



## **ULID 25 TOLMIE SEWER IMPROVEMENTS**

LACEY CONTRACT NUMBER PW 2024-05

**SPECIFICATIONS AND BID DOCUMENTS  
DEPARTMENT OF PUBLIC WORKS**

**LACEY PROJECT NUMBER PW 2024-05**

***CITY OF LACEY  
WASHINGTON***

***CITY OFFICIALS***

**MAYOR**

**ANDY RYDER**

**DEPUTY MAYOR**

**MALCOLM MILLER**

**COUNCIL MEMBERS**

**LENNY GREENSTEIN**

**MICHAEL STEADMAN**

**CAROLYN COX**

**ROBIN VAZQUEZ**

**NICOLAS DUNNING**

**CITY MANAGER**

**RICK WALK**

**CITY ATTORNEY**

**DAVID S. SCHNEIDER**

**DIRECTOR OF PUBLIC WORKS**

**SCOTT EGGER, P.E.**

**CITY ENGINEER**

**AUBREY COLLIER, P.E., S.E.**





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## ADVERTISEMENT FOR BIDS

### ULID 25 TOLMIE SEWER IMPROVEMENTS

NOTICE IS HEREBY GIVEN that sealed bids will be received by the City of Lacey at City Hall, Lacey, Washington until 2:30 p.m., March 6, 2024, at which time bids will be publicly opened via a live video stream. Links to the YouTube live video stream can be found at <https://cityoflacey.org/rfp-rfq-rfi/> under the specific project section and on the specific project page on the Builders Exchange website located at [http://bxwa.com/bxwa\\_toc/pub/2080/toc.html](http://bxwa.com/bxwa_toc/pub/2080/toc.html) for the following work:

**This contract provides for the installation of approximately 3,200 LF of 8-inch diameter gravity sewer main and 2,200 LF of 12-inch diameter water main in the Tolmie Park Estates neighborhood. Work to include laterals, manholes, community septic tank and drain field abandonments, valves, connections to existing water and gravity sewer systems, pavement and lawn restoration and other work.**

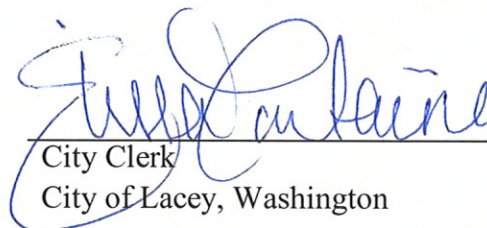
Each bid must be accompanied by a certified check for five percent of the amount of the proposal made payable to the City Treasurer, or an approved bid bond for five percent of the amount of the proposal executed on the approved form attached to these specifications. If bid bond is used, the five percent may be shown in dollars and cents or the form may be filled in by inserting therein, in lieu thereof, "five percent of the amount of the accompanying proposal". Check of unsuccessful bidders will be returned immediately upon award of contract.

The City Council reserves the right to reject any and all bids and to waive all informalities.

Plans, Specifications, and Addenda for this project are available through the "City of Lacey" on-line plan room. Free of charge access is provided by going to <http://bxwa.com> and clicking on: "Posted Projects", "Public Works", "City of Lacey", and "Projects Bidding". Bidders are asked to "Register" in order to receive automatic email notification of future addenda and to be placed on the "Bidders List". Any questions regarding this contract can be directed to Justin Knox, at (360) 438-2628.

The range for this project is \$2,000,000 to \$2,600,000.

Publish: 2/15/2024  
2/22/2024

  
\_\_\_\_\_  
City Clerk  
City of Lacey, Washington

A

INSTRUCTIONS

## INSTRUCTIONS TO BIDDERS

Bidders shall examine contract and bid documents and the site and shall satisfy themselves as to conditions that exist.

Each Bidder shall submit to the City Clerk, Lacey, Washington a sealed bid endorsed upon the outside wrapper with **ULID 25 Tolmie Sewer Improvements** at the time and place designated in the advertisement.

Bids may be delivered in person to Lacey City Hall, 420 College Street SE, or by mail to City of Lacey 420 College St SE Lacey, WA 98503.

Bids will be publicly opened via a live video stream. Links to the YouTube live video stream can be found at <https://cityoflacey.org/rfp-rfq-rfi/> or under the specific project section and on the specific project page on the Builders Exchange website.

The City of Lacey is committed to offering reasonable accommodations to persons with disabilities. We invite any person with special needs to contact the City Clerk at (360) 491-3212 at least seventy-two (72) hours before the meeting to discuss any special accommodations that may be necessary. Citizens with hearing impairment may call the TDD line at (800) 833-6388.

Each Bidder shall complete the proposal with prices in figures with the extension properly computed. The proposal must be properly signed by a duly authorized agent. Proposal must acknowledge addenda, if any, received.

If alternates are included in the proposal the Bidder shall complete the alternates. The City will award the contract to the lowest responsible Bidder as determined by the Special Provisions. The City reserves the right to delete alternates after award.

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1).

The City does not pre-qualify Bidders. However, if the apparent low Bidder has not already been determined qualified, the City shall afford seven (7) days after notification for the low Bidder to provide evidence for evaluation, as to capability to perform the work. The evaluation will include consideration of experience, personnel, equipment, financial resources as well as performance record. The information must be sufficient to enable the Bidder to obtain the required qualification rating prior to the award of the contract.

No bidder may withdraw his bid after the hour set for the opening of bids or before award of the contract unless said award is delayed for a period of forty-five (45) days.

## CONTRACT PARTS

The contract to be executed as a result of this bid consists of multiple parts, all of which pertain as if fully attached hereto and Bidder shall consider all parts as a complete document. In the event of discrepancies between the various parts, precedent shall be in the following order:

1. Contract Form,
  2. Addenda (if any),
  3. Proposal Form,
  4. Special Provisions,
  5. Technical Specifications, if included,
  6. Contract Plans,
  7. WSDOT Standard Specifications for Road, Bridge, and Municipal Construction,
  8. City of Lacey Development Guidelines and Public Works Standards, and
  9. WSDOT Standard Plans for Road, Bridge and Municipal Construction
- The Bidder is directed to complete and return the forms in Section B as a bid proposal.

## BIDDER'S CHECKLIST

**The bidder's attention is especially called to the following forms which must be executed in full as required, and submitted with the bid proposal:**

1. Proposal: The unit prices bid must be shown in the space provided.
2. Proposal Signature Sheet: To be filled in and signed by the bidder. All addenda must be acknowledged.
3. Bid Deposit: Any bid shall be accompanied by a deposit of cash, certified check, cashier's check, or surety bond, in an amount equal to at least five percent (5%) of the total amount bid. Checks shall be payable to the City Clerk, City of Lacey, Washington.

If a surety bond is used, it shall be submitted on a form furnished by the Commission and signed by the bidder and his surety company. The sureties' "attorney-in-fact" must be registered with the Washington State Insurance Commissioner. The power of attorney must also be submitted with the bond. See Specification section 1-02.7 for more information.

4. Non-Collusion and Debarment Affidavit
5. Subcontractors List

**The following form must be submitted within 24 hours following the bid submittal deadlines.**

6. Certification of Compliance with Wage Payment Statutes

**The following must be completed before the contract can be awarded:**

7. L&I training on the requirements related to public works and prevailing wages per RCW 39.04.350
8. Certification of Employment Security Department (ESD) good standing

**The following forms are to be executed after the contract is awarded:**

9. Contract: This agreement to be executed by the successful bidder
10. Performance and Payment Bond
11. Insurance Certificate

---

### Bidder's Checklist

1. Proposal
2. Proposal Signature Sheet  
Addenda Acknowledged
3. Bid Deposit  
Power of Attorney included if applicable
4. Non-Collusion and Debarment Affidavit
5. Subcontractor List
6. Certification of Compliance with Wage Payment Statutes
7. L&I Public Works Prevailing Wage Training
8. ESD Certification


# B

## BID DOCUMENTS



# CITY OF LACEY

## ULID 25 - Tolmie Sewer & Water Improvements

Lacey Contract Number: PW 2024-05

Federal Aid Project Number:

WSDOT Contract Number:

TIB Contract Number:

## Contract Proposal

DATE: \_\_\_\_\_

The undersigned, as bidder, has examined the bid documents as prepared by the Public Works Department, City of Lacey.

The undersigned, as bidder, proposes to furnish all material and perform all labor in accordance with the bid documents at the following prices.

Bidder must fill in unit prices in figures for each item and total.

Bidder shall sign this proposal form and submit all required paperwork with the bid.

### A Sewer

No.	Quantity	Unit	Item ID	Item Description	Unit Price	Extended Price
A1	75000	MC	104-010	Minor Change	\$1.00	\$75,000.00
A2	1	LS	107-010	SPCC Plan	LUMP SUM	
A3	1	LS	109-010	Mobilization	LUMP SUM	
A4	1	LS	110-010	Project Temporary Traffic Control	LUMP SUM	
A5	1600	HR	110-040	Flaggers		
A6	4000	HR	110-070	Portable Changeable Message Sign		
A7	1	LS	202-510	Removal of Structures and Obstructions	LUMP SUM	
A8	150	TN	203-190	Gravel Borrow Incl. Haul		
A9	1	LS	205-510	Trench Safety System	LUMP SUM	
A10	50	CY	209-080	Controlled Density Fill		
A11	1000	TN	404-020	Crushed Surfacing Top Course		
A12	2200	TN	504-011	HMA Cl. 1/2" PG 58H-22		
A13	1500	SY	504-600	Roadway Pulverization		
A14	1	LS	504-610	Preparation of Existing Surfaces	LUMP SUM	
A15	1	LS	504-620	Driveway and Shoulder Preparation	LUMP SUM	
A16	50	TN	504-630	Crushed Rock for Shoulder Grading		
A17	50	CY	504-640	Topsoil Type A for Shoulder Grading		
A18	30	LF	702-062	Plain Conc. Culv. Pipe 12 In. Diam.		
A19	13	EA	705-048	Manhole 48 In. Diam. Type 1		
A20	4	LF	705-049	Manhole Additional Height 48 In. Diam. Type 1		
A21	1	EA	705-920	Raise Manhole to Grade		

A22	750	TN	708-610	Bank Run Gravel for Trench Backfill		
A23	2200	TN	708-620	Imported Pipe Bedding		
A24	40	HR	708-810	Utility Potholing		
A25	8	EA	712-915	Raise Valve Box to Grade		
A26	1800	LF	717-504	4 Inch Diameter Sewer Pipe		
A27	3200	LF	717-508	8 Inch Diameter Sewer Pipe		
A28	47	EA	717-857	Side Sewer Stub - Gravity		
A29	1	EA	717-965	Connect to Existing Sewer System		
A30	3	EA	717-969	Abandon Community Septic System and Drain Fields		
A31	47	EA	717-971	Tank Abandonment		
A32	22	EA	717-973	Locate Tank		
A33	1	LS	801-010	ESC Lead	LUMP SUM	
A34	1	LS	801-680	Erosion/Water Pollution Control	LUMP SUM	
A35	50	CY	802-010	Topsoil Type A		
A36	1	LS	805-510	Lawn and Landscape Restoration	LUMP SUM	
A37	14	EA	813-515	Surface Monument		
A38	10	SY	814-510	Cement Conc. Sidewalk		
A39	18	LF	822-150	Plastic Stop Line		
A40	1	LS	850-792	Project Closeout	\$10,000.00	\$10,000.00

Schedule A Subtotal:

Tax Rate (%) : 9.50 Tax:

Schedule A Total:

## B Sewer

No.	Quantity	Unit	Item ID	Item Description	Unit Price	Extended Price
B1	9	EA	717-857	Side Sewer Stub - Gravity		

Schedule B Subtotal:

Tax Rate (%) : 9.50 Tax:

Schedule B Total:

## C Water

No.	Quantity	Unit	Item ID	Item Description	Unit Price	Extended Price
C1	50000	MC	104-010	Minor Change	\$1.00	\$50,000.00
C2	1	LS	109-010	Mobilization	LUMP SUM	
C3	1	LS	110-010	Project Temporary Traffic Control	LUMP SUM	
C4	240	HR	110-040	Flaggers		
C5	1000	HR	110-070	Portable Changeable Message Sign		
C6	1	LS	202-510	Removal of Structures and Obstructions	LUMP SUM	
C7	1	LS	205-510	Trench Safety System	LUMP SUM	

C8	50	CY	209-080	Controlled Density Fill		
C9	200	TN	504-016	HMA for Pavement Repair Cl. 1/2" PG 58H-22		
C10	20	CY	504-640	Topsoil Type A for Shoulder Grading		
C11	150	TN	708-610	Bank Run Gravel for Trench Backfill		
C12	200	TN	708-620	Imported Pipe Bedding		
C13	16	HR	708-810	Utility Potholing		
C14	2200	LF	709-512	12 Inch D.I. Water Main		
C15	2	EA	709-950	Connect to Existing Water Main		
C16	3	EA	712-506	6 Inch Gate Valve		
C17	1	EA	712-508	8 Inch Gate Valve		
C18	6	EA	712-512	12 Inch Gate Valve		
C19	3	EA	714-510	Hydrant Assembly		
C20	1	EA	715-850	Sampling Station		
C21	1	LS	805-510	Lawn and Landscape Restoration	LUMP SUM	
					Schedule C Subtotal:	
					Tax Rate (%) : 9.50 Tax:	
					Schedule C Total:	
					Contract Total:	
					(All Schedules)	

The undersigned also agrees as follows:

- Within 10 calendar days after the contract is awarded to sign and return the contract and provide insurance documents.
- That this proposal cannot be withdrawn within 45 days after receipt of bids.
- That it is the understanding that the City of Lacey may accept or reject any or all bids.
- The undersigned hereby agrees to pay for labor not less than the prevailing rates of wages per the bid documents.
- Enclosed with this proposal is a bid deposit in the sum of 5% of the bid total amount which it is agreed shall be collected and retained by the City of Lacey as liquidated damages in the event this proposal is accepted by the City of Lacey with 45 calendar days after the receipt of bids and the undersigned fails to execute the contract and the required bond with the City of Lacey, under the conditions thereof, within 10 calendar days after the undersigned is notified that said proposal has been accepted, otherwise said bid deposit shall be returned to the undersigned upon demand.
- A Performance/Payment Bond will be furnished to the City with the contract.
- Retention will be held on this contract per RCW 60.28.011.

Addenda Receipt Acknowledged

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
Date

(If an Individual, Partnership, or Non-Incorporated organization)

\_\_\_\_\_  
Firm Name

\_\_\_\_\_  
Please Print

\_\_\_\_\_  
Phone

Address of Bidder: \_\_\_\_\_  
\_\_\_\_\_

Name and Address of Firm Members:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

-----  
\_\_\_\_\_  
Signature of Bidder (if a Corporation)

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

Firm Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Business Address: \_\_\_\_\_

Incorporated under the Laws of the State of \_\_\_\_\_

Officers

Address

President: \_\_\_\_\_

Secretary: \_\_\_\_\_

Treasurer: \_\_\_\_\_

## BID DEPOSIT SELECTION

A bid deposit in an amount of five percent (5%) of the total bid amount is attached hereto:

CASH ☐ In the amount of \_\_\_\_\_

CASHIER'S CHECK ☐ In the amount of \_\_\_\_\_

CERTIFIED CHECK ☐ In the amount of \_\_\_\_\_

BID BOND ☐ In the amount of 5% of the total bid amount

**CONTRACTOR'S BID DEPOSIT SURETY BOND  
to City of Lacey, Washington**

We, \_\_\_\_\_, as Principal, existing under and by virtue of the laws of the State of Washington and authorized to do business in the State of Washington, and \_\_\_\_\_, as Surety, organized and existing under the laws of the State of \_\_\_\_\_, are held and firmly bound unto the City of Lacey, a Washington municipality, as Obligee, in the penal sum of 5% of the total amount bid, not to exceed \$ \_\_\_\_\_, for the payment of which we jointly and severally bind ourselves, and our legal representatives and successors.

WHEREAS, the Principal has submitted a bid for ULID 25 Tolmie Sewer Improvements.

NOW THEREFORE, the condition of the obligation is such that if the Obligee shall accept the bid of Principal and make timely award to the Principal according to the terms of the bid documents; and the Principal shall, within ten days after notice of the award, exclusive of the day of notice, enter into the contract with the Obligee and furnish the contractor's bonds (performance and payment bonds) with Surety satisfactory to the Obligee in an amount equal to 100% of the amount of the bid proposed including additives, alternatives and Washington State sales tax, then this obligation shall be null and void; otherwise if the Principal fails to enter into the contract and fails to furnish the contractor's bonds within ten days of notice of award, exclusive of the day of notice, the amount of the bid deposit shall be forfeited to the Obligee, payable by the Surety; but in no event will the Surety's liability exceed the face amount of this bid bond.

This bond may be executed in two original counterparts, and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the officer executing on behalf of the surety.

**PRINCIPAL (CONTRACTOR)**

**SURETY**

\_\_\_\_\_  
Principal Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Surety Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Name, address, and telephone of local office/agent of Surety Company is:

\_\_\_\_\_  
\_\_\_\_\_



## NON-COLLUSION AND DEBARMENT AFFIDAVIT

State of \_\_\_\_\_ )

)ss

County of \_\_\_\_\_ )

I, the undersigned, being duly sworn, deposes and says that the person, firm, association, copartnership or corporation herein named, has not either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in the preparation and submission of a proposal of the City of Lacey for consideration in the award of a contract on the improvement described as follows.

I further certify that, except as noted below, the firm, association or corporation or any person in a controlling capacity associated therewith or any position involving the administration of State or federal funds; is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal or State agency; has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal or State agency within the past three years; does not have a proposed debarment pending; and has not been indicted, convicted, or had a civil judgment rendered against said person, firm, association or corporation by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

I further acknowledge that by signing my signature, I am deemed to have signed and have agreed to the provisions of this affidavit.

\_\_\_\_\_  
Name of Project

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Signature of Authorized Member

Sworn to before me this

\_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

\_\_\_\_\_  
Notary Public

(CORPORATE SEAL)

## CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date, the bidder is not a “willful” violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

---

Bidder’s Business Name

---

Signature of Authorized Official\*

---

Printed Name

---

Title

---

Date

---

City

---

State

*Check One:*

Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

State of Incorporation, or if not a corporation, State where business entity was formed:

---

If a co-partnership, give firm name under which business is transacted:

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*\* If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

This form must be submitted with the Bid Proposal or as a Supplement to the Bid no later than 24 hours after the time for delivery of the Bid Proposal, as provided for in Section 1-02.9 of the Contract Provisions.

**CERTIFICATION OF EMPLOYMENT SECURITY DEPARTMENT (ESD)  
GOOD STANDING AND NUMBER**

The bidder hereby provides an ESD number and certifies that per RCW 39.04.350 and Title 50 RCW, in which the City will verify prior to entering into contract with the Contractor, that the Bidder has a valid ESD number and is deemed to be in good standing with Washington State's Employment Security Department.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

---

Bidder's Business Name

---

Employment Security Department (ESD) Number

---

WA State Unified Business Identifier (UBI #)

---

Signature of Authorized Official\*

---

Printed Name

---

Title

---

Date

---

City

---

State

.

## SUBCONTRACTOR LIST

*Prepared in compliance with RCW 39.30.060 as amended*

### To Be Submitted with the Bid Proposal

Project Name: \_\_\_\_\_

**Failure to list subcontractors with whom the bidder, if awarded the contract, will directly subcontract for performance of the work of structural steel installation and rebar installation, heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106RCW, and electrical, as described in Chapter 19.28 RCW or naming more than one subcontractor to perform the same work will result in your bid being non-responsive and therefore void.**

Subcontractor(s) with whom the bidder will directly subcontract that are proposed to perform the work of structural steel installation and rebar installation, heating, ventilation and air conditioning, plumbing, as described in Chapter 18.106 RCW, and electrical as described in Chapter 19.28 RCW **must** be listed below. The work to be performed is to be listed below the subcontractor(s) name.

**To the extent the Project includes one or more categories of work referenced in RCW 39.30.060, and no subcontractor is listed below to perform such work, the bidder certifies that the work will either (i) be performed by the bidder itself, or (ii) be performed by a lower tier subcontractor who will not contract directly with the bidder.**

Subcontractor Name: \_\_\_\_\_  
Work to be Performed: Structural steel installation

Subcontractor Name: \_\_\_\_\_  
Work to be Performed: Rebar installation

Subcontractor Name: \_\_\_\_\_  
Work to be Performed: Plumbing

Subcontractor Name: \_\_\_\_\_  
Work to be Performed: Electrical

Subcontractor Name: \_\_\_\_\_  
Work to be Performed: Heating ventilation and air conditioning

\* Bidder's are notified that is the opinion of the enforcement agency that PVC or metal conduit, junction boxes, etc, are considered electrical equipment and therefore considered part of electrical work, even if the installation is for future use and no wiring or electrical current is connected during the project.

# C CONTRACT DOCUMENTS

## CONSTRUCTION CONTRACT

THIS AGREEMENT, made and effective as of the date of the last signature below, between the City of Lacey, hereinafter called Owner, under and by virtue of the charter, laws and ordinances of the said Owner and the laws of the State of Washington, and

\_\_\_\_\_ hereinafter called Contractor,

### WITNESSETH:

That in consideration of the payment, covenants and agreement hereinafter mentioned, attached and made a part of this Agreement, to be made and performed by the parties hereto, the parties covenant and agree as follows regarding:

1. The Contractor shall do all work and furnish all tools, materials and equipment in accordance with and as described in the attached Plans and Specifications, and in full compliance with the terms, conditions and stipulations herein set forth and attached, now referred to and by such reference incorporated herein and made a part hereof as fully for all purposes as if here set forth at length, and shall perform any alterations in or in addition to the work covered by this Contract and every part thereof and any force account work which may be ordered as provided in this Contract and every part thereof.

The Contractor shall provide and bear the expense of all materials, labor, equipment, tools, implements and conveniences and things of every description that may be requisite for the transfer of materials and for constructing and completing the work provided for in this Contract and every part thereof, except such as are mentioned in the Specifications to be furnished by the Owner.

2. The Owner hereby promises and agrees with the Contractor to employ, and does employ the Contractor to provide the materials and to do and cause to be done the above described work and to complete and finish the same according to the attached Plans and Specifications and the schedule of unit or itemized prices hereto attached, at the time and in the manner and upon the conditions provided for in this Contract and every part thereof.
3. Contractor, for himself and for his heirs, executors, administrators, successors, assigns, does hereby agree to the full performance of all the covenants herein contained upon the part of Contractor.
4. It is further provided that no liability shall attach to Owner or Agent thereof by reason of entering into this Contract, except as expressly provided herein.
5. Payments will be made under the Contract according to the schedule of rates and prices and the specification attached and made a part thereof. Partial payments under the Contract will be made at the request of the Contractor not more than once each month upon approval of the Owner, as hereinafter specified, provided they are in accordance



with the provisions of RCW 60.28.010. There will be reserved and retained from monies earned by the Contractor, as determined by such monthly estimates, a sum equal to 5 percent of the Contract price.

Payment of the retained percentage shall be withheld for a period of forty-five (45) days following the final acceptance of the work and materials by the Owner, and shall be paid the Contractor at the expiration of said forty-five (45) days in event no claims, as provided by law, have been filed against such funds; and provided further, that releases have been obtained from all departments and agencies having jurisdiction over the activities of the Contractor. In the event such claims are filed, Contractor shall be paid such retained percentages less an amount sufficient to pay any such claims together with a sum sufficient to pay the cost of such action, and to cover attorney fees as determined by the Owner.

6. Requests for review of substitute items of material or equipment will not be accepted by the Owner or Agent from anyone other than the Contractor. If the Contractor wishes to furnish a substitute item, the Contractor shall make written application to the Owner's Agent for acceptance thereof, certifying that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function as that specified. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, which shall be considered by the Owner in evaluating the proposed substitute. The Owner may require the Contractor to furnish at the Contractor's expense, additional data about the proposed substitute. The Owner will be the sole judge of acceptability, and no substitute will be ordered without the Owner's prior written acceptance. The Owner may require the Contractor to furnish at the Contractor's expense, a special performance guarantee or other surety with respect to any other substitute.

The Owner or Agent will record the time and expenses in evaluating substitutions proposed by the Contractor. Whether or not the Owner accepts a proposed substitute, the Contractor shall reimburse the Owner for the costs of evaluating any proposed substitute.

7. The Owner reserves the right, after the final payment has been made, to claim and recover by process of law such sums as may be sufficient to make good any defects in the equipment or to recover any over-payment resulting from dishonest acts of the Contractor.
8. The contract time will commence to run, and the Contractor shall start to perform his obligation under the contract documents, on the day indicated in the Notice to Proceed given by Owner to Contractor; but in no event shall contract time commence to run later than the 30th calendar day after the date when both Owner and Contractor execute the Contract. A Notice to Proceed may be given at any time within thirty (30) calendar days after the date when both Owner and Contractor execute the Contract.
9. The Contractor shall guarantee the materials and workmanship for a period of one (1) year from and after the date of final acceptance by the Owner.

If, within said guarantee period, repairs are required which, in the opinion of the Owner, are rendered necessary as a result of work or materials which are inferior, defective or not in accordance with the terms of the Contract, the Contractor shall, promptly upon receipt of notice from the Owner, and without expense to the Owner, (a) correct all defects and place in satisfactory condition in every particular all of such guaranteed work and materials; (b) make good all damage which in the opinion of the Owner is caused by such defects; and (c) make good any other work or material or the equipment and contents of a building, structure or site disturbed in fulfilling any such guarantee.

If the Contractor, after notice, fails within ten (10) days to proceed to comply to the terms of this guarantee, the Owner may have the defects corrected, and the Contractor and his Surety shall be liable for all expense incurred, provided, however, that in case of an emergency where, in the opinion of the Owner, delay would cause serious loss or damage, repairs may be made without notice being given to the Contractor and the Contractor shall pay the cost thereof.

IN WITNESS WHEREOF, the said Contractor has executed this instrument and the City Manager, pursuant to resolution duly adopted, has caused this instrument to be executed in the name of the City of Lacey the day and year first above-written.

\_\_\_\_\_  
\_\_\_\_\_

Contractor

Date

\_\_\_\_\_  
Contractor's Registration Number (UBI No.)

\_\_\_\_\_  
City of Lacey Business License Number

\_\_\_\_\_  
City Manager

Date

ATTEST:

By:

\_\_\_\_\_  
City Clerk

APPROVED AS TO FORM:

By :

\_\_\_\_\_  
City Attorney

**CONTRACTOR'S PERFORMANCE/PAYMENT BOND  
to City of Lacey, Washington**

The City of Lacey, Washington, in Thurston County, has awarded to \_\_\_\_\_ (Contractor), as Principal, a contract for the construction of the project designated as **ULID 25 Tolmie Sewer Improvements** Project No. **Project #PW 2024-05** in Lacey, Washington, and said Principal is required under the terms of the Contract to furnish a performance/payment bond in accordance with chapter 39.08 Revised Code of Washington (RCW).

The Principal, and \_\_\_\_\_ (Surety), a corporation, organized under the laws of \_\_\_\_\_ and licensed to do business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Dept., are jointly and severally held and firmly bound to the City of Lacey, as Obligee, in the sum of \$ \_\_\_\_\_ total Contract amount (including Washington State sales tax), subject to the provisions herein.

The obligations of this bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall well and faithfully perform all of the Principal's obligations under the Contract and fulfill all the terms and conditions of all duly authorized modifications, additions, and changes to said Contract that may hereafter be made, at the time and in the manner therein specified; shall pay all persons in accordance with chapters 39.08, 39.12, and 60.28 RCW, including all workers, laborers, mechanics, subcontractors, and material suppliers, and all persons who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work; shall warranty the work as provided in the Contract and shall indemnify and hold harmless the Obligee from any defects in the workmanship and materials incorporated into the work for the period identified in the Contract; and if such obligations have not been fulfilled, this bond shall remain in full force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation.

This bond may be executed in two original counterparts and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the officer executing on behalf of the surety.

**PRINCIPAL (CONTRACTOR)**

**SURETY**

\_\_\_\_\_  
Principal Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Surety Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Name, address, and telephone of local office/agent of Surety Company is:

\_\_\_\_\_  
\_\_\_\_\_

**DECLARATION OF OPTION FOR MANAGEMENT OF  
STATUTORY RETAINED PERCENTAGE**

- A. I hereby elect to have the retained percentage of this contract held in a fund by the City of Lacey until forty-five (45) days following final acceptance of the work.

\_\_\_\_\_  
Contractor (please print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

- B. I hereby elect to have the City of Lacey invest the retained percentage of this contract from time to time as such retained percentage accrues and in accordance with RCW Ch. 60.28.

I hereby designate \_\_\_\_\_ as the repository for the escrow of said funds.

I hereby further agree to be fully responsible for payment of all costs or fees incurred as a result of placing said percentage in escrow and investing it as authorized by statute.

The City of Lacey shall not be liable in any way for any costs or fees in connection therewith.

\_\_\_\_\_  
Contractor (please print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

- C. I hereby elect to hold a retainage bond.

\_\_\_\_\_  
Contractor (please print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

# D SPECIAL PROVISIONS





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# **SPECIAL PROVISIONS**

## **INTRODUCTION TO THE SPECIAL PROVISIONS**

**(January 19, 2022 APWA GSP)**

The work on this project shall be accomplished in accordance with the *Standard Specifications for Road, Bridge and Municipal Construction*, 2023 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter “Standard Specifications”). The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision either supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

The project-specific Special Provisions are not labeled as such, but are generally denoted with (\*\*\*\*\*). The GSPs are labeled under the headers of each GSP, with the effective date of the GSP and its source, except WSDOT uses a date only (2<sup>nd</sup> on list). For example:

(March 8, 2013 APWA GSP)  
(April 1, 2013)  
(May 1, 2013 Lacey GSP)

Also incorporated into the Contract Documents by reference are:

- *Manual on Uniform Traffic Control Devices for Streets and Highways*, currently adopted edition, with Washington State modifications, if any
- *Standard Plans for Road, Bridge and Municipal Construction*, WSDOT/APWA, current edition
- City of Lacey Development Guidelines and Public Works Standards, current edition

Contractor shall obtain copies of these publications, at Contractor’s own expense.

## **DESCRIPTION OF WORK**

This contract provides for the installation of approximately 3,200 LF of 8-inch diameter gravity sewer main and 2,200 LF of 12-inch diameter water main in the Tolmie Park Estates neighborhood. Work to include laterals, manholes, community septic tank and drain field abandonments, valves, connections to existing water and gravity sewer systems, pavement and lawn restoration and other work.

## **1-01 DEFINITIONS AND TERMS**

### **1-01.3 Definitions**

**(January 19, 2022 APWA GSP)**

Delete the heading Completion Dates and the three paragraphs that follow it, and replace them with the following:

#### Dates

##### Bid Opening Date

The date on which the Contracting Agency publicly opens and reads the Bids.

##### Award Date

The date of the formal decision of the Contracting Agency to accept the lowest responsible and responsive Bidder for the Work.

##### Contract Execution Date

The date the Contracting Agency officially binds the Agency to the Contract.

##### Notice to Proceed Date

The date stated in the Notice to Proceed on which the Contract time begins.

##### Substantial Completion Date

The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

##### Physical Completion Date

The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

##### Completion Date

The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

##### Final Acceptance Date

The date on which the Contracting Agency accepts the Work as complete.

Supplement this Section with the following:

All references in the Standard Specifications or WSDOT General Special Provisions, to the terms “Department of Transportation”, “Washington State Transportation Commission”, “Commission”, “Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Contracting Agency”.

All references to the terms “State” or “state” shall be revised to read “Contracting Agency” unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to “State Materials Laboratory” shall be revised to read “Contracting Agency designated location”.

All references to “final contract voucher certification” shall be interpreted to mean the Contracting Agency form(s) by which final payment is authorized, and final completion and acceptance granted.

Additive

A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

**Alternate**

One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or material of construction for performing the same work.

**Business Day**

A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

**Contract Bond**

The definition in the Standard Specifications for “Contract Bond” applies to whatever bond form(s) are required by the Contract Documents, which may be a combination of a Payment Bond and a Performance Bond.

**Contract Documents**

See definition for “Contract”.

**Contract Time**

The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

**Notice of Award**

The written notice from the Contracting Agency to the successful Bidder signifying the Contracting Agency’s acceptance of the Bid Proposal.

**Notice to Proceed**

The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

**Traffic**

Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

## **1-02 BID PROCEDURES AND CONDITIONS**

### **1-02.1 Prequalification of Bidders**

Delete this Section and replace it with the following:

#### **1-02.1 Qualifications of Bidder**

**(January 24, 2011 APWA GSP)**

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

#### **1-02.2 Plans and Specifications**

**(June 27, 2011 APWA GSP)**

Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed will be found in the Call for Bids (Advertisement for Bids) for the work.

After award of the contract, plans and specifications will be issued to the Contractor at no cost as detailed below:

To Prime Contractor	No. of Sets	Basis of Distribution
Reduced plans (11" x 17")	3	Furnished automatically upon award
Contract Provisions	3	Furnished automatically upon award
Large plans (22" x 34")	3	Furnished only upon request

Additional plans and Contract Provisions may be obtained by the Contractor from the source stated in the Call for Bids, at the Contractor's own expense.

## **1-02.4 Examination of Plans, Specifications and Site of Work**

### **1-02.4(1) General**

#### **(December 30, 2022 APWA GSP Option A)**

The first sentence of the ninth paragraph, beginning with "Prospective Bidder desiring...", is revised to read:

Prospective Bidder desiring an explanation or interpretation of the Bid Documents, shall request the explanation or interpretation in writing soon enough to allow a written reply to reach all prospective Bidders before the submission of their Bids.

### **1-02.5 Proposal Forms**

#### **(July 31, 2017 APWA GSP)**

Delete this section and replace it with the following:

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's UDBE/DBE/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

## **1-02.6 Preparation of Proposal**

#### **(March 3, 2022 Lacey GSP)**

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.
5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last two paragraphs, and replace it with the following:

The Bidder shall submit a completed Contractor Certification Wage Law Compliance form, provided by the Contracting Agency. Failure to return this certification within 24 hours of the bid opening will make this Bid Nonresponsive and ineligible for Award. A Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).

A bid by a partnership shall be executed in the partnership name, and signed by a partner.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture.

#### **1-02.7 Bid Deposit** **(March 8, 2013 APWA GSP)**

Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;
2. Name of the project;
3. The Contracting Agency named as obligee;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;
5. Signature of the bidder's officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

#### **1-02.9 Delivery of Proposal** **(March 3, 2022 Lacey GSP)**

Delete this section and replace it with the following:

Each Proposal shall be submitted in a sealed envelope, with the Project Name and Project Number as stated in the Call for Bids clearly marked on the outside of the envelope, or as otherwise required in the Bid Documents, to ensure proper handling and delivery.

If supplemental information is due after the Bid Proposal is due, the document(s) shall be submitted as follows:

1. In a sealed envelope labeled the same as for the Proposal, with “Supplemental Information” added, or
2. By e-mail to the following e-mail address: ProjectAdmin@ci.lacey.wa.us

All other information required to be submitted with the Bid Proposal must be submitted with the Bid Proposal itself, at the time stated in the Call for Bids.

Proposals that are received as required will be publicly opened and read as specified in Section 1-02.12. The Contracting Agency will not open or consider any Bid Proposal that is received after the time specified in the Call for Bids for receipt of Bid Proposals, or received in a location other than that specified in the Call for Bids. The Contracting Agency will not open or consider any “Supplemental Information” that is received after the time specified, or received in a location other than that specified in the Call for Bids.

If an emergency or unanticipated event interrupts normal work processes of the Contracting Agency so that Proposals cannot be received at the office designated for receipt of bids as specified in Section 1-02.12 the time specified for receipt of the Proposal will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which the normal work processes of the Contracting Agency resume.

#### **1-02.10 Withdrawing, Revising, or Supplementing Proposal** **(July 23, 2015 APWA GSP)**

Delete this section in its entirety, and replace it with the following:

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder’s request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, Emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

#### **1-02.12 Public Opening of Proposals** **(November 20, 2020 Lacey GSP)**

Delete and replace this section with the following:

Proposals will be opened and publicly read by live video stream per the “Instructions to Bidders” in Section A of these Specifications at the time as indicated in the call for Bids



### **1-02.13 Irregular Proposals**

**(December 30, 2022 APWA GSP)**

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
  - a. The Bidder is not prequalified when so required;
  - b. The authorized Proposal form furnished by the Contracting Agency is not used or is altered;
  - c. The completed Proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
  - d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
  - e. A price per unit cannot be determined from the Bid Proposal;
  - f. The Proposal form is not properly executed;
  - g. The Bidder fails to submit or properly complete a Subcontractor list (WSDOT Form 271-015), if applicable, as required in Section 1-02.6;
  - h. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification (WSDOT Form 272-056), if applicable, as required in Section 1-02.6;
  - i. The Bidder fails to submit Written Confirmation (WSDOT Form 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provision;
  - j. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award was made;
  - k. The Bidder fails to submit a DBE Bid Item Breakdown (WSDOT Form 272-054), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
  - l. The Bidder fails to submit DBE Trucking Credit Forms (WSDOT Form 272-058), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;
  - m. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
  - n. More than one Proposal is submitted for the same project from a Bidder under the same or different names.
2. A Proposal may be considered irregular and may be rejected if:
  - a. The Proposal does not include a unit price for every Bid item;
  - b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
  - c. Receipt of Addenda is not acknowledged;
  - d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
  - e. If Proposal form entries are not made in ink.

### **1-02.14 Disqualification of Bidders**

**(May 17, 2018 APWA GSP Option A)**

Delete this Section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the Contracting Agency reserves the right to request documentation as needed from the Bidder and third parties concerning the Bidder's compliance with the mandatory bidder responsibility criteria.

If the Contracting Agency determines the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination..

### **1-02.15 Pre-Award Information** **(August 14, 2013 APWA GSP)**

Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

## **1-03 AWARD AND EXECUTION OF CONTRACT**

### **1-03.3 Execution of Contract** **(January 19, 2022 APWA GSP)**

Revise this section to read:

Within 3 calendar days of Award date (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide the information necessary to execute the Contract to the Contracting Agency. The Bidder shall send the contact information, including the full name, email address, and phone number, for the authorized signer and bonding agent to the Contracting Agency.

Copies of the Contract Provisions, including the unsigned Form of Contract, will be available for signature by the successful bidder on the first business day following award. The number of copies to be executed by the Contractor will be determined by the Contracting Agency.

Within 10 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract, an insurance certification as required by Section 1-07.18, a satisfactory bond as required by law and Section 1-03.4, and the Transfer of Coverage form for the Construction Stormwater General Permit with sections I, III, and VIII completed when provided. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 10 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

### **1-03.4 Contract Bond** **(July 23, 2015 APWA GSP)**

Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond may be a combined payment and performance bond; or be separate payment and performance bonds. In the case of separate payment and performance bonds, each shall be for the full contract amount. The bond(s) shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
  - a) Is registered with the Washington State Insurance Commissioner, and
  - b) Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
  - a) Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
  - b) Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;
4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

### **1-03.7 Judicial Review** **(December 30, 2022 APWA GSP)**

Revise this section to read:

All decisions made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

## **1-04 SCOPE OF THE WORK**

### **1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications, and Addenda**

(November 20, 2020 Lacey GSP)

Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 presiding over 3, 3 over 4, and so forth):

1. Contract Form,
2. Addenda (if any),
3. Proposal Form,
4. Special Provisions,
5. Technical Specifications, if included,
6. Contract Plans,
7. WSDOT Standard Specifications for Road, Bridge, and Municipal Construction,
8. City of Lacey Development Guidelines and Public Works Standards, and
9. WSDOT Standard Plans for Road, Bridge and Municipal Construction

### **1-04.4(1) Minor Changes**

(May 30, 2019 APWA GSP)

Delete the first paragraph and replace it with the following:

Payments or credits for changes amounting to \$15,000 or less may be made under the Bid item “Minor Change”. At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All “Minor Change” work will be within the scope of the Contract Work and will not change Contract Time.

### **1-04.5 Procedure, Protest, and Dispute by the Contractor**

(January 19, 2022 APWA GSP)

Revise item 1 of the first paragraph to read:

1. Give a signed written notice of protest to the Engineer or the Engineer’s field Inspectors within 5 calendar days of receiving a change order or an Engineer’s Written Determination.

### **1-04.6 Variation in Estimated Quantities**

(May 25, 2006 APWA GSP)

Supplement this Section with the following:

The quantities for “Utility Potholing”, “Controlled Density Fill”, “Imported Pipe Bedding” and “Bank Run Gravel for Trench Backfill” have been entered into the Proposal only to provide a common proposal for bidders. Actual quantities will be determined in the field as the work progresses, and will be paid at the original bid price, regardless of final quantity. These bid items shall not be subject to the provisions of 1-04.6 of the Standard Specifications.

#### **1-04.6 Variations in Estimated Quantities** **(December 30, 2022 APWA GSP Option B)**

Revise the first paragraph to read:

Payment to the Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantity of Work performed under a unit item varies from the original Proposal quantity, payment will be at the unit Contract price for all Work unless the total accepted quantity of the Contract item, adjusted to exclude added or deleted amounts included in change orders accepted by both parties, increases or decreases by more than 25 percent from the original Proposal quantity, and if the total extended bid price for that item at time of award is equal to or greater than 10 percent of the total contract price at time of award. In that case, payment for contract work may be adjusted as described herein.

### **1-05 CONTROL OF WORK**

#### **1-05.4 Conformity With and Deviations from Plans and Stakes**

Supplement this section with the following:

##### **Roadway and Utility Surveys** **(July 23, 2015 APWA GSP, Option 1)**

The Engineer shall furnish to the Contractor one time only all principal lines, grades, and measurements the Engineer deems necessary for completion of the work. These shall generally consist of one initial set of:

1. Slope stakes for establishing grading;
2. Curb grade stakes;
3. Centerline finish grade stakes for pavement sections wider than 25 feet; and
4. Offset points to establish line and grade for underground utilities such as water, sewers, and storm drains.

On alley construction projects with minor grade changes, the Engineer shall provide only offset hubs on one side of the alley to establish the alignment and grade.

#### **1-05.4(2) Survey Control and Electronic Files** **(August 10, 2010 Lacey GSP)**

Add the following new section:

The Contractor shall re-establish the survey control used in design by using existing survey monuments and other control points as provided by the City.

When requested by the Contractor, the City will provide an electronic version of the construction plans (drawings), for use by the Contractor at the Contractor’s own risk. In all cases, the approved paper construction plans are the official contract documents. If the Contractor wishes to use the electronic

version of the construction plans for the purposes of providing surveying of the proposed improvements, it shall be the Contractor's responsibility to verify that any coordinates used from the electronic file match the station and offset location given in the contract construction plans. Construction plans are diagrammatic in nature. The coordinate locations of the various graphic elements within the electronic files may not necessarily be precisely shown with respect to their coordinate position. In all cases, the location callouts in the contract construction plans shall govern.

#### **1-05.7 Removal of Defective and Unauthorized Work** **(October 1, 2005 APWA GSP)**

Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remediating defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Engineer from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

No adjustment in contract time or compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

The rights exercised under the provisions of this section shall not diminish the Contracting Agency's right to pursue any other avenue for additional remedy or damages with respect to the Contractor's failure to perform the work as required.

#### **1-05.11 Final Inspections and Operational Testing** **(October 1, 2005 APWA GSP)**

Delete this section and replace it with the following:

##### **1-05.11(1) Substantial Completion Date**

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete

and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefore.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

### **1-05.11(2) Final Inspection and Physical Completion Date**

When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7.

The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

### **1-05.11(3) Operational Testing**

It is the intent of the Contracting Agency to have at the Physical Completion Date a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so that the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.



The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

#### **1-05.12(1) One-Year Guarantee Period**

**(March 8, 2013 APWA GSP)**

Add the following new section:

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within one year after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Contracting Agency's written notice of a defect, and shall complete such work within the time stated in the Contracting Agency's notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Contracting Agency's own forces or another contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for one year after acceptance of the corrections by Contracting Agency.

This guarantee is supplemental to and does not limit or affect the requirements that the Contractor's work comply with the requirements of the Contract or any other legal rights or remedies of the Contracting Agency.

#### **1-05.14 Cooperation with Other Contractors**

**(August 3, 2015 Lacey GSP)**

Supplement this section with the following:

The Contractor shall coordinate residential refuse and recycling pick-up with Pacific Disposal (360) 923-0111. Construction activities shall be planned so that there is no interruption of services.

#### **1-05.15 Method of Serving Notices**

**(December 30, 2022 APWA GSP)**

Revise the second paragraph to read:

All correspondence from the Contractor shall be directed to the Project Engineer. All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, must be in paper format, hand delivered or sent via mail delivery service to the Project Engineer's office. Electronic copies such as e-mails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

#### **1-05.16 Water and Power**

**(October 1, 2005 APWA GSP)**



Add the following new section:

The Contractor shall make necessary arrangements, and shall bear the costs for power and water necessary for the performance of the work, unless the contract includes power and water as a pay item.

### **1-05.18 Record Drawings**

**(January 3, 2011 Lacey GSP Option A)**

Add the following new section:

The Contractor shall furnish As-Built/Record Drawings of all changes to the original plans in accordance with the following conditions:

One set of 22"x 34" plans showing the changes to the project as installed.

Drawings shall be to scale with all notations neat in appearance.

Turn the record drawings over to the Engineer for review and approval prior to final payment.

## **1-06 CONTROL OF MATERIAL**

### **1-06.1 Approval of Materials Prior to Use**

**(April 3, 2017 WSDOT GSP 1-06.1.OPT1.GR1)**

The second sentence of first paragraph is revised to read:

For each proposed material that is required to be submitted for approval using either the QPL or RAM process the Contractor will be allowed to submit for approval two material sources or manufacturers per material type at no cost. Additional material sources or manufacturers may be submitted for approval and will be processed at a cost of \$125.00 per material source or manufacturer submitted by QPL submittal and \$400.00 per material submitted by RAM. All costs for processing additional material sources or manufacturers will be deducted from monies due or that may come due to the Contractor. Subject to a request by the Contractor and a determination by the Engineer the costs for processing may be waived.

### **1-06.1 Approval of Materials Prior to Use**

**(January 4, 2016 Lacey GSP)**

The second sentence of first paragraph is revised to read:

The Contractor shall use the Qualified Product List (QPL), the Aggregate Source Approval (ASA) Database, or the City of Lacey Request for Approval of Material (COL RAM) form.

### **1-06.1(2) Request for Approval of Material (RAM)**

The first paragraph is revised to read:

The COL RAM shall be used with all submittals. The COL RAM shall be prepared by the Contractor in accordance with the instructions and submitted to the engineer for approval before the material is incorporated into the Work..

Supplement this section with the following:

The Contractor shall submit sufficient information that describes the materials proposed as defined and described in these specifications and plans within 10 working days following the Notice to Proceed.

The Contractor shall submit one electronic of catalog cuts, shop drawings, and a material testing sample, as required for all items to be used in this contract for approval. The Contractor shall circle or highlight products and materials that are specific to this project, and cross out items that are not for this project.

All items not in exact compliance with the specifications must be noted as a change. The Contractor shall include an explanation, product specifications, sample articles, and any other items that will aid the Engineer in approving an item not in exact accordance with the specifications.

All submittals shall be submitted in Adobe Acrobat format and submittals that exceed 10 pages shall include a table of contents. Submittals that are not submitted in the format outlined may be rejected outright and the Contractor is required to resubmit in the correct format. The form and the submittal shall be sent in the same e-mail. Submittals that exceed 10 MB shall either be provided on a CD, a flash drive or via an internet link.

The Engineer will review submittals within 10 working days. The Contractor may request additional working days if approval or disapproval is not received in 10 working days. The Contractor may not request additional working days for failure to submit sufficient information to approve an item, or for rejection of an item not in accordance with the specifications.

Resubmittals shall be submitted within 5 working days from City's transmittal, to the contractor, of the Engineer reviewed submittal. If the submittal is "Rejected", the contractor shall resubmit the entire submittal. If the submittal is marked "Revise and Resubmit", the contractor shall submit items that are identified in the Engineer's comments.

Any material purchased or labor performed prior to such approval shall be at the Contractor's risk. The Contractor must receive all material approvals before the materials will be allowed on the project.

## **1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC**

### **1-07.1 Laws to be Observed** **(October 1, 2005 APWA GSP)**

Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work.

This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

### **1-07.2 State Sales Tax** **(June 27, 2011 APWA GSP)**

Delete this section, including its sub-sections, in its entirety and replace it with the following:

The Washington State Department of Revenue has issued special rules on the State sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

#### **1-07.2(1) State Sales Tax — Rule 171**

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

#### **1-07.2(2) State Sales Tax — Rule 170**

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

### **1-07.2(3) Services**

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

### **1-07.6 Permits and Licenses**

**(January 2, 2018 WSDOT 1-07.6.OPT1.FR1)**

Section 1-07.6 is supplemented with the following:

The Contracting Agency has obtained the below-listed permit(s) for this project. A copy of the permit(s) is attached as an appendix for informational purposes. Copies of these permits, including a copy of the Transfer of Coverage form, when applicable, are required to be onsite at all times.

Contact with the permitting agencies, concerning the below-listed permit(s), shall be made through the Engineer with the exception of when the Construction Stormwater General Permit coverage is transferred to the Contractor, direct communication with the Department of Ecology is allowed. The Contractor shall be responsible for obtaining Ecology's approval for any Work requiring additional approvals (e.g. Request for Chemical Treatment Form). The Contractor shall obtain additional permits as necessary. All costs to obtain and comply with additional permits shall be included in the applicable Bid items for the Work involved.

NAME OF DOCUMENT	PERMITTING AGENCY	PERMIT REFERENCE NO.
NPDES Construction Stormwater General Permit	Department of Ecology	WAR313154

### **1-07.15(1) Spill Prevention, Control, and Countermeasures Plan**

**(February 14, 2023 Lacey GSP)**

The Contractor shall prepare a project-specific spill prevention, control, and countermeasures plan (SPCC Plan), and shall implement the plan for the duration of the project. No on-site construction activities may commence until the Contracting Agency accepts a SPCC Plan for the project. An SPCC Plan template and guidance information is available at <https://wsdot.wa.gov/engineering-standards/environmental-guidance/stormwater-water-quality>.

The SPCC Plan shall address all fuels, petroleum products, hazardous materials, and other materials defined in Chapter 447 of the WSDOT Environmental Manual M 31-11. Occupational safety and health requirements that may pertain to SPCC Plan implementation are contained in, but not limited to, WAC 296-824 and WAC 296-843. The SPCC Plan shall address conditions that may be required by Section 3406 of the current International Fire Code, or as approved by the local Fire Marshal.

### **Implementation Requirements**

The Contractor shall update the SPCC Plan throughout project construction so that the written plan reflects actual site conditions and practices. The Contractor shall update the SPCC Plan at least annually and maintain a copy of the updated SPCC Plan on the project site. The Contractor shall fully implement the SPCC Plan, as accepted and updated, at all times.

## **SPCC Plan Element Requirements**

The SPCC Plan shall set forth the following information in the following order:

1. Responsible Personnel – Identify the names, titles, and contact information for the personnel responsible for implementing and updating the plan and for responding to spills.
2. Spill Reporting – List the names and telephone numbers of the Federal, State, and local agencies the Contractor shall notify in the event of a spill as referenced in the abovementioned template.
3. Spill Prevention – Describe the following items:
  - a. The contents and locations of spill response kits that the Contractor shall supply and maintain that are appropriately stocked, located in close proximity to hazardous materials and equipment, and immediately accessible.
  - b. Security measures for potential spill sources to prevent accidental spills and vandalism.
  - c. Site inspection procedures and frequency.
4. Spill Response – Outline the response procedures the Contractor shall follow for each scenario listed below, indicating that if hazardous materials are encountered or spilled during construction, the Contractor shall do everything possible to control and contain the material until appropriate measures can be taken. Include a description of the actions the Contractor shall take and the specific on-site spill response equipment that shall be used to assess the spill, secure the area, contain and eliminate the spill source, clean up spilled material, decontaminate equipment, and dispose of spilled and contaminated material:
  - a. A spill of each type of hazardous material present.
  - b. Stormwater that has come into contact with hazardous materials.
  - c. A release or spill of any unknown preexisting contamination and contaminant sources (such as buried pipes or tanks) encountered during project Work.

## **Payment**

If no bid item for “SPCC Plan” is included in the proposal, any work described in this section shall be incidental to the project.

## **1-07.18 Public Liability and Property Damage Insurance**

Delete this section in its entirety, and replace it with the following:

### **1-07.18 Insurance**

**(December 30, 2022 APWA GSP)**

#### **1-07.18(1) General Requirements**

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer’s financial condition.

B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor’s Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

C. If any insurance policy is written on a claims made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made, and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If

renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.

D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.

E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency

G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

### **1-07.18(2) Additional Insured**

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- The Contracting Agency and its officers, elected officials, employees, agents, and volunteers

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

### **1-07.18(3) Subcontractors**

The Contractor shall cause each Subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors.

The Contractor shall ensure that all Subcontractors of every tier add all entities listed in 1 07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each Subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

#### **1-07.18(4) Verification of Coverage**

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1 07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

#### **1-07.18(5) Coverages and Limits**

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

#### **1-07.18(5)A Commercial General Liability**

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:  
\$1,000,000 Each Occurrence

\$2,000,000	General Aggregate
\$2,000,000	Products & Completed Operations Aggregate
\$1,000,000	Personal & Advertising Injury each offence
\$1,000,000	Stop Gap / Employers' Liability each accident

### **1-07.18(5)B Automobile Liability**

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

\$1,000,000 Combined single limit each accident

### **1-07.18(5)C Workers' Compensation**

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

## **1-07.23 Public Convenience and Safety**

### **1-07.23(1) Construction Under Traffic**

**(February 6, 2023 WSDOT 1-07.23(1).OPT5.FR1)**

Section 1-07.23(1) is supplemented with the following

Lane, ramp, shoulder, and roadway closures are subject to the following restrictions:

If the Engineer determines the permitted closure hours adversely affect traffic, the Engineer may adjust the hours accordingly. The Engineer will notify the Contractor in writing of any change in the closure hours. Exceptions to these restrictions are listed below and when applicable take precedence over closures listed above. The Engineer may also consider on a case-by-case basis additional exceptions following a written request by the Contractor.

Lane, ramp, shoulder, and roadway closures are not allowed on any of the following:

1. A holiday,
2. A holiday weekend; holidays that occur on Friday, Saturday, Sunday or Monday are considered a holiday weekend. A holiday weekend includes Saturday, Sunday, and the holiday.
3. After noon on the day prior to a holiday or holiday weekend, and
4. Before 7 am on the day after the holiday or holiday weekend.
5. The two-hour period prior to and the two-hour period after the following special events:

It shall be the Contractor's responsibility to obtain the dates and times of all events.

#### **Traffic Delays**

When Automated Flagger Assistance Devices (AFADs) or flaggers are used to control traffic, traffic shall not be stopped for more than 15 minutes at any time. All traffic congestion shall be allowed to clear before traffic is delayed again.



If the delay becomes greater than 30 minutes, the Contractor shall immediately begin to take action to cease the operations that are causing the delays. If the 15 minute delay limit has been exceeded, as determined by the Engineer, the Contractor shall provide to the Engineer, a written proposal to revise his work operations to meet the 15 minute limit. This proposal shall be accepted by the Engineer prior to resuming any work requiring traffic control.

There shall be no delay to medical, fire, or other emergency vehicles. The Contractor shall alert all flaggers and personnel of this requirement.

#### General Restrictions

Construction vehicles using a closed traffic lane shall travel only in the normal direction of traffic flow unless expressly allowed in an accepted traffic control plan. Construction vehicles shall be equipped with flashing or rotating amber lights.

No two consecutive on-ramps, off-ramps, or intersections shall be closed at the same time and only one ramp at an interchange shall be closed, unless specifically shown in the Plans.

Roads or ramps that are designated as part of a detour shall not be closed or restricted during the implementation of that detour, unless specifically shown in the Plans.

#### Controlled Access

No special access or egress shall be allowed by the Contractor other than normal legal movements or as shown in the Plans.

Contractor's vehicles of 10,000 GVW or greater shall not exit or enter a lane open to public traffic except as follows:

Egress and ingress shall only occur during the hours of allowable lane closures, and:

1. For exiting an open lane of traffic, by decelerating in a lane that is closed during the allowable hours for lane closures.
2. For entering an open lane of traffic, by accelerating in a closed lane during the allowable hours for lane closures.

Traffic control vehicles are excluded from the gross vehicle weight requirement. If placing construction signs will restrict traveled lanes, then the work will be permitted during the hours of allowable lane closures.

#### Advance Notification

The Contractor shall notify the Engineer in writing of any traffic impacts related to lane closure, shoulder closure, sidewalk closure, or any combination for the week by 12:00 p.m. (noon) Wednesday the week prior to the stated impacts.

The Contractor shall notify the Engineer in writing ten working days in advance of any traffic impacts related to full roadway closure, ramp closure, or both.

The Contractor shall notify the Engineer in writing of any changes to the stated traffic impacts a minimum of 48 hours prior to the traffic impacts.

### **1-07.24 Rights of Way** **(July 23, 2015 APWA GSP)**

Delete this section and replace it with the following:

Street Right of Way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's construction activities shall be confined within these limits, unless arrangements for use of private property are made.

Generally, the Contracting Agency will have obtained, prior to bid opening, all rights of way and easements, both permanent and temporary, necessary for carrying out the work. Exceptions to this are noted in the Bid Documents or will be brought to the Contractor's attention by a duly issued Addendum.

Whenever any of the work is accomplished on or through property other than public Right of Way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreement obtained by the Contracting Agency from the owner of the private property. Copies of the easement agreements may be included in the Contract Provisions or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted in the Plans. The Contractor shall not proceed with any portion of the work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the Contracting Agency in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Each property owner shall be given 48 hours notice prior to entry by the Contractor. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the Contracting Agency, any additional land and access thereto that the Contractor may desire for temporary construction facilities, storage of materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall file with the Engineer a written permission of the private property owner, and, upon vacating the premises, a written release from the property owner of each property disturbed or otherwise interfered with by reasons of construction pursued under this contract. The statement shall be signed by the private property owner, or proper authority acting for the owner of the private property affected, stating that permission has been granted to use the property and all necessary permits have been obtained or, in the case of a release, that the restoration of the property has been satisfactorily accomplished. The statement shall include the parcel number, address, and date of signature. Written releases must be filed with the Engineer before the Completion Date will be established.

## **1-08 PROSECUTION AND PROGRESS**

Add the following new section:

### **1-08.0 Preliminary Matters** **(May 25, 2006 APWA GSP)**

Add the following new section:

### **1-08.0(1) Preconstruction Conference** **(October 10, 2008 APWA GSP)**

Prior to the Contractor beginning the work, a preconstruction conference will be held between the Contractor, the Engineer, and such other interested parties as may be invited. The purpose of the preconstruction conference will be:

- To review the initial progress schedule;
- To establish a working understanding among the various parties associated or affected by the work;
- To establish and review procedures for progress payment, notifications, approvals, submittals, etc.;
- To establish normal working hours for the work;
- To review safety standards and traffic control; and
- To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit at the preconstruction conference the following:

- A breakdown of all lump sum items;
- A preliminary schedule of working drawing submittals; and
- A list of material sources for approval if applicable.

### **1-08.0(2) Hours of Work** **(December 8, 2014 APWA GSP)**

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 5 prior to the day(s) the Contractor is requesting to change the hours.

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.
4. If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.
5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll

**1-08.0(2)A Lacey Hours of Work**  
**(October 16, 2014 Lacey GSP Option A)**

Add the following new section:

Lacey Municipal Code (LMC) Chapter 14.38.010, prohibits outside construction activities between the hours of 9:00 p.m. and 7:00 a.m. in or adjacent to residential zones of the City. A waiver to this ordinance will not be allowed, except in case of emergency, or where operations are necessary during such hours in order to promote the safety of the traveling public as shown in these specifications or as determined by the Engineer.

**1-08.1(7)A Subcontracting**  
**(December 30, 2022 APWA GSP)**

Delete the ninth paragraph, beginning with “On all projects, the Contractor shall certify...”.

**1-08.3(2)A Type A Progress Schedule**  
**(December 30, 2022 APWA GSP)**

Revise this section to read:

The Contractor shall submit five (5) copies of a Type A Progress Schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which format used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 15 calendar days of receiving the submittal.

**1-08.4 Prosecution of Work**  
**(July 23, 2015 APWA GSP)**

Delete this section in its entirety, and replace it with the following:

**1-08.4 Notice to Proceed and Prosecution of Work**

Notice to Proceed will be given after the contract has been executed and the contract bond and evidence of insurance have been approved and filed by the Contracting Agency. The Contractor shall not commence with the work until the Notice to Proceed has been given by the Engineer. The Contractor shall commence construction activities on the project site within ten days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

When shown in the Plans, the first order of work shall be the installation of high visibility fencing to delineate all areas for protection or restoration, as described in the Contract. Installation of high visibility fencing adjacent to the roadway shall occur after the placement of all necessary signs and traffic control devices in accordance with 1-10.1(2). Upon construction of the fencing, the Contractor shall request the Engineer to inspect the fence. No other work shall be performed on the site until the Contracting Agency has accepted the installation of high visibility fencing, as described in the Contract.

### **1-08.5 Time for Completion**

**(March 13, 1995 WSDOT GSP 1-08.5OPT7.FR1)**

This project shall be physically completed within **100** working days.

### **1-08.5 Time for Completion**

**(December 30, 2022 APWA GSP Option A)**

Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the Notice to Proceed Date.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If Substantial Completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the Physical Completion of the contract; and (3) remaining for the Physical Completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. The statement will be identified as a Written Determination by the Engineer. If the Contractor does not agree with the Written Determination of working days, the Contractor shall pursue the protest procedures in accordance with Section 1-04.5. By failing to follow the procedures of Section 1-04.5, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor is approved to work 10 hours a day and 4 days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the Completion Date of the Contract after all the Contractor's obligations under the Contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical Work on the project must be complete; and
2. The Contractor must furnish all documentation required by the Contract and required by law, to allow the Contracting Agency to process final acceptance of the contract. The following documents must be received by the Project Engineer prior to establishing a Completion Date:
  - a. Certified Payrolls (per Section 1-07.9(5)).
  - b. Material Acceptance Certification Documents
  - c. Monthly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.
  - d. Final Contract Voucher Certification
  - e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors
  - f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the Contracting Agency in accordance with Section 8-01.3(16).
  - g. Property owner releases per Section 1-07.24

### **1-08.9 Liquidated Damages**

**(March 3, 2021 APWA GSP, Option B)**

Revise the second and third paragraphs to read:

Accordingly, the Contractor agrees:

1. To pay (according to the following formula) liquidated damages for each working day beyond the number of working days established for Physical Completion, and
2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due to the Contractor.

Liquidated Damages Formula

$$LD=0.15C/T$$

Where:

LD = liquidated damages per working day (rounded to the nearest dollar)

C = original Contract amount

T = original time for Physical Completion

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine the Contract Work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

## **1-09 MEASUREMENT AND PAYMENT**

### **1-09.2(1) General Requirements for Weighing Equipment** **(December 30, 2022 APWA GSP, Option 2)**

Revise item 4 of the fifth paragraph to read:

4. Test results and scale weight records for each day's hauling operations are provided to the Engineer daily. Reporting shall utilize WSDOT form 422-027, Scaleman's Daily Report, unless the printed ticket contains the same information that is on the Scaleman's Daily Report Form. The scale operator must provide an AM and PM tare weight for each truck on the printed ticket.

### **1-09.2(5) Measurement** **(December 30, 2022 APWA GSP)**

Revise the first paragraph to read:

Scale Verification Checks – At the Engineer's discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work.

### **1-09.7 Mobilization** **(December 30, 2022 APWA GSP)**

Delete this Section and replace it with the following:

Mobilization consists of preconstruction expenses and the costs of preparatory Work and operations performed by the Contractor which occur before 10 percent of the total original amount of an individual Bid Schedule is earned from other Contract items on that Bid Schedule. Items which are not to be included in the item of Mobilization include but are not limited to:

1. Any portion of the Work covered by the specific Contract item or incidental Work which is to be included in a Contract item or items.
2. Profit, interest on borrowed money, overhead, or management costs.
3. Any costs of mobilizing equipment for force account Work.

Based on the lump sum Contract price for “Mobilization”, partial payments will be made as follows:

1. When 5 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 50 percent of the Bid Item for mobilization on that original Bid Schedule, 5 percent of the total of that original Bid Schedule, or 5 percent of the total original Contract amount, whichever is the least, will be paid.
2. When 10 percent of the total original Bid Schedule amount is earned from other Contract items on that original Bid Schedule, excluding amounts paid for materials on hand, 100 percent of the Bid Item for mobilization on that original Bid Schedule, 10 percent of the total of that original Bid Schedule, or 10 percent of the total original Contract amount, whichever is the least, will be paid.
3. When the Substantial Completion Date has been established for the project, payment of any remaining amount Bid for mobilization will be paid.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the Contract.

### **1-09.9 Payments** **(December 30, 2022 APWA GSP)**

Section 1-09.9 is revised to read:

The basis of payment will be the actual quantities of Work performed according to the Contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items at the Preconstruction Conference, to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer’s determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payments. The progress estimates are subject to change at any time prior to the calculation of the final payment.

The value of the progress estimate will be the sum of the following:



1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1), on non FHWA-funded projects;
2. The amount of progress payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

Failure to perform obligations under the Contract by the Contractor may be decreed by the Contracting Agency to be adequate reason for withholding any payments until compliance is achieved.

Upon completion of all Work and after final inspection (Section 1-05.11), the amount due the Contractor under the Contract will be paid based upon the final estimate made by the Engineer and presentation of a Final Contract Voucher Certification to be signed by the Contractor. The Contractor's signature on such voucher shall be deemed a release of all claims of the Contractor unless a Certified Claim is filed in accordance with the requirements of Section 1-09.11 and is expressly excepted from the Contractor's certification on the Final Contract Voucher Certification. The date the Contracting Agency signs the Final Contract Voucher Certification constitutes the final acceptance date (Section 1-05.12).

If the Contractor fails, refuses, or is unable to sign and return the Final Contract Voucher Certification or any other documentation required for completion and final acceptance of the Contract, the Contracting Agency reserves the right to establish a Completion Date (for the purpose of meeting the requirements of RCW 60.28) and unilaterally accept the Contract. Unilateral final acceptance will occur only after the Contractor has been provided the opportunity, by written request from the Engineer, to voluntarily submit such documents. If voluntary compliance is not achieved, formal notification of the impending establishment of a Completion Date and unilateral final acceptance will be provided by email with delivery confirmation from the Contracting Agency to the Contractor, which will provide 30 calendar days for the Contractor to submit the necessary documents. The 30 calendar day period will begin on the date the email with delivery confirmation is received by the Contractor. The date the Contracting Agency unilaterally signs the Final Contract Voucher Certification shall constitute the Completion Date and the final acceptance date (Section 1-05.12). The reservation by the Contracting Agency to unilaterally accept the Contract will apply to Contracts that are Physically Completed in accordance with Section 1-08.5, or for Contracts that are terminated in accordance with Section 1-08.10. Unilateral final acceptance of the Contract by the Contracting Agency does not in any way relieve the Contractor of their responsibility to comply with all Federal, State, tribal, or local laws, ordinances, and regulations that affect the Work under the Contract.

Payment to the Contractor of partial estimates, final estimates, and retained percentages shall be subject to controlling laws.

## **1-09.9 Payments**

**(November 20, 2020 Lacey GSP)**



Section 1-09.9 is supplemented with the following:

Progress payments and the Final Contract Voucher Certification (FCVC) will be transmitted electronically to the Contractor for signature. The Contractor shall apply all signatures electronically using the software provided by the Contracting Agency. Within 21 days of execution of the Contract, the Contractor shall submit the names, email addresses, and text-message capable phone numbers for the authorized signers and shall bear the name, phone number and email of the officer providing this authorization. Delegation of authority to sign progress payments and the FCVC shall be by the officer authorized to sign the Contract.

**1-09.11(3) Time Limitation and Jurisdiction**  
**(December 30, 2022 APWA GSP)**

Revise this section to read:

For the convenience of the parties to the Contract it is mutually agreed by the parties that all claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 180 calendar days from the date of final acceptance (Section 1-05.12) of the Contract by the Contracting Agency; and it is further agreed that all such claims or causes of action shall be brought only in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to all such claims or causes of action. It is further mutually agreed by the parties that when claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to all records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

**1-09.13(1) General**  
**(January 19, 2022 APWA GSP)**

Revise this section to read:

Prior to seeking claims resolution through arbitration or litigation, the Contractor shall proceed in accordance with Sections 1-04.5 and 1-09.11. The provisions of Sections 1-04.5 and 1-09.11 must be complied with in full as a condition precedent to the Contractor's right to seek claim resolution through binding arbitration or litigation.

Any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be resolved, as prescribed herein, through binding arbitration or litigation.

The Contractor and the Contracting Agency mutually agree that those claims or causes of action which total \$1,000,000 or less, which are not resolved by mediation, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

The Contractor and the Contracting Agency mutually agree that those claims or causes of action in excess of \$1,000,000, which are not resolved by mediation, shall be resolved through litigation unless the parties mutually agree in writing to resolve the claim through binding arbitration.

**1-09.13(3)A Arbitration General**  
**(January 19, 2022 APWA GSP)**

Revise the third paragraph to read:

The Contracting Agency and the Contractor mutually agree to be bound by the decision of the arbitrator, and judgment upon the award rendered by the arbitrator may be entered in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims subject to arbitration are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. The decision of the arbitrator and the specific basis for the decision shall be in writing. The arbitrator shall use the Contract as a basis for decisions.

**1-09.13(4) Venue for Litigation**  
**(December 30, 2022 APWA GSP)**

Revise this section to read:

Litigation shall be brought in the Superior Court of the county in which the Contracting Agency's headquarters is located, provided that where claims are asserted against a county, RCW 36.01.050 shall control venue and jurisdiction of the Superior Court. It is mutually agreed by the parties that when litigation occurs, the Contractor shall permit the Contracting Agency to have timely access to all records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

## **1-10 TEMPORARY TRAFFIC CONTROL**

**1-10.1 General**  
**(January 3, 2017 Lacey GSP)**

Supplement this section with the following:

Delays to traffic shall be held to a minimum. There shall be no restrictions or interruptions to traffic on Saturdays, Sundays or Holidays. In addition, there shall be no restrictions or interruptions to traffic after 12:00 noon on the day prior to a holiday or holiday weekend.

There shall be no delay to medical, fire, police, or other emergency vehicles with flashing lights or sirens. The Contractor shall alert all flaggers and personnel of this requirement.

The Contractor shall be responsible for removing the permanent traffic signs, as deemed necessary by the Engineer, and shall install and maintain any temporary signs necessary for the safety of the public.

The Contractor shall maintain pedestrian access at all times, without having pedestrians enter the travel lane.

All lane restrictions shall be held to a minimum time and length. Lane closures shall comply with the traffic control plans and these specifications. If the Contractor wishes to deviate from the plans, the Contractor shall submit a traffic control plan to the Engineer, at no additional cost, that complies with the MUTCD, and the Traffic Control Plans, for approval by the Engineer within (5) five working days before the proposed lane closure. If the Engineer determines that lane restrictions are causing congestion, the Contractor will be required to open any lanes, as determined by the Engineer, until the congestion is eliminated.

During non-working hours, Saturdays, Sundays, and Holidays, the Contractor shall keep all lanes open to traffic throughout the limits of the project with the lane and sidewalk area completely clear of all material, tools, personnel, and equipment as directed by the Engineer.

### **1-10.4(3) Reinstating Unit Items With Lump Sum Traffic Control** **(August 2, 2004 WSDOT GSP)**

Section 1-10.4(3) is supplemented with the following:

The bid proposal contains the item “Project Temporary Traffic Control,” lump sum and the additional temporary traffic control items listed below. The provisions of Section 1-10.4(1), Section 1-10.4(3), and Section 1-10.5(3) shall apply.

“Flaggers”, per hour.

“Portable Changeable Message Sign”, per hour.

## **2-01 CLEARING, GRUBBING, AND ROADSIDE CLEANUP**

### **2-01.1 Description**

**(October 16, 2009 Lacey GSP)**

Supplement this section with the following:

The City of Lacey is a Tree City USA, and has deemed it necessary to protect all trees to the best of their ability. Only the trees that are evaluated by a certified Arborist as being diseased or detrimental to the project shall be removed as shown in the plans. The Contractor shall conduct a site review noting all trees within the construction zone prior to submitting a bid. Ease of construction, spoils, or stockpiling needs shall not justify tree removal.

A high visibility fence shall be installed around all trees and vegetation as required by the Engineer prior to beginning work. The Contractor shall be responsible for installing, maintaining and removing the high visibility fence as required.

