



**Procurement Division**  
Public Services Building  
2051 Kaen Road  
Oregon City, OR 97045  
(503) 742-5444 (Office)

## **REQUEST FOR QUOTES (RFQ) #2018-83**

Issue Date: August 28, 2018

Project Name:	CBX PGE Highway 26		
Quote Due Date/Time:	September 13, 2:00 PM		
Procurement Analyst:	Ryan Rice	Phone:	503-742-5446
		Email:	<a href="mailto:rrice@clackamas.us">rrice@clackamas.us</a>

**SUBMIT QUOTES VIA EMAIL TO [PROCUREMENT@CLACKAMAS.US](mailto:PROCUREMENT@CLACKAMAS.US)  
OR MAIL/HAND DELIVERY TO THE ABOVE ADDRESS**

**PLEASE NOTE: EMAIL SUBMISSIONS SHOULD HAVE  
"2018-83 CBX PGE HIGHWAY 26" IN THE SUBJECT LINE**

### **1. ANNOUNCEMENT AND SPECIAL INFORMATION**

Quoters are required to read, understand, and comply with all information contained within this Request for Quotes ("RFQ"). All quotes are binding upon Quoter for sixty (60) days from the Quote Due Date/Time. Quotes received after the Quote Due Date/Time may not be considered. If authorized in the RFQ and resulting contract, travel and other expense reimbursement will only be reimbursed in accordance with the Clackamas County Travel Reimbursement Policy in effect at the time the expense is incurred. The Policy may be found at [www.clackamas.us/bids/terms.html](http://www.clackamas.us/bids/terms.html).

It will be the responsibility of potential Quoters to refer daily to the Bids and Contract Information Page ([www.clackamas.us/bids/index.html](http://www.clackamas.us/bids/index.html)) to check for any available addenda, response to clarifying questions, cancellations or other information pertaining to this RFQ.

All questions regarding this RFQ are to be directed to the Procurement Analyst named above. Quoters may not communicate with County employees or representatives about the RFQ during the procurement process until the Procurement office has notified Quoters of the selected Quoter. Communication in violation of this restriction may result in rejection of a Quoter.

### **2. SCOPE**

The purpose of this RFQ is to construct aerial fiber laterals along Hwy 26, located between Sandy and Welches.

#### **Project Locations:**

49501 SE Cherryville Drive, Sandy, Oregon 97055  
55190 E. Bear Garden Road, Sandy, Oregon 97055  
60157 E. Sleepy Hollow Drive, Sandy, Oregon 97055  
61810 E. Brightwood Loop, Brightwood, Oregon 97011  
64735 E. Brightwood Loop, Brightwood, Oregon 97011  
67294 E. Hwy 26, Welches, Oregon 97067  
24730 E. Woodsey Way, Welches, Oregon 97067

#### **Splicing Requirements:**

- New Aerial FOSC450D @ Highway 26 & SE Cherryville Dr: 2x splices
- New Aerial FOSC450D @ Highway 26 & E Summertime Dr: 2x splices
- New Aerial FOSC450D @ 60250 E Highway 26: 6x splices
- New Aerial FOSC450D @ Highway 26 & E Country Club Rd: 2x splices

- Existing Aerial FOSC450D @ Highway 26 & E Brightwood Loop Rd: 2x splices
- Existing Aerial FOSC450D @ Highway 26 & E Arrah Wana Blvd: 2x splices
- Existing Aerial FOSC450D @ 69500 E Highway 26: 18x splices
- Existing Aerial FOSC450D @ 69580 E Highway 26: 18x splices

**Material Requirements:**

- Fiber Optic Cable: 60ct Singlemode, single-jacket, single armor – contractor provided
- Splice Case: FOSC450D – contractor provided
- Conduit: 2" HDPE/PVC
- Risers: 2" – first 10ft galvanized, PVC after that.
- Strand: 6.6M, 5/16" downguys
- Premise Terminations: N/A
- Place any required down guys and overhead guys.

**General Requirements:**

1. All material and equipment needed to complete this project will be supplied by the contractor.
2. All utility make-ready costs will be the responsibility of Clackamas CBX.
3. City and ODOT permit will be provided by CBX.
4. Contractor will be responsible for developing an approved traffic control plan. **All flagging costs need to be included in the quote.**
5. All fiber cables need to be labeled in every splice case and vault for future reference. CBX will provide the fiber tags.
6. All disturbed areas shall be restored to an in-kind or better condition.
7. Place locate wire in all conduit that fiber is placed in.
8. CBX is not responsible for extra costs due to Subcontractors' failure to review complete plans, drawings and specifications.
9. Quotes in excess of \$50,000.00, performance and payment bonds will be a required part of the final Contract.
10. Should quotes exceed \$100,000.00 a bid bond shall accompany vendor quote.

**Key Dates:**

Commencement Date: Upon Issuance of Notice to Proceed ("NTP")

Substantial Completion: 3/1/2019

Final Completion: 3/31/2019

**Engineers Estimate:** \$100,000.00

**The following items are included and incorporated within this RFQ:**

- PGA CONSTRUCTION DRAWINGS:  
BRIGHTWOOD TO WELCHES DA SCHEME –DRAWING SET: SHEETS 1-7.

**Prevailing Wage:**

Prevailing Wage Rates requirements apply to this project because the maximum compensation for all owner-contracted work is more than \$50,000. The selected contractor and all subcontractors shall comply with the provision of ORS 279C.800 through 279C.870, relative to the Prevailing Wage Rates and the required public works bond.

PREVAILING WAGE RATES for Public Works Contracts in Oregon, July 1, 2018, which can be downloaded at the following web address: [http://www.oregon.gov/boli/WHD/PWR/Pages/pwr\\_state.aspx](http://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx). The Work will take place in Clackamas County, Oregon.

### 3. Sample Contract

Submission of a Quote in response to this RFQ indicates Quoter's willingness to enter into a contract containing substantially the same terms of the **Public Improvement** contract, which can be found at: <http://www.clackamas.us/bids/terms.html>.

No action or response to the sample contract is required under this RFQ.

### 4. Quote

Quotes should be short and concise with the following information:

- A. Lump Sum price to complete the project presented on company letterhead.

Quotes are to include a basic quote and the following Unit Adder:

*Unit Price #1:* Tree Pruning (non-arborist)

Adder-Per Linear Foot

*Unit Price #2:* Directional Rock Bore 2" SDR11 HDPE Rock

Adder-Per Linear Foot

- B. Bid Bond (should quote be in excess of \$100,000.00);
- C. Estimated time to complete the project;
- D. Clackamas County Certifications Form; and
- E. Any additional information that Clackamas County should take into consideration for the project or qualifications.

### 5. Evaluation

The quote received from the lowest responsive responsible Quoter will be awarded a contract. The "lowest responsive responsible Quoter" is the lowest Quoter who has substantially complied with all requirements of the Request for Quote and who can be expected to deliver promptly and perform reliably in the determination of Clackamas County.

**CLACKAMAS COUNTY CERTIFICATIONS**  
**RFQ #2018-83**

Each Quoter must read, complete and submit a copy of this Clackamas County Certification with their Quote. Failure to do so may result in rejection of Quote. By signature on this Certification the undersigned certifies that they are authorized to act on behalf of the Quoter and that under penalty of perjury the undersigned will comply with the following:

**SECTION I. OREGON TAX LAWS**

As required in ORS 279B.110(2)(3), the undersigned hereby certifies that, to the best of the undersigned's knowledge, the Quoter is not in violation of any Oregon Tax Laws. For purposes of this certification, "Oregon Tax Laws" means a state tax imposed by ORS 320.005 to 320.150 and 403.200 to 403.250 and ORS chapters 118, 314, 316, 317, 318, 321, 323, and elderly rental assistance program under ORS 310.630 to 310.706, and local taxes administered by the Department of Revenue under ORS 305.620, all as applicable. If a contract is executed, this information will be reported to the Internal Revenue Service. Information not matching IRS records could subject Quoter to 28% backup withholding.

**SECTION II. NON-DISCRIMINATION**

The undersigned hereby certifies that the Quoter has not and will not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation, national origin, or any other protected class. Nor has Quoter or will Quoter discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emergency small business that is certified under ORS 200.055.

**SECTION III. CONFLICT OF INTEREST**

The undersigned hereby certifies that no elected official, officer, agency or employee of Clackamas County is personally interested, directly or indirectly, in any resulting contract from this RFQ, or the compensation to be paid under such contract, and that no representation, statements (oral or in writing), of the County, its Commissioners, officers, agents, or employees had induced Quoter to submit this Quote. In addition, the undersigned hereby certifies that this proposal is made without connection with any person, firm, or corporation submitting a quote for the same material, and is in all respects fair and without collusion or fraud.

**SECTION IV. COMPLIANCE WITH SOLICITATION**

The undersigned further agrees and certifies that they:

1. Have read, understand and agree to be bound by and comply with all requirements, instructions, specifications, terms and conditions of the RFQ (including any attachments); and
2. Are an authorized representative of the Quoter, that the information provided is true and accurate, and that providing incorrect or incomplete information may be cause for rejection of the Quote or contract termination; and
3. Will furnish the designated item(s) and/or service(s) in accordance with the RFQ and Quote; and
4. Will use recyclable products to the maximum extent economically feasible in the performance of the contract work set forth in this RFQ.

Firm Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Email: \_\_\_\_\_ OR CCB # (if applicable): \_\_\_\_\_

Business Designation (check one):

☐ Corporation ☐ Partnership ☐ Sole Proprietorship ☐ Non-Profit ☐ Limited Liability Company

☐ Resident Quoter, as defined in ORS 279A.120

☐ Non-Resident Quote. Resident State: \_\_\_\_\_

Oregon Business Registry Number: \_\_\_\_\_

## CLACKAMAS COUNTY INSTRUCTIONS TO QUOTERS

Quotes are subject to the applicable provisions and requirements of the Clackamas County Local Contract Review Board Rule C-047-0270 (Intermediate Procurements) and Oregon Revised Statutes.

