

WATER SYMBOLS

SYMBOL		DESCRIPTION
EXIST.	PROP.	
		REDUCER
		THRUST BLOCK
		WATER METER
		FIRE HYDRANTS.
		2-NOZZLE
		3-NOZZLE
		JOINTS:
		FLANGE/BLIND FL
		MECHANICAL
		VALVES.
		CHECK
		GATE/GENERAL

SYMBOL EXIST.	PROP.	DESCRIPTION
		GAS METER
		GAS VALVE
		POWER VAULT
		UTILITY POLE
		UTILITY POLE ANCHOR
		TELEPHONE RISER
		TELEPHONE VAULT

SYMBOL THEOR./ EXIST.	FOUND/ PROP.	DESCRIPTION
		ANGLE POINT
		BENCH MARK
		BLOCK CORNER
		IRON PIPE
		MONUMENT (IN CASE)
		MONUMENT (SURFACE)

SYMBOL EXIST.	PROP.	DESCRIPTION
		BUS STOP
		EMBANKMENT
		MAIL BOX
		RIP RAP
		ROCKERY
		SHRUB
		SIGN
		TREE (Conifer)
		TREE (Deciduous)
		YARD LIGHT

SYMBOL		DESCRIPTION
EXIST.	PROP.	
		SAN SEWER CLEAN OUT
		SAN SEWER MANHOLE
		STORM DRAIN CATCH BASIN
		STORM DRAIN CULVERT
		STORM DRAIN MANHOLE

NORTHWEST OF FERNDALE, WA

PREPARED FOR
ROGERS SCHWARTZ
P.O. BOX 2054
FERNDALE, WA 98248
PHONE 360 384 8170

"CALL FOR DIG" 800 424 5555

FERDALE PUBLIC WORKS 384 4006	US WEST COMMUNICATIONS 206 345 6117
WHAT. CO. ENGINEERING 676 6730	TCI CABLE 671 7927
FERDALE POLICE DEPT 384 3390	CONSTRUCTION SURVEYORS 733 3383
PUGET POWER 715 7235	CASCADE NATURAL GAS 733 5980

SHT 1. COVER SHEET

CUL DE SAC IMPROVEMENTS

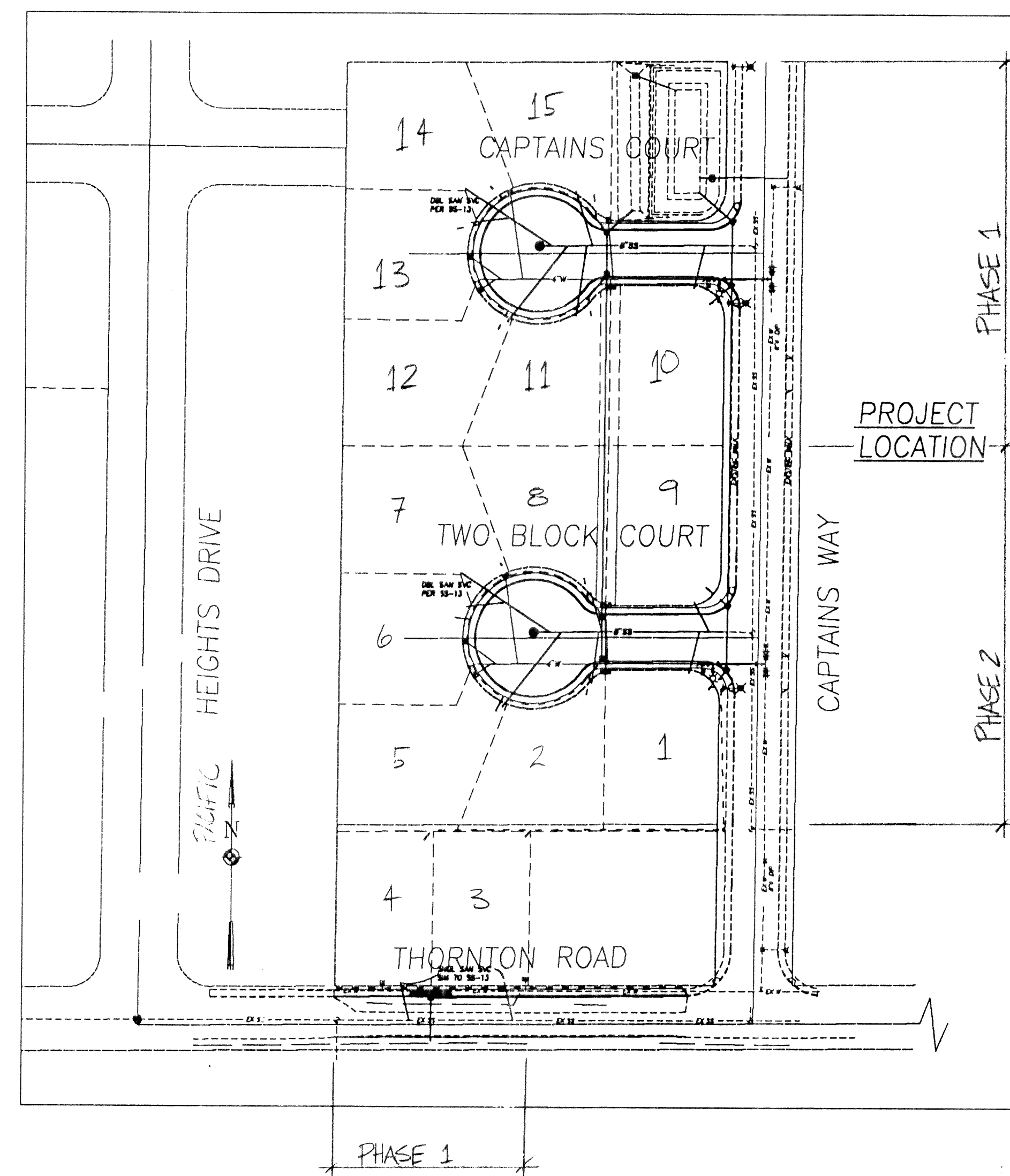
SHT 2. SITE EROSION & ROAD SECTIONS
SHT 3. ROAD & STORM PLAN / PROFILE
SHT 4. SEWER & WATER PLAN / PROFILE

FRONTAGE IMPROVEMENTS

SHT 5. THORNTON ROAD PLAN / PROFILE

DETAILS AND STANDARDS

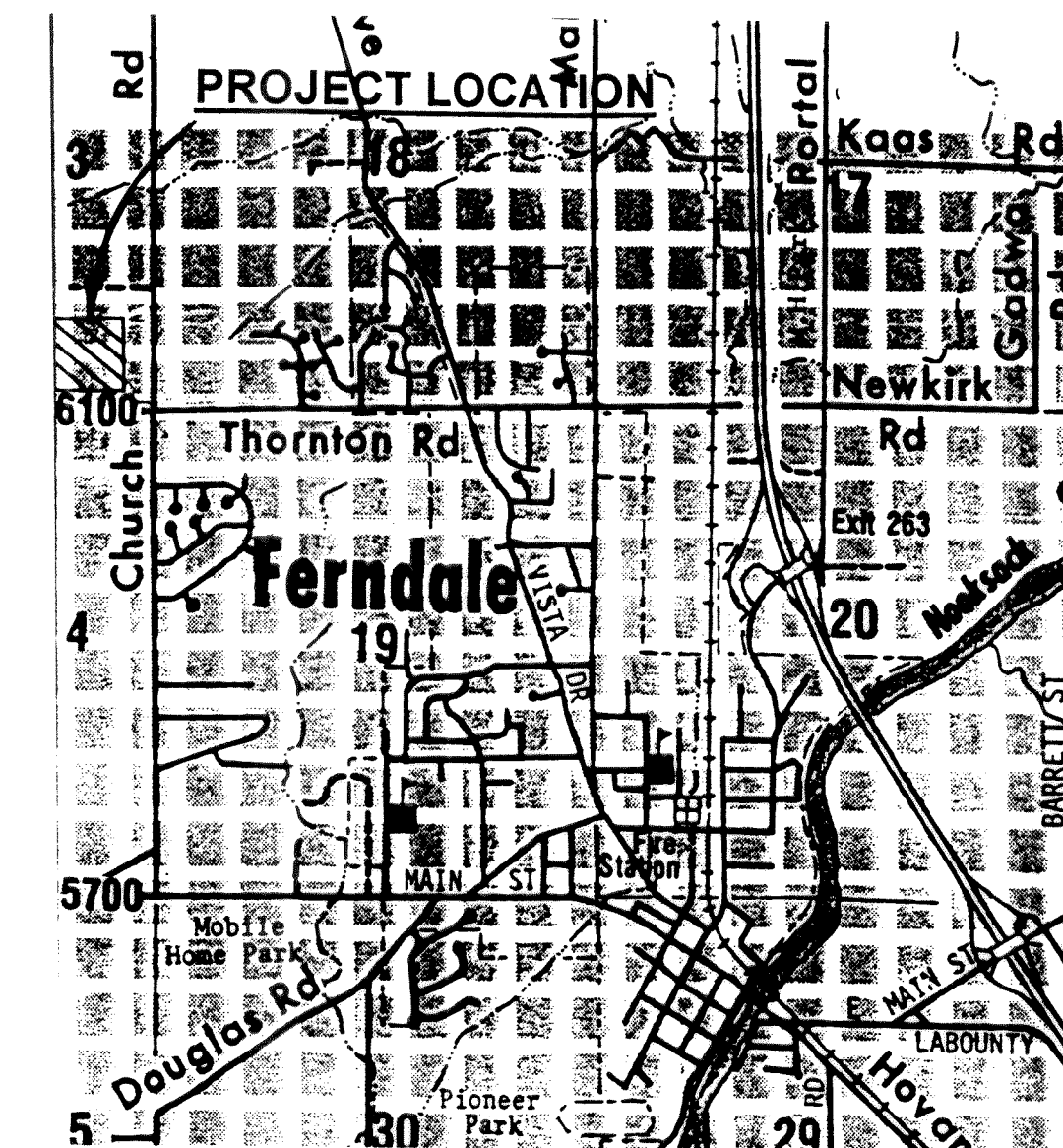
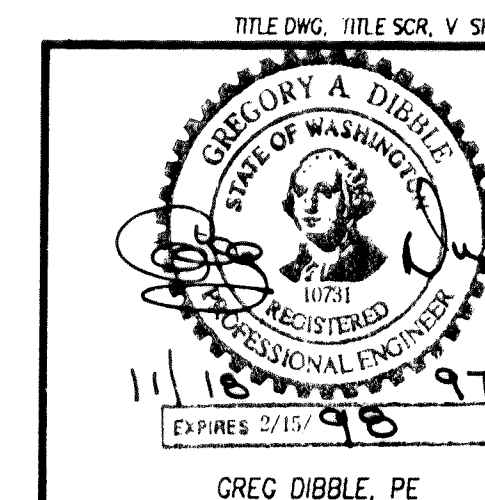
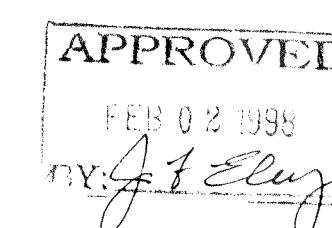
SHT 6. EROSION & SWALE DETAILS
SHT 7. DETENTION POND DETAILS
SHT 8. DETAILS
SHT 9. DETAILS



AS-BUILT PLAN INFORMATION IS SHOWN IN HAND-LETTERING. FIELD DATA HAS BEEN PROVIDED BY THE CONTRACTOR. THESE DRAWINGS REFLECT THE WORK REPRESENTED TO ME AS HAVING BEEN CONSTRUCTED, INCLUDING MODIFICATIONS. THIS WORK MEETS THE INTENT AND PERFORMANCE STANDARDS OF THE ORIGINAL DESIGN.