Disposal of all organic waste shall be by Disposal Method No. 2. Disposal Method No. 1 and No. 3 will not be permitted in this contract. The City of Lacey encourages recycling of organic material at a certified organic recycling center.

The Contractor shall take all precautions necessary to protect the public, property, trees, and natural vegetation from harm. Any damage to utilities or other structures on public right-of-way or private property shall be restored by the Contractor or authorized agent at the Contractor's expense.

### **2-01.5 Payment**

**(October 16, 2009 Lacey GSP)**

Modify this section with the following:

The unit contract price per acre or lump sum for “Clearing and Grubbing” shall be full pay for all work described in this section including “Roadside Cleanup”. If no bid item for “Clearing and Grubbing” or “High Visibility Fence” is included in the proposal, any work described in this section shall be incidental to the project.

## **2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

### **2-02.1 Description**

**(\*\*\*\*\* Lacey)**

Supplement this section with the following:

The following items plus all materials resulting from incidental work including clearing; grubbing and roadside cleanup shall be removed from the job site, disposed of in a waste site or when noted on the plans, delivered to the City.

This work consists of but shall not be limited to the following items:

Pavement	Lane Markings (Buttons, Paint, Plastic, RPM)
Concrete	Manholes
Refuse	Water Valves and Fittings
Valve Boxes	Roadside Cleanup
Septic System Drain Field	Rocks and Stumps

The septic system drain field removal shall consist of abandoning the septic system per Thurston County Department of Health standards. The Contractor shall obtain all necessary permits required to decommission the Septic Systems. The houses will be connected to sewer as part of this project and shall be sewered at all times. All costs to connect to sewer will be paid by various bid items. All permit costs to connect to sewer will be paid by the Contracting Agency.

## **2-02.2 Video**

**(March 3, 2022 Lacey GSP)**

Add the following new section:

The Contractor shall provide pre-construction video of the existing conditions for the construction area including all easements, streets, alleys, and driveways within the project area. Further, video shall include existing drainage, driveways, sidewalks, and other frontage improvements. The Contractor shall also provide pre-construction video of the existing conditions of each face of an existing structure (houses, garages, sheds, fences, etc.), within 30 feet of the construction area.

The Contractor shall provide a copy of the video, in electronic format, to the City prior to any construction.

All costs for providing and furnishing the pre-construction video shall be considered incidental to the Project and no other payment will be allowed.

## **2-02.3 Construction Requirements**

**(\*\*\*\*\* Lacey GSP)**

Supplement this section with the following:

Unless otherwise noted, catch basins and manholes shall be removed entirely.

Where shown on the plans, catch basins, manholes, cleanouts and inlets shall be fully removed to below the subgrade and the cavity filled with gravel borrow compacted to 95% of maximum density. Where existing pipe is to be abandoned, the Contractor shall seal the pipe with commercial concrete.

The Contractor shall use due care and caution during removal and transportation of the salvaged material so that no damage occurs to the salvaged material. Any damage caused by the Contractor shall be deducted from the amount due.

The Board of Directors meet and it was agreed that all of the metal and steel parts to include the meters, pumps, electrical components, etc. that need to be removed with the decommissioning of the private system can be delivered to the drain field at the drive-in entrance, but well inside past the gate area so we still have access to mow the area. The HOA will dispose of these things on our own.

### **2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters** **(October 16, 2016 Lacey GSP)**

Supplement this section with the following:

In removing pavement, sidewalks, and curbs, the Contractor shall:

1. Mark all cut lines in the field and have the Engineer approve them prior to commencing cutting operations. The Engineer reserves the right to adjust removal to the nearest construction joint.
2. Make a vertical saw cut between any existing pavement, sidewalk, or curb that is to remain and the portion to be removed.
3. All sawcuts shall be continuous and made with saws designed specifically for this purpose; no skip cutting, wheel cutting, or jack hammering will be allowed unless given prior approval by the Engineer.
4. Replace at no expense to the Contracting Agency any pavement designated to remain that is damaged during the removal of other pavement. All damaged sidewalks and curbs shall be replaced to the nearest existing joint.
5. Haul all broken-up pieces of pavement, sidewalks, and curbs to an off-project disposal site.

All transitions to existing asphalt or cement concrete driveways, parking lots, curb and gutter and walkways shall be vertically sawcut full-depth with straight, uniform edges. Existing asphalt pavement roadway edge may be cut with a wheel, provided the wheel cut is full depth and no damage occurs to the pavement which is to remain. Neither impact tools nor pavement breakers may be used for trench crossing of existing pavement. Trench crossing of existing pavement shall be vertically sawcut.

When sawcutting the existing roadway is needed to widen the road to perform excavation, the Contractor shall take extra precaution to make a neat, uniform cut, and shall sawcut pavement to full depth, regardless of number of passes necessary. Compaction of asphalt near the sawcut is critical and a vertical, neat line sawcut is required. If in the opinion of the Engineer, the cut is not satisfactory due to Contractor's workmanship or equipment, or if the sawcut becomes damaged and irregular, the Contractor shall fix the problem to the satisfaction of the Engineer, at Contractor's own expense.

Existing asphalt pavement shall be expected to have a 6 inch thickness. No additional compensation for saw cutting shall be considered unless the depth of the total pavement is greater than 9 inches.

The Contractor may grind the existing pavement in lieu of excavation and haul. Spoils from grinding can be stockpiled and used and paid for per sections 4-04.3(12), 4-04.4 and 4-04.5. If the Contractor elects to grind and stockpile the existing pavement, all costs and expenses necessary to furnish all labor, equipment, tools and materials shall be incidental to other bid items and no additional compensation will be allowed.

### **2-02.5 Payment** **(March 18, 2015 Lacey GSP)**

Delete this section and replace with the following:

“Removal of Structures and Obstructions”, lump sum.

The lump sum contract price for these bid items shall be full compensation for all labor, equipment and materials necessary to complete the requirements of this section.

## **2-03 ROADWAY EXCAVATION AND EMBANKMENT**

### **2-03.3(7)C Contractor-Provided Disposal Site**

**(October 16, 2009 Lacey GSP)**

Supplement this section with the following:

The Contracting Agency has not provided a waste site for disposal of excess materials and debris.

### **2-03.3(14)C Compacting Earth Embankments**

**(October 29, 2010 Lacey GSP)**

Supplement this section with the following:

The Contractor shall be required to compact all embankments in accordance with Method C as described in Section 2-03.3(14) C of the Standard Specifications.

### **2-03.3(14)D Compaction and Moisture Control Tests**

**(March 3, 2022 Lacey GSP Option A)**

Supplement this section with the following:

The Contractor shall be responsible for scheduling and coordinating with the City’s testing laboratory. No adjustment to the contract price or time for delays will be made if the contractor fails to schedule the needed testing.

The Contractor shall schedule a minimum of one density test for backfill for each 500 CY placed. In addition, the Contractor shall schedule a minimum of one density test for every 1,000 LF (per layer) of surfacing material placed.

For materials placed in a non-structural application outside the roadway prism such as slope flattening or shoulder dressing, acceptance for compaction may be based on visual inspection to the satisfaction of the engineer.

## **2-05 TRENCH SAFETY SYSTEM**

**(October 16, 2009 Lacey GSP)**

Add the following new section:

### **2-05.1 Description**

This work consists of furnishing, utilizing, moving, and maintaining a trench safety system.

### **2-05.3 Construction Requirements**

The Contractor shall comply with all applicable state laws, OSHA, WISHA requirements, and Department of Labor and Industries regulations governing trench excavation and pipe laying.

If extra excavation is used in lieu of, or in addition to shoring, cribbing, trench shields, or trench boxes, and select backfill material is required in the trench zone, then select backfill shall be used in the extra excavation zone.

### **2-05.4 Measurement**

Trench safety system shall be paid for per lump sum regardless of the type, size and quantity used.

### **2-05.5 Payment**

The lump sum contract price for “Trench Safety System” shall be full compensation for all labor, tools, equipment, and materials necessary to comply with the requirements stated above.

## **2-07 WATERING**

### **2-07.3 Construction Requirements**

[\(October 16, 2009 Lacey GSP\)](#)

Supplement this section with the following:

If the Contractor anticipates the use of City water, the Contractor shall apply for a water meter through the City of Lacey. Any damage rendered to the meter shall be repaired or replaced by the Contracting Agency and those costs deducted from monies due to the Contractor. All water used shall be metered and used sparingly for the entire length of the project. The Contractor will not be charged for water used on the project. The meter shall be returned promptly at the end of the project.

The Contractor is responsible for complying with backflow prevention requirements, which may include but are not limited to providing a certified air gap or reduced pressure backflow assembly (RPBA).

The Contractor shall use the water to keep the project site clean and to control dust during and after construction hours as determined by the Engineer.

### **2-07.4 Measurement**

[\(October 16, 2009 Lacey GSP\)](#)

Delete and replace this section with the following:

The Contractor shall apply for a construction meter through the Contracting Agency. All water used shall be measured with the Contracting Agency supplied meter.

### **2-07.5 Payment**

[\(February 14, 2023 Lacey GSP\)](#)

Delete and replace this section with the following:

The Contractor will not be charged for water used on this project. A construction meter will also be provided for a deposit and can be obtained at the City of Lacey Maintenance Service Center. Any costs to repair meters damaged by the Contractor shall be recovered from monies due the Contractor.

All costs to use or apply water as directed by the Engineer, including but not limited to supplying tank trucks, reduced pressure backflow assemblies (RPBA), and certification of approved backflow prevention methods, shall be considered incidental to the project and no other payment will be allowed.

## **2-09 STRUCTURE EXCAVATION**

### **2-09.3(1)E Backfilling**

**(October 16, 2009 Lacey GSP)**

Modify this section with the following:

Controlled Density Fill shall meet the following requirements:

1750# Sand,

1750# Pea Gravel,

230# Water,

141# Portland Cement,

6 ounces Water Reducing Agent per 100 lbs. cement.

The Controlled Density Fill will require 24 hours of cure time, or as directed by the Engineer. Prior to backfill, all appurtenances shall be covered with 11 mill plastic as directed by the Engineer. The Contractor shall have a steel plate cover placed and anchored over the trench until the Engineer determines the mixture is sufficiently cured, so that a temporary or permanent patch can be placed. This process shall be coordinated so that there will be minimum inconvenience to the public.

### **2-09.5 Payment**

**(October 16, 2009 Lacey GSP)**

Modify this section with the following:

Structure Excavation Including Haul, and Shoring or Extra Excavation shall be incidental to the structure to be constructed unless a bid item is provided.

## **2-13 PRIVATE UTILITY COORDINATION AND CONSTRUCTION**

**(January 3, 2016 Lacey GSP)**

Add the following new sections:

### **2-13.3(6) Gas Valve Box Adjustment**

**(October 29, 2010 Lacey GSP)**

All existing gas valve boxes shall be adjusted to line and grade staked in the field or otherwise designated by the Engineer. The Contractor shall be responsible for coordination with Puget Sound Energy (PSE) for replacement of the existing gas valve boxes and lids if they are determined to be non-adjustable. PSE will provide new valve boxes and lids if the existing is determined to be unusable by the Engineer.

### **2-13.4 Measurement**

**(January 3, 2011 Lacey GSP)**



Adjust Gas Valve Box shall be measured per each.

## **2-13.5 Payment**

**(October 29, 2010 Lacey GSP)**

The unit contract price per each for “Adjust Gas Valve Box” shall be full pay for all labor, materials, tools, and equipment, necessary to remove, replace and adjust gas valve box to line and grade staked in the field. This work is dependent on Puget Sound Energy’s acceptance of the bid. The Engineer reserves the right to delete this work. No extra compensation will be permitted if the Engineer elects to delete this work.

## **5-04 HOT MIX ASPHALT**

### **5-04.1 Description**

**(July 18, 2018 APWA GSP)**

Delete this entire section and replace it with the following:

This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

### **5-04.2 Materials**

**(July 18, 2018 APWA GSP)**

Materials shall meet the requirements of the following sections:

Asphalt Binder 9-02.1(4)  
Cationic Emulsified Asphalt 9-02.1(6)  
Anti-Stripping Additive 9-02.4  
HMA Additive 9-02.5  
Aggregates 9-03.8  
Recycled Asphalt Pavement 9-03.8(3)B  
Mineral Filler 9-03.8(5)  
Recycled Material 9-03.21  
Portland Cement 9-01  
Sand 9-03.1(2)  
(As noted in 5-04.3(5)C for crack sealing)  
Joint Sealant 9-04.2  
Foam Backer Rod 9-04.2(3)A

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP. The RAP shall be sampled and tested at a frequency of one sample for every 1,000 tons produced and not less than ten samples per project. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01. Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

#### **5-04.2(2) Mix Design – Obtaining Project Approval** **(July 18, 2018 APWA GSP)**

No paving shall begin prior to the approval of the mix design by the Engineer.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the contract documents.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

Nonstatistical Mix Design. Fifteen days prior to the first day of paving the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.\*\*

The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324, or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

At the discretion of the Engineer, agencies may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

**Commercial Evaluation** Approval of a mix design for “Commercial Evaluation” will be based on a review of the Contractor’s submittal of WSDOT Form 350-042 (For commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the Contracting Agency for mix design approval is not required.

For the Bid Item Commercial HMA, the Contractor shall select a class of HMA and design level of Equivalent Single Axle Loads (ESAL’s) appropriate for the required use.

#### **5-04.2(2) Mix Design – Obtaining Project Approval** **(January 3, 2011 WSDOT GSP)**

Section 5-04.2(2) is supplemented with the following

ESAL's

The number of ESAL's for the design and acceptance of the HMA shall be 0.3 million.

#### **5-04.2(2)A Changes to the Job Mix Formula**

Delete this section

#### **5-04.2(2)B Using Warm Mix Asphalt Processes** **(July 18, 2018 APWA GSP)**

The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
- Before using additives, obtain the Engineer’s approval using WSDOT Form 350-076 to describe the proposed additive and process.

### **5-04.3 Construction Requirements**

#### **5-04.3(2) Paving Under Traffic** **(April 2, 2018 Lacey GSP)**

Delete this section and replace it with the following:

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

The Contractor shall remove all pavement markings including paint, tape, thermoplastic and RPM's.

All costs in connection with performing the Work associated with these requirements shall be included in the unit Contract prices for the various Bid items involved in the Contract.

### **5-04.3(3)Equipment**

#### **5-04.3(3)A Mixing Plant**

(July 18, 2018 APWA GSP)

Delete this section and replace it with the following:

Plants used for the preparation of HMA shall conform to the following requirements:

1. Equipment for Preparation of Asphalt Binder – Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.
2. Thermometric Equipment – An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.
3. Heating of Asphalt Binder – The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.
4. Sampling and Testing of Mineral Materials – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).
5. Sampling HMA – The HMA plant shall provide for sampling HMA by one of the following methods:
  - a. A mechanical sampling device attached to the HMA plant.

- b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

### **5-04.3(3)B Hauling Equipment**

**(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

### **5-04.3(3)C Pavers**

**(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

**5-04.3(3)D Material Transfer Device or Material Transfer Vehicle**  
**(April 2, 2018 Lacey GSP, Option 1)**

Delete this section and replace it with the following:

A Material Transfer Device/Vehicle (MTD/V) is not required for this project.

**5-04.3(3)E Rollers**  
**(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

**5-04.3(4) Preparation of Existing Surfaces**  
**(December 19, 2019 Lacey)**

Delete this section and replace it with the following:

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.



A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted. Tack coat shall be uniformly applied to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor's operation damages the tack coat it shall be repaired prior to placement of the HMA.

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one part water to one part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer

All vegetation including root structures and moss shall be removed in their entirety within the paved areas including adjoining curbs, gutters, and sidewalks. Further, all vegetation overgrowth shall be trimmed and removed 6 inches from back of proposed HMA edge limits as directed by the Engineer.

Driveway preparation shall include saw cutting, cutting, filling, and grading the transitional area required to provide a HMA approach between the edge of pavement and driveway regardless of the existing surface treatment or width. The Engineer shall mark in the field where the asphalt or concrete shall be sawcut. Typical driveway aprons for paved/concrete driveways are 18" unless shown longer on the plans. Typical driveway aprons for gravel driveways are 48" unless shown longer in the plans. All material that must be removed from the driveway shall be hauled and disposed off the project site. All imported material required to grade and compact driveway bases shall be paid for by the unit bid item "Crushed Surfacing Top Course." All driveways shall require preparation. Temporary access shall be provided for all driveways prior to paving. There shall be no additional compensation for those driveways requiring more preparation than others.

Shoulder preparation shall include cutting, filling, and grading the shoulder to ensure a uniform, longitudinal pavement edge. Maximum distance shall be 12 inches from proposed edge of pavement surface to a maximum depth of 6 inches from edge of roadway finish grade. Backfill requirements beyond these limits shall be repaired at the Contractor's expense. All grading within drainage ditches or swales to establish or maintain existing flowlines shall also be included in shoulder preparation.

All excess asphalt joint filler shall be completely removed and all premolded and rubberized joint filler shall be removed to a minimum 1/2 inch below the surface of the existing pavement.

#### **5-04.3(5) Producing/Stockpiling Aggregates, RAP, & RAS**

Delete this section and replace it with the following:

#### **5-04.3(5) Producing/Stockpiling Aggregates and RAP**

[\(October 30, 2018 Lacey GSP\)](#)

If Recycled asphalt pavement (RAP) is allowed per section 5-04.2, aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

### **5-04.3(5)A Stockpiling RAP or RAS for High RAP/Any RAS Mixes**

Delete this section

### **5-04.3(6) Mixing**

**(October 30, 2018 Lacey GSP)**

Delete this section and replace it with the following:

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

If Recycled asphalt pavement (RAP) is allowed per section 5-04.2, RAP utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured..

### **5-04.3(7) Spreading and Finishing**

**(April 2, 2018 Lacey GSP)**

Delete this section and replace it with the following:

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1"	0.35 feet
HMA Class ¾" and HMA Class ½"	
wearing course	0.208 feet
other courses	0.25 feet
HMA Class ⅜"	0.17 feet



On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

The Contractor shall complete the first lift over the entire length of the project, before the final lift will be allowed to be installed.

If traffic signal loops are required, these loops shall be installed prior to the final lift.

#### **5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA** **(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

For HMA accepted by nonstatistical evaluation the aggregate properties of sand equivalent, uncompacted void content and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

#### **5-04.3(9) HMA Mixture Acceptance** **(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Engineer and may be made in accordance with this section.

#### **HMA Tolerances and Adjustments**

1. Job Mix Formula Tolerances – The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2

Property	Non-Statistical Evaluation	Commercial Evaluation
Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

For Aggregates in the mixture:

- a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percent Passing	Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieves	+/- 6%	+/- 8%
No. 4 sieve	+/- 6%	+/- 8%
No. 8 Sieve	+/- 6%	+/- 8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

- b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

- a. Aggregates –2 percent for the aggregate passing the 1½", 1", ¾", ½", ⅜", and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).

- b. Asphalt Binder Content – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent

### **5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation**

**(July 18, 2018 APWA GSP)**

Add the following new section:

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency by dividing the HMA tonnage into lots.

### **5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots**

**(July 18, 2018 APWA GSP)**

Add the following new section:

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A subplot shall be equal to one day's production or 800 tons, whichever is less except that the final subplot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Sampling and testing for evaluation shall be performed on the frequency of one sample per subplot.

#### **5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling**

**(July 18, 2018 APWA GSP)**

Add the following new section:

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASH-T O T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall to be tested.

Sampling and testing HMA in a Structural application where quantities are less than 400 tons is at the discretion of the Engineer.

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed. In all cases, a minimum of 3 samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested for conformance to the JMF:

- If the test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.
- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a Composite Pay Factor (CPF) shall be performed.

#### **5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing**

**(July 18, 2018 APWA GSP)**

Add the following new section:

Testing of HMA for compliance of Va will at the option of the Contracting Agency. If tested, compliance of Va will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

#### **5-04.3(9)C4 Mixture Nonstatistical Evaluation – Pay Factors**

**(July 18, 2018 APWA GSP)**

Add the following new section:

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a Composite Pay Factor (CPF) using the following price adjustment factors:

Table of Price Adjustment Factors	
Constituent	Factor "f"
All aggregate passing: 1½", 1", ¾", ½", ⅜" and No.4 sieves	2
All aggregate passing No. 8 sieve	15

All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

#### **5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments** **(July 18, 2018 APWA GSP)**

Add the following new section:

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

#### **5-04.3(9)C7 Mixture Nonstatistical Evaluation – Retests** **(July 18, 2018 APWA GSP)**

Add the following new section:

The Contractor may request a subplot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, Va. The results of the retest will be used for the acceptance of the HMA in place of the original subplot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of \$500 per sample.

#### **5-04.3 (9)D Mixture Acceptance – Commercial Evaluation** **(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in 5-04.3(9), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the

existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

For each lot of HMA mix produced and tested under Commercial Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The Job Mix Compliance Price Adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

#### **5-04.3(10) HMA Compaction Acceptance** **(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

HMA mixture accepted by nonstatistical evaluation that is used in traffic lanes, including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, shall be compacted to a specified level of relative density. The specified level of relative density shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of the Engineer, when using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item "Roadway Core" the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item "Roadway Core" the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

#### Test Results

For a subplot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the subplot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the subplot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the subplot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of \$200 per core and the Contractor shall pay for the cost of the traffic control.

#### **5-04.3(10)D HMA Compaction-Visual Evaluation**

Delete this section and replace it with the following:

#### **5-04.3(10)D HMA Nonstatistical Compaction**

##### **5-04.3(10)D1 HMA Nonstatistical Compaction – Lots and Sublots** **(July 18, 2018 APWA GSP)**

Add the following new section:

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A subplot shall be equal to one day's production or 400 tons, whichever is less except that the final subplot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per subplot per WSDOT T 738.

The subplot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

**5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing**  
**(July 18, 2018 APWA GSP)**

Add the following new section:

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each subplot, with one test per subplot.

**5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments**  
**(July 18, 2018 APWA GSP)**

Add the following new section:

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a subplot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The maximum CPF shall be 1.00, however, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92% a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

**5-04.3(11)C Rejection Without Testing (Mixture or Compaction)**  
**(July 18, 2018 APWA GSP)**

Delete this section and replace it with the following:

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

**5-04.3(12)A1 Transverse Joints**  
**(April 2, 2018 Lacey GSP)**

Delete this section and replace it with the following:



The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course. All joints must be flush and provide a smooth transition across the meet line.

A temporary wedge of HMA constructed on a 24H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The wedge shall be maintained until the paving is resumed. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

#### **5-04.3(12)A2 Longitudinal Joints** **(April 2, 2018 Lacey GSP)**

Supplement this section with the following:

Cold joints shall be allowed only at locations approved by the Engineer.

Upon Completion of paving operations, all joints shall be sealed with PG 58H-22 asphalt binder.

#### **5-04.3(17) Roadway Pulverization** **(October 30, 2018 Lacey GSP)**

Add the following new section:

Pavement pulverizing shall be performed with equipment of a type that has operated successfully on work comparable with that to be done under the contract and shall be approved by the Engineer prior to use.

Where indicated on the Plans, the existing pavement shall be pulverized in place from edge of pavement to edge of pavement between the limits staked by the Engineer. Asphalt concrete pavement shall be pulverized to a depth of three times the asphalt thickness. Care shall be taken not to disturb the adjacent concrete curb and gutter.

The Contractor shall process the pulverized material with water to remove material larger than 4" and grade to match existing crown, as shown in the plans or as directed by the Engineer. Upon completion of the grading operation, the Contractor shall compact the material to 95% density in accordance with Section 2-03.3(14)D. Excess pulverized material, loose material and any large pieces 4" or greater of asphalt will be removed and disposed of at the Contractor's expense. Crushed Surfacing Top Course shall be placed and graded if needed, as directed by the Engineer, paid for under the bid item for Crushed Surfacing Top Course.

If the Contractor chooses to pulverize roadway where not indicated on the Plans, no compensation shall be made under the bid item "Roadway Pulverization". The demolition and removal of this pavement material shall be compensated under the lump sum bid item "Removal of Structures and Obstructions" and no other compensation shall be allowed.



The Contractor can stockpile the grindings for use on the project as identified in section 2-02.3(3).

#### **5-04.3(18) Pre Planing Or Pulverizing Metal Detection Check**

**(October 30, 2018 Lacey GSP)**

Add the following new section:

Before starting planing or pulverizing of pavements, and before any additional depth planing or pulverizing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monuments that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor's failure to conduct a pre-planing metal detection survey, or from the Contractor's failure to notify the Engineer of any hidden metal that is detected.

#### **5-04.3(19) Submittals - Paving Plan**

**(October 30, 2018 Lacey GSP)**

Add the following new section:

The Contractor must submit a paving plan to the Engineer at least 5 Working Days in advance of the start date. These plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-paving briefing. When requested by the Engineer, the Contractor must provide the traffic control plan with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The traffic control plan must show where flaggers are proposed.

At a minimum, the plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's work. Briefly describe the sequencing of traffic control consistent with the proposed work sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's work.
2. Names and locations of HMA Supplier facilities to be used, and locations of temporary parking and staging areas.
3. List of all equipment to be used for paving.
4. Description (geometric or narrative) of the scheduled sequence of work, and intended area for each day's work, must include the directions of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection scheduling and sequencing.
5. Approximate times and days for starting and ending daily operations.

#### **5-04.3(20) Pre-Paving Briefing**

**(October 30, 2018 Lacey GSP)**

Add the following new section:

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, Metro transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. The actual times of starting and ending daily operations.
2. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other contractors who may operate in the Project Site.
3. Notifications required of Contractor activities, and coordinating with other entities and the public as necessary.
4. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and to paving.
5. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed
6. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monuments, monitoring wells, street car rail, and castings, before planning, see Section 5-04.3(14)B2.
7. Description of how flaggers will be coordinated with the planing, paving, and related operations.
8. When to start applying tack and coordinating with paving.
9. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and Supplier shutdown of operations.
10. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

#### **5-04.3(21) Paving Operations Supervisor**

**(April 2, 2018 Lacey GSP)**

Add the following new section:

The Contractor shall identify a Paving Operations Supervisor (POS) at the Preconstruction Conference. The POS shall be employed by the Paving Contractor, shall have direct and immediate control of the paving operations on the Project at all times, and shall perform no other duties on the project. No part of the paving operations shall commence or continue without the physical presence of the POS on-site. The POS shall act as the main point of contact in the field to the Engineer and shall execute all requests by the Engineer promptly and immediately.

Specific duties include, but are not limited to the following:

Ensures all paving operations meet the requirements of Section 5-04.

Ensures all iron is marked and properly lowered prior to pavement planing operations.

Ensures paving schedule is communicated to the Engineer 72 hours in advance of paving operations commencing. The Engineer shall be responsible for delivering paving notices to affected business owners and residents. Any changes to the paving schedule must also be communicated to the Engineer 72 hours in advance of the change.

Ensures existing surfaces to be paved are prepared in accordance with Sec. 5-04.3(4) a minimum of two (2) hours prior to paving. Specific attention shall be given to surface cleanliness, match lines to adjoining pavement are vertical and smooth, and matching to existing driveways and rolled gutters are prepared. In the event that preparation of existing surfaces are behind schedule, paving operations may be halted and rescheduled at the Engineer's request if, in his judgment, the delay of paving shall result in a less than satisfactory end product or inconvenience to the public. All costs resulting from paving rescheduling shall be borne by the Contractor.

Ensures all tack coating is completed in accordance with Sec. 5-04.3(4).

### **5-04.3(22) Temporary Patching**

**(April 2, 2018 Lacey GSP)**

Add the following new section:

All excavations within or across streets, driveways, or failure of existing pavement that will be exposed to traffic shall be temporarily patched by the end of the working day or as directed by the Engineer. The patch shall be constructed of a minimum of 0.17 feet of either Commercial HMA or as directed by the Engineer. The Contractor shall maintain all temporary patches until such time as the permanent pavement is in place.

### **5-04.3(24) Roadway Shoulder Final Grading**

**(April 2, 2018 Lacey GSP)**

Add the following new section:

The Contractor shall backfill and grade a 5 foot wide or a 5:1 transition (whichever is less) flush from the new edge of pavement down to the existing shoulder grade with Crushed Rock or Topsoil Type A to match existing shoulder material and condition. The Crushed Rock shall match gradation, shape, and color to of the existing rock shoulder. Upon placing and grading either material, the Contractor shall roll and compact the transition as directed by the Engineer. The Contractor shall then hydroseed all shoulder transitions backfilled with topsoil.

### **5-04.3(26) Utility Access**

**(November 20, 2020 Lacey GSP)**

Add the following new section:

When lowering and raising valves the valve riser pipes must remain free of debris. Cap the valve riser pipe to prevent debris from entering the riser and to provide access to the operating nut.

The contractor is responsible for tracking exact locations of all valves and manholes to be lowered or raised. Before asphalt is placed over a valve, metal must be placed directly above the valve location for the purpose of locating the valve with a metal detector. Once asphalt has been placed over a valve or manhole, the location of that valve or manhole must be marked on the asphalt within 3 working days. The location marks must be maintained until the valves are raised. Channelization near valves or manholes must be complete before they are raised. All valves and manholes must be raised within 20

working days after each time they are paved over. The cost of raising new valves and manholes is incidental to the cost for that bid item. The cost for raising existing valves and manholes will only be paid once for each location, no additional compensation will be allowed if the contractor has to raise the same valve/manhole twice. See sections 7-05 and 7-12 for additional information on raising valves and manholes.

#### **5-04.4 Measurement**

**(February 14, 2023 Lacey GSP)**

Supplement this section with the following:

Roadway Pulverization shall be measured by the square yard of roadway pulverized.

No unit of measure shall apply to the lump sum price for Preparation of Existing Surfaces.

No unit of measure shall apply to the lump sum price for Driveway and Shoulder Preparation.

Crushed Rock for Shoulder Grading shall be measured per ton of material required to complete a smooth transition from the edge of pavement to the existing shoulder grade.

Topsoil Type A for Shoulder Grading shall be measured per cubic yard of material required to complete a smooth transition from the edge of pavement to the existing shoulder grade.

#### **5-04.5 Payment**

**(November 20, 2020 Lacey GSP)**

Supplement this section with the following:

The unit Contract price per ton for all HMA bid items shall also include Paving Operations Supervisor (POS) and the removal of excess tack coat of asphalt from existing surfaces, including, but not limited to existing pavement markings. Pavement markings shall be restored to a pre-construction condition or better. No additional compensation shall be given to the Contractor for installing new pavement markings if existing pavement markings cannot be restored to a pre-construction condition or better as directed by the Engineer.

If no bid item for “HMA for Pre-leveling Cl. \_\_ PG \_\_” is included, all materials, equipment, and labor necessary to pre-level the existing pavement prior to paving shall be fully compensated by the bid item “HMA Cl. \_\_ PG \_\_” and “Fiber Reinforced HMA Cl. \_\_ PG \_\_” and no other pay shall be allowed.

The unit Contract price per ton for “HMA for Pavement Repair Cl \_\_ PG \_\_” shall also include all costs for constructing speed humps as shown in the plans, including pavement markings if no bid item for this is included in the proposal.

“Job Mix Compliance Price Adjustment”, by calculation.

“Job Mix Compliance Price Adjustment” will be calculated and paid for as described in Section 5-04.3(9)C6.

“Compaction Price Adjustment”, by calculation.

“Compaction Price Adjustment” will be calculated and paid for as described in Section 5-04.3(10)D3.

“Roadway Pulverization,” per square yard.

The unit contract price per square yard for “Roadway Pulverization” shall be full compensation for all labor, material and equipment to pulverize roadway and hauling of excess material.

“Preparation of Existing Surfaces,” lump sum.

The lump sum contract price for “Preparation of Existing Surfaces” shall be full pay for all labor, materials, and equipment to comply with the plans and specifications, including but not limited to cleaning and removal of all vegetation from proposed paved surfaces or that vegetation that will interfere with paving operations prior to paving.

“Driveway and Shoulder Preparation”, lump sum.

The lump sum contract price for “Driveway and Shoulder Preparation” shall be full pay for all labor, materials, and equipment to comply with the plans and specifications, including but not limited to sawcuts, cuts, fills, and grading all driveways and shoulders prior to paving.

“Crushed Rock for Shoulder Grading,” per ton.

“Topsoil Type A for Shoulder Grading,” per cubic yard.

The unit contract price for the above bid items shall be full compensation for all labor, material and equipment, including seeding of topsoil, to provide a smooth transition between the new edge of pavement and existing roadway.

## **7-05 MANHOLES, INLETS, CATCH BASINS, AND DRYWELLS**

### **7-05.3(1)B Raise Manhole To Grade**

**(January 7, 2019 Lacey GSP)**

Add the following new section:

Where shown on the plans or where directed by the Engineer, existing manholes and Type 2 catch basins shall be raised to the grade as staked or as directed by the Engineer. The Contractor shall supply and install new manhole rings, frames, and covers as part of raising the manhole to grade. The finished installation shall conform to the detail shown in plans. No wood adjustment of any kind will be allowed.

Maximum distance allowed from edge of iron ring or frame of appurtenance to outside edge of pavement restoration is 18 inches. Patches larger than this or clean misses (e.g. where the Contractor excavates in the new pavement mat and does not find the iron appurtenance to raise) shall result in a credit from the Contractor to the City of \$1000 for each occurrence. Further, the Contractor shall repair the pavement patch as directed by the Engineer.

### **7-05.4 Measurement**

**(October 30, 2018 Lacey GSP)**

Supplement this section with the following:

“Connect to Existing Manhole” will be measured per each location called out in the plans.

### **7-05.5 Payment**

**(October 30, 2018 Lacey GSP)**

Supplement this section with the following:

The unit contract price per each for manholes and catch basins shall be full pay for furnishing all labor, tools, equipment, and materials required to place the structure including excavation, haul, backfill, testing, and all accessories, such as rings, covers, grates, steps, grate inlets, trash racks, beehive grates and debris cages, removable silt trap tees, GU liners, inside drops, outside drops and all other items needed to install

the manhole complete in place in accordance with the plans and these specifications in conformity with the lines and grades staked.

“Raise Manhole to Grade”, per each.

The unit Contract price per each for “Raise Manhole to Grade” shall be full pay for all costs necessary to furnishing and installing the unit complete in place, including restoration of adjacent areas.

“Connect to Existing Manhole”, per each.

The unit contract price per each for “Connect to Existing Manhole” shall be full pay for furnishing all labor, tools, equipment, and materials required to connect to existing manhole in place, including concrete, concrete collars and sealants. Further, all excavation, haul, backfill, testing, and accessories shall be included in the unit contract price. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing manhole or the quantity of pipes connecting to the manhole. Items not specifically identified on the plans but necessary to properly connect to manhole shall be considered incidental and no other compensation shall be allowed.

## **7-08 GENERAL PIPE INSTALLATION REQUIREMENTS**

### **7-08.1 Description**

[\(December 31, 2014 Lacey GSP\)](#)

This section is revised to read:

This work includes installing culverts, storm sewers, sanitary sewers, and water mains. The contractor shall also follow Section 7-02, 7-04, 7-09 or 7-17 as it applies to the specific kind of Work.

### **7-08.2 Materials**

[\(October 16, 2009 Lacey GSP\)](#)

Supplement this section with the following:

Bank Run Gravel for Trench Backfill shall be in accordance with Section 9-03.19.

Controlled Density Fill shall be in accordance with Section 2-09.3(1)E.

Imported Pipe Bedding shall be in accordance with Section 9-03.16.

### **7-08.3 Construction Requirements**

#### **7-08.3(1) Excavation and Preparation of Trench**

[\(October 30, 2018 Lacey GSP\)](#)

Supplement this section with the following:

The contractor shall locate and preserve all existing utilities per RCW 19.122. Utility locations shown on the plans depict the physical features that were visible at the time of the survey. The City of Lacey is not responsible for the location of underground utilities that are marked or not marked in the field by other utility providers. Utility service laterals are not typically shown on plans or locatable and the contractor shall anticipate such services. The City will locate the meters and the mains. For service laterals, pursuant to RCW 19.122.030, the City will indicate a presence of an un-locatable service lateral and if requested can meet with the contractor or provide copies of available records. The Contractor shall have a crimping tool available during excavation to crimp any broken water services. Before commencing work, the contractor shall coordinate with One-Call services to determine the location of all utilities.

The Contractor shall pothole all apparent conflicts between existing utilities and proposed construction as approved by the Engineer. The Contractor shall notify Engineer of location and approximate time to complete prior to potholing. The Contractor shall notify the Engineer of any conflicts with the existing utilities and proposed work at least 3 days prior to proceeding with work. Potholing of the utilities shall be completed a minimum distance of 300 feet in front of pipe laying operations. No adjustment to the contract price or time will be made if the contractor fails to follow this specification. Potholing for Utility Crossings and Connections shall be performed by the Contractor using vacuum excavation truck or other device approved by the Engineer. If the Contractor potholes prior to approval no compensation shall be made for the potholing.

The Contractor shall deflect pressurized pipe at the joints no greater than the maximum allowable deflection as determined by the pipe or fitting manufacturer to avoid conflicts with crossing utilities. Vertical bends and vertical thrust blocking shall be avoided by deflecting pipe either upwards or downwards prior to the utility crossing.

#### **7-08.3(1)A Trenches**

**(December 31, 2014 Lacey GSP)**

Section 7-08.3(1)A is supplemented with the following to the fourth paragraph:

All material excavated from trenches shall not be piled on the roadway.

#### **7-08.3(1)C Bedding the Pipe**

**(February 25, 2015 Lacey GSP)**

Section 7-08.3(1)C is supplemented with the following

If native material meets the requirements of 7-08.2 the Contractor shall use all suitable native material prior to using imported pipe bedding or bank run gravel. All material shall be approved by the Engineer prior to placement. If the Contractor places imported material prior to approval, no compensation shall be made for the imported material.

#### **7-08.3(3) Backfilling**

**(October 30, 2018 Lacey GSP)**

Supplement this section with the following:

For backfilling trenches for longitudinal runs of pipe, the Contractor shall use all suitable native material prior to using bank run gravel and/or controlled density fill. All native backfill material shall be approved by the Engineer prior to placement. If the Contractor places imported material prior to approval, no compensation shall be made for the imported material. All backfill material shall be compacted and tested according to Section 2-03.3(14)D.

For transverse runs of pipe including the service lines within the roadway prism, the Contractor shall use controlled density fill unless approved otherwise by the Engineer. All native material shall be excavated, hauled and disposed of offsite. All exceptions shall be approved by the Engineer.

At the end of each workday, the Contractor shall install a lift of temporary asphalt cold mix on top of the trench backfill, flush with the existing pavement. No trench excavation shall be exposed to traffic without a temporary asphalt cold mix sealing the existing pavement surface. If approved by the Engineer, the Contractor may choose to use HMA for Pavement Repair Cl. ½" PG 64-22 for permanent pavement repair if a bid item for this work has been included in the Proposal. All costs associated with providing



and removal of temporary asphalt cold mix shall be incidental to the bid item for the pipe being installed and no other compensation will be allowed.

### **7-08.3(3)A Controlled Density Fill**

**(December 31, 2014 Lacey GSP)**

Section 7-08.3(3)A is added with the following:

The Contractor shall use controlled density fill (CDF) as shown in the Plans or directed by the Engineer.

Controlled Density Fill shall meet the following requirements:

1750# Sand,

1750# Pea Gravel,

230# Water,

141# Portland Cement,

6 ounces Water Reducing Agent per 100 lbs. cement.

The Controlled Density Fill will require 24 hours of cure time, or as directed by the Engineer. Prior to backfill, all appurtenances shall be covered with 11 mill plastic as directed by the Engineer.

### **7-08.3(3)B Steel Plating for Pipe Trench**

**(February 25, 2015 Lacey GSP)**

Section 7-08.3(3)B is added with the following:

The Contractor shall install steel plating over the trench per the plans to allow for CDF to fully cure and allow vehicle traffic to pass during non-working hours. The steel plating shall remain complete over the trench until the pavement repair is complete. This process shall be coordinated so that there will be minimum inconvenience to the public. All costs for all labor, materials, and equipment to furnish, place, assemble, install, maintain and remove the steel plates and associated materials shall be included in the unit contract price per foot of pipe installed and no additional compensation shall be allowed.

### **7-08.3(5) Pipe Abandonment**

**(February 14, 2023 Lacey GSP)**

Add the following new section:

The Contractor shall abandon pipes where shown on the Plans or directed by the Engineer. For abandonment, removal, handling and disposal of asbestos cement piping, refer to Section 7-09.3(19)D of these Special Provisions. All abandonments shall be done after all new utility mains and service connections are installed unless authorized by the Engineer. Abandonments shall include all excavation, pipe cutting and removal, fittings, concrete plugging, and backfilling. Some abandonments require specific fittings as indicated on the Plans. All fittings required to complete the abandonment shall be included in the cost for the abandonment. Potholing per 7-08.3(1) to verify required fittings shall be done as directed by the Engineer. The valve shall not be abandoned in place, the valve shall be removed and a blind flange installed. Pipe abandonments shall be completed in cooperation with the engineer in order to minimize disruption of utility service to the residents. If water services will be interrupted follow the requirements of 7-09.3(19)B.

All pipes to be abandoned shall have the first 2 linear feet of abandoned pipe filled/plugged with a watertight concrete grout. The inspector shall inspect the abandonment prior to backfilling.



In the case of an abandonment associated with a connection to an existing main, no payment shall be made for the bid item "Pipe Abandonment". The Contractor shall include all costs with these associated abandonments under the "Connect to Existing Water Main", "Connect to Existing Reclaimed Water Main", "Connect to Existing Gravity Sewer Main", or "Connect to Existing Sanitary Sewer Main" pay item. In addition, payment for "Pipe Abandonment" will only be paid for the locations and quantities called out on the plans or as directed by the Engineer.

#### **7-08.3(6) Water Main/Sanitary Sewer Service Crossings** **(February 25, 2015 Lacey GSP)**

Add the following new section:

Notify the Engineer if the waterline is less than 18 inches above sanitary sewer. The minimum cover as shown on the plans may be reduced as approved by the Engineer to maintain minimum vertical separation.

The Contractor shall install the longest standard length of water pipe so that the joints will fall an equal distance from any sewer crossing. In some cases where minimum separation cannot be maintained, it may be necessary to encase the water main as directed by the Engineer. No concrete shall be installed unless specifically directed by the Engineer.

Costs to cut and place water pipe as specified shall be incidental to the water pipe line and no other pay will be allowed.

#### **7-08.3(7) Connections to Existing Mains** **(October 30, 2018 Lacey GSP)**

Add the following new section:

The Contractor shall be responsible for determining the scope of work for connection to existing mains.

It shall be the Contractor's responsibility to field verify the location and depth of the existing main and the fittings required in accordance with 7-08.3(1) to make the connections to the existing mains including any pipe abandonment associated with the connections to existing mains. Connect to existing mains shall be completed in cooperation with the engineer in order to minimize disruption of service to the residents. All taps shall be a minimum of 36" away from the bell joint unless otherwise approved by the engineer.

Temporary blow-off assembly required for temporary or permanent release of air, chlorination or flushing purposes shall be provided by the Contractor as a part of the connection to existing main.

In the case of a live tap connection no payment shall be made for the bid item, "Connect to Existing Water Main". The Contractor shall include all costs associated with live taps under "\_\_\_\_\_ Inch Tapping Valve With Tapping Sleeve" pay items.

Payment for "Connect to Existing \_\_\_\_\_" will only be paid for the locations and quantities called out on the plans or as directed by the Engineer. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing main or the quantity of connecting pipes or other materials needed.

#### **7-08.3(8) Detectable Marking Tape** **(January 4, 2016 Lacey GSP)**

Add the following new section:

All pipeline installed under this contract will be identified by a continuous color coded tracer marker. For pressure lines it shall be buried 12 inches to 18 inches below finished grade, and for sewer lines it shall be buried 24 inches to 30 inches below finished grade. The marker shall be imprinted every 30 to 40 inches in permanent black ink indicating the type of line buried below and shall also have the word "Caution" prominently shown.

The tracer marker shall be plastic non-biodegradable and have a metallic core or backing which can be detected by a standard metal detector.

In addition to the detectable marking tape a U.S.E coated 12 gauge tracer wire shall be taped to all mains and service lines. The wire shall be brought up and tied to all valves and meter boxes. The tracer wire shall be looped up into all valve boxes per the plans. A low voltage grease-type splice kits, or better shall be used on all tracer wire connection points. After the wire nut is used to connect the wire together an overhand knot shall be tied just outside the connection to prevent it from coming apart. All service and mainline tracer wires shall be properly connected. A tracer wire magnesium anode shall be installed at all dead ends of the tracer / locate system. On long stretches of pipe anodes may be required at a minimum spacing of 1000'. The anode type shall be Copperhead Anode Part# ANO-14, 1.5# x 1.315"Dx18.5"L or approved equal. When connecting a new main or a new service to an existing main, the new tracer wire shall be connected to the existing tracer wire if available.

Special high strength locate wire may be required for directional drilling where the wire is allowed to be pulled in with the pipe or conduit. High strength wire shall be Neptco Trace-Safe 1800 lb. strength or approved equal and shall be connected with the wire manufacturer's connections.

Continuity or locate testing of the wire will be done by the City. The contractor shall give 72 hours notice for continuity testing by the City. The testing shall be conducted prior to paving or final restoration of landscape areas. The locating device will be connected to the tracer wire at any or all Gate Valves and Services and tracer wire shall transmit an acceptable signal strength as determined by the City for a minimum of 300 feet. Contractor will locate and repair any failed connections. The wire shall be furnished and installed by the Contractor.

Color coding of tape and wire shall be as follows:

- a) Water – Blue
- b) Sewer – Green
- c) Reclaimed – Purple
- d) Electrical conduits – Red
- e) Communication Conduits - Orange

Installation of the pipeline tracer marker and 12 gauge coated copper wire is considered incidental to the construction of the pipe and conduits and no other compensation will be allowed.

### **7-08.3(9) Concrete Thrust Blocking**

**(February 25, 2015 Lacey GSP)**

Add the following new section:

Install thrust blocking at bends, tees, dead ends, and crosses and as shown in the plans and as directed by the Engineer. Thrust Blocking shall be commercial concrete poured against undisturbed earth. An 11 mil plastic barrier shall be placed between all thrust blocks and fittings. The calculations for thrust blocking are as follows:

Thrust at fittings in pounds at 225 pounds per square inch of water pressure.

Pipe Diameter	90° Bend	45° Bend	22-1/2° Bend	11-1/4° Bend	Dead End or Tee
4"	3,600	2,000	1,000	500	2,600
6"	8,000	4,400	2,300	1,200	5,700
8"	14,300	7,700	4,000	2,000	10,100
10"	22,300	12,100	6,200	3,100	15,800
12"	32,000	17,400	8,900	4,500	22,700
14"	43,600	23,600	12,100	6,100	30,800
16"	57,000	30,800	15,700	7,900	40,300
18"	72,000	39,000	19,900	10,000	51,000

**SAFE SOIL BEARING LOADS:**

Soil	Pounds per Square Foot
Muck, Peat	0,000
Soft clay	1,000
Sand	2,000
Sand and gravel	3,000
Sand and gravel cemented with clay	4,000

Ecology blocks may be used for thrust blocking if approved by the Engineer.

Installation of thrust blocking is considered incidental to the construction of the pipe and no other compensation will be allowed.

#### **7-08.4 Measurement**

**(October 30, 2018 Lacey GSP)**

Supplement this section with the following:

“Imported Pipe Bedding” will be measured per ton.

“Bank Run Gravel for Trench Backfill” will be measured per ton.

“Utility Potholing”, will be measured per hour.

“Pipe Abandonment” will be measured per each, for each section called out on the Plans.

“Controlled Density Fill” will be measured by the cubic yard for the quantity of material placed.

“Connect to Existing Water Main” will be measured per each location called out in the plans.

#### **7-08.5 Payment**

**(October 30, 2018 Lacey GSP)**

Supplement this section with the following:

“Bank Run Gravel for Trench Backfill” per ton and “Imported Pipe Bedding” per ton.

The unit contract price per ton for "Bank Run Gravel for Trench Backfill" and “Imported Pipe Bedding” shall be full compensation for all labor, material and equipment to furnish, place and compact the backfill. Native material used for backfill shall be considered incidental to the pipe installation and no additional compensation shall be allowed.

Payment shall be based on actual amount of imported bedding or bank run gravel for trench backfill used. The Engineer reserves the right to adjust the bid proposal quantity as required.

There will be no additional compensation made for the removal and wasting of trench excavation that is unsuitable for backfill.

“Utility Potholing”, per hour shall be full compensation for all labor, material and equipment necessary to excavate, backfill, and restore the utility location(s) required by the Engineer and determine its vertical and horizontal location. Utility potholing will only be paid for work approved by the Engineer in advance.

“Pipe Abandonment”, per each.

The unit contract price per each for “Pipe Abandonment” shall be full pay for providing all labor, tools, equipment and materials necessary to abandon the specified piping including the plug material.

If no bid item for “Pipe Abandonment” is included, any work described in this section shall be incidental to the project.

“Controlled Density Fill”, per cubic yard.

If no bid item for “Controlled Density Fill” is included, any work described in this section shall be incidental to the project.

“Connect to Existing Water Main”, per each.

The unit contract price for "Connect to Existing Water Main" shall be full pay for providing all labor, tools, equipment, and materials necessary to connect to the existing main. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing main or the quantity of connecting pipes or other materials needed. If no such item exists all costs shall be incidental to the project and no additional compensation shall be allowed.

## **7-09 WATER MAINS**

### **7-09.1 Description**

**(January 3, 2017 Lacey GSP)**

Supplement this section with the following:

Various transition couplings, flanged coupling adapters, transition couplings with follower flanges and gaskets, and other miscellaneous couplings and fittings may be required for performance under this project.

It shall be the Contractor's responsibility to determine what specific couplings, adapters, and fittings that will be used to make connections shown on the plans. The Engineer has shown specific existing material types, and nominal sizes using the best information available. The Engineer has not determined the specific dimensions of existing materials. The Contractor shall submit a sketch showing configuration and materials of the proposed connection for review and approval.

Where vertical bends or pipe ends are required, the pipe and fittings shall be restrained on each side of the bend for a distance as recommended by the manufacturer.

### **7-09.2 Materials**

**(February 14, 2023 Lacey GSP)**

Supplement this section with the following:

All pipe for water mains shall have flexible gasket joints and shall comply with one of the following two types unless otherwise specified on the plans:

Ductile iron pipe shall conform to AWWA C 151 Standard Thickness Class 52 and have a cement mortar lining conforming to AWWA C 104. All push-on joints shall be made using rubber gaskets conforming to AWWA C 111. Push-on pipe joints shall be un-restrained, except where identified on the plans or when used in conjunction with vertical bends, unless directed otherwise by the engineer.

PVC pipe shall conform to AWWA C900 and to the latest revision of the following standards, PVC Compound ASTM D1784 Class 12454B, Gasket ASTM F477, Manufacturing ASTM D2241. Pipe for potable water use shall be certified NSF 6, have a Dimension Ratio of 14, and be blue or white in color. Push-on pipe joints shall be un-restrained, except where identified on the plans or when used in conjunction with vertical bends, unless directed otherwise by the engineer.

All pipe, 12 inches or larger in diameter shall be ductile iron pipe unless PVC is approved by the Engineer.

PE Pipe: All 2 inch and smaller diameter pipe shall be NSF Approved, PE3408 blue polyethylene pipe manufactured from virgin materials. Pipe shall meet the following specifications:

- ANSI/AWWA C901
- ASTM D1248, ASTM D 3350, ASTM D 2239, ASTM D 3035 and ASTM D 2737,
- Pressure Class 200, SDR - 7(Standard Inside Dimension Ratio-Pressure Rated),
- Cell classification 345464C,

Pipe shall be manufactured by Interstate Plastics, Philips Driscopipe, Eagle Pacific, Superlon Plastics, U.S. Poly or approved equal.

Pipe restraints shall not be used as a substitute for thrust blocking unless approved by the engineer.

Where restrained joint pipe is identified on the plans the pipe and all associated fittings must be restrained by an approved pipe restraint system within the areas noted. Where vertical bends are used a minimum of 2 pipe joints or 25 lineal feet either side of the fitting (90°, tee, etc.), or as directed by the engineer, shall be restrained using an approved pipe restraint system.

Joint restraints for push-on joint ductile iron pipe shall be “Field Lok” type gaskets rated to 350 p.s.i and tested in accordance with ANSI/AWWA C111/A21.11, TR Flex as furnished by U.S. Pipe , Piranha as furnished by Romac, or Gripper Gasket LLC.

Joint restraints for push-on joint PVC pipe shall be Certa-Lok by CertainTeed Corporation, Eagle Loc 900 by JM Eagle, Diamond Lok-21 by Diamond Plastics, or RieberLok gasket. Bell restraint devices may be used where approved by the engineer. Bell restraint devices for PVC pipe shall have a working pressure of at least 200 psi with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG series 2800, Uni-Flange Series 1390, Romac Industries, Inc., U.S. Gripper, or approved equal.

All fittings for ductile iron pipe or PVC pipe shall be ductile iron compact fittings conforming to AWWA C 153 or conforming to AWWA C 110 and C 111. All shall be cement mortar lined conforming to AWWA C 104. Plain end fittings shall be ductile iron if mechanical joint retainer glands are installed on the plain ends. All fittings shall be flanged or mechanical joint.

All mechanical joint fittings shall be equipped with a mechanical joint restraint device consisting of wedges or lugs integral to the retaining gland. The mechanical joint restraint device shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG, Ford Uni-Flange Series 1400, Romac Industries, Inc., U.S. Gripper, or approved equal.

All pipe shall be new and in good condition with no visible signs of UV damage, fading or other defects.

### **7-09.3(19)B Maintaining Service**

**(February 14, 2023 Lacey GSP)**

Supplement this section with the following:

Where existing water services must be interrupted, the Contractor shall notify the Engineer as to the date, time and duration of the interruption, a minimum of 72 hours (3 working days) prior to the interruption. The Contractor shall field verify pipe diameter and fittings prior to requesting a service interruption. The City will notify customers involved or affected by the water service interruption. The Contractor shall make every effort to schedule water main construction with a minimum interruption of water service. Water service can not be interrupted before 8:00 am. Existing pipe shall be cut and connection ready to be made by 11:00 am or the shutdown must be rescheduled unless otherwise approved by the Engineer.

### **7-09.3(24) Disinfection of Water Mains**

**(February 14, 2023 Lacey GSP)**

Modify this section with the following:

The Contractor shall provide extra safeguards to prevent contamination, rocks, sand or foreign matter from accumulating in the pipe.

Unless otherwise approved by the Engineer, the method for disinfecting water mains shall be by dry Calcium Hypochlorite conforming to ANSI/ AWWA B300 and NSF/ANSI 61 as defined in Section 7-09.3(24)D of the WSDOT Standard Specifications and AWWA C651-14 Sec. 4.1.3 and Sec. 4.3. If adhesives are used to secure chlorine tablets to the pipe interior, they must meet the requirements of NSF/ANSI 61 and AWWA C651-14 Sec. 4.3.3.

Pipe and fittings used in connections to existing mains shall be less than one pipe length (generally less than 20 ft), and spray disinfected, swabbed or immersed for disinfection as per AWWA C651-14 Sec. 4.10 and 4.11 (1% chlorine solution).

Bacteriological testing shall be done by the City per AWWA C651-14 Sec. 5.1 Option A or B. Option B may not be able to be used if the pressure in the line is too low to allow the sample tap to run continuously for 15 minutes without opening the system valve. Bacteriological testing must be scheduled with the Engineer at least 3 days in advance. Any samples needed on a Friday must be completed prior to 10:00 AM. Results are typically provided within four (4) working days but may take up to (7) working days. If the samples fail to produce acceptable results, the main shall be re-chlorinated by the continuous-feed or slug method until satisfactory results are obtained per AWWA C651-14.

The Contractor shall flush the new main. Flushing mains shall require the assistance of City utility personnel and shall be coordinated with the Engineer 3 working days in advance.

### **7-09.3(24)A Flushing**

**(December 31, 2014 Lacey GSP)**

Modify this section by deleting the first sentence of the fourth paragraph and replacing it with the following:

The Contractor shall be responsible for disposal of treated water flushed from mains and shall neutralize the wastewater for protection of aquatic life in the receiving water and their associated surface and ground water tributaries, before disposal into any natural drainage channel, i.e., receiving water, waters of the State, including wetlands.

#### **7-09.4 Measurement**

**(April 30, 2015 Lacey GSP)**

Supplement this section with the following:

#### **7-09.5 Payment**

**(October 30, 2018 Lacey GSP)**

Supplement this section with the following:

The pay item in quotes is revised to read, “\_\_\_\_\_ Inch Water Main.”

The unit contract price for “\_\_\_\_\_ Inch Water Main” per linear foot shall be full pay for furnishing all labor, materials, tools and equipment, necessary to install the water main, complete in-place, including but not limited to pipe, couplings, adaptors, crosses, tees, bends, reducers, caps, plugs, restrained joint fittings, bend markers, and other fittings not specifically identified on the plans. Further, all excavation, bedding, backfilling with native material, compacting, temporary patching, formed thrust blocking, testing, flushing, and disinfecting shall also be included in the unit contract price. Items not specifically identified on the plans but necessary to properly install the water main shall be considered incidental to the water main and no other compensation shall be allowed.

Temporary blow-off assembly required for temporary or permanent release of air, chlorination or flushing purposes shall be provided by the Contractor as a part of the new water main. The unit contract price for “\_\_ inch Water Main” shall be full pay for providing all labor, tools, equipment, and materials necessary to abandon the pipe including temporary blow-off assembly.

### **7-12 VALVES FOR WATER MAINS**

#### **7-12.2 Materials**

**(February 14, 2023 Lacey GSP)**

Supplement this section with the following:

All valves shall be non-rising stem, resilient wedge gate valves conforming to AWWA C515 unless otherwise specified and shall be American AVK, Clow, EJ Flowmaster, Kennedy, M & H, Mueller, Waterous Series 2500. The minimum cover over the valve, measured from the valve operator nut to finished grade, shall be 20 inches. Gate valves 14 inches and larger that are unable to provide 20 inches of cover over the valve shall be factory equipped with a bevel gear actuator for horizontal installation as directed by the engineer. The bevel gear actuator shall be rated for buried installations.

Butterfly valves shall meet all the requirements of AWWA C504 Class 150B and shall be Allis Chalmers, Kennedy, Linseal III, M&H, Mueller, Pratt Groundhog.

Valves shall be bolted to the tee and the cross with flanged ends. Joint materials for flanges shall be 1/8 inch thick one piece, cloth inserted rubber gaskets conforming to AWWA C107-78.

Bolts for all flanged and mechanical joints shall be high strength, low alloy steel bolts only, meeting the current provisions of American National Standard ANSI/AWWA C111/A 21.11 for rubber gasket joints for cast iron or ductile iron pipe and fittings.

Valve boxes shall be East Jordan Iron Works #248 or Olympic Foundry VB-950, 6-3/4 inch OD with recessed handle type iron cover marked "CITY OF LACEY WATER."

Tapping sleeves shall be stainless steel with ductile iron flange and shall be Romac "SST" or approved equal.

Two inch air and vacuum release valve shall be a two inch ARI D-040. Fiberglass enclosure shall be Vent Guard Model No. AVG1824, Beige in color, manufactured by Hot Box, Inc. (800) 736-0238. An insulation pouch shall be placed over the air release assembly. The 18" x 24" insulation pouch shall be beige in color with the opening on the 18" side, and manufactured by DeKorra Products LLC

Valve insertions shall be Romac InsertaValve or Hydra-Stop Insta-Valve Plus and be completed by an experienced installer.

### **7-12.3(3) Raise Valve Box to Grade** **(November 20, 2020 Lacey GSP)**

Add the following new section:

Where shown on the plans or where directed by the Engineer, existing valve boxes shall be raised to the grade as staked or otherwise designated by the Engineer. The Contractor shall supply and install new valve boxes and covers as part of raising valve boxes to grade. The finished installation shall conform to the detail shown in plans.

All new and existing valve boxes located in any unpaved area shall have a concrete pad poured or placed entirely around each valve box. The pad shall be a minimum of 36 inches by 36 inches for each valve box. The concrete shall be commercial concrete or better with a minimum thickness of 8 inches.

Maximum distance allowed from edge of iron ring or frame of appurtenance to outside edge of pavement restoration is 18 inches. Patches larger than this or clean misses (e.g. where the Contractor excavates in the new pavement mat and does not find the iron appurtenance to raise) shall result in a credit from the Contractor to the City of \$1000 for each occurrence. Further, the Contractor shall repair the pavement patch as directed by the Engineer.

See Section 5-04.3(26) Utility Access for additional requirements.

### **7-12.5 Payment** **(April 2, 2018 Lacey GSP)**

Supplement this section with the following:

"Raise Valve Box to Grade," per each.

" \_\_\_\_\_ Inch Gate Valve," per each.

The payment for the various items specified above shall be full pay for furnishing all labor, materials, tools, and equipment necessary to install the unit complete in place on the water main, including trenching, concrete pads and concrete or asphalt restoration of adjacent areas, disinfecting, testing, blocking of valve, valve box and marker post.



## **7-14 HYDRANTS**

### **7-14.2 Materials**

**(March 3, 2022 Lacey GSP)**

Modify this section with the following:

Fire hydrants shall be Waterous Pacer, Mueller Centurion, M & H Reliant Style 129S, Kennedy K-81, or EJIW 5CD250 conforming to AWWA C 502. The valve opening shall be 5 1/4-inch diameter. Hydrants shall be mechanical joint, 4-1/2 feet standard bury with two 2-1/2 inch outlets and one pumper port, and shall have a 1.25-inch pentagonal operating nut (counter clockwise opening). All hydrants shall be outfitted with a 4-1/2" NST by 5" Storz adapter with cap.

Some locations may require other than the 4-1/2 feet standard bury. Contractor shall be responsible for determining actual required bury and provide proper standpipe height.

Blow-off Hydrants shall be Eclipse MainGuard Model No. 78. Pipe and fittings for blow-off hydrant installation shall conform to the requirements of Section 7-15. The factory 2.5" cap shall be replaced with a plastic/nylon style cap with 2.5" NST thread.

### **7-14.3(1) Setting Hydrants**

**(December 31, 2014 Lacey GSP)**

Supplement this section with the following:

A 6 foot wide cleared area, centered along the pipe, shall extend from the edge of pavement to 3 foot past the new hydrant, not to exceed the right-of-way line. The clearing may include trimming of trees and shrubs to an overhead height of 10 feet as directed by the Engineer. Upon completion of fire hydrant installation, the cleared area shall be graded and restored as directed by the Engineer.

### **7-14.5 Payment**

**(February 14, 2023 Lacey GSP)**

Supplement this section with the following:

The unit contract price for all items in this section shall also include, but not be limited to, trench excavation and backfill, gravel backfill, fill and grading 3' around hydrant and between hydrant and edge of roadway, painting, extensions, fittings, ductile iron spool between the main and hydrant, Storz adapter, Megalug restraining joints, and blue hydrant marker.

## **7-15 SERVICE CONNECTIONS**

### **7-15.3(8) Sampling Station**

**(January 3, 2017 Lacey)**

Add the following new section:

The Contractor shall supply and install new sampling stations where shown on the plans or where directed by the Engineer. The finished installation shall conform to the detail shown in plans.

## **7-15.5 Payment**

**(October 16, 2016 Lacey)**

Supplement this section with the following:

“Sampling Station”, per each.

The unit contract price for “Sampling Station” per each shall be full compensation for all labor, material, and equipment to furnish and install the sampling station complete in place including, but not be limited to, service saddle, tapping the pipe, corporation stops, service lines, valve box, and all miscellaneous couplings, fittings, and adapters to install the sampling station and connect to the water main.

## **7-17 SANITARY SEWERS**

### **7-17.1 Description**

**(October 29, 2010 Lacey GSP)**

Supplement this section with the following:

Various transition couplings, flanged coupling adapters, transition couplings with follower flanges and gaskets, and other miscellaneous couplings and fittings may be required for performance under this project.

It shall be the Contractor's responsibility to determine what specific couplings, adapters, and fittings that will be used to make connections shown on the plans. The Engineer has shown specific existing material types, and nominal sizes using the best information available. The Engineer has not determined the specific dimensions of existing materials.

### **7-17.2 Materials**

**(November 20, 2020 Lacey GSP)**

Delete this section and replace with the following:

Gravity Sewer Pipe - Pipe used for gravity sewer shall meet the requirements of WSDOT Section 9-05.12(1) Solid Wall PVC Sanitary Sewer Pipe. All pipe shall be white or green in color.

PVC Pressure Pipe – All pipe less than 4 inches in diameter shall be Schedule 80 PVC, ASTM D1784. All pipe 4 through 12 inches in diameter, shall be PVC C900 DR 14, meeting the requirements of WSDOT Section 9-30.1. A combination of solvent weld and PVC threaded schedule 80 fittings may be required to properly plumb the pump discharge piping to and through the valve vault. All pipe shall be grey, green or white in color. No sewer pipe installed in this project shall be blue.

HDPE (High density Polyethylene Pipe) Pressure Pipe- All HDPE pipe shall be Hi density ASTM D 3350, SDR 11 4710 socket welded or butt fusion welded and be sized by inside pipe diameter (see table below). IPS HDPE pipe shall be used; however, in cases where the required inside diameter of the pipe cannot be obtained using IPS HDPE, ductile iron pipe size (DIPS HDPE) pipe may be required. All HDPE pipe used for sewer shall be green or black with a green stripe manufactured on the pipe.

Table: Typical Sizes And Dimensions For Iron Pipe Size (IPS) PE3408  
High Density Polyethylene (HDPE) Pipe

PRESSURE RATING	DR 11 (160 PSI)
-----------------	-----------------

NOMINAL SIZE	ACTUAL O.D.	MINIMUM WALL THICKNESS	AVERAGE I.D.	WEIGHT LB/LF
2"	2.375"	0.216"	1.917"	0.639
3"	3.500"	0.318"	2.825"	1.387
4"	4.500"	0.409"	3.633"	2.294
5"	5.375"	0.489"	4.339"	3.272
5"	5.563"	0.506"	4.491"	3.505
6"	6.625"	0.602"	5.348"	4.971
7"	7.125"	0.648"	5.752"	5.750
8"	8.625"	0.784"	6.963"	8.425
10"	10.750"	0.977"	8.678"	13.089
12"	12.750"	1.159"	10.239"	18.412
14"	14.000"	1.273"	11.302"	22.199
16"	16.00"	1.455"	12.916"	28.994
18"	18.00"	1.636"	14.531"	36.696
20"	20.00"	1.818"	16.145"	45.304
22"	22.00"	2.000"	17.760"	54.818
24"	24.00"	2.182"	19.375"	65.237
26"	26.00"	2.364"	20.989"	76.563
28"	28.00"	2.545"	22.604"	88.795
30"	30.00"	2.727"	24.218"	101.934

Note:

Average inside diameter calculated using nominal OD and minimum wall plus 4% for use in estimating fluid flows. Actual ID will vary.

Pipe Restraint - Where pipe is specified as restrained joint pipe 4 inches through 10 inches in diameter, use PVC C900/RJ Restrained Joint Pipe Certa-Lok by CertainTeed Corporation, Eagle Loc 900 by JM Eagle or Diamond Lok-21 by Diamond Plastics. The plastic pipe shall conform to the latest revision of the following specifications, PVC Compound ASTM D1784 Class 12454, Gasket ASTM F477, Manufacturing ASTM D2241. Pipe shall be certified NSF and meet requirements of Dimension Ratio 14.

Pipe Restraint - Where specified as restrained joint pipe larger than 10 inches in diameter, the pipe shall be restrained using bell joint restraint devices that have a working pressure of at least 200 psi with a minimum safety factor of 2:1 and shall be EBAA Iron, Inc., MEGALUG series 2800, Uni-Flange Series 1390, Romac Industries, Inc., U.S. Gripper, or approved equal.

Ductile Iron Pipe - All ductile iron pipe shall conform to ANSI/AWWA C151/A21.51. Thickness class 52 specifications. Ductile iron pipe for sewer shall be ordered as bare pipe without cement lining and without outside coating. The pipe shall be lined on the inside to a minimum of 35 mils thick with Protecto 401 or 15 mils thick with 3M ScotchKote 134 fusion bonded epoxy. The pipe shall be coated on the outside to a minimum of 20 mils thick with Ceramawrap Ceramic Epoxy or 15 mils thick with 3M ScotchKote 134 fusion bonded epoxy. Coatings shall be applied according to the manufacturers' requirements by a certified applicator of the product. Coatings shall not be applied to pipe, fittings or valves in the field by the contractor.

Ductile Iron Fittings for sewer mains - All ductile iron pipe fittings shall be compact ductile iron style and shall be ordered bare (without cement lining or outer coating) and then be coated with epoxy rated for sewer by a professional coating firm. Coatings applied by the fitting manufacturer shall be excepted pending approval of the coating material submitted. Coatings/linings shall be Protecto 401, Ceramawrap or 3M ScotchKote 134 per the Ductile iron pipe specifications shown above. Mechanical joint (MJ) fittings shall be installed with an approved mechanical joint restraint device. The mechanical joint restraint device shall have a working pressure of at least 250 psi with a minimum safety factor of 2:1 and

conform to ANSI A21.10 and AWWA C110. Products shall be EBAA Iron, Inc., MEGALUG Series 2000PV, Romac Industries, Inc., U.S. Gripper, or approved equal.

Eccentric Plug Valves for sewer mains – Valves 3” through 12” shall have a round full port opening (100% pipe area), comply with AWWA C517 specifications and be constructed of cast or ductile iron. Flanged valves shall be drilled to ANSIB16.1, Class 125 specifications and mechanical Joint valves shall comply with ANSI/AWWA C111/A21.11 specifications. Valves shall be eccentric quarter turn with resilient encapsulated plug, have 95% nickel seat, u-cup stem seal and permanently lubricated stainless steel bearings. Valves shall be 175psi working pressure. 3” and 4” valves shall be standard ¼ turn operation. Valves 6” and larger shall have a totally enclosed, sealed and permanently lubricated worm gear actuator with stainless shaft. Valves for buried service shall have a gear box and be designed for underground applications. Buried valves shall be fitted with standard 2” square hub operator. 3” and 4” valves installed in vaults shall be supplied with hand lever bar to attach to hub. Valves 6” and larger in vaults shall be supplied with hand wheel operator attached to gear box. Plug valves for sewer service shall be coated by the manufacturer on the inside and outside with the manufacturers epoxy coating rated for sewer. Valves shall conform to AWWA C509-80 and be Crispin 800 series, Pratt -Ballcentric, or Milliken - Millcentric.

PVC Ball Valves – 2” and smaller PVC ball valves shall be Schedule 80 PVC or Poly true union valves with red handle. Cepex, Spears, KBI or approved equal. Valves shall be threaded FIPT x FIPT Style.

Valves shall be bolted to tees and the crosses with flanged ends. Joint materials for flanges shall be 1/8 inch thick one piece, cloth inserted rubber gaskets conforming to AWWA C107-78, rated for sewer service. Bolts, nuts and hardware for all flanged and mechanical joints in the wetwell and valve vault shall be 316 stainless steel only, meeting the current provisions of American National Standard ANSI/AWWA C111/A 21.11 for rubber gasket joints for cast iron or ductile iron pipe and fittings.

Valve boxes shall be EJ Ironworks or Olympic Foundry VB-950, 6-3/4 inch OD with recessed handle type iron cover marked “CITY OF LACEY SEWER”.

All pipe shall be new and in good condition with no visible signs of UV damage, fading or other defects.

## **7-17.3(2) Cleaning and Testing**

### **7-17.3(2)A General**

**(March 3, 2022 Lacey GSP)**

The first sentence shall be deleted and replaced with the following:

All sewer force mains and appurtenances shall be tested in sections of convenient length under a hydrostatic pressure of not less than 175 psi for 15 minutes.

Supplement this section with the following:

All pipe installed shall be tested in accordance with WSDOT Section 7-09.3(23).

All sanitary sewer pipe, including laterals, shall be high-velocity cleaned, televised and approved prior to paving. Hydrant flushing lines is not an acceptable method of cleaning. If rocks or other debris are found in manholes, the Contractor shall re-clean the sewer pipe.

### **7-17.3(2)H Television Inspection**

**(March 3, 2022 Lacey GSP)**

Delete this section and replace with the following:

The television inspection shall be completed with a CCTV color camera recorded in standard DVD format. CCTV inspection crawler shall be equipped with a flow depth indicator, such as a 1-inch steel bar or ball, to measure the magnitude of pipe vertical fluctuation. If multiple television inspections of the same pipe are required, they shall be completed in the same direction each time.

