Sub Regional RTEP Committee: Western
Dayton Supplemental Projects

December 18, 2019

Changes to the existing supplemental projects

Dayton Transmission Zone: Supplemental Normandy

Date: 12/18/2019

Supplemental Project Number:

s0331

Project Description:

Install 138/69kV transformer at Normandy Substation

Estimated Cost:

$5,500,000

Project ISD:

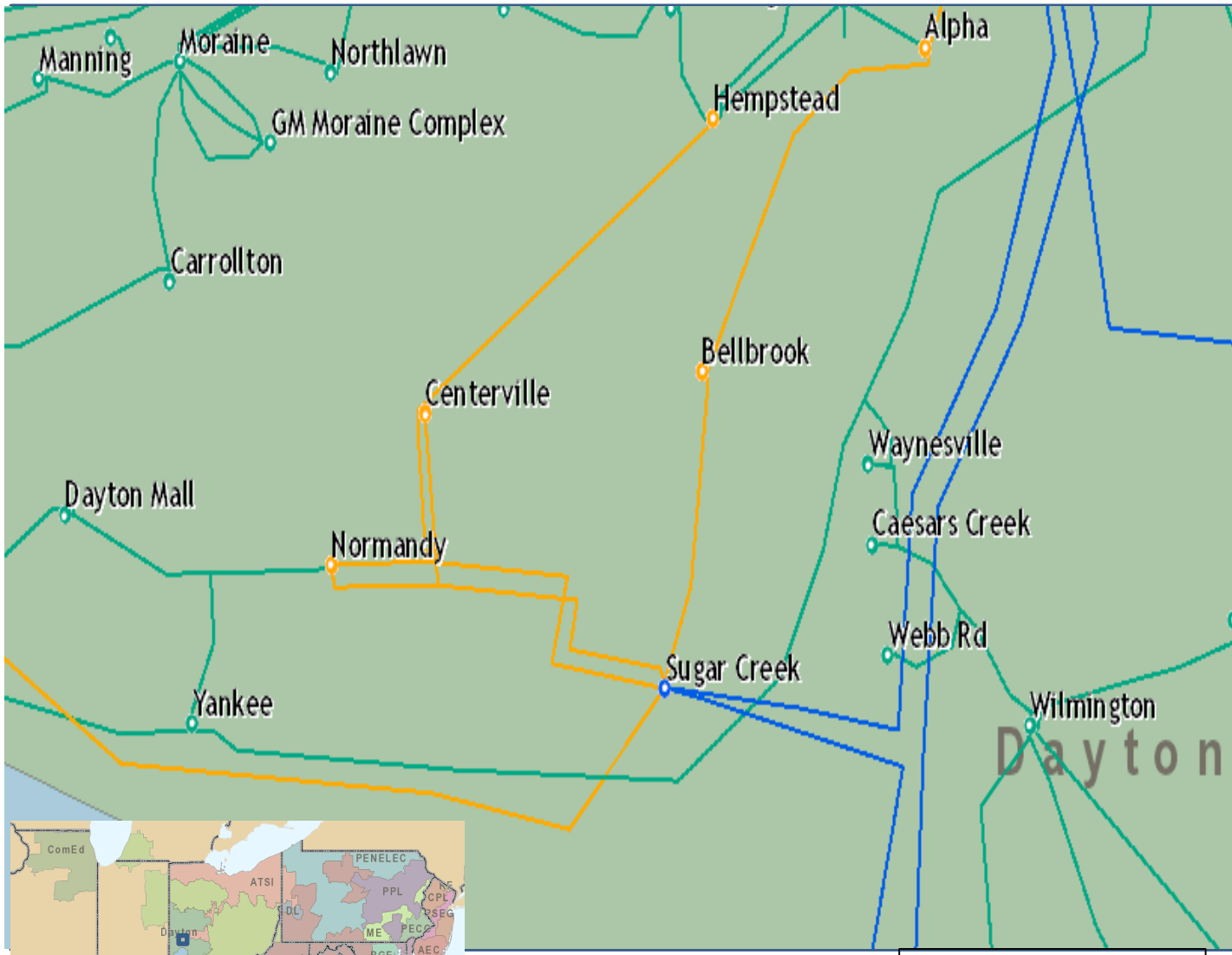
6/1/2021

Reason for Cancellation:

- This project to add a 138/69kV transformer at Normandy substation is being cancelled due to space constraints at the substation, protection concerns, and operational limitations by adding a 138kV source into this part of the system.