BY: *W. B. Baker* P.E. DATE: 10-18-99

BY: J. P. [Signature] P.E. DATE: 10-18-99

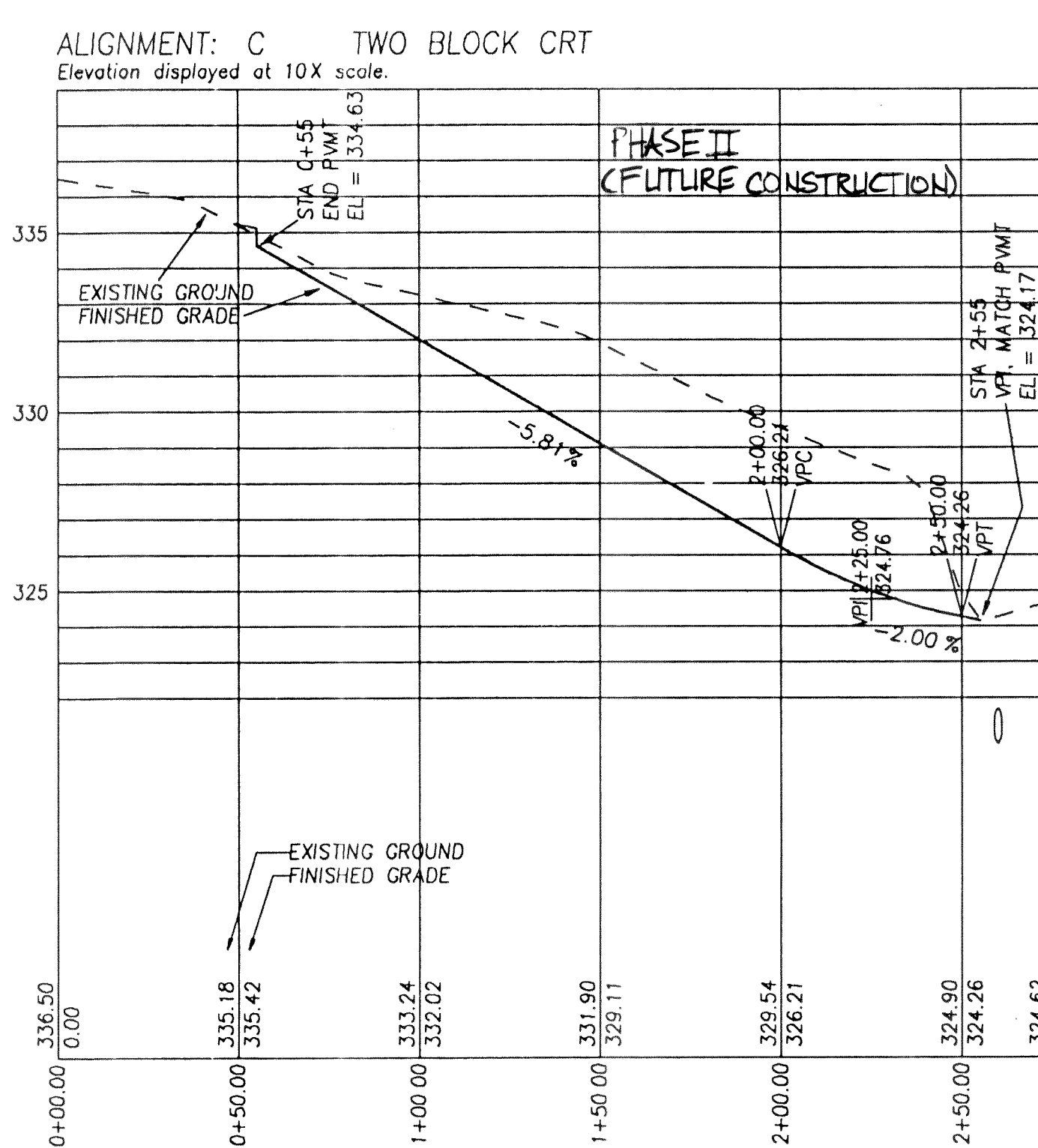
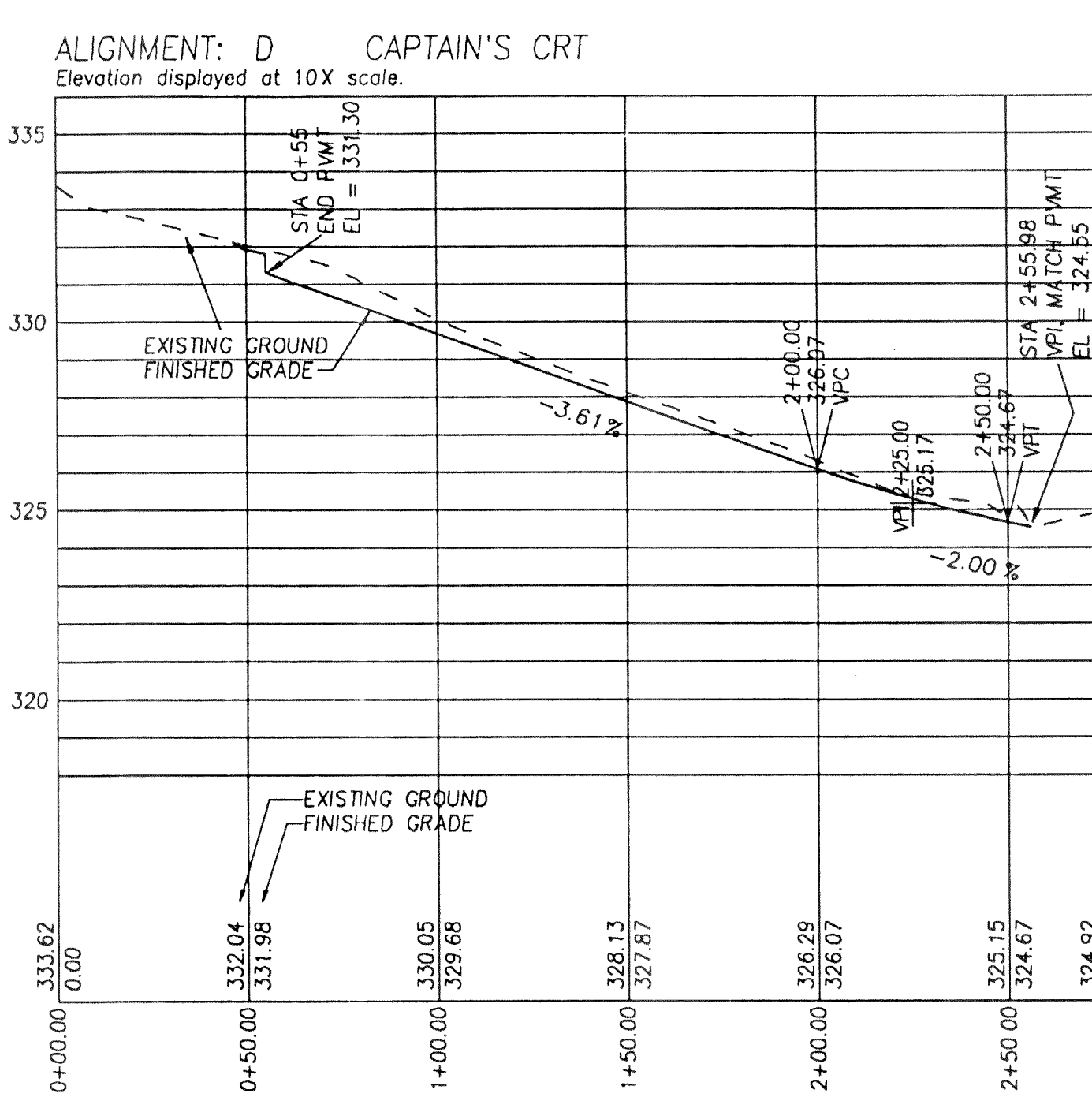
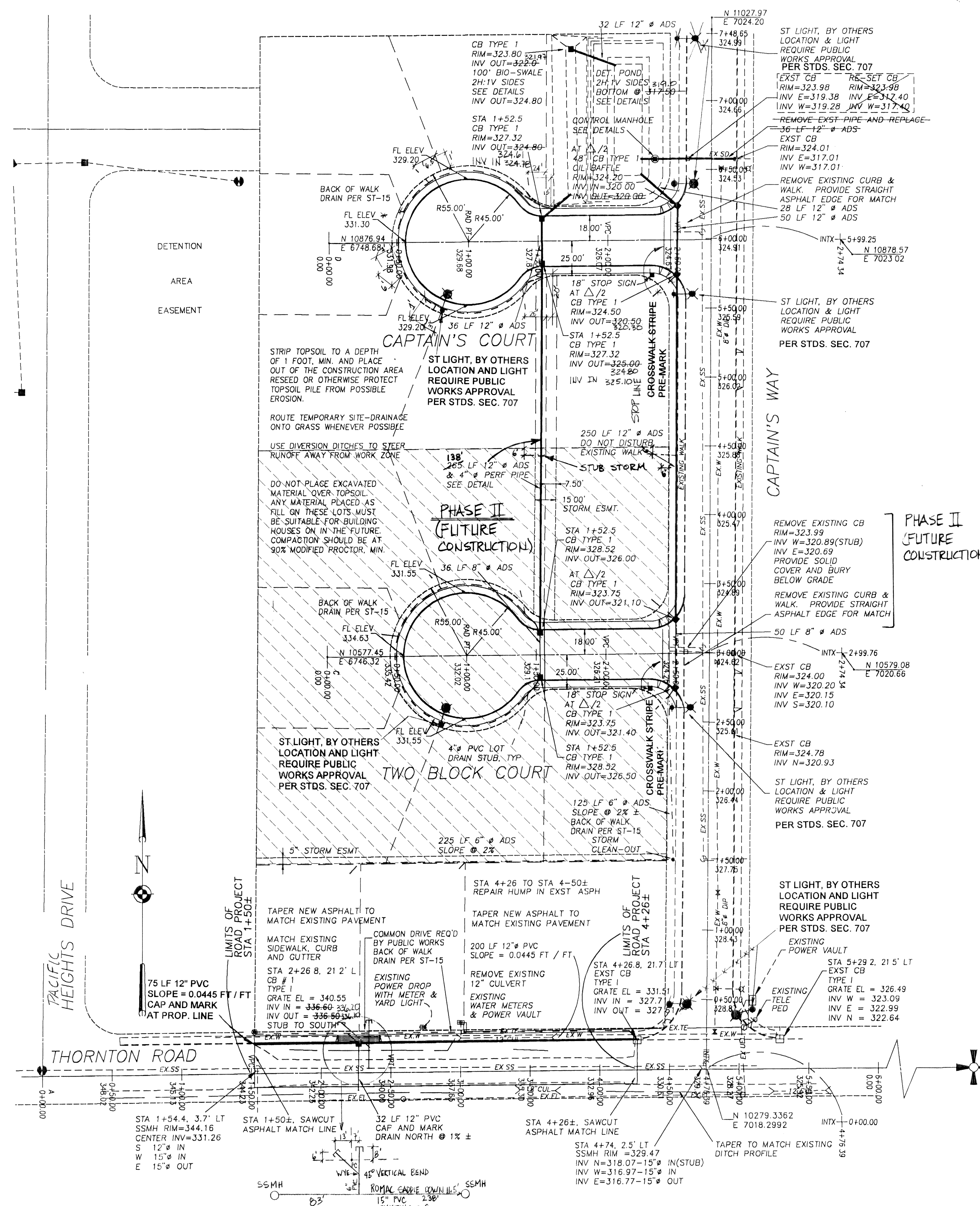
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ROGER'S SCHWARTZ
P. O. BOX 2054
FERNDALE, WA 98248
(360) 384-1170

WIGGIBBLE ENGINEERING
600 DUPONT STREET
BELLINGHAM, WA 98225
(509) 734 1288, FAX 738 7798

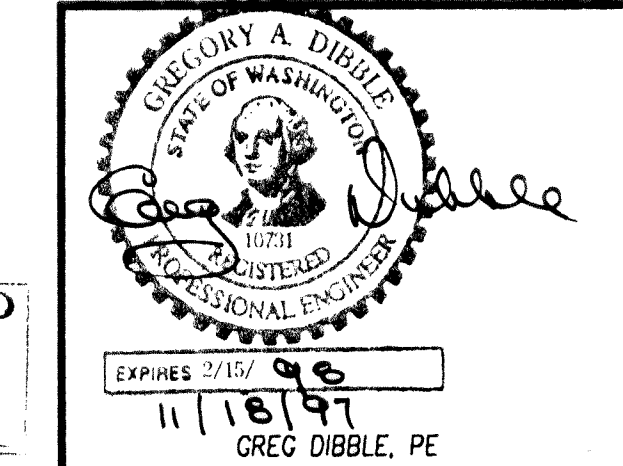
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JOB:	96 765
SHEET:	1

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 BY: *[Signature]* DATE: 10-18-99

SCALES:
 HORIZ. 1" = 40'
 VERT. 1" = 4'
 SURVEY BY CONSTRUCTION SURVEYORS
 DATUM = CITY OF FERNDALE
 765 SITE DWG. ROAD SCR. V. SH12



APPROVED
 FEB 02 1998
[Signature]

ROAD & STORM DRAINAGE PLAN / PROFILES

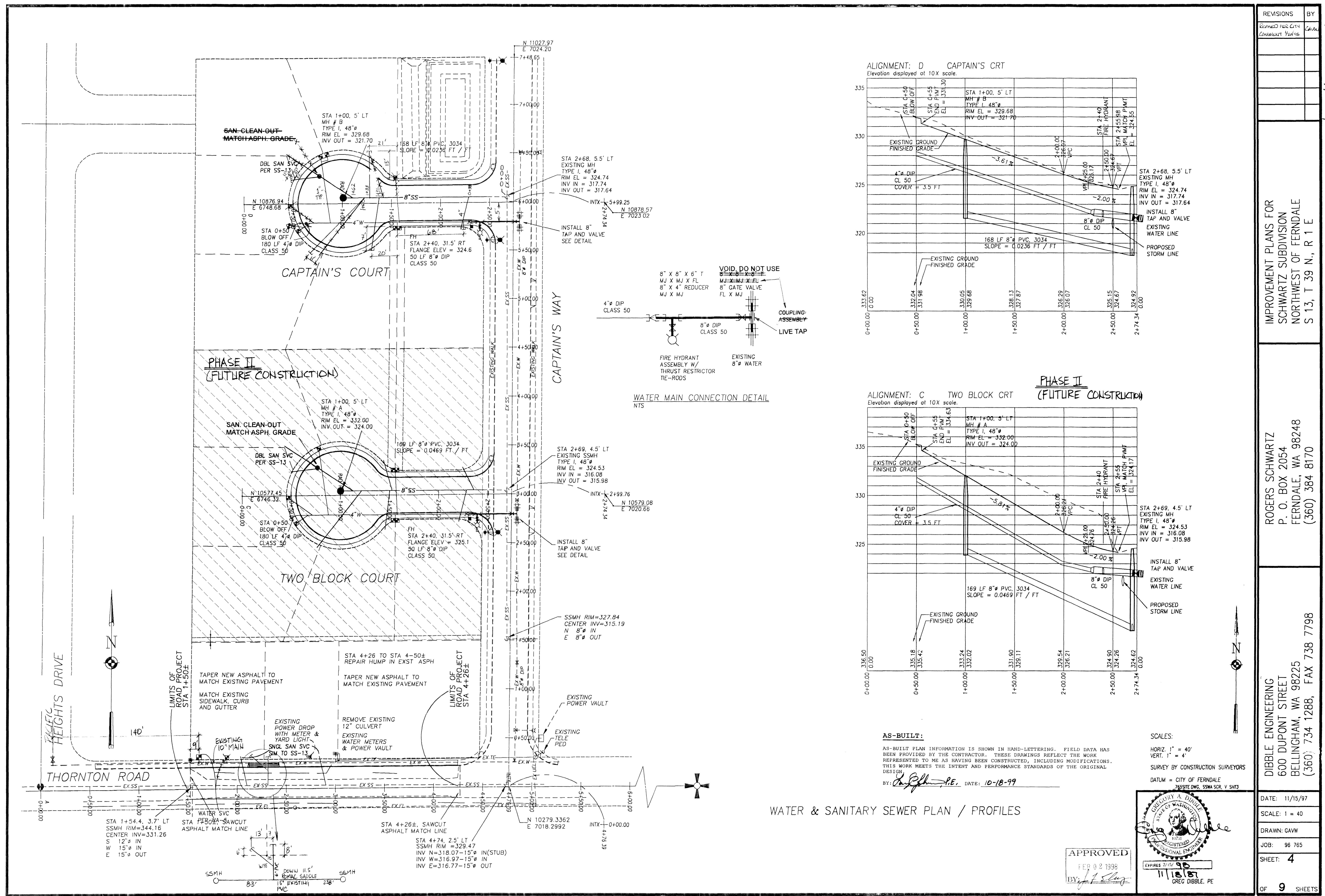
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REVISION PER CITY	GAVW
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SCALE: 1" = 40'	
DRAWN: GAVW	
JOB: 96 765	
SHEET: 3	
OF 9 SHEETS	