### QUOTE PREPARATION

1. **QUOTE FORMAT:** Quotes must be submitted as indicated in the RFQ. Quotes may be submitted in writing to Clackamas County via e-mail, mail or in person.
2. **CONFORMANCE TO RFQ REQUIREMENTS:** Quotes must conform to the requirements of the RFQ. Unless otherwise specified, all items quoted are to be new, unused and not remanufactured in any way. Any requested attachments must be submitted with the quote and in the required format. Quote prices must be for the unit indicated on the quote. Failure to comply with all requirements may result in quote rejection.
3. **ADDENDA:** Only documents issued as addenda by Clackamas County serve to change the RFQ in any way. No other directions received by the Quoter, written or verbal, serve to change the RFQ document. NOTE: IF YOU HAVE RECEIVED A COPY OF THE RFQ, YOU SHOULD CONSULT THE CLACKAMAS COUNTY BIDS AND CONTRACT INFORMATION WEBSITE ([www.clackamas.us/bids/index.html](http://www.clackamas.us/bids/index.html)) TO ENSURE THAT YOU HAVE NOT MISSED ANY ADDENDA OR ANNOUNCEMENTS. QUOTERS ARE NOT REQUIRED TO RETURN ADDENDUMS WITH THEIR QUOTE. HOWEVER, QUOTERS ARE RESPONSIBLE TO MAKE THEMSELVES AWARE OF, OBTAIN AND INCORPORATE ANY CHANGES MADE IN ANY ADDENDA ISSUED, AND TO INCORPORATE ANY CHANGES MADE BY ADDENDUM INTO THEIR FINAL QUOTE. FAILURE TO DO SO MAY, IN EFFECT, MAKE THE QUOTER'S QUOTE NON-RESPONSIVE, WHICH MAY CAUSE THE QUOTE TO BE REJECTED.
4. **USE of BRAND or TRADE NAMES:** Any brand or trade names used by Clackamas County in the specifications are for the purpose of describing and establishing the standard of quality, performance and characteristics desired and are not intended to limit or restrict competition. Quoters may submit quotes for substantially equivalent products to those designated unless the RFQ provides that a specific brand is necessary because of compatibility requirements, etc. All such brand substitutions shall be subject to approval by Clackamas County.
5. **PRODUCT IDENTIFICATION:** Quoters must clearly identify all products quoted. Brand name and model or number must be shown. Clackamas County reserves the right to reject any quote when the product information submitted with the quote is incomplete.
6. **FOB DESTINATION:** Unless specifically allowed in the RFQ, ***QUOTE PRICE MUST BE F.O.B. DESTINATION with all transportation and handling charges included in the Quote.***
7. **DELIVERY:** Delivery time must be shown in number of calendar days after receipt of purchase order.
8. **EXCEPTIONS:** Any deviation from quote specifications, or the form of sample contract referenced in this RFQ, may result in quote rejection at County's sole discretion.
9. **SIGNATURE ON QUOTE:** Quotes must be signed by an authorized representative of the Quoter. Signature on a quote certifies that the quote is made without connection with any person, firm or corporation making a quote for the same goods and/or services and is in all respects fair and without collusion or fraud. Signature on a quote also certifies that the Quoter has read and fully understands all quote specifications, and the sample contract referenced in this RFQ (including insurance requirements). No consideration will be given to any claim resulting from quoting without comprehending all requirements of the RFQ.
10. **QUOTE MODIFICATION:** Quotes, once submitted, may be modified in writing before the time and date set for quote closing. Any modifications should be signed by an authorized representative, and state that the new document supersedes or modifies the prior quote. Quoters may not modify quotes after quote closing time.
11. **QUOTE WITHDRAWALS:** Quotes may be withdrawn by request in writing signed by an authorized representative and received by Clackamas County prior to the Quote Due Date/Time. Quotes may also be withdrawn in person before the Quote Due Date/Time upon presentation of appropriate identification.

- 12. QUOTE SUBMISSION:** Quotes may be submitted by returning to Clackamas County Procurement Division in the location designated in the introduction of the RFQ via email, mail or in person; however, no oral or telephone quotes will be accepted. Envelopes, or e-mails containing Quotes should contain the RFQ Number and RFQ Title.

#### **QUOTE EVALUATION AND AWARD**

- 1. PRIOR ACCEPTANCE OF DEFECTIVE PROPOSALS:** Due to limited resources, Clackamas County generally will not completely review or analyze quotes which fail to comply with the requirements of the RFQ or which clearly are not the best quotes, nor will Clackamas County generally investigate the references or qualifications of those who submit such quotes. Therefore, neither the return of a quote, nor acknowledgment that the selection is complete shall operate as a representation by Clackamas County that an unsuccessful quote was complete, sufficient, or lawful in any respect.
- 2. DELIVERY:** Significant delays in delivery may be considered in determining award if early delivery is required.
- 3. CASH DISCOUNTS:** Cash discounts will not be considered for award purposes unless stated in the RFQ.
- 4. PAYMENT:** Quotes which require payment in less than 30 days after receipt of invoice or delivery of goods, whichever is later, may be rejected.
- 5. INVESTIGATION OF REFERENCES:** Clackamas County reserves the right to investigate references and or the past performance of any Quoter with respect to its successful performance of similar services, compliance with specifications and contractual obligations, and its lawful payment of suppliers, sub-contractors, and workers. Clackamas County may postpone the award or execution of the contract after the announcement of the apparent successful Quoter in order to complete its investigation. Clackamas County reserves the right to reject any quote or to reject all quotes at any time prior to Clackamas County's execution of a contract if it is determined to be in the best interest of Clackamas County to do so.
- 6. METHOD OF AWARD:** Clackamas County reserves the right to make the award by item, groups of items or entire quote, whichever is in the best interest of Clackamas County.
- 7. QUOTE REJECTION:** Clackamas County reserves the right to reject any and all quotes.
- 8. QUOTE RESULTS:** Quoters who submit a quote will be notified of the RFQ results. Awarded quote files are public records and available for review by submitting a public records request or by appointment.



CLACKAMAS COUNTY  
PUBLIC IMPROVEMENT CONTRACT

BID BOND

Project Name: # 2018-83 CBX PGA Highway 26

We, \_\_\_\_\_, as "Principal,"  
(Name of Principal)

and \_\_\_\_\_, an \_\_\_\_\_ Corporation,  
(Name of Surety)

authorized to transact Surety business in Oregon, as "Surety," hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns to pay unto Clackamas County ("Obligee") the sum of (\$\_\_\_\_\_)

\_\_\_\_\_ dollars.

**WHEREAS**, the condition of the obligation of this bond is that Principal has submitted its proposal or bid to an agency of the Obligee in response to Obligee's procurement document (No. \_\_\_\_\_) for the project identified above which proposal or bid is made a part of this bond by reference, and Principal is required to furnish bid security in an amount equal to ten (10%) percent of the total amount of the bid pursuant to the procurement document.

**NOW, THEREFORE**, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

**IN WITNESS WHEREOF**, we have caused this instrument to be executed and sealed by our duly authorized legal representatives this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Principal: \_\_\_\_\_ Surety: \_\_\_\_\_

By: \_\_\_\_\_ Signature By: Attorney-In-Fact

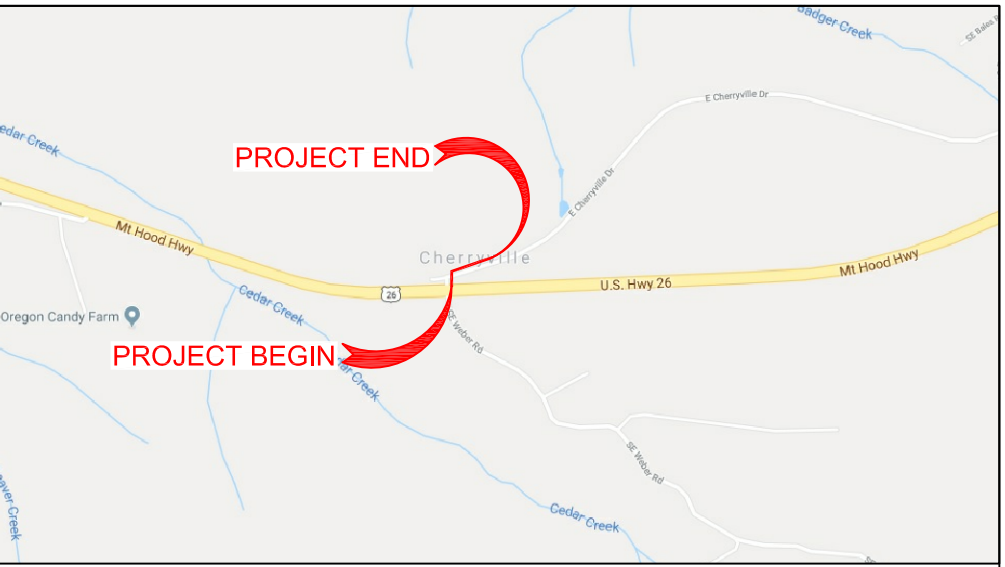
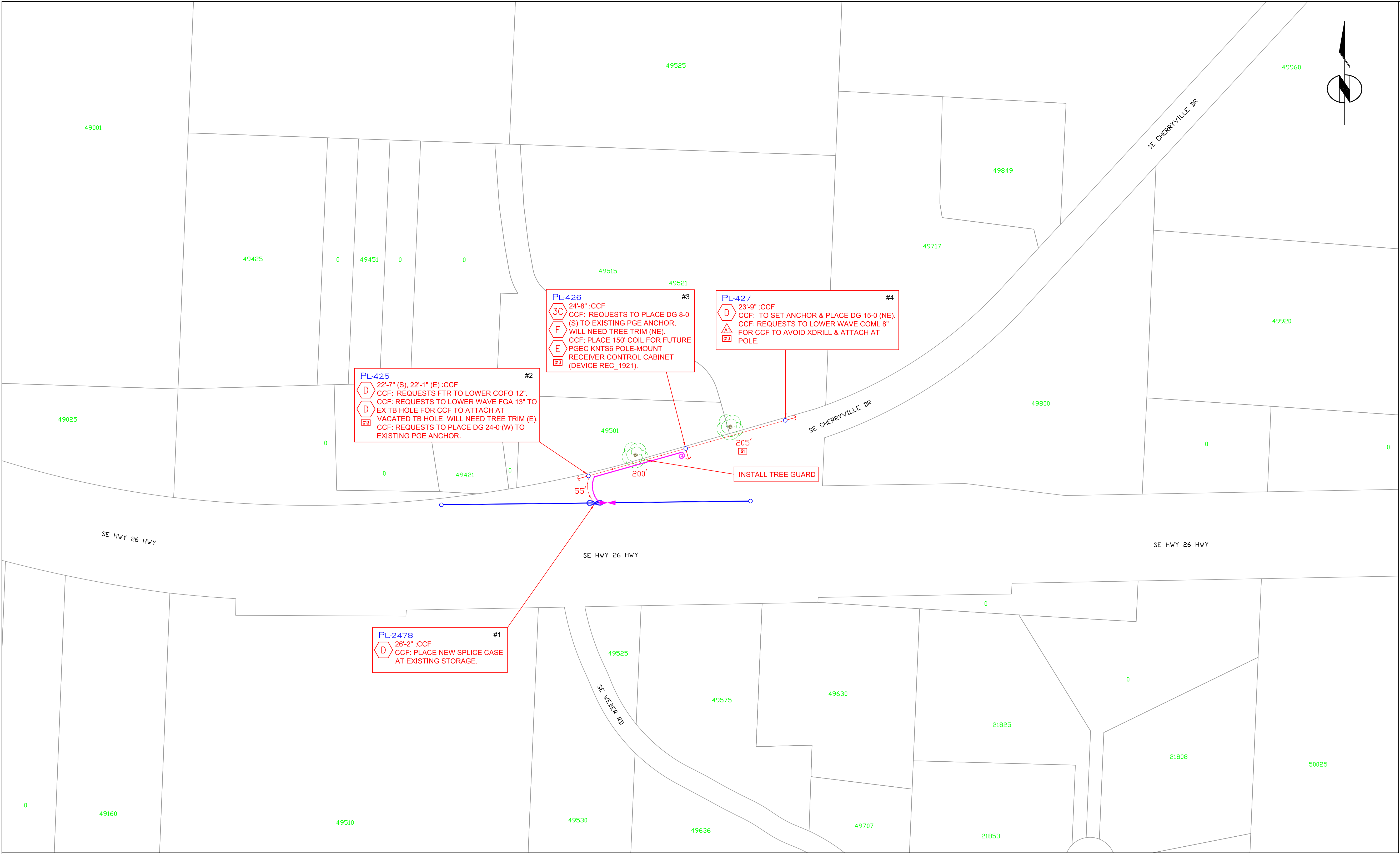
\_\_\_\_\_ Official Capacity \_\_\_\_\_ Name

