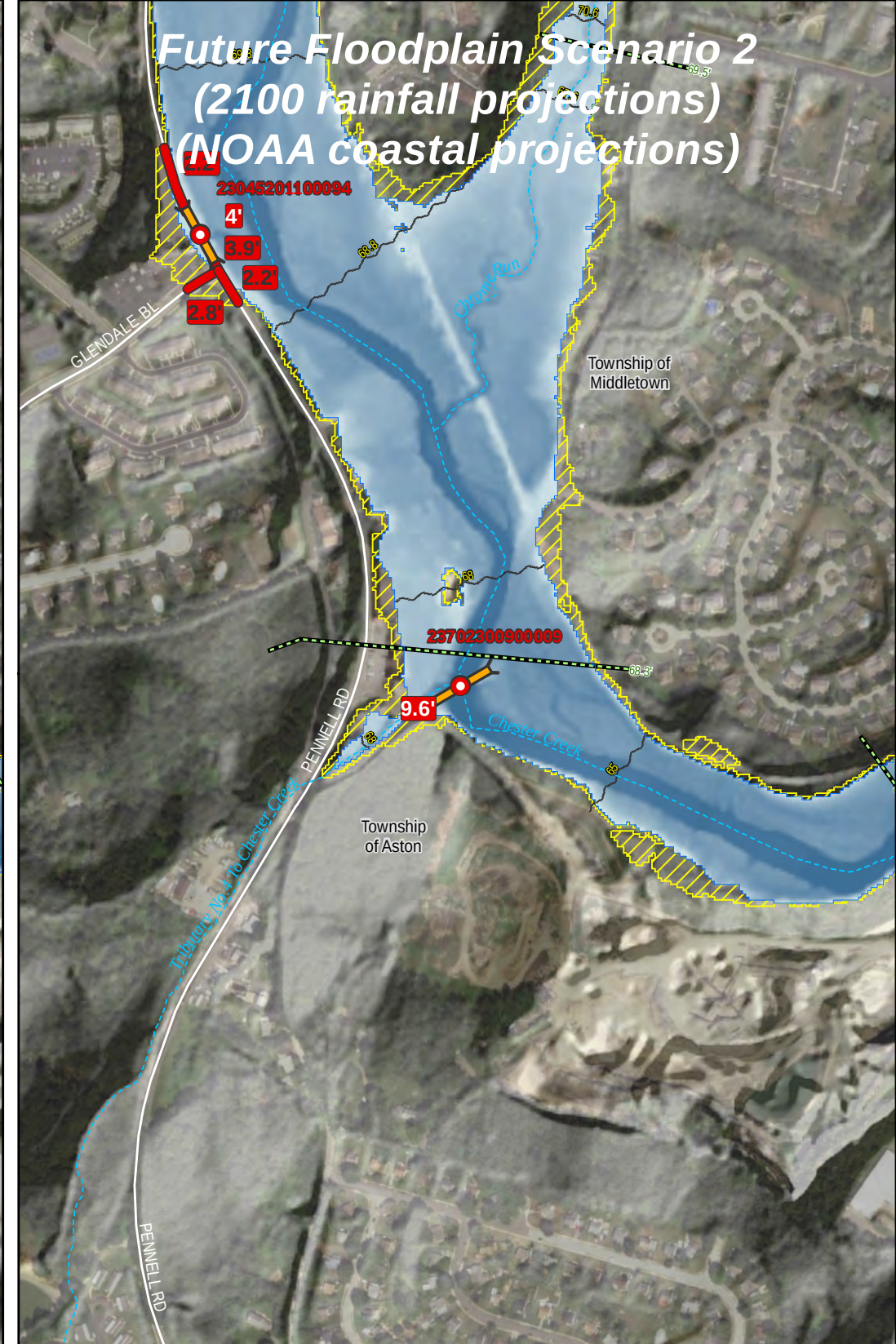
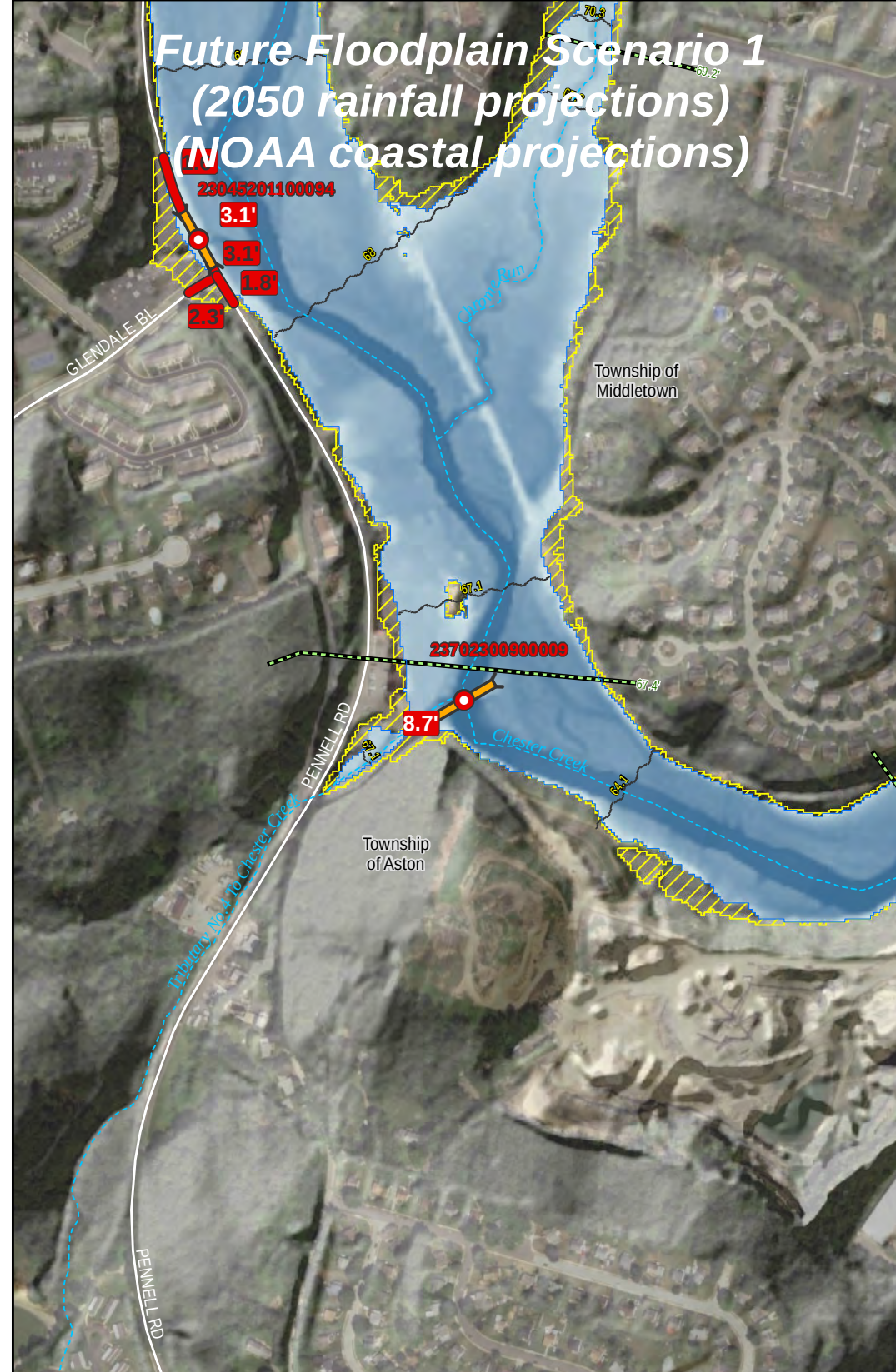
Sheet 65 of 125

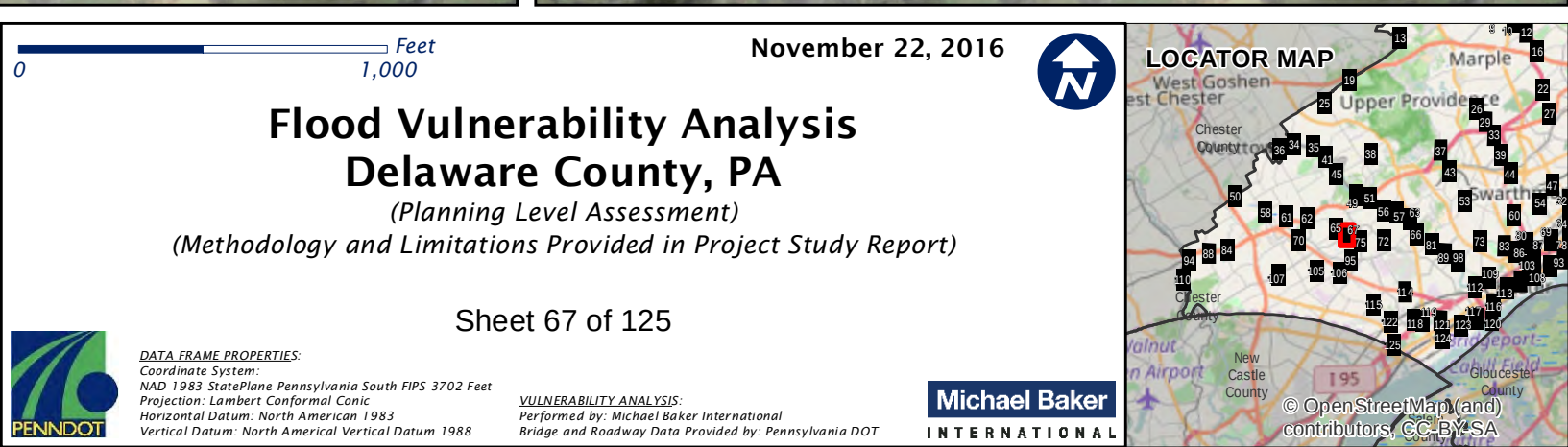
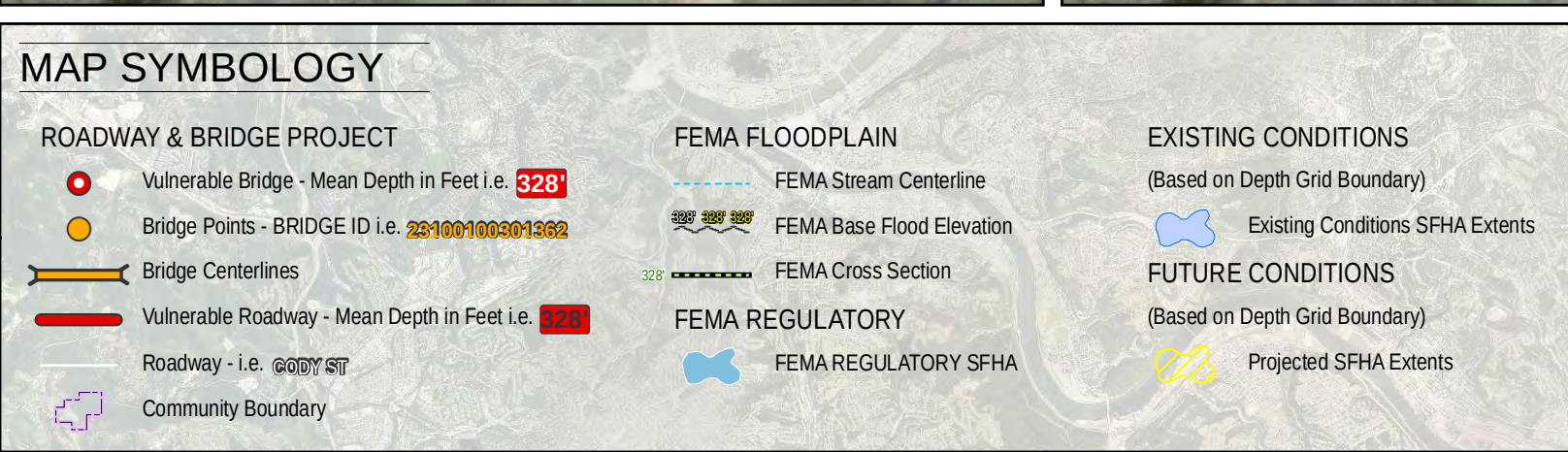
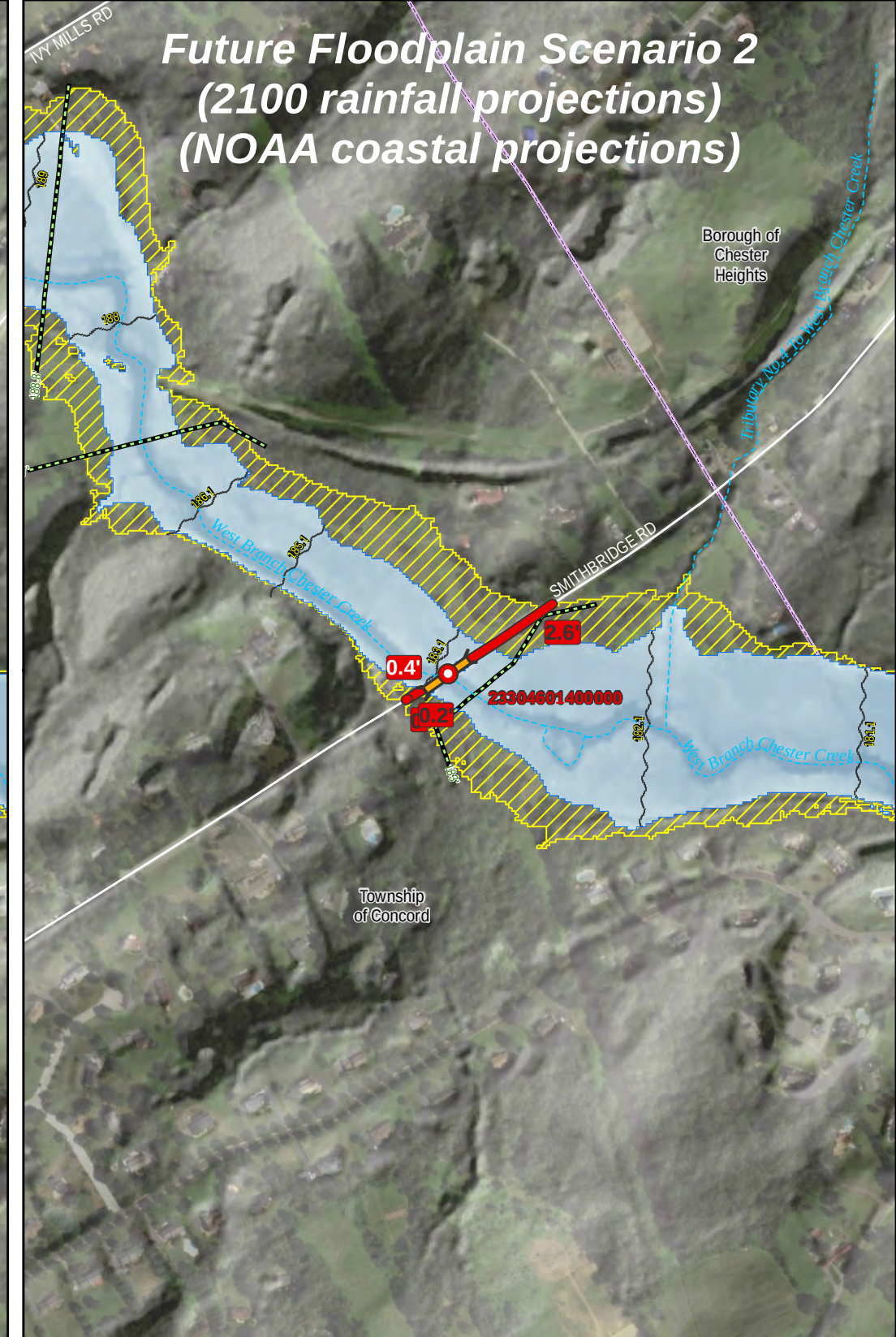
**Michael Baker
INTERNATIONAL**

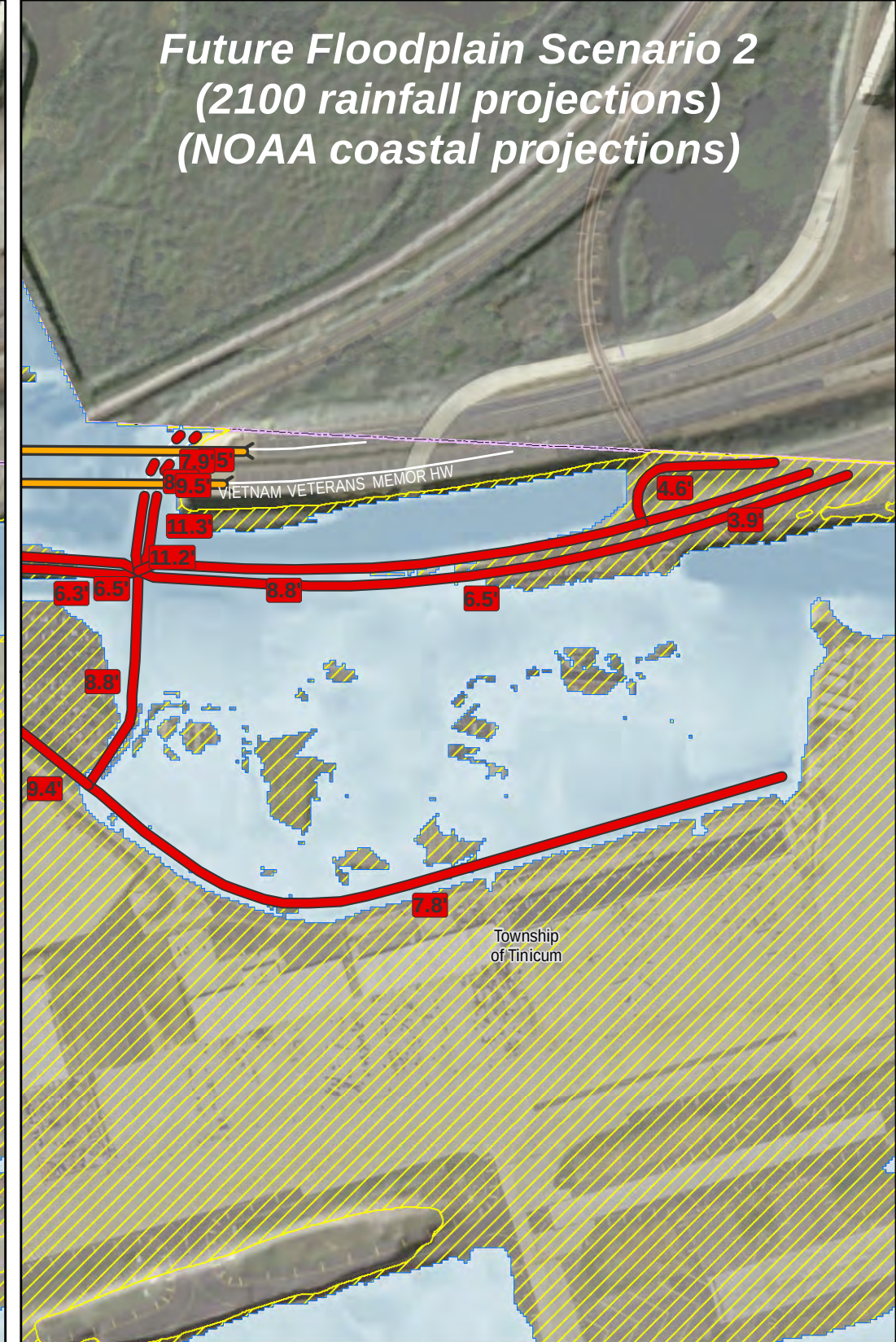
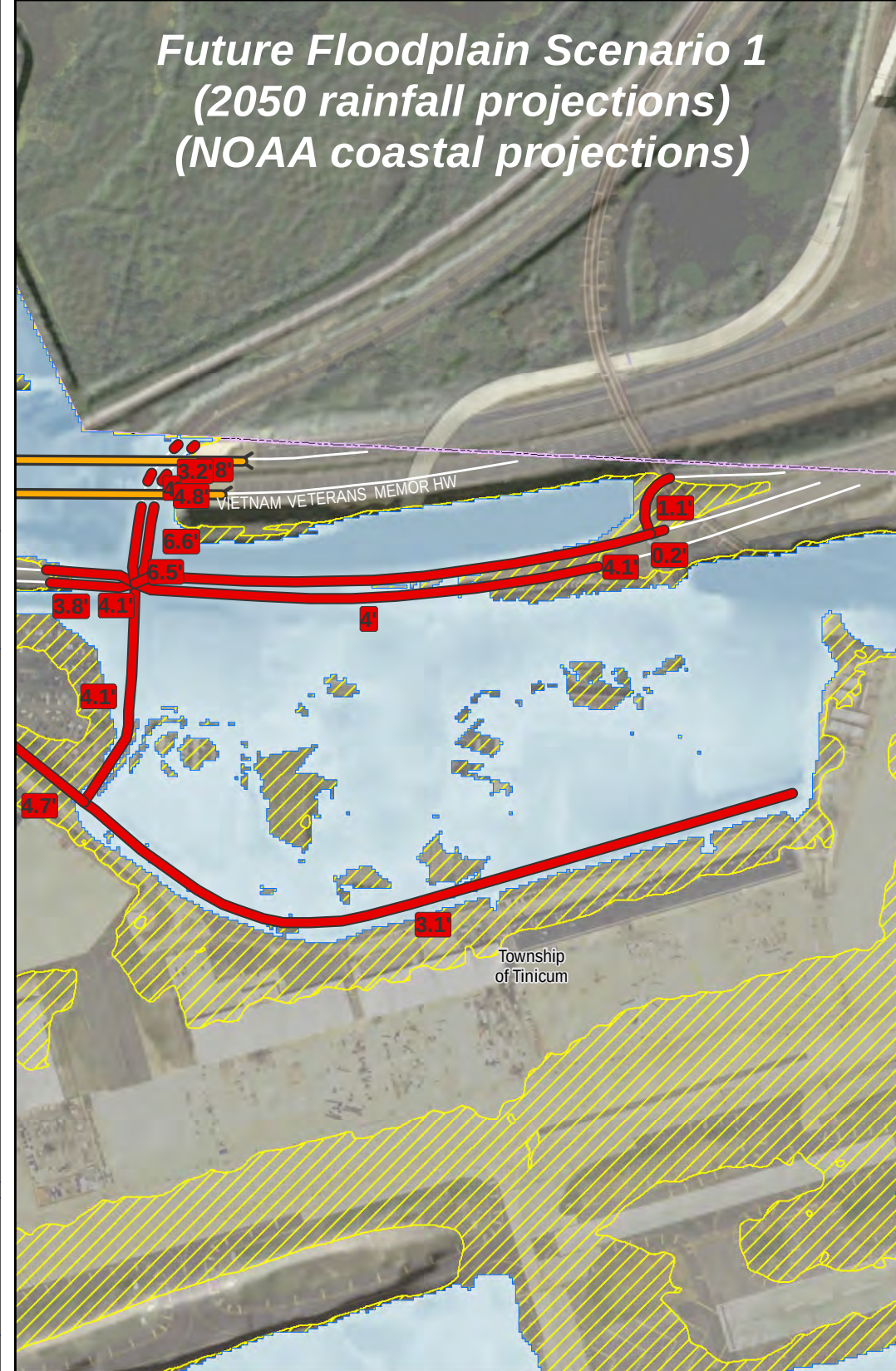
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Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP







MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **GOV ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

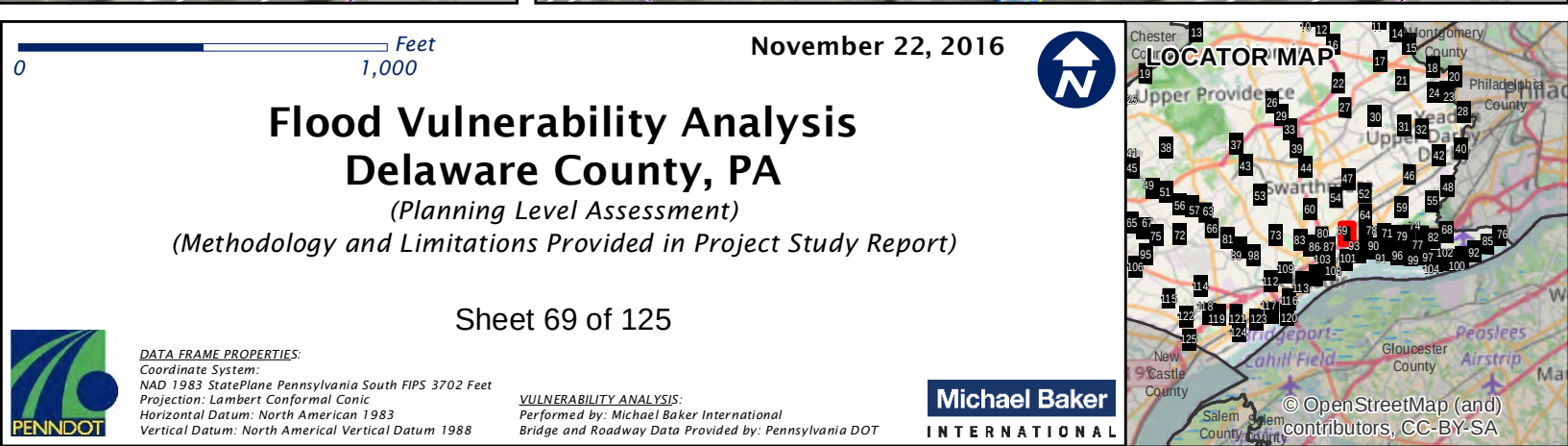
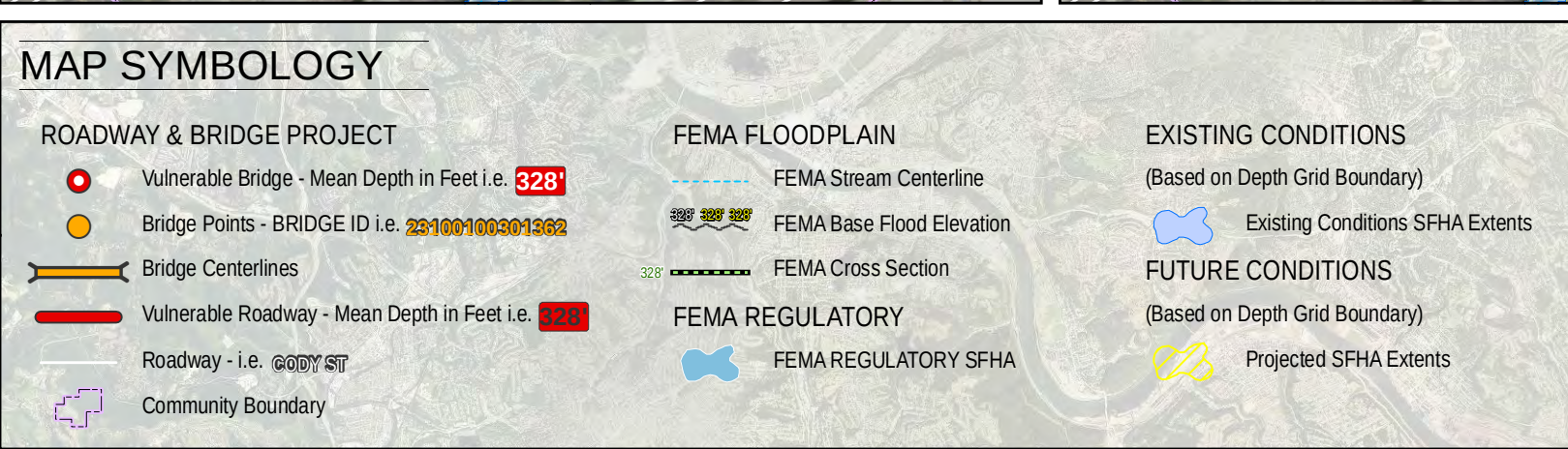
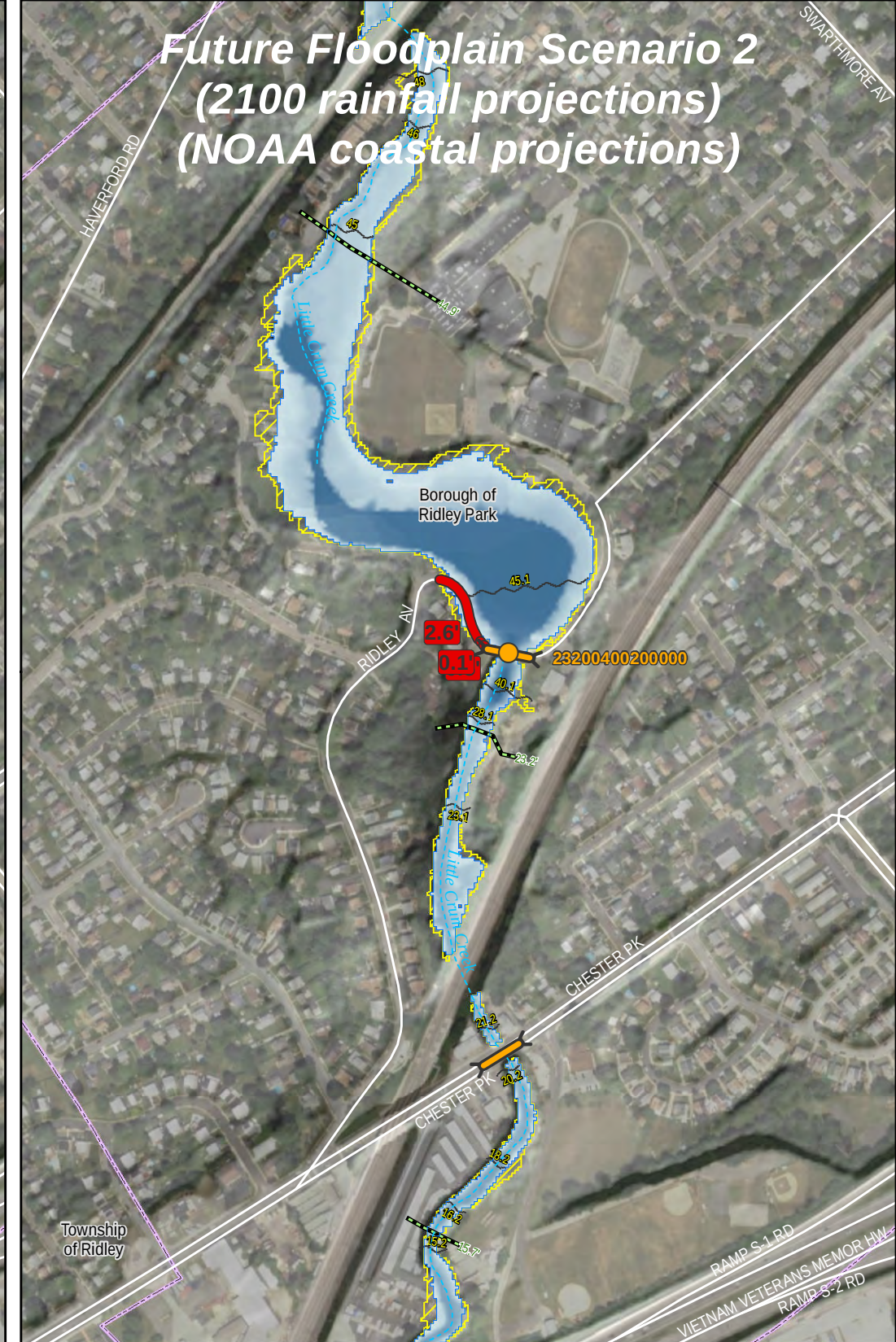
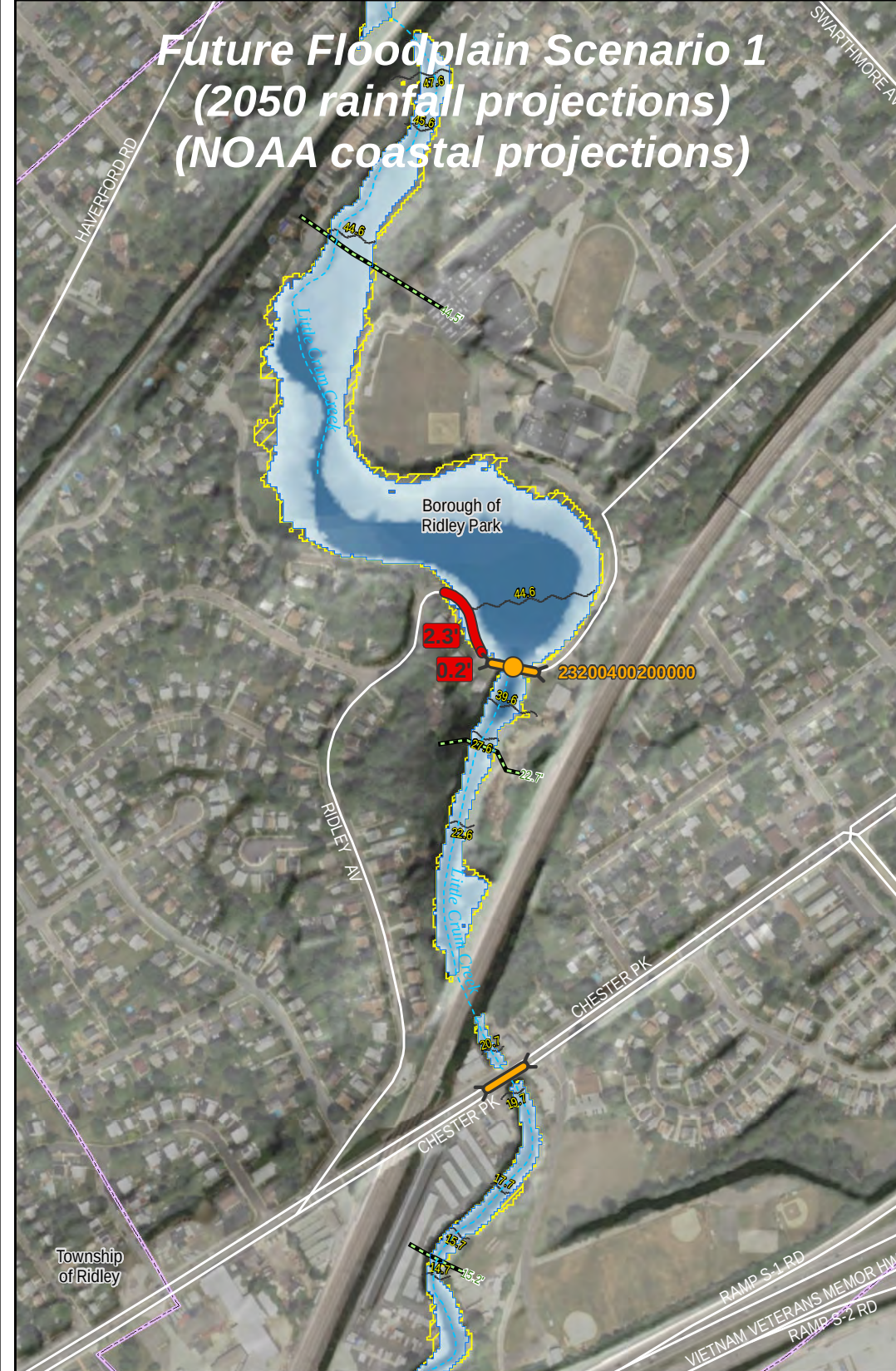
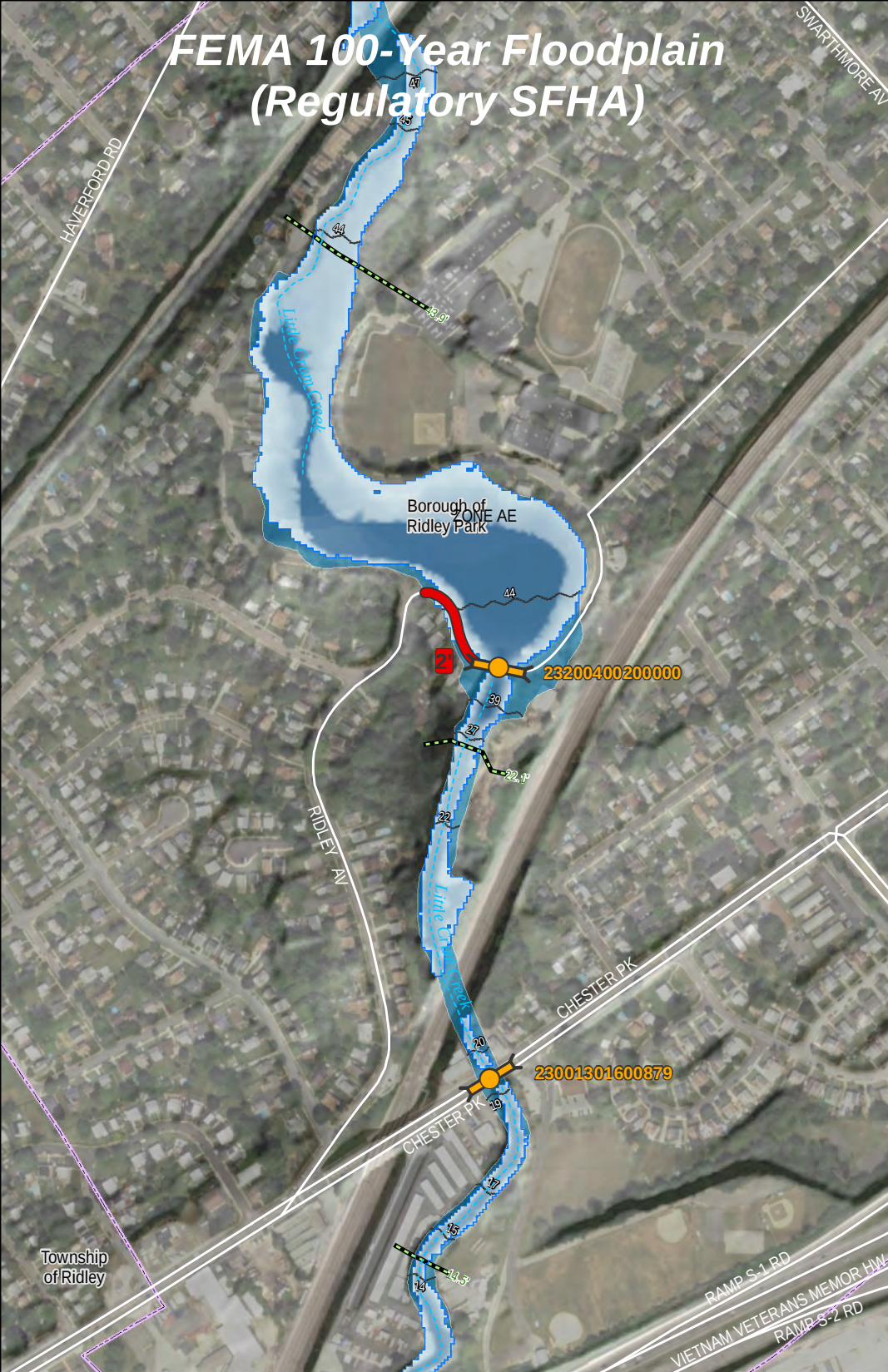
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(Methodology and Limitations Provided in Project Study Report)

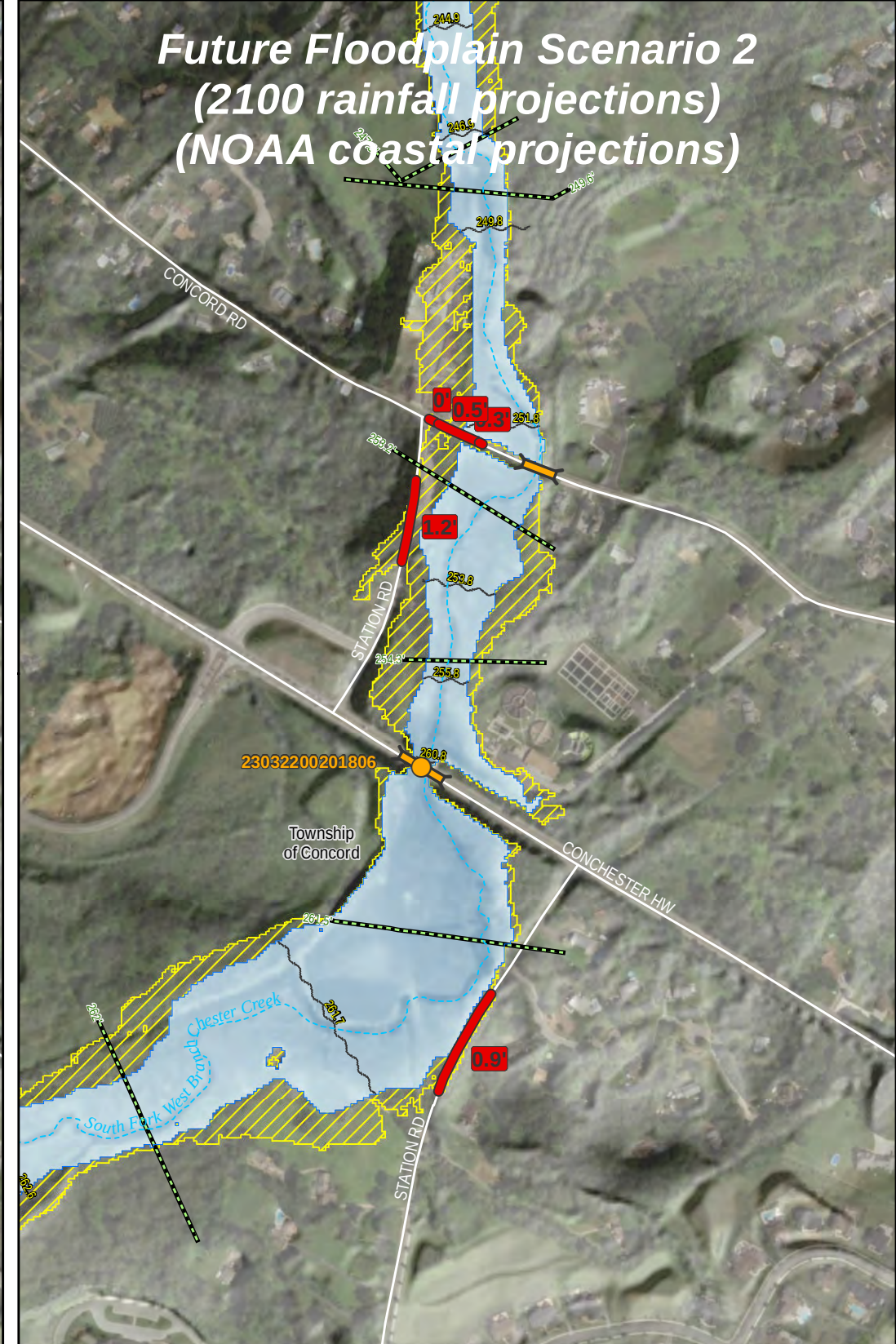
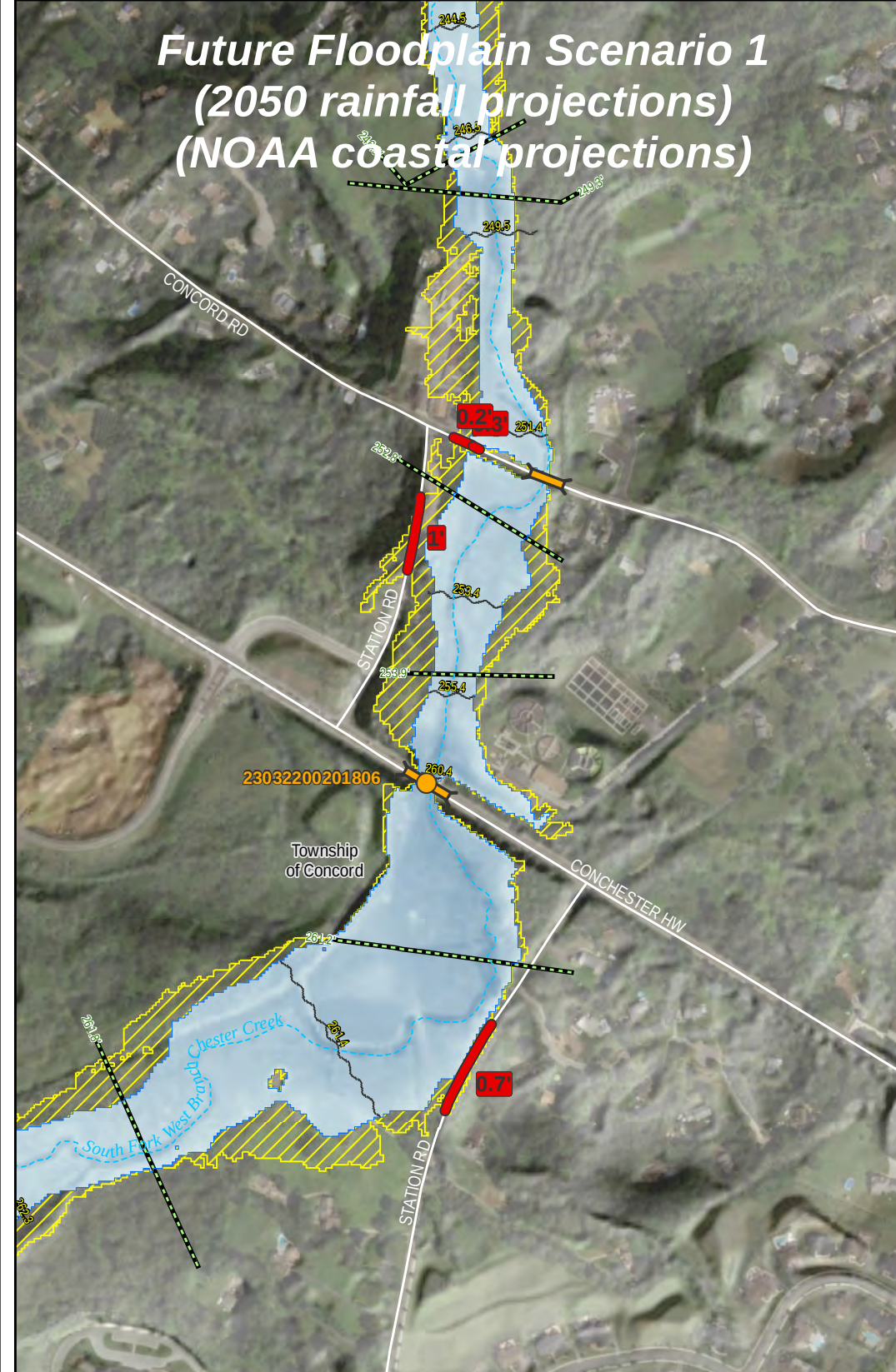
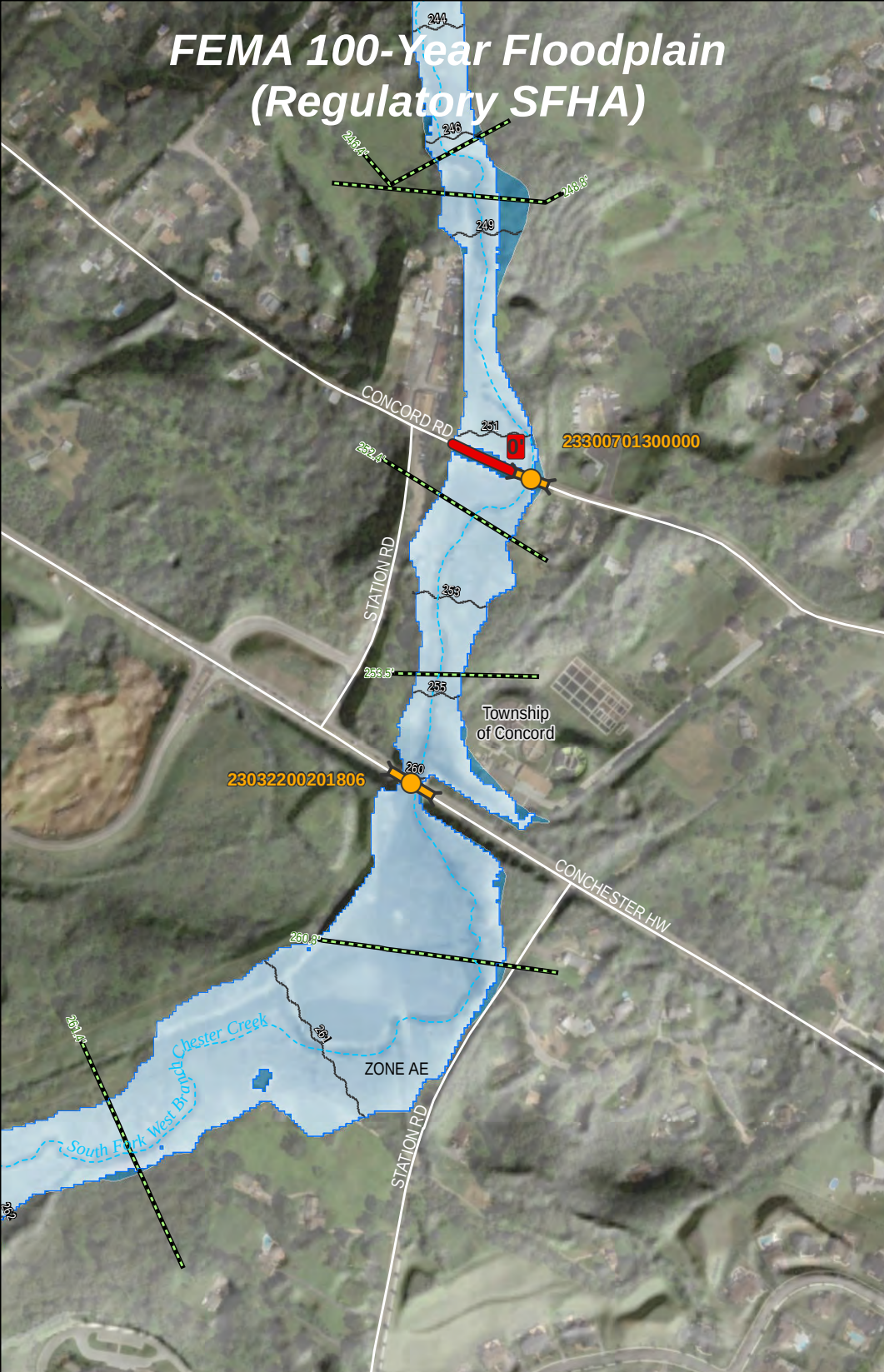
Sheet 68 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **60D ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 70 of 125

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS
(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS
(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis

Delaware County, PA

(Planning Level Assessment)

(Methodology and Limitations Provided in Project Study Report)

Sheet 71 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

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MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **60DY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