- Project s1876.2 is planned to address the needs in this area.

- PJM has completed the “Do No Harm” study and there were no reliability issues identified.



Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Dayton Transmission Zone M-3 Process
New Bremen, Ohio

Need Number: Dayton-2019-010

Process Stage: Need Meeting 12/18/2019

Project Driver:

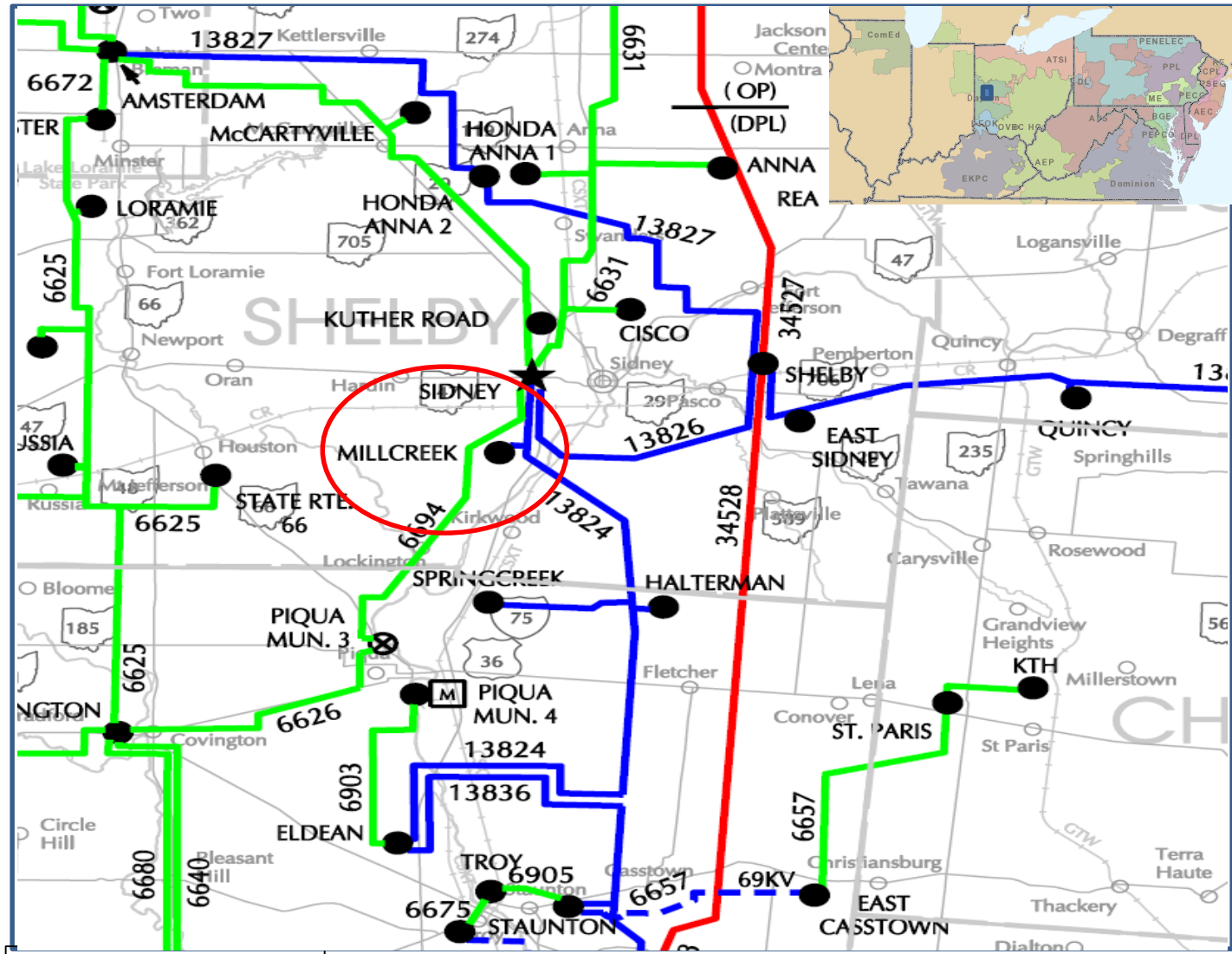
Requested customer upgrade, source for underlying distribution

