PSE
PACIFIC SURVEY & ENGINEERING INC www.psesurvey.com
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685 EMAIL: pse@psesurvey.com

GARDINER TERRACE
PHASE 2, DIVISION 1

SITUATE IN THE SOUTH HALF OF THE NORTH HALF OF SEC. 19,
TWP. 39 N., RGE. 2 E., W.M.,
CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON

WATER, SEWER, STORM DRAINAGE AND ROADWAY IMPROVEMENTS

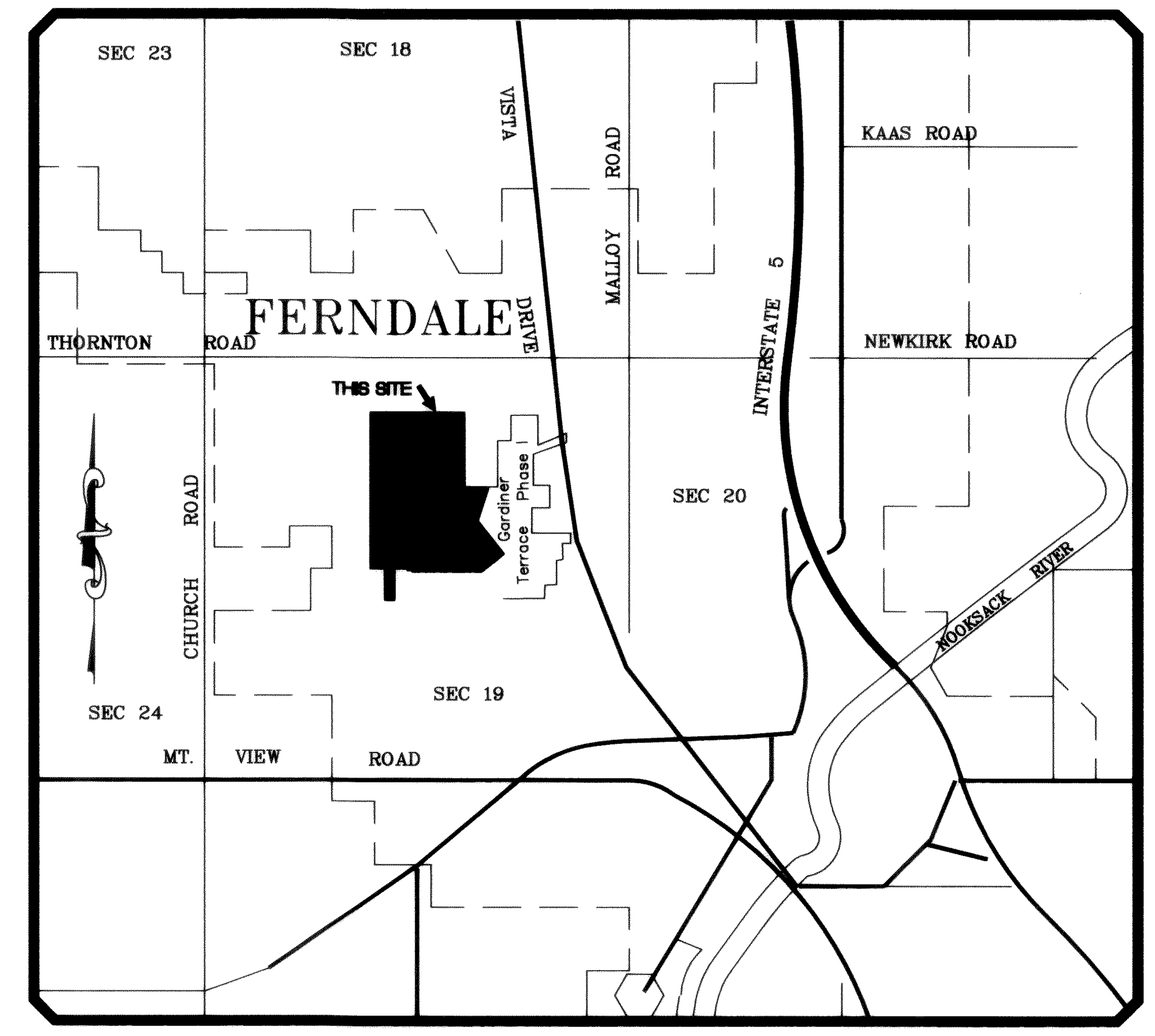
0007S.001 2·13·06 KR

LEGEND

- = FND BR CAP IN CONCRETE
- = FND CONC. MON.
- = FND #5 REBAR W/PLAS. CAP PLS#9947
- = FND REBAR AND CAP PLS#24218
- = FND 2" GALVANIZED IRON PIPE
- = FND 2.5" ALUM. MON.
- = FND #4 REBAR W/PLAS. CAP PLS#24218
- = FND PK NAIL
- = FND NAIL AND BR TAG
- = FND NAIL AND BR TAG
- = EXISTING WATER BLOW OFF VALVE
- = EXISTING WATER METER BOX
- = EXISTING WATER VALVE
- = EXISTING FIRE HYDRANT
- W/L = EXISTING WATER LINE
- = EXISTING STORM DRAIN MANHOLE
- = EXISTING STORM DRAIN CATCH BASIN
- 12"SD = EXISTING STORM SEWER LINE
- = EXISTING SANITARY SEWER MANHOLE
- 8"SS = EXISTING SANITARY SEWER LINE
- LP = EXISTING CONCRETE LIGHT POLE
- PP = EXISTING WOOD POWER POLE
- = EXISTING GUY WIRE
- U.T. = EXISTING UNDERGROUND TELEPHONE PEDESTAL
- U.E. = EXISTING UNDERGROUND ELECTRIC PEDESTAL
- G.M. = EXISTING UNDERGROUND GAS MARKER
- U.C. = EXISTING UNDERGROUND TELEVISION CABLE
- STOP = EXISTING STOP SIGN
- M.B. = EXISTING MAILBOX
- OHL = EXISTING OVERHEAD LINES
- x = EXISTING OLD BARBED WIRE FENCE
- = EXISTING WOODEN FENCE
- = PROPOSED STREET LIGHT
- = PROPOSED SANITARY SEWER CLEANOUT
- = PROPOSED SANITARY SEWER MANHOLE
- = PROPOSED STORM DRAIN MANHOLE (USE SSMH TYPE II, 48")
- = PROPOSED CATCH BASIN/CURB INLET
- = PROPOSED ROOF/YARD/FOUNDATION DRAIN SERVICE W/6" PVC LINE
- = PROPOSED FIRE HYDRANT
- = PROPOSED WATER VALVE
- = PROPOSED BLOW OFF ASSEMBLY
- SD = PROPOSED STORM DRAIN LINE
- W = PROPOSED WATER LINE
- SS = PROPOSED SANITARY SEWER LINE
- = PROPOSED DOUBLE WATER SERVICE
- = PROPOSED SINGLE WATER SERVICE
- = PROPOSED DOUBLE SEWER SERVICE
- = PROPOSED SINGLE SEWER SERVICE
- = PROPOSED MAILBOX CLUSTER

SHEET INDEX

1.) COVER SHEET
2.) PROJECT OVERVIEW
3.) EXISTING TOPOGRAPHY
4.) GRADING PLAN
5-6.) ROADWAY & STORM DRAINAGE - ARTIST DRIVE
7.) ROADWAY & STORM DRAINAGE - SHANNON AVENUE
8-9.) WATER & SEWER - ARTIST DRIVE
10.) WATER & SEWER - SHANNON AVENUE
11-12.) EROSION & SEDIMENTATION CONTROL PLAN
13.) GENERAL NOTES
14-15) MISCELLANEOUS DETAILS



VICINITY MAP
NTS

AS-BUILT SET

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN GARDINER TERRACE, PHASE II, DIVISION 1 HAVE BEEN INSPECTED BY PACIFIC SURVEYING AND ENGINEERING AND CONSTRUCTED IN CONFORMANCE WITH THE PLANS APPROVED BY THE PUBLIC WORKS DIRECTOR FOR SAID DEVELOPMENT AND THE GENERAL SPECIFICATIONS ADOPTED BY THE CITY OF FERNDALE DEPARTMENT OF PUBLIC WORKS.

ALEXANDER W. URQUHART
P.E. NO. 38240
DATE 12/4/03

ALEXANDER W. URQUHART STATE OF WASHINGTON 38240 REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 04/28/2004

SURVEY NOTES:

1) BOUNDARY & CONTROL/BASIS OF BEARING PER THAT RECORD OF SURVEY RECORDED UNDER WHATCOM COUNTY AUDITOR'S FILE # 920903067 AND THAT PLAT OF "AMENDED GARDINER TERRACE, PHASE I" RECORDED UNDER WHATCOM COUNTY AUDITOR'S FILE # 1980802934.
2) EXISTING CONTOUR INTERVAL IS 2-FOOT & COMPUTER GENERATED FROM FIELD DATA COLLECTED ELECTRONICALLY FROM ROBOTIC TOTAL STATION EQUIPMENT.
3) VERTICAL DATUM: NAVD 1929.
BENCH MARK= USGS L6=26B, ELEV.=34.96'

APPROVED
DEC 22 2003
BY [signature]
CITY OF FERNDALE

CALL BEFORE YOU DIG
1-800-424-5555

SHEET 1 OF 15 SHEETS

ABBREVIATIONS

℄	CENTERLINE
R/W	RIGHT OF WAY
F.L.	FLOWLINE
BCR	BEGIN CURB RETURN
ECR	END CURB RETURN
BC	BEGIN CURVE
EC	END CURVE
PCC	POINT OF COMPOUND CURVATURE
PRC	POINT OF REVERSE CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
BVC	BEGIN VERTICAL CURVE
EVC	END VERTICAL CURVE
R	CURVE RADIUS
L	CURVE LENGTH
RT.	RIGHT
LT.	LEFT
EG	EXISTING GRADE
FG	FINISH GRADE
FS	FINISH SURFACE
FF	FINISH FLOOR
IE	INVERT ELEVATION
T/W	TOP OF WALL
B/W	BOTTOM OF WALL
TF	TOP OF FOOTING
TC	TOP OF CURB
TP	TOP OF PIPE
EP	EDGE OF PAVEMENT
F. HYD.	FIRE HYDRANT
SDCB	STORM DRAIN CATCH BASIN
SDMH	STORM DRAIN MANHOLE
SSCO	SANITARY SEWER CLEAN-OUT
SSMH	SANITARY SEWER MANHOLE

ROAD INTERSECTION EQUATIONS

STA 14+52.79 SHANNON AVE. = STA 5+04.26 ARTIST DRIVE
STA 18+22.08 ARTIST DR. (NEW) = STA 8+22.08 ARTIST DR. (EX.)

PSE JOB# 2001 006
UNDER PROJ: 98084

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF	123.96
		FIRE HYDRANT AT NW	
STAKING		CORNER OF SEAMOUNT	
		& VISTA	
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # TITLE_SHEET		
PLAN CHECK					

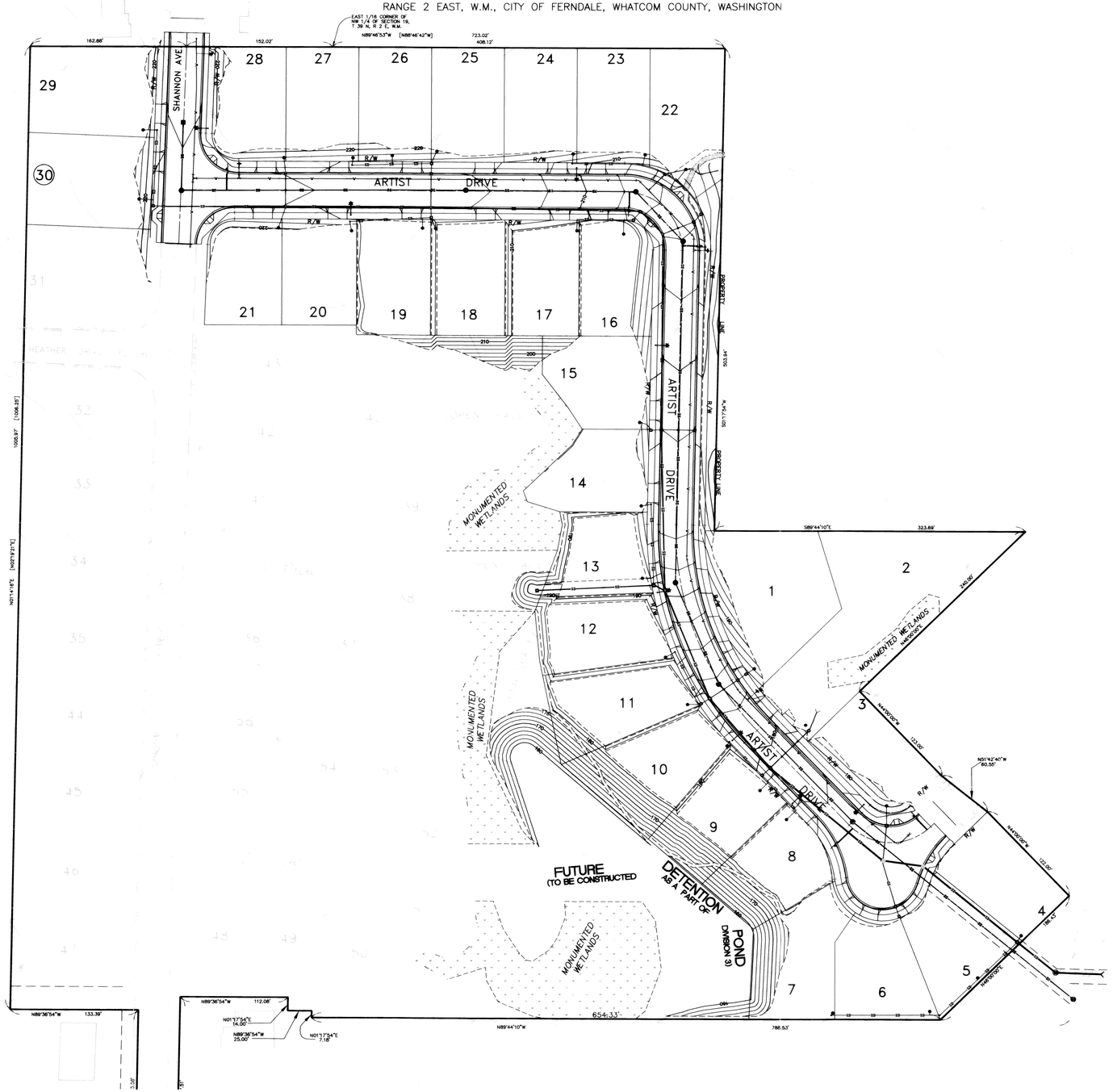
REV	DATE	DESCRIPTION	BY
REVISIONS			

No.		DATE
1	ISSUED FOR PERMIT	7-19-02
2	ISSUED FOR PERMIT	9-16-02
3	ISSUED FOR PERMIT	1-17-03
4	ISSUED FOR PERMIT	3-07-03
5	AS-BUILT SET	12-04-03
ISSUE		

ALEXANDER W. URQUHART STATE OF WASHINGTON 38240 REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 04/28/2004
12/4/03

GARDINER TERRACE, PHASE II

SITUATE IN THE SOUTH HALF OF THE NORTH HALF OF SECTION 19, TOWNSHIP 39 NORTH, RANGE 2 EAST, W.M., CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON



APPROVED
DEC 2 2003
BY
CITY OF FERNDALE

CALL BEFORE YOU DIG
1-800-424-5555

GARDINER TERRACE, PHASE 2, DIVISION 1

PROJECT OVERVIEW

FOR BILL KRAMER
1442 SUNSET AVENUE (AB) DENOTES FIELD SURVEYED DATA
FERNDALE, WASHINGTON 98248

AS-BUILT

PSE JOB# 2001 006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING			
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_JP-BASE		
PLAN CHECK					