IMPROVEMENT PLANS FOR
 SCHWARTZ SUBDIVISION
 NORTHWEST OF FERNDALE
 S 13, T 39 N., R 1 E

ROGERS SCHWARTZ
 P. O. BOX 2054
 FERNDALE, WA 98248
 (360) 384 8170

DIBBLE ENGINEERING
 600 DUPONT STREET
 BELLINGHAM, WA 98225
 (360) 734 1285 FAX 738 7798

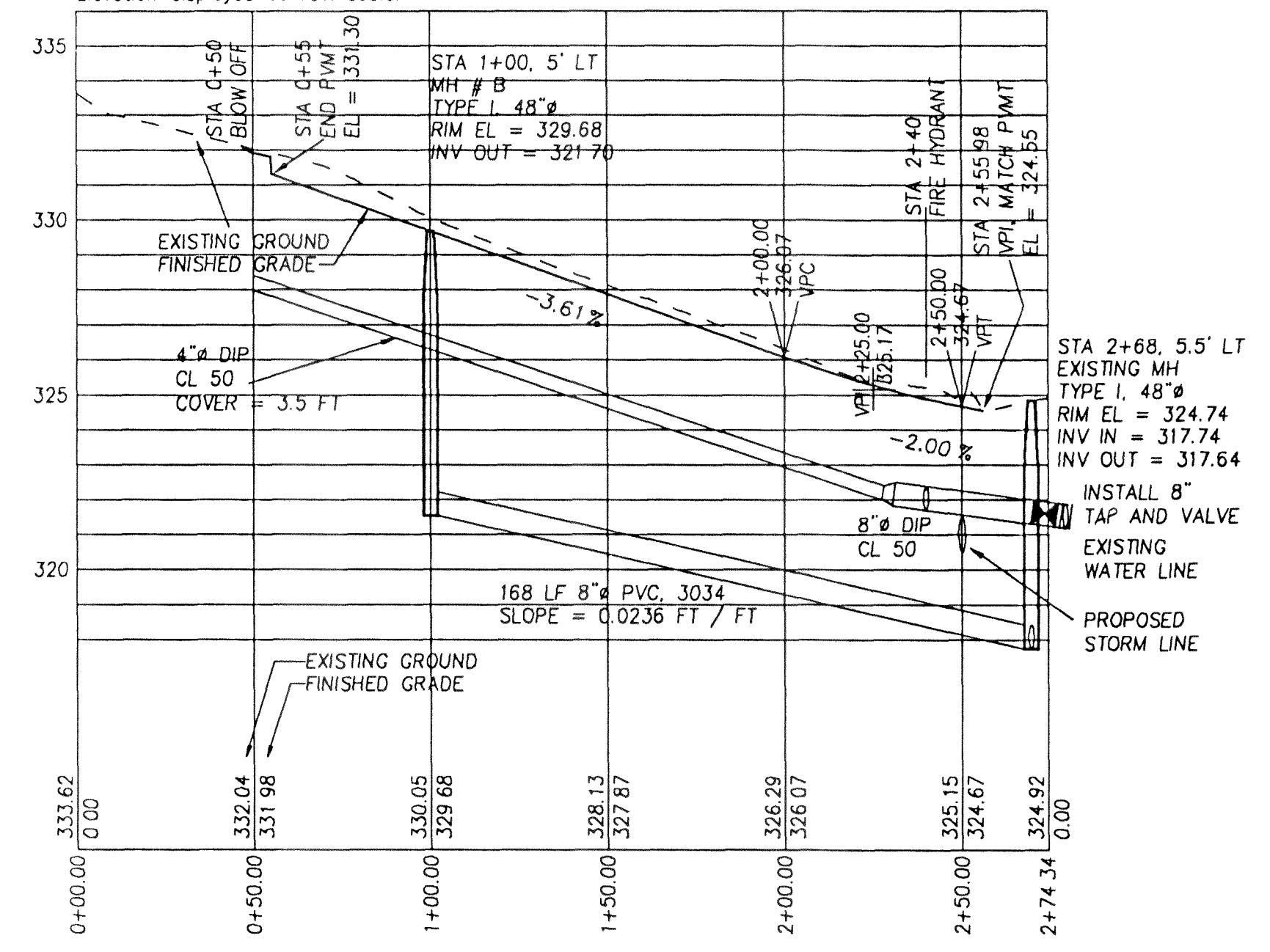
00223.D03 2-16-06 KR



REVISIONS		BY
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SCHWARTZ SUBDIVISION		
NORTHWEST OF FERDALE		
S 13, T 39 N., R 1 E		
ROGERS SCHWARTZ		
P. O. BOX 2054		
FERDALE, WA 98248		
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DIBBLE ENGINEERING		
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BELLINGHAM, WA 98225		
(360) 734 1288, FAX 738 7798		
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OF 9 SHEETS		

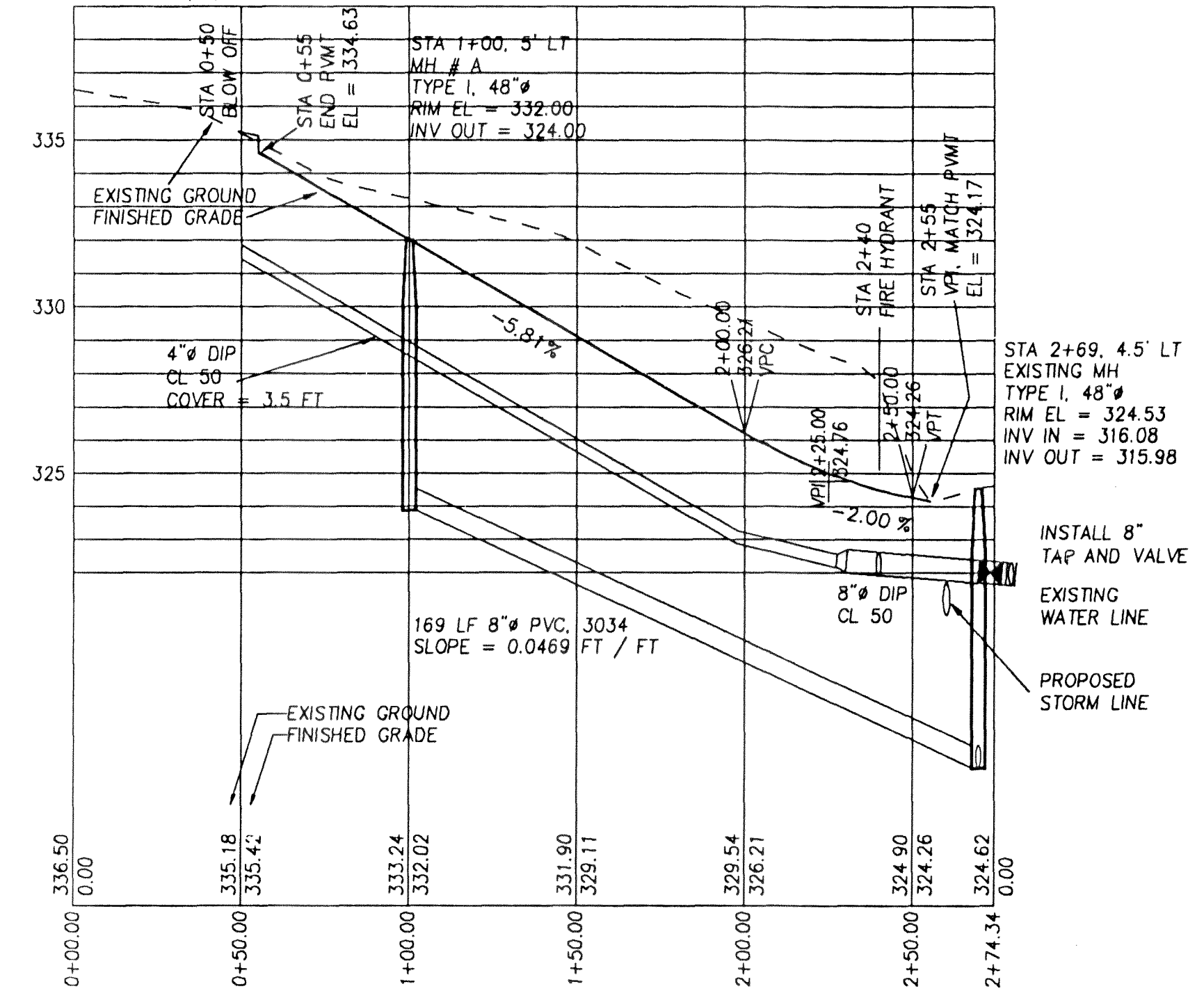
00223.004 2-16-06

ALIGNMENT: D CAPTAIN'S CRT
Elevation displayed at 10X scale.



PHASE II
(FUTURE CONSTRUCTION)

ALIGNMENT: C TWO BLOCK CRT
Elevation displayed at 10X scale.



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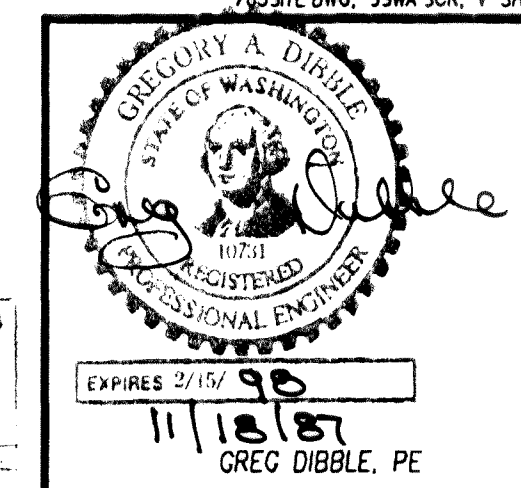
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VERT. 1" = 4'