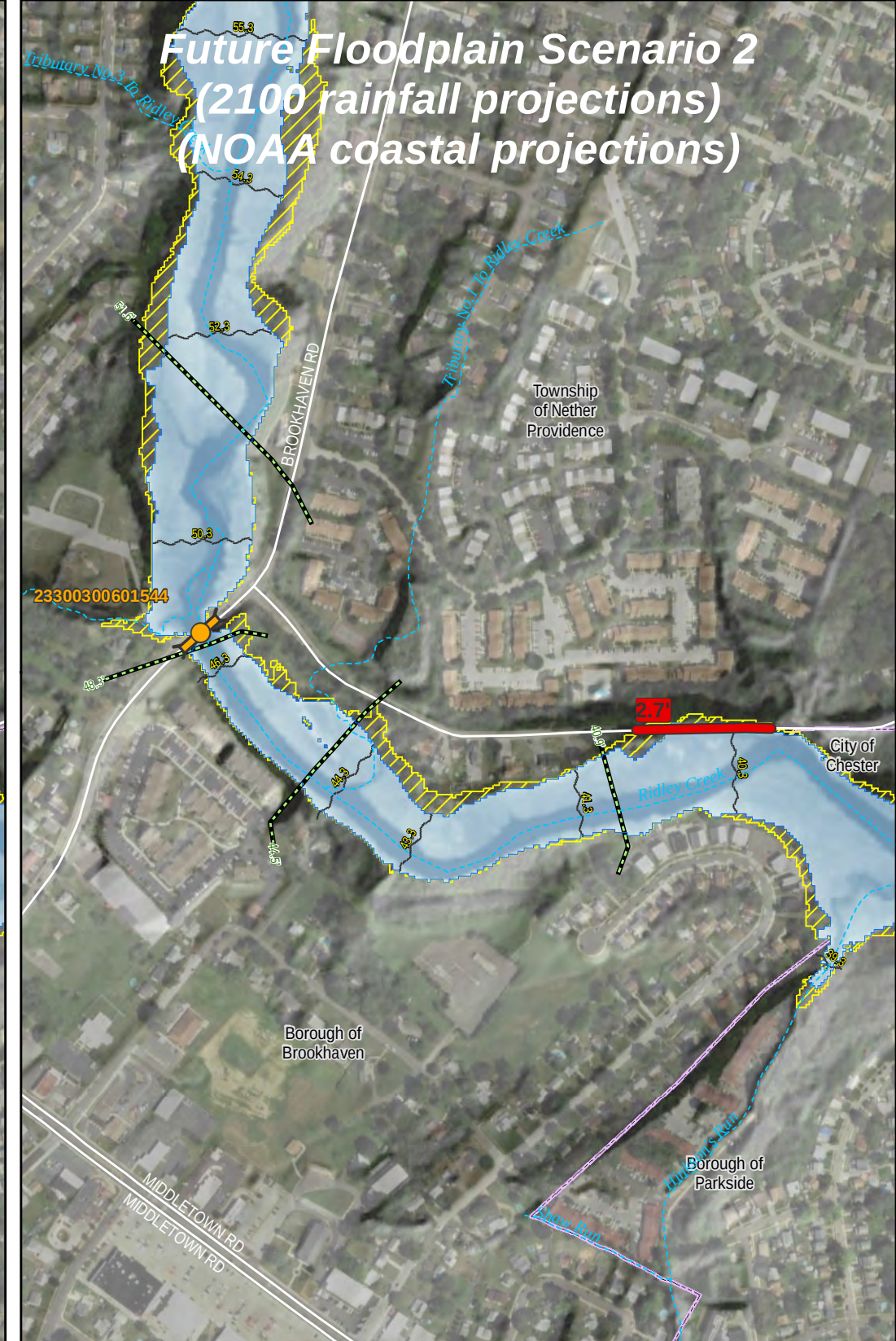
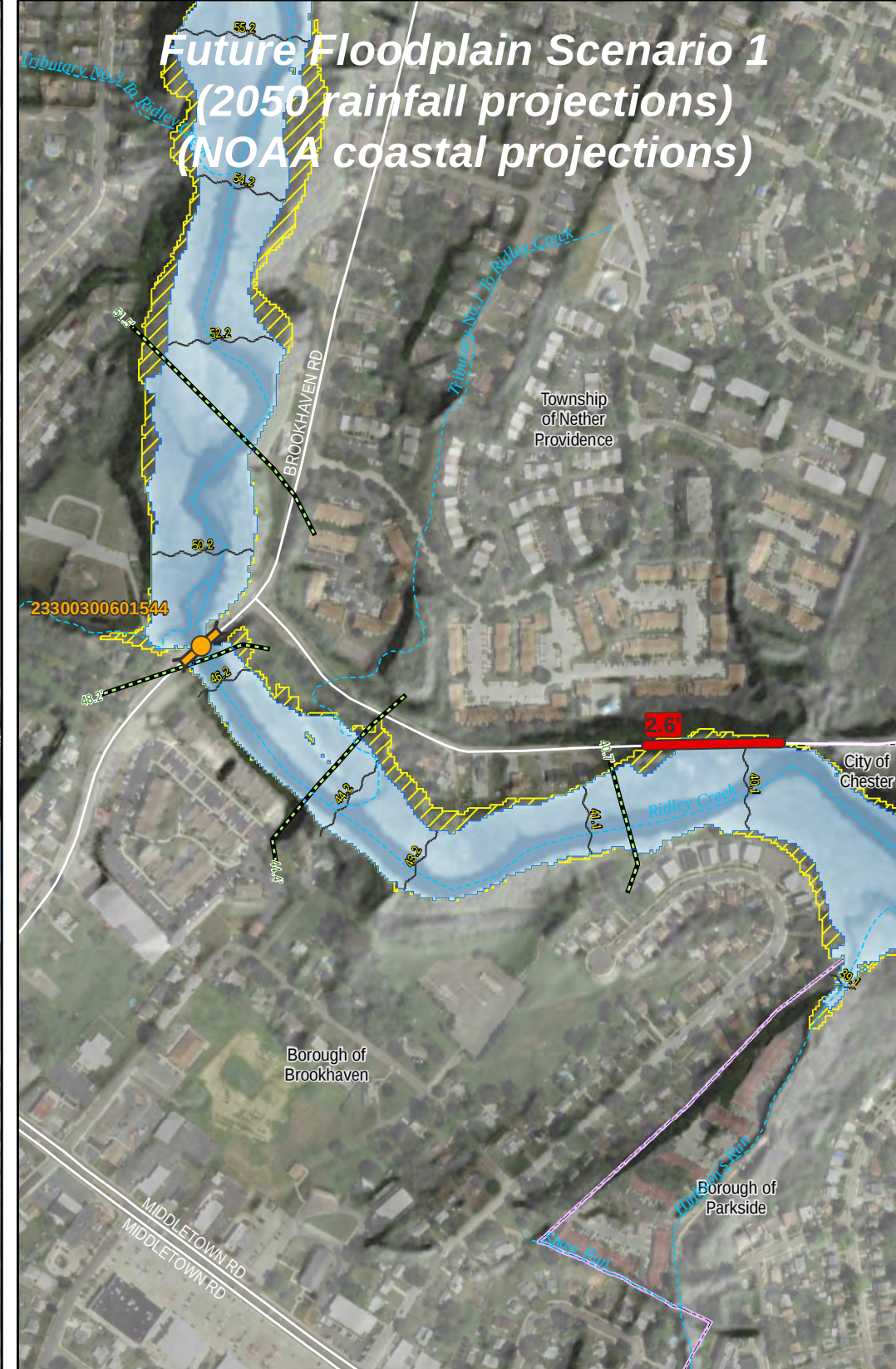
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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DATA FRAME PROPERTIES:
Coordinate System:
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Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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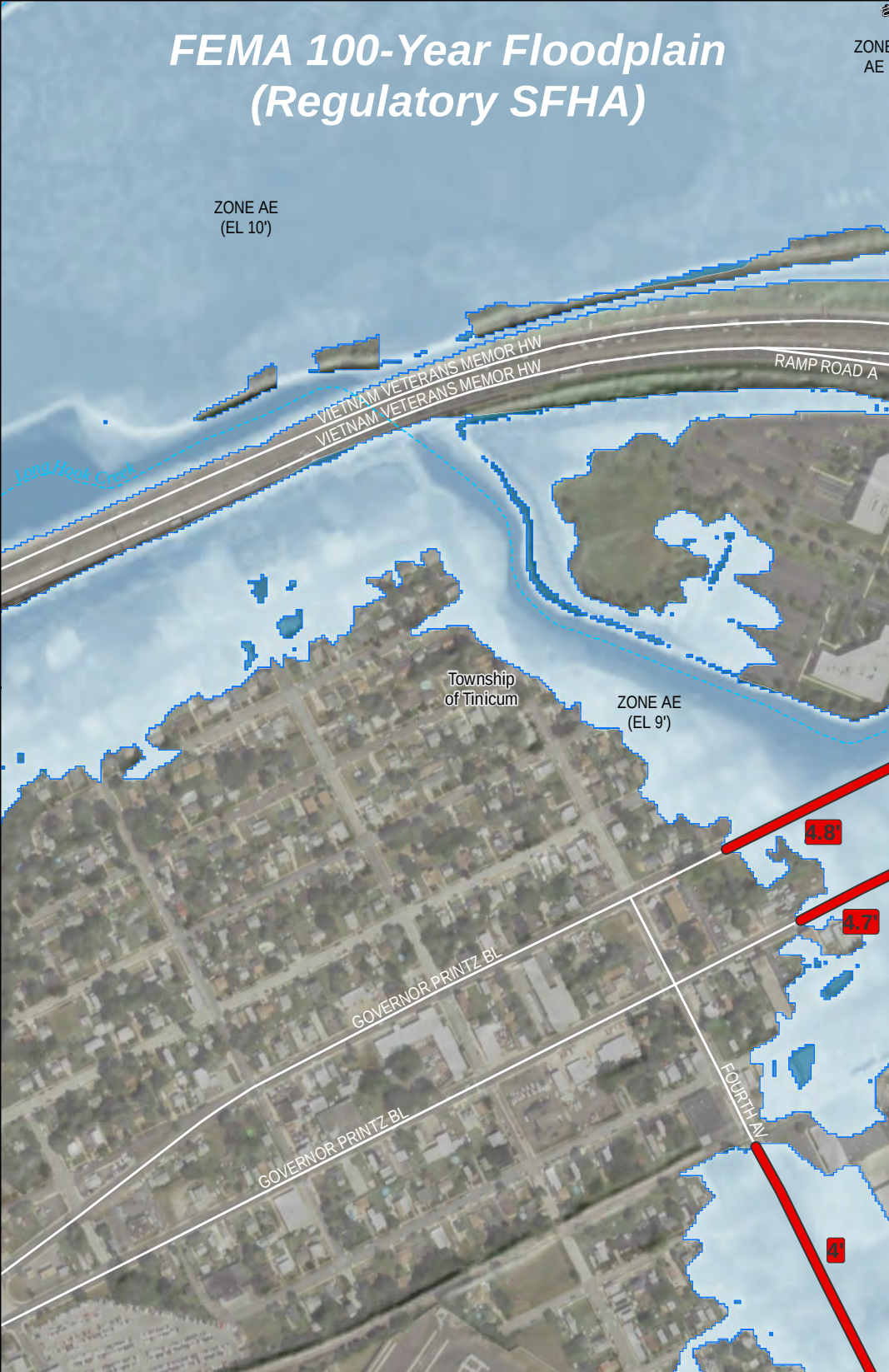
Michael Baker INTERNATIONAL

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

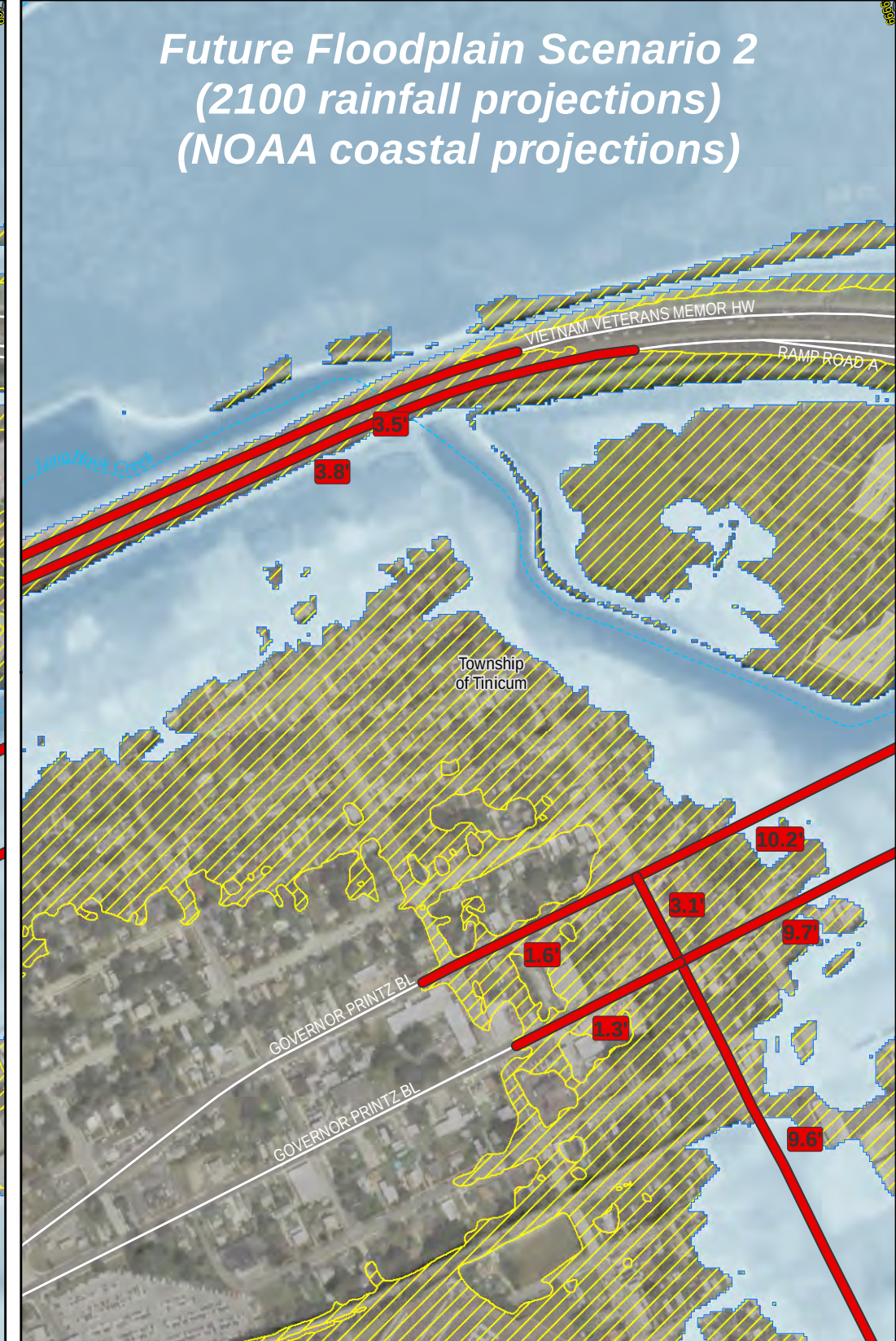
FEMA 100-Year Floodplain (Regulatory SFHA)



Future Floodplain Scenario 1 (2050 rainfall projections) (NOAA coastal projections)



Future Floodplain Scenario 2 (2100 rainfall projections) (NOAA coastal projections)



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **GOV PRINTZ BL**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS

(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS

(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

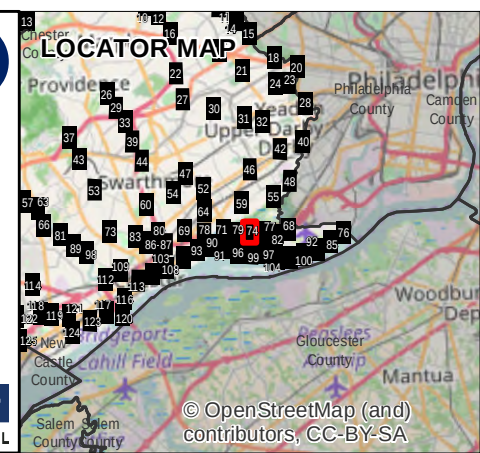
Sheet 74 of 125



DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

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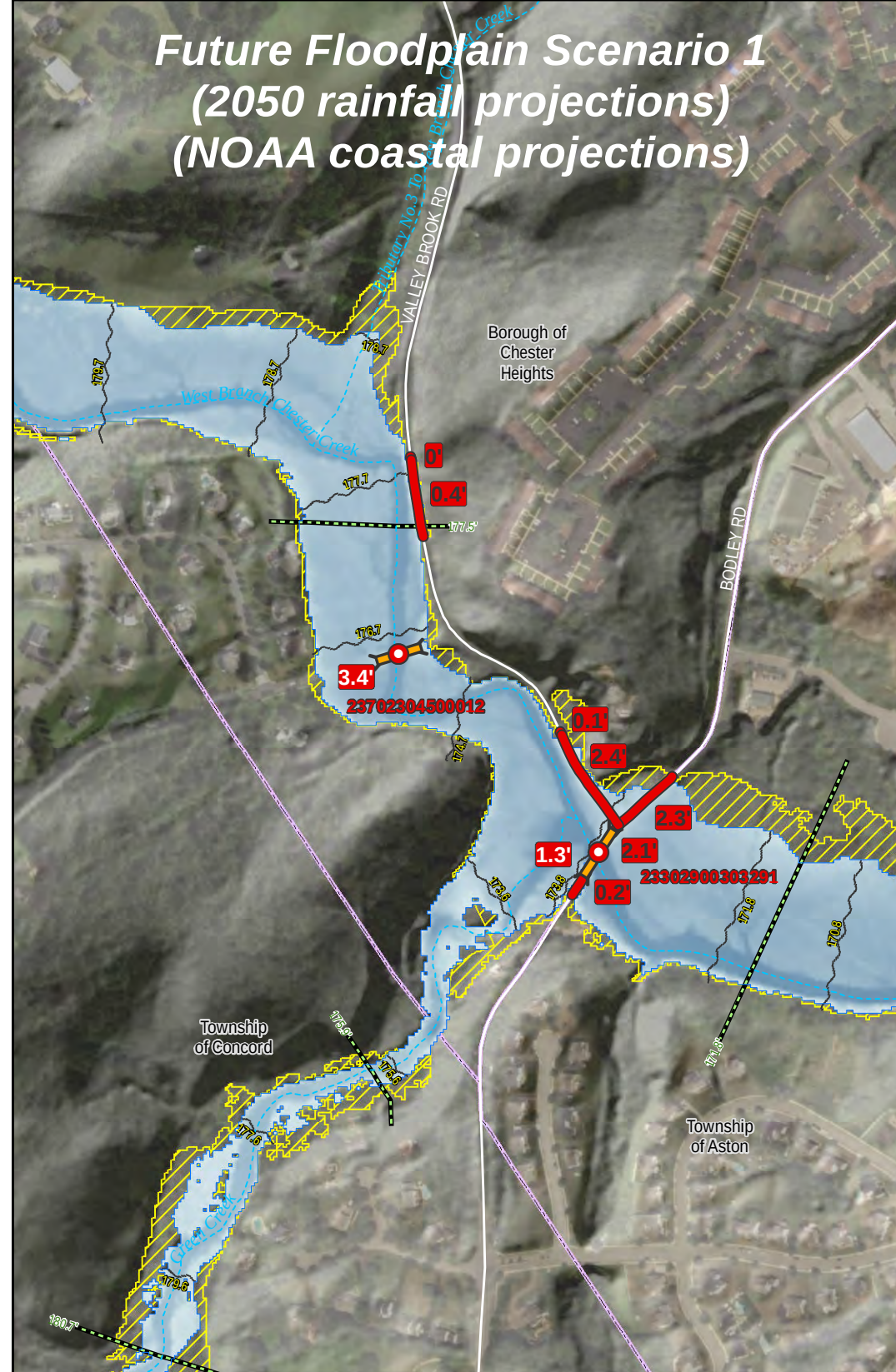


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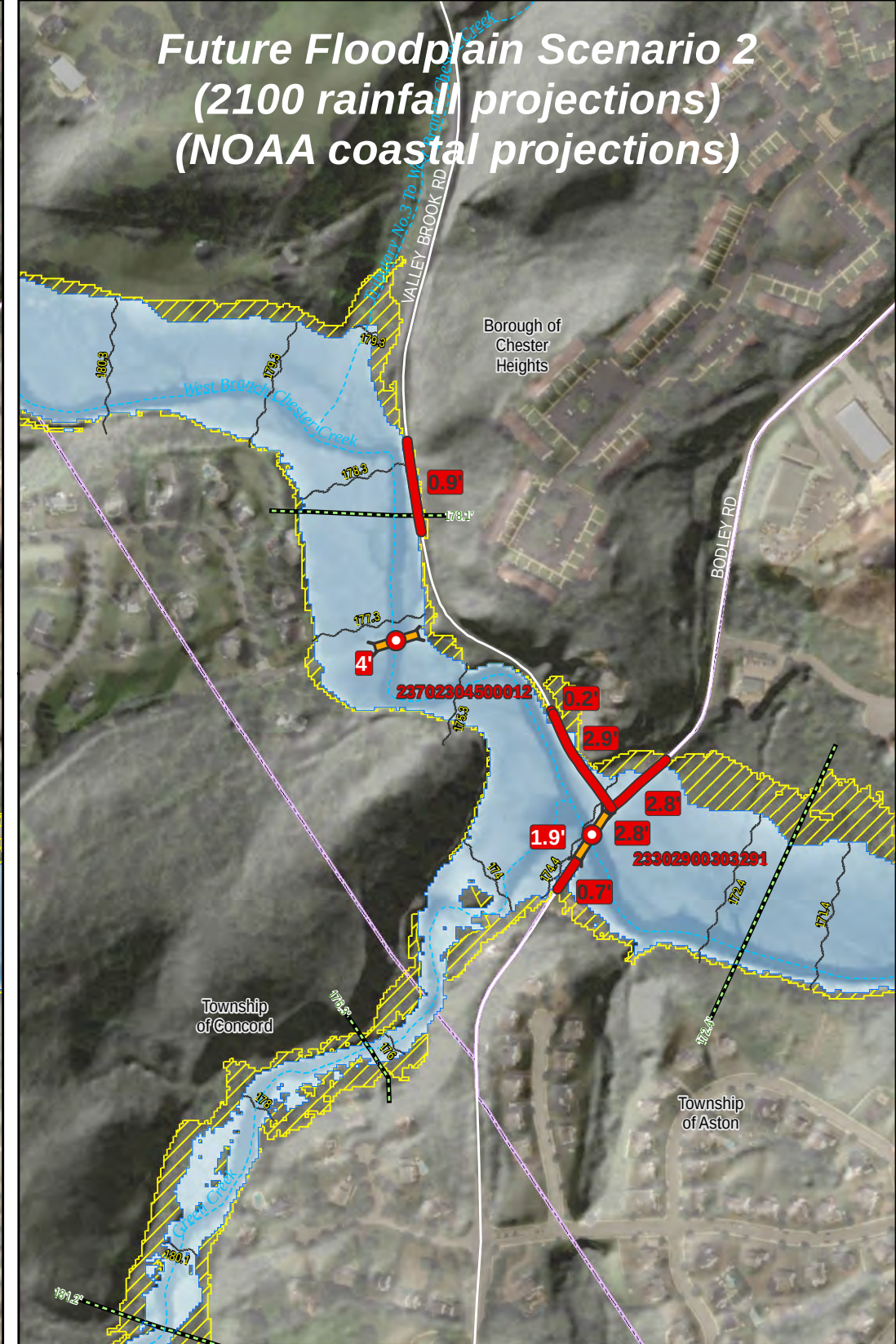
FEMA 100-Year Floodplain (Regulatory SFHA)



Future Floodplain Scenario 1 (2050 rainfall projections) (NOAA coastal projections)



Future Floodplain Scenario 2 (2100 rainfall projections) (NOAA coastal projections)



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS

(Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS

(Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

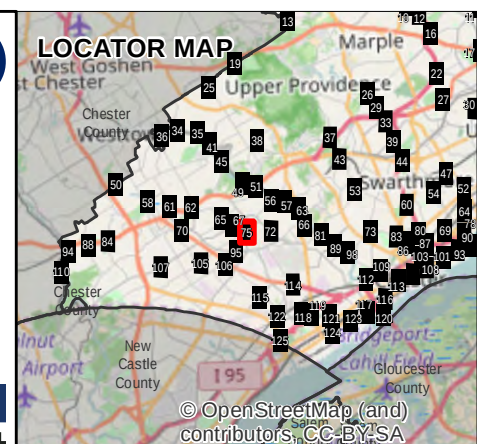
Sheet 75 of 125



DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

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FEMA 100-Year Floodplain (Regulatory SFHA)



Future Floodplain Scenario 1 (2050 rainfall projections) (NOAA coastal projections)

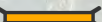
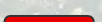


Future Floodplain Scenario 2 (2100 rainfall projections) (NOAA coastal projections)



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

-  Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
-  Bridge Points - BRIDGE ID i.e. **23100100301362**
-  Bridge Centerlines
-  Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
-  Roadway - i.e. **CODY ST**
-  Community Boundary

FEMA FLOODPLAIN

-  FEMA Stream Centerline
-  FEMA Base Flood Elevation
-  FEMA Cross Section

FEMA REGULATORY

-  FEMA REGULATORY SFHA

EXISTING CONDITIONS

- (Based on Depth Grid Boundary)

-  Existing Conditions SFHA Extents

FUTURE CONDITIONS

- (Based on Depth Grid Boundary)

-  Projected SFHA Extents

0 1,000 Feet

November 22, 2016



Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

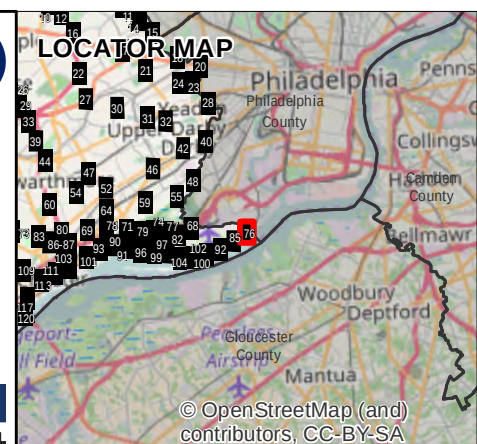
Sheet 76 of 125



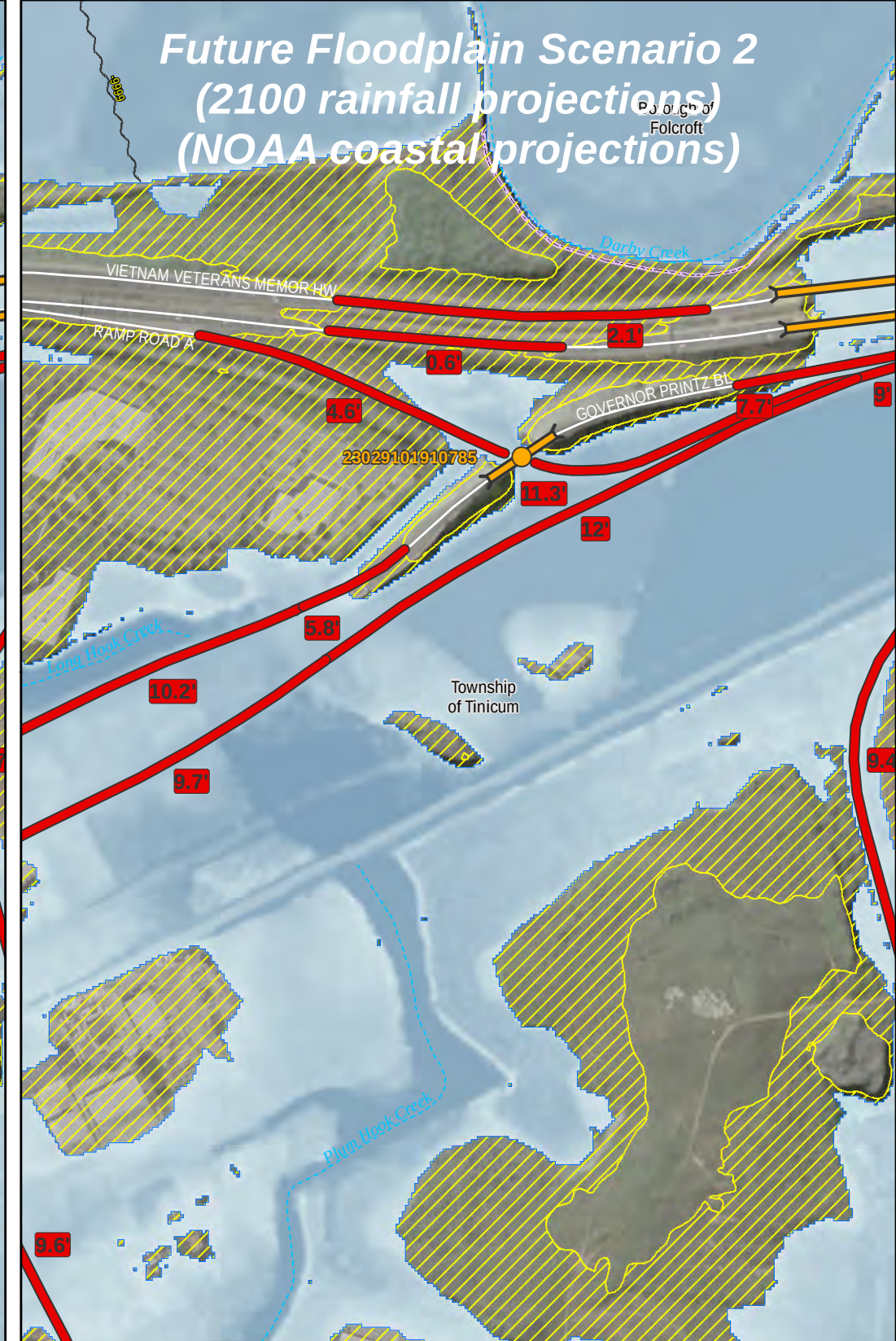
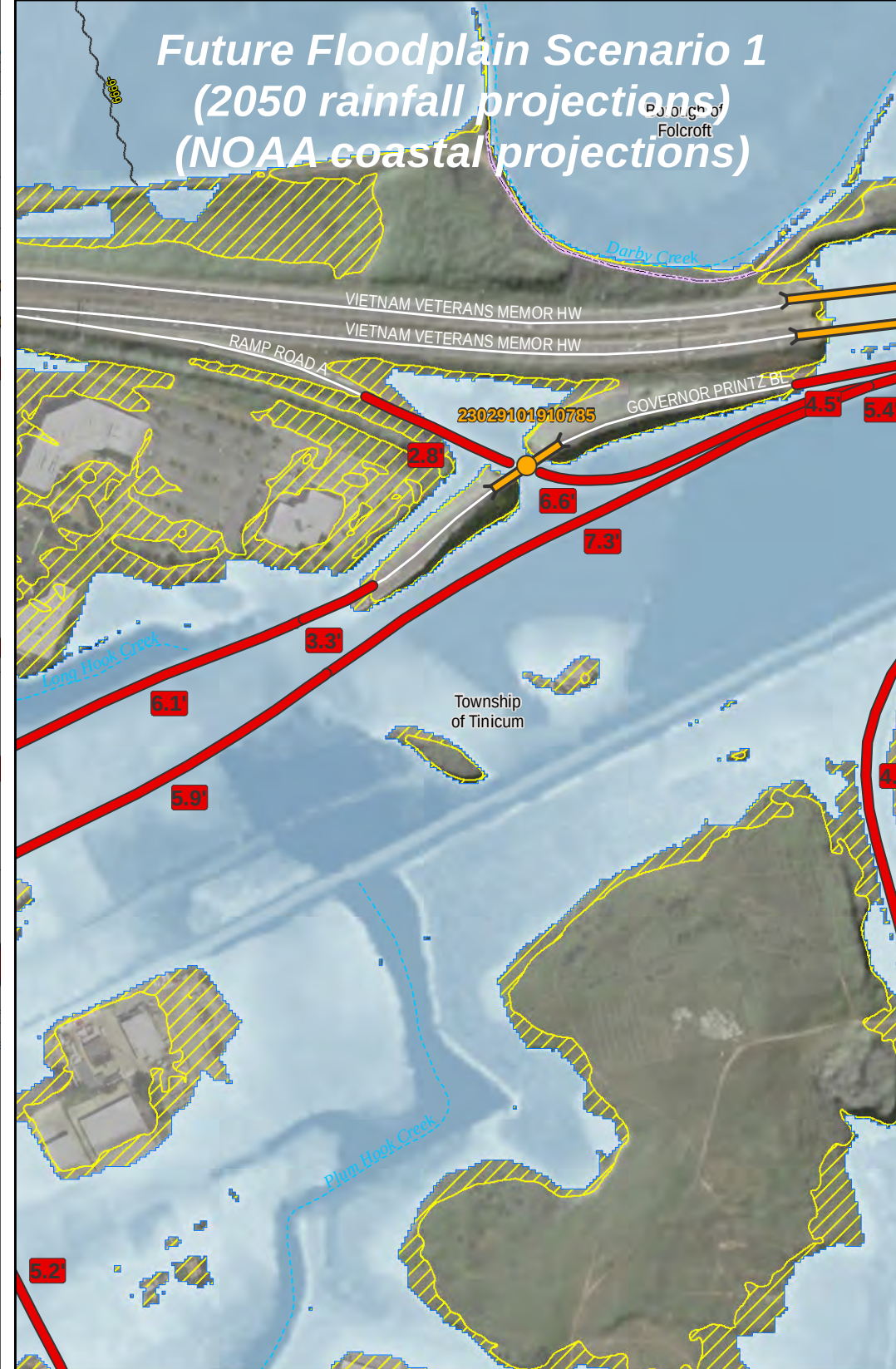
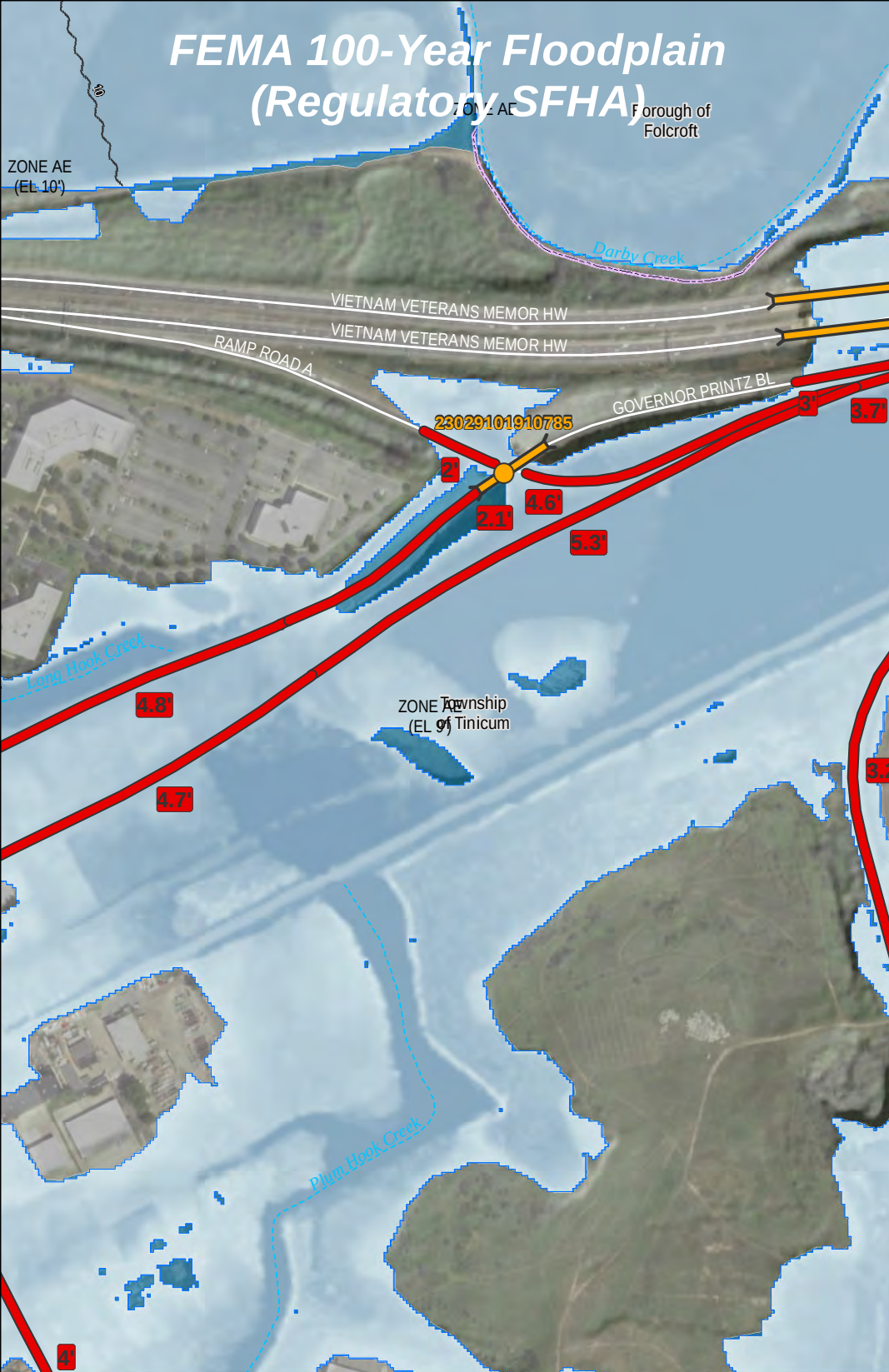
DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

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INTERNATIONAL**



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MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 3.28'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 3.28'	FEMA REGULATORY	
Roadway - i.e. GOODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

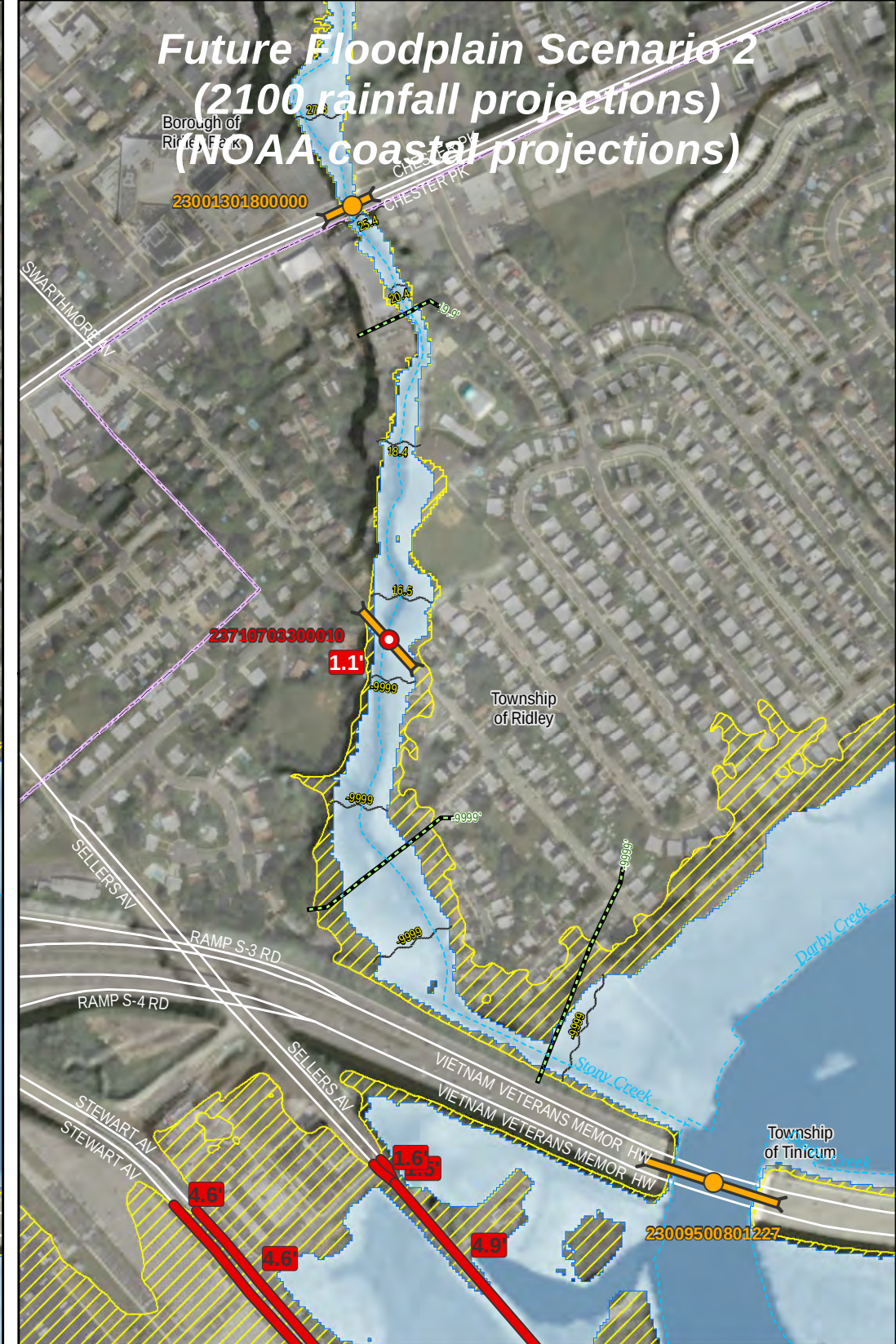
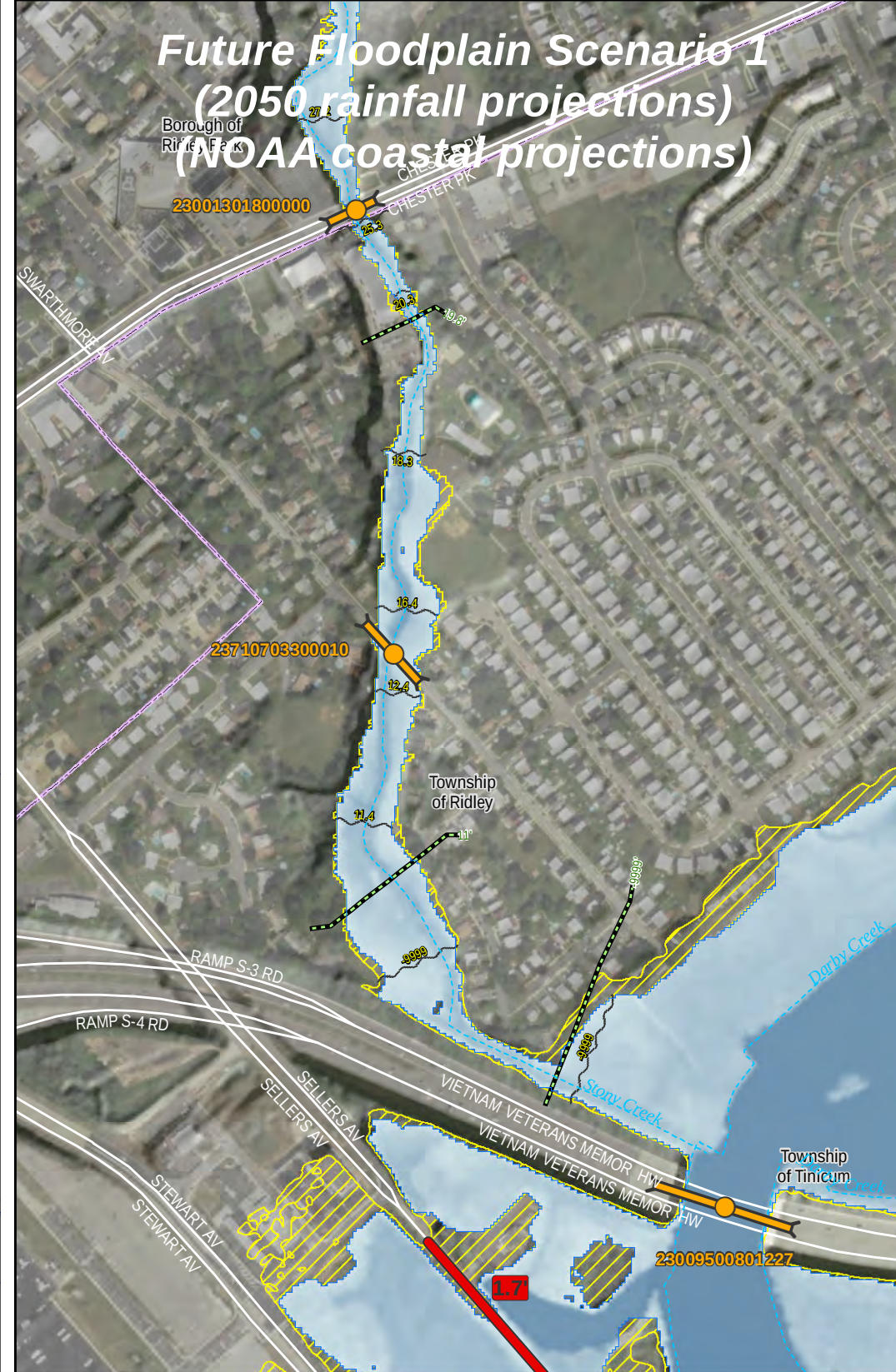
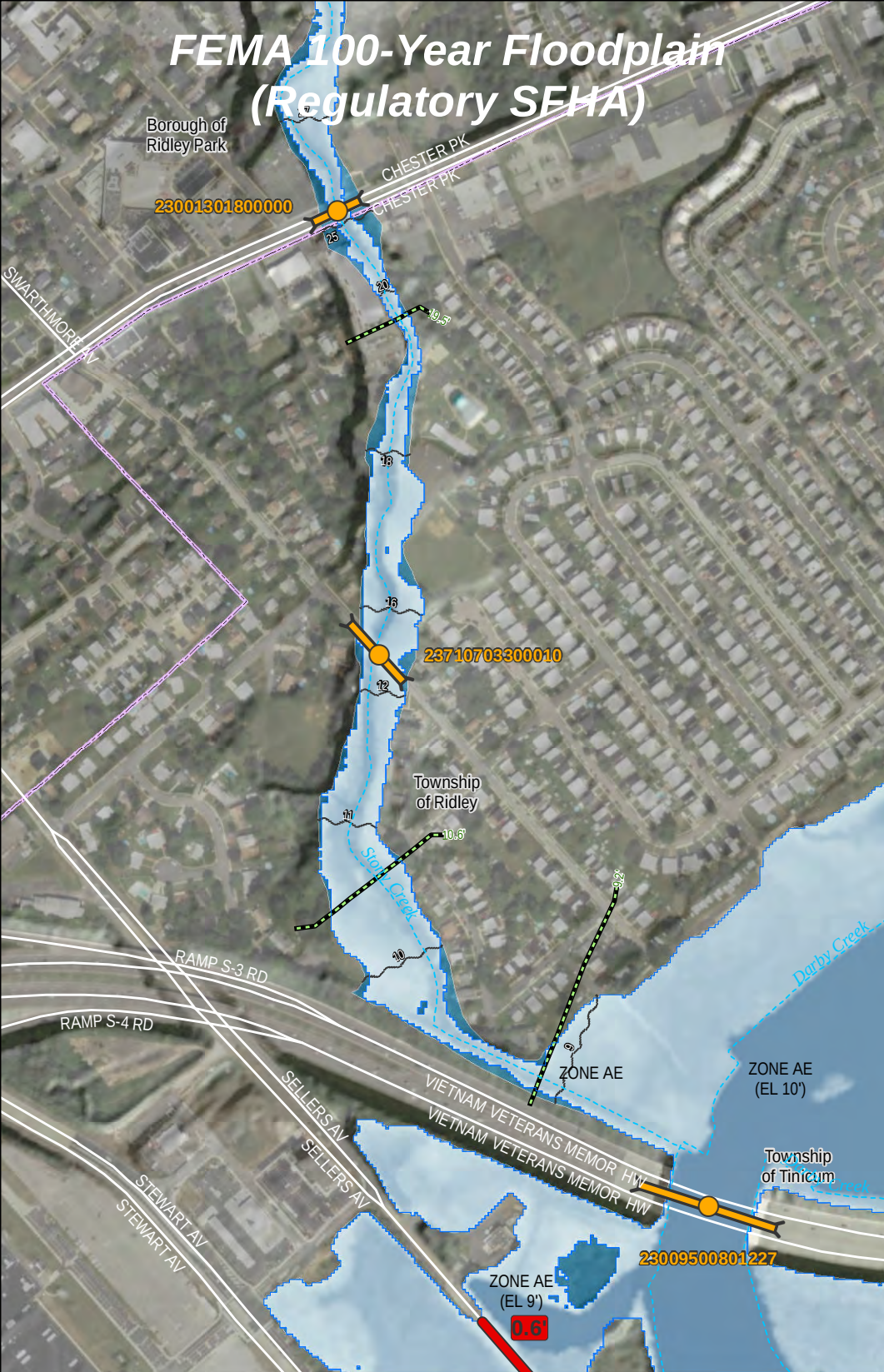
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LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

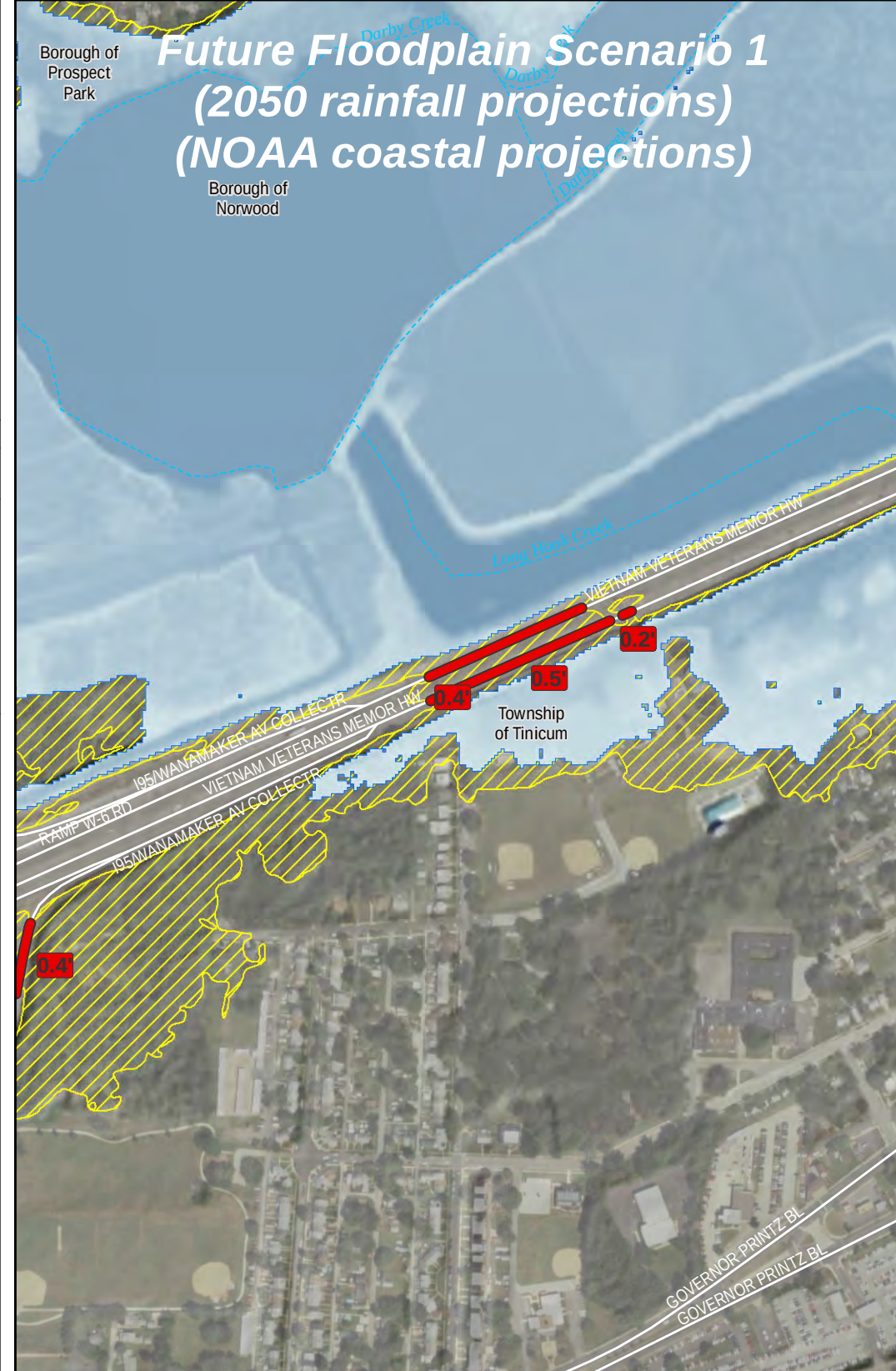
Sheet 78 of 125

Michael Baker INTERNATIONAL

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLLOGY

ROADWAY & BRIDGE PROJECT

-  Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
-  Bridge Points - BRIDGE ID i.e. **23100100301362**
-  Bridge Centerlines
-  Vulnerable Roadway - Mean Depth in Feet i.e. **32'**
-  Roadway - i.e. **GODY ST**
-  Community Boundary

FEMA FLOODPLAIN

-
-  FEMA Stream Centerline
 FEMA Base Flood Elevation
 FEMA Cross Section
 FEMA REGULATORY
 FEMA REGULATORY SFHA

EXISTING CONDITIONS

(Based on Depth Grid Boundary)

-  Existing Conditions SFHA Extents
- FUTURE CONDITIONS**
(Based on Depth Grid Boundary)
-  Projected SFHA Extents



November 22, 2016



Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

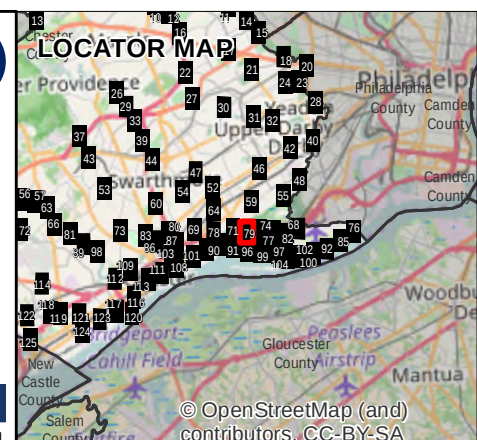
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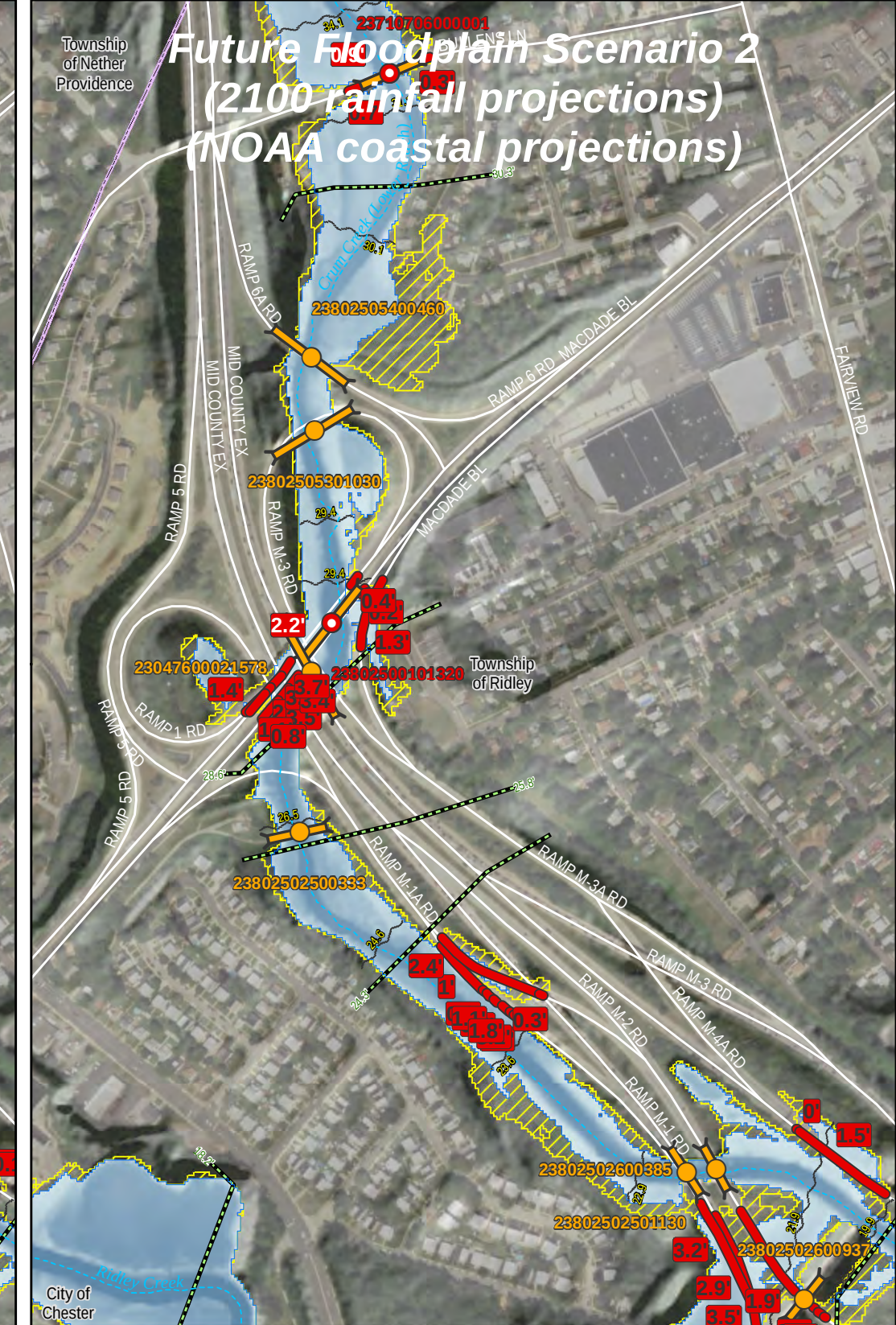
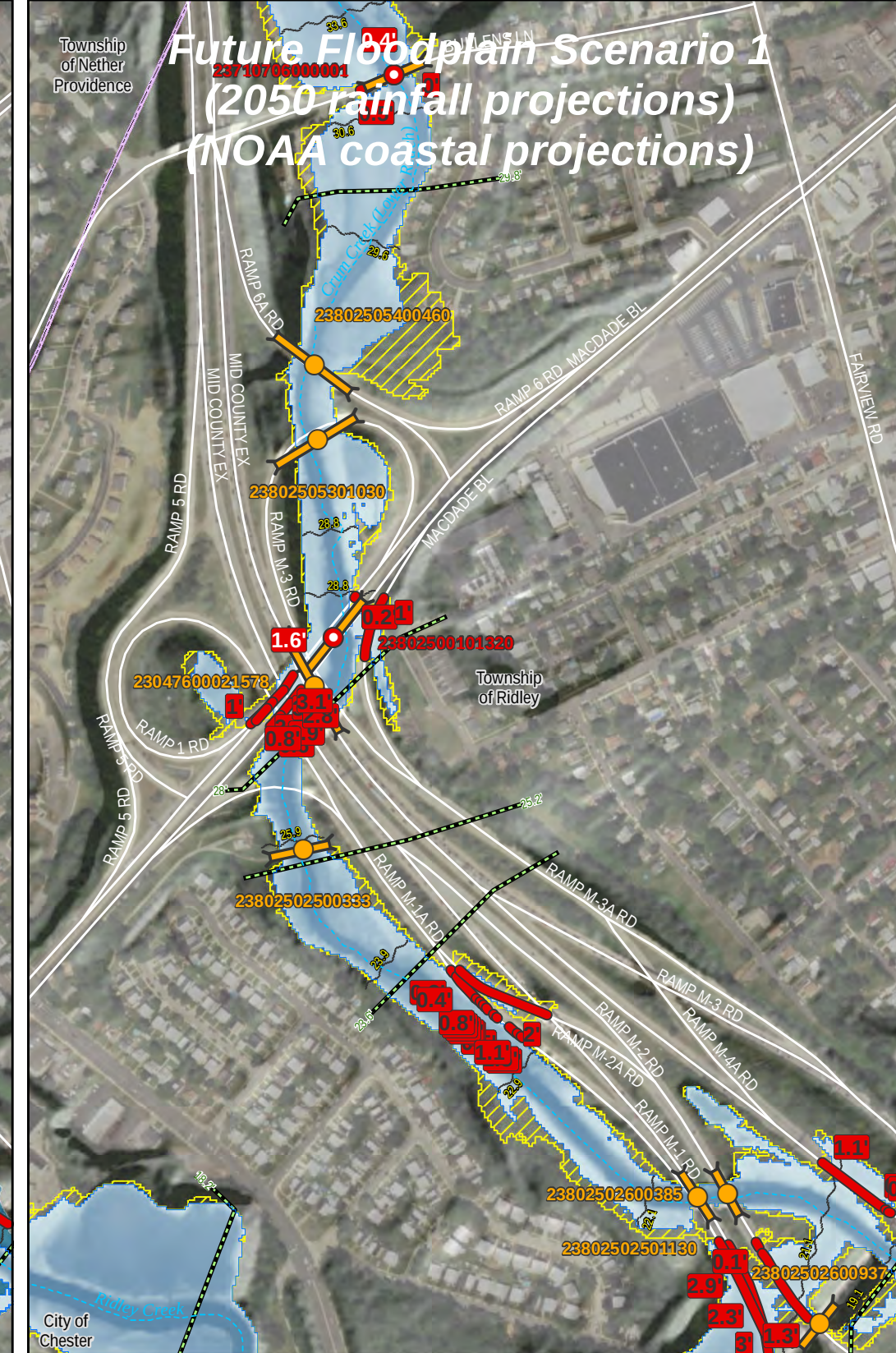
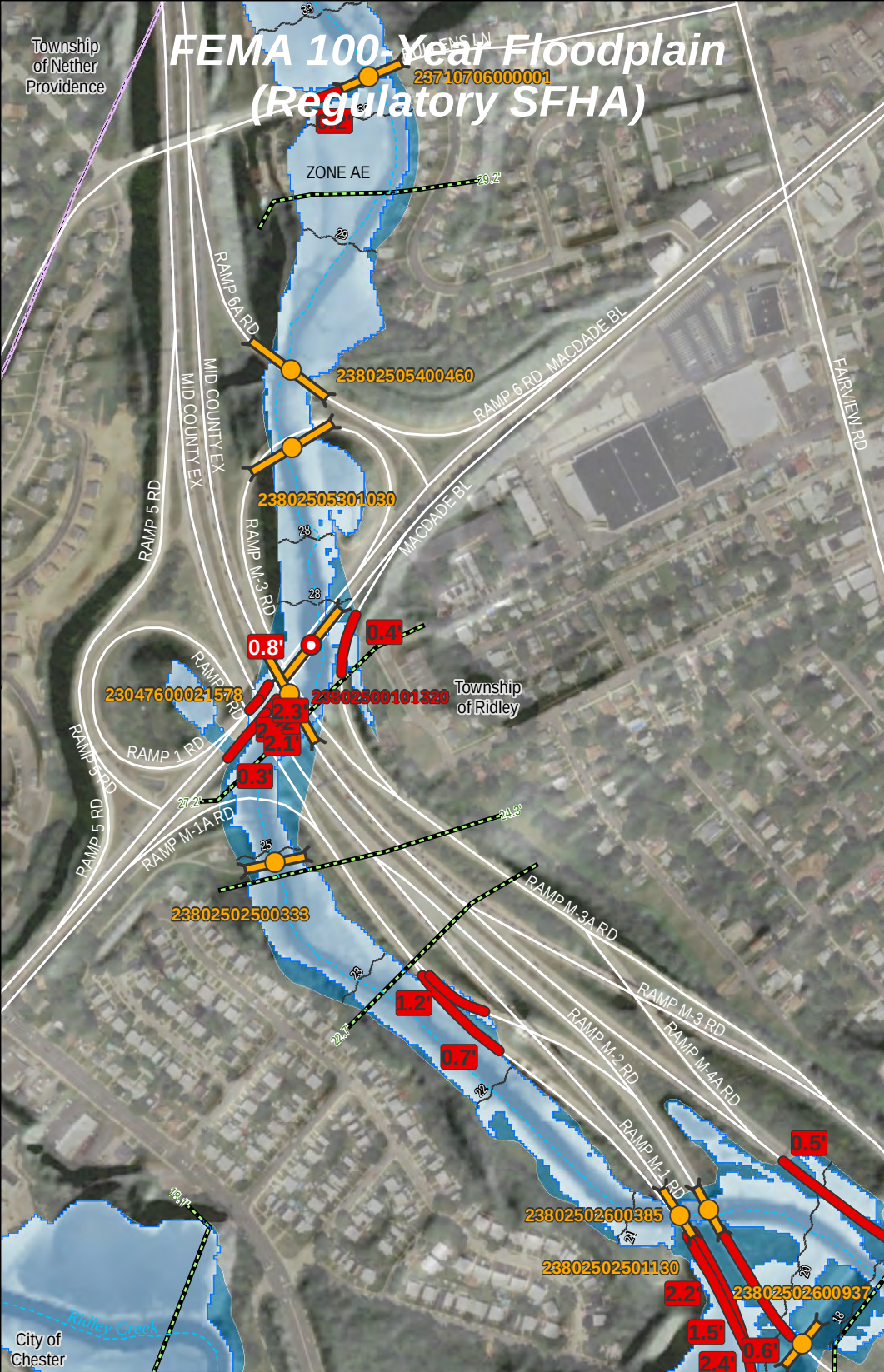


DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
 Performed by: Michael Baker International
 Bridge and Roadway Data Provided by: Pennsylvania DOT

Michael Baker
INTERNATIONAL





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	
	Vulnerable Bridge - Mean Depth in Feet i.e. 328'
	Bridge Points - BRIDGE ID i.e. 23100100301362
	Bridge Centerlines
	Vulnerable Roadway - Mean Depth in Feet i.e. 328'
	Roadway - i.e. CODY ST
	Community Boundary

FEMA FLOODPLAIN	
	FEMA Stream Centerline
	FEMA Base Flood Elevation
	FEMA Cross Section
FEMA REGULATORY	
	FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)	
	Existing Conditions SFHA Extents
FUTURE CONDITIONS (Based on Depth Grid Boundary)	
	Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

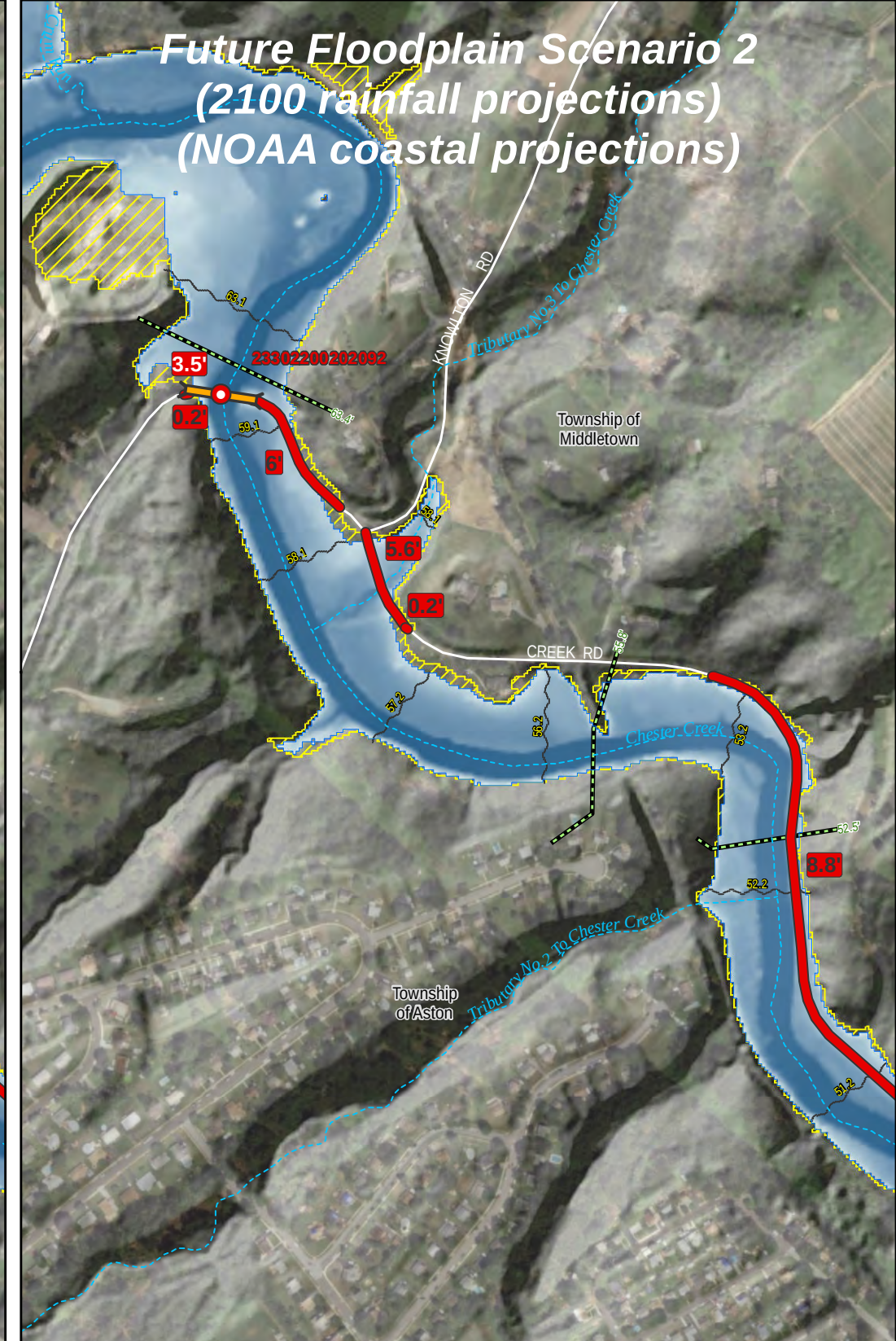
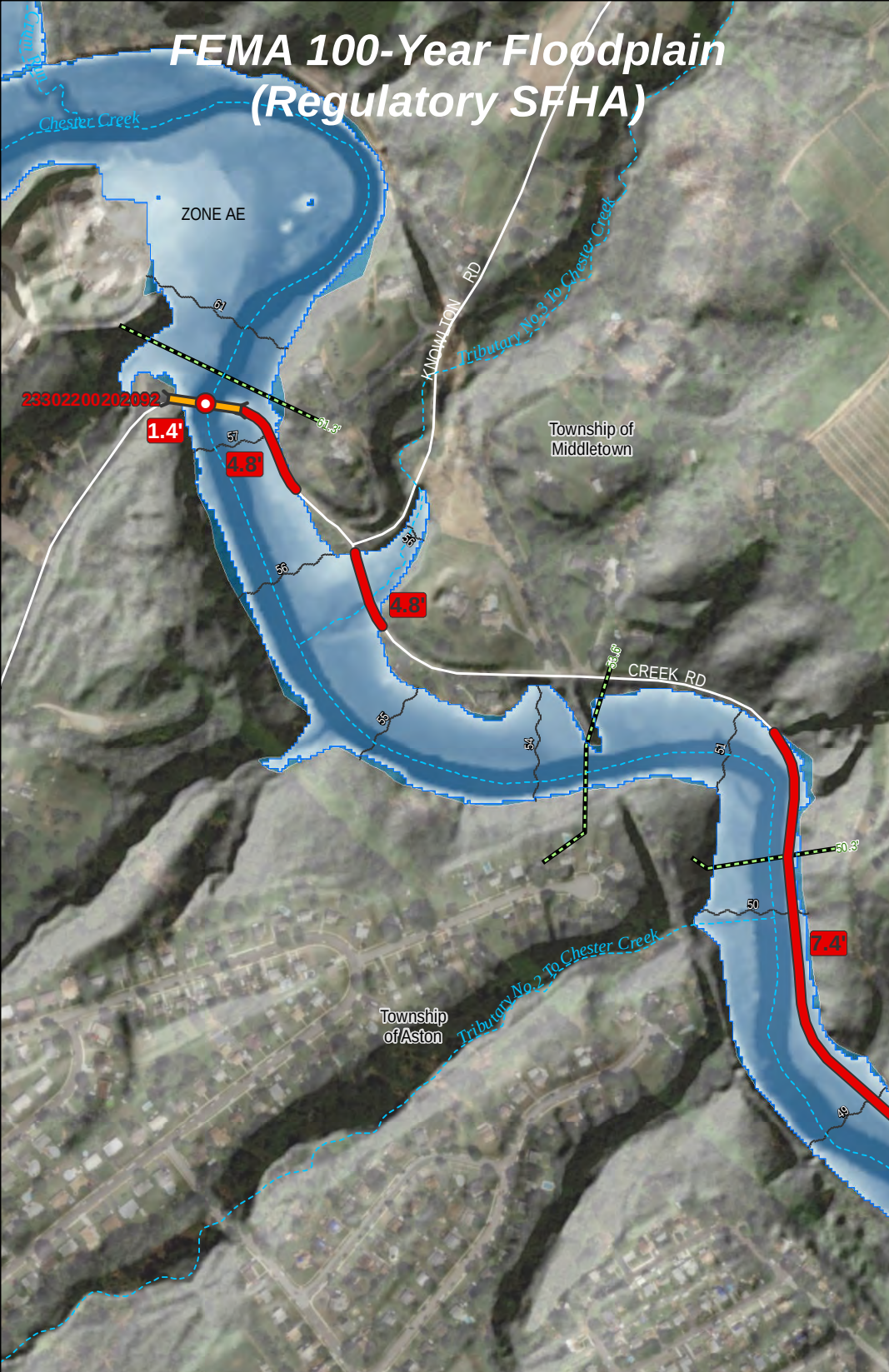
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 80 of 125

DATA FRAME PROPERTIES:
Coordinate System:
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Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

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MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

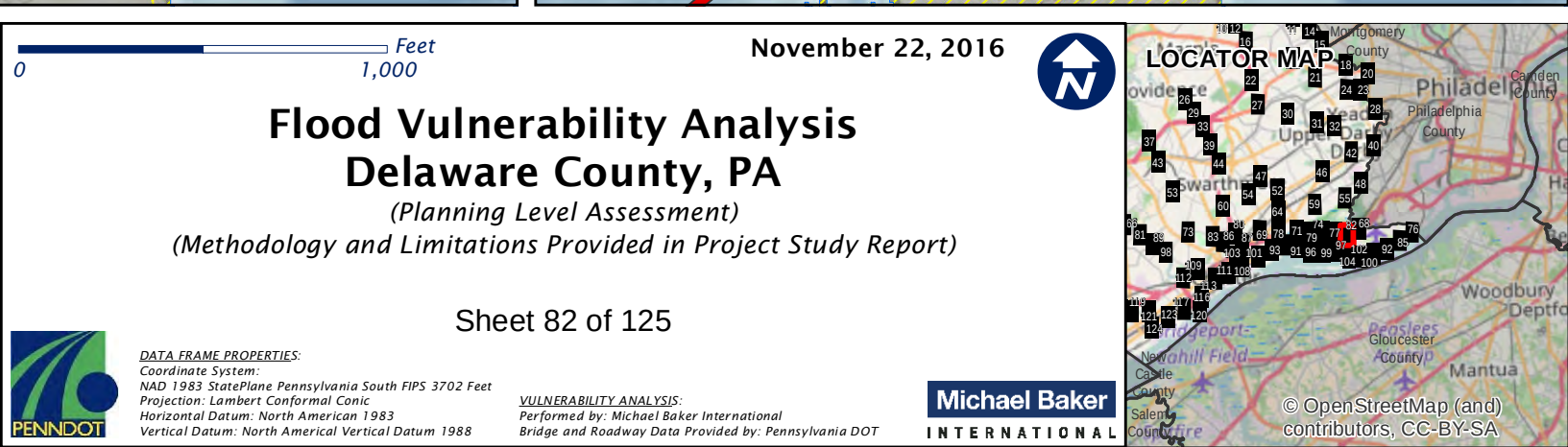
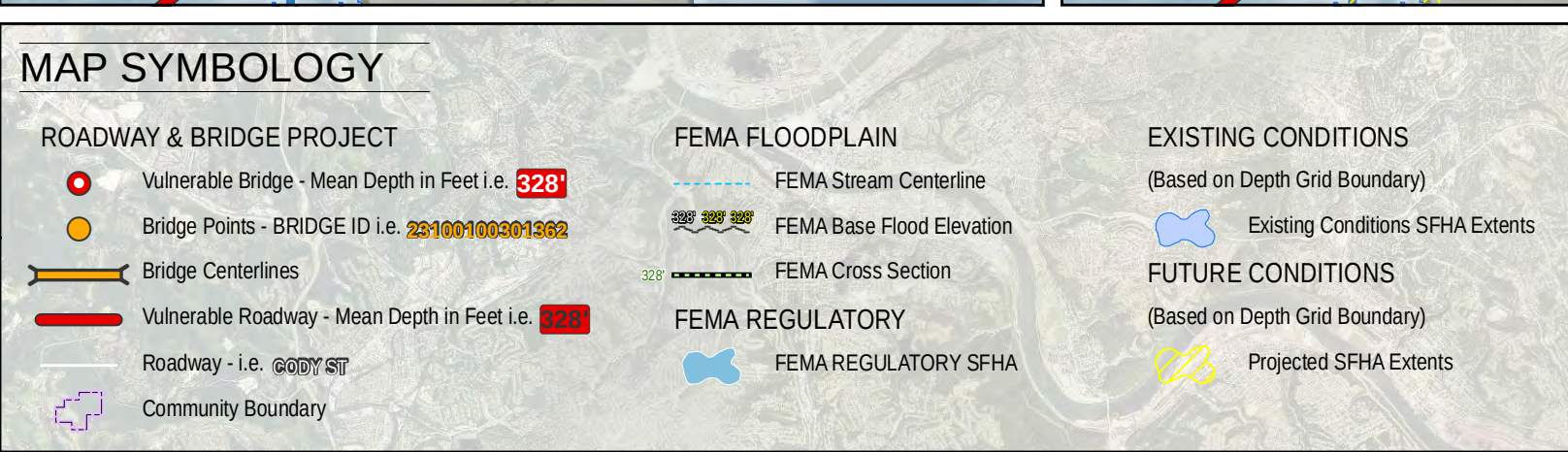
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(Methodology and Limitations Provided in Project Study Report)

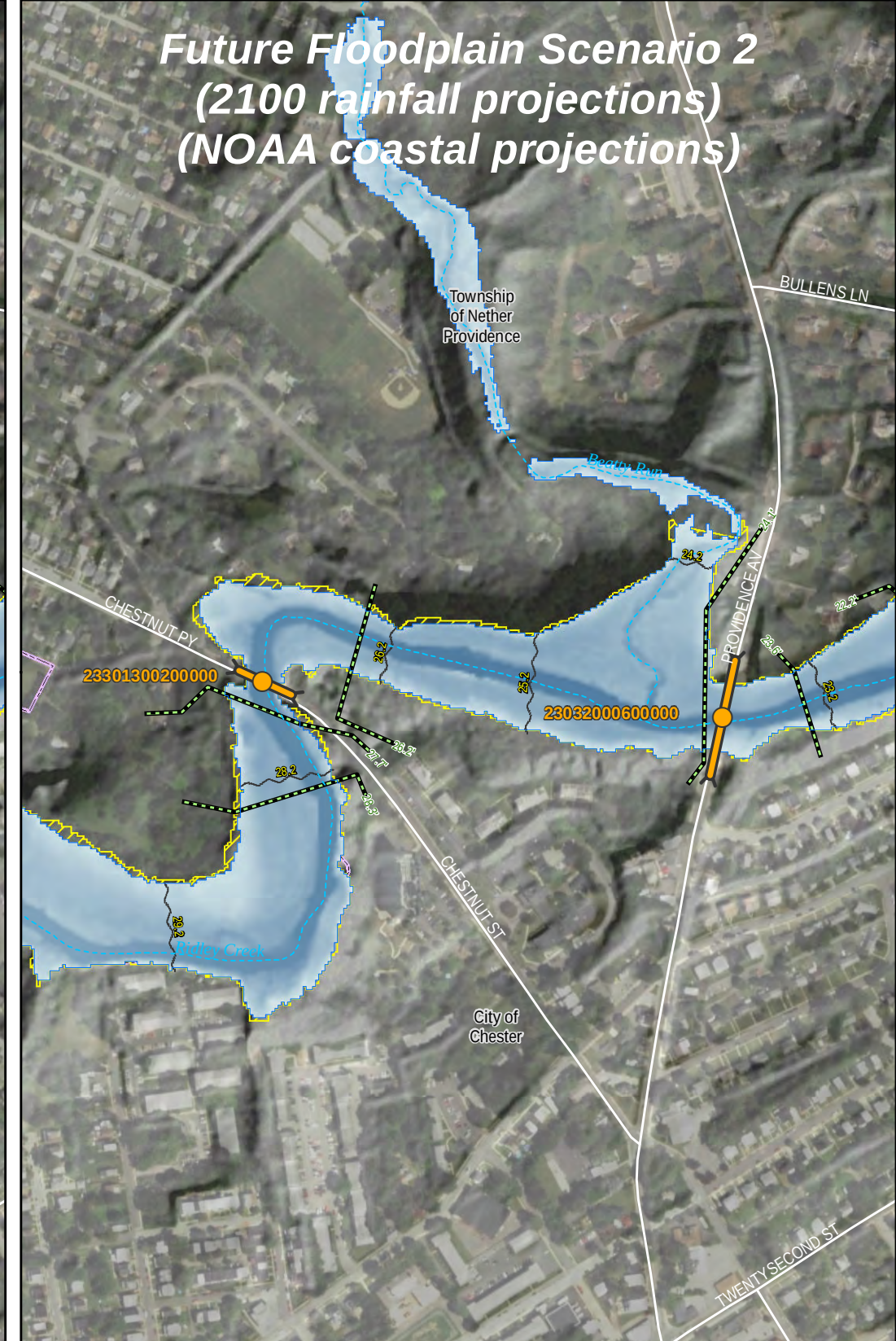
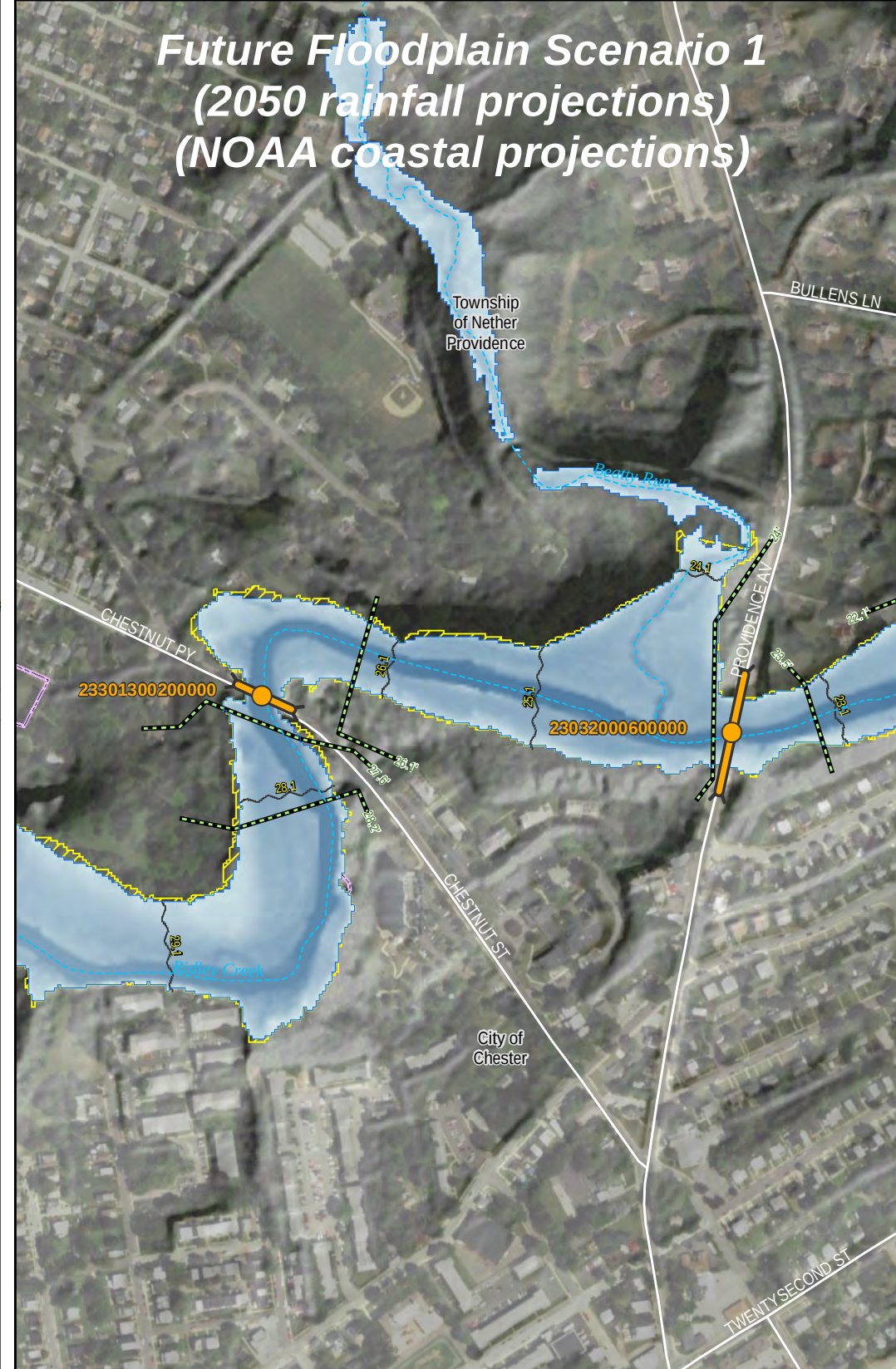
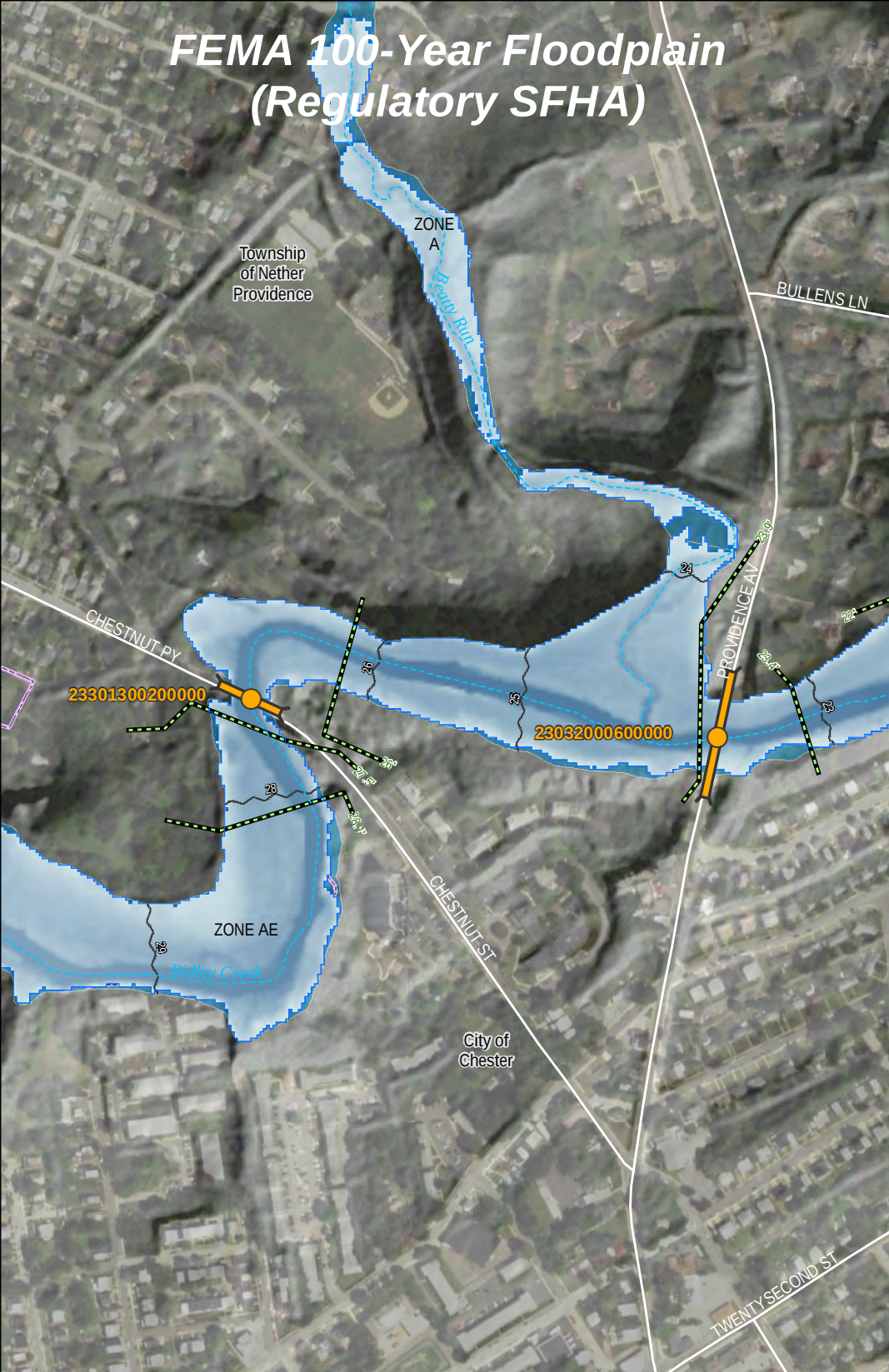
Sheet 81 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

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Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

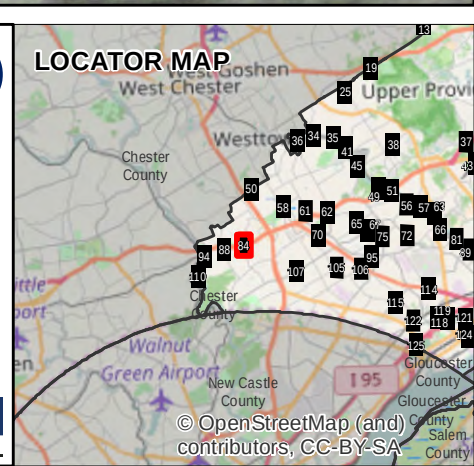
Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 84 of 125

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. 60DY ST	FEMA REGULATORY SFHA	
Community Boundary		

0 1,000 Feet

November 22, 2016

**Flood Vulnerability Analysis
Delaware County, PA**
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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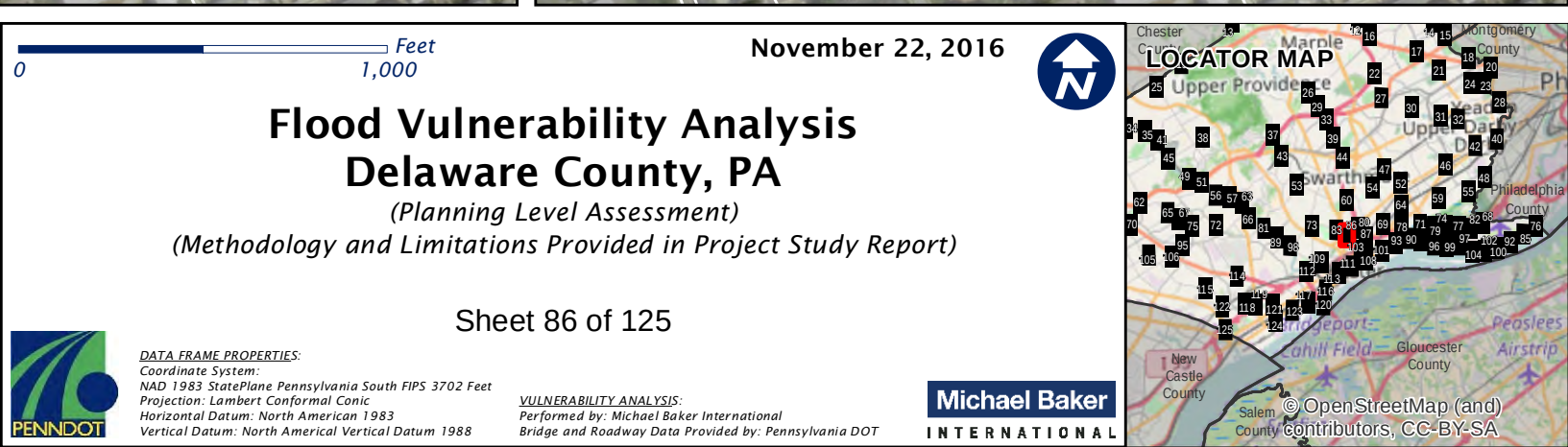
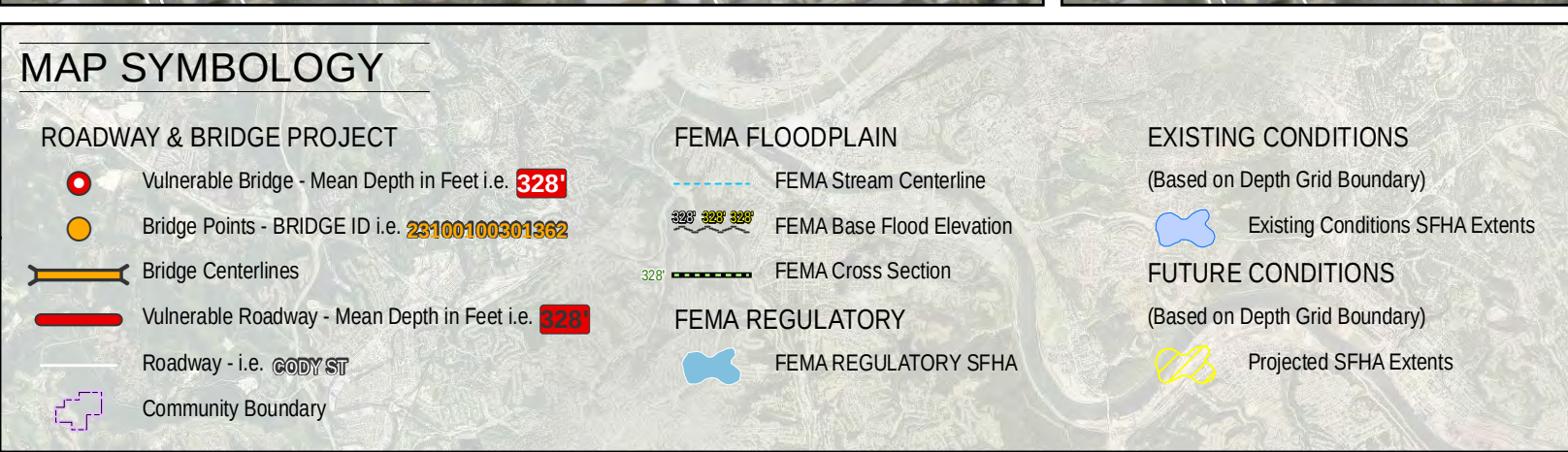
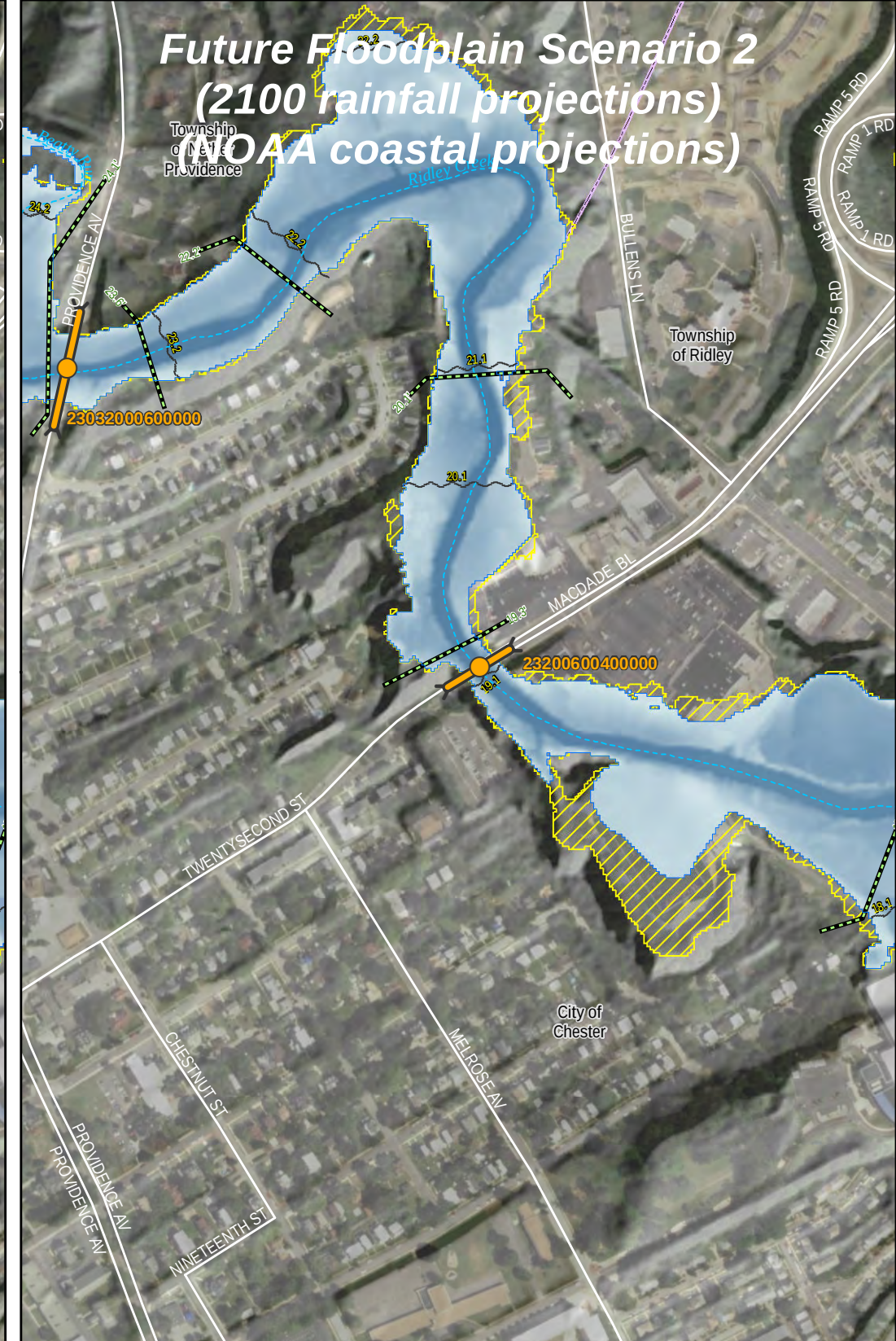
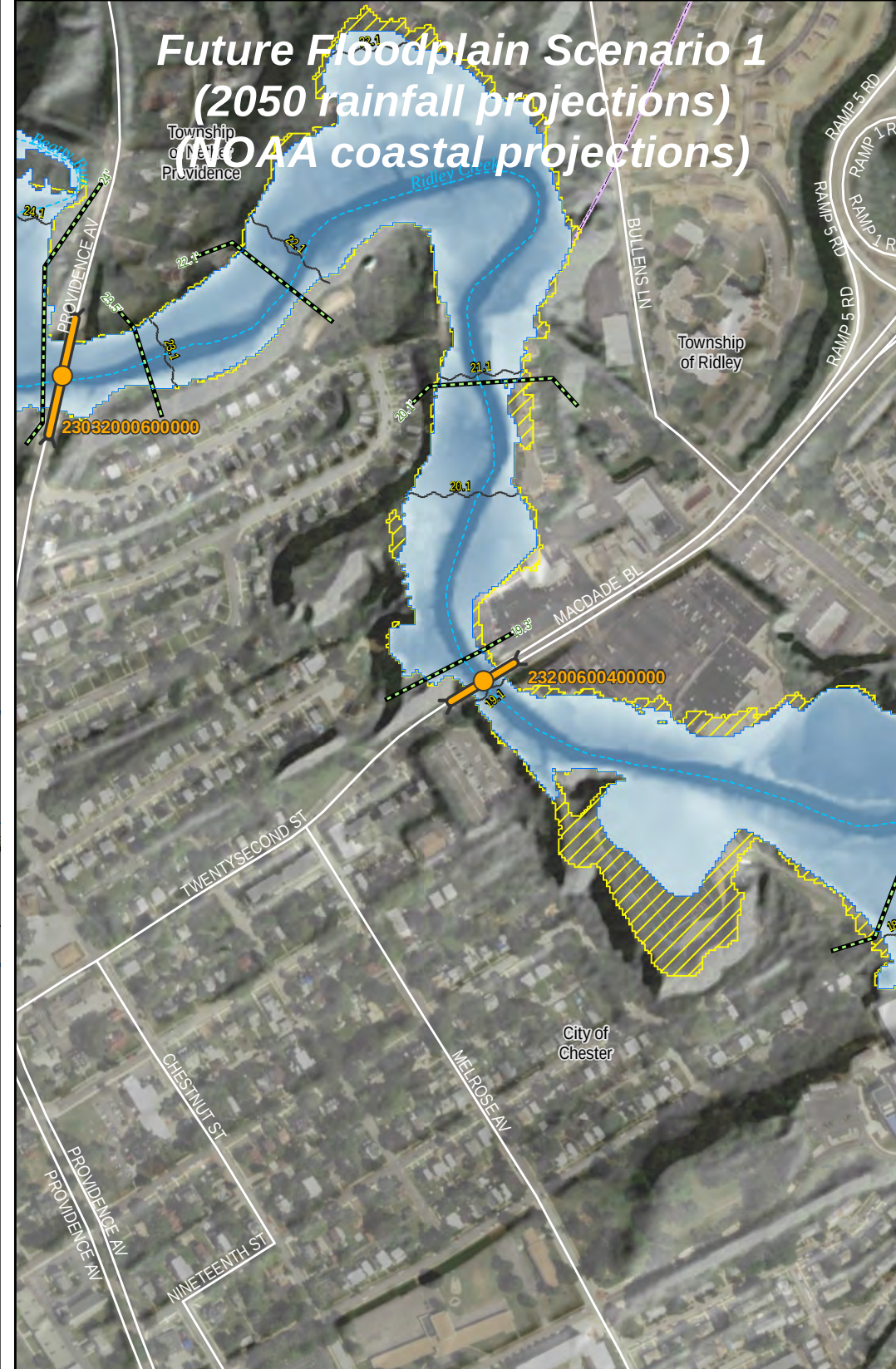
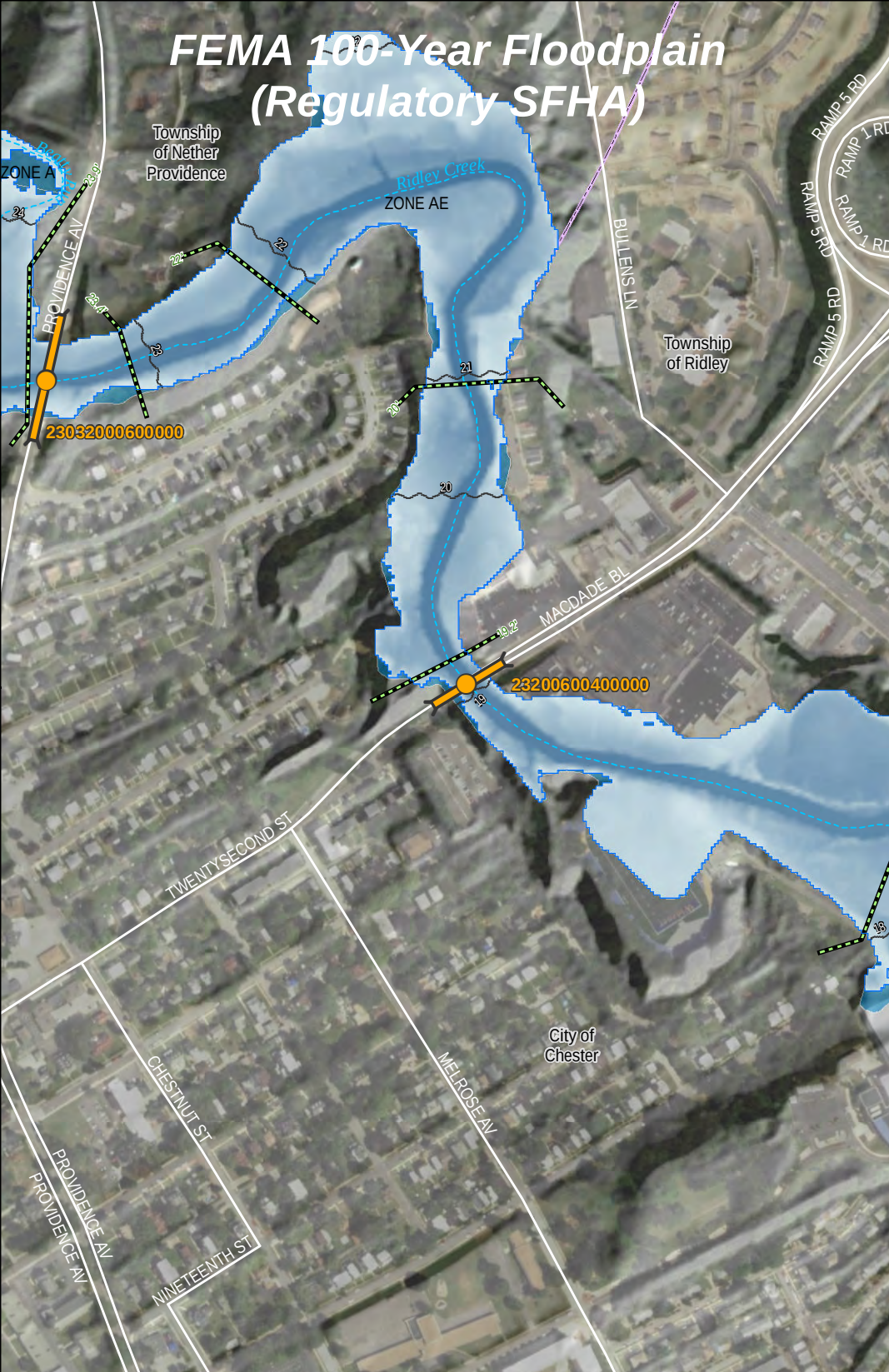
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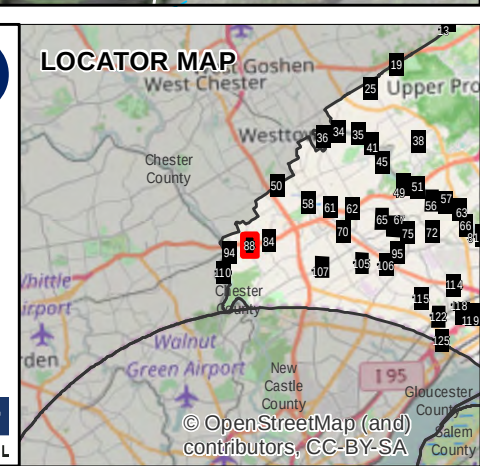
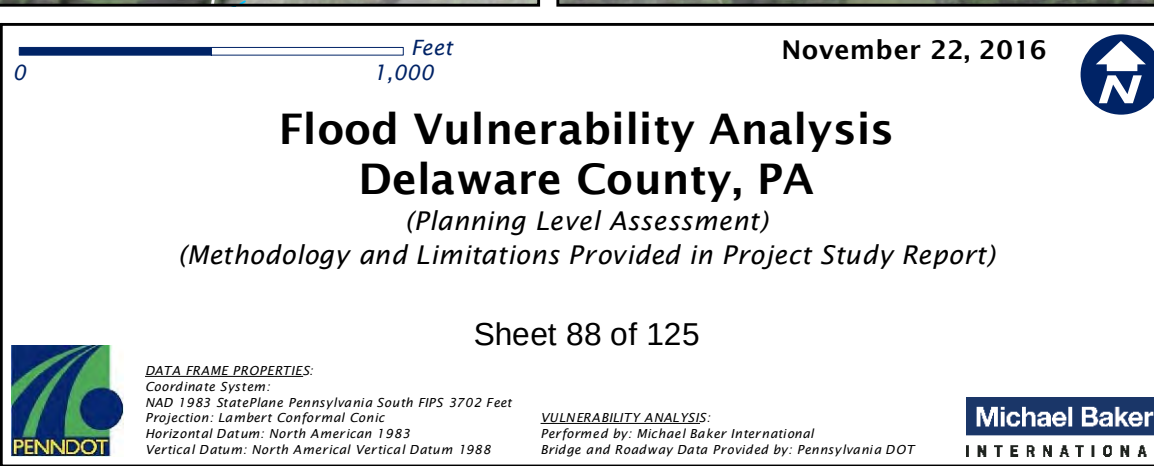
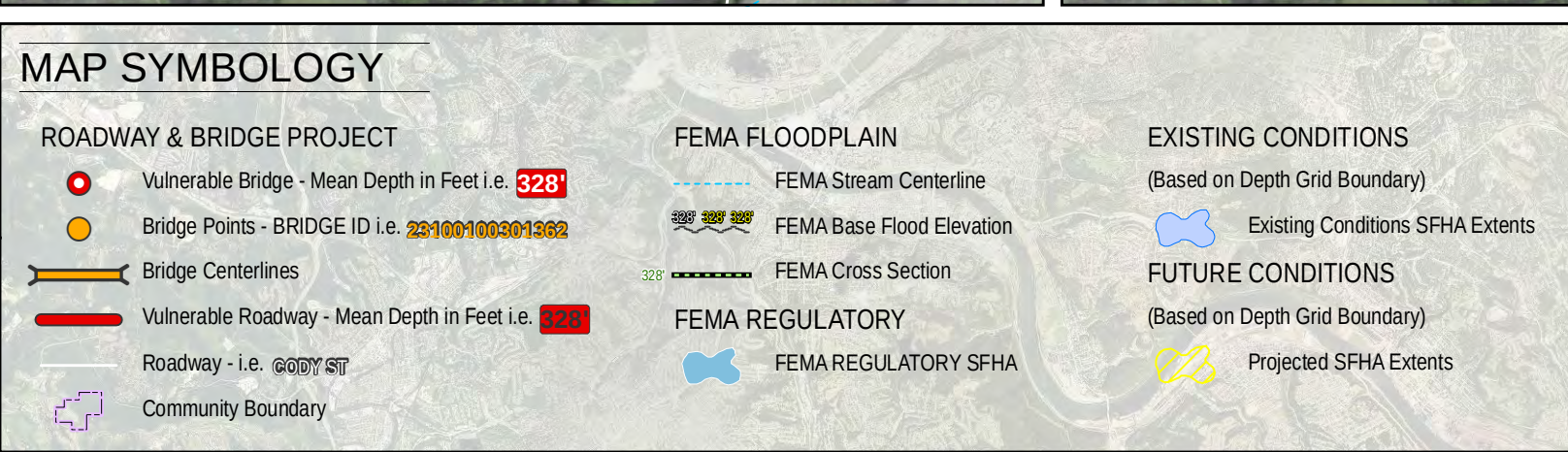
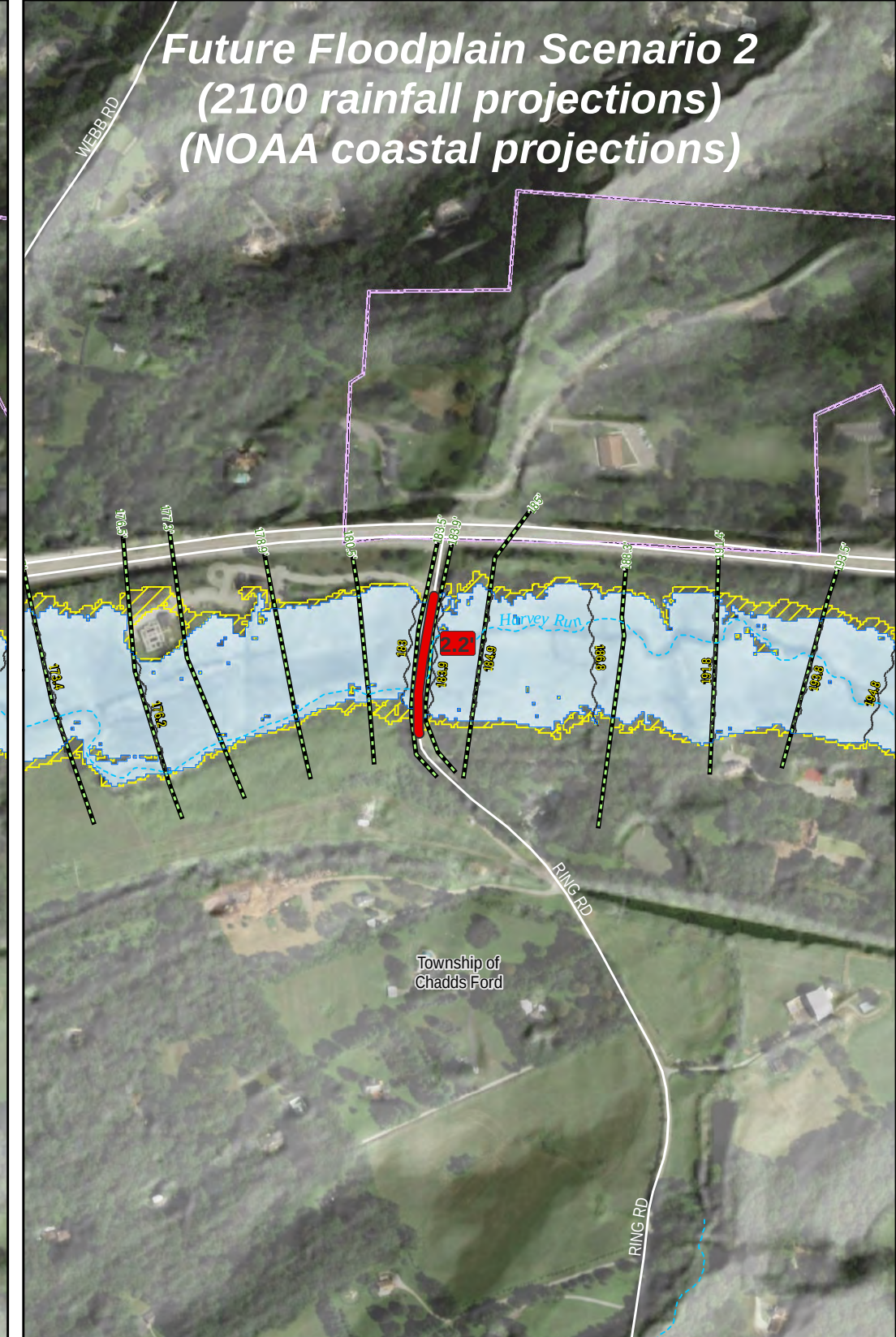
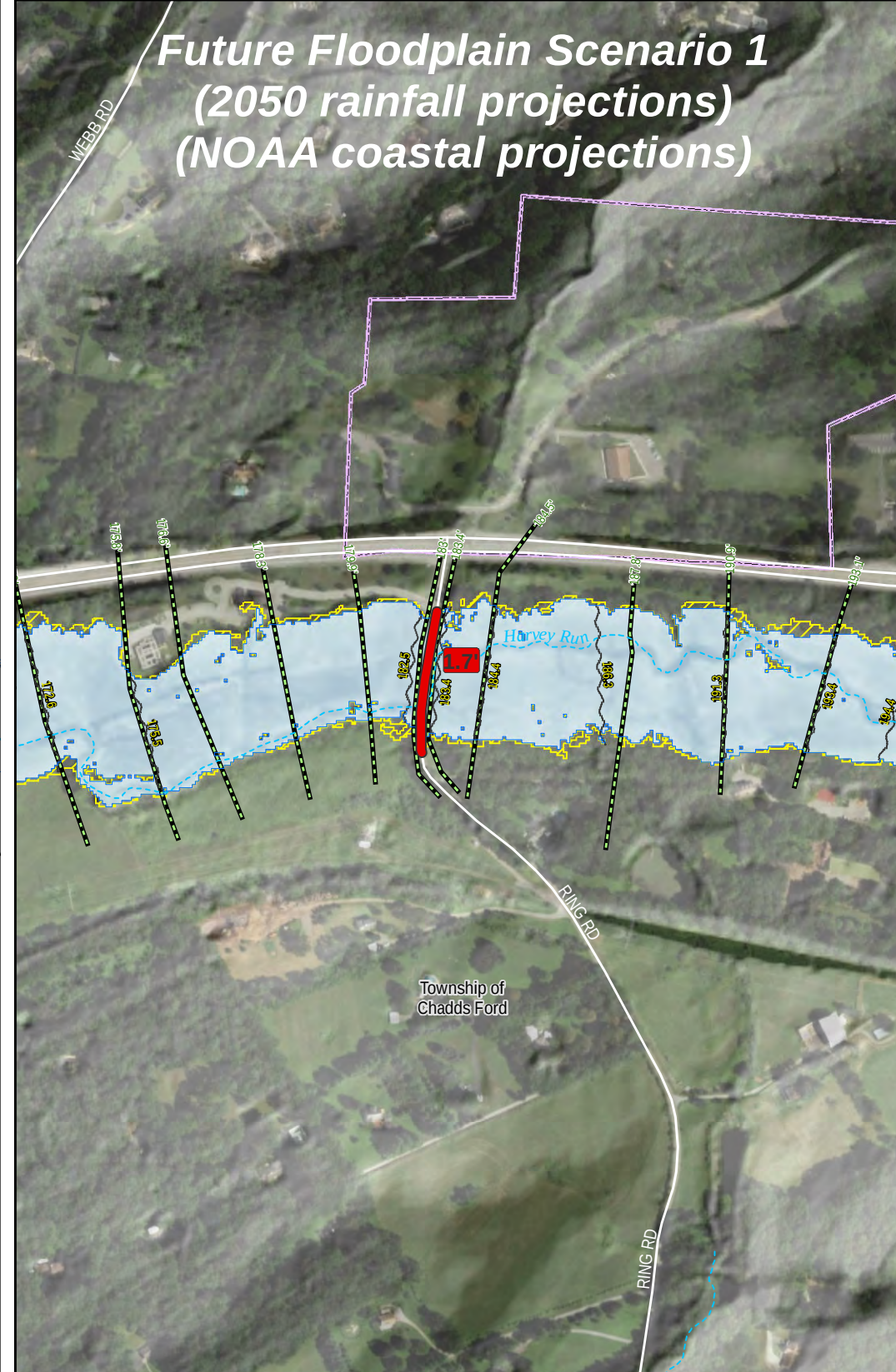
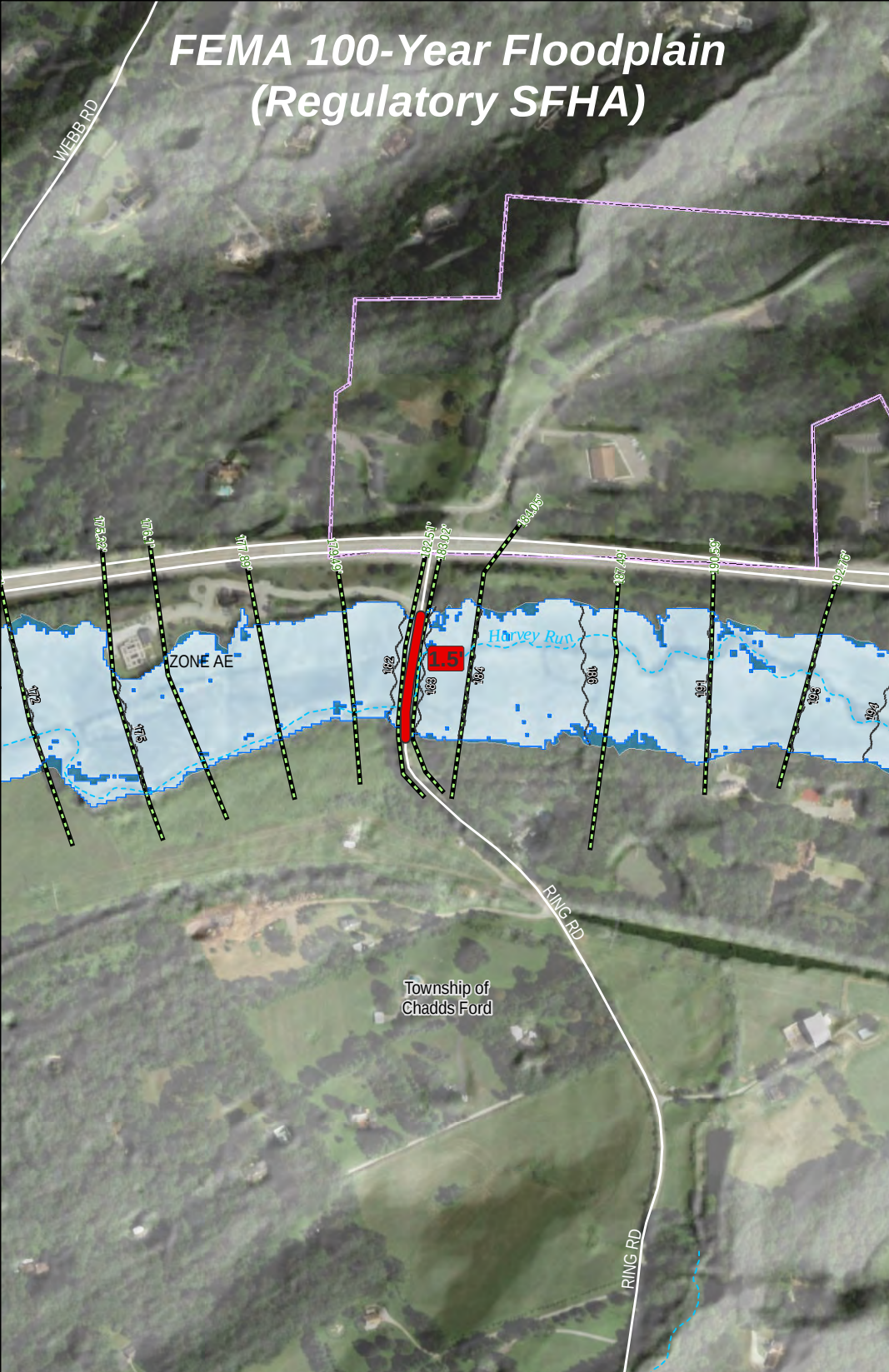
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Projection: Lambert Conformal Conic
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Vertical Datum: North American Vertical Datum 1988