REV	DATE	DESCRIPTION	BY
REVISIONS			

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4	ISSUED FOR PERMIT	03-07-03
5	AS-BUILT SET	12-04-03
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ALEXANDER W. URQUHART
STATE OF WASHINGTON
38240
REGISTERED PROFESSIONAL ENGINEER
12/04/03
EXPIRES: 04/28/2004

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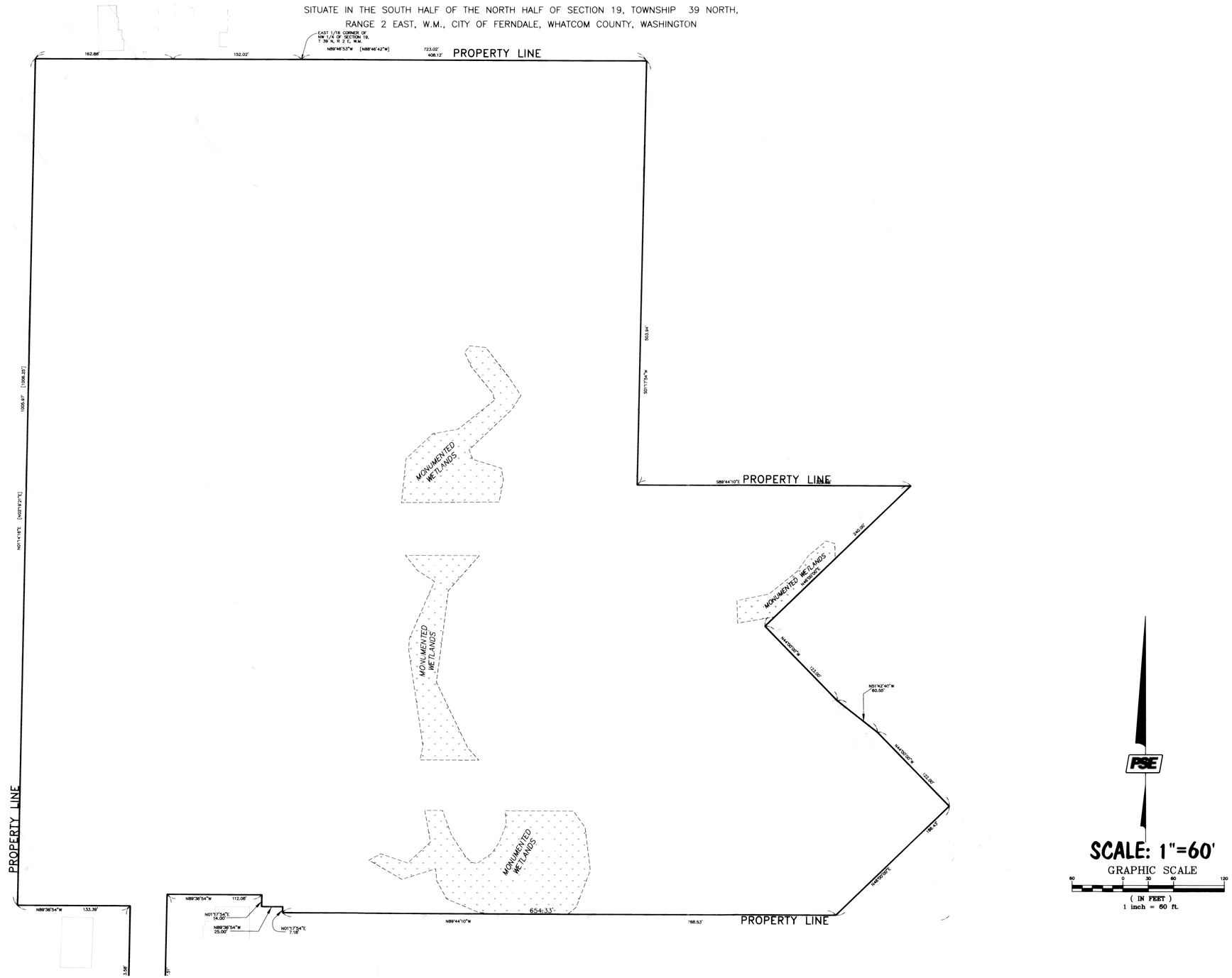
www.psesurvey.com
EMAIL: pse@psesurvey.com

SHEET 2 OF 15 SHEETS

00075.00 2-13-06 KR

GARDINER TERRACE, PHASE II

SITUATE IN THE SOUTH HALF OF THE NORTH HALF OF SECTION 19, TOWNSHIP 39 NORTH, RANGE 2 EAST, W.M., CITY OF FERNDALE, WHATCOM COUNTY, WASHINGTON



SCALE: 1"=60'

GRAPHIC SCALE

60 0 30 60 120

(IN FEET)
1 inch = 60 ft.

CALL BEFORE YOU DIG

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GARDINER TERRACE, PHASE 2, DIVISION 1

EXISTING TOPOGRAPHY

FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001 006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF	123.96
		FIRE HYDRANT AT NW	
STAKING		CORNER OF SEAMOUNT	
		& VISTA	
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_IP-BASE		
PLAN CHECK					

REV	DATE	DESCRIPTION	BY
REVISIONS			

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ISSUE		

ALEXANDER W. URQUHART
STATE OF WASHINGTON
38240
REGISTERED
PROFESSIONAL ENGINEER
12-04-03
EXPIRES: 04/28/2004

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SHEET 3 OF 15 SHEETS

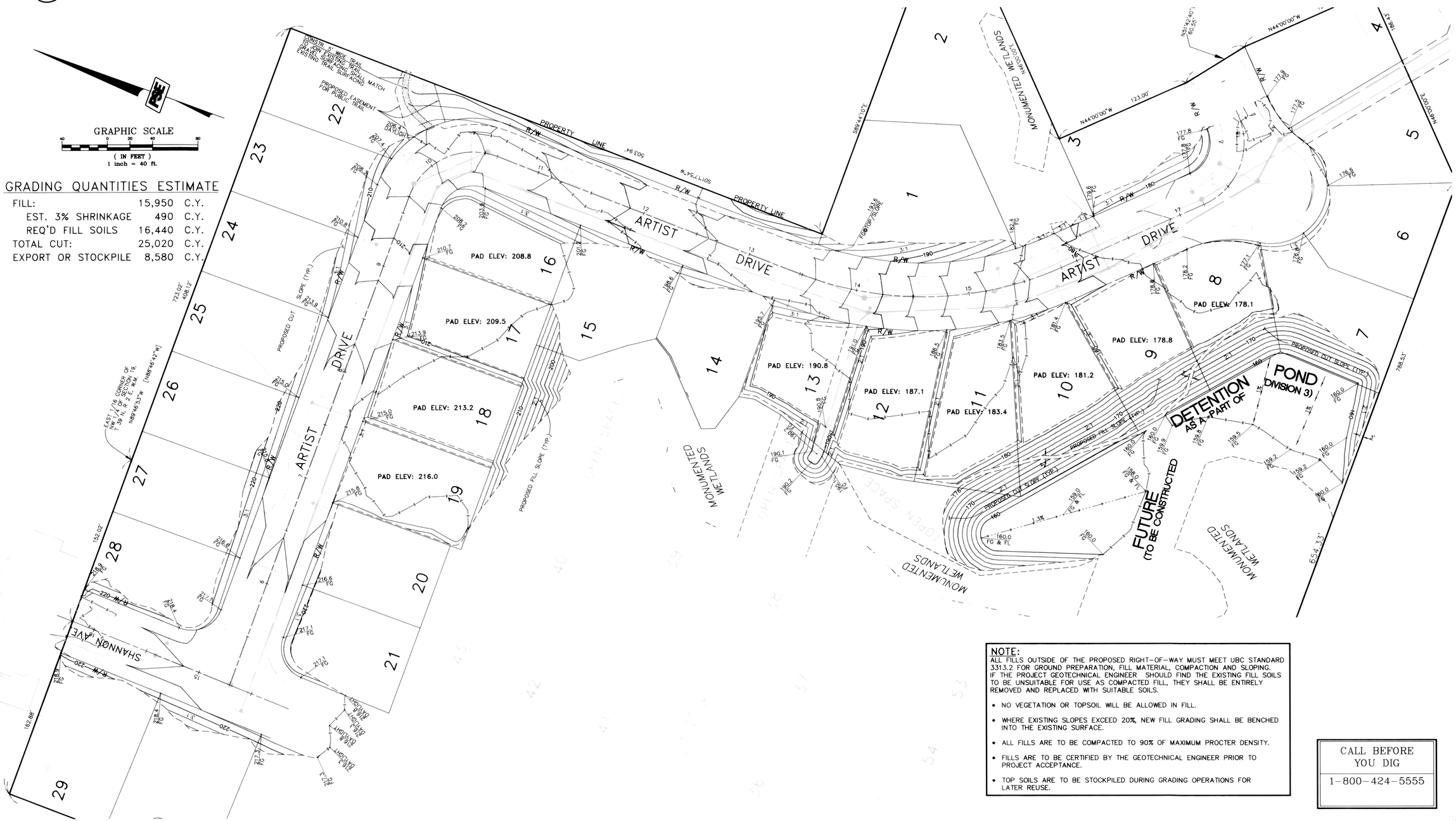
C0075.003 2-13-06 KR

PACIFIC SURVEY & ENGINEERING INC
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685
EMAIL: pse@psesurvey.com www.psesurvey.com

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

GRADING QUANTITIES ESTIMATE

FILL:	15,950	C.Y.
EST. 3% SHRINKAGE	490	C.Y.
REQ'D FILL SOILS	16,440	C.Y.
TOTAL CUT:	25,020	C.Y.
EXPORT OR STOCKPILE	8,580	C.Y.



NOTE:
ALL FILLS OUTSIDE OF THE PROPOSED RIGHT-OF-WAY MUST MEET UBC STANDARD 3313.2 FOR GROUND PREPARATION, FILL MATERIAL, COMPACTION AND SLOPING. IF THE PROJECT GEOTECHNICAL ENGINEER SHOULD FIND THE EXISTING FILL SOILS TO BE UNSUITABLE FOR USE AS COMPACTED FILL, THEY SHALL BE ENTIRELY REMOVED AND REPLACED WITH SUITABLE SOILS.

- NO VEGETATION OR TOPSOIL WILL BE ALLOWED IN FILL.
- WHERE EXISTING SLOPES EXCEED 20%, NEW FILL GRADING SHALL BE BENCHED INTO THE EXISTING SURFACE.
- ALL FILLS ARE TO BE COMPACTED TO 90% OF MAXIMUM PROCTER DENSITY.
- FILLS ARE TO BE CERTIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO PROJECT ACCEPTANCE.
- TOP SOILS ARE TO BE STOCKPILED DURING GRADING OPERATIONS FOR LATER REUSE.

CALL BEFORE YOU DIG
1-800-424-5555

GARDINER TERRACE, PHASE 2, DIVISION 1

GRADING PLAN

FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001 006

FIELD BOOKS		TBM. NO.	LOCATION	ELEV.
DESIGN	16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING				
ASBUILT				
CONTRACTOR		SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR				
CONSTRUCTION RECORD		VERTICAL DATUM		

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TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_IP-BASE		
PLAN CHECK					

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ISSUE		

ALEXANDER W. URQUHART
STATE OF WASHINGTON
38240
REGISTERED PROFESSIONAL ENGINEER
12-04-03
EXPIRES: 04/28/2004

SHEET 4 OF 15 SHEETS

C0075.004 2-13-06 KR

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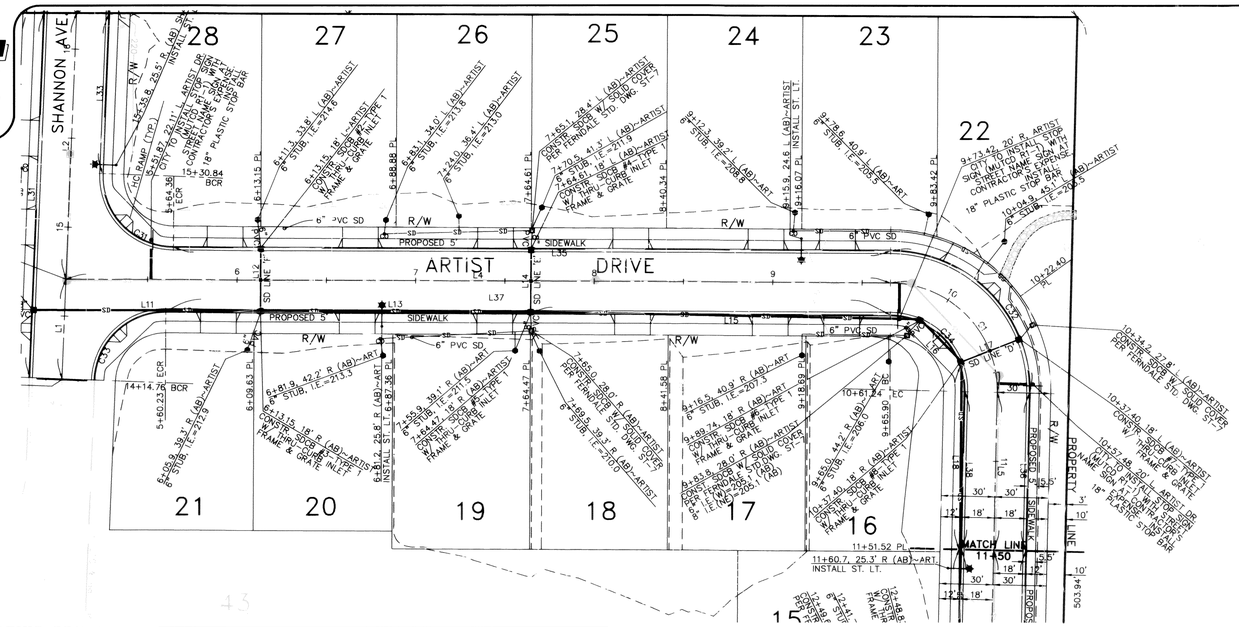
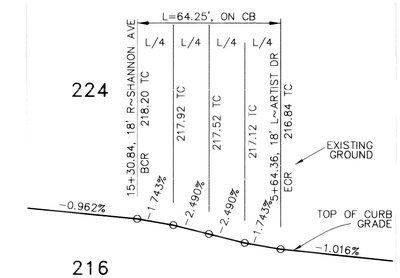


GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

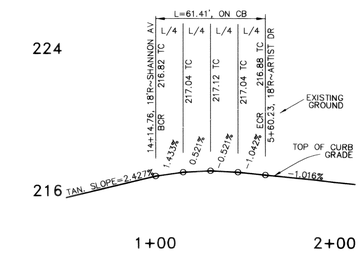
DRIVEWAY NOTE:
DRIVEWAY OPENINGS SHALL BE CONSTRUCTED PER WSDOT STD. PLAN F-3. DRIVEWAY OPENINGS SHALL BE 20 FEET WIDE, EXCEPT AS NOTED AND SHALL BE CENTERED 20' FEET FROM THE NEAREST LOT CORNER, EXCEPT AS NOTED.