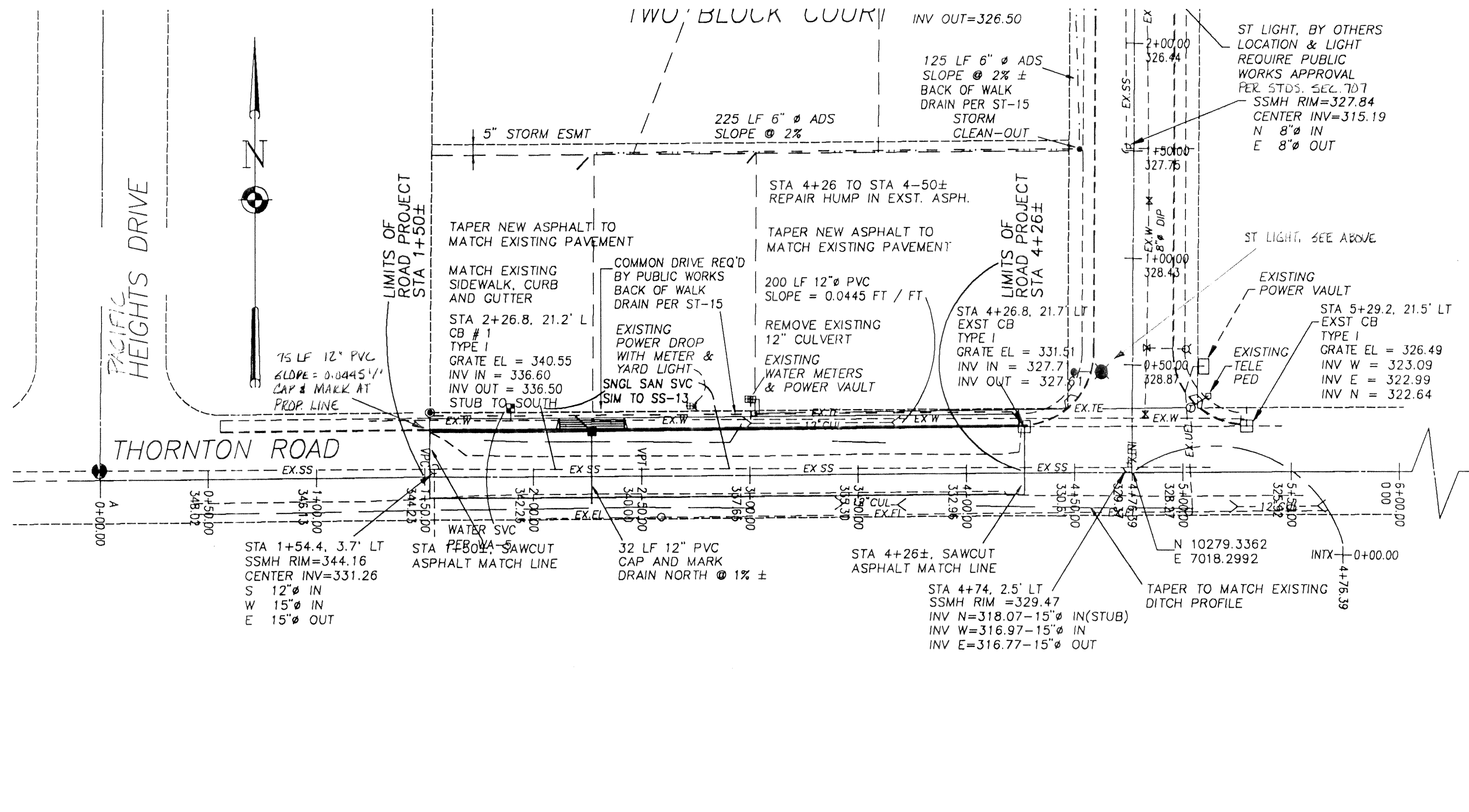
SURVEY BY CONSTRUCTION SURVEYORS

DATUM = CITY OF FERDALE
755 SITE O.W.G., S.S.W. SCR. V. SHJ3

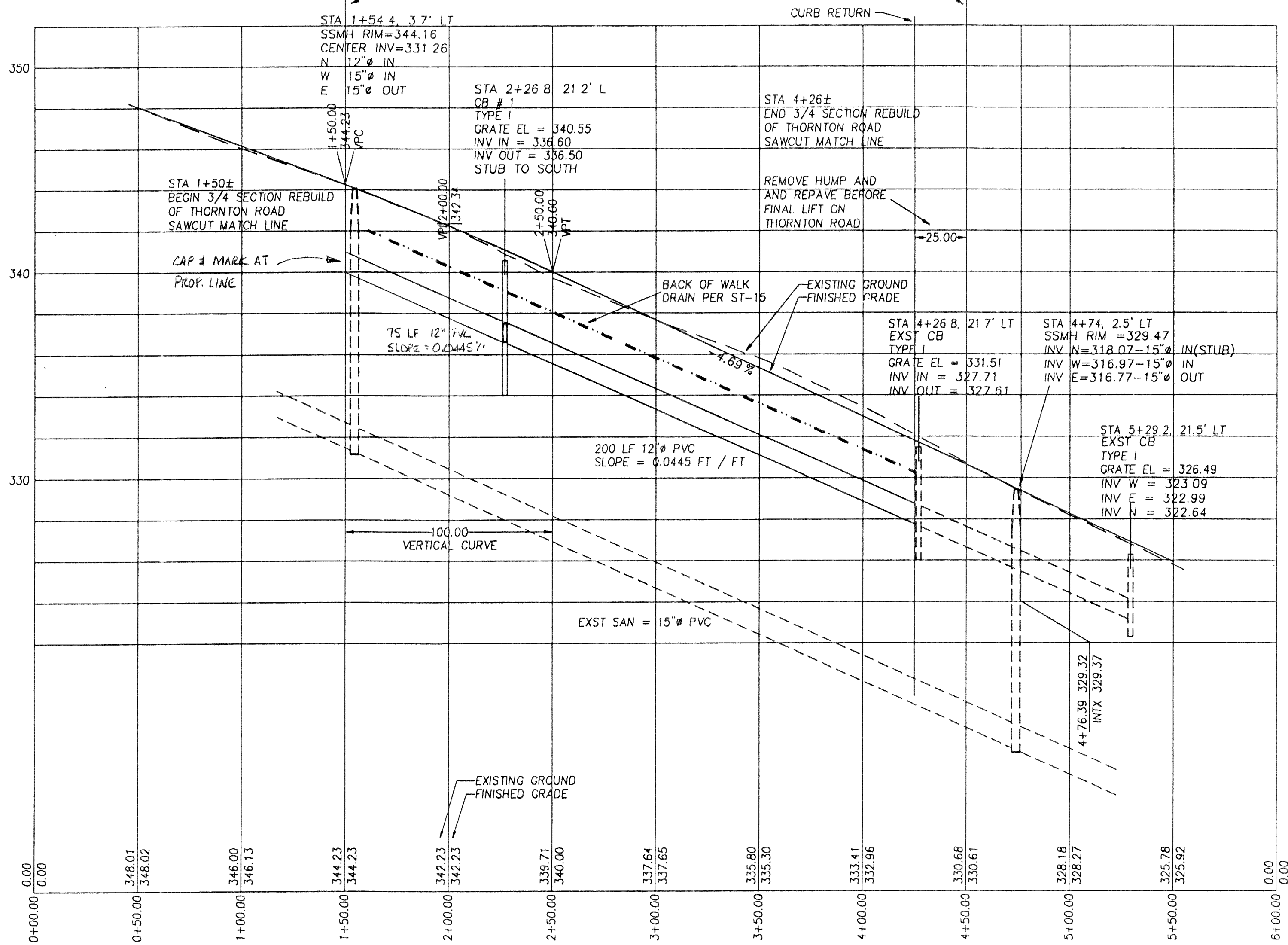
APPROVED
FEB 02 1998
BY: *[Signature]*



WATER & SANITARY SEWER PLAN / PROFILES



ALIGNMENT: A THORNTON ROAD
Elevation displayed at 10X scale.



GENERAL NOTES

ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH 1997 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION BY WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND STANDARD PLANS AND SPECIFICATIONS OF THE CITY OF FERNDALE.

CONTRACTOR WILL OBTAIN A PUBLIC WORKS PROJECT PERMIT, A REVOCABLE ENCROACHMENT PERMIT FOR WORK IN THE PUBLIC RIGHT OF WAY, AND ALL OTHER REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE CITY ENGINEER'S OFFICE PRIOR TO BEGINNING WORK. CONTRACTOR SHALL CONTACT THE OFFICE OF THE CITY ENGINEER 24 HOURS PRIOR TO COMMENCING WORK WITHIN THE CITY RIGHT-OF-WAY.

CONTRACTOR SHALL CONTACT THE CITY OF FERNDALE DEPARTMENT OF PUBLIC WORKS 24 HOURS IN ADVANCE OF ANY INSPECTIONS OUTLINED AS FOLLOWS:

UPON PLACEMENT OF SEDIMENTATION AND EROSION CONTROL DEVICES.

UPON PLACEMENT OF PIPE AND PRIOR TO BACKFILLING.

DURING PLACEMENT OF BACKFILL.

GENERAL ROADWAY:

UPON COMPLETION OF UNDERGROUND UTILITIES AND SUBGRADE INCLUDING GRAVEL BALLAST.

UPON COMPLETION OF BASE COURSE AND CURBING.

UPON PLACEMENT OF CRUSHED SURFACING COURSE, PRIOR TO PLACEMENT OF ANY PAVEMENT.

DURING PLACEMENT OF ASPHALT PAVEMENT.

OVERALL INSPECTIONS OF SHOULDERS, SIDEWALKS, DITCHES, MONUMENTS, DRAINAGE PIPES, STORM INLETS, FINAL SITE GRADING AND CLEAN-UP.

END OF MAINTENANCE PERIOD PRIOR TO RELEASE OF SECURITY DEPOSIT.

ALL WORK WITHIN THE RIGHT OF WAY MUST BE INSPECTED AND APPROVED BY A REPRESENTATIVE OF THE CITY OF FERNDALE ENGINEERING DIVISION AND 24 HOURS NOTICE MUST BE GIVEN PRIOR TO STARTING WORK OR TO SCHEDULE INSPECTIONS.

CONTRACTOR SHALL RESTORE ALL PUBLIC AND PRIVATE PROPERTY DISRUPTED BY THE PROJECT.

ALL CUT AND BACKFILL SLOPES SHALL BE SEEDED AND FERTILIZED FOR EROSION CONTROL. CONTRACTOR SHALL BE RESPONSIBLE FOR SLOPE EROSION UNTIL VEGETATION IS FIRMLY ESTABLISHED.

CONTRACTOR SHALL INSTITUTE PRACTICES FOR PREVENTION OF EROSION DURING CONSTRUCTION. EROSION CONTROL WORK SHALL CONFORM TO THE REQUIREMENTS OF SECTION 8.01 OF THE 1997 STANDARD SPECIFICATIONS AND CHAPTER 11 OF THE FERNDALE STANDARDS.

CONTRACTOR SHALL SUBMIT A LIST OF ITEM COSTS TO THE CITY ENGINEER COVERING ALL COSTS OF CONSTRUCTION AND SUBMIT A TWO-YEAR MAINTENANCE BOND COVERING DEFECTS IN MATERIALS AND WORKMANSHIP PRIOR TO CITY ACCEPTANCE OF THE PROJECT.

CONTRACTOR SHALL INFORM THE ENGINEER OF ANY PROPOSED CHANGES IN PLAN PRIOR TO CONSTRUCTION OF THAT CHANGE. CONTRACTOR SHALL MAINTAIN RECORDS OF ANY DEVIATIONS AND FORWARD TO ENGINEER. ENGINEER SHALL PROVIDE CITY WITH A CERTIFIED AS-BUILT MYLAR AT THE COMPLETION OF THE PROJECT.

CONTRACTOR SHALL CONTACT UTILITIES COORDINATING 48 HOURS IN ADVANCE OF CONSTRUCTION (1-800-424-5555).

ALL COMPACTION TESTING REQUIRED DURING THIS CONSTRUCTION PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUBGRADE MUST BE CERTIFIED BY THE ENGINEER PRIOR TO PAVING.

ALL LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE TRUE AND CORRECT LOCATION.

A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

ROAD AND STORM DRAIN SPECIFICATIONS

STRIPPED ORGANIC MATERIAL AND EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE OFF SITE, OR AS DIRECTED BY THE OWNER.

STORM DRAIN PIPE SHALL BE IN ACCORDANCE WITH CITY OF FERNDALE STANDARD SPECIFICATION R-9. BEDDING FOR PVC PIPE SHALL BE IN ACCORDANCE WITH STANDARD PLAN SS-15.

CATCH BASINS SHALL BE TYPE 1 PRECAST CONCRETE. CATCH BASINS SHALL BE ACCORDING TO DOT PLAN B-1. NON-PUBLIC RIGHT-OF-WAY CATCH BASINS SHALL BE CONSTRUCTED USING METAL FRAMES AND GRATES PER DOT PLAN B-2A.

CATCH BASIN FRAMES AND GRATES INSTALLED IN CITY RIGHT-OF-WAY SHALL BE THRU-CURB AND ACCORDING TO CITY OF FERNDALE STANDARD PLAN ST-8.

ALL EXISTING STORM PIPES SHALL BE CLEARED OF DEBRIS AND SEDIMENT AT THE COMPLETION OF THE PROJECT.

BIOFILTRATION SWALES SHALL BE CONSTRUCTED AS SHOWN. SWALES WILL BE SEEDED OR SODDED AS REQUIRED AND MAINTAINED UNTIL GRASS IS WELL ESTABLISHED.

CURB AND GUTTER SHALL BE ACCORDING TO CITY OF FERNDALE STANDARD SPECIFICATION R-9.

CEMENT CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH CITY OF FERNDALE SPECIFICATION R-9. SIDEWALK SHALL BE 6 INCHES THICK THROUGH DRIVEWAY SECTIONS.

CURB RAMPS SHALL BE CONSTRUCTED IN LOCATIONS SHOWN ON THE SITE PLAN AND SHALL CONFORM TO REQUIREMENTS OF CITY OF FERNDALE STANDARD PLAN R-14.

ASPHALT CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 5-04 OF THE STANDARD SPECIFICATIONS. DESIGN ENGINEER SHALL INSPECT SUBGRADE, RUN TESTS AS REQUIRED AND CERTIFY SUBGRADE FOR BEARING CAPACITY PRIOR TO PLACING BANK-RUN GRAVEL.

PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH CITY OF FERNDALE STANDARD SPECIFICATION R-11.

ROCK RETAINING WALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF FERNDALE SPECIFICATIONS R-18.

RESIDENTIAL STREET LIGHTING SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF BELLINGHAM STANDARD PLAN ST-42. SECTION 707 OF THE DEVELOPMENT STANDARDS AND THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS. SUBMIT LIGHTING PLANS AND DETAILS TO THE PUBLIC WORKS DIRECTOR FOR REVIEW AND APPROVAL.

ALL SIGNS SHALL BE HI-INTENSITY AND INSTALLED ON CITY SPECIFIED POSTS. STREET NAME SIGNS SHALL ALSO BE INSTALLED. SIGNS AND CROSSWALK MARKINGS MAY BE INSTALLED BY THE CITY AT THE DEVELOPER'S EXPENSE.

POSITIVE LOT DRAINS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF FERNDALE STANDARD SPECIFICATION ST-15. LOCATOR BOARDS SHALL BE INSTALLED AND PAINTED WHITE.

SANITARY SEWER SPECIFICATIONS

FOUR INCH THROUGH TWELVE INCH SEWERS SHALL BE PVC PIPE CONFORMING TO ASTM D-3034, SDR-35 OR EQUAL. PIPE JOINTS SHALL BE MADE WITH FLEXIBLE GASKETS CONFORMING TO THE REQUIREMENTS OF SECTION 7-17.3(2)E OF THE STANDARD SPECIFICATIONS.

TRENCH EXCAVATION SHALL BE IN ACCORDANCE WITH SECTION 7-17.3(1)A OF THE STANDARD SPECIFICATIONS.

THE BEDDING SHALL BE IN ACCORDANCE WITH SECTION 7-17.3(1)B OF THE STANDARD SPECIFICATIONS. THE BEDDING FOR PVC PIPE SHALL BE PEA GRAVEL ACCORDING TO CITY OF FERNDALE STANDARD PLAN SS-1.

FOUR-INCH OR SIX-INCH SIDE SEWER INSTALLATIONS AND AS-BUILTS SHALL CONFORM TO FERNDALE STANDARDS, SEC. 706 AND STANDARD PLANS NO. SS-6, SS-13, AND SS-14. LOCATOR BOARDS SHALL BE INSTALLED AT THE ENDS OF THE LATERALS AND SHALL BE PAINTED GREEN.

TRENCH BACKFILL UNDER ROADWAY AND SHOULDER SHALL BE BANK RUN GRAVEL COMPACTED TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST. TRENCH BACKFILL OUTSIDE OF ROADWAY SECTIONS MAY BE NATIVE MATERIAL COMPACTED TO 85% MAXIMUM DRY DENSITY. MINIMUM COVER SHALL BE 60 INCHES.

MANHOLES SHALL CONFORM TO CITY OF FERNDALE STANDARD PLAN NO. SS-2. FRAMES AND COVERS SHALL CONFORM TO STANDARD PLAN NO. SS-9. ALL MANHOLES SHALL USE CONE-TYPE RISERS WHEN THE TOTAL HEIGHT EXCEEDS EIGHT (8) FEET FOR 48" DIAMETER MANHOLES. ALL MANHOLES SHALL BE PRE-CANNELED.

CONTRACTOR SHALL CONTACT THE ENGINEER AT THE TIME OF SEWER SERVICE INSTALLATION IN ORDER THAT STATIONING OF SIDE SEWERS AND CLEAN-OUTS CAN BE RECORDED. LOCATIONS SHALL BE NOTED ON THE AS-BUILT PLAN IN ACCORDANCE WITH CITY REQUIREMENTS.

SANITARY SEWER EASEMENTS SHALL BE STAKED PRIOR TO CONSTRUCTION.

SANITARY SEWER SYSTEM SHALL BE PRESSURE TESTED AND SCANNED BY TV IN ACCORDANCE WITH CITY OF FERNDALE REQUIREMENTS.

WATER MAIN & APPURTENANCES

ALL 6" AND 8" DIAMETER WATER MAIN SHALL BE OF AWWA STANDARDS H3-71, C151-71 AND CEMENT LINING C104-71, AND SHALL BE CLASS 50 DUCTILE IRON PIPE. ALL FITTINGS SHALL BE CLASS 150 AND SHALL CONFORM TO AWWA SPECIFICATION C-110-71 AND C-104-71. INSTALLATION SHALL CONFORM TO THE MANUFACTURERS INSTRUCTIONS AND THE REQUIREMENTS OF THE CITY OF FERNDALE.