Specific Assumption Reference:

Dayton Local Plan Assumptions (Slide 5)

Problem Statement:

- An industrial customer served from the Sidney Substation intends to add 10 MVA of load in 2020 Q3.
- All three of the 69/12kV transformers at Sidney Substation are already loaded to ~90% during peak times.
- The loss of one of the three 69/12kV transformers at Sidney Substation will result in load shed of ~4,000 customers.
- The 138/12kV transformer at the nearest substation, Millcreek, is currently loaded to ~70% during peak times.
- Millcreek is a tapped sub off of the Sidney to Eldean 138kV transmission line



Solutions

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

Dayton Transmission Zone M-3 Process
Brookville, Ohio

Need Number: Dayton-2019-009

Process Stage: Solutions Meeting 12/18/2019

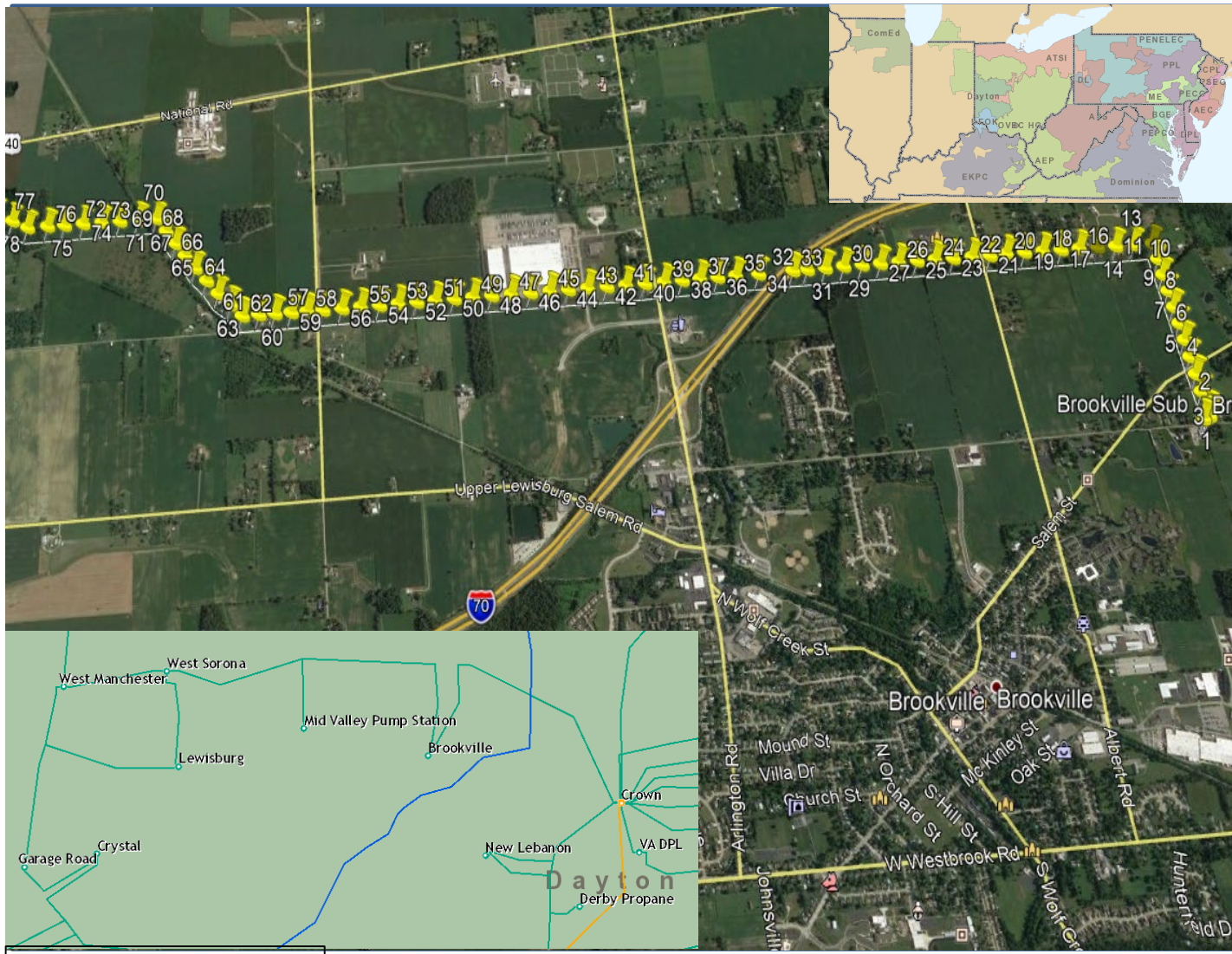
Previously Presented:
Need Meeting 10/25/2019