Attest: \_\_\_\_\_ Corporation Secretary \_\_\_\_\_ Address

\_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip

\_\_\_\_\_ Phone \_\_\_\_\_ Fax





LEGEND

- EXISTING PGEC OH FIBER
- EXISTING PGEC SPLICE CASE/ IN-SPAN STORAGE
- EXISTING CCF OH FIBER
- EXISTING CCF SPLICE CASE/ IN-SPAN STORAGE
- PROPOSED CCF OH FIBER
- PROPOSED CCF SPLICE CASE/ IN-SPAN STORAGE

ANCHORS

ANCHOR CODE	(LEAD) (LBS)	10" SGL HELIX	10" SGL HELIX W/ QUEENS POST	TRIPLE HELIX	14" SGL HIT	10" EXPANDING	28" PLATE
A		A1	A2	A3	A4	A5	A8

GUYING

G	(POS-LBS)	5/16" O.H.	3/8" O.H.	7/16" O.H.	1/2" O.H.	5/16" D.G.	3/8" D.G.	7/16" D.G.	1/2" D.G.
1 GUY	G1	G4	G7	G10	G13	G16	G19	G22	
2 GUYS	G2	G5	G8	G11	G14	G17	G20	G23	
3 GUYS	G3	G6	G9	G12	G15	G18	G21	G24	

- INSTALL AUXILIARY EYE ON EXISTING PGE ANCHOR
- INSTALL DIELECTRIC TANGENT SUPPORT (TYPICALLY 40" BELOW NEUTRAL, 1' ABOVE EXISTING COMMUNICATION WHERE APPLICABLE)
- INSTALL DIELECTRIC SUSPENSION SUPPORT
- INSTALL THRU-BOLT MOUNTED SUPPORT (ALUMINUM TANGENT)
- TAPE & SHAPE PGE FACILITIES TO ACCOMMODATE NESC CLEARANCE PGE LINE CREW
- INSTALL DIELECTRIC HIGH TENSION DEAD-END SUPPORT
- INSTALL DOUBLE DEAD END
- INSTALL 1-2" POLE CONDUIT UNIT W/ 12" BRACKETS
- 200' OF IN-SPAN STORAGE LOOP, NO SPLICE CASE
- INSTALL DIELECTRIC TANGENT SUPPORT ON 18" FIBERGLASS EXTENSION ARMS AS NOTED (TYPICALLY 40" BELOW NEUTRAL, 1' ABOVE EXISTING COMMUNICATION WHERE APPLICABLE)
- INSTALL GEO TEK PUPPI ARM (10-TB2000-60-SX)
- STEEL POLE BOLT-A-BAND ATTACHMENT
- INSTALL WOOD ARM (4" OR 8") SEE SPECIFIC POLE NOTES
- RAISE ST LT TO MEET MIN 20" CLEARANCE
- RAISE /PULL SLACK TO MEET MIN 30" MID SPAN CLEARANCE
- RAISE POWER FACILITIES TO MEET MIN 40" CLEARANCE BETWEEN POWER AND COMMUNICATIONS
- 200' COIL FOR SPLICE CASE
- INSTALL SLACK SPAN
- INSTALL 5/16" STRAND
- TREE TRIM / LANDSCAPING

ANY DEVIATION FROM THIS DESIGN MUST BE APPROVED BY PGE PROJECT MANAGER

CALL 811 BEFORE YOU DIG

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE OREGON UTILITY NOTIFICATION CENTER ADMINISTRATION @ (503-232-1987)

TO REQUEST UTILITY LOCATES CALL THE OREGON UTILITY NOTIFICATION CENTER, 811 AT LEAST 2 BUSINESS DAYS PRIOR TO EXCAVATION.

Know what's below. Call before you dig.

**B** CU 1247 DIELECTRIC SUPPORT TANGENT & LIGHT ANGLE

**B1** CU 1248 DIELECTRIC SUSPENSION

**B2** SPECIAL ORDERS MULTI-CABLE STACKING

**T1** THRU-BOLT MOUNTED SUPPORT

**F** CU 1250 SEE NOTES BELOW 200' CABLE STORAGE (SNOWSHOES) & POLE ATTACHMENT

**D2** CU 1252 DOUBLE DE ON THRU BOLT

**1** ALUMA-FORM BOLT-A-BAND

**3C** THREE BOLT CLAMP

**D** CU 1251 (ORDER 2-DE FOR CORNER) DOUBLE DEAD END POLE

**E** CU 1249 & CU 1247

**H** SU 40166 PUPPI ARM

**3C** THREE BOLT CLAMP

**1** ALUMA-FORM BOLT-A-BAND

**F** CU 1250 SEE NOTES BELOW 200' CABLE STORAGE (SNOWSHOES) & POLE ATTACHMENT

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**F** CU 1250 SEE NOTES BELOW 200' CABLE STORAGE (SNOWSHOES) & POLE ATTACHMENT

**D2** CU 1252 DOUBLE DE ON THRU BOLT

**1** ALUMA-FORM BOLT-A-BAND

**3C** THREE BOLT CLAMP

**D** CU 1251 (ORDER 2-DE FOR CORNER) DOUBLE DEAD END POLE

**E** CU 1249 & CU 1247

**H** SU 40166 PUPPI ARM

**3C** THREE BOLT CLAMP

**1** ALUMA-FORM BOLT-A-BAND

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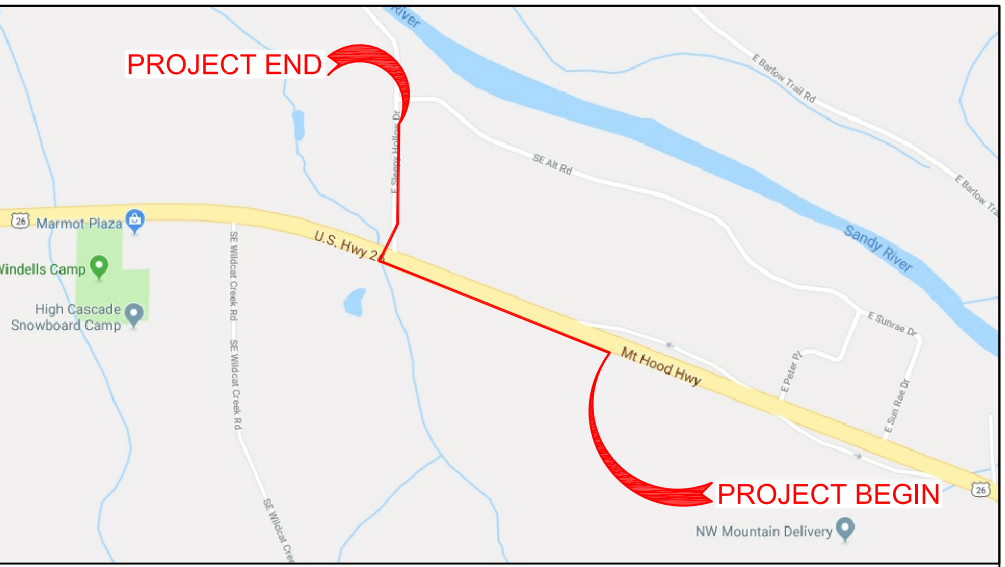
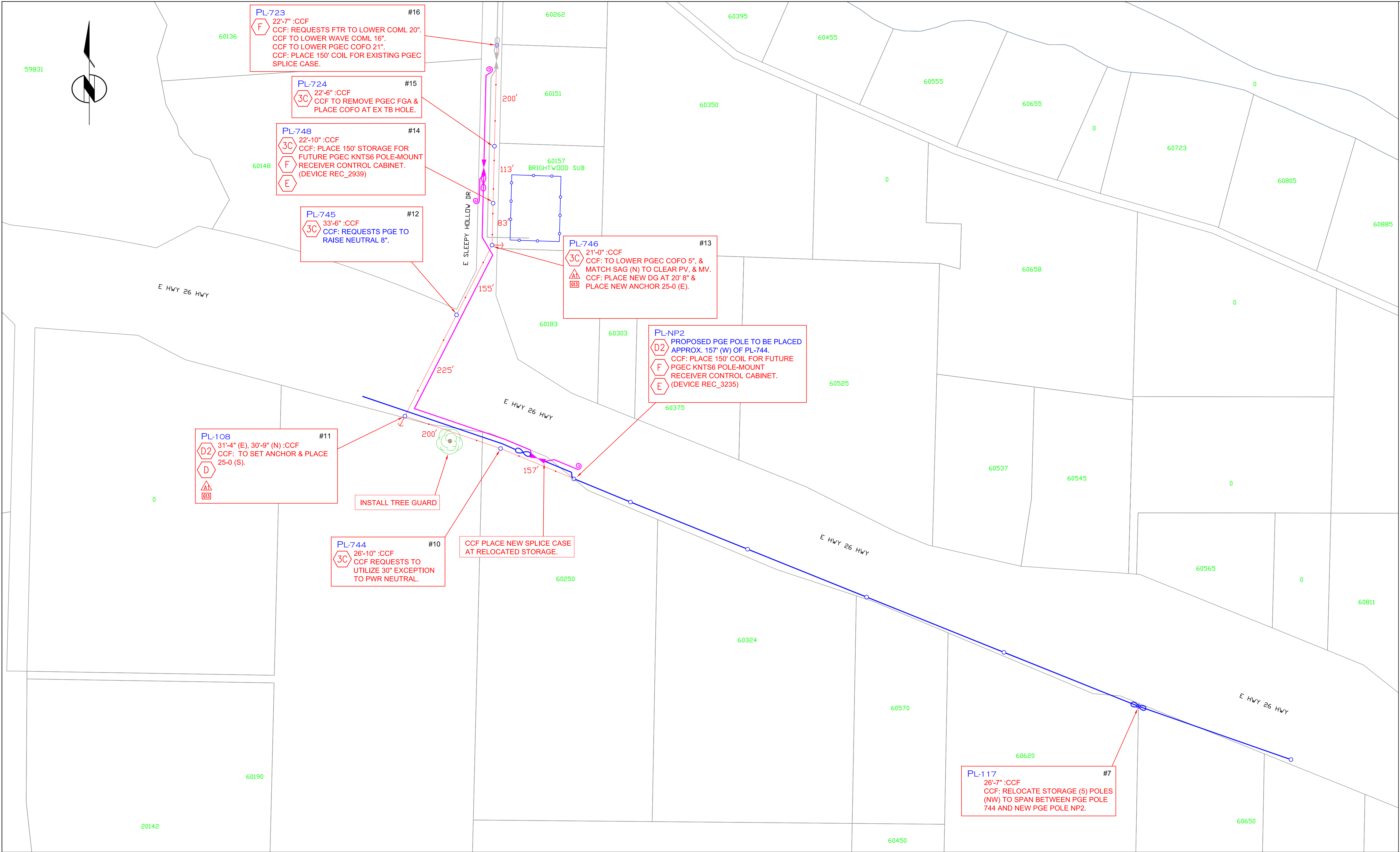
**3C** THREE BOLT CLAMP