PIPE LAYING SHALL MEET THE REQUIREMENTS OF SECTION 7-11 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH THE DEVELOPMENT STANDARD W-11.

CONNECTION TO THE EXISTING WATER MAIN SHALL BE BY LIVE TAP AFTER SATISFACTORY COMPLETION OF PRESSURE AND SANITARY TESTING. CONTRACTOR MUST NOTIFY THE PROJECT ENGINEER AND THE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION TIME AT LEAST FOUR WORKING DAYS IN ADVANCE.

TRENCH BACKFILL UNDER ROADWAY AND SHOULDER SHALL BE BANK RUN GRAVEL COMPACTED TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST. TRENCH BACKFILL OUTSIDE OF ROADWAY SECTIONS MAY BE NATIVE MATERIAL COMPACTED TO 85% MAXIMUM DRY DENSITY. MINIMUM COVER SHALL BE 42 INCHES.

CONCRETE THRUST BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERNDALE STANDARD PLAN NO. W-2 THROUGH W-4, OR AS DIRECTED BY THE PROJECT ENGINEER. BLOCKS SHALL BE INSTALLED AS SPECIFIED IN SECTION 7-11.3(13) OF THE STANDARD SPECIFICATIONS. NO PRECAST BLOCKS ARE ALLOWED.

CONTRACTOR SHALL CONFER WITH THE CITY ENGINEER REGARDING METHOD OF FILLING AND PRESSURE TESTING PIPE PRIOR TO CONSTRUCTION. TEST PRESSURE SHALL BE A MINIMUM OF 200 PSI. UNDER THE SUPERVISION OF THE CITY ENGINEER. THE PRESSURE TEST MANIFOLD SHALL BE ACCORDING TO CITY OF BELLINGHAM STANDARD PLAN #WA-2.

GATE VALVES SHALL BE AWWA APPROVED FOR PRESSURE CLASS 150 AND SHALL BE IRON-BODY, FULL-BRONZE MOUNTED, RESILIENT SEATED. CAST IRON VALVE BOXES SHALL BE IN ACCORDANCE WITH AWWA STANDARD C509.

BLOW-OFFS SHALL BE IN ACCORDANCE WITH FERNDALE STANDARD PLAN W-10 AND SHALL BE WITHIN THE RIGHT OF WAY.

WATER MAIN EASEMENTS SHALL BE STAKED PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL CONTACT THE ENGINEER AT THE TIME OF WATER SERVICE INSTALLATION IN ORDER THAT STATIONING OF CORPORATION STOPS CAN BE RECORDED. LOCATIONS OF WATER MAINS, BENDS, FITTINGS, VALVES, HYDRANTS, WATER SERVICES ETC. SHALL BE NOTED ON THE AS-BUILT PLAN IN ACCORDANCE WITH CITY REQUIREMENTS.

FIRE HYDRANT SHALL BE 6" (5-1/4" MVO) WITH DOUBLE HOSE AND SINGLE PUMPER OUTLETS FITTED WITH STORZ ADAPTERS. HYDRANTS SHALL COMPLY WITH CITY OF FERNDALE SPECIFICATIONS, CHAPTER 705. INSTALLATIONS SHALL CONFORM TO CITY STANDARD PLAN W-1. CONTRACTOR SHALL PLACE HYDRANT EXTENDERS AS NECESSARY TO BRING BASE FLANGE TO GRADE.

WATER SERVICES AS REQUIRED SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF FERNDALE STANDARD PLAN W-5, W-6 AND W-14. WATER SERVICE METER ASSEMBLIES, METER BOXES AND INSTALLATION SHALL CONFORM TO CITY OF FERNDALE REQUIREMENTS. METERS SHALL BE INSTALLED BY THE CITY AND PAID FOR BY THE DEVELOPER.

ALL WATER SERVICE CONNECTION FEES SHALL BE PAID IN ADVANCE. SERVICES LINES TO THE METERS SHALL BE INSTALLED BY THE CONTRACTOR TO THE PUBLIC RIGHT OF WAY AND SERVICE LINES BEYOND THIS POINT TO BE INSTALLED BY THE LOT OWNERS. WHEN LOCATOR BOARDS ARE INSTALLED TO MARK SERVICE LINES, THEY SHALL BE PAINTED BLUE.

LOCATOR BOARDS FOR SERVICES SHALL BE 2" PVC PIPES.

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BY: *[Signature]* DATE: 10-18-99

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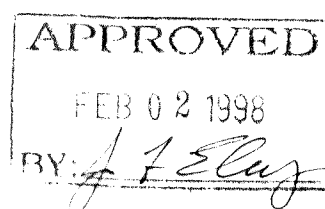
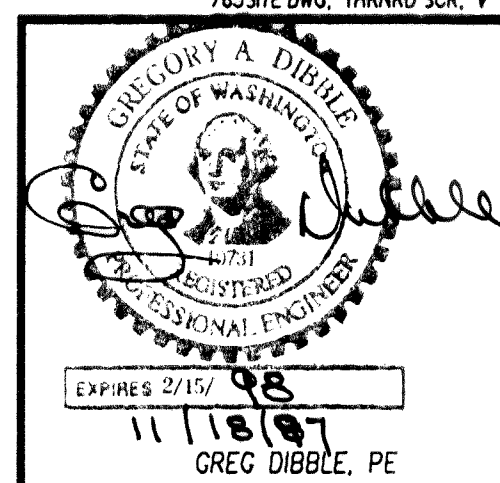
HORIZ. 1" = 40'

VERT. 1" = 4'

SURVEY BY CONSTRUCTION SURVEYORS

DATUM = CITY OF FERNDALE

765 SITE DWG, THORNTON SCR. V. SH4



ROAD & STORM DRAINAGE PLAN / PROFILE

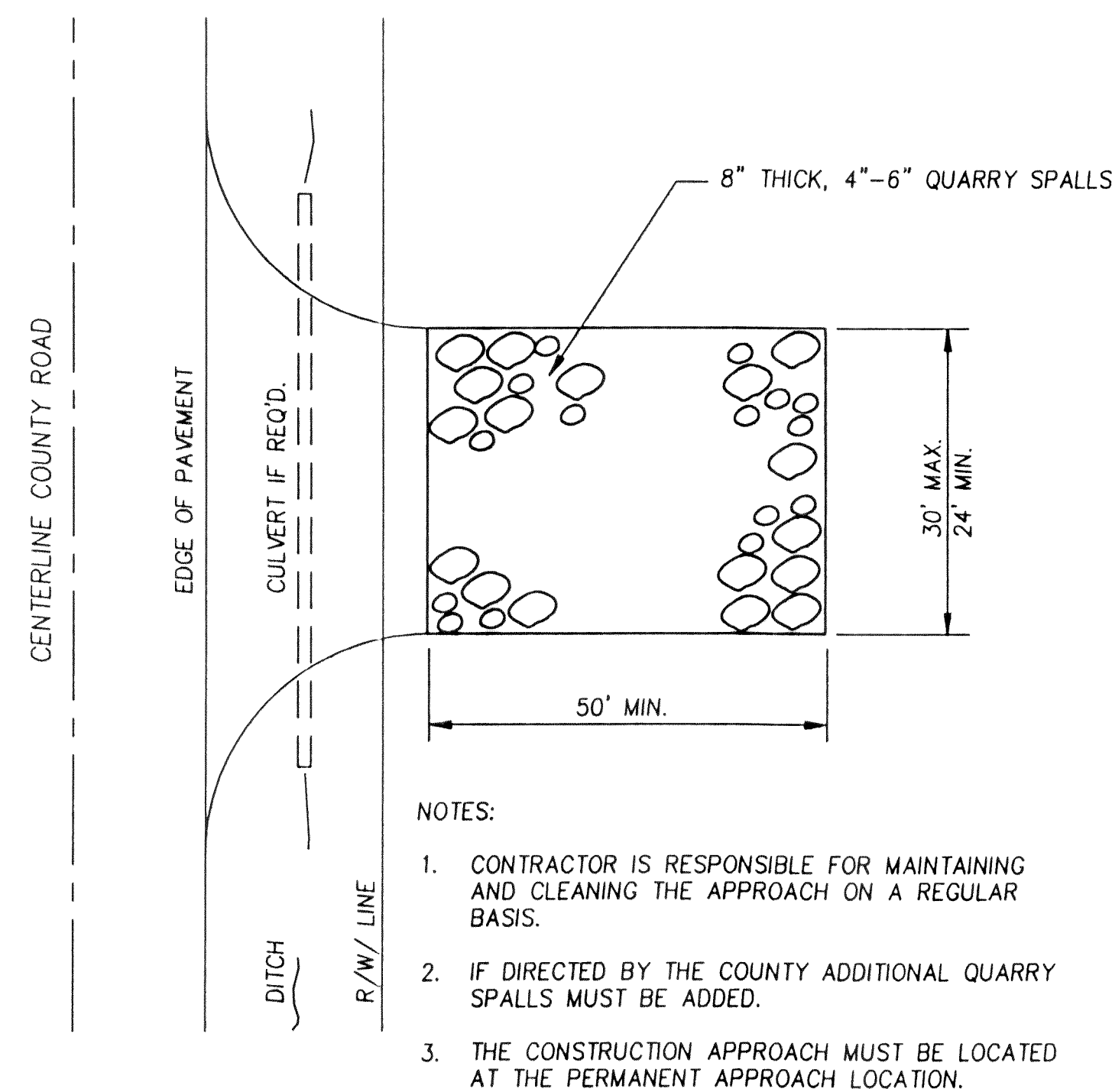
REVISIONS	BY
1. REVISED PER CITY COMMENTS	GAVW

IMPROVEMENT PLANS FOR
SCHWARTZ SUBDIVISION
NORTHWEST OF FERNDALE
S 13, T 39 N., R 1 E

ROGERS SCHWARTZ
P. O. BOX 2054
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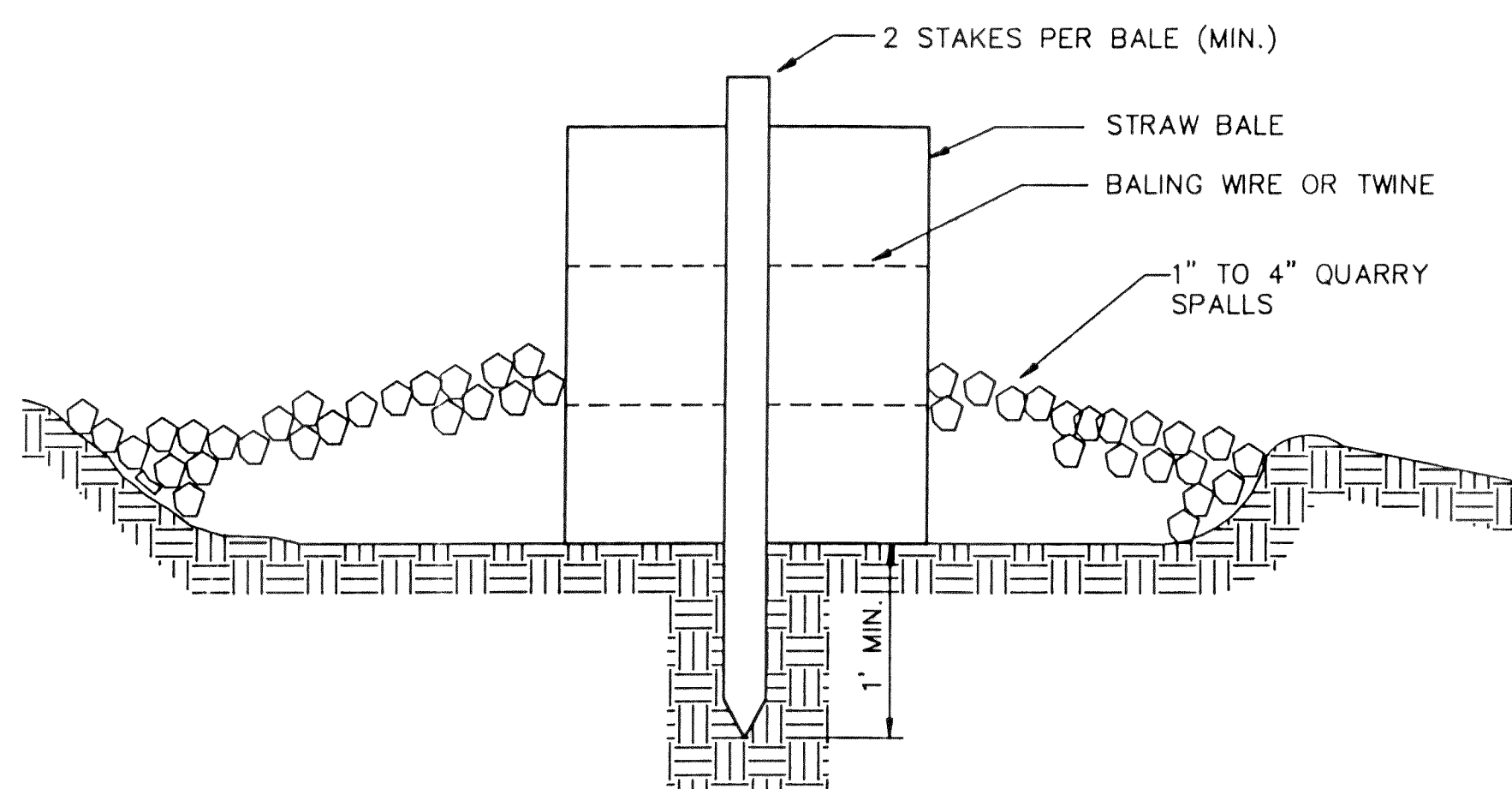
DATE: 11/15/97
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SHEET: 5
OF 9 SHEETS