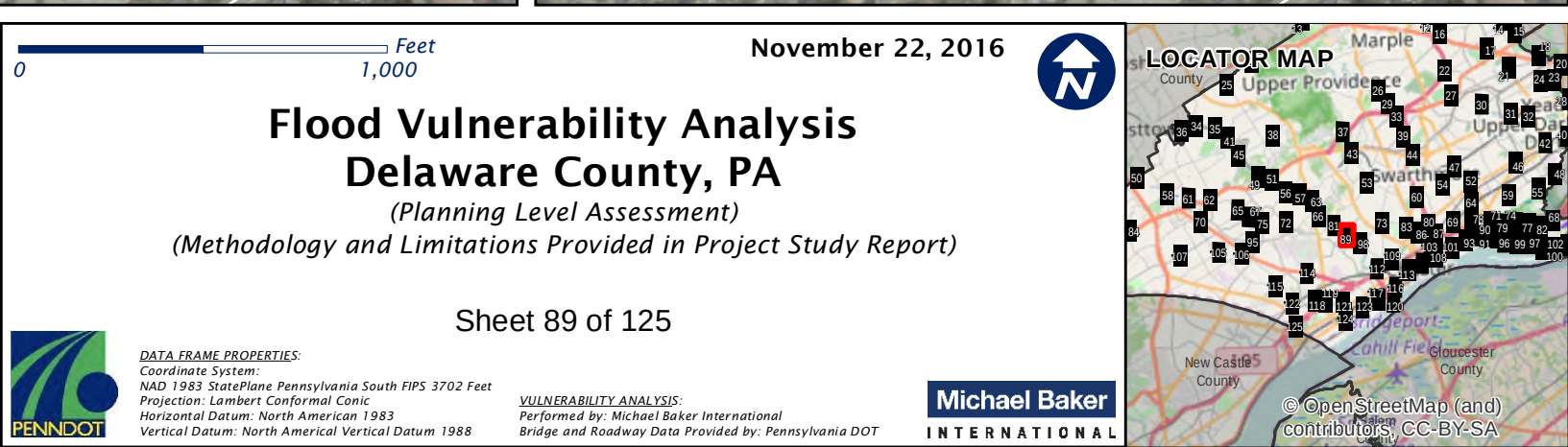
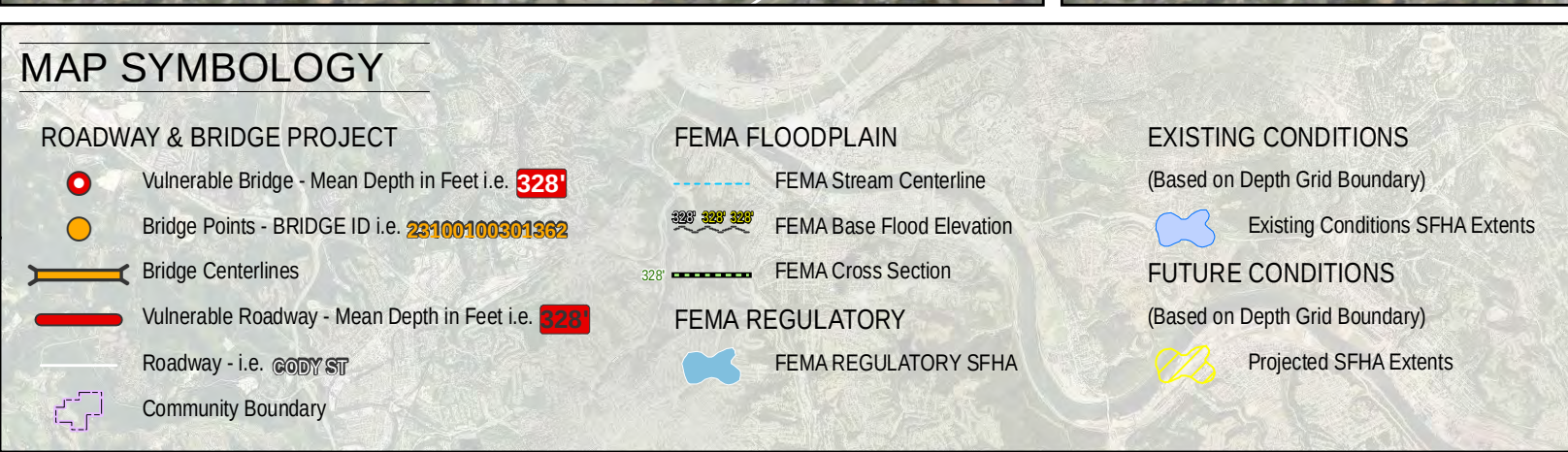
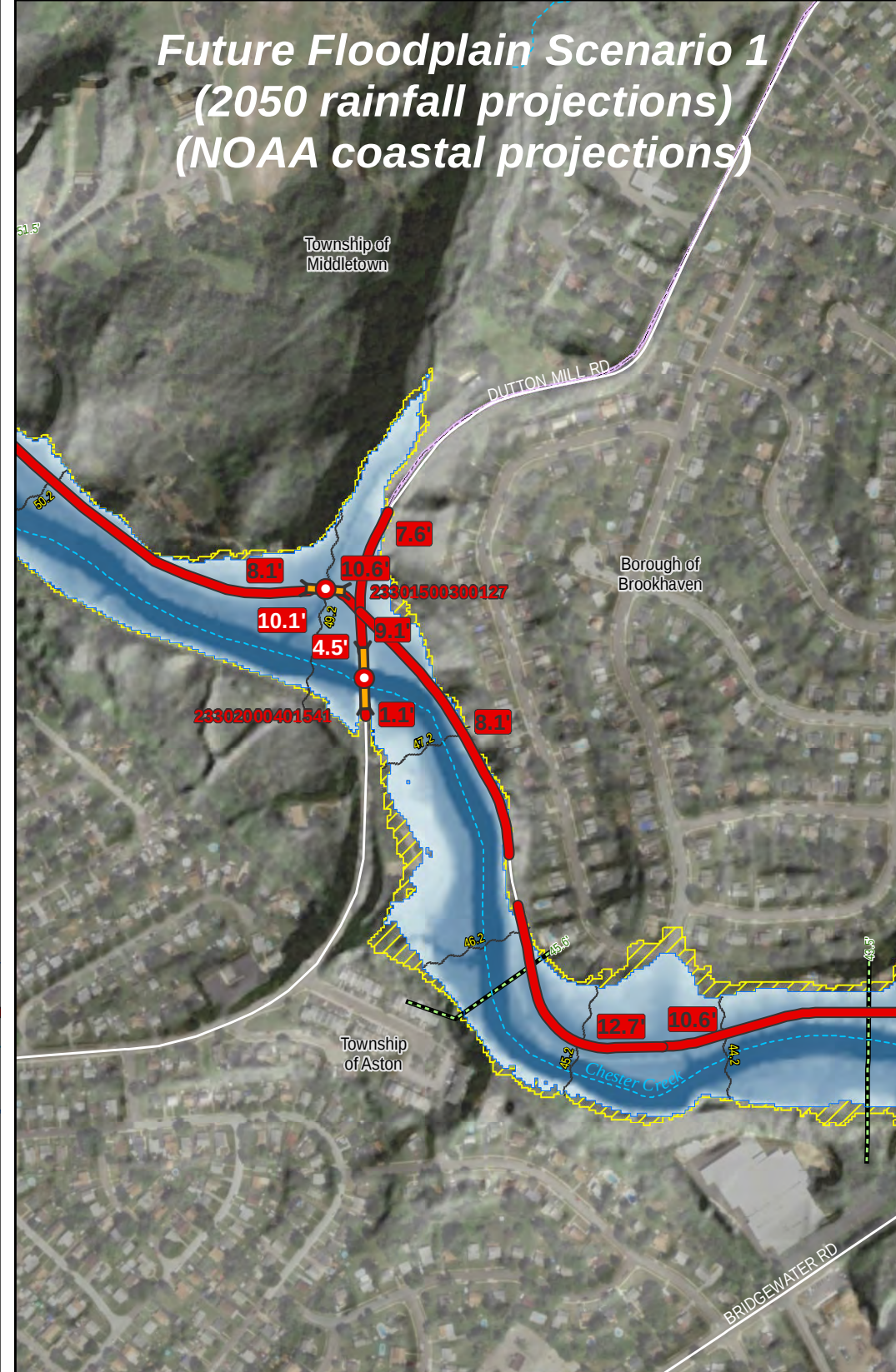
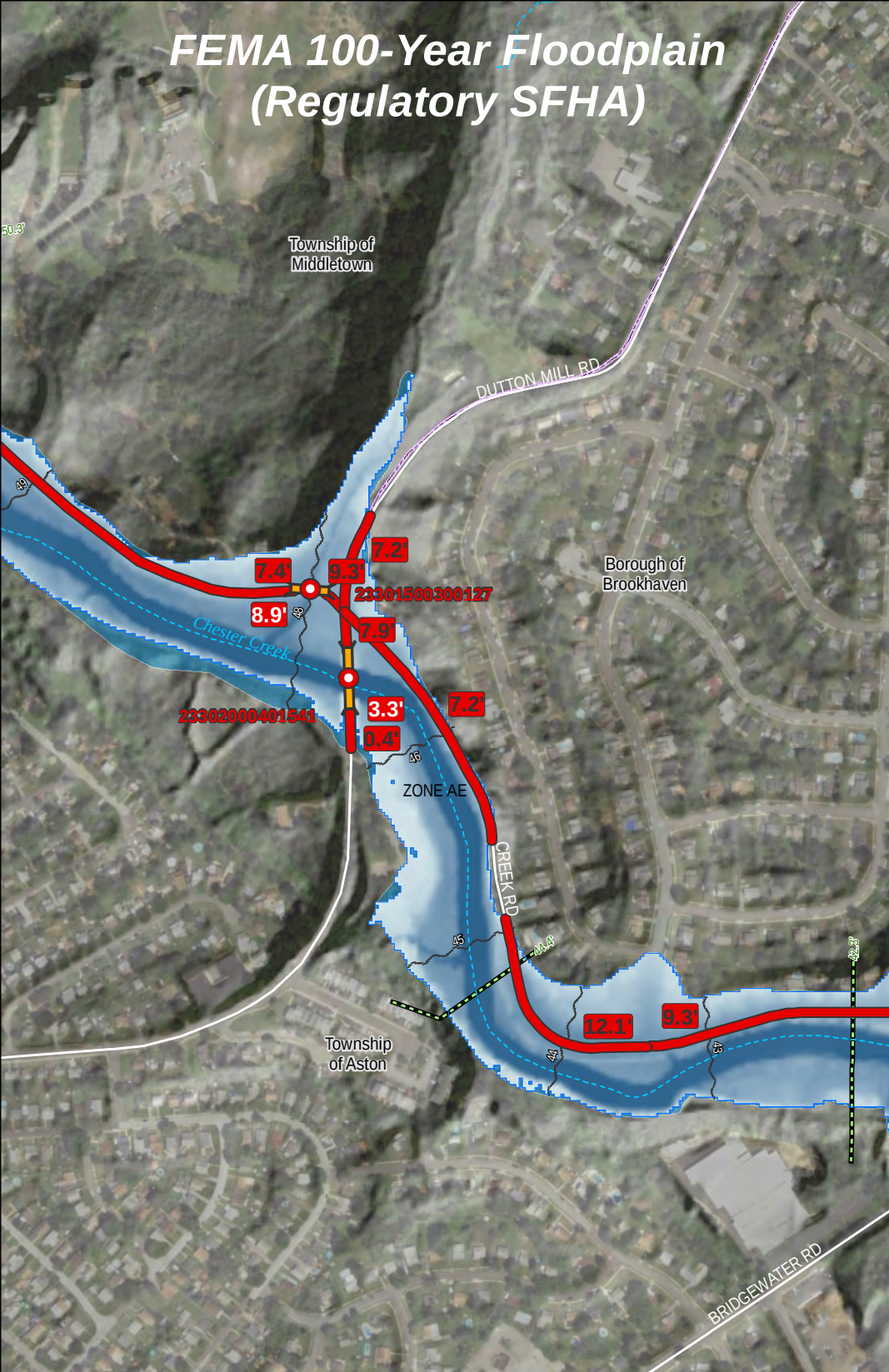
VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

**Michael Baker
INTERNATIONAL**

LOCATOR MAP









MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	
	Vulnerable Bridge - Mean Depth in Feet i.e. 328'
	Bridge Points - BRIDGE ID i.e. 23100100301362
	Bridge Centerlines
	Vulnerable Roadway - Mean Depth in Feet i.e. 328'
	Roadway - i.e. CODY ST
	Community Boundary

FEMA FLOODPLAIN	
	FEMA Stream Centerline
	FEMA Base Flood Elevation
	FEMA Cross Section
FEMA REGULATORY	
	FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)	
	Existing Conditions SFHA Extents
FUTURE CONDITIONS (Based on Depth Grid Boundary)	
	Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

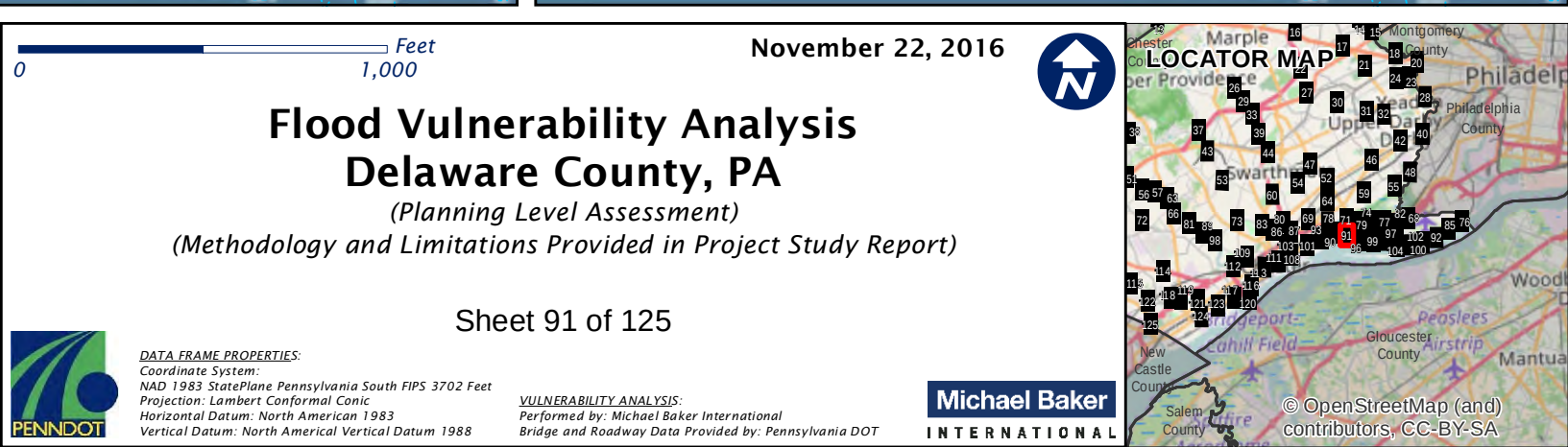
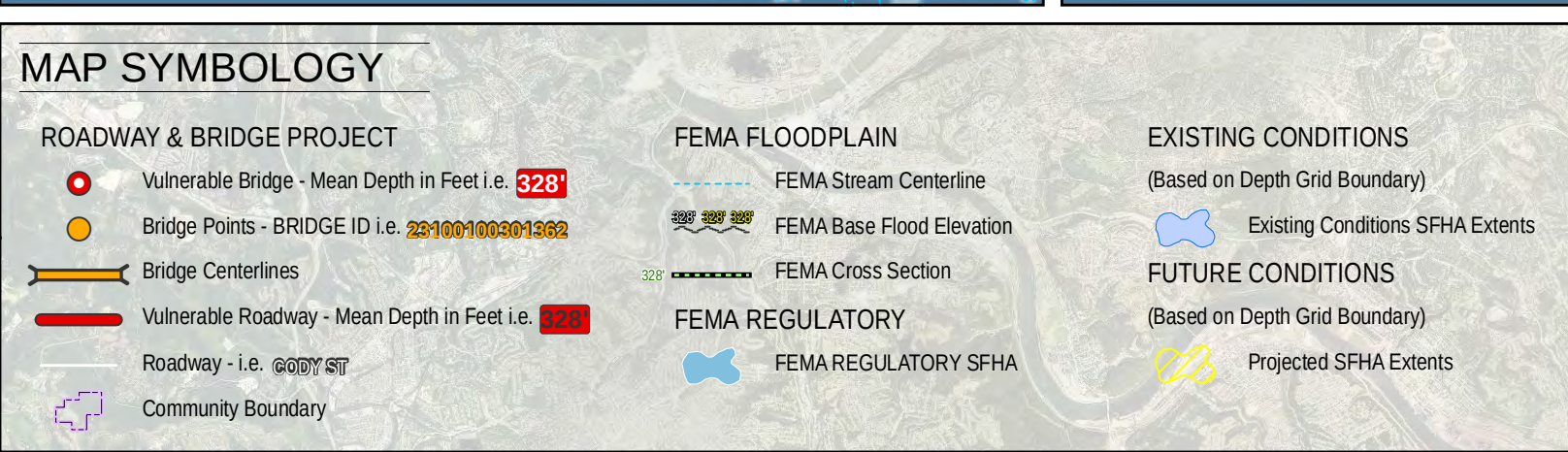
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(Methodology and Limitations Provided in Project Study Report)

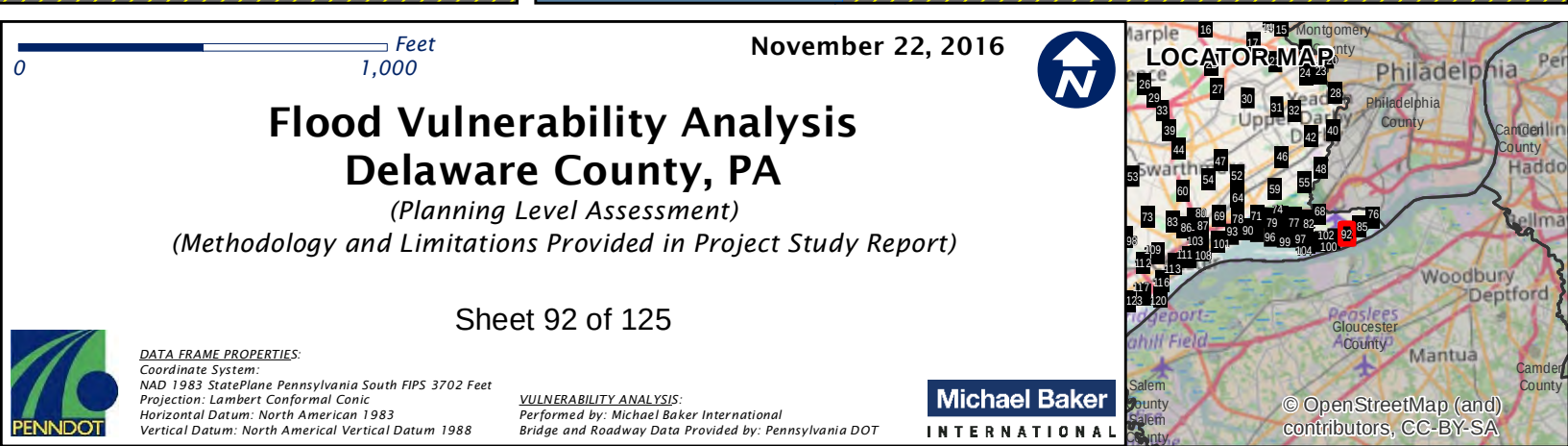
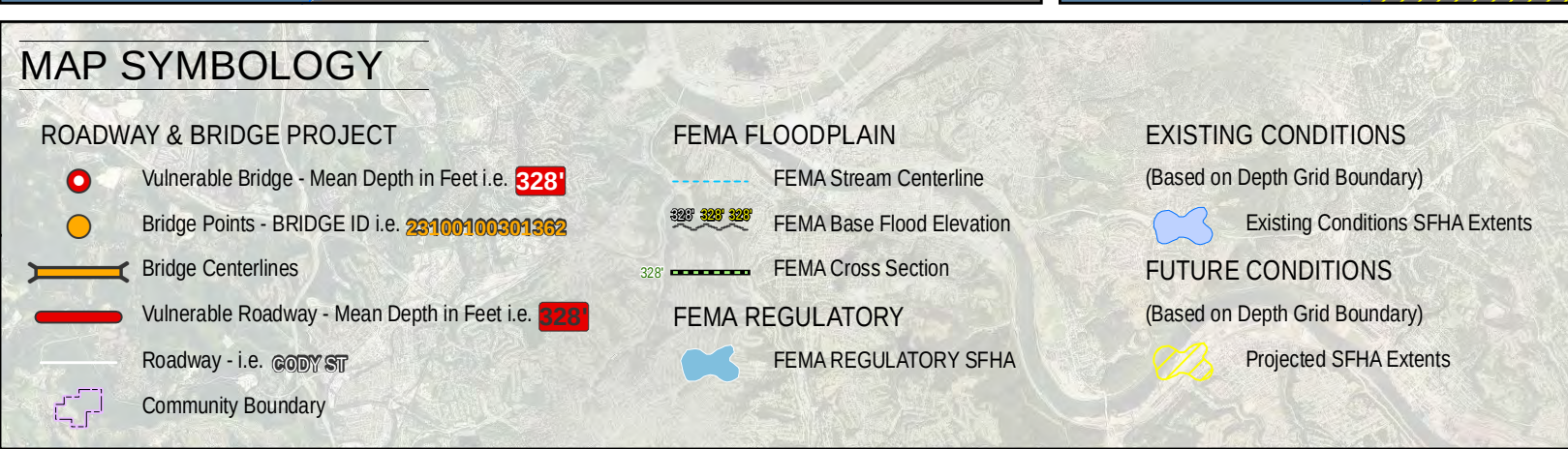
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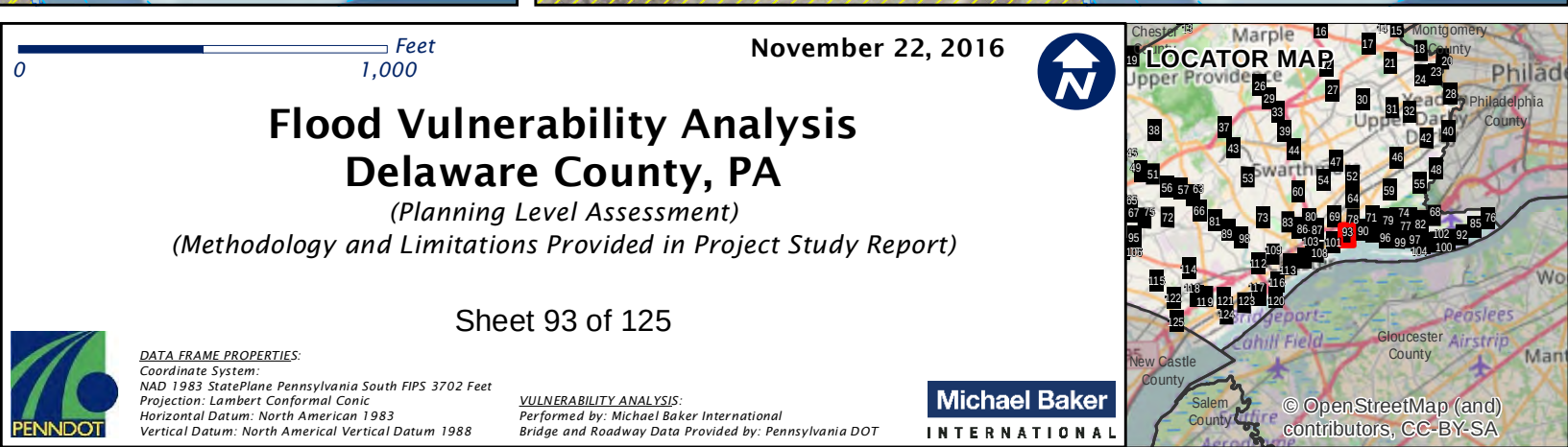
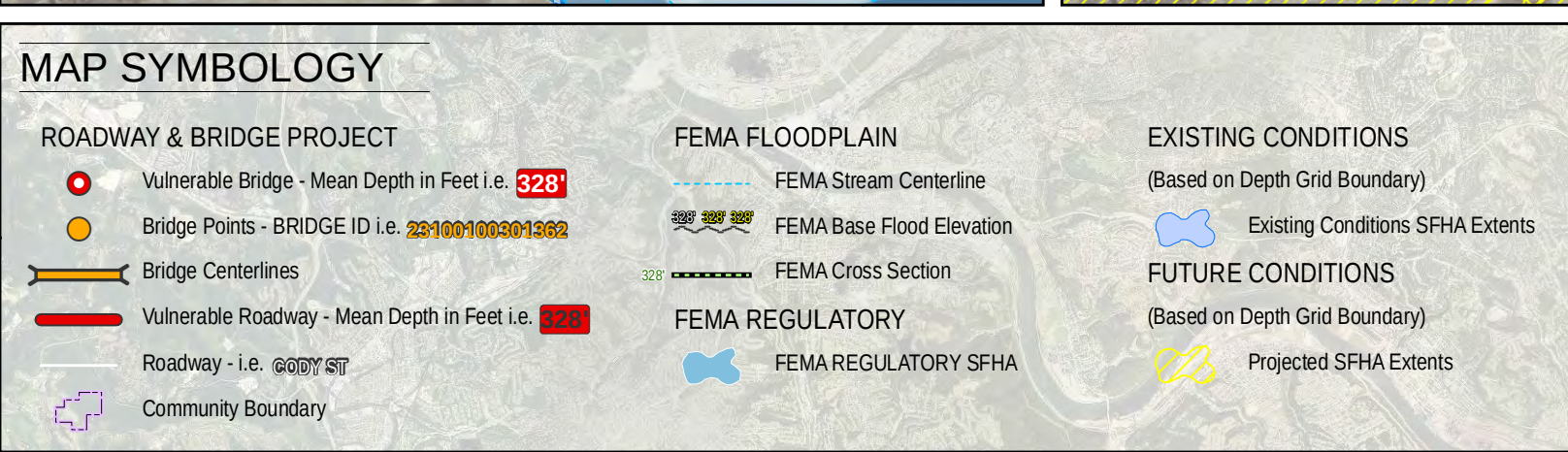
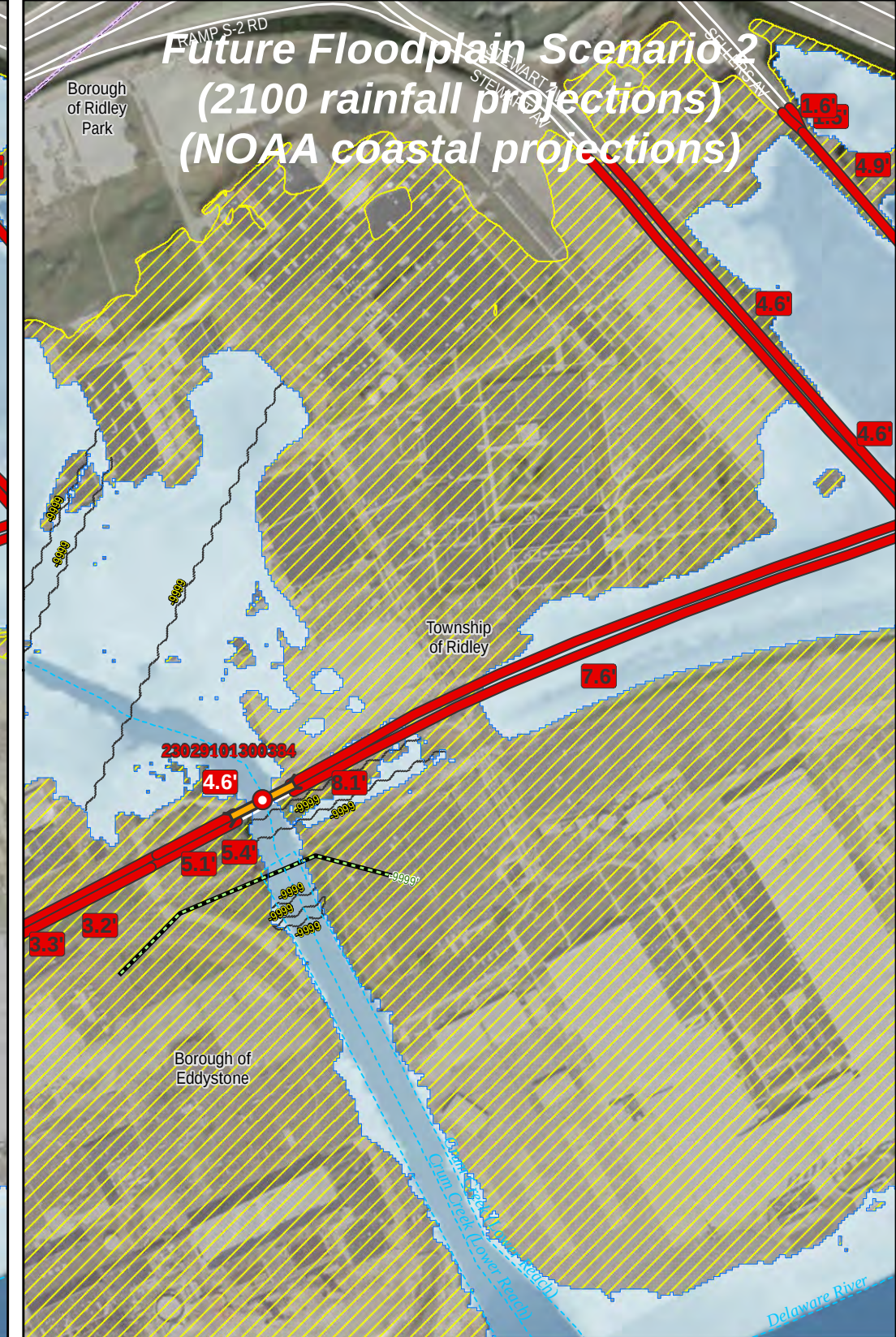
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Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

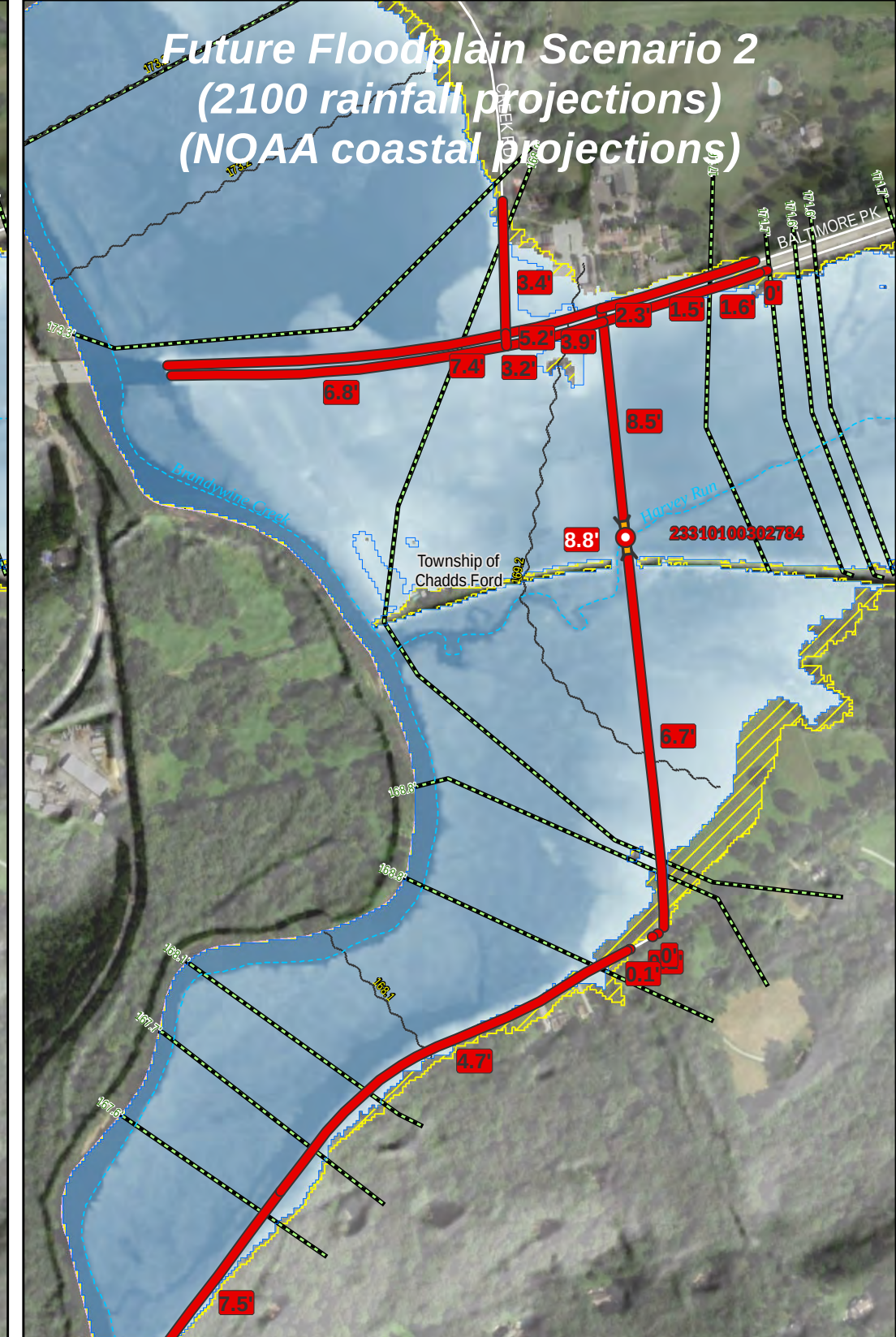
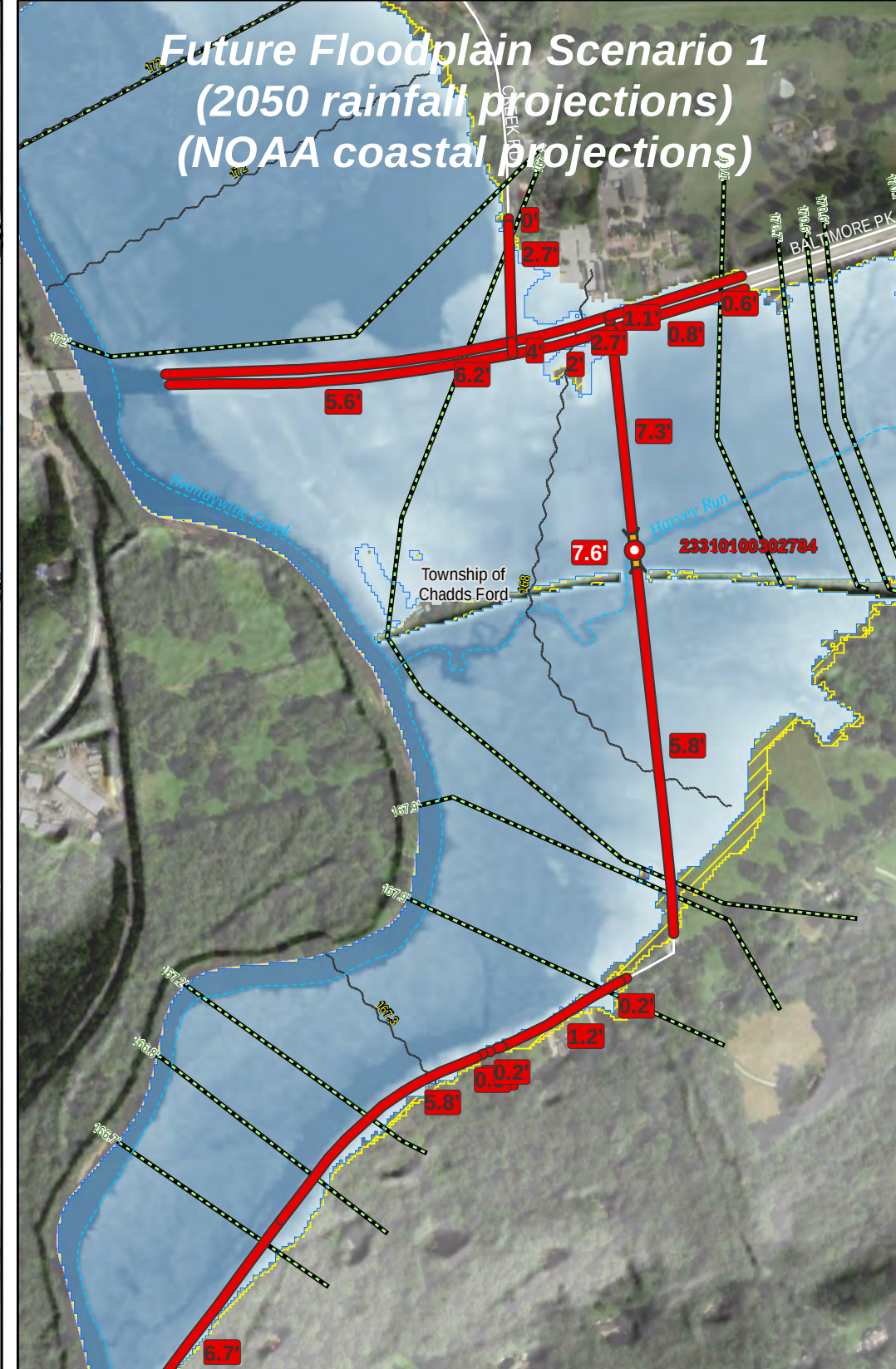
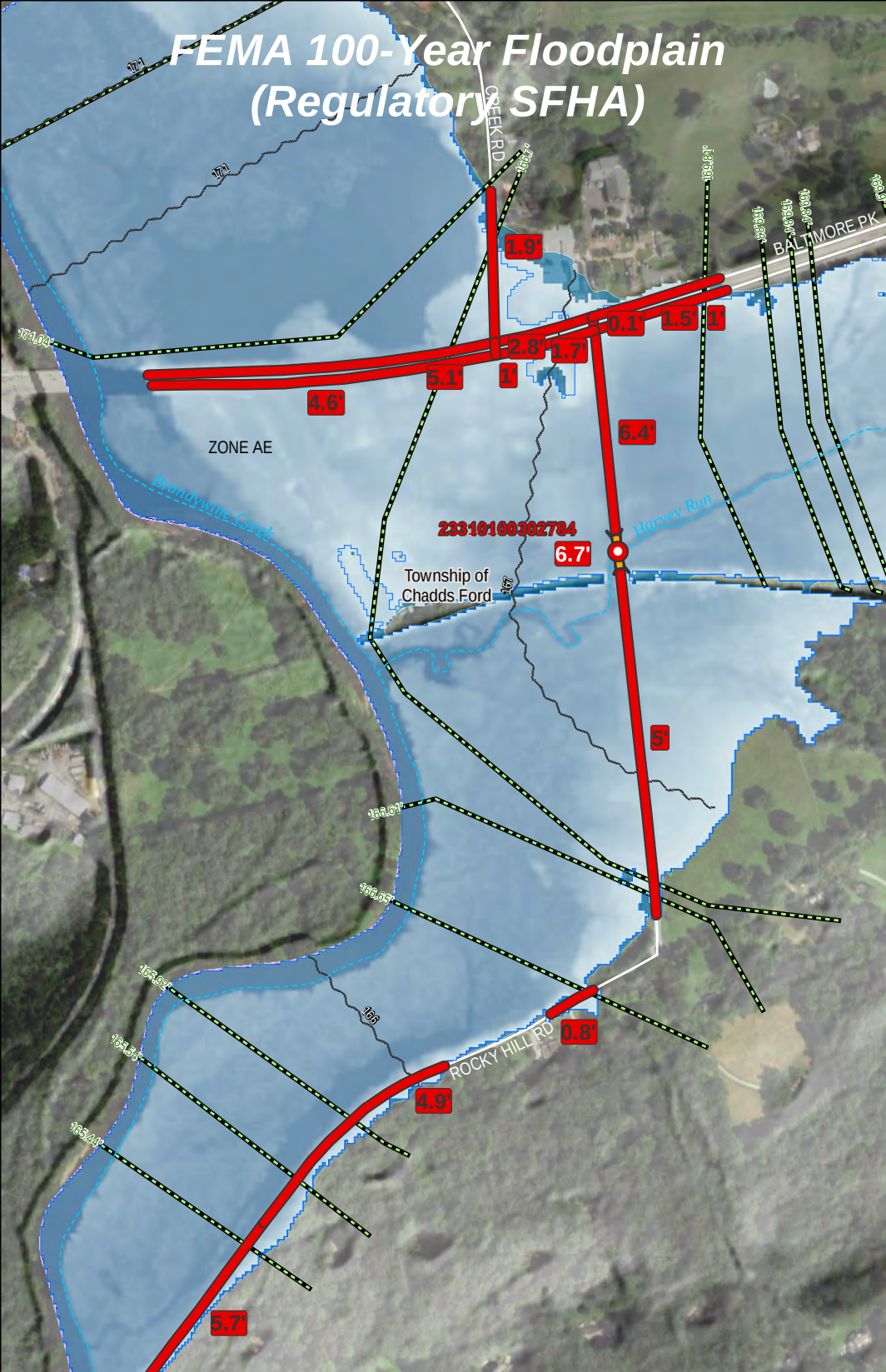
VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
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MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	
	Vulnerable Bridge - Mean Depth in Feet i.e. 328'
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	Vulnerable Roadway - Mean Depth in Feet i.e. 328'
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	Community Boundary
FEMA FLOODPLAIN	
	FEMA Stream Centerline
	FEMA Base Flood Elevation
	FEMA Cross Section
FEMA REGULATORY	
	FEMA REGULATORY SFHA
EXISTING CONDITIONS (Based on Depth Grid Boundary)	
	Existing Conditions SFHA Extents
FUTURE CONDITIONS (Based on Depth Grid Boundary)	
	Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

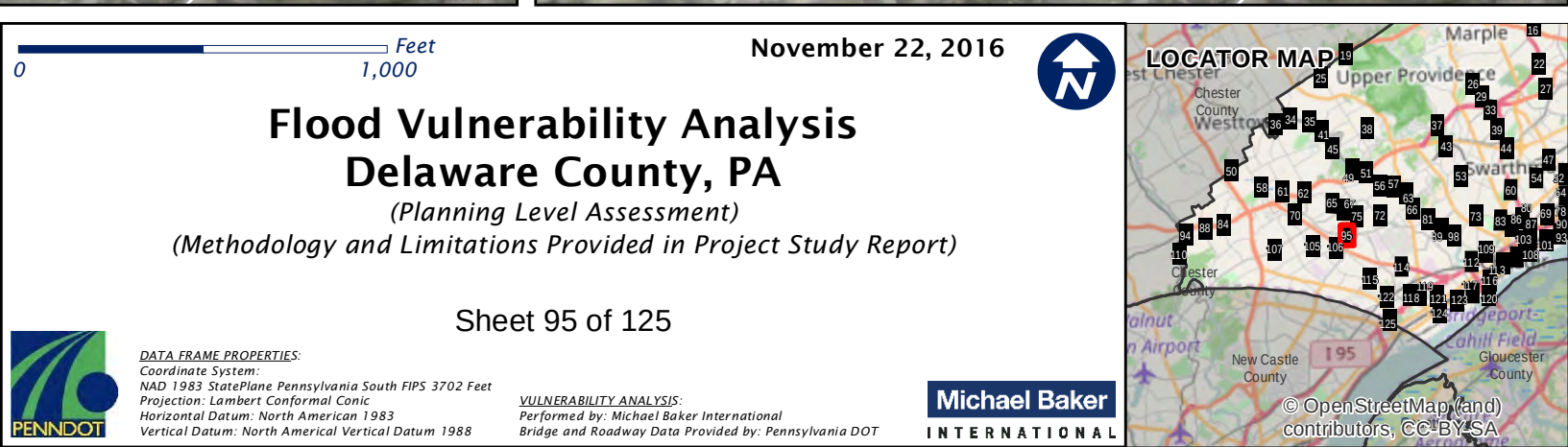
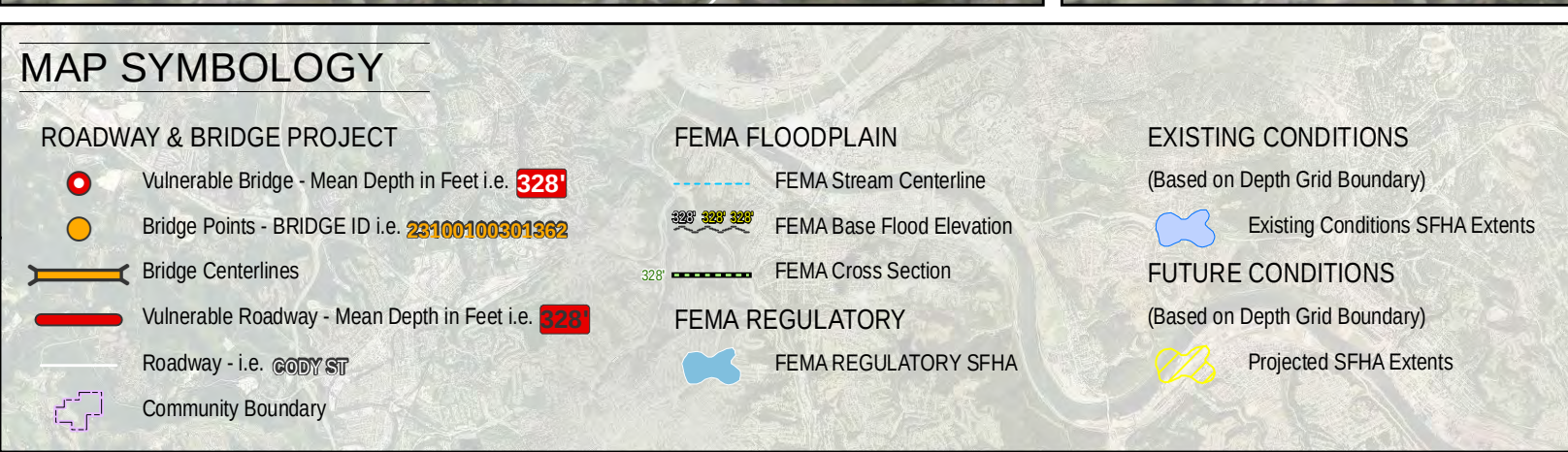
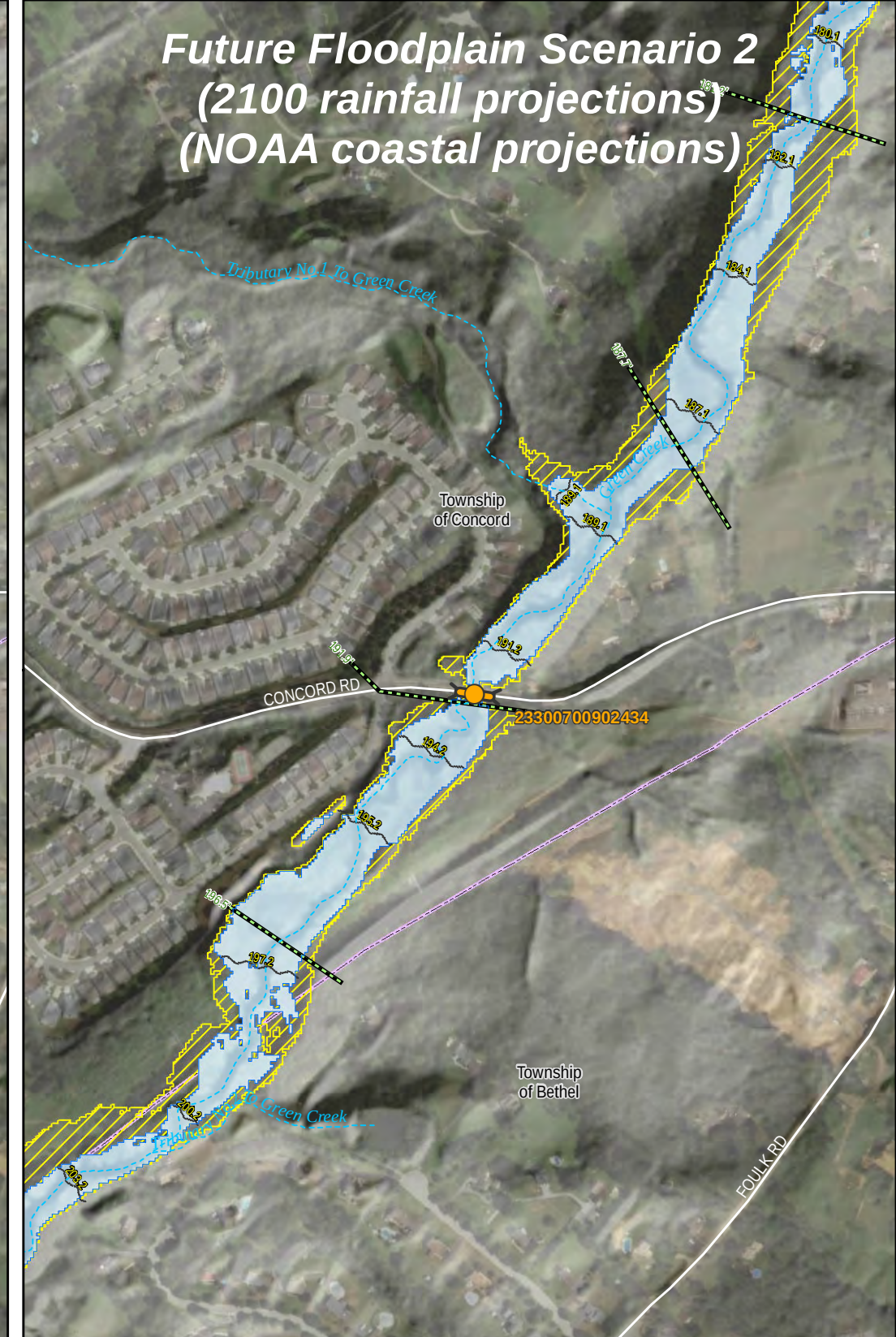
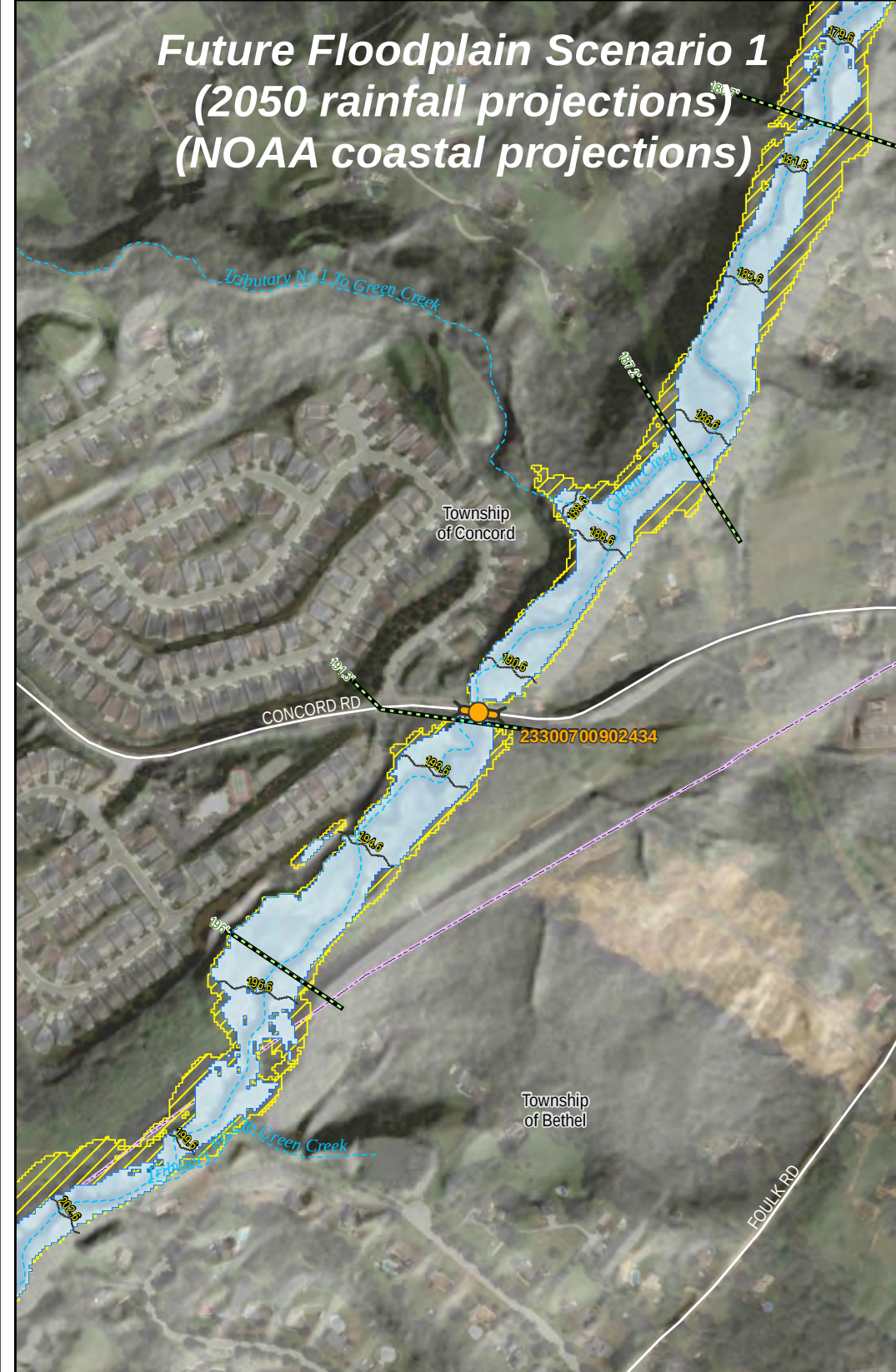
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(Methodology and Limitations Provided in Project Study Report)

