COMMERCIAL SERVICE REQUIREMENTS

Please provide the following information:

- A plot plan showing your preferred fencing and transformer location(s). PUD will work out the actual transformer location together as we finalize the engineering plans.
- Service voltages desired.
- Total connected load in kW, broken down into requirements for lighting, air-conditioning, electric motors (along with their size), etc.
- Estimated demand in kW.
- Projected growth in electrical power requirements in kW in the next few years.
- Size and type of service wire to be installed.

To organize this information easier, a "Request for Electrical Service Information" form is attached. Please complete the form and return it to Engineering at your earliest convenience. Or call the Engineering office at 547-0556 for an appointment to review your plans with a Field Engineer.

If temporary power is required, PUD will need to discuss availability, applicable charges for District construction, and the approximate date when temporary power will be needed.

To give you a good idea of how your project will proceed, we've briefly outlined below the items normally provided by the PUD and those that are the customer/contractor's responsibility.

CUSTOMERS PAY FPUD TO PROVIDE THE FOLLOWING MATERIAL AND LABOR:

- Pad-mounted transformer with one of the following secondary voltages:
  - 120/240 volt single-phase
  - 208 grounded Y/120 volt three-phase
  - 480 grounded Y/277 volt three-phase
- Primary (high voltage) conductor from the source to the pad-mounted transformer.
- Current transformers.
- Meter.
- Overhead service conductor from pole to service mast. (For overhead services only)

BUILDERS NORMALLY PROVIDE THE FOLLOWING:

- Vault and lid for the pad-mounted transformer; PUD specifications provided after the transformer is sized.
- All service wire and conduit from secondary bushings of transformer, or designated junction box, to the customer's electrical panel. This service wire remains your property and maintenance responsibility.
- Current transformer (CT) enclosure. The PUD will install the current transformers.
- Meter bases. Engineering can specify the type after the load data is received. The PUD will prewire your meter base before it is installed.

- A continuous run of conduit, (1" for 3-phase, 3/4" for 1-phase), from the current transformer enclosure to the meter base. This conduit should be no more than 50 feet in length with no condulets throughout its length.

- All trench, conduit, bedding, backfill, vaults and vault installation for primary and secondary conductors.

- Grade stakes for vaults as needed.

- Easements for primary lines and the transformer(s).

- Cash payment of line extension fees, prior to any work being done by the PUD.

- Key boxes or double locking gates as needed to provide PUD personnel 24-hour access to PUD equipment. Access must be by PUD key.

- Additional items that may be determined after final loads are known and PUD design is finalized

- Attached for more detailed information is a copy of the PUD's "Three-Phase Line Extension Guide".

- After preliminary engineering is completed, we can provide an estimate of line extension fees that need to be paid before PUD construction crews are scheduled.

- **If special materials or transformers need to be ordered for your project, the delivery time could be as long as six months or more. We will be able to order necessary materials sooner, if you provide the information outlined above early in the planning of your project. If it is a large project that requires large transformers, equipment, it may be required to pay for the equipment before it is ordered.**

With good coordination, the engineering and construction of your proposed service should run smoothly. Your help is greatly appreciated.

3 PH COMMERCIAL SERVICE

Below is a summary of the requirements that we have incorporated into our Rules & Regulations for Three-Phase Underground Line Extension.

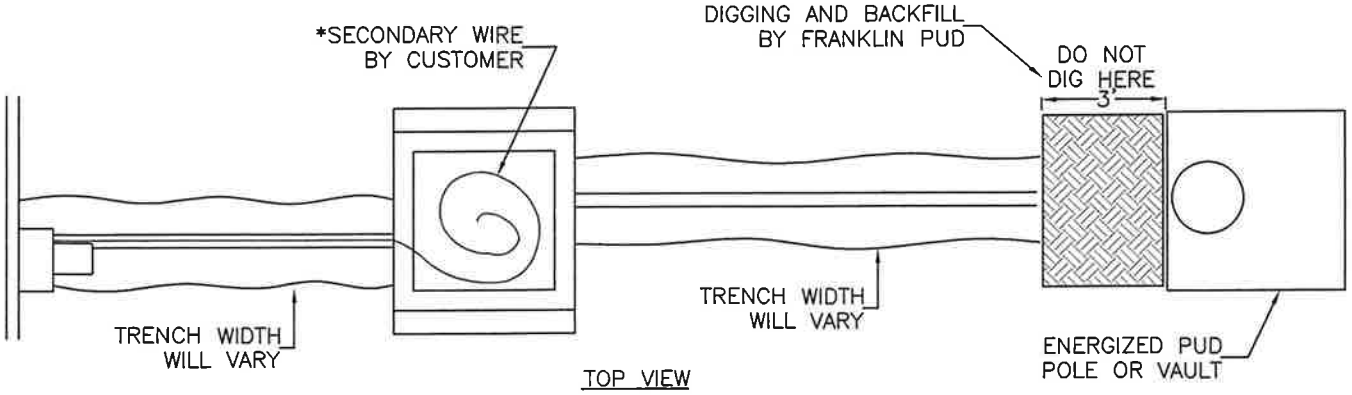
- A Field Engineer will determine the availability, location and conditions of service, if an easement will be necessary, and the dollar amount of line extension fees for your new service. Please call Engineering early in your planning process for this information.