Television inspection shall meet related Pipeline Assessment and Certification Program (PACP) codes developed by NASSCO, Inc. Television inspection of pipelines shall be performed by experienced personnel trained in identifying structural and operational defects, obstacles and service connections by closed circuit color television. Personnel shall be PACP-trained and certified field technicians. No sags or bellies in the pipe shall be greater than ½ inch in depth.

The Contractor shall supply one paper copy and one electronic copy of the pipe inspection form for each pipe reach televised. Two copies of electronic video files shall be provided in DVD format. The Contractor shall submit DVDs and written reports for review within three (3) working days after line televising. The written report must note any areas that are not in compliance with the plans and specifications. Acceptance of the line will be made after the television inspection video and report has been reviewed and approved by the Engineer. Allow the Engineer (5) working days to review the video and report before scheduling paving.

Acceptance of the line will be made after the television inspection DVD has been reviewed and approved by the Engineer.

The cost incurred in making all television inspections shall be included in the unit contract price per foot of pipe installed and no additional compensation shall be allowed.

**7-17.3(5) Lawn and Landscape Repair**  
**(September 23, 2013 Lacey GSP)**

Section 7-15.3(5) is added with the following:

The Contractor shall limit damage of existing lawn and landscaping during service and service line installation. All damage shall be repaired equal to or better than the existing condition as shown in the preconstruction video. All costs for restoration shall be included in the unit price per service.

**7-17.3(6) Tank Abandonment**  
**(March 20, 2015 Lacey)**

Add the following new section:

The Contractor shall abandon the individual septic tanks, where shown on the Plans or directed by the Engineer. For abandonment, all County and State requirements shall be met. All abandonments shall be done after all new utility mains and service connections are installed unless authorized by the Engineer. Abandonments shall include all excavation, pipe cutting and removal, fittings, concrete plugging, and backfilling. Some abandonments require specific fittings as indicated on the Plans. Any required pumping and filling material, all fittings required to complete the abandonment shall be included in the cost for the abandonment. Abandonments shall be completed in cooperation with the engineer in order to minimize disruption of utility service to the residents.

**7-17.3(7) Abandon Community Septic System and Drain Fields**  
**(March 20, 2015 Lacey GSP)**

Add the following new section:

The Contractor shall abandon the community septic system and associated drain fields where shown on the Plans or directed by the Engineer. For abandonment, all County and State requirements shall be met. All abandonments shall be done after all new utility mains and service connections are installed unless authorized by the Engineer. Abandonments shall include all excavation, pipe cutting and removal, fittings, concrete plugging, and backfilling. Some abandonments require specific fittings as indicated on the Plans. Any required pumping and filling material, all fittings required to complete the abandonment shall be included in the cost for the abandonment. Abandonments shall be completed in cooperation with the engineer in order to minimize disruption of utility service to the residents.

**7-17.3(8) Locate Tank**  
**(January 8, 2024 Lacey GSP)**

Add the following new section:

The Contractor shall locate all tanks prior to the installation of the sewer lateral on the new gravity sewer main where shown on the Plans or directed by the Engineer. Approximately 22 of the septic holding tank do not have risers nor cleanouts on the outside of the house and have been identified on the plans and in Appendix A. The Contractor shall utilize an approved locator and transmitter, or an Engineer approved locating device, to minimize the disturbance to the yard.

**7-17.4 Measurement**  
**(October 30, 2018 Lacey GSP)**

Section 7-17.4 is supplemented with the following:

“Side Sewer Stub – Gravity” shall be measured per each.

“Connect to Existing Sewer System” shall be measured per each location called out on the plans.

“Tank Abandonment” shall be measured per each.

“Abandon Community Septic System and Drain Fields” shall be measured per each location called out on the plans.

“Locate Tank” shall be measured per each location called out on the plans.

**7-17.5 Payment**  
**(\*\*\*\*\* Lacey)**

Section 7-17.5 is supplemented with the following:

" \_\_\_ Inch Diameter Sewer Pipe", per linear foot.

The unit contract price per linear foot for " \_\_\_ Inch Diameter Sewer Pipe", shall be full compensation for all labor, material, and equipment to furnish, place, assemble, and install sewer line, complete in place, including all wyes, tees, caps, plugs, clean outs, special fittings, joint materials, commercial concrete, bend markers, adjustment of inverts to manholes, dewatering, bypass pumping, cleaning, televising inspection and testing. Further, all excavation, hauling, disposal, compaction, temporary patching and other required earthwork shall be included.

"4 Inch Diameter Sewer Pipe", per linear foot.

The unit contract price per linear foot for "4 Inch Diameter Sewer Pipe", shall be full compensation for all labor, material, and equipment to furnish, place, assemble, and install the sewer lateral line from the side sewer stub to the connection point for each house, complete in place, including all wyes, tees, caps, plugs, clean outs, special fittings, joint materials, dewatering, bypass pumping, cleaning, televising inspection

and testing. Further, all excavation, hauling, disposal, compaction, temporary patching and other required earthwork shall be included.

“Side Sewer Stub – Gravity”, per each.

The unit contract price per each of the various items specified above shall be full pay for furnishing all labor, materials, tools, and equipment, necessary or incidental to furnishing and installing the unit complete in place on the sewer main, including trenching and temporary patching, but not be limited to all miscellaneous couplings, fittings, wyes, the 6” sewer lateral, the cleanout, as shown on the plans, and other items necessary for the unit to be installed complete in-place.

“Connect to Existing Sewer System”, per each.

The unit contract price per each for “Connect to Existing Sewer System” shall be full pay for furnishing all labor, tools, equipment, and materials required to connect to existing system in place, including but not be limited to concrete, concrete collars and sealants. Further, all excavation, haul, backfill, testing, accessories, and removal of manholes shall be included in the unit contract price. For purposes of payment, there will be no distinction made for the difficulty of connecting to the existing sewer system or the quantity of connecting pipes or other materials needed. Items not specifically identified on the plans but necessary to properly connect to system shall be considered incidental and no other compensation shall be allowed.

“Tank Abandonment,” per each.

The payment for “Tank Abandonment”, shall be full pay for furnishing all labor, tools, equipment, and materials necessary to complete the requirements of this section and abandon the specified individual septic tanks. Further, all excavation, haul, backfill, accessories, and removal of riser lids shall be included in the unit contract price. For purposes of payment, there will be no distinction made for the difficulty of tank abandonments. Items not specifically identified on the plans but necessary to properly abandon the tank shall be considered incidental and no other compensation shall be allowed.

“Abandon Community Septic System and Drain Fields”, per each.

The unit contract price per each for “Abandon Community Septic System and Drain Fields”, shall be full pay for providing all labor, tools, equipment and materials necessary to complete the requirements of this section and abandon the specified community septic system and associated piping.

“Locate Tank”, per each.

The unit contract price per each for “Locate Tank”, shall be full pay for providing all labor, tools, equipment and materials necessary to locate the septic holding tank and identify connection points.

All costs to furnish and install concrete pads shall be incidental to the unit contract price for each item and no other pay shall be allowed.

## **7-20 ABANDON EXISTING SEPTIC SYSTEM**

### **7-20.1 Description**

(January 15, 2020 Lacey GSP)

Add the following new section:

This work consists of abandoning the existing septic systems per the requirements of the contract plans and specifications.

### **7-20.2 Materials**

Concrete used to plug the existing pipes shall meet the requirements of WSDOT Std. Spec. 9-04.3.

Controlled Density Fill (CDF) shall meet the requirements of WSDOT Std. Spec. 2-09.3(1)E.

Gravel Backfill for Walls shall meet the requirements of WSDOT Std. Spec. 9-03.12(2).

Topsoil Type C shall meet the requirements of WSDOT Std. Spec. 9-14.1(3) and these Special Provisions.

Seeding and fertilizer shall meet WSDOT Std. Spec. and Special Provision 8-01.

Bark shall meet the requirements of WSDOT Std. Spec. 9-14.4(3).

### **7-20.3 Construction Requirements**

The Contractor shall obtain and comply with all Thurston County Department of Health requirements for abandoning the On-site Sewage System (OSS) according to the plans and these specifications. The Contractor will not be responsible for filling out any applications or paying any fees associated with the abandonment of the existing OSS.

Prior to abandoning any tanks the Contractor shall submit photos to the City of the areas surrounding the construction area that could possibly be disturbed due to construction activities. The photos shall be taken with a camera that is 8 megapixels or better and shall be of sufficient quality to show identification of plant species and existing conditions of adjacent structures, walkways, driveways, landscaping foundations and walls. Contractor shall take care to minimize disturbance of any plant material or landscaping when performing septic tank abandonment, including side sewer stub and connection. If any plant material or landscaping will be disturbed by construction operations, the Contractor shall coordinate with the Engineer for approval to remove landscaping as required. Restore lawn and landscaping per section 8-05.

The Contractor shall provide the homeowner/resident with a written notice a minimum of 5 days prior to construction activities. The Contractor shall provide a copy of the written notice concurrently to the City. The Contractor shall not begin any construction activities on private property unless authorized by the Engineer.

The existing septic tanks shall be abandoned per the plans and these specifications. The Contractor shall field verify the location of the septic tanks, pump chambers, piping, appurtenances and also verify pipe sizes and material types prior to ordering parts. Methods of locating the previously listed shall include potholing, locating equipment, dye testing etc. which is included in the work for abandoning the existing septic system. The septic tanks and any additional pumping chambers, if any, shall be pumped out by a Thurston County certified sewage system pumper listed at [www.co.thurston.wa.us/health/ehoss/cert\\_prof.html](http://www.co.thurston.wa.us/health/ehoss/cert_prof.html). The Contractor shall obtain a completed slip certifying the pumping and provide to Engineer. The existing septic tank shall not be used between the time of pumping and abandonment.

The Contractor shall be responsible for properly disposing effluent laden soils, drainfield rock, contaminated soils, drain field pipe, and other septic system components. All disposal shall be in accordance with all regulatory requirements.

Existing sewer pipes shall be plugged on the inlet and outlet ends of the existing septic tanks for a distance of three pipe diameters with concrete. Care shall be used in placing the concrete in the pipe to see that the opening of the pipe is completely filled and thoroughly plugged. If any drain field pipe is removed in order to construct the sewer service connection it shall be plugged per the same requirements.



Plugging the existing pipes is considered part of the abandoning the existing septic system and shall not be measured or paid separately.

Any excavation resulting from tank abandonment shall be backfilled with native or gravel borrow and compacted to 90% maximum density. The Contractor shall be responsible for determining method of compaction. Four inches of Topsoil Type C shall be placed prior to placing four inches of landscaping material, replacing sod or hydro seeding.

The septic tank abandonment method shall be as shown on the plans. Any pumping chambers in addition to the septic tank(s) shall be abandoned in place unless approved by the Engineer. Any tanks not abandoned by removal shall be perforated or cracked in the bottom to facilitate drainage.

#### **Septic Tank Abandonment in Place**

Concrete lids shall be removed or crushed in and covered with material from the proposed tank excavation or gravel backfill for walls. Concrete pieces resulting from crushing the lids in shall not be larger than four inches diameter measured in any direction. Any portion of the demolished tank shall be at least 18" below finished grade.

#### **7-20.4 Measurement**

"Tank Abandonment" will be measured per each.

#### **7-20.5 Payment**

Payment will be made in accordance with Section 1-04.1 for the following Bid Item:

"Tank Abandonment", per each.

Any additional pumping chambers and storage tanks are included in the existing septic system shall be abandoned per these specifications and shall be considered incidental to "Tank Abandonment".

The unit contract price "Tank Abandonment", per each shall be full pay for labor, materials, supplies, equipment, tools and all other items required to completely abandon the existing on-site sewage system for each individual residence per the plans and these specifications and includes but is not limited to:

1. Complying with all Thurston County Department of Health requirements.
2. Field verifying the exact location of the existing septic tanks, pumping chambers, piping, appurtenances and pipe size and material types.
3. Document (photograph) existing site conditions.
4. Removing any shrubs or vegetation, landscaping, decking, concrete pavement, or block walls required to gain access to the septic system.
5. Removing liquids and solids from the existing septic tanks and any additional pumping chambers.
6. Plugging and abandoning existing septic system conveyance piping in accordance with these plans and specifications.
7. Removing and disposal of tank(s) as applicable, appurtenances that include but not limited to the risers, lids, access hatches, pumps, rails, electrical equipment and pump control components, disconnect

electrical power, abandon conduit, remove and dispose of conductors inside conduits, repair/restore interior/exterior wall surfaces.

8. Stockpiling/disposing of material from tank and trench excavations including haul.
9. Abandoning existing power supply.
10. Any excavation required for tank and any additional pumping chamber abandonment.
11. Removing and disposing of the tanks, additional pumping chambers, piping, mound systems and other related components if called out to do so in plans.
12. Crushing the septic tank lids and portions of tanks a minimum of 6 inches below the outlet invert elevation for tanks to be abandoned in place with the new sewer drain line flowing through the existing tank location.
13. Using materials from proposed tanks excavation or gravel backfill for walls if native can't meet compaction requirements to fill voids within tank.
14. Placing four inches of topsoil and grade to match surrounding grades.
15. Restoration requirements (i.e, lawn, topsoil, other landscaping or other deck/patio or siding repair).

## **8-01 EROSION CONTROL AND WATER POLLUTION CONTROL**

### **8-01.3 Construction Requirements**

#### **8-01.3(1) General**

[\(May 28, 2020 WSDOT GSP\)](#)

Section 8-01.3(1) is supplemented with the following:

The Contractor shall identify the ESC Lead at the preconstruction discussions and in the TESC Plan. The ESC Lead shall have, for the life of the Contract, a current Certificate of Training in Construction Site Erosion and Sediment Control from a course approved by the Washington State Department of Ecology. The ESC Lead must be onsite or on call at all times throughout construction. The ESC Lead shall be listed on the Emergency Contact List required under Section 1-05.13(1).

The ESC Lead shall implement the TESC Plan. Implementation shall include, but is not limited to:

1. Installing, adaptively managing, and maintaining temporary erosion and sediment control BMPs to assure continued performance of their intended function. Damaged or inadequate BMPs shall be corrected immediately.
2. Updating the TESC Plan to reflect current field conditions.
3. Inspecting and reporting on all areas disturbed by construction activities, all on-site erosion and sediment control BMPs, and all storm water discharge points every calendar week and within 24 hours of runoff events in which storm water discharges from the site or as directed by the Engineer.
4. Submit to the Engineer no later than the end of the next working day following the inspection a TESC Inspection Report that includes:

- a. When, where, and how BMPs were installed, maintained, modified, and removed.
- b. Observations of BMP effectiveness and proper placement.
- c. Recommendations for improving future BMP performance with upgraded or replacement BMPs when inspections reveal TESC BMP deficiencies.
- d. Identify for each discharge point location whether there is compliance with state water quality standards in WAC 173-201A for turbidity and pH.

Inspection of temporarily stabilized, or inactive sites may be reduced to once every calendar month if allowed by the Engineer.

#### **8-01.3(9)A2 Silt Fence**

[\(October 16, 2014 Lacey GSP\)](#)

Supplement this section with the following:

If the Engineer determines that site conditions dictate additional silt fence throughout the duration of the project, the Contractor shall immediately install additional silt fence as directed by the Engineer.

#### **8-01.3(9)D Inlet Protection**

[\(November 20, 2020 Lacey GSP\)](#)

Delete the first paragraph and replace with the following:

All catch basins and inlets within 500 ft of the project limits, downstream or affected by construction activities shall have inlet protection and as required by the Engineer. Inlet protection devices shall be installed prior to beginning clearing, grubbing, or earthwork activities.

#### **8-01.4 Measurement**

[\(April 30, 2015 Lacey GSP\)](#)

Supplement this section with the following:

All items required for erosion control shall be included in the lump sum bid item “Erosion/Water Pollution Control” unless a specific bid item is included in the proposal.

Modify this section with the following:

No specific unit of measure shall apply to the lump sum item “ESC Lead”

#### **8-01.5 Payment**

[\(November 20, 2020 Lacey GSP\)](#)

Modify this section with the following:

The lump sum contract price for “ESC Lead” shall be full compensation for all labor, material, tools, and equipment necessary to meet the requirements of Section 8-01.3(1)B to include conduct site inspections, stormwater sampling, report preparation, report submittal, lab work, and personnel certification.

Delete “Erosion/Water Pollution Control”, by force account and add the following bid item:

“Erosion/Water Pollution Control”, lump sum.

The lump sum contract price for “Erosion/Water Pollution Control” shall be full compensation for all labor, material, and equipment necessary to implement, install, maintain and remove all erosion and water pollution control items including removal and disposal of sediment, stabilization and rehabilitation of soil disturbed by these activities, and any additional Work deemed necessary by the Engineer to control erosion and water pollution and all Work required for compliance with the Construction Stormwater General Permit (CSWGP) including annual permit fees. The requirements for the ESC Lead shall also be included in this lump sum bid item if no bid item is included in the proposal. The Contractor shall bear full responsibility for erosion/water pollution control in all sources of material, disposal sites, and haul roads.

## **8-02 ROADSIDE RESTORATION**

### **8-02.3(4) Topsoil**

[\(November 20, 2020 Lacey GSP\)](#)

Supplement this section with the following:

The Contractor shall thoroughly scarify the subgrade by tilling, disking or harrowing after the subgrade elevation has been established as indicated on the Plans. If the construction includes a roundabout, the Contractor shall scarify the existing subgrade a minimum of 24 inches deep in the center island of the roundabout to break up the base material of the existing road prior to installation of the topsoil.

Topsoil shall be placed at 12” depth in planter strips, and 18” depth in medians, and a minimum of 42” inches below the top of curb in the roundabout island unless otherwise shown in the Plans.

Final grading shall include raking, floating, dragging, and rolling to remove all surface irregularities and to provide a firm, smooth surface with positive drainage. Imported topsoil shall not be placed more than 3 days prior to permanent seeding.

### **8-02.3(9) Seeding, Fertilizing and Mulching**

[\(November 20, 2020 Lacey GSP\)](#)

Supplement this section with the following:

The Contractor shall provide water or irrigation to all seeded areas as often as conditions dictate depending on weather and soil conditions. Water will be provided as described in Section 2-07.

Seed shall be broadcast with approved hydraulic seeding equipment, in combination with wood cellulose fiber mulch, soil stabilizer and fertilizer distributed uniformly over designated areas. Half of seed shall be sown with sower moving in one direction, the other half with sower moving at right angles to first sowing. Hydroseeding operator shall remove all seed mulch in its entirety from adjoining paving, structures and plants

Fertilizer shall be applied over the surface of plant basin. Install fertilizer tablets as specified.

All trees shall have an application of beneficial mycorrhizal fungi applied at time of planting in accordance with the manufacturer’s recommendations.

### **8-02.3(9)A Dates For Application of Seed**

[\(November 20, 2020 Lacey GSP\)](#)

Delete the second paragraph of this section and replace with the following:

In areas receiving automatic irrigation, seeding may occur between May 15 and September 1. Actual planting shall be performed only when weather and soil conditions are suitable and in accordance with locally accepted practice and/or approved by the Engineer.

#### **8-02.4 Measurement**

**(April 4, 2016 Lacey GSP)**

Supplement this section with the following:

Topsoil, compost and mulch will be measured by the cubic yard.

#### **8-02.5 Payment**

**(October 16, 2016 Lacey GSP)**

This section with the following:

The following bid items shall be full pay for furnishing all labor, materials, tools and equipment, necessary to scarify the subgrade, install, rake, remove debris such as rocks and organic material and shape the material as shown in the plans:

“Topsoil Type A”, per cubic yard,

“Bark or Wood Chip Mulch” per cubic yard.

### **8-05 LAWN AND LANDSCAPE RESTORATION**

**(October 16, 2014 Lacey GSP)**

Add the following new section:

#### **8-05.1 Description**

The Contractor shall take every precaution to preserve and protect existing lawn and landscape areas. Only those landscaped areas necessary for construction shall be disturbed. All lawn areas and landscaping damaged or removed shall be repaired as directed by the Engineer. Lawn areas damaged or removed shall be restored with sod as directed by the Engineer.

#### **8-05.3 Construction Requirements**

The Contractor shall repair any vegetation, fencing, culverts, ditch sections, or any other objects or structures that are not covered by a specific bid item. Restoration shall return anything damaged by construction to their original condition or to a condition superior to the original condition. The Contractor shall be responsible to evaluate the site prior to bidding this project to determine the areas to be affected by the particular construction method or machinery proposed to be used.

#### **8-05.4 Measurement**

No unit of measure shall apply to the lump sum price for Lawn and Landscape Restoration.

#### **8-05.5 Payment**

“Lawn and Landscape Restoration”, lump sum.

The lump sum contract price for “Lawn and Landscape Restoration” shall be full pay for all labor, materials, and equipment to restore the project site to condition equal to, or superior to the original condition.

If no bid item for “Lawn and Landscape Restoration” is included, any work described in this section shall be incidental to the project.

## **8-13 MONUMENT CASES**

### **8-13.3 Construction Requirements**

**(October 16, 2009 Lacey GSP)**

Supplement this section with the following:

The concrete shall be placed on firm undisturbed earth and unyielding foundation. The monument shall be constructed following the completion of all asphalt paving. All monuments shall be installed as shown in the Plans and as staked by the Engineer. Case and cover shall be supplied by the Contractor.

The Contractor shall request monument caps 5 working days in advance of monument installation work. The Engineer will punch the bronze plug marker upon completion of the installation. The Contractor shall notify the Engineer 72 hours prior to installation, so the Engineer can aid in the placement.

#### **8-13.3(1) Surface Monument**

**(October 29, 2010 Lacey GSP)**

Add the following new section:

The Contractor shall construct and install cast-in-place surface monuments as shown in the Plans and as staked by the Engineer. The Contractor shall request monument caps 5 working days in advance of monument installation work.

The concrete shall be placed on undisturbed earth, or firm and unyielding foundation. The monument shall be constructed following the completion of all asphalt paving. The Engineer will punch the bronze plug marker upon completion of the installation. The Contractor shall notify the Engineer 72 hours prior to installation, so the Engineer can aid in the placement of the marker cap.

#### **8-13.4 Measurement**

**(October 29, 2010 Lacey GSP)**

Supplement this section with the following:

Surface monuments shall be measured by the unit for each surface monument furnished and set.

#### **8-13.5 Payment**

**(October 29, 2010 Lacey GSP)**

Modify this section with the following:

“Surface Monument”, per each.

“Monument Case and Cover”, per each.

The unit contract price per each shall be full compensation for all labor, equipment, tools, and materials required to complete the work as specified.

## **8-14 CEMENT CONCRETE SIDEWALKS**

### **8-14.1 Description**

[\(March 31, 2015 Lacey GSP\)](#)

Supplement this section with the following:

Where applicable in this section “concrete sidewalks” shall read “concrete sidewalks and driveways” unless a bid item is provided. Depth shall be as shown in the Plans. The minimum driveway depth shall be 6 inches. The Contractor shall match color, texture, and material of existing sidewalks and driveways.

All ADA requirements will be strictly enforced including ramps and slopes as shown in the plans. Sidewalk and Bus Pads shall not exceed 2% cross slope.

### **8-14.4 Measurement**

[\(April 2, 2018 Lacey GSP\)](#)

Supplement this section with the following:

Cement concrete sidewalks shall be measured by the square yard of finished surface outside of the ramp pay limits and will not include the surface area of the curb ramps (i.e. the sidewalk quantities indicated on the Plans are for informational purposes only and include the ramp area). Cement Concrete sidewalks shall include cement concrete bike ramps, and bus pads.

### **8-14.5 Payment**

[\(April 2, 2018 Lacey GSP\)](#)

Supplement this section with the following:

The unit contract price for “Cement Conc. Sidewalk” per square yard shall be full pay for furnishing all materials, equipment, and labor to construct the sidewalk, and bus pads complete in-place, to include forms, and concrete. Further, the Contractor shall make all excavations including haul and disposal, regardless of depth required, for constructing the sidewalk to the lines and grades shown, and shall include all costs associated with maintaining pedestrian access through the construction area with crushed surfacing top course or other material as approved by the Engineer.

## **8-18 MAILBOX SUPPORT**

### **8-18.3 Construction Requirements**

[\(October 16, 2009 Lacey GSP\)](#)

Supplement this section with the following:

It shall be the Contractor’s responsibility to coordinate relocation with the local Postmaster and ensure that the mailboxes are restored to a condition equal to or better than the existing conditions prior to construction. The Contractor shall ensure that mail service is not interrupted during construction.

### **8-18.4 Measurement**

[\(January 4, 2016 Lacey GSP\)](#)

Delete this section.

## **8-18.5 Payment**

**(January 4, 2016 Lacey GSP)**

Delete this section and replace with following:

All costs in connection with temporary or permanent relocation of mailboxes shall be included in the contract price per lump sum for “Lawn and Landscape Restoration”, and no additional compensation shall be allowed.

## **8-22 PAVEMENT MARKING**

### **8-22.2 Material**

**(October 16, 2016 Lacey GSP)**

Modify this section with the following:

Material for all plastic lines shall be Type A – Liquid hot applied thermoplastic at 120 mil thickness.

Material used for all plastic stop lines, plastic yield line, plastic entry line, plastic crosswalk lines, circulating lane line, plastic traffic arrows, plastic traffic letters, plastic legends, plastic symbols, and all plastic lines within the circulating lanes of the roundabout shall be Type B – Pre-formed fused thermoplastic at 120 mil thickness.

### **8-22.3 Construction Requirements**

**(February 14, 2023 Lacey GSP)**

Supplement this section with the following:

Stop Line shall be a solid white line 24 inches wide or as shown in the plans.

Before preformed thermoplastic is placed, test the pavement to determine if moisture is present using a propane fueled heat gun. The moisture test must be observed by the Engineer before work begins. If moisture is present use a propane fueled heat gun to remove the moisture by passing heat over the area continuously. If the area is able to be dried and no moisture remains proceed with the application. If the area is unable to be dried, do not apply the material at that time. Any material installed that does not comply with this specification will be considered defective and no payment will be made.

## **8-50 MISCELLANEOUS**

Add the following new sections:

### **8-50.2 PROJECT CLOSEOUT**

**(April 2, 2018 Lacey GSP)**

#### **Description**

This work shall consist of completing all miscellaneous items of work in accordance with the Plans and these Specifications that are required to achieve Completion and Final Acceptance, as identified by the



Engineer and the Contracting Agency. This work may include but is not limited to punch list items, record drawings, O&M Manuals, training, material acceptance documents, copies of the approved “Affidavit of Prevailing Wages Paid” for the Contractor and all Subcontractors, and any other work required in these Plans and Specifications that has not been completed.

## Measurement

No unit of measurement shall apply to the lump sum price for “Project Closeout”.

## Payment

“Project Closeout”, lump sum.

The unit contract price per lump sum for “Project Closeout” includes all compensation for all costs of completing the miscellaneous items of work identified by the Contracting Agency prior to final acceptance of the Project. A fixed lump sum price has been included in the Proposal for this work. Any additional costs anticipated or incurred by the Contractor for the work shall be included in the various lump sum and unit price bid items as found in the Proposal. Neither partial payment, nor additional compensation shall be allowed

## 9-03 AGGREGATES

Add the following new Section:

### 9-03.16 Imported Pipe Bedding

(April 30, 2015 Lacey)

Bedding material for pressure mains and services shall be clean sand/gravel mixture free from organic matter and conforming to the following gradation:

Sieve Size	Percent Passing
3/4" square	100
3/8" square	70-100
U.S. No. 4	55-100
U.S. No. 10	35-95
U.S. No. 20	20-80
U.S. No. 40	10-55
U.S. No. 100	0-10
U.S. No. 200	0-3

Bedding material for gravity mains and stubs/or laterals shall be clean sand/gravel mixture free from organic matter and conforming to the following gradation:

Sieve Size	Percent Passing
3/8" square	85-100
U.S. No. 4	10-30
U.S. No. 8	0-10
U.S. No. 16	0-5

All percentages are by weight

### 9-03.21 Recycled Materials

(April 30, 2015 Lacey)

Section 9-03.21 is supplemented with the following:

Recycled materials will not be used unless approved by the Engineer.

## **9-14 EROSION CONTROL AND ROADSIDE PLANTING**

### **9-14.2(1) Topsoil Type A** **(March 3, 2022 Lacey GSP)**

Supplement this section with the following:

Topsoil Type A shall be composed of a three way winter mix consisting of 2 parts soil, 2 parts compost, 3 parts sand.

Soil shall be classified as gravelly sand, well-graded sand, poorly graded sand, or silty sand.

Compost shall be a weed free well decomposed, humus-like material derived from the decomposition of grass clippings, leaves, branches, wood, and other organic materials. Compost shall be produced at a permitted solid waste composting facility. Composts containing shavings, cedar sawdust, or straw will not be permitted.

Sand shall consist of 100 percent passing the 3/8 inch sieve, minimum 95 percent passing the #4 sieve, and maximum of 5 percent passing the #100 sieve.

Topsoil shall meet the following requirements:

Screen Size (approximate particle size)	5/8" maximum
Maturity measure (C:N ratio)	30:1
Total Nitrogen	0.5% minimum
PH range	5.5-8.0
Foreign matter by dry weight	1% maximum

The Contractor shall provide a sample of the topsoil and a laboratory analysis with recommendations from the laboratory for desired additives for the Engineers approval. The Contractor shall incorporate any additives recommended by the laboratory.

### **9-14.3 Seed** **(November 20, 2020 Lacey)**

Supplement this section with the following:

There shall be several types of mixes used on this project. The list of approved seed varieties are specifically identified list below. They shall be applied at the given rates. Source identified seed shall be fourth generation or earlier. Non-Source Identified seed shall meet or exceed Washington State Department of Agriculture Certified Seed Standards. Seeds shall be certified "Weed Free", indicating there are no noxious or nuisance weeds in the seed.

Lawn Mix - shall be applied at 200 pounds per acre and the maximum weed seed shall be no more than 0.5%. Grass seed of the following composition, proportion, and quality shall be applied as follows:

Kind and Variety of Seed	Percent By Weight	Minimum Pure Seed	Minimum Germination
Equal Mix 3-Perennial Ryegrasses	60%	98%	90%
One Chewing Fine Fescue	20%	98%	90%
One Creeping Red Fescue	20%	98%	90%

Approved Seed Type:

**Perennial Ryegrasses**

Fiesta 4	Manhattan 5	Grand Slam GLD	Karma
SR 4650	Karma	Banfield	Sideways
Thrive	Wicked	Pavilion	Dasher 3
Tetradark			

**Creeping Red Fescue**

Salsa	Cindy	Jasper	Salem
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**Chewing Fescue**

Tiffany	Shadow II	Treazure E	Longfellow
Weekend	Tamara	Enjoy	Victory

E  
PREVAILING  
WAGES

## **PREVAILING WAGE RATES**

The following wage rates are in effect for this project.

**State of Washington  
Department of Labor and Industries  
Washington State Prevailing Wage Rates For Public Works Contracts**

**Thurston County Rates For All Trades**

**Effective: March 6, 2024 including any correction notices issued by Labor and Industries prior to bid.**

Wage Rates and the Benefit Code Key may be found at:  
<https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx>

Supplemental to State Wage Rates may be found at:  
<http://www.wsdot.wa.gov/Design/ProjectDev/WageRates/default.htm>

A copy is also available for viewing at the City of Lacey Public Works Engineering office located at 420 College St SE, Lacey, WA 98503. If requested, a hard copy will be mailed to you.

# APPENDIX A

## PROPOSED CONNECTIONS AND SEPTIC AS-BUILTS

### Part 1 - Phase 1 Lots 01 - 17

#### **General Notes:**

1. Locations and routes are diagrammatic and relative to the photo taken. Actual locations shall be located in the field with the Engineer. All efforts shall be taken to avoid mature landscaping, irrigation, electrical and other improvements to avoid costly restoration.



**General Notes:**

- 1. Locations and routes are diagrammatic and relative to the photo taken. Actual locations shall be located in the field with the Engineer. All efforts shall be taken to avoid mature landscaping, irrigation, electrical and other improvements to avoid costly restoration.





OWNER DONAHUE PARCEL # 8010-00-001 SITE # 3944

ADDRESS TOLMIE EST TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 9-1-80 SEWAGE CONTRACTOR Donahue & Addox

SEPTIC TANK SIZE 1250 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

LOT 1

100'

# THURSTON COUNTY HEALTH DEPARTMENT

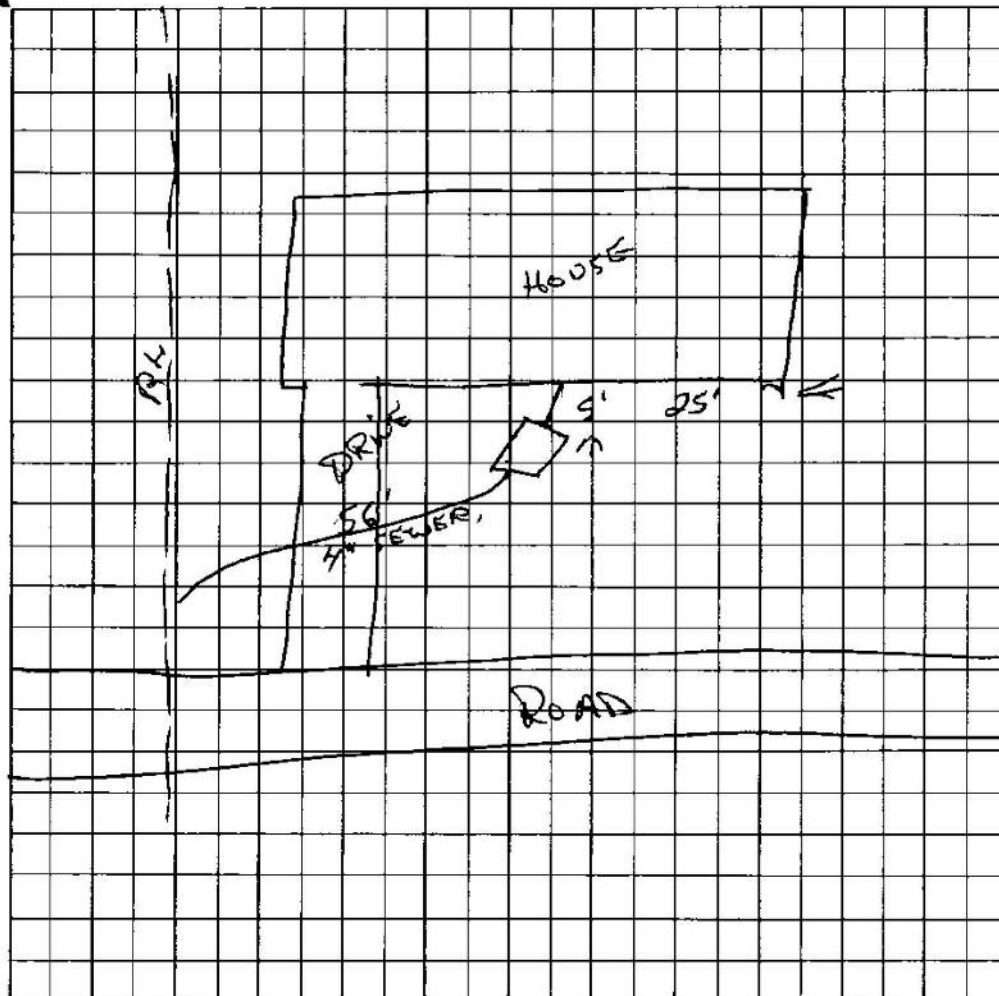
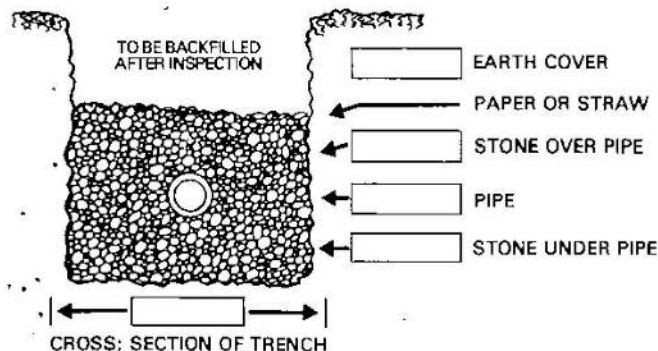
2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

## FINAL INSPECTION RECORD

THIS RECORD IS NOT A GUARANTEE OF PERFORMANCE. THE HEALTH DEPARTMENT RECOMMENDS THE SEPTIC TANK ITSELF SHOULD BE PUMPED AND INSPECTED EVERY THREE TO FIVE YEARS, DEPENDING ON HOW POOR THE DRAINAGE IN THE AREA IS. REDUCTION IN HOUSE WATER USE WILL EXTEND THE DRAINFIELD LIFE.

INDICATE THE FOLLOWING INFORMATION, IF KNOWN, ON THE DRAWING:

1. RESIDENCE LOCATION AND DIMENSIONS.
  2. PAVED SURFACES (I.E., PATIOS, DRIVEWAYS, ETC.)
  3. WELLS OR SURFACE WATER SOURCES.
  4. DIRECTIONS OF DRAINAGE.
  5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
TANK LOCATION — FROM HOUSE  
FROM HOUSE CORNER  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
  6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
  7. LABEL ALL SETBACKS, I.E. FROM WATER, PROPERTY LINES, COUNTRY ROADS, ETC.
  8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
  9. USE ARROWS TO SHOW DIRECTION OF SLOPE.
- ONE SQUARE EQUALS 10 FEET



LOT 1 - 3529 EAGLE DR NE





EX RISER LID

PROP  
CO

LOT 2 – 3515 EAGLE DR NE









PROP  
CO

EX  
CO

LOT 3 – 3501 EAGLE DR NE



OWNER Doradue Court PARCEL: 80120000300 SITE: 3945

ADDRESS Tomie Lot 3 TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE \_\_\_\_\_ SEWAGE CONTRACTOR Johnson & Maddux

SEPTIC TANK SIZE \_\_\_\_\_ CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT. \_\_\_\_\_

2925  
**THURSTON COUNTY HEALTH DEPARTMENT**

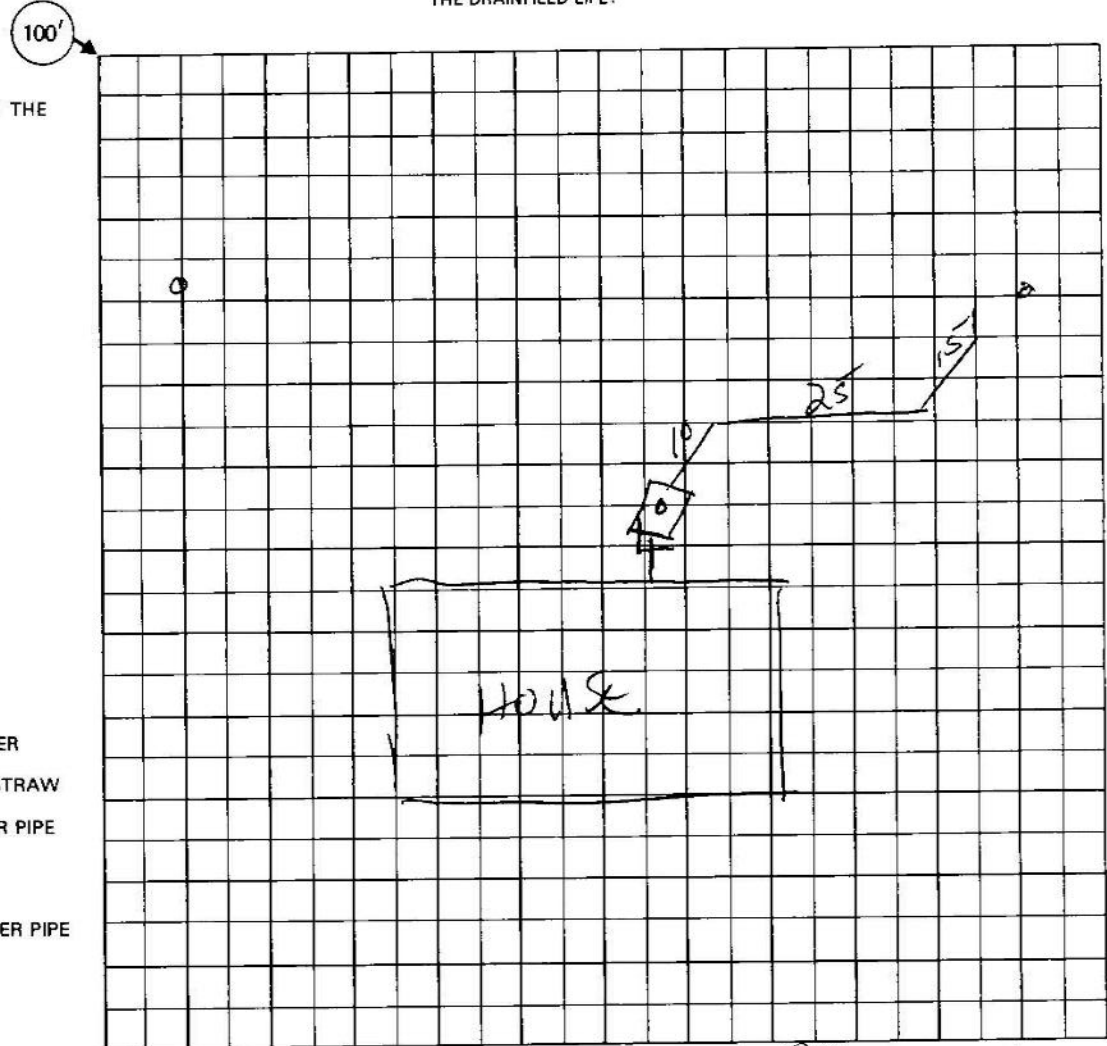
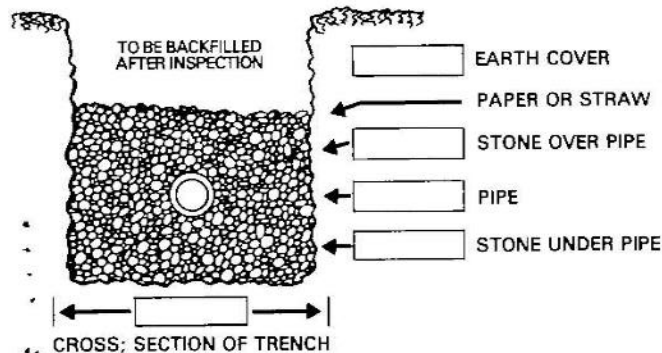
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FROM HOUSE CORNER  
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\* LOCATION & LENGTH OF ALL TIGHT LINES
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9. USE ARROWS TO SHOW DIRECTION OF SLOPE.  
ONE SQUARE EQUALS 10 FEET



LOT 3 - 3501 EAGLE DR NE



**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 4 – 3445 EAGLE DR NE**



OWNER Dowdell PARCEL # 8012-00-004 SITE # 2724

ADDRESS Lot 4 Tolmie TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 3-21-80 SEWAGE CONTRACTOR Johnson + Madsen

SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK ✓ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

JACK 2592  
**THURSTON COUNTY HEALTH DEPARTMENT**  
2000 LAKERIDGE DR. S.W.  
OLYMPIA WA 98502  
PHONE 753-8073

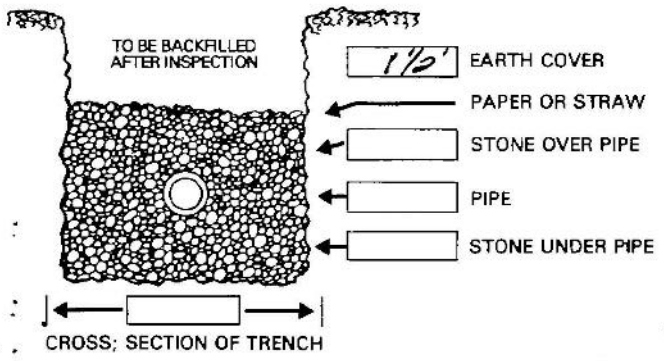
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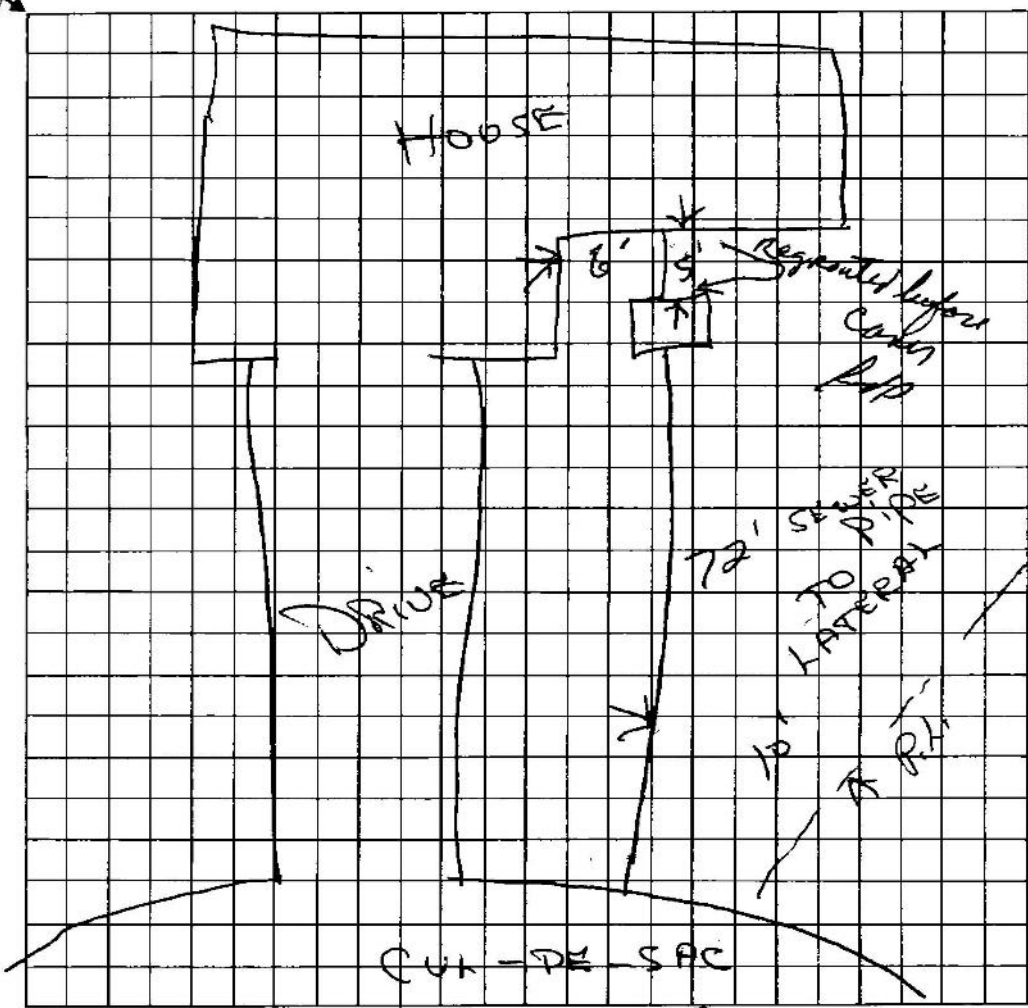
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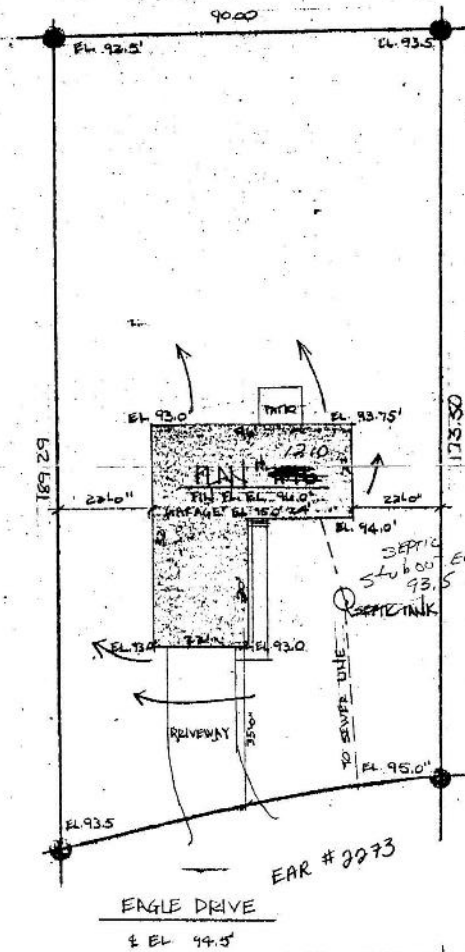
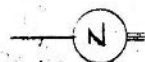
ONE SQUARE EQUALS 10 FEET



100'



LOT 4 - 3445 EAGLE DR NE



EAR #2273

EAGLE DRIVE

± EL 94.5'

PLOT PLAN LOT #4  
TOLMIE PARK  
DONOHUE CONST.

SCALE 1"=20'-0"

SEWER INTRIM SYSTEM

LOT 4 – 3445 EAGLE DR NE





PROP  
CO

EX  
CO

LOT 5 – 3433 EAGLE DR NE



OWNER DOLANUE PARCEL # \_\_\_\_\_ SITE # 3946

ADDRESS DOLANUE ESTATES TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 9-1-80 SEWAGE CONTRACTOR JOHN F. MADDOX

SEPTIC TANK SIZE 1250 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

LOT 5

100'

THURSTON COUNTY HEALTH DEPARTMENT <sup>3205</sup>

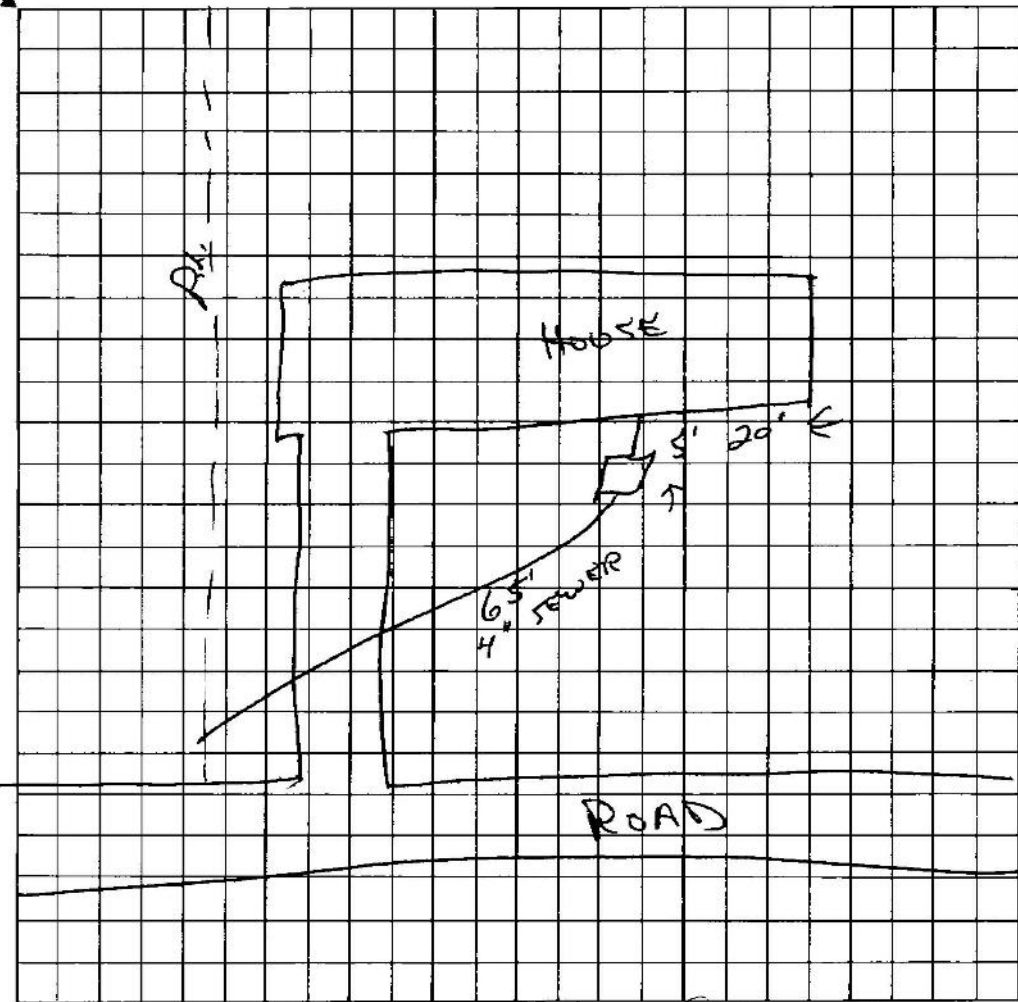
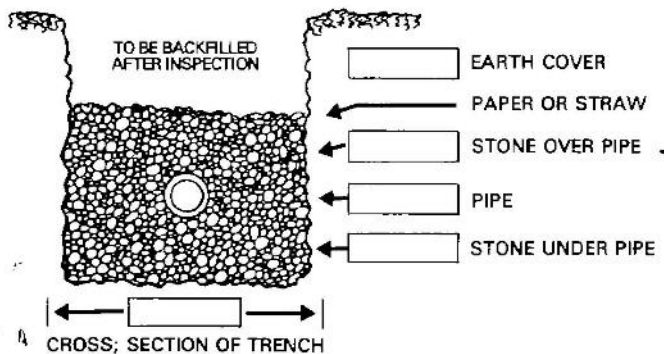
2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

FINAL INSPECTION RECORD

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INDICATE THE FOLLOWING INFORMATION, IF KNOWN, ON THE DRAWING:

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  2. PAVED SURFACES (I.E., PATIOS, DRIVEWAYS, ETC.)
  3. WELLS OR SURFACE WATER SOURCES.
  4. DIRECTIONS OF DRAINAGE.
  5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
TANK LOCATION — FROM HOUSE  
FROM HOUSE CORNER  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
  6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
  7. LABEL ALL SETBACKS, I.E. FROM WATER, PROPERTY LINES, COUNTRY ROADS, ETC.
  8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
  9. USE ARROWS TO SHOW DIRECTION OF SLOPE.
- ONE SQUARE EQUALS 10 FEET



DATE 9-15-80 CERTIFIED BY [Signature] APPROVED BY 9/22/80 S. J. Daniel

LOT 5 - 3433 EAGLE DR NE





EX  
CO

PROP  
CO

**LOT 6 – 3421 EAGLE DR NE**



OWNER Don & Anne Court PARCEL # 8012-00-006 SITE # -

ADDRESS LOT 6 Tolmie Est TWPSP - SEC - RG -

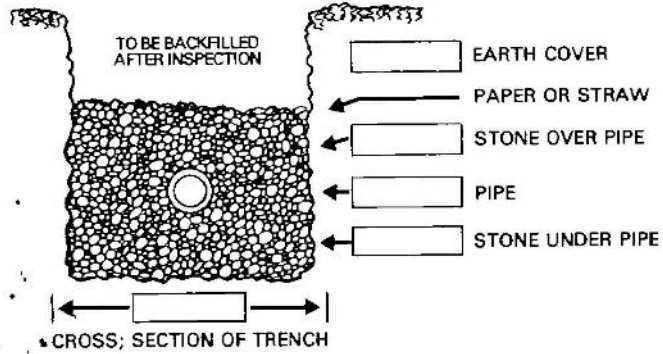
INSTALLATION DATE 9-16-80 SEWAGE CONTRACTOR TO Henson & HADDOX

SEPTIC TANK SIZE 1250 CUBIC YARDS ROCK - SPACE RESERVED FOR REPLACEMENT FIELD - SQ. FT. -

Tolmie Lot 6 (100')

INDICATE THE FOLLOWING INFORMATION, IF KNOWN, ON THE DRAWING:

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- ONE SQUARE EQUALS 10 FEET

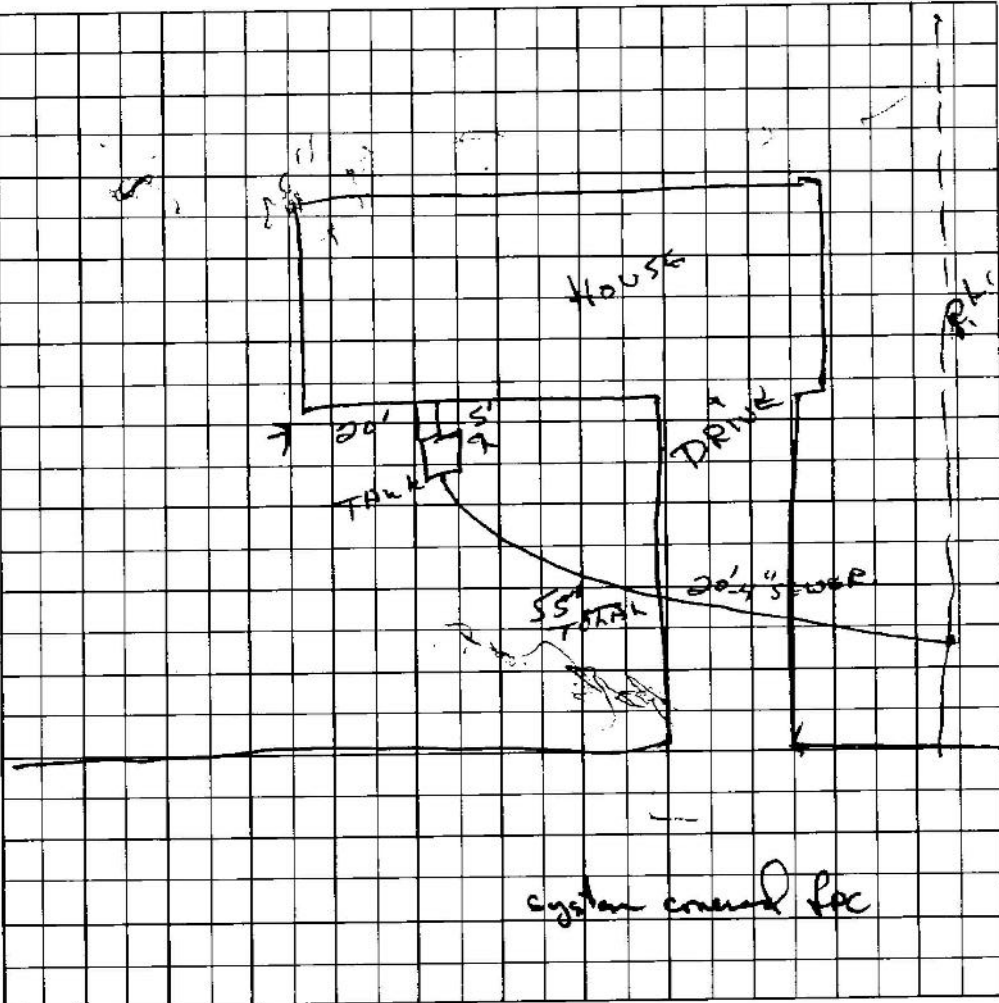


# THURSTON COUNTY HEALTH DEPARTMENT

2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

## FINAL INSPECTION RECORD

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**LOT 7 – 3409 EAGLE DR NE**





NORTH

NOTE: VERIFY SEWER  
LOCATION IN FIELD

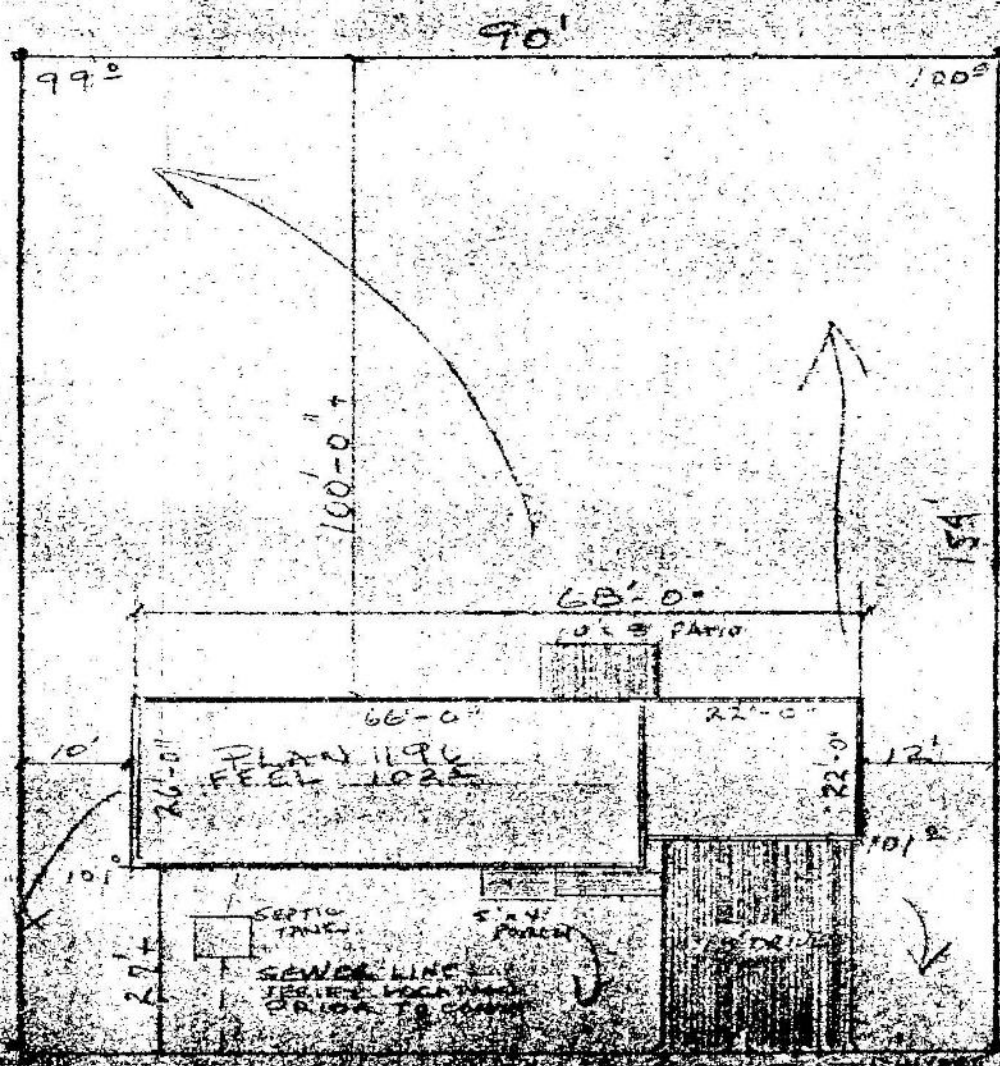
Notes: Site Permit to  
not required.

PLAN 1196  
3409 EAGLE DRIVE  
LOT 7, TOLMIE PARK ES  
DENICHE CONST CO, INC  
COMM WATER, COMM  
SEWER WITH INDIVIDUAL  
TANKS.  
Date: 5/8/80

N

SCALE: 1" = 20'

NOTES: SEE PLAN 1196 FOR  
DETAILED INFORMATION



LOT 7 - 3409 EAGLE DR NE





EX  
CO

PROP  
CO

**LOT 8 – 3403 EAGLE DR NE**



OWNER Donahue PARCEL # 8012-00-008 SITE # 2725

ADDRESS Lot 8 Talmer TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 2-28-80 SEWAGE CONTRACTOR Johnson & Madrox

SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

Duane Jack 2971  
**THURSTON COUNTY HEALTH DEPARTMENT**

2000 LAKERIDGE DR. S.W.  
 OLYMPIA WA. 98502  
 PHONE 753-8073

**FINAL INSPECTION RECORD**

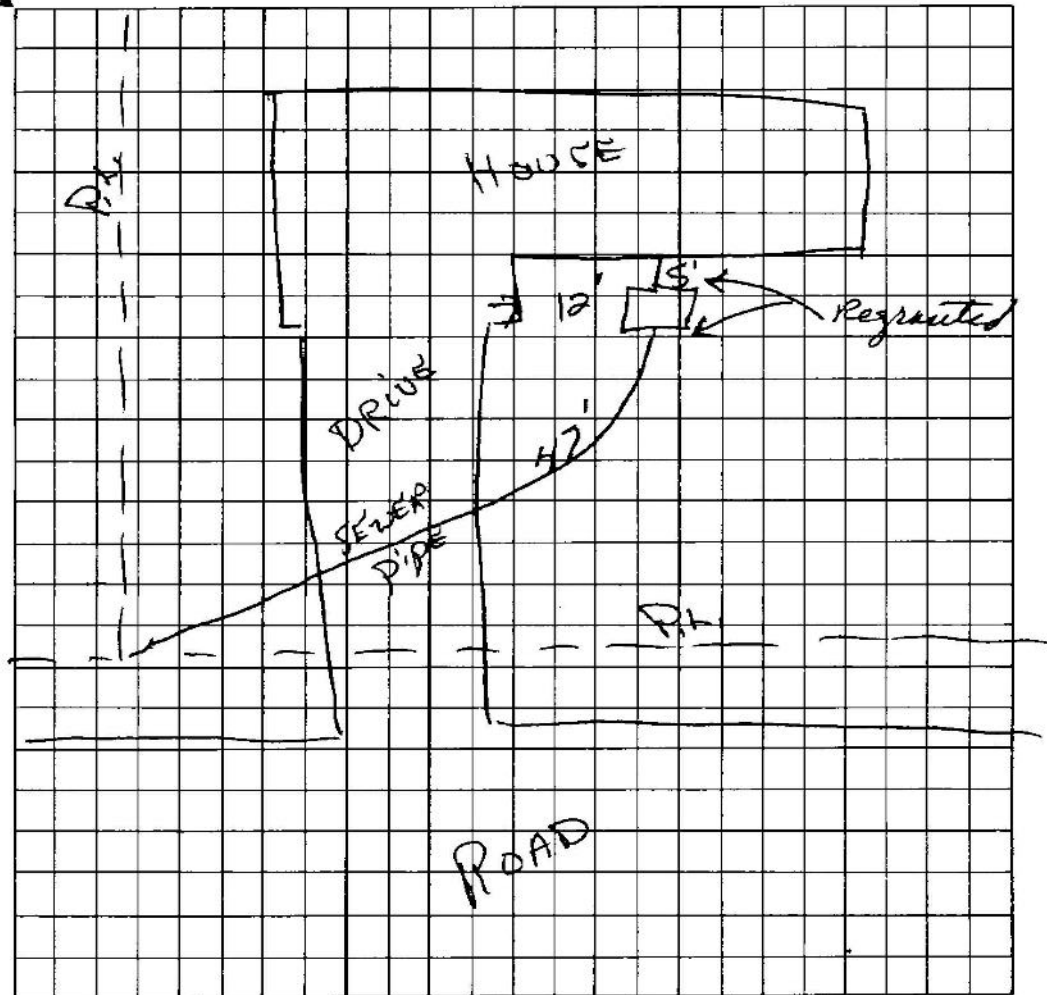
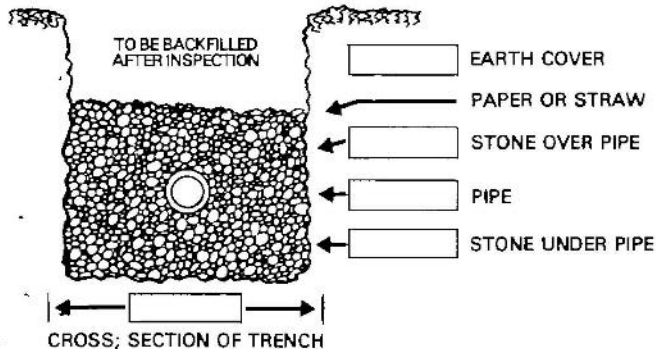
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**MIRRORED?**

100'

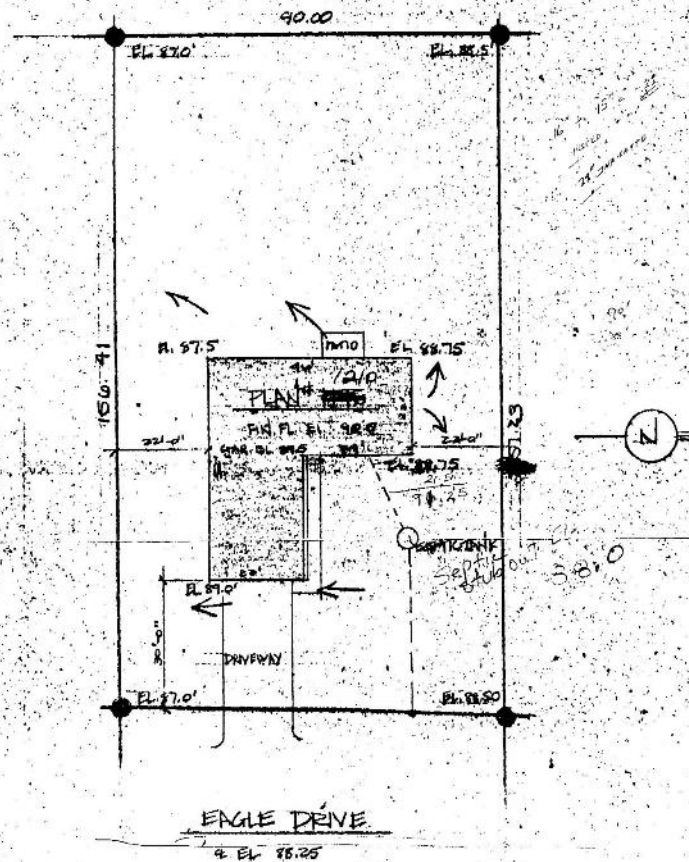
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 LOCATION & LENGTH OF ALL TIGHT LINES
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 ONE SQUARE EQUALS 10 FEET



**LOT 8 - 3403 EAGLE DR NE**

# MIRRORED?



EAR # 2273

PLOT PLAN LOT #3  
TOLMIE PARK  
DONOHUE CONST.