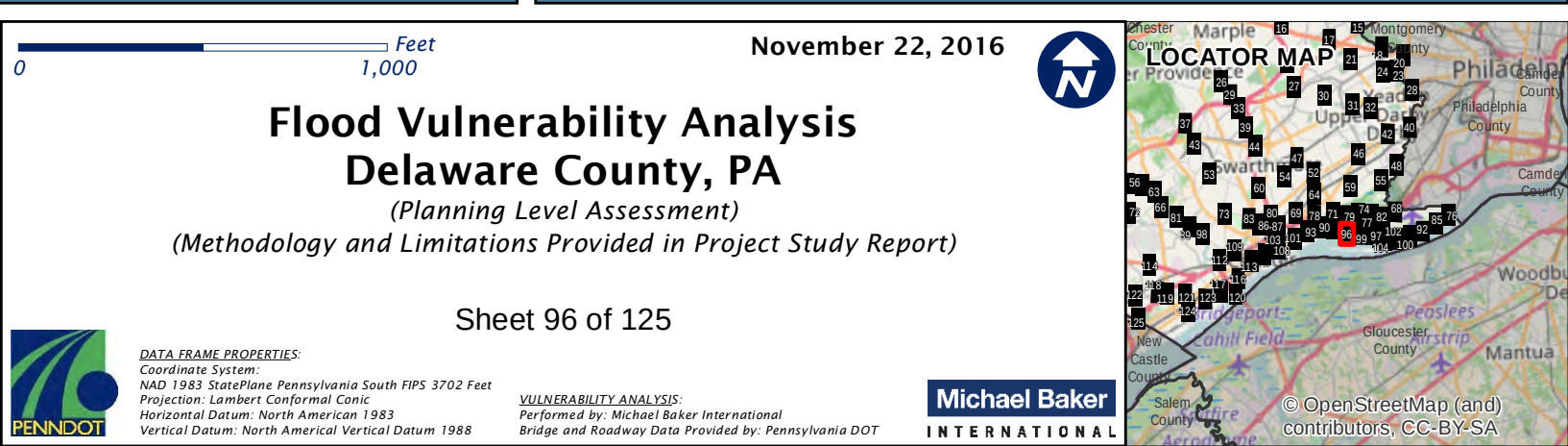
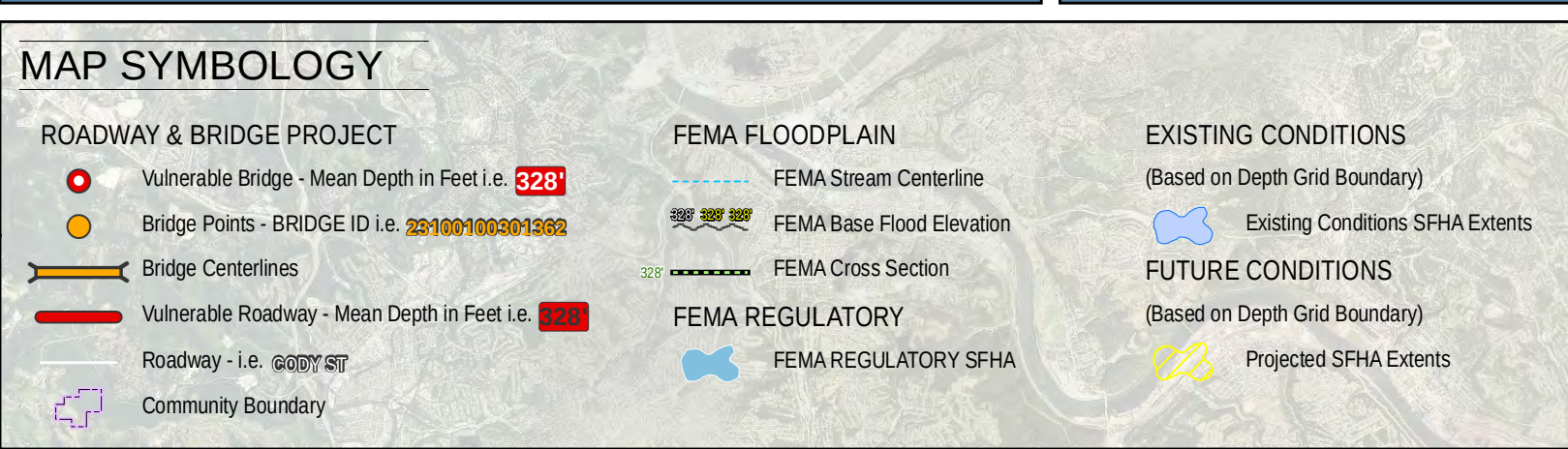
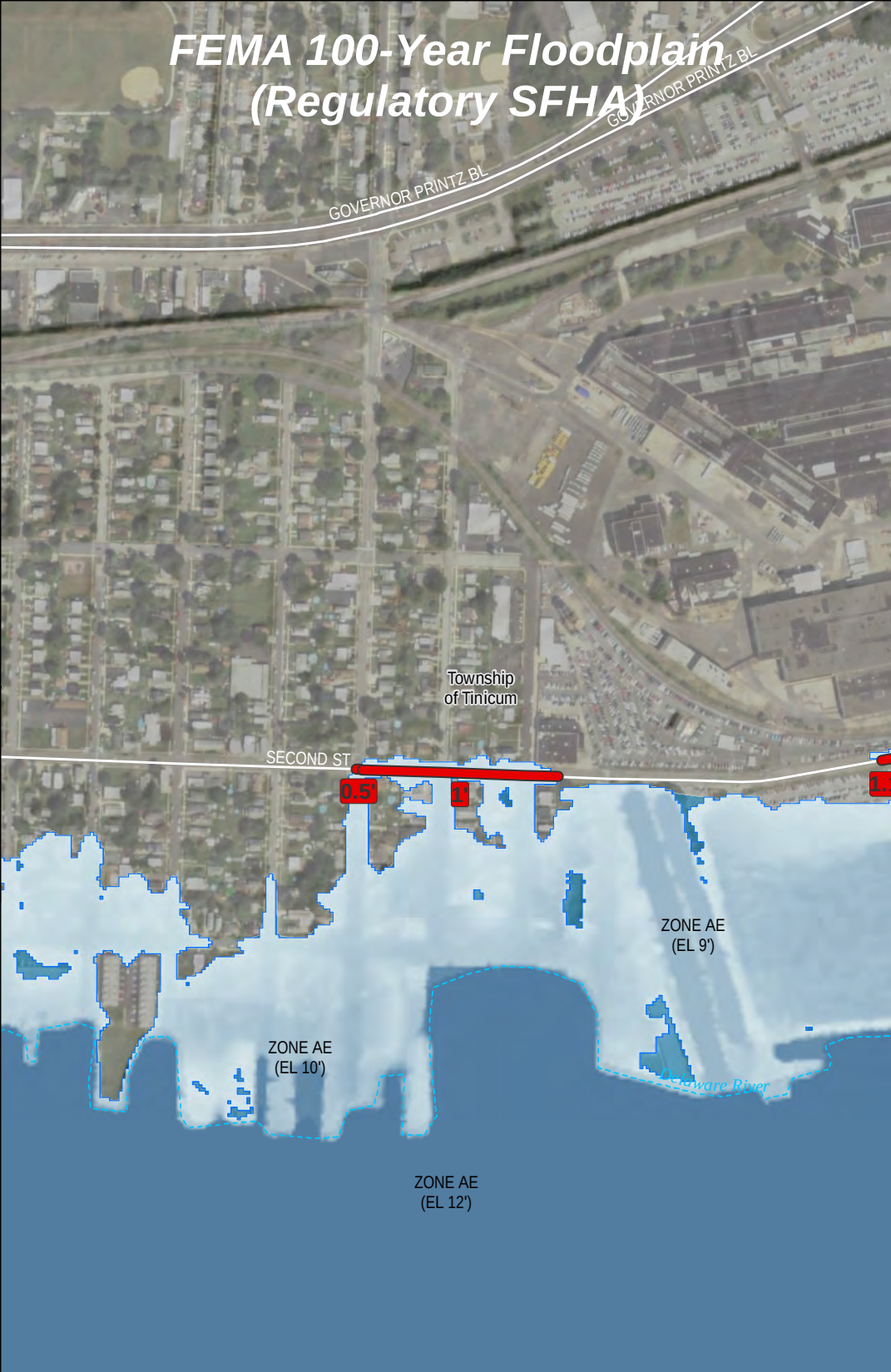
Sheet 94 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP







MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	
	Vulnerable Bridge - Mean Depth in Feet i.e. 328'
	Bridge Points - BRIDGE ID i.e. 23100100301362
	Bridge Centerlines
	Vulnerable Roadway - Mean Depth in Feet i.e. 328'
	Roadway - i.e. CODY ST
	Community Boundary

FEMA FLOODPLAIN	
	FEMA Stream Centerline
	FEMA Base Flood Elevation
	FEMA Cross Section
FEMA REGULATORY	
	FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)	
	Existing Conditions SFHA Extents
FUTURE CONDITIONS (Based on Depth Grid Boundary)	
	Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

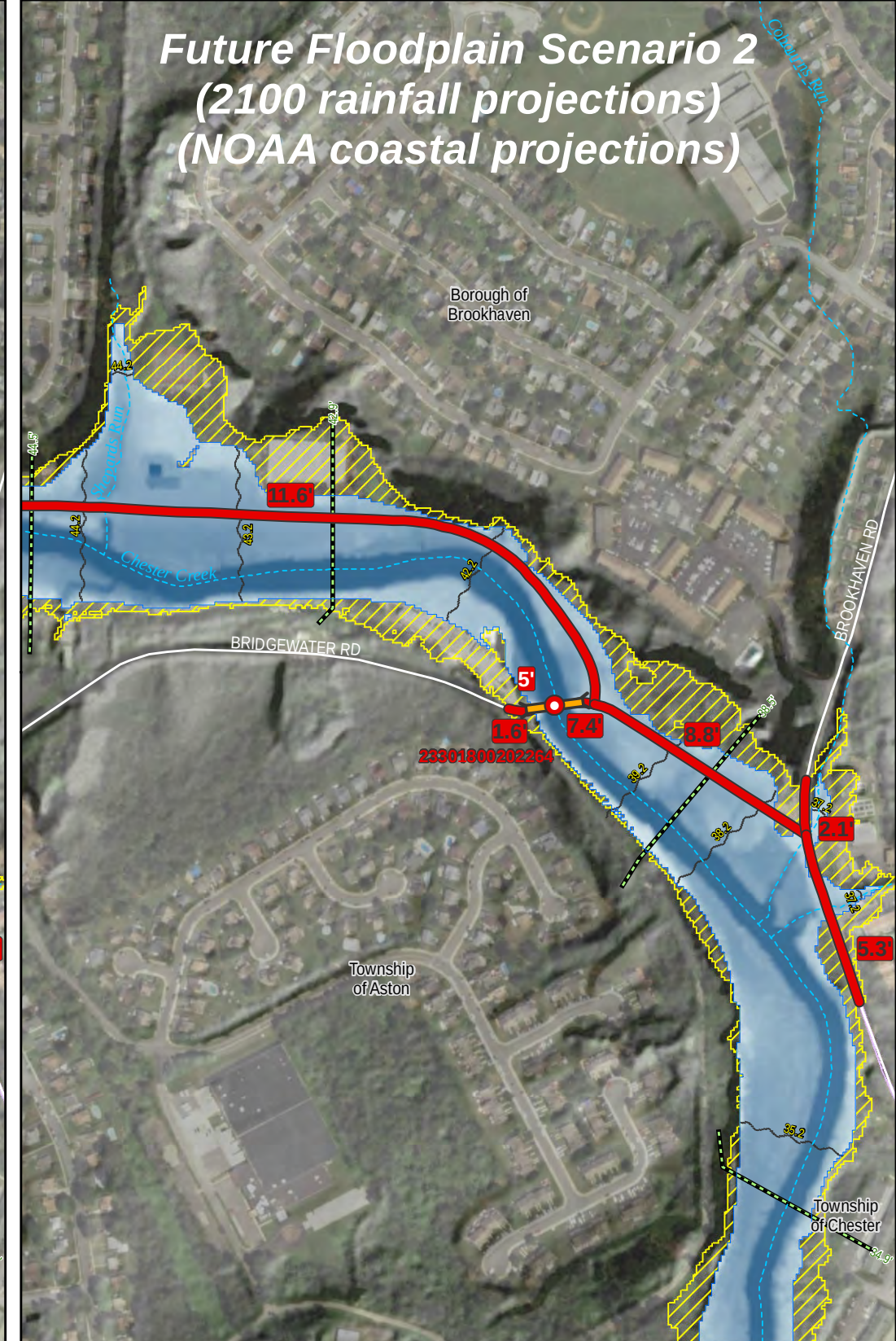
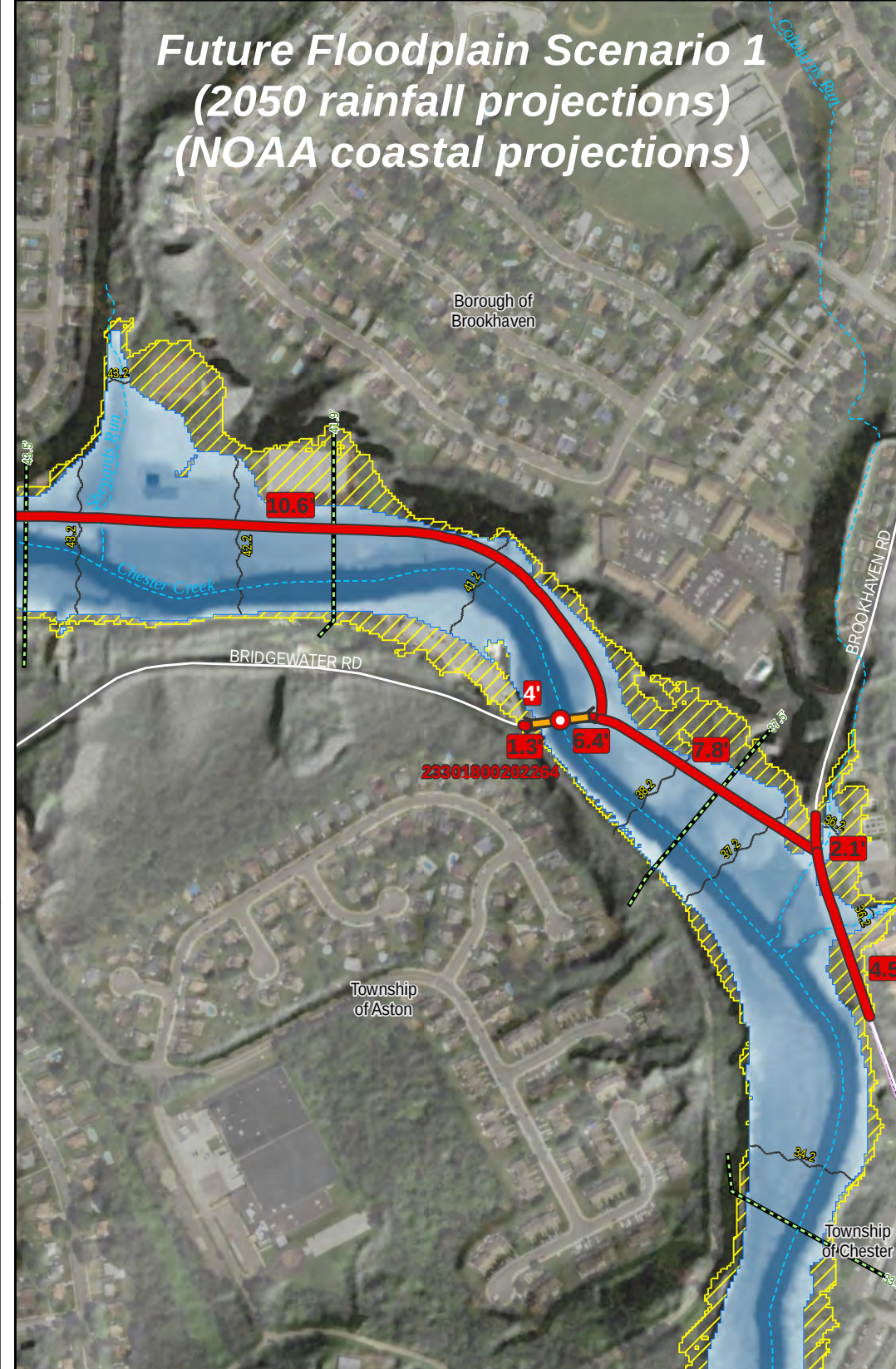
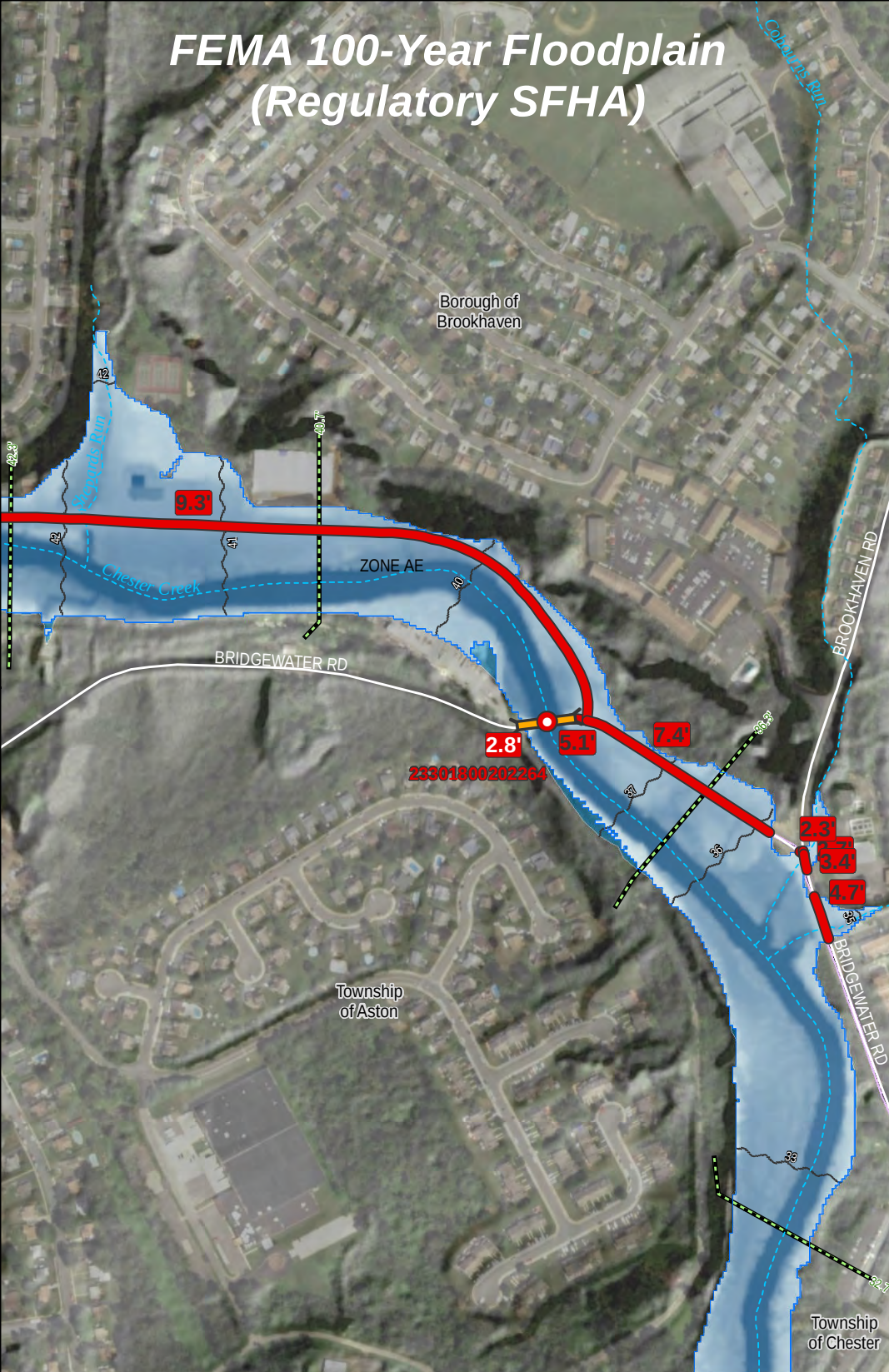
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

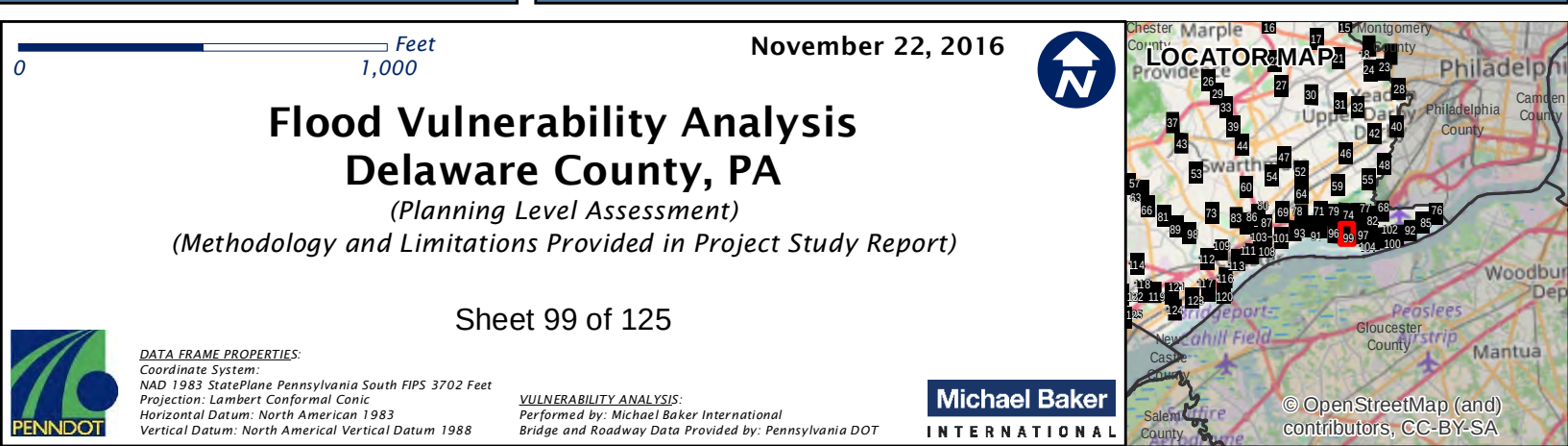
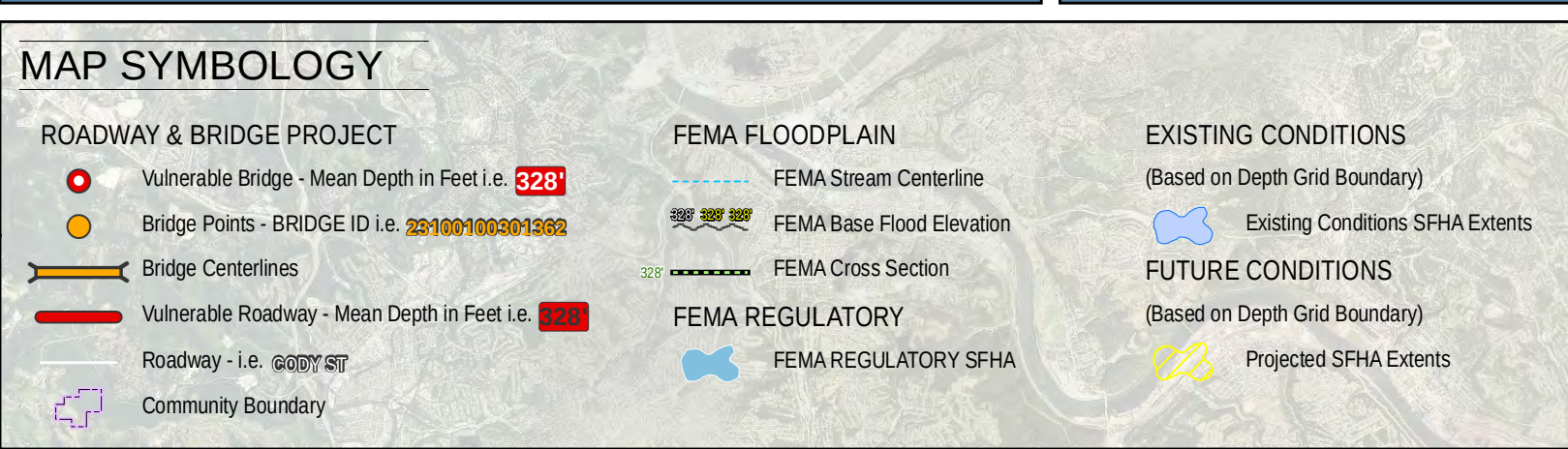
Flood Vulnerability Analysis Delaware County, PA

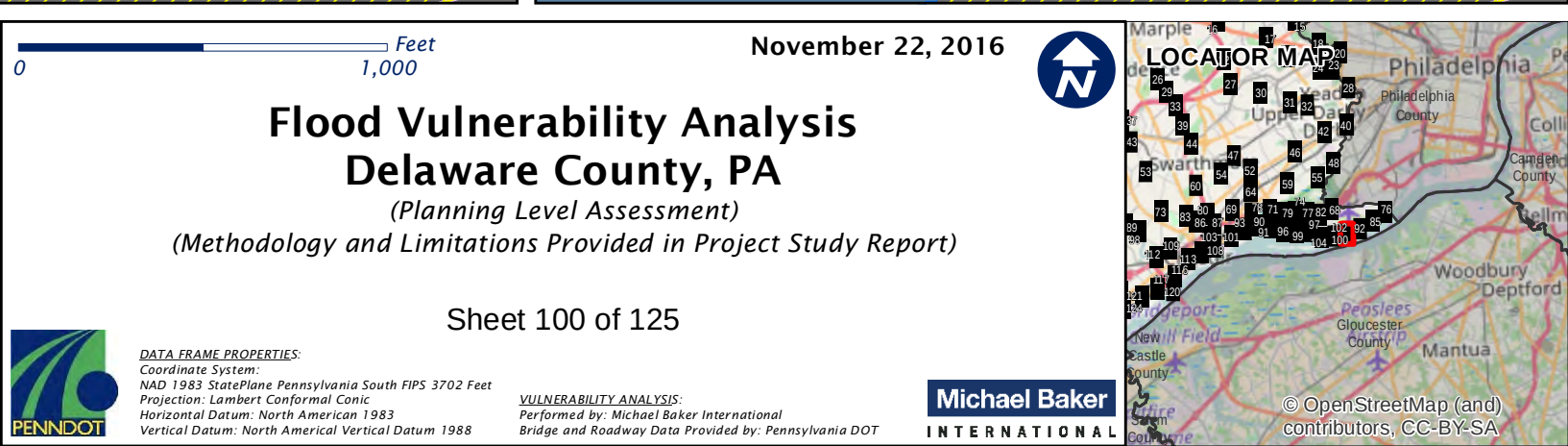
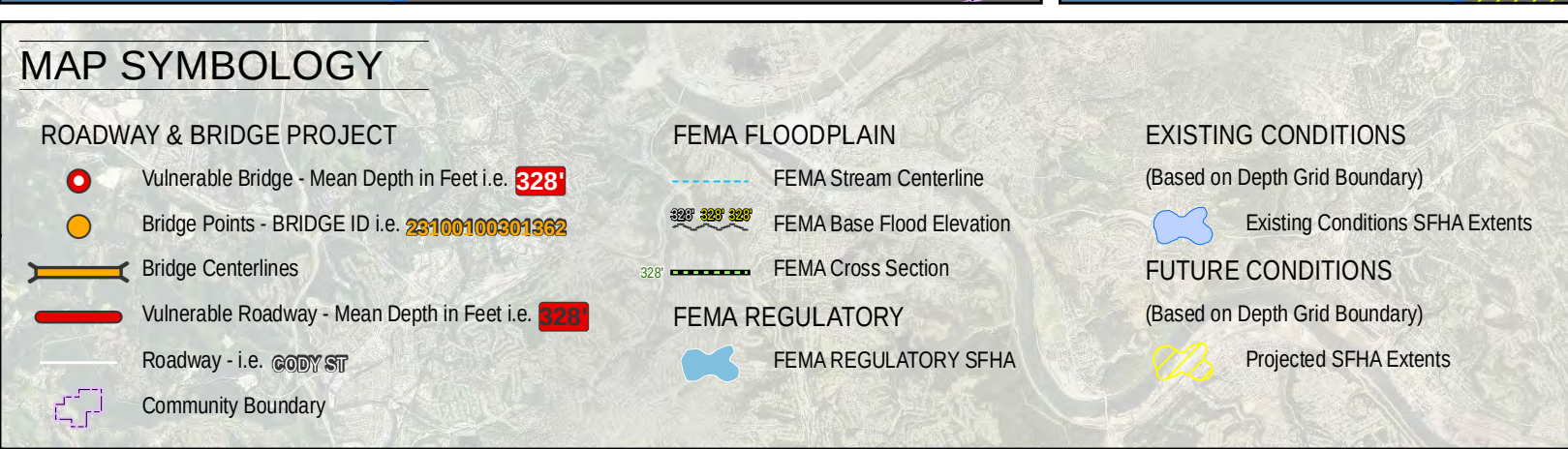
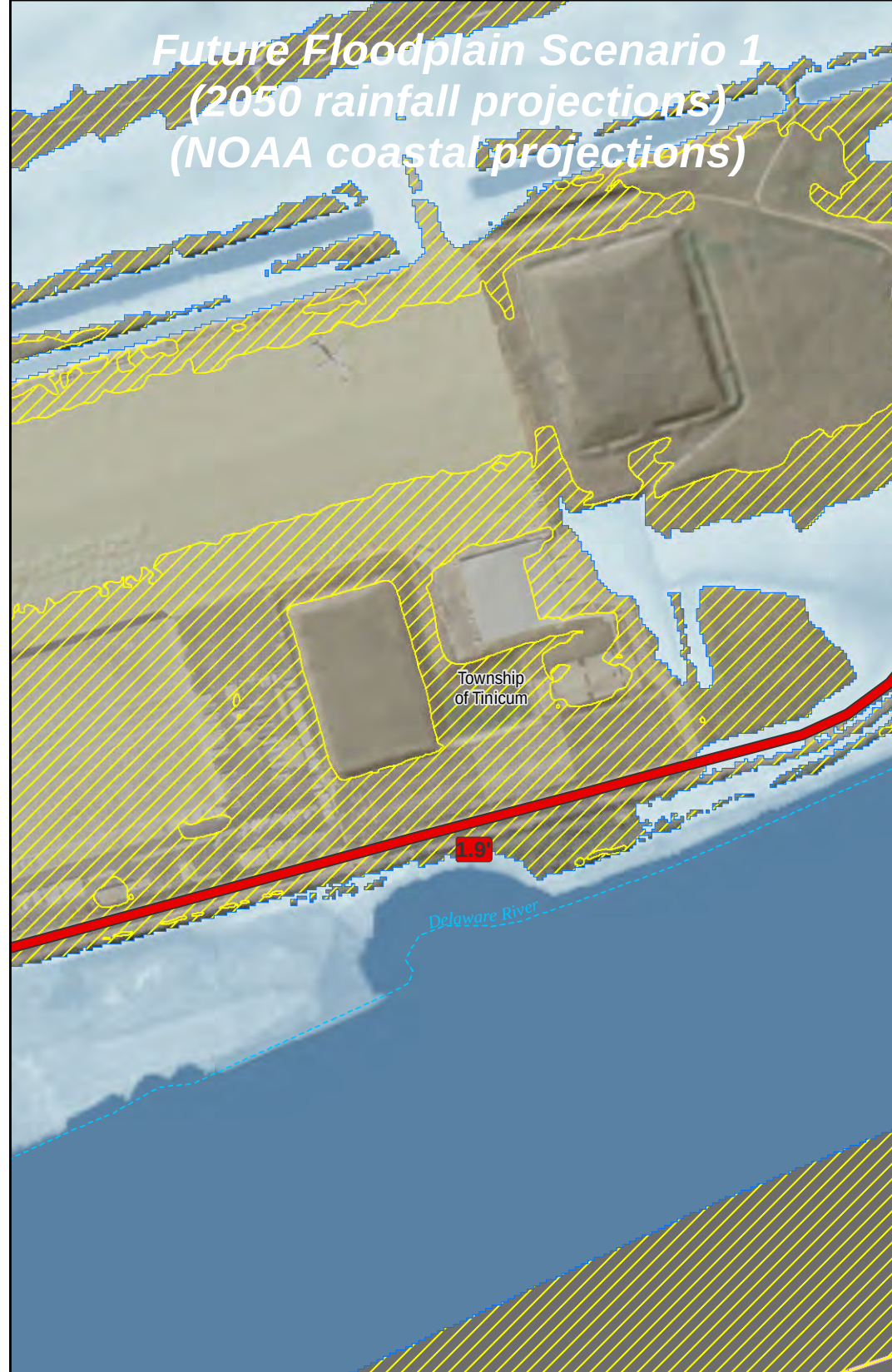
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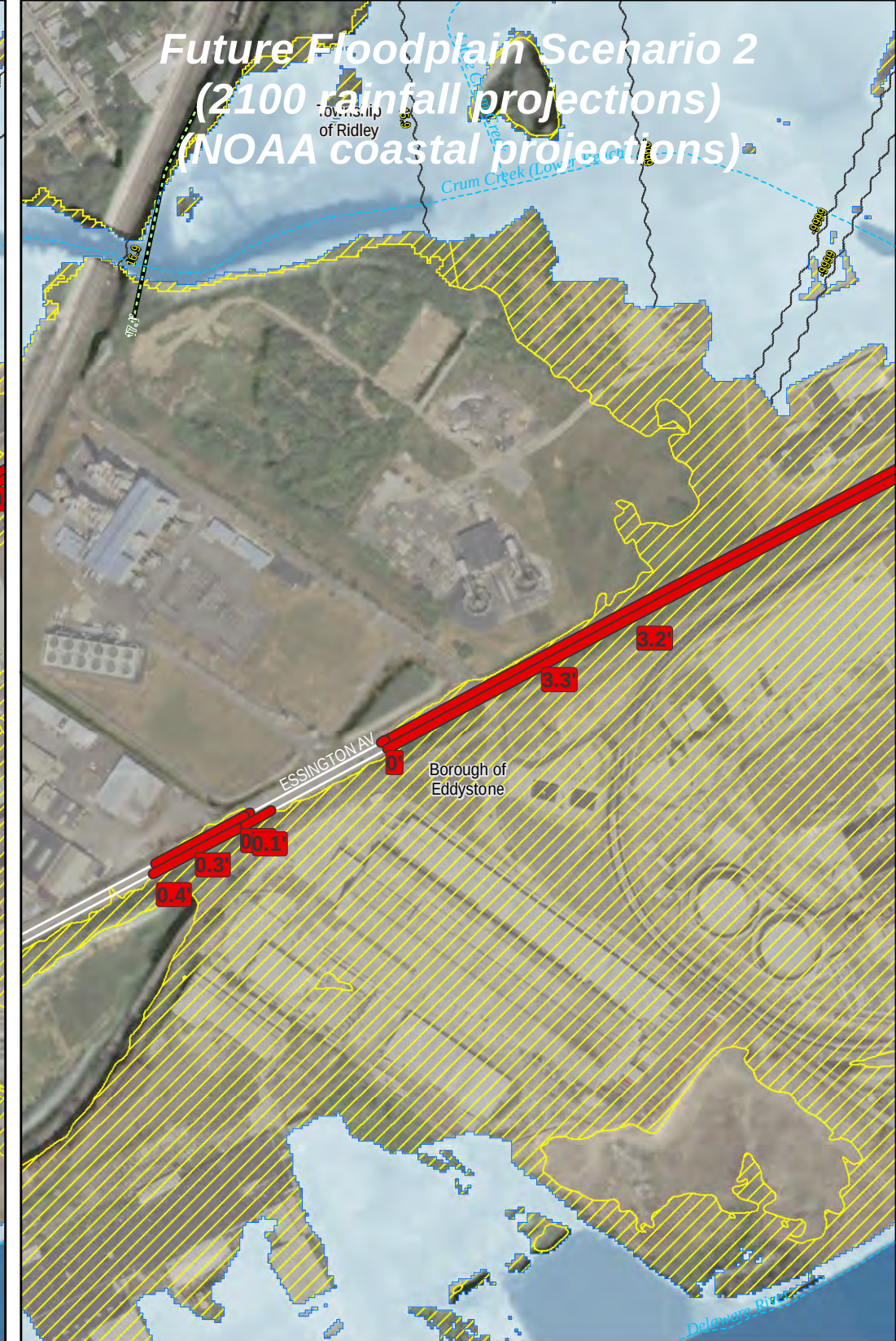
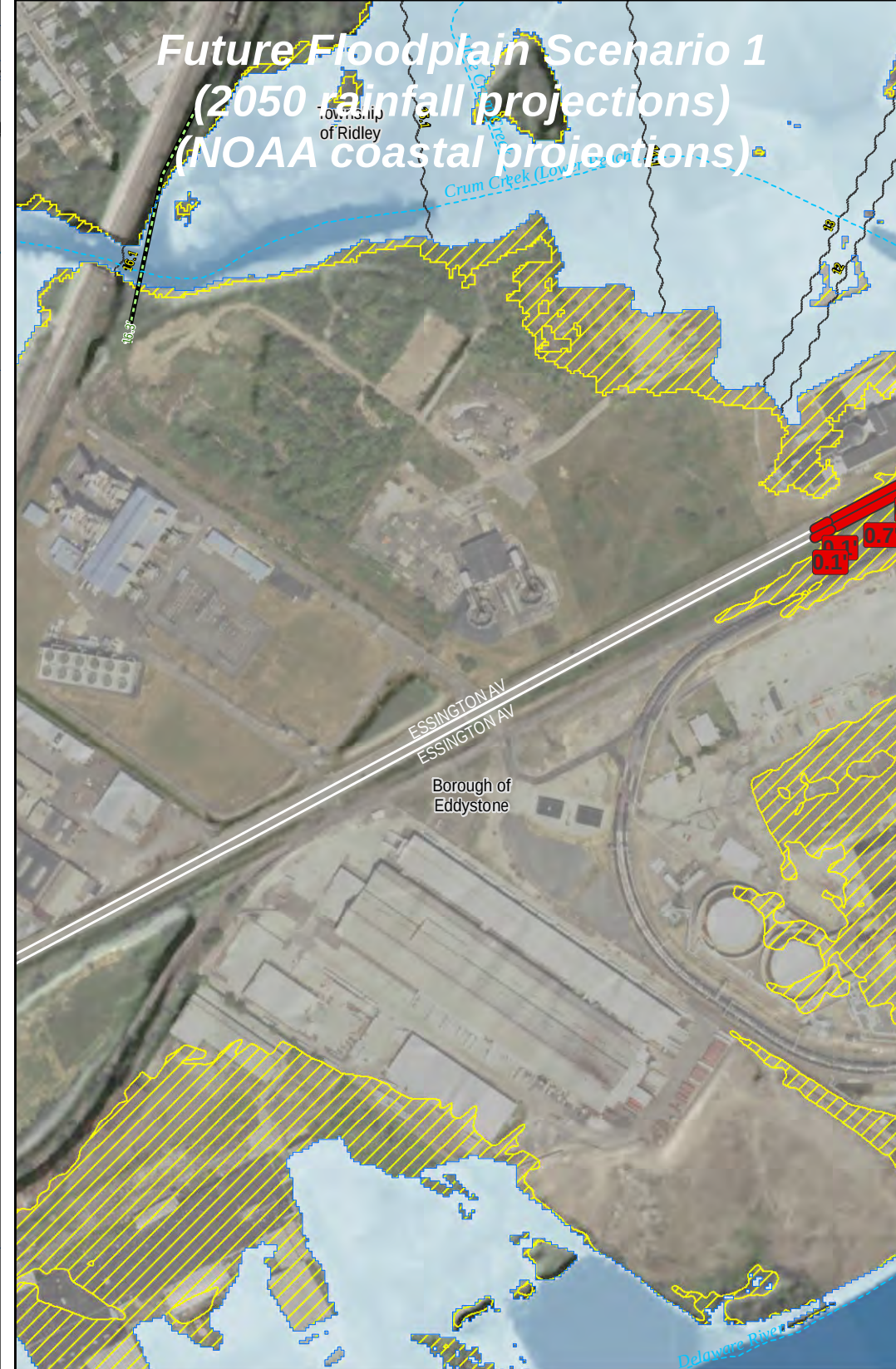
Sheet 98 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT







MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **60Y ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

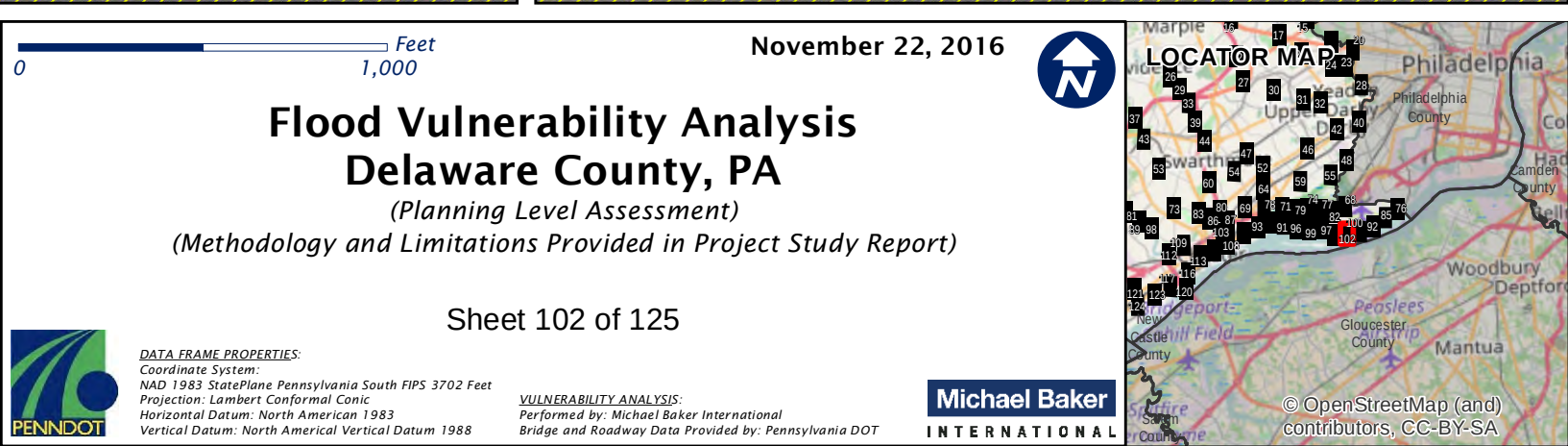
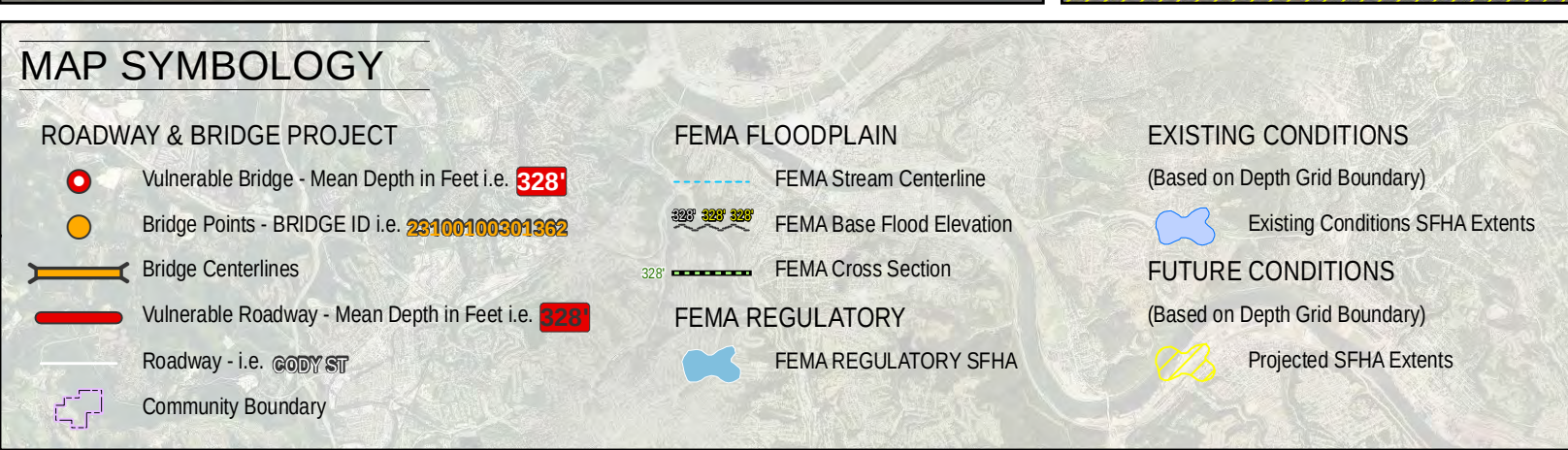
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