Project Driver:
New customer delivery point

Specific Assumption Reference:
Dayton Local Plan Assumptions (Slide 5)

Problem Statement:

- An new industrial customer has requested a new delivery point in Brookville, Ohio. The potential customer site is located north of Upper Lewisburg Salem Rd and west of Arlington Rd in close proximity to the existing 6639 transmission line. The route of the existing 6639 line is shown in the graphic on the right side of the slide.
- Prior to the need for full transmission capacity, the customer will require 500kW of capacity immediately to begin construction activities. By April 1, 2020 the customer will require a minimum of 5MW of total capacity to finalize building construction and the installation of production equipment. By November of 2020, the full substation and capacity for an 11MVA load will be required. There are long-terms plan for the customer to potentially grow to a 26MVA load.
- In order to support the customer's delivery needs, support local economic development, and maintain system reliability for all customers, it is necessary to promptly begin designing and building a comprehensive solution that can supply the customer needs and meet the schedule outlined in this slide.



Dayton Transmission Zone M-3 Process
Brookville, Ohio

Need Number: Dayton-2019-009

Process Stage: Solutions Meeting 12/18/2019

Proposed Solution:

Dayton has developed a comprehensive distribution and transmission solution to meet both the short-term and long term needs identified in problem statement. Dayton plans to install distribution level service to provide service to the first 500kW and 5MW loads. The transmission project to serve the initial 11MVA of load will entail tapping the existing Brookville-West Manchester 69 kV line (6639). This new transmission tap, constructed with 477 ACSR conductor, will loop in and out of a new three breaker 69kV ring bus substation where one 69/12kV 30MVA transformer will be installed. Fiber will be added from Brookville Substation to the new sub, so remote end relay changes will be needed at Brookville Substation. Remote end relay setting updates will be required at West Manchester Substation. The transmission project is estimated to cost $2.5M