SCALE 1"=20'-0"

SEWER: JNTNM SYSTEM  
WATER: PUBLIC

**LOT 8 – 3403 EAGLE DR NE**



**\*FIND TANK\***

APPROX  
CONNECTION  
LOCATION

PROP  
CO

**LOT 9 – 3341 EAGLE DR NE**



OWNER Donahue PARCEL # 8019-00-009 SITE # 2726

ADDRESS Fort Lot 9 Talmis TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 3-21-80 SEWAGE CONTRACTOR Johnson & Maddox

SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK — SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

Donahue 2472 2472  
**THURSTON COUNTY HEALTH DEPARTMENT**

2000 LAKERIDGE DR. S.W.  
OLYMPIA WA 98502  
PHONE 753-8073

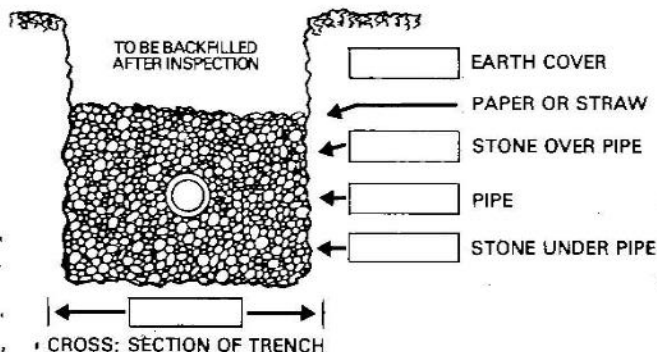
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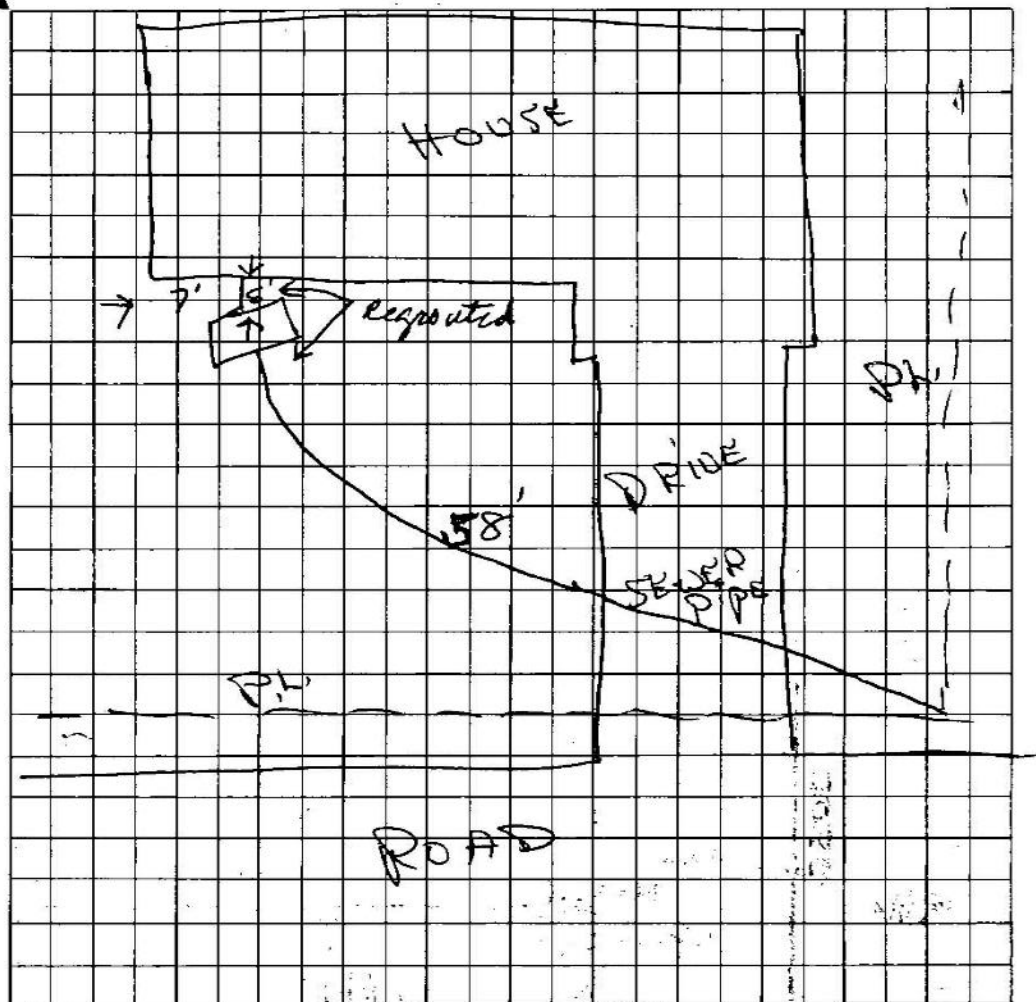
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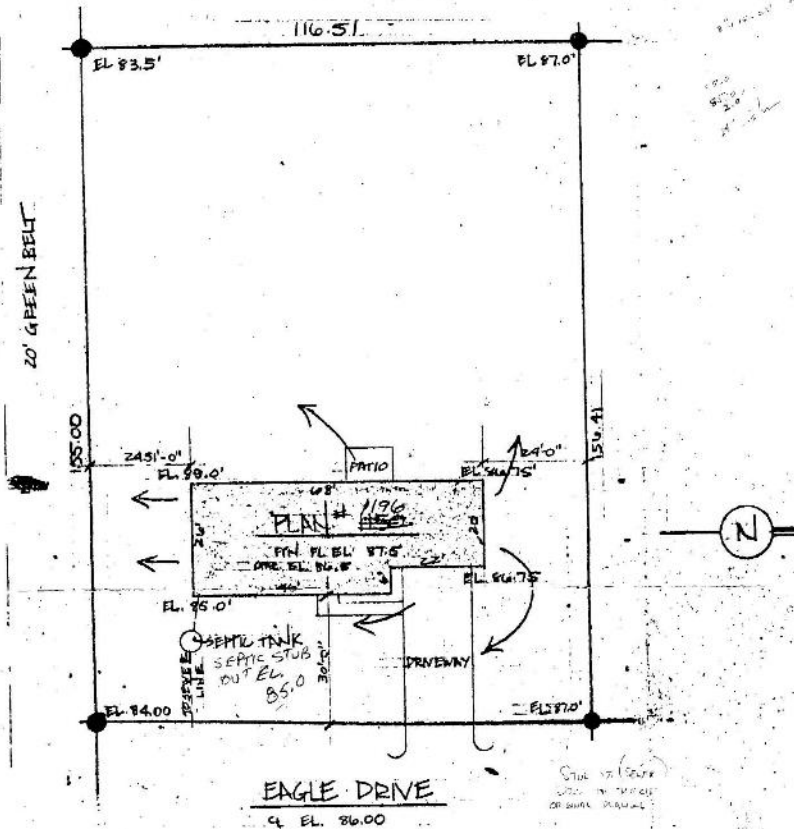
ONE SQUARE EQUALS 10 FEET



100'



**LOT 9 - 3341 EAGLE DR NE**



3341 EAGLE DRIVE N.E.  
 PLOT PLAN LOT 9  
 TOLMIE PARK  
 DONOHUE COLIST.

SCALE 1" = 20'-0"

SEWER: INTERIM SYSTEM  
 WATER: PUBLIC

Site # 2726





**LOT 10 – 7000 TOLMIE CT NE**



OWNER DOWAHUE PARCEL # \_\_\_\_\_ SITE # 5136

ADDRESS TOLMIE EST. TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 9-1-80 SEWAGE CONTRACTOR JOHNSON & LADDON

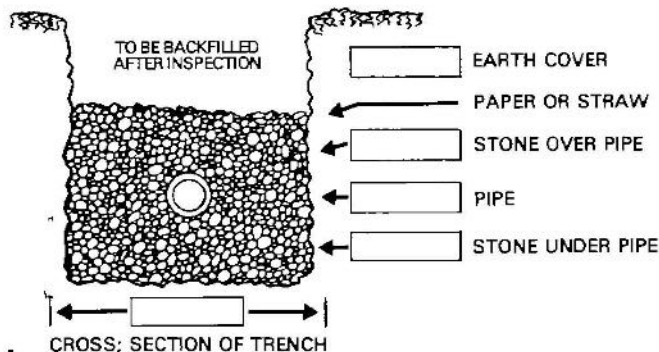
SEPTIC TANK SIZE 1250 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

LOT 10

100'

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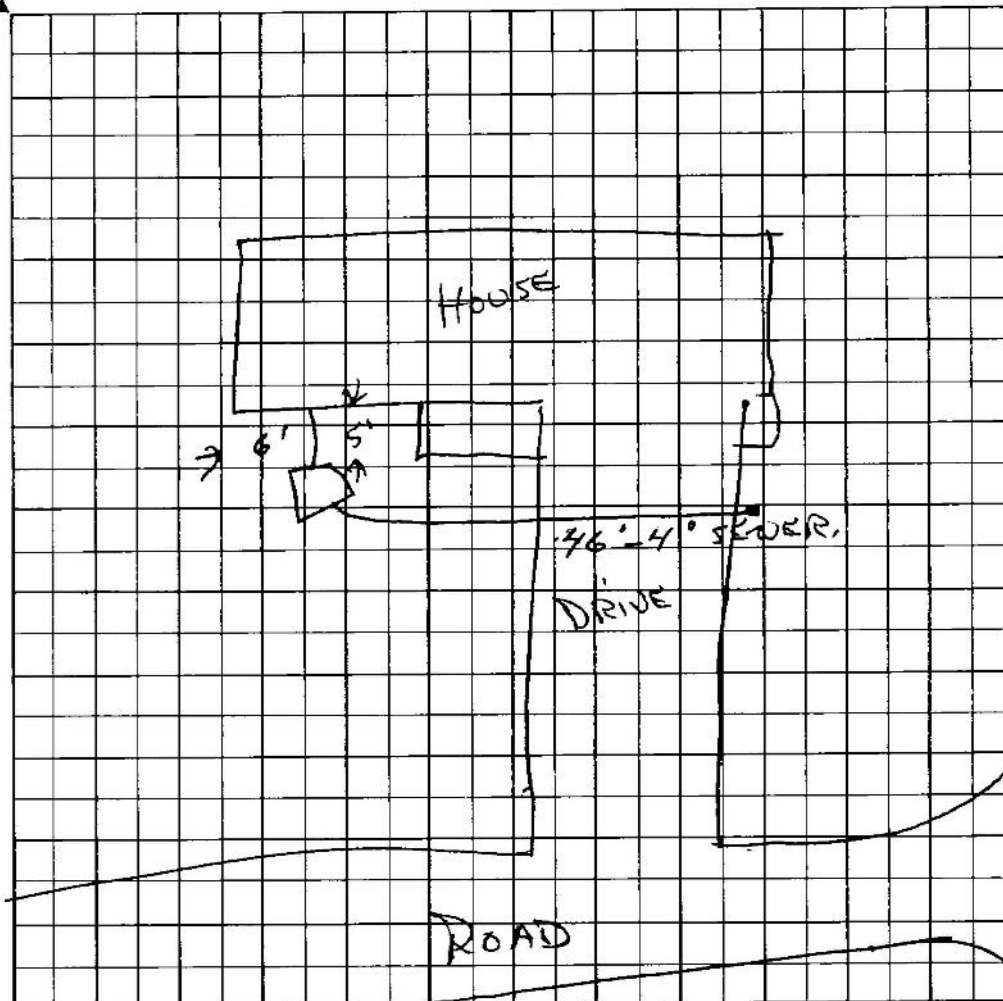


# THURSTON COUNTY HEALTH DEPARTMENT

2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

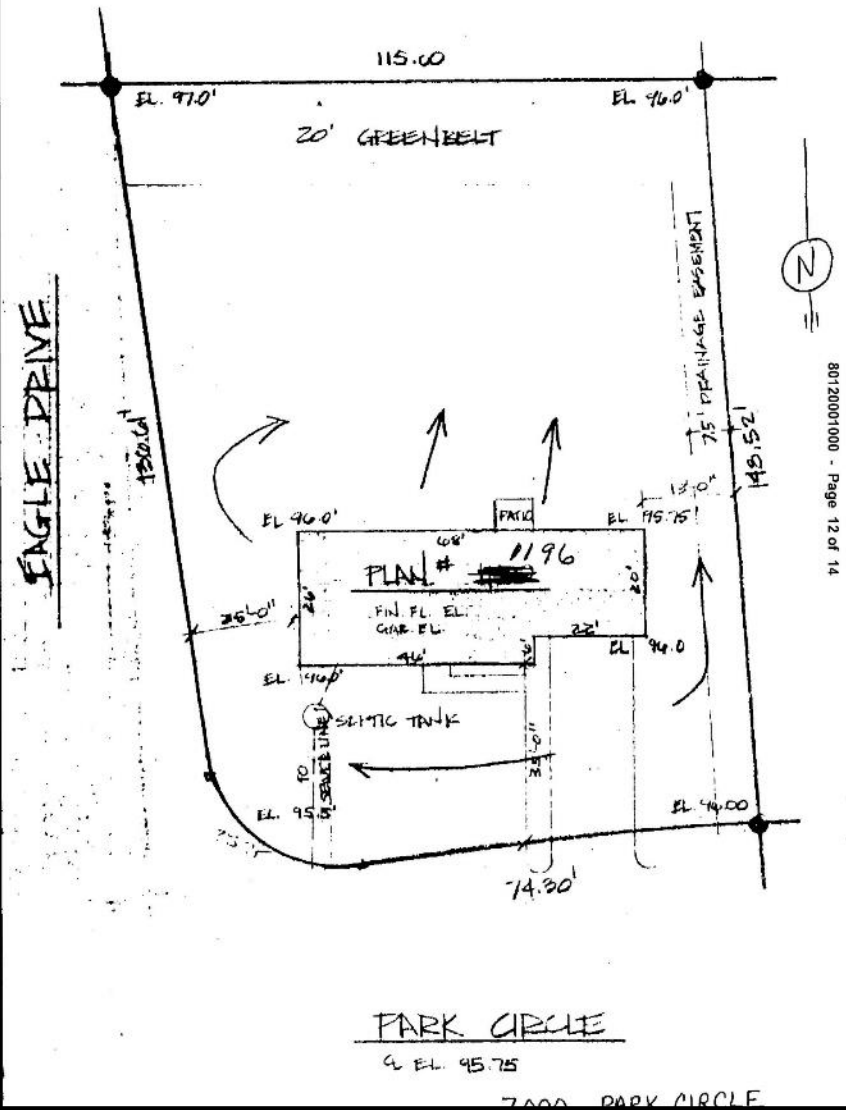
## FINAL INSPECTION RECORD

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LOT 10 - 7000 TOLMIE CT NE





LOT 10 - 7000 TOLMIE CT NE





EX  
CO

PROP  
CO

LOT 11 – 7012 TOLMIE CT NE



OWNER Donahue PARCEL # 8012-00-011 SITE # 5185

ADDRESS Tolmie Estates Lot 11 TWNSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 10-23-80 SEWAGE CONTRACTOR Johnson & Maddy

SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

# THURSTON COUNTY HEALTH DEPARTMENT

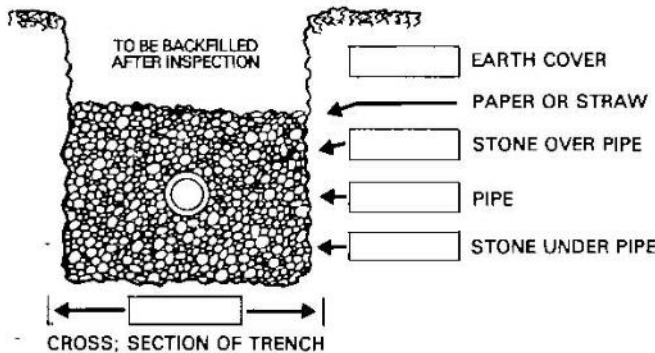
2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

## FINAL INSPECTION RECORD

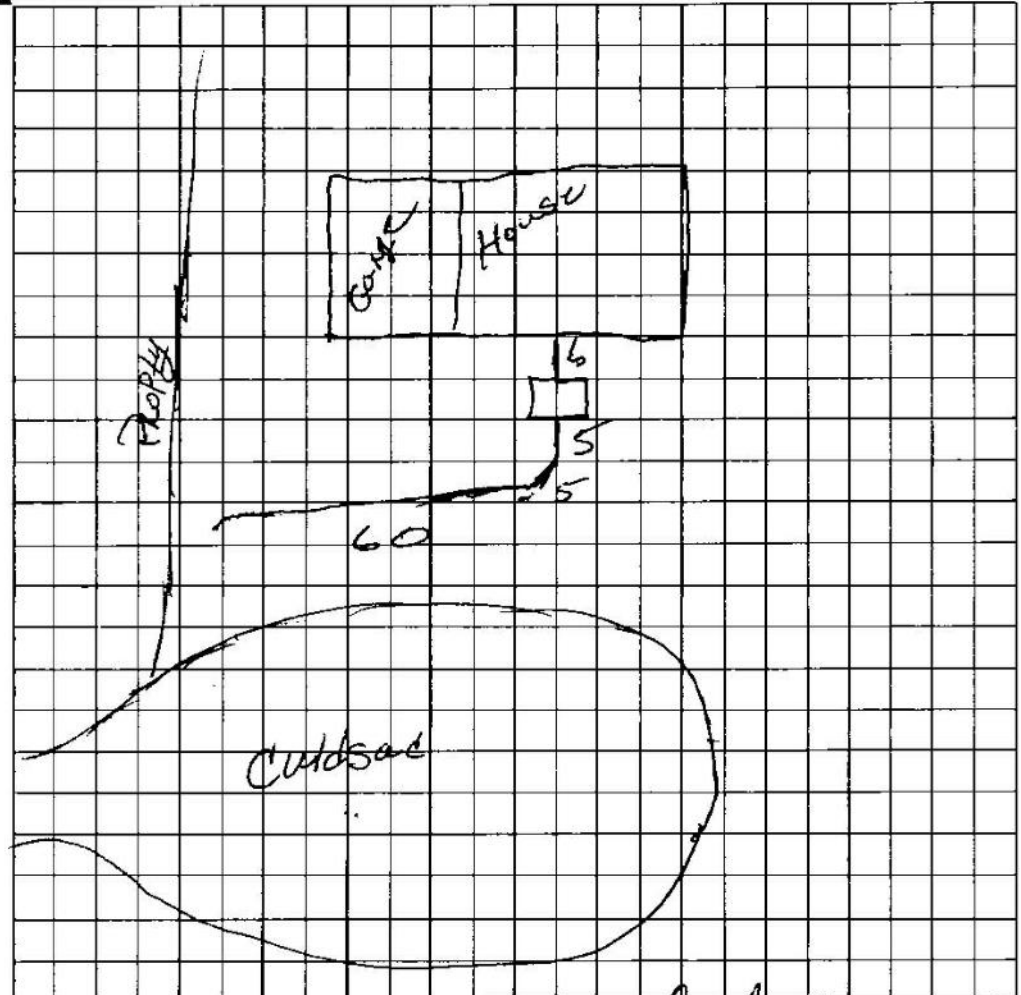
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  9. USE ARROWS TO SHOW DIRECTION OF SLOPE.
- ONE SQUARE EQUALS 10 FEET



100'



LOT 11 - 7012 TOLMIE CT NE

7012 PARK CIRCLE  
PLOT PLAN LOT\* 11  
TOLMIE PARK  
DONOHUE COAST.  
SCALE 1" = 20'-0"

SEWER MAIN SYSTEM  
WATER PUBLIC





EX RISER LID

PROP  
CO

ASPHALT PATCH  
DRIVEWAY AS  
NECESSARY,  
MINIMIZE PATCH

LOT 12 – 7024 TOLMIE CT NE



OWNER Donahue PARCEL # 8012-00-012 SITE # 5186  
ADDRESS Lot 12 Tolmie TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_  
INSTALLATION DATE 7-23-81 SEWAGE CONTRACTOR J & M  
SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

THURSTON COUNTY HEALTH DEPARTMENT

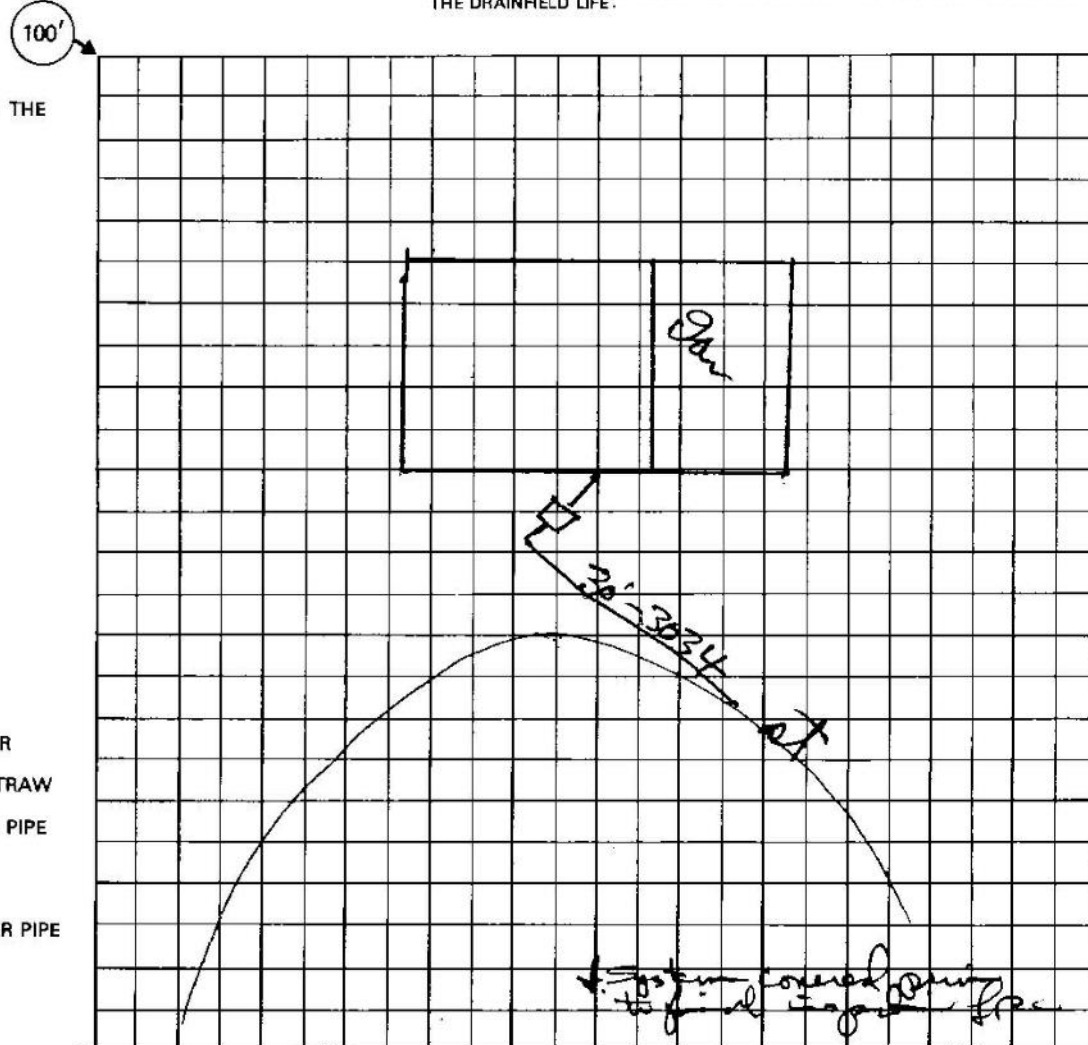
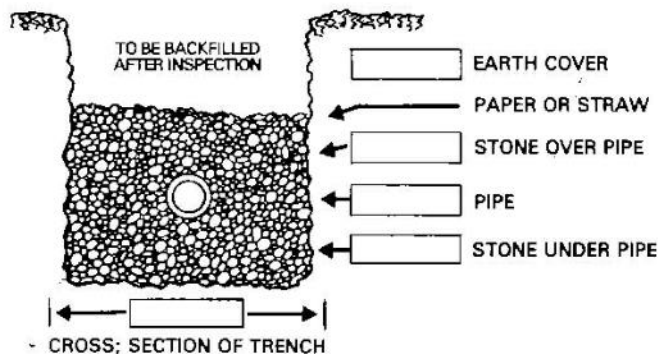
2000 LAKERIDGE DR. S.W.  
OLYMPIA WA 98502  
PHONE 753-8073

FINAL INSPECTION RECORD

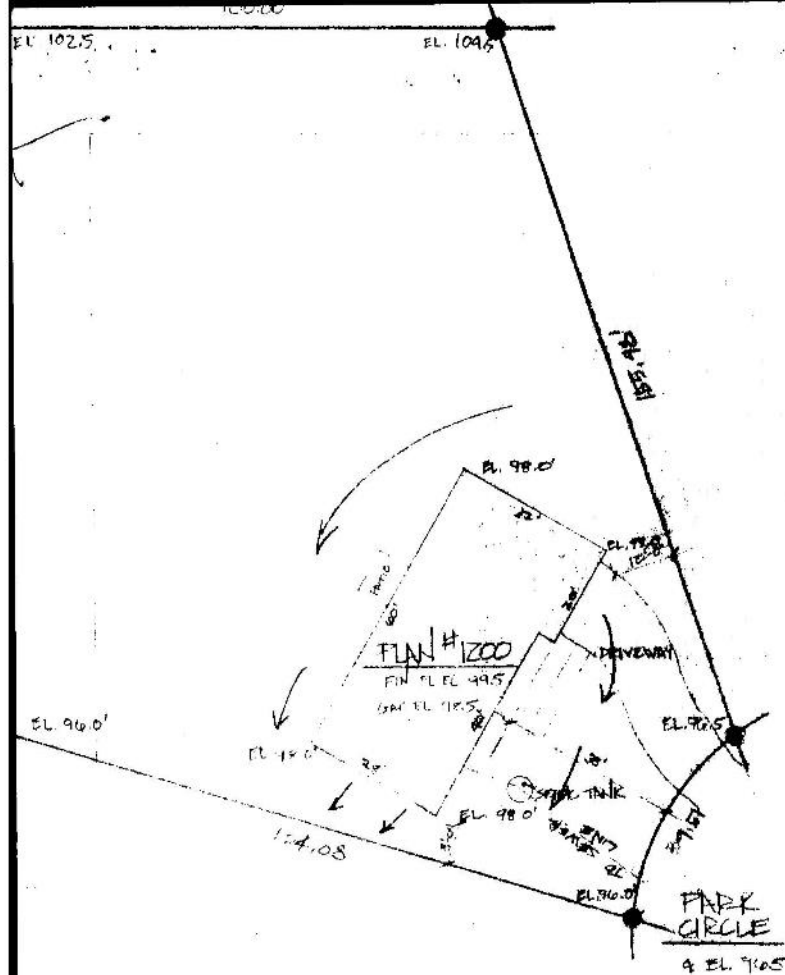
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- ONE SQUARE EQUALS 10 FEET



LOT 12 - 7024 TOLMIE CT NE



80120001200 - Page 12 of 14

7024 PARK CIRCLE  
 PLOT PLAN LOT #12  
 TOLMIE PARK  
 DONOHUE CONST.

LOT 12 – 7024 TOLMIE CT NE





EX  
CO

PROP  
CO

SAWCUT AND  
REPLACE CEMENT  
CONC D/W AS  
NECESSARY

LOT 13 – 7030 TOLMIE CT NE



SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK — SPACE RESERVED FOR REPLACEMENT FIELD 4 SQ. FT.

**THURSTON COUNTY HEALTH DEPARTMENT**

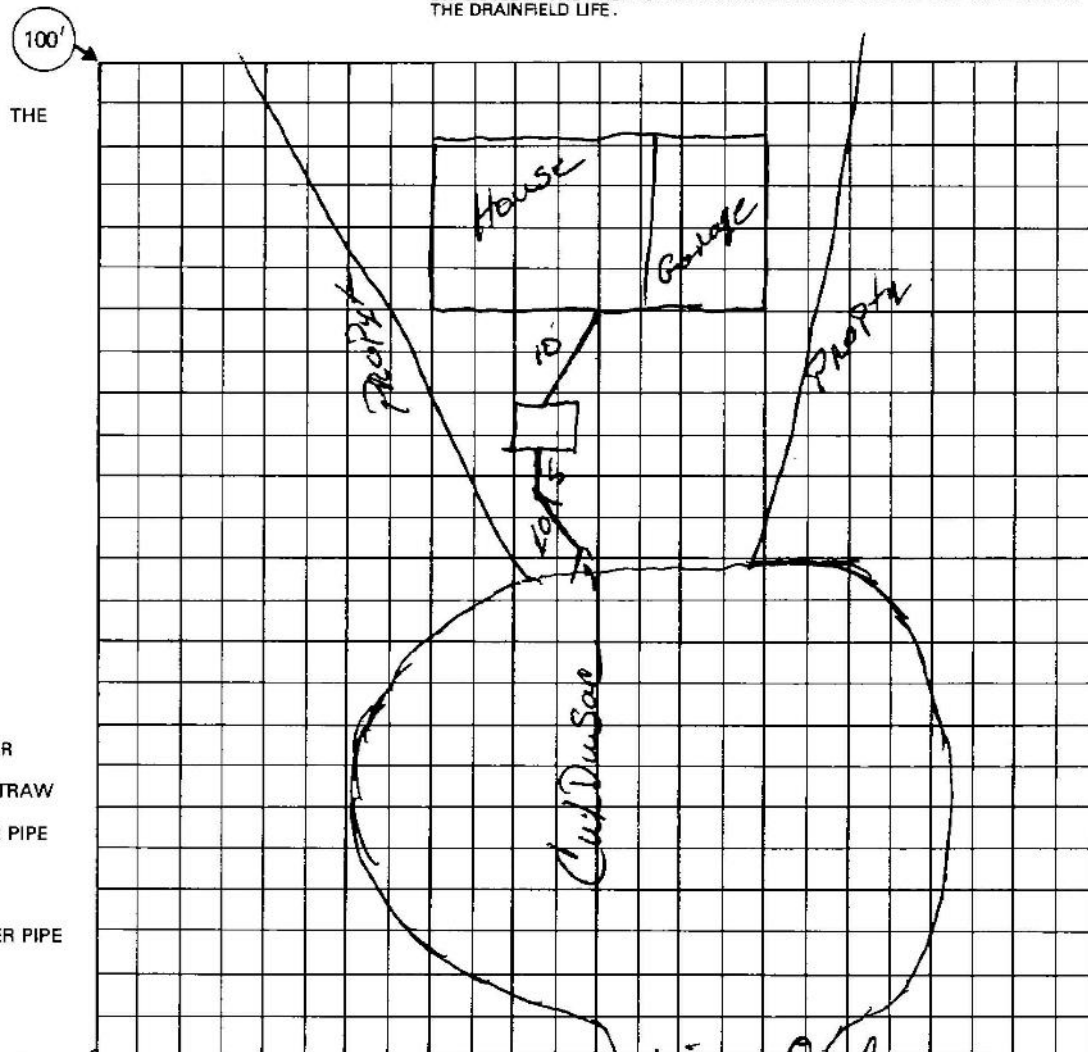
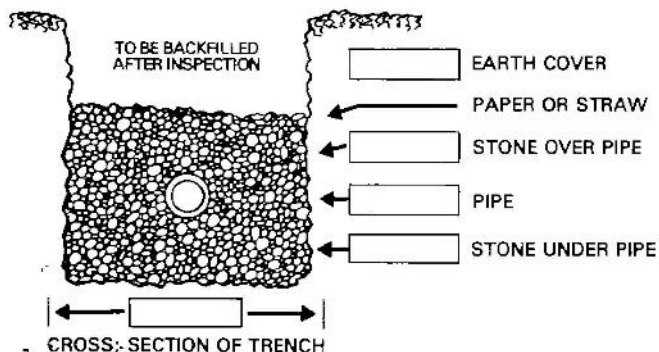
2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
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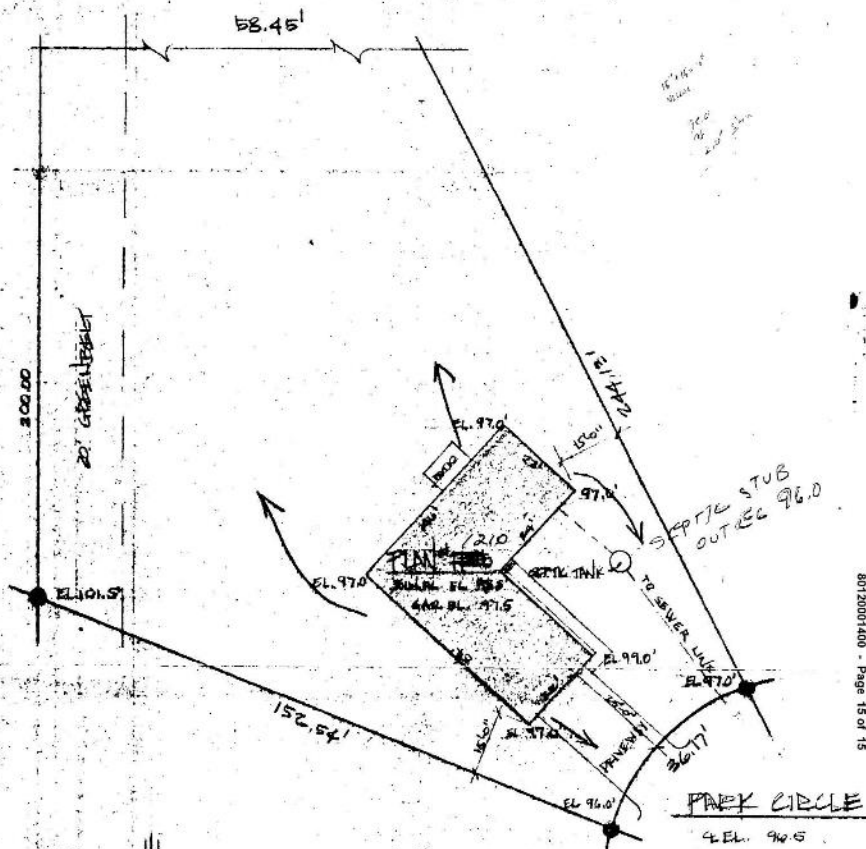
## LOT 13 – 7030 TOLMIE CT NE





**LOT 14 – 7029 TOLMIE CT NE**





80120001400 - Page 15 of 15

7029 PARK CIRCLE  
 PLOT PLAN LOT \* 14  
 TOLMIE PARK  
 DONOHUE CONST.  
 SCALE 1" = 20'-0"

LOT 14 – 7029 TOLMIE CT NE



**\*FIND TANK\***

APPROX. CONNECTION  
LOCATION

PROP  
CO

**LOT 15 – 7011 TOLMIE CT NE**



OWNER Donahue Const PARCEL # \_\_\_\_\_ SITE # 3948  
ADDRESS Lot 15 Tolmie TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_  
INSTALLATION DATE 7-15-80 SEWAGE CONTRACTOR Johnson & Maddy  
SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

THURSTON COUNTY HEALTH DEPARTMENT

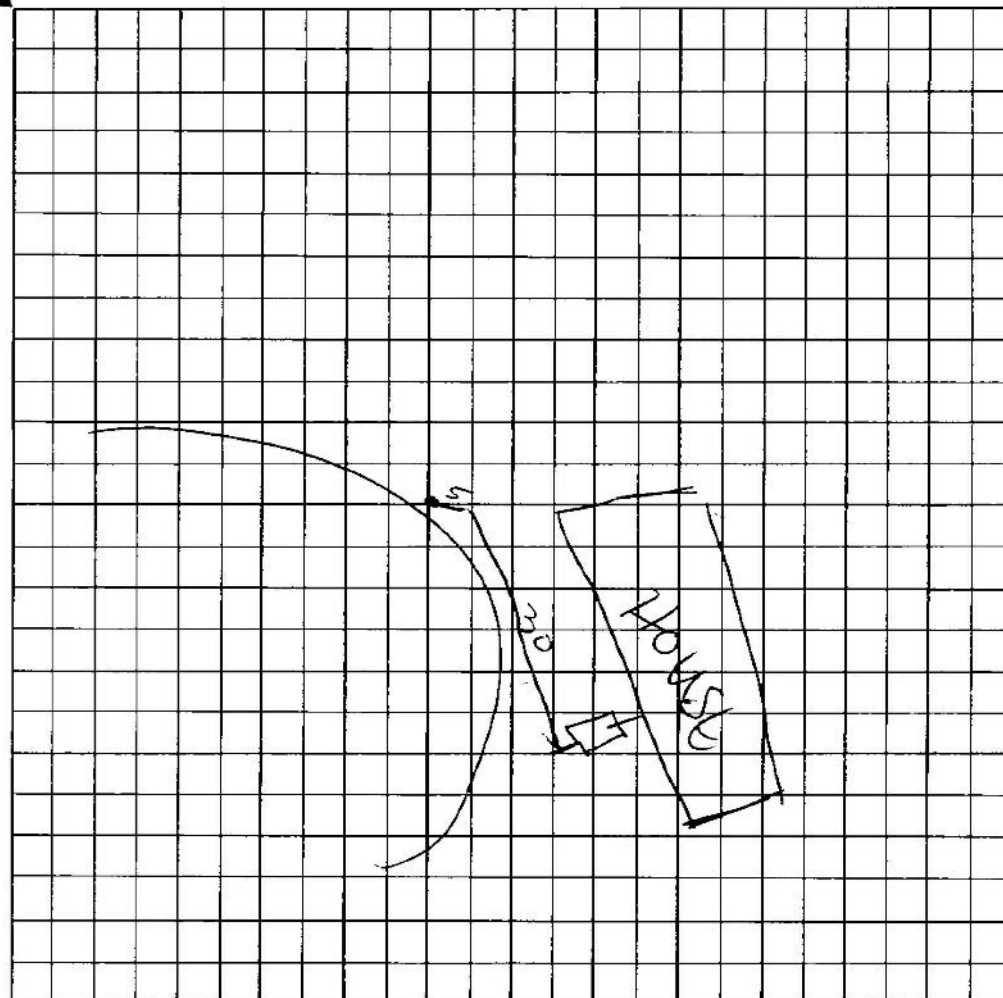
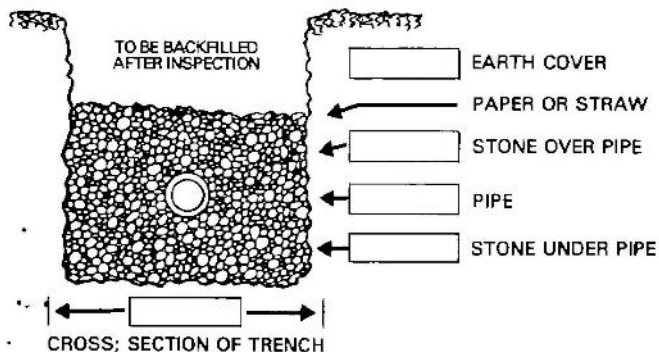
2000 LAKERIDGE DR. S.W.  
OLYMPIA WA 98502  
PHONE 763-8073

FINAL INSPECTION RECORD

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ONE SQUARE EQUALS 10 FEET



DATE 9-15-80 CERTIFIED BY P. H. APPROVED BY 9/15/80 P. Donahue

LOT 15 - 7011 TOLMIE CT NE





**LOT 16 – 3444 EAGLE DR NE – VIEW 1 – SERVICE OFF OF EAGLE DR NE**



**\*FIND TANK\***

APPROX. CONNECTION  
LOCATION

PROP  
CO

**LOT 16 – 3444 EAGLE DR NE – VIEW 2 – SERVICE OFF OF EAGLE DR NE**



OWNER Danahue PARCEL # 8012-00-016 SITE # 5188

ADDRESS Lot 16 Tolmie TWNSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 1-8-81 SEWAGE CONTRACTOR Johnson & Maddy

SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

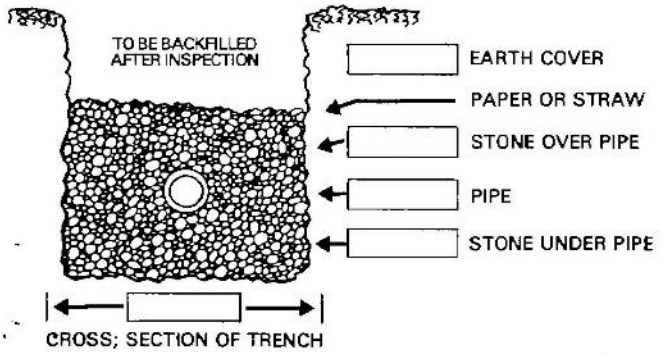
Jim + Lon 3679  
**THURSTON COUNTY HEALTH DEPARTMENT**  
2000 LAKE RIDGE DR. S.W.  
OLYMPIA WA 98502  
PHONE 753-8073

**FINAL INSPECTION RECORD**

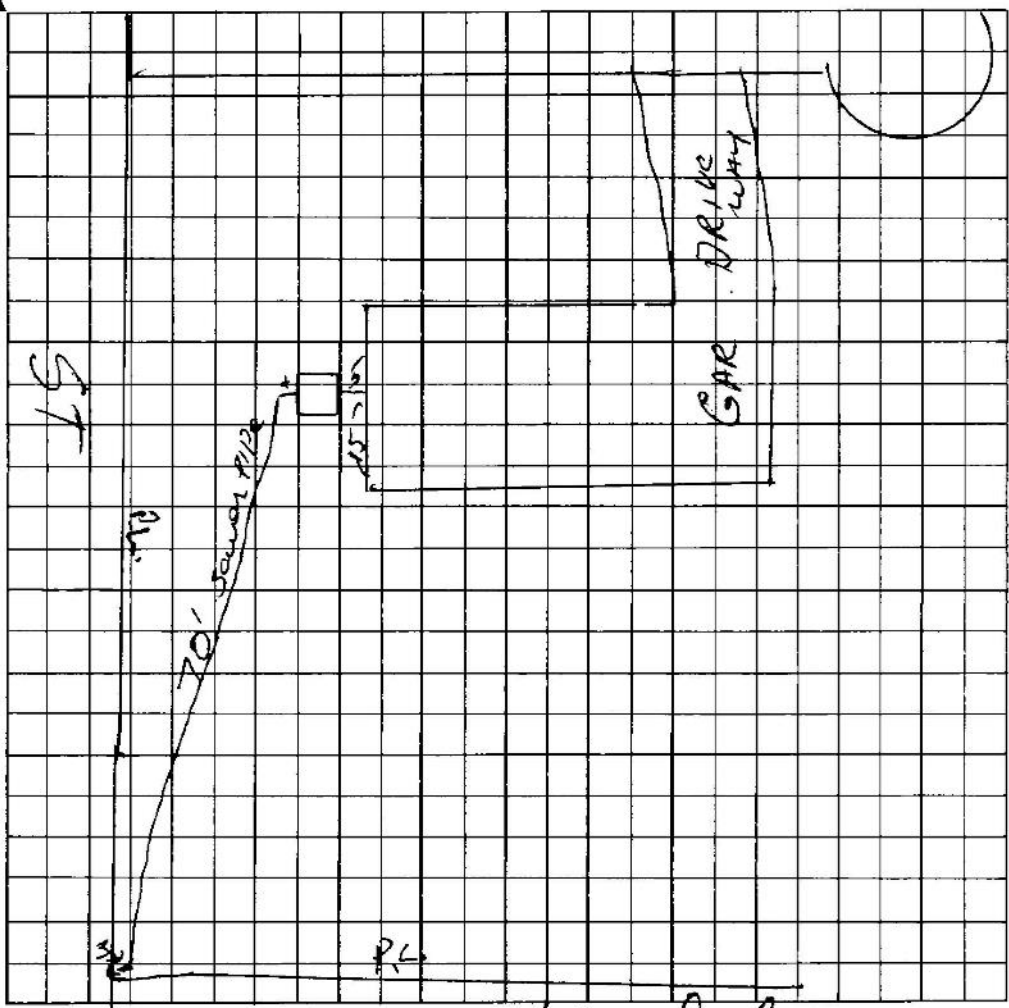
THIS RECORD IS NOT A GUARANTEE OF PERFORMANCE. THE HEALTH DEPARTMENT RECOMMENDS THE SEPTIC TANK ITSELF SHOULD BE PUMPED AND INSPECTED EVERY THREE TO FIVE YEARS, DEPENDING ON HOW POOR THE DRAINAGE IN THE AREA IS. REDUCTION IN HOUSE WATER USE WILL EXTEND THE DRAINFIELD LIFE.

INDICATE THE FOLLOWING INFORMATION, IF KNOWN, ON THE DRAWING:

1. RESIDENCE LOCATION AND DIMENSIONS.
2. PAVED SURFACES (I.E., PATIOS, DRIVEWAYS, ETC.)
3. WELLS OR SURFACE WATER SOURCES.
4. DIRECTIONS OF DRAINAGE.
5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
TANK LOCATION — FROM HOUSE  
FROM HOUSE CORNER  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
7. LABEL ALL SETBACKS, I.E. FROM WATER, PROPERTY LINES, COUNTRY ROADS, ETC.
8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
9. USE ARROWS TO SHOW DIRECTION OF SLOPE.  
ONE SQUARE EQUALS 10 FEET



100'



LOT 16 - 3444 EAGLE DR NE



**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 17 – 3428 EAGLE DR NE**



OWNER Donaue PARCEL # \_\_\_\_\_ SITE # \_\_\_\_\_

ADDRESS Volanie Estates TWNSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 7-25-80 SEWAGE CONTRACTOR Johnson & Maddy

SEPTIC TANK SIZE 1200 7/8 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

Lot 17 Salmie

**THURSTON COUNTY HEALTH DEPARTMENT**

2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

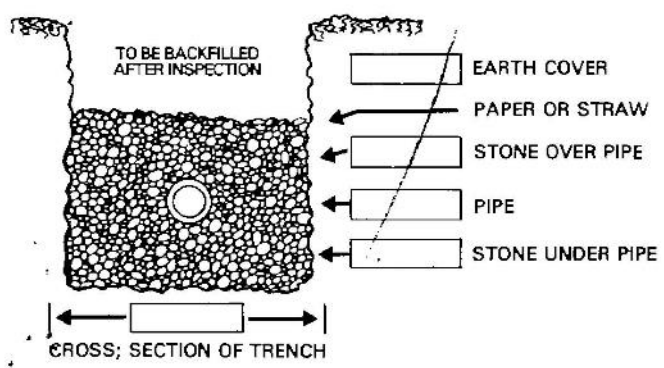
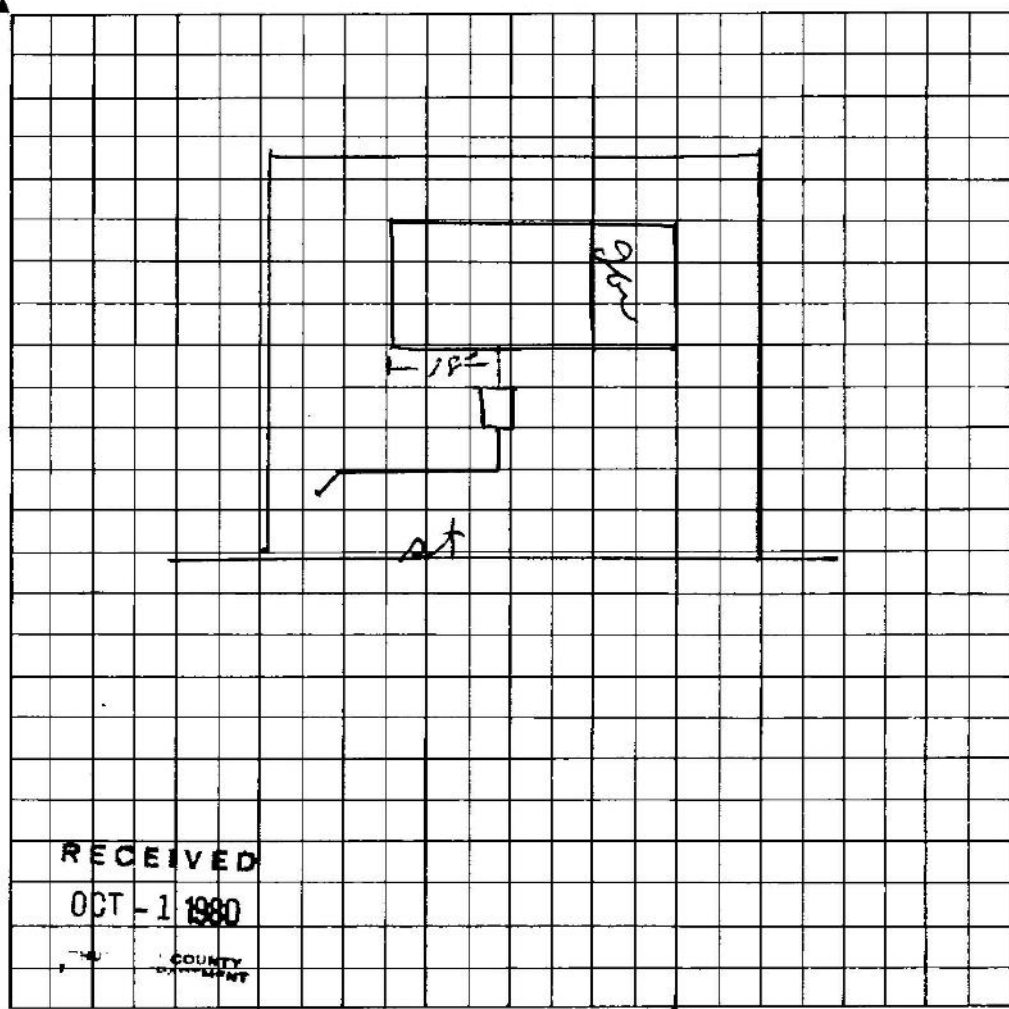
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  9. USE ARROWS TO SHOW DIRECTION OF SLOPE.
- ONE SQUARE EQUALS 10 FEET

100'



DATE 10-1-80

CERTIFIED BY [Signature]

APPROVED BY 10/3/80 P. Davis

**LOT 17 - 3428 EAGLE DR NE**

# APPENDIX A

## PROPOSED CONNECTIONS AND SEPTIC AS-BUILTS

### Part 2 - Phase 2 Lots 18 - 30

#### **General Notes:**

1. Locations and routes are diagrammatic and relative to the photo taken. Actual locations shall be located in the field with the Engineer. All efforts shall be taken to avoid mature landscaping, irrigation, electrical and other improvements to avoid costly restoration.



## General Notes:

1. Locations and routes are diagrammatic and relative to the photo taken. Actual locations shall be located in the field with the Engineer. All efforts shall be taken to avoid mature landscaping, irrigation, electrical and other improvements to avoid costly restoration.





**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 18 – 7002 TOLMIE DR NE – VIEW 2 – SERVICE OFF OF EAGLE DR NE**



USE BLACK PENS ONLY

PROJECT PLAN FOR SINGLE-FAMILY AND DUPLEX CONSTRUCTION  
(THIS IS NOT A PERMIT)

SITE # 5710

FILING DATE 12-4-80

THURSTON COUNTY PARCEL # \_\_\_\_\_

APPLICANT NAME Wally Pratt

PHONE #: \_\_\_\_\_ (home) \_\_\_\_\_ (work)

MAILING ADDRESS P.O. Box 3644 Lacey

PROPERTY ADDRESS Lot 18 Tolmie Park Est Div II

OWNER (IF OTHER THAN APPLICANT) \_\_\_\_\_

PROJECT DESCRIPTION: SINGLE-FAMILY  
MOBILE HOME  
DUPLEX  
FOR ON-SITE EVALUATION ONLY

☒ CHECK APPROPRIATE  
BOXES

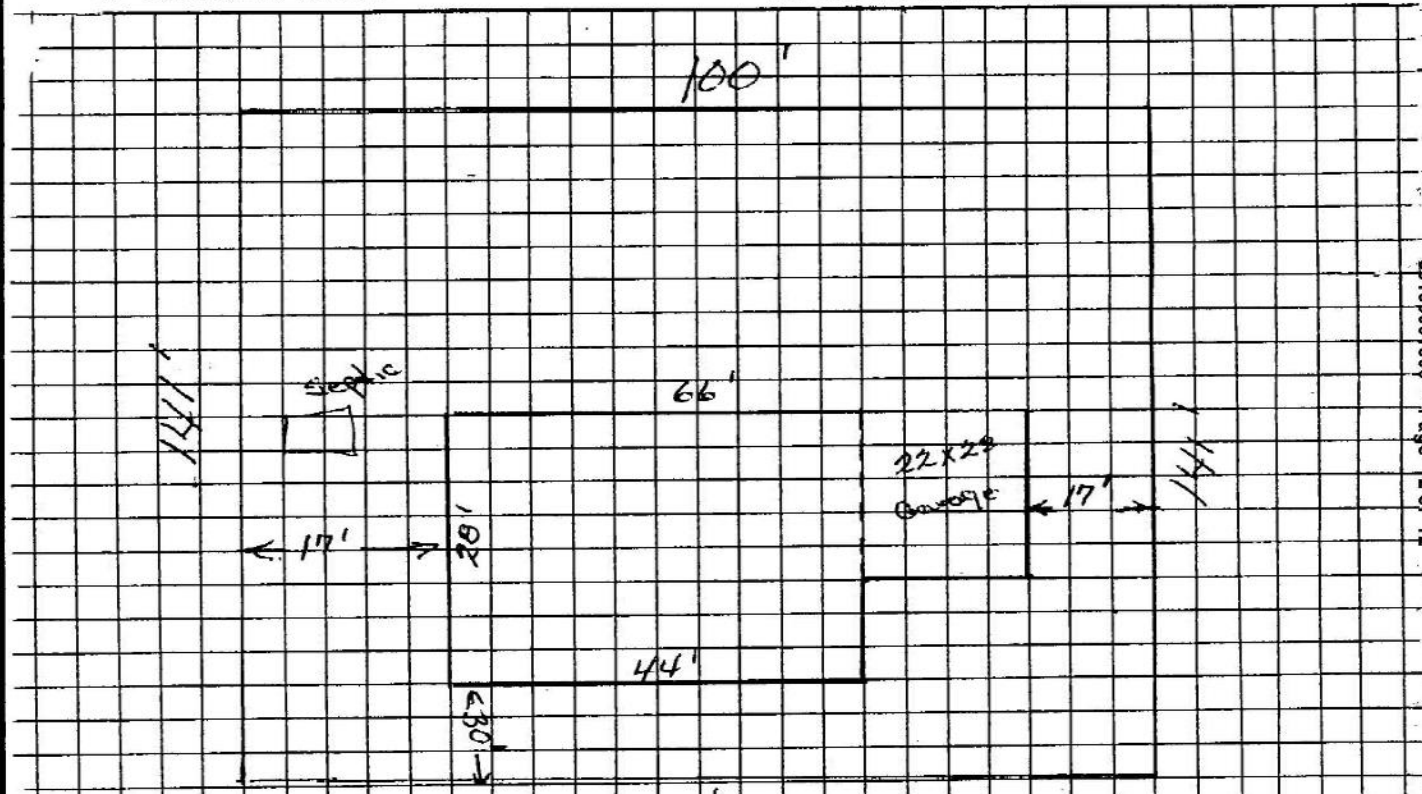
NO. OF BEDROOMS 3

LOT AREA 100 x 141

LEGAL DESCRIPTION: (INCLUDE SHORT PLAT NUMBER OR NAME OF SUBDIVISION AND LOT NUMBER IF APPLICABLE)

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

1. Indicate north arrow.
2. Property boundary lines.
3. Indicate driveway location from nearest intersection or landmark.
4. Major features of property (ravines, seasonal creeks, bodies of water).
5. Septic system location.
6. Wells or drinking water source.
7. Paved surfaces (i.e. driveways and patios).
8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it.
9. Indicate structures--existing or proposed--and distances from lot lines.



80130001800 - Page 12 of 12

LOT 18 - 7002 TOLMIE DR NE



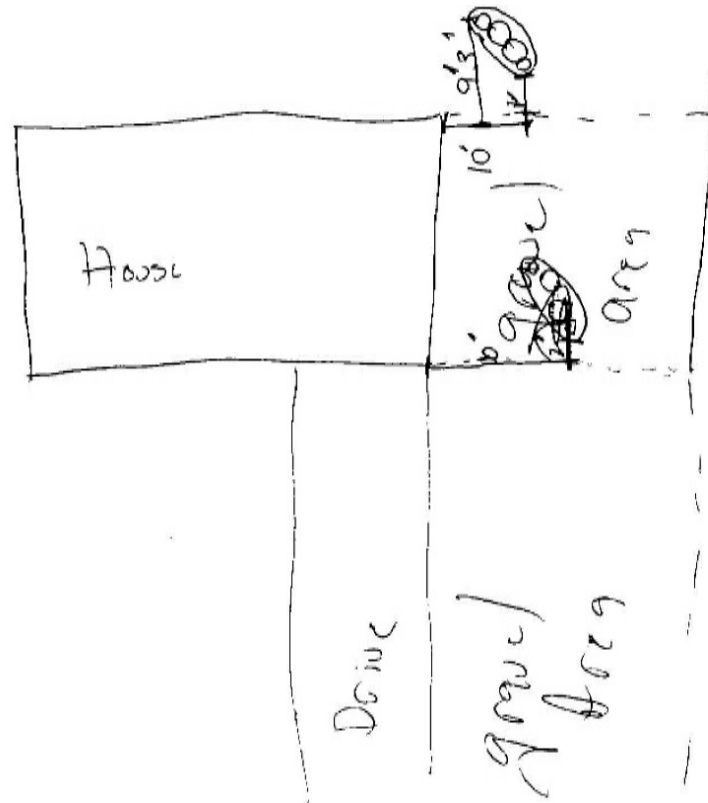
**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION  
NE CORNER

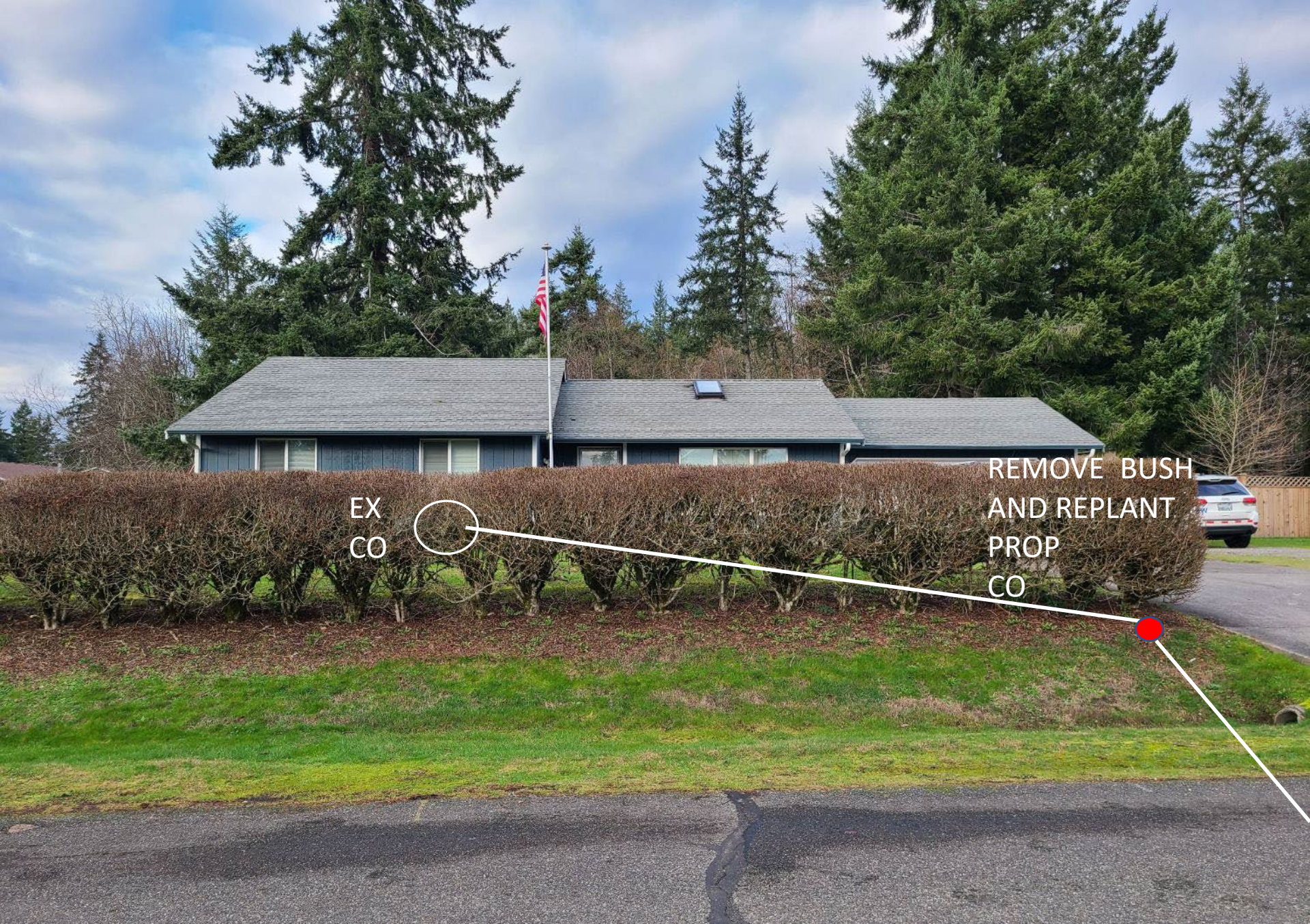
**LOT 19 – 7010 TOLMIE DR NE**



3041 Steam Is.







EX  
CO

REMOVE BUSH  
AND REPLANT  
PROP  
CO

LOT 20 – 7018 TOLMIE DR NE



# BUILDING SITE APPLICATION PROJECT PLAN

PLEASE PRESS HARD

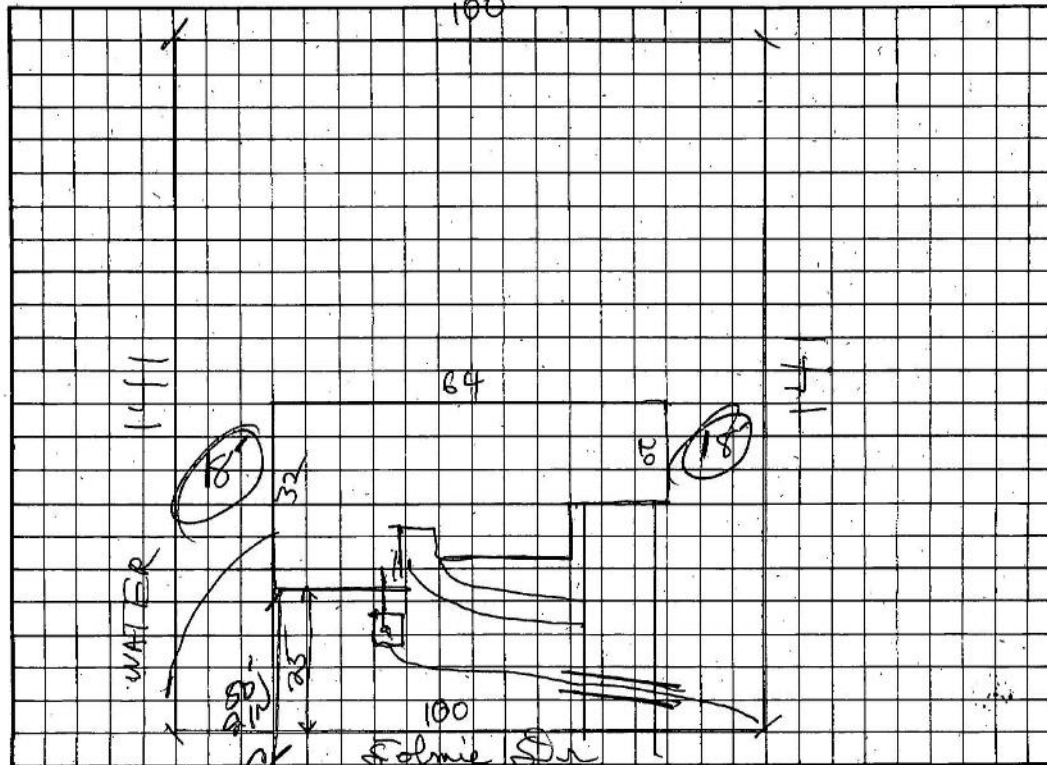
(This is not a permit)

SITE NO. \_\_\_\_\_

PARCEL NO. \_\_\_\_\_

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> 1. Indicate north arrow.</li> <li><input type="checkbox"/> 2. Property boundary lines.</li> <li><input type="checkbox"/> 3. Indicate driveway location from nearest intersection or landmark.</li> <li><input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water).</li> <li><input type="checkbox"/> 5. Proposed septic system location.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> 6. Wells or drinking water source.</li> <li><input type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).</li> <li><input type="checkbox"/> 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it.</li> <li><input type="checkbox"/> 9. Indicate structures — existing or proposed — and distance from lot lines.</li> <li><input type="checkbox"/> 10. Neighbors wells within 150 feet.</li> </ul> |
|---|--|



I UNDERSTAND THAT ANY PERMITS ISSUED BY THE COUNTY CONSISTENT WITH THE ABOVE SITE PLAN ARE VALID ONLY IF ALLOWED BY ALL APPLICABLE LAWS AND CODES. FURTHER, THAT ALL PERMITS ISSUED ARE VALID ONLY IF CONSTRUCTION IS ACCORDING TO THIS PLAN.

SIGNATURE: Richard W. Cafman

PUBLIC WORKS: ACCESS PERMIT: ISSUED \_\_\_\_\_ (date) PERMIT NO. \_\_\_\_\_

PLANNING & ZONING	PERMITS NECESSARY	NO	YES	REMARKS
DATE TO PLANNING <u>1/8/90</u>	ZONING	—	—	<u>R2/1</u>
ACCEPTABLE <u>BAC</u> <u>1/11/90</u> (initial) (date)	SHORELINE	—	—	
	SUBDIVISION	—	—	
	SEPA	—	—	
HOLD FOR PERMIT				

## DIRECTIONS TO SITE:

Marvin to Hawks  
Pavie Left on Eagle Dr  
Left on Tolmie Dr  
Third Lot on Left

LOT 20 – 7018 TOLMIE DR NE



**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 21 – 7026 TOLMIE DR NE**







**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 22 – 7034 TOLMIE DR NE**



OWNER Evelyn Milam PARCEL # 14628 SITE # \_\_\_\_\_

ADDRESS 1025 Neil NE 44 TWPSP 18 SEC 3 RG 14

INSTALLATION DATE 8-10-85 SEWAGE CONTRACTOR Antenna Const

SEPTIC TANK SIZE 1125 CUBIC YARDS ROCK NONE SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

## THURSTON COUNTY HEALTH DEPARTMENT

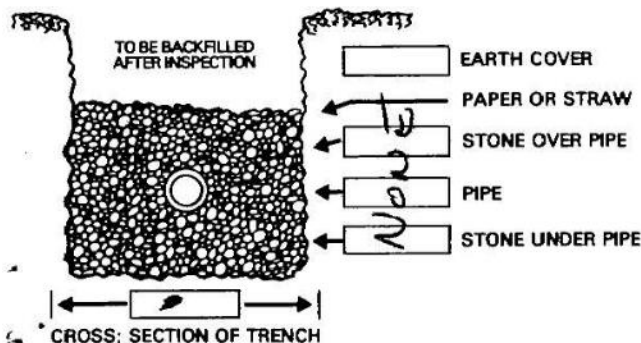
2000 LAKERIDGE DR. S.W.  
OLYMPIA WA 98502  
PHONE 753-8073

### FINAL INSPECTION RECORD

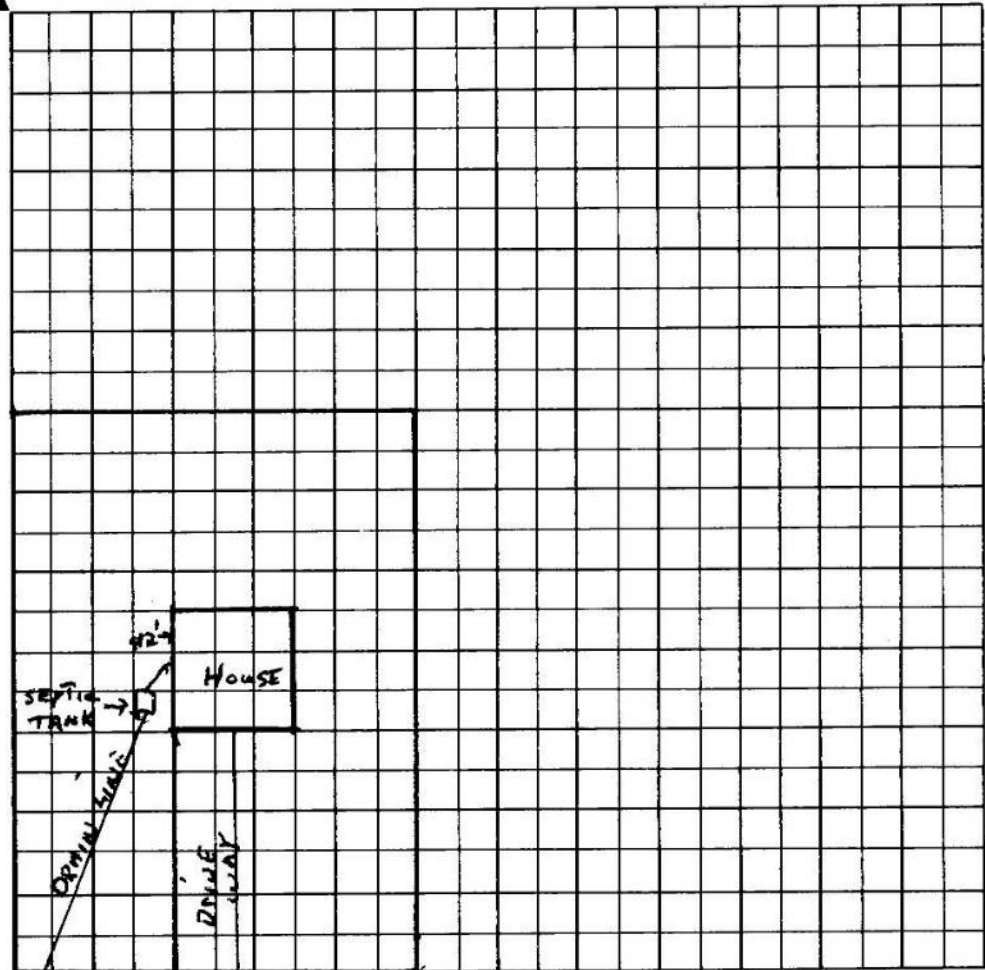
THIS RECORD IS NOT A GUARANTEE OF PERFORMANCE. THE HEALTH DEPARTMENT RECOMMENDS THE SEPTIC TANK ITSELF SHOULD BE PUMPED AND INSPECTED EVERY THREE TO FIVE YEARS, DEPENDING ON HOW POOR THE DRAINAGE IN THE AREA IS. REDUCTION IN HOUSE WATER USE WILL EXTEND THE DRAINFIELD LIFE.