CONSTRUCTION ACCESS DETAIL

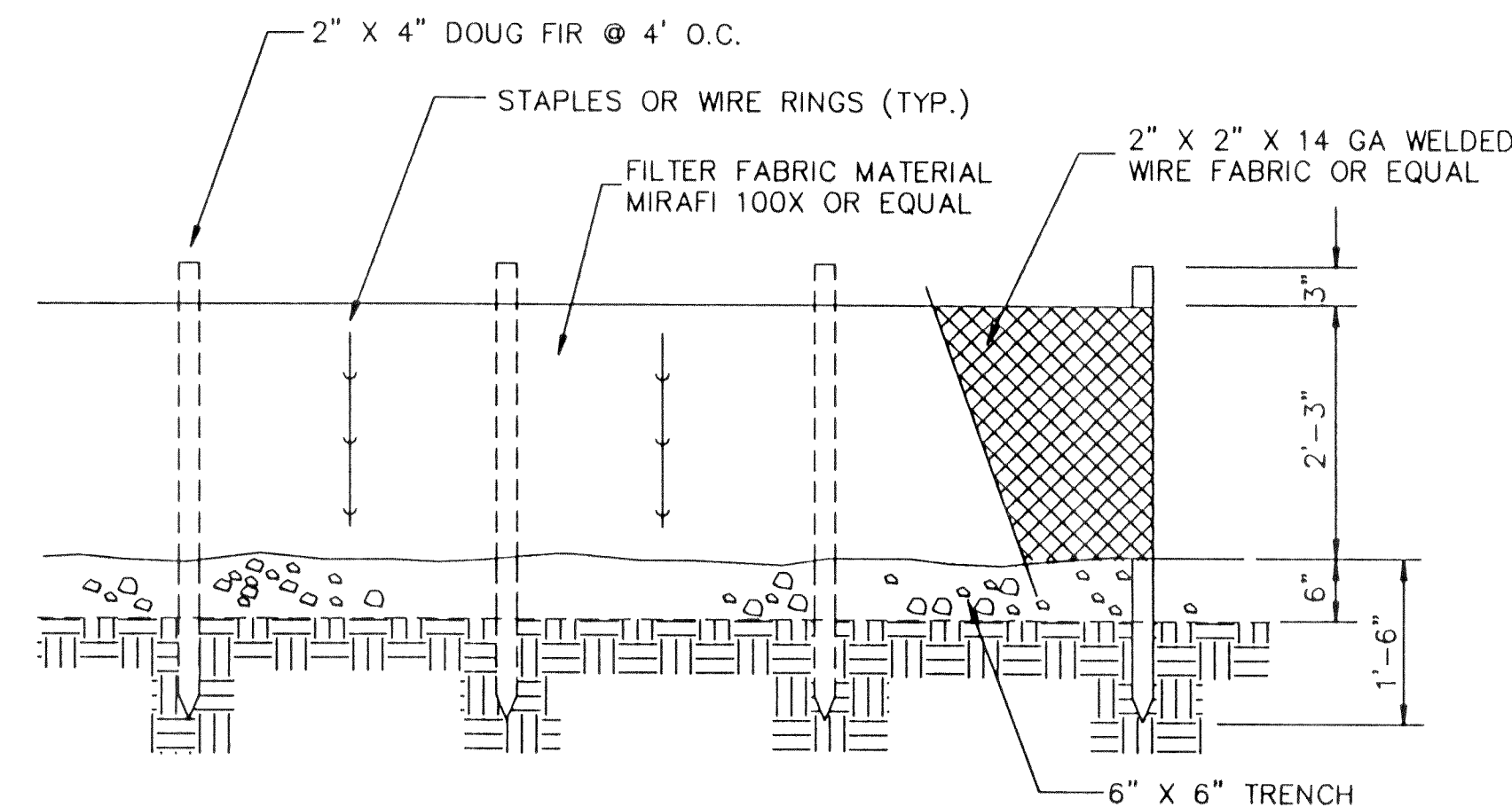
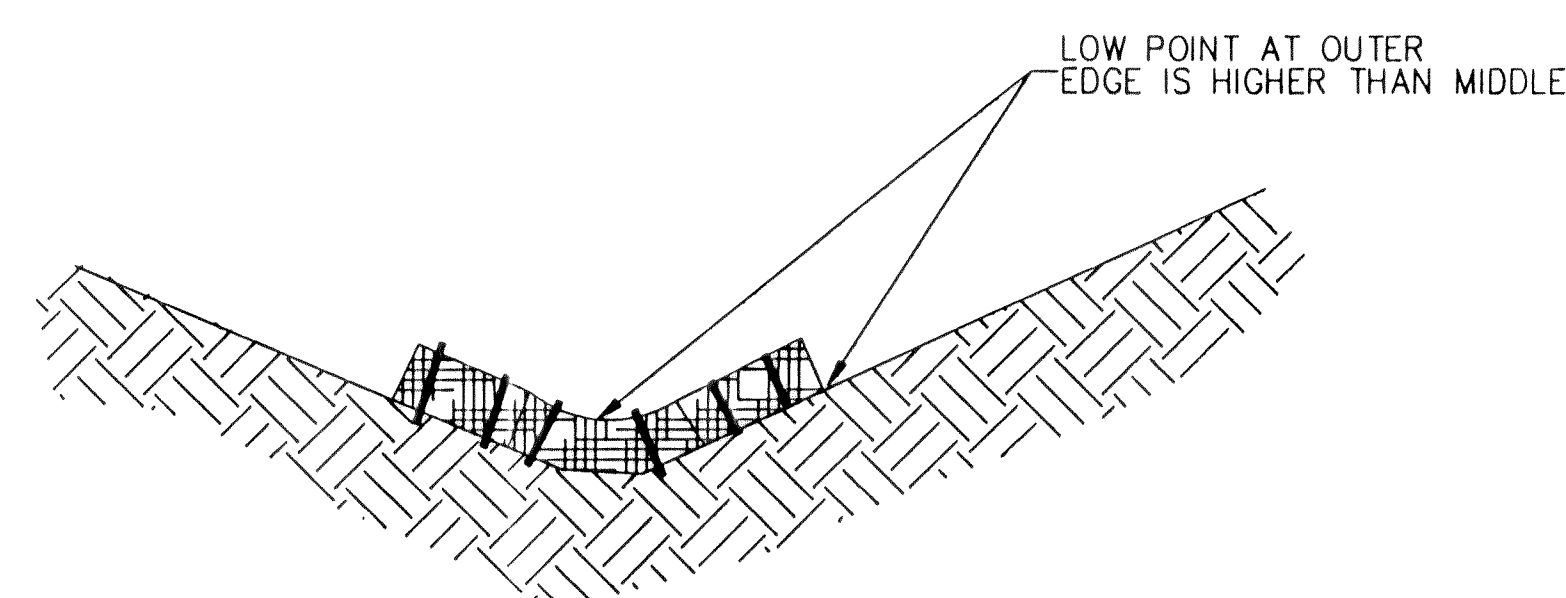
STRAW BALE MAINTENANCE

1. STRAW BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
2. CLOSE ATTENTION SHALL BE PAID TO THE PROMPT REPAIR OF DAMAGED BALES, END RUNS, AND UNDERCUTTING BENEATH BALES.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE STRAW BALE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

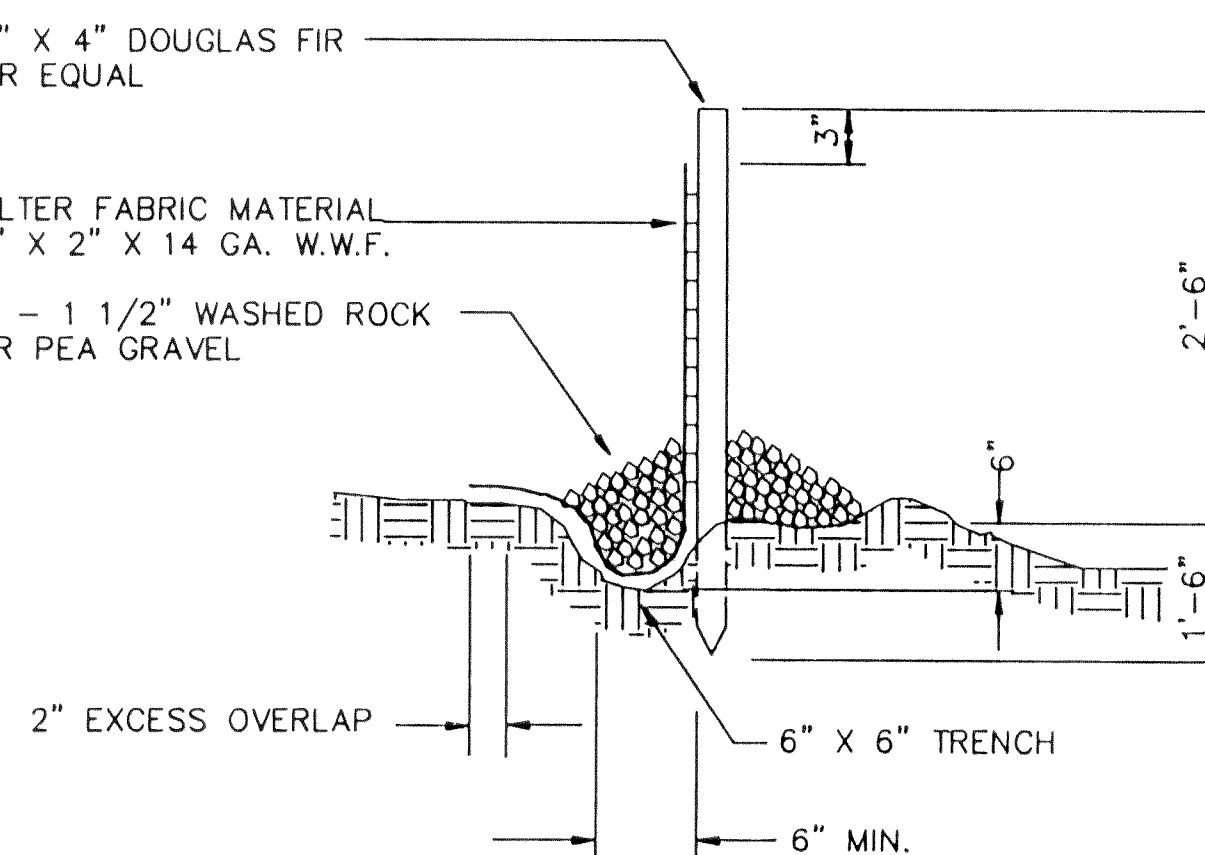


STRAW BALE X-SECTION

NTS



TYPICAL CROSS SECTION



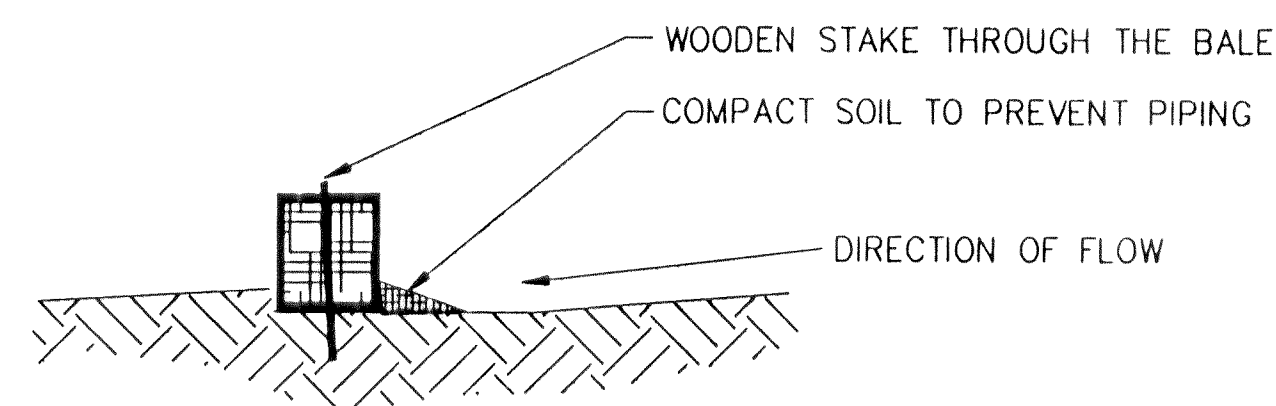
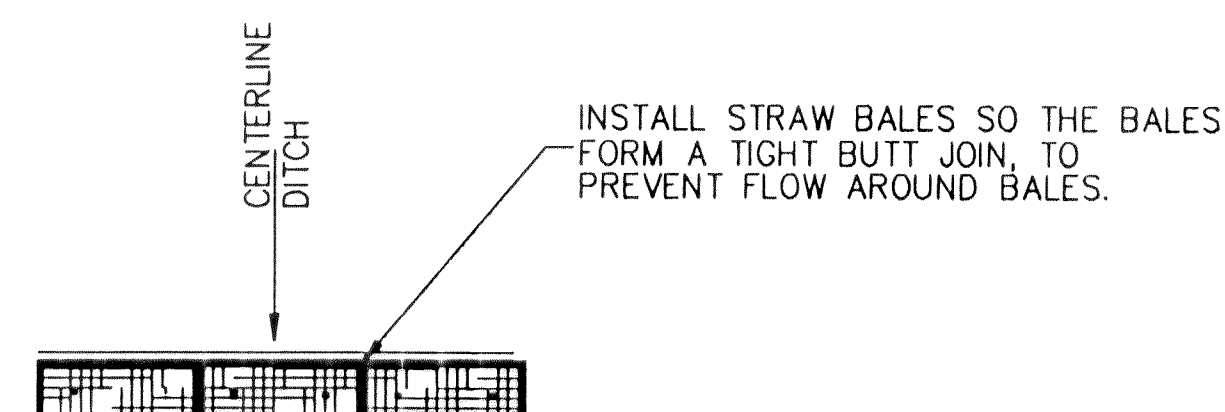
TYPICAL CROSS SECTION

NOTES

1. PLACE 1' OF 3/4" - 1 1/2" WASHED ROCK OR PEA GRAVEL ON BOTH SIDES OF FENCE TO CREATE A BEVEL SHAPE.
2. FABRIC SHALL COVER BOTTOM OF 6" X 6" TRENCH AND EXTEND BEYOND THE LIMITS OF THE GRAVEL IN ORDER TO MAINTAIN AN EXCESS OVERLAP OF 2" MINIMUM AS SHOWN IN TYPICAL CROSS-SECTION.
3. STRAW BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
4. CLOSE ATTENTION SHALL BE PAID TO THE PROMPT REPAIR OF DAMAGED BALES, ENDS AND UNDERCUTTING BENEATH BALES.