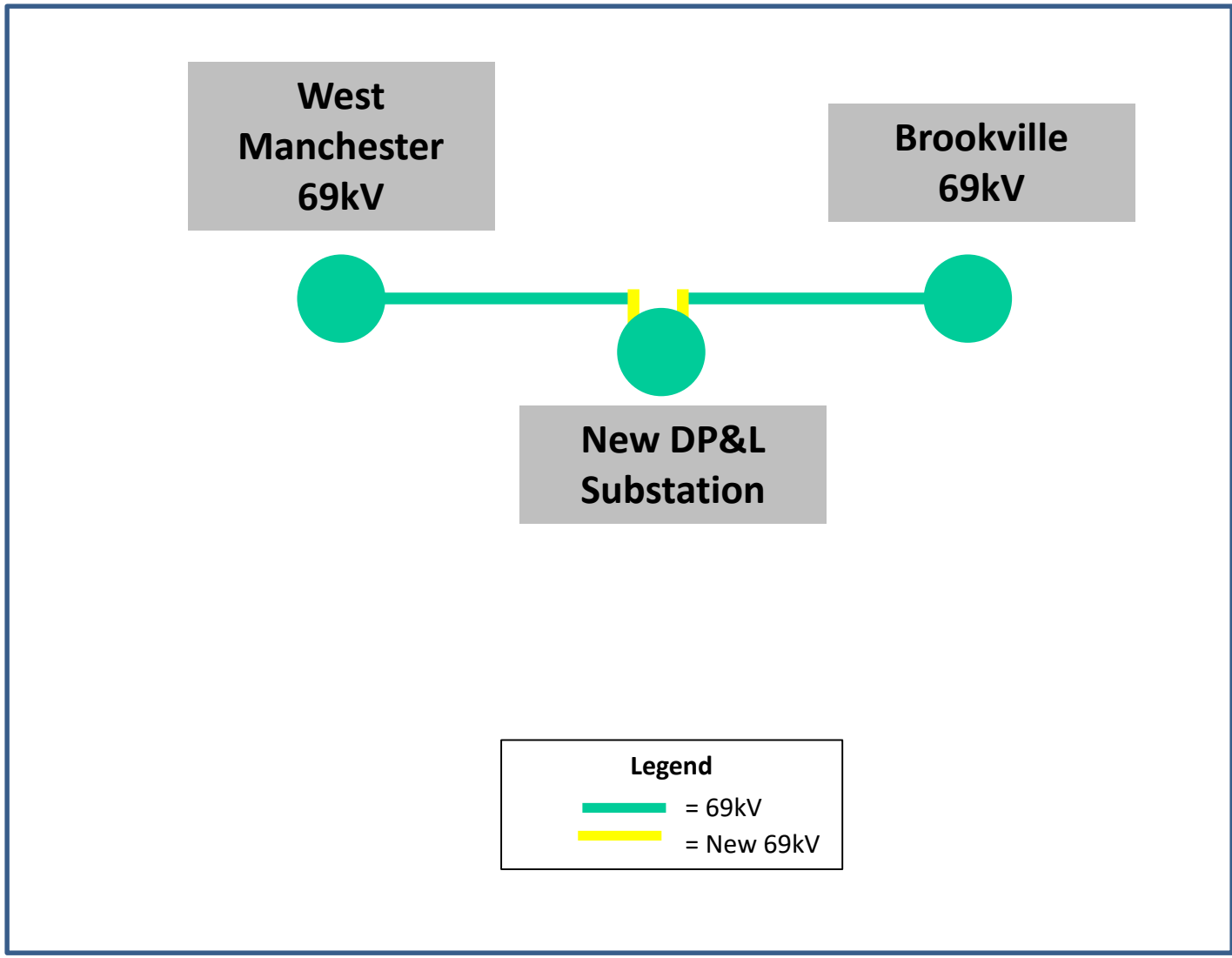
Alternatives Considered:

1. Construct a new 69/12kV substation with transmission line switches. This alternative was not selected due to amount of exposure on 6636 and other existing tap load served by this line. Estimated cost $1.9M

Projected In-Service: 10/31/2020

Project Status: Conceptual

Model: 2018 MMWG 2020SUM



Appendix

High Level M-3 Meeting Schedule

Assumptions

Activity	Timing
Posting of TO Assumptions Meeting information	20 days before Assumptions Meeting
Stakeholder comments	10 days after Assumptions Meeting

Needs

Activity	Timing
TOs and Stakeholders Post Needs Meeting slides	10 days before Needs Meeting
Stakeholder comments	10 days after Needs Meeting

Solutions

Activity	Timing
TOs and Stakeholders Post Solutions Meeting slides	10 days before Solutions Meeting
Stakeholder comments	10 days after Solutions Meeting

Submission of Supplemental Projects & Local Plan

Activity	Timing
Do No Harm (DNH) analysis for selected solution	Prior to posting selected solution
Post selected solution(s)	Following completion of DNH analysis
Stakeholder comments	10 days prior to Local Plan Submission for integration into RTEP
Local Plan submitted to PJM for integration into RTEP	Following review and consideration of comments received after posting of selected solutions

Revision History

12/5/2019 – V1 – Original version posted to pjm.com