HANUKKAH EVE WINDSTORM DECEMBER 2006 2009 UPDATE ON KEMA RECOMMENDATIONS

Dated 8/31/2009

PUGET SOUND ENERGY
The Energy To Do Great Things

HANUKKAH EVE WINDSTORM DECEMBER 2006

2009 UPDATE ON KEMA RECOMMENDATIONS

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TABLE OF CONTENTS

LIST OF EXHIBITS

Introduction

On November 29, 2007 Puget Sound Energy (PSE) provided to the Washington Utilities and Transportation Commission (UTC) a summary of the KEMA recommendations and subsequent actions taken by PSE. An update to the KEMA Recommendations Matrix was provided as part of a General Rate Case (GRC), Docket numbers UE-072300 and UG-072301, in response to Data Request #54 from the UTC.

Pursuant to paragraph 9 of the Multiparty Settlement re: Emergency Response and Storm Preparedness in Docket Nos UE-072300 and UG-72301, PSE provided its annual report dated August 30, 2008, which addressed PSE's progress in implementing and/or further considering KEMA and supplemental recommendations identified in the after action review of the December 2006 Hanukkah Eve Windstorm.

This Annual Report provides a summary of actions taken by PSE on the KEMA recommendations since the August 30, 2008 annual report.

As noted in this update, PSE has accepted and implemented most of these recommendations and they are now integrated into PSE's emergency preparedness processes. PSE will continue to refine these processes as a result of post-event and annual reviews.

A matrix has been added to this year's annual report reflecting the KEMA recommendations and current status as of August 31, 2009. The matrix, providing a quick summary of the status recommendations, follows this introduction. For those not "Complete", there is additional update information provided in the text following.

KEMA Recommendations Matrix

REC #	Recommendation Title	8/31/2009 Update
4.4	**EMERGENCY RESTORATION - ANNUAL PLANNING RECOMMENDATIONS**	
4.4.1	Expand the company emergency response capability through enhanced personnel utilization.	**C**
5.4	**EMERGENCY RESTORATION - IMMINENT EVENT PLAN RECOMMENDATIONS**	
5.4.1	Develop a storm categorization methodology and tailor aspects of the CERP to various levels of storms.	**C**
6.4	**EMERGENCY RESTORATION - EVENT ASSESSMENT RECOMMENDATIONS**	
6.4.1	Enhance the damage assessment capability and process to provide better and faster estimates of restoration times and resource requirements.	**C**
7.4	**EMERGENCY RESTORATION - EXECUTION RECOMMENDATIONS**	
7.4.1	Institute consistent accountability for executing the storm plan.	**C**
7.4.2	Formalize local area coordination and transmission restoration priority activities.	**C**
8.4	**EMERGENCY RESTORATION - EXTERNAL COMMUNICATIONS RECOMMENDATIONS**	
8.4.1	Create an integrated corporate and local communication strategy that is scalable to storm severity.	**C**
9.4	**EMERGENCY RESTORATION - CUSTOMER SERVICE RECOMMENDATIONS**	
9.4.1	Formalize a customer-escalated call process.	**C**
9.4.2	Use local carrier phone network in front of CLX/IVRU to enhance call-taking capacity and capabilities.	**C**
10.4	**EMERGENCY RESTORATION - INFORMATION SYSTEMS AND PROCESS RECOMMENDATIONS**	
10.4.1	Establish enterprise-level technology, data, and integration architecture for outage management related processes.	
10.4.2	Develop end-to-end information and business process flows for outage management and emergency restoration processes.	
10.4.3	Enhance existing technology and systems to close functionality gaps with the strategy of migrating them toward the final architecture.	**Part of 10.4.2**
10.4.4	Deploy new systems to close the functionality gaps and build out the outage management architecture.	**See 10.4.1**
10.4.5	Develop a phased implementation plan for outage management related information system and processes.	**See 10.4.1**
11.4	**SUPPORT SERVICES RECOMMENDATIONS**	
11.4.1	Refine the Emergency/Storm Event Response Services Contract (ESERSC) to add the planning, training, communication, and evaluation roles necessary to plan for and implement major restoration efforts.	**C**
12.4	**MATERIALS MANAGEMENT AND LOGISTICS RECOMMENDATIONS**	
12.4.1	Enhance logistics to better support the number of crews supporting the restoration.	
12.4.2	Document material management policies and processes created to support storm levels.	**C**
13.4	**POST-EVENT REVIEW RECOMMENDATIONS**	
13.4.1	Ensure the existing post-storm actions and recommendations are consistent with the leading practice model presented in this report.	**C**
14.4	**INFRASTRUCTURE CONDITIONS RECOMMENDATIONS**	
14.4.1	Enhance PSE's transmission vegetation management policy and standards for ROW width.	
14.4.2	Aggressively develop and maintain cross-country transmission access roads.	
14.4.3	Evaluate hardening opportunities for both transmission and distribution.	**C**

Update provided in 8/31/2009 report

C *Completed*

UPDATE ON KEMA RECOMMENDATIONS

4.4 Emergency Restoration—Annual Planning Recommendations

4.4.1 Expand the company emergency response capability through enhanced personnel utilization.

Status 8/31/09: **Completed by 8/30/2008 as reported in the 2008 update.**

Notes: Incorporated as part of PSE's annual storm planning.

References:

- Exhibit A – Lists of Damage Assessors
- Exhibit B – ER Assignments 2009-2010

5.4 Emergency Restoration—Imminent Event Plan Recommendations

5.4.1 Develop a storm categorization methodology and tailor aspects of the Corporate Emergency Response Plan (CERP) to the various levels of storms.

Status 8/31/09: **Completed by 8/30/2008 as reported in the 2008 update.**

Notes: Incorporated annually in PSE's CERP.

References:

- Exhibit C – 2008-2009 Corporate Emergency Response Plan (cover and page 16 only)

6.4 Emergency Restoration—Event Assessment Recommendations

6.4.1 Enhance the damage assessment capability and process to provide better and faster estimates of restoration times and resource requirements.

Status 8/31/09: Completed by 8/30/2008 as reported in the 2008 update.

References:

- Exhibit D – Damage Assessment Training Guide

7.4 Emergency Restoration—Execution Recommendations

7.4.1 Institute consistent accountability for executing the storm plan.

Status 8/31/09: Completed by 8/30/2008 as reported in the 2008 update.

Notes: 2009 Potelco/PSE Fall Joint Leadership Meeting is scheduled for October 7, 2009.

References:

- Exhibit E – Agenda (sample) for Fall Storm Leadership Meeting

7.4.2 Formalize local area coordination and transmission restoration priority activities.

Status 8/31/09: **Completed by 8/30/2008 as reported in the 2008 update.**

8.4 Emergency Restoration—External Communications Recommendations

8.4.1 Create an integrated corporate and local communication strategy that is scalable to storm severity.

Status 8/31/09: Completed by 8/30/2008 as reported in the 2008 update.

References:

- Exhibit F – Web-Map Display Demo

9.4 Emergency Restoration—Customer Service Recommendations

9.4.1 Formalize a customer-escalated call process.

Status 8/31/09: Completed by 8/30/2008 as reported in the 2008 update.

References:

- Exhibit G – PSE Communication Lead Assignments

9.4.2 Use local carrier phone network in front of CLX/IVRU to enhance call-taking capacity and capabilities.

Status 8/31/09: **Completed by 8/30/2008 as reported in the 2008 update.**

10.4 Emergency Restoration—Information Systems and Process Recommendations

10.4.1 Establish enterprise-level technology, data, and integration architecture for outage management related processes.

PSE Actions:

PSE accepted KEMA's recommendation and is initiating the next phase of planning and analysis of various implementation scenarios for a Geographic Information System (GIS) and an integrated Outage Management System (OMS). PSE recognizes that a thoughtful plan and implementation is required to recognize benefits and to clearly understand the extent of business process, workflow, organizational, and competency changes necessary to realize them.

As noted in the Report, PSE engaged KEMA to further define the cost and requirements of new enterprise-level architecture for integrating technology and data for outage management. Their work included defining a new system connectivity model that is to be housed in a GIS, and serve as the core for an advanced OMS. The cost/benefit analysis was completed in February 2008.

In its analysis of the GIS system, KEMA's focus was on the necessary connectivity model for the electric system to support OMS. After review of the Cost Benefit Analysis of OMS/GIS Initiative, PSE realized it needed to better understand how the implementation of GIS would impact business units across the enterprise and that a broader analysis was necessary. PSE engaged PA Consulting to perform a *Needs and Requirements Assessment* of Enterprise GIS. The project was completed with an executive presentation in June 2008. At this meeting, based on PA's and KEMA's recommendations, PSE made the decision to move forward with the next phase of detailed GIS implementation planning that would provide detailed costs and benefits based on an analysis of the required technology, process, and workforce skill changes for a successful implementation. The benefit analysis would include implementation of an OMS as one of the initial applications to leverage the value of the GIS connectivity model. For this next phase, PSE further engaged PA Consulting to conduct the analysis. The analysis was completed during the fourth quarter of 2008.

As a result of this detailed analysis, PSE recognized the high degree of integration between a GIS/OMS system and PSE's other enterprise applications such as SAP and ConsumerLinx. In order to minimize the risk and maximize the benefits, GIS/OMS implementation is being further planned in the context of other enterprise information technology priorities.

10.4.2 Develop end-to-end information and business process flows for outage management and emergency restoration processes.

10.4.3 Enhance existing technology and systems to close functionality gaps with the strategy of migrating them toward the final architecture.

PSE Actions:

Process mapping will be conducted as a preliminary step of the OMS/GIS implementation, which is to be tasked to the implementation project team.

SCADA, Automated Meter Reading System (AMR), and CLX integration will be addressed as a part of the implementation of an OMS.

10.4.3 *Continued.*

SCADA: As of December 31, 2008, all of PSE's transmission substations (61 facilities) currently have SCADA and of the 288 distribution substations in PSE's system, 257 have SCADA. Eleven (11) of the remaining 31 substations currently without SCADA are planned to have SCADA installed by 2010, with SCADA installed in three (3) other stations after 2010 so that all PSE–owned distribution stations will provide open/close SCADA status. The remaining 17 stations are remote stations, submarine cable stations, or are being retired over the next several years. By 2015, fifty-three (53) distribution substations will be upgraded so that the current of each phase at the feeder breaker can be read remotely. Note: These numbers do not include the customer leased stations. The information above is also described in the following table:

SUBSTATION	NUMBER	FUNCTIONALITY		SCHEDULE
		Breaker Status	Operate Breaker Remotely	
Transmission	61	Yes	Yes	Existing
Distribution	225	Yes	No	Existing
Distribution	32	Yes	Yes	Existing
Distribution	11	Yes	No	2010
Distribution	3	Yes	Yes	2011-2012
Distribution	17	No	No	N/A

Distribution Automation: PSE is seeking a U.S. Department of Energy grant for implementation of smart grid technologies aimed at improving reliability and service for our business and residential customers, as well as provide the foundation for future improvements in energy efficiency. PSE's proposed Smart Grid project should:

- Improve electric system reliability and reduce the length of outages through technologies that allow the electric system to automatically respond to equipment failures;
- Provide PSE crews with more detailed and timely information about damage to the system.
- Mitigate peak energy needs by more accurately monitoring and controlling system voltage.
- Increase the number of PSE residential and municipal customers taking part in the utility's load-control pilot programs, which use new technology to better manage energy use.
- Provide the foundation for emerging technologies that will give consumers greater information about their energy use.
- Accelerate SCADA implementation in PSE substations across PSE's service area.
- Create integrated smart grid pilot projects in four Western Washington communities (Bainbridge Island, Mercer Island, Point Roberts, and Whidbey Island) involving over 55,000 PSE residential electric customers and almost 7,000 PSE business electric customers.

AMR-Cellnet: As reported last year, PSE has begun a project to enhance outage verification functionality by taking advantage of a new messaging service by Cellnet. Corresponding changes to PSE's Meter Data Warehouse (MDW), necessary for this project, will also be scheduled for completion. Original timing of the MDW upgrade project, December 2008, was delayed due to budget and resource constraints. Once both pieces are complete, PSE will be able to trigger an AMR outage restoration verification shortly after power has been restored to a circuit, and receive restoration results for customers with AMR metering being served by the circuit within minutes.

Additionally, PSE expects to test and enhance the functionality of the Cellnet system with two-way communications through implementation of the Smart Grid project, if the DOE grant is received.

10.4.4 Deploy new systems to close the functionality gaps and build out the outage management architecture.

Status 8/31/09: Addressed as part of 10.4.1.

10.4.5 Develop a phased implementation plan for outage management related information system and processes.

Status 8/31/09: Addressed as part of 10.4.1.

11.4 Support Services Recommendations

11.4.1 Refine the Emergency/ Storm Event Response Services Contract (ESERSC) to add the planning, training, communication, and evaluation roles necessary to plan for and implement major restoration efforts.

Status 8/31/09: **Completed by 8/30/2008 as reported in the 2008 update.**

12.4 Materials Management and Logistics Recommendations

12.4.1 Enhance logistics to better support the number of crews supporting the restoration.

PSE Actions:

As of August 2009, PSE is nearing agreement with Base Logistics for them to provide support services, as may be requested by PSE, during large-scale emergency events. Base Logistics was selected through an RFP process measuring the best overall fit for PSE's needs from several bidders. Base Logistics was contracted by PSE to provide a plan document detailing vendors, materials and support personnel which can be mobilized to support expanded restoration operations.

Base Logistics has created a universal site plan for use at PSE's Local Area Coordination sites and has also provided several regional vehicle staging area site plans. Additional staging area plans remain to be developed for PSE's Northern and Western regions. This work will be completed by year-end 2009.

References:

- Exhibit H – PSE's Base Logistics Agreement

12.4.2 Document material management policies and processes created to support storm levels.

Status 8/31/09: **Completed by 8/30/2008 as reported in the 2008 update.**

13.4 Post-Event Review Recommendations

13.4.1 Ensure the existing post-storm actions and recommendations are consistent with the leading practice model presented in this report.

Status 8/31/09: **Completed by 8/30/2008 as reported in the 2008 update.**

14.4 Infrastructure Conditions Recommendations

14.4.1 Enhance PSE's transmission vegetation management policy and standards for ROW width.

PSE Actions: PSE continues to work with Washington State Representatives Kevin Van De Wege (D-Sequim) from the House Utilities and Technology Committee to develop a collaborative solution to these policy issues. PSE hosted a work session in May 2009, which included representatives from utilities, forest industry, cities and local governments, Washington State Department of Natural Resources (DNR) and the WUTC. As a result of that meeting, PSE is working with the DNR on how Forest Practice Applications information is developed (this addresses a portion of the issue on trees left as buffers), and with the Association of Washington Cities on a series of training sessions for its members on utility vegetation management (this addresses the right tree, right place issue).

PSE also had a representative on the Evergreen Communities Task Force, which along with CTED, was charged with developing model tree ordinances for use by local jurisdictions in the state. PSE worked in this committee to assure utilities needs were covered in these model ordinances. (This addresses all three policy issues.)

PSE engaged Sigfried Guggenmoos of Ecological Solutions to examine its transmission (and high voltage distribution) systems. Results of his study were shared with WUTC staff on March 26, 2009. PSE is incorporating more patrols of 55, 115 & 230 kV system for danger trees into the vegetation management budget as a result of this study. Other components of the study will be incorporated into existing capital planning processes.

This item will be updated in future reports to the UTC.

14.4.2 Aggressively develop and maintain cross-country transmission access roads.

PSE Actions: PSE is collecting the access data, as vegetation maintenance is performed. The data is collected and will be input into a system for use during storms. The confidentiality of this information, due to NERC security requirements, makes limiting information access to the appropriate individuals critical. This issue will be worked on in 2010.

PSE also is continuing to fund and make improvements to selected critical access points and corridors. During 2009, PSE worked with BPA to provide better access to a "side by side" corridor in the Bremerton area. This enabled PSE to share costs in the project with BPA. PSE also continues to mow additional rights-of-way where the permitting process allows.

This item will be updated in future reports to the UTC.

14.4.3 Evaluate hardening opportunities for both transmission and distribution.

Status 8/31/09: Completed by 8/30/2008 as reported in the 2008 update..

ADDITIONAL RECOMMENDATIONS

As noted in the August 30, 2008 report to the UTC, all but three of the items (B-12, C-10, and E-27) listed in PSE's additional recommendations list were accepted and are now a normal part of PSE's emergency preparedness process. Updates on the three that were outstanding last year are provided below. PSE now considers the following three recommendations complete and they will not be addressed in future reports to the UTC.

1.1 Emergency Restoration Execution

Teaming with Jurisdictions to Increase Efficiency

B-12—Formalize "utility road clearing task force" with Department of Transportation (DOT), County/City Roads, PSE, Potelco and Asplundh.

PSE Actions: PSE accepted this Governor's After Action Review recommendation.

State, county, city agencies, and utilities were encouraged to coordinate their "road clearing" activities. The plan was finalized with the State Department of Transportation (DOT) on September 9, 2008. The plan has been distributed to all Washington State Emergency Managers (WSEMA) through the State Department of Emergency Management, to the nine county emergency management agencies in PSE's electric service area, and to all DOT regions. The plan has also been distributed to all PSE and Potelco storm managers and storm support teams. In addition to the plan, PSE submitted and exchanged contact information by region. Contact information provided included 24/7 numbers for key personnel from PSE, emergency management agencies, public works and DOT regions.

PSE and Potelco operations management personnel meet annually with the DOT regions to review the plan, as well as share the plan with the county emergency management personnel at Pre Winter Storm presentations/meetings held annually in each electric service area county.

Exhibit I – Utility Road Clearing Task Force Plan

Exhibit J – Sample Utility Road Clearing Task Force Contact Sheet Provided to Emergency Management

2.1 External Communication

Provide Customers with Damage Information More Openly

C-10—Continuously update the map on the PSE web site showing the progress of work crews.

PSE Actions: PSE has updated its Service Alert Map to reflect outages and status of repair work. The Service Alert Map was utilized in the 2008/09 storm season for significant events when PSE's emergency operations center (EOC) was activated. The map provides damage location and information by City and by zip code.

PSE has shared the information on accessing the outage map data with county and city emergency management agencies during pre-winter storm presentations. (See Exhibit E.)

3.1 Emergency Response—Information Systems

E-27—Incorporate damage assessment and repair information into a system that will assist with material acquisition and dispersion.

PSE Actions: PSE accepted this internal recommendation

On a pilot basis, PSE tested a handheld electronic Personal Data Assistant (PDA) device that would allow gathering and transmitting damage assessment information (including pictures, GPS coordinates, and material needs) electronically to operating bases. PSE completed a non-storm field trial with 10 PDA devices at Pierce operating base in April 2008. The pilot concluded and did not prove to provide better information than our current process in gathering damage assessment information, and it took longer to process the data. PSE will pursue future enhancements to damage assessment capability with OMS technology addressed in 10.4.1.

Exhibit A

DA - Primary, Trained

Last Name	First Name	Primary ER Assign	Pri Assign Trng Cmplt Date
[redacted]	[redacted]	Damage Assessor	03/31/2009
[redacted]	[redacted]	Damage Assessor	Trainer
[redacted]	[redacted]	Damage Assessor	04/28/2009
[redacted]	[redacted]	Damage Assessor	07/23/2009
[redacted]	[redacted]	Damage Assessor	7/7/2009
[redacted]	[redacted]	Damage Assessor	07/09/2009
[redacted]	[redacted]	Damage Assessor	07/28/2009
[redacted]	[redacted]	Damage Assessor	07/23/2009
[redacted]	[redacted]	Damage Assessor	07/14/2009
[redacted]	[redacted]	Damage Assessor	7/7/2009
[redacted]	[redacted]	Damage Assessor	04/02/2009
[redacted]	[redacted]	Damage Assessor	07/28/2009
[redacted]	[redacted]	Damage Assessor	05/06/2009
[redacted]	[redacted]	Damage Assessor	07/30/2009
[redacted]	[redacted]	Damage Assessor	04/28/2009
[redacted]	[redacted]	Damage Assessor	07/09/2009
[redacted]	[redacted]	Damage Assessor	05/06/2009
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[redacted]	[redacted]	Damage Assessor	7/7/2009
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[redacted]	[redacted]	Damage Assessor	07/23/2009
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[redacted]	[redacted]	Damage Assessor	05/06/2009
[redacted]	[redacted]	Damage Assessor	04/07/2009

Exhibit A

DA - Primary, Trained

Last Name	First Name	Primary ER Assign	Pri Assign Trng Cmplt Date
[redacted]	[redacted]	Damage Assessor	07/30/2009
[redacted]	[redacted]	Damage Assessor	04/02/2009
[redacted]	[redacted]	Damage Assessor	04/02/2009
[redacted]	[redacted]	Damage Assessor	07/09/2009
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[redacted]	[redacted]	Damage Assessor	04/07/2009
[redacted]	[redacted]	Damage Assessor	07/30/2009
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[redacted]	[redacted]	Damage Assessor	04/29/2009
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[redacted]	[redacted]	Damage Assessor	04/02/2009
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[redacted]	[redacted]	Damage Assessor	05/06/2009
[redacted]	[redacted]	Damage Assessor	7/7/2009
[redacted]	[redacted]	Damage Assessor	Trainer
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[redacted]	[redacted]	Damage Assessor	04/28/2009
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[redacted]	[redacted]	Damage Assessor	04/28/2009
[redacted]	[redacted]	Damage Assessor	07/09/2009

Exhibit A

DA - Secondary, Trained

Last Name	First Name	Secondary ER Assign	Sec Assign Trng Cmplt Date
[redacted]	[redacted]	Damage Assessor	07/09/2009
[redacted]	[redacted]	Damage Assessor	08/27/2008
[redacted]	[redacted]	Damage Assessor	4/7/2009
[redacted]	[redacted]	Damage Assessor	03/31/2009
[redacted]	[redacted]	Damage Assessor	07/23/2009
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[redacted]	[redacted]	Damage Assessor	08/27/2008
[redacted]	[redacted]	Damage Assessor	05/20/2009
[redacted]	[redacted]	Damage Assessor	08/20/2008
[redacted]	[redacted]	Damage Assessor	07/30/2009

Exhibit A

DA - Secondary, Trained

Last Name	First Name	Secondary ER Assign	Sec Assign Trng Cmplt Date
[redacted]	[redacted]	Damage Assessor	08/27/2008
[redacted]	[redacted]	Damage Assessor	07/30/2009
[redacted]	[redacted]	Damage Assessor	07/23/2009
[redacted]	[redacted]	Damage Assessor	07/23/2009

Exhibit A

DA - Scheduled for Training 8/25/2009

Last Name	First Name	ER Assign	Training Scheduled
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009
[redacted]	[redacted]	Damage Assessor	8/25/2009

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	911 Call Coordinator	
[redacted]	[redacted]	911 Call Coordinator	CLX Specialist
[redacted]	[redacted]	911 Call Coordinator	Communications Lead
[redacted]	[redacted]	911 Call Coordinator	Damage Assessor
[redacted]	[redacted]	911 Call Coordinator	Driver
[redacted]	[redacted]	911 Call Coordinator	Lodging Coordinator
[redacted]	[redacted]	Admin Support	
[redacted]	[redacted]	Admin Support	
[redacted]	[redacted]	Admin Support	
[redacted]	[redacted]	Admin Support	
[redacted]	[redacted]	Admin Support	
[redacted]	[redacted]	Admin Support	
[redacted]	[redacted]	Admin Support	Admin Support
[redacted]	[redacted]	Admin Support	CLX Specialist
[redacted]	[redacted]	Admin Support	CLX Specialist
[redacted]	[redacted]	Admin Support	CLX Specialist
[redacted]	[redacted]	Back-up Dispatcher	
[redacted]	[redacted]	Back-up Dispatcher	
[redacted]	[redacted]	Back-up Dispatcher	
[redacted]	[redacted]	Back-up Dispatcher	
[redacted]	[redacted]	Back-up Dispatcher	
[redacted]	[redacted]	Back-up Dispatcher	
[redacted]	[redacted]	Back-up Dispatcher	Back-up Dispatcher
[redacted]	[redacted]	Back-up Dispatcher	Crew Coordinator
[redacted]	[redacted]	Back-up Dispatcher	Crew Coordinator
[redacted]	[redacted]	Back-up Dispatcher	Crew Coordinator
[redacted]	[redacted]	Back-up Dispatcher	Crew Coordinator
[redacted]	[redacted]	Back-up Dispatcher	Crew Coordinator
[redacted]	[redacted]	Back-up Dispatcher	Damage Assessor
[redacted]	[redacted]	Back-up Dispatcher	Damage Assessor
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	

Exhibit B

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	
[redacted]	[redacted]	CAC Outage Calls	CAC Outage Call-backs
[redacted]	[redacted]	CAC Outage Calls	CAC Outage Call-backs
[redacted]	[redacted]	CAC Outage Calls	CAC Outage Call-backs
[redacted]	[redacted]	CAC Outage Calls	CAC Outage Call-backs
[redacted]	[redacted]	CAC Outage Calls	CAC Outage Call-backs
[redacted]	[redacted]	CAC Outage Calls	CAC Outage Call-backs
[redacted]	[redacted]	CAC Outage Calls	CAC Outage Call-backs
[redacted]	[redacted]	CAC Outage Calls	CAC Outage Call-backs
[redacted]	[redacted]	CAC Outage Calls	Communications Coordinator
[redacted]	[redacted]	CAC Outage Calls	Damage Assessor

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	CAC Outage Calls	Damage Assessor
[redacted]	[redacted]	CAC Outage Calls	Driver
[redacted]	[redacted]	CAC Outage Calls	Driver
[redacted]	[redacted]	CAC Outage Calls	Gas Curtailment Caller
[redacted]	[redacted]	CAC Outage Calls	Gas Curtailment Caller
[redacted]	[redacted]	CAC Outage Calls	Gas Curtailment Caller
[redacted]	[redacted]	CAC Outage Calls	Gas Curtailment Caller
[redacted]	[redacted]	CAC Outage Calls	Gas Curtailment Caller
[redacted]	[redacted]	CAC Outage Calls	Lodging Coordinator
[redacted]	[redacted]	CAC Trainer	CAC Outage Call-backs
[redacted]	[redacted]	CAC Trainer	CAC Outage Call-backs
[redacted]	[redacted]	CAC Trainer	CAC Outage Call-backs
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	
[redacted]	[redacted]	CLX Specialist	CLX Specialist
[redacted]	[redacted]	CLX Specialist	CLX Specialist
[redacted]	[redacted]	CLX Specialist	CLX Specialist
[redacted]	[redacted]	CLX Specialist	Damage Assessment Call-Taker
[redacted]	[redacted]	CLX Specialist	Driver

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	CLX Specialist	Lodging Coordinator
[redacted]	[redacted]	CLX Specialist	Lodging Coordinator
[redacted]	[redacted]	CLX Specialist	Walk-in Customer Advocate
[redacted]	[redacted]	Communications Coordinator	
[redacted]	[redacted]	Communications Coordinator	
[redacted]	[redacted]	Communications Coordinator	
[redacted]	[redacted]	Communications Coordinator	
[redacted]	[redacted]	Communications Coordinator	
[redacted]	[redacted]	Communications Coordinator	
[redacted]	[redacted]	Communications Coordinator	
[redacted]	[redacted]	Communications Coordinator	Communications Coordinator
[redacted]	[redacted]	Communications Coordinator	Communications Coordinator
[redacted]	[redacted]	Communications Coordinator	Communications Coordinator
[redacted]	[redacted]	Communications Coordinator	Communications Lead
[redacted]	[redacted]	Communications Coordinator	Communications Lead
[redacted]	[redacted]	Communications Coordinator	Communications Lead
[redacted]	[redacted]	Communications Coordinator	Communications Lead
[redacted]	[redacted]	Communications Coordinator	Communications Lead
[redacted]	[redacted]	Communications Coordinator	County EOC Liaison
[redacted]	[redacted]	Communications Coordinator	Damage Assessor
[redacted]	[redacted]	Communications Coordinator	Damage Assessor
[redacted]	[redacted]	Communications Coordinator	Damage Assessor
[redacted]	[redacted]	Communications Coordinator	Damage Assessor
[redacted]	[redacted]	Communications Coordinator	Damage Assessor
[redacted]	[redacted]	Communications Coordinator	Driver
[redacted]	[redacted]	Communications Coordinator	State EOC Liaison
[redacted]	[redacted]	Communications Lead	Crew Coordinator
[redacted]	[redacted]	County EOC Liaison	
[redacted]	[redacted]	County EOC Liaison	
[redacted]	[redacted]	County EOC Liaison	
[redacted]	[redacted]	County EOC Liaison	
[redacted]	[redacted]	County EOC Liaison	
[redacted]	[redacted]	County EOC Liaison	
[redacted]	[redacted]	County EOC Liaison	
[redacted]	[redacted]	County EOC Liaison	
[redacted]	[redacted]	County EOC Liaison	CLX Specialist
[redacted]	[redacted]	County EOC Liaison	Communications Coordinator
[redacted]	[redacted]	County EOC Liaison	Crew Coordinator
[redacted]	[redacted]	County EOC Liaison	Driver
[redacted]	[redacted]	County EOC Liaison	Local Area Coord Assist
[redacted]	[redacted]	County EOC Liaison	Lodging Coordinator
[redacted]	[redacted]	Crew Coordinator	

Exhibit B

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Crew Coordinator	
[redacted]	[redacted]	Crew Coordinator	Back-up Dispatcher
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Crew Coordinator	Damage Assessor
[redacted]	[redacted]	Damage Assessment Call-Taker	Contract Crew Coordinator
[redacted]	[redacted]	Damage Assessment Call-Taker	Contract Crew Coordinator
[redacted]	[redacted]	Damage Assessment Coordinator	
[redacted]	[redacted]	Damage Assessment Coordinator	Damage Assessment Coordinator
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	

Exhibit B

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	
[redacted]	[redacted]	Damage Assessor	Back-up Dispatcher
[redacted]	[redacted]	Damage Assessor	CLX Specialist
[redacted]	[redacted]	Damage Assessor	Contract Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Contract Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator

Exhibit B

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Crew Coordinator
[redacted]	[redacted]	Damage Assessor	Damage Assessment Coordinator
[redacted]	[redacted]	Damage Assessor	Damage Assessor
[redacted]	[redacted]	Damage Assessor	Damage Assessor
[redacted]	[redacted]	Damage Assessor	Damage Assessor
[redacted]	[redacted]	Damage Assessor	Damage Assessor
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	Driver
[redacted]	[redacted]	Damage Assessor	EOC EMS Specialist
[redacted]	[redacted]	Damage Assessor	Lodging Coordinator
[redacted]	[redacted]	Damage Assessor	Storm Board Coordinator
[redacted]	[redacted]	DDD Specialist	Damage Assessor
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	

Exhibit B

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	

Exhibit B

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
		EFR Supervisor	Storm Board Analyst
		Environmental Spills	
		Environmental Spills	
		Environmental Spills	
		Environmental Spills	
		Environmental Spills	Damage Assessor
		Environmental Spills	Damage Assessor
		Environmental Spills	Damage Assessor
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	
		EOC 911 Call-Taker	Driver
		EOC 911 Call-Taker	EOC 911 Call Coordinator
		EOC 911 Call-Taker	EOC 911 Call-Taker
		EOC 911 Call-Taker	EOC 911 Call-Taker
		EOC 911 Call-Taker	EOC Admin Support
		EOC Admin Support	
		EOC Admin Support	
		EOC Admin Support	
		EOC Admin Support	
		EOC Admin Support	
		EOC Admin Support	
		EOC Admin Support	
		EOC Admin Support	
		EOC Admin Support	Driver
		EOC Admin Support	EOC 911 Call-Taker
		EOC Data Specialist	
		EOC Data Specialist	
		EOC Data Specialist	
		EOC Data Specialist	
		EOC Data Specialist	

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	EOC Data Specialist	
[redacted]	[redacted]	EOC Data Specialist	Damage Assessor
[redacted]	[redacted]	EOC Director	
[redacted]	[redacted]	EOC Director	
[redacted]	[redacted]	EOC Director	
[redacted]	[redacted]	EOC Director	
[redacted]	[redacted]	EOC Director	
[redacted]	[redacted]	EOC Director	
[redacted]	[redacted]	EOC Director	
[redacted]	[redacted]	EOC Director	
[redacted]	[redacted]	EOC Director	Damage Assessor
[redacted]	[redacted]	EOC EMS Specialist	
[redacted]	[redacted]	EOC EMS Specialist	
[redacted]	[redacted]	EOC EMS Specialist	
[redacted]	[redacted]	EOC EMS Specialist	
[redacted]	[redacted]	EOC EMS Specialist	Damage Assessor
[redacted]	[redacted]	EOC EMS Specialist	Damage Assessor
[redacted]	[redacted]	EOC EMS Specialist	Storm Board Coordinator
[redacted]	[redacted]	EOC Food Service Assistant	
[redacted]	[redacted]	EOC Food Service Assistant	
[redacted]	[redacted]	EOC Food Service Assistant	
[redacted]	[redacted]	EOC Food Service Assistant	
[redacted]	[redacted]	EOC Food Service Assistant	
[redacted]	[redacted]	EOC Food Service Assistant	
[redacted]	[redacted]	EOC Food Service Assistant	
[redacted]	[redacted]	EOC Food Service Assistant	
[redacted]	[redacted]	EOC Food Service Assistant	CAC Outage Calls
[redacted]	[redacted]	EOC Food Service Assistant	EOC Admin Support
[redacted]	[redacted]	EOC Food Service Chef	
[redacted]	[redacted]	EOC I/T Manager	
[redacted]	[redacted]	EOC I/T Manager	
[redacted]	[redacted]	EOC I/T Manager	
[redacted]	[redacted]	EOC I/T Manager	
[redacted]	[redacted]	EOC I/T Manager	
[redacted]	[redacted]	EOC I/T Manager	CLX Specialist
[redacted]	[redacted]	EOC Major Accounts Rep	
[redacted]	[redacted]	EOC Major Accounts Rep	
[redacted]	[redacted]	EOC Major Accounts Rep	
[redacted]	[redacted]	EOC Major Accounts Rep	
[redacted]	[redacted]	EOC Major Accounts Rep	
[redacted]	[redacted]	EOC Major Accounts Rep	
[redacted]	[redacted]	EOC Major Accounts Rep	