- Customer normally provides and installs all trenching, conduit, primary junction vaults, transformer vaults, backfill, and secondary conductors, as well as service entrance wiring and equipment. Customer retains ownership and maintenance responsibility for customer provided service conductors and equipment.

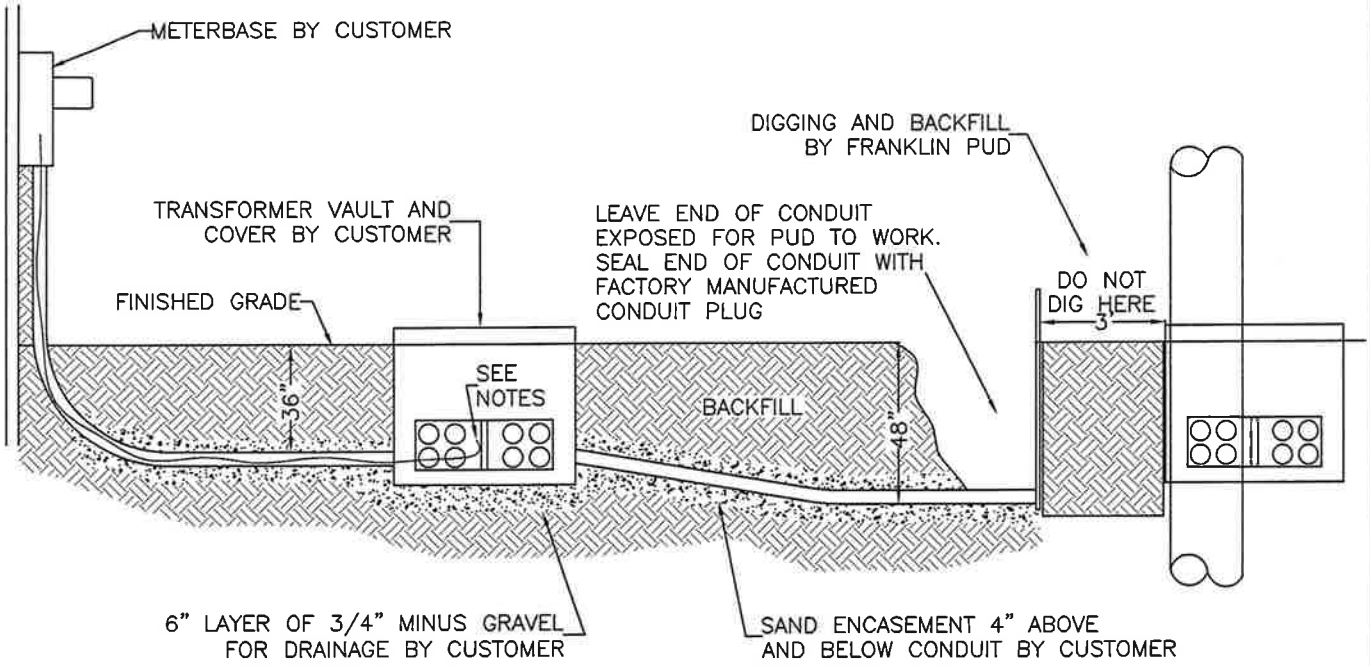
- Prior to commencing actual installation, one of our Engineers will meet with you and/or your representative at the construction site to finalize the scope of the work. If there are additional customer furnished items, our Engineer will review them with you in greater detail as the job progresses.

- PUD will supply and install the meter when the new service is connected. PUD will also provide and install current transformers (CT's) when required. Check with engineering for detailed meter socket, test switch and installation requirements. The customer must pay all metering costs before the service is connected.

- You will need to obtain all permits required from city, county and state agencies before excavating on any public lands or right-of-way, and comply with the requirements of these agencies.