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  2. PAVED SURFACES (I.E., PATIOS, DRIVEWAYS, ETC.)
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  4. DIRECTIONS OF DRAINAGE.
  5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
TANK LOCATION - FROM HOUSE  
FROM HOUSE CORNER  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
  6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
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  8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
  9. USE ARROWS TO SHOW DIRECTION OF SLOPE.
- ONE SQUARE EQUALS 10 FEET



100'



DATE 10-21-85

CERTIFIED BY

E. J. C. [Signature]

APPROVED BY

Tammy [Signature]

LOT 22 - 7034 TOLMIE DR NE



**\*FIND TANK\***

REMOVE TREE  
PROP  
CO

APPROX.  
CONNECTION  
LOCATION

**LOT 23 – 7042 TOLMIE DR NE**



OWNER HARRY SCHLEINER <sup>PARCEL 15010</sup> SITE # \_\_\_\_\_  
 ADDRESS 7620 12<sup>TH</sup> AVE NE TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_  
 INSTALLATION DATE 9-20-85 SEWAGE CONTRACTOR Autumn  
 SEPTIC TANK SIZE 1125 CUBIC YARDS ROCK NONE SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

## THURSTON COUNTY HEALTH DEPARTMENT

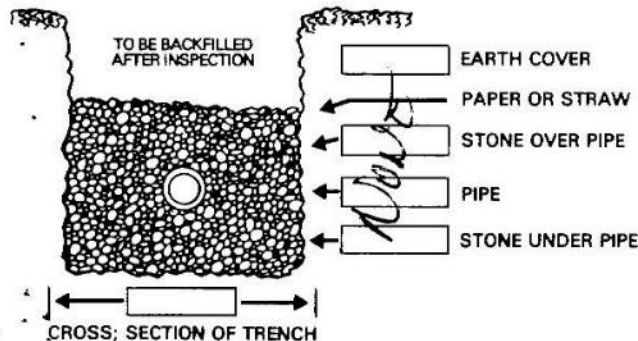
2000 LAKERIDGE DR. S.W.  
 OLYMPIA WA. 98502  
 PHONE 753-8073

### FINAL INSPECTION RECORD

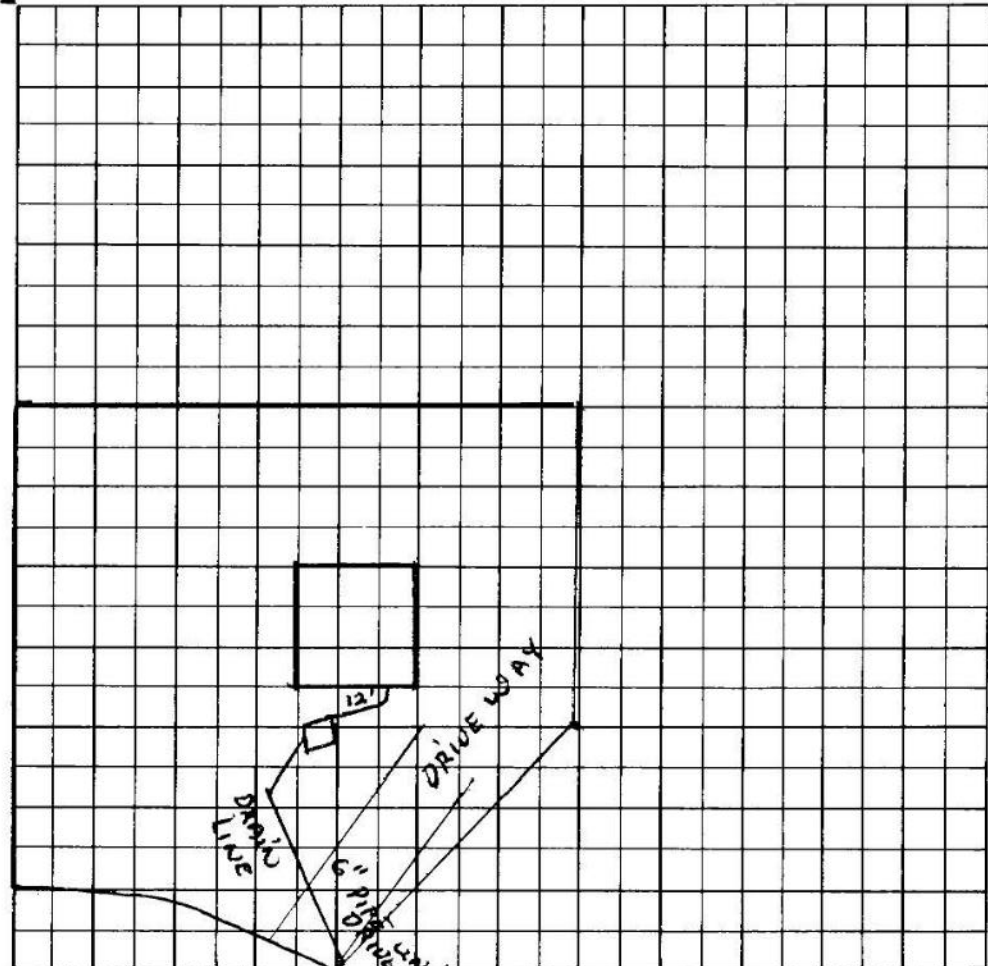
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  9. USE ARROWS TO SHOW DIRECTION OF SLOPE.
- ONE SQUARE EQUALS 10 FEET



100'



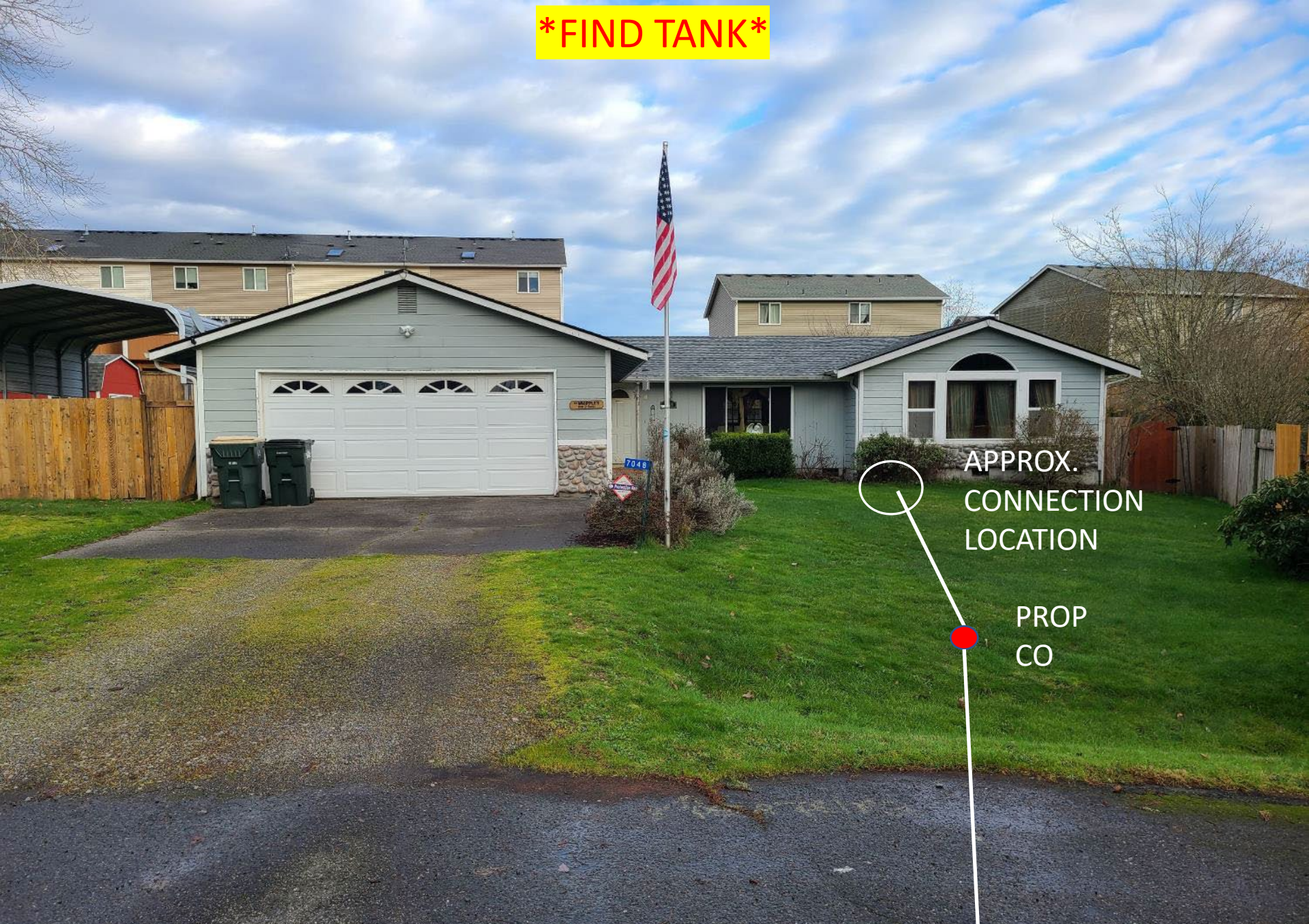
DATE 10-21-85 CERTIFIED BY J. J. Craig

APPROVED BY Tamara Kuhlch

LOT 23 - 7042 TOLMIE DR NE



**\*FIND TANK\***



APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 24 – 7048 TOLMIE DR NE**



RAP

13998

OWNER Hoei PARCEL # \_\_\_\_\_ SITE # 21876

ADDRESS Tolmie Lt 24 SEC \_\_\_\_\_ TWPSP \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 6-14-89 SEWAGE CONTRACTOR Johnson + Maddy

SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

# THURSTON COUNTY HEALTH DEPARTMENT

2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 786-5455

## FINAL INSPECTION RECORD

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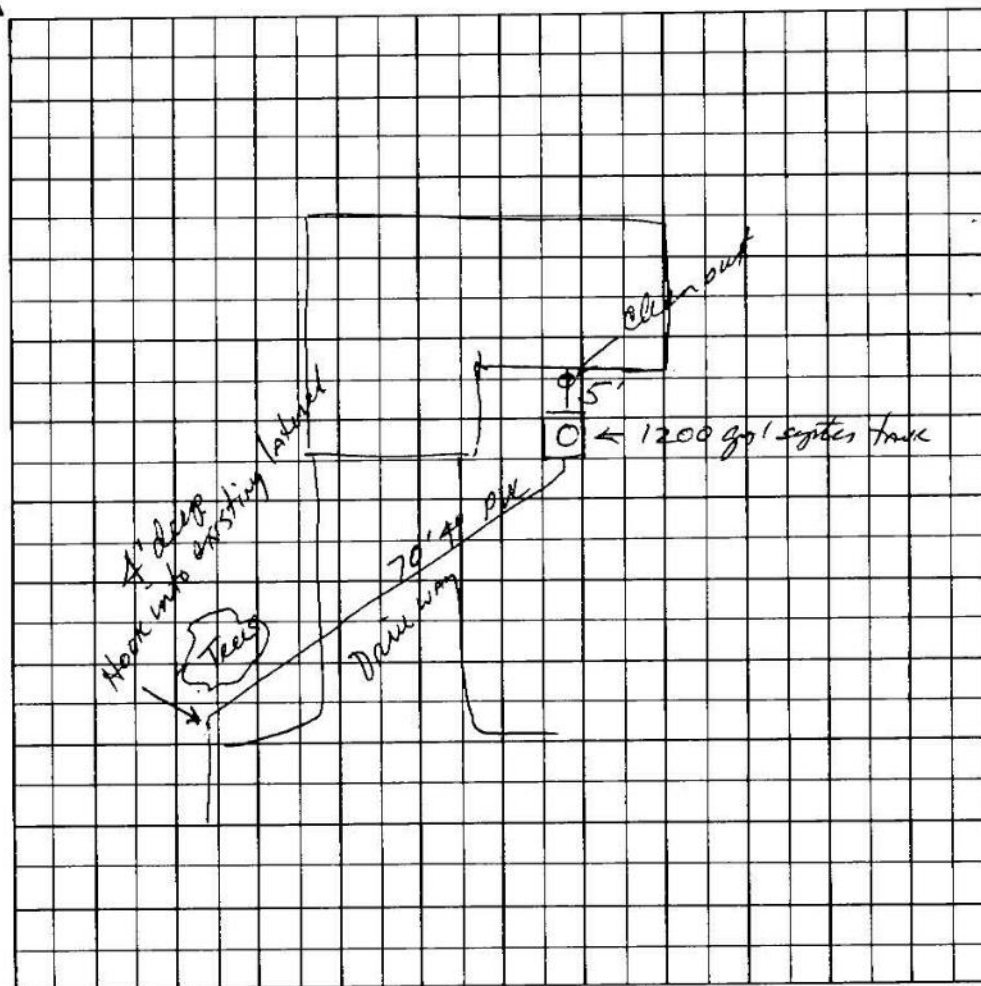
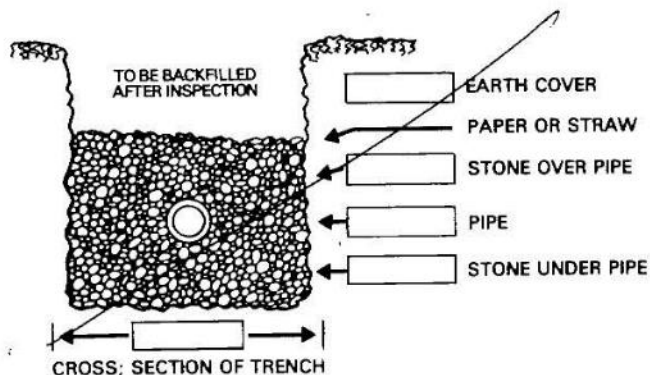
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3. WELLS OR SURFACE WATER SOURCES.
4. DIRECTIONS OF DRAINAGE.
5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP TANK LOCATION — FROM HOUSE  
FROM HOUSE CORNER  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
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9. USE ARROWS TO SHOW DIRECTION OF SLOPE.

ONE SQUARE EQUALS 10 FEET

RECEIVED

JUL 14 1989

ENVIRONMENTAL HEALTH



LOT 24 - 7048 TOLMIE DR NE



**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 25 – 7043 TOLMIE DR NE**



ADDITIONAL INFORMATION:

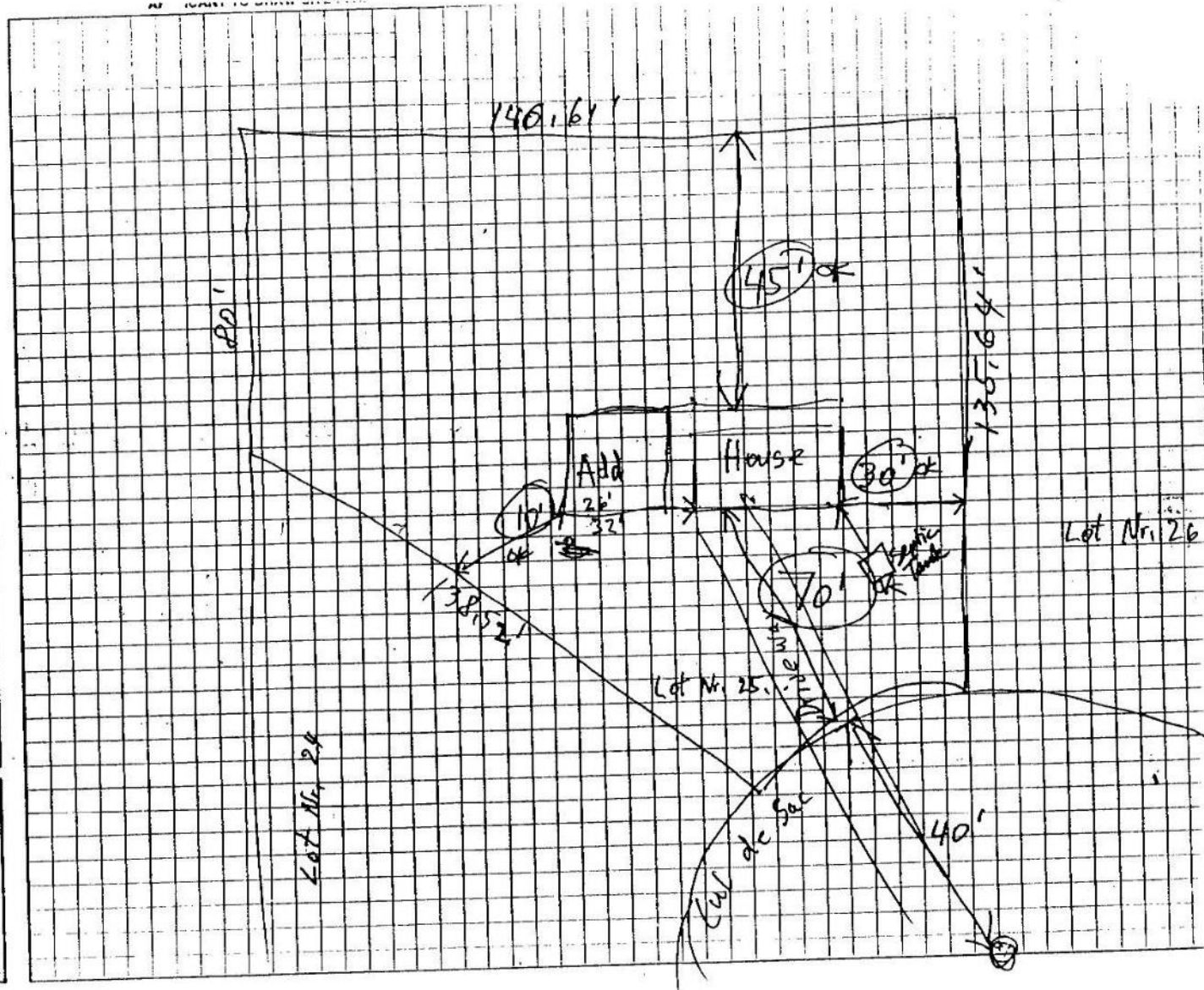
LANDSCAPING  
DRAINAGE PLAN  
HYDRANTS  
TOPOGRAPHY  
LIGHTING  
SIGNAGE  
SHORELINES  
FLOOD ZONES

L  
airie Rd  
North  
ul de Sac  
e to Right



1'

ATTACHMENTS:



LOT 25 - 7043 TOLMIE DR NE

OWNER EUGENE BUCKER  
NEOZICK PARCEL # 8013-00-025 SITE # 8585

ADDRESS \_\_\_\_\_ TWPSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 4-21-82 SEWAGE CONTRACTOR CUSTOM SEPTIC SERVICE

SEPTIC TANK SIZE 1200 7/8 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

## THURSTON COUNTY HEALTH DEPARTMENT

2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

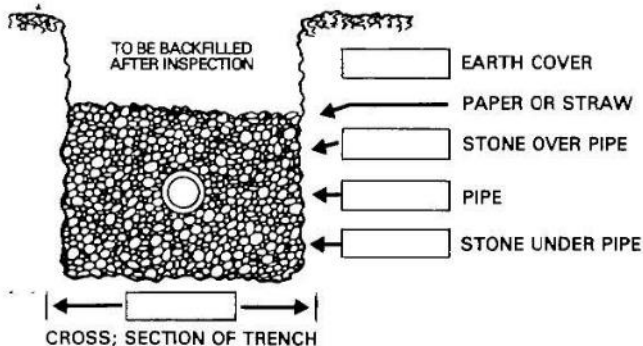
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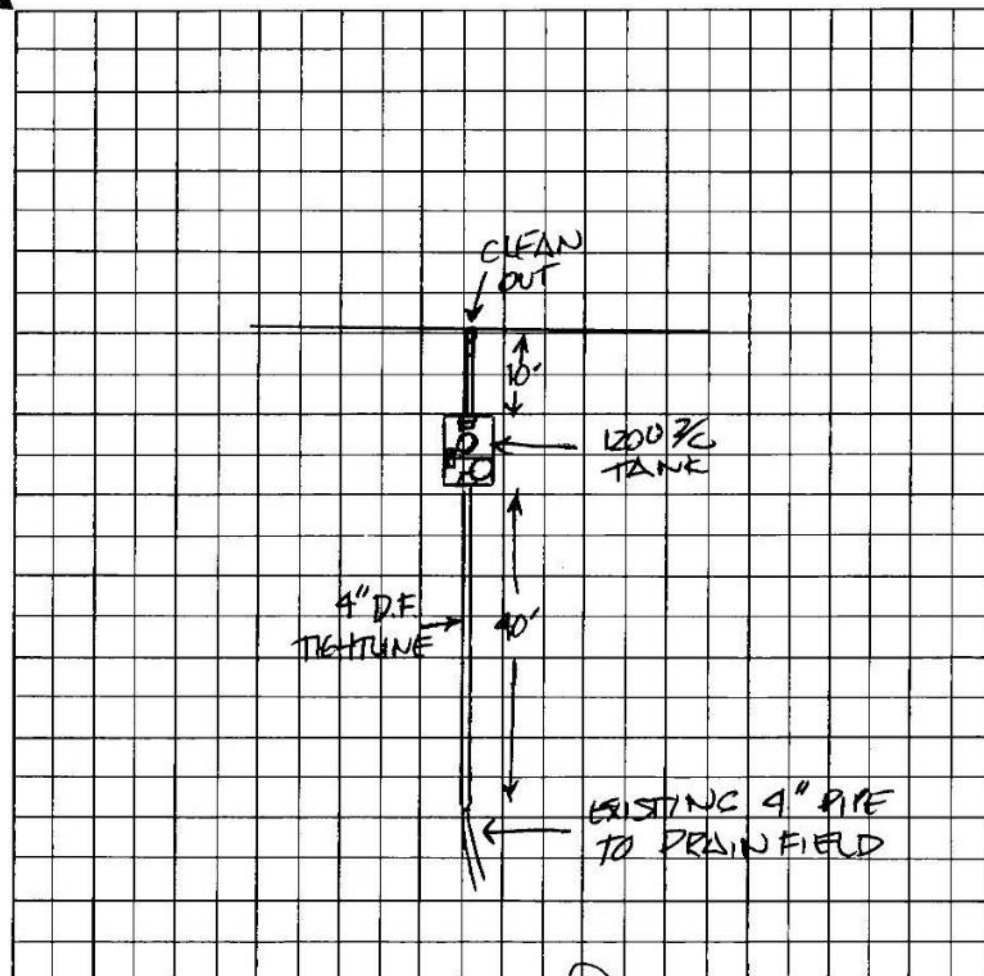
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5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
TANK LOCATION — FROM HOUSE  
FROM HOUSE CORNER  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
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8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
9. USE ARROWS TO SHOW DIRECTION OF SLOPE.

ONE SQUARE EQUALS 10 FEET 5 FT



100'



LOT 25 - 7043 TOLMIE DR NE





EX  
RISER

PROP  
CO

**LOT 26 – 7035 TOLMIE DR NE**



# BUILDING SITE APPLICATION PROJECT PLAN

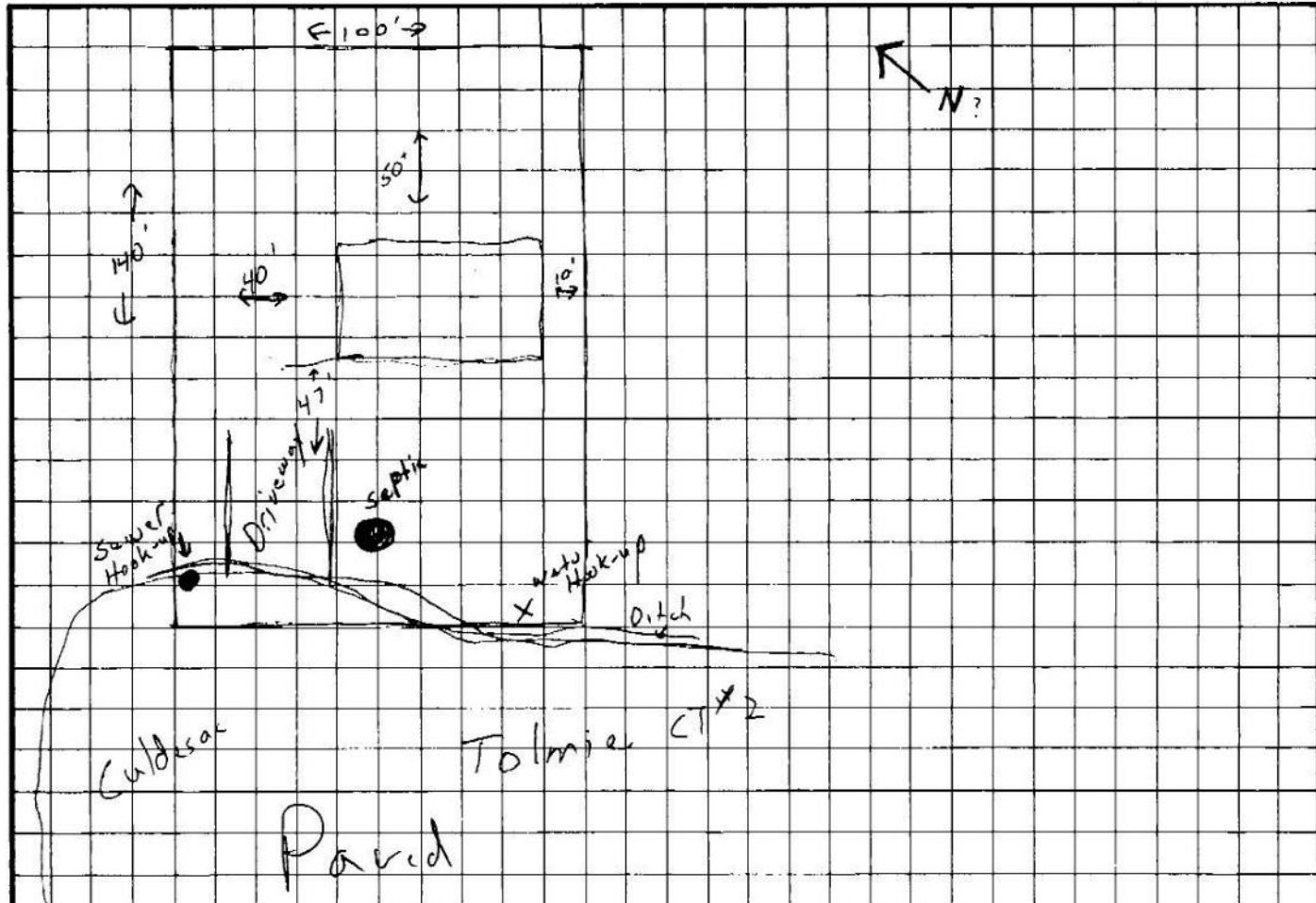
(This is not a permit)

SITE NO. 8746 Lot 26 Tolmie Park Estate PARCEL NO. 80130002600

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- ☒ 1. Indicate north arrow.
- ☒ 2. Property boundary lines.
- ☒ 3. Indicate driveway location from nearest intersection or landmark.
- ☒ 4. Major features of property (ravines, seasonal creeks, bodies of water).
- ☒ 5. Septic system location.

- ☒ 6. Wells or drinking water source.
- ☒ 7. Paved surfaces (i.e. driveways and patios).
- ☒ 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it.
- ☐ 9. Indicate structures - existing or proposed - and distances from lot lines.



80130002600 - Page 19 of 19

LOT 26 - 7035 TOLMIE DR NE



**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 27 – 7027 TOLMIE DR NE**



SITE NO.

12698

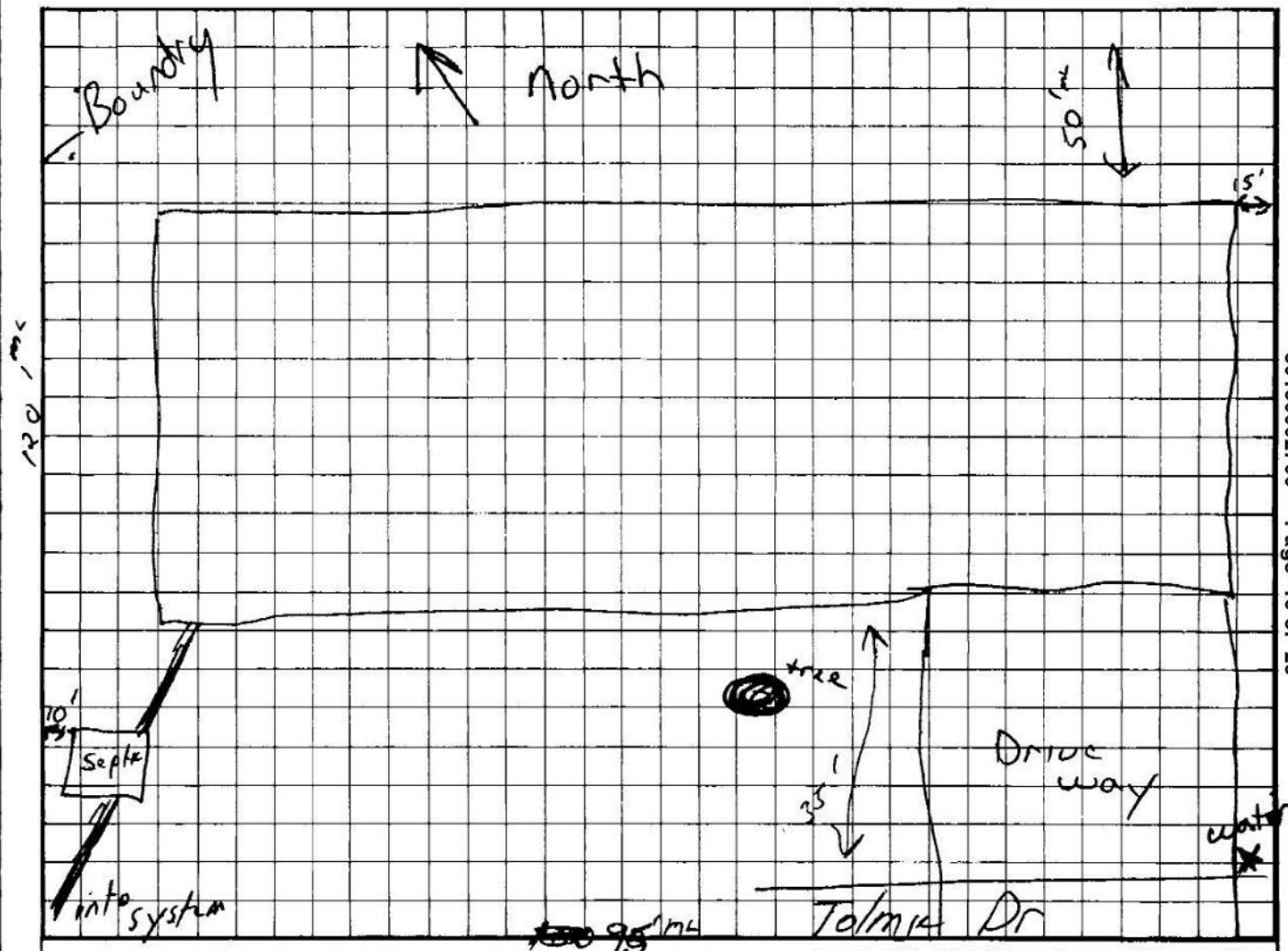
(This is not a permit)

PARCEL NO.

8013-00-02700

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- |   |  |
|---|--|
| <input type="checkbox"/> 1. Indicate north arrow.   | <input type="checkbox"/> 6. Wells or drinking water source.  |
| <input type="checkbox"/> 2. Property boundary lines.  | <input type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).  |
| <input type="checkbox"/> 3. Indicate driveway location from nearest intersection or landmark.       | <input type="checkbox"/> 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it. |
| <input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water). | <input type="checkbox"/> 9. Indicate structures -- existing or proposed -- and distances from lot lines.   |
| <input type="checkbox"/> 5. Septic system location.   |  |



80130002700 - Page 13 of 23

LOT 27 - 7027 TOLMIE DR NE



**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 28 – 7019 TOLMIE DR NE**



# BUILDING SITE APPLICATION PROJECT PLAN

PLEASE PRESS HARD

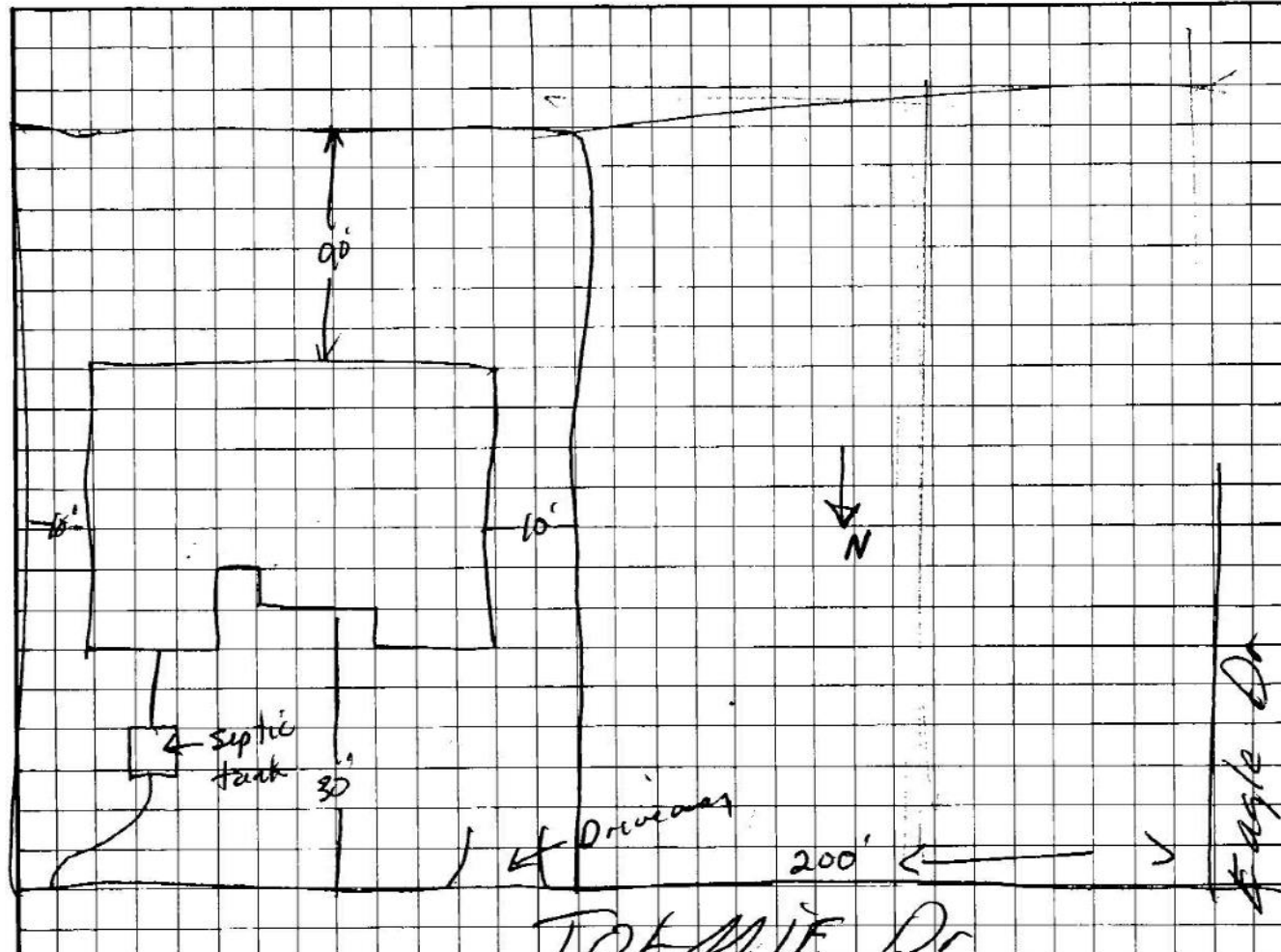
(This is not a permit)

SITE NO.

PARCEL NO.

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE

- |   |  |
|---|--|
| <input type="checkbox"/> 1. Indicate north arrow.   | <input type="checkbox"/> 6. Wells or drinking water source.  |
| <input type="checkbox"/> 2. Property boundary lines.  | <input type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).  |
| <input type="checkbox"/> 3. Indicate driveway location from nearest intersection or landmark.       | <input type="checkbox"/> 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it. |
| <input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water). | <input type="checkbox"/> 9. Indicate structures -- existing or proposed -- and distances from lot lines.   |
| <input type="checkbox"/> 5. Septic system location.   |  |



80130002800 - Page 16 of 17

LOT 28 - 7019 TOLMIE DR NE



**\*FIND TANK\***

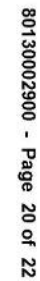
APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 29 – 7015 TOLMIE DR NE**



80 13000 2900



## LOT 29 – 7015 TOLMIE DR NE



**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 30 – 7003 TOLMIE DR NE**



OWNER Richard Chapman PARCEL: P013 00-03000 SITE: 24645

ADDRESS 2016 Mack St. SEC 3 TWPSP 18 ARG 1W

INSTALLATION DATE 6-27-90 SEWAGE CONTRACTOR Custom

SEPTIC TANK SIZE 1200 2k CUBIC Community SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.  
YARDS ROCK Demolition

# THURSTON COUNTY HEALTH DEPARTMENT

2000 LAKE RIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 786-5455

## FINAL INSPECTION RECORD

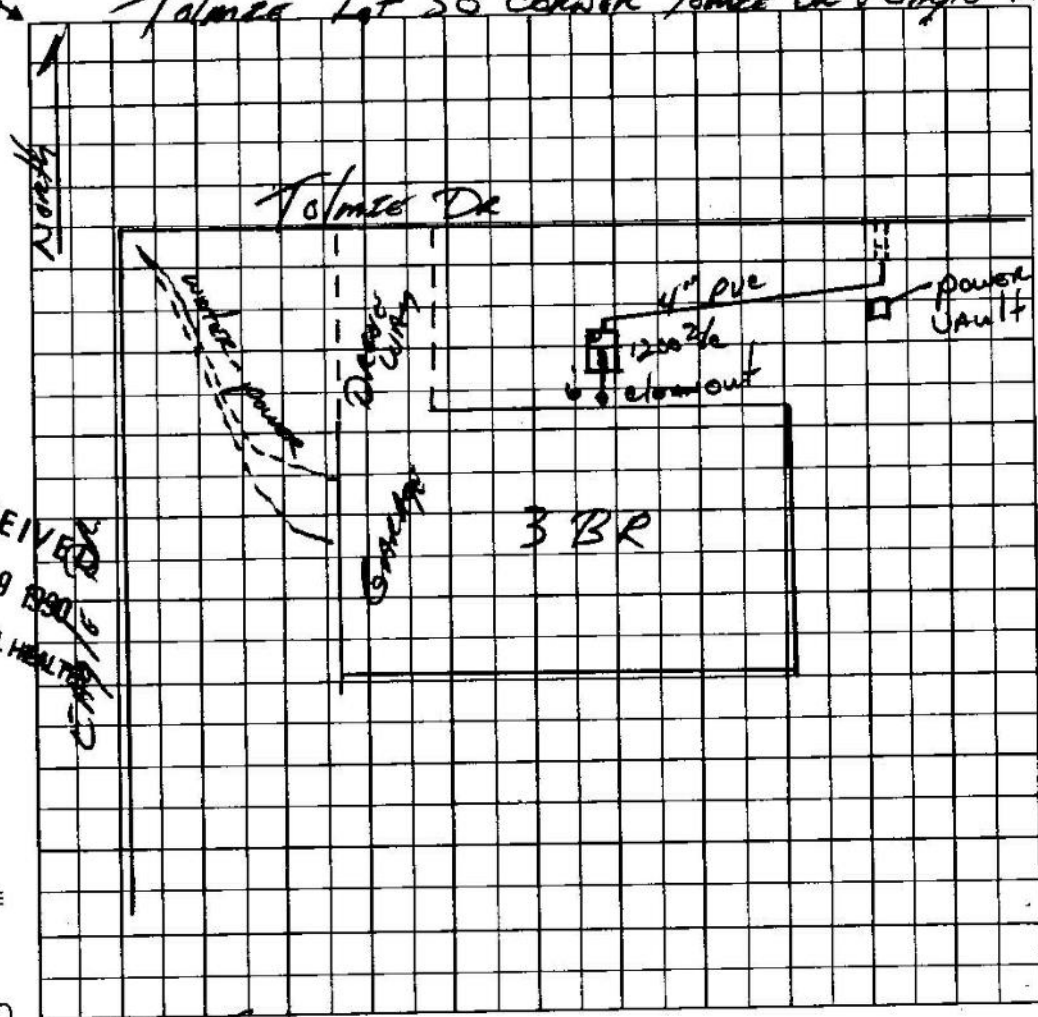
THIS RECORD IS NOT A GUARANTEE OF PERFORMANCE. THE HEALTH DEPARTMENT RECOMMENDS THE SEPTIC TANK ITSELF SHOULD BE PUMPED AND INSPECTED EVERY THREE TO FIVE YEARS, DEPENDING ON HOW POOR THE DRAINAGE IN THE AREA IS. REDUCTION IN HOUSE WATER USE WILL EXTEND THE DRAINFIELD LIFE.

INDICATE THE FOLLOWING INFORMATION, IF KNOWN, ON THE DRAWING:

1. RESIDENCE LOCATION AND DIMENSIONS.
  2. PAVED SURFACES (I.E., PATIOS, DRIVEWAYS, ETC.)
  3. WELLS OR SURFACE WATER SOURCES.
  4. DIRECTIONS OF DRAINAGE.
  5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
TANK LOCATION - FROM HOUSE  
FROM HOUSE CORNER  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
  6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
  7. LABEL ALL SETBACKS, I.E. FROM WATER, PROPERTY LINES, COUNTRY ROADS, ETC.
  8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
  9. USE ARROWS TO SHOW DIRECTION OF SLOPE.
- ONE SQUARE EQUALS 10 FEET

100'

Tolmie Lot 30 Corner Tolmie Dr & Eagle Dr



Community Demolition

TO BE BACKFILLED AFTER INSPECTION



- ☐ EARTH COVER
- ☐ PAPER OR STRAW
- ☐ STONE OVER PIPE
- ☐ PIPE
- ☐ STONE UNDER PIPE

CROSS SECTION OF TRENCH

RECEIVED  
JUL 19 1990  
ENVIRONMENTAL HEALTH

LOT 30 - 7003 TOLMIE DR NE

# APPENDIX A

## PROPOSED CONNECTIONS AND SEPTIC AS-BUILTS

### Phase 3 Lots 31 - 47

#### **General Notes:**

1. Locations and routes are diagrammatic and relative to the photo taken. Actual locations of new meter services shall be located in the field with the Engineer. All efforts shall be taken to avoid mature landscaping, irrigation, electrical and other improvements to avoid costly restoration.



**\*FIND TANK\***

**General Notes:**

1. Locations and routes are diagrammatic and relative to the photo taken. Actual locations shall be located in the field with the Engineer. All efforts shall be taken to avoid mature landscaping, irrigation, electrical and other improvements to avoid costly restoration.



**LOT 31 – 6049 TOLMIE DR NE AKA 3307 EAGLE DR NE**







**\*FIND TANK\***

EX  
CO

PROP  
CO

**LOT 32 – 6041 TOLMIE DR NE**

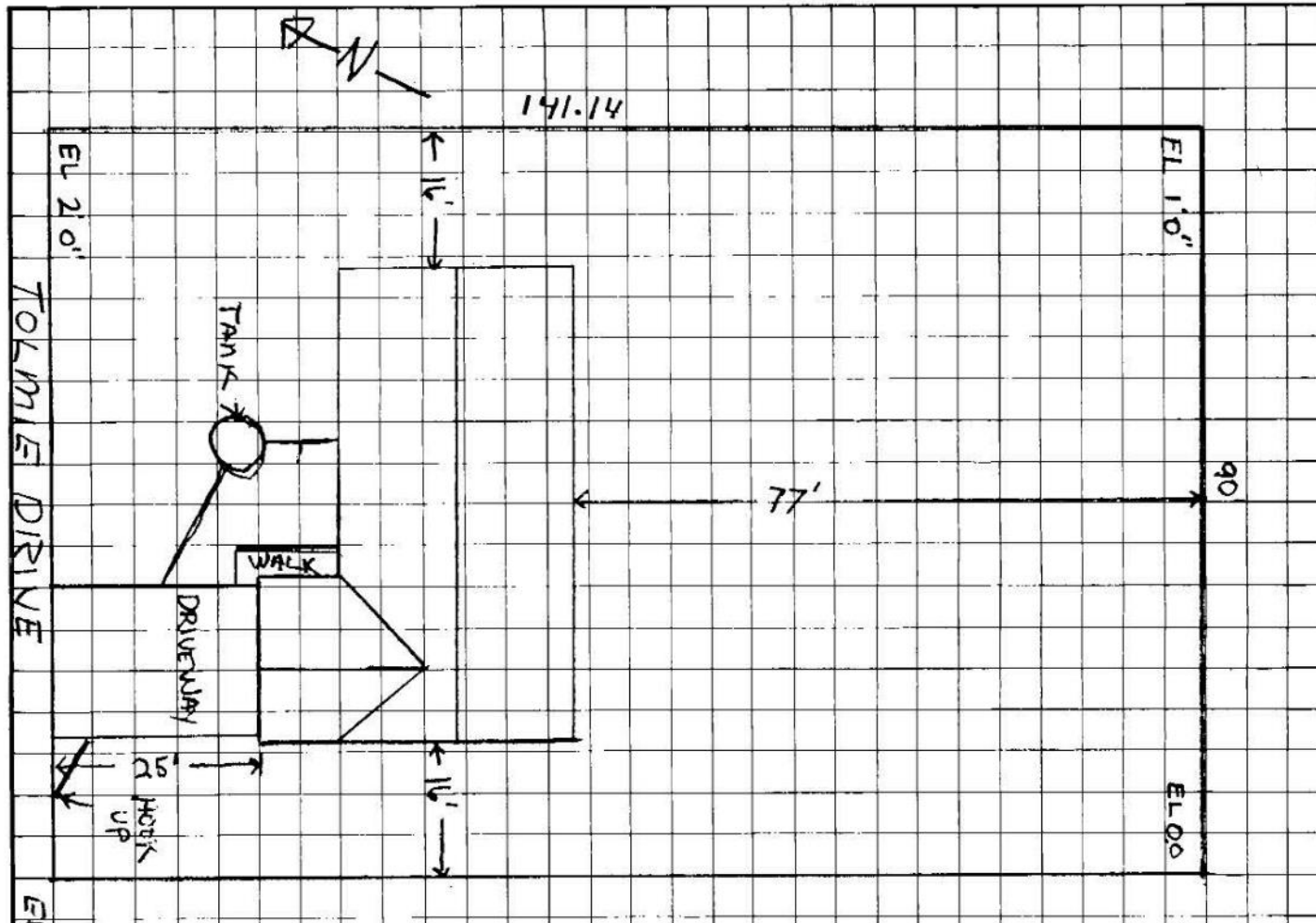


(This is not a permit)

SITE NO. 11115PARCEL NO. 80140003200

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- |   |  |
|---|--|
| <input type="checkbox"/> 1. Indicate north arrow.   | <input type="checkbox"/> 6. Wells or drinking water source.  |
| <input type="checkbox"/> 2. Property boundary lines.  | <input type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).  |
| <input type="checkbox"/> 3. Indicate driveway location from nearest intersection or landmark.       | <input type="checkbox"/> 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it. |
| <input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water). | <input type="checkbox"/> 9. Indicate structures -- existing or proposed -- and distances from lot lines.   |
| <input type="checkbox"/> 5. Septic system location.   |  |





**\*FIND TANK\***



**LOT 33 – 6037 TOLMIE DR NE**



# BUILDING SITE APPLICATION PROJECT PLAN

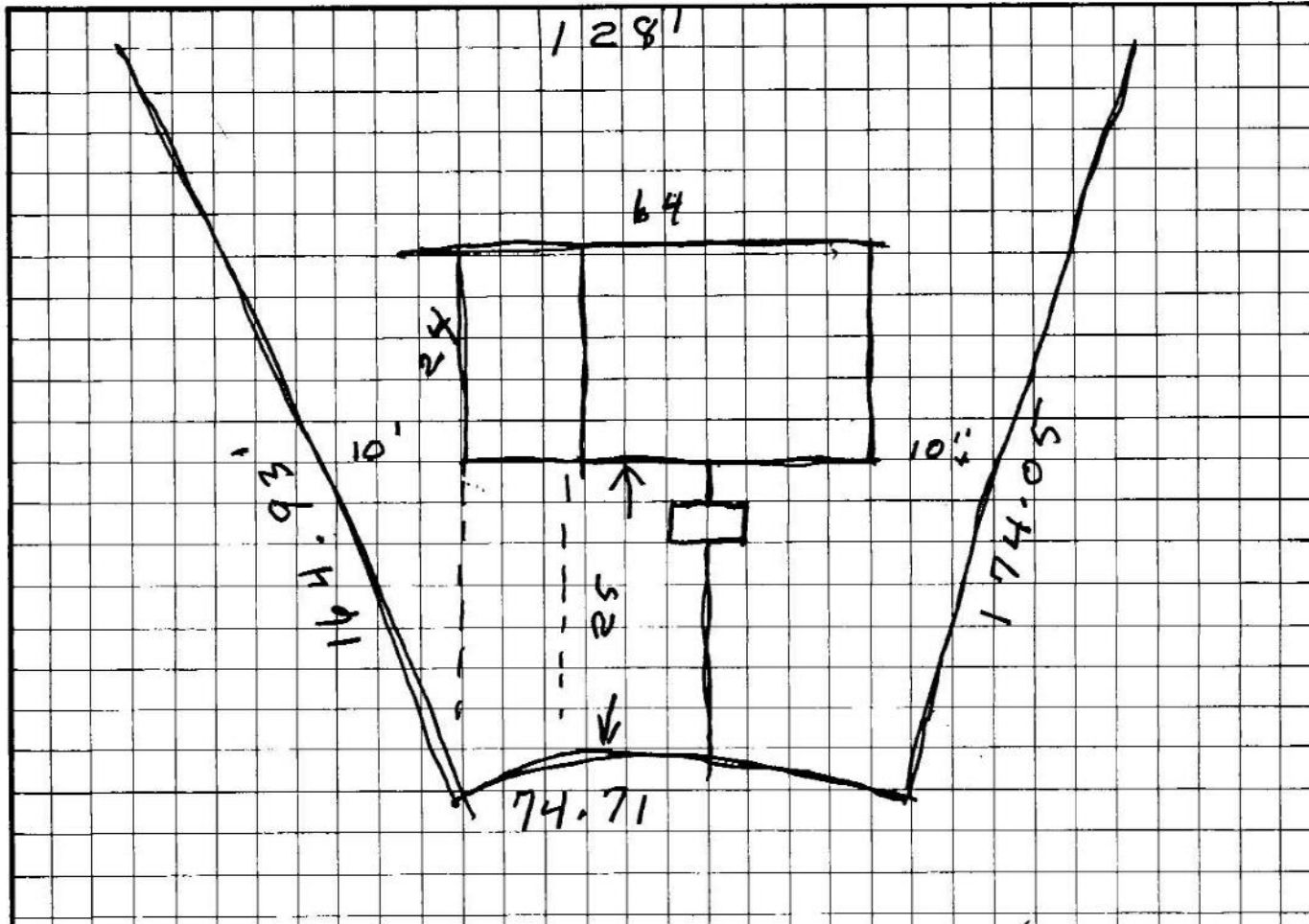
(This is not a permit)

SITE NO. 10366

PARCEL NO. 8012-00 - 033

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- |   |  |
|---|--|
| <input type="checkbox"/> 1. Indicate north arrow.   | <input type="checkbox"/> 6. Wells or drinking water source.  |
| <input type="checkbox"/> 2. Property boundary lines.  | <input type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).  |
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| <input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water). | <input type="checkbox"/> 9. Indicate structures -- existing or proposed -- and distances from lot lines.   |
| <input type="checkbox"/> 5. Septic system location.   |  |



80140003300 - Page 27 of 28

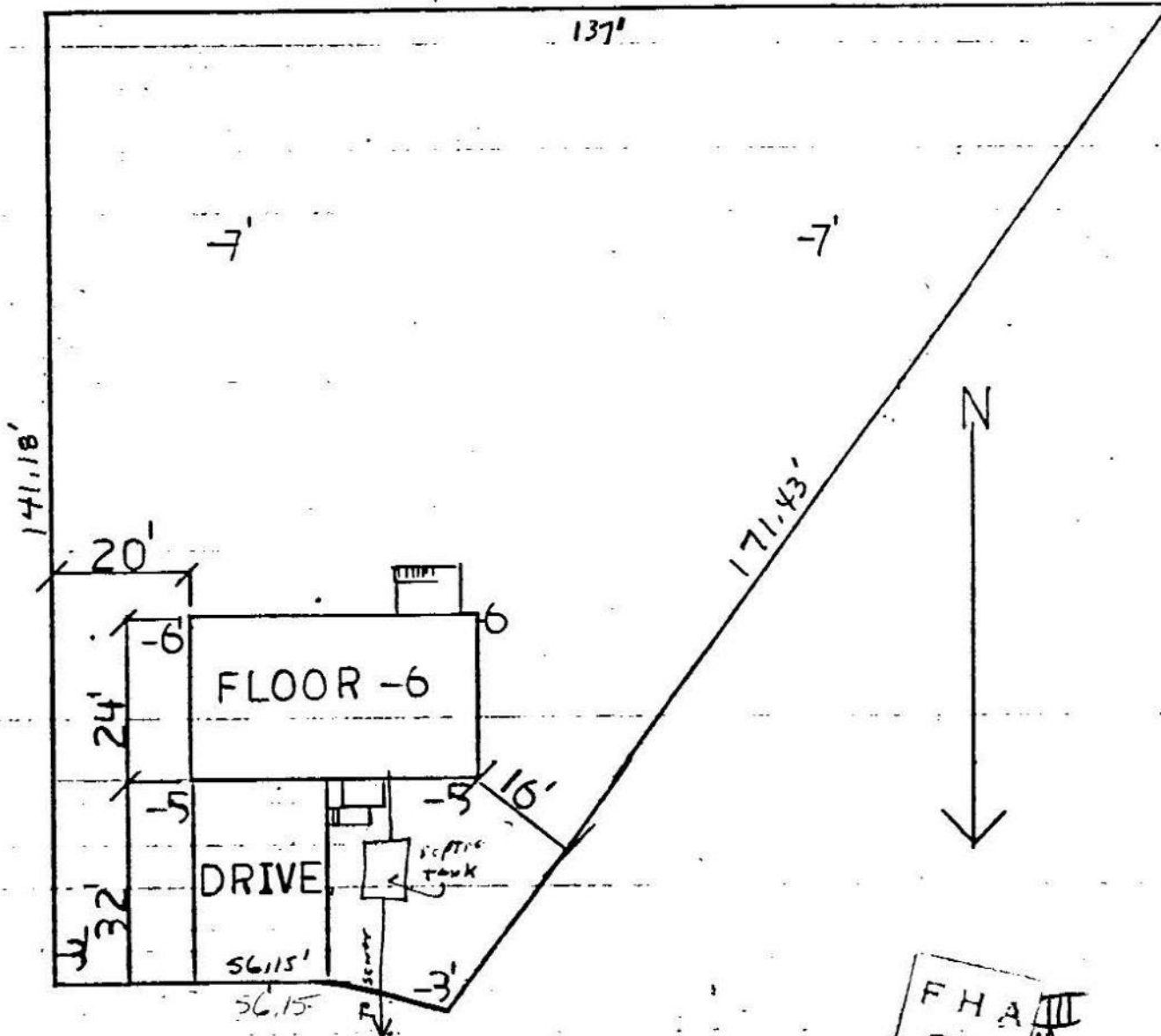
LOT 33 - 6037 TOLMIE DR NE





**LOT 34 – 6033 TOLMIE DR NE**





LOT 34 TOLMIE PARK ESTATES  
(60' SEWER - 8')

FHA III  
SET.  
DIV.

These



**\*FIND TANK\***



**LOT 35 – 6031 TOLMIE DR NE**



(This is not a permit)

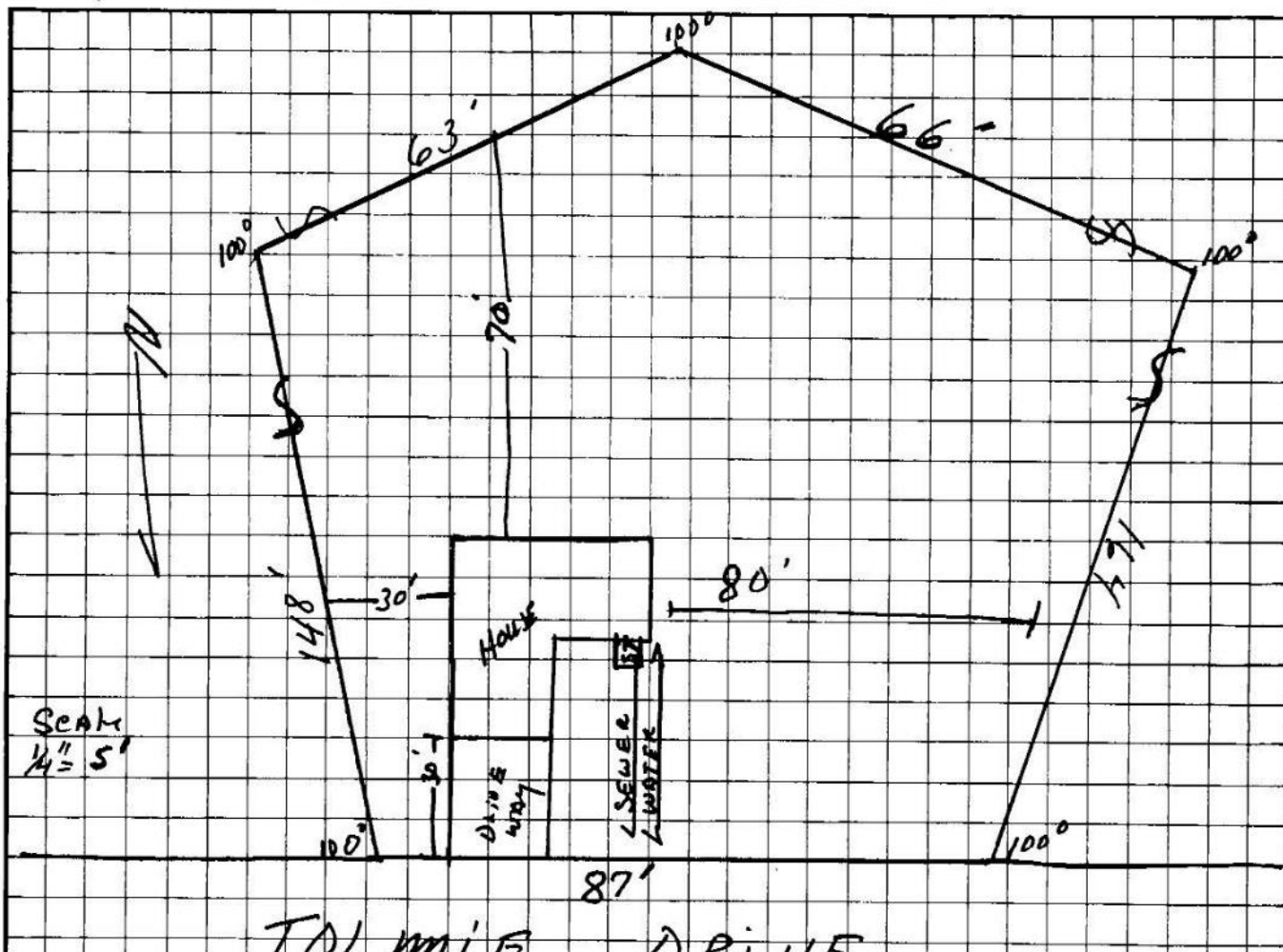
SITE NO. \_\_\_\_\_

PARCEL NO. \_\_\_\_\_

8014-00-035

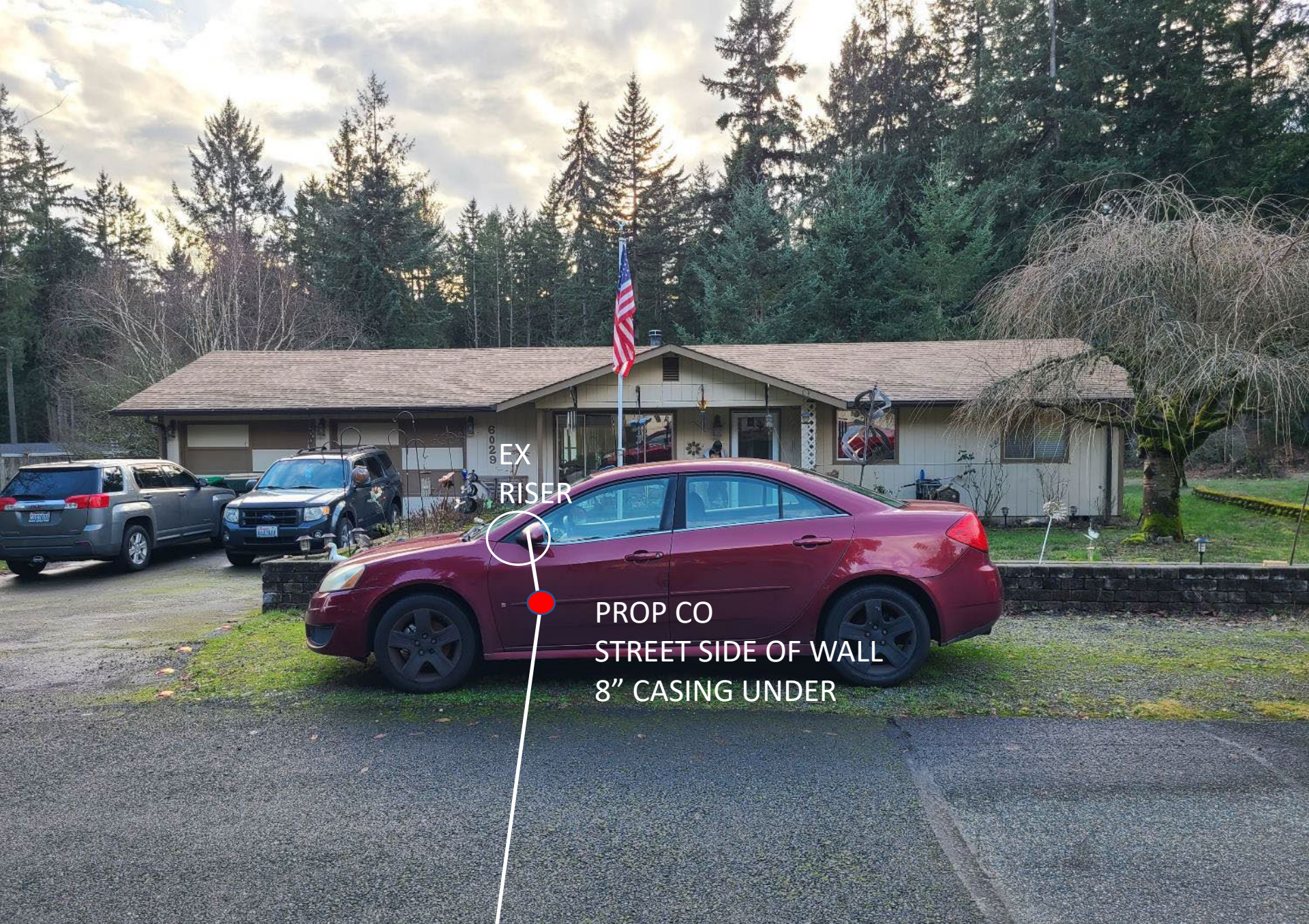
INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- |   |  |
|---|--|
| <input type="checkbox"/> 1. Indicate north arrow.   | <input type="checkbox"/> 6. Wells or drinking water source.  |
| <input type="checkbox"/> 2. Property boundary lines.  | <input type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).  |
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| <input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water). | <input type="checkbox"/> 9. Indicate structures -- existing or proposed -- and distances from lot lines.   |
| <input type="checkbox"/> 5. Septic system location.   |  |



80140003500 - Page 12 of 13





LOT 36 – 6029 TOLMIE DR NE



OWNER John Cornell PARCEL # 8012-00-036 SITE # 10368

ADDRESS \_\_\_\_\_ TWP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 5-25-83 SEWAGE CONTRACTOR J+M

SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

# THURSTON COUNTY HEALTH DEPARTMENT

2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

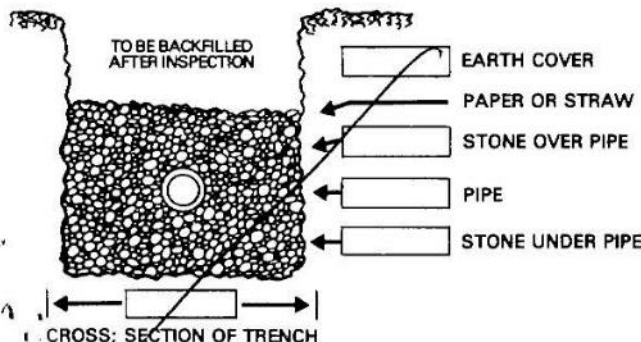
## FINAL INSPECTION RECORD

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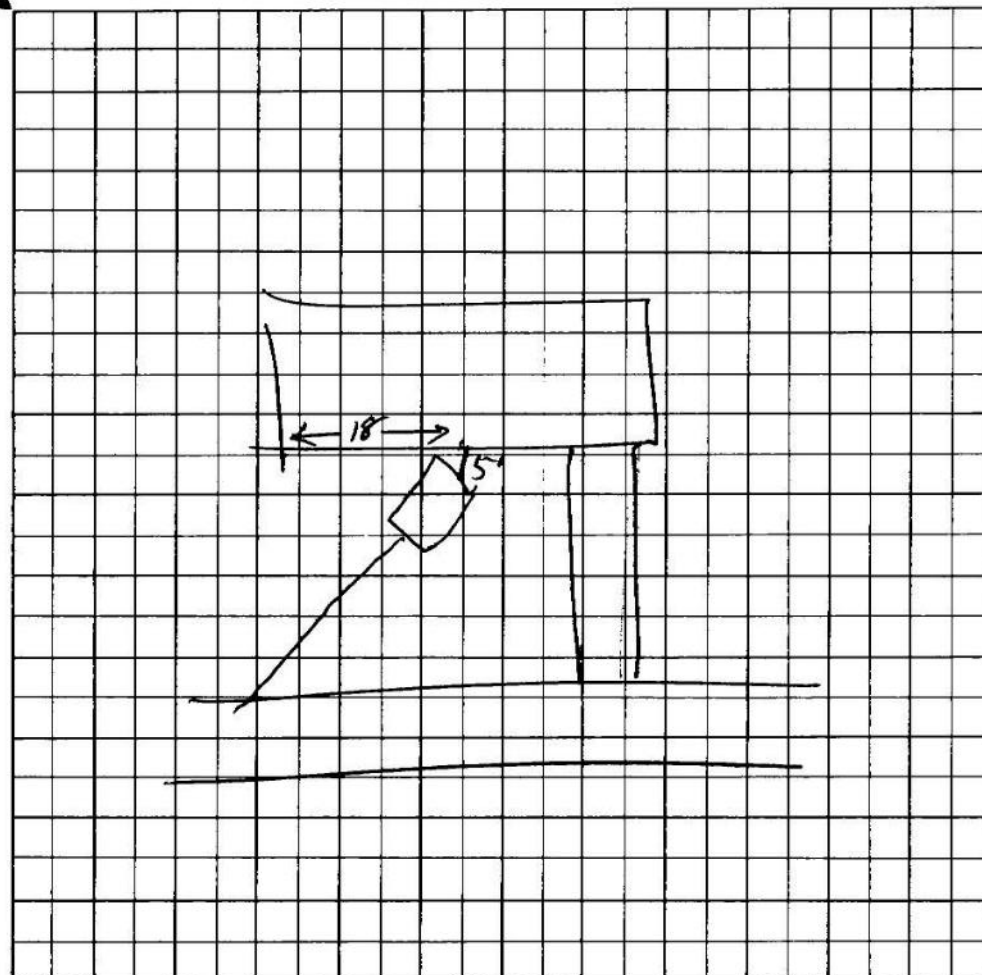
INDICATE THE FOLLOWING INFORMATION, IF KNOWN, ON THE DRAWING:

1. RESIDENCE LOCATION AND DIMENSIONS.
2. PAVED SURFACES (I.E., PATIOS, DRIVEWAYS, ETC.)
3. WELLS OR SURFACE WATER SOURCES.
4. DIRECTIONS OF DRAINAGE.
5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
TANK LOCATION — FROM HOUSE  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
7. LABEL ALL SETBACKS, I.E. FROM WATER, PROPERTY LINES, COUNTRY ROADS, ETC.
8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
9. USE ARROWS TO SHOW DIRECTION OF SLOPE.

ONE SQUARE EQUALS 10 FEET



100'



DATE 7-29-87 CERTIFIED BY [Signature] APPROVED BY \_\_\_\_\_





EX  
CO

PROP  
CO

**LOT 37 – 6025 TOLMIE DR NE**



# BUILDING SITE APPLICATION PROJECT PLAN

(This is not a permit)

SITE NO.

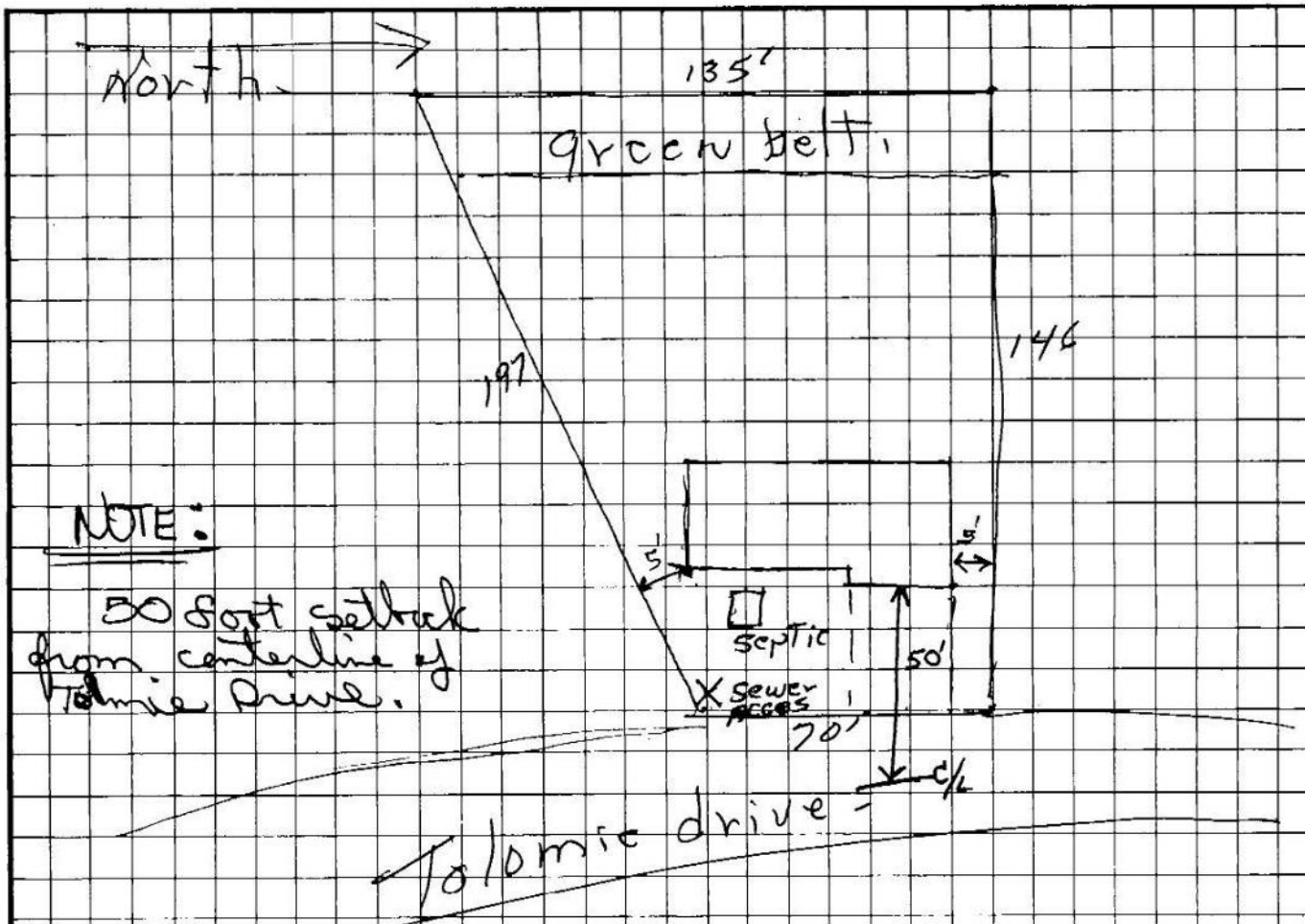
10429

PARCEL NO.

#37

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- |   |  |
|---|--|
| <input type="checkbox"/> 1. Indicate north arrow.   | <input type="checkbox"/> 6. Wells or drinking water source.  |
| <input type="checkbox"/> 2. Property boundary lines.  | <input type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).  |
| <input type="checkbox"/> 3. Indicate driveway location from nearest intersection or landmark.       | <input type="checkbox"/> 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it. |
| <input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water). | <input type="checkbox"/> 9. Indicate structures - existing or proposed - and distances from lot lines.   |
| <input type="checkbox"/> 5. Septic system location.   |  |



80140003700 - Page 11 of 12

LOT 37 - 6025 TOLMIE DR NE





EX  
CO

PROP  
CO

LOT 38 – 6021 TOLMIE DR NE



# BUILDING SITE APPLICATION PROJECT PLAN

(This is not a permit)

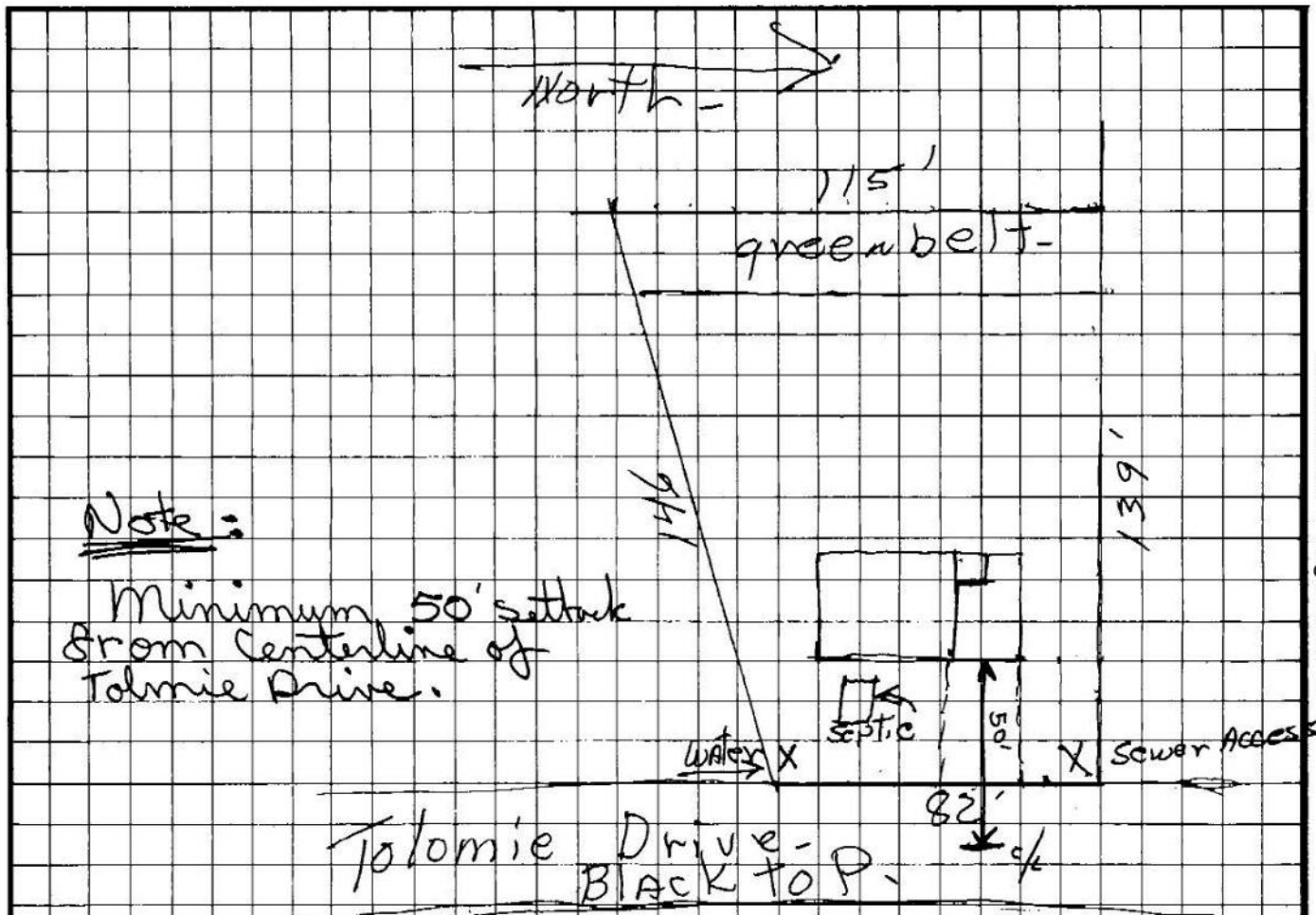
SITE NO. \_\_\_\_\_

PARCEL NO. \_\_\_\_\_

Lot #38 8012-00-038

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> 1. Indicate north arrow.  | <input type="checkbox"/> 6. Wells or drinking water source.  |
| <input type="checkbox"/> 2. Property boundary lines.  | <input type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).  |
| <input type="checkbox"/> 3. Indicate driveway location from nearest intersection or landmark.       | <input type="checkbox"/> 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it. |
| <input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water). | <input type="checkbox"/> 9. Indicate structures - existing or proposed - and distances from lot lines.   |
| <input type="checkbox"/> 5. Septic system location.   |  |



80140003800 - Page 13 of 14

LOT 38 - 6021 TOLMIE DR NE



**\*FIND TANK\***



APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 39 – 6015 TOLMIE DR NE**



# BUILDING SITE APPLICATION PROJECT PLAN

PLEASE PRESS HARD

SITE NO.