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	
[redacted]	[redacted]	Driver	Back-up Dispatcher
[redacted]	[redacted]	Driver	CLX Specialist
[redacted]	[redacted]	Driver	CLX Specialist
[redacted]	[redacted]	Driver	CLX Specialist
[redacted]	[redacted]	Driver	CLX Specialist
[redacted]	[redacted]	Driver	CLX Specialist
[redacted]	[redacted]	Driver	CLX Specialist
[redacted]	[redacted]	Driver	CLX Specialist
[redacted]	[redacted]	Driver	Crew Coordinator
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	Damage Assessor
[redacted]	[redacted]	Driver	DDD Specialist
[redacted]	[redacted]	Driver	DDD Specialist
[redacted]	[redacted]	Driver	Driver
[redacted]	[redacted]	Driver	Driver
[redacted]	[redacted]	Driver	Driver
[redacted]	[redacted]	Driver	Driver
[redacted]	[redacted]	Driver	EOC EMS Specialist
[redacted]	[redacted]	Driver	Gas Curtailment Caller
[redacted]	[redacted]	EFR Supervisor	
[redacted]	[redacted]	EFR Supervisor	
[redacted]	[redacted]	EFR Supervisor	
[redacted]	[redacted]	EFR Supervisor	Communications Lead
[redacted]	[redacted]	EFR Supervisor	Communications Lead
[redacted]	[redacted]	EFR Supervisor	Communications Lead
[redacted]	[redacted]	EFR Supervisor	Damage Assessor
[redacted]	[redacted]	EFR Supervisor	Damage Assessor
[redacted]	[redacted]	EFR Supervisor	EFR Supervisor

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	EOC Major Accounts Rep	
[redacted]	[redacted]	EOC Major Accounts Rep	
[redacted]	[redacted]	EOC Major Accounts Rep	Communications Coordinator
[redacted]	[redacted]	EOC Major Accounts Rep	County EOC Liaison
[redacted]	[redacted]	EOC Major Accounts Rep	Storm Board Coordinator
[redacted]	[redacted]	EOC Manager	
[redacted]	[redacted]	EOC Manager	
[redacted]	[redacted]	EOC Manager	
[redacted]	[redacted]	EOC Manager	
[redacted]	[redacted]	EOC Manager	County EOC Liaison
[redacted]	[redacted]	EOC Manager	
[redacted]	[redacted]	EOC Manager	Storm Board Analyst
[redacted]	[redacted]	EOC Media Relations	
[redacted]	[redacted]	EOC Media Relations	
[redacted]	[redacted]	EOC Media Relations	
[redacted]	[redacted]	EOC Media Relations	
[redacted]	[redacted]	EOC Media Relations	
[redacted]	[redacted]	EOC Media Relations	
[redacted]	[redacted]	EOC Media Relations	
[redacted]	[redacted]	EOC Resource Coordinator	
[redacted]	[redacted]	EOC Resource Coordinator	
[redacted]	[redacted]	EOC Resource Coordinator	
[redacted]	[redacted]	EOC Resource Coordinator	
[redacted]	[redacted]	EOC Resource Coordinator	
[redacted]	[redacted]	EOC Resource Coordinator	
[redacted]	[redacted]	EOC Resource Coordinator	
[redacted]	[redacted]	EOC Resource Coordinator	Crew Coordinator
[redacted]	[redacted]	EOC Resource Coordinator	Damage Assessor
[redacted]	[redacted]	EOC Resource Coordinator	EOC Admin Support
[redacted]	[redacted]	EOC Resource Coordinator	EOC Resouce Coordinator
[redacted]	[redacted]	EOC Resource Coordinator	EOC Resouce Coordinator
[redacted]	[redacted]	EOC Resource Coordinator	Lodging Coordinator
[redacted]	[redacted]	ESO System Ops	Damage Assessor
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	
[redacted]	[redacted]	Lodging Coordinator	Admin Support
[redacted]	[redacted]	Lodging Coordinator	Admin Support
[redacted]	[redacted]	Lodging Coordinator	CLX Specialist
[redacted]	[redacted]	Lodging Coordinator	CLX Specialist
[redacted]	[redacted]	Lodging Coordinator	Damage Assessment Call-Taker
[redacted]	[redacted]	Lodging Coordinator	EOC 911 Call-Taker
[redacted]	[redacted]	Lodging Coordinator	Lodging Coordinator
[redacted]	[redacted]	Lodging Coordinator	Lodging Coordinator
[redacted]	[redacted]	Lodging Coordinator	Lodging Coordinator
[redacted]	[redacted]	Lodging Coordinator	Lodging Coordinator
[redacted]	[redacted]	Lodging Coordinator	Walk-in Customer Advocate
[redacted]	[redacted]	Map Books	CLX Specialist
[redacted]	[redacted]	Materials Management	
[redacted]	[redacted]	Materials Management	
[redacted]	[redacted]	Materials Management	
[redacted]	[redacted]	Materials Management	Driver
[redacted]	[redacted]	Materials Management	Lodging Coordinator
[redacted]	[redacted]	Pool Car Admin	
[redacted]	[redacted]	State EOC Liaison	
[redacted]	[redacted]	State EOC Liaison	
[redacted]	[redacted]	Storm Board Analyst	
[redacted]	[redacted]	Storm Board Analyst	
[redacted]	[redacted]	Storm Board Analyst	
[redacted]	[redacted]	Storm Board Analyst	Communications Lead
[redacted]	[redacted]	Storm Board Analyst	Damage Assessor
[redacted]	[redacted]	Storm Board Analyst	Damage Assessor

2009-2010 PSE Employee Emergency Response Assignments

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Storm Board Analyst	Damage Assessor
[redacted]	[redacted]	Storm Board Analyst	Damage Assessor
[redacted]	[redacted]	Storm Board Analyst	Damage Assessor
[redacted]	[redacted]	Storm Board Analyst	Damage Assessor
[redacted]	[redacted]	Storm Board Analyst	Damage Assessor
[redacted]	[redacted]	Storm Board Assistant	
[redacted]	[redacted]	Storm Board Coordinator	Damage Assessor
[redacted]	[redacted]	Storm Board Coordinator	Damage Assessor
[redacted]	[redacted]	Storm Board Coordinator	Storm Board Analyst
[redacted]	[redacted]	Substation Technical Support - Lead	Damage Assessor
[redacted]	[redacted]	Syst Maint Technical Support	Driver
[redacted]	[redacted]	Walk-in Customer Advocate	
[redacted]	[redacted]	Walk-in Customer Advocate	
[redacted]	[redacted]	Walk-in Customer Advocate	
[redacted]	[redacted]	Walk-in Customer Advocate	CLX Specialist
[redacted]	[redacted]	Walk-in Customer Advocate	CLX Specialist

CORPORATE EMERGENCY RESPONSE PLAN

VOLUME 1

2008 - 2009





PSE PUGET SOUND ENERGY
The Energy To Do Great Things

Corporate Emergency Response Plan
Volume I **2008-2009**

EVENT LEVELS

Levels	Electric Criteria	Gas Criteria	Level of Response	Operations Actions
Level 0 **Normal**	Nominal conditions across system.	Nominal conditions across system.	Normal daily response activity.	Normal operations.
Level 1 **Regional**	Event localized to individual geographic areas; resources within region adequate for response.	Localized event managed with PSE regional resources.	Operations base(s) open; coordination with system operations or gas control. Gas Planning Strategy Center open for gas emergencies.	Emergency Operations Center (EOC) not opened. Internal resources utilized. Some use of employees with Emergency Response (ER) assignments.
Level 2 **Significant**	Multiple regions affected; requires resources from other PSE regions and/or outside PSE service territory.	Multiple PSE regions affected; requires resources to be allocated to other PSE regions.	EOC open; multiple operating bases open and local area coordination may be activated. Employees with emergency response assignments mobilized.	EOC opened. Additional contractor resources needed; some from bordering states. Moderate to extensive use of employees with ER assignments. Windshield assessment utilized. Complete assessment within 24-36 hrs. Local area coordination possible.
Level 3 **Major**	Most or all regions affected; maximum level response required; need extensive resources from outside service territory.	Most or all PSE regions affected; may request operator qualified resources from outside PSE.	EOC open; most or all operating bases open; external logistics support may be employed; full corporate response to support restoration efforts.	EOC opened. Resources obtained from outside of region. Full utilization of employees with ER assignments. Local area coordination implemented. Windshield assessment utilized; complete assessment within 48-72 hours.

Exhibit D

DAMAGE ASSESSOR GUIDE

2008





PSE PUGET SOUND ENERGY
The Energy To Do Great Things

Exhibit D

Puget Sound Energy
Operations – Emergency Planning
P.O. Box 90868 EST-05E
Bellevue, WA 98009-0868
425-454-6363

Table of Contents

Table of Contents

Table of Contents

Facility Maps

Quanta/PSE Operating Bases and Other PSE Facilities (in alphabetical order)

- Customer Access Center
- Eastside System Operations
- Factoria Service Center
- Kent Fleet
- Kitsap Service Center
- Kittitas Service Center
- North King Service Center
- Puyallup Service Center
- Shuffleton Office
- Skagit Service Center (New and Old Locations)
- South King Service Center
- Thurston Service Center
- Vashon Service Center
- Whatcom Service Center
- Whidbey Service Center

Notes:

Foreward

Purpose of This Book

This manual is a reference book for Puget Sound Energy (PSE) & Quanta Contract Crew Coordinators, and is part of PSE's Emergency Response Plan.

During a storm or other emergency, it can be difficult to remember all of Puget Sound Energy's policies and procedures when working as a Damage Assessor. This book contains information and tips to help you in your role as a PSE Damage Assessor, as part of PSE's Emergency Response Plan. This book is designed to be used in conjunction with the Damage Assessment Form (2050).

Comments

Direct any suggestions, additions, or corrections to Operations & Emergency Planning, ext. 81-3962.

How to Order

To order additional copies, contact Operations & Emergency Planning, ext. 81-3962.

Notes:

Introduction

Background

PSE's electric system can be damaged by windstorms, ice and snow storms, earthquakes, floods, and events such as car-pole accidents. Any time there is damage to PSE's system, it needs to be assessed prior to dispatching a line crew for repairs.

PSE's Electric First Responders (Service Linemen) generally handle damage assessment for minor wind events, car-pole accidents, and other "single" type events.

However, for medium to large storms and other major events, Damage Assessment teams are deployed to perform an initial assessment and communicate their findings back to the appropriate storm management center (storm board).

You As a Damage Assessor

While you are acting as a Damage Assessor, it is important to keep in mind that you may move on into a Contract Crew Coordinator role, and as such, you may end up working in areas that you've damage assessed. As a Contract Crew Coordinator, you will want to take your crew to a job with all the materials and equipment needed. You will appreciate a job well done by the Damage Assessor.

Therefore, it is suggested that you go about your duties as a Damage Assessor as if you will be returning to the area with a contract crew.

What You Can Expect

When called out for Damage Assessment duty, you may be away from home for long periods of time, even several days. There are a few things you should consider before storm season.

- Have a discussion with family members regarding your storm duty and possible impacts on them.
- Provide family members with contact information, including your cell number and the operating base phone number.
- Should the neighbors be notified that you will be away for awhile?
- Do arrangements need to be made for child care?
- You may need to purchase meals while away, so plan to bring some money and/or a credit card.
- Don't forget prescription or other medications and an extra pair of eyeglasses.

Continued on next page

What You Can Expect, *Continued*

Personal Preparedness Bag

During a storm, you may be on duty for an extended time. It's a good idea to plan ahead and make up your own personal preparedness storm duty bag. Below are some suggestions of items to include in your bag.

Clothing Supplies	Work Gear	Nice to Have
Extra coat	Hard hat and liner	Thermos
Extra shirt	Leather gloves/glove liners	Cooler
Extra jeans	Disposable gloves	Handwarmers
Extra underwear	Safety glasses	Snacks/Beverages
Extra socks	Ear plugs	Money and credit card
Warm hat (knit or wool)	Rain gear	
Gloves	Waterproof footwear	
Insulated underwear	Safety Vest	
Towel(s)	Toiletries and medications	

Figure 1 Example of a Personal Preparedness Bag

Introduction

Reporting For Duty

Required Equipment

When you are called to damage assessment duty, you will most likely be directed to a local operating base. You may also be directed to an Area Coordinator in a more remote location. In either case, you must report with the following:

- Hard Hat
- Reflective Safety Vest
- Safety Glasses
- Sturdy Shoes
- Cell phone with charger

Optional Equipment

Additionally, the following items can make your job easier:

- Rain gear, warm jacket, gloves, hat
- Binoculars
- Hearing protection
- GPS Device

Equipment/ Materials Provided by Operating Base

The operating base will provide the Damage Assessor with a pre-packaged "storm kit" containing the following:

▪ 3 cell flashlight	▪ 50 pack - Caution: Abnormal Condition tags	▪ Spiral note pad
▪ 6 pack of D cell batteries	▪ 50 pack – Danger: Do Not Operate tags	▪ Clipboard
▪ Battery operated strobe light	▪ 50 pack – Storm Damage tags	▪ 12 pack of 3″ sticky note pads
▪ Portable Spot Light	▪ Pad of oil spill forms	▪ Ball point pens
▪ Roll of caution tape	▪ Pad of pole/transformer replacement forms	▪ Permanent Marker
▪ 3-way 12 V outlet	▪ Pad of self protection clearance forms	

Additionally, the operating base will provide you with:

- Local circuit maps
- Local area maps
- Contact phone numbers

Introduction

Key Information

Make sure you find out and keep the following key information with you.

- Operating base telephone numbers.
- Damage Assessment Coordinator's telephone number.
- Warehouse telephone number.
- Electric Dispatch phone number.
- Local radio communications channel (if you have a company radio).

Communication

The primary method of communication while damage assessing is by cell phone. Always take your cell phone with you when called to duty as a damage assessor. Be sure to bring both wall outlet and vehicle chargers to keep your cell phone battery charged in the event you are working away from home for an extended period.

If you are damage assessing out of cell phone range, you may either drive to within cell phone range, or drive back to the operating base to hand deliver the damage assessment reports. The operating base supervisor will work with you to decide which method is best.

Some PSE and Quanta vehicles are equipped with two-way radios. Use this method only to communicate if assistance is needed or you are reporting an emergency. Otherwise, the airwaves need to be kept clear for switching communication.

Emergencies

Always know the address, city, and county where you are assessing. In an emergency or injury situation this information is critical.

If an emergency arises, use your cell phone to call for help whenever possible. If you have a company radio, you can use it to alert others in the area who could lend assistance. See PSE Standard 0100.0990, "Radio Operating and Help Procedures for PSE Electric Operations," which contains procedures for emergency radio use.

Call the operating base as well to let them know of the situation.

For additional information on calling for help, see "Responding to Medical Emergencies" in the *Safety* tab.

Duties and Expectations

Checking In

When reporting to the operating base, it is important to sign in first and introduce yourself to the Damage Assessment Coordinator, who will assign you a work area and provide any pertinent information.

Patrolling

The operating base will deploy damage assessment teams to various areas. A team may assigned to patrol one or more circuits, and at times several teams may be used in one general area.

Patrolling may either be the entire line, from the substation to the end, or just a specific section of line. In either case, make sure you patrol the whole line that you are assessing. There can be multiple cases of damage on a given section of line. Some laterals run for several miles.

Storm Damage Tags

These bright pink tags are designed to alert other assessors that a damage assessment has been completed. When you have completed assessing an area and reported your findings to the storm base, fill out a Storm Damage tag and nail or otherwise attach it to a pole near the beginning of the assessed area.

Figure 1 Storm Damage Tag

MID 9996116

The Damage Assessment Form

A Damage Assessment (D/A) Form (2050) must be filled out for each case of damage.

For simple, easy-to-assess cases, such as a single-phase lateral with just a few spans, all the damage and required material may be recorded on one form.

However, in most cases, a separate D/A form will be required for each pole. This includes:

1. Poles with equipment (reclosers, sectionalizers, transformers, etc.).
2. Corner poles.
3. Poles with lateral taps.
4. Transmission poles with distribution underbuild.
5. Poles with underground terminations, etc.

Figure 2 Damage Assessment Form, Page 1

PUGET SOUND ENERGY
The Energy To Do Great Things

DAMAGE ASSESSMENT

USE REVERSE FOR NOTES.

Use back if needed.

ASSESSOR'S NAME	DATE	INCIDENT NO.	SITE NO.
CELL NO.	TIME	☐ SERVICEMEN JOB ☐ TREE CREW JOB ☐ LINE CREW JOB	
CIRCUIT OR T-LINE NAME	OH CIRCUIT MAP	GRID/STRUCTURE NO.	

DANGER TO PUBLIC? ☐ YES ☐ NO **OIL SPILL PRESENT?** ☐ YES ☐ NO **TRANSITE RISER PIPE?** ☐ YES ☐ NO

DESCRIBE: **IF "YES" REPORT IMMEDIATELY TO SERVICE CENTER**

ADDRESS SITE (DETAIL DESCRIPTION)

IS THE SITE ACCESS RESTRICTED? ☐ YES ☐ FLOOD ☐ SLIDE ☐ WASHOUT ☐ DOWNED TREES ☐ WALK-IN JOB

ARE FLAGGERS REQUIRED? ☐ YES ☐ NO ____ QUANTITY DAY JOBONLY? ☐ YES

☐ TREES IN LINE ☐ BRANCHES ACROSS PHASES ☐ WIRE DOWN ☐ OTHER (DESCRIBE)

☐ BROKEN POLE/ARM ☐ SERVICE DOWN ☐ OPEN CUTOUT

WHAT KIND OF POLE? *(CHECK ALL EQUIPMENT AT SITE)*

VOLTAGE	TRANSMISSION STRUCTURE		DISTRIBUTION STRUCTURE	
☐ SEC/SVC	☐ HPA	☐ DISTRIBUTION UNDERBUILD	☐ POLE TOP PIN 1PH	☐ LATERAL
☐ 4 KV	☐ HPD	☐ VERTICAL TURN	☐ POLE TOP PIN 3PH	☐ FIBERGLASS ARM 3PH
☐ 12 KV	☐ 2-POLE "H' FRAME	☐ VERTICAL DEADEND	☐ DEADEND	☐ WINGARM
☐ 34 KV	☐ 3-POLE "H" FRAME	☐ WISHBONE	☐ CORNER 3PH	☐ DOUBLE CIRCUIT
☐ 115 KV			☐ PRIMARY NEUTRAL 3PH	
☐ 230 KV			☐ OTHER (DESCRIBE):	

WHAT IS BROKEN? *(FILL IN ALL AVAILABLE INFORMATION)* ☐ STREET LIGHT ON POLE? INTO-LIGHT TAG NO. ____ ☐ CELL NET EQUIPMENT? CELL NET UNIT NO. ____

POLES SIZE/CLASS/QUANTITY		ARMS SIZE/CLASS/QUANTITY		BRACES	BOLTS
STEEL PIN	POLE TOP PIN	INSULATORS	DEADENDS	RIGID CLEVIS	
DOWN GUY	SPAN GUY	GUY GUARDS	STRAIN INSULATOR	GUY HOOK	

TRANSFORMER _____ KVA ☐ 1PH ☐ 3PH ☐ 120/208 ☐ 120/240 ☐ 277/480 ☐ BUSHINGS ____ ☐ BANKED 2 OR 3 ☐ PADMOUNT

TRANSFORMER CO. ID NO.

CONDUCTOR SIZE	TYPE ☐ TREE WIRE ☐ COPPER ☐ ACSR / AAC ☐ TRIPLEX	LENGTH	SEC / SVC SIZE & LENGTH

SPLICES _____#4CU _____#6CU _____#4ACSR _____#2ACSR _____#4/O ACSR _____#336 ACSR _____#397 AAC

SWITCH NO. _____ ☐ LINK BREAK ☐ LOAD INTERRUPTER ☐ SOLID BLADE ☐ GANG-OPERATED

TERMINATION ☐ 1PH ☐ 3PH *(INSERT QUANTITY)* ☐ 750_____ ☐ 1/0_____

RISER *(IF TRANSITE, REPORT IMMEDIATELY TO SERVICE CENTER)* NOTE QUANTITY FOR EACH SIZE/TYPE

DB120 ____ 2" ____ 3" ____ 4" ____ 6"

SCH 80 ____ 2" ____ 3" ____ 4" ____ 6"

2050 08/07 PAGE 1 OF 2

Continued on next page

Figure 3 Damage Assessment Form, Page 2

Filling Out the D/A Form

When assessing damage, you are collecting information to be communicated back to the operating base. Fill out the D/A form as completely as possible. Not all fields will require an entry, but remember, the more completely you fill out the form, the easier it will be for the Contract Crew Coordinator and responding line crew to arrive with the proper materials, equipment, and personnel.

The D/A form is fairly self-explanatory, but here are a few hints to help you properly fill out the form.

Block Title	Information
Incident No.	Can be used to record the Incident Number, if one has been assigned by System Operations. This is helpful for the operating base folks.
Site No.	May be used by you as a Damage Assessor to help relate the form to a particular area on a map, by creating your own unique numbering system, noting this on the D/A Form, and also on a copy of a circuit map. This method can help the operating base in their crew assignments.
Type of Job	Used to denote the type of crew to be deployed: A **Serviceman Job** is typically only service and secondary work. A **Tree Crew Job** is used when a tree crew is required to either accompany the line crew or to clear an area for a line crew to have accessibility. A **Line Crew Job** is for most work, when a line crew is required to restore damaged transmission and distribution lines.
Circuit or T-Line Name	Very important information that needs to be included for each location.
Address Site	Include the street address and a reference to an existing switch number, if available. This helps the crew find the location on a circuit map. Note any accessibility issues and provide driving directions for the crew.

On the rest of the form, check applicable boxes and fill in quantities. Use the reverse of the form when more space is needed, or to help explain different circumstances.

Duties and Expectations

Important Considerations for the D/A Form

The following fields are of critical importance:

- **Oil Spill:** Is there an oil spill? If so, this needs to be reported to the storm base immediately
- **Address:** Look for an address on a mailbox; the nearest intersection; some type of notable landmark; a pole, switch, or grid number; or a description of the location (e.g., 6 spans east of _____)
- **Access:** Any unusual access obstacles, including washed out roads, trees down across the road, or walk-in locations.
- **Flaggers:** Will flaggers be needed to control traffic once a crew arrives on site?
- **Transite Pipe (primary and secondary risers):** Notify the operating base early so environmental clean up can be arranged.

Making a Material List

Typically, storeroom personnel at the local operating base will be knowledgeable enough to read material lists on D/A forms and issue the correct items for a particular application (e.g., a single phase tangent pole with pole-top pin).

However, during especially large events, there might not be enough "seasoned" storeroom people to fully staff the warehouse, necessitating the use of personnel that are not familiar enough with "construction units" and so forth, to be able to issue the correct material.

For these larger events, the Damage Assessor may be asked to include Material Identification Numbers (MIDs) with the lists of material that are submitted. It may be useful for a Damage Assessor to take a copy of the Electric and Gas Materials Catalog (MatCat) along on damage assessment duty. This Damage Assessment Guide includes examples of some of the more common applications, including MIDs.

NOTE: Unless specifically asked, do not include MIDs when filling out D/A forms.

How to Report Damage

There are two ways to report damage after assessing an area:

- You may be asked to call the damage in to the operating base; or,
- You may be asked to deliver your completed damage reports to the operating base.

Make sure you understand what is expected at your location.

If/when you call in a damage assessment report, give your name and location, and the damage you've noted on your D/A form. The operating base will have someone taking damage assessment reports. That person may ask additional questions, so it is best if you can report the damage from the actual site before moving on to another site.

If communications are poor or out, you may need to hand-deliver assessment information to the operating base.

Duties and Expectations

The Damage Assessment Team

Partner Up

Make sure you are assigned a driver. Drivers may or may not have damage assessment experience, so spend a few minutes discussing the assignment and your expectations of the driver. As Damage Assessor, you will be focused on looking for damage. The driver's first responsibility is to watch the road.

Driver's Duties and Responsibilities

When working on a Damage Assessment Team, the driver shall:

- Follow Damage Assessor's instructions – the Damage Assessor is the Team Leader.
- Make sure the vehicle is functional.
- Maintain an appropriate speed and obey speed limits.
- Watch out for other traffic and road hazards.
- Watch fuel gauge as fuel may not be easy to obtain in some areas.
- Keep track of extra equipment and supplies (flashlights, flares, etc.).
- Stay with the vehicle unless the Damage Assessor specifies otherwise.

Safety

General Safety

When assessing damage, your number one objective is to protect yourself.

- Stay clear of downed equipment.
- Use caution when coming across downed poles and wire. Poles and trees may appear down, but can still move unexpectedly.
- Lines lying on the ground may still be energized or can become reenergized.
- Trees may be leaning into overhead conductors which may break under strain and fall down, resulting in injury.
- Stay in your vehicle whenever possible.

Electrical

Many PSE employees with engineering, planning, or management backgrounds may be assigned duties as a Damage Assessor. Some of these employees are not qualified electrical workers under the requirements of WAC 296-45, and may not perform electrical work. Safety requirements for non-electrical workers, covered under WAC 296-155 and WAC 296-800-280, include:

- Do not violate the ten foot rule (WAC 296-155) for approaching exposed conductors.
- Do not touch covered or insulated conductors such as tree wire or underground cables.
- Learn to recognize the electrical equipment you could encounter in the field, and know the associated hazards.
- Know what to do in the event of an electrical contact. ***Any employee, regardless of classification, who has an electrical contact shall immediately seek emergency medical treatment***.

In the Field

Keep in mind the following safety items when working in the field:

- Always wear your hard hat.
- Reflective vests must be worn when working in or near the roadway.
- Your vehicle is not an emergency vehicle. Obey all traffic laws.
- Be aware of falling trees, limbs, and debris.
- Be aware of traffic. Cones cannot stop cars.
- Do not contact lift equipment or line trucks.
- Wear your safety glasses.
- Use vehicle flashers and/or strobe light when on shoulder.

Safety

Downed Lines

Stay away from all downed lines. Let the journeymen on the crew handle any downed lines, whether or not they are power lines. NEVER attempt to move a downed line yourself. Report it to the local service center.

Keep the public away from downed lines. Use cones and caution tape as a barricade

Do not assume lines with black insulation on them are phone or cable TV. The tree wire PSE uses for primary voltages in many areas can look just like communication lines.

Lines identified as TV or phone could be tangled up with electric conductor farther away and could become energized.

Witnessing Unsafe Actions

Unsafe Actions by the General Public

If you observe the public acting or working in an unsafe manner around downed lines, warn them of the danger and ask them to stop their unsafe activity. WAC safety rules do not apply to the general public, so the Department of Labor and Industries cannot require the public's compliance.

If the situation is endangering the crew, call 911.

Unsafe Actions by Line Crews and/or Contractors

If you observe line crews or other contractors (flaggers, etc.) working in an unsafe manner, contact the operating base.

Responding to Medical Emergencies

Medical Emergency Procedures

Step	Action
1	From a safe location, dial area emergency number (911).
2	State that you are in need of medical aid and be ready to report the following information: ▪ "This is Puget Sound Energy" or "This is Potelco/Quanta." ▪ "I am at (give exact address)." ▪ Type of problem or injury. ▪ Individual's present condition and age. ▪ Sequence of events leading to the emergency. ▪ Medical history, medication if known.
3	Avoid moving the injured or ill person.
4	Until medical personnel arrive, render first aid/CPR within training and qualification limits without endangering the victim or others.
5	Contact Eastside System Supervisor at 81-4681 or (800) 383-1759 or (425) 882-4681 or radio through dispatcher.
6	Immediately notify the employee's supervisor of the emergency.

Providing Emergency Aid

If available, trained and certified PSE/Quanta first aid providers may provide emergency first aid and life support until relieved by aid crews. Whenever an aid car is called, the employee can be transported as recommended by aid personnel to the appropriate emergency medical facility for further treatment.

Providing Non-Emergency Aid

In circumstances requiring non-emergency care, PSE and/or Quanta personnel trained in first aid may render appropriate care. Should the injured employee require further medical treatment and assistance is warranted, you may drive the employee to the nearest emergency medical facility or, if they prefer, to the employee's medical provider.

⚠ NOTICE!

Notify the operating base of any events where emergency or non-emergency aid has been administered.

Responding to Critical Incidents

A critical incident is defined as:

- Any serious employee injury (an injury that results in hospitalization or a fatality); or
- Any workplace violence or threat; or
- Any natural disaster that significantly impacts PSE, Quanta employees or contractors' establishments.

Critical Incident Procedure

Any PSE or Quanta employee who becomes aware that a critical incident has occurred shall do the following in accordance with their training.

Step	Action
1	Attend to injured people as appropriate/needed (e.g. calls 911, provides first aid/CPR as trained). Ensure injured employees are transported properly and note the hospital that they are transported to.
2	Secure incident site to the greatest extent possible as appropriate/needed.
3	Initiate and/or facilitate evacuation as trained to ensure life safety.
4	Contact the Eastside System Supervisor, 81-4681 or (800) 383-1759 or (425) 882-4681 or radio dispatcher. ***NOTE:*** System Supervisor will notify appropriate company personnel including department management.
5	Contact the operating base.
6	Eastside System Supervisor immediately contacts: ▪ Managers of each affected department (including Quanta Management) ▪ PSE Human Resources ▪ PSE Safety and Operations Training ▪ In the event of any workplace violence or threat, calls PSE Security 24–hour Cell Phones: (425) 766–9595 or (425) 766-9430.

Notes:

Power Poles

Poles are categorized by length and class.

- Guy stub poles and service poles are 30′ – 35′ tall.
- Distribution poles are in the 40′ – 45′ range. Occasionally they are a little taller when there are clearance issues.
- Transmission poles are in the 65′ – 85′ range, though some are taller (see the *Transmission System* tab for detailed information on transmission poles).

Pole class is determined by the diameter of the pole. The length and class can be found on the pole identification tag affixed to the pole gain. Note this information if it is safe to approach the downed pole and the pole identification tag is readily accessible.

If the downed pole is in an unsafe location, or it is broken too badly to determine its length and class, look to the pole on either side of the downed pole. They are likely the same size.

Figure 1 Typical Pole Tag in Pole Gain

Distribution Crossarms

NOTE: For transmission crossarms, see the *Transmission System* tab in this book.

Wooden Crossarms

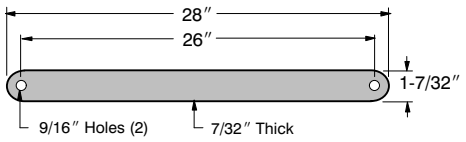
These crossarms come in various lengths. The most common are 9′ and 11′, though 13′ arms are used for double circuits.

If a damaged wood crossarm is still in the air, it is difficult to tell the length of the arm from the ground. Look at the cross arm braces.

- If there are two flat braces (per arm), the arm is 9′ in length.
- If there is a one-piece angled V-shaped brace, the arm is 13′ (MID 8761700).

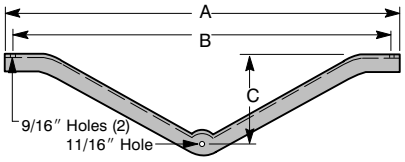
Although 11′ arms can use either type of brace, they usually use an 11′ V brace (MID 8761600).

Figure 2 Flat Crossarm Brace



MID 8763700

Figure 3 Typical Double Span Angle Iron Crossarm Brace



Dimensions				
A	**B**	**C**	**Steel Angle Size**	**Material ID**
63″	60″	18″	1-1/2″ x 1-1/2″ x 3/16″	8761600
75″	72″	22″	1-3/4″ x 1-3/4″ x 3/16″	8761700

In general:

- 1 phase primary neutral = 9′ arm
- 3 phase, common neutral = 9′ arm
- 3 phase, primary neutral = 11′ arm
- 3 phase wing arm = 11′ arm (uses a different type of brace)
- 3 phase double circuit = 13′ arm

Figure 4 Double Circuit

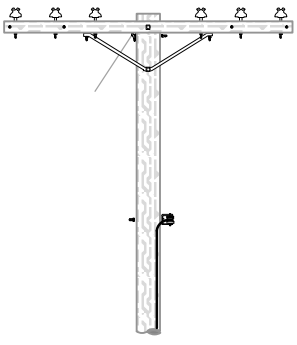


Figure 5 Single-Phase, Primary Neutral

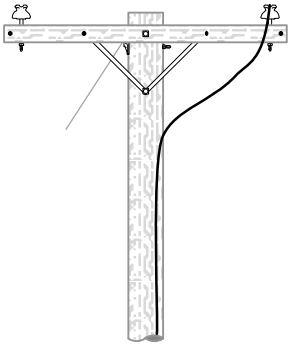


Figure 6 Three-Phase, Pole Top Pin

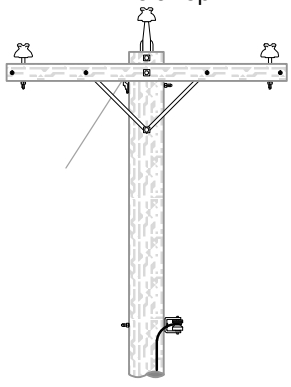
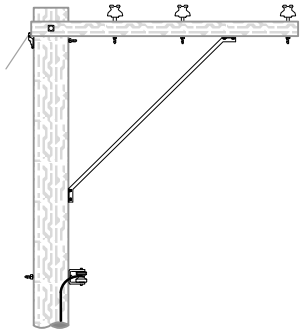


Figure 7 Wingarm

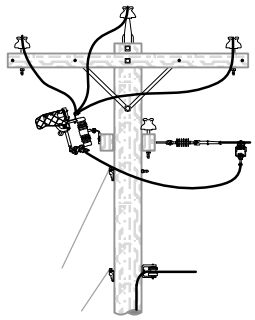


Multiple Crossarms

Often conductors are "double deadended," meaning there are two crossarms back to back. This construction is often used for angle poles, when the lines are not tangent (straight).