TOP VIEW



PLAN VIEW

NOTES:

* LOOP ENOUGH SECONDARY WIRE SLACK IN VAULT TO ALLOW CABLE TO EXTEND 5' ABOVE VAULT COVER. CHECK WITH FRANKLIN PUD ENGINEERING FOR SECONDARY DETAILS.

ALLOW FOR OVER HANG OF TRANSFORMER COOLING FINS BEYOND EDGE OF TRANSFORMER VAULT COVER. THE VAULT COVER SHOULD BE PLACED 10–FEET FROM ALL COMBUSTIBLE SURFACES, OVERHANGS, WINDOWS AND DOORS OR 4–FEET FROM ANY NON–COMBUSTIBLE SURFACES HAVING NO WINDOWS OR DOORS WITHIN 10–FEET OF VAULT COVER.

DO NOT DIG WITHIN 3-FEET OF FRANKLIN PUD POWER POLE OR ENERGIZED VAULT.

242.3.DWG

FRANKLIN PUD
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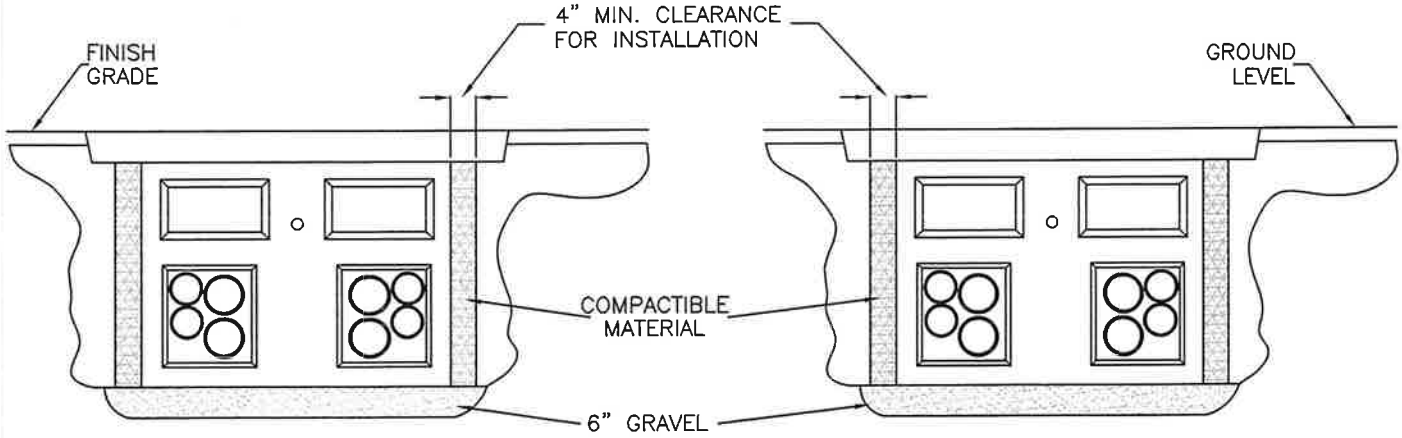
3-PHASE COMMERCIAL SERVICE
UNDERGROUND LINE EXTENSION GUIDE

DWN. N. RUMMEL	DATE: 12/95 UPDATED: 8/13	DWG. NO. 242.3
APP. B. WYATT		

TYPICAL INSTALLATION ALONG ROADWAY, SIDEWALKS, PARKING AREAS AND OTHER GRADED AREAS.

INSTALLATION FOR AREAS THAT ARE NOT GRADED.



NOTES:

EXCAVATION AND BEDDING: EXCAVATE TO ALLOW FOR OVERALL ASSEMBLED HEIGHT OF THE VAULT, PLUS ADDED HEIGHT OF RISERS AND BEDDING MATERIALS, GRADE BEDDING MATERIAL LEVEL. BEDDING MATERIAL SHOULD BE 3" TO 6" OF 3/4" MINUS GRAVEL.

BACKFILLING: BACKFILL AROUND ALL VAULTS SHOULD CONSIST OF GOOD COMPACTIBLE MATERIAL SUCH AS PEA GRAVEL, SAND OR CLEAN EARTH FILL. COMPACT FILL MATERIAL AROUND VAULT LEAVING NO VOIDS BETWEEN THE VAULT WALLS AND NATIVE SOIL OF EXCAVATION. MAKE CERTAIN TO COMPACT THE BACKFILL PROGRESSIVELY IN 6" LIFTS FROM THE BOTTOM TO THE TOP SURFACE. BACKFILL ONLY AFTER VAULT IS COMPLETELY ASSEMBLED.