HORIZONTAL SCALE: 1"=40'

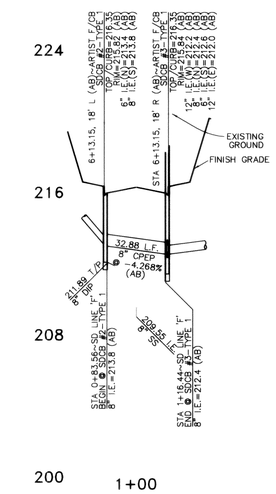
VERTICAL SCALE: 1"=4'



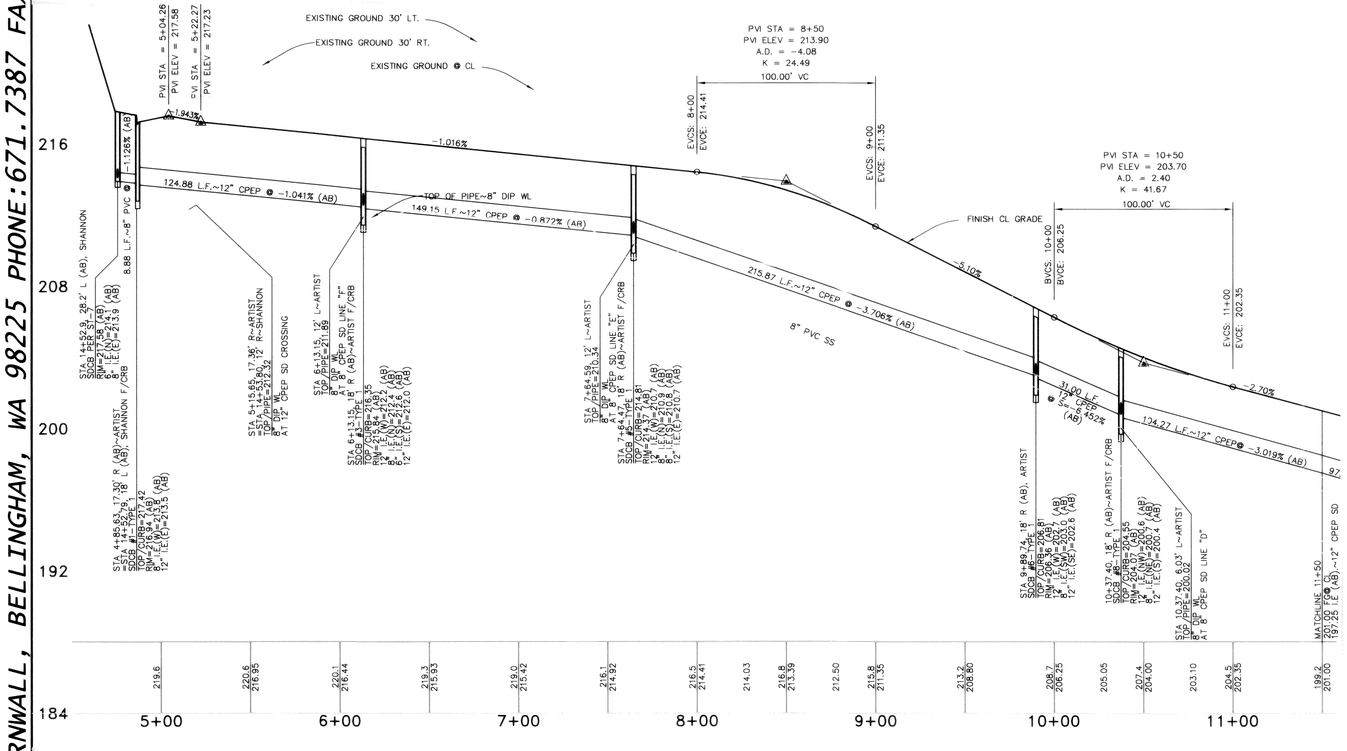
LEFT CURB RETURN @ SHANNON AVE

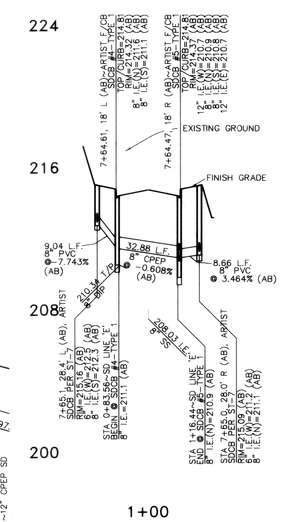


RIGHT CURB RETURN @ SHANNON AVE.

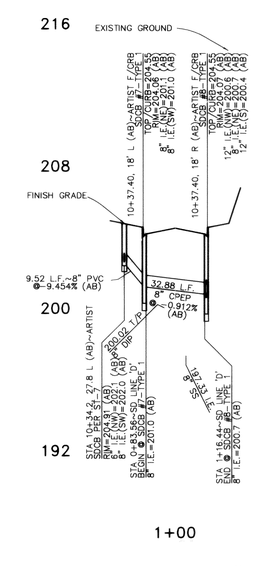


STORM DRAIN LINE "F"





STORM DRAIN LINE "E"



STORM DRAIN LINE "D"

CENTERLINE LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L4	461.64	S89°44'10"E	CENTERLINE
L5	88.76	S01°17'54"W	CENTERLINE

CENTERLINE CURVE DATA				
CURVE	DELTA	RADIUS	LENGTH	DESCRIPTION
C1	91°02'04"	60.00	95.33	CENTERLINE

STORM DRAIN LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L11	124.88 (AB)	S89°44'15"E (AB)	12" CPEP
L12	32.88 (AB)	S00°15'50"W (AB)	8" CPEP-SD LINE "F"
L13	149.15 (AB)	S89°44'10"E (AB)	12" CPEP
L14	32.88 (AB)	S00°31'03"W (AB)	8" CPEP-SD LINE "E"
L15	215.87 (AB)	S88°57'58"E (AB)	12" CPEP
L16	31.00 (AB)	S44°13'08"E (AB)	12" CPEP
L17	32.88 (AB)	S68°32'23"W (AB)	8" CPEP-SD LINE "D"
L18	104.27 (AB)	S00°28'32"W (AB)	12" CPEP

CURB LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L35	401.54	S89°44'10"E	24" BARRIER CURB & GUTTER
L36	88.76	S01°17'54"W	24" BARRIER CURB & GUTTER
L37	405.67	S89°44'10"E	24" BARRIER CURB & GUTTER
L38	88.76	S01°17'54"W	24" BARRIER CURB & GUTTER

CURB CURVE DATA				
CURVE	DELTA	RADIUS	LENGTH	DESCRIPTION
C31	92°02'08"	40.00	64.25	24" BARRIER C&G
C32	91°02'04"	78.00	123.93	24" BARRIER C&G
C33	87°57'53"	40.00	61.41	24" BARRIER C&G
C34	91°02'04"	42.00	66.73	24" BARRIER C&G

AS-BUILT

(AB) DENOTES FIELD SURVEYED DATA

APPROVED
DEC 22 2003
BY _____
CITY OF FERNDALE

CALL BEFORE YOU DIG
1-800-424-5555

ARTIST DRIVE (STA 5+04.26 TO 11+50)

SURFACE IMPROVEMENTS AND STORM DRAIN
FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001 006

FIELD BOOKS		TBM. NO.	LOCATION	ELEV.
DESIGN	16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING				
ASBUILT				
CONTRACTOR		SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR				
CONSTRUCTION RECORD		VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_IP-BASE		
PLAN CHECK					

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REVISIONS			

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ISSUE		

ALEXANDER W. URQUHART
STATE OF WASHINGTON
38240
REGISTERED PROFESSIONAL ENGINEER
12/4/03
EXPIRES: 04/28/2004

SHEET 5 OF 15 SHEETS

00075.005 8-13-06

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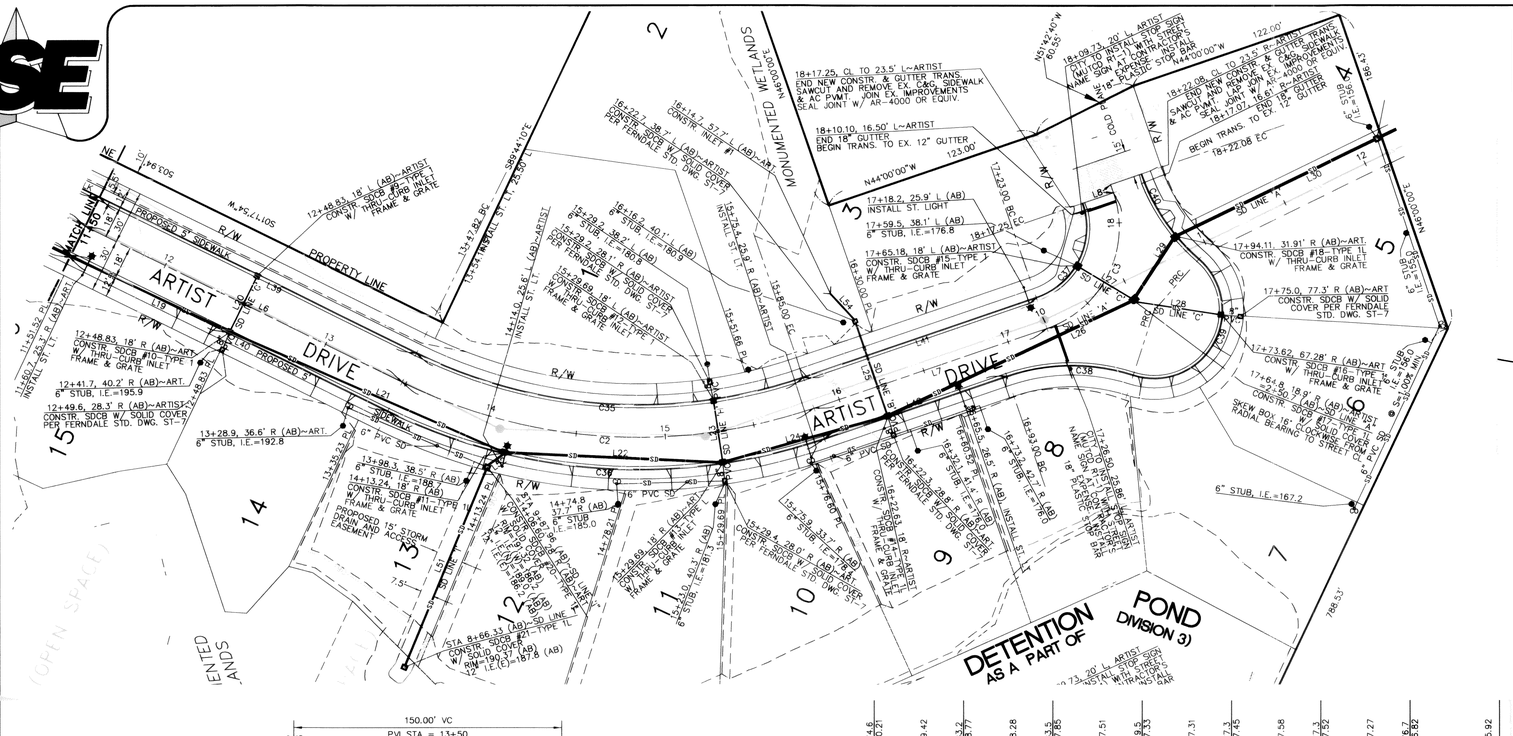
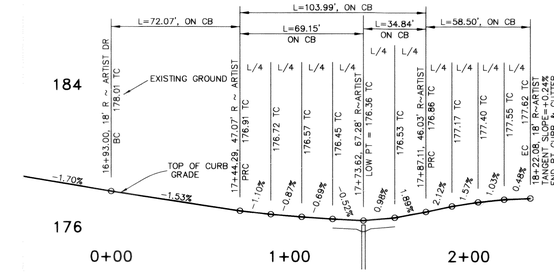
EMAIL: pse@psesurvey.com www.psesurvey.com

00075.006 8-13-06 KR



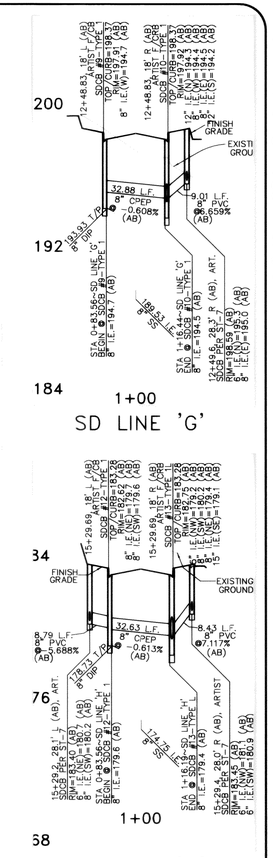
DRIVEWAY NOTE:
DRIVEWAY OPENINGS SHALL BE CONSTRUCTED PER WSDOT STD. PLAN F-3.
DRIVEWAY OPENINGS SHALL BE 20 FEET WIDE, EXCEPT AS NOTED AND SHALL BE CENTERED 20' FEET FROM THE NEAREST LOT CORNER, EXCEPT AS NOTED.

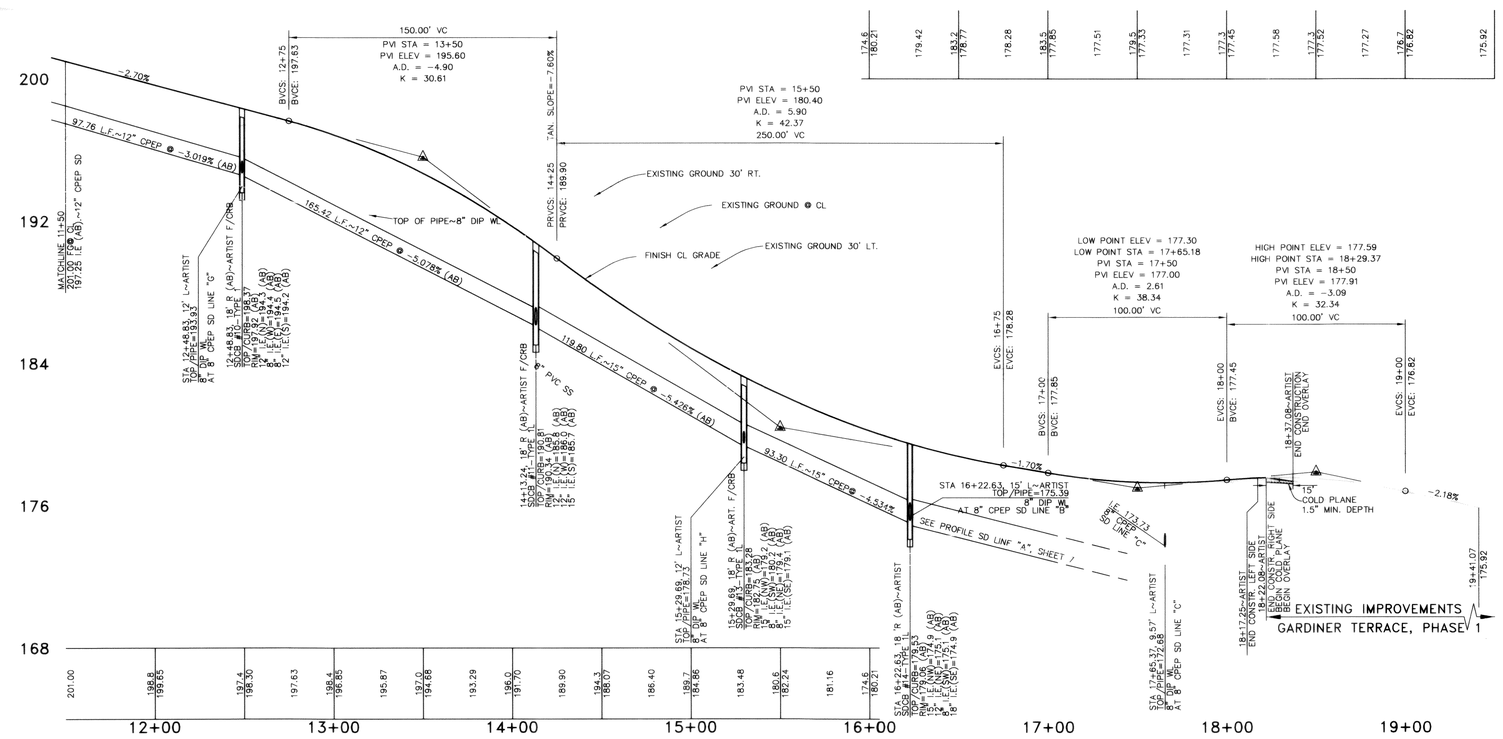


TOP OF CURB THROUGH KNUCKLE

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'