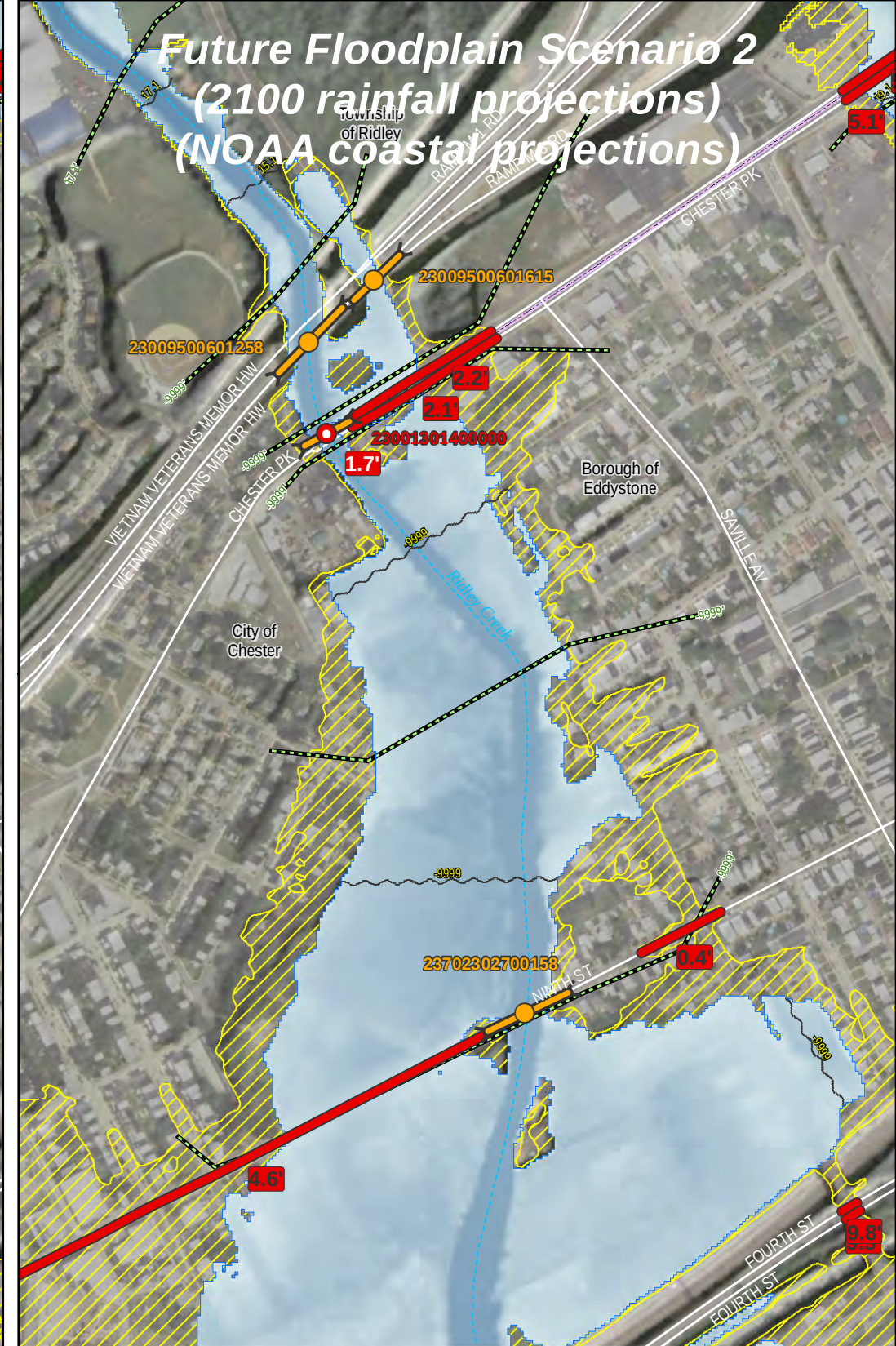
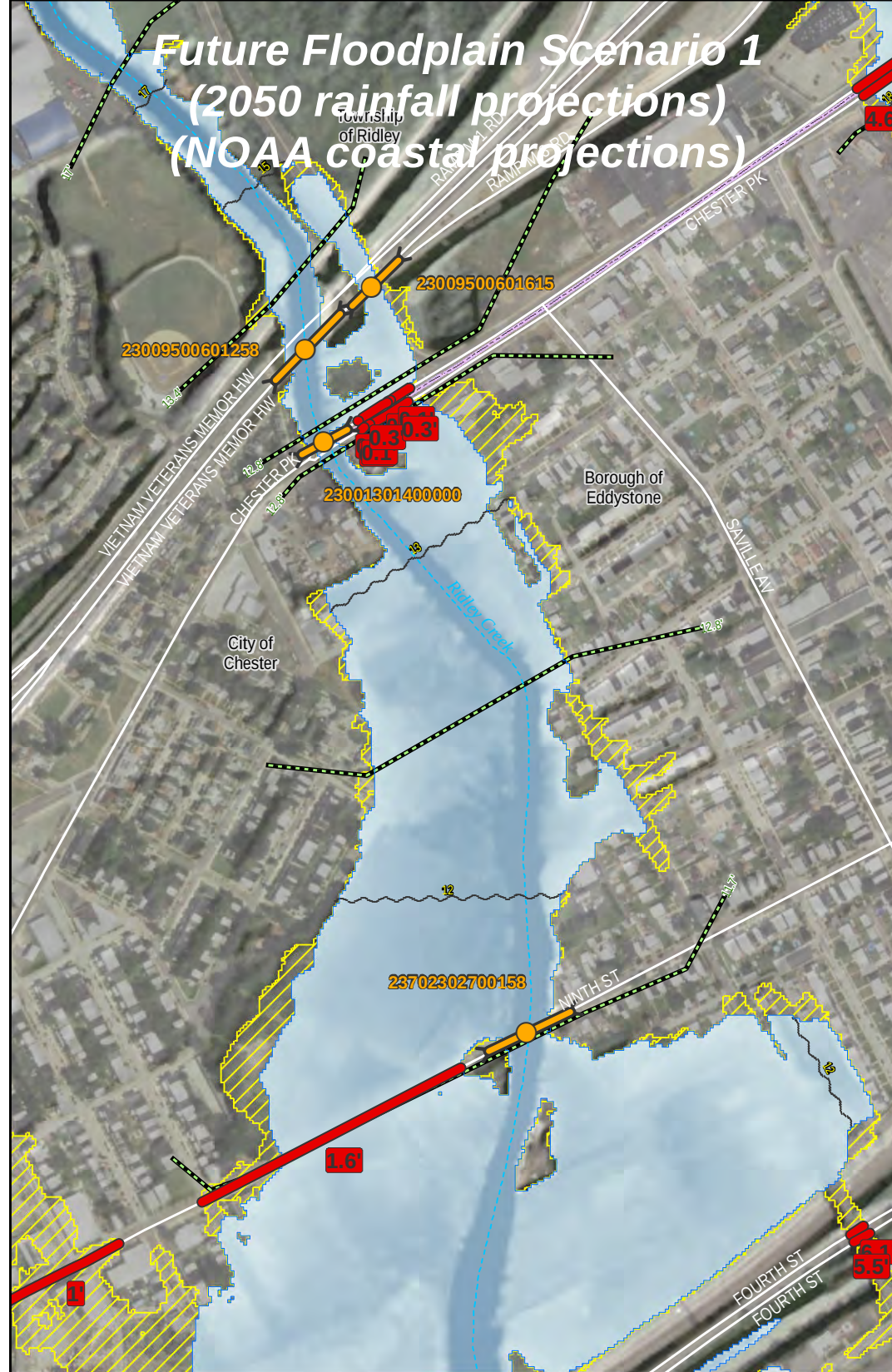
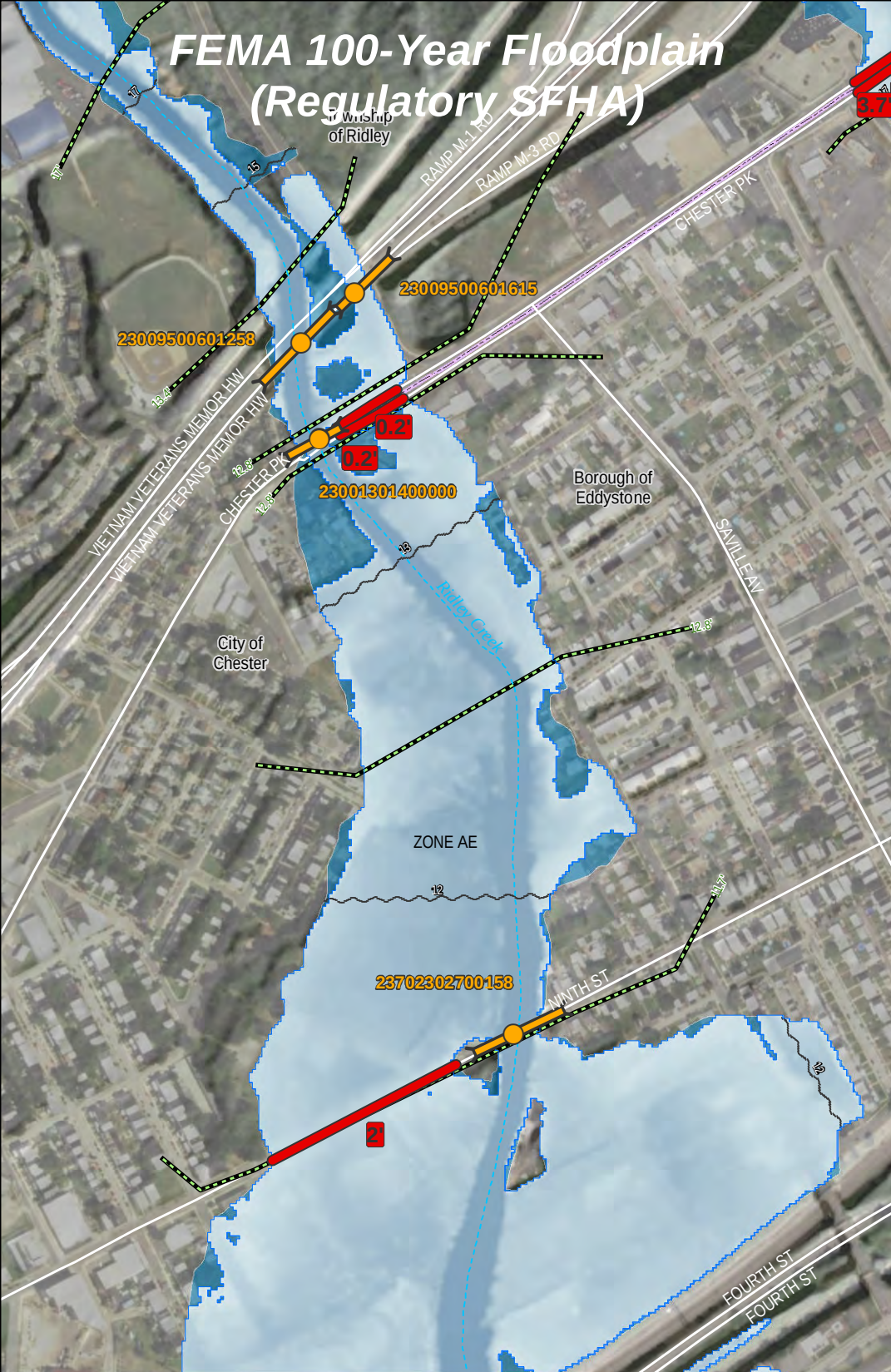
Sheet 101 of 125

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

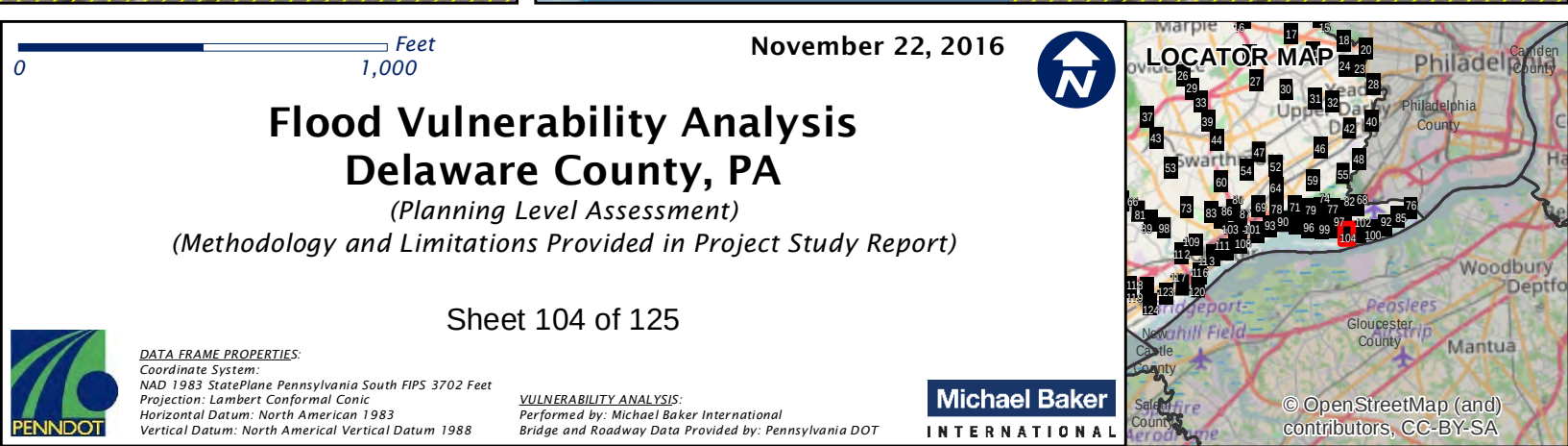
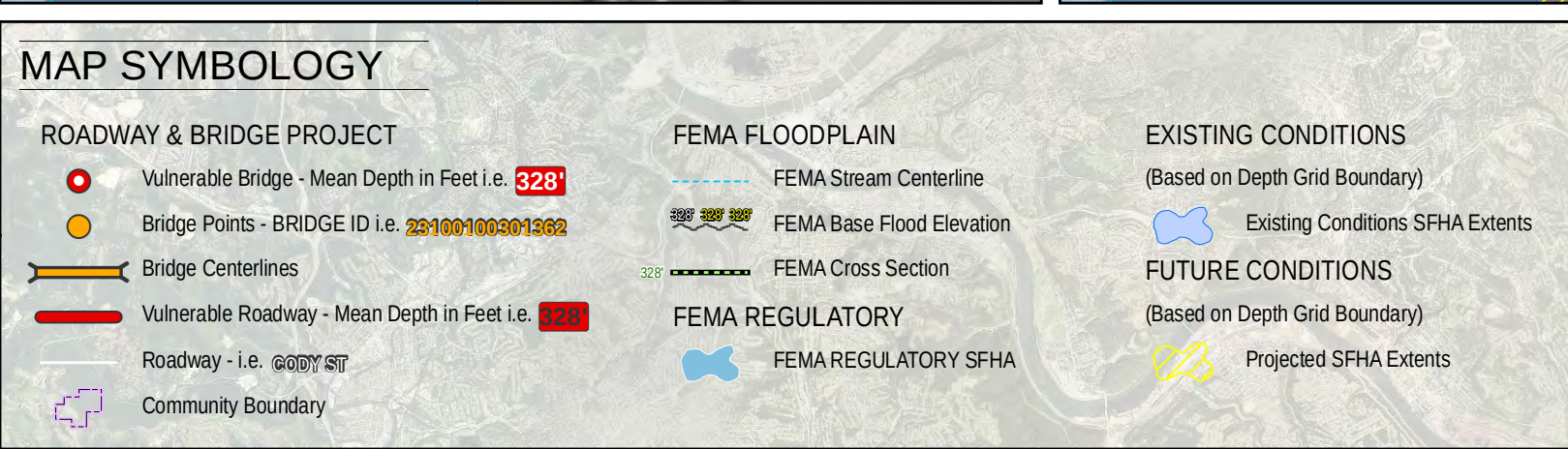
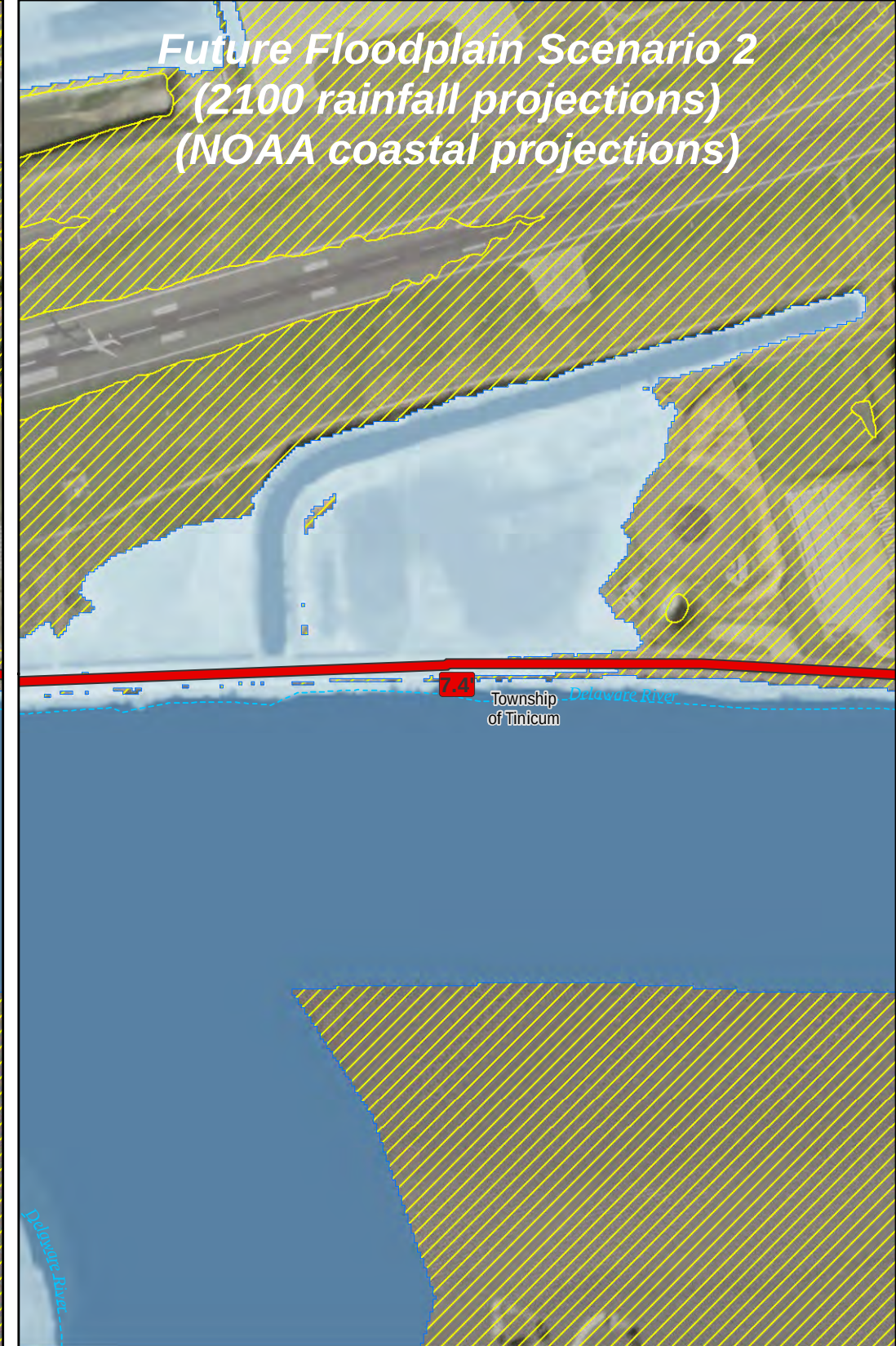
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(Methodology and Limitations Provided in Project Study Report)

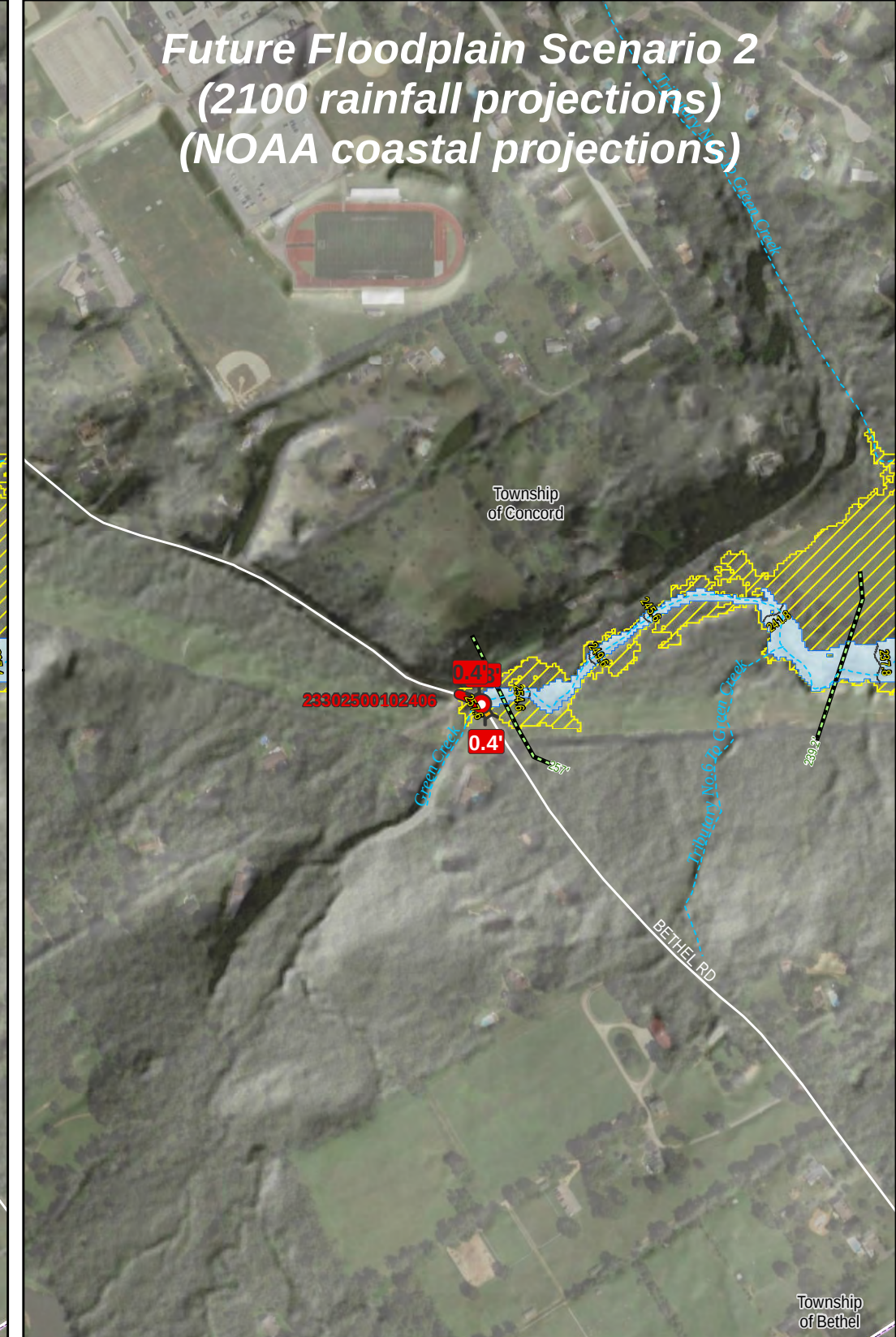
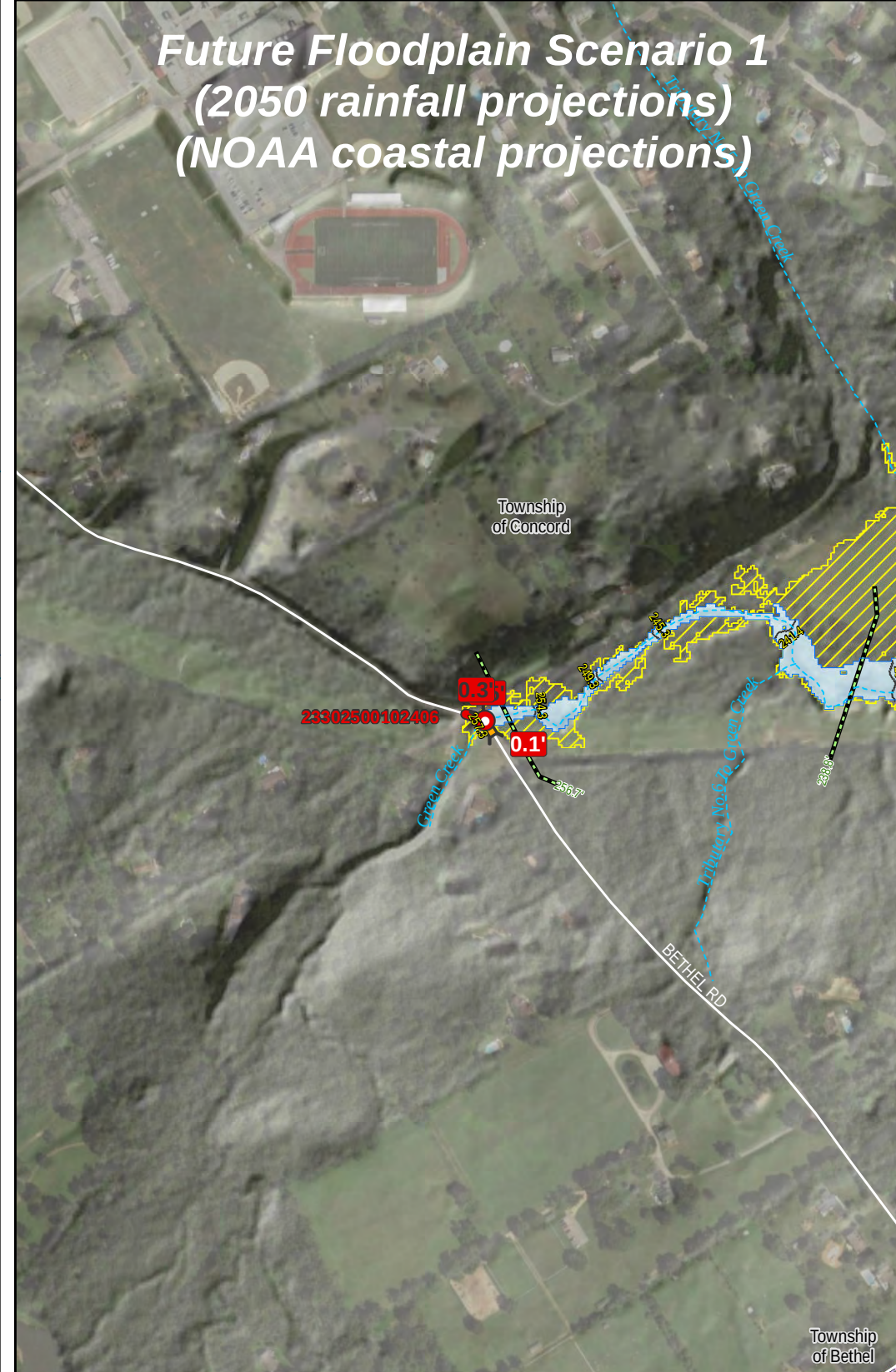
Sheet 103 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **60DY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 105 of 125

DATA FRAME PROPERTIES:
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Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

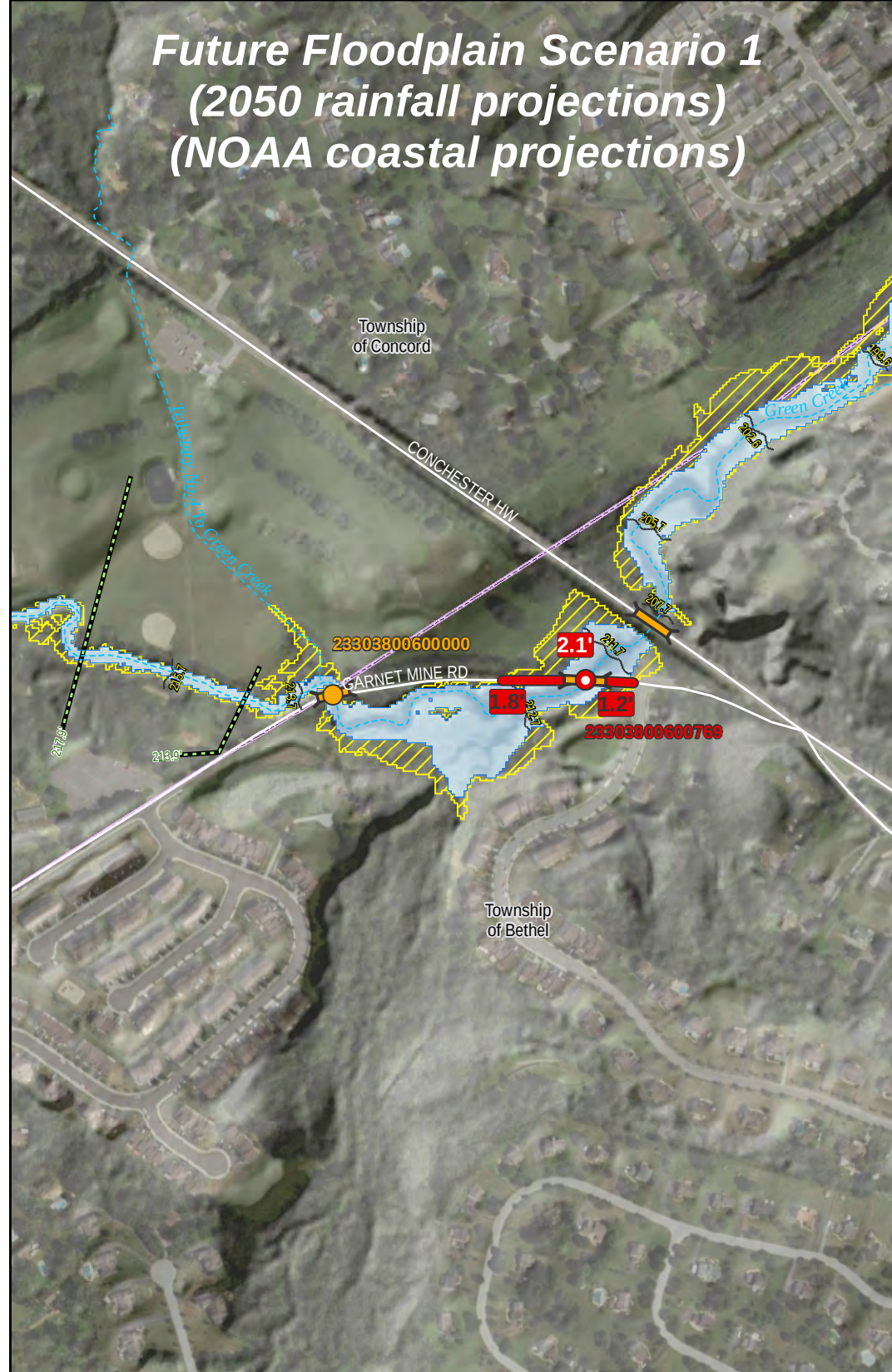
VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP

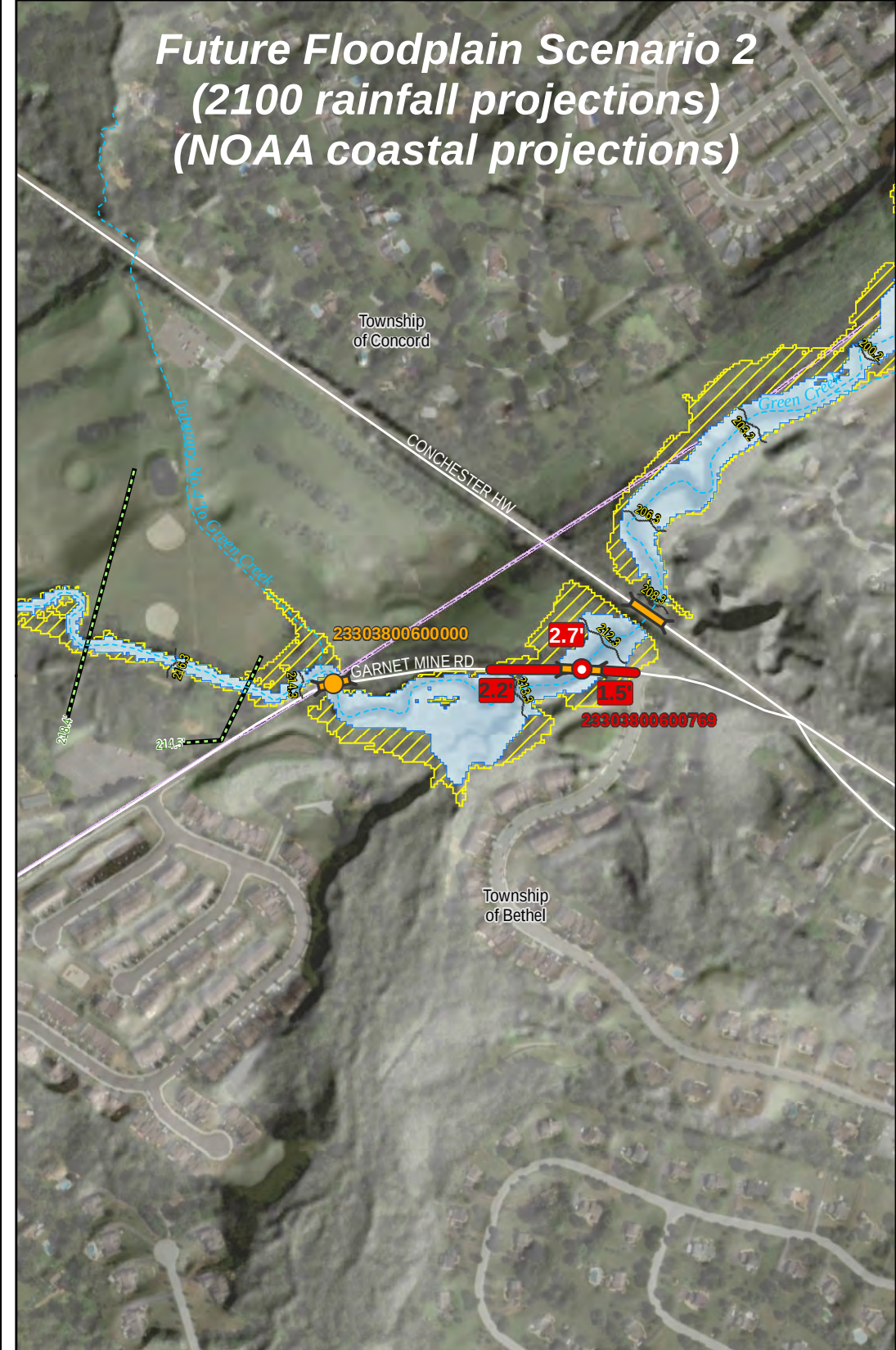
FEMA 100-Year Floodplain (Regulatory SFHA)



Future Floodplain Scenario 1 (2050 rainfall projections) (NOAA coastal projections)



Future Floodplain Scenario 2 (2100 rainfall projections) (NOAA coastal projections)



MAP SYMBOLOGY

- ROADWAY & BRIDGE PROJECT**
- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
 - Bridge Points - BRIDGE ID i.e. **23100100301362**
 - Bridge Centerlines
 - Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
 - Roadway - i.e. **60DY ST**
 - Community Boundary

- FEMA FLOODPLAIN**
- FEMA Stream Centerline
 - FEMA Base Flood Elevation
 - FEMA Cross Section
- FEMA REGULATORY**
- FEMA REGULATORY SFHA

- EXISTING CONDITIONS**
(Based on Depth Grid Boundary)
- Existing Conditions SFHA Extents
- FUTURE CONDITIONS**
(Based on Depth Grid Boundary)
- Projected SFHA Extents

0 1,000 Feet

November 22, 2016



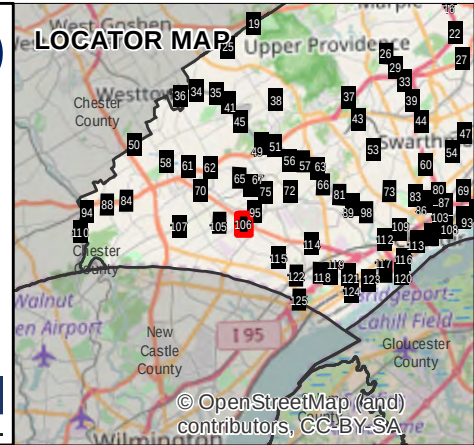
Flood Vulnerability Analysis Delaware County, PA (Planning Level Assessment) (Methodology and Limitations Provided in Project Study Report)

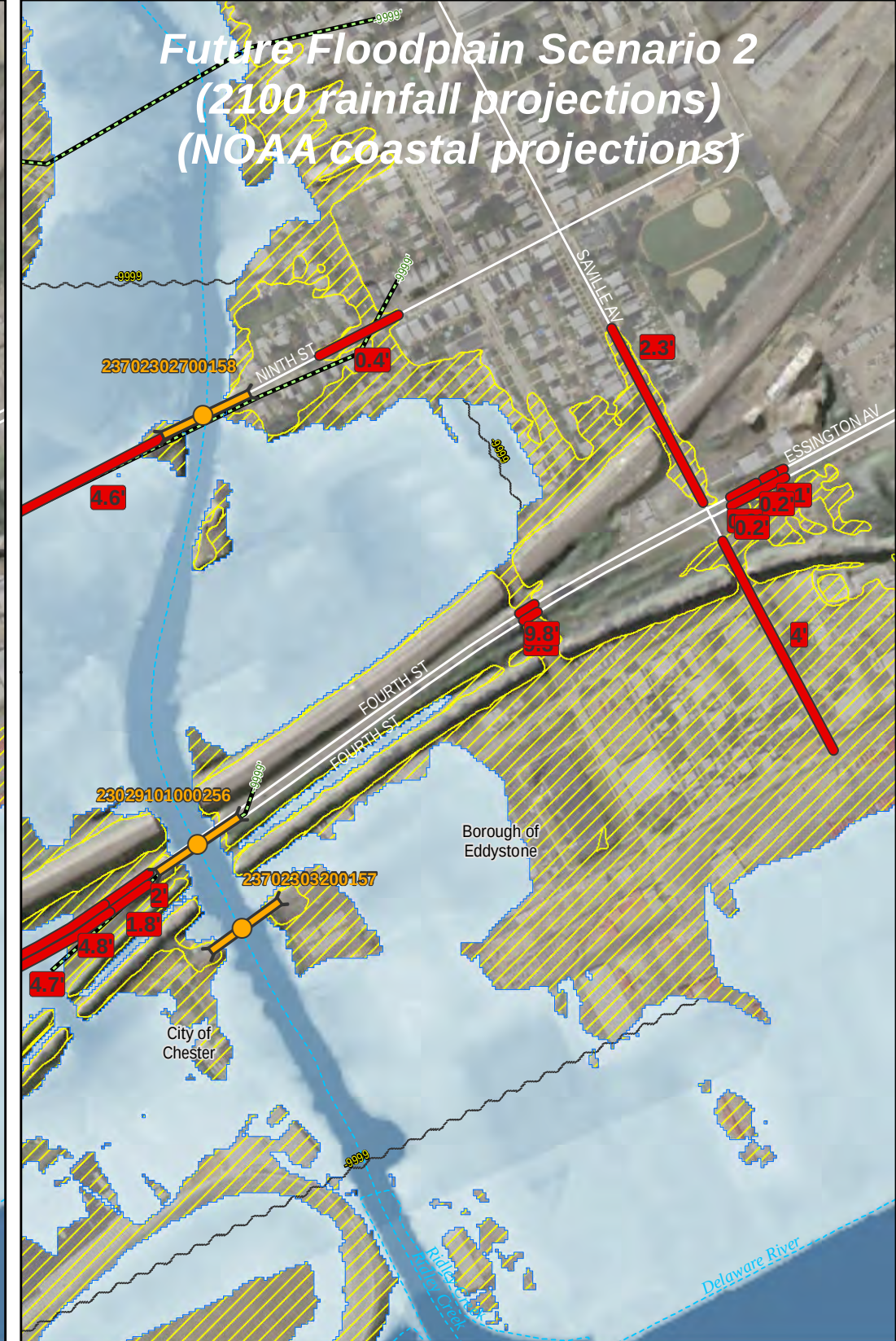
Sheet 106 of 125



DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT





MAP SYMBOLOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. GOODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

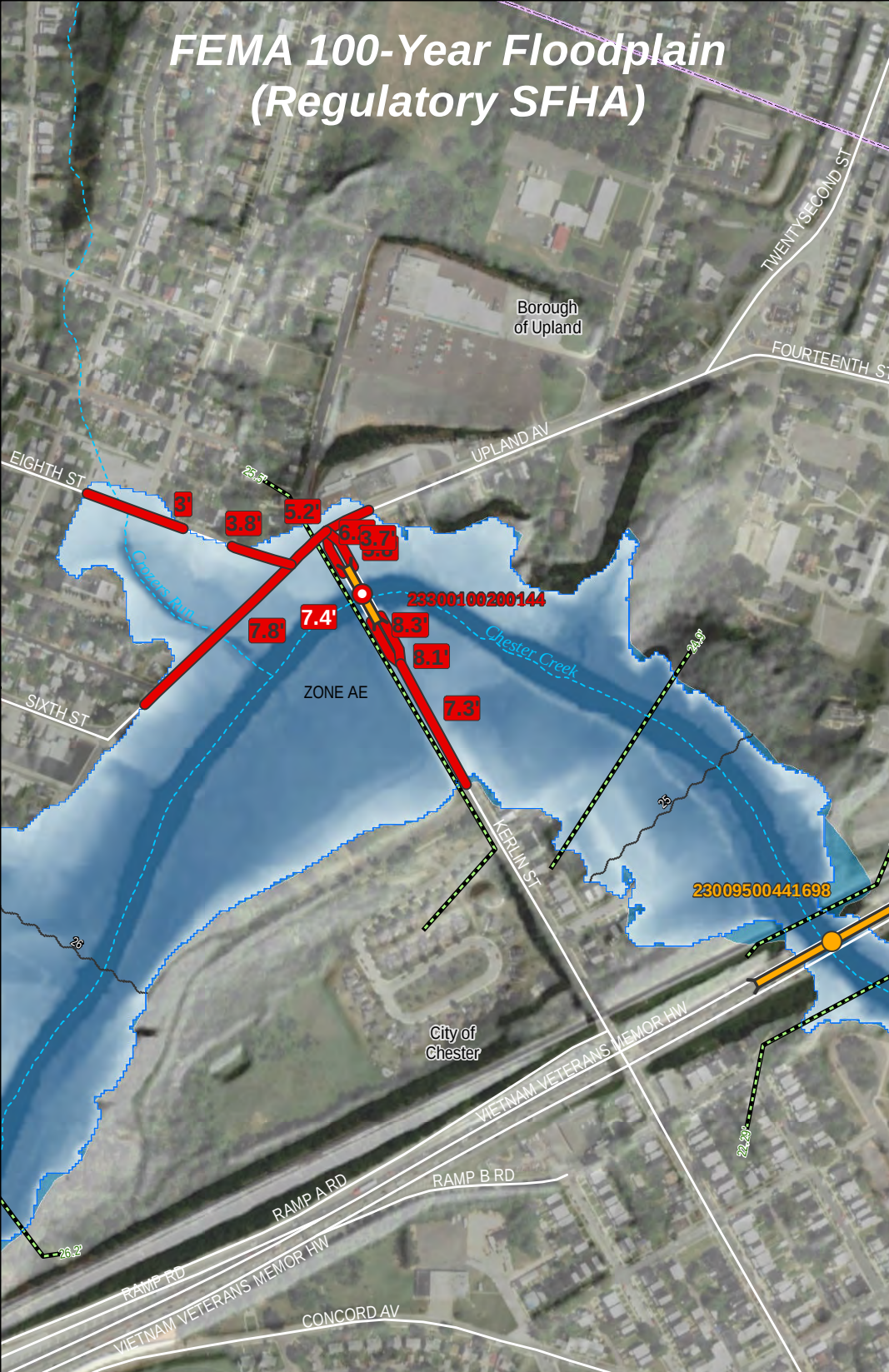
Sheet 108 of 125

Michael Baker INTERNATIONAL

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. 60DY ST	FEMA REGULATORY SFHA	
Community Boundary		

0 1,000 Feet

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 109 of 125

November 22, 2016

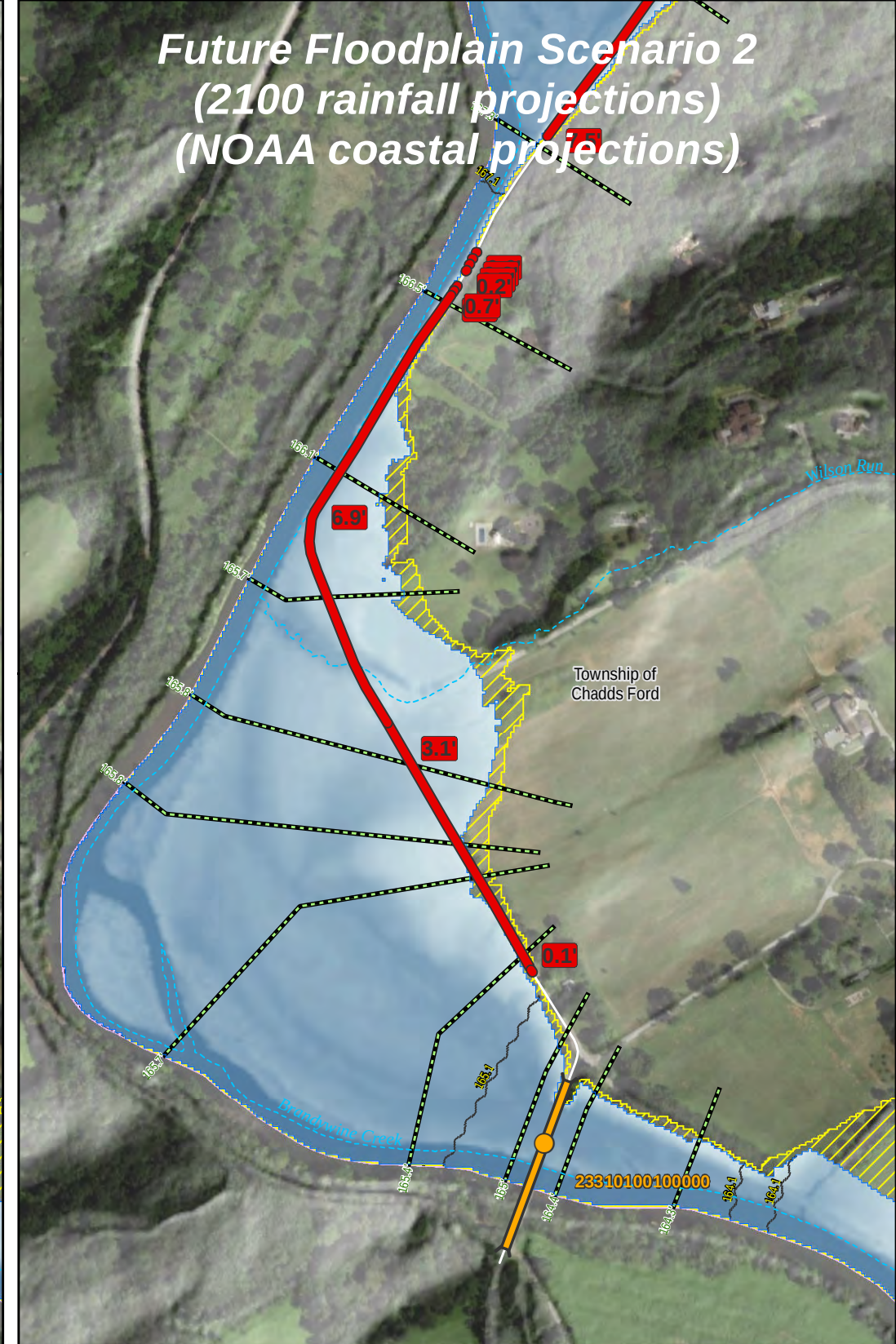
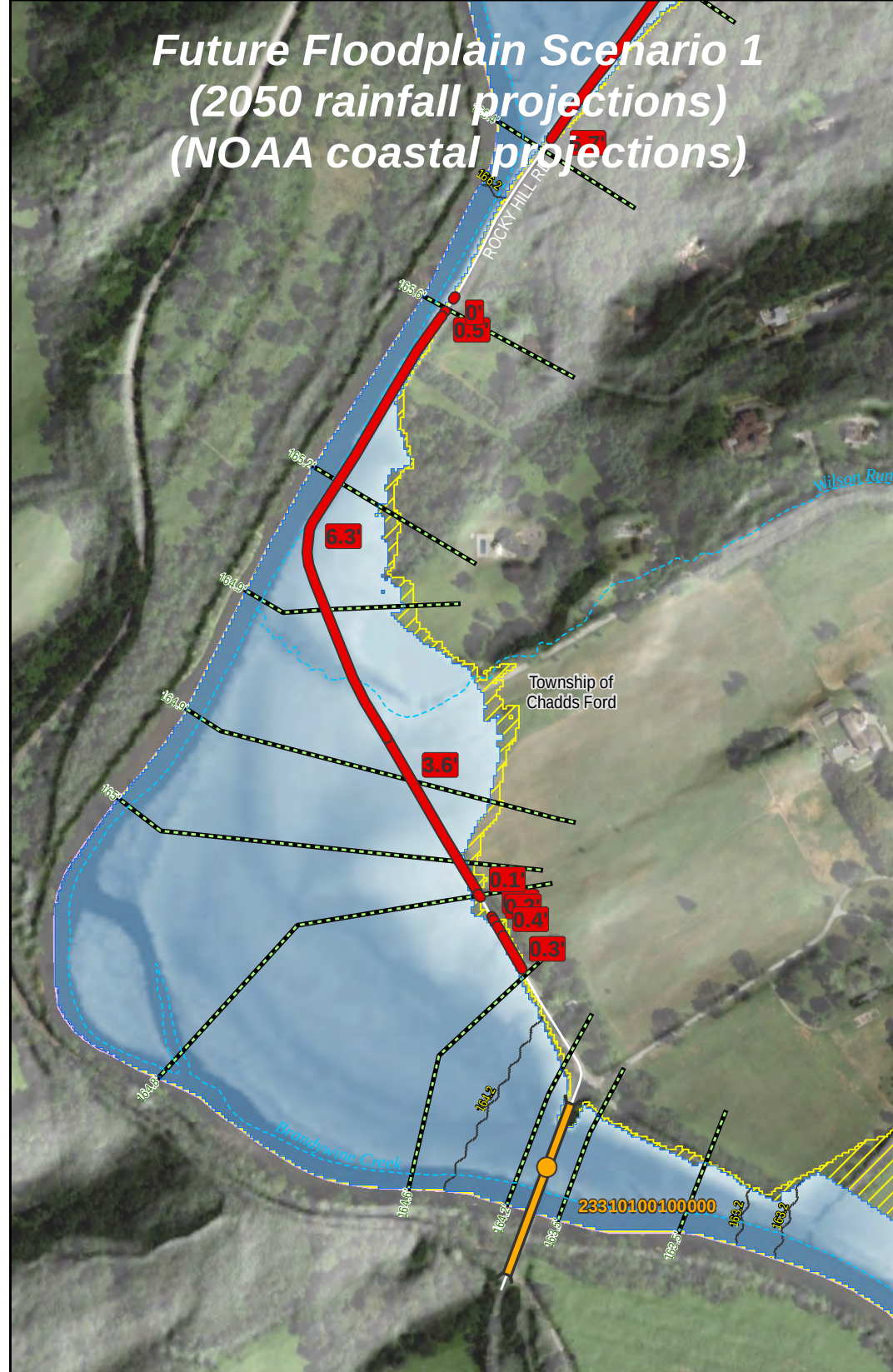
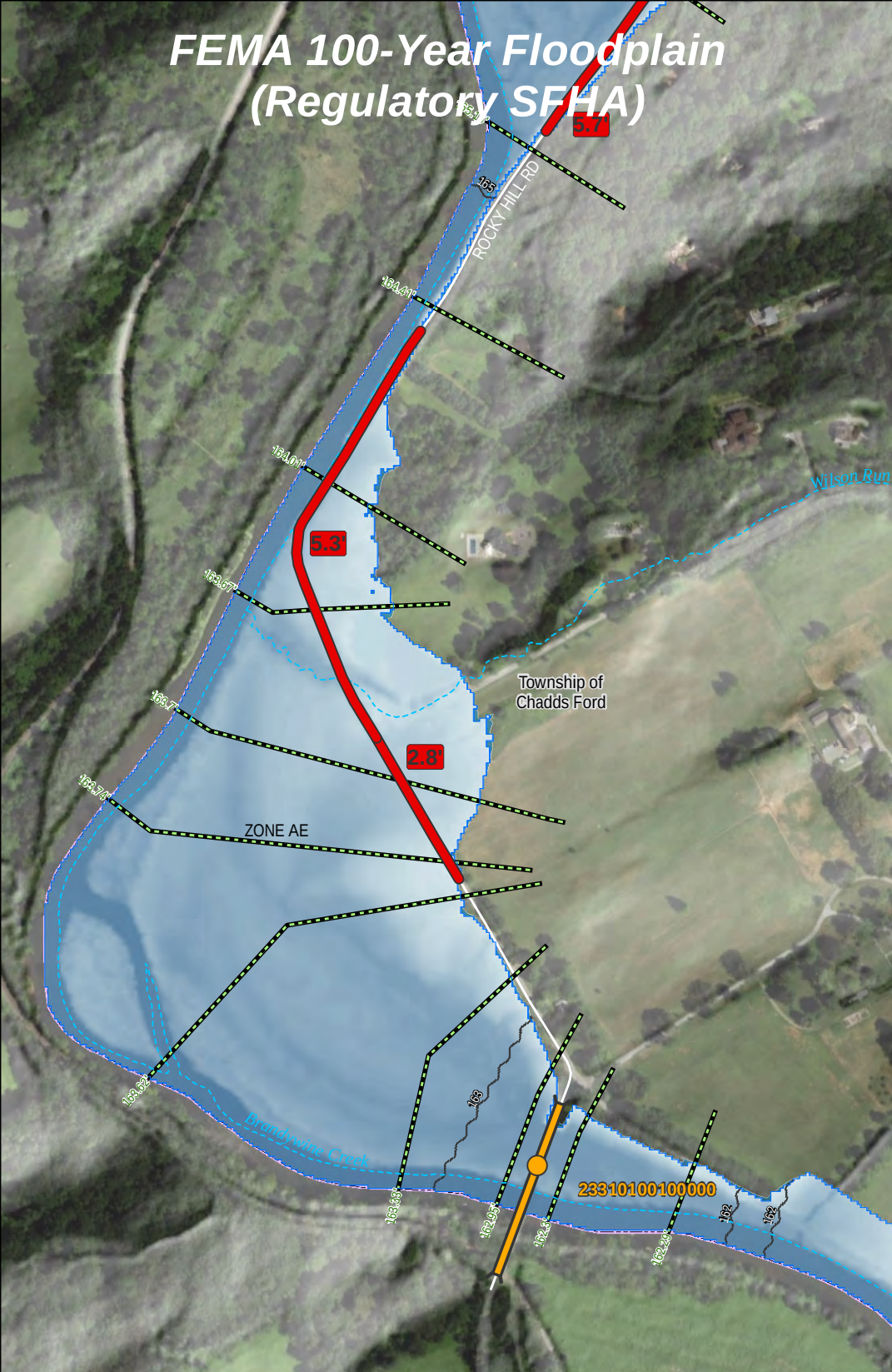
Michael Baker INTERNATIONAL

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP

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MAP SYMBOLOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23310100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **60Y ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

Feet
0 1,000

Flood Vulnerability Analysis

Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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INTERNATIONAL

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 3.28'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 3.28'	FEMA REGULATORY	
Roadway - i.e. 60DY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

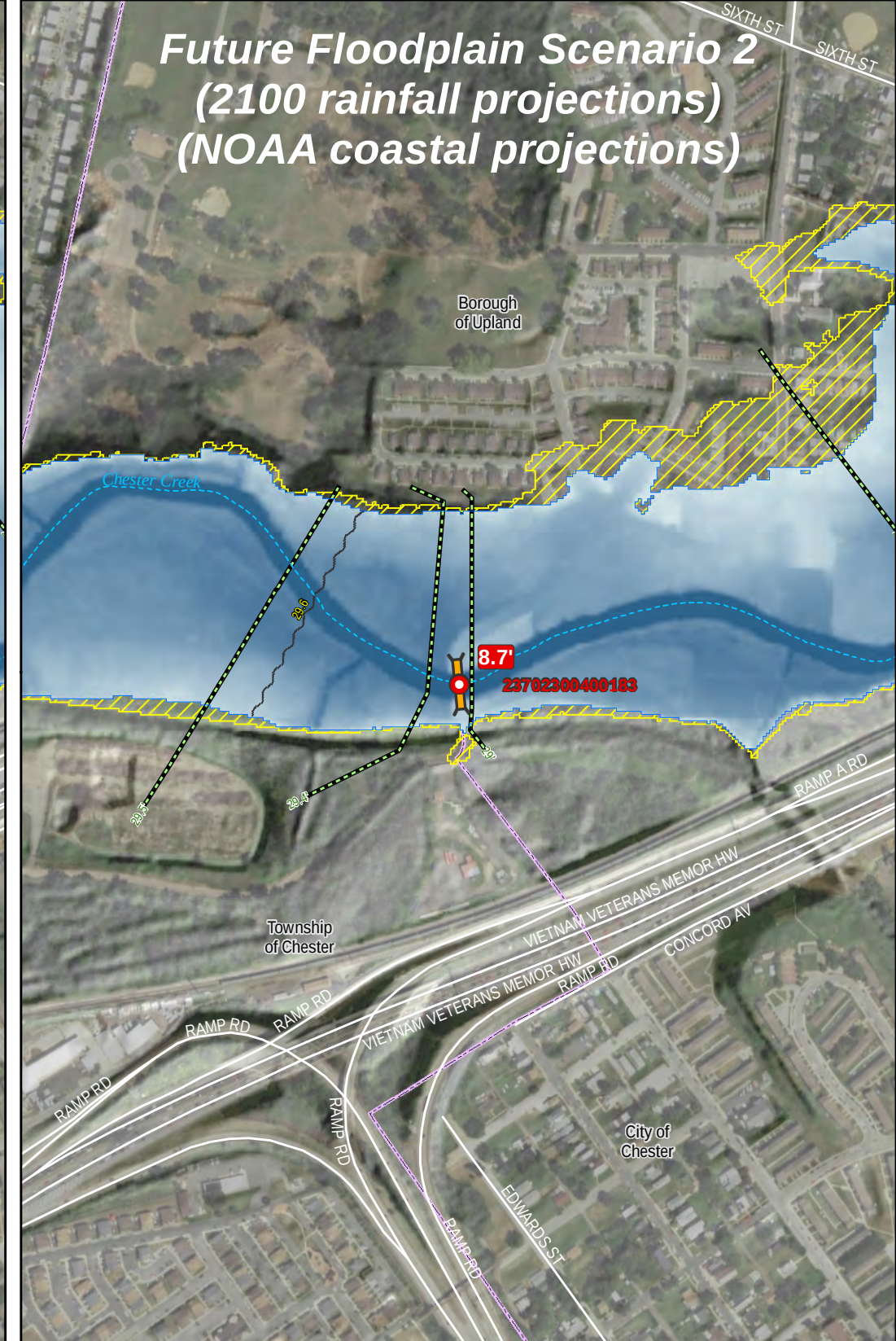
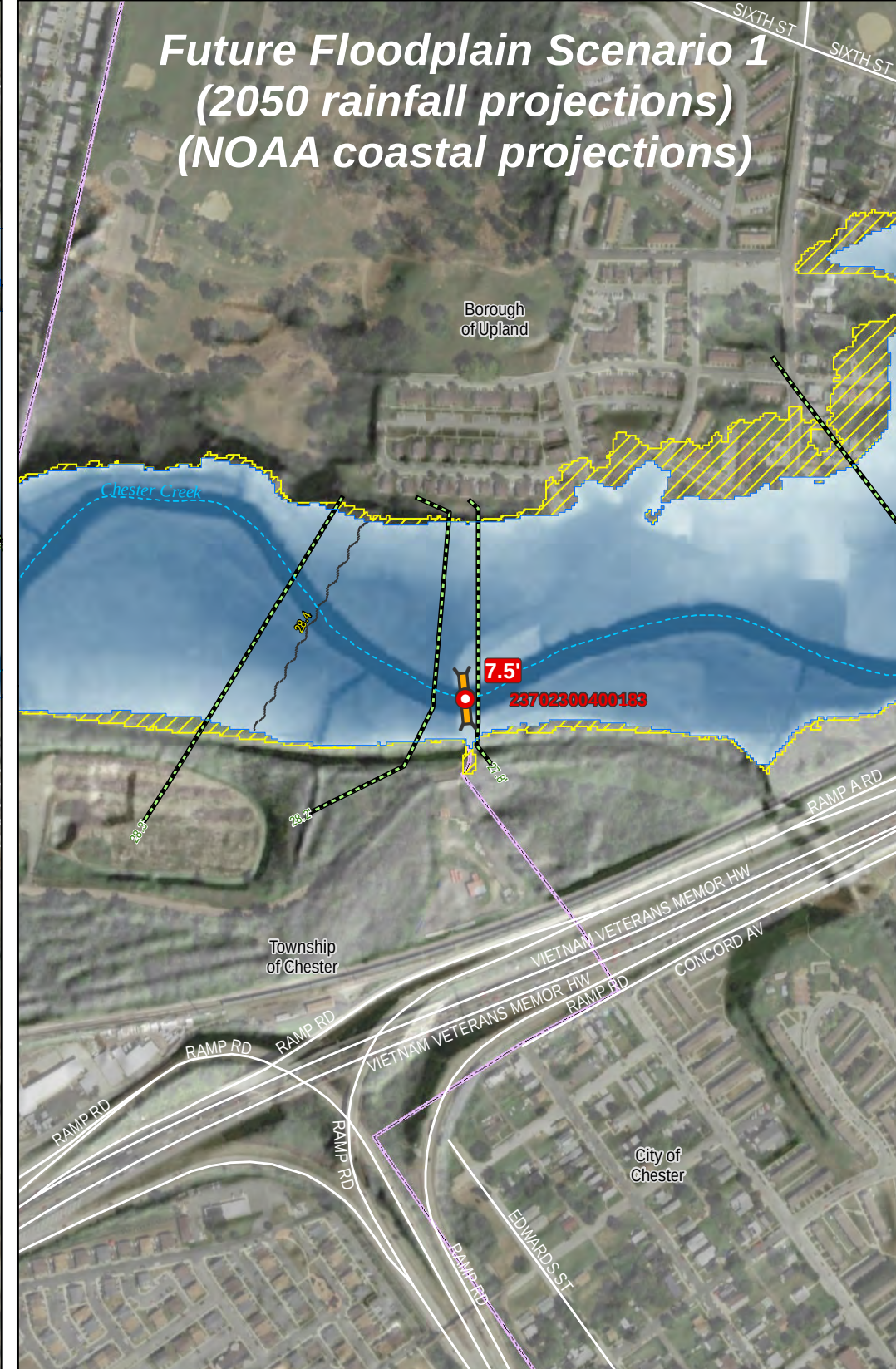
Sheet 111 of 125