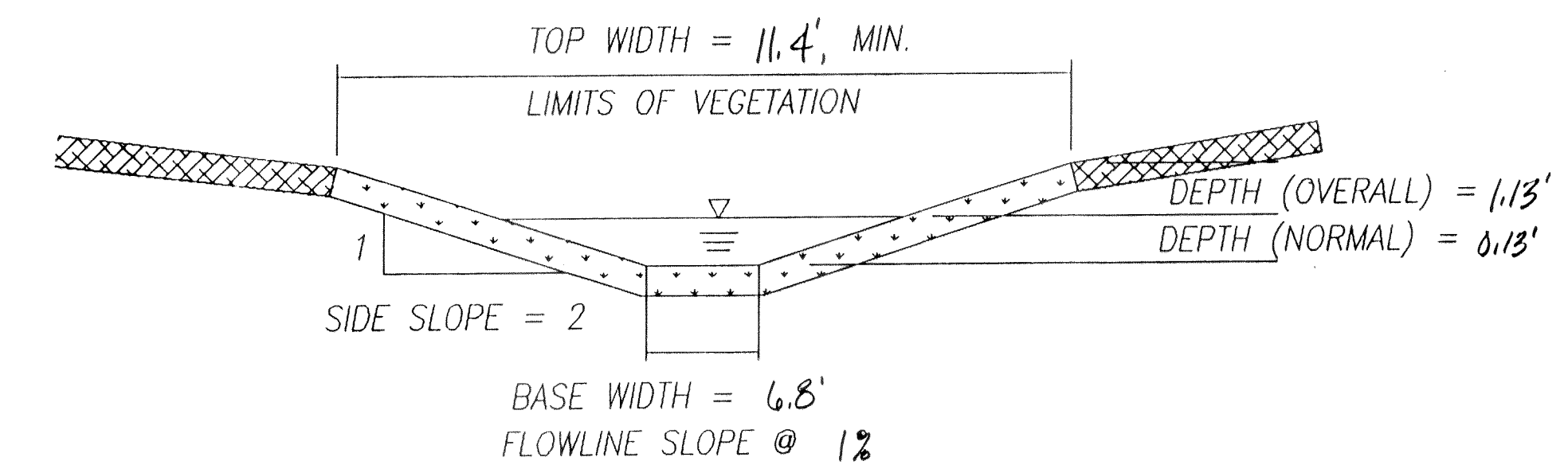
SILTATION FENCE DETAIL

NTS



STRAW BALE BARRIERS

NTS



TYPICAL SWALE CROSS-SECTION

NTS

STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN

Table III-6.1. Characteristics of Grasses Suitable for Lining Puget Sound Region Biofilters. (a)

Common Name	Persistence/ Growth Form	Description	Rating (b)
Annual ryegrass or Italian ryegrass	Annual/bunchgrass	Common erosion control grass; establishes rapidly on bare soils but does not reseed well.	3
Kentucky bluegrass	Perennial/sod-forming	Common turf grass; may require irrigation in dry season. May need regular reseeding.	3
Tall fescue	Perennial/bunchgrass	Common turf grass; can be used alone; may require irrigation in dry season.	4
Western wheatgrass	Perennial/sod-forming	Tolerates drought	3

a. Adapted from Goldman et al. (3). Other recommended grasses and legumes:

Meadow foxtail	Creeping red fescue	Annual ryegrasses
Tall fescue	Timothy	White clover
Redtop	Seaside colonial bentgrass	

Other water-resistant grasses that grow well in regional conditions are *Poa trivialis* (roughstalk bluegrass) and *Lolium perenne* (perennial ryegrass) (West. D., Seattle City Light, personal communication).

The seeding mix specified for the parking lot swales at the West Willows Technical Center in Redmond was as follows:

52% perennial rye	13% clover
35% winter rye	

Shapiro and Associates recommends the following seeding mix for this application (Gorski A., Shapiro and Associates, personal communication):

40% redtop bentgrass	20% tall fescue	5% Russian wild rye
30% red fescue	5% perennial rye	

b. Ratings are for erosion protection: 1 - fair; 2 - good; 3 - excellent; 4 - superior.

III-6-12

FEBRUARY, 1992

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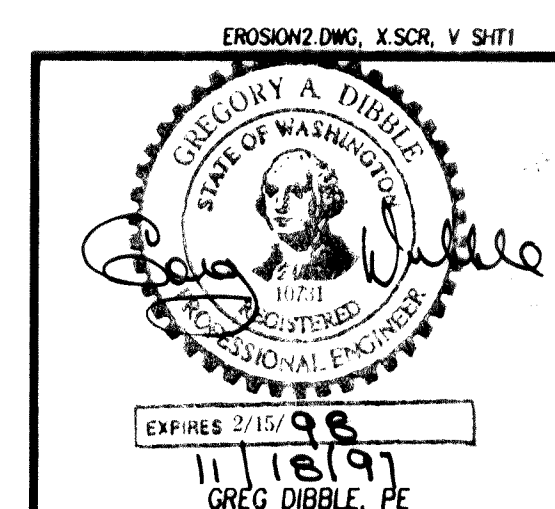
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BY: *[Signature]* DATE: 10-18-99

APPROVED

FEB 02 1998

BY: *[Signature]*



IMPROVEMENT PLANS FOR
SCHWARTZ SUBDIVISION
NORTHWEST OF FERNDALE
S 13, T 39 N., R 1 E

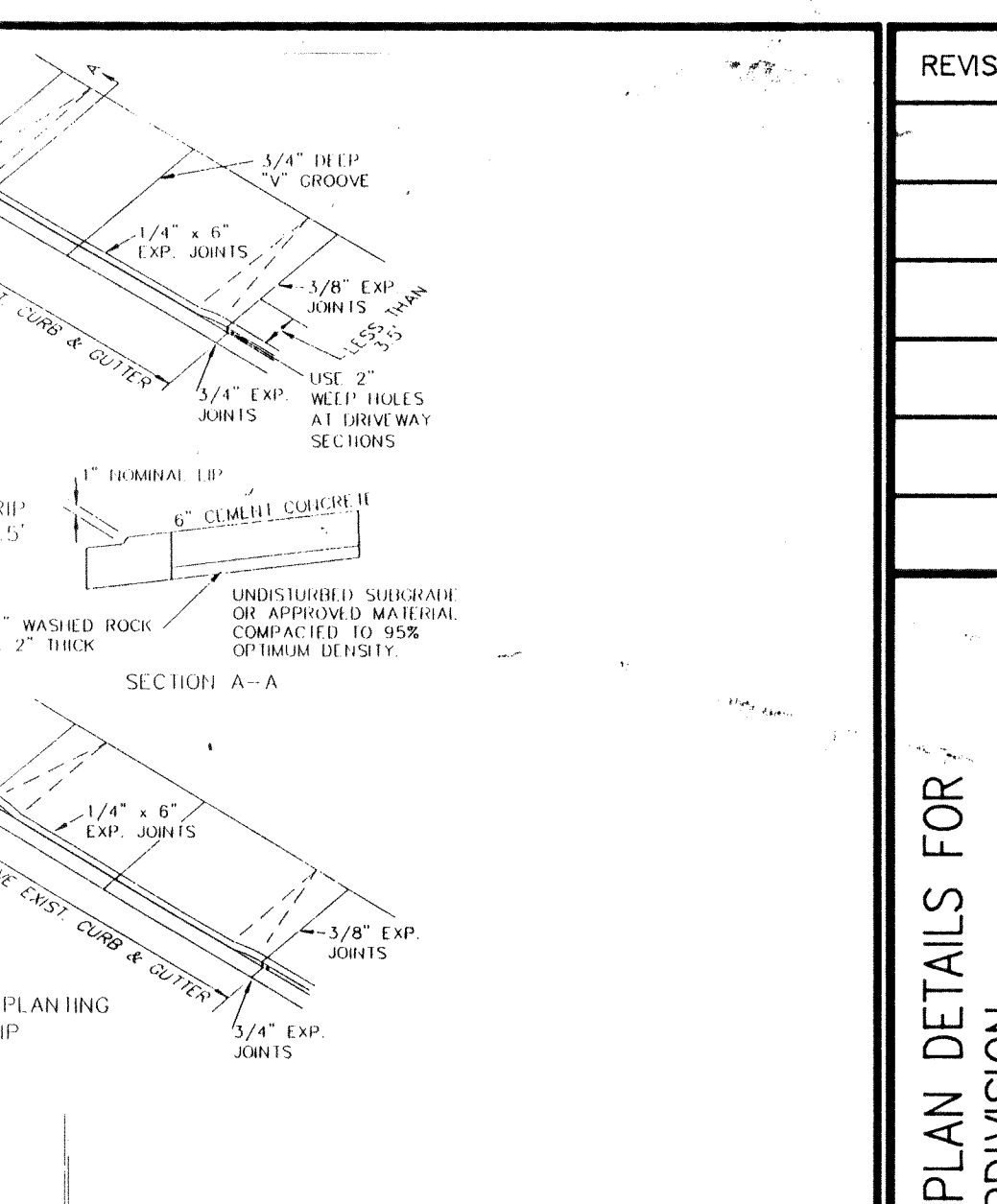
ROGERS SCHWARTZ
P. O. BOX 2054
FERNDALE, WA 98248
(360) 384 8170

DIBBLE ENGINEERING
100 DUPONT STREET
BELLINGHAM, WA 98225
(360) 734 1288, FAX 738 7798

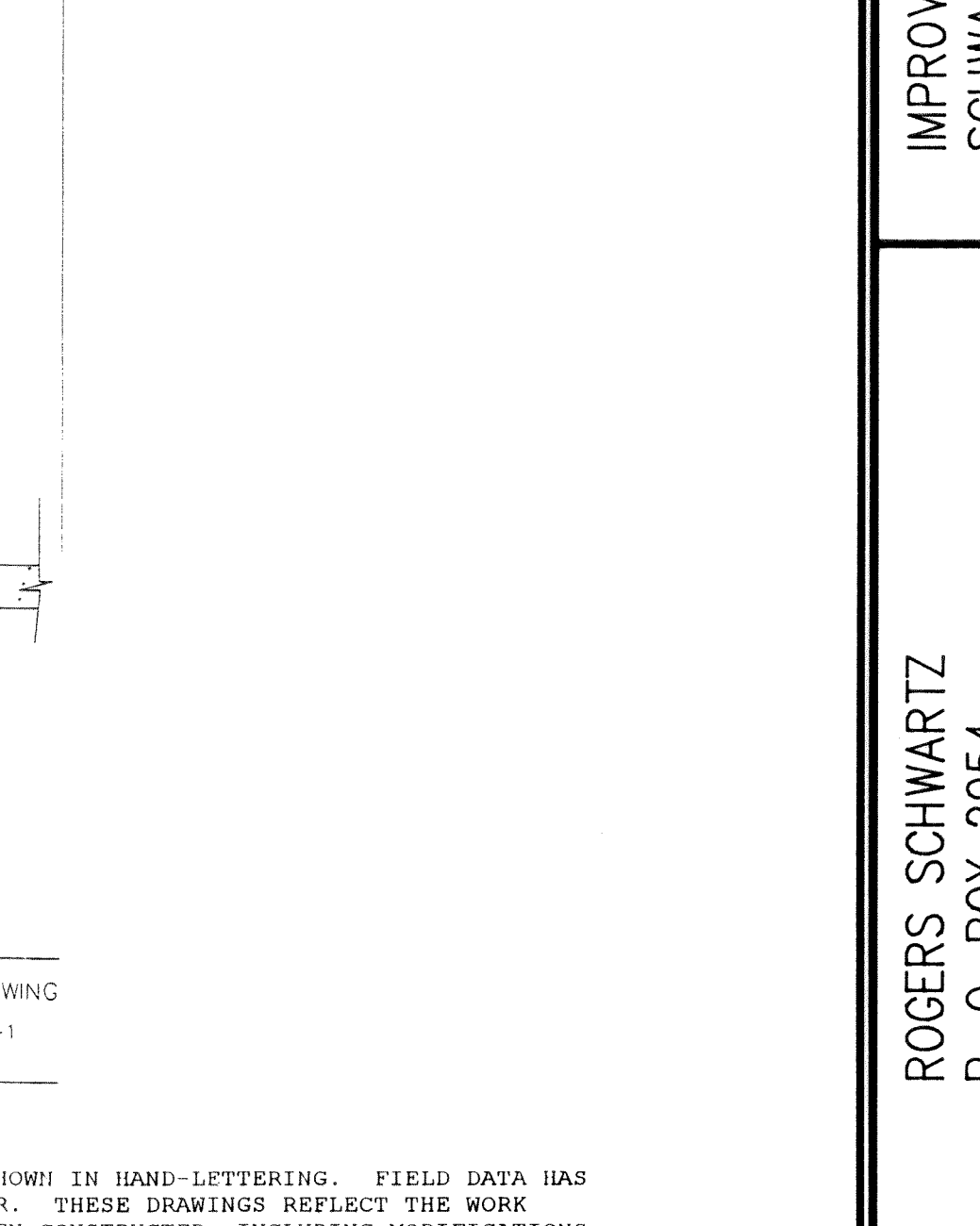
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OF 9 SHEETS