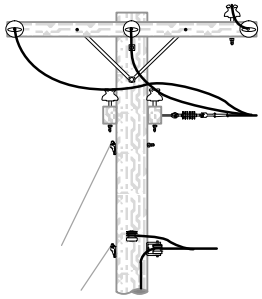
A lower set of double arms is used for a single-phase line tap off of a three-phase line.

Figure 8 Tap



For corner poles, a second set of double arms may be added at approximately 90 degrees to the top arms.

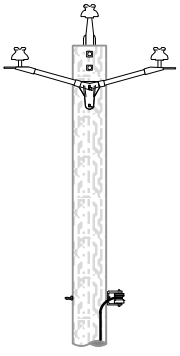
Figure 9 Three-Phase Corner Pole



Fiberglass Crossarms

In some cases where there are right-of-way issues, fiberglass crossarms are used in a "compact construction technique." These fiberglass arms come in single-, double-, triple-, and deadend-arm configurations. They are also used for replacing old steel arms.

Figure 10 Three-Phase, Fiberglass Arm



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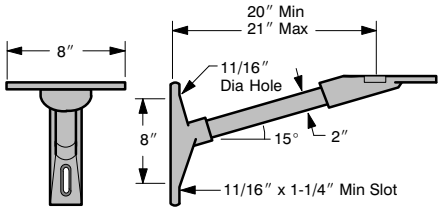
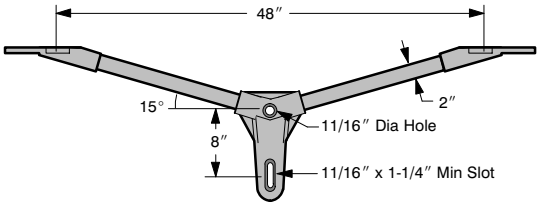
Fiberglass Crossarms, *continued*

Figure 11 Single Bracket Arm



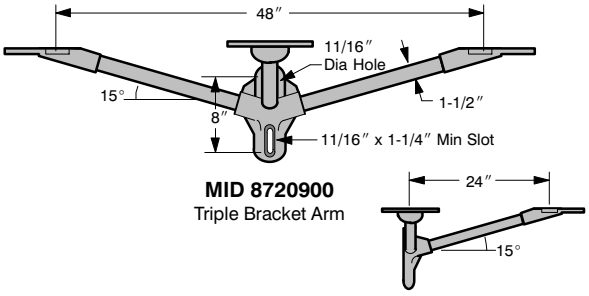
MID 8721100

Figure 12 Double Bracket Arm



MID 8721000

Figure 13 Triple Bracket Arm



MID 8720900
Triple Bracket Arm

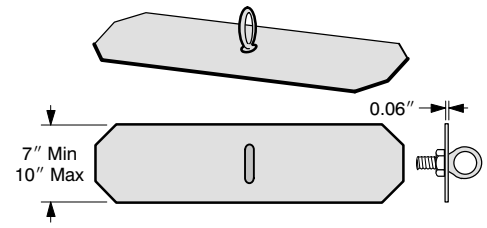
Triple bracket arms are used for three-phase, 1/0 cable termination brackets.

Pole Grounds

Every new pole installed on PSE's system, whether distribution or transmission, is required to have a pole ground installed.

- Distribution poles – run the pole ground up the pole and connect it to the common or primary neutral.
- Transmission poles with distribution underbuild – install as described above for distribution poles.
- Transmission poles without distribution underbuild – cut the ground wire off just below the ground surface so it will be available if an underbuild system is installed in the future.

Figure 14 Ground Plate



MID 8969401

Copper ground plates are attached to a pole butt.

A **Ground Wire Moulding (MID 8920300)** is required to be installed at the base of the pole, covering the first 8 feet of the pole ground wire.

Order plenty of **Ground Wire Molding Staples (MID 9058100)**. PSE is currently applying more staples than usual to discourage wire theft.

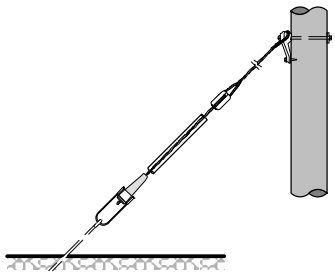
The following is a typical list of material needed for a pole ground.

POLE GROUND

DESCRIPTION	MID	QTY
Ground Plate	8969401	1
Pole Ground Wire	8459000	45′
Moulding	8920300	1
1/2″ Staples	9058100	Bin Stock
1 1/2″ Staples	1391100	Bin Stock

Guy Wires

Figure 15 Example of 3/8″ Down Guy



Description	MID	Qty
3/8 Guy Wire	8585200	40
3/8 Guy Whip	8847700	3
3/8 Auto Grip	8846700	1
Guy Hook	8877400	1
Insulator	9391100	1
Guy Guard	9000500	1

Down Guys

In most cases, when a pole goes over, one or more guy wires break. However, the anchor rarely gets pulled out of the ground and can be reused. Guy wires are stocked in three basic sizes: 3/8″, 7/16″, and 1/2″ diameters. Broken guy wire may be spliced together using an automatic guy wire splice.

Figure 16 Guy Wire Splices

Guy Wire Size	Material ID
5/16″	2224000
3/8″	2224100
7/16″	2224200

Typical
Automatic Splice for Guy Wire

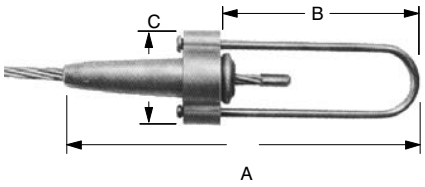
Continued on next page

Down Guys, *continued*

However, it is often easier to attach a new guy wire. There may be more than one guy wire attached to a pole. These are sized and placed by an engineer to provide proper support. Make sure you order enough material to replace each guy wire.

When installing new guy wire, an automatic guy grip will be required for each guy wire.

Figure 17 Automatic Guy Grips



Typical
Automatic Guy Grip

Wire Size	Bail Length	Dimensions A	B	C	Material ID
3/8″	Short	10-1/8″	6-7/8″	1-5/8″	8846700
3/8″	Long	17″	12″	1-5/8″	8846800
7/16″	Short	14-3/4″	8″	2-1/4″	8846900
7/16″	Long	22″	15-1/4″	1-15/16″	8847000

This guy grip is used only for attaching guy wire to anchor rods. The grip is supplied with a solid stainless steel bail.

Span Guys

Not all guy wires are down guys. PSE also uses span guys on occasion. These will be stretched between two poles using the same hardware and wire as down guys.

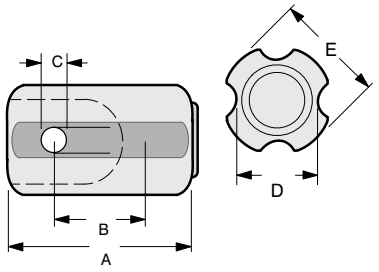
Guying Insulators

Every down or span guy will require one or more insulators, depending on the application.

Strain insulators are used for insulating down and span guys.

Figure 18 Typical Strain Insulator

Dimensions A	B	C	D	E	Material ID
4-1/4″	2-1/4″	7/8″	2-1/8″	2-7/8″	9391100
5-1/2″	3-1/8″	1″	2-3/8″	3-1/8″	9391200



MID 9391100

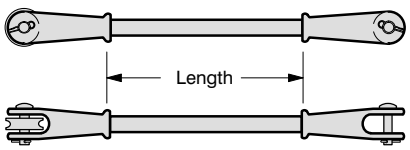
Continued on next page

Guying Insulators, *continued*

Guy strain clevis-clevis insulators are used to insulate guy wires which may inadvertently become energized.

Figure 19 Typical Guy Strain Clevis-Clevis Insulator

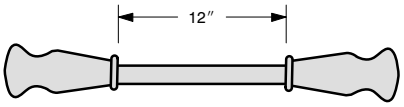
Length	Min Breaking Strength (lbs)	Material ID
12″	30,000	9395900
144″	15,000	9396400
144″	30,000	9396500
96″	15,000	9396600
96″	30,000	9396700



These insulators are used to insulate guy wires which may inadvertently become energized.

Guy strain thimble-thimble insulators are used to insulate guy wires for 34.5 kV distribution.

Figure 20 Typical Guy Strain Thimble-Thimble Insulator

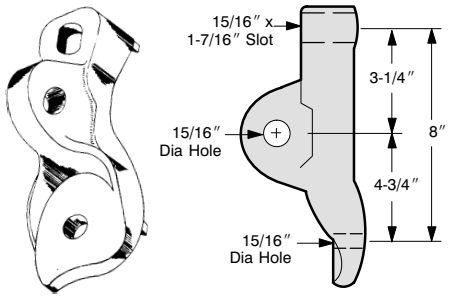


MID 9397000

Guying Pole Hardware

There are a number of different pieces of hardware to attach a guy wire to a pole. Remember to try to replace damaged hardware with like hardware. Listed below is some typical guy pole hardware.

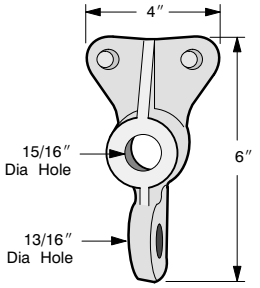
Figure 21 Pole Eye Plate



MID 8969300

Pole eye-plates attach guy wires to poles.

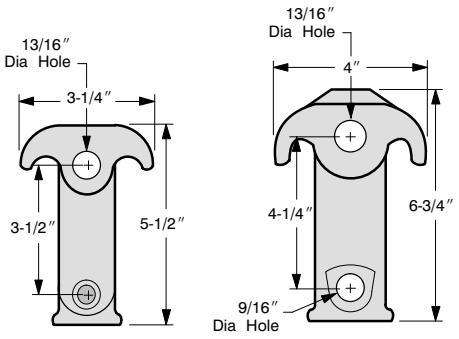
Figure 22 Clevis-Type Guy Plate



MID 8877700

Clevis-type guy plates attach guy wires to poles.

Figure 23 Guy Hooks



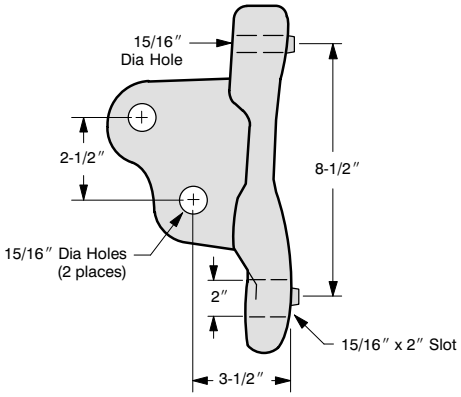
8877400
5/16″ to 3/8″ Guy Hook

8877300
7/16″ to 1/2″ Guy Hook

Guy Wire Size	Material ID
5/16″	8877400
3/8″	8877400
7/16″	8877300
1/2″	8877300

Guy hooks attach guy wires to poles.

Figure 24 Double-Eye Pole Plate



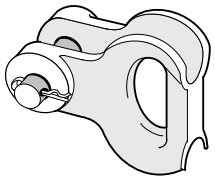
MID 8969000

Double-eye plates typically attach guy wires to transmission deadend structures.

Continued on next page

Guying Pole Hardware, *continued*

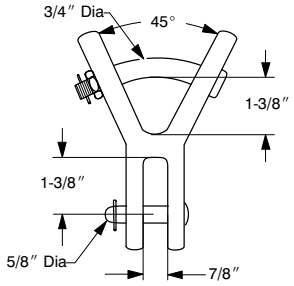
Figure 25 Thimble Clevis



MID 9995638

The thimble clevis is used with chain links and anchor shackles to attach guy wire to pole-eye plates.

Figure 26 Y-Clevis



MID 9997083

The Y-Clevis Clevis is used to attach guy wires to pole eye plates.

Bolts, Screws, and Washers

New bolts, screws, washers, nuts, etc. will be required when framing new poles.

Conductor Sizes and Types

Over the years, PSE has used a variety of copper and ACSR overhead conductors in various sizes. You can expect to encounter several different sizes of wire when damage assessing. PSE does not stock replacement wire for most of the uncommon sizes. Splices, however, are usually available to join two different sizes of wire.

NOTE: For transmission conductor types and sizes, see the *Transmission System* tab in this book.

Distribution Conductor

While it is usually pretty easy to differentiate the type of wire material, determining its size can be a challenge. Overhead primary conductor is manufactured of two types of material: copper wire and aluminum wire.

Copper wire is found in two basic types – bare and covered (insulated). Copper wire ranges in size from #6 to #2 (smaller to larger) single strand, and 2/0 and 4/0 stranded. Bare copper wire that has been installed for quite a while and exposed to the elements will typically turn a greenish color.

Table 1 Copper wire sizes

Size AWG or kcmil	Number of Strands	Material ID
4/0	7	8482200
2/0	7	8482300
2	1	8483500
4	1	8483700

There are two types of **aluminum wire.** The most common is known as ACSR (Aluminum Conductor, Steel Reinforced), which is stranded wire with a steel core. Sizes commonly found on PSE's distribution system include sizes from #2 (smaller) to 2/0, 4/0, 336 kcmil, 397 kcmil, and 795 kcmil.

Table 2 Aluminum wire sizes

Size AWG or kcmil	Strand Design (Alum/Steel)	Material ID
336	18/1	9995547
4/0	6/1	8310300
2	6/1	8310800

Distribution Conductor

The other type of aluminum wire is known as All Aluminum Conductor (AAC) which is also stranded wire, but without a steel core. Although not very common, the main size of AAC found on PSE's distribution system is 397.5 kcmil.

Table 3

AAC size

Size (kcmil)	Number of Strands	Material ID
397.5	19	8311700

The only way to visibly tell the difference between ACSR and AAC is to look at an end view, where the ACSR wire's steel core will be evident.

Tree wire is either 336 kcmil or #2 ACSR with a 1/8″ thick covering of black polyethelene. This is typically used in locations with a lot of trees to help cut down on phase-to-phase and phase-to-ground faults.

Size AWG or kcmil	Strand Design (Alum/Steel)	Material ID
336.4	18/1	8309750
#2	6/1	8309730

NOTE: When replacing or repairing tree wire conductor, covered tie wire or special preformed ties must be used and attached to specific insulators designed for tree wire (see page 3 for more information).

Overhead Service Wire is available in various sizes and configurations. It is composed of one or more insulated conductors with one uninsulated neutral conductor as the supporting member.

Table 4

Duplex Wire for Streetlights

Phase Conductors		Bare ACSR Neutral		
Size	Strands	Size	Strands	Material ID
4	7	4	6/1	8319000

Table 5

Triplex Wire for 1/0 Services

Phase Conductors		Bare ACSR Neutral		
Size	Strands	Size	Strands	Material ID
2	7	4	6/1	8318100
2	7	4	6/1	8318101
1/0	7	2	6/1	8318500
4/0	19	2/0	6/1	8318400

Table 6

Quadruplex Wire for 3/0 Services

Phase Conductors		Bare ACSR Neutral		
Size	Strands	Size	Strands	Material ID
2	7	2	6/1	8319100
1/0	19	1/0	6/1	8319500
4/0	19	4/0	6/1	8319700

Tie Wire

Tie wire is required to "tie" conductors to insulators.

For "tying in" all aluminum conductors to standard 12.5 kV distribution insulators, use aluminum tie wire (MID 8313400), or the appropriately sized preformed helical-grip tie. See page 1100-33 of the Electric and Gas Materials Catalog (MatCat).

For "tying in" all copper conductors to standard distribution insulators, use Dead Soft Drawn bare copper wire (MID 8483700).

For "tying in" 34.5 kV wire, preformed ties must be used. See pages 1100-33 and 34 of the MatCat.

Figure 1 Covered Tie Wire

MID 8309760

With the exception of nonmetallic preformed ties, this is the only wire approved to tie tree wire to high-density polyethylene pin-type insulators *(MID 9346050)*.

Covered Flexible Copper Wire

Covered flexible copper wire is used to make ground connections to primary lightning arresters.

Figure 2 Covered Flexible Copper Wire

MID 8441900

AWG #2 insulated flexible copper wire is used when making ground connections to primary lightning arresters. The flexible wire allows the arrestor isolator to hang down after operating indicating the arrester needs replacing.

The conductor is annealed, tin-coated, or uncoated copper with bunched wires and rope-lay stranding. The covering is a minimum of 60 mils thick. The maximum rated circuit voltage is 600 volts.

Primary Splices

Splices are available in PSE's warehouse system to repair most sizes of wire. Make sure you order adequate and appropriate sized splices for each case of damage requiring new insulators and for splicing existing or new conductors. The most common types of automatic tensioning splices are listed below.

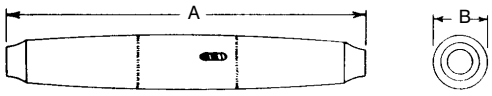
Figure 3 Automatic Tension Splicing Sleeve for Aluminum Conductors

Typical
Automatic Tension Splicing Sleeve for
Aluminum Conductors

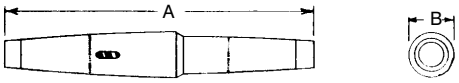
Conductor Size	Strand	Material ID
1/0	7	2214000
4/0	7	2214100
397.5	19	2215400

This sleeve is used for splicing aluminum overhead conductors. The sleeve is high-strength aluminum and is filled with an inhibitor compound.

Figure 4 Automatic Tension Splicing Sleeve for Copper Conductors



2211300



2212300

Sleeve	Conductor Range Solid	Strand	Material ID
Automatic	6	8	2211300
Automatic	4	6	2211400
Automatic	2	3	2211500
Automatic	1	2	2211600
Automatic	1/0	1	2211700
Automatic	2/0	1/0	2211800
Automatic	3/0	2/0	2211900
Automatic	4/0	3/0	2212000
Automatic		4/0	2212100
Automatic		500	2212800

Sleeve	Material ID
Reducing 4 Sol to 6 Sol	2212300
Automatic 4/0 Str to 4/0 Sol	2212400

Continued on next page

Primary Splices, *Continued*

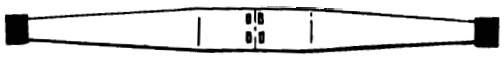
Figure 5 Automatic Dual Range Tension Splicing Sleeve for ACSR Conductors

MID 2219100

ACSR Wire Size	Color End A	Color End B	Material ID
#4 - #2	Red/Orange	Red/Orange	2219100

This sleeve is used for splicing #2 ACSR to #4 ACSR overhead conductors in any combination. The sleeve is high-strength aluminum and is filled with an inhibitor compound. It can be used to replace *MIDs 2215000, 2215100, and 2219000*.

Figure 6 Automatic-Tension Splicing Sleeve for ACSR Conductors



Typical
Automatic Tension Splicing Sleeve for ACSR Conductors

ACSR Wire Size	Color	Material ID
#4 (6/1)	Orange	2215000
#2 (6/1)	Red	2219100
2/0 (6/1)	Grey	2215200
4/0 (6/1)	Pink	2215300
336.4 (18/1)	Green	2215400
397.5 (18/1)	Blue	2215500

This sleeve is used for splicing ACSR overhead conductors. The sleeve is high-strength aluminum and is filled with an inhibitor compound. The ends are capped with a color-coded strand-guide cap.

Primary Splices, *Continued*

Figure 7 Service Connectors

Typical
Service Connector

Opening A			Opening B			
ACSR	**Al. or Cu**	**Color**	**ACSR**	**Al. or Cu**	**Color**	**Material ID**
4	4 Str – 2 Sol	Orange		10 Str-8 Sol	Brown	2257200
	3 Str			8 Str-6 Sol	Green	2256300
			6	6 Str-4 Sol	Blue	2257100
			4	4 Str-2 Sol	Orange	2256200
2	2 Str – 1 Sol	Red		8 Str-6 Sol	Green	2257300
			6	6 Str-4 Sol	Blue	2256600
			4	4 Str-2 Sol	Orange	2256500
			2	2 Str	Red	2256400
1/0	1/0	Yellow		8 Str-6 Sol	Green	2255700
			6	6 Str-4 Sol	Blue	2256700
			4	4 Str-2 Sol	Orange	2256800
			2	2 Str	Red	2256900
			1/0	1/0 Str (Al. only)	Yellow	2257000
	2/0	Grey	2	2-1 Str	Red	2257400
			1/0	1/0 Str	Yellow	2257500
			2/0	2/0 Str	Grey	2258800
	3/0	Black	2	2 Str	Red	2257600
			1/0	1/0 Str	Yellow	2257700
				2/0 Str	Grey	2249800
	4/0	Pink	2	2-1 Str	Red	2257800
			1/0	1/0 Str	Yellow	2257900
				2/0 Str	Grey	2250000
				3/0 Str	Black	2249900
				4/0 Str	Pink	2258900

Insulators

Distribution Insulators

Puget Sound Energy uses a variety of insulator types on the distribution system.

NOTE: For insulators on the transmission system, please see the *Transmission System* tab in this book.

PSE's distribution voltages are 12.5 kV and 34.5 kV. Insulators and pins are coded for each voltage. Note that most insulators are designed for bare wire (copper and ACSR); however, there are different insulators designed for "tree wire."

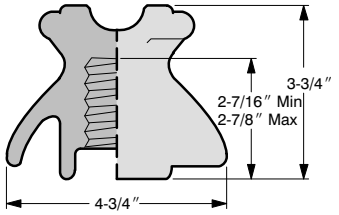
NOTE: Some of PSE's areas have a limited amount of 4 kV, which is being phased out and replaced with 12.5 kV. If you encounter damaged to poles insulated for 4 kV, they should be rebuilt to 12.5 kV standards.

Pin Insulators

Pin insulators are supported by either a wood (old style) or steel pin. In most damage cases, the pin will need to be replaced along with the insulator. There are a variety of pins available, so make sure to choose the correct pin for the application.

Below are examples of the different types of pins and pin insulators.

Figure 1 12.5 kV Insulator



MID 9350300

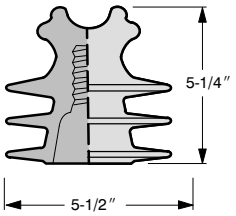
This porcelain insulator is used on 12.5 kV phase wires. Insulator is installed on a 1-inch diameter pin.

Continued on next page

Insulators

Pin Insulators,
continued

Figure 2 12.5 kV Insulator for Tree Wire



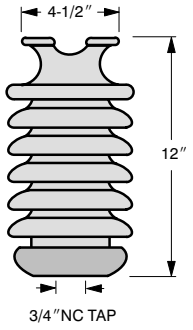
MID 9346050

This insulator is used on 12.5 kV phase wires. Insulator is installed on a 1-inch diameter pin.

The only approved application of this insulator is with tree wire. Tree wire should only be installed with polyethylene insulators, covered tie wire, and/or plastic pre-formed ties.

NOTE: Covered tie wire or plastic pre-formed ties are required to be used when securing tree wire to these insulators.

Figure 3 34.5 kV Insulator

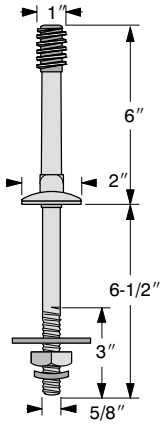


MID 9382100

This tie-top porcelain post insulator is used on 34.5 kV phase wires. Insulator is installed on a 3/4-inch diameter pin.

Pins for Distribution Insulators

Figure 4 6″ Pin with 6-1/2″ Shank

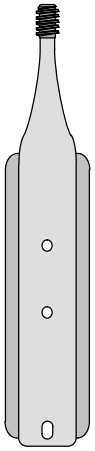


MID 8950700

This insulator pin attaches porcelain or polymer insulators to wood crossarms.

The shank is **not** long enough for the 11-foot heavy-duty deadend arm *(MID 8722400),* or the 13-foot double-dead-end arm *(MID 8722000)*. Use *MID 8950800* instead.

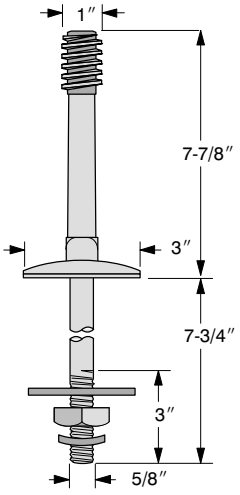
Figure 5 20″ Pole Top Bracket for 12.5 kV Insulators



MID 8960800

This bracket attaches porcelain or polymer insulators to the tops of poles.

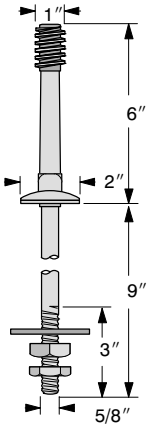
Figure 6 7″ Pin with 7-3/4″ Shank



MID 8950701

This insulator pin is for use on crossarms with a depth of 4-3/4- or 5-3/4-inches, and for insulators requiring a pin with a 7-inch height.

Figure 7 6″ Pin with 9″ Shank



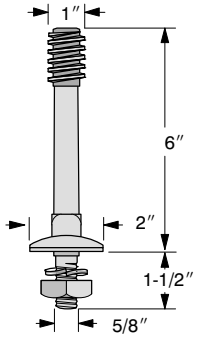
MID 8950800

This insulator pin attaches porcelain or polymer insulators to the 11-foot heavy-duty deadend arm *(MID 8722400),* and the 13-foot double-deadend arm *(MID 8722000)*.

Continued on next page

Pins for Distribution Insulators, *Continued*

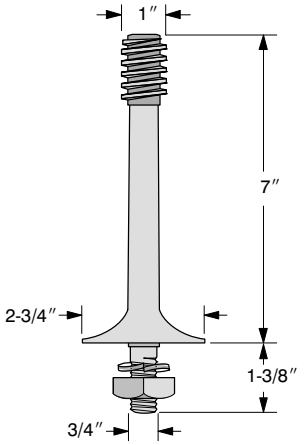
Figure 8 6″ Pin with 1-1/2″ Shank



MID 8950500

These steel pins are used on overhead distribution with fiberglass arms when two insulators are required on angle construction.

Figure 9 7″ Pin with 1-3/8″ Shank

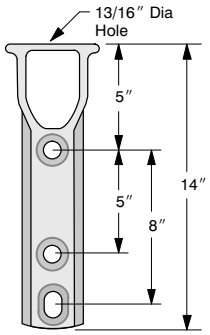


MID 8951300

This insulator pin attaches porcelain or polymer insulators to epoxirod sidemount arms or 34.5 kV pole top brackets.

Some insulators are mounted on the top of a pole on a bracket called a Pole Top Pin.

Figure 10 14″ Pole Top Bracket for 34.5 kV Insulators



MID 8768700

This insulator pin adapter uses porcelain or polymer insulators with 1-inch internal threads, and 5/8-inch diameter bolts to support down leads and jumpers.

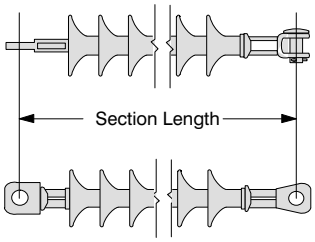
Insulators

Distribution Suspension Insulators

Suspension insulators used on the distribution system are made of silicone rubber, and are used for dead-end and corner applications.

There are two coded distribution suspension insulators.

Figure 11 Suspension Insulators



12.5 kV — MID 9389100
34.5 kV — MID 9389000

Other Insulators

Rigid Clevis

The rigid clevis is used to support the neutral when it is in the common (lower) position, and is also used to deadend or support overhead services and secondaries.

Figure 12 Rigid Clevis

MID 9257200

Service Knob

The service knob is used to support or deadend 600 volt or less overhead services.

Figure 13 Service Knob

MID 9412900

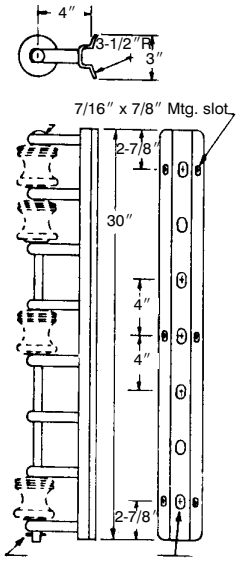
Continued on next page

Other Insulators, *Continued*

Four Spool Secondary Rack

These were once used to attach secondary wires from three phase transformer banks, neutral conductors and multiple services. These secondary racks can be reused if in good shape, or replace them with a rigid clevis (see above).

Figure 14 Four-Spool Secondary Rack



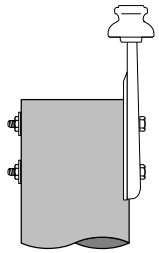
MID 8773100

Insulators

Pin and Insulator Assemblies

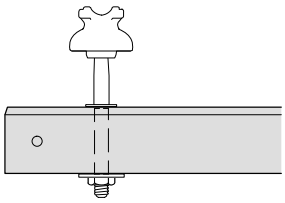
Below are some of examples of various pin and insulator assemblies to help in ordering the correct parts.

Figure 15 12 kV Single Pole Top Pin



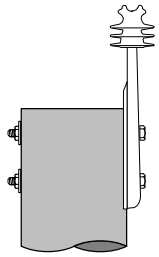
DESCRIPTION	MID	QTY
Insulator	9350300	1
Pole Top Pin	8960800	1
10″ Bolt	1241700	2
Square Washer	9102600	2

Figure 16 12 kV Arm-Mounted Pin



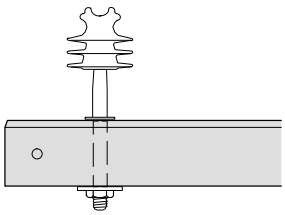
DESCRIPTION	MID	QTY
Insulator	9350300	1
Pin	8950700	1

Figure 17 12 kV Single Pole Top Poly Pin Insulators Used for Tree Wire



DESCRIPTION	MID	QTY
Insulator	9346050	1
Pole Top Pin	8960800	1
10″ Bolt	1241700	2
Square Washer	9102600	2
Covered Tie Wire	8309760	as needed

Figure 18 12 kV Mounted Poly Pin Insulators Used for Tree Wire



DESCRIPTION	MID	QTY
Insulator	9350300	1
Pin	8950700	1
Covered Tie Wire	8309760	as needed

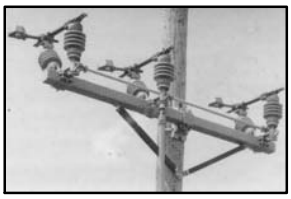
Notes:

Switches

Gang Operated

Gang operated switches are used in three-phase situations, and operate all three phases simultaneously from a single control handle. If a pole with a gang operated switch is knocked down, the switch will likely be damaged. The linkage running up the pole can also be damaged. Unless you are sure the switch and linkage is reusable, include a replacement switch when requesting the material needed at that location.

Figure 1 3PST Pole-Mount Switches



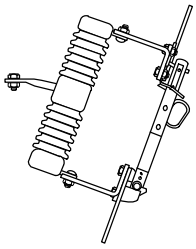
MID 5069000
12.5 kV 3PST Switch

System Voltage	Material ID
12.5 kV	5069000
34.5 kV	5070200

Solid Blade

Solid blade disconnects are operated on an individual basis, independent of each other. These can be used for single- or three-phase construction. They are also used for sectionalizing portions of lines and as disconnect switches for 600 A terminations.

Figure 2 New Style SPST Cutout Crossarm-Mounted Switch



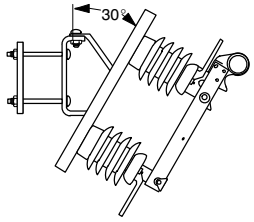
MID 9995955
15 kV Cutout Switch

System Voltage	Current Rating	Material ID
12.5 kV	600 A	9995955

This SPST cutout switch is used on 600 A terminal poles for equipment bypass and sectionalizing applications. The switch has hooks for breaking load with S&C's "Loadbuster" tool.

Crossarm mounting bracket is not included. To mount on a crossarm, order mounting bracket *MID 9995886*.

Figure 3 Old Style SPST Crossarm-Mount Switches



MID 4955500
12.5 kV Crossarm-Mount Switch

System Voltage	Current Rating	Material ID
12.5 kV	600 A	4955500
34.5 kV	600 A	4955600

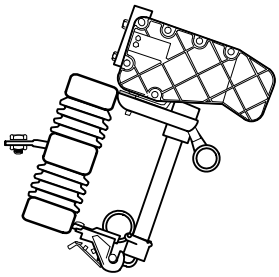
These SPST switches are used as equipment bypass switches and for disconnects on 600 A terminal poles. The switch has hooks for breaking load with S&C's "Loadbuster" tool.

All 12.5 kV switches are supplied with a 30° angle mounting bracket. The 34.5 kV switch is designed for vertical mounting.

Fused Cutouts

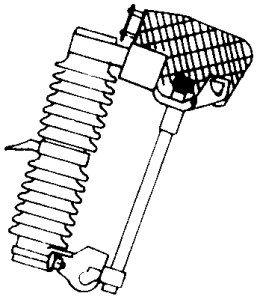
Fused cutouts are installed as protection devices for transformers, capacitors, and lines (laterals). Some single-phase fused cutouts are “load break cutouts,” designed to minimize any arcing when the switch is opened under load. These cutouts have flash guards, also called “elephant ears,” which extinguish the arc when opened under load.

Figure 4 34.5 kV Load Break



MID 4898500

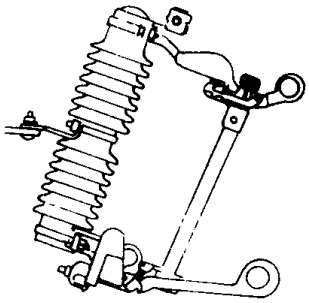
Figure 5 12.47 kV Load Break



MID 4898100

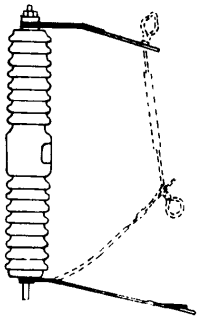
Other fused single-phase cutouts are “link break cutouts,” which do not have load-interrupting capability unless used with a loadbuster tool.

Figure 6 12.47 kV Link Break



MID 4899000

Figure 7 Grasshopper or Trip-O-Link Cut Out



Fuse Sizes

The capacity of the fuse is imprinted on the end cap. If the fuse had "blown" this information may not be available on site. Consult the overhead circuit map for fuse sizes for laterals. For overhead transformers, use the following chart to determine the correct fuse size.