Michael Baker INTERNATIONAL

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. 60DY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

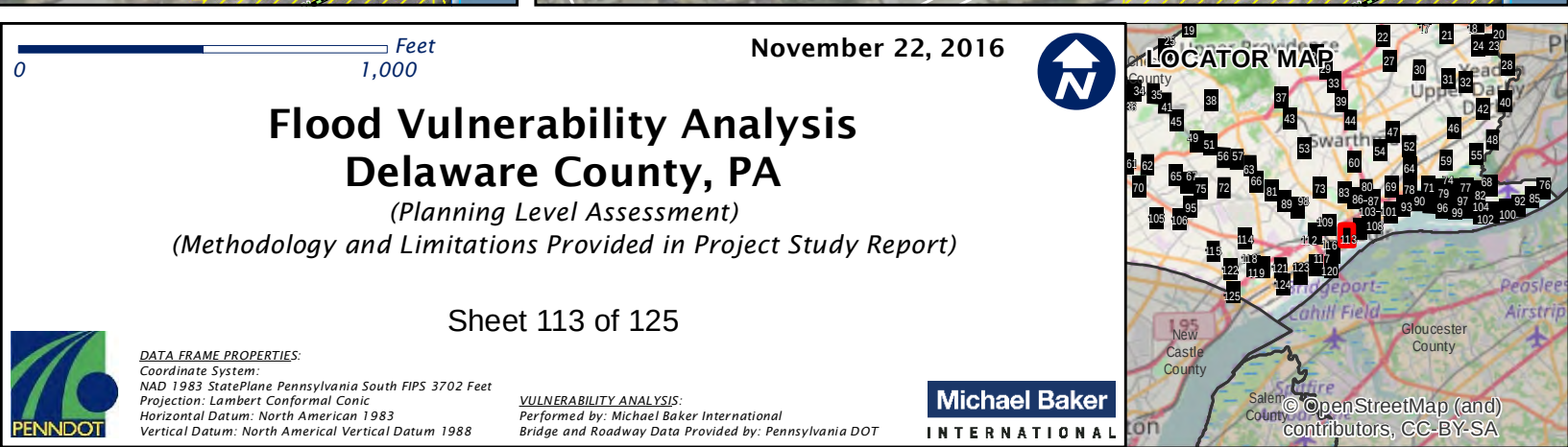
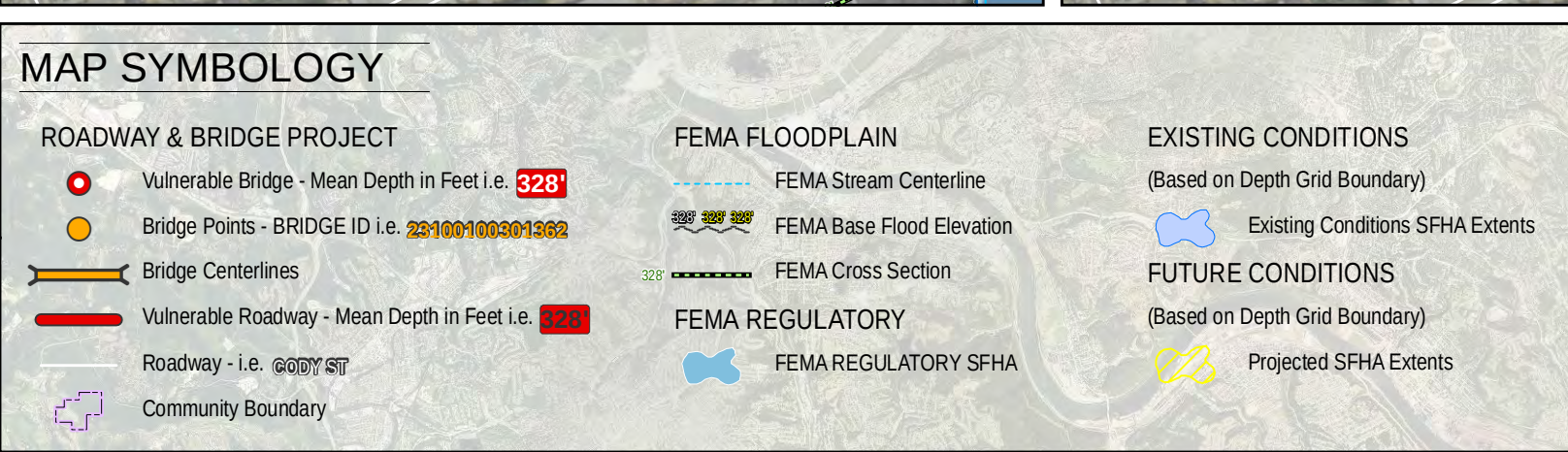
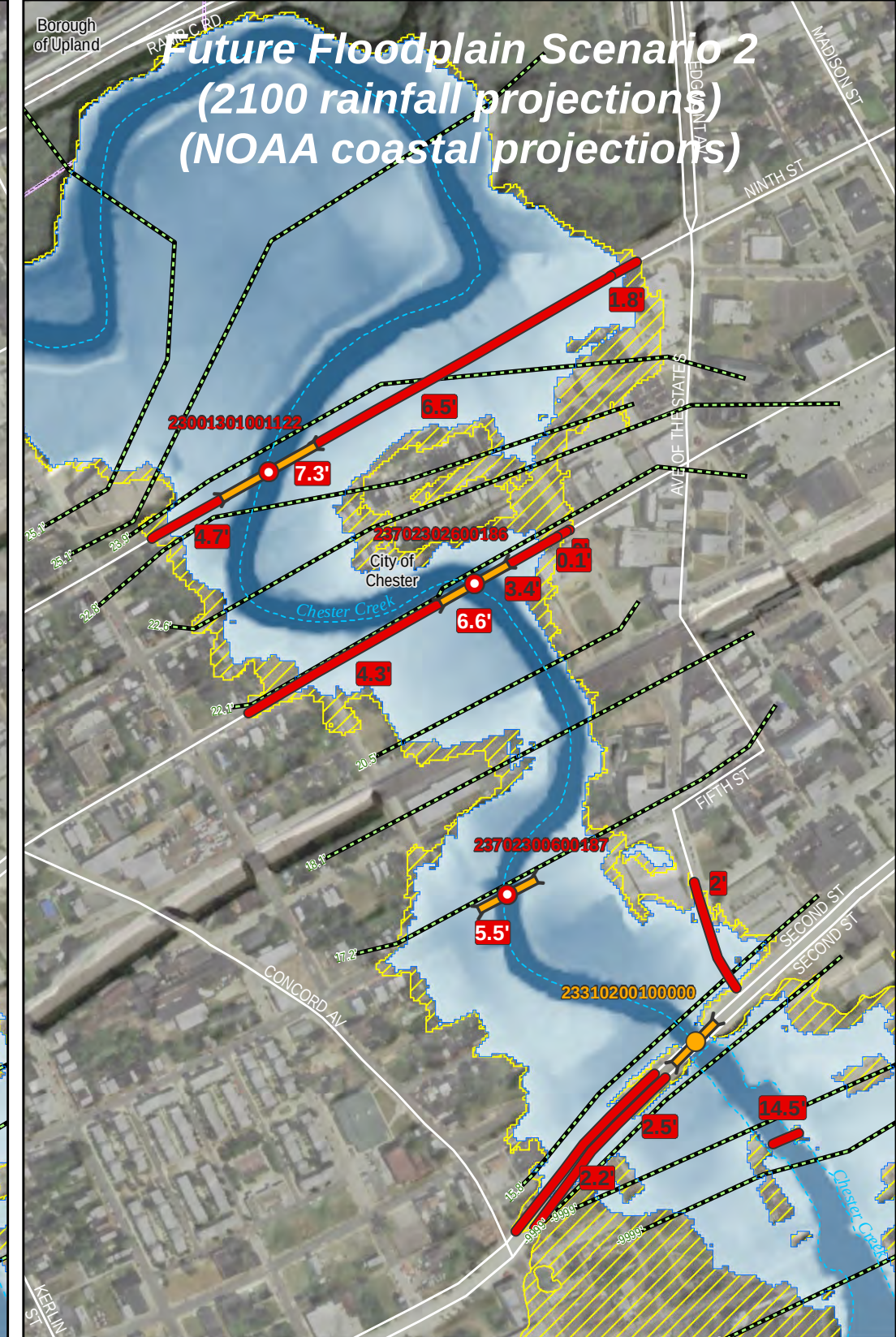
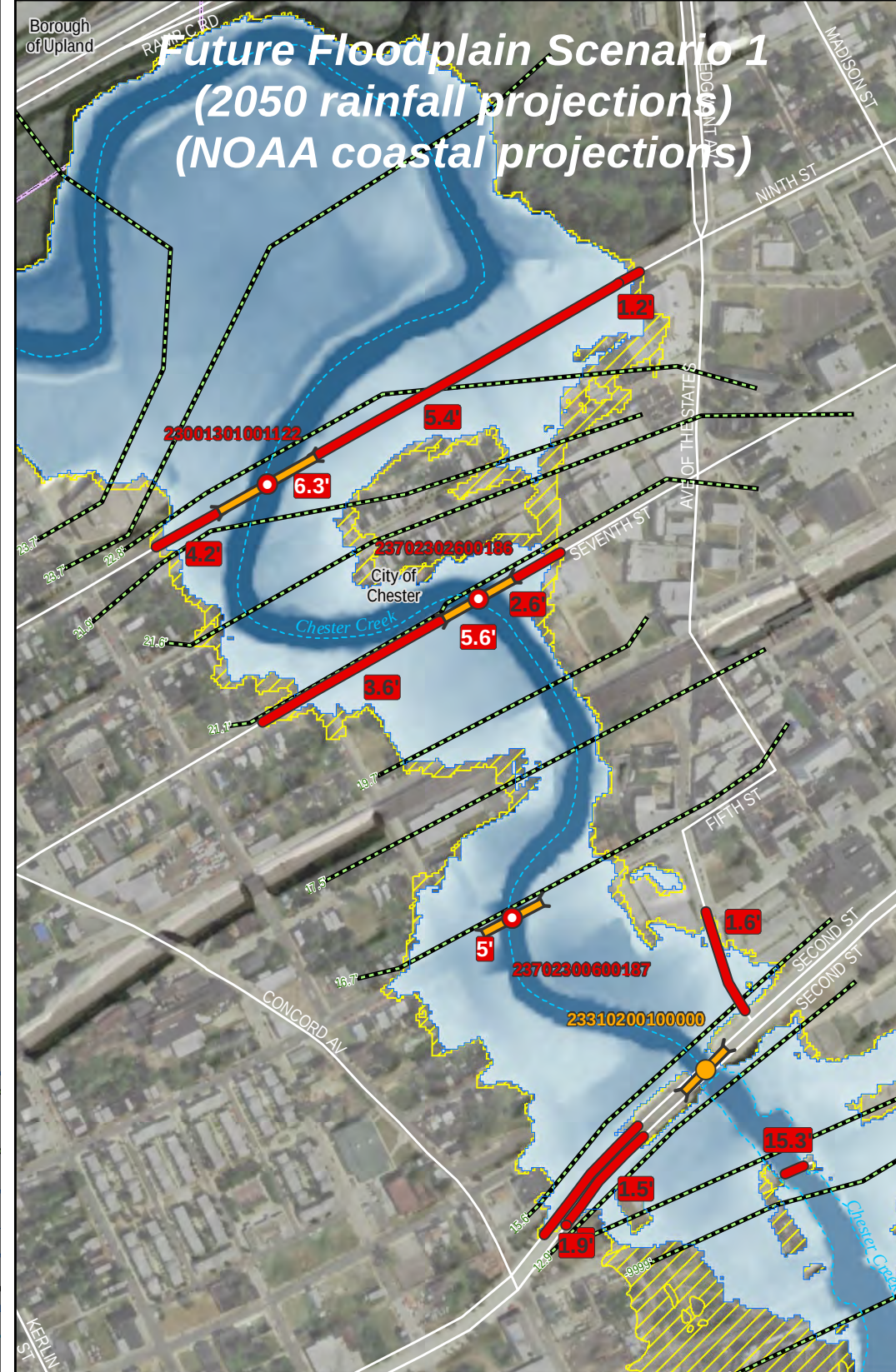
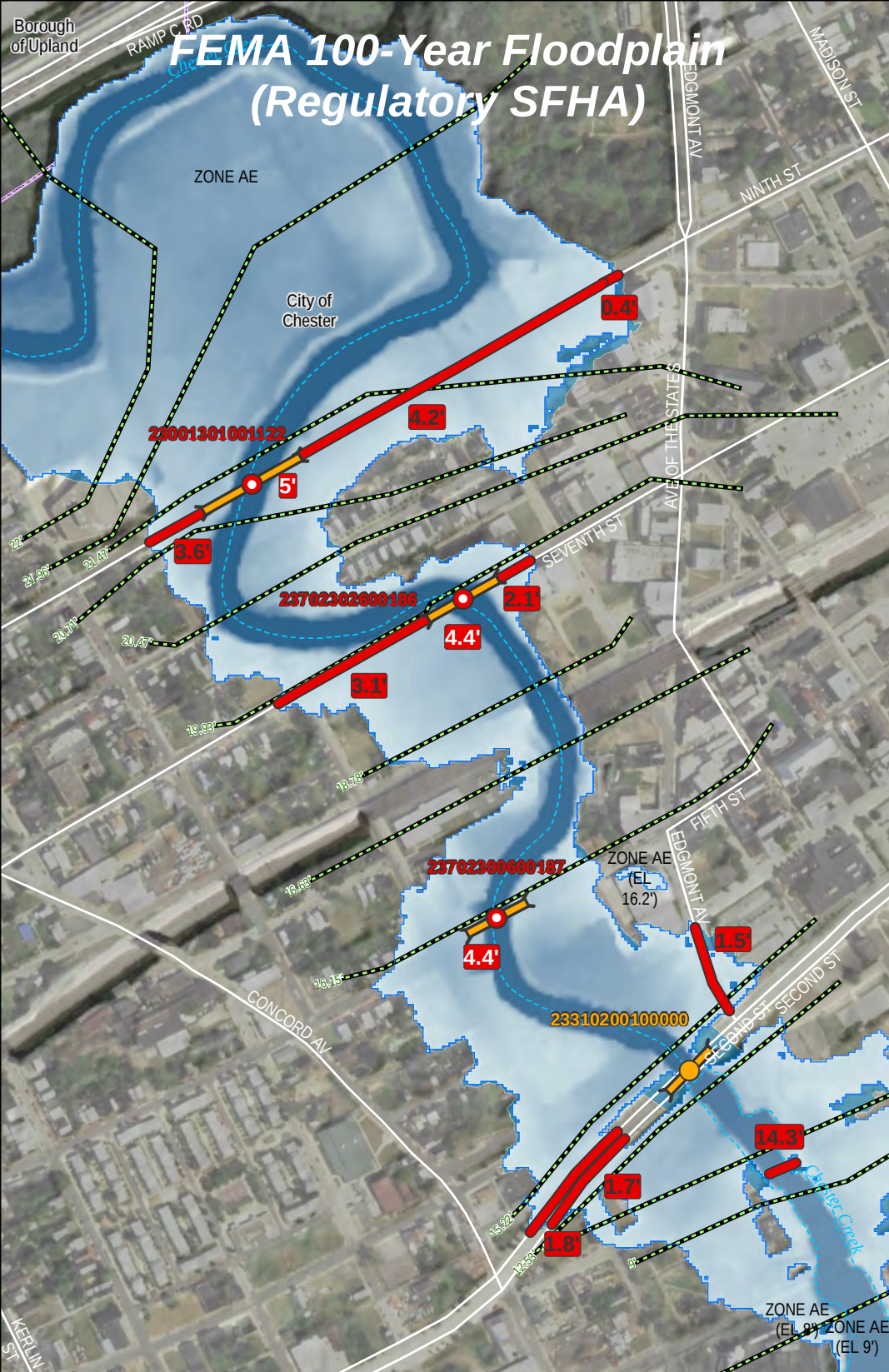
Sheet 112 of 125

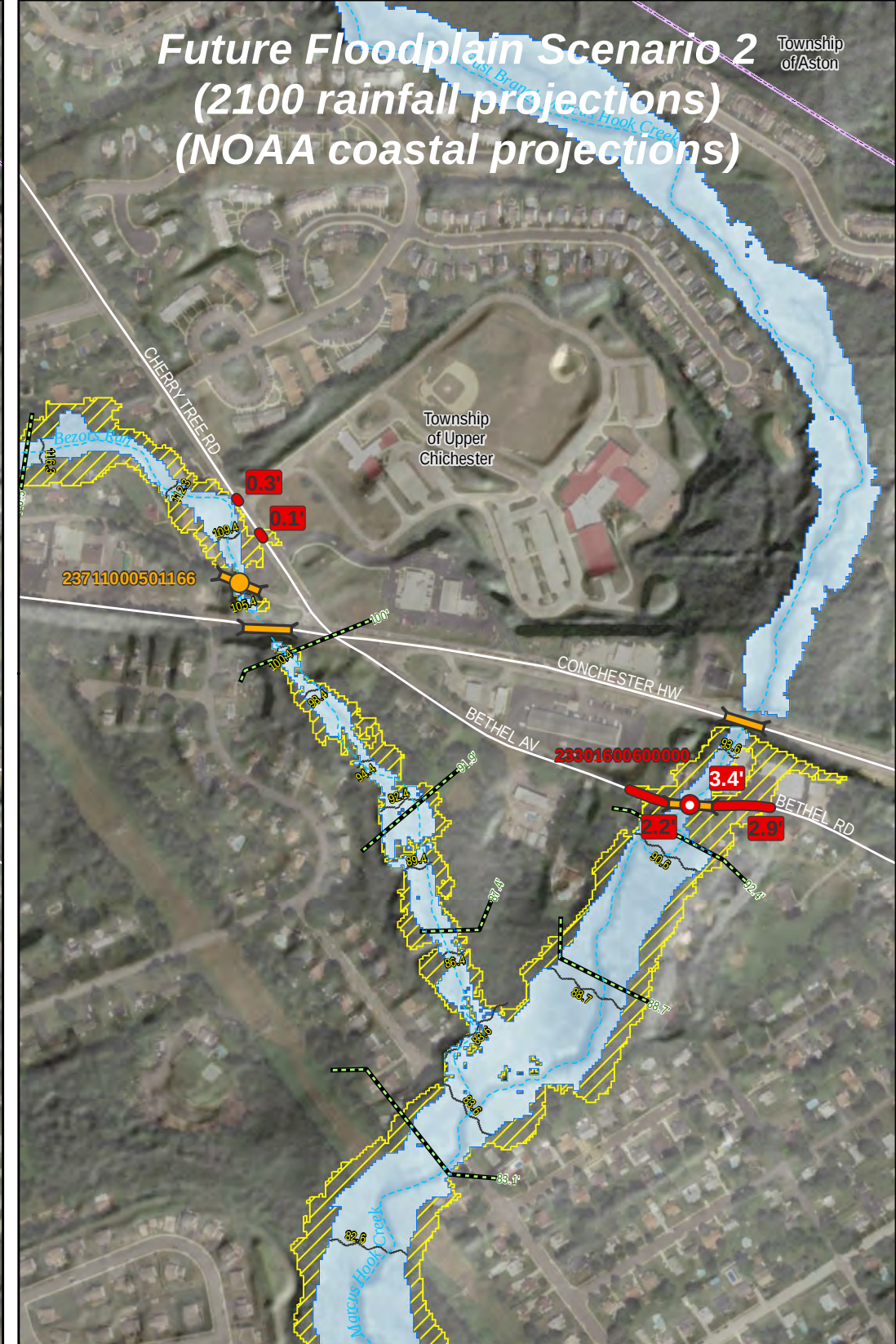
Michael Baker INTERNATIONAL

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

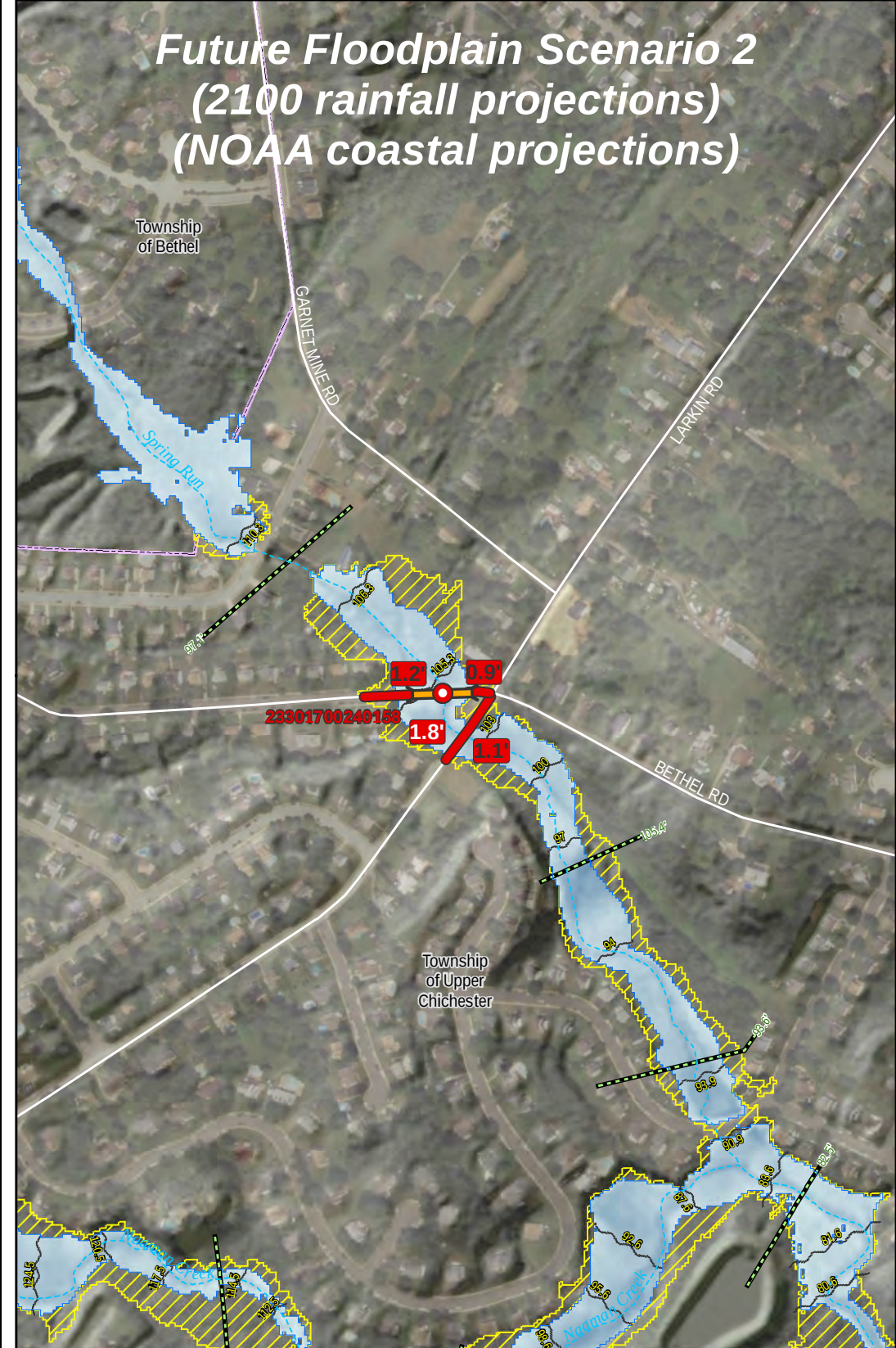
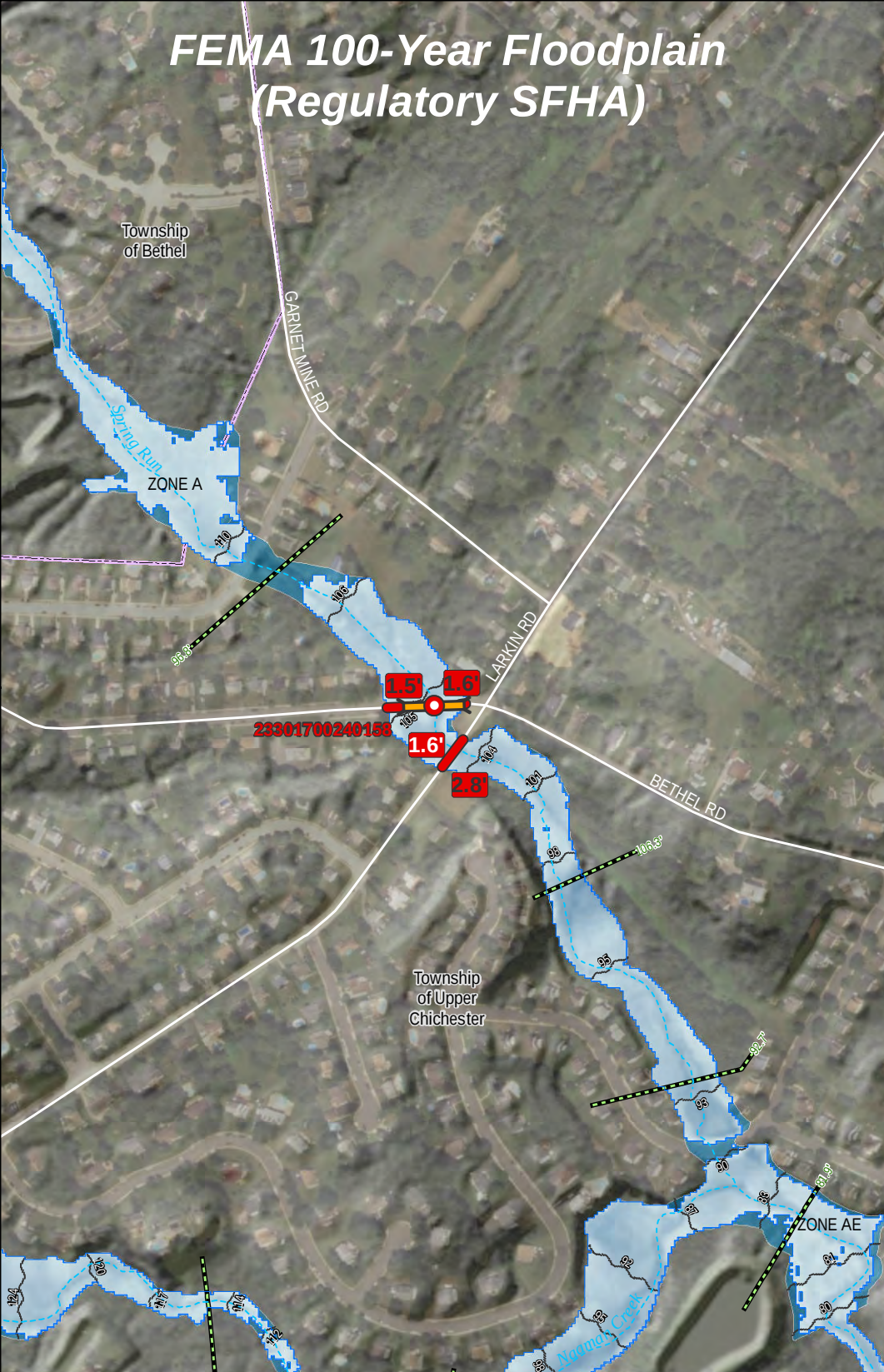
Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 114 of 125

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

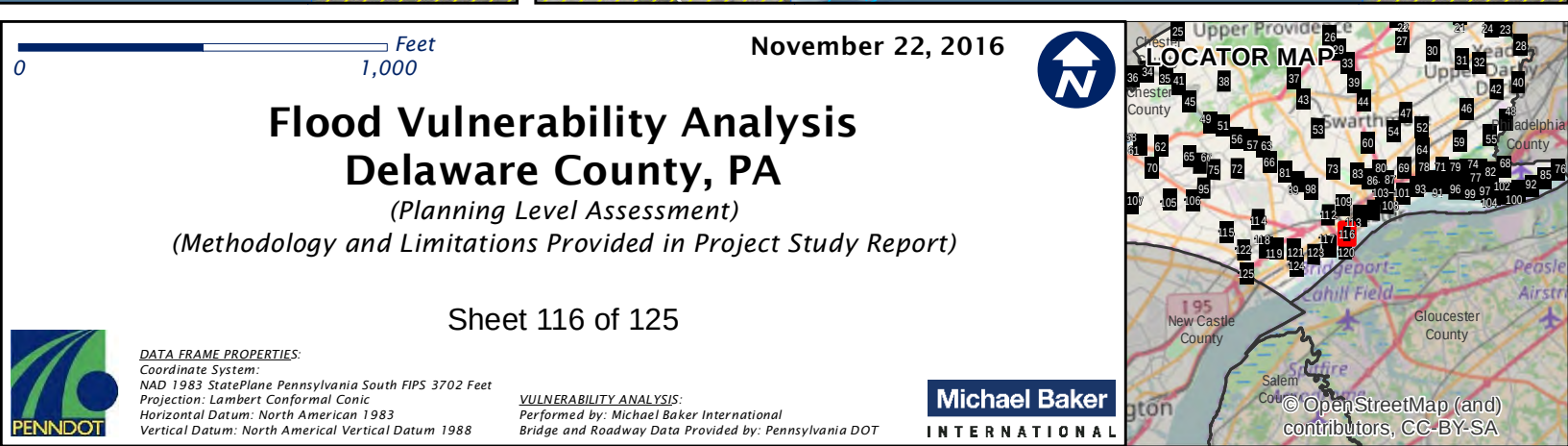
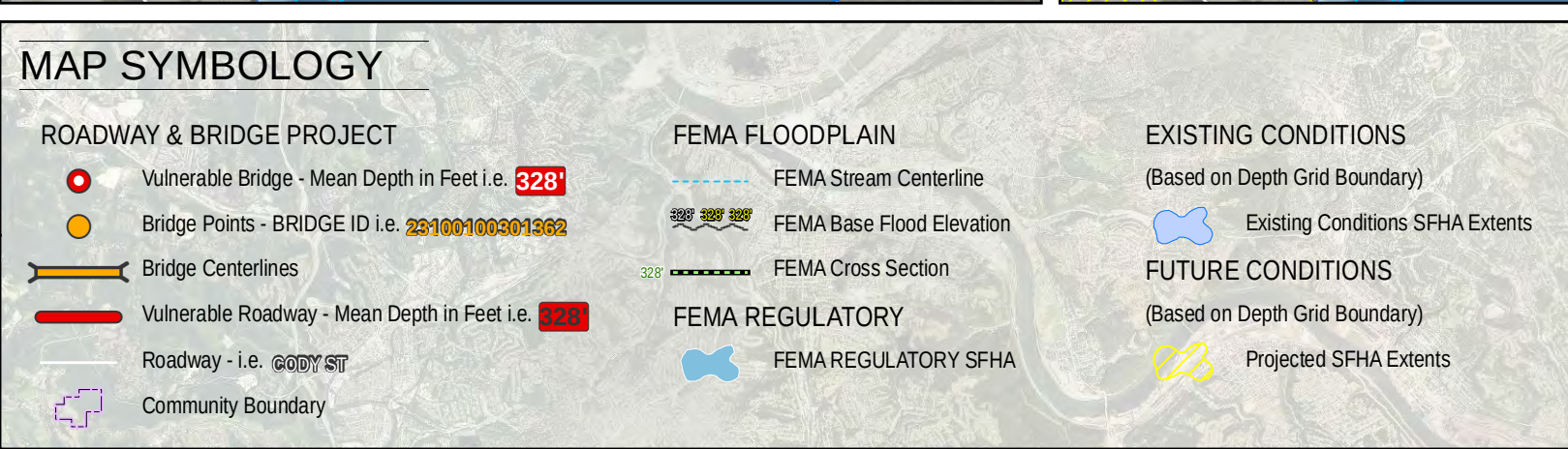
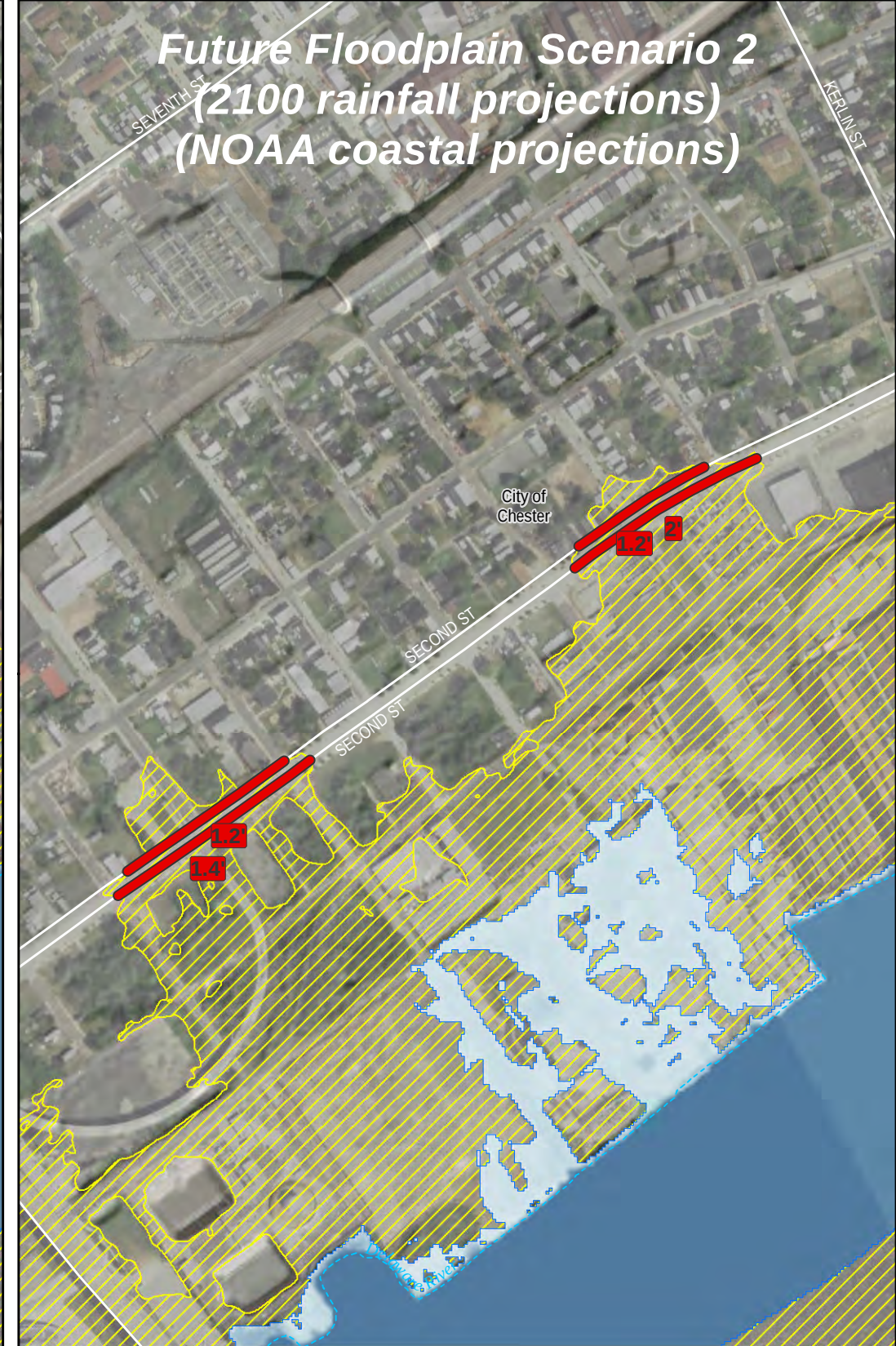
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(Methodology and Limitations Provided in Project Study Report)

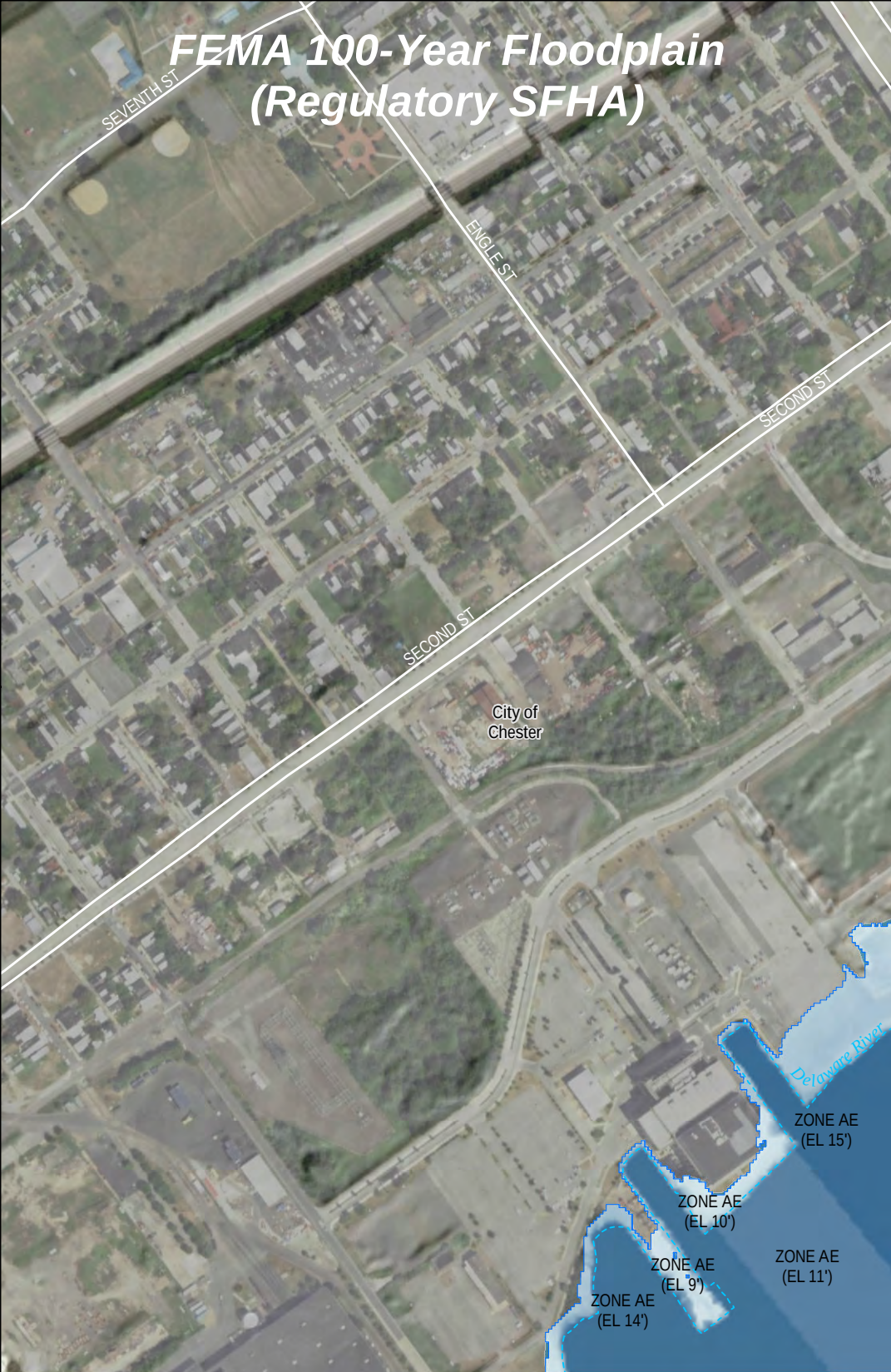
Sheet 115 of 125

DATA FRAME PROPERTIES:
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
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LOCATOR MAP





MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
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Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

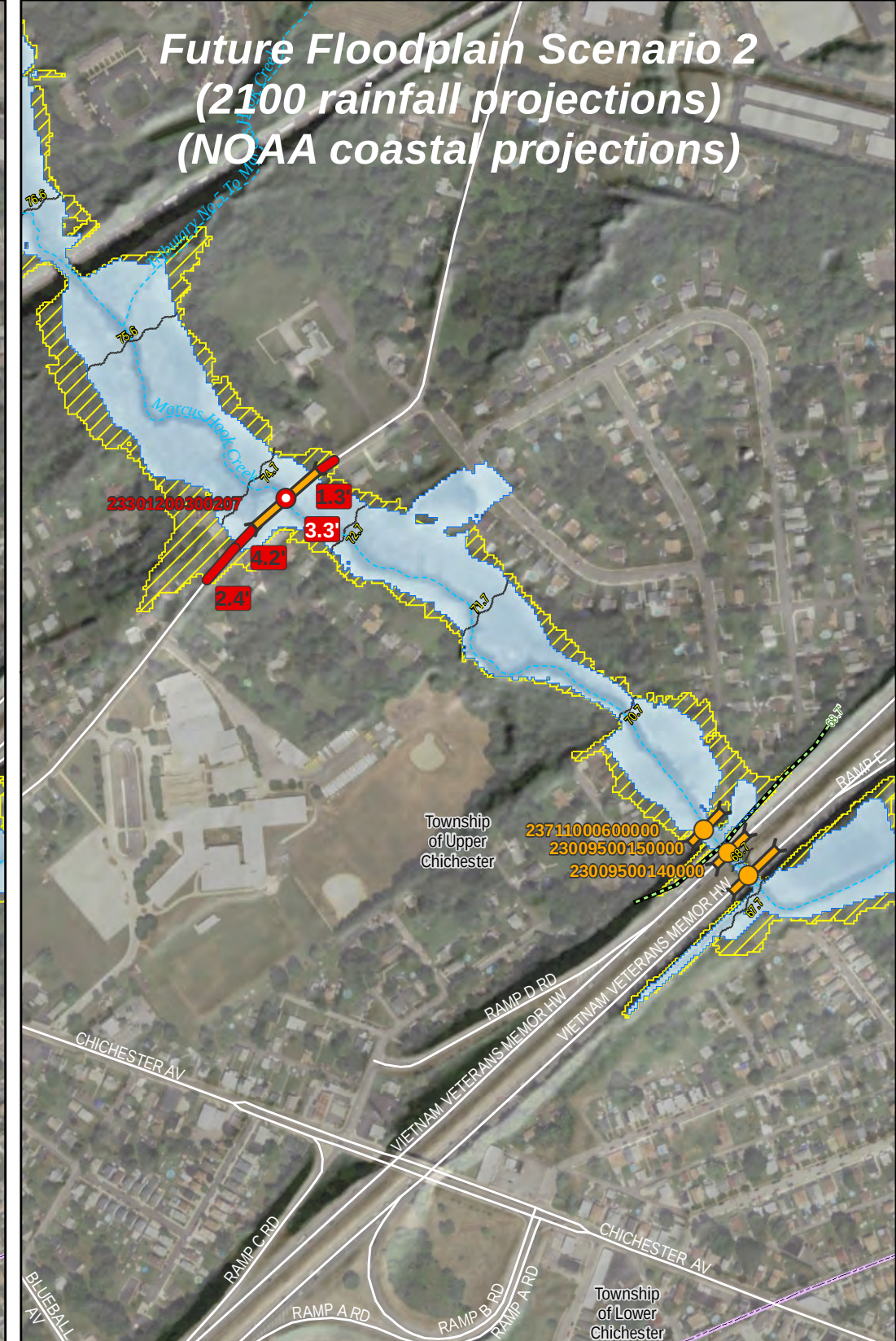
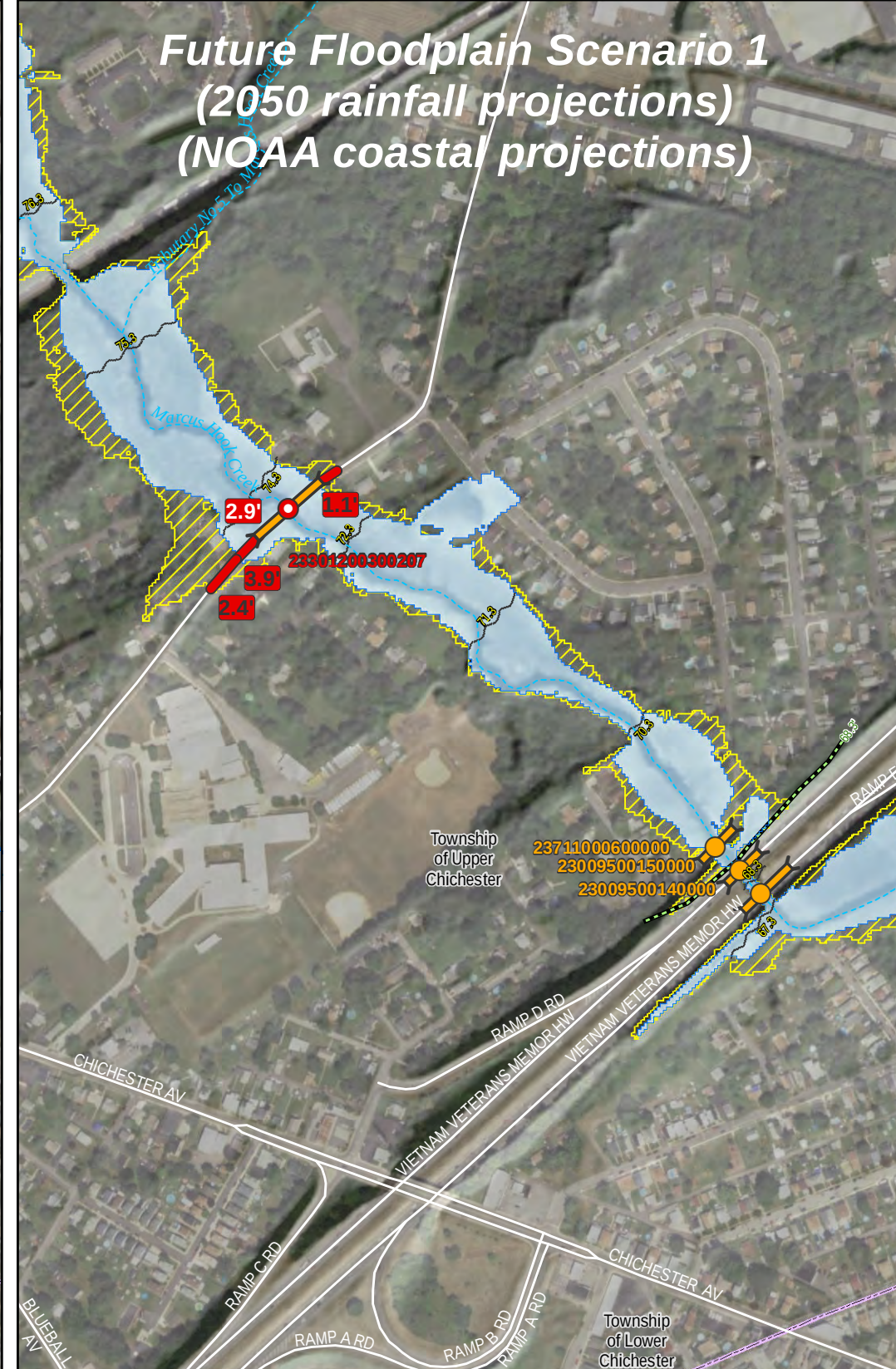
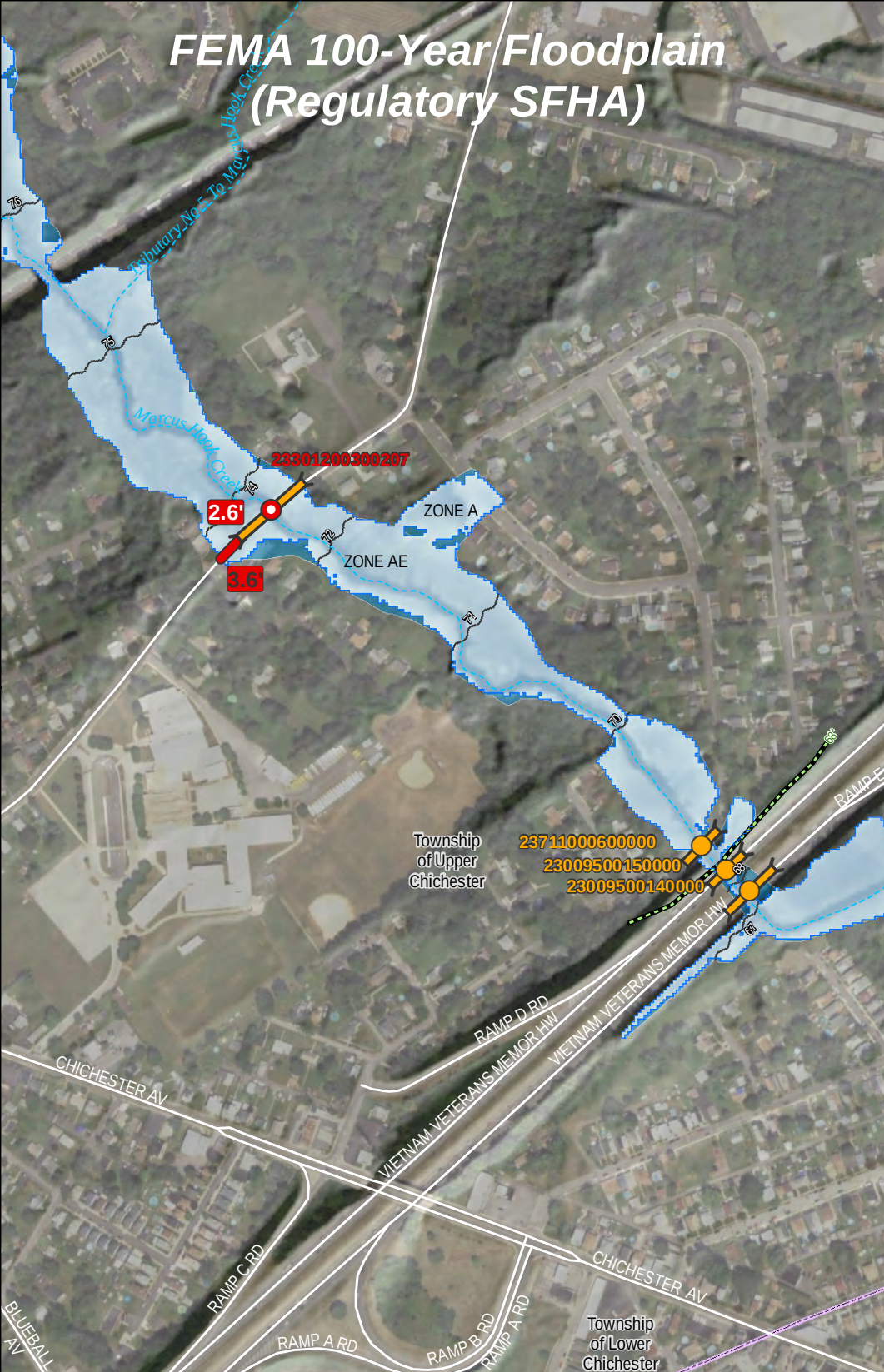
Sheet 117 of 125

Michael Baker INTERNATIONAL

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

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Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
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Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. GOVT ST	FEMA REGULATORY SFHA	
Community Boundary		