11761

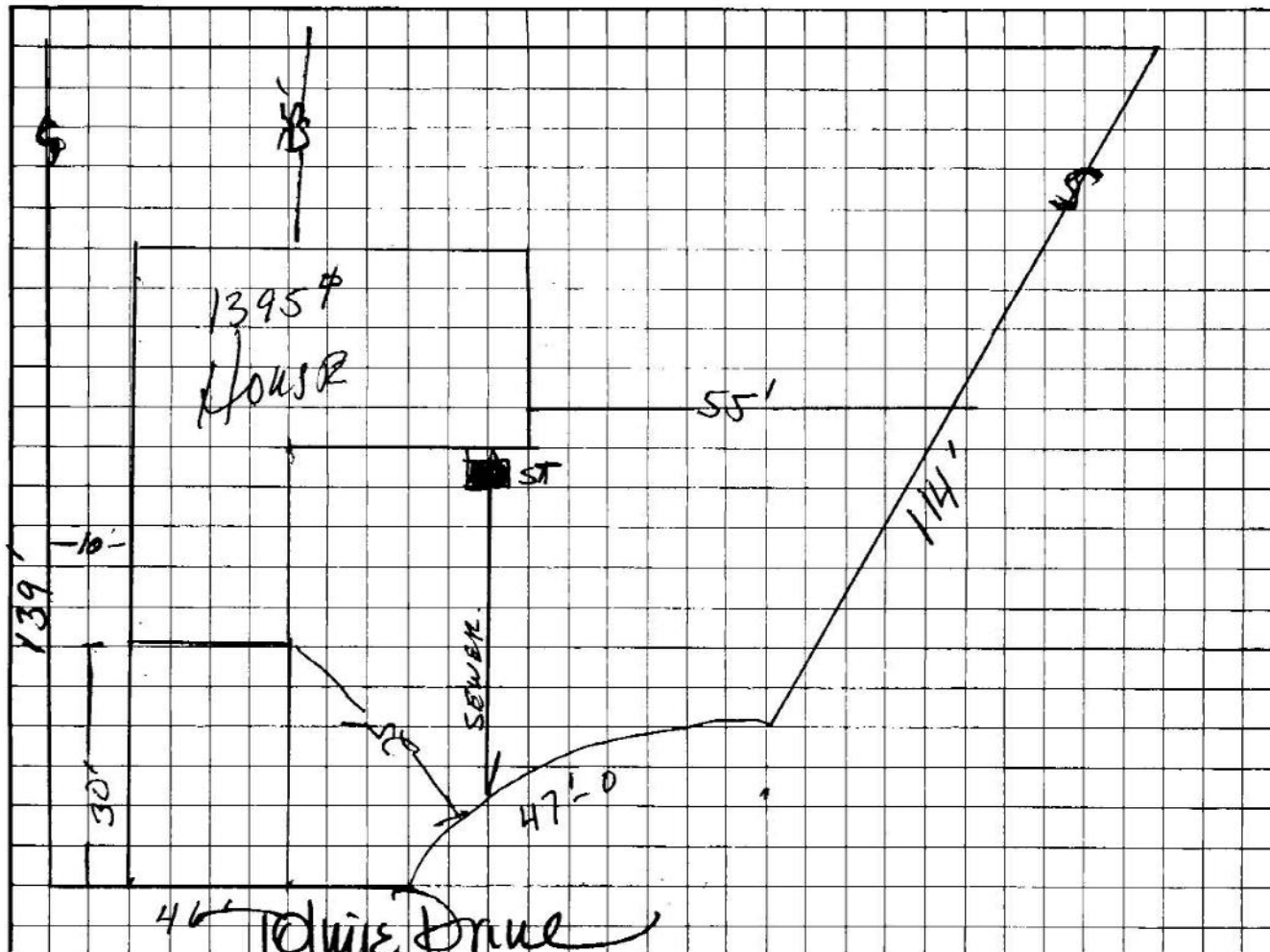
(This is not a permit)

PARCEL NO.

8014-00-3900

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> 1. Indicate north arrow.</li> <li><input type="checkbox"/> 2. Property boundary lines.</li> <li><input type="checkbox"/> 3. Indicate driveway location from nearest intersection or landmark.</li> <li><input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water).</li> <li><input type="checkbox"/> 5. Septic system location.</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> 6. Wells or drinking water source.</li> <li><input type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).</li> <li><input type="checkbox"/> 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it.</li> <li><input type="checkbox"/> 9. Indicate structures -- existing or proposed -- and distances from lot lines.</li> </ul> |
|--|--|



80140003900 - Page 11 of 12

LOT 39 - 6015 TOLMIE DR NE





PROP  
CO

EX CO  
1' BELOW SURFACE

LOT 40 – 6001 TOLMIE DR NE



# BUILDING SITE APPLICATION PROJECT PLAN

PLEASE PRESS HARD

(This is not a permit)

SITE NO.

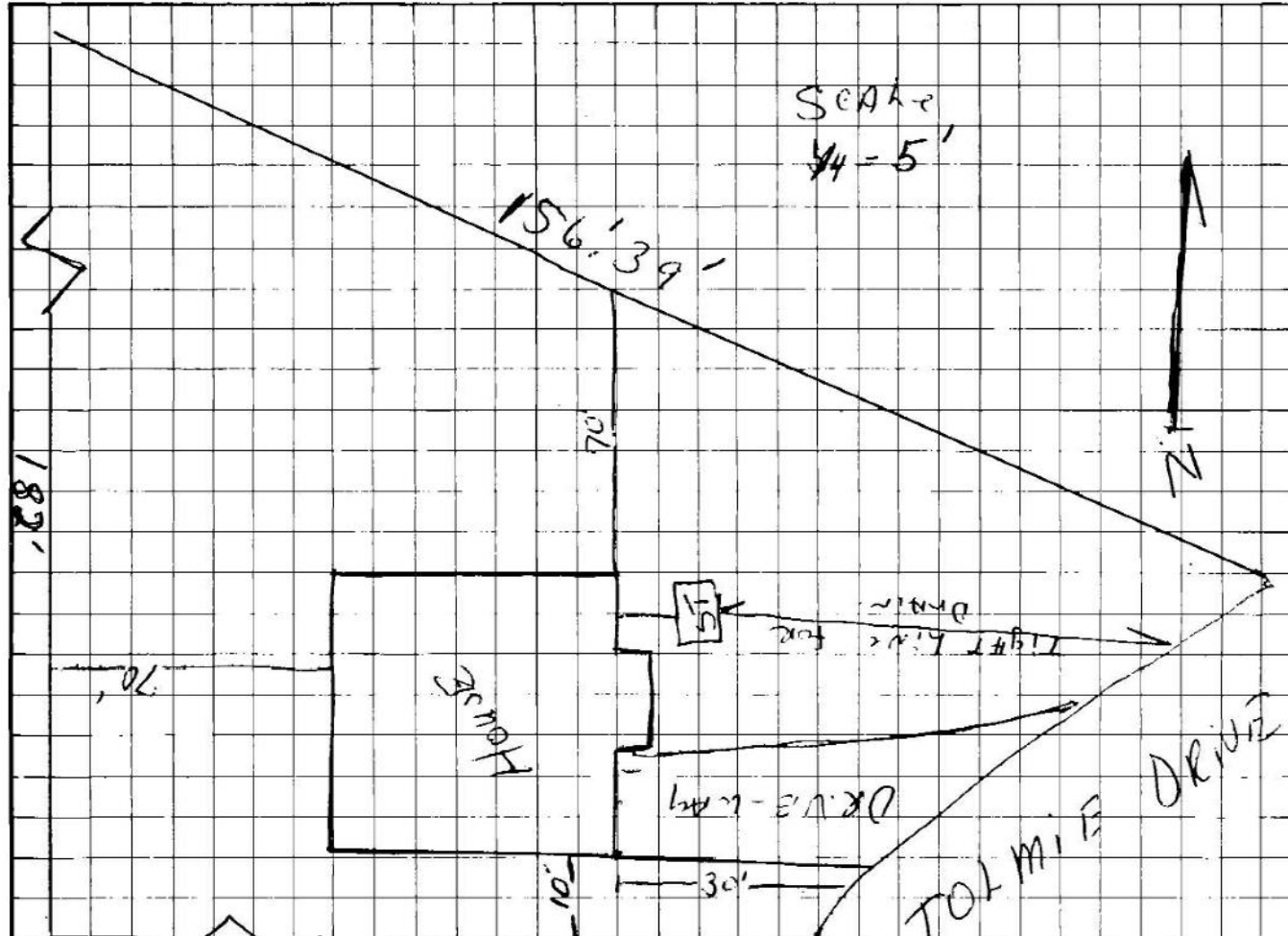
11593

PARCEL NO.

8014-000-4000

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- ☐ 1. Indicate north arrow.
- ☐ 2. Property boundary lines.
- ☐ 3. Indicate driveway location from nearest intersection or landmark.
- ☐ 4. Major features of property (ravines, seasonal creeks, bodies of water).
- ☐ 5. Septic system location.
- ☐ 6. Wells or drinking water source.
- ☐ 7. Paved surfaces (i.e. driveways and patios).
- ☐ 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it.
- ☐ 9. Indicate structures - existing or proposed - and distances from lot lines.



80140004000 - Page 20 of 21

LOT 40 - 6001 TOLMIE DR NE





LOT 41 – 6002 TOLMIE DR NE



OWNER Vorhes Custom Builders SITE # 10523A  
 ADDRESS Lot 41 Div #3 Tolmie TWNSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_  
 INSTALLATION DATE \_\_\_\_\_ SEWAGE CONTRACTOR Cascade Sepsis  
 SEPTIC TANK SIZE \_\_\_\_\_ CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

# THURSTON COUNTY HEALTH DEPARTMENT

2000 LAKERIDGE DR. S.W.  
 OLYMPIA WA. 98502  
 PHONE 753-8073

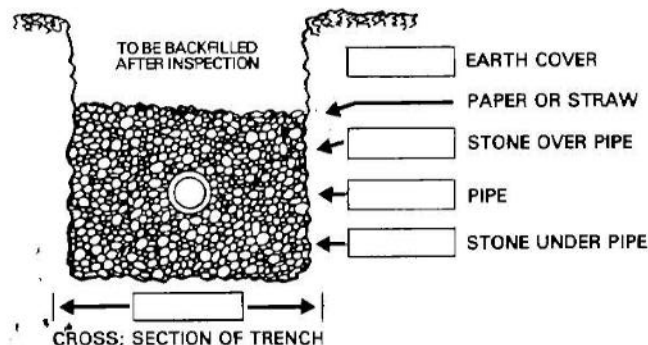
OCT 13 1983

## FINAL INSPECTION RECORD

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INDICATE THE FOLLOWING INFORMATION, IF KNOWN, ON THE DRAWING:

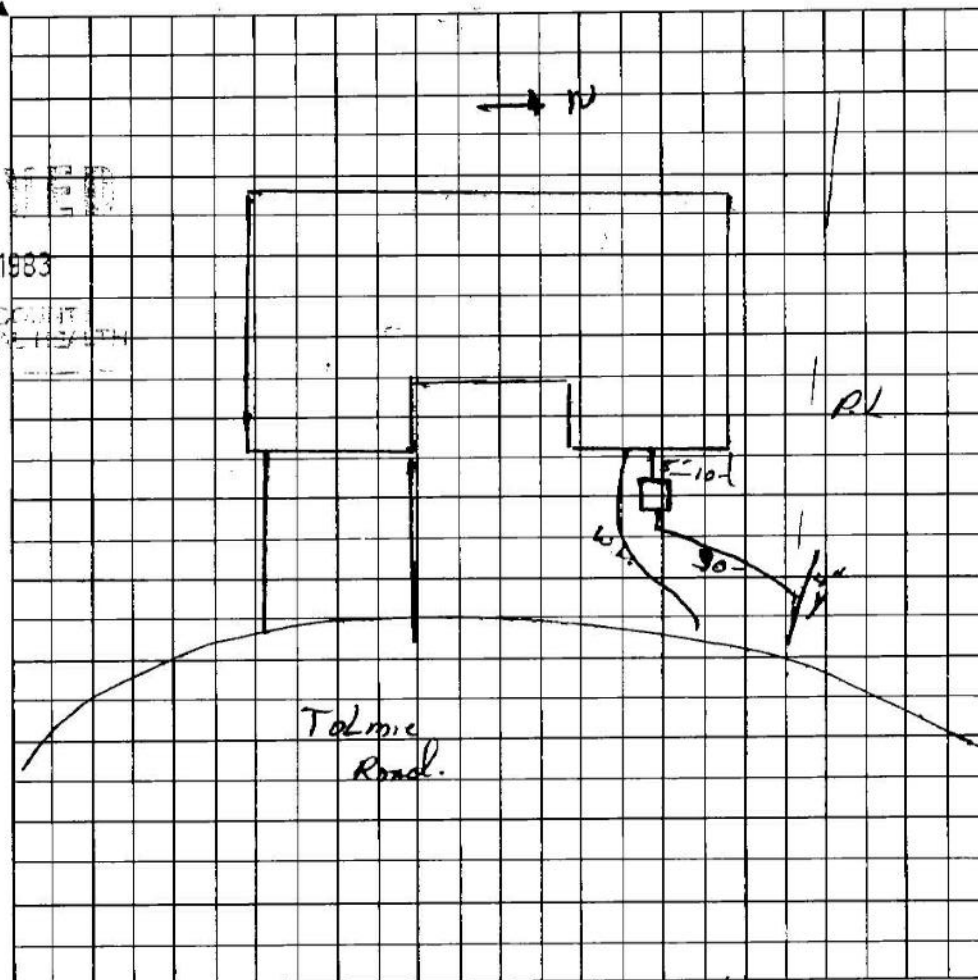
1. RESIDENCE LOCATION AND DIMENSIONS.
2. PAVED SURFACES (I.E., PATIOS, DRIVEWAYS, ETC.)
3. WELLS OR SURFACE WATER SOURCES.
4. DIRECTIONS OF DRAINAGE.
5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
 TANK LOCATION — FROM HOUSE  
 FROM HOUSE CORNER  
 DRAINFIELD LENGTH AND LOCATION  
 LOCATION & LENGTH OF ALL TIGHT LINES
6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
7. LABEL ALL SETBACKS, I.E. FROM WATER, PROPERTY LINES, COUNTRY ROADS, ETC.
8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
9. USE ARROWS TO SHOW DIRECTION OF SLOPE.  
 ONE SQUARE EQUALS 10 FEET



RECEIVED

OCT 19 1983

THURSTON COUNTY  
 ENVIRONMENTAL HEALTH



DATE

CERTIFIED BY

*MJ Martin*

APPROVED BY

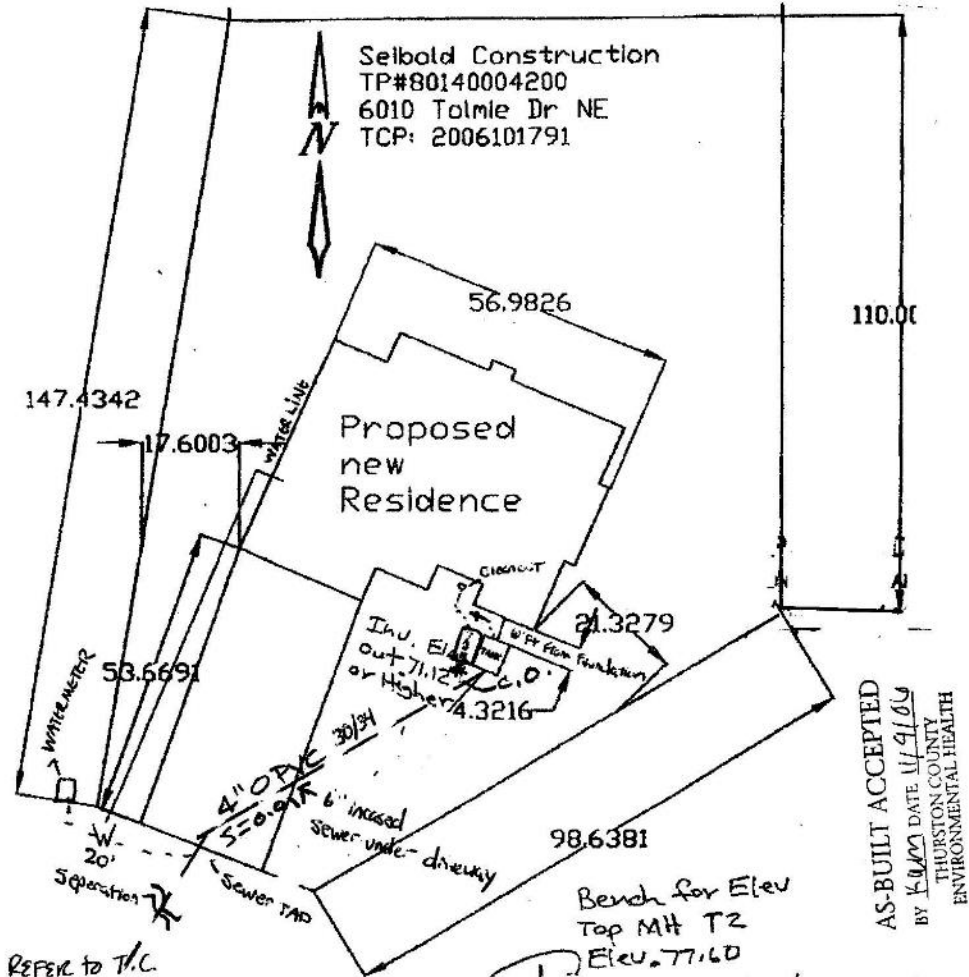
*Art Harny*





**LOT 42 – 6010 TOLMIE DR NE**





REFER to T.C.  
Act IV + WAC  
For tank requirements  
CMC 5/30/09

MINIMUM 1000 gallon  
(a) 9. consent. (b) approved manufacturer. (c) all equipment will maintain 100% efficiency

Installer - Terry Helton Const. L.L.C.

\* Dist. installed with  
white riser + cap.



**\*FIND TANK\***

APPROX.  
CONNECTION  
LOCATION

PROP  
CO

**LOT 43 – 7010 TOLMIE DR NE**



# BUILDING SITE APPLICATION PROJECT PLAN

PLEASE PRESS HARD

(This is not a permit)

SITE NO.

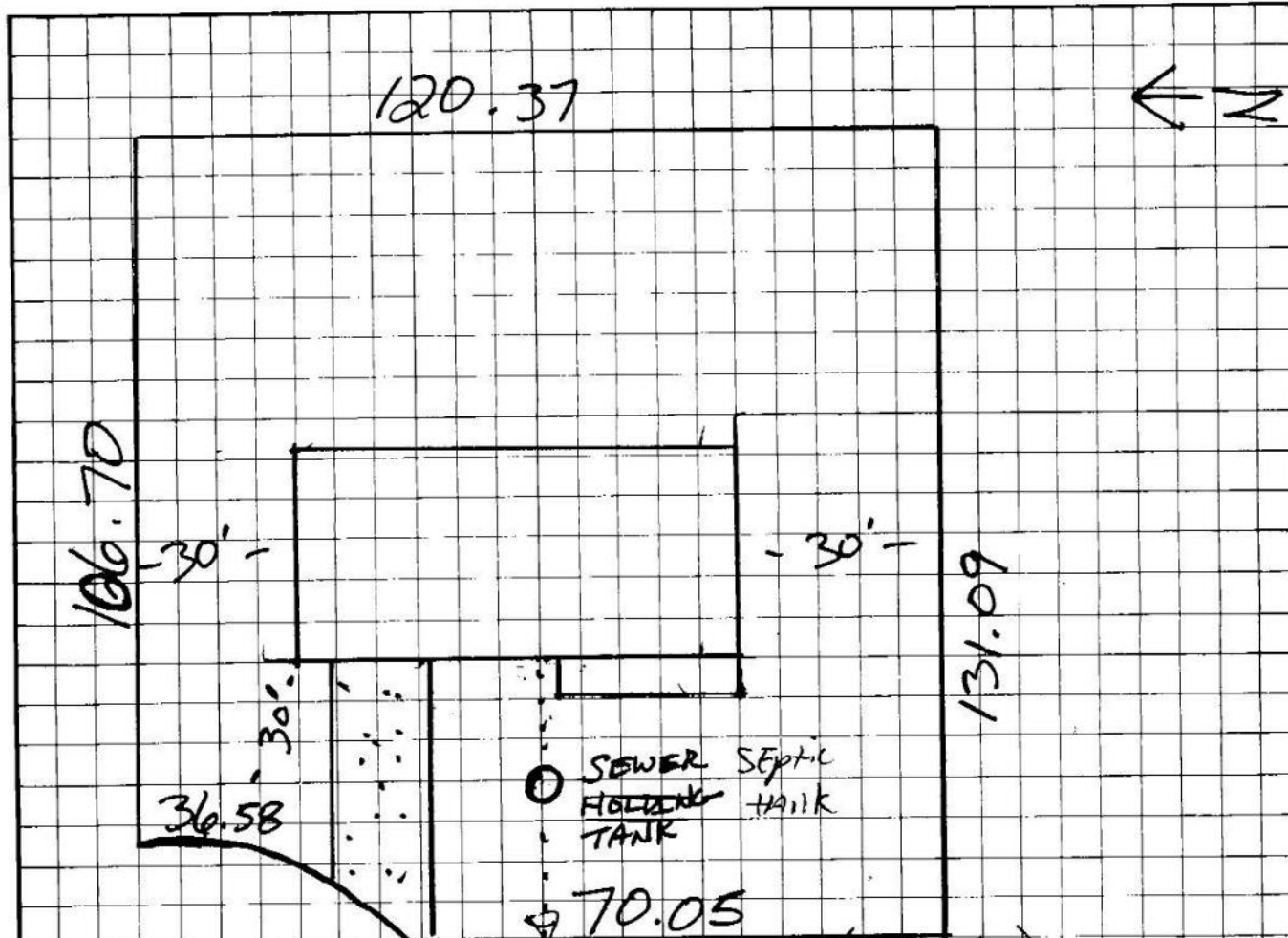
14950

PARCEL NO.

801400 04300

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- ☐ 1. Indicate north arrow.
- ☐ 2. Property boundary lines.
- ☐ 3. Indicate driveway location from nearest intersection or landmark.
- ☐ 4. Major features of property (ravines, seasonal creeks, bodies of water).
- ☐ 5. Septic system location.
- ☐ 6. Wells or drinking water source.
- ☐ 7. Paved surfaces (i.e. driveways and patios).
- ☐ 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it.
- ☐ 9. Indicate structures -- existing or proposed -- and distances from lot lines.





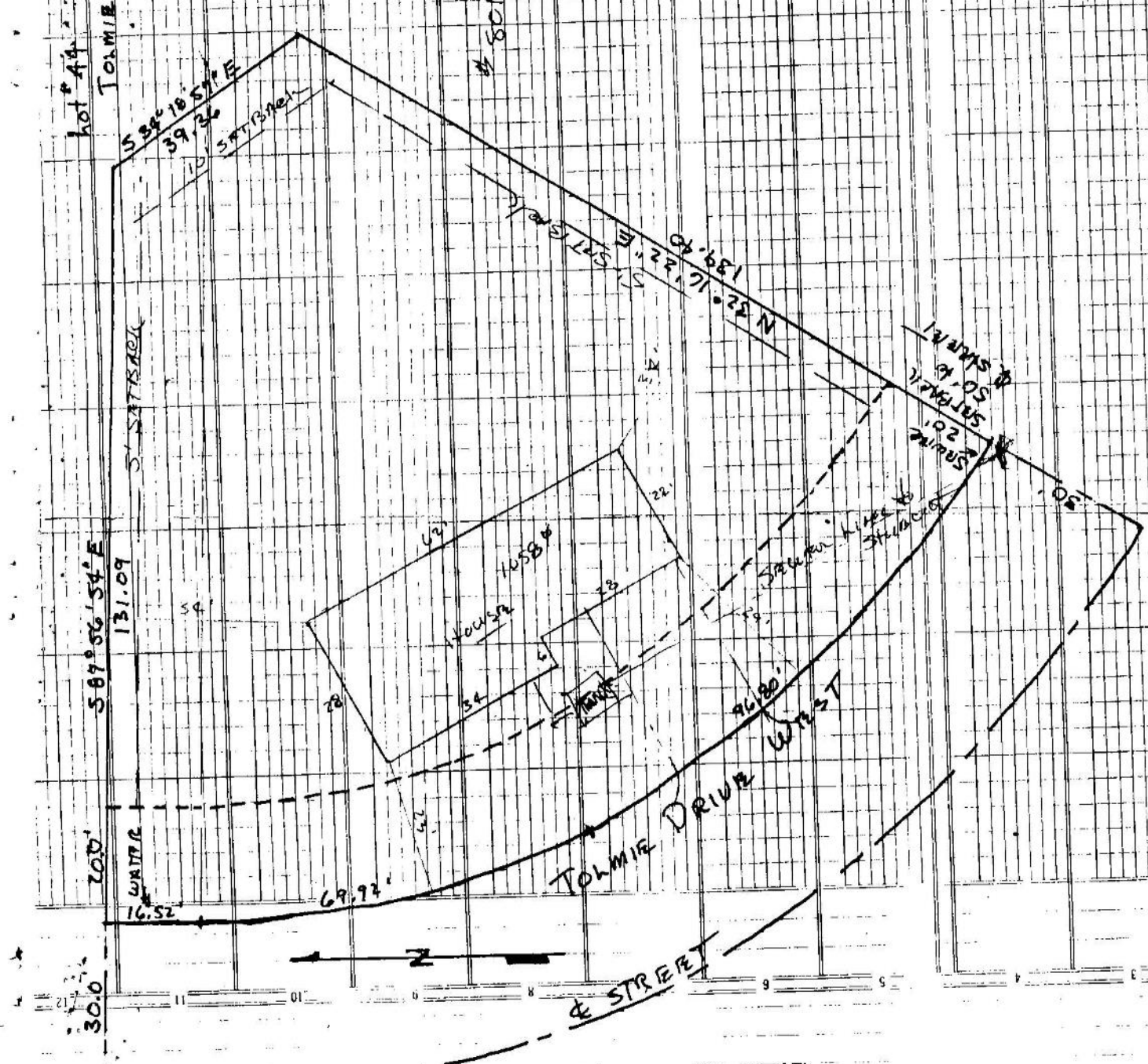


EX  
RISER

PROP  
CO

**LOT 44 – 6026 TOLMIE DR NE**





LOT 44 – 6026 TOLMIE DR NE



**\*FIND TANK\***



**LOT 45 – 6034 TOLMIE DR NE**



OWNER JOHNSON PARCEL # 801400-0500 SITE # 9894

6479

# THURSTON COUNTY HEALTH DEPARTMENT

2000 LAKE RIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

ADDRESS \_\_\_\_\_ TWP/SP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 7-21-83 SEWAGE CONTRACTOR JOHNSON + MADDOX

SEPTIC TANK SIZE 1200 CUBIC YARDS ROCK \_\_\_\_\_ SPACE RESERVED FOR REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

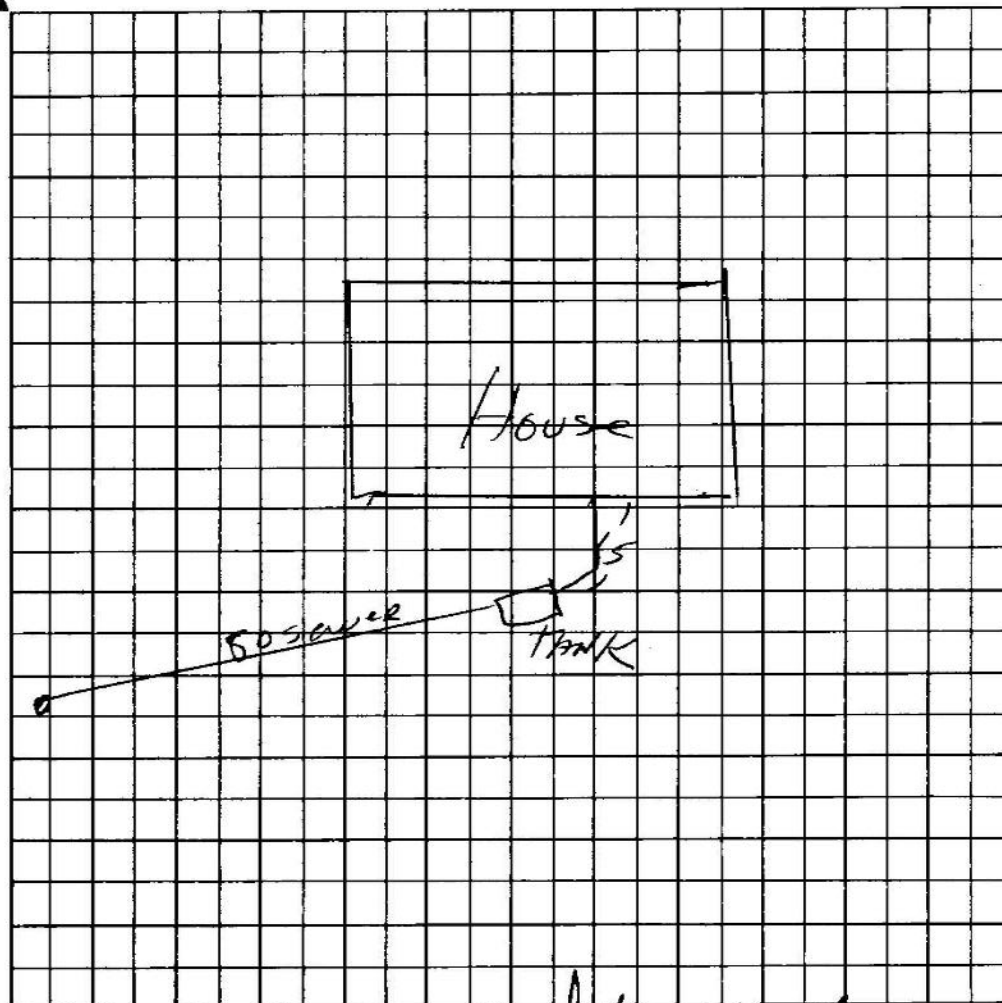
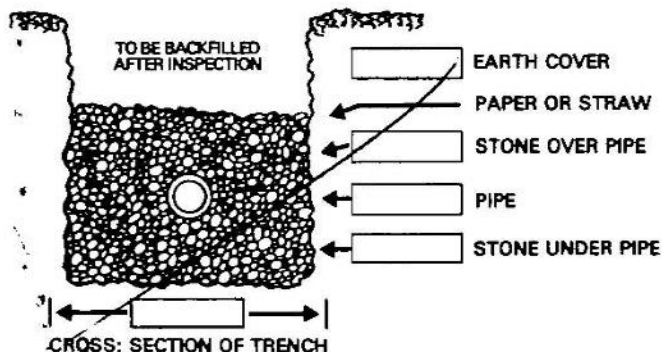
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100'

INDICATE THE FOLLOWING INFORMATION, IF KNOWN, ON THE DRAWING:

1. RESIDENCE LOCATION AND DIMENSIONS.
2. PAVED SURFACES (I.E., PATIOS, DRIVEWAYS, ETC.)
3. WELLS OR SURFACE WATER SOURCES.
4. DIRECTIONS OF DRAINAGE.
5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
TANK LOCATION - FROM HOUSE  
FROM HOUSE CORNER  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
7. LABEL ALL SETBACKS, I.E. FROM WATER, PROPERTY LINES, COUNTRY ROADS, ETC.
8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
9. USE ARROWS TO SHOW DIRECTION OF SLOPE.  
ONE SQUARE EQUALS 10 FEET



LOT 45 - 6034 TOLMIE DR NE





PROP  
CO

EX  
CO

LOT 46 – 6040 TOLMIE DR NE



# BUILDING SITE APPLICATION PROJECT PLAN

PLEASE PRESS HARD

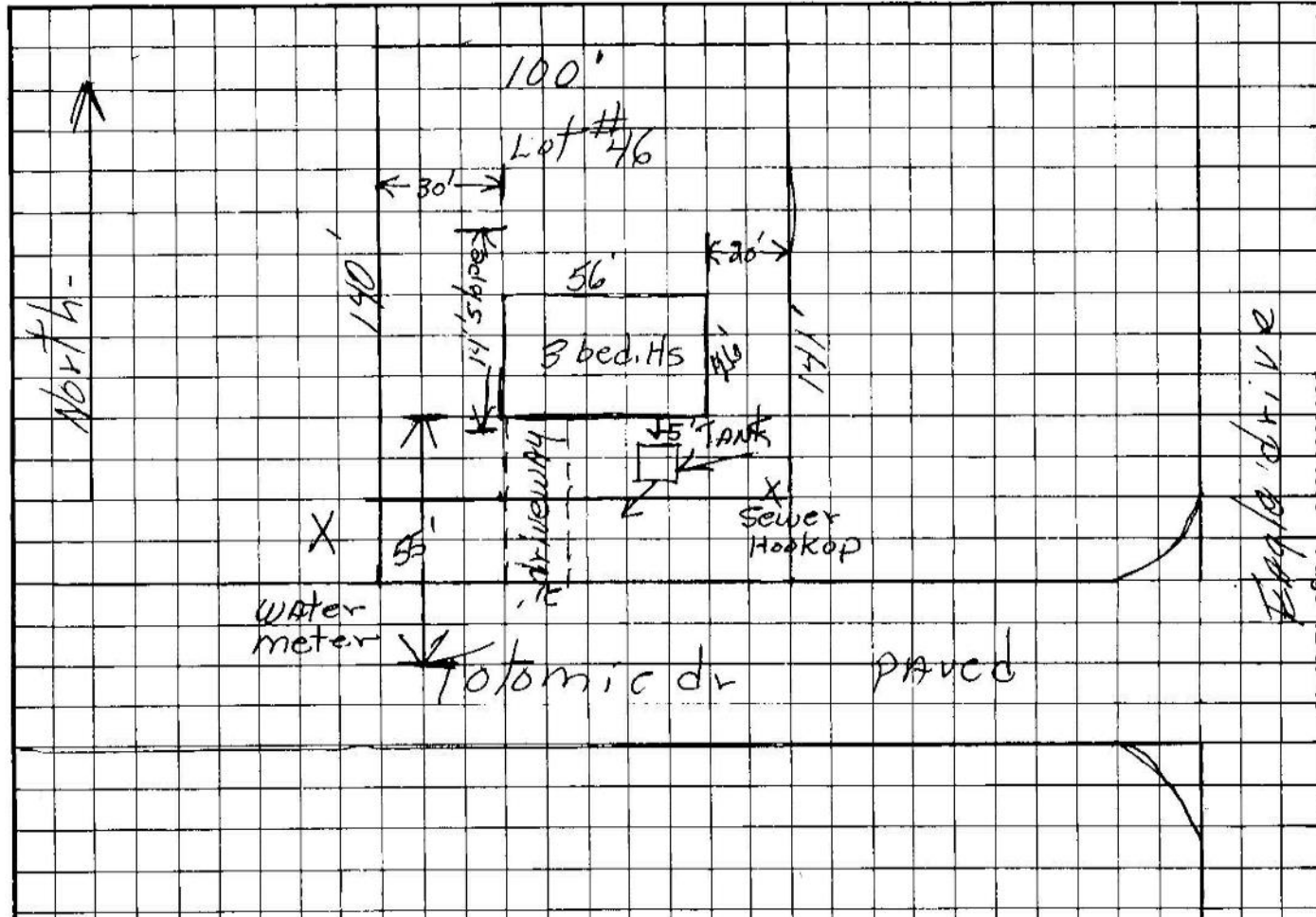
(This is not a permit)

SITE NO. Lot #46

PARCEL NO. 80140004600

INDICATE THE FOLLOWING INFORMATION. LABEL EXISTING OR PROPOSED, IF KNOWN, ON THE DRAWING. DRAW TO SCALE, USING 1 SQUARE TO EQUAL NO MORE THAN 10 FEET.

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> 1. Indicate north arrow.   | <input type="checkbox"/> 6. Wells or drinking water source.  |
| <input checked="" type="checkbox"/> 2. Property boundary lines.  | <input checked="" type="checkbox"/> 7. Paved surfaces (i.e. driveways and patios).   |
| <input checked="" type="checkbox"/> 3. Indicate driveway location from nearest intersection or landmark. | <input type="checkbox"/> 8. Arrows showing direction of slope. Assume an elevation of 100 feet at one lot corner and indicate the other lot corner elevations to it. |
| <input type="checkbox"/> 4. Major features of property (ravines, seasonal creeks, bodies of water).      | <input type="checkbox"/> 9. Indicate structures -- existing or proposed -- and distances from lot lines.   |
| <input checked="" type="checkbox"/> 5. Septic system location.   |  |







LOT 47 – 6048 TOLMIE DR NE



OWNER L.E. Jolly PARCEL # \_\_\_\_\_ SITE # 12124

ADDRESS LOT 47 TOLMIE DR NE DIV. \_\_\_\_\_ TWNSP \_\_\_\_\_ SEC \_\_\_\_\_ RG \_\_\_\_\_

INSTALLATION DATE 8-23-84 SEWAGE CONTRACTOR K. M. MOORE CONAST

SPITC \_\_\_\_\_ CUBIC \_\_\_\_\_ SPACE RESERVED FOR \_\_\_\_\_  
TANK SIZE 1125 YARDS ROCK \_\_\_\_\_ REPLACEMENT FIELD \_\_\_\_\_ SQ. FT.

COMMUNITY DRAINFIELD

100'

## THURSTON COUNTY HEALTH DEPARTMENT

2000 LAKERIDGE DR. S.W.  
OLYMPIA WA. 98502  
PHONE 753-8073

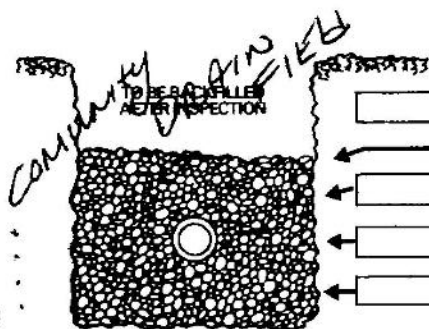
### FINAL INSPECTION RECORD

THIS RECORD IS NOT A GUARANTEE OF PERFORMANCE. THE HEALTH DEPARTMENT RECOMMENDS THE SEPTIC TANK ITSELF SHOULD BE PUMPED AND INSPECTED EVERY THREE TO FIVE YEARS, DEPENDING ON HOW POOR THE DRAINAGE IN THE AREA IS. REDUCTION IN HOUSE WATER USE WILL EXTEND THE DRAINFIELD LIFE.

INDICATE THE FOLLOWING INFORMATION, IF KNOWN, ON THE DRAWING:

1. RESIDENCE LOCATION AND DIMENSIONS.
2. PAVED SURFACES (I.E., PATIOS, DRIVEWAYS, ETC.)
3. WELLS OR SURFACE WATER SOURCES.
4. DIRECTIONS OF DRAINAGE.
5. SEPTIC SYSTEM LOCATION AND DEPTH TO TOP.  
TANK LOCATION — FROM HOUSE  
FROM HOUSE CORNER  
DRAINFIELD LENGTH AND LOCATION  
LOCATION & LENGTH OF ALL TIGHT LINES
6. LENGTH, LOCATION & DIMENSIONS OF ALL INTERCEPTOR LINES.
7. LABEL ALL SETBACKS, I.E. FROM WATER, PROPERTY LINES, COUNTRY ROADS, ETC.
8. ASSUME AN ELEVATION OF 100 FEET AT ONE LOT CORNER AND INDICATE THE OTHER LOT CORNER ELEVATIONS TO IT.
9. USE ARROWS TO SHOW DIRECTION OF SLOPE.

ONE SQUARE EQUALS 10 FEET



EARTH COVER

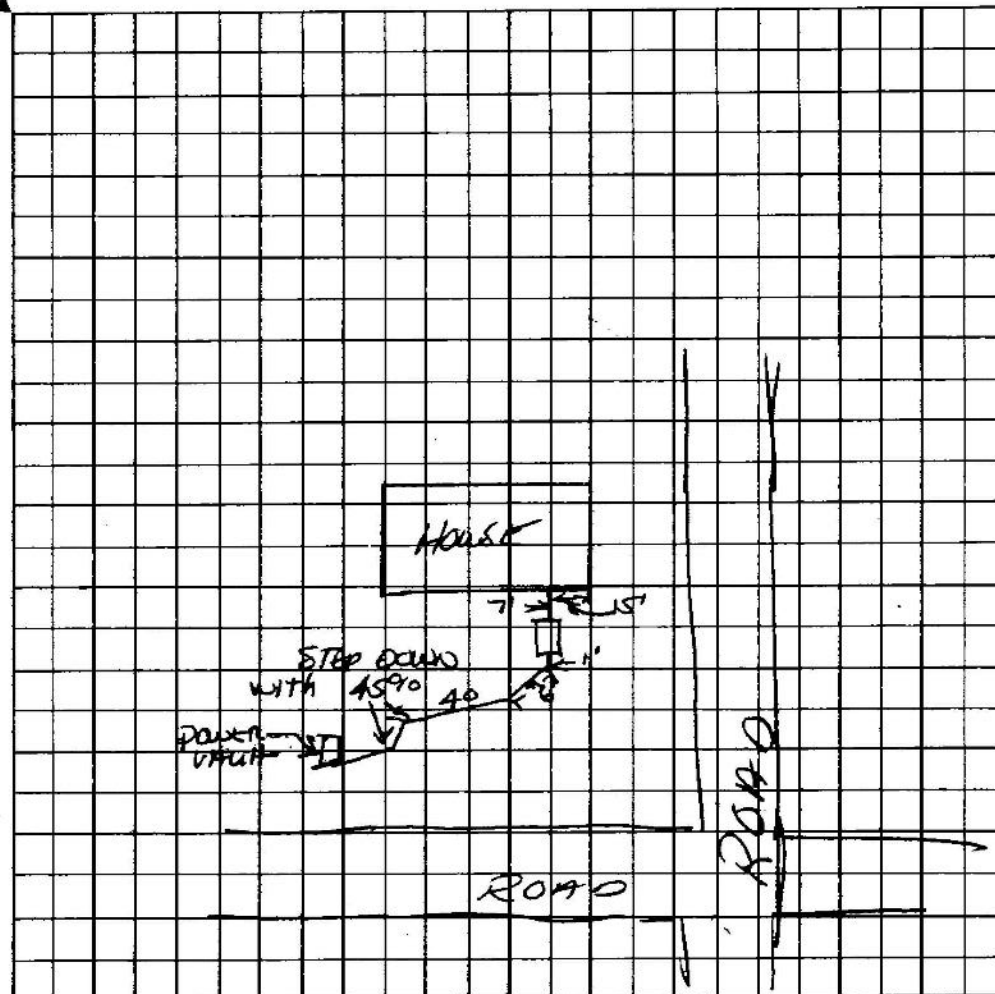
PAPER OR STRAW

STONE OVER PIPE

PIPE

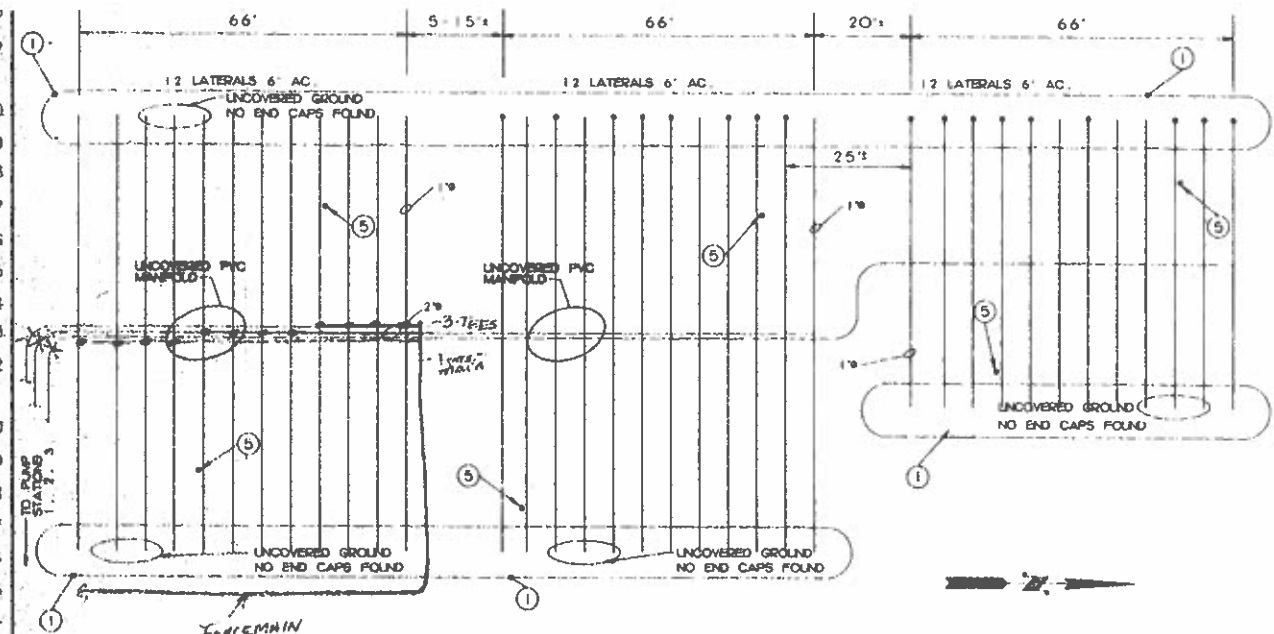
STONE UNDER PIPE

CROSS-SECTION OF TRENCH



DATE 8-27-84 CERTIFIED BY K. Moore APPROVED BY S. Davis 12-6-84

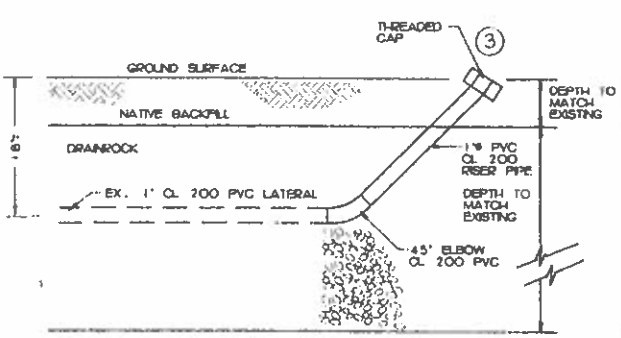
LOT 47 - 6048 TOLMIE DR NE



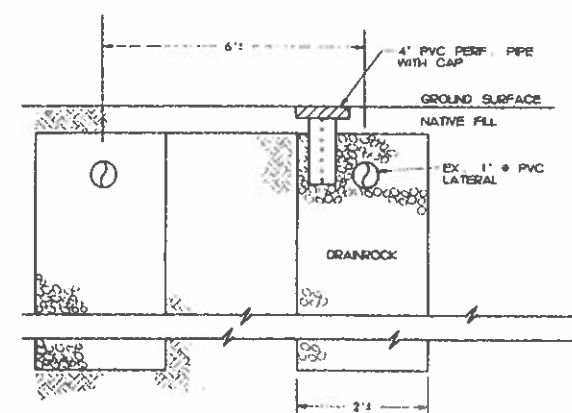
**DRAINFIELD PLAN**  
N.T.S.

KEEP HEAVY EQUIP OFF  
DRAINFIELD LATERALS

- DRAINFIELD REPAIR NOTES**
- MOW & ~~REMOVE~~ DRAINFIELD SITE TO BE DONE BY HOMEOWNERS ASSOC.
  - EXPOSE AND IDENTIFY ENDS OF ALL LATERALS
  - CLEAN OUT END OF ALL LATERALS
  - INSTALL 45° ELBOW AND RISER PIPE WITH THREADED CAP FLUSH WITH GROUND. (SEE CLEANOUT ASSEMBLY)
  - BACKFILL END OF LATERALS WITH CLEAN DRAINROCK 1'-2.5' IN DIAMETER. (SEE CLEANOUT DETAIL) USE EX. MATERIAL
  - INSTALL MONITORING PORTS. SIX REQUIRED, ONE EACH SIDE OF MANIFOLD FOR FIELDS A,B,C. (SEE PLAN ABOVE AND TRENCH DETAIL)
  - EXACT INFORMATION ON DRAINFIELD WAS UNAVAILABLE. THE NUMBER OF LATERALS PER FIELD MAY VARY. IN THE EVENT A LATERAL IS NOT FOUND IN A DRAINROCK TRENCH, CONTACT THE ENGINEER FOR BIDDING PURPOSES ASSUME 55 CLEANOUT ASSEMBLIES TO BE INSTALLED.
  - ACCESS TO DRAINFIELD SHALL BE COORDINATED THROUGH THE HOMEOWNERS ASSOC.

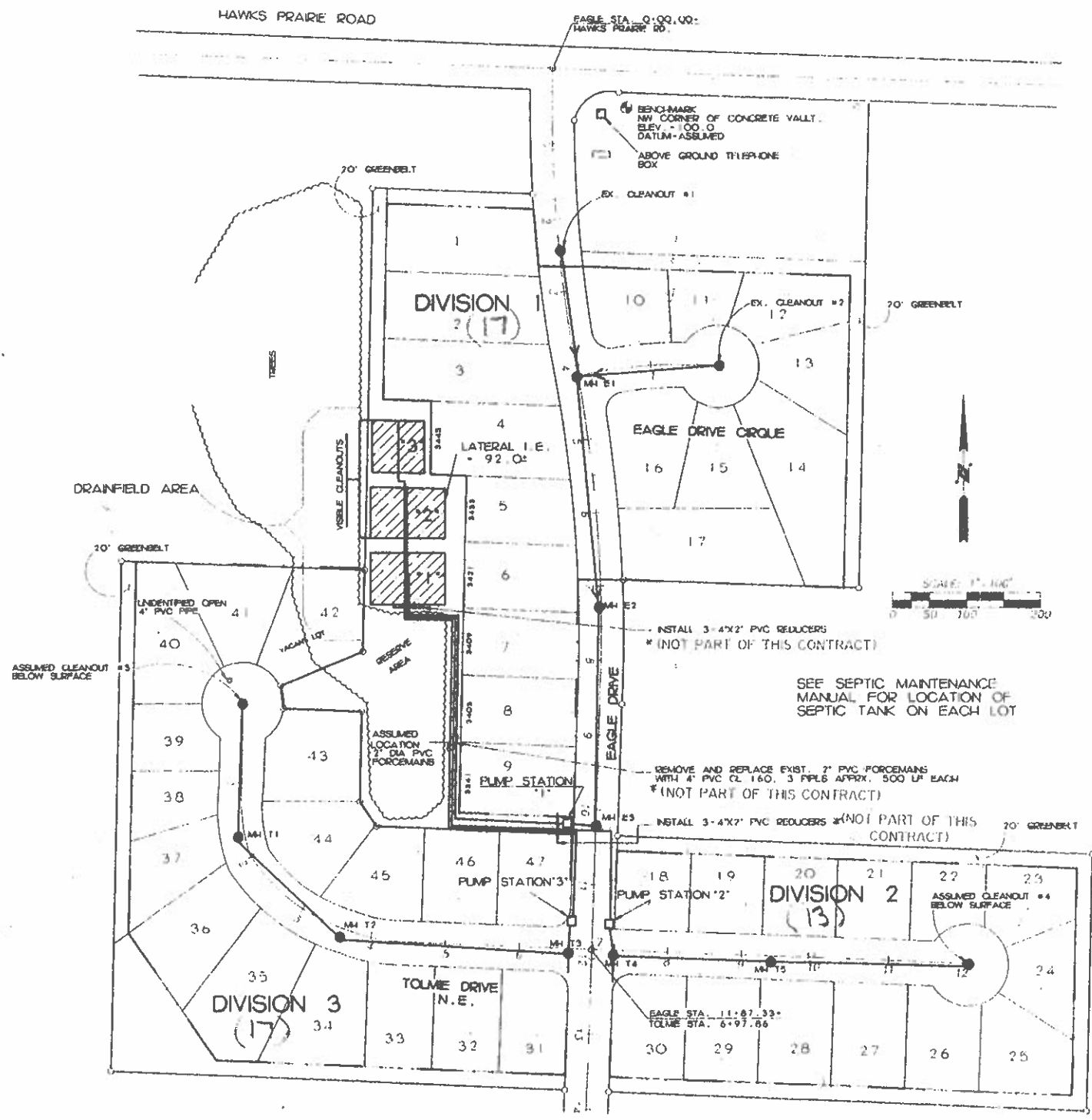


**CLEANOUT ASSEMBLY**  
N.T.S.



**TRENCH DETAIL**  
N.T.S.

# TOLMIE PARK ESTATES DIVISIONS 1, 2 & 3





EAGLE STA. 0+00.00-  
HAWKS PRARIE RD.

BENCHMARK OF CONCRETE VAULT.  
NW CORNER  
ELEV. = 100.0  
DATUM = ASSUMED

ABOVE GROUND TELEPHONE  
BOX

EX. CLEANOUT #1

EX. CLEANOUT #2

DIVISION 1

EAGLE DRIVE CIRQUE

EAGLE DRIVE

PUMP STATION #1

PUMP STATION #2

PUMP STATION #3

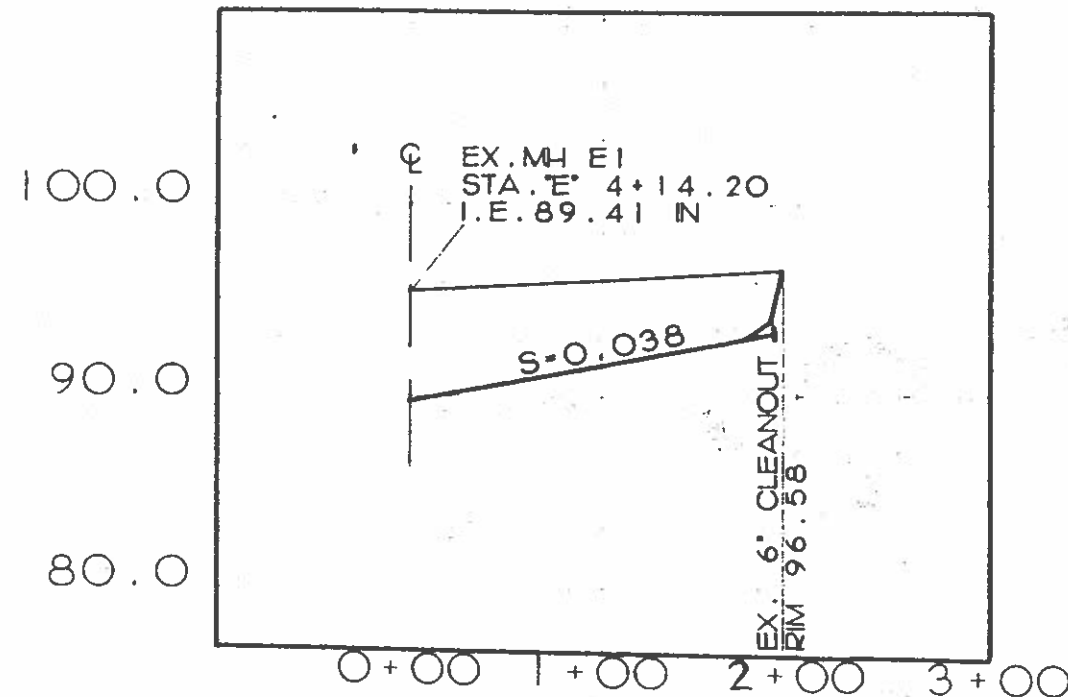
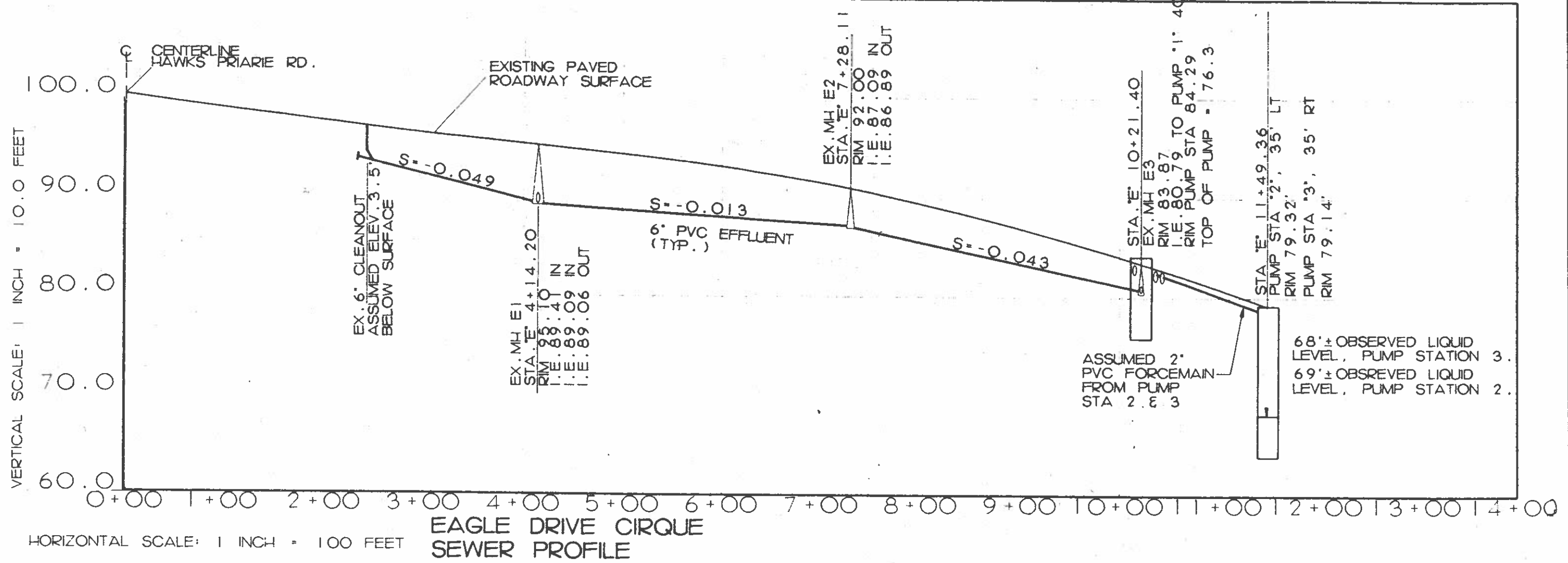
Tolmie & Dr. N.E.

SCALE: 1"=100'

Tolmie Park Estates

SCALE:	APPROVED BY:	DRAWN BY:
DATE: 6/26/03		REVISED:
Division 1 site Plan		
DRAWING NUMBER		2 of 11

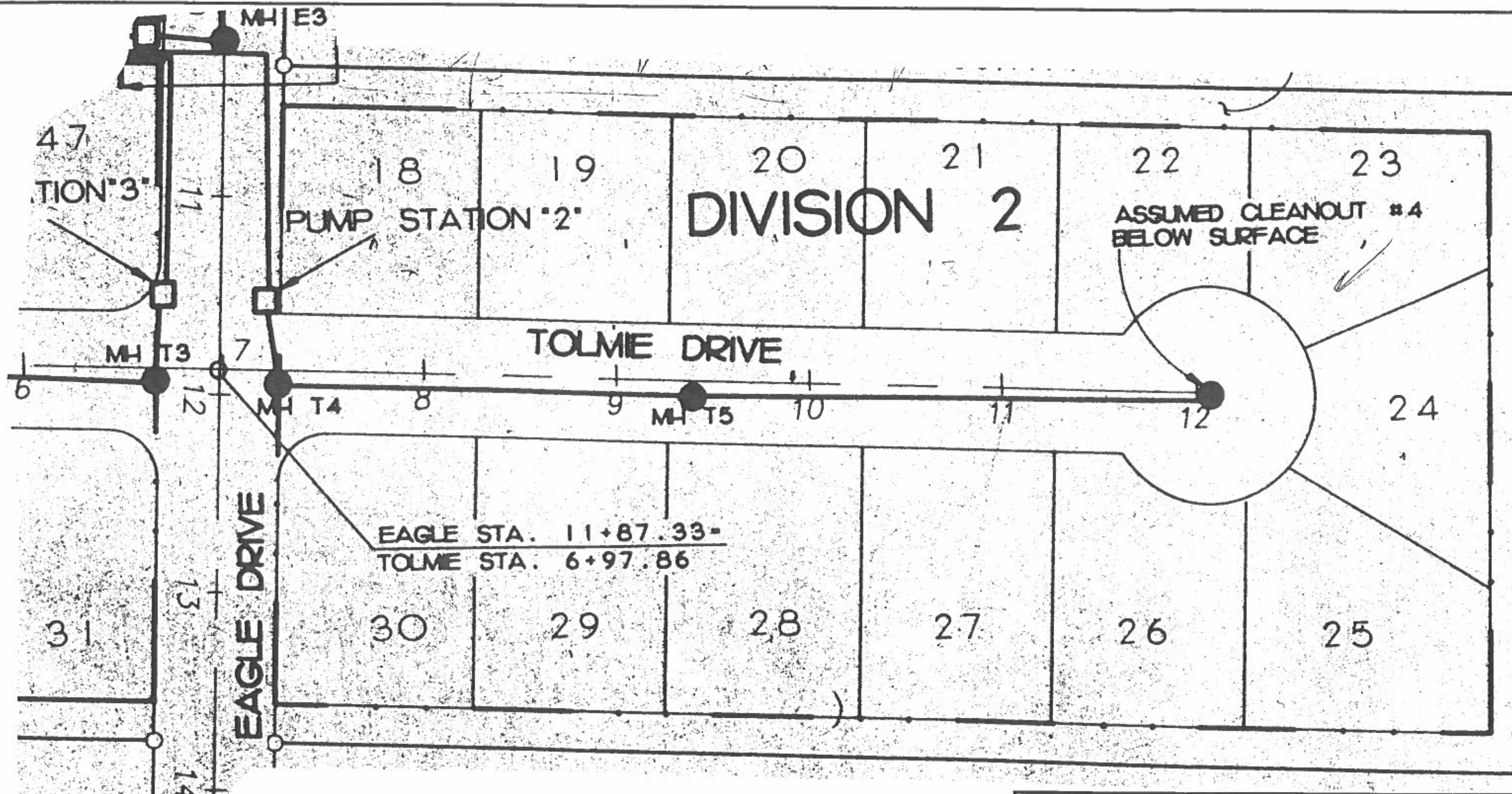
# EAGLE DRIVE SEWER PROFILE



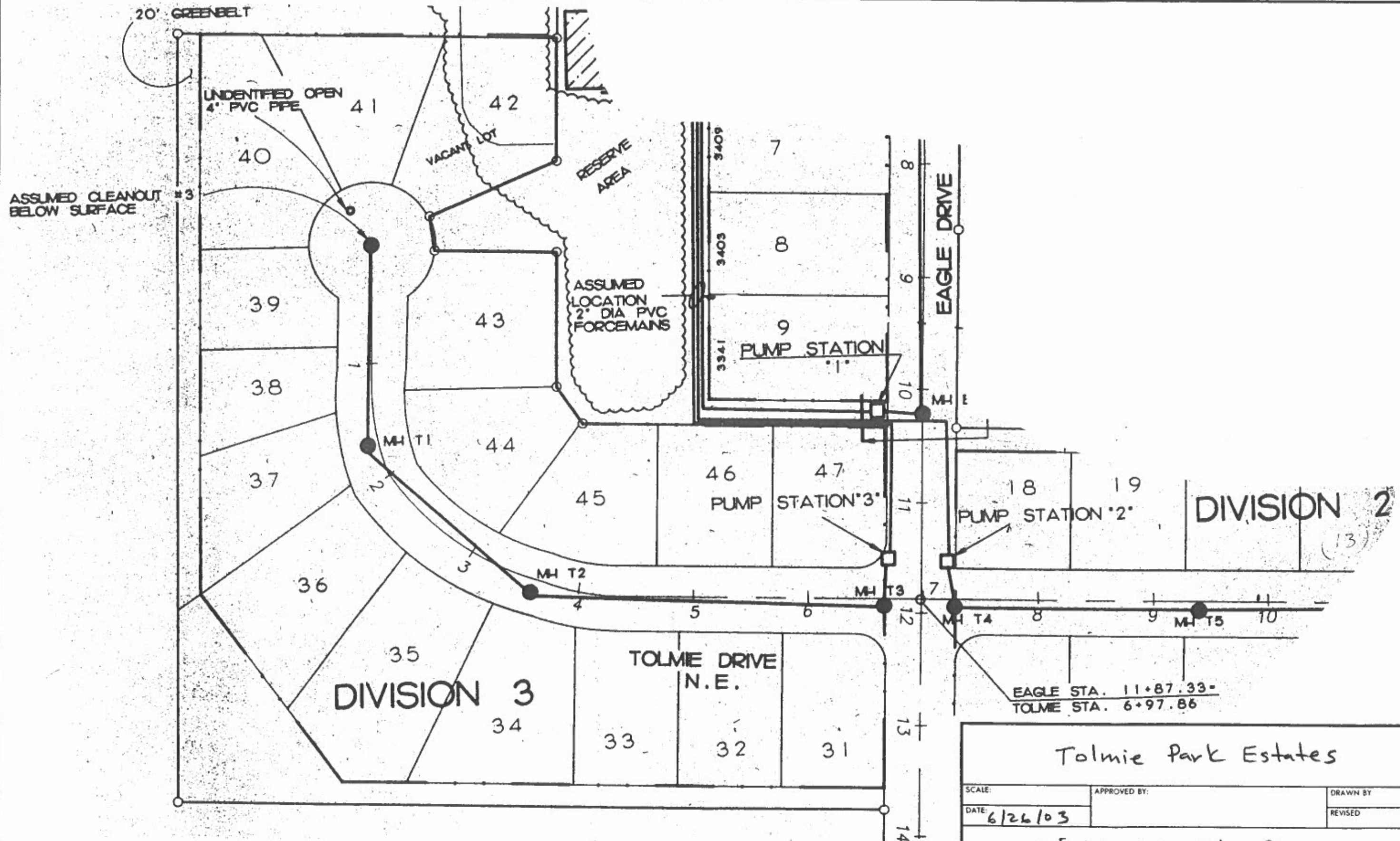
Tolmie Park Estates

SCALE:	APPROVED BY:	DRAWN BY:
DATE:		REVISED:
Division 1 Sewer & Street Profile		
		DRAWING NUMBER 3 of 11





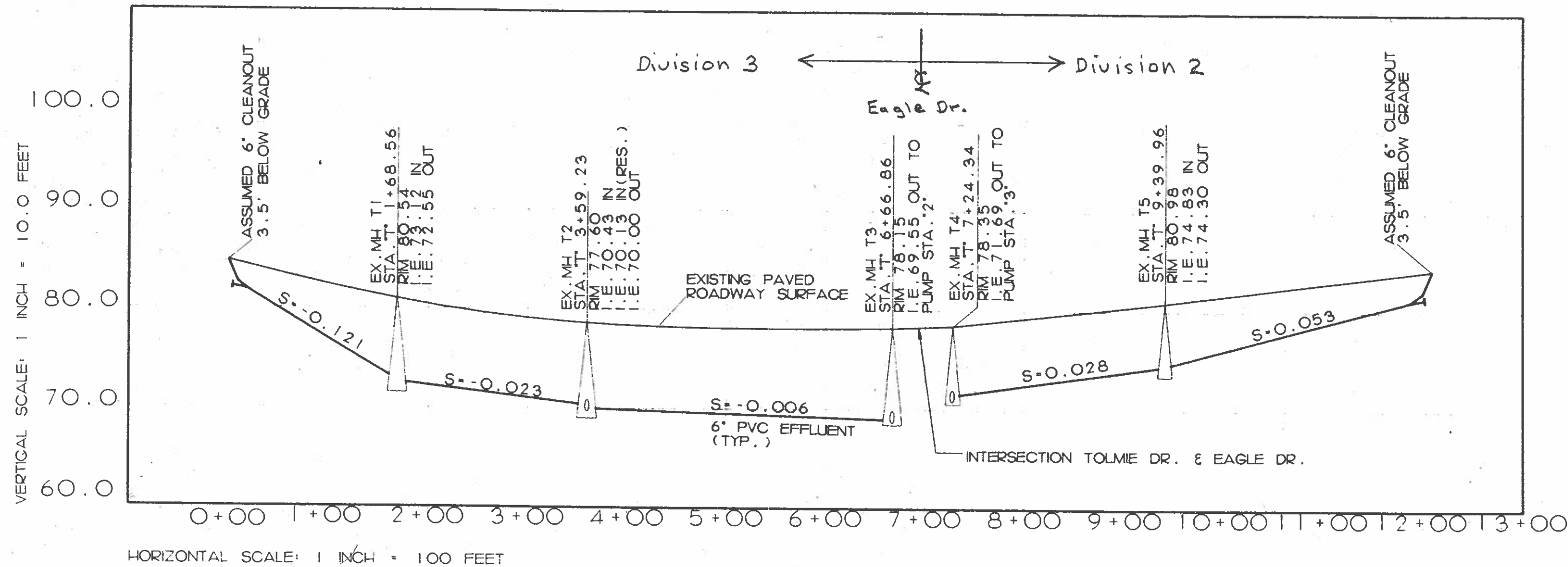
Tolmie Park Estates		
SCALE:	APPROVED BY:	DRAWN BY:
DATE: 6/26/03		REVISED:
Division 2 Site Plan		
		DRAWING NUMBER 4 of 11



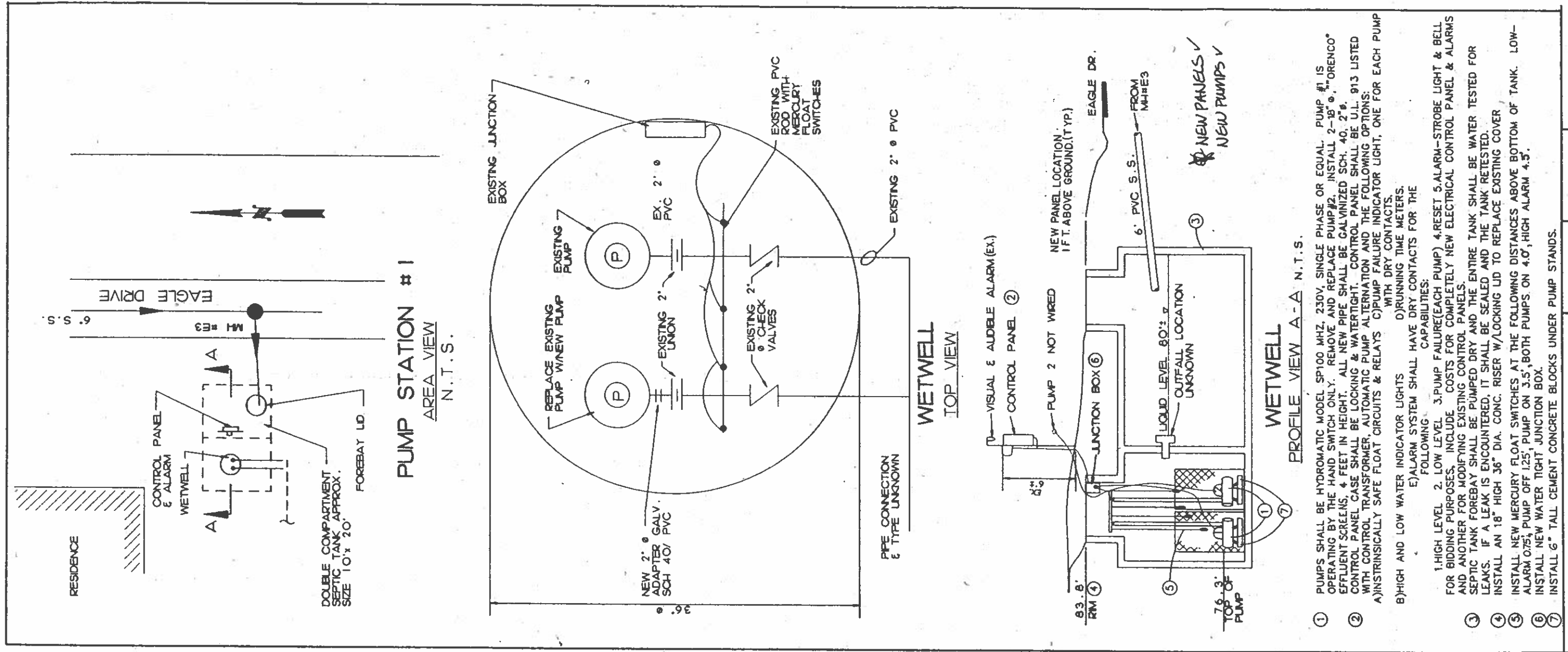
Tolmie Park Estates		
SCALE:	APPROVED BY:	DRAWN BY:
DATE: 6/26/03		REVISED:
Division 3 site Plan		
DRAWING NUMBER		5 of 11



TOLMIE DRIVE N.E. SEWER PROFILE

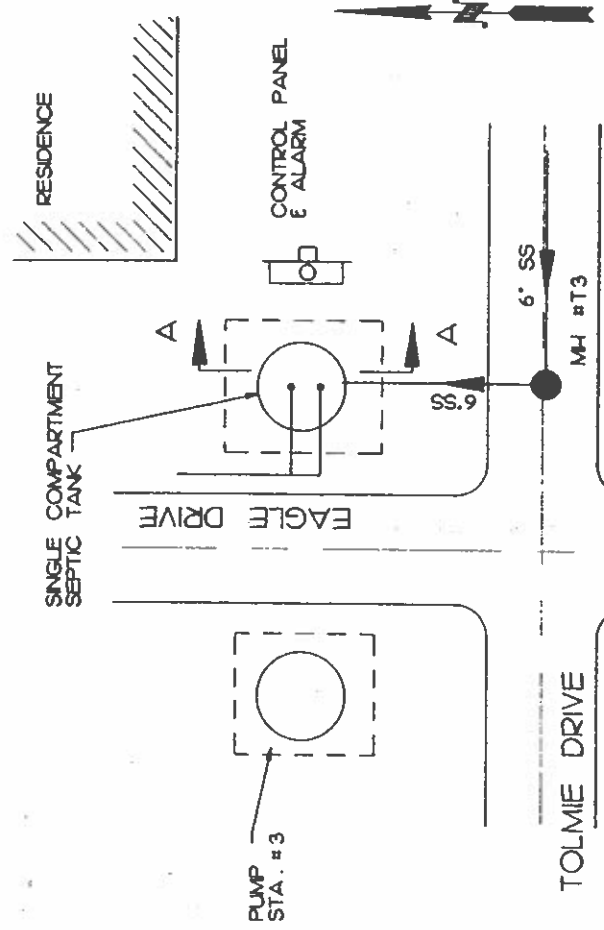


Tolmie Park Estates		
SCALE:	APPROVED BY:	DRAWN BY:
DATE: 6/26/03		REVISED:
Division 2 & 3 Sewer & Street Profiles		
		DRAWING NUMBER
		6 of 11

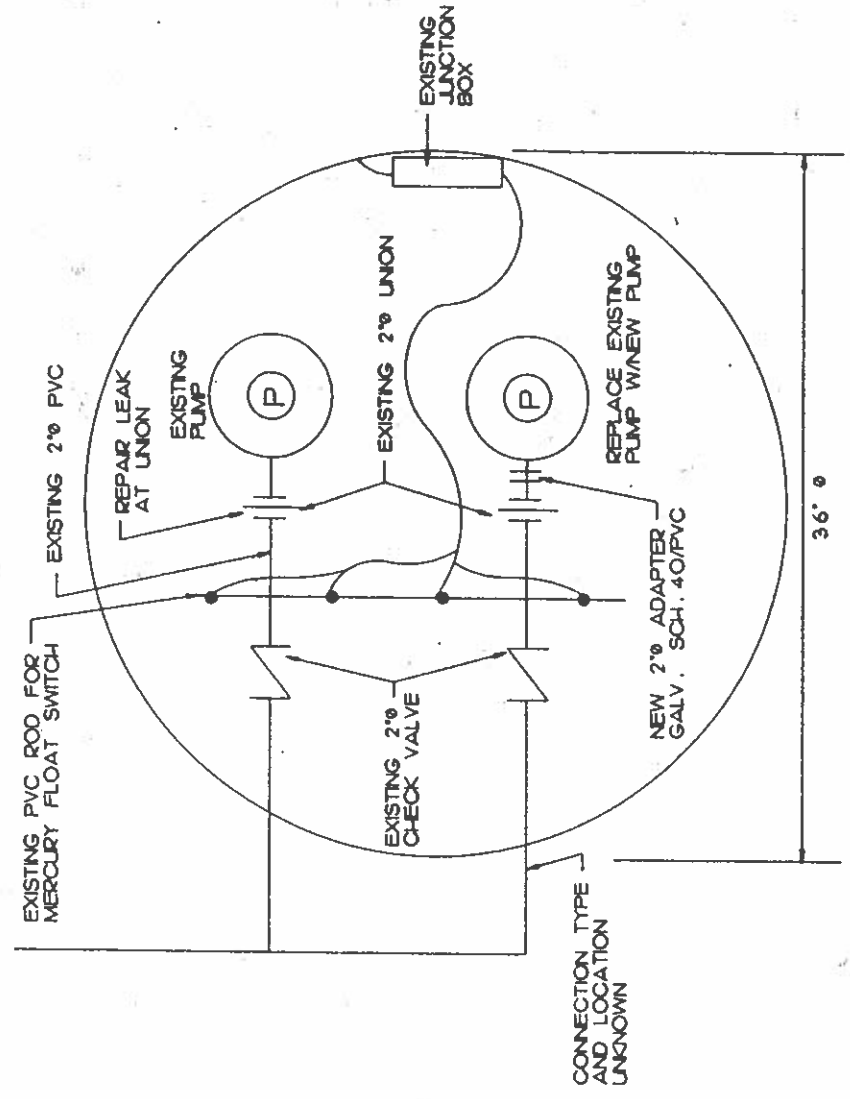


Tolmie Park Estates			
SCALE:	APPROVED BY:	DRAWN BY:	
DATE: 6/26/03		REVISED:	
Pump Station #1 Schematic			
			DRAWING NUMBER 7 of 11

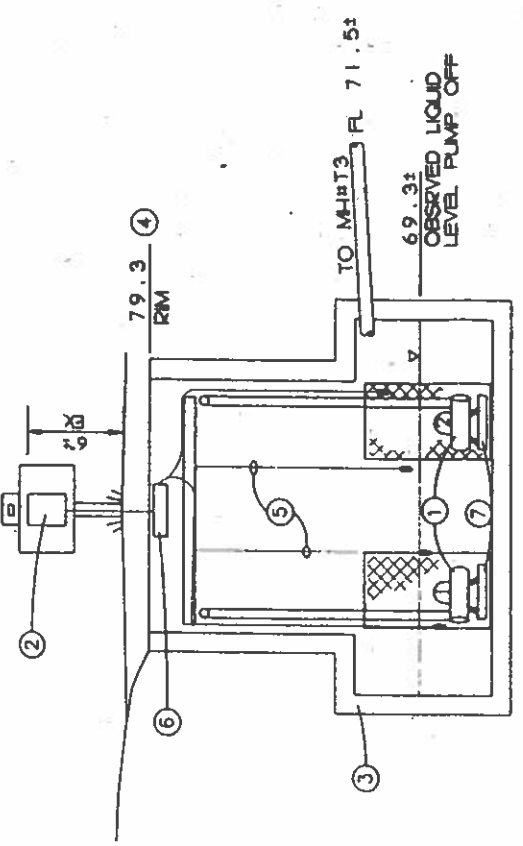




**PUMP STATION #2**  
AREA VIEW  
N.T.S.



**WETWELL**  
TOP VIEW



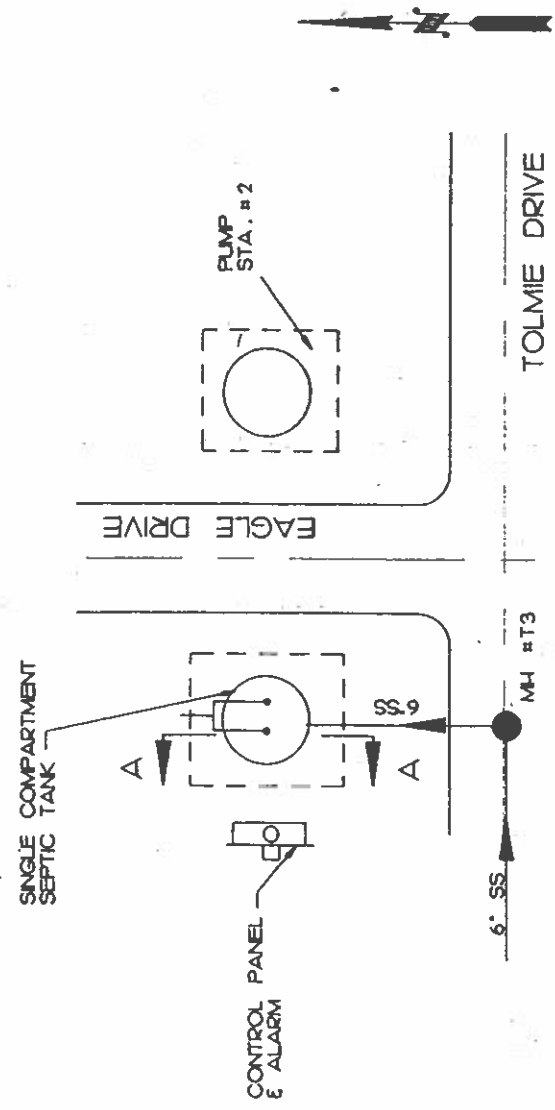
**WETWELL**  
PROFILE VIEW A-A N.T.S.