**D** CU









### LEGEND

	EXISTING PGEC OH FIBER
	EXISTING PGEC SPLICER CASE/ IN-SPAN STORAGE
	EXISTING CCF OH FIBER
	EXISTING CCF SPLICER CASE/ IN-SPAN STORAGE
	PROPOSED CCF OH FIBER
	PROPOSED CCF SPLICER CASE/ IN-SPAN STORAGE

### ANCHORS

ANCHOR CODE	(LEAD)	(LBS)	10" SGL HELIX	10" SGL HELIX W/ QUEEN POST	TRIPLE HELIX	14" SGL HIT	10" EXPANDING	28" PLATE
A								

### GUYING

G	(POS-LBS)	5/16" O.H.	3/8" O.H.	7/16" O.H.	1/2" O.H.	5/16" D.G.	3/8" D.G.	7/16" D.G.	1/2" D.G.
1 GUY	G1	G4	G7	G10	G13	G16	G19	G22	
2 GUYS	G2	G5	G8	G11	G14	G17	G20	G23	
3 GUYS	G3	G6	G9	G12	G15	G18	G21	G24	

- INSTALL AUXILIARY EYE ON EXISTING PGE ANCHOR
- INSTALL DIELECTRIC TANGENT SUPPORT (TYPICALLY 40" BELOW NEUTRAL, 1' ABOVE EXISTING COMMUNICATION WHERE APPLICABLE)
- INSTALL DIELECTRIC SUSPENSION SUPPORT
- INSTALL THRU-BOLT MOUNTED SUPPORT (ALUMINUM TANGENT)
- TAPE & SHAPE PGE FACILITIES TO ACCOMMODATE NESC CLEARANCE PGE LINE CREW
- INSTALL DIELECTRIC HIGH TENSION DEAD-END SUPPORT
- INSTALL DOUBLE DEAD END
- INSTALL 1-2" POLE CONDUIT UNIT W/ 12" BRACKETS
- 200' OF IN-SPAN STORAGE LOOP, NO SPLICER CASE
- INSTALL DIELECTRIC TANGENT SUPPORT ON 18" FIBERGLASS EXTENSION ARMS AS NOTED (TYPICALLY 40" BELOW NEUTRAL, 1' ABOVE EXISTING COMMUNICATION WHERE APPLICABLE)
- INSTALL GEO TEK PUPPI ARM (10-TB2000-60-SX)
- STEEL POLE BOLT-A-BAND ATTACHMENT
- INSTALL WOOD ARM (4' OR 8') SEE SPECIFIC POLE NOTES
- RAISE ST LT TO MEET MIN 20" CLEARANCE
- RAISE /PULL SLACK TO MEET MIN 30" MID SPAN CLEARANCE
- RAISE POWER FACILITIES TO MEET MIN 40" CLEARANCE BETWEEN POWER AND COMMUNICATIONS
- 200' COIL FOR SPLICER CASE
- INSTALL SLACK SPAN
- INSTALL 5/16" STRAND
- TREE TRIM / LANDSCAPING

ANY DEVIATION FROM THIS DESIGN MUST BE APPROVED BY PGE PROJECT MANAGER

CALL 811 BEFORE YOU DIG

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE OREGON UTILITY NOTIFICATION CENTER ADMINISTRATION @ (503-232-1987)

TO REQUEST UTILITY LOCATES CALL THE OREGON UTILITY NOTIFICATION CENTER, 811 AT LEAST 2 BUSINESS DAYS PRIOR TO EXCAVATION.

Know what's below. Call before you dig.

CU 1247 DIELECTRIC SUPPORT TANGENT & LIGHT ANGLE

CU 1248 DIELECTRIC SUSPENSION

SPECIAL ORDERS MULTI-CABLE STACKING

THRU-BOLT MOUNTED SUPPORT

CU 1250 SEE NOTES BELOW 200' CABLE STORAGE (SNOWSHOES) & POLE ATTACHMENT

CU 1252 DOUBLE DE ON THRU BOLT

ALUMA-FORM BOLT-A-BAND

THREE BOLT CLAMP

SPLICE CASE BY COMM TECHS

REEL CHANGE: WHEN SPLICER CASE IS REQUIRED LINE CREW INSTALL DDE & COIL 200' FROM EACH REEL. 200' STORAGE LOOPS (NO SPLICER CASE) LINE CREW INSTALL DDE & BUILD STORAGE LOOPS.

BAB-54XX: 1 1/4" SINGLE BAND (x2)  
BAB-58: 1 1/4" BUCKLE (x2)  
HDBB-1511-H: HEAVY DUTY MOUNT (TIMES 2 FOR 2x2 OR D2)  
5/8"-11x2" HEAVY DUTY BOLT (x2)

TANGENT POLE FIBER

MAXIMUM LINE ANGLE IS 20 DEGREES

MAXIMUM RECOMMENDED LINE ANGLE IS 40 DEGREES, USE FOR TANGENT SPANS OVER 350'

IN MULTI-CABLE INSTALLATIONS, MODULAR BASE SURFACES AT THE MOUNTING BOLT PROVIDE STABLE ENGAGEMENT AND STACKING

TANGENT HARDWARE ALUMINUM

CU 1251 (ORDER 2-DE FOR CORNER) DOUBLE DEAD END POLE

CU 1249 & CU 1247

SU 40166 PUPPI ARM MOUNT PGEC DIALECTRIC SUPPORT IN TOP INSIDE POSITION (TYPICAL)

FIELD SIDE ROAD SIDE

CORNERS & ANGLES GREATER THAN 40 DEGREES REQUIRE DEAD END CONSTRUCTION

18" FIBERGLASS EXTENSION ARM

### FOOTAGES:

OVERLASH NEW FIBER - 1,133'  
LASH EXISTING FIBER - 753'  
STORAGE - 450'

1.5% SAG + 10% - 175'

TOTAL FIBER - 1,758'

NEW STRAND - 1,133'

### NOTES:

BLUE TEXT: PGE MAKEREADY NOTES  
RED TEXT: FIBER MAKEREADY/ INSTALLATION NOTES

INSTALL PGEC FIBER TAGS ON EVERY ATTACHMENT AT EVERY POLE  
MAINTAIN 40" FROM LOWEST POWER POINT TO FIBER.  
MAINTAIN 20" FROM BOTTOM OF STREETLIGHT BRACKET TO FIBER.  
MAINTAIN 30" FROM LOWEST POWER LINE MIDSPAN TO FIBER  
DO NOT BLOCK CLIMBING SPACE.

### HARDWARE:

D - 1  
D2 - 2  
F - 3  
3C - 5  
TG - 1  
G13 - 3  
A1 - 3  
E - 2

DRAWING PREPARED BY: TECHNICAL SOLUTIONS  
Mark\_Schubert@knb.com  
PO BOX 2529  
CLACKAMAS, OR 97015

Communication Engineer:  
Emory Morris  
Office: (503) 612-2899  
Email: Emory.Morris@pgn.com

PGE CONSTRUCTION DRAWING

AS-BUILT VERIFICATION & NESC VIOLATIONS CORRECTED

This document accurately represents FIELD Construction.

Foreman: \_\_\_\_\_ Date: \_\_\_\_\_

General Foreman: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature only required for field construction changes.)