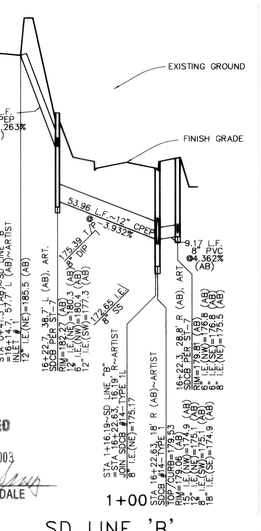
CENTERLINE LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L6	197.82	S01°17'54"W	CENTERLINE
L7	138.00	S44°00'00"E	CENTERLINE
L8	4.83	N46°00'00"E	CENTERLINE

CENTERLINE CURVE DATA				
CURVE	DELTA	RADIUS	LENGTH	DESCRIPTION
C2	45°17'54"	300.00	237.18	CENTERLINE
C3	90°00'00"	60.00	94.25	CENTERLINE

STORM DRAIN LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L19	97.76 (AB)	S00°28'32"W (AB)	12" CPEP
L20	32.88 (AB)	N88°42'06"W (AB)	8" CPEP-SD LINE "G"
L21	165.42 (AB)	S01°12'22"E (AB)	12" CPEP
L22	119.80 (AB)	S22°19'03"E (AB)	15" CPEP
L23	32.63 (AB)	S56°33'44"W (AB)	8" CPEP-SD LINE "H"
L24	93.30 (AB)	S40°50'47"E (AB)	15" CPEP
L25	53.96 (AB)	S48°05'03"W (AB)	12" CPEP-SD LINE "B"
L26	149.50 (AB)	S50°17'38"E (AB)	18" CPEP-SD LINE "A"
L27	34.02 (AB)	S05°55'23"W (AB)	8" CPEP-SD LINE "C"
L28	47.97 (AB)	N16°16'19"W (AB)	8" CPEP-SD LINE "C"
L29	40.30 (AB)	S81°57'22"E (AB)	18" CPEP-SD LINE "A"
L51	119.30 (AB)	N87°26'57"E (AB)	12" CPEP-SD LINE "I"
L52	10.87 (AB)	S60°31'31"E (AB)	12" CPEP-SD LINE "I"
L54	19.77 (AB)	S22°08'08"W (AB)	12" CPEP-SD LINE "B"

CURB LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L39	197.82	S01°17'54"W	24" BARRIER CURB & GUTTER
L40	197.82	S01°17'54"W	24" BARRIER CURB & GUTTER
L41	138.00	S44°00'00"E	24" BARRIER CURB & GUTTER
L42	108.00	S44°00'00"E	24" BARRIER CURB & GUTTER

CURB CURVE DATA				
CURVE	DELTA	RADIUS	LENGTH	DESCRIPTION
C35	45°17'54"	282.00	222.95	24" BARRIER C&G
C36	45°17'54"	318.00	251.41	24" BARRIER C&G
C37	90°00'00"	42.00	65.97	24" BARRIER C&G
C38	36°52'12"	112.00	72.07	24" BARRIER C&G
C39	156°47'47"	38.00	103.99	24" BARRIER C&G
C40	29°55'35"	112.00	58.50	24" BARRIER C&G



APPROVED
DEC 22 2003
BY Tina Hays
CITY OF FERNDALE

AS-BUILT

(AB) DENOTES FIELD SURVEYED DATA

CALL BEFORE YOU DIG
1-800-424-5555

ARTIST DRIVE (STA 11+50 TO 18+22.08)

SURFACE IMPROVEMENTS AND STORM DRAIN

FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001 006

FIELD BOOKS		TBM. NO.	LOCATION	ELEV.
DESIGN	16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING				
ASBUILT				
CONTRACTOR		SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR				
CONSTRUCTION RECORD		VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_IP-BASE		
PLAN CHECK					

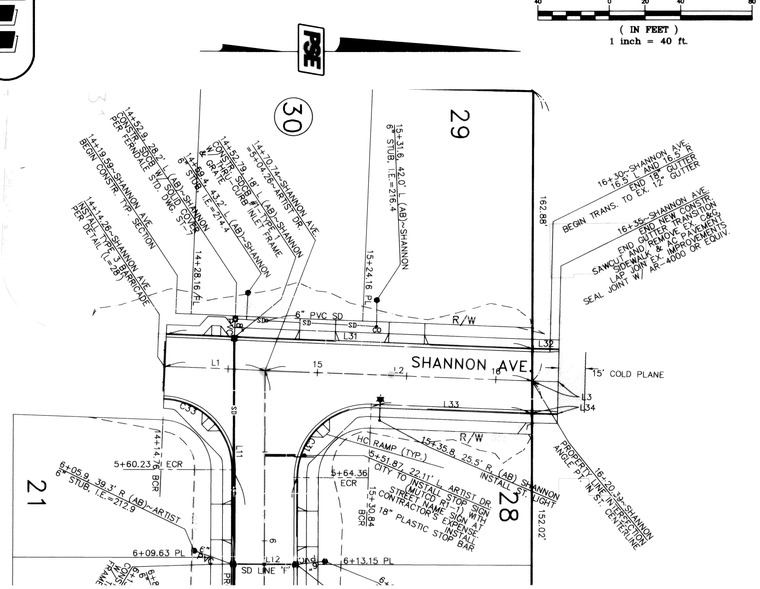
REV	DATE	DESCRIPTION	BY
REVISIONS			

No.		DATE
1	ISSUED FOR PERMIT	7-19-02
2	ISSUED FOR PERMIT	9-16-02
3	ISSUED FOR PERMIT	1-17-03
4	ISSUED FOR PERMIT	3-07-03
5	AS-BUILT SET	12-04-03
ISSUE		

ALEXANDER W. UROSKI
STATE OF WASHINGTON
18240
REGISTERED PROFESSIONAL ENGINEER
12/04/03
EXPIRES: 04/28/2004

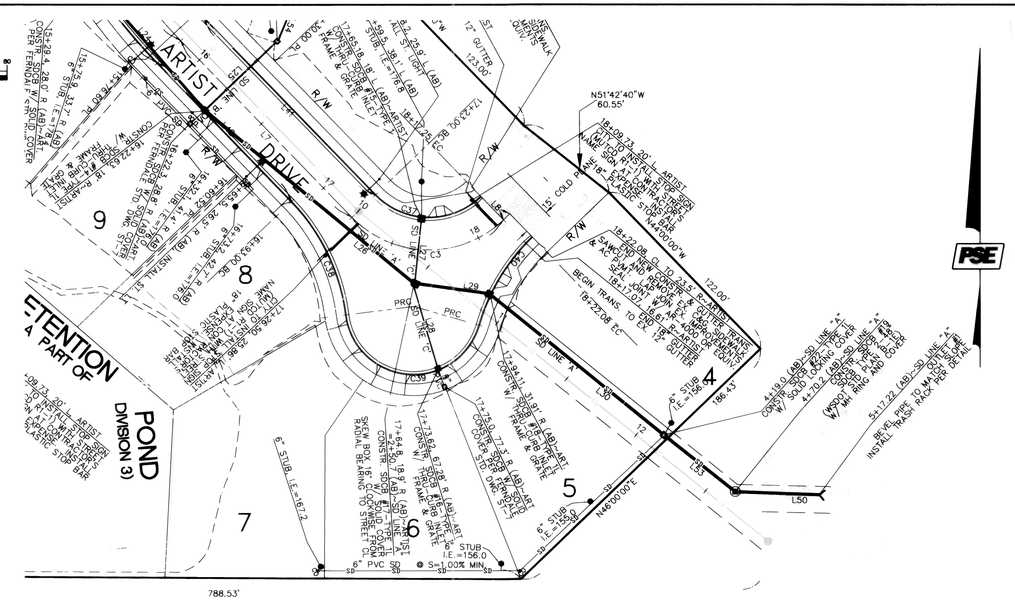
SHEET 6 OF 15 SHEETS

PACIFIC SURVEY & ENGINEERING INC
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685
EMAIL: psc@psesurvey.com www.psesurvey.com



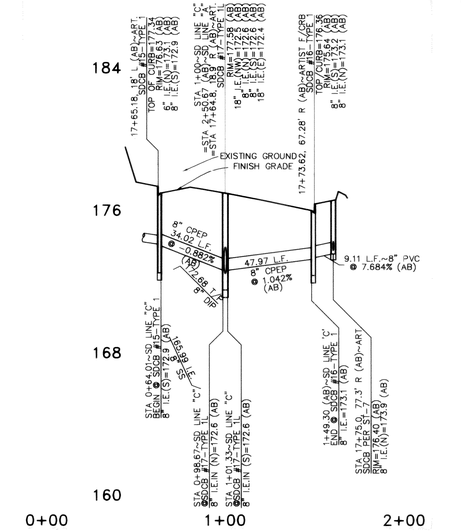
SHANNON AVENUE

VERTICAL SCALE: 1"=4'



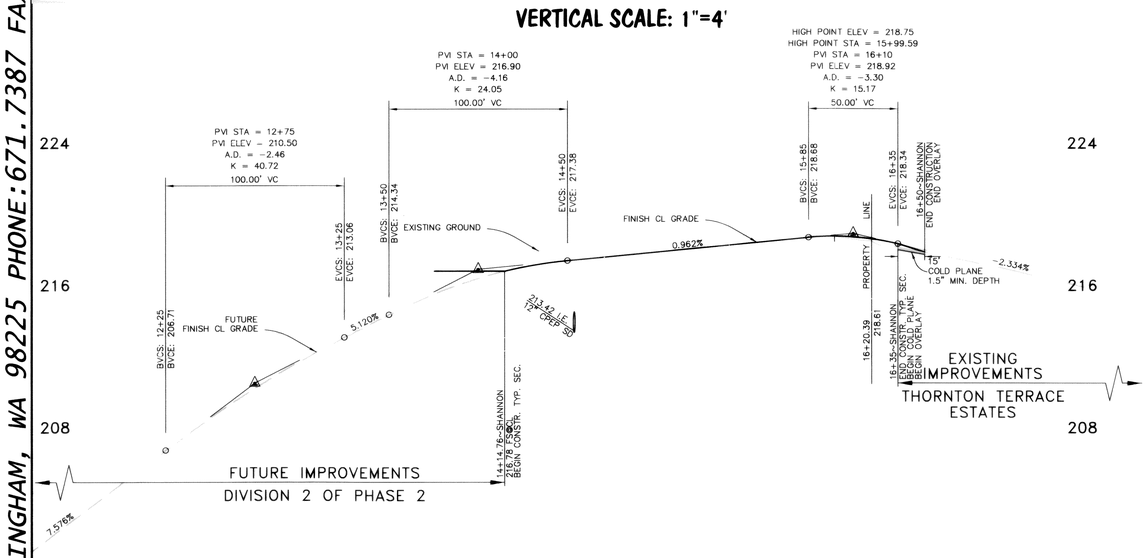
STORM DRAIN LINE "A"

HORIZONTAL SCALE: 1"=40'

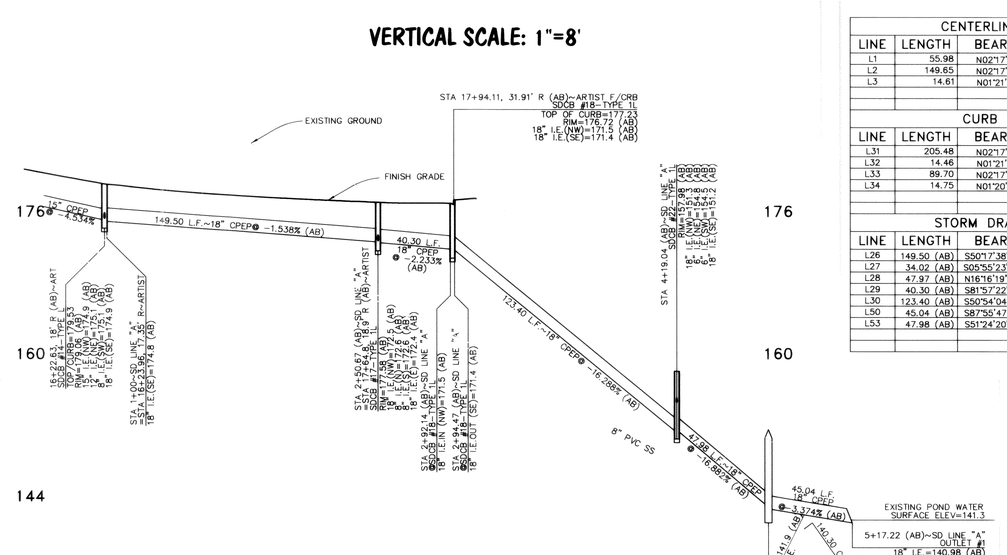


STORM DRAIN LINE "C"

VERTICAL SCALE: 1"=4'



VERTICAL SCALE: 1"=8'



CENTERLINE LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L1	55.98	N02°17'57"E	CENTERLINE
L2	149.65	N02°17'57"E	CENTERLINE
L3	14.61	N01°21'48"E	CENTERLINE

CURB LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L31	205.48	N02°17'57"E	24" BARRIER CURB & GUTTER
L32	14.46	N01°21'48"E	24" BARRIER CURB & GUTTER
L33	89.70	N02°17'57"E	24" BARRIER CURB & GUTTER
L34	14.75	N01°20'30"E	24" BARRIER CURB & GUTTER

STORM DRAIN LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L26	149.50 (AB)	S50°17'38"E (AB)	18" CPEP-SD LINE "A"
L27	34.02 (AB)	S05°55'23"W (AB)	8" CPEP-SD LINE "C"
L28	47.97 (AB)	N16°16'19"W (AB)	8" CPEP-SD LINE "C"
L29	40.30 (AB)	S81°57'22"E (AB)	18" CPEP-SD LINE "A"
L30	123.40 (AB)	S50°54'04"E (AB)	18" CPEP-SD LINE "A"
L50	45.04 (AB)	S87°55'47"E (AB)	18" CPEP-SD LINE "A"
L53	47.98 (AB)	S51°24'20"E (AB)	18" CPEP-SD LINE "A"

APPROVED
DEC 22 2003
BY
CITY OF FERNDALE

CALL BEFORE YOU DIG
1-800-424-5555

SHEET 7 OF 15 SHEETS

SHANNON AVE. & STORM DRAIN LINE "A"

SURFACE IMPROVEMENTS AND STORM DRAIN

FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

AS-BUILT

(AB) DENOTES FIELD SURVEYED DATA

PSE JOB# 2001006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING			
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWJ		CABLE TV		
SANITARY SEWER	AWJ		DESIGN	AWJ	
STORM SEWER	AWJ		QUANTITIES		
WATER	AWJ		FINAL CHECK		
GAS			DWG # 2001006_IP-BASE		
PLAN CHECK					