Table 1

Fusing for single- and three-phase applications on overhead transformers. Transformers in three-phase banks shall be fused according to their ***individual*** sizes.

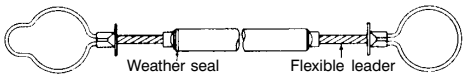
Transformer Size	2,400 V Single-Phase Transformers	7,200 V Single-Phase Transformers	19,920 V Single-Phase Transformers
	Expulsion Fuse	Expulsion Fuse	Expulsion Fuse
1.5	2T	2T	—
3	6T	2T	—
5	10T	2T	1H
7.5	15T	6T	—
10	15T	6T	2H
15	15T	6T	2H
25	25T	10T	5H
37.5	40T	15T	6T
50	65T	15T	8T
75	65T	25T	10T
100	100T	40T	15T
167	*140T	65T	25T
250	*140T	65T	25T
333	*140T	65T	25T
500	—	100T	40T

* Check with System Protection Group before using 140T fuses

Fuse Links

Fuse links (grasshoppers) were used to protect transformers up to 25 kVA, but are being phased out. If a new transformer is needed, replace the fused cutout as well. If you come across a situation where the transformer and cutout are still OK for use, a replacement fuse link may be used. However, if a crew needs to work on the pole, use this opportunity to have the cutout replaced.

Figure 8 Fuse Links (Grasshoppers)



Typical
Fuse Link

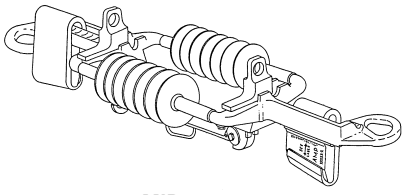
Ampere Rating	Material ID
2 A	3344100
6 A	3344200
10 A	3344300
15 A	3344400
25 A	3344500

These fuse links are used only as replacements in open link 7.2 and 12.5 kV cutouts to protect distribution transformers up to 25 kVA where the required fuse-carrying capacity rating does not exceed 50 Amp. Fault interrupting capability is up to 1200 Amp. They are not to be used for fusing laterals.

In-Line Disconnect Switch

You may find the occasional use of in-line disconnect switches in the field. They are sometimes used to isolate sections of lines during construction and maintenance operations, and are also used occasionally as bypass switches. Unless the in-line disconnect switch is in use as a bypass switch, it does not need to be replaced in the field. However, make sure you note on the damage assessment form that such switch is not being replaced. Below is an example of an in-line disconnect switch.

Figure 9 Line-Tension (In-Line) Disconnect Switch



MID 5069500
Disconnect Switch

System Voltage	Wire Size	Material ID
12.5 kV	336.4 ACSR 397.5 AAC	5069500

Transformers

When a transformer is knocked to the ground, an oil spill can occur. Oil spills must be reported to the Operating Base as soon as possible and must be noted on the Damage Assessment Form.

Figure 1 Downed Pole with Transformer

The operating base needs to know the size and voltages of any and all transformers that need to be replaced.

Overhead transformers come in a variety of sizes, ranging from 10 kVA up to 167 kVA, as well as single and two bushing configurations. Some transformers will have the kVA rating marked on the side of the tank and others will have an alpha designation. The most common sizes of overhead transformers are:

J = 10 kVA	L = 15 kVA	N = 25 kVA	P = 37.5 kVA
R = 50 kVA	S = 75 kVA	T = 100 kVA	UL = 167 kVA

Figure 2 Overhead Transformer with One Primary Bushing
120/240 Volt Secondary

	High-Voltage			
kVA	4,160GrdY /2,400 x 12,470GrdY /7,200	12,470GrdY /7,200	12,470GrdY /7,200 x 34,500GrdY /19,920	34,500GrdY /19,920
15 kVA	6207150	6211200	6217050	6221050
25 kVA	6207200	6211250	6217100	6221100
37.5 kVA	6207250	6211300	6217150	6221150
50 kVA	6207300	6211350	6217200	6221200
75 kVA	6207350	6211400	6217250	6221250
100 kVA	6207400	6211450	6217300	6221300
167 kVA	6207450	6211550	6217350	6221350

Typical
120/240 V, 167 kVA Secondary
One-Bushing Transformer
(Note: May also be used for
208Y/120Y services)

Transformers, *Continued*

Figure 3 Overhead Transformer with One Primary Bushing
120/208Y Volt Secondary

	High-Voltage		
kVA	4,160GrdY /2,400 x 12,470GrdY /7,200	12,470GrdY /7,200	12,470GrdY /7,200 x 34,500GrdY /19,920
15 kVA	6205150	6209100	6215150
25 kVA	6205200	6209150	6215200
37.5 kVA	6205250	6209200	6215250
50 kVA	6205300	6209250	6215300
75 kVA	6205350	6209300	6215350
100 kVA	6205400	6209350	6215400
167 kVA	*	*	*

*Order the equivalent transformer listed in the 120/240 low-voltage section above. These 167 kVA transformers have each of the four secondary-winding leads brought out to separate terminals. External connection for either 120/240- or 208Y/120-volt operation is made by service crew.

Typical
120/240 V, 50 kVA
One-Bushing Transformer

Figure 4 Overhead Transformer with Two Primary Bushings
120/240 Volt Secondary

	High-Voltage	
kVA	2,400/ 4,160Y x 7,200/ 12,470Y	7,200/ 12,470Y
15 kVA	6208150	6212150
25 kVA	6208200	6212200
37.5 kVA	6208250	6212250
50 kVA	6208300	6212300
75 kVA	6208350	6212350
100 kVA	6208400	6212400
167 kVA	6208450	6212500

Typical
120/240 V, 34.5 kVA
Two-Bushing Transformer

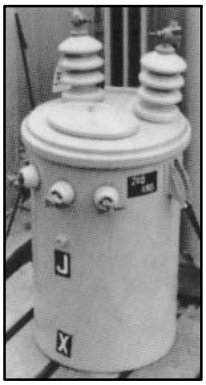
Transformers, *Continued*

Figure 5 Overhead Transformer with Two Primary Bushings
240/480 Volt Secondary for State Highway Lighting

	High-Voltage	
kVA	2,400/ 4,160Y	7,200/ 12,470Y
25 kVA	6203150	6213100
50 kVA	6203250	6213200
100 kVA		6213300
167 kVA	6203450	6213350

These overhead transformers are single-phase units which may be used for single-phase applications or interconnected for three-phase applications.

Transformers with two high-voltage bushings are designed for three-phase ungrounded-wye primary system banks (such as closed- delta secondary banks). These transformers can also be used in place of single-bushing transformers if necessary, but single-bushing transformers cannot be used for three-phase ungrounded-wye connected banks.



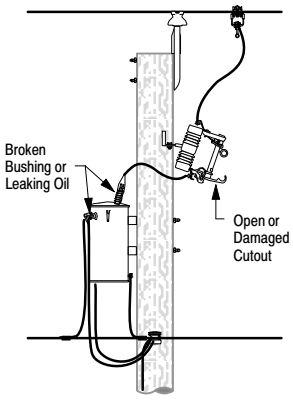
Typical
240Y/480 V, 25 kVA
Two-Bushing Transformer

NOTE: PSE's preferred installation practice is to use a single-bushing transformer when replacing a two bushing transformer on a single-phase line with the neutral in the primary (on the crossarm) position. To do this, the neutral must be in the common (lower) position. Note on the Damage Assessment form whether it will be possible to roll the primary neutral to the common position to accommodate the use of a single-phase transformer.

If possible, note the secondary voltage of distribution transformers, which can be found on the transformer nameplate. You may also find a sticker with the secondary voltage configuration on the center transformer of a three-phase bank. Single transformers serving residential customers will be 120/240 volts on the secondary side.

Because transformer cutouts are often broken, order a new transformer cutout when calling for a transformer.

Figure 6 Transformer and Cutout on Pole

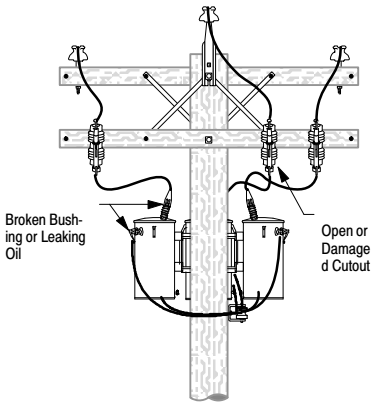


Overhead Transformer Bank

Some commercial applications use three transformers banked together for three-phase power, or two transformers banked together as part of an open delta configuration. Note the size of each transformer.

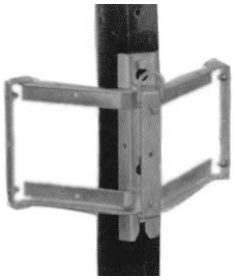
Transformers making up a transformer bank may or may not all be the same size (kVA rating), depending on application. Note the size of each transformer in the bank.

Figure 7 Transformer Bank



Banked transformers are mounted on a “cluster rack” on the pole.

Figure 8 Transformer Cluster-Mount Bracket and Adapter Plate



MID 5135000
XFMR Cluster-Mount
Bracket

Bracket Type	Material ID
Transformer Cluster-Mount	5135000
Pole Bracket, 750 lbs per position for type “A” lugs	
Transformer Cluster-Mount	5148300
Pole Bracket, 2500 lbs per position for type “A” and “B” lugs	

Padmount Transformer

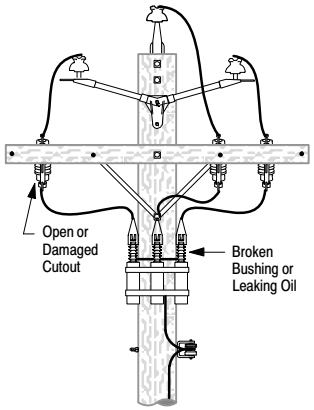
Occasionally a padmounted transformer may be damaged during a storm and have to be replaced. In most cases, existing hardware (elbows, grounds, vaults, etc) may be reused.

The primary voltage will be noted on the transformer case, usually in yellow paint. The secondary voltage will be noted on the transformer nameplate. If the transformer is serving residential customers, it will be 120/240 volts on the secondary side. This information is needed by the operating base so the correct replacement transformer size can be ordered.

Line Capacitors

PSE has installed distribution line capacitors in many locations. These are rectangular "cans" with fuses, mounted in a rack of three.

Figure 9 Line Capacitor



Recently installed capacitors are PCB-free, but it is possible that older units may contain PCBs. If it is not labeled "CONTAINS NO PCBs," exercise caution around the units. If any capacitors are ruptured and/or leaking fluid, report this as a hazardous condition (oil spill).

NOTE: Replacement of a capacitor bank on a distribution line is not considered "mission critical" in storm restoration efforts. However, it is imperative that the damage be noted on the D/A form so follow-up restoration can be accomplished.

Notes:

Regulators, Reclosers, and Sectionalizers

This section covers other PSE-owned distribution line equipment on a pole, such as voltage regulators, line reclosers and sectionalizers.

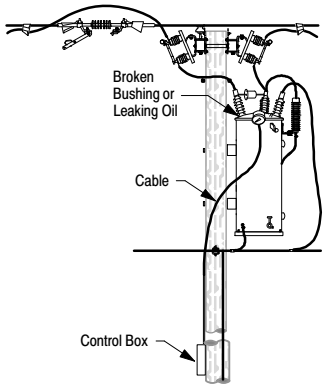
⚠ CAUTION!

Regulators, reclosers (non-vacuum), sectionalizers, and autoboosters contain insulating oil. If an oil spill has occurred, it must be reported to the operating base as soon as possible.

Regulators and Autoboosters

In some instances, line voltage regulators are installed on poles. They look like overhead transformers, but are larger and taller, usually with some type of cooling fins or radiators. They also have a large dial on the side, visible from the ground, showing the step position of the regulator.

Figure 1 Regulator



Occasionally, you may find an autobooster installed in the field. An autobooster looks a lot like a small single-phase transformer with a dial indicator similar to a voltage regulator.

NOTE: Autoboosters are no longer stocked in Stores. If an autobooster fails, it should be replaced with a single phase regulator. Contact Electric First Response Engineering for assistance.

Reclosers

There are two types of reclosers on PSE's system: oil filled and vacuum type. Both types of reclosers are identified by the control box mounted approximately 10 feet above ground. Oil reclosers are no longer stocked in Stores and should be replaced with vacuum reclosers.

Figure 2 Recloser (Oil-Filled)

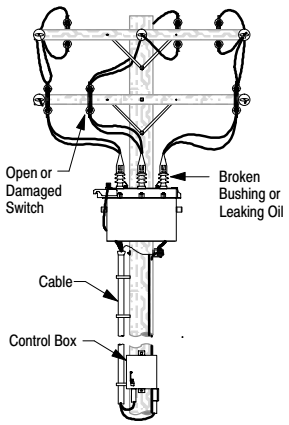
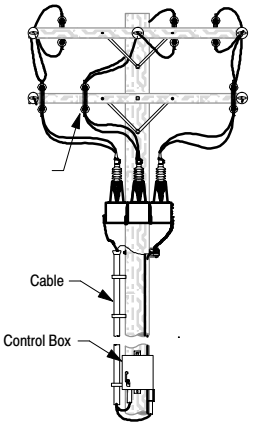


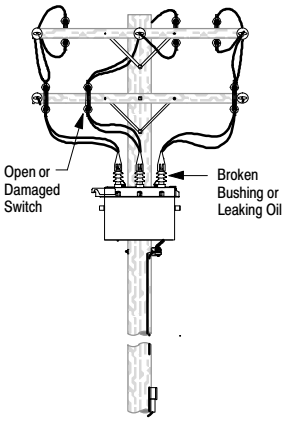
Figure 3 Recloser (Vacuum)



Sectionalizers

A sectionalizer looks very much like an oil-filled recloser, but it is smaller and does not have a control box mounted down on the pole.

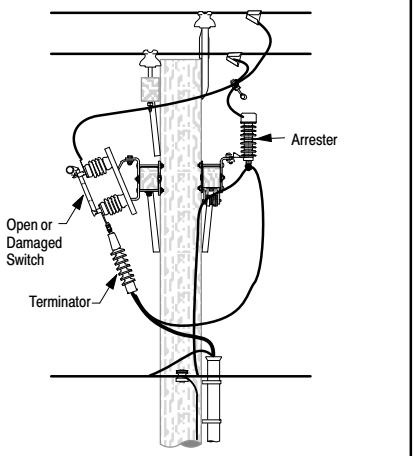
Figure 4 Sectionalizer (Oil-Filled)



Underground Risers

Poles with an underground terminations can be damaged during a storm. This pole will have conduit, standoff brackets, and underground cable with a termination at the top that connects it to the overhead fused cutout. There also will be a lightning arrester in parallel. Be sure to note all of these materials on the D/A form.

Figure 1 Termination/Riser



Conduit

Underground conductor, either primary or secondary, will be routed up a pole in conduit. Although many variations of construction will be evident in the field, PSE currently uses Schedule 80 PVC for the first 10 feet aboveground, and DB-120 for the rest of the application. Conduit is stocked in five sizes: 1″, 2″, 3″, 4″, and 6″.

If the underground conductor is enclosed in a continuous conduit system, a 90-degree bend will be required.

If the underground conductor is direct buried, a 90-degree bend is not required (but may be installed anyway). The conductor is trained into a 90-degree turn and fed directly into the bottom of the conduit system.

⚠ CAUTION!

Some older conduit was made out of a material called transite, which contains asbestos. This is a rough-textured gray material, unlike more-common PVC conduit. If you encounter any damaged transite conduit, it must be reported to the operating base so proper disposal can be arranged. If a piece of transite conduit is blocking the roadway, try to push it out of the way with a shovel or similar tool. ***Do not handle transite conduit unless you are trained and equipped to do so.***

Fittings

A variety of fittings are stocked at warehouses, including couplings, standoff brackets and clamps.

Standoff Brackets

Standoff brackets are available in two lengths, 15″ and 24″. In the field, the majority of standoff brackets are 15″. The size to be used is determined by the number of conduit risers that will be attached to the pole. Typically four brackets are needed per pole, including one that is to be installed 6″ belowgrade.

Clamps

Conduit clamps are sized according to the diameter of the conduit.

NOTE: On service poles only, conduit straps may be used to attach conduit risers directly to the pole surface if there will not be multiple risers.

Bell Ends

A bell end (bushing) is required at the top of the conduit riser.

Riser Assemblies

The following table lists, by conduit diameter, all of the components necessary for riser assemblies.

2″ RISER

Description	Material ID	QTY
2″ DB120 PVC	7634800	20
2″ Schd 80 Bend	7645201	1
2″ Bellend	7624500	2
2″ Schd 80 PVC	7642200	10
Lag Screw	9995734	8
Stndoff brkt	7627300	4
2″ Clamp	7632400	4

3″ RISER

Description	Material ID	QTY
3″ DB120 PVC	7634900	20
3″ Schd 80 Bend	7645301	1
3″ Bellend	7624600	2
3″ Schd 80 PVC	7642300	10
Lag Screw	9995734	8
Stndoff brkt	7627300	4
3″ Clamp	7633300	4

4″ RISER

Description	Material ID	QTY
4″ DB120 PVC	7635000	20
4″ Schd 80 Bend	7645401	1
4″ Bellend	7624700	2
4″ Schd 80 PVC	7642400	10
Lag Screw	9995734	8
Stndoff brkt	7627300	4
4″ Clamp	7633400	4

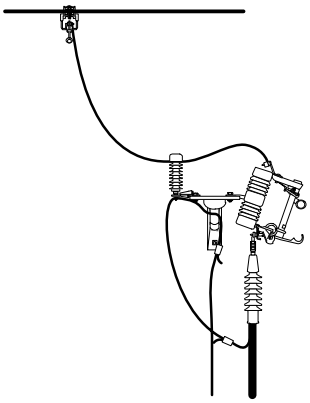
6″ RISER

Description	Material ID	QTY
6″ DB120 PVC	7635100	20
6″ Schd 80 Bend	7645601	1
6″ Bellend	7624900	2
6″ Schd 80 PVC	7642600	10
Lag Screw	9995734	8
Stndoff brkt	7627300	4
6″ Clamp	7633600	4

Terminations and Lightning Arresters

All underground primary cable uses a termination to connect the cable to the overhead cutout. If repairing a damaged pole with an underground riser, and the primary cable cannot be reused, a new run of cable and new termination will have to be installed.

Figure 2 Single Phase 12.5 kV 1/0 Termination



DESCRIPTION	MID	QTY
Termination Kit	7852000	1
Pin terminal	7849200	1
Arrestor	4824100	1
Cutout	4899000	1
Flex wire	8441900	6
L Bracket	9995886	2

Figure 3 12.5 kV and 34.5 kV Cable Terminations

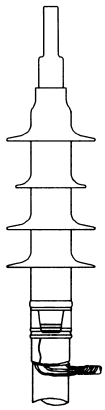
12.5 kV Terminations

Conductor Size	Cable Type	Material ID
#2 – 4/0	Concentric Neutral	7852000
4/0 – 500 kcmil	Tape shield	7852140
500 – 1000 kcmil	Tape shield	7852150

34.5 kV Terminations

Conductor Size	Cable Type	Material ID
1/0 – 4/0	Concentric Neutral	7852100
3/0 – 600 kcmi	Tape shield	7852160

For terminating a #2 - 1/0, butyl-insulated, tape-shield cable, use *MID 7852000* and order a tape-shield adapter kit *MID 9995507*.



Typical
Cable Termination

Continued on next page

Terminations and Lightning Arresters, *Continued*

Pole mounted distribution lightning arresters are used to protect underground cables at terminal poles. These are required on all underground terminations, including both 12.5 kV and 34.5 kV.

Figure 4 Distribution Lightning Arresters

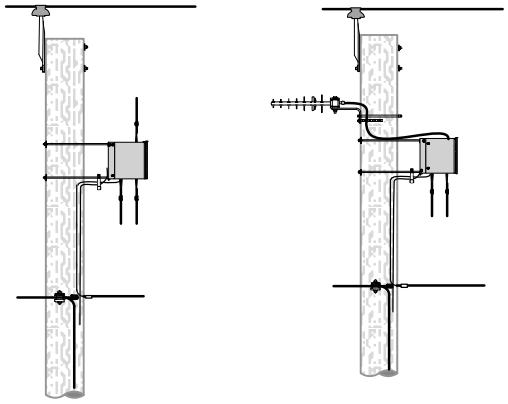
System Voltage	Type	Material ID
7.2/12.5 kV	Pole Mounted	4824100
19.9/34.5 kV	Pole Mounted	4825200

MID 4824100
12 kV Heavy-Duty Arrester

AMR

PSE uses an Automated Meter Reading (AMR) system to "read" customers' meters and electronically transmit the data back to PSE. To do this, there are a number of AMR pole top units installed on distribution power poles. These pole top units collect data and transmit it on to an AMR Control System, which is also found on a pole.

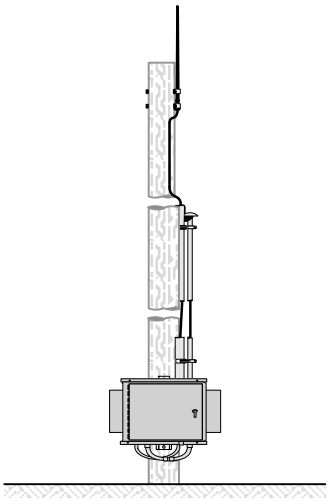
Figure 1 AMR Pole Top Units



Standard Install with Omni Antenna

Standard Install with Directional Antenna

Figure 2 AMR Control Station



Important Note About AMR Equipment

It is a requirement to note on the D/A form any AMR equipment affected. Undamaged AMR equipment may be reused but it still must be reported. If AMR equipment is found on damaged or downed poles, immediately call the CellNet/Schlumberger-Sema Hotline at **1-866-662-7762.**

Identify yourself as a PSE Damage Assessor reporting downed equipment for the PSE AMR Project. Be prepared to provide the following information.

- Equipment type and ID Number:
  - Pole top units have a 5-digit code on the cabinet front,
  - Control Stations are identified by their location.
- Pole Location by address or cross streets.
- Pole Grid Number ID.

Control stations without power should be reported to the Damage Assessment Supervisor.

Streetlights

All damaged streetlights should be noted on the D/A form. Include the Intolight number, if possible. Typically, Intolight handles all streetlight repair and replacement. However, if a streetlight is not damaged and is reuseable, the responding line crew may reinstall it. Make sure you note this on the damage assessment form.

Figure 3 Aluminum Streetlight ID Tag

MID 9995260

Figure 4 Film Streetlight ID Tag

MID 9995731

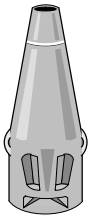
Figure 5 Example of a Film Streetlight ID Tag on a Pole

Avian and Wildlife Protectors

PSE uses a variety of avian and wildlife protection devices. These devices are found on insulators, crossarms, and conductors. Avian and wildlife protectors may be reused if they are not damaged.

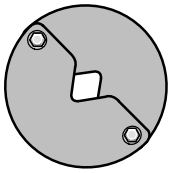
While it is not essential to immediately replace such equipment during major outage restoration efforts, it is very important to note on the damage assessment form any damaged avian and wildlife protection devices for eventual replacement.

Figure 6 Examples of Equipment Wildlife Protectors



MID 3450000
Overhead Equipment

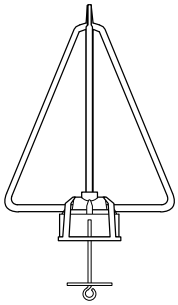
MID 9996101
Tyco Overhead Equipment



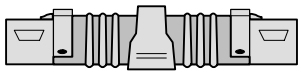
MID 9995994
E/Barrier

MID 9996514
Tyco Cutout Protector

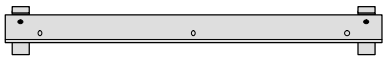
MID 9996143
Firefly Bird Flapper Swivel



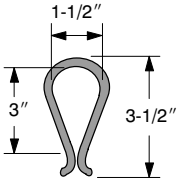
MID 9996146
MID 9996147
Antiperch Triangles



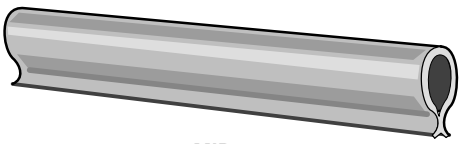
MID 9996213
Tyco Pin Protector



MID 9996214
Tyco Wire Protector



Line-Duc End View



MID 9995986
Line-Duc

Non-PSE Equipment on Pole

There is often other equipment attached to PSE poles, usually belonging to cable and telecommunications companies. This equipment and conductor is attached to PSE poles below the neutral conductor. Note this on the D/A form so that the operating base may notify the other utility.

Figure 7 Examples of Other Equipment on Poles

Transmission System

Damage Assessing on the Transmission System

This is a specialized type of damage assessment, typically performed by transmission engineers and planners and/or others that have had extensive experience in this area.

However, in a very large event or an event that impacts a large portion of the transmission system, other "less-experienced" folks may be pressed into duty. This section of the Damage Assessment Guide is intended to give a brief overview of typical transmission construction practices.

Many of PSE's transmission lines are routed "cross country" on rights-of-way that are not necessarily vehicle-accessible. This may mean a lot of foot-patrolling, so dress accordingly and be prepared.

NOTE: PSE's system still contains some 55 kV, which is being phased out and replaced with 115 kV. If you encounter damage to poles insulated for 55 kV, they should be rebuilt to 115 kV standards.

Transmission Poles

Transmission poles vary in height. Most are 65′–85′ and taller, but in some cases, they can be as tall as 120′. Conductors are attached to transmission poles in various configurations.

Figure 1 HPA

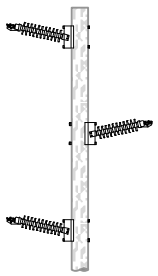


Figure 2 Vertical Turn

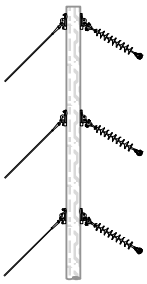
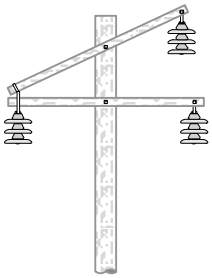


Figure 3 Vertical Deadend

Figure 4 Wishbone



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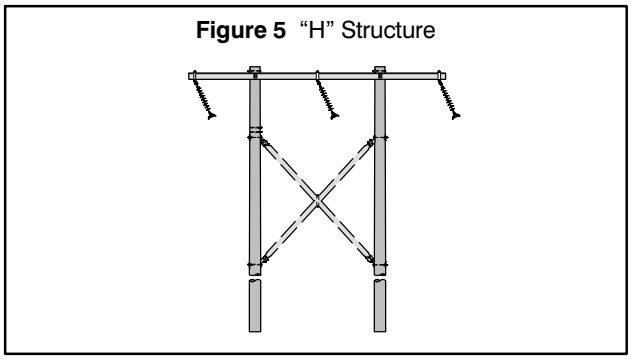
Transmission Poles, *Continued*

Some transmission lines use a double pole arrangement, with a large crossarm between them and insulators hanging down. This is called an "H" Structure. The crossarms used in this construction are typically much larger than normal crossarms.

Figure 5 "H" Structure



Call for a pole ground assembly for every pole that needs replacing in the field, including all transmission poles. See the "Pole Grounds" and "Guy Wire" sections in the *Miscellaneous* tab.

Transmission Crossarms

Crossarms used on the transmission system are "heavier" (width and depth) than distribution arms and much longer, ranging from 14′-39′ in length.

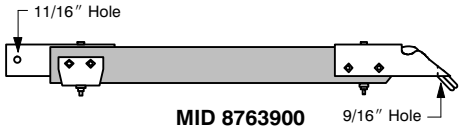
Table 1

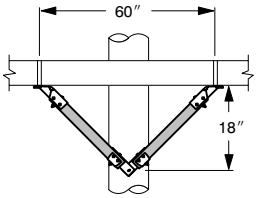
Voltage	Description	Length	Width	Depth	Material ID
115 kV	Heavy-Duty Deadend	8′	7-1/2″	5-5/8″	8730700
115 kV	Heavy-Duty Deadend or Wishbone	14′	3-5/8″	9-1/2″	8733700
115 kV	Types AB, DA – H-Structure	24′	3-5/8″	9-1/2″	8734150
230 kV	Type AR S&W Engineering	39′	3-5/8″	9-1/2″	8734300
230 kV	Type B2 S&W Engineering	39′	3-5/8″	11-1/2″	8734800
230 kV	Heavy-Duty Type DE-4	15′ 6″	10″	9″	8734900
115 kV	Types A, B, DA, E – H-Structure	24′	7-1/2″	7-1/2″	8735000
115 kV	Type DC – H-Structure	24′	6-1/2″	9-1/2″	8735100
115 kV	Type G – H-Structure	16′	3-5/8″	9-1/2″	8735300
115 kV	Types D, F, & Transmission Towers	26′	3-5/8″	9-1/2″	8735400
115 kV	Types G2, G2A – H-Structure	28′	3-5/8″	9-1/2″	8735500

Transmission Crossarm Braces

Crossarm braces used on the transmission system include two "standard" types of braces.

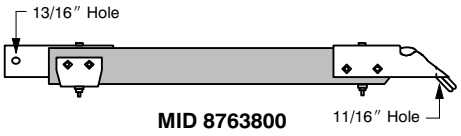
Figure 6 115 kV Heavy-Duty Deadend Crossarm Brace

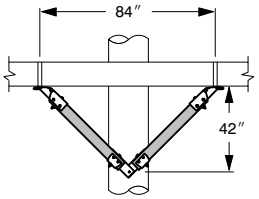




These braces stabilize heavy-duty deadend arms. The braces are designed for an 18-inch drop and 60-inch span. Brace timber has a finished dimension of 1-5/8 x 2-1/4 inches. Supplied as a set, one brace each for left and right. All metal is galvanized. Wood is treated with preservatives. All fittings are static-proof.

Figure 7 115/230 kV Deadend Crossarm Brace





These braces stabilize 115 and 230 kV crossarms. The braces are designed for a 42-inch drop and 84-inch span. Brace timber has a finished dimension of 2-3/4 x 3-1/2 inches. Supplied as a set, one brace each for left and right. All metal is galvanized. Wood is treated with preservatives. All fittings are static-proof.

Continued on next page

Transmission Crossarm Braces, *Continued*

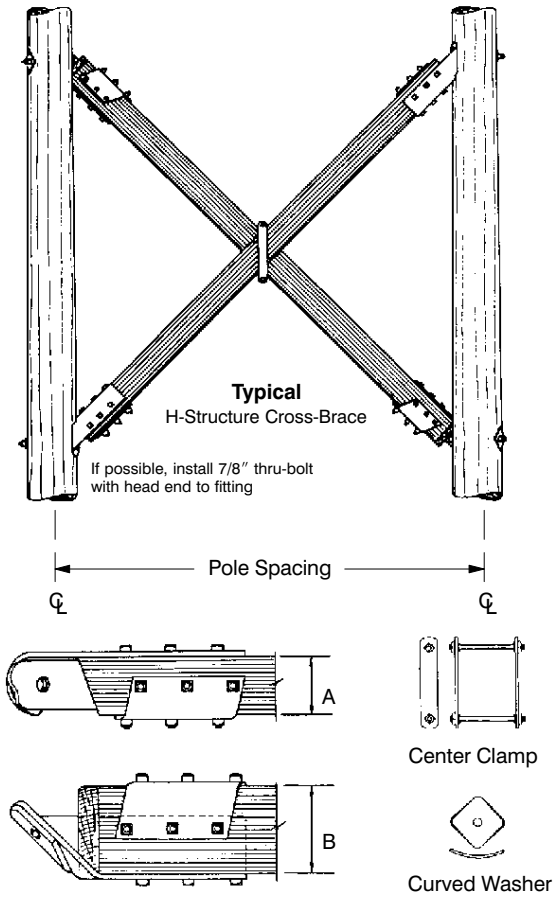
H-structure cross-braces are also used and include all necessary hardware.

Figure 8 H-Structure Cross-Braces

Pole Spacing	Dimensions A	Dimensions B	Number of Bolts	Material ID
11′-6″	3-3/8″	4-3/8″	4	8764200
12′-6″	3-3/8″	4-3/8″	4	8764300
13′-6″	3-3/8″	4-3/8″	4	8764400
14′-6″	3-3/8″	4-3/8″	4	8764500
15′-6″	3-3/8″	5-3/8″	4	8764600
19′-0″	3-3/4″	5-3/4″	4	8764900
21′-0″	3-3/4″	5-3/4″	4	8765000
23′-0″	3-3/4″	5-3/4″	4	8765100
13′-6″	3-11/16″	8-1/2″	8	8763001
16′-6″	3-11/16″	8-1/2″	8	8763002
19′-0″	3-11/16″	8-1/2″	8	8763003
21′-0″	3-11/16″	8-1/2″	8	8763004

Cross-braces are supplied in sets with pole mounting hardware including center clamp, 4-inch curved square washers, and 7/8-inch bolts with MF locknuts. Fifty percent of bolts are 16-inch and fifty percent are 18-inch. All metal is galvanized. Wood is treated with preservatives.

Cross-braces are ordered by the design centerline-to-centerline pole spacing for any multipole structure.



Transmission Insulators

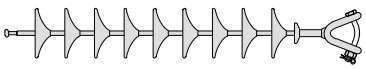
Transmission line insulators come in two different types: suspension and horizontal line post. Both types come in different sizes for 115 kV and 230 kV.

Suspension Insulators

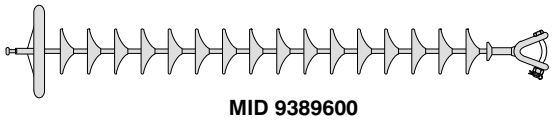
These insulators are used on poles that are "turn" poles, (i.e., not tangent). They are also used in "wishbone" applications. For examples, see *Figures 2, 3, and 4*.