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 118 of 125

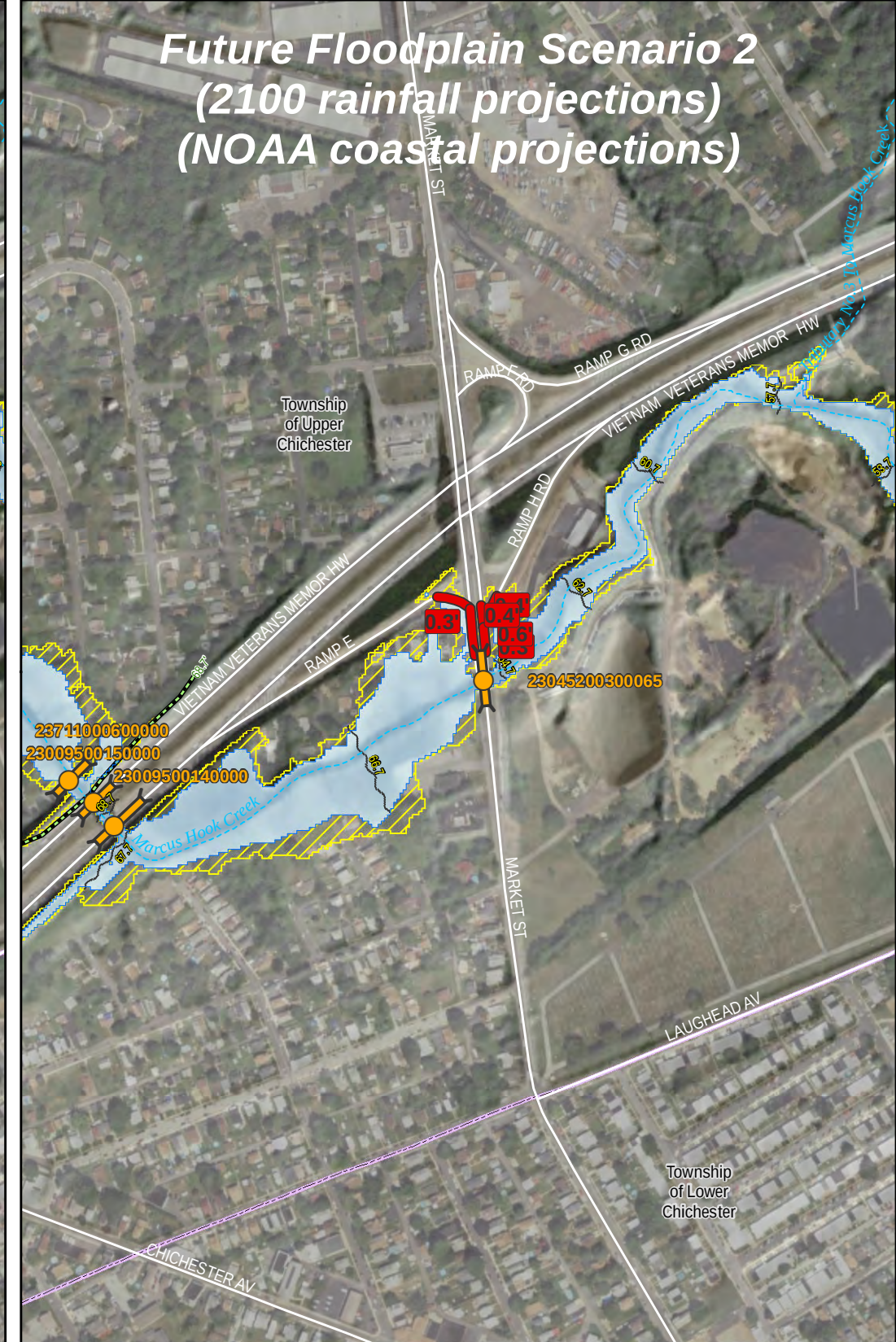
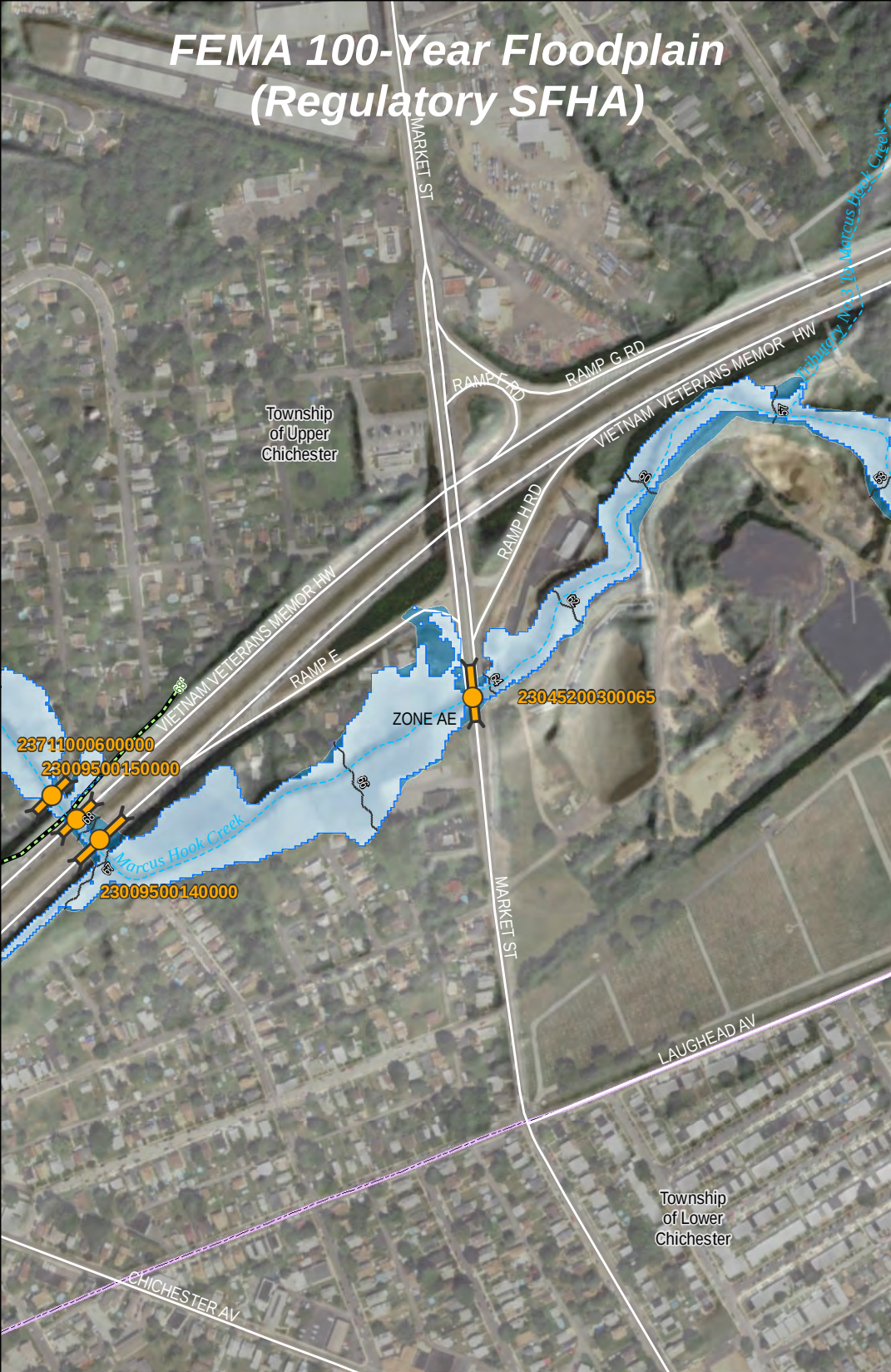
PENNDOT

Michael Baker INTERNATIONAL

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
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VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
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Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 119 of 125

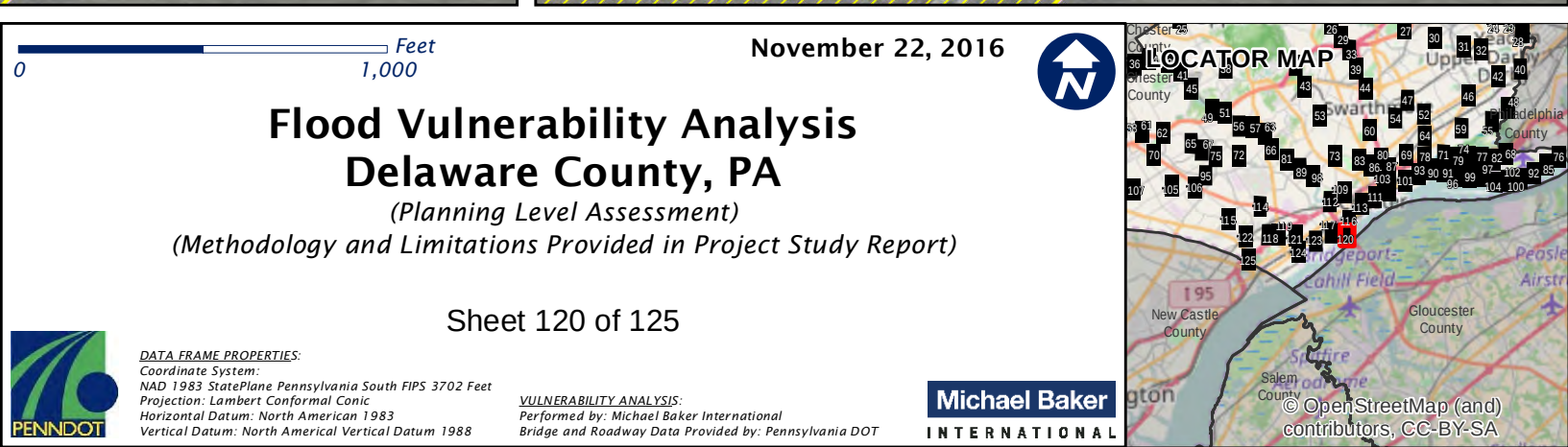
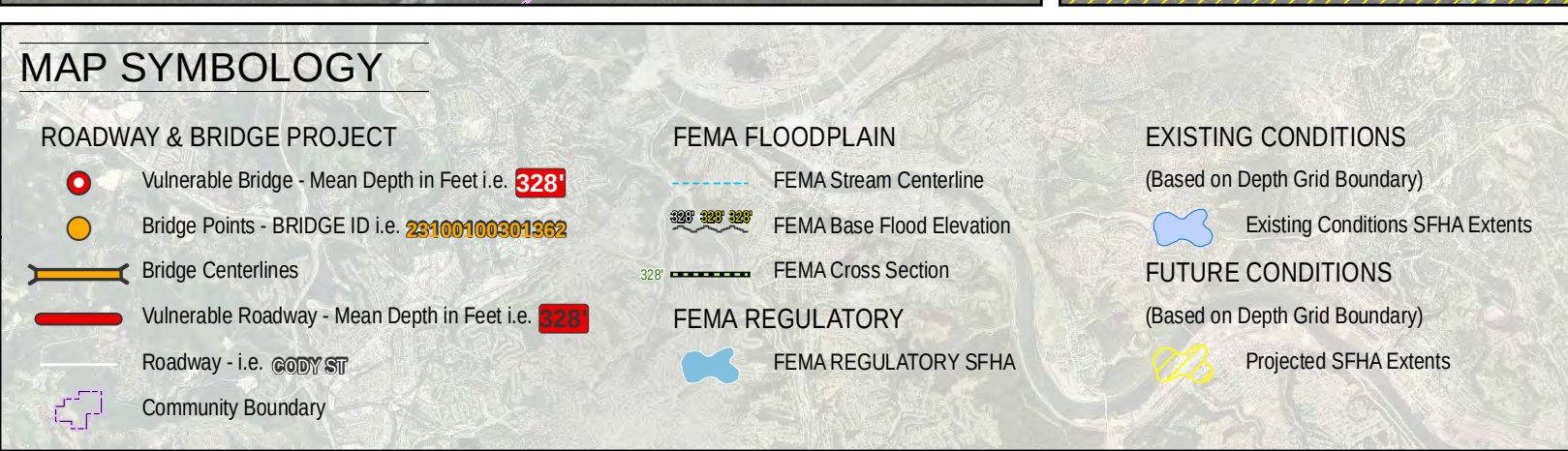
Michael Baker INTERNATIONAL

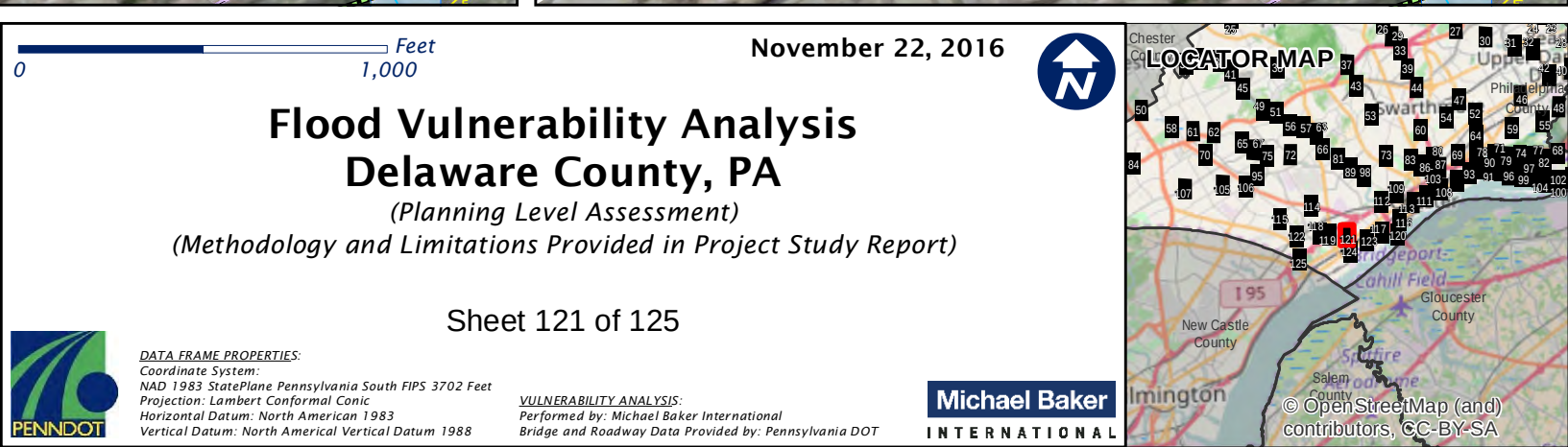
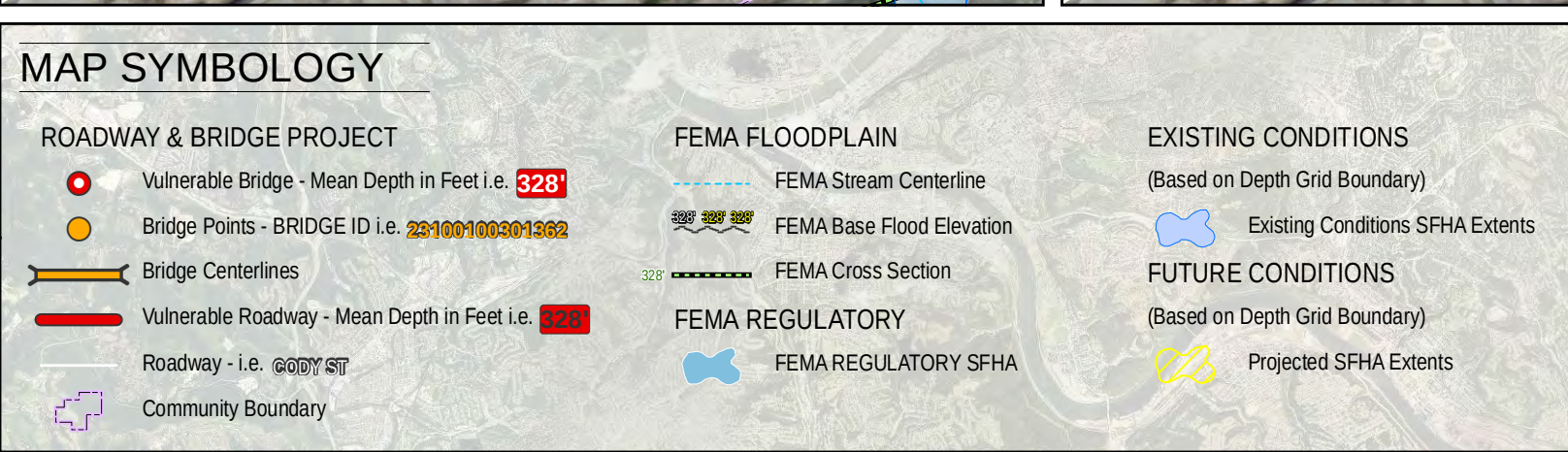
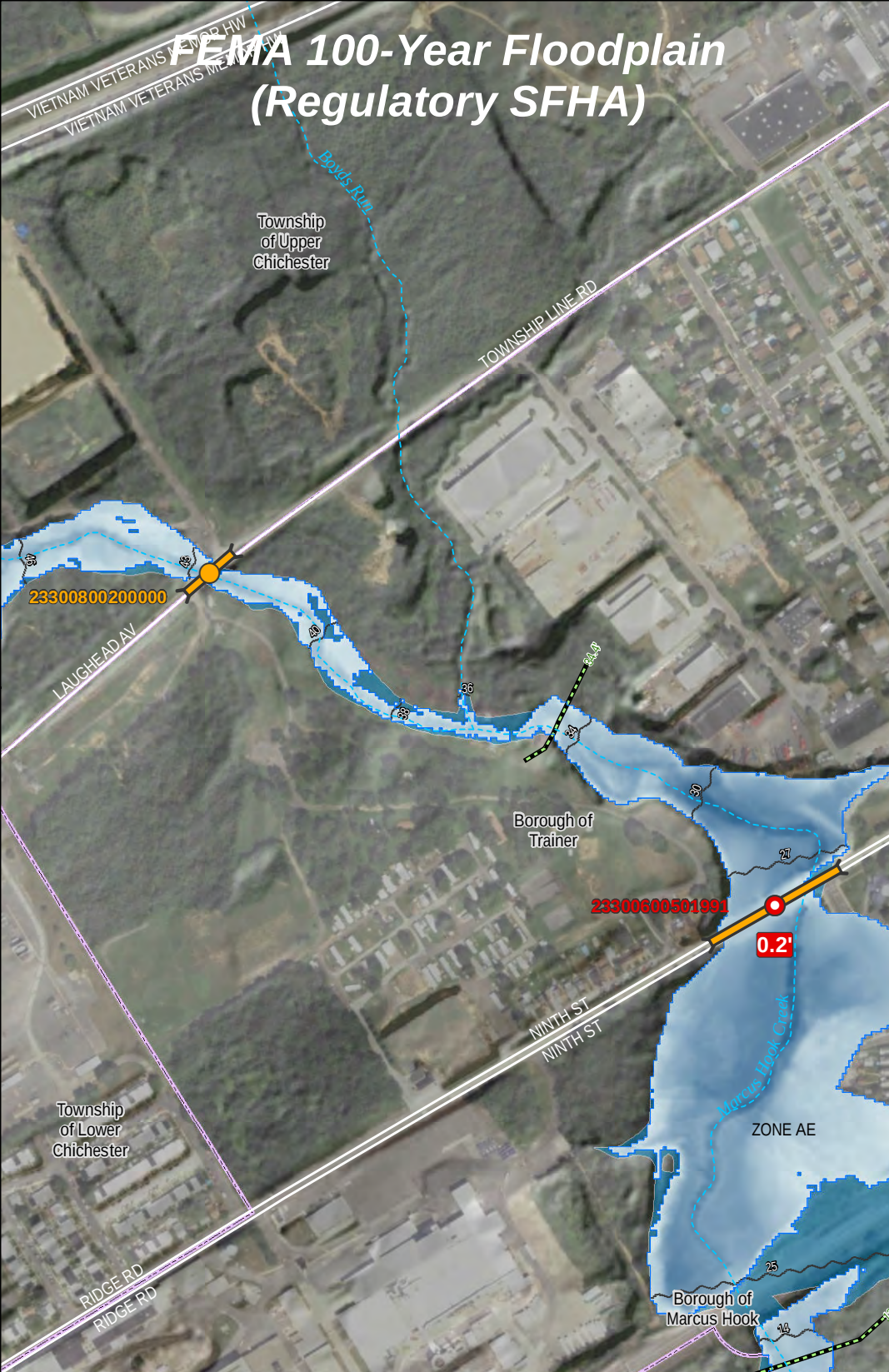
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Coordinate System:
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Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

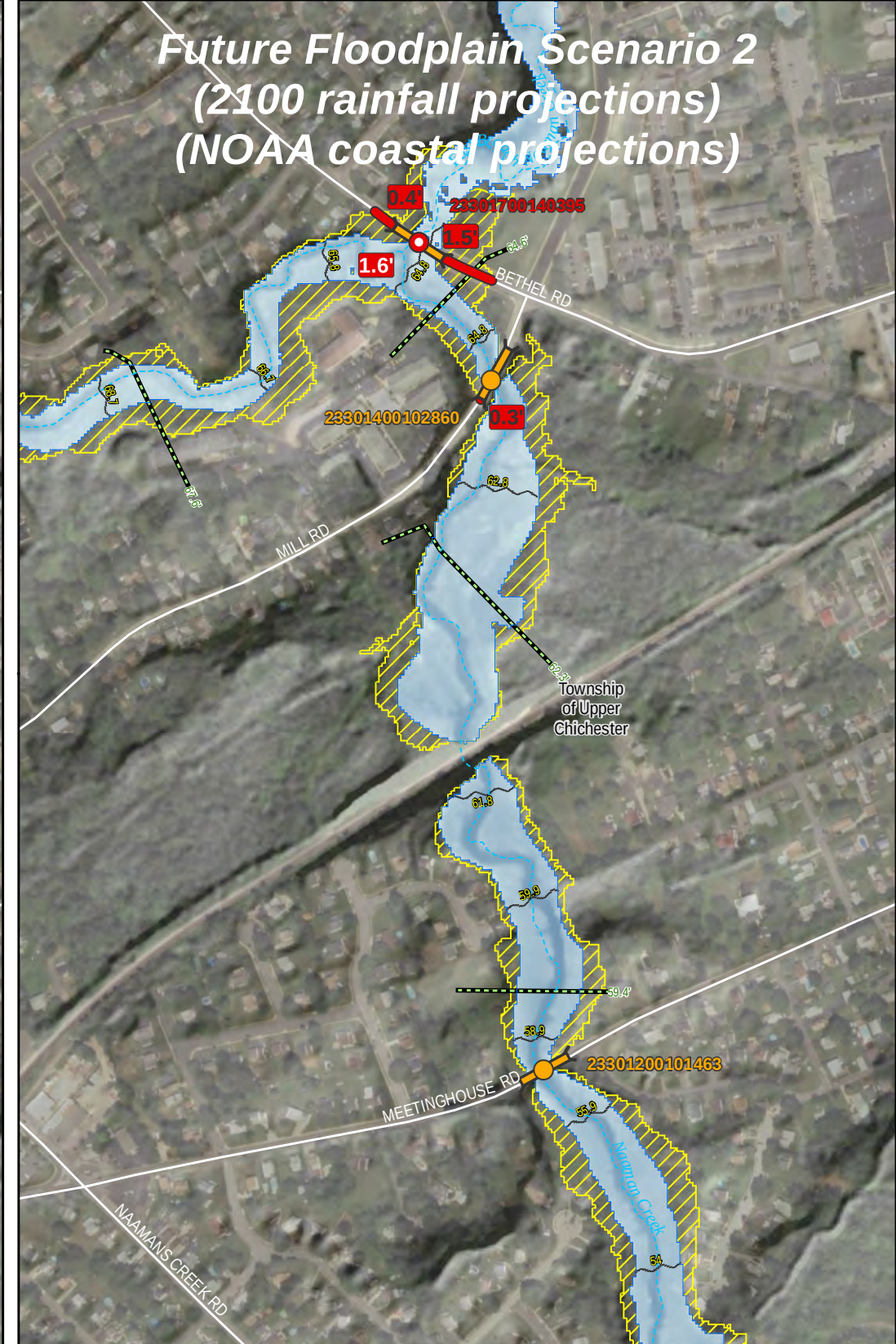
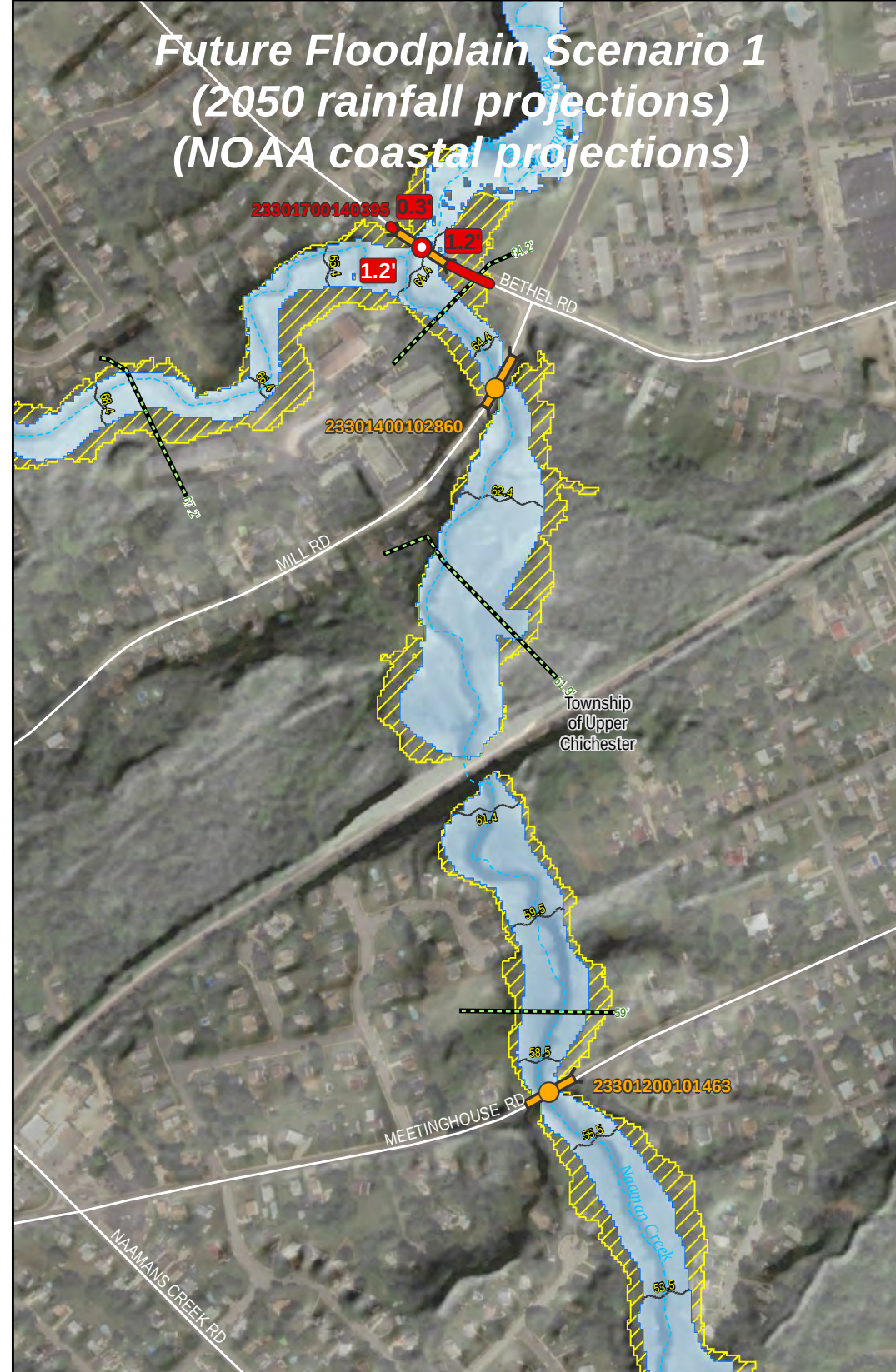
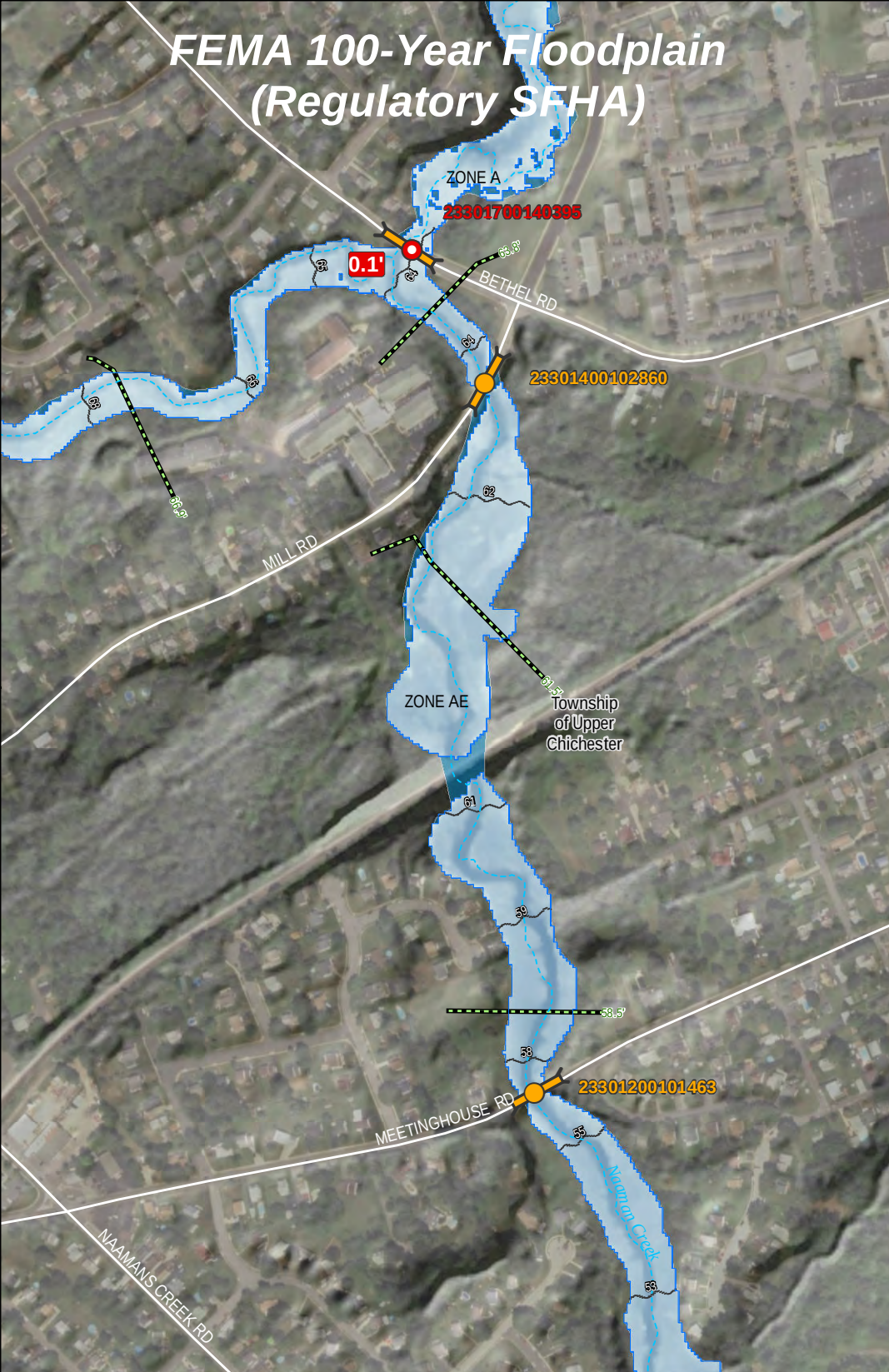
VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP

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MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT

- Vulnerable Bridge - Mean Depth in Feet i.e. **328'**
- Bridge Points - BRIDGE ID i.e. **23100100301362**
- Bridge Centerlines
- Vulnerable Roadway - Mean Depth in Feet i.e. **328'**
- Roadway - i.e. **CODY ST**
- Community Boundary

FEMA FLOODPLAIN

- FEMA Stream Centerline
- FEMA Base Flood Elevation
- FEMA Cross Section

FEMA REGULATORY

- FEMA REGULATORY SFHA

EXISTING CONDITIONS (Based on Depth Grid Boundary)

- Existing Conditions SFHA Extents

FUTURE CONDITIONS (Based on Depth Grid Boundary)

- Projected SFHA Extents

0 1,000 Feet

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

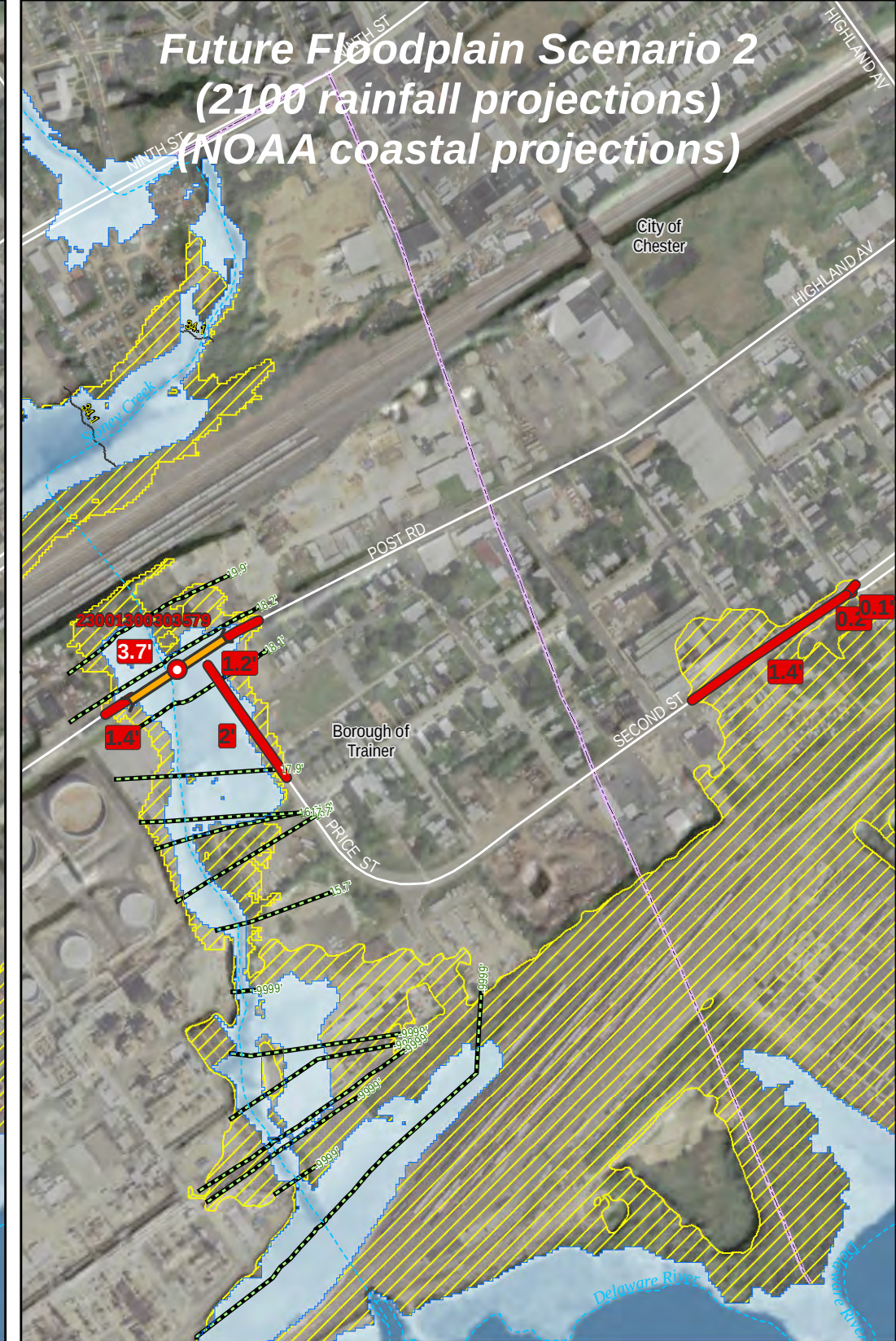
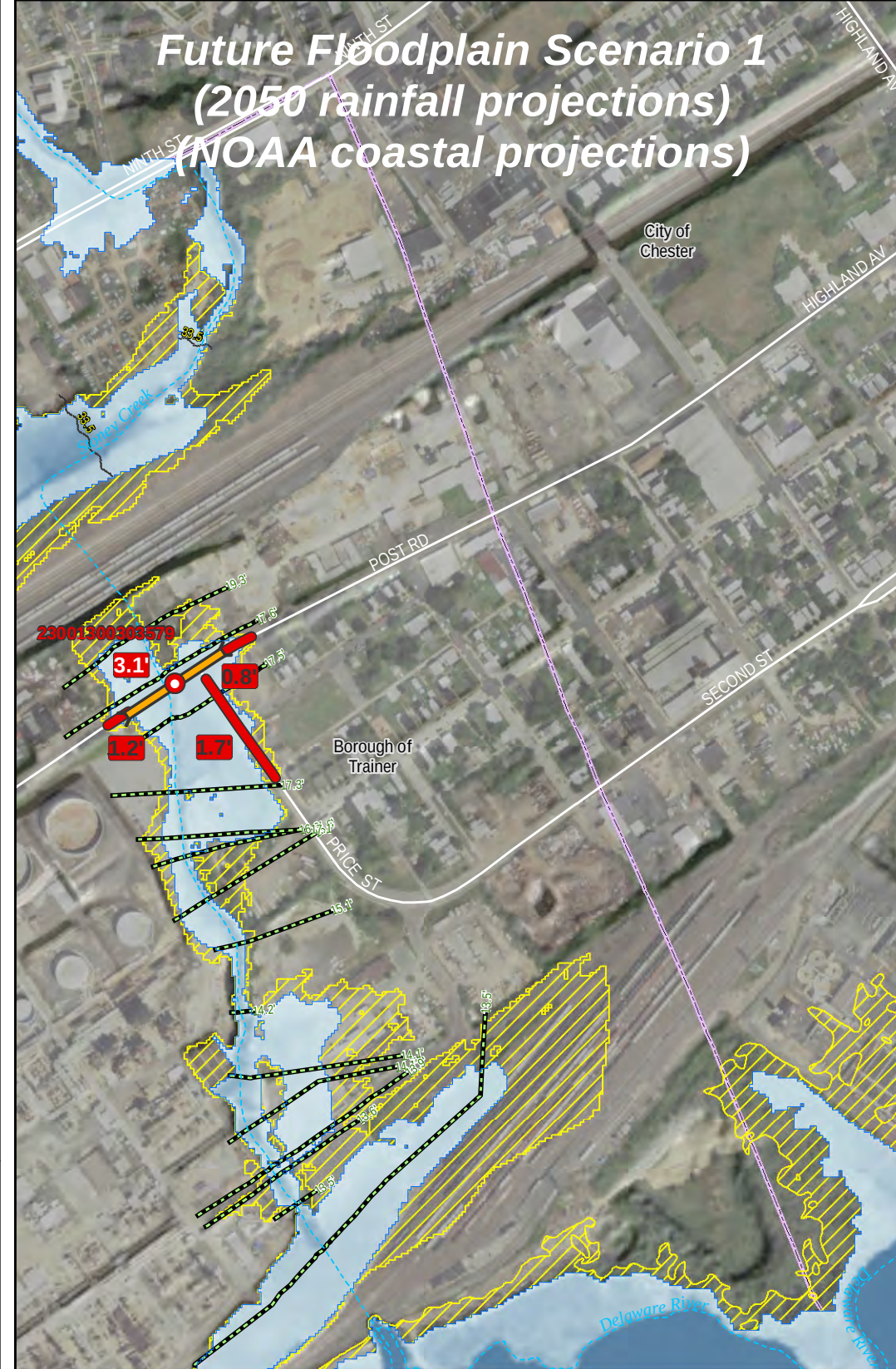
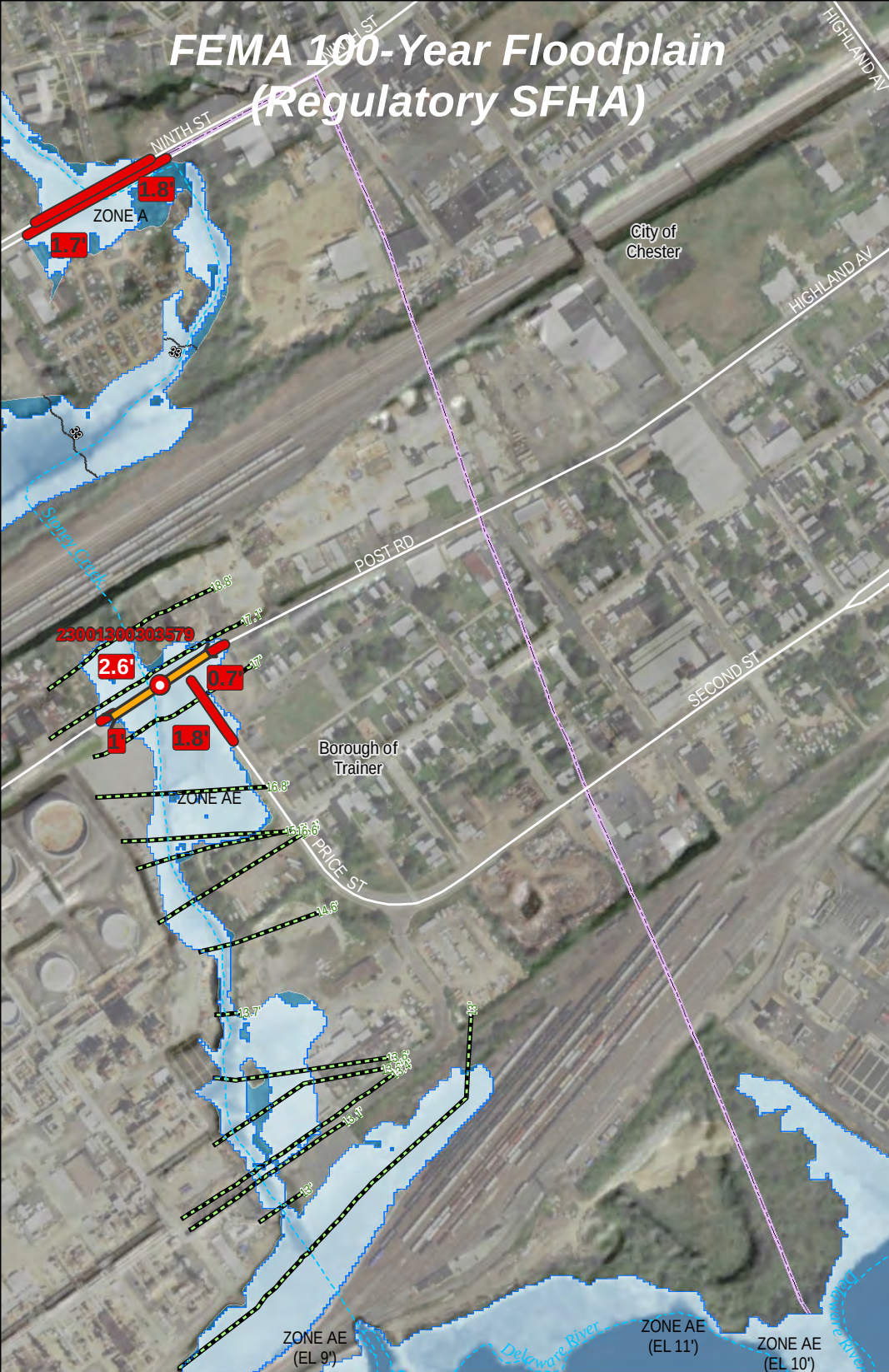
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP



MAP SYMBOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. CODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis

Delaware County, PA

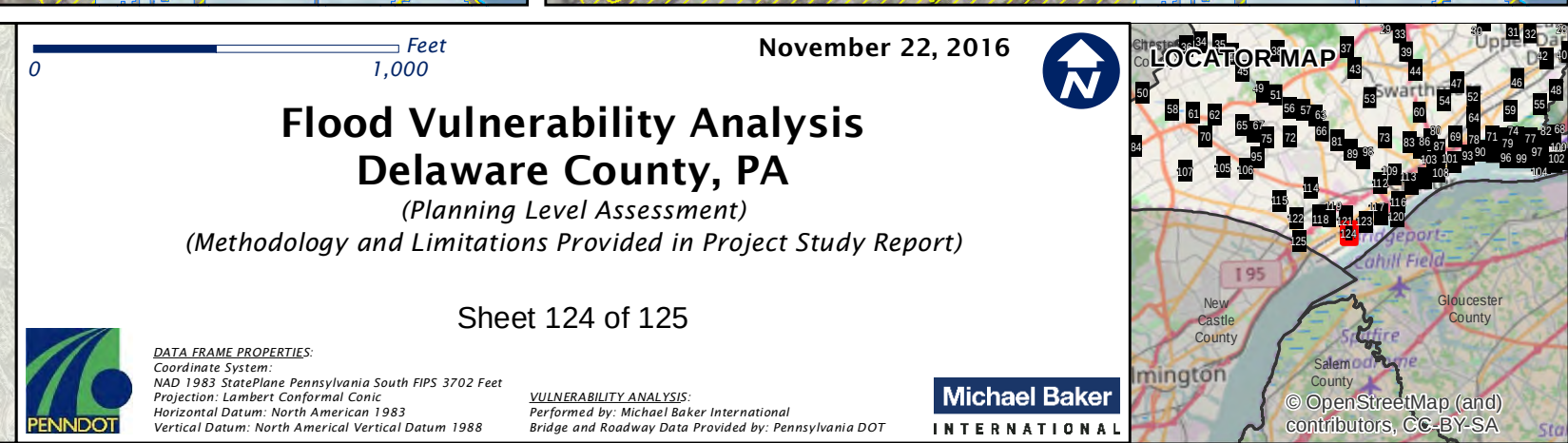
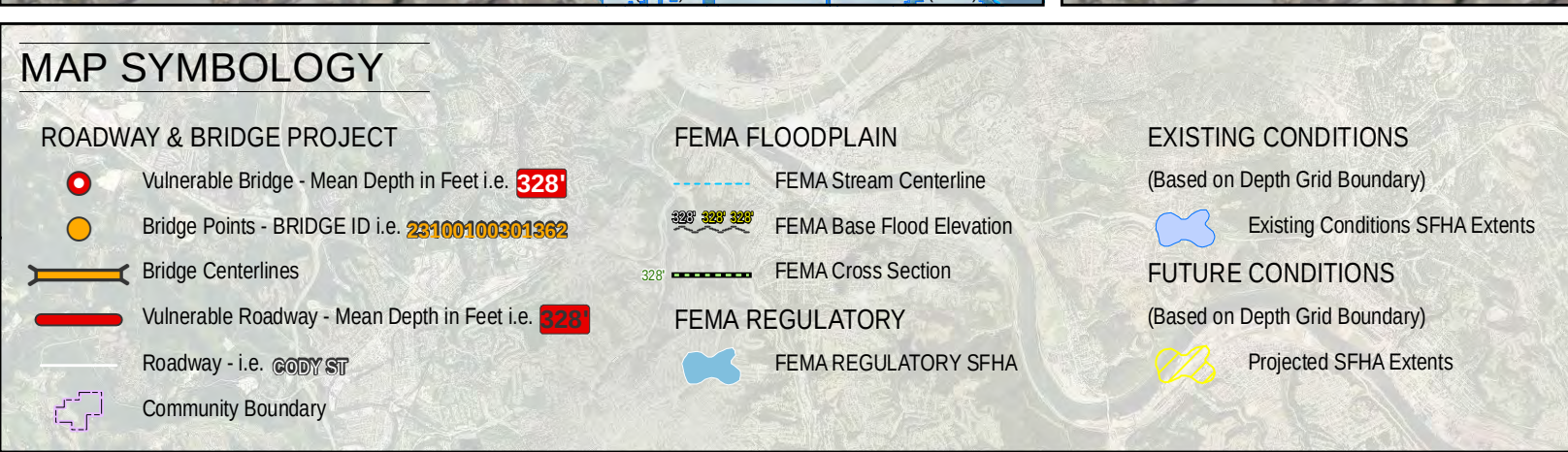
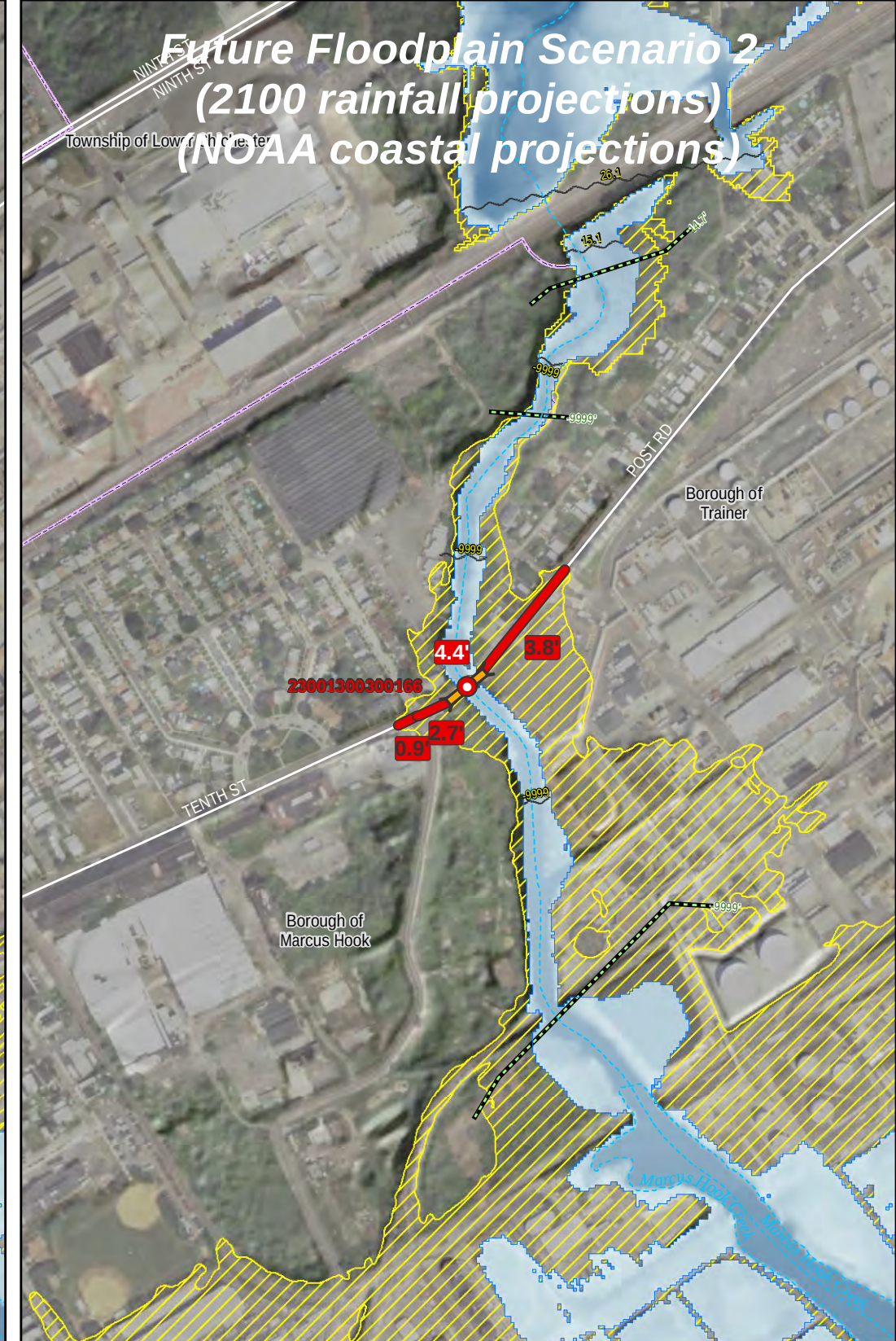
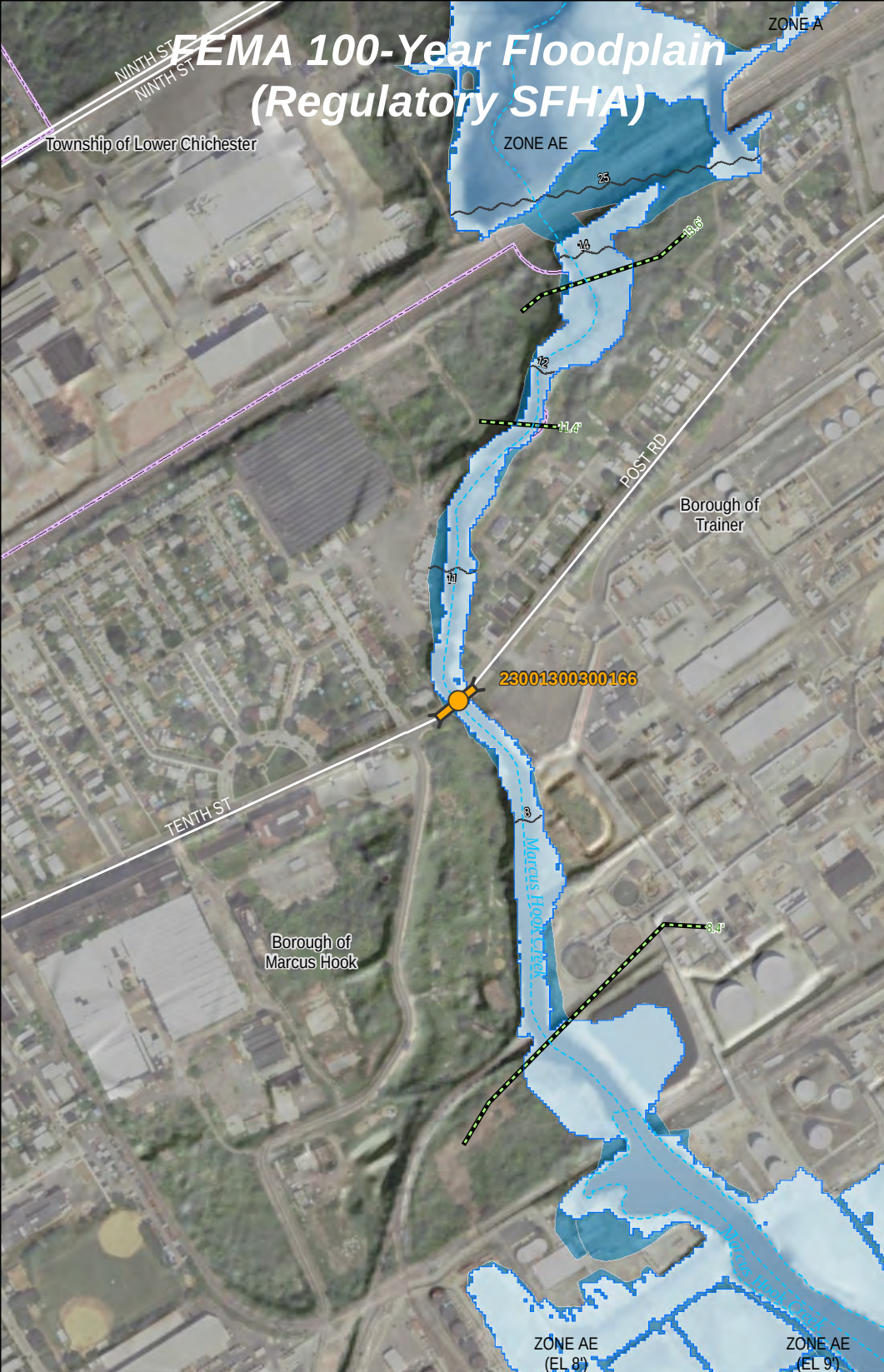
(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

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DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
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Horizontal Datum: North American 1983
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VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT

LOCATOR MAP





MAP SYMBOLOLOGY

ROADWAY & BRIDGE PROJECT	FEMA FLOODPLAIN	EXISTING CONDITIONS (Based on Depth Grid Boundary)
Vulnerable Bridge - Mean Depth in Feet i.e. 328'	FEMA Stream Centerline	Existing Conditions SFHA Extents
Bridge Points - BRIDGE ID i.e. 23100100301362	FEMA Base Flood Elevation	FUTURE CONDITIONS (Based on Depth Grid Boundary)
Bridge Centerlines	FEMA Cross Section	Projected SFHA Extents
Vulnerable Roadway - Mean Depth in Feet i.e. 328'	FEMA REGULATORY	
Roadway - i.e. GOODY ST	FEMA REGULATORY SFHA	
Community Boundary		

November 22, 2016

Flood Vulnerability Analysis Delaware County, PA

(Planning Level Assessment)
(Methodology and Limitations Provided in Project Study Report)

Sheet 125 of 125

**Michael Baker
INTERNATIONAL**

LOCATOR MAP

DATA FRAME PROPERTIES:
Coordinate System:
NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
Projection: Lambert Conformal Conic
Horizontal Datum: North American 1983
Vertical Datum: North American Vertical Datum 1988

VULNERABILITY ANALYSIS:
Performed by: Michael Baker International
Bridge and Roadway Data Provided by: Pennsylvania DOT