REV	DATE	DESCRIPTION	BY
REVISIONS			

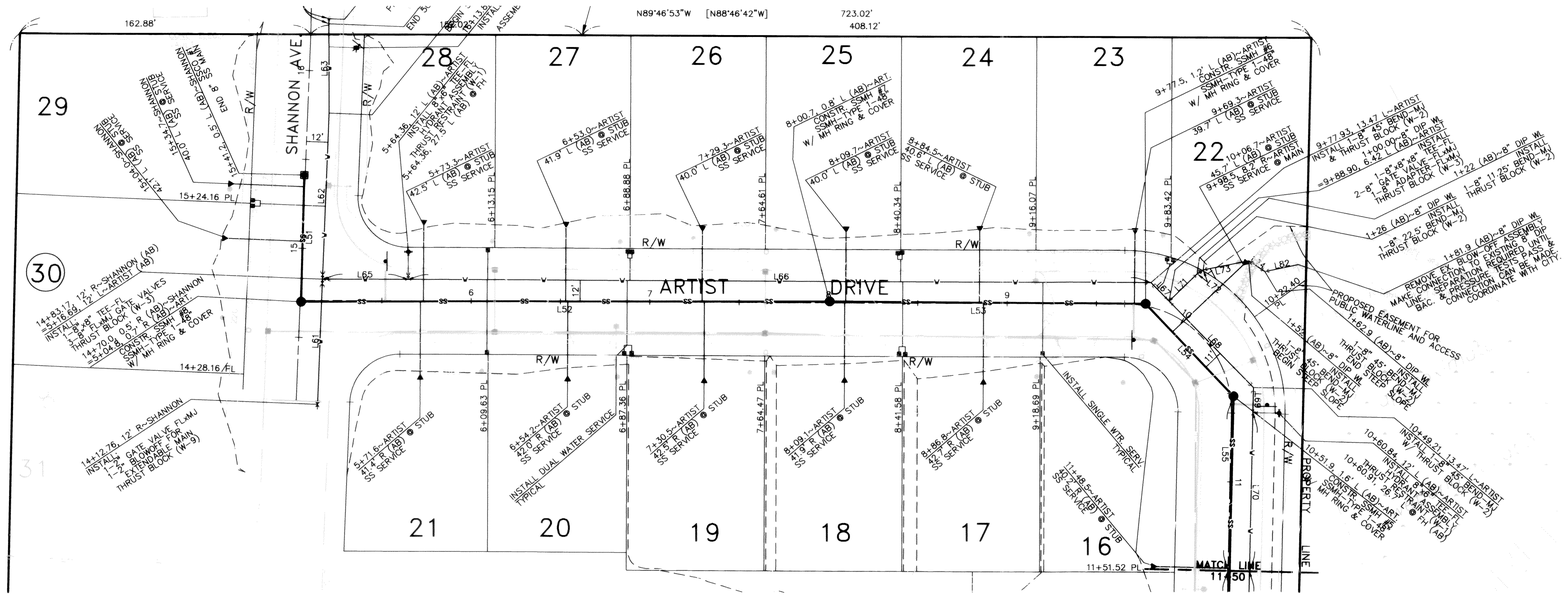
No.		DATE
1	ISSUED FOR PERMIT	7-19-02
2	ISSUED FOR PERMIT	9-16-02
3	ISSUED FOR PERMIT	1-17-03
4	ISSUED FOR PERMIT	3-07-03
5	AS-BUILT SET	12-04-03
ISSUE		

ALEXANDER W. UROVAN
STATE OF WASHINGTON
38240
12/4/03
PROFESSIONAL ENGINEER
EXPIRES: 04/28/2004

12/4/03

PACIFIC SURVEY & ENGINEERING INC
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685
EMAIL: pse@psesurvey.com www.psesurvey.com

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

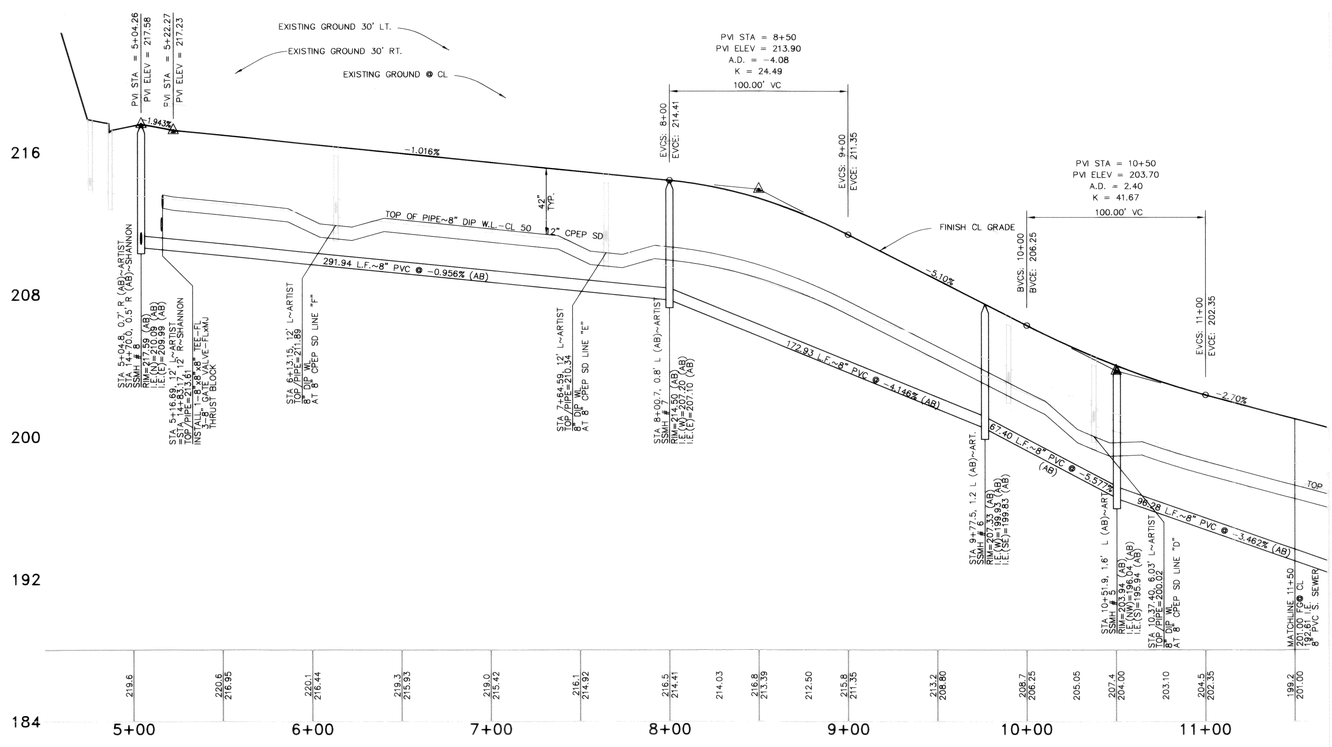


SANITARY SEWER LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L52	295.94 (AB)	N89°58'23"E (AB)	8" PVC, SDR-35
L53	176.93 (AB)	S89°30'04"E (AB)	8" PVC, SDR-35
L54	71.40 (AB)	S43°25'51"E (AB)	8" PVC, SDR-35
L55	98.28 (AB)	S01°19'04"W (AB)	8" PVC, SDR-35

WATER MAIN LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L65	48.03 (AB)	S89°44'10"E	8" DIP-CLASS 50
L66	415.81 (AB)	S89°44'10"E	8" DIP-CLASS 50
L67	14.57 (AB)	S44°13'08"E	8" DIP-CLASS 50
L68	67.66 (AB)	S44°13'08"E	8" DIP-CLASS 50
L69	14.16 (AB)	S01°17'54"W	8" DIP-CLASS 50
L70	89.23 (AB)	S01°17'54"W	8" DIP-CLASS 50
L71	22.0 (AB)	N45°46'52"E (AB)	8" DIP-CLASS 50
L72	4.0 (AB)	N56°46'52"E (AB)	8" DIP-CLASS 50
L73	26.0 (AB)	N78°46'52"E (AB)	8" DIP-CLASS 50
L74	10.9 (AB)	S56°13'08"E (AB)	8" DIP-CLASS 50 - SLOPED
L82	19.0 (AB)	N77°55'23"E (AB)	8" DIP-CLASS 50

00075.008 2.13.00 KR

HORIZONTAL SCALE: 1"=40' **VERTICAL SCALE: 1"=4'**



AS-BUILT

(AB) DENOTES FIELD SURVEYED DATA

APPROVED
DEC 22 2003
BY CITY OF FERNDALE

CALL BEFORE YOU DIG
1-800-424-5555

ARTIST DRIVE (STA 5+04.26 TO 11+50)

SANITARY SEWER AND WATER SYSTEM IMPROVEMENTS

FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001 006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING			
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_JP-BASE		
PLAN CHECK					

REV	DATE	DESCRIPTION	BY
REVISIONS			

No.		DATE
1	ISSUED FOR PERMIT	7-19-02
2	ISSUED FOR PERMIT	9-16-02
3	ISSUED FOR PERMIT	1-17-03
4	ISSUED FOR PERMIT	3-07-03
5	AS-BUILT SET	12-04-03
ISSUE		

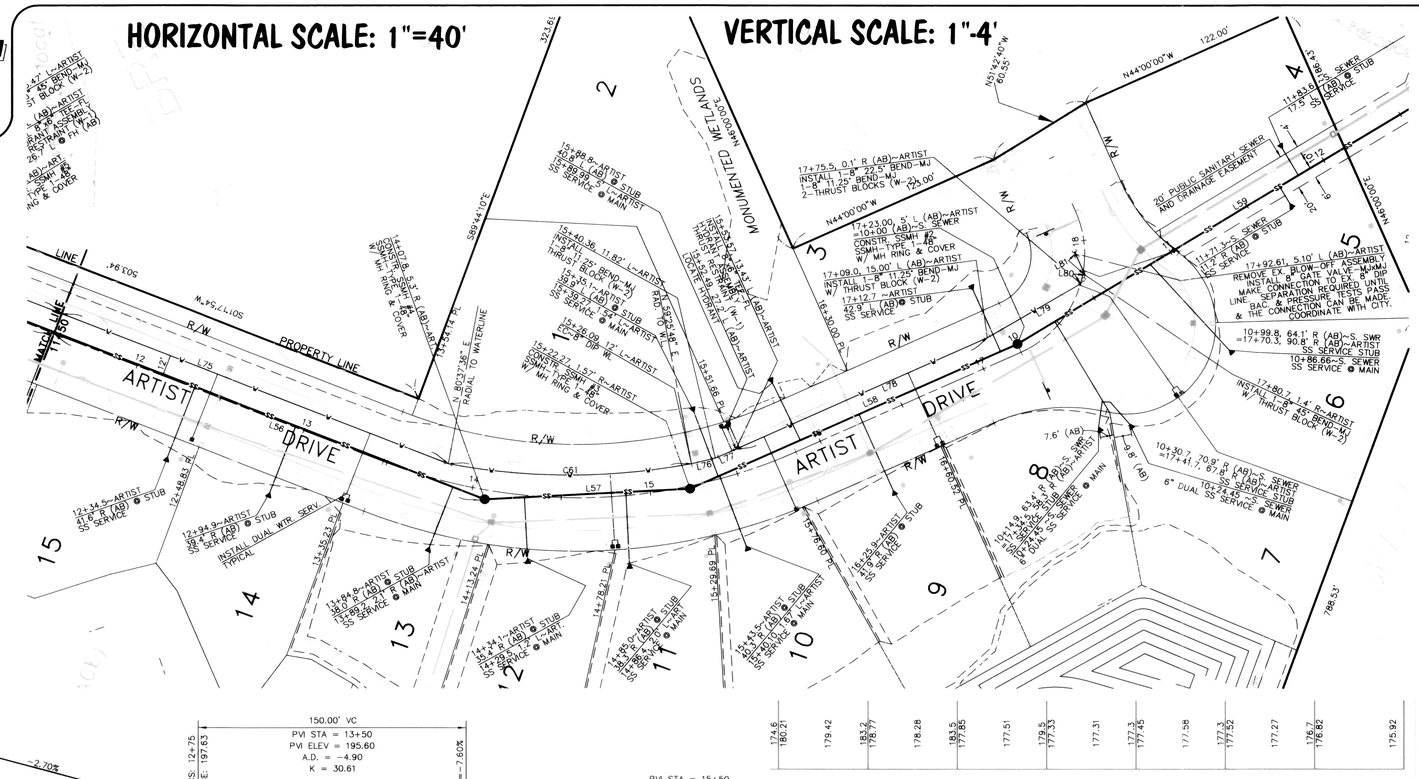
ALEXANDER W. URQUHART
STATE OF WASHINGTON
38240
REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 04/28/2004
12/4/03

SHEET 8 OF 15 SHEETS

PACIFIC SURVEY & ENGINEERING INC
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685 EMAIL: pse@psesurvey.com www.psesurvey.com

HORIZONTAL SCALE: 1"=40'

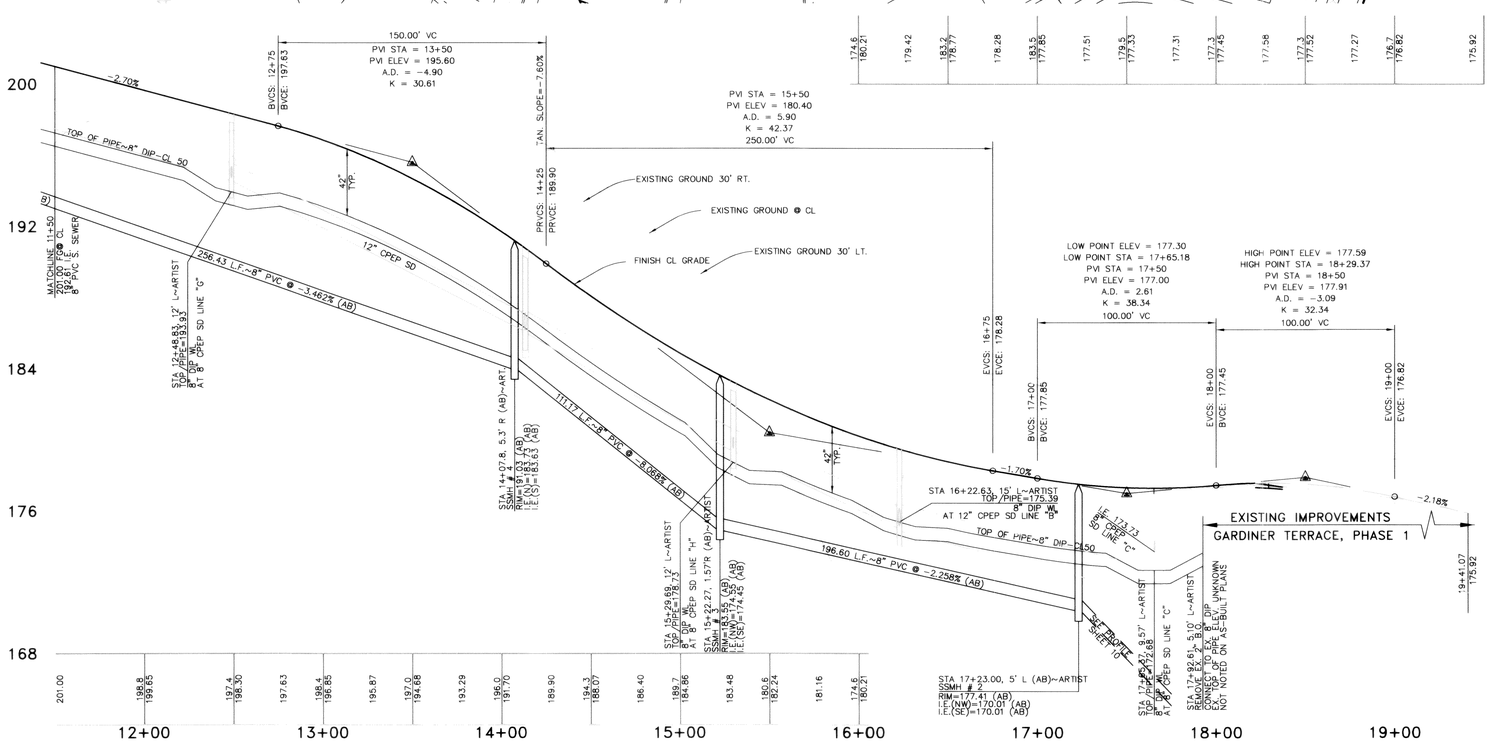
VERTICAL SCALE: 1"-4'