Figure 9 Suspension Insulators

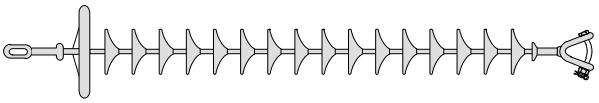
Nominal System Voltage	Horizontal Coupling/ Section Length	Material ID
115 kV	41″- 47″	9388000
230 kV	74″- 80″	9389600
230 kV	77″- 83″	9995751



MID 9388000
115 kV Ball Suspension Insulator



MID 9389600
230 kV Ball Suspension Insulator



MID 9995751
230 kV Oval-Eye Suspension Insulator

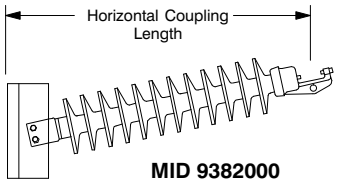
Horizontal Post Insulators

These types of insulators are used on tangent poles. See *Figure 1* for an example of an HPA.

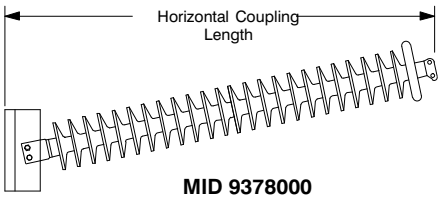
Figure 10 115 kV and 230 kV Horizontal Line Post Insulators

Nominal System Voltage	Horizontal Coupling Length	Base Type	Material ID
115 kV	42″ - 48″	Gain Channel	9382000
115 kV	42″ - 48″	Flat	9382001
230 kV	73″ - 79″	Gain Channel	9378000
230 kV	73″ - 79″	Flat	9378001
230 kV	73″ - 79″	Gain Channel	9996211

"Flat" base type is for laminated or steel poles.
"Gain channel" base type if for round wood poles.



MID 9382000
MID 9382001
115 kV Trunnion
Horizontal Post Insulators



MID 9378000
MID 9378001
MID 9996211
230 kV Extended Two-Hole
115 kV Horizontal Post Insulators

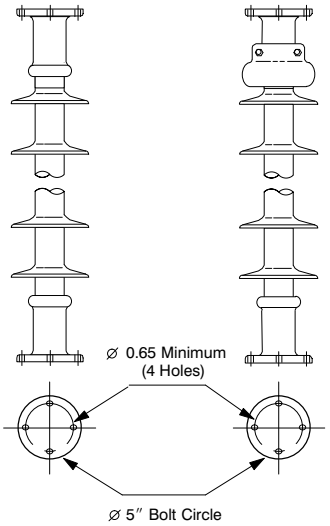
Continued on next page

Horizontal Post Insulators, *continued*

Transmission lines are occasionally constructed with vertical line post insulators. For example, these applications are used when a transmission line must be lowered for clearance under another line.

Figure 11 115 kV and 230 kV Vertical Line Post Insulators

Nominal System Voltage	Height	Material ID
115 kV	45″	9373001
230 kV	80″	9373499



MID 9373001
115 kV Vertical
Post Insulator

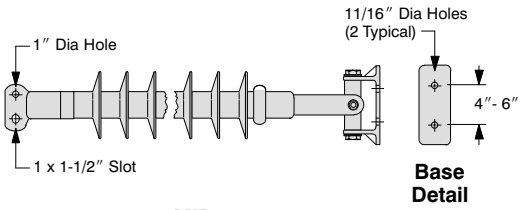
MID 9373499
230 kV Vertical
Post Insulator

Strut Insulators

Strut insulators are used on the transmission system, in applications such as "H" structures, when a conductor must be captured in place and prevented from moving sideways.

Figure 12 Strut Insulator

Nominal System Voltage	Horizontal Coupling Length	Material ID
115 kV	61″	9997363
230 kV	84″to 86″	9378002



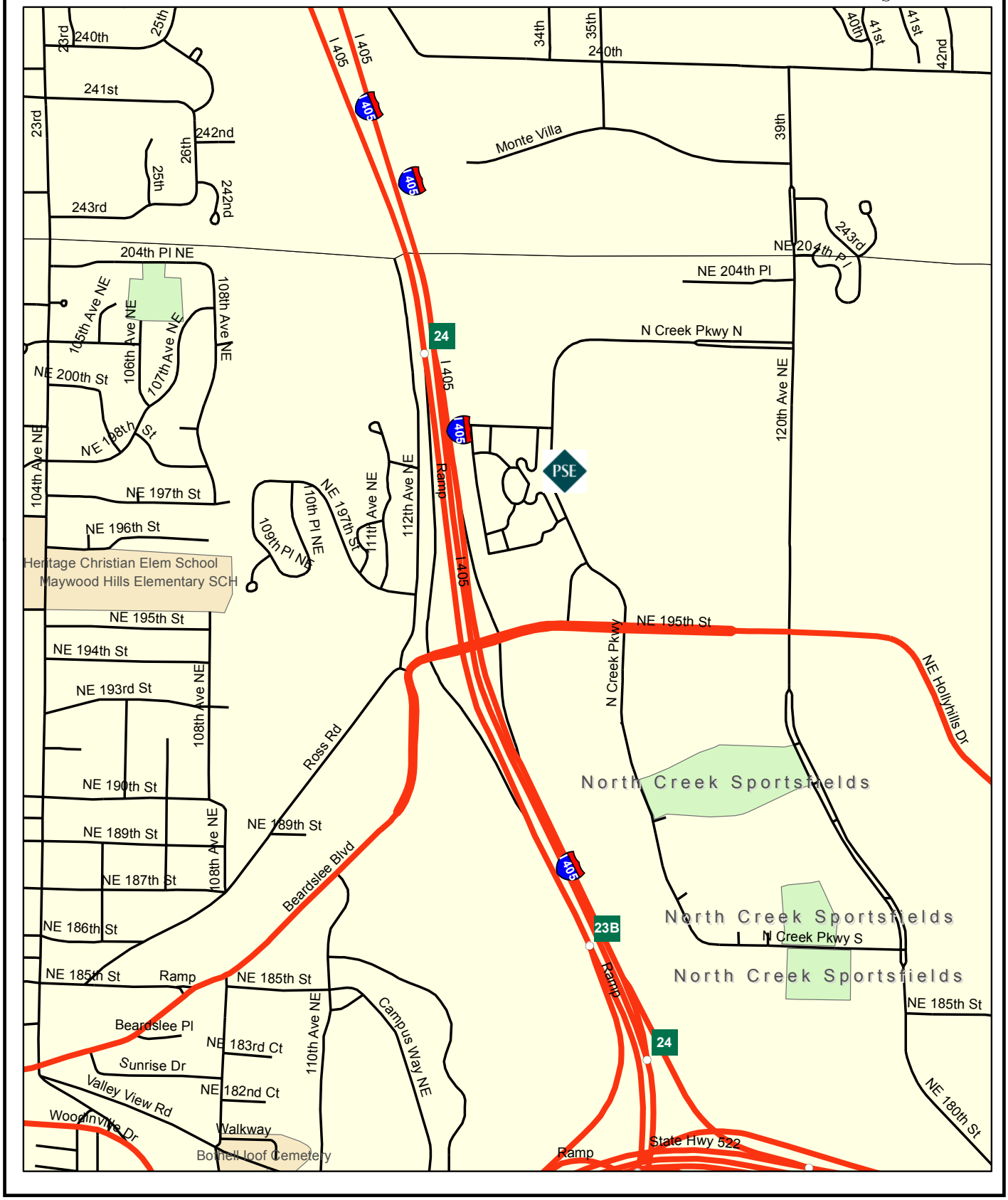
MID 9378002
230 kV Strut Insulator

The weathershed/sheath material is silicone rubber. Base mounting bolt holes consist of two 11/16-inch diameter holes, spaced 4 to 6 inches vertically.

NOTE: Grading rings are not provided with the insulators. The 230 kV strut insulator is to be used in conjunction with a suspension insulator that is equipped with a grading ring.

Exhibit D

Customer Access Center
19900 N Creek Parkway
Bothell, WA 98011



Notes:

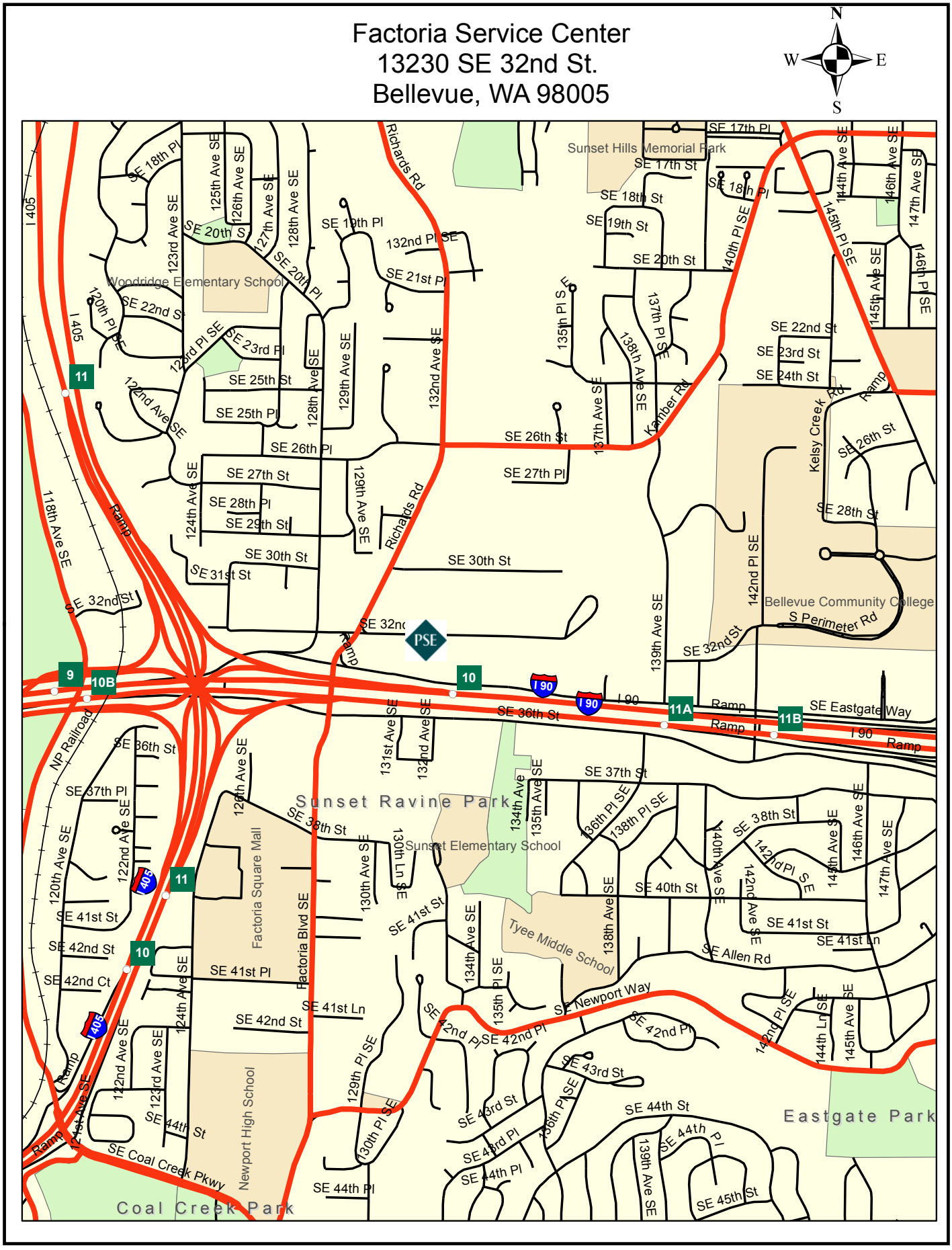
Exhibit D

Eastside System Operations
13635 NE 80th St.
Redmond, WA 98052

Notes:

Exhibit D

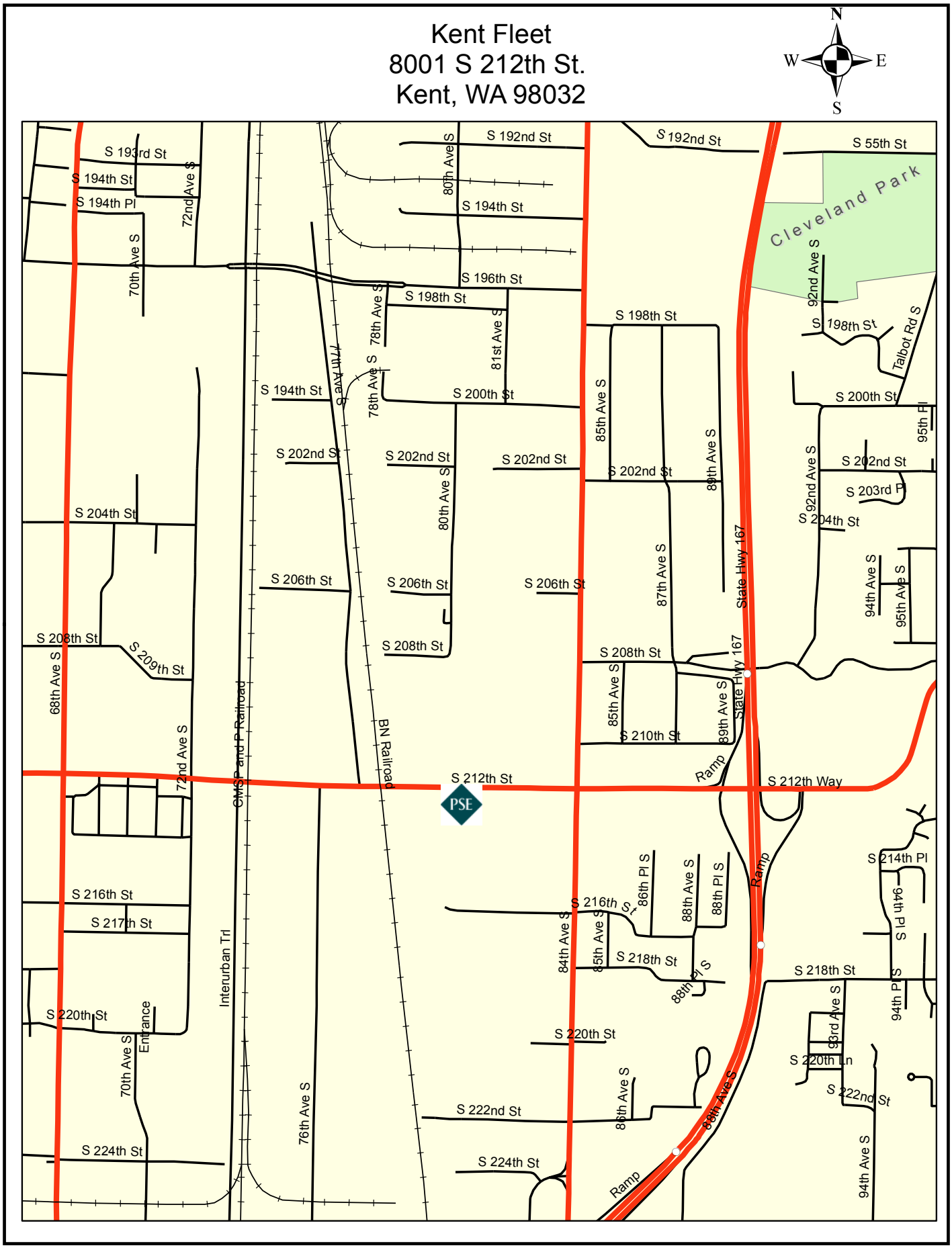
Factoria Service Center
13230 SE 32nd St.
Bellevue, WA 98005



Notes:

Exhibit D

Kent Fleet
8001 S 212th St.
Kent, WA 98032



Notes:

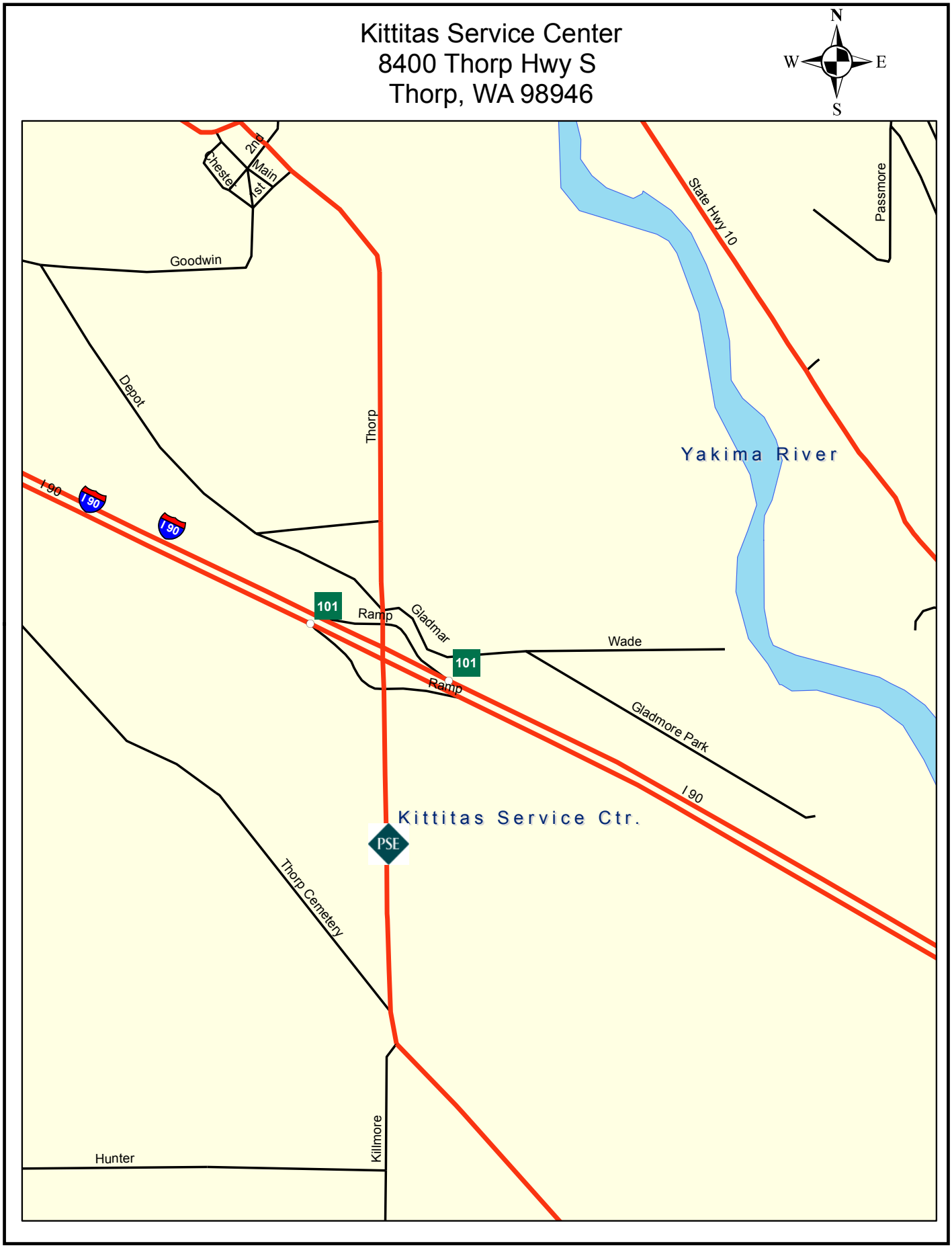
Exhibit D

Kitsap Service Center
6522 Kitsap Way
Bremerton, WA 98312

Notes:

Exhibit D

Kittitas Service Center
8400 Thorp Hwy S
Thorp, WA 98946



Notes:

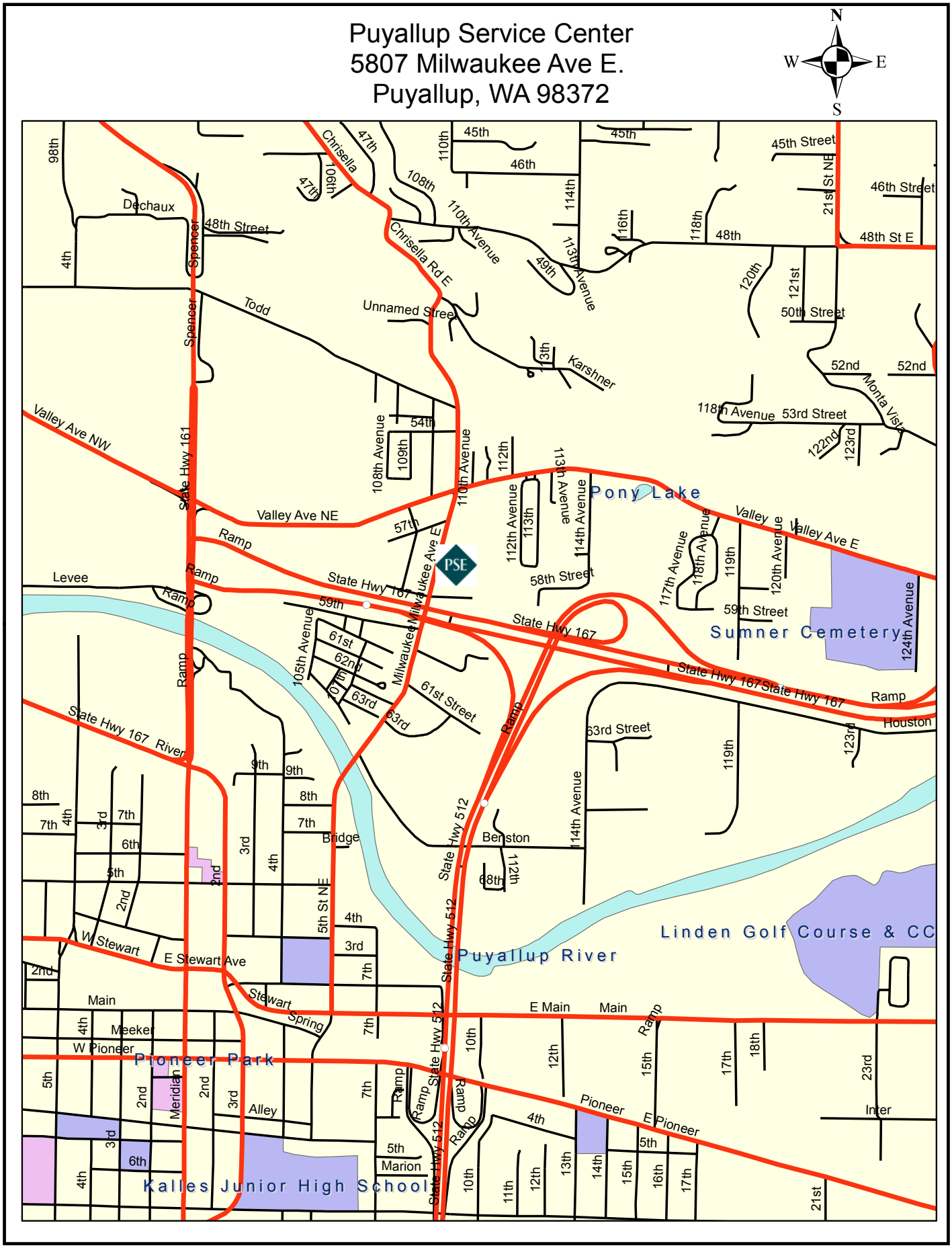
Exhibit D

North King Service Center
18150 Redmond Way
Redmond, WA 98052

Notes:

Exhibit D

Puyallup Service Center
5807 Milwaukee Ave E.
Puyallup, WA 98372



Notes:

Exhibit D

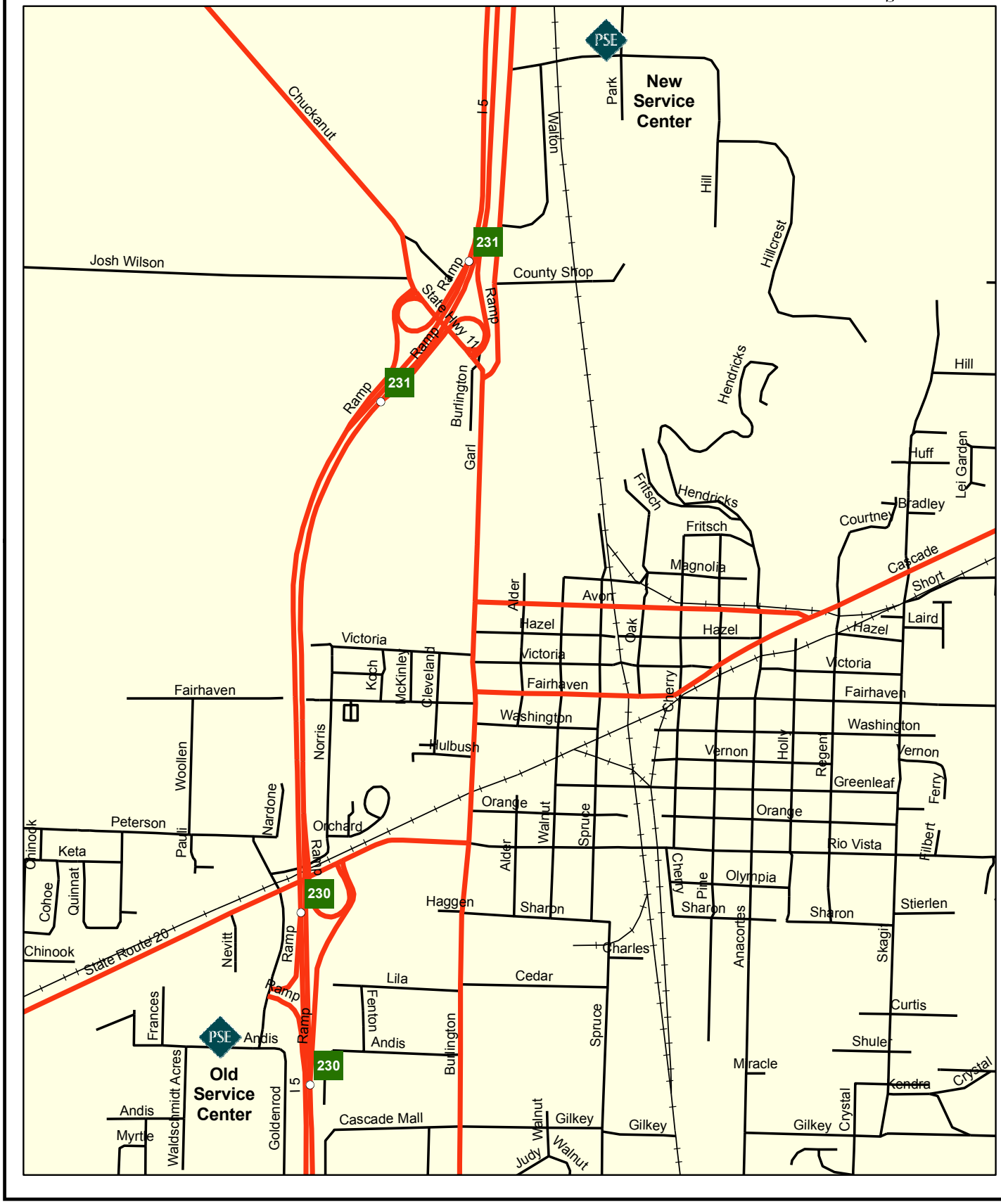
Shuffleton Office
1101 Lake Washington Blvd. N
Renton, WA 98056

Notes:

Exhibit D

Old
Skagit Service Center
18601 Andis Rd.
Burlington, WA 98233

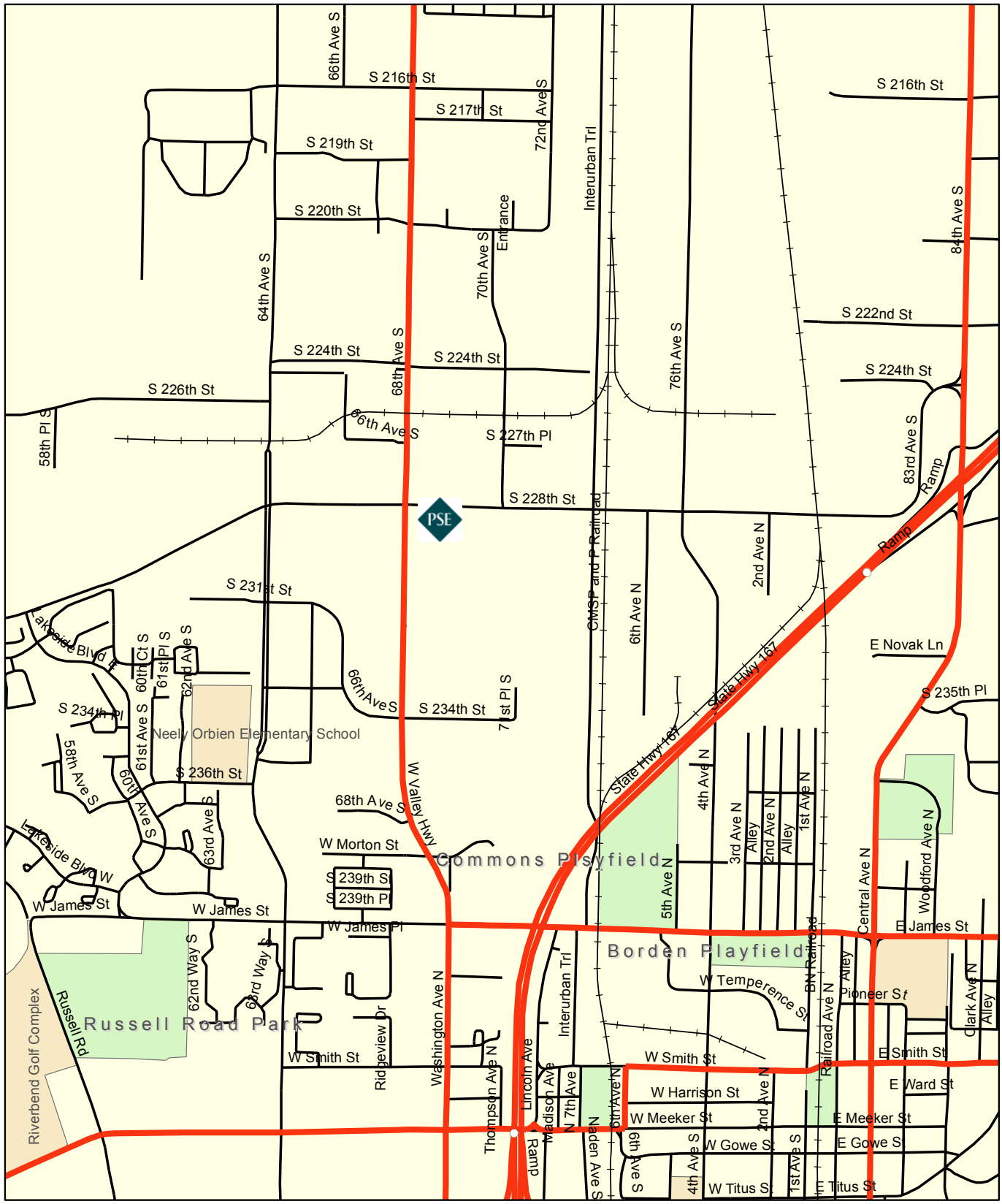
New
Skagit Service Center
1660 Park Lane
Burlington, WA 98233



Notes:

Exhibit D

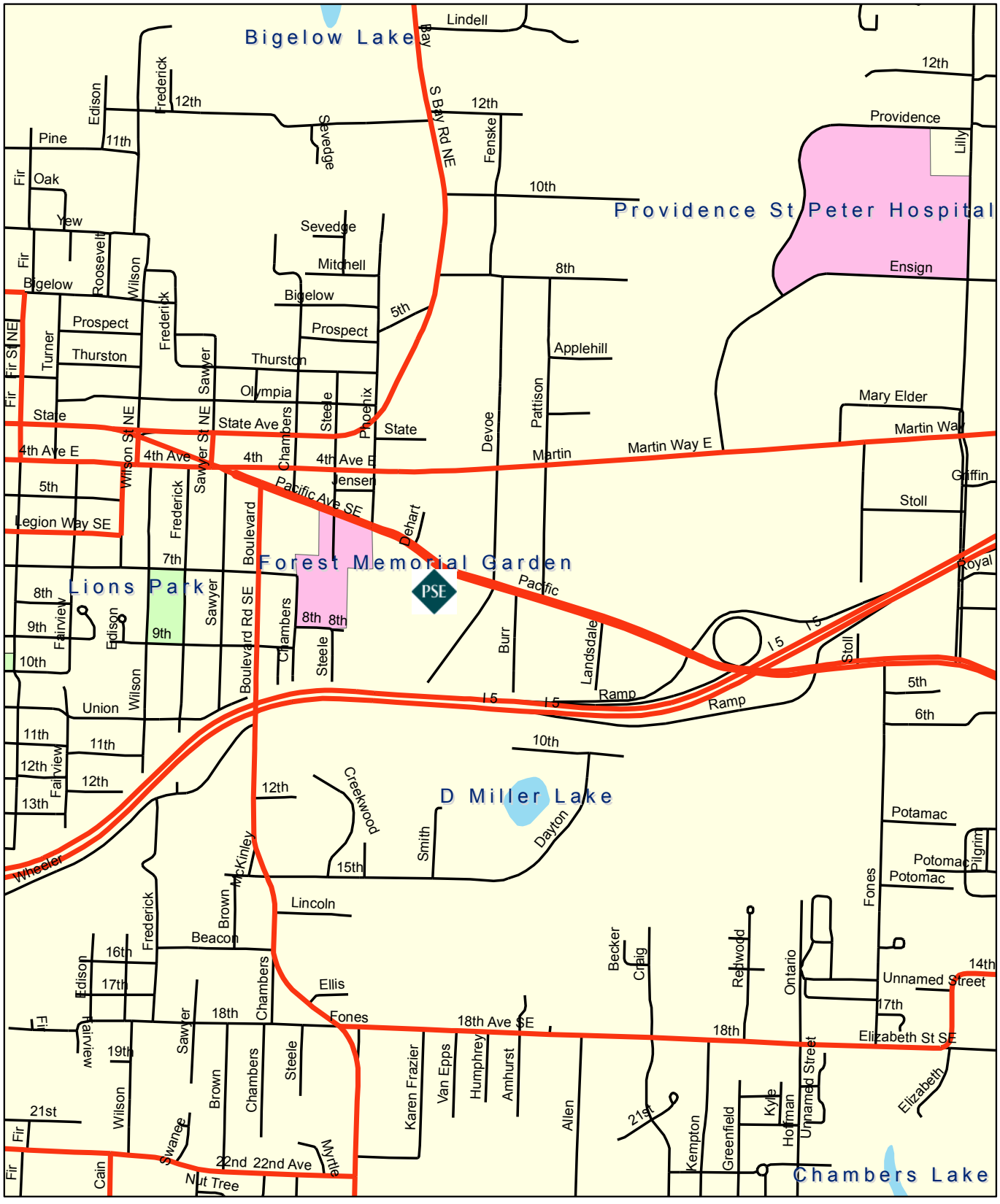
South King Service Center
6905 S 228th St.
Kent, WA 98032