SDPM/ENG REVIEW: \_\_\_\_\_ ASBUILT BY DESIGNER: \_\_\_\_\_

DATE: 08/17/18 SCALE: 1"=100' ACCOUNT: UNKNOWN AWO: . JOB NO. PGEC-11244

CIRCUIT: BRIGHTWOOD TO WELCHES DA SCHEME - SECTION 3 REVISION: 4 SIZE: 22x34

LOCATION: 60157 E SLEEPY HOLLOW DR, SANDY, OR 97055

DESCRIPTION: INSTALL 60 CT ADSS OH FIBER

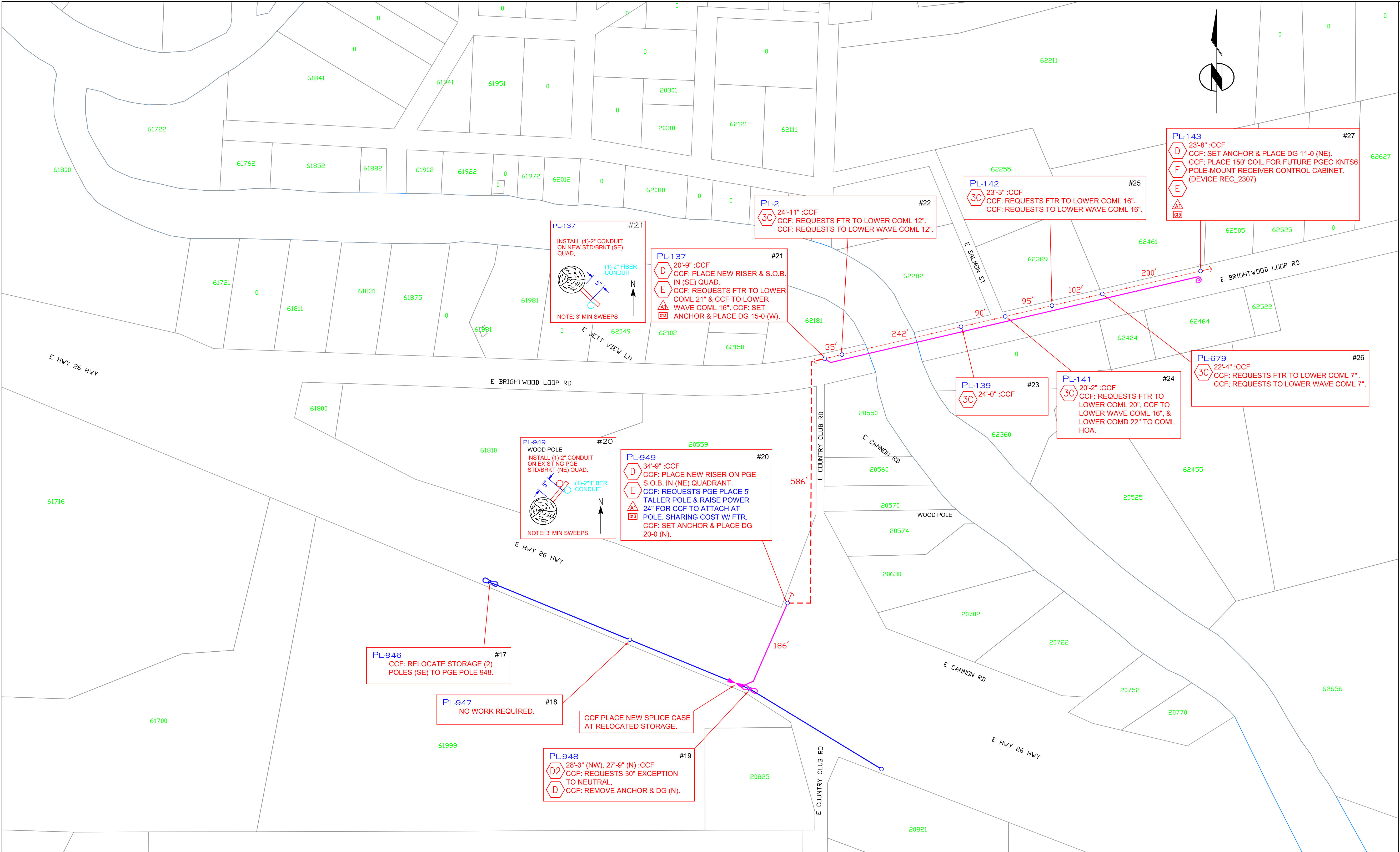
COUNTY: CLACKAMAS SECTION(S): D26-23C, D26-22D WORK WITH: N/A SHEET: 3 OF 7

DESIGN BY: K & B Technical Solutions PHONE: (503) 650-6041 DRAWN BY: K&B

10800 SW AVERY ST  
TUALATIN, OR 97062

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LEGEND

- EXISTING PGEC OH FIBER
- EXISTING PGEC SPLICE CASE/ IN-SPAN STORAGE
- EXISTING CCF OH FIBER
- EXISTING CCF SPLICE CASE/ IN-SPAN STORAGE
- PROPOSED CCF OH FIBER
- PROPOSED CCF SPLICE CASE/ IN-SPAN STORAGE
- NEW (1)-2" CONDUIT W/ FIBER

ANCHORS

ANCHOR CODE	(LEAD LBS)	A1	A2	A3	A4	A5	A6	A7	A8
A		10" SGL HELIX	10" SGL HELIX	10" SGL HELIX	10" SGL HELIX	10" SGL HELIX	10" SGL HELIX	10" SGL HELIX	10" SGL HELIX

GUYS

G	(POS-LBS)	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19	G20	G21	G22	G23	G24
1 GUY		G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19	G20	G21	G22	G23	G24
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3 GUYS		G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19	G20	G21	G22	G23	G24

- INSTALL AUXILIARY EYE ON EXISTING PGE ANCHOR
- INSTALL DIELECTRIC TANGENT SUPPORT (TYPICALLY 40" BELOW NEUTRAL, 1' ABOVE EXISTING COMMUNICATION WHERE APPLICABLE)
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- INSTALL 5/16" STRAND
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TO REQUEST UTILITY LOCATES CALL THE OREGON UTILITY NOTIFICATION CENTER, 811 AT LEAST 2 BUSINESS DAYS PRIOR TO EXCAVATION.

**811**

Know what's below. Call before you dig.

**FOOTAGES:**

OVERLASH NEW FIBER - 764'  
NEW AERIAL SPAN - 186'  
STORAGE - 150'

NEW CONDUIT - 586'  
NEW RISERS - 54'

1.5% SAG + 10% - 189'

TOTAL FIBER - 1,929'

NEW STRAND - 764'

**HARDWARE:**

D - 4  
D2 - 1  
F - 1  
3C - 5  
G13 - 3  
A1 - 3  
E - 3

**NOTES:**

BLUE TEXT: PGE MAKEREADY NOTES  
RED TEXT: FIBER MAKEREADY/ INSTALLATION NOTES

INSTALL PGEC FIBER TAGS ON EVERY ATTACHMENT AT EVERY POLE  
MAINTAIN 40" FROM LOWEST POWER POINT TO FIBER.  
MAINTAIN 20" FROM BOTTOM OF STREETLIGHT BRACKET TO FIBER.  
MAINTAIN 30" FROM LOWEST POWER LINE MIDSPAN TO FIBER  
DO NOT BLOCK CLIMBING SPACE.

**THINK SAFETY FIRST!**

DRAWING PREPARED BY: **K&B** TECHNICAL SOLUTIONS  
Mark\_Schubert@att.net  
PO BOX 2529  
CLACKAMAS, OR 97015

PGE CONSTRUCTION DRAWING

AS-BUILT VERIFICATION & NESC VIOLATIONS CORRECTED

This document accurately represents FIELD Construction.

Foreman: \_\_\_\_\_ Date: \_\_\_\_\_

General Foreman: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature only required for field construction changes)

SDPM/ENG REVIEW: \_\_\_\_\_ ASBUILT BY DESIGNER: \_\_\_\_\_

DATE: 08/13/18 SCALE: 1"=100' ACCOUNT: UNKNOWN AWO: . JOB NO. PGEC-11244

CIRCUIT: BRIGHTWOOD TO WELCHES DA SCHEME - SECTION 4 REVISION: 3 SIZE: 22x34

LOCATION: 61810 E BRIGHTWOOD LOOP, BRIGHTWOOD, OR 97011

DESCRIPTION: INSTALL 60 CT ADSS OH FIBER

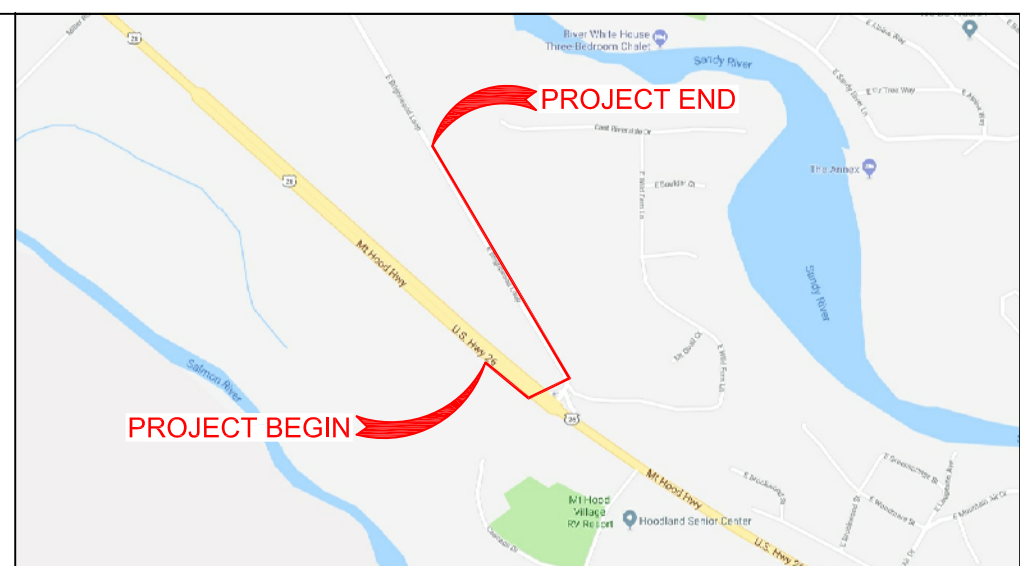
COUNTY: CLACKAMAS SECTION(S): D26-26A, D26-23D, D26-24C WORK WITH: N/A SHEET: 4 OF 7

DESIGN BY: K & B Technical Solutions PHONE: (503) 650-6041 DRAWN BY: K&B







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TUALATIN, OR 97062

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## LEGEND

- |   |  |
|---|--|
|  | EXISTING PGEC OH FIBER                     |
|  | EXISTING PGEC SPLICE CASE/ IN-SPAN STORAGE |
|  | EXISTING CCF OH FIBER                      |
|  | EXISTING CCF SPLICE CASE/ IN-SPAN STORAGE  |
|  | PROPOSED CCF OH FIBER                      |
|  | PROPOSED CCF SPLICE CASE/ IN-SPAN STORAGE  |

## ANCHORS









ANCHOR CODE	A1	A2	A3	A5	A7	A8
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## GUYING