- 1 PUMPS SHALL BE HYDROMATIC SP100 MHZ, 230V, SINGLE PHASE OR EQUAL. PUMP #1 IS OPERATING AUTOMATICALLY. REMOVE AND REPLACE PUMP #2. INSTALL 2-18" ORENCO EFFLUENT SCREENS, 4 FEET IN HEIGHT. ALL PIPES SHALL GALVANIZED SCH.40, 2".
- 2 SAME AS PUMP STA.#1
- 3 SEPTIC TANK SHALL BE PUMPED DRY AND WATER TESTED FOR LEAKS. IF A LEAK IS ENCOUNTERED, IT SHALL BE SEALED AND THE TANK RETESTED.
- 4 INSTALL A 6" HIGH 36" DIA. CONCRETE RISER WITH LOCKING LID TO REPLACE EXISTING COVER.
- 5 INSTALL NEW MERCURY FLOAT SWITCHES AT THE FOLLOWING DISTANCES ABOVE BOTTOM OF TANK. LOW ALARM 0.75', PUMP ON 1.25', PUMP OFF 1.5', HIGH ALARM 4.5'.
- 6 INSTALL NEW WATER TIGHT JUNCTION BOX.
- 7 SAME AS PUMP STA.#1.

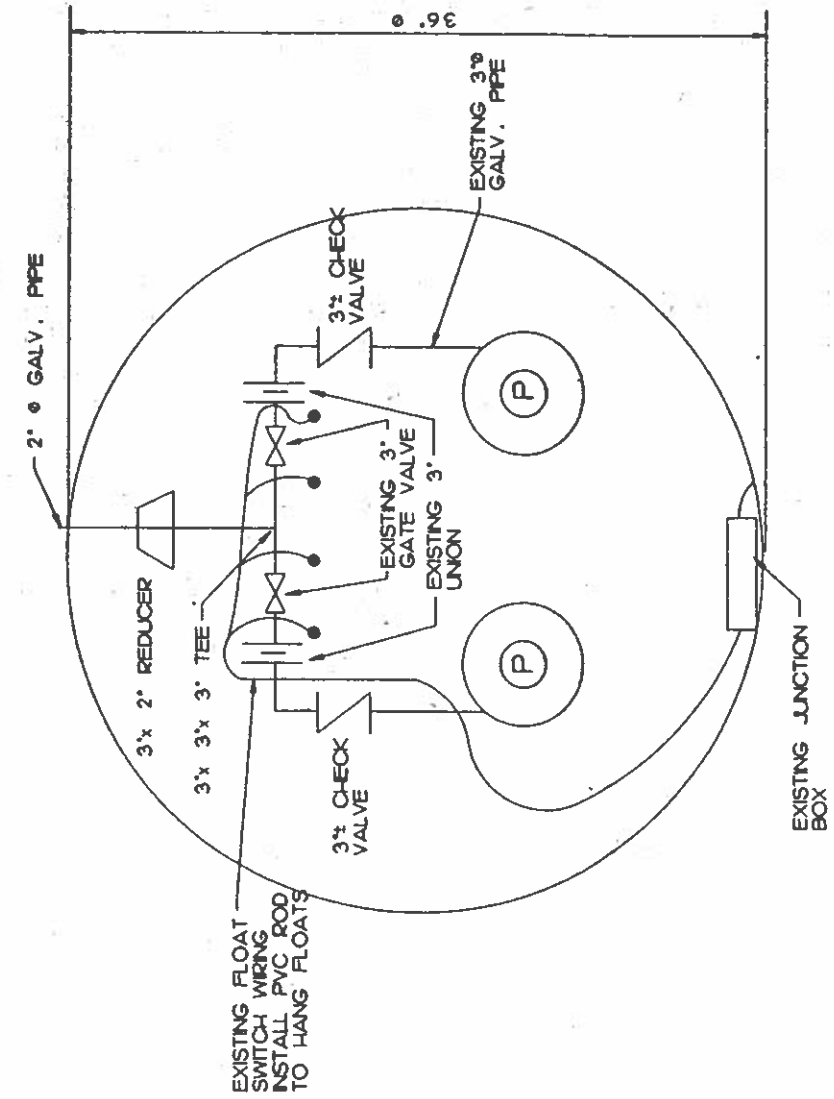
NEW PUMPS ✓  
NEW PUMPS ✓

11/19/92

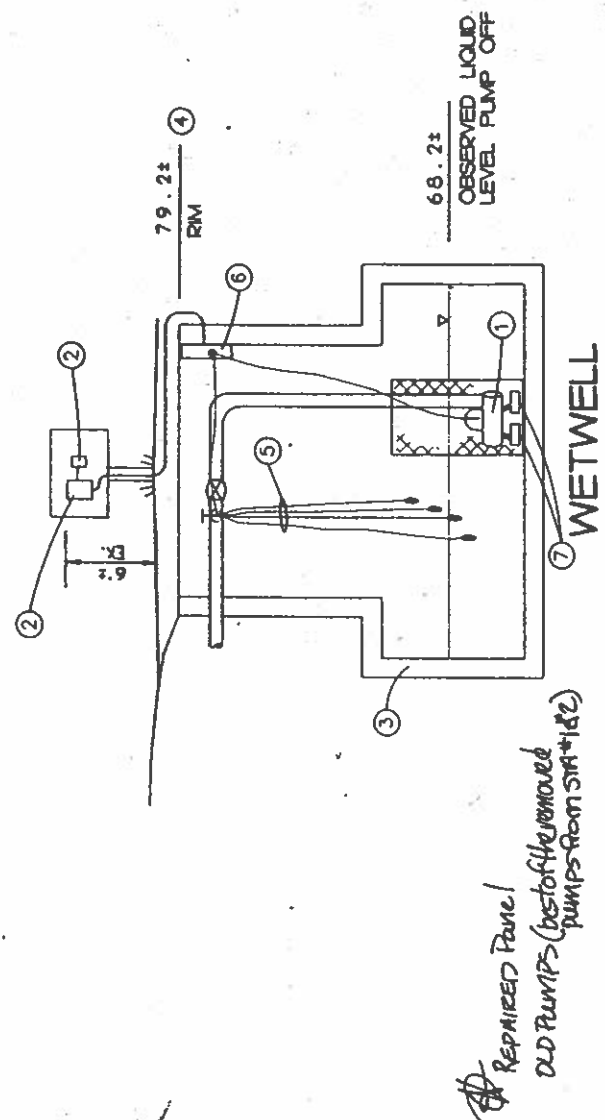
Tolmie Park Estates		
SCALE:	APPROVED BY:	DRAWN BY:
DATE: 6/26/03		REVISED:
Pump Station #2 Schematic		
		DRAWING NUMBER 8 of 11



PUMP STATION #3  
AREA VIEW  
N.T.S.



WETWELL  
TOP VIEW



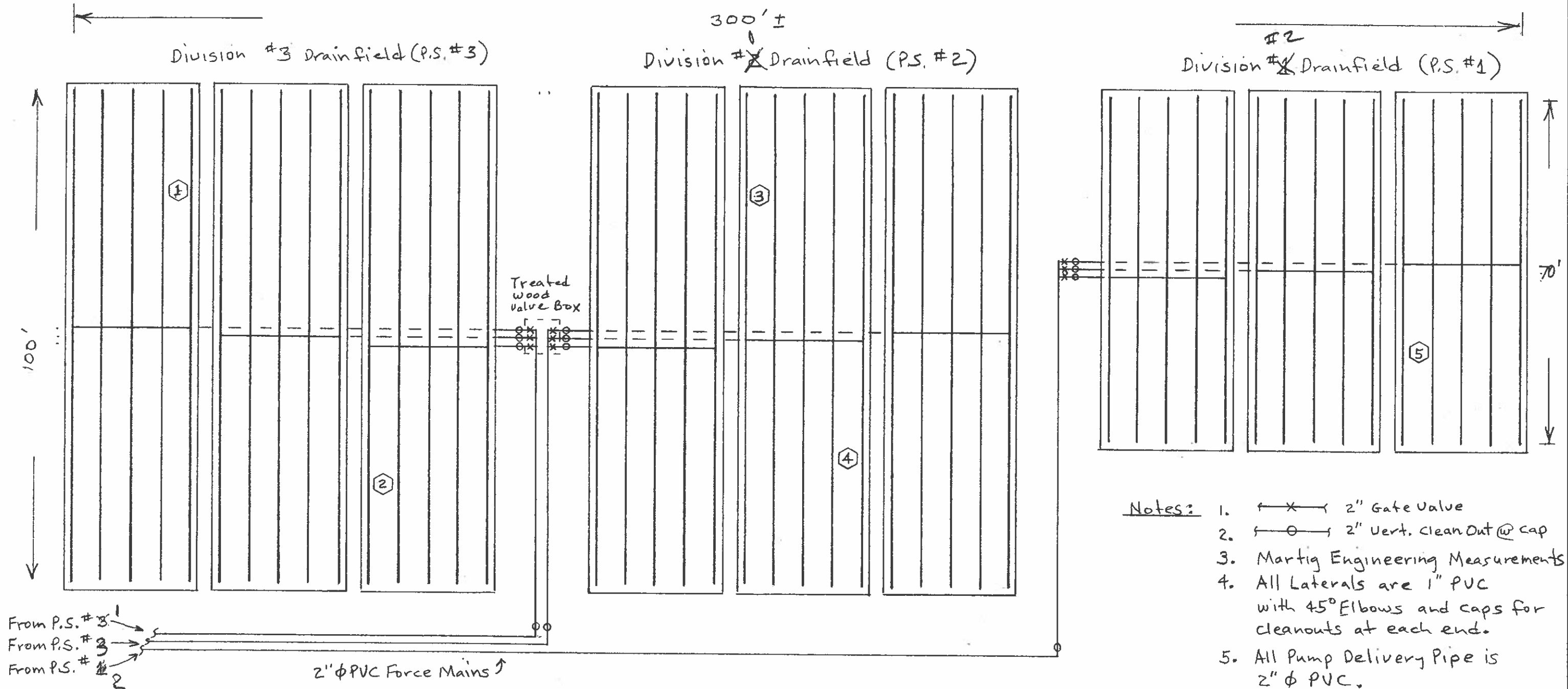
WETWELL  
PROFILE VIEW A-A N.T.S.

*REPAIRED Panel!  
OLD PUMPS (best of the removed  
pumps from STA #1 & #2)*

- ① PUMP SHALL BE HYDROMATIC SP100 MHZ, 230V, SINGLE PHASE OR EQUAL. PUMP #1 IS OPERATING AUTOMATICALLY. REMOVE AND REPLACE PUMP #2. INSTALL 2-18" Ø "ORENCO" EFFLUENT SCREENS 4 FEET IN HEIGHT. ALL NEWPIPE SHALL BE GALVANIZED SCH. 40, 3"Ø.
- ② SAME AS PUMP STA. #1.
- ③ SAME AS PUMP STA. #2.
- ④ SAME AS PUMP STA. #2.
- ⑤ SAME AS PUMP STA. #2 PLUS THE FOLLOWING: A SEPERATE PVC ROD SHALL BE USED TO HANG THE FLOAT SWITCHES.
- ⑥ SAME AS PUMP STA. #2.
- ⑦ SAME AS PUMP STA. #1.

Tolmie Park Estates		
SCALE:	APPROVED BY:	DRAWN BY:
DATE: 6/26/03		REVISED:
Pump station #3 Schematic		
		DRAWING NUMBER 9 of 11





Caution: Although the Drain Fields are working as connected, it is recommended that Division #1 & Division #2 Drain Fields be switched since Division #2 is smaller @ 13 connections (not 17 connections as in #1)

- Notes:
1. 2" Gate Valve
  2. 2" Vert. Clean Out @ Cap
  3. Martig Engineering Measurements
  4. All Laterals are 1" PVC with 45° Elbows and caps for cleanouts at each end.
  5. All Pump Delivery Pipe is 2" PVC.
  6. Standard 3' Wide Trenches
  7. ① Five Observation Ports for D.F. Ponding Detection.



Tolmie Park Estates (T.P. # 80120200000)

SCALE: 1" = 20'

APPROVED BY:

DRAWN BY: KWM

DATE: 6/26/03

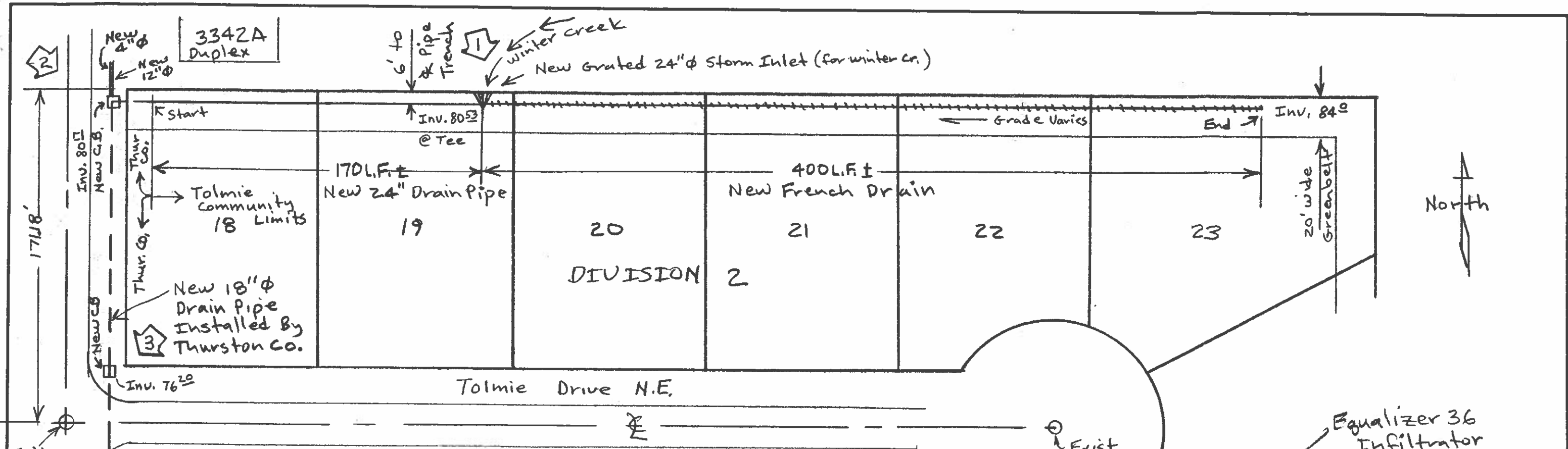
REVISED

As-Built Community Drainfield Plan

Martig Engineering (360) 754-9687

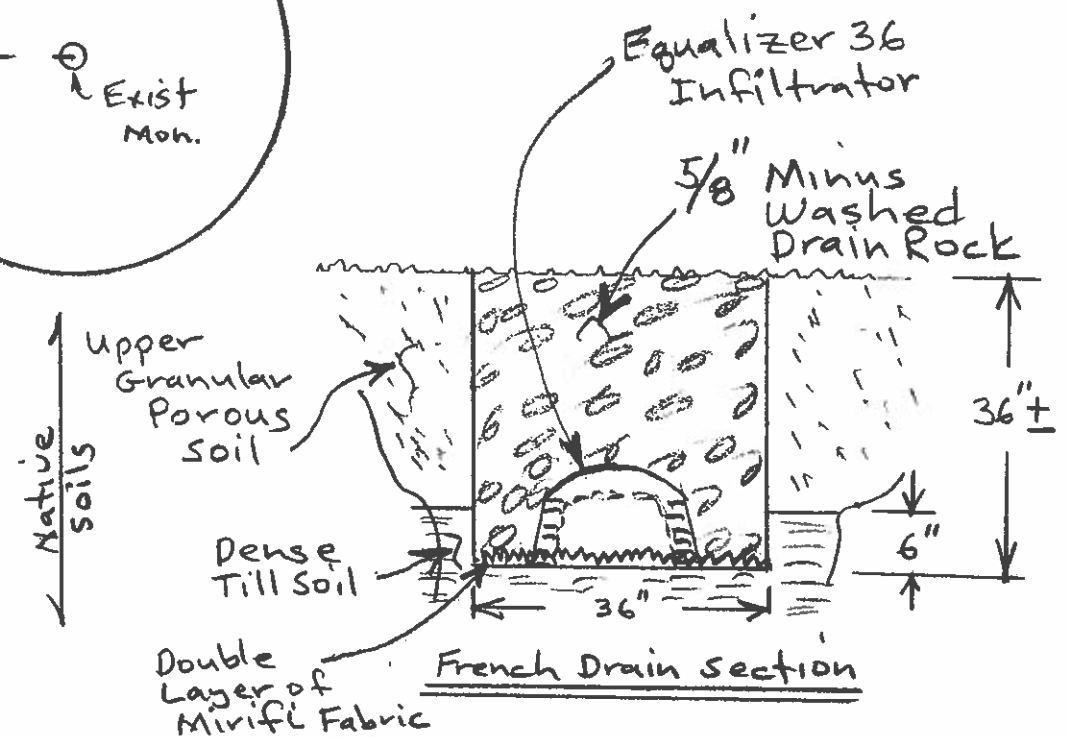
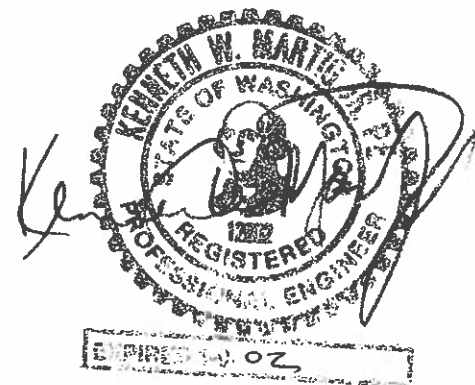
DRAWING NUMBER

10 of 11



### Construction Notes:

1. New 24" φ Drain slips over newly installed 18" φ at start point. Grout seal annular space
2. Winter creek Inlet is made with 24" Tee section with Treated Timber Trash Rack Grate (4' x 4' x 3' High Box w/ 4" clear between 2" x 4" Timber slats.
3. Infiltrator French Drain is sealed to 24" Tee using Bricks and Mortar at Winter creek Inlet
4. A 6" φ PVC Inspection Port (vertical) shall be installed at each end and mid-point of the French Drain for visual inspection.
5. Standard End Bulkhead at End Point of French Drain
6. Remove Trees within Greenbelt as necessary to construct new Trench Systems.
7. Smooth grade ground surface where "test ditch" and new Pipe & French Drain cuts and Spoils exist.
8. Use excess trench excavation soil to smooth grade around 3342A Duplex and fill in two winter creek channels that will be abandoned.
9. Stumps and brushed to be removed from site. Logs to be left for owners to cut up for firewood.
10. 3 @ Inspection Locations.



Stormwater cutoff Pipe & Infiltration Trench  
 (a) 170 Linear Feet of 24" φ Drain Pipe  
 (b) 400 Linear Feet of Infiltrator French Drain

SCALE: 1" = 50'

APPROVED BY:

DRAWN BY

DATE

July 2000

REVISED

July 2000

Tolmie Park Estates

Brian Herrick (360) 438-1168 (As-Built)

Martig Engineering

Ken Martig, Jr. PE (360) 754-9687

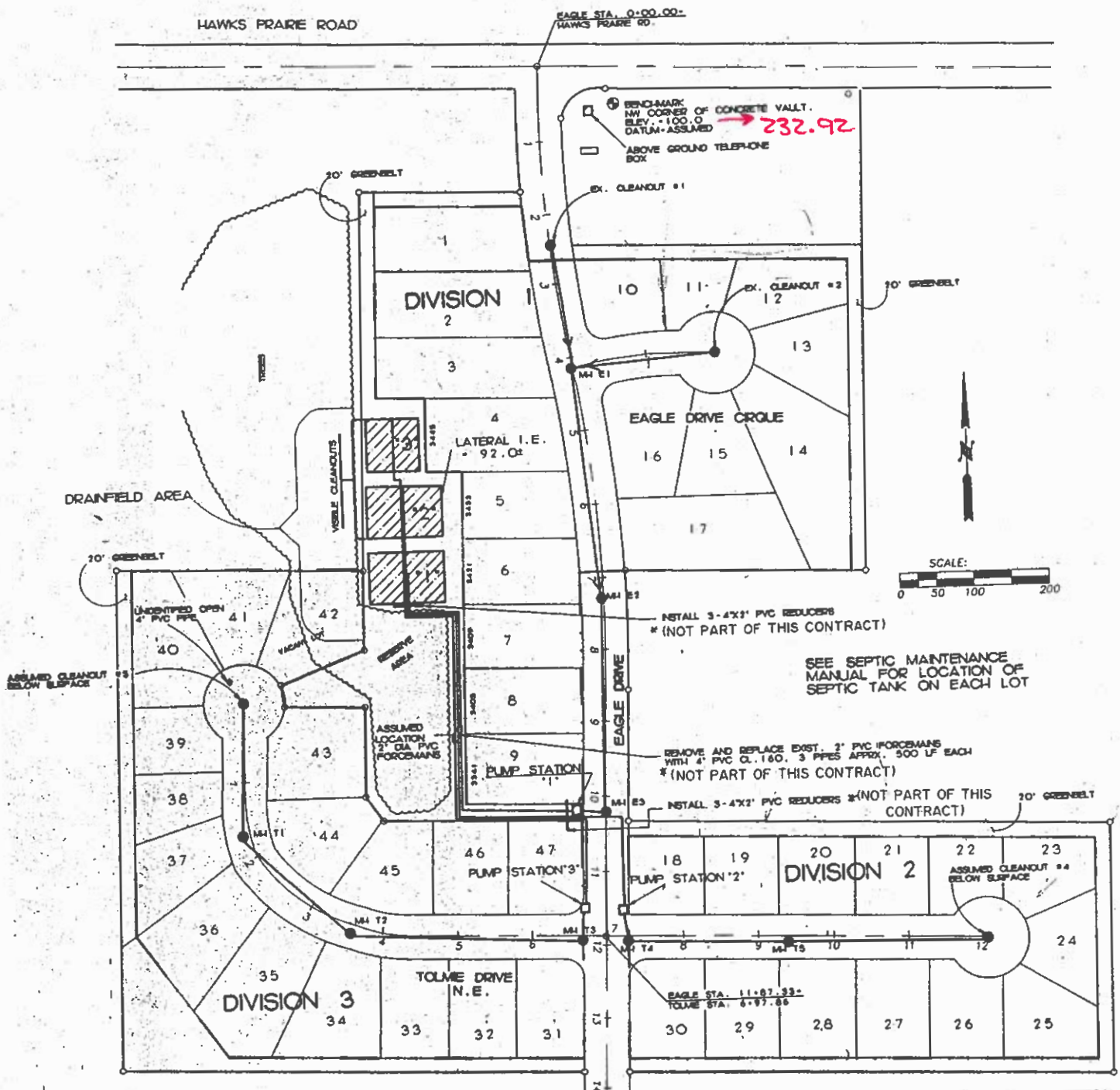
DRAWING NUMBER

11 of 11



T. 18N. R. 1W., W.M.

TOLMIE PARK ESTATES  
DIVISIONS 1, 2 & 3



Tolmie Park Estates

SCALE	APPROVED BY:	DRAWN BY
DATE 6/26/03		REVISED
System layout Site Plan		
DRAWING NUMBER		1 of 11

**TOLMIE PARK ESTATES**  
**ON-SITE WASTEWATER**  
**COLLECTION--TREATMENT--DISPOSAL**  
**SYSTEM**

Thurston County  
On-Site Sewage System  
Operational Certificate # 26008  
Tax Parcel # 80120200000  
(Copy Attached)

**OPERATION & MAINTENANCE MANUAL**

JUNE 26, 2003

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Monitoring & Maintenance Schedule Summary	9
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Forms (1 of 6 thru 6 of 6)	11 - 16
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Drawings (1 of 11 thru 11 of 11)	20 - 31



## A. SYSTEM DESCRIPTION

### 1. Tolmie Park Estates:

Tolmie Park Estates is a residential community comprised of 47 Lots for single family residences. It contains three Divisions. Division 1 contains 17-Lots, Division 2 contains 13-lots, and Division 3 contains 17-Lots. Attached Drawing (1 of 11) shows the layout of this residential community.

A community Water System serves this development. The wastewater from the residences is collected, treated, & disposed of by a community On-Site Sewage System.

The On-Site Sewage System is owned and operated by:  
Tolmie Park Estates Homeowners Association  
P.O. Box 5389  
Lacey, WA 98503

### 2. Primary Treatment (Septic Tank):

Each of the 47 residences has its own 1150- gallon, two-compartment Septic Tank to provide Primary Treatment of the wastewater leaving each respective residence. The purpose of these tanks is to remove floatable and sinkable solids. The effluent from each Septic Tank discharges to a community Collection System.

### 3. Community Collection System (Piping & Manholes):

Each of the three Divisions has its own Collection System. These three systems consist of 6-inch diameter sewer pipe laid between manholes (except that the pipe's uphill dead-end has a 6-inch diameter Clean-Out. The Septic Tanks discharge into the 6-inch sewer pipes. The end Clean-Out and the Manholes provide access into the pipes for inspection and cleaning.

DIVISION 1: Attached Drawing (2 of 11) shows the Site Plan of the Division 1 Collection System. Attached Drawing (3 of 11) shows its Sewer & Street Profile.

DIVISION 2: Attached Drawing (4 of 11) shows the Site Plan of the Division 2 Collection System. Attached Drawing (6 of 11) shows its Sewer & Street Profile.

DIVISION 3: Attached Drawing (5 of 11) shows the Site Plan of the Division 3 Collection System. Attached Drawing (6 of 11) shows its Sewer & Street Profile.

At the downstream end of each of the three Collection Systems is a dedicated Pump Station (to convey the collected wastewater to the Community Drainfield).

4. Pump Stations:

Each of the three Divisions has its own dedicated Pump Station to deliver the collected wastewater to the Community Drainfield.

Each Pump Station has a settling/clarifying chamber where remaining finer solids within the wastewater stream can settle-out. Wastewater drains from this compartment into a second compartment (Wet-Well) where the Pumps are situated.

Each Pump Station has two identical pumps. Either pump can deliver the normal wastewater flow rates to the drainfield. These two pumps alternate, pumping the Wet-Well from a selected high level down to its selected low level. On rare occasions, when the flow rate is abnormally high, both pumps can pump at the same time.

Each Pump Station has a Control System consisting of Float-Switches located within the Wet-Well and a Control Panel housed inside a weather-tight housing (located on an above-ground post adjacent to the Wet-Well). This Control System operates the two pumps and activates the alarms.

Each Pump Station has a High Level ALARM consisting of a Bell/Horn and Red-Light. If the pumps cannot keep up with the wastewater flow into the Wet-Well, the alarm is actuated. The Bell/Horn can be silenced by pushing a button located on the outside of the Control Panel housing (Note: the Red-Light will remain on, after pushing the button, until the level within the Wet-Well returns to normal).

DIVISION 1: Attached Drawing (7 of 11) shows the Schematic of the Division 1 Pump Station.

DIVISION 2: Attached Drawing (8 of 11) shows the Schematic of the Division 2 Pump Station.

DIVISION 3: Attached Drawing (9 of 11) shows the Schematic of the Division 3 Pump Station.



5. Secondary Treatment & Disposal (Community Drainfield):

Each of the three Divisions has its own dedicated Drainfield. Attached Drawing (10 of 11) shows the three separate Drainfields. Each of the three separate Drainfields is divided into three sub-sections with a gate-valve positioned to control each sub-section.

When a Division Pump Station sends the contents of its Wet-Well to its respective Drainfield, this pumped wastewater discharges into fifteen washed-rock fill zones thru the 1-inch diameter lateral pipes. Secondary Treatment of the wastewater occurs within these washed-rock zones.

When the wastewater reaches the bottom of the washed-rock fill zones, it infiltrates into the natural/native soil that underlies the Drainfield. This infiltrating treated water dissipates within these soils just like rainwater or irrigation water.

It is important that the washed-rock fill zones do not become saturated with ponding-water. If ponding-water occurs, Secondary Treatment efficiency drops-off. Each of the three separate Division Drainfields has Observation Ports installed to monitor for a ponding-water condition.

6. Infiltration Control:

Prior to the summer of 2000, off-site Regional precipitation runoff flowed into the Tolmie Park Estates development, causing flooding (Infiltration) of the On-Site Sewage System every winter.

This off-site runoff arrived by both overland-flow (the Winter Creek), and by flow thru the soil (Interflow). The off-site water causing the significant damaging Infiltration problem arrived primarily along the northern boundary of Division 2.

In the summer of 2000, an Infiltration Cut-Off Storm Drainage System was installed to intercept the overland and interflow runoff arriving along the north boundary of Division 2. Attached Drawing (11 of 11) shows this system.

The Winter Creek's overland flow now enters a 24-inch diameter storm drainpipe thru an inlet structure located on the north boundary of Lot 19 (see arrow symbol with 1 inside it on (11 of 11)). The interflow is now captured by a French Drain cutoff trench that runs along the north boundary of Lots 19 thru 23.

Both the captured overland flow and interflow are conveyed west and then south thru the 24-inch and 18-inch drainpipe, thus bypassing Division 2. This pipeline has two catch-basins for inspection and cleaning (see arrow symbols with 2 & 3 inside them on (11 of 11)).

During the 2000-2001, 2001-2002, & 2002-2003 winters, this new infiltration cut-off storm drainage system has eliminated the Infiltration problem. The Division 2 Pump Station operates normally during winter months without overflowing or causing Collection System backups.

Division 1 and Division 3 Infiltration problems were minor leaks at pipe-to-manhole mortared joints. Once these were sealed by injecting expanding foam into the leaking joints, their respective Pump Stations also operate normally during the winter months.

## **B. MONITORING AND MAINTENANCE REQUIREMENTS**

### **1. Monitoring Requirements:**

- a. **Pump Stations (Form 2 of 6):** Each of the three Division pump stations has two identical pumps. Since (for each Division) the two identical pumps alternate with every pump cycle, the hours that each of the two identical pumps run should be equal. Therefore, run-time meters are installed within the Control Panel at each of the three pump stations to document the hours that both pumps actually run, at each respective pump station.

The Division 1 Pump Station has a newer/modern Control Panel that has a third meter to document the number of times that both of its two identical pumps actually run at the same time. Eventually, the other two Pump Stations will also have this third meter.

Therefore, the monitoring requirement at each of the three Pump Stations is to document the run-time for each pump. At a minimum, run-time meters should be read and recorded on Form 2 of 6, once every month.

- b. **Community Drainfield (Form 4 of 6):** The Community Drainfield has three separate dedicated Drainfields, one for each of the three Divisions.

Since it is important that these Drainfields do not become saturated with ponding water, within the washed-rock fill zones, Observation Ports have been installed to monitor for ponding water level conditions (a total of five Observation Ports as shown on Drawing 10 of 11).

Therefore, the monitoring requirement at the Community Drainfield is to measure and record the levels on Form 4 of 6.



- c. Infiltration Control (Form 5 of 6): An Infiltration cut-off storm drainage system protects the On-Site Sewage System from becoming flooded.

The major potential cause of infiltration comes from Winter Creek overland flow. This overland flow now enters into a storm drainage system thru an inlet structure located on Lot 19 as shown on Drawing 11 of 11 (Note, the potential interflow infiltration contribution is collected in a maintenance-free French Drain trench as shown on the same drawing).

Therefore, maintaining a clean/unobstructed inlet structure, where the Winter Creek enters the drainage system, is the primary monitoring requirement for the Infiltration Cut-Off Storm Drainage System. Secondly, the two Catch-Basins must remain clear of debris. Monitoring/cleaning should be conducted every October and periodically throughout the wet winter months.

- d. Collection System: The Manholes of the Collection System should be monitored, on a periodic basis, for stranded debris. The most common cause of stranded debris comes from children dropping sticks and rocks into the Manholes.

The Manholes should also be inspected for the leaking of groundwater into them during the wet winter months. Any discovered leak should be plugged by injecting expanding foam into the leak.

## 2. Maintenance Requirements:

- a. Septic Tank Pumper Cleaning (Form 1 of 6): The Septic Tanks must be cleaned by a Licensed Pumper at least once every three years.

Starting the Fall of 2003, all Septic Tanks within Division 2 should be pumped. All of the Septic Tanks within Division 3 should be pumped in the Fall of 2004. All of the Septic Tanks within Division 1 should be pumped in the Fall of 2005. Then the sequence of Division 2, 3, 1 continues such that one Division is pumped every year.

- b. Pump Station Pumper Cleaning (Form 3 of 6): All three Pump Stations should be cleaned by a Licensed Pumper every year. This cleaning should be accomplished at the same time one Division of Septic Tanks is being cleaned.

The settling compartment of each Pump Station should be pumped dry. The Wet-Well compartment should be water-hose washed while being pumped dry to remove all fine solids that have accumulated within the Wet-Well.

- c. Winter Creek Inlet (Form 5 of 6): The primary maintenance requirement of the Infiltration Cut-Off Storm Drainage System is maintaining a clean/unobstructed inlet to the 24-inch drainpipe. The two drainpipe Catch-Basins should also be kept clean of debris.

The French Drain trench portion of the system is maintenance-free, except that, no structure or tree should be placed within 5-feet of its trench centerline.



## DRAWINGS LIST

- 1 of 11: System Layout Site Plan
- 2 of 11: Division 1 Site Plan
- 3 of 11: Division 1 Sewer & Street Profile
- 4 of 11: Division 2 Site Plan
- 5 of 11: Division 3 Site Plan
- 6 of 11: Division 2 & 3 Sewer & Street Profile
- 7 of 11: Pump Station #1 Schematic
- 8 of 11: Pump Station #2 Schematic
- 9 of 11: Pump Station #3 Schematic
- 10 of 11: As-Built Community Drainfield Plan
- 11 of 11: Stormwater Cutoff Pipe & Infiltration Trench  
(shows Winter Creek Inlet and two Catch-Basins)

## REPORT FORMS

- 1 of 6: Septic Tank Pumper Cleaning Report
- 2 of 6: Pump Station Run-Time Log
- 3 of 6: Pump Station Pumper Cleaning Report
- 4 of 6: Community Drainfield Monitoring & Maintenance Report
- 5 of 6: Infiltration Cut-Off Storm Drainage System Cleaning/Repair Report
- 6 of 6: Miscellaneous Repair Report



Matth  
237

## WMP-Series Plastic-Bodied Magmeter

### FEATURES

Polyethylene protective cover

LCD rate and total indicator

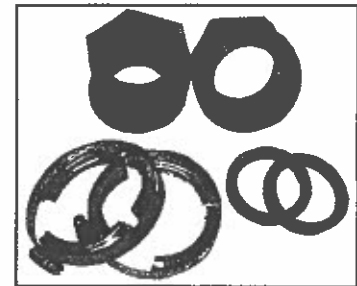
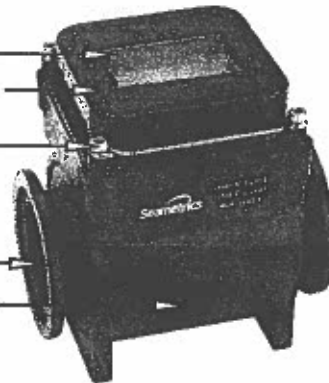
Powder-coated diecast-aluminum electronics housing

Cross-drilled screws (2) for tamper-evidence

316SS electrodes

Corrosion-resistant glass-filled polypropylene body

Lightweight for easy handling



Seametrics Fitting Kit  
for 2 & 3 inch model

### SPECIFICATIONS\*

Pipe Size	1, 2 or 3 inch full port			
Fittings	1 inch NPTF, 2 or 3 inch flange clamps with 2 or 3 inch NPTF fitting kit			
Pressure	150 psi or 10.3 bar working pressure @ 70° F			
Operating Temperature Range	10° to 130° F (-12° to 54° C) operating, -40° to 176° F (-40° to 80° C) non-operating			
Accuracy	+/-1% of reading (between 10% and 100% of max flow)			
	+/-3% of reading (between cutoff and 10% of max flow)			
Flow Range	Minimum	1 inch: 2.3 GPM (.145 LPS)	2 inch: 6 GPM (.38 LPS)	3 inch: 14 GPM (.88 LPS)
	Maximum	1 inch: 110 GPM (6.94 LPS)	2 inch: 300 GPM (18.9 LPS)	3 inch: 670 GPM (42.3 LPS)
Materials	Body	Glass-filled polypropylene		
	Electrodes	316 stainless steel		
	Electronics Housing	Diecast aluminum, powder-coated		
	Display Cover	Polyethylene		
Display	Digits	Rate	Total	
		6	8	
	Units	Gallons/Minute, Million Gallons/Day, Cubic Feet/Second, Cubic Feet/Minute, Liters/Second, Liters/Minute, Million Liters/Day, Cubic Meters/Minute, Cubic Meters/Hour		Acre-Feet, Acre-Inch, Gallons, Gallons x 1000, Cubic Feet, Liters, Megaliters, Cubic Meters, Cubic Meters x 1000
Security	Cross-drilled screws and tamper-evident seal (optional)			
Power	WMP101	10-30 Vdc @ 60 mA max (15 mA average) NOTE: Using an unregulated power supply >18 Vdc may damage the meter due to AC line input voltage fluctuation		
	WMP104	6 each AA alkaline cells, replaceable. Estimated life is 1 year depending on usage (standard)		
		2 each C lithium batteries, replaceable. Estimated life is 2-4 years depending on usage (Extended battery life option)		
Pulse Output Signal (WMP101 Only)	Current sinking pulse, opto isolated, 32 Vdc max at 10 mA max			
Pulse Rate (WMP101 Only)	Low Frequency (-PxU) 1 unit/pulse out, pulse width of 10ms depending on unit selection			
	High Frequency (-HF)	1"	2"	3"
	Pulse/Gal	80	30	13
	Pulse/Liter	21.136	7.926	3.435
Empty Pipe Detection	Hardware/software, conductivity-based			
Conductivity	>20 microSiemens/cm			
Environmental	NEMA 4X standard			
Electrical Connection (WMP101 Only)	5 pin male circular connector, mates to industry standard cable			

\*Specifications subject to change • Please consult our website for current data ([www.seametrics.com](http://www.seametrics.com))



Tolmie 9/13/17 3:30 PM

PS # 3

#1 19.4

#2 19.9

21.3 Both

PS # 2 #1 27.0

#2 27.9

29.0 Both

PS #1 #1 48.5

~~47.8~~

#2 49.5


52.2 Both

# APPENDIX B

## COL RAM FORMS




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<b>PROJECT:</b>		<b>SUBMITTAL NO.</b>		
LACEY CONTRACT NO. PW____-20____		Date sent to City:		
<b>Request for Approval of Material, Product or Shop Drawing</b>				
Contractor:		Subcontractor:		
No. of Pages	Item: Material, Product or Shop Drawing			Specification Reference
<input type="checkbox"/> This item is as specified		<b>OR</b> <input type="checkbox"/> This item is a substitution/or equal Material/Product Substitution Request shall be submitted		
<input type="checkbox"/> Supplier/Subcontractor certifies material/product conforms to contract.				
Review Priority: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3            Requested Due Date:				
Notes to Engineer:				

City of Lacey Engineer:		Date Approved by City:	
<input type="checkbox"/> Rejected	New Submittal Required.		
<input type="checkbox"/> Revise and Resubmit	See Engineer's comments.		
<input type="checkbox"/> Conditionally Approved	See items included in Engineer's comments.		
<input type="checkbox"/> Conditionally Approved	No exceptions noted.		
Review of the materials, products or plans do not relieve the contractor from compliance with requirements of the contract documents and does not necessarily constitute acceptance for materials, products or plans to be incorporated in the work. This review is for general conformance of the project's conceptual design and general compliance with the project's plans and specifications.			
Date City Transmitted to Contractor:		Date Contractor Transmitted to Subcontractor/Supplier:	



Date Received by City of Lacey:	Reviewed by: (Name/Company)
<u>Engineer's Comments:</u>  1.	

PROJECT: <i>A</i>		SUBMITTAL NO. <i>C</i>	
LACEY CONTRACT NO. PW___-20___ <i>B</i>			
Request for Approval of Material, Product or Shop Drawing			
Contractor: <i>D</i>		Subcontractor: <i>E</i>	
No. of Pages	Item: Material, Product or Shop Drawing		Specification Reference
<i>F</i>	<i>G</i>		<i>H</i>
<input type="checkbox"/> This item is as specified <i>I1</i> OR <input type="checkbox"/> This item is a substitution/or equal Material/Product Substitution Request shall be submitted <i>I2</i>			
<input type="checkbox"/> Supplier/Subcontractor certifies material/product conforms to contract.			
Review Priority: <input type="checkbox"/> 1 <i>K</i> <input type="checkbox"/> 2 <input type="checkbox"/> 3      Requested Due Date: <i>L</i>			
Notes to Engineer:  <i>M</i>			

Section 1

City of Lacey Engineer: <i>R</i>		Date City Transmitted to Contractor: <i>S</i>
<input type="checkbox"/> Rejected	New Submittal Required.	
<input type="checkbox"/> Revise and Resubmit	See Engineer's comments.	
<input type="checkbox"/> Conditionally Approved	See items included in Engineer's comments.	
<input type="checkbox"/> Conditionally Approved	No exceptions noted.	
Review of the materials, products or plans do not relieve the contractor from compliance with requirements of the contract documents and does not necessarily constitute acceptance for materials, products or plans to be incorporated in the work. This review is for general conformance of the project's conceptual design and general compliance with the project's plans and specifications.		
Date Received by Contractor: <i>T</i>		Date Returned to Subcontractor/Supplier: <i>U</i>

Section 3



Date Received by City of Lacey:	<i>N</i>	Reviewed by: (Name/Company)	<i>@</i>
<u>Engineer's Comments:</u>  1. <i>P</i>			

Section 2

## Section 1

The **Project Manager** shall fill in items **A** and **B**. The “Request for Approval of Material, Products or Shop Drawing” form shall be included in the specifications.

**A** Project Manager enters in the project title that matches the plans and specifications.

**B** Project Manager enters in PW project number that matches the plans and specifications.

The **Contractor** shall fill out the “Request for Approval of Material, Product or Shop Drawing” form for all materials or products that will be installed and Shop Drawing that will be used in the project. The form and the submittal shall be sent in the same e-mail. Submittals that exceed 10 MB shall either be provided on a CD, a flash drive or an internet link.

The products and materials that are specific to the project shall be circled or highlighted. If a submittal includes products or materials that are not project specific then these items shall be crossed out. Project Submittals that exceed 10 pages shall be submitted in Adobe Acrobat format and include a table of contents. Submittals that are not submitted in this format may be rejected outright and the contractor will be required to resubmit in the correct format.

The contractor shall enter in items **C, D, E, F, G, H, I, J, K, L**, and **M**.

**C** Contractor enters in the submittal number. The first “Request for Approval of Material, Product or Shop Drawing” submittal number shall be 1.0, the second shall be 2.0, the third shall be 3.0, etc.

When a “Request for Approval of Material, Product or Shop Drawing” requires resubmitting, the next submittal shall be the first part of the submittal number and then 0.1. Example: If submittal 9.0 requires resubmitting, then the resubmittal shall be 9.1. If a second resubmittal is required, then the next resubmittal shall be 9.2.

**D** Contractor shall fill in their name.

**E** Contractor shall fill in the subcontractor that is requesting approval. If only the General Contractor is requesting approval, then NA (not applicable) shall be entered.

**F** The number of pages for each specific material, product or shop drawing shall be entered.

**G** The specific material, product or shop drawing shall be entered. Material or product will be the trade name of the product or the name it is most easily recognized by. Materials or products that are similar (i.e. pipe fittings) can be bundled into one submittal.

**H** The specification that pertains to the specific material, product or shop drawing shall be entered. This information is critical in comparing the material, product or shop drawing to the specifications. You may also list Plan Sheet number or Special Provision page in this area.

**I** The Contractor shall check if the items submitted are either specified (I1) or that the submitted item is a substitution or equal (I2). If the product is a substitute or equal, then a Material/Product Substitution Request shall be submitted.

**J** The Contractor shall check that supplier and/or subcontractor certifies the bid item.

**K** The Contractor shall check if the submittal for approval is a high (1), average (2) or low (3) priority. The City of Lacey will review priority submittals as quickly as possible. Note: The majority of the submittals shall be checked as priority 2 or 3. Priority 1 submittals shall be critical or long lead items.

**L** A due date can be entered by the contractor. The City of Lacey will endeavor to review and return the request for approval by the requested due date.

**M** Any additional notes that the Contractor finds would assist the City of Lacey in reviewing the submittal can be entered in here.

## Section 2

The **City of Lacey Engineer** shall fill in items **N**, **O** and **P**.

**N** Enter the date that the City of Lacey received the “Request for Approval of Material, Product or Shop Drawing” from the Contractor.

**O** Enter the name and company of the person that reviewed the submittal.

**P** Any comments regarding changes needed, resubmittals requirements, conditional approval, etc. shall be entered.

## Section 3

The **City of Lacey Engineer** shall fill in items **Q**, **R**, and **S**.

**Q** Either “Rejected: New Submittal Required.”, “Review and Resubmit: See Engineer’s comments.”, “Conditionally Approved: See items included in Engineer’s comments.”, or “Conditionally Approved: No exceptions noted” shall be checked”.

**R** Enter the name of the Engineer sending the submittal back to the Contractor. The Engineering sending the form back may not necessarily be the Engineer completing the review.

**S** Enter the date that the City of Lacey transmits the “Request for Approval of Material, Product or Shop Drawing” to the Contractor.

The **Contractor** shall enter in items **T** and **U** for their own records. If there is a discrepancy between the **S** “Date City Transmitted to Contractor” and **T**, the Contractor shall notify the City of Lacey within 3 working days.

**T** Contractor enters the date that they received the completed “Request for Approval of Material or Shop Drawing”.

**U** Contractor enters the date that that they return the completed “Request for Approval of Material or Shop Drawing” to the Subcontractor/Supplier.



# APPENDIX C

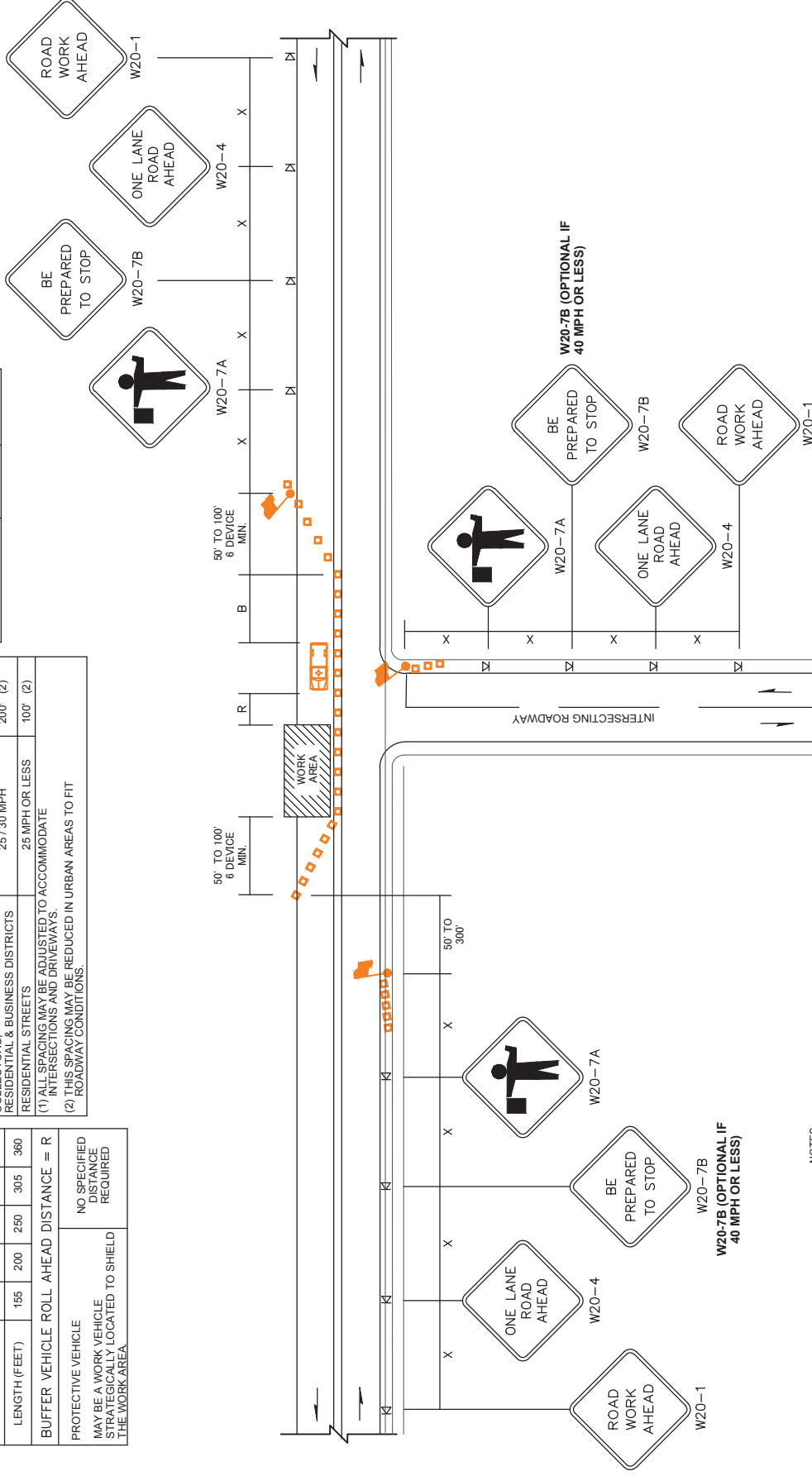
## TRAFFIC CONTROL PLANS

BUFFER DATA					
LONGITUDINAL BUFFER SPACE = B					
DESIGN SPEED (MPH)	25	30	35	40	45
LENGTH (FEET)	155	200	250	305	360
BUFFER VEHICLE ROLL AHEAD DISTANCE = R					
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA	NO SPECIFIED DISTANCE REQUIRED				

SIGN SPACING = X (1)	DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS	45 MPH	500'
URBAN ARTERIALS & COLLECTORS	35 / 40 MPH	350'
COLLECTORS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' (2)
RESIDENTIAL STREETS	25 MPH OR LESS	100' (2)

CHANNELIZATION DEVICE SPACING (FEET)			
DESIGN SPEED (MPH)	TAPER	10 TO 20	TANGENT
35/45	10 TO 20	10 TO 20	60
25/30	10 TO 20	10 TO 20	40

W20-7B (OPTIONAL IF 40 MPH OR LESS)



NOTES:

1. ALL SIGNS ARE BLACK ON ORANGE.
2. EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
3. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
4. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
5. REFER TO THE MUTCD FOR SIGN DIMENSIONS.

**LEGEND**

FLAGGING STATION

TEMPORARY SIGN LOCATION

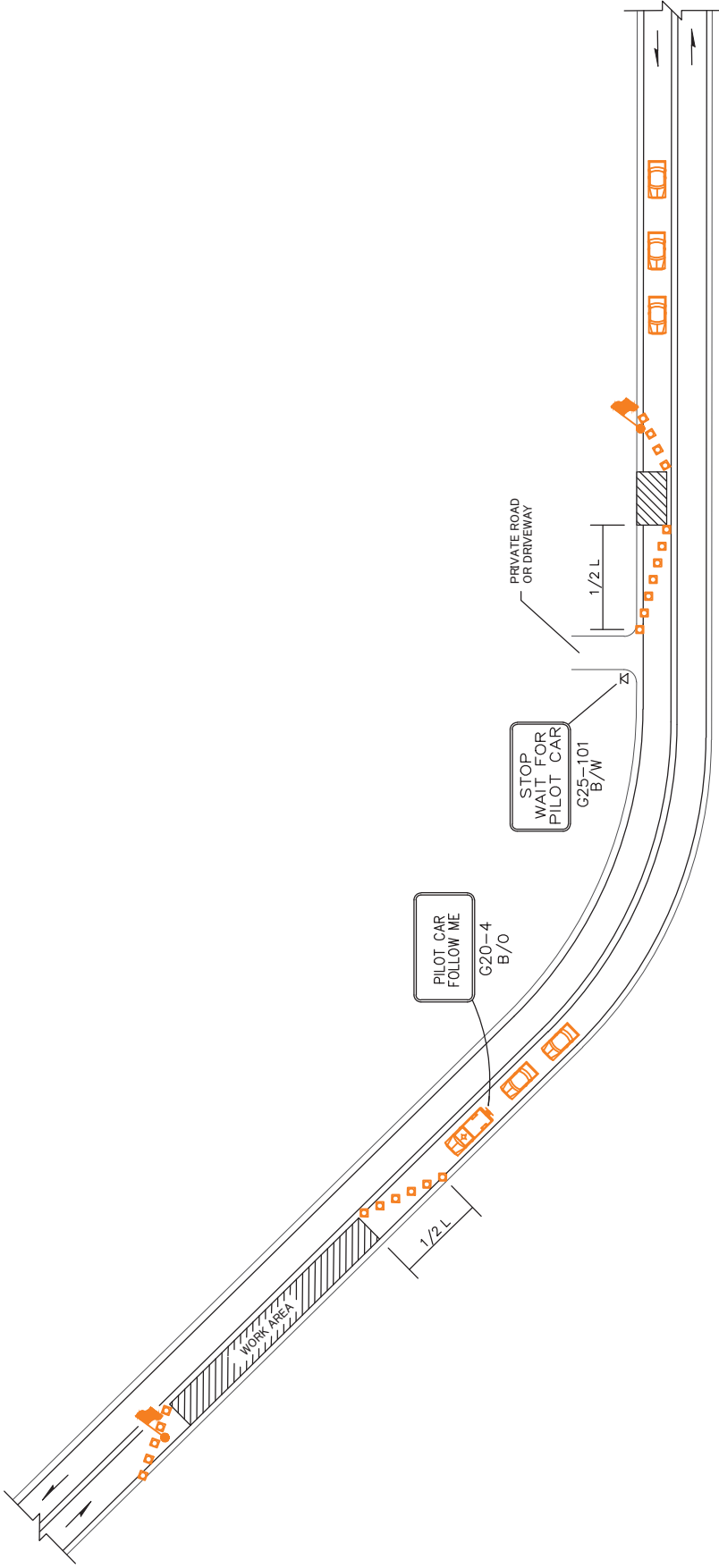
CHANNELIZING DEVICES

PROTECTIVE VEHICLE

# ONE-LANE TWO-WAY TRAFFIC CONTROL WITH FLAGGERS TC-1

MINIMUM TAPER LENGTH = L (feet)				
LANE WIDTH (feet)	DESIGN SPEED (MPH)			
	25	30	35	40
10	105	150	205	270
11	115	165	225	295
12	125	180	245	320

CHANNELIZATION DEVICE SPACING (feet)			
DESIGN SPEED (MPH)	TAPER	TANGENT	
35/45	30	60	
25/30	20	40	



#### LEGEND

-  FLAGGING STATION
-  KI TEMPORARY SIGN LOCATION
-  CHANNELIZING DEVICES
-  PILOT VEHICLE
-  MOTORIST VEHICLE

#### NOTES:

1. REFER TO SHEET TC1 FOR ADDITIONAL SIGNING AND FLAGGING DETAILS NOT SHOWN.
2. CHANNELIZING DEVICES ARE RECOMMENDED ALONG CENTERLINE TO SEPARATE TRAFFIC FROM WORK OPERATION. DEVICES ARE REQUIRED AT TAPERS TO SHIFT TRAFFIC MOVEMENT BETWEEN LANES AND TO PROTECT FLAGGING STATIONS.
3. SIGN G25-101 IS RECOMMENDED FOR NON-STOP SIGN CONTROLLED APPROACHES SUCH AS PRIVATE ROADS AND DRIVEWAYS. THIS SIGN IS NOT REQUIRED TO BE ALUMINUM SUBSTRATE AND CAN BE MADE OF ALTERNATIVE MATERIALS.
4. REFER TO THE MUTCD FOR SIGN DIMENSIONS.

## PILOT CAR OPERATION TC-2



MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)			
LANE WIDTH (feet)	DESIGN SPEED (MPH)		
	25	30	35
10	105	150	205
11	115	165	225
12	125	180	245

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)			
SHOULDER WIDTH (feet)	DESIGN SPEED (MPH)		
	25	30	35
8'	40	60	90
10'	40	60	90

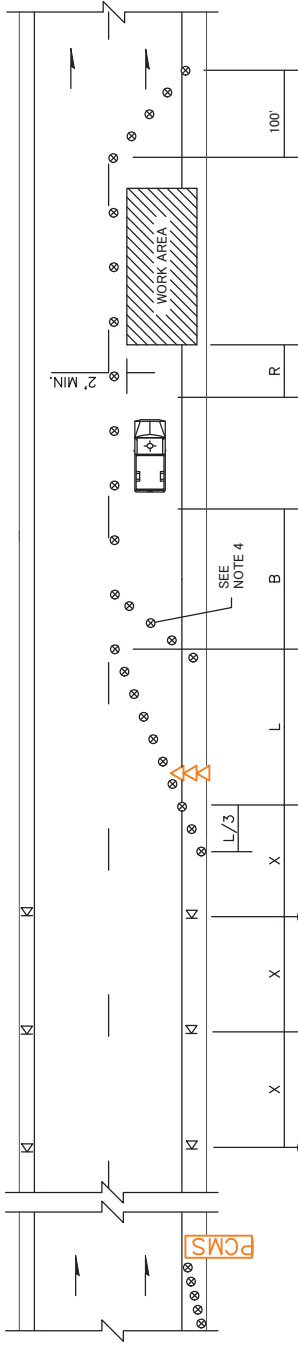
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.

SIGN SPACING = X (1)		
URBAN ARTERIALS	DESIGN SPEED (MPH)	
	45 MPH	500'
COLLECTORS, RESIDENTIAL & BUSINESS DISTRICTS	DESIGN SPEED (MPH)	
	35 / 40 MPH	350'
RESIDENTIAL STREETS	DESIGN SPEED (MPH)	
	25 / 30 MPH	200' (2)
INTERSECTIONS AND JUNCTIONS	DESIGN SPEED (MPH)	
	25 MPH OR LESS	100' (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE, AT-GRADE INTERSECTIONS AND JUNCTIONS.

(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

BUFFER DATA			
LONGITUDINAL BUFFER SPACE = B			
LENGTH (feet)	25	30	35
	155	200	250



PCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE IN ADVANCE OF LANE CLOSURE SIGNING.

#### NOTES:

- SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
- EXTEND DEVICE TAPER AT L/3 ACROSS SHOULDER.
- DEVICES SHALL NOT ENCR OACH INTO THE ADJACENT LANE.
- USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000' (FT) (RECOMMENDED).
- DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT).
- ALL SIGNS ARE BLACK ON ORANGE.
- REFER TO THE MUTCD FOR SIGN DIMENSIONS.

#### LEGEND

- TEMPORARY SIGN LOCATION
- TRAFFIC SAFETY DRUM
- SEQUENTIAL ARROW SIGN
- PROTECTIVE VEHICLE
- PORTABLE CHANGEABLE MESSAGE SIGN

## SINGLE-LANE CLOSURE FOR MULTI-LANE ROADWAYS TC-3

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)		
LANE WIDTH (feet)	DESIGN SPEED (MPH)	
	25	30
10	105	150
11	115	165
12	125	180
	205	270
	225	295
	245	320
	320	540

MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)		
SHOULDER WIDTH (feet)	DESIGN SPEED (MPH)	
8'	25	30
10'	40	60
	60	90
	90	150

USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'

SIGN SPACING = X (1)		DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS		45 MPH	500'
URBAN ARTERIALS & COLLECTORS		35 / 40 MPH	350'
COLLECTORS		25 / 30 MPH	200' (2)
RESIDENTIAL & BUSINESS DISTRICTS		25 MPH OR LESS	100' (2)

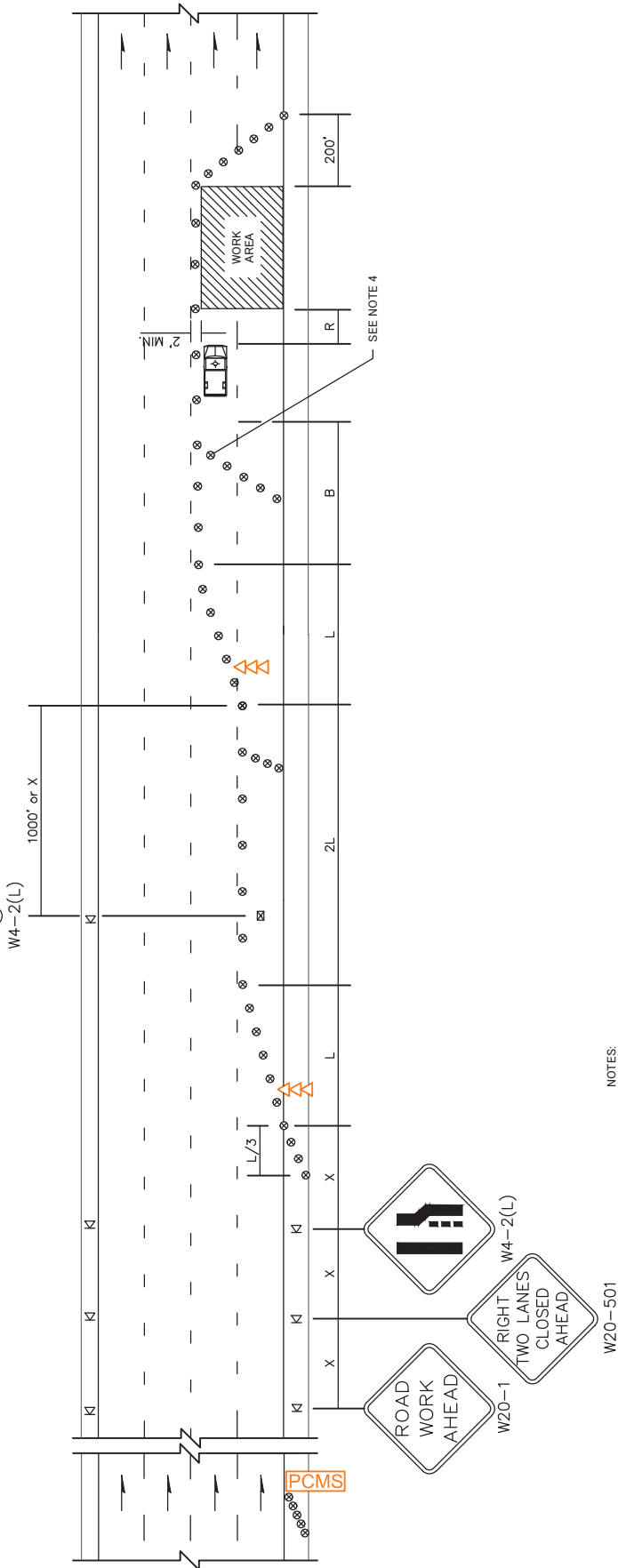
CHANNELIZATION DEVICE SPACING (feet)		
DESIGN SPEED (MPH)	TAPER	TANGENT
35/45	30	60
25/30	20	40

BUFFER DATA						
LONGITUDINAL BUFFER SPACE = B						
DESIGN SPEED (MPH)	25	30	35	40	45	
LENGTH (feet)	155	200	250	305	360	

PCMS		
1	2	
2 LANES CLOSED AHEAD	WATCH FOR SLOW TRAFFIC	
2.0 SEC	2.0 SEC	



FIELD LOCATE 1 MILE IN ADVANCE OF LANE CLOSURE SIGNING.