Notes:

Exhibit D

Thurston Service Center
2711 Pacific Ave SE
Olympia, WA 98501



Notes:

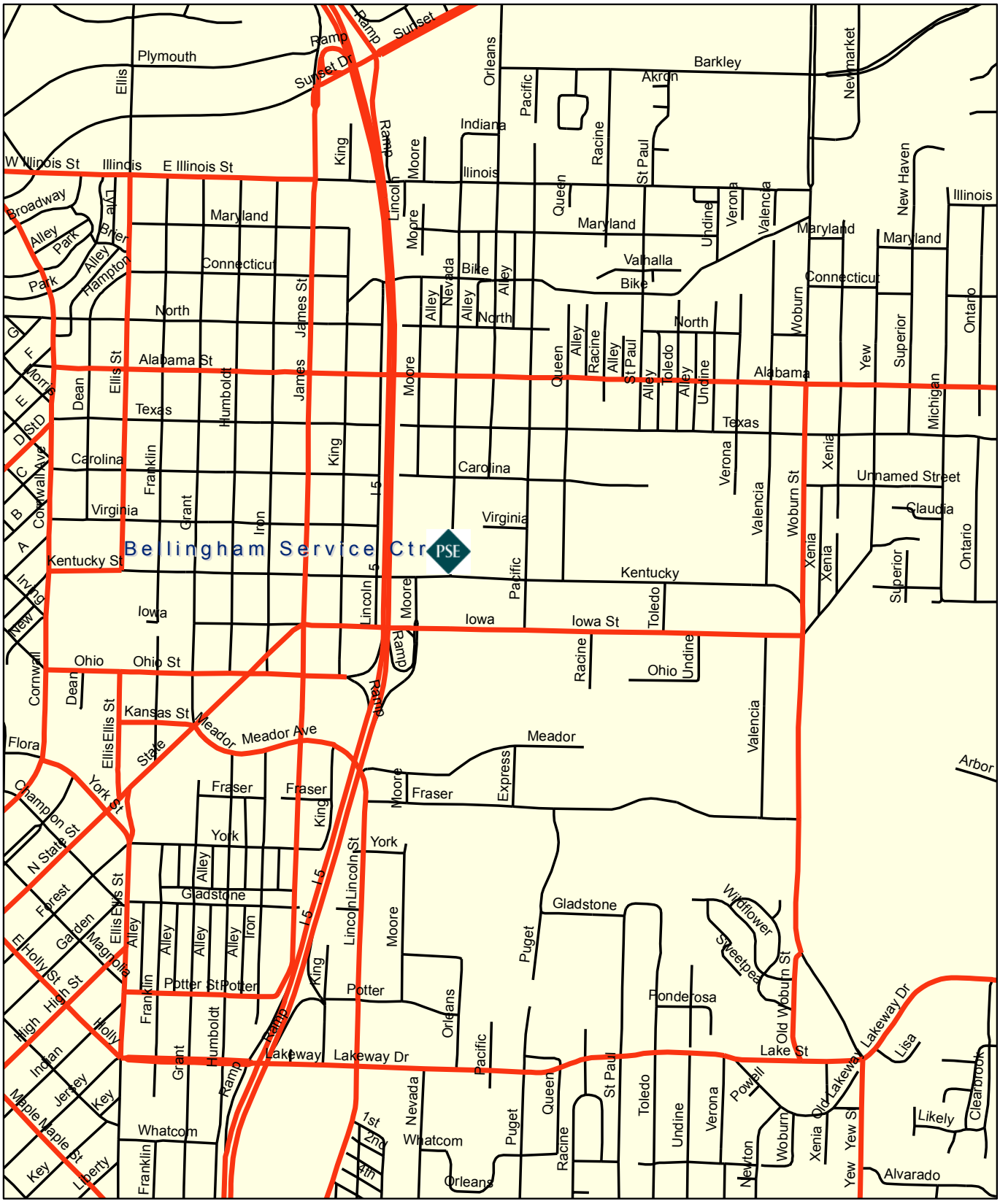
Exhibit D


Vashon Service Center
18125 Vashon Highway SW
Vashon, WA 98070
N
W
E
S
SW Cove Rd
98th Ave SW
95th Ln SW
SW Gorsuch Rd
96th Pl SW
SW 171st St
Puget Sound
90th Ave SW
SW Soper Rd
SW 174th St
Alley
96th Pl SW
95th Pl SW
SW Bank Rd
176th St SW
SW Bank Rd
100th Ave SW
99th Pl SW
94th Pl SW
107th Ave SW
SW 178th St
SW 180th St
SW 180th St
PSE
McLean Rd SW
SW 183rd Pl
SW 184th St
103rd Ave SW
Vashon Hwy SW
96th Pl SW
SW 188th St
SW 188th St
Puget Sound
SW 190th St
87th Pl SW
Ridge Rd SW
SW 192nd St
103rd Ave SW
Beall Rd SW
SW Cemetery Rd

Notes:

Exhibit D

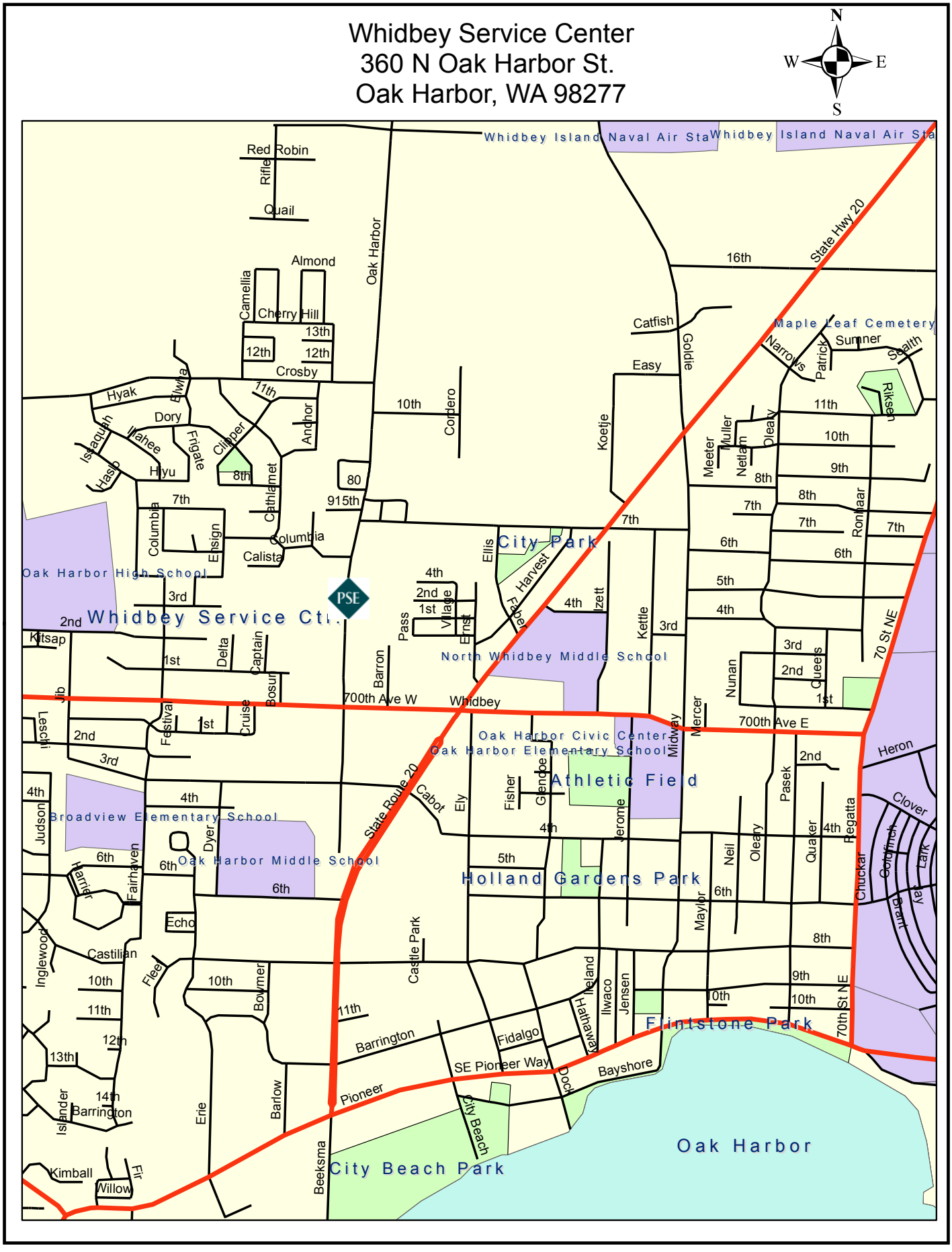
Whatcom Service Center
2131 Nevada St.
Bellingham, WA 98226



Notes:

Exhibit D

Whidbey Service Center
360 N Oak Harbor St.
Oak Harbor, WA 98277



Notes:

SAMPLE AGENDA

Fall Storm Leadership Meeting – PSE/Potelco

October 7, 2009
10:00 a.m. – Noon
Summit Conference Room – PSE Building 2nd Floor

10:00 a.m. – 10:10 a.m.	**Introductions**
10:10 a.m. – 10:30 a.m.	**Opening Comments** *Sr. Management*
10:30 a.m. – 11:00 Noon	**National Weather Service**
11:00 p.m. – 11:20 p.m.	**Expectations & Roles of EOC & Base Leadership** *Operations Directors*
11:20 p.m. – 11:30 p.m.	**What's New from 2008-09** *Emergency Planning*
11:30 p.m. – 11:50 p.m.	**Updates** ***Expected Crew Resources*** ***Customer Access Center Readiness*** ***Storm Communications Strategy***
11:50 p.m. - Noon	**Questions???** **Adjourn**

Exhibit F

Service Alert Map

City Outage View | ZIP Code Restoration View | How To Use This Map

City outage view shows estimated number of customers without service

This map displays the latest estimated number of customers without electric service in a selected community. Enter a city's name in the left-hand column's "Search" box or hold your cursor over a particular location on the map to get the most up-to-date number of PSE customers without electric service in that city. The map does not show outages with fewer than 50 customers. Time estimates for power-restoration in hard-hit communities will be posted, when available, on the Service Alert Latest Updates page.

Text Version

Return to Service Alert main page >>

Show map details

- [x] Cities
- [x] Highways
- [ ] PSE Electric Service Area

Zoom in/out

Zoom in to county level or zoom out to All Counties

All Counties

Refresh the map

Updated 11:05 AM PT
Map data is automatically updated every 15 minutes. Refresh this page in your browser to display the latest information.

Refresh data

Search by city

Enter city

Search

Search results:
City: **Bellevue**
Customers without service: **156**

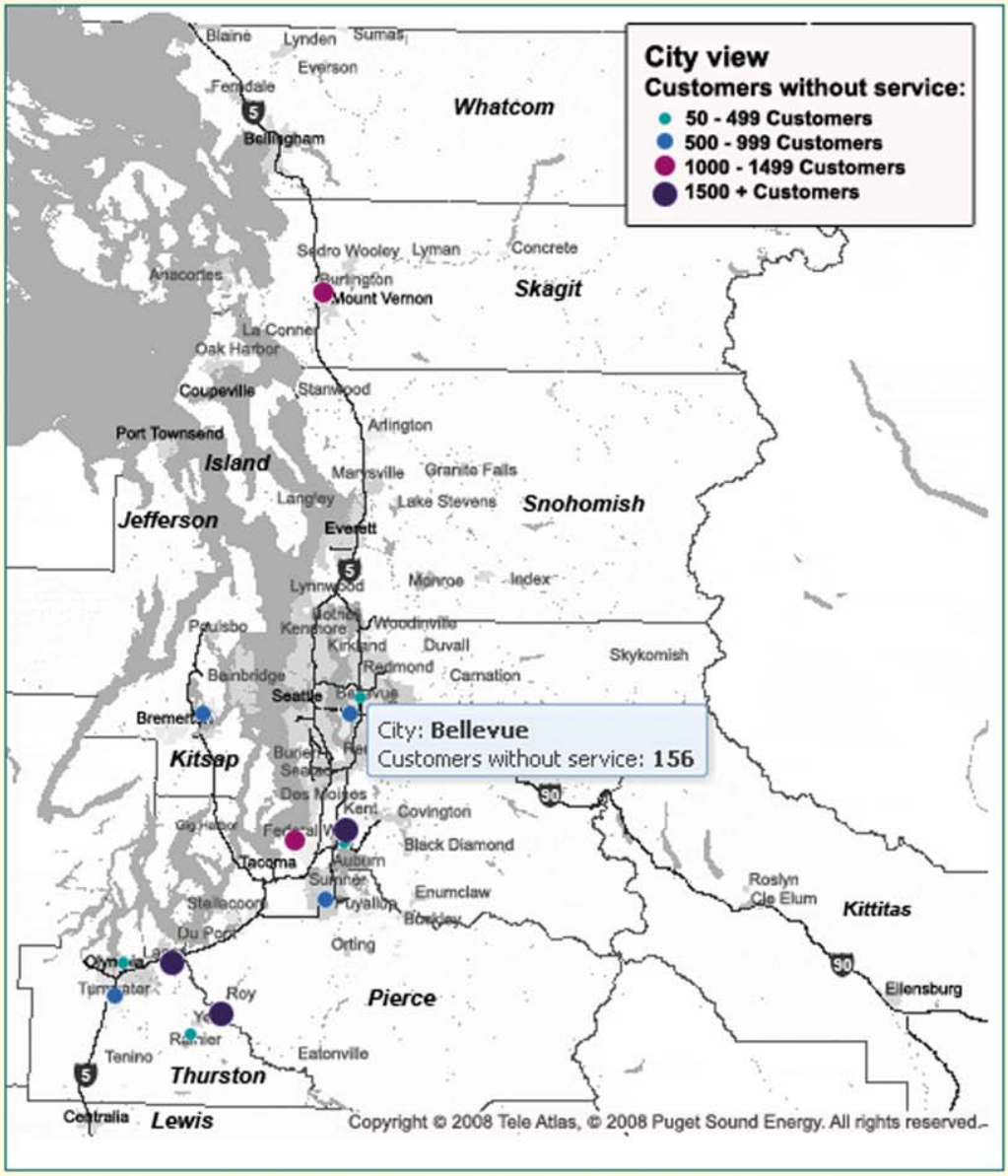


Exhibit F

Service Alert Map

City Outage View | ZIP Code Restoration View | How To Use This Map

ZIP code restoration view shows restoration status

This map shows the current status by ZIP code area of PSE power-restoration efforts. Enter your ZIP code in the left-hand column's "Search" box or hold your cursor over a particular location on the map to get repair-status information. The map does not show outages with fewer than 50 customers. Time estimates for power-restoration in hard-hit communities will be posted, when available, on the Service Alert Latest Updates page.

Text Version

Return to Service Alert main page >>

Show map details

- [x] Cities
- [x] Highways
- [ ] PSE Electric Service Area

Zoom in/out

Zoom in to county level or zoom out to All Counties

All Counties

Refresh the map

Updated 11:05 AM PT
Map data is automatically updated every 15 minutes. Refresh this page in your browser to display the latest information.

Refresh data

Search by ZIP code

Enter ZIP code

Search

Search results:
ZIP: **98002**
Customers without service: **67**
Status:
Assessment/mobilization

Note: Multiple results for a single ZIP-code entry may

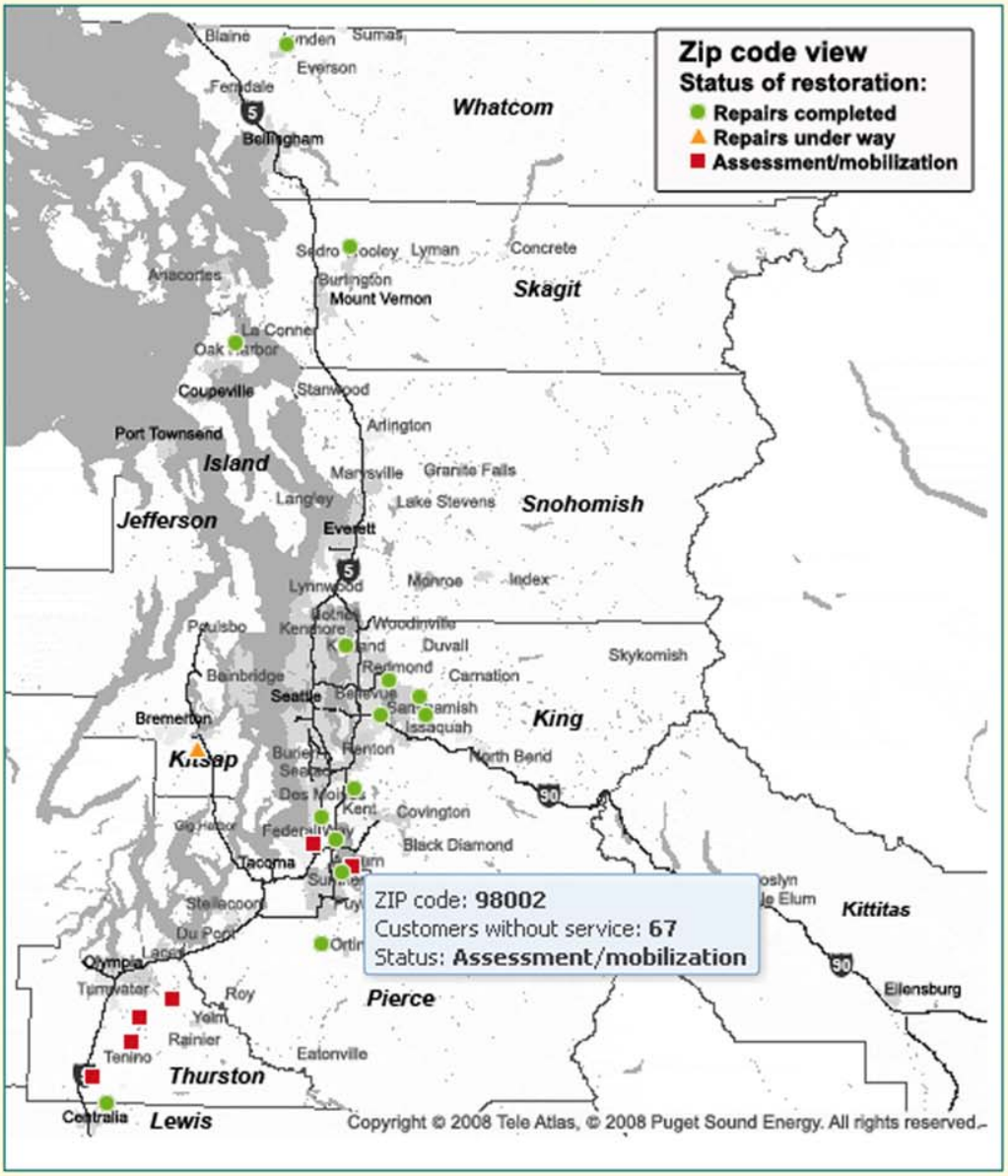


Exhibit F

Home | Pay Stations & Service Map | Contact Us

PUGET SOUND ENERGY
The Energy To Do Great Things

My PSE Account » LOGIN

Tuesday, September 16, 2008 Search

HOME & BUSINESS SOLUTIONS | SAFETY & RELIABILITY | ENERGY & ENVIRONMENT | COMMUNITY | INSIDE PSE

Service Alert Map

City Outage View | ZIP Code Restoration View | How To Use This Map

City outage view shows estimated number of customers without service

This map displays the latest estimated number of customers without electric service in a selected community. Enter a city's name in the left-hand column's "Search" box or hold your cursor over a particular location on the map to get the most up-to-date number of PSE customers without electric service in that city. The map does not show outages with fewer than 50 customers. Time estimates for power-restoration in hard-hit communities will be posted, when available, on the Service Alert Latest Updates page.

Text Version

Return to Service Alert main page >>

Show map details

- [x] Cities
- [x] Highways
- [ ] PSE Electric Service Area

Zoom in/out

Zoom in to county level or zoom out to All Counties

All Counties

Refresh the map

Updated 11:05 AM PT
Map data is automatically updated every 15 minutes. Refresh this page in your browser to display the latest information.

Refresh data

Search by city

Enter city

Search

Search results:
City: **Bellevue**
Customers without service: **156**

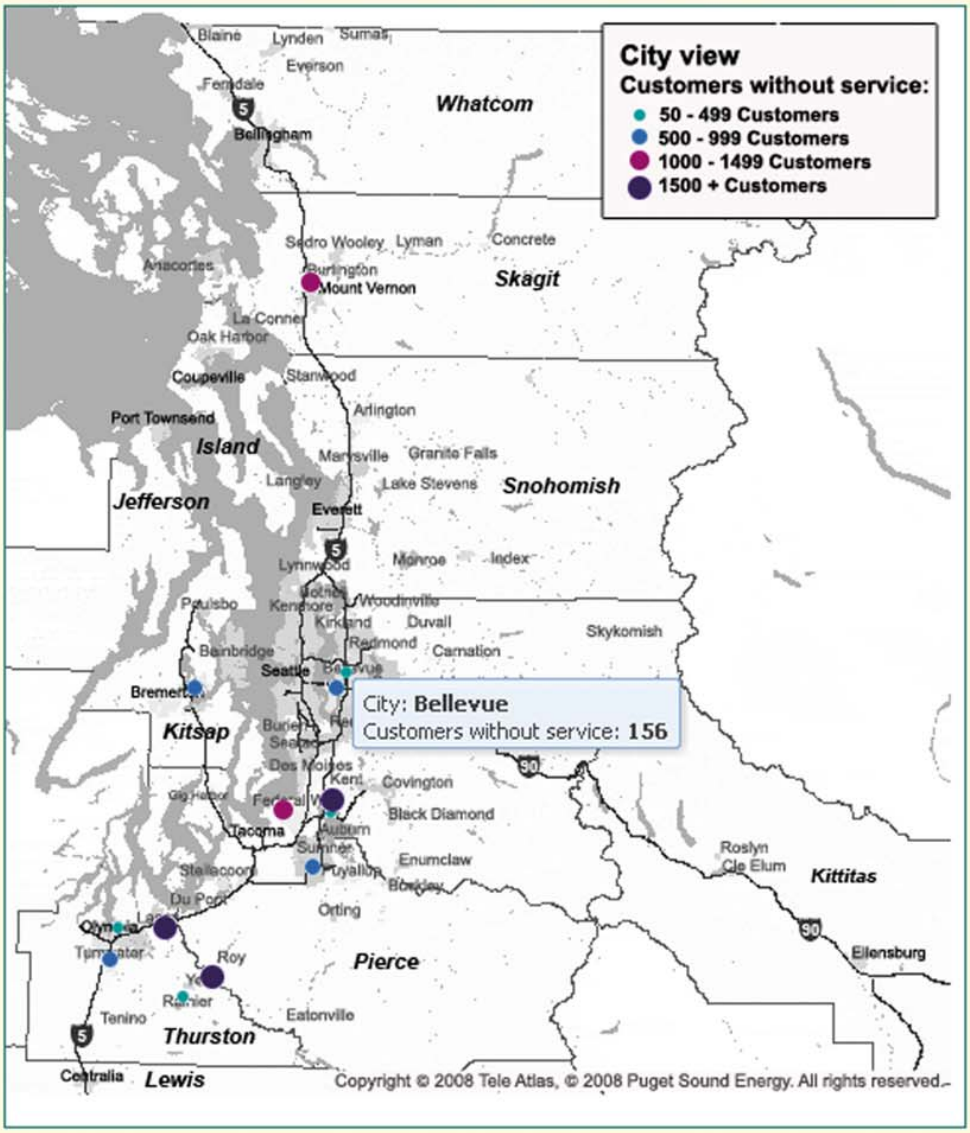
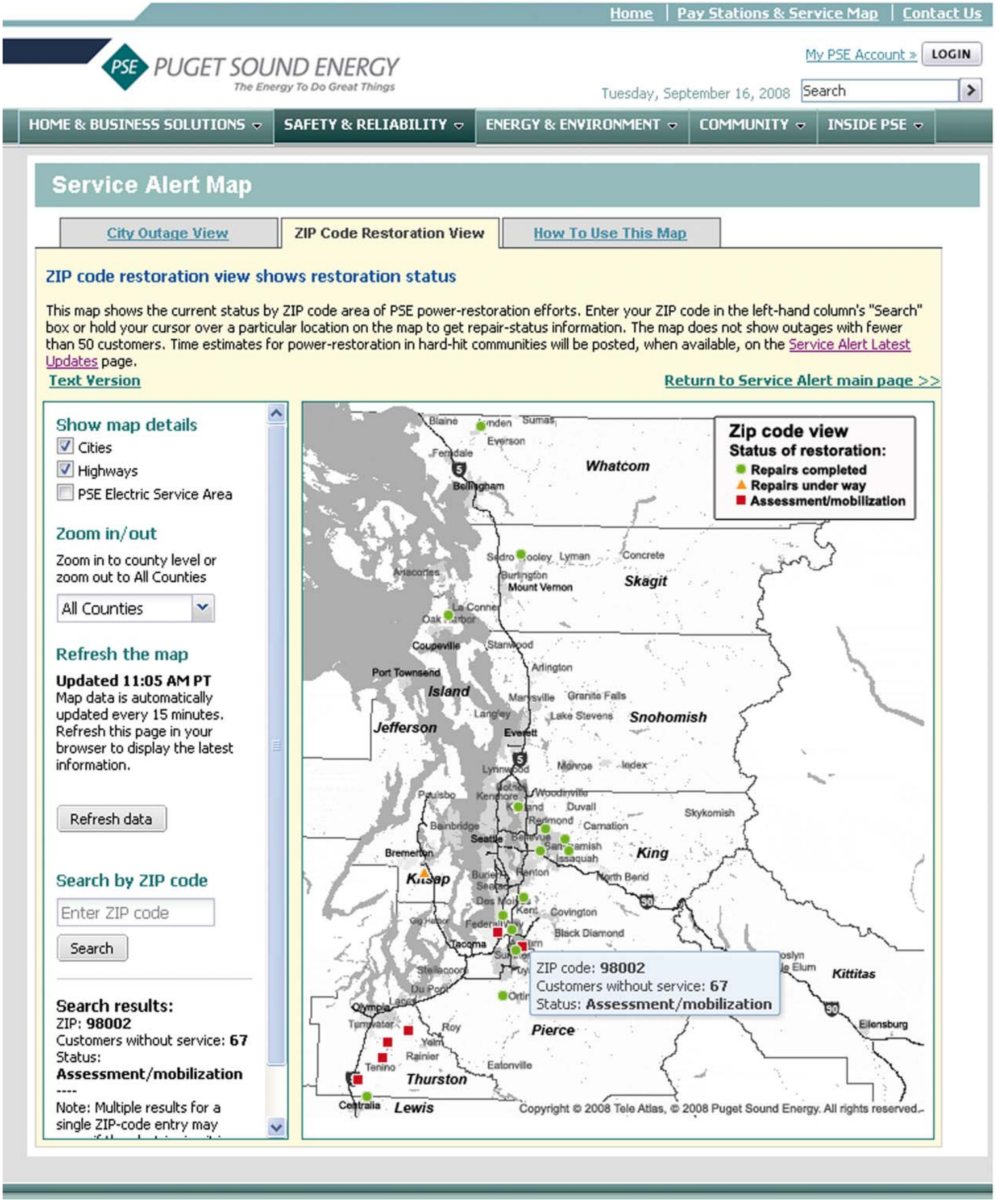


Exhibit F


Home | Pay Stations & Service Map | Contact Us
PUGET SOUND ENERGY
The Energy To Do Great Things
My PSE Account » LOGIN
Tuesday, September 16, 2008 Search
HOME & BUSINESS SOLUTIONS
SAFETY & RELIABILITY
ENERGY & ENVIRONMENT
COMMUNITY
INSIDE PSE
Service Alert Map
City Outage View
ZIP Code Restoration View
How To Use This Map
ZIP code restoration view shows restoration status
This map shows the current status by ZIP code area of PSE power-restoration efforts. Enter your ZIP code in the left-hand column's "Search" box or hold your cursor over a particular location on the map to get repair-status information. The map does not show outages with fewer than 50 customers. Time estimates for power-restoration in hard-hit communities will be posted, when available, on the Service Alert Latest Updates page.
Text Version
Return to Service Alert main page >>
Show map details
Cities
Highways
PSE Electric Service Area
Zoom in/out
Zoom in to county level or zoom out to All Counties
All Counties
Refresh the map
Updated 11:05 AM PT
Map data is automatically updated every 15 minutes. Refresh this page in your browser to display the latest information.
Refresh data
Search by ZIP code
Enter ZIP code
Search
Search results:
ZIP: 98002
Customers without service: 67
Status:
Assessment/mobilization

Note: Multiple results for a single ZIP-code entry may
Zip code view
Status of restoration:
Repairs completed
Repairs under way
Assessment/mobilization
Whatcom
Skagit
Island
Jefferson
Snohomish
King
Kitsap
Pierce
Thurston
Lewis
Kittitas
ZIP code: 98002
Customers without service: 67
Status: Assessment/mobilization
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Exhibit G

2009-2010 Communictionas Coordinators and Leads

Last Name	First Name	Primary ER Assign	Secondary ER Assign
[redacted]	[redacted]	Communications Coordinator	Communications Lead
[redacted]	[redacted]		Communications Lead
[redacted]	[redacted]	Communications Coordinator	Communications Lead
[redacted]	[redacted]	EFR Supervisor	Communications Lead
[redacted]	[redacted]		Communications Lead
[redacted]	[redacted]	Communications Coordinator	Communications Lead
[redacted]	[redacted]	Communications Lead	Damage Assessor
[redacted]	[redacted]	911 Call Coordinator	Communications Lead
[redacted]	[redacted]		Communications Lead
[redacted]	[redacted]	EFR Supervisor	Communications Lead
[redacted]	[redacted]	EFR Supervisor	Communications Lead
[redacted]	[redacted]	Communications Lead	Crew Coordinator
[redacted]	[redacted]	Communications Coordinator	Communications Lead
[redacted]	[redacted]	Storm Board Analyst	Communications Lead
[redacted]	[redacted]	Communications Coordinator	Communications Lead

Exhibit H

Emergency Response Logistics Plan

Prepared by:

[redacted]

The objective of logistics is to support personnel during an event in a manner that is consistent with the goals and procedures of restoration operations. Logistics must enhance the ability of personnel to efficiently complete the task at hand.

This plan will delineate roles and responsibilities of personnel, identify resources and services required to establish and support local area coordination and staging areas and document vendor deployment processes. The plan will also identify a network of vendors qualified to provide the required resources and/or services.

Well planned and executed logistics can improve restoration operations significantly and reduce the ultimate cost of the restoration by eliminating unnecessary delays in supporting response personnel.

Table of Contents

Appendices:

Purpose

To implement logistical strategies that enhance Puget Sound Electric's, hereinafter referred to as PSE, ability to restore services in an efficient manner. Establish parameters to help PSE determine level of external logistical support required for restoration event(s). Identify the resources required to support the restoration workforce and establish processes for securing and managing those assets.

Scope

Establish process implementation criteria and timelines for efficient mobilization and management of resources required to support crews involved in system outage events. Provide scalable support, depending upon PSE internal Event Level criteria for company, contract and mutual aid restoration crews during system restoration events.

Establish a vendor network capable of responding to the plan requirements. The vendor network will include qualified vendors currently engaged by PSE. Conduct periodic surveys of vendor network to ensure reliability of the network. Update logistics plan on an annual basis.

Provide logistics personnel, both on-site and/or from Base Logistics Incident Command Center, to secure and manage support resources during Level 3 and/or other restoration events as requested by PSE.

Resources and Services:

LAC/Staging Sites - Deploy resources and personnel, as required, to establish local area coordination and staging sites identified by PSE. If Base Logistics is activated, PSE will issue a formal **'Notice to Proceed'** listing the services and/or resources required at each location.

Meal Service – Deploy catering units to provide meal service at each staging site activated. Unless otherwise directed by PSE, the catering units will provide breakfast and dinner meals. Box lunches will be provided to all personnel each morning prior to departing the staging site. Provide a variety of snacks, sports drinks, bottled water and ice available to crews prior to departure.

- Breakfast will be buffet style and include eggs, breakfast meat (bacon, sausage, and ham), potatoes, pancakes or waffles, biscuits and associated condiments. Hot and cold cereals will also be available

- Lunches will consist of a cold cut sandwich on a hoagie roll or similar bread, chips, fruit, additional snacks and appropriate condiments.

- In extended response situations, or during cold weather responses, it may be desirable to provide an occasional 'hot meal' at the lunch period. These meals would have to be delivered to crews in the field rather than being picked up at breakfast. If hot lunches are prepared, the following procedures will apply:

  - Establish 'hot meal' schedule prior to deployment if possible
    - Give 48hr notice to caterer if prior notice not possible
  - Provide sufficient personnel to distribute lunches to field locations
    - Base Logistics to provide additional personnel for lunch distribution if requested
  - Establish pick up points and times and arrange to have crew supervisors meet food couriers to pick up meals for their crews

- Supper will be buffet style and include two (2) entrees with soup/salad, vegetable, bread and dessert. Appropriate condiments will also be included in the supper meal

- Deploy tents with appropriate number of tables and chairs to provide dining and catering preparation facilities at each site.