GROUTING: WE RECOMMEND A CEMENT GROUT CONSISTING OF TWO PARTS SAND AND ONE PART CEMENT AND SUFFICIENT WATER TO FROM A PLASTIC SLURRY. APPLY GROUT TO FILL ALL VOIDS IN THE JOINT BEING SEALED AND DUCT ENTRY HOLES ARE TO BE GROUTED AFTER DUCT INSTALLATION.

KNOCKOUTS: FROM INSIDE THE VAULT, REMOVE THE KNOCKOUT BY STRIKING ITS CENTER WITH A HAMMER. THIS METHOD ALLOWS FOR EASY REMOVAL WITHOUT EXCESS CHIPPING OR DAMAGE TO THE VAULT. COMPLETELY REMOVE CENTER KNOCKOUT IN BOTTOM OF VAULT PRIOR TO INSTALLATION TO ALLOW VAULT TO DRAIN.

PAVING AROUND VAULT: PRIOR TO PAVING OR POURING SIDEWALKS AROUND THE VAULT, AND BEFORE INSTALLATION OF THE PUD'S TRANSFORMERS, CALL OUR ENGINEERING DEPARTMENT SO WE MAY HAVE GROUNDING CONDUCTORS INSTALLED.

CONDUIT INSTALLATION: TO INSURE PROPER SEPARATION BETWEEN HIGH VOLTAGE AND LOW VOLTAGE CONDUCTORS, REVIEW CONDUIT INSTALLATION WITH OUR ENGINEER BEFORE EXTENDING CONDUITS INTO THE VAULT.

243.1.DWG

FRANKLIN PUD
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VAULT INSTALLATION GUIDELINES

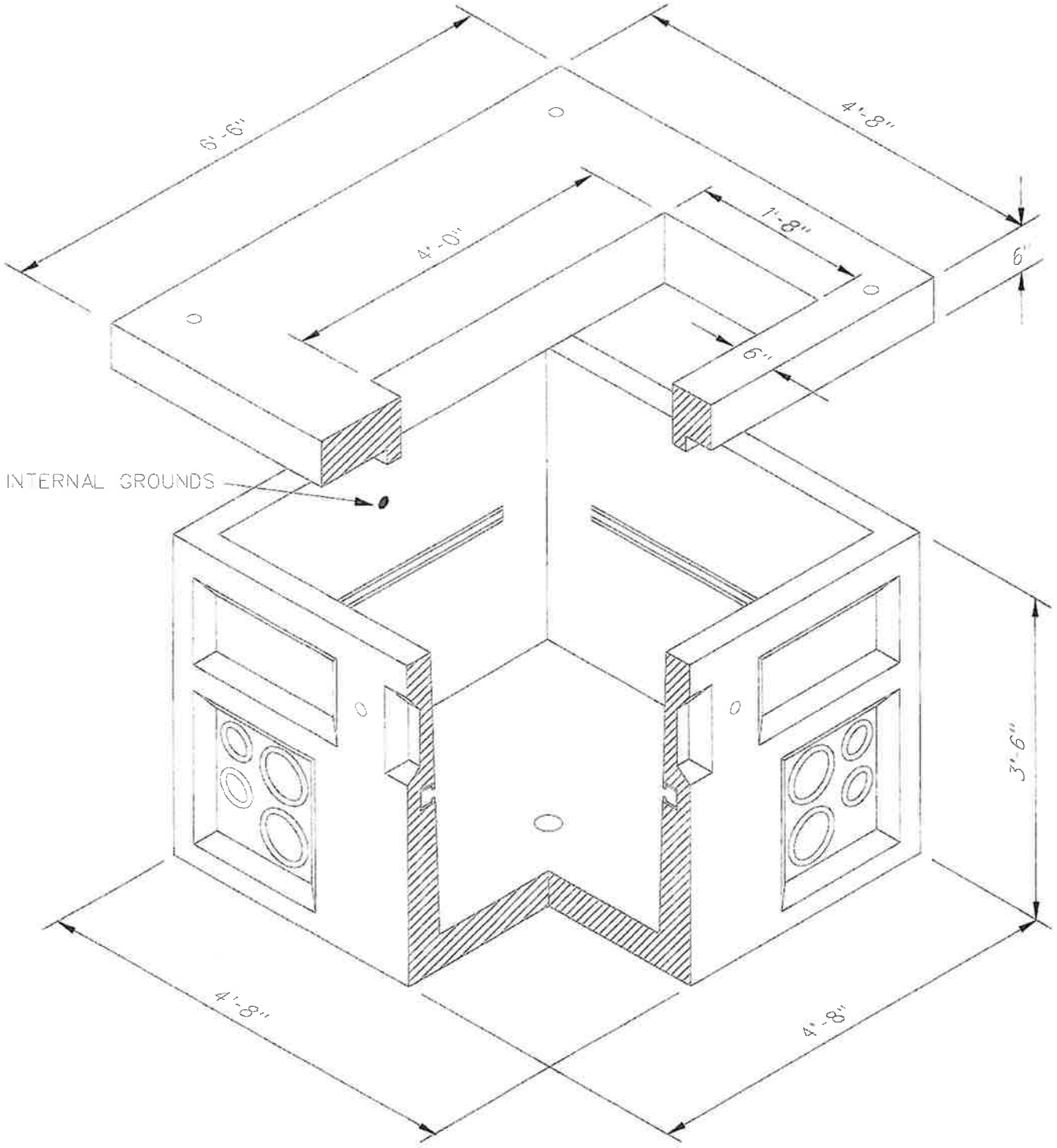
DWN. N. RUMMEL	DATE: 12/95 UPDATED: 8/13	DWG. NO. 243.1
APP. B. WYATT		