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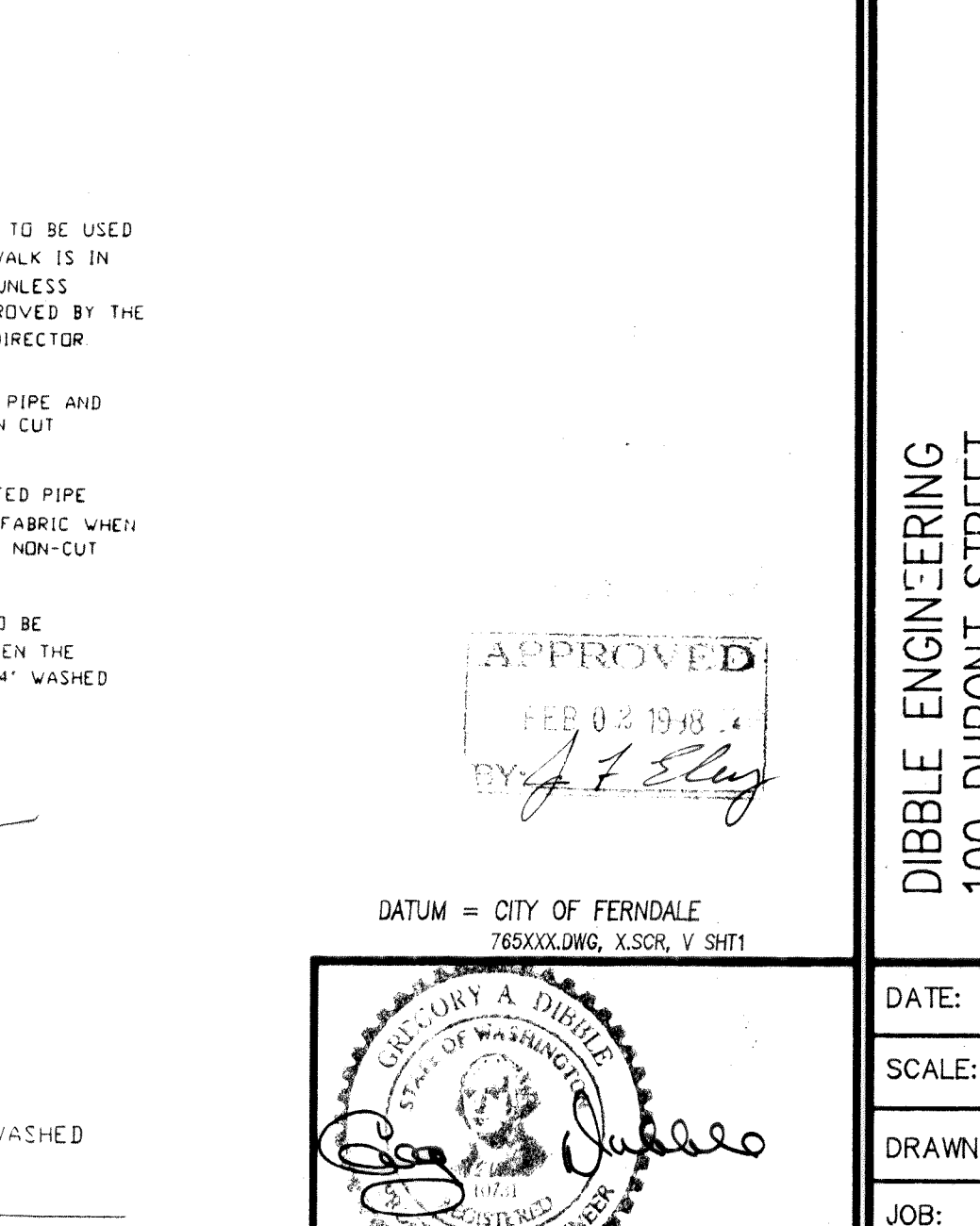


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WHEN CONSTRUCTED, INCLUDING MODIFICATIONS.
PERFORMANCE STANDARDS OF THE ORIGINAL

DATE: 10-18-99



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ST-15

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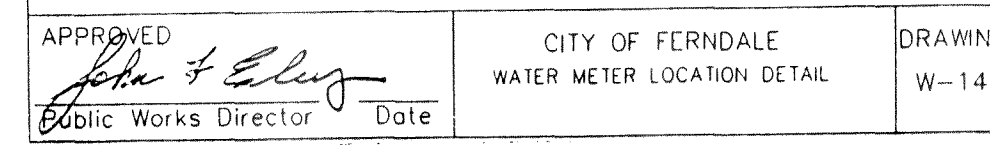
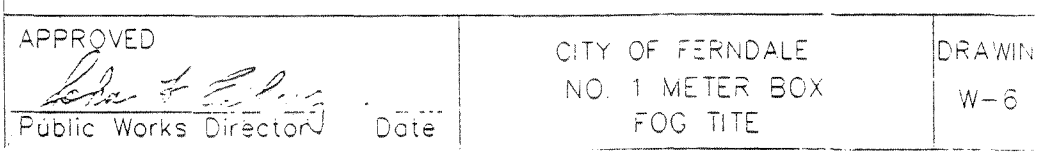
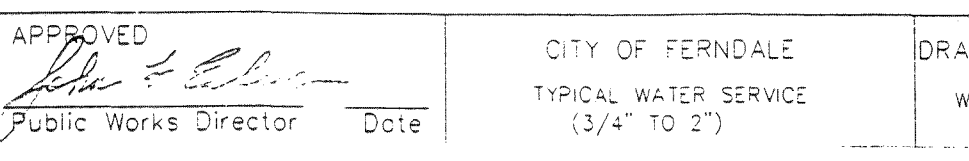
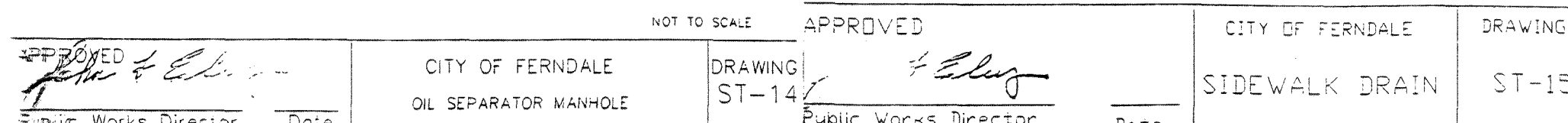
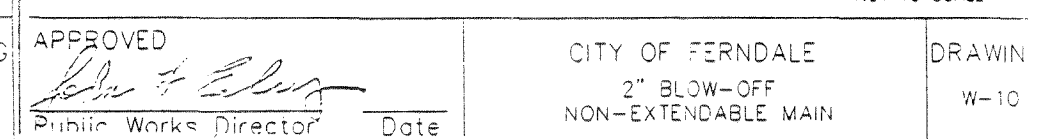
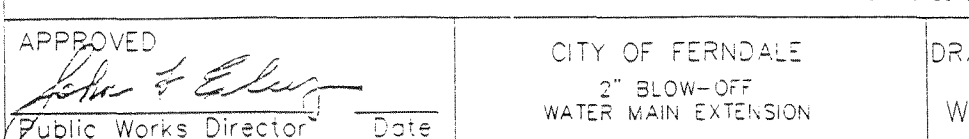
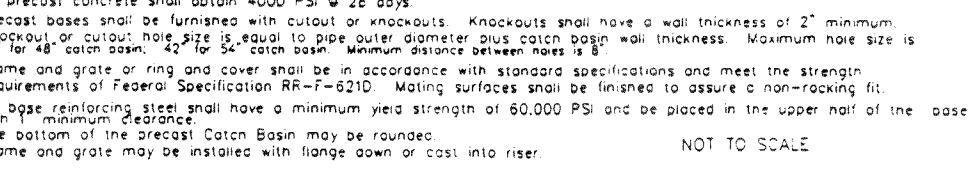
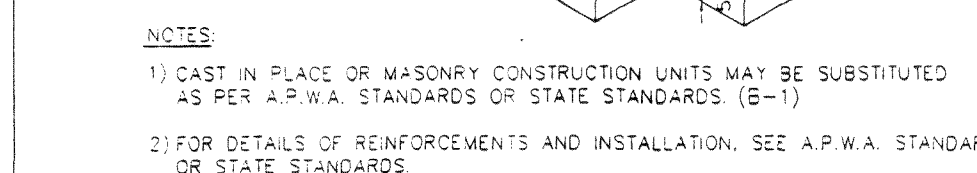
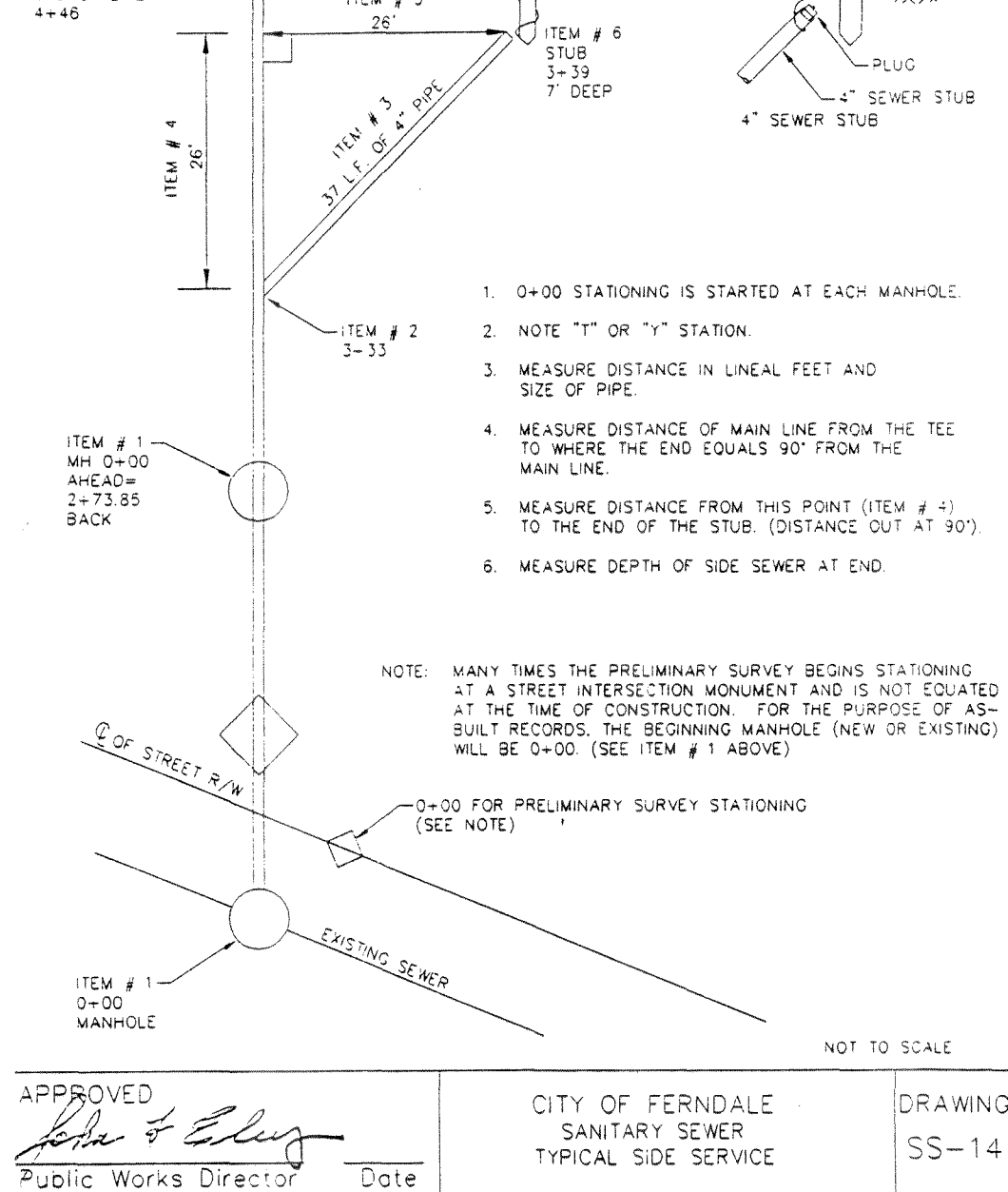
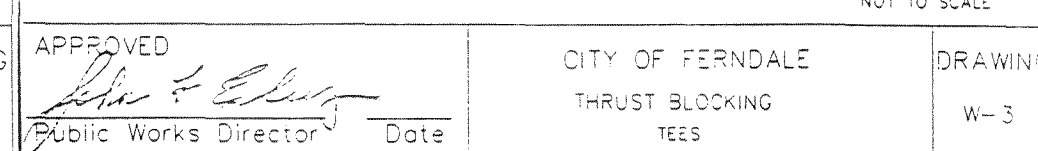
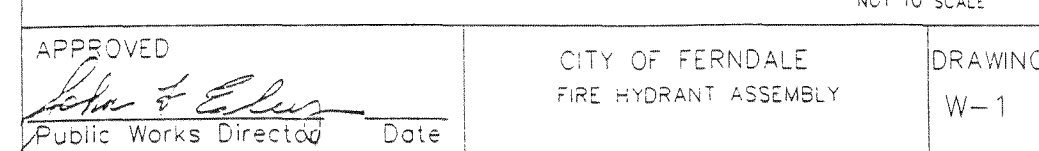
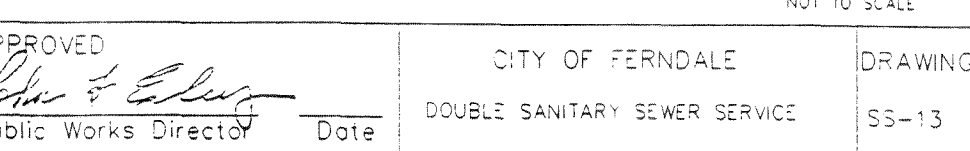
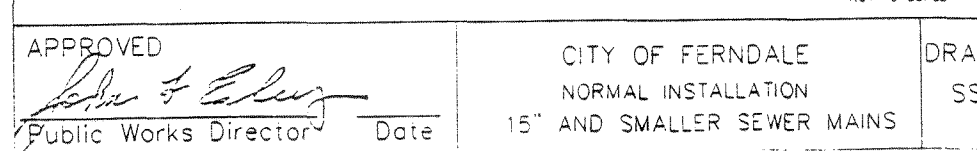
11/18/97

GREG DIBBLE, PE

SHEET:

DIBBLE ENGINEERING 100 DUPONT STREET BELLINGHAM, WA 98225 (360) 734 1288 FAX 738 7798	ROGERS SCHWARTZ P. O. BOX 2054 FERNDALE, WA 98248 (360) 384 8170	IMPROVEMENT PLAN DETAILS FOR SCHWARTZ SUBDIVISION NORTHWEST OF FERNDALE S 13, T 39 N., R 1 E		REVISIONS	BY
DATE: 9/16/96	SCALE: 1" = 40'	DRAWN: GAWW			
JOB: 96 765					
SHEET: 15					

00223.008 2.16.06 KR



DATE:	9/16/96
SCALE:	1" = 40'
DRAWN:	GAVW
JOB:	96 765
SHEET:	9

00223.009 2/16.06 HK

AS-BUILT:

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BY: J. E. Johnson DATE: 10-18-79

APPROVED
FEB 02 1998
BY: J. F. Elzy

765XXX.DWG, X.SCR, V.SHT1

A circular professional engineer seal for Gregory A. Dibble, State of Washington. The seal features a portrait of a man in the center. The text around the portrait reads "GREGORY A. DIBBLE", "STATE OF WASHINGTON", "LICENSED PROFESSIONAL ENGINEER", and "EXPIRES 2/15/97". The seal is stamped over a document with handwritten notations: "11/18" and "97" on the left, and "98" at the bottom.