  - May include storage tents for catering paper products and bottled water/sodas

Ice – Deliver bagged ice to each staging site in sufficient quantities to support the assigned crews and catering operations. Appropriate storage units, refrigerated trailers and/or reach-in storage boxes will be positioned at each location to store the ice.

Sodas, bottled water – Assorted sodas, sport drinks and bottled water will be delivered to each site for crew consumption. These items will be available to crews prior to departing the staging site each morning for their assigned work area.

Snack Items – Provide an assortment of snack items at each staging site for crews to access on a daily basis. These items promote goodwill and keep personnel at work locations between meal periods.

Fleet Fueling – Secure and deploy equipment to provide wet-hose fueling capacity as requested. Fueling operation will be 24/7 with bulk of wet-hose operation to be performed during the overnight hours.

Laundry Service - Local laundry service will be provided in each region. Laundry service is scheduled to begin on day two (2) and continue on a daily basis throughout the event and will be coordinated from each staging location.

- Provide on-site mobile laundry units and personnel in situations where local facilities are unavailable or cannot provide sufficient capacity

Portable Restrooms / Hand Wash Stations / Trash Receptacles – Base Logistics will deploy portable restrooms, hand wash stations and trash bins/roll-offs to each activated site in accordance with the expected personnel deployment. 30yd roll-off scrap container(s) will be positioned to allow easy access to service trucks as they enter the staging site. Additional 20-30yd roll-offs and trash boxes will be placed in close proximity to catering operations and to fleet parking areas. Scheduled service will be included with all restroom and trash receptacle deployments.

Tower Lights – Lighting will be required at sites that have no or insufficient lighting to support staging operations. Tower Lights equipped with 4 to15KW generators will be dispatched where required. Generally, this lighting will be required for fleet parking areas, material depots and for catering operations. These lights can also support low amperage power requirements.

Staging Site Office(s) – Deploy portable buildings and/or travel trailers to staging sites as directed by PSE to be utilized as staging site offices**.**

- Trailers to contain 5 – 6 work spaces (desks), small meeting area, HVAC and power generation to support unit(s).

Tents – Secure and deploy storage tents at each site as required to protect on-site materials.

Alternative Lodging (Bunk Trailers / Sleep Tents) - Provide bunk trailers and/or sleep tents for housing restoration crews in areas where traditional lodging is compromised.

Mobile Showers / Mobile Laundry – Where alternative housing is utilized, provide mobile shower and laundry units.

- **Potable Water -** Potable water tankers must be deployed to sites where service is not available
- **Gray Water –** Gray water bladders and disposal trucks must be deployed to sites where proper discharge conduits not available

Other resources – Provide other site resources as requested by PSE including golf carts or similar for staging site transportation, forklifts for material distribution operations and/or any other resource necessary to support restoration operations

Site Cleanup - Ensure that resources dispatched to all sites are removed in a timely manner. Additionally, remove debris generated during the response effort. Notify PSE of any environmental or liability concerns resulting from restoration operations.

Response Parameters

PSE

This plan is designed to allow PSE the flexibility to manage restoration logistics internally, especially for small events, and/or engage Base Logistics to provide any or all of the logistics support required during Level 2 and Level 3 events.

PSE will determine extent of support required for Level 0 through Level 2 events and may chose to initiate logistics response internally. PSE personnel can utilize the local vendor network and response parameters established in this plan to accomplish these tasks.

Base Logistics

If a storm system should pose a threat to PSE's service territory, Base Logistics and PSE's Storm Command will determine the level of alert based on PSE Event Level Criteria and begin preparations for a potential response. At the request and direction of PSE, Base Logistics will initiate the required logistics processes[1].

PSE can alert Base Logistics by contacting any of the personnel listed in the Emergency Contact Section of this document. Base Logistics personnel maintain 24/7 availability and are prepared to respond immediately to any logistical request.

> **Authorization** - To ensure proper notification of activation requests, PSE should transmit a '**Notice to Proceed'**[2] to Base Logistics. This authorization can be faxed to Base @ 504.733.6531 or transmitted via e-mail to Jodi Langston or Jeff Badeaux at Base Logistics. Base will acknowledge receipt of the authorization and begin securing the appropriate resources.
>
> **Activation –** Upon activation, Base Logistics will deploy a logistics management team to the affected area(s). The team will work with PSE personnel to assess logistical requirements, coordinate resource deployment and manage the deployed resources. Typically, the Base team will include site logistics manager(s); logistics support personnel, catering manager(s)[3] and a lead logistics manager **(to be deployed to PSE's Storm Logistics Command Center)**. **If sleep tents and/or bunk trailers are part of the activation, Base will also deploy personnel to manage these resources.** The number of personnel assigned to a response will be determined by the size of the event and the scope of Base Logistics' responsibility.

[1] **Refer to pre-storm activation process**
[2] **Appendix 3**
[3] **May reside in Incident Command Center or at on-site location**

Responsibilities:

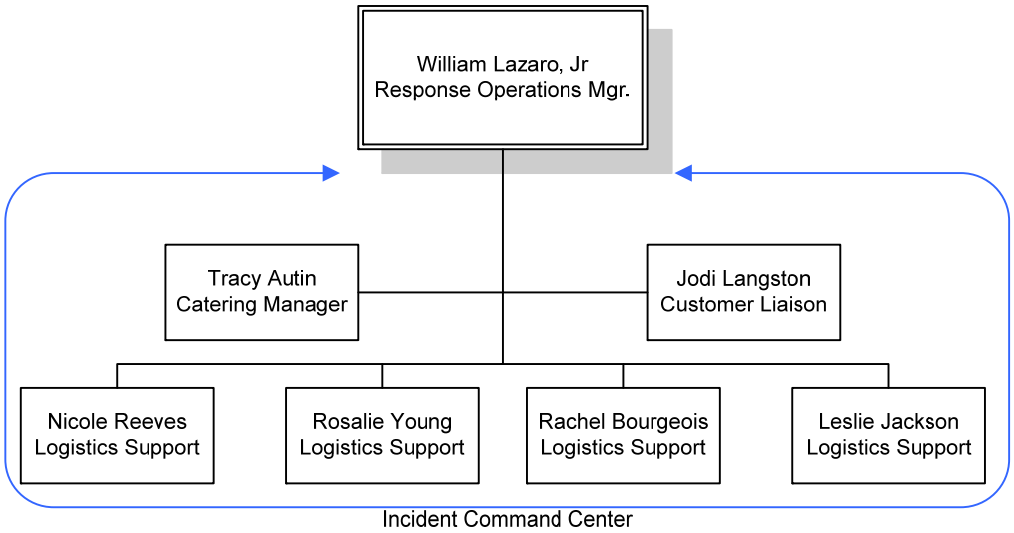
PSE Logistics – PSE logistics management will determine response requirements, identify LAC and staging sites to open and inform Base Logistics, via 'Notice to Proceed', of response expectations, including number of personnel expected to support.

PSE Site Logistics Coordinators will coordinate site setup and direct Base Logistics site personnel as to local needs. The logistics coordinators will communicate number of crews to support and any crew movements (additions, releases and/or reassignments) to Base site personnel to ensure adequate support levels are maintained.

Base Logistics Incident Command Center - The Incident Command Center personnel maintain communications with PSE to identify response requirements (staging areas, number of personnel requiring support, anticipated services). Base Logistics ICC personnel also secure and deploy the resources required to attain the level of support requested by PSE.

Incident Command Structure

Base Logistics Incident Command Center will be staffed according to PSE's restoration requirements. Typically the ICC command structure includes a Response Operations Manager (William Lazaro), a Customer Liaison (Jodi Langston), a Catering Manager (Tracy Autin) and depending upon the response requirements two to four logistics support persons (to secure and deploy staging area resources). The number of support personnel will be scaled to meet specific response requirements.

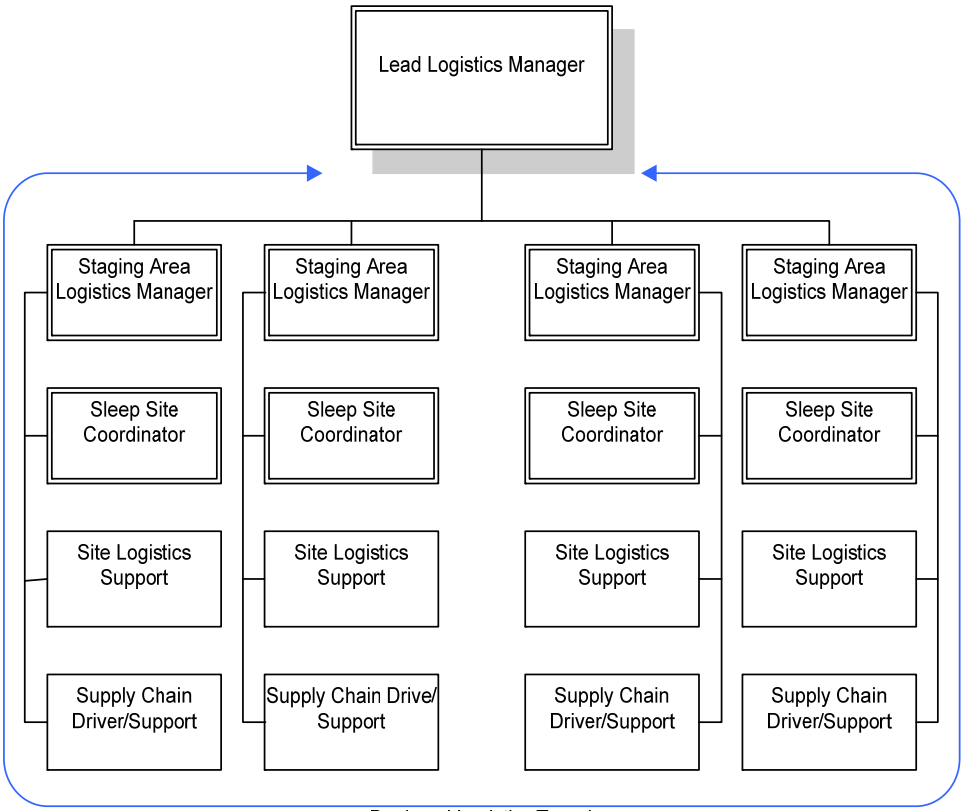


Base Logistics Deployed Personnel – Upon activation, Base Logistics will deploy a logistics management team to PSE. The team will interface with PSE response management personnel, coordinate deployment of staging area resources and manage staging area support operations.

Deployed Personnel Structure

The deployed logistics team will consist of a lead logistics manager, area and/or staging area logistics managers and site logistics support/supply chain personnel. The lead logistics manager will initially report to PSE Logistics / Storm Command to work closely with PSE logistics management to direct all support functions. This person also provides an on-site, single source contact for PSE's Storm Management Team.

The area and/or staging area logistics manager(s) will coordinate the deployment and daily functions of the resources assigned to his/her area of responsibility. These managers will report up to PSE Site Logistics Coordinators to ensure that all local requirements are met. If alternative lodging is required at any staging area, Base Logistics will deploy a sleep site coordinator to manage set-up and daily operations. Logistics support and/or supply chain personnel will be deployed to support staging area operations as necessary.



Deployed Logistics Team*

*The size and makeup of the deployed logistics team will vary from event to event.

Pre-Storm Activation Process

Establishing processes and timelines for resource procurement enables a timely and effective response in an outage situation. This proactive approach ensures availability of necessary products and services in a normally high demand period.

- If a storm should pose a threat to PSE's service area, ***normally 96-72 hours prior to impact***, PSE and Base Logistics will determine the appropriate level of alert and will respond as follows:

  - Prepare Base Logistics systems and personnel for potential response
  - Prepare PSE logistics personnel for potential response
  - Alert vendor network of standby status[4]

- If the probability of impact is more immediate, ***48 - 24 hours prior***, Base Logistics will, at PSE's direction, begin securing resources and vendors[5] necessary to support the restoration effort. This may include staging personnel and equipment in advance of the anticipated event.

[4] Base Logistics internal process
[5] As specified in Scope

Pre-Storm Activation Narrative

- **Within 96hrs of storm activity:**
  - Base Logistics and PSE monitors pending event
  - PSE determines potential requirements and notifies Base Logistics
  - Base alerts vendor network of possible deployment

- **Within 72hrs of storm activity**
  - Base Logistics and PSE continue to monitor pending event
  - Base Logistics contacts PSE to determine if alternative housing will be required
  - PSE issues **'Notice to Proceed'** authorizing Base Logistics to secure alternative housing resources

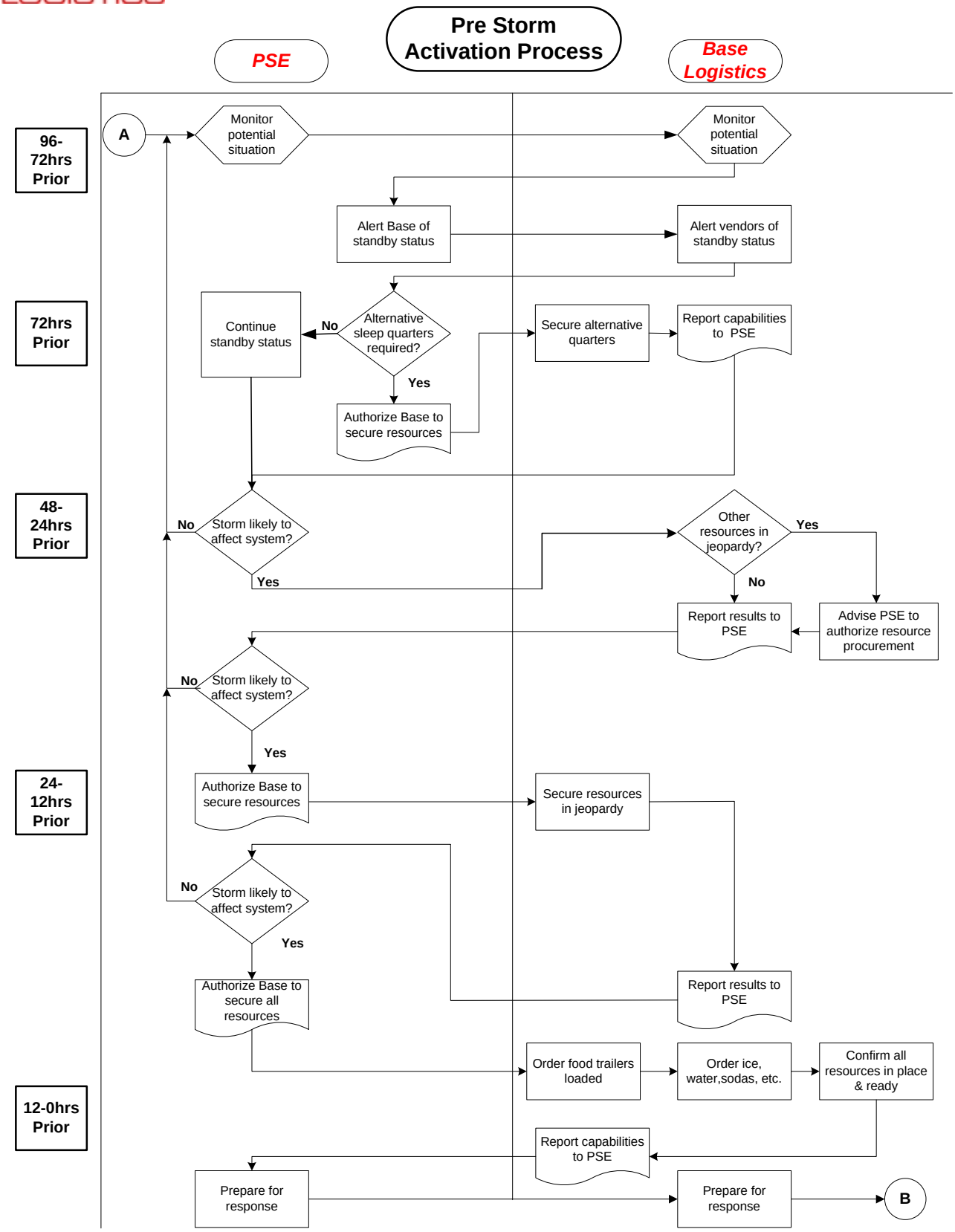
- **Within 48hrs of storm activity:**
  If storm is still expected to impact PSE's Service Territory the following sequence should transpire:
  - Base Logistics confirms vendor capability
    - Notify PSE if any resources are in jeopardy (high demand items for pending event) and recommend advance procurement of those items
  - PSE authorizes Base Logistics to secure resources at risk via Notice to Proceed
    - Base Logistics secures resources in jeopardy and reports capacity to PSE

- **Within 24hrs of storm activity:**
  If storm is still expected to impact PSE' Service Territory at this point, resources required for immediate deployment should be secured under the following parameters:
  - PSE authorizes Base Logistics to secure immediate need resources for expected response
  - Base Logistics secures staging site resources for immediate dispatch once storm has cleared area
    - Position sleep site resources for immediate dispatch
  - Base Logistics stages personnel/vendors/resources close to affected area for quick response
    - May include evacuation from coastal areas if required[6]

- **Within 12hrs of storm activity:**
  - Base Logistics places food orders and has trailers pre-loaded
  - Base Logistics confirms all resources available and ready for deployment
  - Base Logistics reports capabilities to PSE

[6] **Applicable for hurricane responses**

Exhibit H


Pre Storm Activation Process
PSE
Base Logistics
96-72hrs Prior
72hrs Prior
48-24hrs Prior
24-12hrs Prior
12-0hrs Prior
A
Monitor potential situation
Monitor potential situation
Alert Base of standby status
Alert vendors of standby status
Continue standby status
No
Alternative sleep quarters required?
Yes
Secure alternative quarters
Report capabilities to PSE
Authorize Base to secure resources
No
Storm likely to affect system?
Yes
Other resources in jeopardy?
Yes
No
Report results to PSE
Advise PSE to authorize resource procurement
No
Storm likely to affect system?
Yes
Authorize Base to secure resources
Secure resources in jeopardy
No
Storm likely to affect system?
Yes
Authorize Base to secure all resources
Report results to PSE
Order food trailers loaded
Order ice, water,sodas, etc.
Confirm all resources in place & ready
Report capabilities to PSE
Prepare for response
Prepare for response
B

Storm Activation Process

Once the storm has cleared PSE's service territory, Base Logistics will deploy personnel and resources to the affected area(s) as directed. Base Logistics Incident Command will monitor the deployment and communicate its progression to PSE Command personnel.

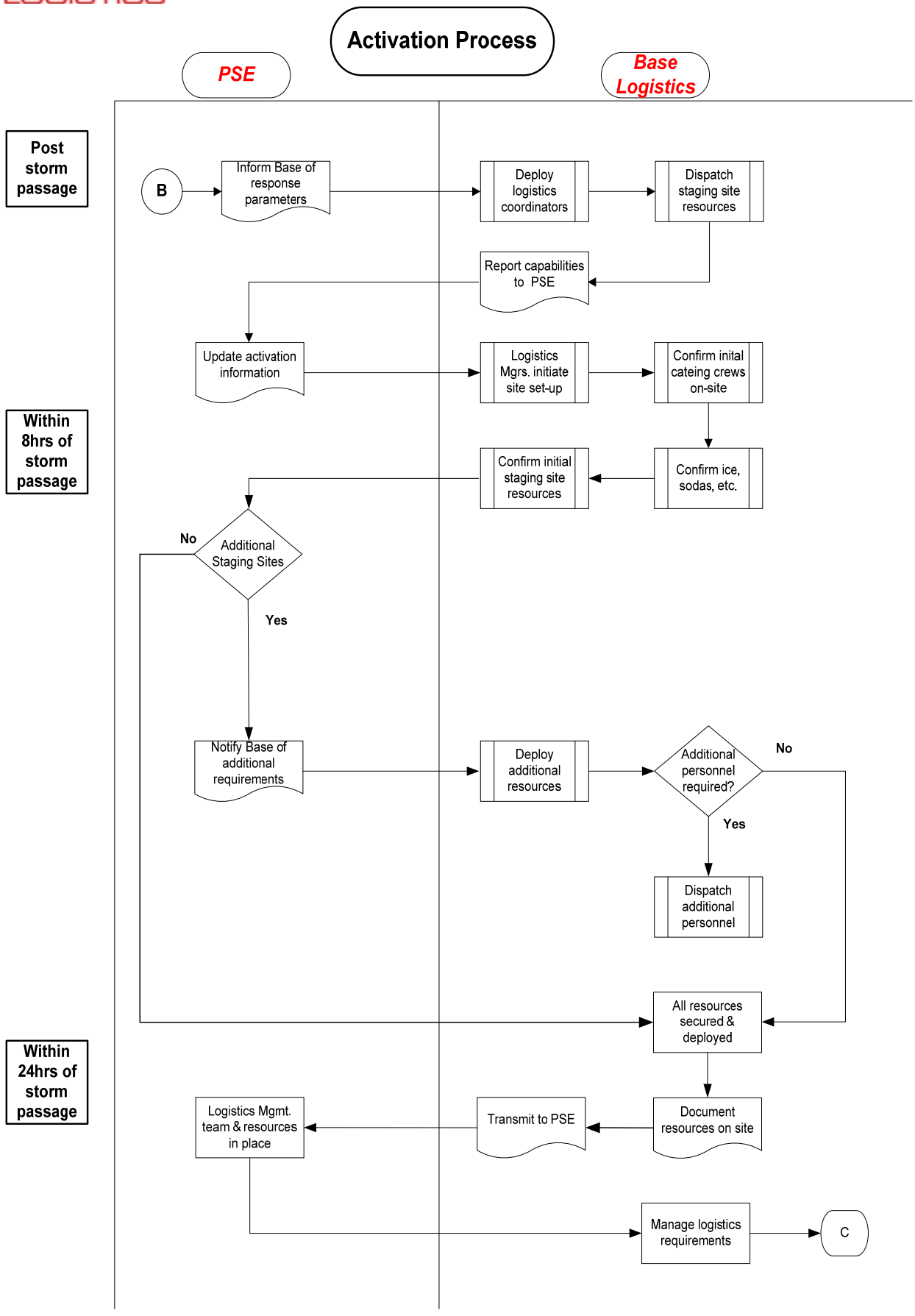
❖ **Staging site resources deployed immediately post storm are:**
- On-site catering units
- Food supply trailers
- Ice, soft drinks, bottled water, sport drinks
  - Cold storage units for ice
- Tables, tents and chairs (where required)
- Portable restrooms, hand wash stations, trash bins, tower lights
- Staging Site office units
- Laundry service (activated to begin on day 2)
- Alternative Housing resources (if required)

Activation Narrative

❖ **Immediately after storm passage:**
- PSE transmits **'Notice to Proceed'** to Base Logistics
  - Expected personnel deployment
  - Staging sites to be activated
- Base Logistics personnel deployed to affected area
  - Lead logistics manager to PSE Storm Command
  - Area logistics manager(s) and support personnel to staging site(s)
- Base Logistics Incident Command Center dispatches on-site catering crews and other required resources to staging sites

❖ **Within 8hrs of storm passage:**
- PSE updates activation information and transmits to Base Logistics Incident Command Center
  - Expected personnel deployment
  - Staging sites to be activated
- Base Logistics has initial catering crews on-site
  - Initial food order in place at staging site(s)
  - Ice and refrigerated storage units
  - Soft drinks, bottled water, sport drinks, snacks
- Base Logistics has staging site resources in-route/on-site
  - Staging Site office unit(s)
  - Tower Lighting, generators (where required)
  - Trash bins, portable restrooms, hand wash stations…

❖ **Within 24hrs of storm passage**
- Base Logistics has all required resources in place
- Base Logistics reports capabilities to PSE
  - Add/release resources as required


Activation Process
PSE
Base Logistics
Post storm passage
Within 8hrs of storm passage
Within 24hrs of storm passage
B
Inform Base of response parameters
Deploy logistics coordinators
Dispatch staging site resources
Report capabilities to PSE
Update activation information
Logistics Mgrs. initiate site set-up
Confirm inital cateing crews on-site
Confirm ice, sodas, etc.
Confirm initial staging site resources
Additional Staging Sites
No
Yes
Notify Base of additional requirements
Deploy additional resources
Additional personnel required?
No
Yes
Dispatch additional personnel
All resources secured & deployed
Document resources on site
Transmit to PSE
Logistics Mgmt. team & resources in place
Manage logistics requirements
C

On-site Catering Process

Quality on-site catering companies capable of providing full service meals have been developed to meet the requirements of this plan. The caterers are either located in or adjacent to PSE's service territory and are positioned for quick deployment to affected areas.

Breakfast and dinner will be hot meals prepared and served on location. These meals will offer a variety of items and be of the highest quality and wholesome. Box lunches will be available each morning for crews as they depart their staging area.

Caterers at each staging site will prepare meals according to the menu plan[7] accompanying this document. Each site will serve the identical meals each breakfast and dinner meal period. [8]

The activation process for catering vendors is as follows:

- **72 to 48hrs prior to storm:**
  - Caterers contacted with preliminary information regarding possible deployment
    - Ability to respond is verified
      - Personnel and equipment
      - Potential placement of personnel and equipment in safe location to facilitate post storm deployment

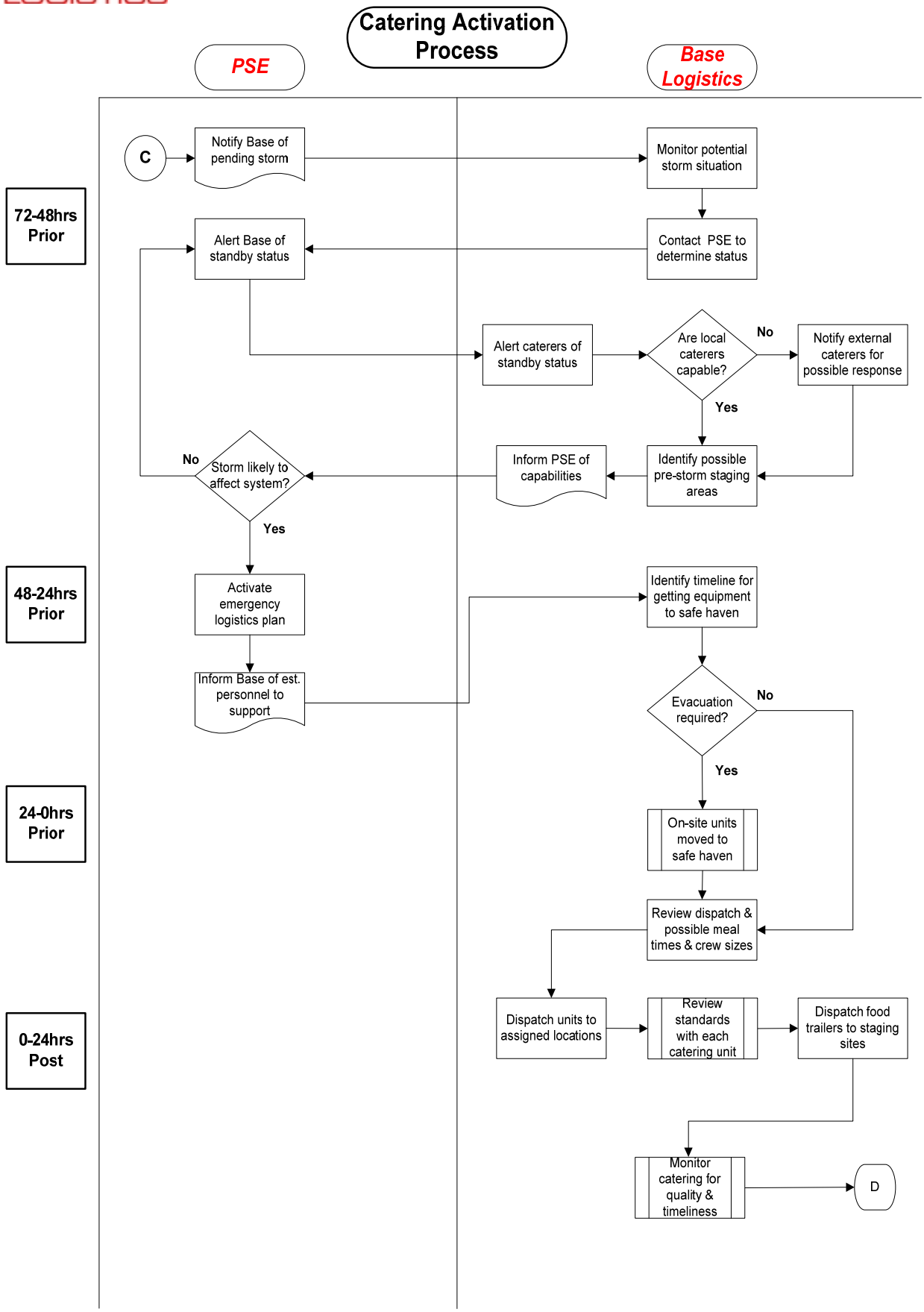
- **48 to 24hrs prior to storm:**
  - Base Logistics updates information with caterers regarding possible deployment
    - Information includes expected deployment area and personnel to feed
    - Cutoff times for getting personnel and equipment to safe location (if required)

- **24 to 0hrs prior to storm:**
  - Final preparations are made for deployment
    - Updated information on deployment area and personnel to feed
    - Possible timing of first meal
    - Verification that all personnel and equipment are in a safe, secure location and ready to respond

- **0 to 24hrs post storm passage:**
  - Caterers dispatched to staging site locations
    - Food supply delivered to staging site in refrigerated equipment
    - Menu is verified
    - Update information on first meal, number of personnel to feed
  - Catering vendor is ready to begin full-service operations

[7] **Appendix 4**
[8] **Variations in menu items may occur in large scale or extended events due to product availability**

Catering Activation Process



Foodservice Process

Foodservice vendors provide the food and other products required for the on-site catering units. Base Logistics will supply the catering units with food and ancillary products necessary to complete their assigned tasks. Refrigerated food supply trailers will be dropped at the activated staging sites to ensure that sufficient quantities of food and other necessary supplies are available at all times. Base Logistics Catering Manager(s) will arrange re-supply deliveries as necessary. Locations that do not require full trailer shipments will be supplied through daily deliveries or with smaller refrigerated equipment.

Base Logistics has arranged for initial food supplies to be loaded prior to an anticipated event (within 24hrs).[9] Loading supplies in advance, when possible, ensures that supplies are available immediately post storm passage.

Foodservice Activation:

- **72 to 48hrs prior to storm passage:**
  - Foodservice providers contacted with preliminary information regarding anticipated event
    - Potential extent of response (impact area)
    - Potential duration of response
    - Anticipated refrigerated trailer to meet requirements
    - Review standard order guides with vendor to ensure inventory

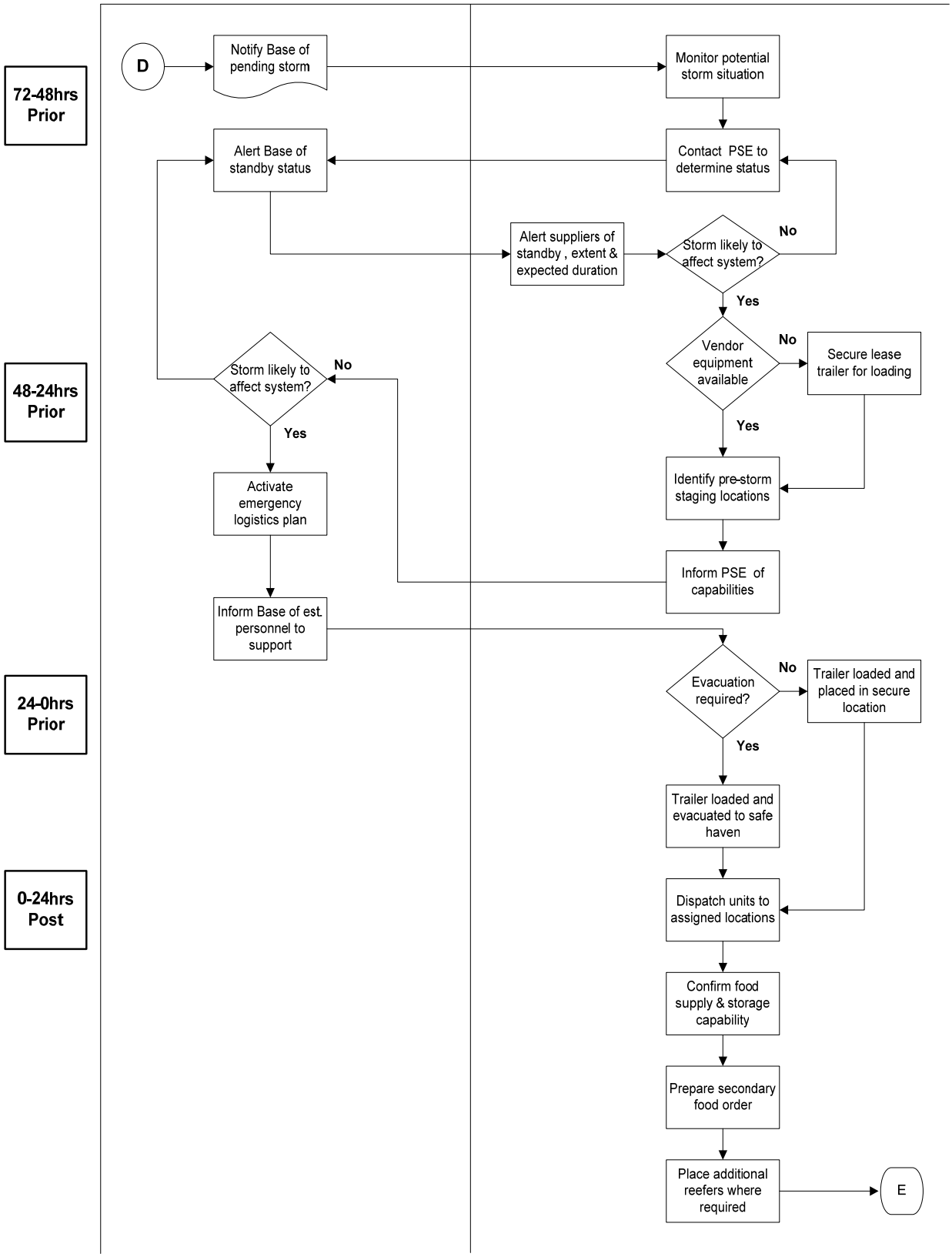
- **48 to 24hrs prior to storm:**
  - Base Logistics verifies food and trailer inventory with primary foodservice vendor
    - Arrange for alternative source to supply any foodservice item that prime vendor can't supply
    - Arrange for alternative transportation if prime vendor can't provide sufficient equipment

- **24 to 0hrs prior to storm:**
  - Base Logistics makes final preparations for deployment of foodservice resources
    - At PSE's direction, Base Logistics orders trailers loaded
    - Trailers staged or moved to secure location if situation warrants

- **0 to 24hrs post storm passage:**
  - Foodservice vendors dispatched to activated staging sites immediately after storm has cleared the area
  - Base Logistics confirms anticipated personnel assigned to each staging site
    - Adjust secondary orders and delivery schedules to meet anticipated demand
    - Place additional refrigerated equipment where necessary
    - Monitor ongoing foodservice operations to capable response

[9] Base Logistics internal process

Foodservice Activation Process



Laundry Process

Laundry service becomes a crucial support activity in extended response situations. Base Logistics has identified and qualified laundry providers within PSE' service territory for utilization in emergency situations. The facilities identified range from large commercial laundries to medium size local cleaners. Base Logistics can secure modular laundry units that can be placed on-site to handle the demand, if local service is negatively impacted by an outage event.