TRANSFORMER VAULT AND COVER 3- PHASE PAD-MOUNT (45-300 KVA)

The concrete transformer vault and cover will be specified by our Engineering Department after the transformer size is determined. Equivalent products must have prior approval of our Engineering Department. The top of the vault (not including the cover) is installed at the final grade level so that when the 6" cover is in place, the top of the cover will be 6" above the final grade of the surrounding surface. Knockouts should be made from the inside of the vault. Completely remove center knockout in bottom of vault prior to installation to allow vault to drain. All vaults shall be placed on 6" of compacted crushed rock.

Three phase transformer vaults approved for use by customers of the PUD, for 45kVA through 300 kVA transformer installations, are as follows:

Spokane Concrete Products P.O. Box 5178 Spokane, WA 99205 (509) 487-2726	E11-KO Padmount Vault with internal grounds
Old Castle Precast 2808 A Street SE Auburn, WA 98002 (800) 892-1538	504 Vault with internal grounds 56-2044 Cover
H2 PreCast 4919 Contractors Drive East Wenatchee, WA 98802 (509) 884-6644	554 Base with internal grounds with 6'–6" X 4'-8" X 6" lid with 48" X 20" opening



NOTES:

1. SEE "VAULT INSTALLATION GUIDELINES"

244_1.DGN

FRANKLIN PUD

THE POWER IS YOURS

VAULT, TRANSFORMER 3-PHASE PAD-MOUNT (45-300 KVA)

DWN. B. WYATT	DATE: 4-2-03	DWG. NO. 244.1
APP. M. HAY		

TRANSFORMER VAULT AND COVER 3- PH PAD- MOUNT (500-750 KVA)

The concrete transformer vault and cover will be specified by our Engineering Department after the transformer size is determined. Equivalent products must have prior approval of our Engineering Department. The top of the vault (not including the cover) is installed at the final grade level so that when the 6" cover is in place, the top of the cover will be 6" above the final grade of the surrounding surface. Knockouts should be made from the inside of the vault. All vaults shall be placed on 6" of compacted crushed rock.