SANITARY SEWER LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L56	258.43 (AB)	S01°19'04"W (AB)	8" PVC, SDR-35
L57	115.17 (AB)	S22°54'39"E (AB)	8" PVC, SDR-35
L58	200.60 (AB)	S44°00'00"E (AB)	8" PVC, SDR-35

WATER MAIN LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L75	232.23 (AB)	S01°17'54"W	8" DIP-CLASS 50
L76	13.70 (AB)	S33°20'41"E(AB)	8" DIP-CLASS 50
L77	12.75 (AB)	S44°00'00"E	8" DIP-CLASS 50
L78	153.97 (AB)	S44°00'00"E	8" DIP-CLASS 50
L79	60.47 (AB)	S50°06'28"E(AB)	8" DIP-CLASS 50
L80	5.42 (AB)	S82°54'59"E(AB)	8" DIP-CLASS 50
L81	13.25 (AB)	N46°00'00"E	8" DIP-CLASS 50

WATER MAIN CURVE DATA				
CURVE	DELTA	RADIUS	LENGTH	DESCRIPTION
C61	21°11'48"(AB)	370.00 (AB)	136.88 (AB)	8" DIP-CLASS 50



AS-BUILT

(AB) DENOTES FIELD SURVEYED DATA

APPROVED
DEC 2 2 2003
BY
CITY OF FERNDALE

CALL BEFORE YOU DIG
1-800-424-5555

SHEET 9 OF 15 SHEETS

ARTIST DRIVE (STA 11+50 TO 18+22.08)

SANITARY SEWER AND WATER SYSTEM IMPROVEMENTS

FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001 006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING			
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_IP-BASE		
PLAN CHECK					

REV	DATE	DESCRIPTION	BY
REVISIONS			

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2	ISSUED FOR PERMIT	9-16-02
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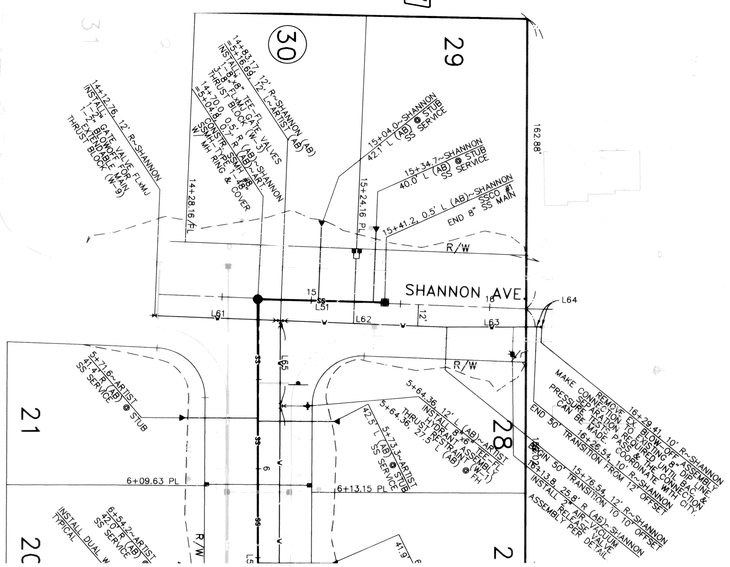
4	ISSUED FOR PERMIT	3-07-03
5	AS-BUILT SET	12-04-03
ISSUE		

ALEXANDER W. UROSHAW
STATE OF WASHINGTON
38240
REGISTERED PROFESSIONAL ENGINEER
12/4/03
EXPIRES: 04/28/2004

0007S.009 2-13-06 KR

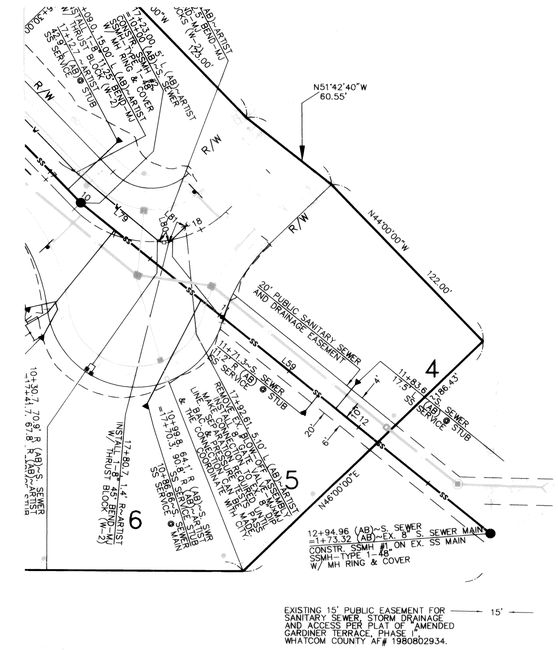
PACIFIC SURVEY & ENGINEERING INC
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685
EMAIL: pse@psesurvey.com www.psesurvey.com



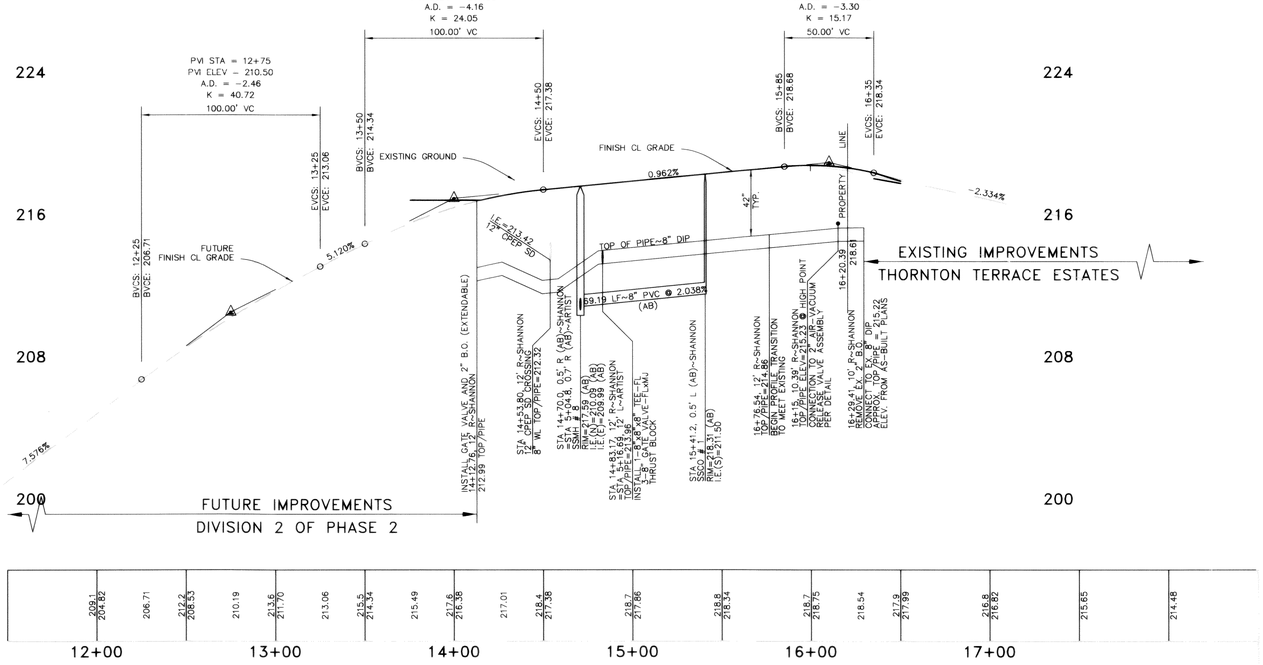
GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

SANITARY SEWER LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L51	71.19 (AB)	N01°28'18"E (AB)	8" PVC, SDR-35
L59	294.96 (AB)	S51°00'59"E (AB)	8" PVC, SDR-35
WATER MAIN LINE DATA			
LINE	LENGTH	BEARING	DESCRIPTION
L61	70.41	N02°17'57"E	8" DIP-CLASS 50
L62	93.37	N02°17'57"E	8" DIP-CLASS 50
L63	50.20	N00°06'00"W	8" DIP-CLASS 50
L64	2.87	N01°21'48"E	8" DIP-CLASS 50

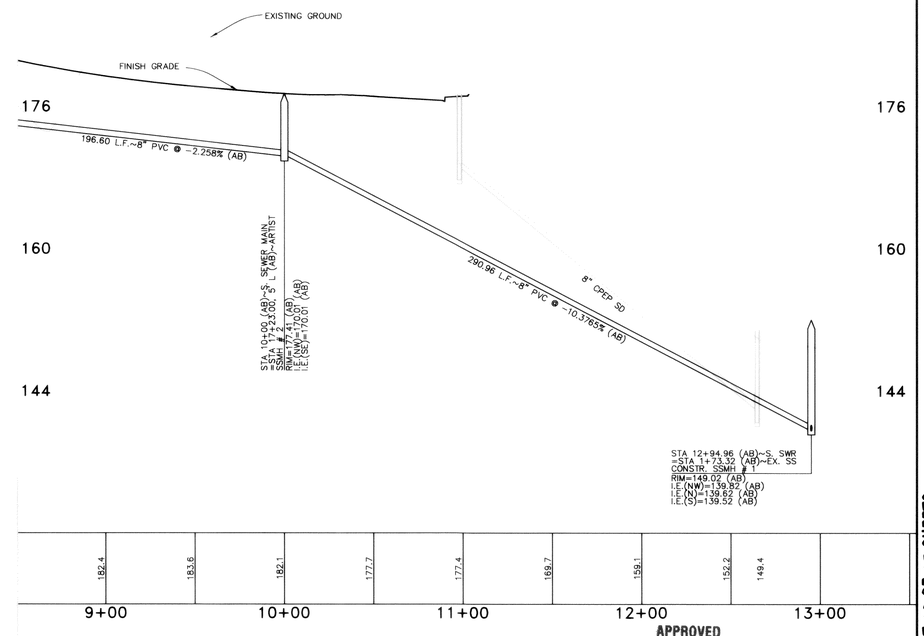
HORIZONTAL SCALE: 1"=40'



VERTICAL SCALE: 1"=4'



VERTICAL SCALE: 1"=8'



APPROVED
DEC 2 2 2003
BY
CITY OF FERNDALE

AS-BUILT

(AB) DENOTES FIELD SURVEYED DATA

CALL BEFORE YOU DIG
1-800-424-5555

SHANNON AVE. & SEWER ACROSS LOT 5

SANITARY SEWER AND WATER SYSTEM IMPROVEMENTS
FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING			
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_JP-BASE		
PLAN CHECK					

REV	DATE	DESCRIPTION	BY
REVISIONS			

No.		DATE
1	ISSUED FOR PERMIT	7-19-02
2	ISSUED FOR PERMIT	9-16-02
3	ISSUED FOR PERMIT	1-17-03
4	ISSUED FOR PERMIT	3-07-03
5	AS-BUILT SET	12-04-03
ISSUE		

ALEXANDER W. URQUHART
STATE OF WASHINGTON
38240
REGISTERED
PROFESSIONAL ENGINEER
12/4/03
EXPIRES: 04/28/2004

SHEET 10 OF 15 SHEETS

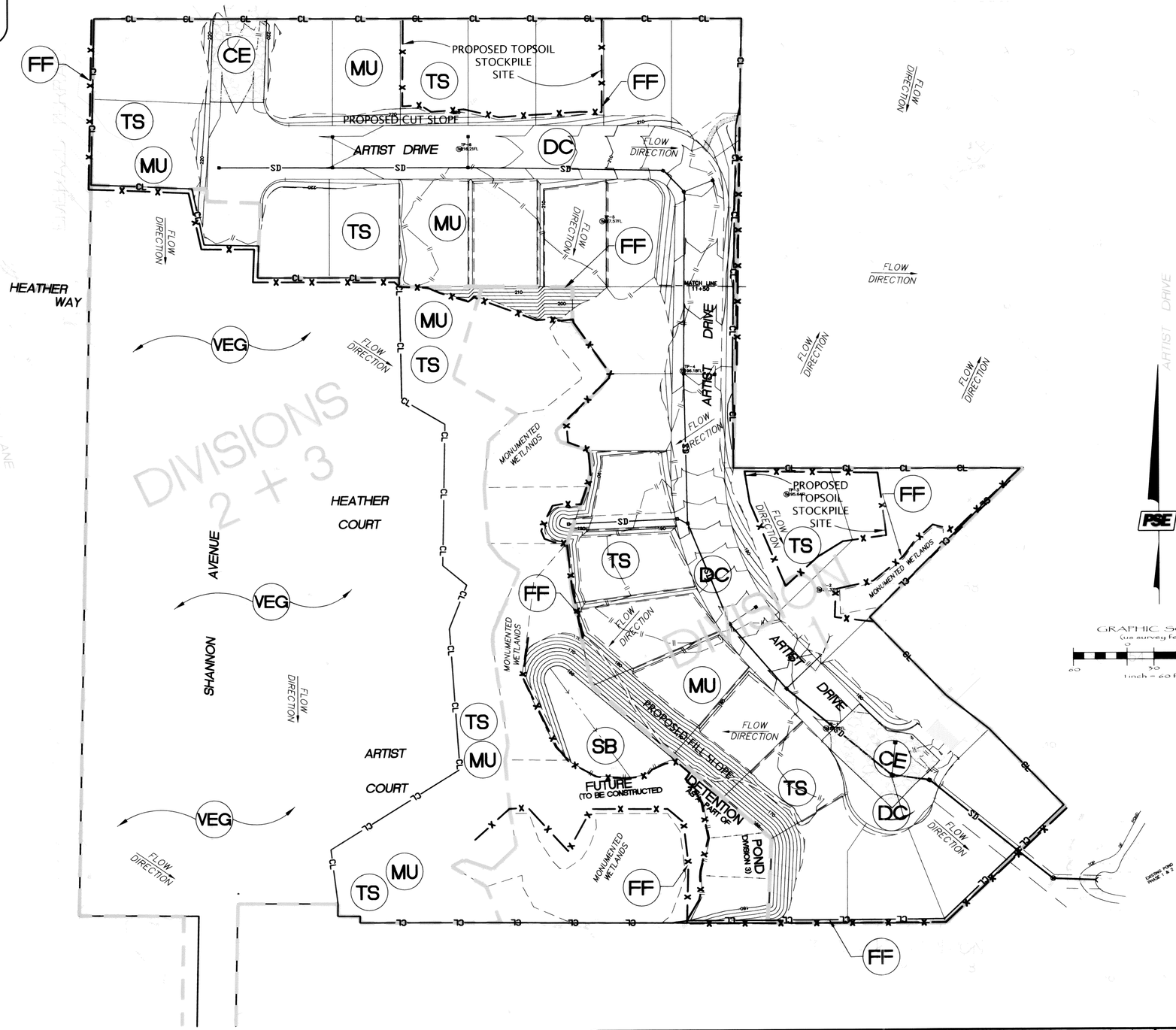
00075.010 2.13.06

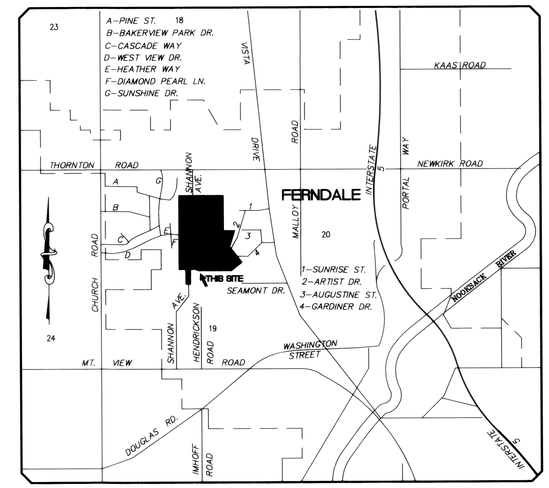
LARGE PARCEL EROSION AND SEDIMENTATION CONTROL PLAN (LPESC)