1 GUY	G1	G4	G7	G10	G13	G16	G19	G22
2 GUYS	G2	G5	G8	G11	G14	G17	G20	G23
3 GUYS	G3	G6	G9	G12	G15	G18	G21	G24

- |   |  |
|---|--|
|    | INSTALL AUXILIARY EYE ON EXISTING PGE ANCHOR   |
|    | INSTALL DIELECTRIC TANGENT SUPPORT<br>(TYPICALLY 40" BELOW NEUTRAL, 1' ABOVE EXISTING COMMUNICATION WHERE APPLICABLE)  |
|    | INSTALL DIELECTRIC SUSPENSION SUPPORT  |
|    | INSTALL THRU-BOLT MOUNTED SUPPORT (ALUMINUM TANGENT)   |
|    | TAPE & SHAPE PGE FACILITIES TO ACCOMMODATE<br>NESC CLEARANCE PGE LINE CREW   |
|    | INSTALL DIELECTRIC HIGH TENSION DEAD-END SUPPORT   |
|    | INSTALL DOUBLE DEAD END  |
|   | INSTALL 1-2" POLE CONDUIT UNIT W/ 12" BRACKETS   |
|    |  200' OF IN-SPAN STORAGE LOOP, NO SPLICE CASE                                 |
|    | INSTALL DIELECTRIC TANGENT SUPPORT ON 18" FIBERGLASS<br>EXTENSION ARMS AS NOTED (TYPICALLY 40" BELOW NEUTRAL,<br>1' ABOVE EXISTING COMMUNICATION WHERE APPLICABLE) |
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|    | STEEL POLE BOLT-A-BAND ATTACHMENT  |
|    | INSTALL WOOD ARM (4' OR 8')<br>SEE SPECIFIC POLE NOTES   |
|  | RAISE ST LT TO MEET MIN 20" CLEARANCE  |
|  | RAISE /PULL SLACK TO MEET MIN 30" MID SPAN CLEARANCE   |
|  | RAISE POWER FACILITIES TO MEET MIN 40" CLEARANCE<br>BETWEEN POWER AND COMMUNICATIONS   |
|    | 200' COIL FOR SPLICE CASE  |
|    | INSTALL SLACK SPAN   |
|    | INSTALL 5/16" STRAND   |
|    | TREE TRIM / LANDSCAPING  |

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BE APPROVED BY PGE PROJECT MANAGER

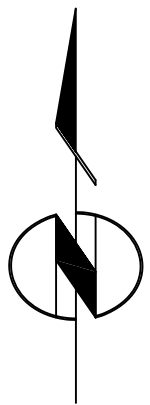
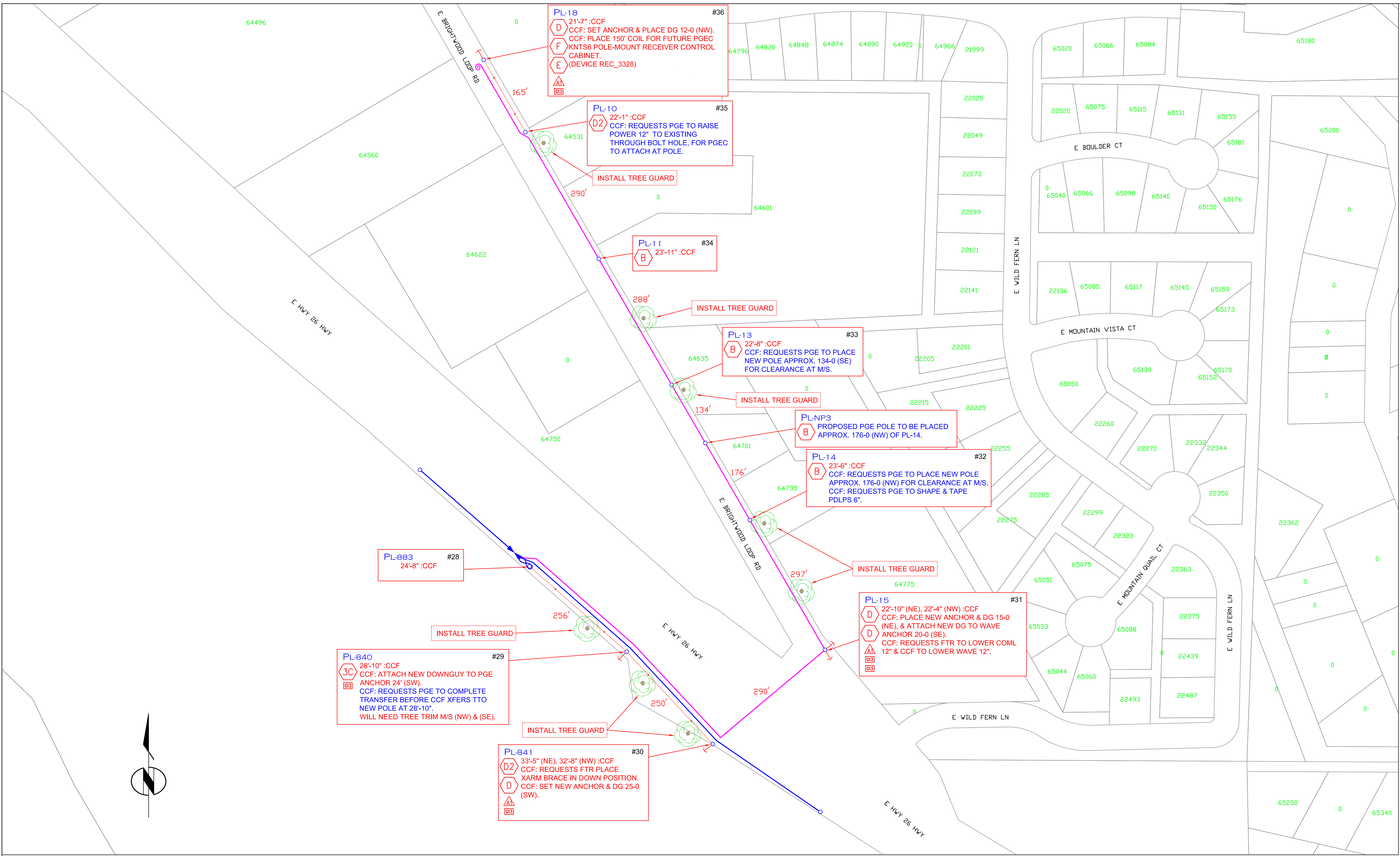
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Now what's **below**.  
**Call before you dig.**



- B1** CU 1247 DIELECTRIC SUPPORT TANGENT & LIGHT ANGLE  
MAXIMUM LINE ANGLE IS 20 DEGREES

**B2** CU 1248 DIELECTRIC SUSPENSION  
MAXIMUM RECOMMENDED LINE ANGLE IS 40 DEGREES, USE FOR TANGENT SPANS OVER 350'

**B3** SPECIAL ORDERS MULTI-CABLE STACKING  
IN MULTI-CABLE INSTALLATIONS, MODULAR BASE SURFACES AT THE MOUNTING BOLT PROVIDE STABLE ENGAGEMENT AND STACKING

**B4** THRU-BOLT MOUNTED SUPPORT  
TANGENT HARDWARE ALUMINUM

**B5** CU 1250 SEE NOTES BELOW 200' CABLE STORAGE (SNOWSHOES) & POLE ATTACHMENT  
CU 1252 DOUBLE DE ON THRU BOLT  
SPLICE CASE BY COMM TECHS  
60" EACH SIDE OF POLE  
ROAD SIDE

**B6** ALUMA-FORM BOLT-A-BAND  
BAB-54X: 1 1/4" SINGLE BAND (x2)  
BAB-58: 1 1/4" BUCKLE (x2)  
HDBB-1511-H: HEAVY DUTY MOUNT (TIMES 2 FOR 2x0 OR D2)  
58"-11x2" HEAVY DUTY BOLT (x2)

**B7** THREE BOLT CLAMP  
EXISTING POLE GROUND  
#6 COPPER JUMPER WIRE TO POLE GROUND  
PLACE FIBER ID TAGS AT EACH POLE  
TANGENT POLE FIBER

**B8** CU 1247 DIELECTRIC SUPPORT TANGENT & LIGHT ANGLE  
MAXIMUM LINE ANGLE IS 20 DEGREES

**B9** CU 1248 DIELECTRIC SUSPENSION  
MAXIMUM RECOMMENDED LINE ANGLE IS 40 DEGREES, USE FOR TANGENT SPANS OVER 350'

**B10** SPECIAL ORDERS MULTI-CABLE STACKING  
IN MULTI-CABLE INSTALLATIONS, MODULAR BASE SURFACES AT THE MOUNTING BOLT PROVIDE STABLE ENGAGEMENT AND STACKING

**B11** THRU-BOLT MOUNTED SUPPORT  
TANGENT HARDWARE ALUMINUM

**B12** CU 1250 SEE NOTES BELOW 200' CABLE STORAGE (SNOWSHOES) & POLE ATTACHMENT  
CU 1252 DOUBLE DE ON THRU BOLT  
SPLICE CASE BY COMM TECHS  
60" EACH SIDE OF POLE  
ROAD SIDE

**B13** ALUMA-FORM BOLT-A-BAND  
BAB-54X: 1 1/4" SINGLE BAND (x2)  
BAB-58: 1 1/4" BUCKLE (x2)  
HDBB-1511-H: HEAVY DUTY MOUNT (TIMES 2 FOR 2x0 OR D2)  
58"-11x2" HEAVY DUTY BOLT (x2)

**B14** THREE BOLT CLAMP  
EXISTING POLE GROUND  
#6 COPPER JUMPER WIRE TO POLE GROUND  
PLACE FIBER ID TAGS AT EACH POLE  
TANGENT POLE FIBER

FOOTAGES:

OVERLASH NEW FIBER - 671'  
LASH EXISTING FIBER - 506'  
NEW AERIAL SPAN - 1,475'  
STORAGE - 150'

1.5% SAG + 10% - 262'

TOTAL FIBER - 2,558'

NEW STRAND - 671'

**HARDWARE:**

B -	4
D -	4
D2 -	2
F -	1
3C -	1
TG -	8
G13 -	4
A1 -	4
E -	1


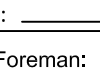
NOTES:

BLUE TEXT: PGE MAKEREADY NOTES

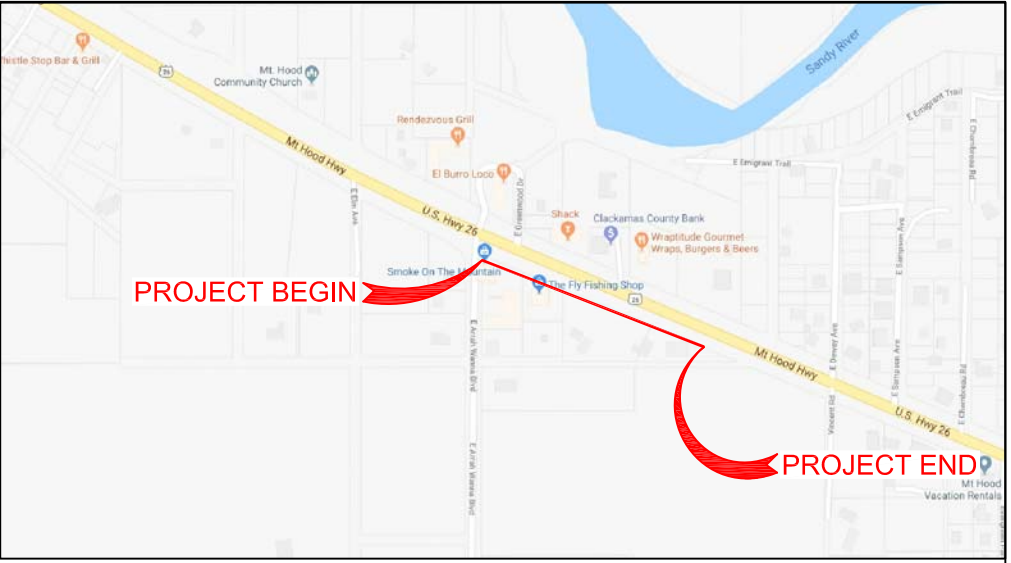
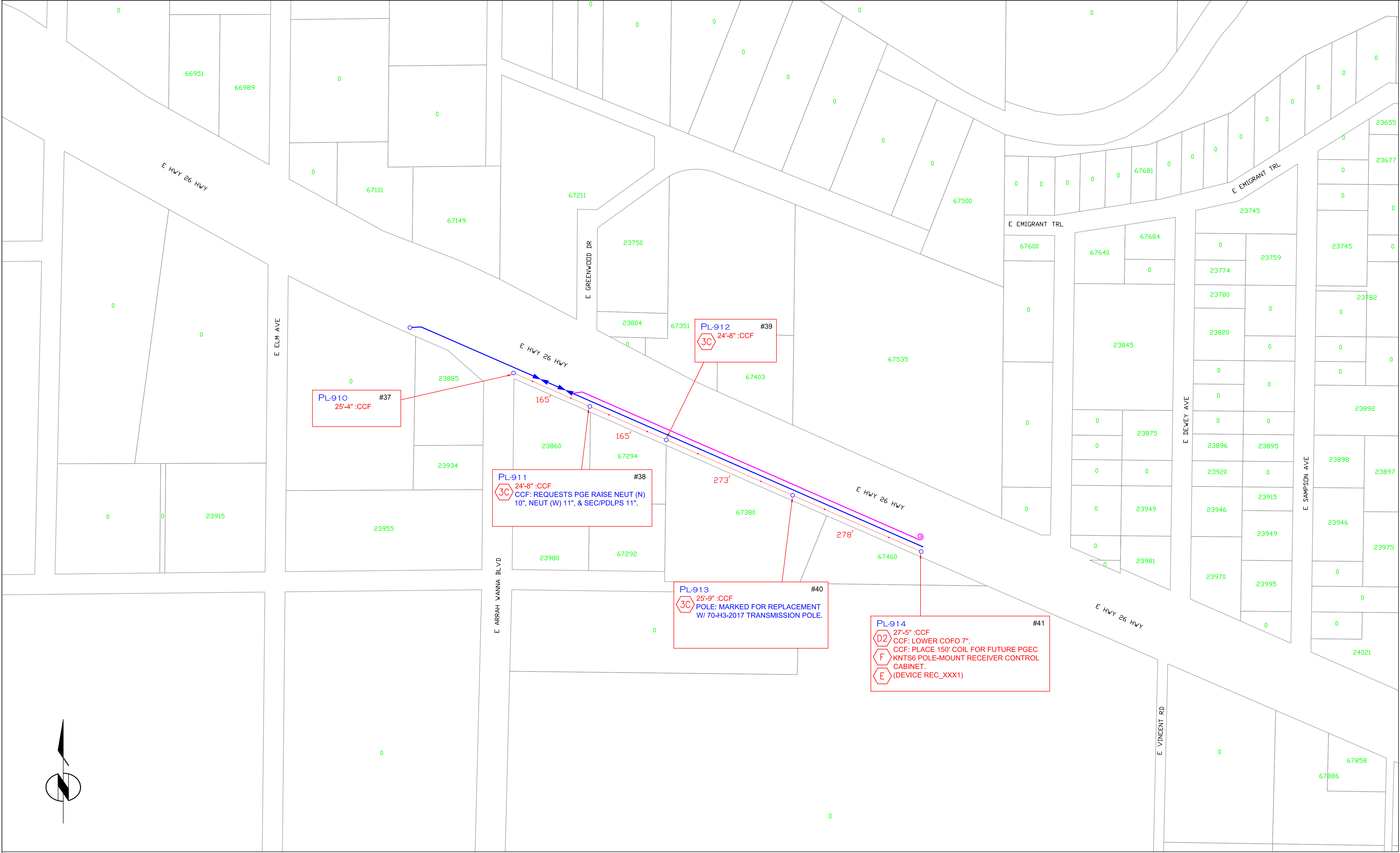
RED TEXT: FIBER MAKEREADY/ INSTALLATION NOTES

INSTALL PGEC FIBER TAGS ON EVERY ATTACHMENT AT EVERY POLE  
MAINTAIN 40" FROM LOWEST POWER POINT TO FIBER.  
MAINTAIN 20" FROM BOTTOM OF STREETLIGHT BRACKET TO FIBER.  
MAINTAIN 30" FROM LOWEST POWER LINE MIDSPAN TO FIBER  
DO NOT BLOCK CLIMBING SPACE.

**THINK  
SAFETY  
FIRST!**

 <p><b>DRAWING PREPARED BY</b>  <b>TECHNICAL SOLUTIONS</b>  <b>Mark_Gyborus@kbmail.net</b>          PO BOX 2329          CLACKAMAS, OR 97015</p>	<p align="center"><b>COMMUNICATION ENGINEER:</b>  <b>Emory Morris</b>  <b>Office: (503) 612-2899</b>  <b>Email: Emory.Morris@pgn.com</b></p>
<p><b>PGE CONSTRUCTION DRAWING</b></p>	
<p><b>AS-BUILT VERIFICATION &amp; NESC VIOLATIONS CORRECTED</b></p> <p align="center"><i>This document accurately represents FIELD Construction.</i></p>	
<p><b>Foreman:</b> _____</p>	<p><b>Date:</b> _____</p>
<p><b>General Foreman:</b> _____</p>	<p><b>Date:</b> _____</p>
<p>(Signature only required for field construction changes.)</p>	
<p><b>SDPM/ENG REVIEW:</b> _____</p>	<p><b>[ASBUILT BY DESIGNER:</b> _____</p>
<p><b>DATE:</b> 08/13/18</p>	<p><b>SCALE:</b> 1"=100'</p>
<p><b>ACCOUNT:</b> UNKNOWN</p>	<p><b>AWD:</b> -</p>
<p><b>JOB NO. PGEC-11244</b></p>	
<p><b>TITLE</b> BRIGHTWOOD TO WELCHES DA SCHEME - SECTION 5</p>	<p><b>REVISION:</b> 3</p>
<p><b>CIRCUIT</b></p>	<p><b>SIZE</b> 22x34</p>
	
<p><b>LOCATION</b> 64735 E BRIGHTWOOD LOOP, BRIGHTWOOD, OR 97011</p>	
<p><b>DESCRIPTION</b> INSTALL 60 CT ADSS OH FIBER</p>	
<p><b>COUNT</b> CLACKAMAS</p>	<p><b>SECTION(S)</b> D27-30C</p>
<p><b>DESIGN BY</b> K &amp; B Technical Solutions</p>	<p><b>PHONE</b> (503) 650-6041</p>
<p><b>DRAWN BY</b> K&amp;B</p>	<p><b>WORK WITH</b> N/A</p>
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<p>10800 SW AVERY ST TUALATIN, OR 97062</p>	<p><b>SHEET</b> 5 OF 7</p>





LEGEND

- EXISTING PGEC OH FIBER
- EXISTING PGEC SPLICER CASE/ IN-SPAN STORAGE
- EXISTING CCF OH FIBER
- EXISTING CCF SPLICER CASE/ IN-SPAN STORAGE
- PROPOSED CCF OH FIBER
- PROPOSED CCF SPLICER CASE/ IN-SPAN STORAGE

ANCHORS

ANCHOR CODE	(LEAD) (LBS)	10" SGL HELIX	10" SGL HELIX W/ QUEENS POST	TRIPLE HELIX	14" SGL HIT	10" EXPANDING	28" PLATE
A1							
A2							
A3							
A5							
A7							
A8							

GUYS

(POS-LBS)	5/16" O.H.	3/8" O.H.	7/16" O.H.	1/2" O.H.	5/16" D.G.	3/8" D.G.	7/16" D.G.	1/2" D.G.
1 GUY	G1	G4	G7	G10	G13	G16	G19	G22
2 GUYS	G2	G5	G8	G11	G14	G17	G20	G23
3 GUYS	G3	G6	G9	G12	G15	G18	G21	G24

- INSTALL AUXILIARY EYE ON EXISTING PGE ANCHOR
- INSTALL DIELECTRIC TANGENT SUPPORT (TYPICALLY 40" BELOW NEUTRAL, 1' ABOVE EXISTING COMMUNICATION WHERE APPLICABLE)
- INSTALL DIELECTRIC SUSPENSION SUPPORT
- INSTALL THRU-BOLT MOUNTED SUPPORT (ALUMINUM TANGENT)
- TAPE & SHAPE PGE FACILITIES TO ACCOMMODATE NESC CLEARANCE PGE LINE CREW
- INSTALL DIELECTRIC HIGH TENSION DEAD-END SUPPORT
- INSTALL DOUBLE DEAD END
- INSTALL 1-2" POLE CONDUIT UNIT W/ 12" BRACKETS
- 200' OF IN-SPAN STORAGE LOOP, NO SPLICER CASE
- INSTALL DIELECTRIC TANGENT SUPPORT ON 18" FIBERGLASS EXTENSION ARMS AS NOTED (TYPICALLY 40" BELOW NEUTRAL, 1' ABOVE EXISTING COMMUNICATION WHERE APPLICABLE)
- INSTALL GEO TEK PUPPI ARM (10-TB2000-60-SX)
- STEEL POLE BOLT-A-BAND ATTACHMENT
- INSTALL WOOD ARM (4" OR 8") SEE SPECIFIC POLE NOTES
- RAISE ST LT TO MEET MIN 20" CLEARANCE
- RAISE /PULL SLACK TO MEET MIN 30" MID SPAN CLEARANCE
- RAISE POWER FACILITIES TO MEET MIN 40" CLEARANCE BETWEEN POWER AND COMMUNICATIONS
- 200' COIL FOR SPLICER CASE
- INSTALL SLACK SPAN
- INSTALL 5/16" STRAND
- TREE TRIM / LANDSCAPING

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**T1** THRU-BOLT MOUNTED SUPPORT

TANGENT HARDWARE ALUMINUM

**F** CU 1250 SEE NOTES BELOW 200' CABLE STORAGE (SNOWSHOES) & POLE ATTACHMENT

**D2** CU 1252 DOUBLE DE ON THRU BOLT

REEL CHANGE: WHEN SPLICER CASE IS REQUIRED LINE CREW INSTALL DDE & COIL 200' FROM EACH REEL. 200' STORAGE LOOPS (NO SPLICER) LINE CREW INSTALL DDE & BUILD STORAGE LOOPS.