- NOTES:
- SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
  - EXTEND DEVICE TAPER AT U/3 ACROSS SHOULDER.
  - DEVICES SHALL NOT ENCRUCH INTO THE ADJACENT LANES.
  - USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000' (FT) (RECOMMENDED).
  - DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT).
  - ALL SIGNS ARE BLACK ON ORANGE.
  - REFER TO THE MUTCD FOR SIGN DIMENSIONS.

- LEGEND
- ⊙ TRAFFIC SAFETY DRUM
  - ⊠ TEMPORARY SIGN LOCATION
  - ➡ SEQUENTIAL ARROW SIGN
  - 🚗 PROTECTIVE VEHICLE
  - 📄 PORTABLE CHANGEABLE MESSAGE SIGN
  - ⊞ TEMPORARY SIGN LOCATION (9' (FT) MOUNTING HEIGHT)

# DOUBLE-LANE CLOSURE FOR MULTI-LANE ROADWAYS TC-4

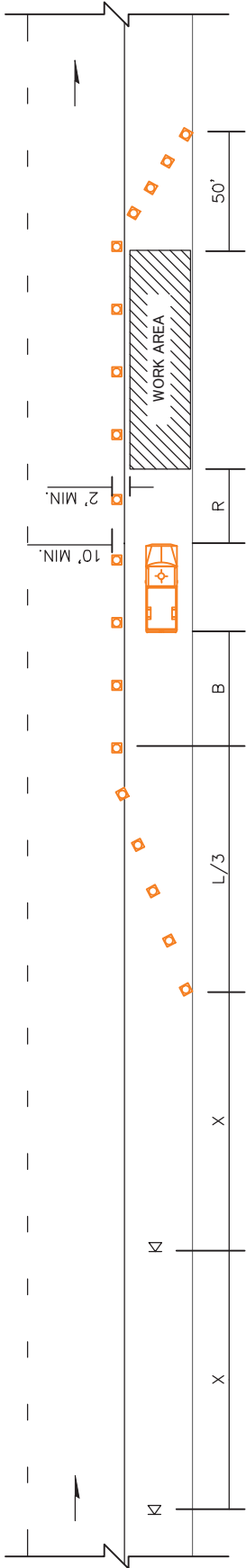
SIGN SPACING = X (1)	DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS	35 / 40 MPH	350'
URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' (2)
RESIDENTIAL STREETS	25 MPH OR LESS	100' (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS.  
 (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

MINIMUM SHOULDER TAPER LENGTH = L/3 (FEET)					
SHOULDER WIDTH (feet)	DESIGN SPEED MPH				
	25	30	35	40	45
8'	40	40	60	90	120
10'	40	60	90	90	150

USE A 3 DEVICES TAPER FOR SHOULDERS LESS THEN 8'

CHANNELIZATION DEVICE SPACING (FEET)			
DESIGN SPEED MPH	TAPER		TANGENT
	35/40	30	60
	25/30	20	40



ROAD WORK AHEAD  
W20-1

SHOULDER WORK  
W21-5

BUFFER DATA				
LONGITUDINAL BUFFER SPACE = B				
DESIGN SPEED (MPH)	25	30	35	40
LENGTH (FEET)	155	200	250	305
BUFFER VEHICLE ROLL AHEAD DISTANCE = R				
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.			NO SPECIFIED DISTANCE REQUIRED	

- K1

TEMPORARY SIGN LOCATION

Orange square

CHANNELIZING DEVICES

Orange car icon

PROTECTIVE VEHICLE
- NOTES:

  1. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT).
  2. ALL SIGNS ARE BLACK ON ORANGE.
  3. REFER TO THE MUTCD FOR SIGN DIMENSIONS.

SHOULDER CLOSURE – LOW SPEED

(40 MPH OR LESS)

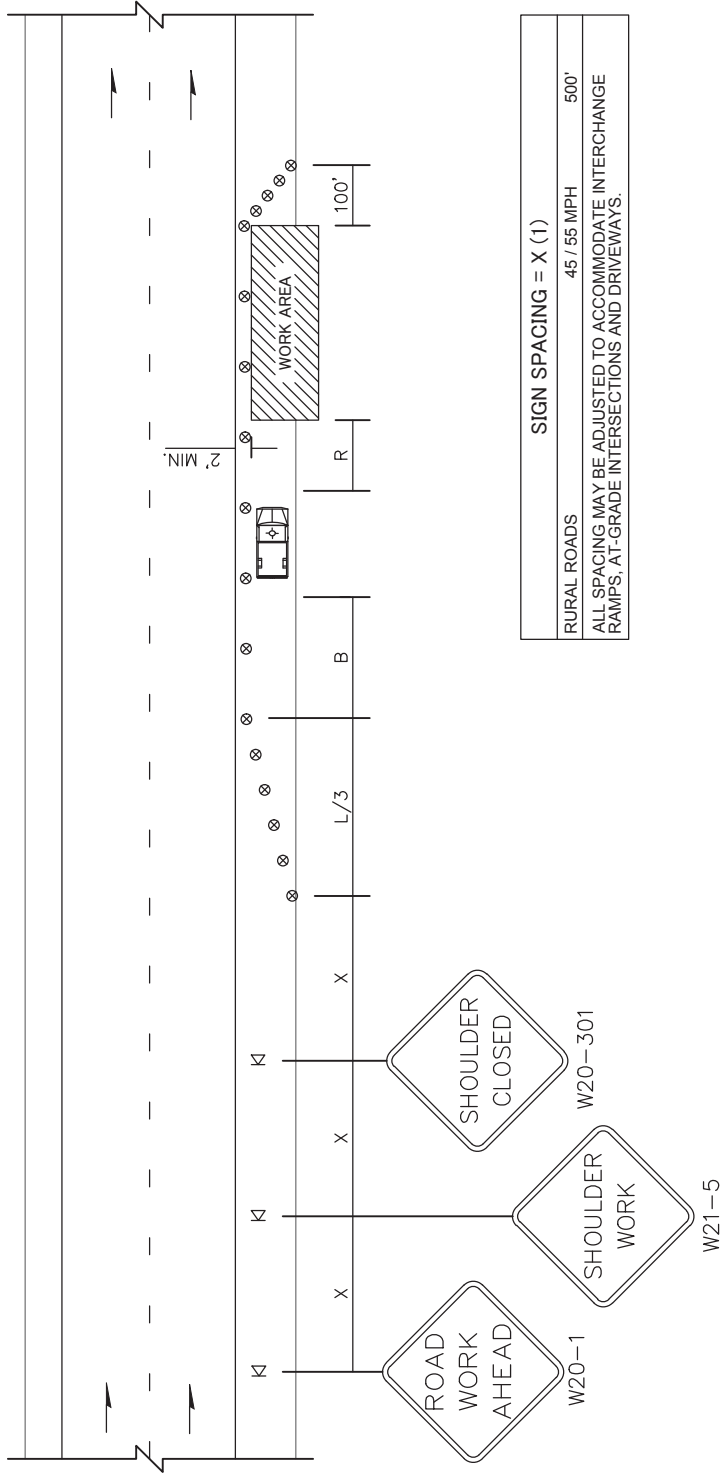
TC-5



MINIMUM SHOULDER TAPER LENGTH = $L/3$ (feet)						
SHOULDER WIDTH (feet)	DESIGN SPEED					
	25	30	35	40	45	50
8'	-	-	-	-	120	130
10'	-	-	-	-	150	170
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.						

CHANNELIZATION DEVICE SPACING (feet)			
MPH	TAPER	TANGENT	
50/70	40	80	
35/45	30	60	

BUFFER DATA						
LONGITUDINAL BUFFER SPACE = B						
DESIGN SPEED (MPH)	25	30	35	40	45	50
LENGTH (feet)	-	-	-	-	360	425



#### LEGEND

TEMPORARY SIGN LOCATION

TRAFFIC SAFETY DRUM

PROTECTIVE VEHICLE

K1

⊗



#### NOTES:

1. NO ENCROACHMENT IN TRAVELED LANE. IF ENCROACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
2. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT) O.C.
3. ALL SIGNS ARE BLACK ON ORANGE.
4. REFER TO THE MUTCD FOR SIGN DIMENSIONS.

## SHOULDER CLOSURE – HIGH SPEED

TC-6

MINIMUM TAPER LENGTH = L (FEET)				
LANE WIDTH (FEET)	DESIGN SPEED (MPH)			
	25	30	35	40
10	105	150	205	270
11	115	165	225	295
12	125	180	245	320
				540

BUFFER DATA					
LONGITUDINAL BUFFER SPACE = B					
DESIGN SPEED (MPH)	25	30	35	40	45
LENGTH (feet)	155	200	250	305	360
BUFFER VEHICLE ROLL AHEAD DISTANCE = R					
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED				

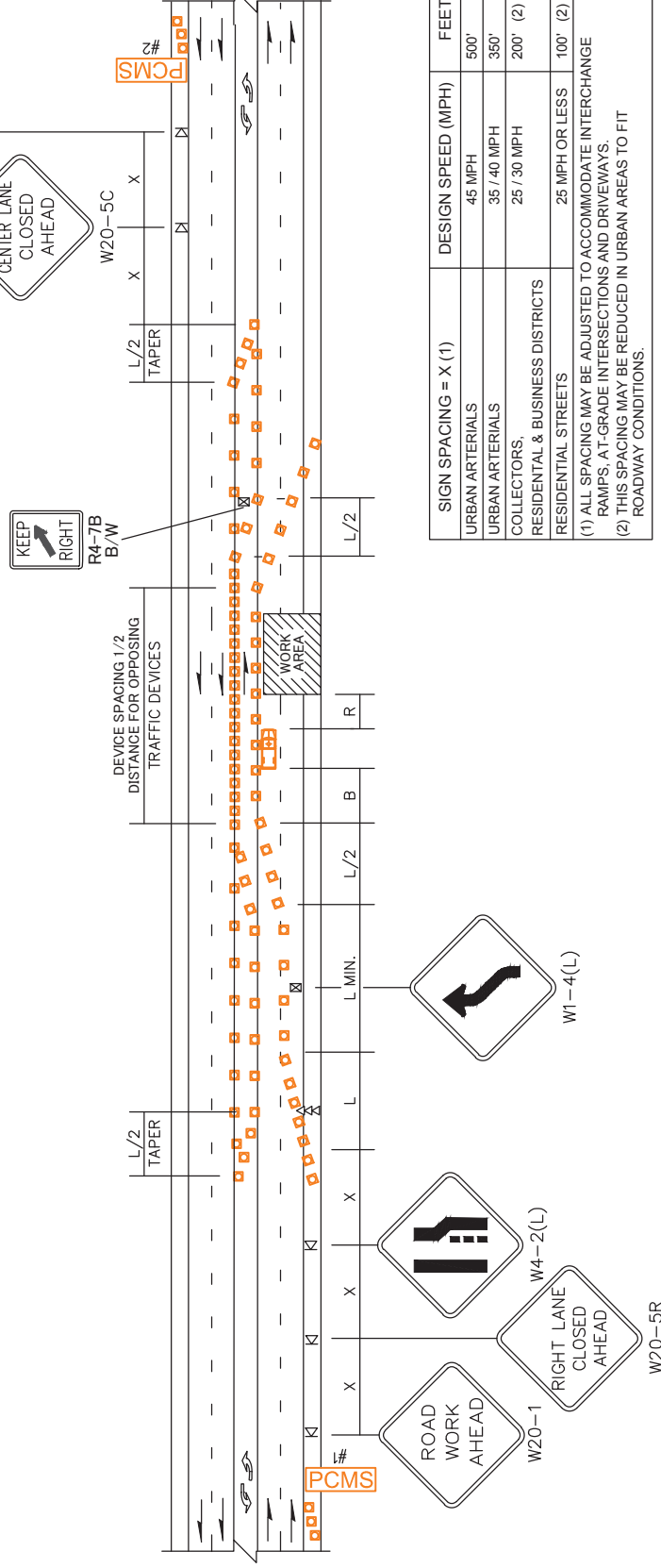
CHANNELIZATION DEVICE SPACING (FEET)			
DESIGN SPEED (MPH)	TAPER	TANGENT	
35/45	30	60	
25/30	20	40	

PCMS #1	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.

PCMS #2	
1	2
CENTER LANE CLOSED	NNO LEFT TURNING
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.



SIGN SPACING = X (1)	DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS	45 MPH	500'
URBAN ARTERIALS	35 / 40 MPH	350'
COLLECTORS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' (2)
RESIDENTIAL STREETS	25 MPH OR LESS	100' (2)
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		

## LEGEND

- K1 TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW SIGN
- PROTECTIVE VEHICLE
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- ⊗ TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

## NOTES:

1. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
2. RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
3. FOR POSTED SPEED LIMITS OF 30 MPH OR LESS, USE SIGN W1-3 IN LIEU OF SIGN W1-4.
4. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
5. REFER THE MUTCD FOR SIGN DIMENSIONS.

# RIGHT LANE CLOSURE WITH SHIFT

## 5 LANE ROADWAY

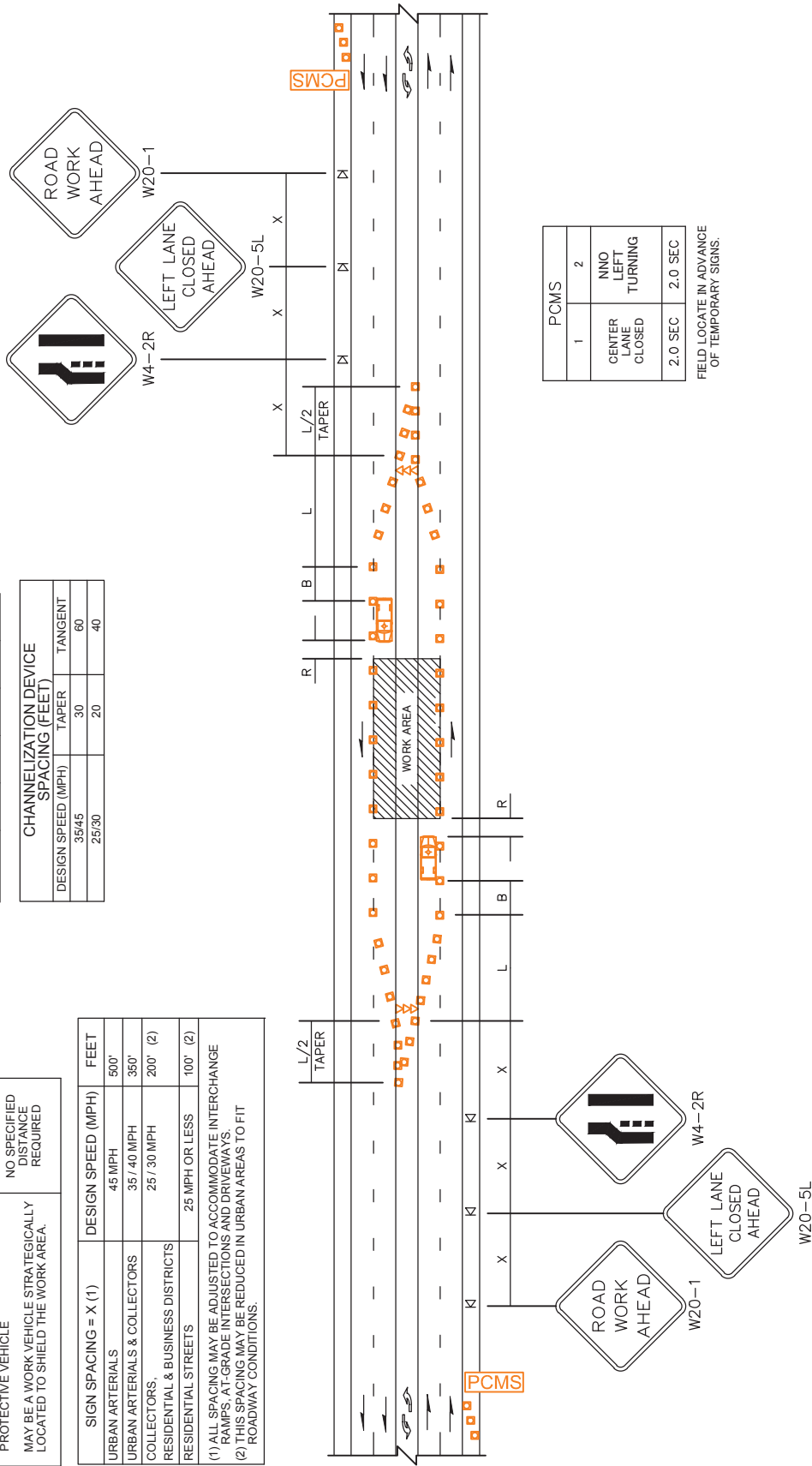
### TC-10

BUFFER DATA					
LONGITUDINAL BUFFER SPACE = B					
DESIGN SPEED (MPH)	25	30	35	40	45
LENGTH (FEET)	155	200	250	305	360
BUFFER VEHICLE ROLL AHEAD DISTANCE = R					
PROTECTIVE VEHICLE	MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.				NO SPECIFIED DISTANCE REQUIRED

SIGN SPACING = X (1)	DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS	45 MPH	500'
URBAN ARTERIALS & COLLECTORS	35 / 40 MPH	350'
COLLECTORS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' (2)
RESIDENTIAL STREETS	25 MPH OR LESS	100' (2)
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS. (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		

MINIMUM TAPER LENGTH = L (FEET)					
LANE WIDTH (FEET)	DESIGN SPEED (MPH)				
25	30	35	40	45	
10	105	150	205	270	450
11	115	165	225	295	495
12	125	180	245	320	540

CHANNELIZATION DEVICE SPACING (FEET)			
DESIGN SPEED (MPH)	TAPER	TANGENT	
35/45	30	60	
25/30	20	40	



PCMS	
1	2
CENTER LANE CLOSED	NNO LEFT TURNING
2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE OF TEMPORARY SIGNS.

#### LEGEND

- KI TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW SIGN
- PROTECTIVE VEHICLE
- PORTABLE CHANGEABLE MESSAGE SIGN

#### NOTES

- SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
- ALL SIGNS ARE BLACK ON ORANGE.
- REFER TO THE MUTCD FOR SIGN DIMENSIONS.

## LEFT LANE AND CENTER TURN LANE CLOSURE - 5 LANE ROADWAY TC-11



BUFFER DATA					
LONGITUDINAL BUFFER SPACE = B					
DESIGN SPEED (MPH)	25	30	35	40	45
LENGTH (FEET)	155	200	250	305	360
BUFFER VEHICLE ROLL AHEAD DISTANCE = R					
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED				

SIGN SPACING = X (1)	DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS	45 MPH	500'
URBAN ARTERIALS & COLLECTORS	35 / 40 MPH	350'
COLLECTORS,	25 / 30 MPH	200' (2)
RESIDENTIAL & BUSINESS DISTRICTS	25 MPH OR LESS	100' (2)
RESIDENTIAL STREETS	25 MPH OR LESS	100' (2)
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		

MINIMUM TAPER LENGTH = L (FEET)					
LANE WIDTH (FEET)	25	30	35	40	45
DESIGN SPEED (MPH)	105	150	205	270	450
	11	115	165	225	295
	12	125	180	245	320
					540

CHANNELIZATION DEVICE SPACING (FEET)		
DESIGN SPEED (MPH)	TAPER	TANGENT
35/45	30	60
25/30	20	40



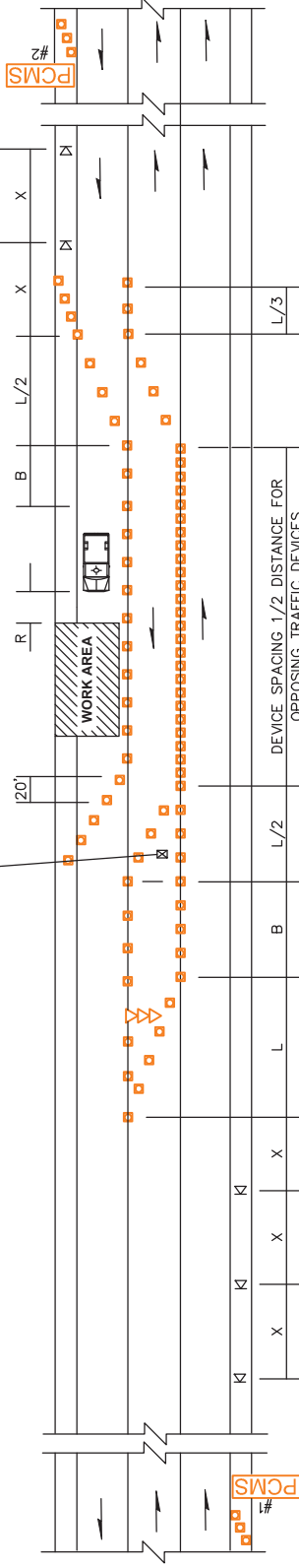
W20-1



W1-4(L)



R4-7B  
BW



W20-1



W4-2R



W20-5L

PCMS #1		PCMS #2	
1	2	1	2
LEFT LANE CLOSURE	1 MILE AHEAD	LANE SHIFTS LEFT	1 MILE AHEAD
2.0 SEC	2.0 SEC	2.0 SEC	2.0 SEC

FIELD LOCATE IN ADVANCE  
OF TEMPORARY SIGNS.

FIELD LOCATE IN ADVANCE  
OF TEMPORARY SIGNS.

#### LEGEND

K1 TEMPORARY SIGN LOCATION

CHANNELIZING DEVICES

SEQUENTIAL ARROW SIGN

PROTECTIVE VEHICLE

PORTABLE CHANGEABLE MESSAGE SIGN

TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

#### NOTES

- SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
- FOR SPEED LIMIT OF 30 MPH OR LESS, USE SIGN W1-3 IN LIEU OF SIGN W1-4.
- RECOMMENDED EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
- ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
- REFER TO THE MUTCD FOR SIGN DIMENSIONS.

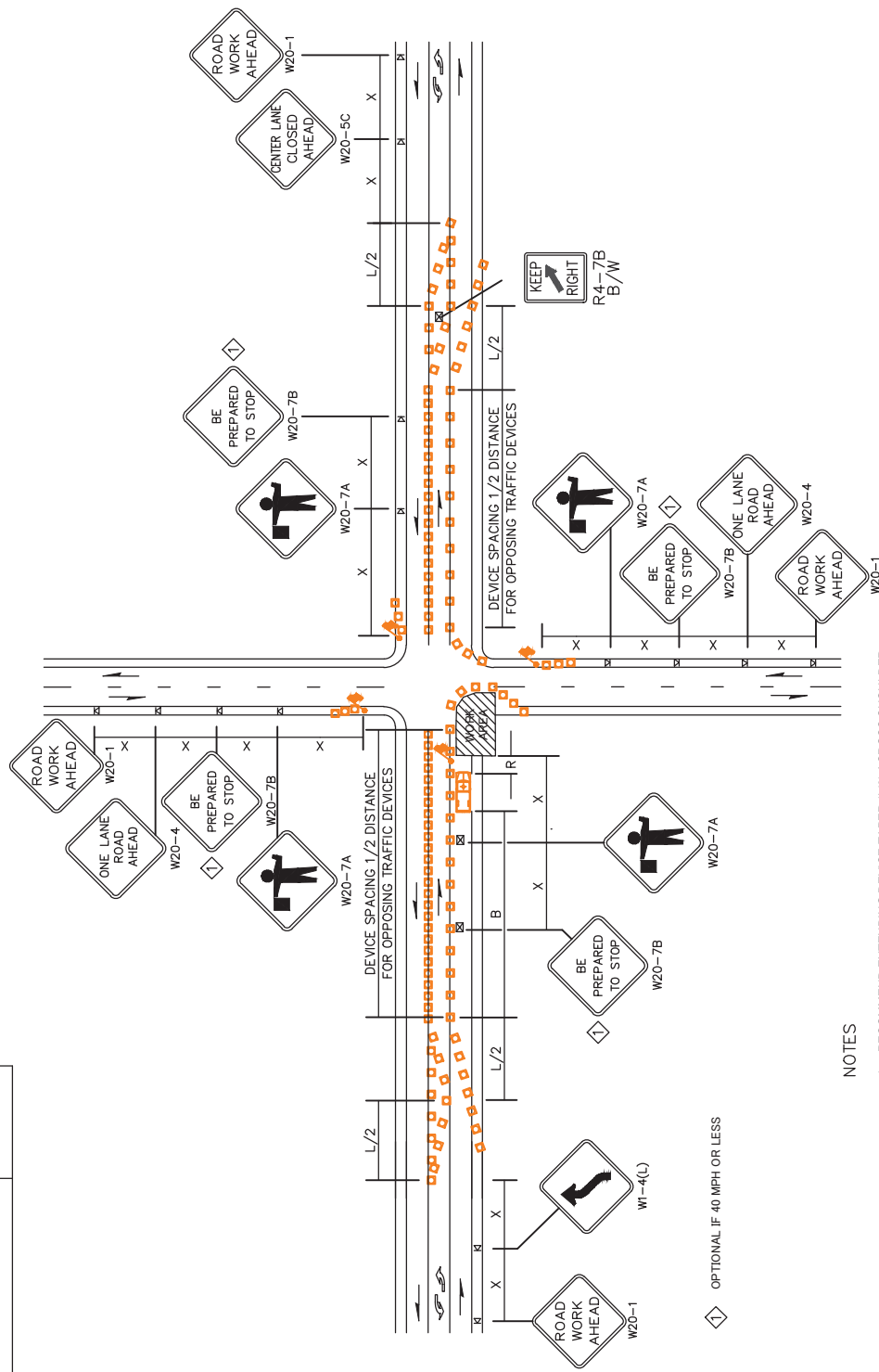
## LANE SHIFT THREE LANE ROADWAY TC-12

BUFFER DATA					
LONGITUDINAL BUFFER SPACE = B					
DESIGN SPEED (MPH)	25	30	35	40	45
LENGTH (FEET)	155	200	250	305	360
BUFFER VEHICLE ROLL AHEAD DISTANCE = R					
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED				

SIGN SPACING = X (1)		DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS		45 MPH	500'
URBAN ARTERIALS, COLLECTORS,		35 / 40 MPH	350'
RESIDENTIAL & BUSINESS DISTRICTS		25 / 30 MPH	200' (2)
RESIDENTIAL STREETS		25 MPH OR LESS	100' (2)
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.			
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.			

CHANNELIZATION DEVICE SPACING (FEET)		
DESIGN SPEED (MPH)	TAPER	TANGENT
35/45	30	60
25/30	20	40

MINIMUM TAPER LENGTH = L (FEET)		DESIGN SPEED (MPH)	
LANE WIDTH (FEET)		25	30
10		105	150
11		115	165
12		125	180
		245	320
		285	495
		320	540



OPTIONAL IF 40 MPH OR LESS

### NOTES

- RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
- IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING OPERATIONS AND A UNIFORMED POLICE OFFICER IS REQUIRED.
- FOR SPEED LIMIT OF 30 MPH OR LESS USE SIGN W1-3 IN LIEU OF SIGN W1-4.
- MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
- ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE DESIGNATED.
- REFER TO THE MUTCD FOR SIGN DIMENSIONS.

### LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- PROTECTIVE VEHICLE - RECOMMENDED
- TEMPORARY SIGN LOCATION (6" MOUNTING HEIGHT)

## INTERSECTION LANE CLOSURE THREE LANE ROADWAY TC-14

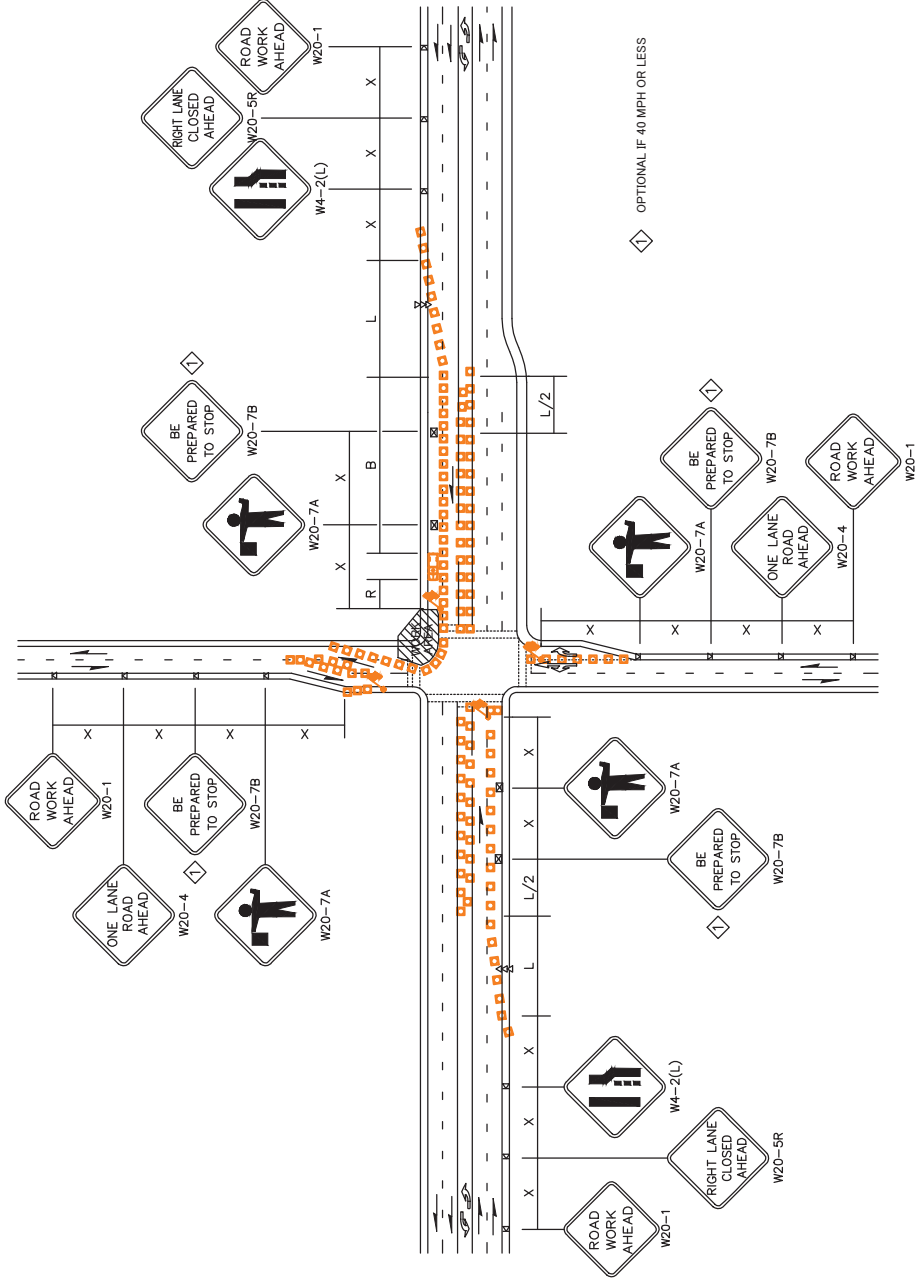
BUFFER DATA					
LONGITUDINAL BUFFER SPACE = B					
DESIGN SPEED (MPH)	25	30	35	40	45
LENGTH (feet)	155	200	250	305	360
BUFFER VEHICLE ROLL AHEAD DISTANCE = R					
PROTECTIVE VEHICLE MAY BE A WORK VEHICLE STRATEGICALLY LOCATED TO SHIELD THE WORK AREA.	NO SPECIFIED DISTANCE REQUIRED				

SIGN SPACING = X (1)	DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS	45 MPH	500'
URBAN ARTERIALS & COLLECTORS	35 / 40 MPH	350'
COLLECTORS,	25 / 30 MPH	200' (2)
RESIDENTIAL & BUSINESS DISTRICTS	25 MPH OR LESS	100' (2)
RESIDENTIAL STREETS	25 MPH OR LESS	100' (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE  
RAMP, AT-GRADE INTERSECTIONS AND DRIVEWAYS.  
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT  
ROADWAY CONDITIONS.

MINIMUM TAPER LENGTH = L (FEET)		DESIGN SPEED (MPH)					
LANE WIDTH (FEET)		25	30	35	40	45	
10	105	150	205	270	450		
11	115	165	225	295	495		
12	125	180	245	320	540		

CHANNELIZATION DEVICE SPACING (FEET)		DESIGN SPEED (MPH)	TAPER	TANGENT
		35/45	30	60
		25/30	20	40



#### LEGEND

- FLAGGING STATION
- TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- SEQUENTIAL ARROW SIGN
- PROTECTIVE VEHICLE - RECOMMENDED
- TEMPORARY SIGN LOCATION (5' MOUNTING HEIGHT)

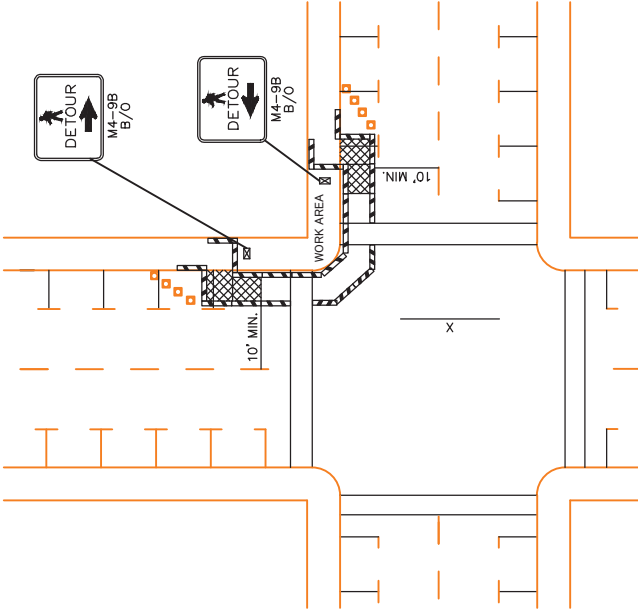
#### NOTES

1. RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
2. IF A SIGNAL IS PRESENT, IT SHALL BE SET TO "RED FLASH MODE" OR TURNED OFF DURING FLAGGING OPERATIONS AND A UNIFORMED POLICE OFFICER IS REQUIRED.
3. MAINTAIN A MINIMUM OF ONE ACCESS POINT FOR EACH BUSINESS WITHIN WORK AREA LIMITS.
4. ALL SIGNS ARE BLACK ON ORANGE.
5. REFER TO THE MUTCD FOR SIGN DIMENSIONS.

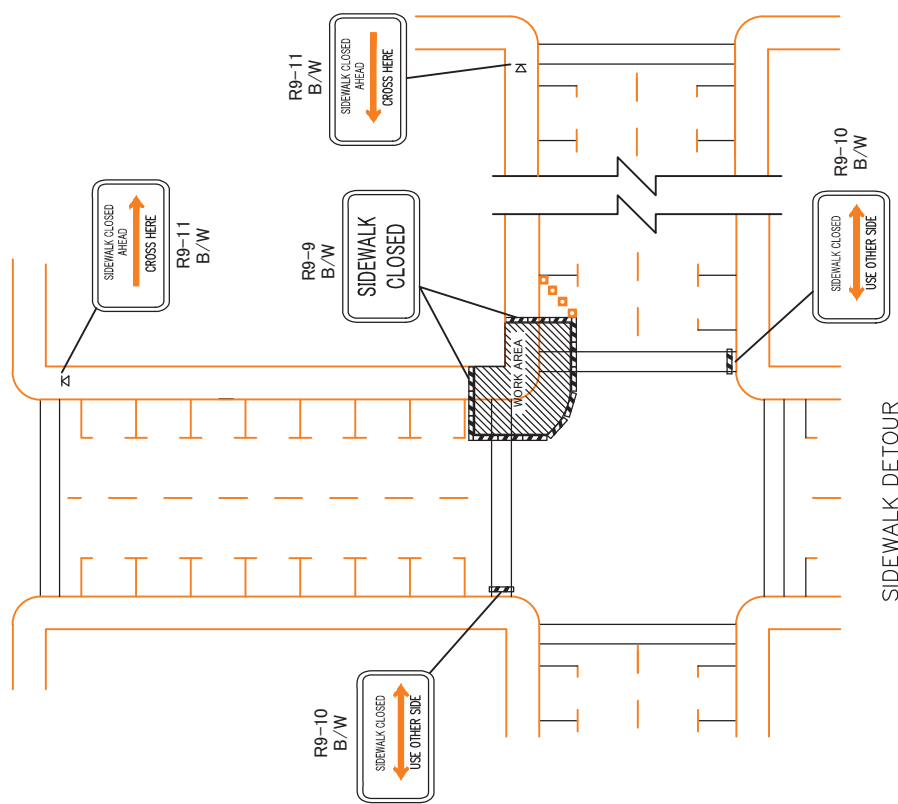
## INTERSECTION LANE CLOSURE FIVE LANE ROADWAY TC-15



 R8-3  
R/W  
 INSTALL ON TYPE 2 BARRICADES THROUGHOUT THE WORK AREA  
 24 HOURS PRIOR TO IMPLEMENTING TRAFFIC CONTROL.  
 PRIOR NOTIFICATION OF LOCAL LAW ENFORCEMENT REQUIRED.



SIDEWALK DIVERSION



SIDEWALK DETOUR

LEGEND

TEMPORARY SIGN LOCATION

CHANNELIZING DEVICES

PEDESTRIAN CHANNELIZING DEVICES

TEMPORARY PEDESTRIAN RAMP FOR SIDEWALKS

NOTES

1. CONTROLS SHOWN ARE FOR PEDESTRIAN TRAFFIC ONLY.
2. A 60" PATH WIDTH SHOULD BE MAINTAINED (48" IS THE MINIMUM).
3. CONTACT AND COORDINATE IMPACTED TRANSIT AGENCIES PRIOR TO IMPLEMENTING ANY CLOSURES.
4. SEE SHEET TC-52 FOR TEMPORARY PEDESTRIAN RAMP DETAILS.
5. ADA PEDESTRIAN FACILITIES MUST BE MAINTAINED. SEE STANDARD SPECIFICATION 1-10.2(1)B.
6. TEMPORARY PEDESTRIAN PUSH BUTTONS SHALL BE PLACED ON THE DIVERTED PATH WHEN EXISTING BUTTONS ARE NOT ACCESSIBLE TO PEDESTRIANS.
7. REFER TO THE MUTCD FOR SIGN DIMENSIONS.

MINIMUM LANE CLOSURE TAPER LENGTH = L (FEET)				
LANE WIDTH (FEET)	DESIGN SPEED (MPH)			
	25	30	35	40
10	105	150	205	270
11	115	165	225	295
12	125	180	245	320

SIGN SPACING = X (1)		DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS		45 / 55 MPH	500'
URBAN ARTERIALS AND COLLECTORS		35 / 40 MPH	350'
COLLECTORS, RESIDENTIAL & BUSINESS DISTRICTS		25 / 30 MPH	200' (1)
RESIDENTIAL STREETS		25 MPH OR LESS	100' (1)

MINIMUM SHOULDER TAPER LENGTH = L/3 (FEET)				
SHOULDER WIDTH (FEET)	DESIGN SPEED (MPH)			
	25	30	35	40
8'	40	40	60	90
10'	40	60	90	150

USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.

BUFFER DATA				
LONGITUDINAL BUFFER SPACE = B				
DESIGN SPEED (MPH)	25	30	35	40
LENGTH (feet)	155	200	250	305
BUFFER VEHICLE ROLL AHEAD DISTANCE = R				
PROTECTIVE VEHICLE	NO SPECIFIED DISTANCE REQUIRED			

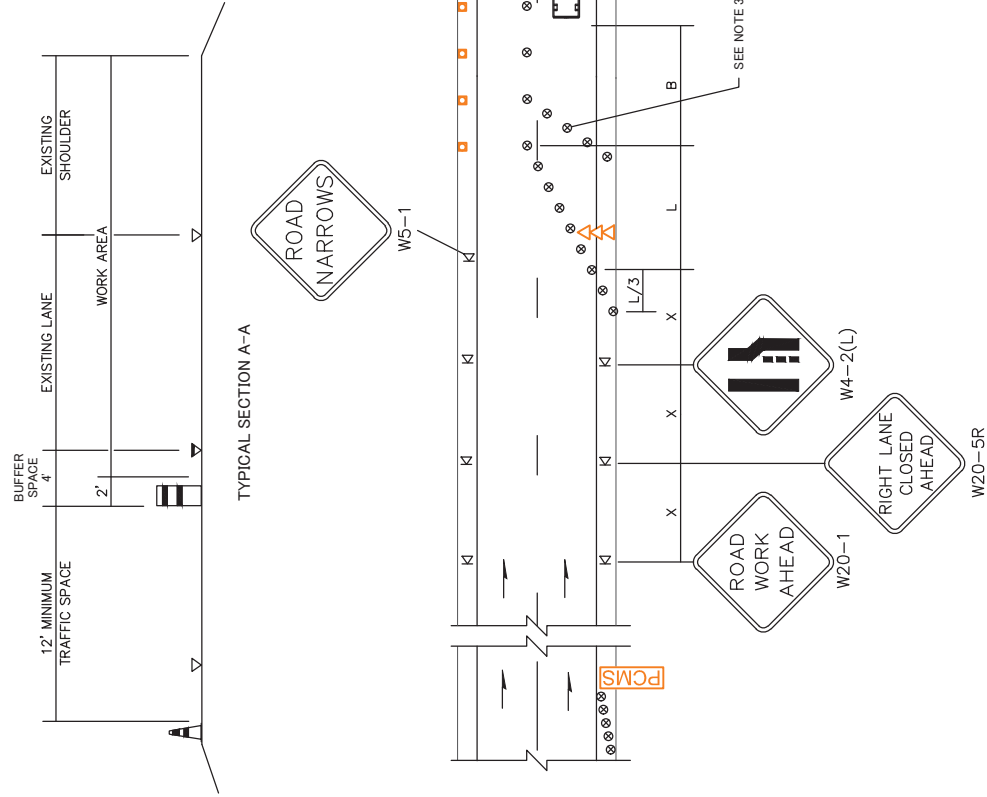
CHANNELIZATION DEVICE SPACING (FEET)		
DESIGN SPEED (MPH)	TAPER	TANGENT
35/45	30	60
25/30	20	40

## LEGEND

- K1 TEMPORARY SIGN LOCATION
- CHANNELIZING DEVICES
- ⊗ TRAFFIC SAFETY DRUM
- ➡ SEQUENTIAL ARROW SIGN
- 🚚 PROTECTIVE VEHICLE
- 📢 PORTABLE CHANGEABLE MESSAGE SIGN

PCMS	
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE IN ADVANCE OF LANE CLOSURE SIGNING.



## NOTES

- SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
- RECOMMEND EXTENDING DEVICE TAPER (L/3) ACROSS SHOULDER.
- USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000' (RECOMMENDED).
- ALL SIGNS ARE BLACK ON ORANGE.
- RECOMMEND ADVANCE NOTICE FOR ANY OVER WIDTH LOADS PRIOR TO LANE CLOSURE FOR ALTERNATE ROUTES IF APPLICABLE.
- REFER TO THE MUTCD FOR SIGN DIMENSIONS.

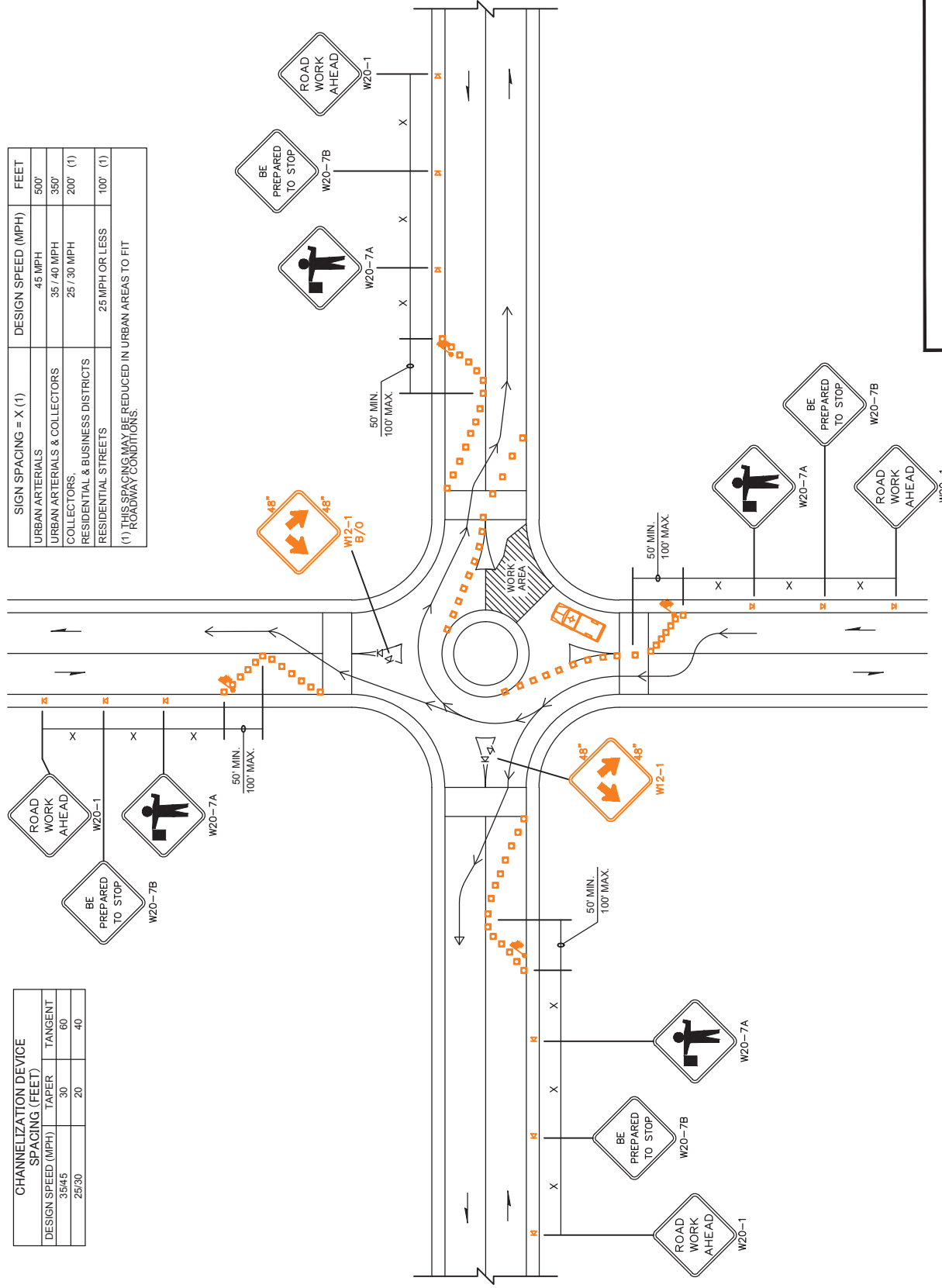
# SINGLE-LANE CLOSURE WITH SHIFT

## TC-17

CHANNELIZATION DEVICE SPACING (FEET)			
DESIGN SPEED (MPH)	TAPER	TANGENT	
35/45	30	60	
25/30	20	40	

SIGN SPACING = X (1)	DESIGN SPEED (MPH)	FEET
URBAN ARTERIALS & COLLECTORS	45 MPH	500'
URBAN ARTERIALS & COLLECTORS	35 / 40 MPH	350'
COLLECTORS	25 / 30 MPH	200' (1)
RESIDENTIAL & BUSINESS DISTRICTS	25 MPH OR LESS	100' (1)





(1) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.



#### NOTES

1. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
2. PROTECTIVE VEHICLE RECOMMENDED - MAY BE A WORK VEHICLE.
3. TYPICAL APPLICATION SHOWN. ADJUST FOR SITE CONDITIONS.
4. REFER TO THE MUTCD FOR SIGN DIMENSIONS.

#### LEGEND

-  FLAGGING STATION
-  TEMPORARY SIGN LOCATION
-  CHANNELIZING DEVICES
-  PROTECTIVE VEHICLE - RECOMMENDED

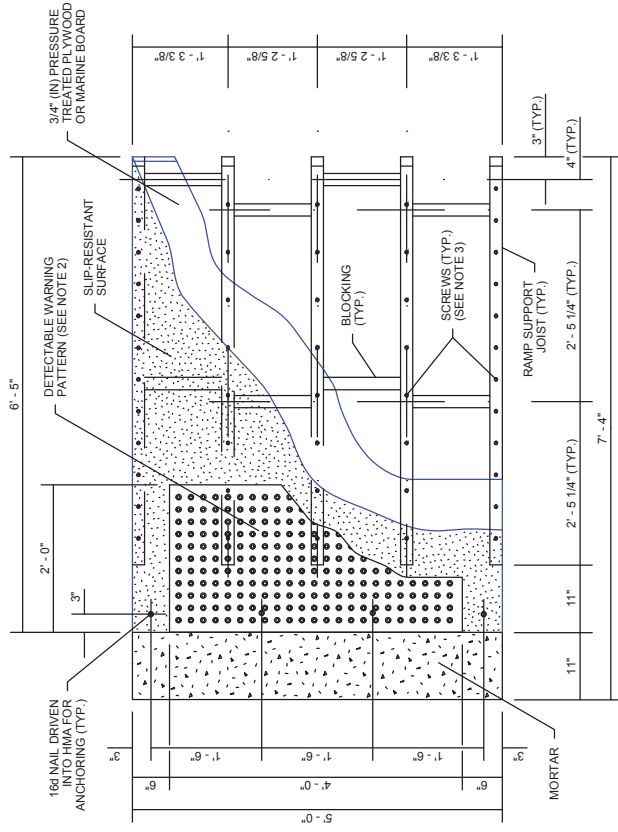
## TYPICAL ROUNDABOUT FLAGGING OPERATION TC-18



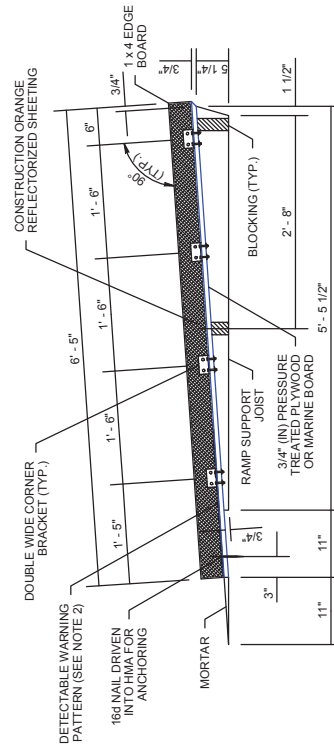
TEMPORARY PEDESTRIAN RAMP  
WITH EDGE BOARD  
TC-52

## NOTES

1. THIS ASSUMES OPTIMAL CONDITIONS AND A STANDARD CURB HEIGHT OF 6" (IN). INSTALLED RAMPS SHALL BE NO STEEPER THAN 12H : 1V, AND SHALL HAVE A CROSS-SLOPE OF 2% OR LESS. USE SHIMS OR GROUT AS REQUIRED TO ADJUST FOR EXISTING CONDITIONS AND TO PREVENT ROCKING. SHIMS SHALL BE NO HIGHER THAN 1" (IN), AND SHALL BE SECURED TO THE RAMP. FOR CURBS SHORTER THAN 6" (IN), INSTALL A RAMP ON THE SIDEWALK, NO STEEPER THAN 12H : 1V, MADE OF GROUT OR AS APPROVED BY THE ENGINEER. ADJUSTMENTS TO THE RAMP DIMENSIONS SHOWN MAY BE REQUIRED TO MATCH EXISTING CONDITIONS.
2. THE DETECTABLE WARNING PATTERN SHALL BE INSTALLED ONLY WHEN THE INTENT IS TO GUIDE PEDESTRIANS DIRECTLY ACROSS THE ROADWAY (CROSSWALK). SEE **STANDARD PLAN P-40.10** FOR DETAILS.
3. SCREWS SHALL BE USED TO SECURE THE RAMP SURFACE. SPACING SHALL BE IN ACCORDANCE WITH THE CURRENT BUILDING CODE.
4. USE A SLIP-RESISTANT TREATMENT FOR THE SURFACE OF RAMP.
5. ALL FASTENERS SHALL BE GALVANIZED.
6. DO NOT INSTALL A HAND RAILING IF USING THE EDGE BOARD OPTION.

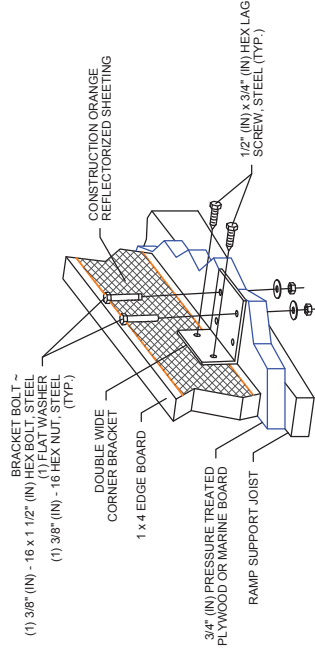


TOP VIEW  
RAMP DETAIL

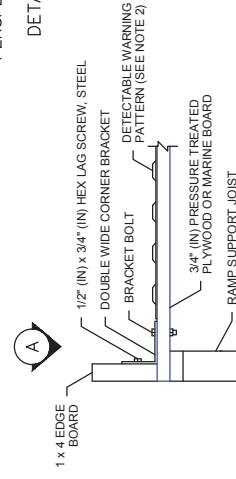


SIDE VIEW

RAMP AND EDGE BOARD



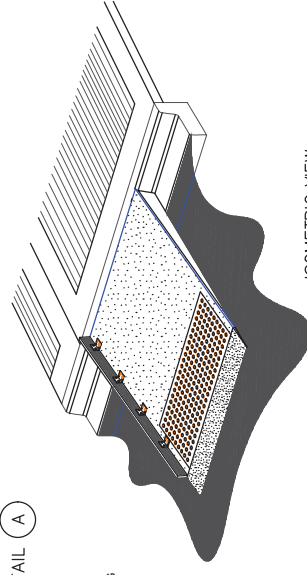
PERSPECTIVE VIEW



END VIEW

EDGE BOARD  
ATTACHMENT DE-

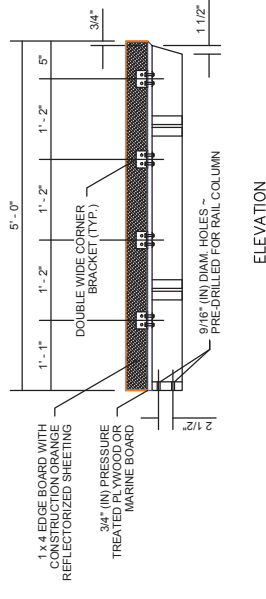
TEMPORARY PEDESTRIAN RAMP  
WITH EDGE BOARD



ISOMETRIC VIEW

## TC-53

1. ALL HOLES SHOWN SHALL BE DRILLED TO FACILITATE SEE AND FLEXIBLE EXPANSION.
2. **USE SHEET REFERENCE NO. TC-42, FOR TEMPORARY PEDESTAL RAMP DETAILS.**
3. THIS DESIGN ASSUMES OPTIMAL CONDITIONS AND A STANDARD CURVE HEIGHT OF 6" (IN). INSTALLED RAMPS SHALL BE 1/2" THICK, 12" WIDE, 12" HIGH, AND HAVE A CROSS SLOPE OF 2% OR LESS. USE SHIMS OR GROUT AS REQUIRED TO ADJUST FOR EXISTING CONDITIONS AND TO PREVENT ROCKING. SHIMS SHALL BE NO MORE THAN 1/2" THICK FOR CURBS SUPPORTED BY THE RAMP AND NO PLATE FOR CURBS SUPPORTED BY THE RAMP. INSTALL A RAMP ON THE SIDEWALK NO STEEPER THAN 12% 1/2". MADE OF GROUT OR AS APPROVED BY THE ENGINEER. ADJUSTMENTS TO THE PLATFORM SHALL BE MADE AS REQUIRED TO MATCH EXISTING CONDITIONS.
4. **SCREWS SHALL BE USED TO SECURE THE RAMP TO EXISTING CURB IN ACCORDANCE WITH THE CURRENT BUILDING CODE.**
5. **USE A SLIP-RESISTANT TREATMENT FOR SURFACE OF RAMP.**
6. **ALL FASTENERS SHALL BE GALVANIZED.**



# APPENDIX D

## SWPPP



# Construction Stormwater Pollution Prevention Plan (CSWPPP)

**City of Lacey**  
420 College Street SE  
Lacey, WA 98503

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## KEY TERMS

BMPs	best management practices
CESCL	Certified Erosion and Sediment Control Lead
CSWGP	Construction Stormwater General Permit
DOE	Washington State Department of Ecology
LID	low-impact development
SDM	City of Lacey Storm Design Manual
SPCC	Spill Prevention, Control, and Countermeasures
SWPPP	Stormwater Pollution Prevention Plan
TESC	Temporary Erosion and Sediment Control
TMDL	total maximum daily load



# 1. CONSTRUCTION STORMWATER POLLUTION PREVENTION ELEMENTS

## 1.1 Objective of the Stormwater Pollution Prevention Plan

The purpose of a Construction Stormwater Pollution Prevention Plan (SWPPP) is to describe the potential for pollution problems on a construction project. The SWPPP also explains and illustrates the measures to be taken on the construction site to control these problems. This SWPPP is prepared according to the guidance of the City of Lacey 2022 Stormwater Design Manual (SDM) which is based on the 2019 Stormwater Management Manual for Western Washington – Washington State Department of Ecology (DOE) that has been revised for local application. The SDM describes thirteen necessary elements of construction stormwater pollution prevention. These thirteen elements include: preserving vegetation/mark clearing limits, establish construction access, control flow rates, install sediment controls, stabilize soils, protect slopes, protect drain inlets, stabilize channels and outlets, control pollutants, control de-watering, maintain Best Management Practices (BMPs), manage the project, and protect low-impact development BMPs. These elements have been addressed as follows.

## 1.2 Summary of Elements

The BMPs listed in this report, or their equivalent, are required. For linear projects such as roadway construction, modifying or adapting a BMP may be necessary to address unique stormwater protection challenges. Any revisions by the contractor to the BMPs listed in the SWPPP shall be approved by the Engineer. Therefore, if the contractor does not require a BMP or needs to modify a BMP, the contractor shall document the reasons and update the SWPPP to match what is being implemented in the field. A copy of the BMPs can be found in Appendix A.

## 1.3 Element #1: Preserve Vegetation/Mark Clearing Limits

Prior to any land disturbing activities, the construction limits shall be marked prior to any clearing to restrict clearing to the approved limits. Sensitive areas, wetland buffers, and preserved trees/vegetation shall be marked with fencing or staking flags. A high visibility fence shall be installed to delineate the location and control access of each site to be demolished prior to any work in accordance with BMP C103. The Contractor shall use best judgement selecting of the type of fencing (high orange fencing, chain-link with placards, or high visible silt fence) to be utilized based off public access to site location. A silt fence shall be installed separately or in conjunction with the high visibility fence to contain loose sediment associated with project demolition or grading within the project limits in accordance with BMP C233.

The native top soil, natural vegetation, and existing trees shall be retained in an undisturbed state to the maximum extent practicable. If it is not practicable to retain the native top soil in place, it should be stockpiled on-site, covered to prevent erosion, and replaced immediately upon completion of the ground disturbing activities. The Contractor shall determine if construction is not possible due to presence of vegetation/tree, and shall clear, grub, and dispose of accordingly.

**Installation Schedule:** March/April 2024 or as Contractor sees fit per construction phasing

**Inspection and Maintenance Plan:**

- If the fencing or clearing limits are observed to be damaged or visibility is reduced, it shall be repaired and/or replaced immediately and visibility restored.

## 1.4 Element #2: Establish Construction Access

Existing asphalt roads and parking lots within in the construction perimeter will be utilized as construction access to the maximum extent feasible. Locations where the existing roads are to be removed or intersections with an existing road not within the construction perimeter a stabilized construction entrance shall be constructed to minimize the tracking of sediment onto any public road. Construction vehicle access and exit shall be limited to one route, if feasible. This stabilized construction entrance shall be constructed in accordance with the requirements of BMP C105.

If sediment is tracked off-site, public roads shall be cleaned thoroughly at the end of each day, or more frequently during wet weather. Sediment shall be removed from roads by shoveling or pickup sweeping and shall be transported to a controlled sediment disposal area. Street washing will be allowed only after sediment is removed.

Should tracking of sediments off-site continue to occur, wheel washes or construction road and parking area stabilization may be needed (BMPs 106 and 107).

**Installation Schedule:** March/April 2024 or as Contractor sees fit per construction phasing

### **Inspection and Maintenance Plan:**

- If sediment or quarry spalls are observed being tracked onto pavement, then alternative measures to keep the street free of sediment shall be used. This may include replacement/cleaning of existing quarry spalls, street sweeping, an increase in the dimensions of the entrance, or the installation of a wheel wash.
- If a wheel wash is installed, the wheel wash should start out the day with fresh water, and the wash water should be changed a minimum once per day. The Contractor shall determine the frequency of changing the wash water.

## 1.5 Element #3: Control Flow Rates

Permanent and temporary stormwater facilities shall be constructed as one of the first steps of site grading, and will be observed to function properly before constructing site improvements. Stormwater runoff shall be observed during storm events to ensure flow rates are not increased to cause erosion to off-site locations. Temporary interceptor swales are proposed to convey runoff into a temporary sediment pond before discharging and infiltrating on-site or to existing roadside ditches and storm system catch basins. If substantial flow rates are observed, check dams shall be installed to promote ponding and reduce flow rates within the swales. Temporary swales shall be constructed according to BMP C200, and shall be stabilized with temporary vegetation or other channel protection during construction. Temporary sediment ponds shall be constructed according to BMP C241.

**Installation Schedule:** March/April 2024 or as Contractor sees fit per construction phasing

### **Inspection and Maintenance Plan:**

- Immediately remove sediment from within the flow path of the temporary swale following a rainfall event.
- If a temporary sediment pond is utilized, the sediment collected shall be removed from the pond when it reaches 1-foot in depth.
- Any damage to the temporary sediment pond embankments or slopes shall be repaired.

## 1.6 Element #4: Install Sediment Controls

To minimize the discharge of pollutants offsite, erosion and sediment controls will be installed along site perimeter as needed. Stormwater runoff from disturbed areas shall be routed through an appropriate sediment removal BMP per the Contractor's best judgement prior to runoff discharging off-site or into drain inlets. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but must ensure downstream waterways are protected from erosion due to increases in the volume, velocity, and peak flow rate of stormwater from the project site. Silt fence barriers shall be constructed in accordance with BMP C233.

In addition to silt fencing, the following BMPs are may be implemented where appropriate:

- BMP C230 – Straw Bale Barrier
- BMP C231 – Brusher Barrier
- BMP C232 – Gravel Filter Berm
- BMP C234 – Vegetated Strip
- BMP C235 – Straw Wattles
- BMP C240 – Sediment Trap
- BMP C241 – Temporary Sediment Pond
- BMP C 251 – Construction Stormwater Filtration

**Installation Schedule:** March/April 2024 or as Contractor sees fit per construction phasing

### **Inspection and Maintenance Plan:**

- Repair any damage immediately.
- Intercept and convey all evident concentrated flows uphill of the silt fence to a sediment pond.
- Remove sediment deposits when the deposit reaches approximately one-third of the height of the silt fence, or install a second silt fence.
- Replace filter fabric that has deteriorated due to ultraviolet breakdown.

## 1.7 Element #5: Stabilize Soils

All exposed and unworked soils shall be stabilized by application of effective BMPs, which protect the soil from the erosive forces of raindrop impact, flowing water, and from wind erosion. Construction schedule phasing shall be planned to reduce the amount of soil exposed during construction activity.

From October 1 through April 30, no soils shall remain exposed and un-worked for more than 2 days. From May 1 to September 30, no soils shall remain exposed and un-worked for more than 7 days. This condition applies to all soils on-site, whether at final grade or not. Soils to be stabilized at the end of shifts prior to holidays or weekends based on weather forecasts per Contractor's best judgement.



In areas where the soils will remain un-worked for more than 30 days or have reached final grade, seeding and mulching shall be used in accordance with BMPs C120 and C121. If the soil stockpile slope is 2H:1V or greater with at least 10 feet of vertical relief, nets, or blankets shall be used according to BMP C122. Plastic covering shall be used on disturbed areas that require cover less than 30 days per BMP C123. Sod shall be used in accordance with BMP C124 for disturbed areas that require immediate vegetative cover. Dust control shall be used as needed to prevent wind transport of dust from disturbed soil surfaces and in accordance with BMP C140. Contractor to utilize available non-potable water from on-site sources or provide water tanker in order to spray down disturbed soils to minimize dust produced from construction activities.

In addition, the following BMPs may be used to stabilize soils where appropriate:

- BMP C125 – Topsoiling
- BMP C130 – Surface Roughening
- BMP C131 – Gradient Terraces

**Installation Schedule:** March/April 2024 or as Contractor sees fit per construction phasing

**Inspection and Maintenance Plan:**

- Reseed any seeded areas that fail to establish at least 80 percent cover. If reseeding is ineffective, use an alternative method such as sodding, mulching, or nets/blankets to stabilize soils.
- Reseed and protect by mulch any areas that experience erosion after achieving adequate cover.
- Supply seeded areas with adequate moisture, but do not water to the extent that runoff is generated.
- If the grass is unhealthy, the cause shall be determined and appropriate action taken to reestablish a healthy groundcover. If it is impossible to establish a healthy groundcover due to frequent saturation, instability, or some other cause, the sod shall be removed, the area seeded with an appropriate mix, and protected with a net or blanket.
- Damaged or torn plastic sheets shall be replaced and open seams shall be repaired.
- Respray areas as needed to keep dust to a minimum.

## 1.8 Element #6: Protect Slopes

Slopes will be stabilized as indicated in Element #5 above. Cut and fill slopes shall be constructed in a manner that will minimize erosion. In addition, the following BMPs may be implemented where appropriate:

- BMP C200 – Interceptor Dike and Swale
- BMP C205 – Subsurface Drains
- BMP C206 – Level Spreader
- BMP C207 – Check Dams

**Installation Schedule:** March/April 2024 or as Contractor sees fit per construction phasing

**Inspection and Maintenance Plan:**

- BMPs to be inspected after every runoff event to ensure that they are functioning correctly.

## 1.9 Element #7: Protect Drain Inlets

All storm drain inlets made operable during construction, as well as all existing structures within the project limits, shall be marked and protected so that stormwater runoff shall not enter the conveyance system without first being filtered or treated to remove sediment. Install catch basin sock filters or approved equal as shown on the TESC Plans and in accordance with BMP C220 or WSDOT standard I-40.20-00.

Contractor to prevent sediment and street wash water to enter storm drains without prior and adequate treatment.

**Installation Schedule:** March/April 2024 or as Contractor sees fit per construction phasing

**Inspection and Maintenance Plan:**

- Inlets to be inspected weekly at a minimum and daily during storm events.
- Inlet protection devices shall be cleaned and removed and replaced when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).
- Do not wash sediment into storm drains while cleaning.

## 1.10 Element #8: Stabilize Channels and Outlets

The temporary drainage swales shall provide stabilization, including armoring material, adequate to prevent erosion of outlets, slopes, and downstream reaches. The Contractor to contact Design Engineer for appropriate dimensions of conveyance channels if utilized.

**Installation Schedule:** March/April 2024 or as Contractor sees fit per construction phasing

**Inspection and Maintenance Plan:**

- Inspect and repair as needed.
- Install channel lining if erosion is observed.
- Install check dams if concentrated flow rates are observed during and after a runoff event.

## 1.11 Element #9: Control Pollutants

All pollutants, including waste materials and demolition debris, that occur on-site during construction shall be handled and disposed of in a manner that does not cause contamination of stormwater. Maintenance and repair of heavy equipment and vehicles involving oil changes, hydraulic system drain down, solvent and de-greasing cleaning operations, fuel tank drain down and removal, and other activities which may result in discharge or spillage of pollutants to the ground or into stormwater runoff must be conducted using spill prevention measures, such as drip pans. Emergency repairs may be performed on-site using temporary plastic placed beneath, and if raining, over the vehicle. Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Manufacturers' recommendations shall be followed for application rates and procedures.

Two source control BMPs will apply to this project:

- A Spill Prevention Control and Countermeasures Plan (prepared by Contractor)
- Street Sweeping (as needed during construction by Contractor)

**Installation Schedule:** March/April 2024 or as Contractor sees fit per construction phasing

**Inspection and Maintenance Plan:**

- Contaminated surfaces shall be cleaned immediately following any discharge or spill incident.
- Source control BMPs shall be utilized to prevent the likelihood of pollutants being introduced on-site.

## 1.12 Element #10: Control Dewatering

It is not anticipated that dewatering will be required for this project.

## 1.13 Element #11: Maintain BMPs

All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to ensure continued performance of their intended function. All maintenance and repair shall be in accordance with BMPs.

Sediment control BMPs shall be inspected weekly or after a runoff-producing storm event during the dry season and daily during the wet season.

All temporary erosion and sediment control BMPs shall be removed within 30 days after final site stabilization is achieved, or after the temporary BMPs are no longer needed. Trapped sediment shall be removed or stabilized on-site. Disturbed soil areas resulting from removal of BMPs or vegetation shall be permanently stabilized.

## 1.14 Element #12: Manage the Project

### 1.14.1 Phasing of Construction

The project shall be phased where feasible in order to prevent, to the maximum extent practicable, the transport of sediment from the site during construction. Revegetation of exposed areas and maintenance of that vegetation shall be an integral part of the clearing activities for each phase. Installation of temporary sediment control devices shall be implemented in accordance with the respective phase of construction activities.

### 1.14.2 Seasonal Work Limitations

From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted if silt-laden runoff will be prevented from leaving the construction site.

The following activities are exempt from the seasonal clearing and grading limitations:

- Routine maintenance and necessary repair of erosion and sediment control BMPs;
- Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to the soil; and
- Activities where there is 100 percent infiltration of surface water runoff within the site in approved and installed erosion and sediment control facilities.



### 1.14.3 Inspection and Monitoring

All BMPs shall be inspected, maintained, and repaired as needed to ensure continued performance of their intended function.

Sampling and analysis of the stormwater discharges from the construction site may be necessary to ensure compliance with standards.

Whenever inspection and/or monitoring reveals that the BMPs identified in the construction SWPPP are inadequate, due to the actual discharge of or potential to discharge a significant amount of any pollutant, the construction SWPPP shall be modified, as appropriate, in a timely manner.

Site inspections shall be conducted by the identified CESCL. The CESCL must be on-site or on-call at all times during the duration of construction activities. The CESCL must examine stormwater visually for the presence of suspended sediment, turbidity, discoloration, and oil sheen, and it is upon the CESCL's evaluation of the effectiveness of BMPs to determine if it is necessary to install, maintain, or repair BMPs to improve quality of stormwater discharges.

The CESCL must inspect all areas disturbed by construction activities, all BMPs, and all stormwater discharge points at least once every calendar week and within 24 hours of any discharge from the site. The CESCL may reduce this inspection frequency for temporary stabilized or inactive sites to once every calendar month through the duration of construction activities.

### 1.14.4 Maintenance of the SWPPP

A copy of this Construction SWPPP must be on-site or within reasonable access to the site.

If there is a change in the design, operation or maintenance at the construction site that could have a significant effect on the discharge of pollutants to the waters of the State, this Construction SWPPP must be modified to meet those changes.

Additionally, the SWPPP must be modified if, during inspections, it is determined that the Construction SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. Additional or modified BMPs will be included to correct problems identified. Revisions to the Construction SWPPP must be made within 7-days following the inspection.

BMPs that apply to the maintenance of the SWPPP include:

- BMP C150: Materials on Hand
- BMP C160: Certified Erosion and Sediment Control Lead
- BMP C162: Scheduling

## 1.15 Element #13: Protect Low Impact Development (LID) BMPs

The primary purpose of On-Site Stormwater Management is to reduce the disruption of the natural site hydrology through infiltration. BMPs used to meet CR5: On-Site Stormwater Management, also called LID BMPs, are permanent BMPs.

Protection of all LID BMPs will be necessary throughout the duration of the project, and as required per the Contract Agreement.

Protection of the LID BMPs includes, but is not limited to:

- Protection from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain into the LID BMPs. Restore the BMPs to their functioning condition if they accumulate sediment during construction. Restoring the BMP must include removal of sediment and any sediment-laden Bioretention/Rain Garden soils, and replacing the removed soils with soils meeting the design specification.
- Maintain the infiltration capabilities of LID BMPs by protecting against compaction by construction equipment and foot traffic. Protect completed lawn and landscaped areas from compaction due to construction equipment.
- Keep all heavy equipment off existing soils under LID BMPs that have been excavated to final grade to retain the infiltration rate of the soils.

Additional information is available in the *Low impact Development Technical Guidance Manual for Puget Sound* (Hinman and Wulkan 2012) for more details on protecting LID integrated management practices. This information regarding this manual is for additional information purposes only.

BMPs that may be implemented for protection where appropriate:

- BMP C102: Buffer Zone
- BMP C103: High-Visibility Fence
- BMP C207: Check Dams
- CMP C233: Silt Fence