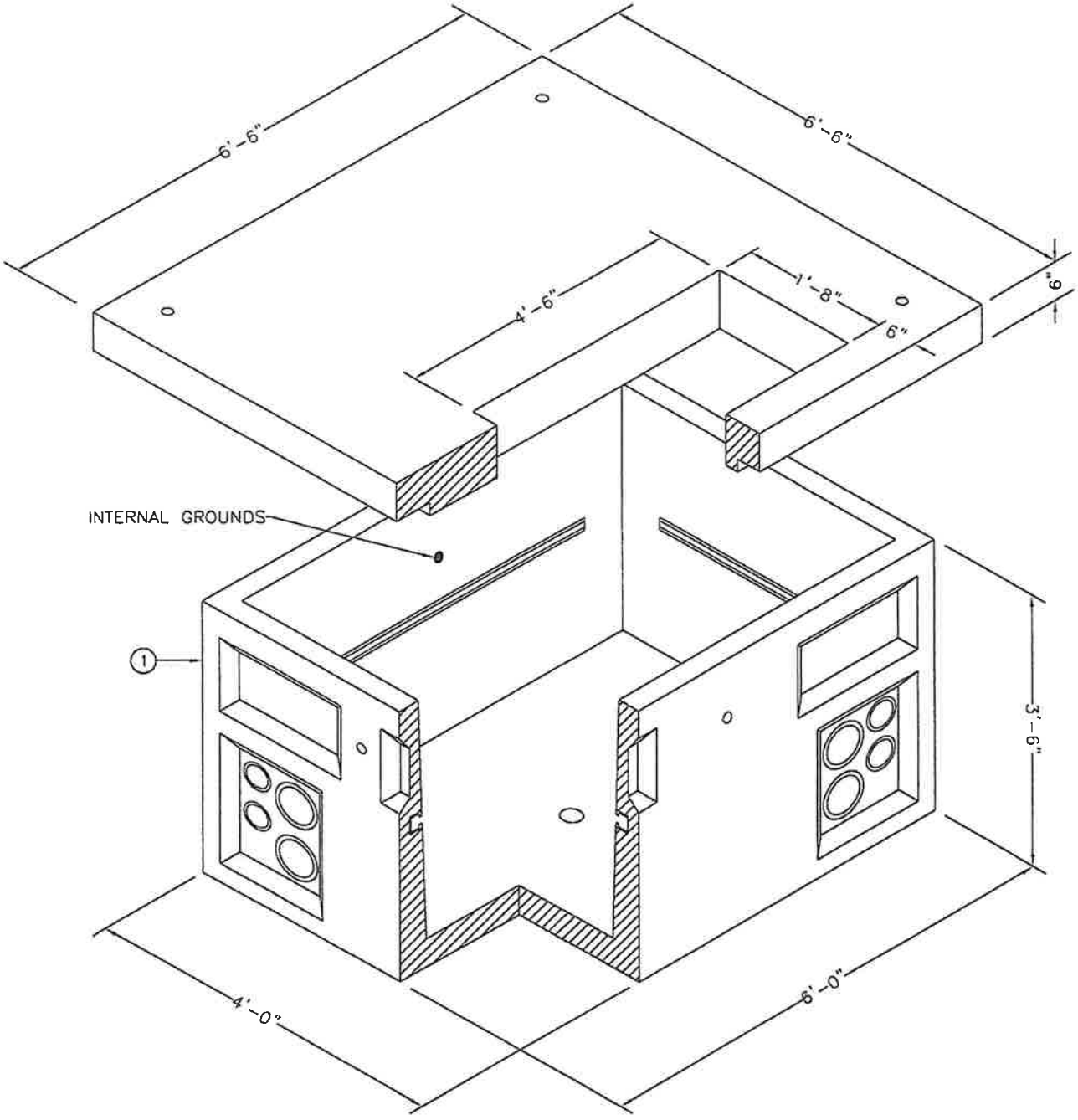
Three phase transformer vaults approved for use by customers of the PUD, for transformer installations 500 kVA through 750kVA, are as follows:

Oldcastle Precast
2808 A Street SE
Auburn, WA 98002
(800) 892-1538

644LA Vault with internal grounds
Special Cover
Provide Drawing to Vendor

H2 PreCast
4919 Contractors Drive
East Wenatchee, WA 98802
(509) 884-6644

464 Base with internal grounds
with 6'–6" X 6'-6" X 6" lid
with 4'-6" X 1'-8" opening



NOTES:

1. SEE "VAULT INSTALLATION GUIDELINES".

270.3.DWG

FRANKLIN PUD
THE POWER IS YOURS

VAULT, TRANSFORMER
3-PHASE PAD-MOUNT (500-750kVA)