Because the volume of clothing can accumulate quickly, laundry service must begin early and be continued on a daily basis throughout the event. Base Logistics has developed processes to ensure timely and orderly laundry service for deployed personnel.

The following parameters have been established for laundry service:

- Base Logistics will provide laundry bags and blank name cards for laundry service at each staging site location
  - Bags will be available when crews arrive at their assigned staging site

- Laundry drop & p/u area will be marked with appropriate signage

- Service will begin on day two of the event
  - Crews bring laundry to staging site at breakfast
  - Base Logistics will have a designated area/person to drop/accept laundry bags

- Service is scheduled for same day turnaround in most cases
  - Cleaned laundry will be available for p/u when crews return to staging site for dinner meal
  - Laundry not available in the evening will be available the next morning

Laundry Narrative

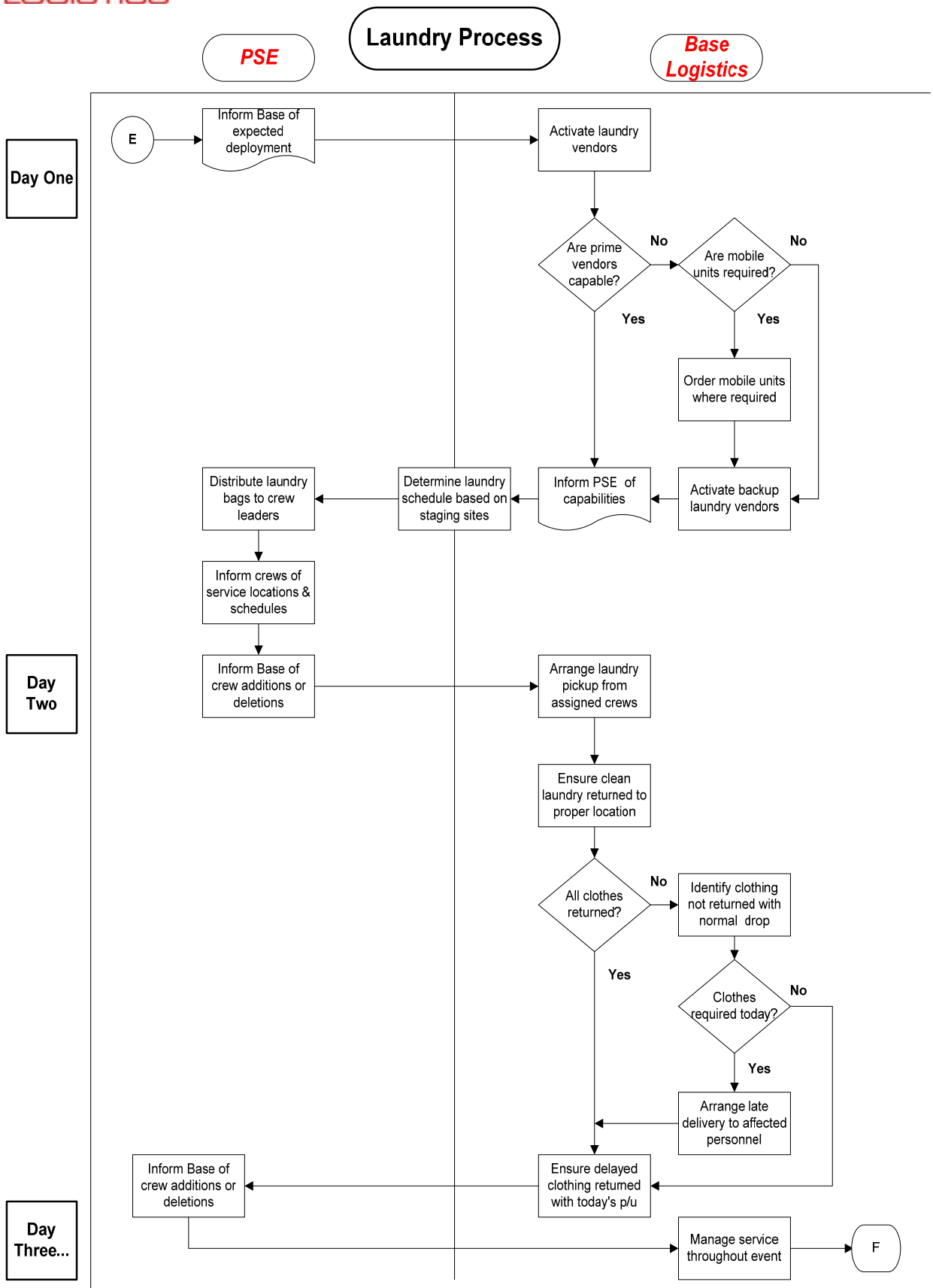
- **Day One:**
  - PSE informs Base Logistics of expected crew assignments for activated staging sites
  - Base Logistics activates primary laundry vendors
    - Activate backup vendors where primary vendors can not respond
      - Dispatch mobile units if required
  - PSE distributes laundry bags and name cards to crews arriving at staging site locations
  - PSE and Base Logistics determine laundry schedule
    - Based on staging site assignments
  - Crews informed of laundry schedule
  - Signs placed in designated area for drop & p/u

- **Day Two:**
  - PSE informs Base Logistics of personnel additions, deletions and or movements
  - Base Logistics coordinates laundry pickup
  - Base Logistics ensures that cleaned laundry is returned to proper areas
    - Checks returned laundry against list of laundry tendered vendor
    - Arranges late delivery, if needed, of any laundry not returned with day's batch
    - Ensures that laundry not returned late is returned at the subsequent morning pickup

- **Day Three:**
  - PSE informs Base Logistics of personnel additions, deletions, movement
  - Base Logistics coordinates scheduled laundry pickup
  - Base Logistics ensures that cleaned laundry is returned to proper areas
    - Checks returned laundry against list of laundry tendered to vendor
    - Arranges late delivery, if needed, of any laundry not returned with day's batch
    - Ensures that laundry not returned late is returned at the subsequent morning pickup

- **Day Four…:**

  The process is continuously repeated through the end of the response.
  - Clothes not returned prior to a crew's departure will be forwarded as quickly as possible to affected person's home or workplace


Laundry Process
PSE
Base Logistics
Day One
Day Two
Day Three...
E
Inform Base of expected deployment
Activate laundry vendors
Are prime vendors capable?
No
Are mobile units required?
No
Yes
Yes
Order mobile units where required
Distribute laundry bags to crew leaders
Determine laundry schedule based on staging sites
Inform PSE of capabilities
Activate backup laundry vendors
Inform crews of service locations & schedules
Inform Base of crew additions or deletions
Arrange laundry pickup from assigned crews
Ensure clean laundry returned to proper location
All clothes returned?
No
Identify clothing not returned with normal drop
Yes
Clothes required today?
No
Yes
Arrange late delivery to affected personnel
Inform Base of crew additions or deletions
Ensure delayed clothing returned with today's p/u
Manage service throughout event
F

First-Out Ancillary Site Resources

Vendors who will provide resources immediately required at staging sites include: security personnel, tables, tents, chairs (for dining), generators, tower lights, fleet fueling, trash bins and portable restrooms. The processes involved in the procurement and activation of these resources are similar to those involving catering and foodservice.

- **72 to 48hrs prior:**
  - Vendors contacted and put on alert for possible deployment
    - Base Logistics verifies inventory and ability to respond
    - Vendors' ability to deliver resources when and where required

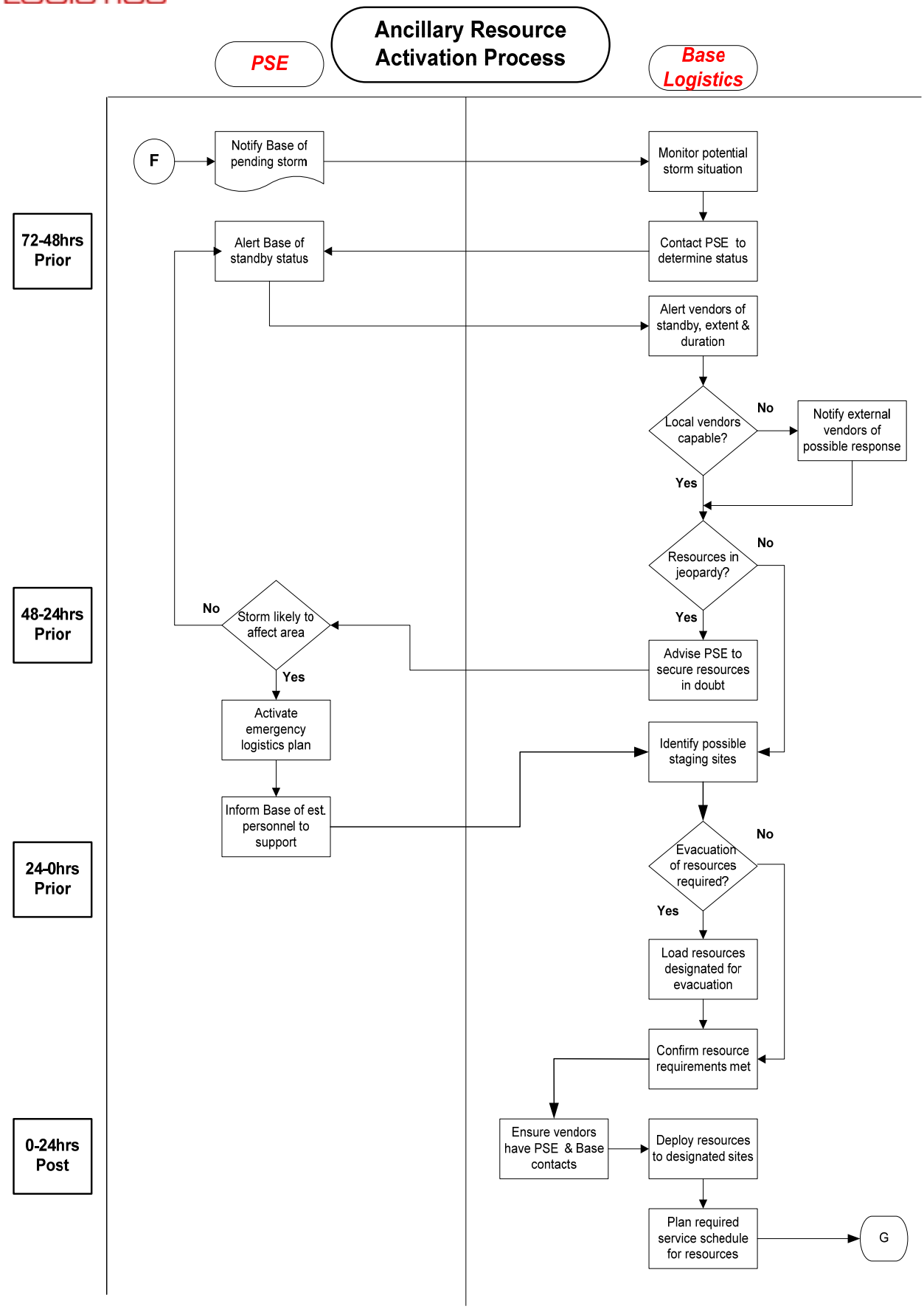
- **48 to 24hrs prior:**
  - Vendors given potential staging site assignments and expected requirements
    - Secondary providers contacted if primary vendors are lacking
    - Base may advise PSE to commit to resources in jeopardy of being taken by others

- **24 to 0hrs prior:**
  - Base Logistics confirms vendor response capabilities
  - Equipment is loaded and ready for dispatch to staging site
    - Equipment is evacuated from vulnerable areas

- **0 to 24hrs post storm passage:**
  - All vendors dispatched to assigned staging sites
    - Base Logistics and PSE staging site personnel direct setup of resources
    - Base Logistics confirms service schedule for all resources based on number of personnel assigned staging site

Second-Out Ancillary Site Resources

The vendors who provide these resources are not usually required in the immediate hours of the restoration. Those resources, laundry service, site cleanup personnel and equipment and other special use equipment will be activated according to timelines established for those services/needs.


Ancillary Resource Activation Process
PSE
Base Logistics
72-48hrs Prior
48-24hrs Prior
24-0hrs Prior
0-24hrs Post
F
Notify Base of pending storm
Monitor potential storm situation
Alert Base of standby status
Contact PSE to determine status
Alert vendors of standby, extent & duration
Local vendors capable?
No
Notify external vendors of possible response
Yes
Resources in jeopardy?
No
Yes
Storm likely to affect area
No
Yes
Advise PSE to secure resources in doubt
Activate emergency logistics plan
Identify possible staging sites
Inform Base of est. personnel to support
Evacuation of resources required?
No
Yes
Load resources designated for evacuation
Confirm resource requirements met
Ensure vendors have PSE & Base contacts
Deploy resources to designated sites
Plan required service schedule for resources
G

Small Contingent Support

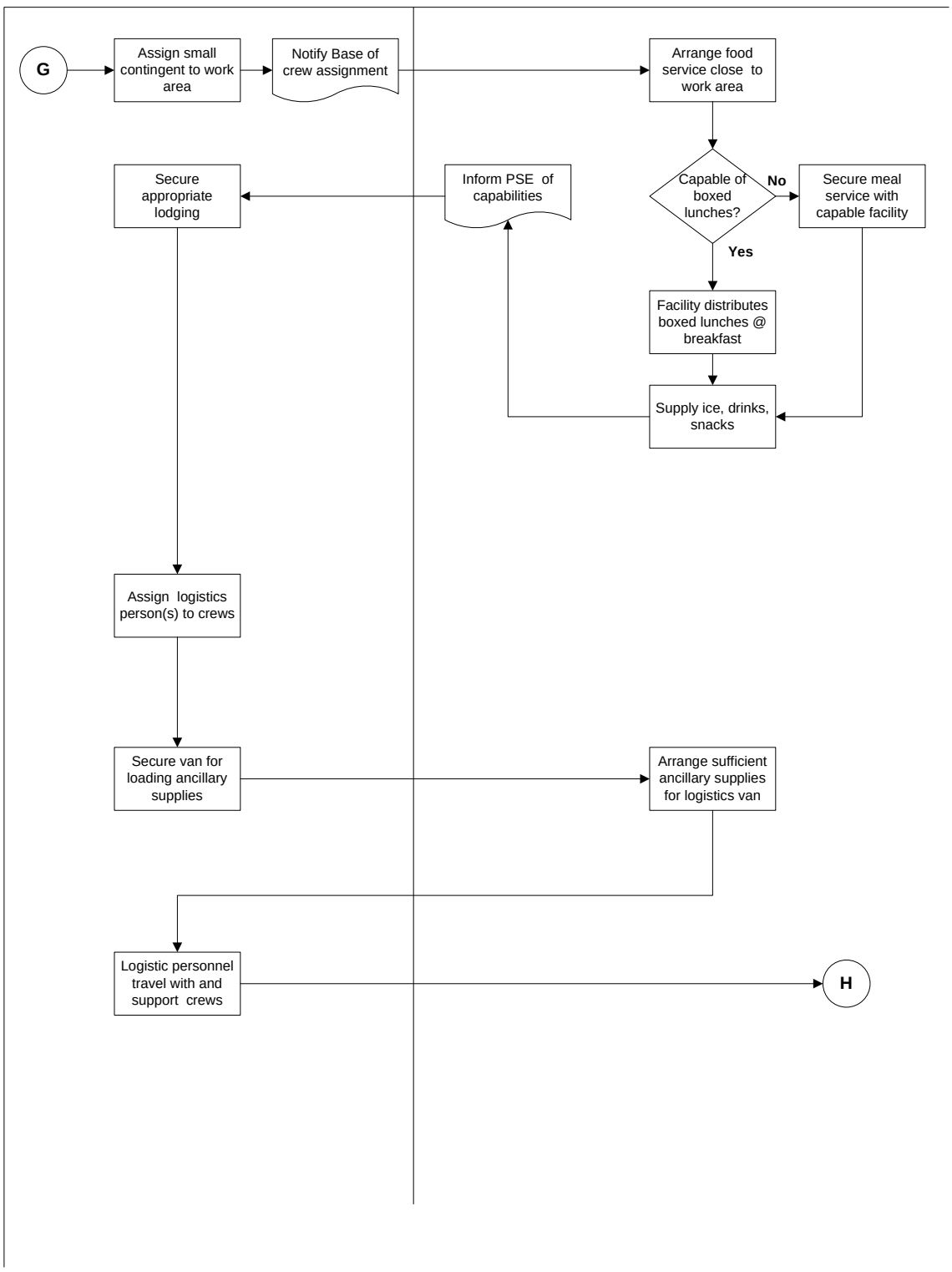
Logistics support for emergency outages lasting more than twelve hours, but less than 48 hours, is still an important part of the restoration process. Normally there is little need to dispatch on-site catering and/or activate a full scale staging site for these events. Also, even in large scale restoration operations, small groups may be deployed to remote locations, too far away to make it feasible to bring them back to established staging sites.

Small Contingent Support Process

- **Base Logistics**
  - Arrange food service in close proximity to workforce
  - Inform PSE personnel of food service arrangements
  - Supply logistics ancillary items (ice, water, sodas, snacks, etc.) for PSE support personnel to distribute
  - Communicate with PSE field personnel to ensure sufficient supplies at all times

- **PSE**
  - Assign at least two 'logistics' personnel to support contingent
  - Provided completed rooming lists in a timely fashion to facilitate crew check-in at lodging facility
  - Communicate needs of contingent to Base Logistics so that supply chain is uninterrupted

Small Contingent Support Process



De-Activation

At the direction of PSE, Base Logistics will de-activate vendors and services in an expeditious manner and report vendor release dates to PSE.

Base Logistics will document response activities and audit vendor invoices prior to submitting to PSE for processing. Additionally, Base Logistics will be available to attend any meeting, critique or process improvement discussion related to the response.

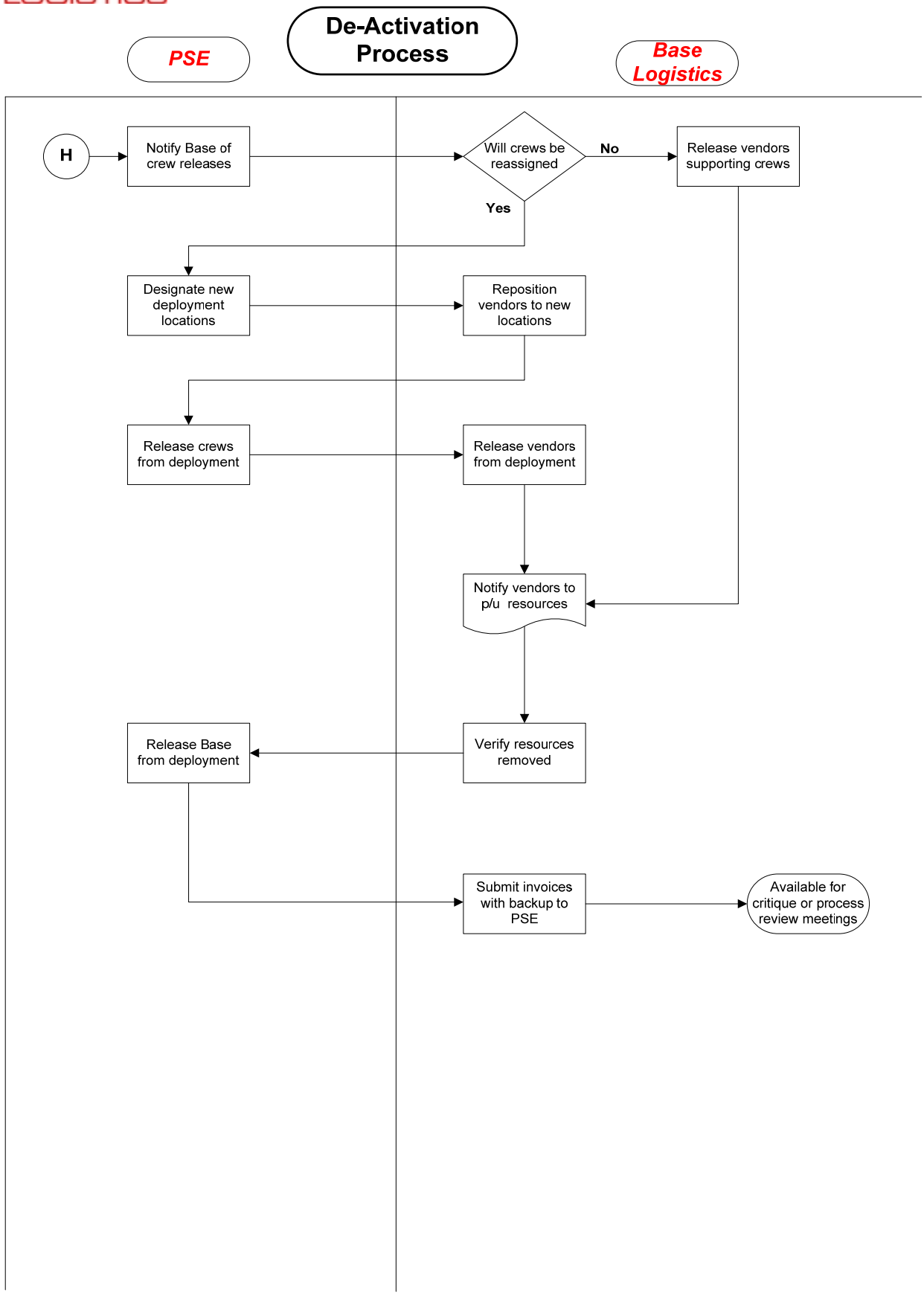

De-Activation Process
PSE
Base Logistics
H
Notify Base of crew releases
Will crews be reassigned
No
Release vendors supporting crews
Yes
Designate new deployment locations
Reposition vendors to new locations
Release crews from deployment
Release vendors from deployment
Notify vendors to p/u resources
Release Base from deployment
Verify resources removed
Submit invoices with backup to PSE
Available for critique or process review meetings

Exhibit H

Emergency Contact Phone Numbers

[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Notice to Proceed

Appendix 3

NOTIFICATION / AUTHORIZATION TO PROCEED

FROM: _____ **COMPANY:** _____

DATE: _____

This document Notifies and Authorizes Base Logistics, LLC to secure and/or provide the product(s) and services indicated below.

Location: _____ **Personnel assigned:** _____

On-site contact: _____ **Contact phone #:** _____

Resource	Quantity	Date Requested	Time Requested	Comments
Site Setup				
Office Unit(s)				
R/V(s)				
Security				
Trash Bins (20-30yd roll-off)				
Trash Bins (8yd bins)				
Trash Bins (Haz-Mat)				
Trash Boxes				
Portable Restrooms				
Hand Wash Stations				
Generator(s)				Size:
Light Tower(s)				
Fuel Truck(s)				
Tents (Mgmt. team)				
Catering				
On-site Catering				
Soft Drinks				
Bottled Water (.5 liter)				
Bottled Water (5gal.)				
Ice				
Ice Storage				
Snacks				
Storage Container				
Mess Tent				
Tables/Chairs				
Heaters/HVAC				
Fans				
Transportation				
Shuttle Buses				
ATV/Golf Cart(s)				
Fork Lift(s)				
Other vehicle (specify)				
Laundry Service				
Laundry Service				
Mobile Laundry Unit(s)				

Appendix 3 **Notification/Authorization to Proceed - continued**

Resource	Quantity	Date Requested	Time Requested	Comments
Alternative Housing				
Bunk Trailer(s)				Please specify # of personnel to sleep
Sleeping Tent(s)				Please specify # of personnel to sleep
Sleeping Cots				
Linen Set(s)				Set includes: 2-sheets, pillow w/pillow cs., blanket, bath towel, wash cloth, soap & shampoo
Modular Shower(s)				
Sleeping Bags				
Communications Equipment				
Satellite Phones				
Satellite Internet				
Cellular Phones				
Other Equipment				
Marsh Buggy				
Crane(s)				
Bulldozer(s)				

Additional Comments: _____

_____

_____

Ordered by: _____

Electronic signature w/date stamp acceptable

Staging Site Plans

Exhibit I

9/09/2008

UTILITY ROAD CLEARING TASK FORCE

PLAN, PROCEDURE AND PROCESS FOR ALL PARTIES

Background

Following the Hanukkah Eve Windstorm in December 2006, the Governor of Washington State, Christine Gregoire, requested Major General Timothy J. Lowenberg, the Adjutant General to conduct a full after-action review of how the State's Emergency Management division in collaboration with other responders prepared for and responded to the December windstorms, and to provide any recommendations on how to improve those processes. In response to the Governor's request, the Washington Military Department convened a statewide Review Team of 28 representatives of federal, state and local jurisdictions, agencies, associations, nonprofit organizations, and businesses to conduct a statewide review.

The review and final recommendations focused on six areas of concern, one of which was the following:

"What should be done to ensure our infrastructure can respond to disasters timely and efficiently?"

One of six workgroups formed to conduct specific research and make recommendations was the Infrastructure Work Group. The work group focused on the following main areas of concern:

Electricity, transportation, water, wastewater, and communications.

One of the best practices utilized during the December 2006 windstorm was the ad hoc formation of utility road clearing teams that safely, effectively and efficiently cleared downed trees, debris, electrical wire from public transportation routes ensuring public safety. Teams of utility line crews, qualified tree crews, roads crews and the Washington State Patrol or local law enforcement coordinated efforts

Drivers for this Procedure

- Community need
- Downed wire safety
- Public safety
- Efficient restoration and recovery

Plan Owners/ Interested Parties

The owners and interested parties of this procedure and plan document is shared by the following responsible parties:

- Washington State Department of Transportation
- County/City Public Works
- Electric Utilities (investor-owned and public) in State of Washington
- Washington State Patrol
- Washington State Emergency Management Division

Plan Overview

This plan is intended to provide a framework for a coordinated effort to ensure blocked roadways and transportation corridors are safe for the public, prioritize road clearing efforts, determine when and if to close roads for utility crews, coordinate flagging resources, and communicate status of road clearing/make safe work to stakeholders.

Participating in this effort are the following: participating utilities, public works, city/county/state road crews, Washington State Patrol and local law enforcement agencies as needed.

Coordination may occur at the State/County/City emergency operations center, or for more localized events at local area coordination centers established by the utility, public works or other agencies involved.

Plan Execution

Parties engaged in the Utility Road Clearing Task Force will share contact information and, at least annually, update the contact lists. Parties shall meet at least once annually in their regional areas prior to the October 1 to March 31 storm season to refresh contacts, review procedures and update the procedure as required.

Annual coordination meetings will be held, chaired by the Washington State DOT.

Events requiring the use of the Utility Road Clearing Task Forces will be debriefed within one month following an event and changes to the procedure will be incorporated as needed.

Regardless of the type of event (e.g., windstorm, fire, flood, earthquake), the lead agency for coordination of the Utility Road Clearing Task Force will be the public works or transportation/roads lead for the area affected.

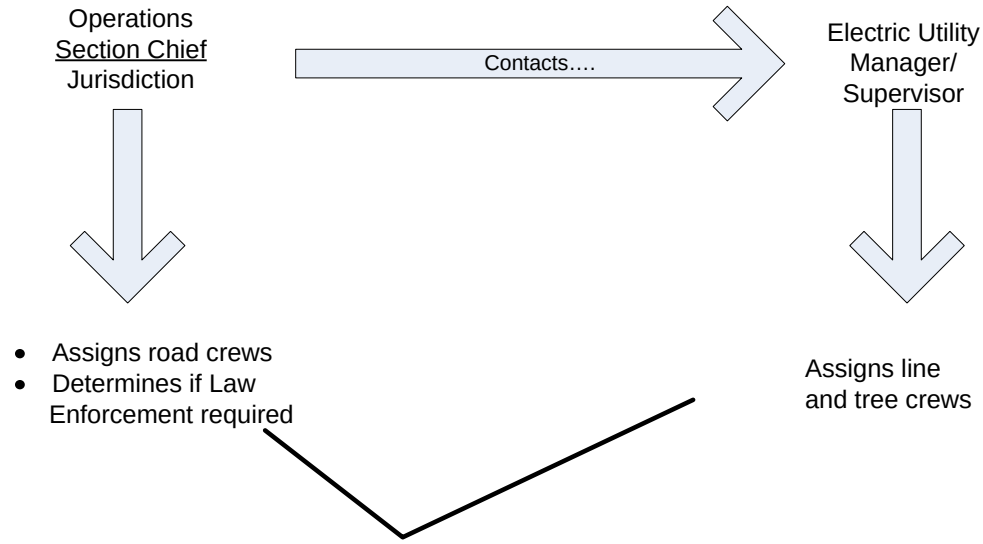
Road clearing priorities are established by the inter-agency task force and will depend on the type of emergency event. Teams working collaboratively to clear roads will include the following:

- Participating electric utilities
- Qualified tree crews
- Public works
- City/county/state road crews
- Washington State Patrol and/or local law enforcement agencies as needed.

The team is responsible for determining shift coordination among the parties (e.g., 12 hours on/12 off; or 18 on and 6 off, etc.).

The following graphic depicts actions and responsibilities for the formation of the Task Force:

Utility Road Clearing Task Force
Example of Notifications and Actions:



Jurisdiction Section Chief & Utility Manager Co-Develop Incident Action Plan (IAP)

- Determine meeting location(s) – staging areas
- Determine if WSP or local law enforcement involvement is required
- Prioritize road openings?
- Decision: Close roads?
- Decision: Number and location of staging sites needed?

Staging Area:

(At determined locations)

- Road crew
- Line Crew
- Qualified Tree Crew
- WSP?
- Flaggers

Crew Foremen responsible for:

- Field crew coordination
- Scheduling shifts
- Road prioritization, closures, etc.

Develop "CAN" Report

Conditions
Actions
Needs

Event Organization

Causes for activation may include:

- Trees across road, w/wire down
- Poles, wires across road
- Right of way blocked, wires/equipment in road

  - Utilities may contact jurisdiction to close roads for work access
    - The closure of a roadway will be made by the party that has jurisdiction in the area (e.g., WSDOT for State roads, County Public Works/Roads departments for County roads.)

  - Jurisdiction may contact utility to clear downed wire from road

Checklist:

Who Does What

WS DOT	Utility	Public Works	EMD Office
Maintain and annually update contact information and provides to utilities in regional area.	Maintain and annually update contact information and provides to DOT and other roads jurisdictions in service area.	Maintain and update contact information and provides to utilities in regional area.	Maintain copies of contact information shared between Public Works/jurisdictions, Utilities and WS DOT.
May trigger Utility Road Clearing Task Force plan by contacting Utility and Washington State Patrol.	May trigger Utility Road Clearing Task Force plan by contacting WSDOT, County or City roads jurisdiction.	May trigger Utility Road Clearing Task Force plan by contacting Utility and local law enforcement.	Monitor Utility Road Clearing Task Force plan, offering resources, assistance as required.
Schedule annual coordination meetings with interested parties throughout State of Washington.	Participate in annual coordination meetings with WS DOT and other jurisdictions roads departments as requested.	Participate in annual coordination meetings with WS DOT and other utilities as requested.	Utilize EOC liaisons from utilities for resource coordination as required.
Provide road status information to utility as needed; e.g., transformer on ground/oil spill; fire on pole; broken poles, etc. (Utility needs nearest intersection or route and milepost. If possible provide utility with grid number on pole.)		Provide road status information to utility as needed; e.g., transformer on ground/oil spill; fire on pole; broken poles, etc. (Utility needs nearest intersection or route and milepost. If possible provide utility with grid number on pole.)	
Prioritize major thoroughfares for restoration.		Prioritize transportation routes for restoration.	

PUGET SOUND ENERGY

NORTH KING COUNTY

UPDATED: December 19, 2008

*****Confidential*****

(For internal and North King County emergency agency use only)

PUGET SOUND ENERGY Emergency Operations Center (EOC): [redacted]

24X7 System Supervisor (when EOC not activated): [redacted]

NORTH KING COUNTY SPECIFIC NUMBERS:

For 911 calls (answered 24X7 by System Operations at PSE): [redacted]

Function	Name	Office Phone	Cell Phone
Potelco Operating Base Manager – North King County	[redacted]		
PSE Electric First Response Supervisor – North King County			
PSE Alternate Contact (Manager Electric First Response)			
Asplundh Tree Expert Co. – Primary Duty Supv. (call cell 1st)			
Asplundh Tree Expert Co. – Alternate Duty Supv.			
PSE Community Relations Manager			
PSE Manager Operations Continuity			
PSE Emergency Planning Manager			

COUNTY/STATE AGENCY CONTACT INFORMATION:

King County EOC

[redacted] ***Director, King County EMD:*** [redacted]

King County Public Works/Roads

[redacted] ***Supervisor III:*** [redacted]

[redacted] ***Supervisor III:***

WS DOT – King County

[redacted] ***Area 3; Everett:*** [redacted]

Area 5; Seattle:

State of Washington EOC Duty Supervisor: [redacted]