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5/8"-11x2" HEAVY DUTY BOLT (x2)

**3C** THREE BOLT CLAMP

EXISTING POLE GROUND  
#6 COPPER JUMPER WIRE TO POLE GROUND  
PLACE FIBER ID TAGS AT EACH POLE

**D2** - 1  
F - 1  
3C - 3  
E - 1

FOOTAGES:

OVERLASH NEW FIBER - 881  
LASH EXISTING FIBER - 881'  
STORAGE - 150'

1.5% SAG + 10% - 117'

TOTAL FIBER - 1,148'

NEW STRAND - 881'

HARDWARE:

NOTES:

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DO NOT BLOCK CLIMBING SPACE.



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Mark\_Schubert@stemail.net  
PO BOX 2529  
CLACKAMAS, OR 97015

Communication Engineer:  
Emory Morris  
Office: (503) 612-2899  
Email: Emory.Morris@pgn.com

PGE CONSTRUCTION DRAWING

AS-BUILT VERIFICATION & NESC VIOLATIONS CORRECTED  
This document accurately represents FIELD Construction.

Foreman: \_\_\_\_\_ Date: \_\_\_\_\_

General Foreman: \_\_\_\_\_ Date: \_\_\_\_\_  
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SDPM/ENG REVIEW: \_\_\_\_\_ ASBUILT BY DESIGNER: \_\_\_\_\_

DATE: 08/13/18 SCALE: 1"=100' ACCOUNT: UNKNOWN AWO: . JOB NO. PGEC-11244

CIRCUIT: BRIGHTWOOD TO WELCHES DA SCHEME - SECTION 6 REVISION: 3 SIZE 22x34

LOCATION: 67294 E HWY 26, WELCHES, OR 97067

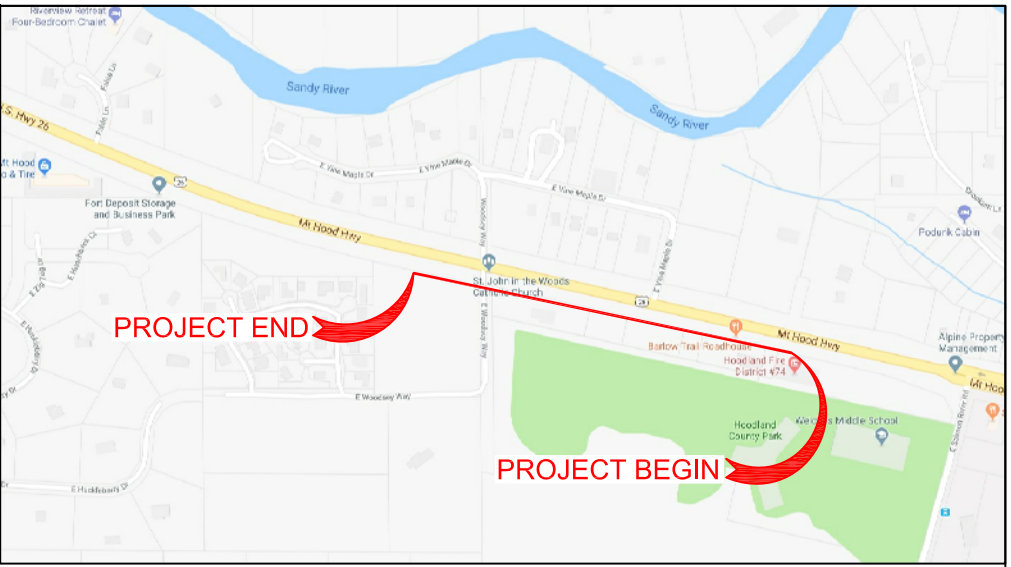
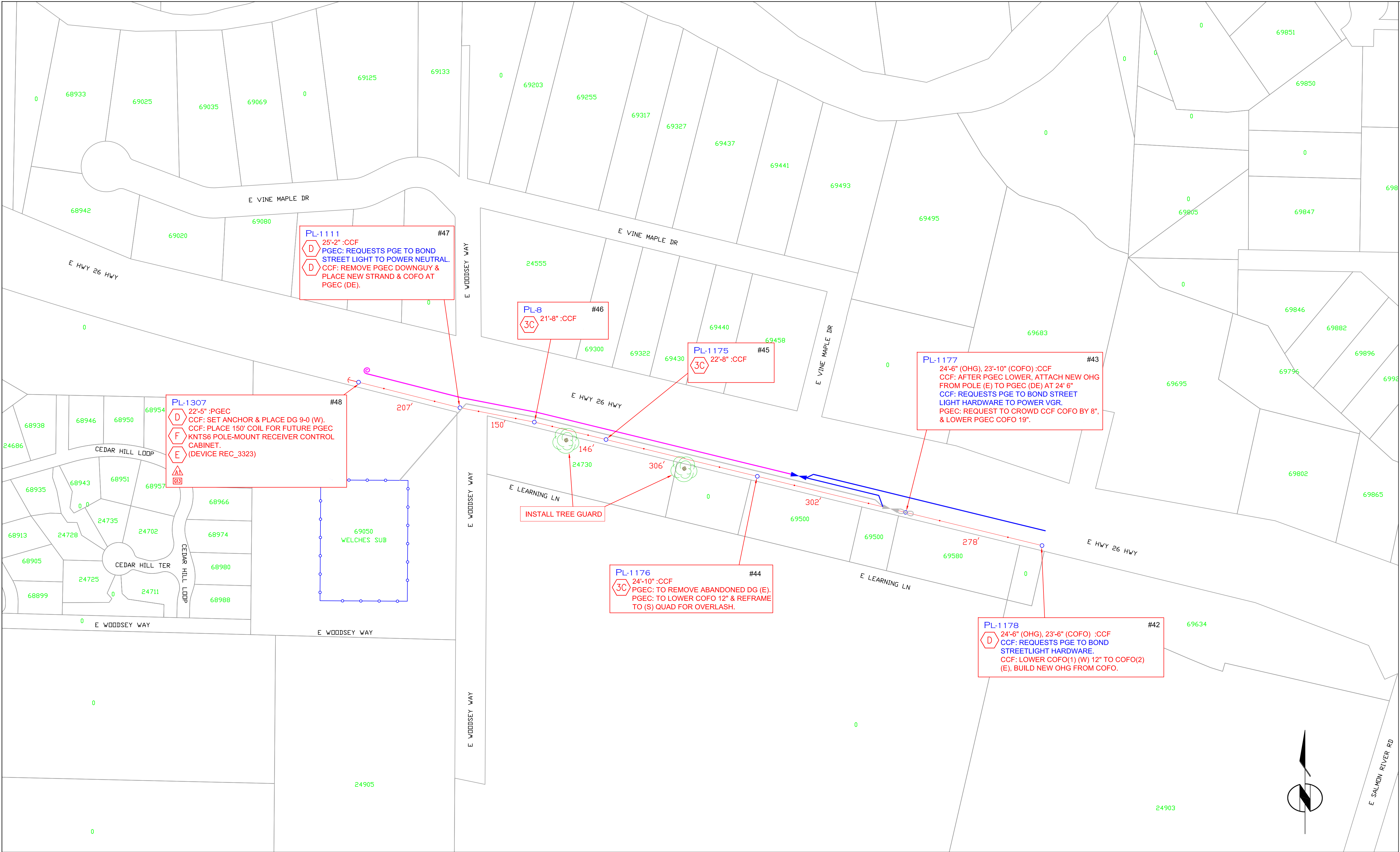
DESCRIPTION: INSTALL 60 CT ADSS OH FIBER

COUNTY: CLACKAMAS SECTION(S): D27-32D WORK WITH: N/A SHEET: 6 OF 7

DESIGN BY: K & B Technical Solutions PHONE: (503) 650-6041 DRAWN BY: K&B

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### LEGEND

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- EXISTING PGEC SPLICE CASE/ IN-SPAN STORAGE
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A4	10" SGL HELIX	10" SGL HELIX
A5	10" SGL HELIX	10" SGL HELIX
A6	10" SGL HELIX	10" SGL HELIX
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### GUYING

G	(POS-LBS)
1 GUY	G1 G4
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3 GUYS	G3 G6

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**B2** SPECIAL ORDERS MULTI-CABLE STACKING

**H** THRU-BOLT MOUNTED SUPPORT

**F** CU 1250 SEE NOTES BELOW 200' CABLE STORAGE (SNOWSHOES) & POLE ATTACHMENT

**D2** CU 1252 DOUBLE DE ON THRU BOLT

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#6 COPPER JUMPER WIRE TO POLE GROUND

PLACE FIBER ID TAGS AT EACH POLE

TANGENT POLE FIBER

OVERLASH NEW FIBER - 1,111  
LASH EXISTING FIBER - 1,182'  
STORAGE - 150'

1.5% SAG + 10% - 143'

TOTAL FIBER - 1,404'

NEW STRAND - 1,389'

**NOTES:**

**BLUE TEXT: PGE MAKEREADY NOTES**

**RED TEXT: FIBER MAKEREADY/ INSTALLATION NOTES**

INSTALL PGEC FIBER TAGS ON EVERY ATTACHMENT AT EVERY POLE  
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**HARDWARE:**

D - 4  
F - 1  
3C - 3  
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A1 - 1  
E - 1

**THINK SAFETY FIRST!**

DRAWING PREPARED BY  
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TECHNICAL SOLUTIONS  
Mark\_Schubert@bnetmail.net  
PO BOX 2529  
CLACKAMAS, OR 97015

Communication Engineer:  
Emory Morris  
Office: (503) 612-2899  
Email: Emory.Morris@pgn.com

PGE CONSTRUCTION DRAWING

**AS-BUILT VERIFICATION & NESC VIOLATIONS CORRECTED**

This document accurately represents FIELD Construction.

Foreman: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE: 08/13/18 SCALE: 1"=100' ACCOUNT: UNKNOWN AWO: . JOB NO. PGEC-11244

CIRCUIT: BRIGHTWOOD TO WELCHES DA SCHEME - SECTION 7 REVISION: 3

LOCATION: 24730 E WOODSEY WAY, WELCHES, OR 97067 SIZE: 22x34

DESCRIPTION: INSTALL 60 CT ADSS OH FIBER

COUNTY: CLACKAMAS SECTION(S): D37-04A,B WORK WITH: N/A SHEET: 7 OF 7

DESIGN BY: K & B Technical Solutions PHONE: (503) 650-6041 DRAWN BY: K&B

13800 SW AVERY ST  
TUALATIN, OR 97062

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