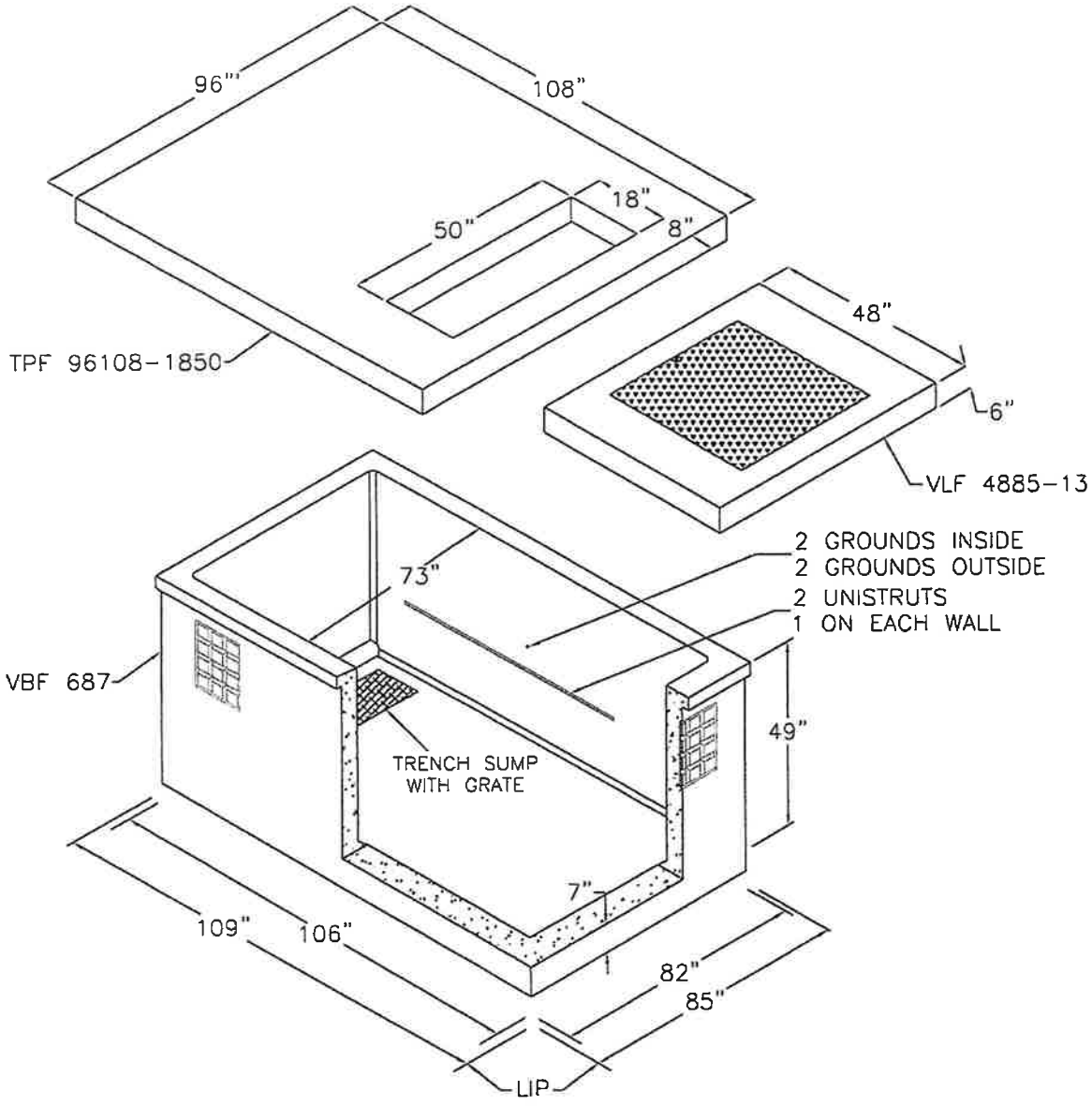
DWN. N. RUMMEL	DATE: 12/95 03/12	DWG. NO. 270.3
APP. B. WYATT		

TRANSFORMER VAULT AND COVER 3- PHASE PAD-MOUNT (1000 KVA or LARGER)

The concrete transformer vault and cover will be specified by our Engineering Department after the transformer size is determined. Equivalent products must have prior approval of our Engineering Department. The top of the vault (not including the cover) is installed at the final grade level so that when the 6" cover is in place, the top of the cover will be 6" above the final grade of the surrounding surface. Knockouts should be made from the inside of the vault. All vaults shall be placed on 6" of compacted crushed rock.

Three phase transformer vaults approved for use by customers of the PUD, for transformer installations 1500 kVA and above are as follows:

Oldcastle Precast 2808 A Street SE Auburn, WA 98002 (800) 892-1538	575-LA Vault with internal grounds Special Cover Provide Drawing to Vendor
H2 PreCast 4919 Contractors Drive East Wenatchee, WA 98802 (509) 884-6644	575 Base with internal grounds with 8'-0" X 9'-0" X 8" lid with 5'-0" X 1'-8" opening



NOTES:

1. SEE "VAULT INSTALLATION GUIDELINES"

246_1.DWG

FRANKLIN PUD

THE POWER IS YOURS

1000 KVA AND ABOVE
VAULT TRANSFORMER
3-PHASE

DWN.	DATE:	DWG. NO.
N. RUMMEL	5/09	246.1
APP.		
B. WYATT		

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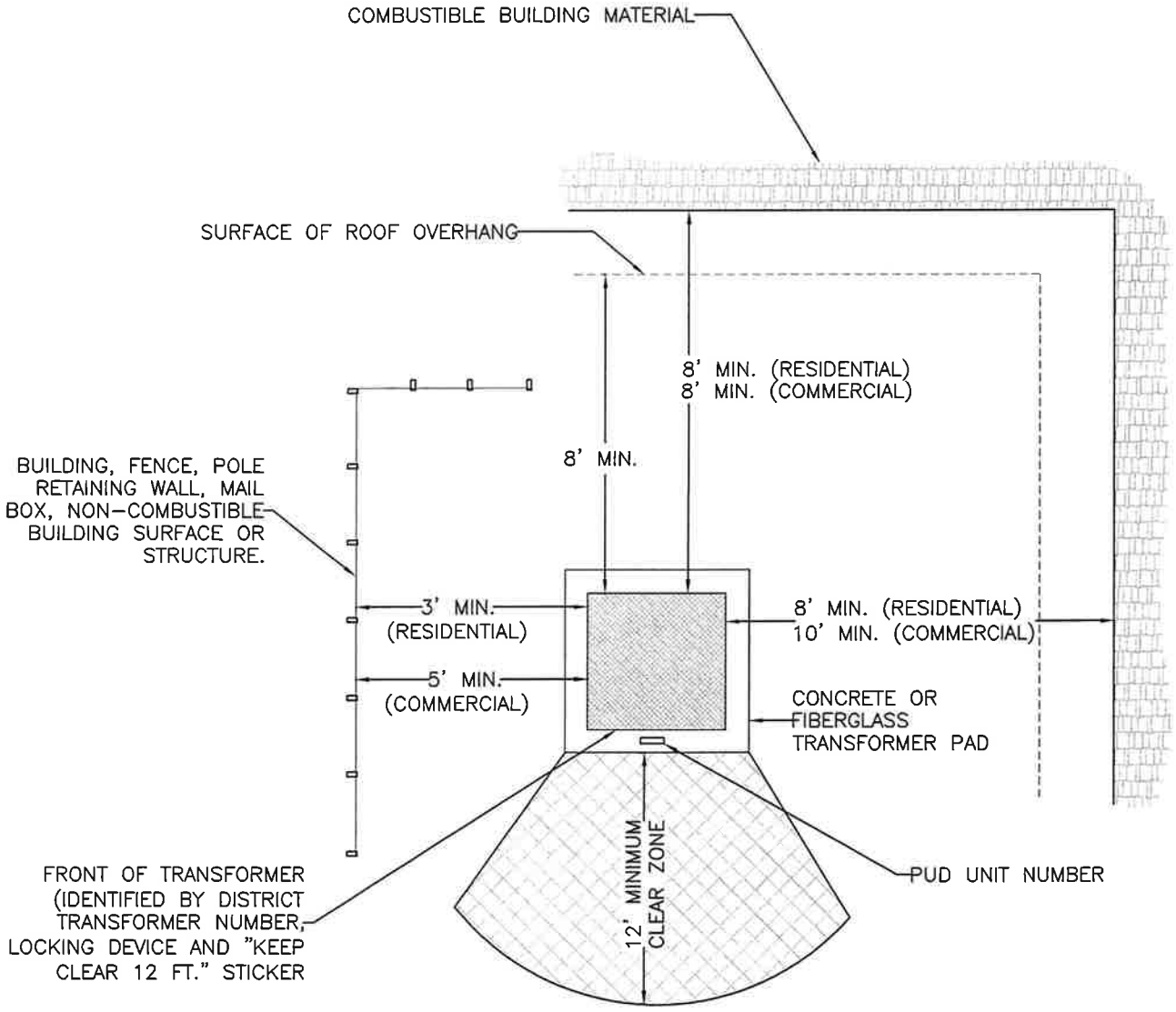

- NO OBSTRUCTIONS ALLOWED OVER TRANSFORMER.
- A MINIMUM 8 FT. CLEARANCE IS REQUIRED FROM ALL DOORS AND WINDOWS.
- DRAINAGE AT PADMOUNT TRANSFORMER MUST BE AWAY FROM BUILDING IN CASE OF OIL LEAKAGE.
- REFER TO LANDSCAPING GUIDELINES.

247.1.DWG

FRANKLIN PUD
THE POWER IS YOURS

TYPICAL TRANSFORMER CLEARANCES

DWN. N. RUMMEL	DATE: 12/95 UPDATED: 8/13	DWG. NO. 247.1
APP. B. WYATT		