(INCLUDES PHASE II, DIVISION 1 ONLY-DIVISIONS 2 + 3 SHOWN FOR REFERENCE ONLY)

PSE

PACIFIC SURVEY & ENGINEERING INC www.psesurvey.com
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685 EMAIL: pse@psesurvey.com





VICINITY MAP
NTS

GRAPHIC SCALE
(us survey feet)
1 inch = 60 feet

LEGEND

- VEG = PRESERVING NATURAL VEGETATION, BMP C101
- FF = SILT FENCE, BMP C233
- CE = STABILIZED CONSTRUCTION ENTRANCE AND WHEEL WASH, BMPs C105 & C106
- DC = DUST CONTROL, BMP C140
- MU = MULCHING AND NETS & BLANKETS, BMPs C121 & C122
- TS = TEMPORARY & PERMANENT SEEDING, BMP C120
- SB = TEMPORARY SEDIMENT POND, BMP C241
- —CL—CL— = INDICATES CLEARING LIMITS
- —x—x— = INDICATES SILT FENCE (FF, BMP C233)

EROSION CONTROL NOTES:

1. COVER ALL DIRT/GRAVEL PILES WITH PLASTIC SHEETING DURING CONSTRUCTION WHEN NOT IN USE.
2. ALL NATIVE SOILS AREA CLASSIFIED AS "WHATCOM" HYDROLOGIC GROUP C PER "SOIL SURVEY OF WHATCOM COUNTY," SCS 1992.
3. ALL STORM DRAINS RECEIVING SURFACE RUNOFF FROM DISTURBED AREAS SHALL BE PROTECTED PER DETAIL ON SHEET 12.
4. CONSTRUCTION SCHEDULE- PENDING APPROVAL OF PLANS FROM CITY OF FERNDALE, APRIL 1 - OCTOBER 1, 2003.
5. SEE SHEET 12 FOR EROSION & SEDIMENTATION CONTROL NARRATIVE.
6. SEE ADDITIONAL EROSION AND SEDIMENT CONTROL REQUIREMENTS PER CITY OF FERNDALE LAND DISTURBANCE PERMIT NO. 02006.LDP.

SHEET 11 OF 15 SHEETS

CALL BEFORE YOU DIG
1-800-424-5555

GARDINER TERRACE, PHASE II

EROSION AND SEDIMENT CONTROL PLAN

FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001 006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING			
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWJ		CABLE TV		
SANITARY SEWER	AWJ		DESIGN	AWJ	
STORM SEWER	AWJ		QUANTITIES		
WATER	AWJ		FINAL CHECK		
GAS			DWG # 2001006_EROSION		
PLAN CHECK					

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ISSUE		

ALEXANDER W. UROUHART
STATE OF WASHINGTON
38240
REGISTERED PROFESSIONAL ENGINEER
12/4/03
EXPIRES: 04/28/2004

00075.011 2.13.06 KR

LARGE PARCEL EROSION AND SEDIMENTATION CONTROL PLAN DETAILS

PACIFIC SURVEY & ENGINEERING INC
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685
EMAIL: pse@psesurvey.com www.psesurvey.com

EROSION AND SEDIMENTATION CONTROL PLAN NARRATIVE

PROJECT DESCRIPTION
THE PROPOSED PROJECT IS A RESIDENTIAL SUBDIVISION CONSISTING OF 56 LOTS WITH REQUIRED ROADWAYS AND UTILITY IMPROVEMENTS. THE MAJORITY OF THE SITE WILL BE CLEARED EXCEPT FOR EXISTING WETLANDS, BUFFERS, AND DEDICATED OPEN SPACE AREAS AS SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLAN (ESC). EARTHWORK WILL BE REQUIRED FOR ROADWAY CONSTRUCTION AND INDIVIDUAL RESIDENTIAL SITE PREPARATIONS.

EXISTING SITE CONDITIONS
THE PROJECT SITE IS APPROXIMATELY 20 ACRES WITH SLOPES RANGING FROM APPROXIMATELY 6% TO 35%. THE SITE IS CURRENTLY BRUSHY AND WOODED. WETLANDS EXIST AT THE SITE. THE DRAINAGE GENERALLY FLOWS ACROSS THE SITE FROM THE NORTH TO THE SOUTH. DOWNSTREAM PIPE CONVEYANCE SYSTEMS EXIST AND OUTFALL TO UNNAMED DITCHES. STORMWATER EVENTUALLY DISCHARGES FROM EXISTING CONVEYANCE SYSTEMS TO SCHELL CREEK AND FROM SCHELL CREEK TO THE LUMMI RIVER.

ADJACENT AREAS
AREAS ADJACENT TO THE PROJECT SITE INCLUDE EXISTING FERNDALE SCHOOLS, RESIDENTIAL PROPERTIES, AND VACANT PARCELS. ROADWAY AND UTILITY CONNECTIONS WILL BE MADE TO SHANNON AVENUE, HEATHER WAY, AND ARTIST DRIVE. STORMWATER DRAINAGE LEAVING THE SITE WILL BE CONTROLLED BY SILT FENCES INTERCEPTOR SWALES AND DIKES, NATURAL BUFFER ZONES, AND TEMPORARY SEEDING AND MULCHING. ALL TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES ARE IN ACCORDANCE WITH THE WASHINGTON STATE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN, 1992 EDITION.

SOILS
THE NATIVE SOILS ON THE PROJECT SITE HAVE BEEN CLASSIFIED AS "WHATCOM", HYDROLOGIC GROUP C PER THE SOIL CONSERVATION SERVICE SOIL SURVEY OF WHATCOM COUNTY AREA, WASHINGTON, 1992.

CRITICAL AREA
THE ENTIRE SITE CONSISTS OF CRITICAL EROSION SLOPES AS DEFINED BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN.

EROSION AND SEDIMENTATION CONTROL BMP'S
THE PROJECT MAY BE CONSTRUCTED IN TWO PHASES AS DESIGNATED ON THE ESC PLAN. UPON COMPLETION OF CLEARING AND GRUBBING WITHIN THE CLEARING LIMITS ON THE PLAN, ALL SILT FENCES, INTERCEPTOR DIKES AND SWALES, CONSTRUCTION ENTRANCES, AND THE TEMPORARY SEDIMENTATION POND WILL BE CONSTRUCTED. TEMPORARY SEEDING AND MULCHING WILL BE COMPLETED AFTER GRADING OF AREAS OUTSIDE OF PROPOSED RIGHT-OF-WAYS. ALL BMP'S SHOWN ON THE ESC PLAN ARE IN ACCORDANCE WITH THE WASHINGTON STATE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR THE PUGET SOUND BASIN.

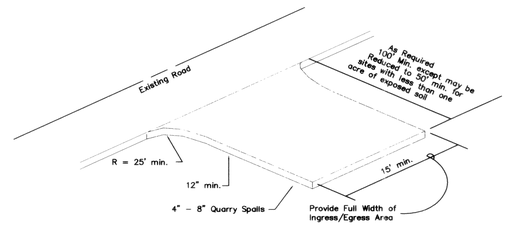
PERMANENT STABILIZATION
THE SILT FENCES, INTERCEPTOR DIKES AND SWALES, TEMPORARY SEEDING, AND MULCHING WILL REMAIN UNTIL BUILDING LOTS ARE DEVELOPED.

STORMWATER MANAGEMENT CONSIDERATIONS
THE DEVELOPMENT OF THE SITE WILL RESULT IN INCREASED RUNOFF RATES FROM THE SITE. THESE INCREASED RUNOFF RATES WILL BE LIMITED TO THE PREDEVELOPMENT RATES BY A STORM DRAINAGE CONTROL STRUCTURE AND DETENTION POND.

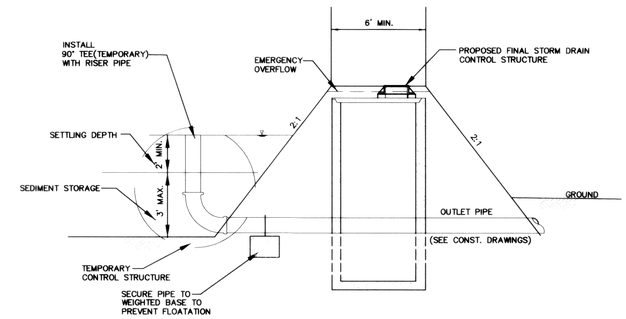
MAINTENANCE
THE EROSION CONTROL MEASURES WILL BE MAINTAINED AS NECESSARY PER THE DIRECTION OF THE CITY OF FERNDALE.

CALCULATIONS
FINAL DRAINAGE CALCULATIONS, CONVEYANCE CALCULATIONS, DETENTION POND DESIGN, AND STORMWATER QUALITY DESIGN ARE INCLUDED IN THE PROJECT STORMWATER DRAINAGE REPORT.

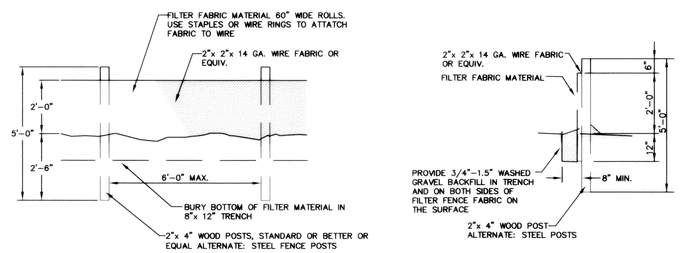
NON-ESC BMP'S REQUIRED
THE CONTRACTOR SHALL BE REQUIRED TO PERFORM "GOOD HOUSEKEEPING" TO ENSURE THAT CONSTRUCTION DEBRIS IS CONTAINED WITHIN THE SITE AND PROPERLY DISPOSED OF. THE CONTRACTOR SHALL DEMONSTRATE THE ABILITY TO ADEQUATELY CONTAIN AND DISPOSE OF GASOLINE, DIESEL, HYDRAULIC FLUID, ETC. IN THE EVENT OF A SPILL.



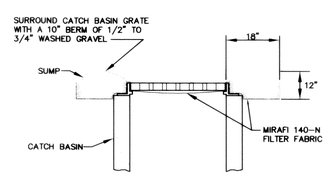
CONSTRUCTION ROAD STABILIZATION
NOT TO SCALE



TEMPORARY CONTROL STRUCTURE DETAIL
NOT TO SCALE



SILT FENCE DETAILS
NOT TO SCALE



INTERIM CATCH BASIN GRATE PROTECTION
NOT TO SCALE

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GARDINER TERRACE, PHASE II
EROSION CONTROL DETAILS
FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001 006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF	123.96	BASE	ELB	RWC	TELEPHONE		
		FIRE HYDRANT AT NW		TOPOGRAPHY	ELB	RWC	ELECTRIC		
STAKING		CORNER OF SEAMOUNT		PROFILE	AWU		CABLE TV		
		& VISTA		SANITARY SEWER	AWU		DESIGN	AWU	
ASBUILT				STORM SEWER	AWU		QUANTITIES		
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1			WATER	AWU		FINAL CHECK		
INSPECTOR				GAS			DWG # 2001006_EROSION		
CONSTRUCTION RECORD	VERTICAL DATUM			PLAN CHECK					

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ALEXANDER W. URQUHART
STATE OF WASHINGTON
38240
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12/4/03
EXPIRES: 04/28/2004

SHEET 12 OF 15 SHEETS

0007S.012 2-13-06 KR

PACIFIC SURVEY & ENGINEERING INC
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685
EMAIL: pse@psesurvey.com www.psesurvey.com

GENERAL CONSTRUCTION NOTES

GENERAL

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STANDARD PLANS AND SPECIFICATIONS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (STANDARD SPECIFICATIONS). AND AMENDMENTS TO THESE SPECIFICATIONS AS CONTAINED HEREIN, PARTICULARLY SECTIONS 5-04 THROUGH 5-05. SECTIONS 7-08.3(3), 9-01 THROUGH 9-03 WILL GENERALLY APPLY UNLESS OTHERWISE STATED BELOW, OR BY THE CONTRACT DOCUMENTS. WORK AND MATERIALS SHALL ALSO CONFORM TO CITY OF FERNDALE (COF) DEVELOPMENT STANDARDS. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS 1-07.23-TRAFFIC CONTROL, SHALL APPLY.

3. UNDERGROUND UTILITIES ARE KNOWN TO EXIST IN THE AREA OF CONSTRUCTION. THE LOCATION OF EXISTING UTILITIES SHOWN IS APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY OWNERS FOR LOCATIONS AND TO FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY LOCATION SERVICE AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-454-5555. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT WITH EXISTING UTILITIES.

4. THROUGHOUT THE WORK, THE CONTRACTOR SHALL COMPLY WITH ALL PERMITS.

5. A REVOCABLE ENCROACHMENT PERMIT SHALL BE OBTAINED PRIOR TO COMMENCING WORK IN THE RIGHT-OF-WAY

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SUBSURFACE CONDITIONS AND SOILS TYPES.

7. THE CONTRACTOR SHALL LAY OUT AND SET ANY CONSTRUCTION STAKES AND MARKS NEEDED TO ESTABLISH THE LINES, GRADES, SLOPES OR CROSS-SECTIONS AS SHOWN ON THE PLANS OR AS STAKED BY THE ENGINEER.

8. BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY A PRE-CONSTRUCTION MEETING MUST BE HELD BETWEEN THE CONTRACTOR, OWNER, CITY ENGINEER AND PROJECT ENGINEER (MIN. 3 DAYS PRIOR TO STARTING).

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES (SILT FENCE, STRAW BALE DAMS, SILT PONDS, ETC.), THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING.

10. THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK.

11. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.

12. ALL HARD SURFACED PAVEMENTS IN PUBLIC AREAS MUST BE REPAIRED AT THE CLOSE OF EACH WORK DAY. THE REPAIRS CAN BE TEMPORARY WITH ASPHALT COLD MIX OR PERMANENT WITH CLASS B ASPHALT. ALL REPAIRS SHALL BE ACCORDING TO COF DEVELOPMENT STANDARDS. AT A MINIMUM PERMANENT REPAIRS MUST REPAIR THE HARD SURFACE IN KIND.

13. INSPECTIONS FOR ROAD, DRAINAGE, AND UTILITY CONSTRUCTION SHALL BE AS OUTLINED AND IN ACCORDANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTION 302

14. CONTRACTOR TO PROVIDE A 2 YEAR WARRANTY FOR MAINTAINING ALL GRADES ON DETENTION POND AND STRUCTURES.

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

UTILITIES

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO ASSURE ACCURATE AND TIMELY COLLECTION OF ALL REQUIRED AS-BUILT DATA. THIS DATA MUST ACCURATELY REFLECT THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES, BOTTOM OF PIPE ELEVATIONS, INVERT ELEVATIONS, MANHOLE LOCATIONS, BLOW-OFF LOCATIONS AND INVERTS OF SERVICE CONNECTION (BOTH AT PIPE AND AT PROPERTY LINE), VERTICAL AND HORIZONTAL BENDS, SERVICE BOXES AND METERS, VALVES AND HYDRANTS. CALL AT LEAST 48-HOURS BEFORE BURYING UNDERGROUND PIPE TO ASSURE AND FACILITATE REQUIRED AS-BUILT SURVEY. THE ENGINEER WILL PROVIDE CERTIFIED AS-BUILT MYLARS TO PUBLIC WORKS UPON PROVISIONAL ACCEPTANCE OF ROAD AND UTILITY IMPROVEMENTS.

2. THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:

A. NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.

B. WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.

C. TRENCH DEWATERING DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT PONDS.

D. WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.

3. UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE TO THE CITY OF FERNDALE DEVELOPMENT STANDARDS.

4. TESTING OF NEW WATER LINES, SANITARY SEWER LINES, AND STORM SEWER SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.

EARTHWORK

1. THE CONTRACTOR SHALL CLEAR, GRUB AND CLEAN UP THOSE AREAS SHOWN ON THE PLANS.

2. THE CONTRACTOR SHALL RAZE, REMOVE AND DISPOSE OF ALL BUILDING AND FOUNDATIONS, STRUCTURES, FENCES AND OTHER OBSTRUCTIONS THAT LIE WHOLLY OR PARTIALLY WITHIN THE PROJECT LIMITS.

3. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UNCOMPACTED OR POORLY COMPACTED FILL SOILS WITHIN THE THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.

4. THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.

5. MAXIMUM DENSITY AND OPTIMUM MOISTURE FOR GRANULAR MATERIALS WILL BE DETERMINED USING ASTM D-1557 TEST METHOD.

6. UNSUITABLE MATERIAL NOT FIT FOR A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.

BASES

1. GRAVEL BASES AND BALLAST MAXIMUM PARTICLE SIZE PASSING THE U.S. NO. 200 SIEVE SHALL NOT EXCEED 5%

2. BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY.

3. CONTRACTOR OR PROPONENT SHALL BE RESPONSIBLE FOR ALL COMPACTION TESTING. ALL TESTING SHALL BE THROUGH ENG. REV. ACCOUNT AND PAID FOR BY OWNER.

PAVEMENTS

1. WHERE SHOWN ON THE PLANS, PAVEMENT MARKINGS SHALL BE OBLITERATED UNTIL BLEMISHES CAUSED BY THE PAVEMENT MARKING REMOVAL CONFORM TO THE COLORATION OF THE ADJACENT PAVEMENT.

2. SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.

3. A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.

4. ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT.

5. ASPHALT CONCRETE PAVEMENT SHALL NOT BE PLACED NOR COMPACTED DURING HOURS OF DARKNESS.

6. SUBGRADE SHALL BE CERTIFIED IN WRITING BY THE DESIGN ENGINEER PRIOR TO PAVING.

SANITARY SEWER NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH A.P.W.A. STANDARD SPECIFICATIONS, 1996 EDITION, AND SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE.

2. ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERNDALE. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK.

3. SEWER MAIN SHALL BE A MINIMUM 8 INCHES DIAMETER PVC (SDR-35) CONFORMING TO THE PROVISIONS OF ASTM D 3034 AND INSTALLED TO CITY SPECIFICATIONS.

4. TESTING OF THE SEWER SYSTEM SHALL BE DONE IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERNDALE REPRESENTATIVE.

5. ALL TRENCHES SHALL BE BACKFILLED WITH CLASS B BANK RUN GRAVEL OR SUITABLE NATURAL MATERIAL AS DIRECTED BY THE ENGINEER, AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.

6. ALL MANHOLES SHALL BE INSTALLED PER CITY OF FERNDALE SS-2, SS-3, SS-4, AND SHALL BE PRE-CHANNELED..

7. SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDALE STANDARDS.

8. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW.

9. BEDDING SHALL BE PEA GRAVEL PER SS-1.

10. ALL CLEANOUTS SHALL BE INSTALLED PER CITY OF FERNDALE SS-5.

STORM DRAINAGE

1. ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT 7-08.3(1). THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL AND ANY REQUIRED PIPE BEDDING, TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE. DRAINAGE MATERIALS SHALL CONFORM TO SEC. 9-05.

2. ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, LOCATED IN AREAS HAVING LIMITED PUBLIC SURVEILLANCE SHALL HAVE SOLID LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY OR OIL POLLUTION PREVENTION DEVICE SHALL HAVE SOLID LOCKING LIDS.

3. ALL STORM DRAIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS.

4. UNLESS OTHERWISE SPECIFIED, CAST IRON PRODUCTS SHALL CONFORM TO ASTM DESIGNATION A 48 CLASS 30 AND DUCTILE IRON PRODUCTS TO ASTM DESIGNATION A 536 GRADE 80-55-06.

5. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF ONE FOOT AND MUST MEET THE FOLLOWING SPECIFICATIONS: 5"-8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; AND 2" ROCK/10%-20% PASSING.

6. STORM SEWER PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP) AND SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS, SECTION 9-5.20.

WATER

1. PIPE FOR WATER MAIN –
ALL PIPE SHALL BE OF A.W.W.A. STANDARDS H3-71, C151-71 AND CEMENT LINING C104-71, AND SHALL BE DUCTILE CAST-IRON, STANDARD THICKNESS CLASS 50 PUSH-ON JOINTS OR M.J. JOINTS. THE PIPE SHALL BE OF 150 PSI WORKING PRESSURE, PLUS 100 PSI SURGE PRESSURE. NO PVC OR AC PIPE WILL BE ALLOWED.

PIPE LAYING SHALL MEET THE REQUIREMENTS OF SECTION 7-11 OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. ALL PIPE SHALL HAVE A MINIMUM COVERING OF 42 INCHES.

2. FITTINGS –
MATERIAL FOR FITTINGS SUCH AS CROSSES, TEES, BENDS, REDUCERS AND SLEEVES SHALL BE DUCTILE IRON. JOINTS SHALL BE M.J., FLANGED OR PUSH-ON JOINTS AND SHALL CONFORM TO A.W.W.A. SPECIFICATIONS C-110-71 AND C-104-71.

3. CONCRETE THRUST BLOCKING –
CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERNDALE STANDARD DETAIL W-2 THROUGH W-4, OR AS DIRECTED BY PROJECT ENGINEER. BLOCKS SHALL BE INSTALLED AS SPECIFIED IN SECTION 7-11.3(13) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION. NO PRE CAST BLOCKS ARE ALLOWED.

4. CONNECTION TO EXISTING WATER MAINS –
THE CONTRACTOR MUST NOTIFY THE FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE.

5. HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS –
ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTIONS 7-11-3(11) AND 7-11.3(12) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE OR MUNICIPAL CONSTRUCTION – CURRENT EDITION. HYDROSTATIC TESTING INSPECTED BY CITY.

6. WATER SERVICE TRANSFERS –
TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS.

7. GATE VALVES –
GATE VALVES SHALL BE FOR LINES 2 INCHES THROUGH 8 INCHES, AND SHALL BE INSTALLED IN CAST-IRON VALVE BOXES. SHORT-BODY VALVES SUITABLE FOR A NONSHOCK SHUT-OFF PRESSURE OF 130 PSI RESILIENT SEAT VALVES AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED.

GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE MOUNTED VALVES CONFORMING TO A.W.W.A. C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS OF PIPE USED.

ALL VALVES SHALL HAVE NONRISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH A 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGE OR M.J. JOINTS.

VALVE MARKERS SHALL BE LOCATED OUTSIDE OF PAVEMENT SECTIONS.

8. HYDRANT MATERIALS AND INSTALLATION –
FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COF STANDARD DETAIL W-1 (WSDOT B-19) AND THE FOLLOWING STANDARDS:

i. FIRE HYDRANTS SHALL HAVE TWO INDIVIDUALLY-VALVED 2-1/2" PORTS AND ONE 5-1/4" MAIN VALVE OPENING. A 4-1/2" NST PUMPER NOZZLE AND A 5" STORZ PORT WITH CAP AND CABLE SHALL BE SUPPLIED. HYDRANTS SHALL EITHER BE IOWA OR M.H. 929T HYDRANTS.

ii. FIRE HYDRANTS SHALL HAVE THE STORZ PORT FACING THE REQUIRED ACCESS AND THE BASE FLANGE OF THE HYDRANT MUST NOT VARY MORE THAN 1 FOOT IN ELEVATION FROM THE GRADE LEVEL OF THE REQUIRED ACCESS. THE LOWEST STEM SHALL BE A MINIMUM OF 14" ABOVE THE GROUND.

iii. IF THE PUBLIC WORKS DIRECTOR DETERMINES THAT FIRE HYDRANTS ARE VULNERABLE TO VEHICULAR DAMAGE, APPROPRIATE CRASH POSTS SHALL BE PROVIDED. NO OBSTRUCTIONS SHALL EXIST WITHIN A 3-FOOT WORKING AREA OF EACH REQUIRED ACCESS. CRASH POSTS SHALL BE 4" CEMENT-FILLED PIPE A MIN. OF 3' IN HEIGHT WITH A MIN. OF 2' OF PIPE BELOW GRADE. HYDRANT SHUTOFF VALVES SHALL BE LOCATED BETWEEN 5' AND 20' FROM THE HYDRANT.

iv. UNDERGROUND SUPPLIES TO FIRE HYDRANTS MUST BE INSPECTED. SUCH INSPECTION SHALL INCLUDE VISUAL INSPECTION OF PIPING AND HYDROSTATIC PRESSURE TESTING TO A MIN. OF 200 PSI OR 50 PSI IN EXCESS OF STREET MAIN PRESSURE, WHICHEVER IS GREATER. A FLOW TEST WILL BE REQUIRED WHEN INSTALLATION IS COMPLETE.

v. FIRE HYDRANTS MUST BE MAINTAINED IN AN OPERABLE CONDITION AT ALL TIMES AND MUST BE REPAIRED OR REPLACED WHEN DEFECTIVE. HYDRANTS SHALL BE FULLY OPERABLE BEFORE CONSTRUCTION COMMENCES ABOVE GRADE LEVEL.

ILLUMINATION STANDARD - SECTION 207

1. 100-WATT HIGH PRESSURE SODIUM LAMPS SHALL BE INSTALLED ON STANDARD CONCRETE OCTAGONAL OR ROUND POLES NO LESS THAN 25 FEET HIGH AND SPACED NO MORE THAN 250' APART, MEASURED ALONG PAVEMENT CENTERLINE.

EROSION/SEDIMENTATION CONTROL + ROADSIDE PLANTING

1. APPROVAL OF THE EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).

2. THE IMPLEMENTATION OF THE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.

3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

4. THE ESC FACILITIES SHOWN ON THE PLANS MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.

5. THE ESC FACILITIES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.

6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

7. ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 7 DAYS, SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.).

8. ANY AREA NEEDING ESC MEASURE, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.

9. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A STORM EVENT.

10. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

11. STABILIZED CONSTRUCTION ENTRANCES AND WASH PADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

12. DURING THE TIME PERIOD OF NOVEMBER 1 THROUGH MARCH 31, ALL PROJECT DISTURBED AREAS GREATER THAN 5,000 SQUARE FEET THAT ARE TO BE LEFT UNWORKED FOR MORE THAN 12 HOURS, SHALL BE COVERED BY ONE OF THE FOLLOWING COVER MEASURES: MULCH, SODDING OR PLASTIC COVERING.

13. TREES SHALL BE PLANTED IN PITS HAVING DIAMETERS AT LEAST TWICE THAT OF THE ROOT BALL OR ROOT SYSTEM. THE OUTER 6 INCHES OF MATERIAL SHALL BE REMOVED BY HAND METHODS. THE WALL AND BOTTOM OF THE PITS SHALL BE REMOVED BY HAND METHODS. THE WALL AND BOTTOM OF THE PITS SHALL BE ROUGHED TO ALLOW FOR ROOT PENETRATION. ALL PLANTING POCKETS SHALL BE BACKFILLED BY JETTING TO PREVENT AIR POCKETS IN THE LOWER THIRD OF THE HOLE. TREES SHALL BE WATERED GENEROUSLY DURING AND AFTER BACKFILL. BACKFILL MATERIALS SHALL BE SANDY LOAM.

14. PUBLIC RIGHTS OF WAY SHALL BE KEPT IN A CLEAN AND SERVICEABLE MANNER AT ALL TIMES. IN THE EVENT MATERIAL ARE INADVERTENTLY DEPOSITED ON ROADWAYS, THE MATERIAL SHALL BE PROMPTLY REMOVED. MATERIALS ARE TO BE SWEPT AND REMOVED PRIOR TO ANY FLUSHING. PUBLIC AND PRIVATE DRAINAGE WAYS SHALL BE PROTECTED FROM POLLUTION.

15. ALL TREES SHALL BE 4 INCHES TO 6 INCHES CALIPER, B & B, UNLESS OTHERWISE NOTED. MEASUREMENTS, CALIPER, BRANCHING, GRADING, QUALITY, BALLING AND BURLAPPING SHALL FOLLOW THE CODE OF STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN IN THE AMERICAN STANDARD FOR NURSERY STOCK. ALL PLANTS SHALL HAVE NATURAL SHAPE.

16. FERTILIZER FOR TREES SHALL BE FORMULA 4-2-2 "TRANSPLANTER" AS MANUFACTURED BY PACIFIC AGRO COMPANY AND SHALL BE APPLIED AT THE RATE OF 8 OUNCES PER TREE. FOUR PLANTING TABLETS, 21 GRAM SIZE AS MANUFACTURED BY AGRIFORM INTERNATIONAL CHEMICALS, INC., 20-10-5 ANALYSIS SHALL BE APPLIED. TREE STAKING SHALL BE IN ACCORDANCE WITH DETAILS IN THE PLAN.

17. ALL TREES SHALL BE PROPERLY PROTECTED AGAINST HARM FROM WIND, UNUSUAL WEATHER AND THE PUBLIC. THE CONTRACTOR SHALL PERFORM ALL NECESSARY MAINTENANCE INCLUDING WATERING, PRUNING AND SPRAYING UNTIL ONE YEAR AFTER ACCEPTANCE. ALL TREES MUST BE IN A VIGOROUS GROWING CONDITION AT THE END OF THE ONE-YEAR GUARANTEE PERIOD. DEFECTIVE MATERIALS, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED IMMEDIATELY WITH SPECIMENS OF THE SAME SPECIES AND SIZE AS THE ORIGINAL..

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SHEET 13 OF 15 SHEETS

00075.013 2.13.06 KB

GARDINER TERRACE
PHASE II, DIVISION 1
FOR BILL KRAMER
1442 SUNSET AVENUE
FERNDALE, WASHINGTON 98248

PSE JOB# 2001 006

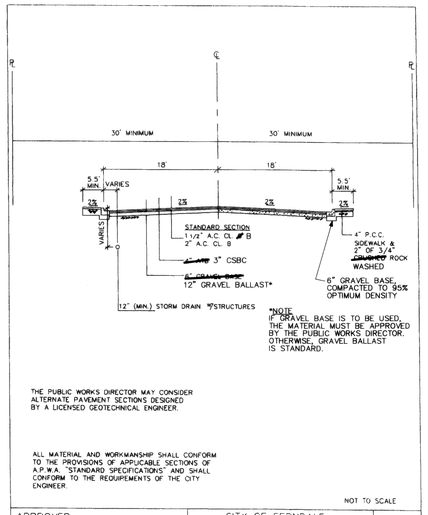
FIELD BOOKS	TBM. NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF	123.96	BASE	ELB	RWC	TELEPHONE		
		FIRE HYDRANT AT NW		TOPOGRAPHY	ELB	RWC	ELECTRIC		
STAKING		CORNER OF SEAMOUNT		PROFILE	AWJ		CABLE TV		
		& VISTA		SANITARY SEWER	AWJ		DESIGN	AWJ	
ASBUILT				STORM SEWER	AWJ		QUANTITIES		
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1			WATER	AWJ		FINAL CHECK		
INSPECTOR				GAS			DWG # GENERAL_NOTES		
CONSTRUCTION RECORD	VERTICAL DATUM			PLAN CHECK					

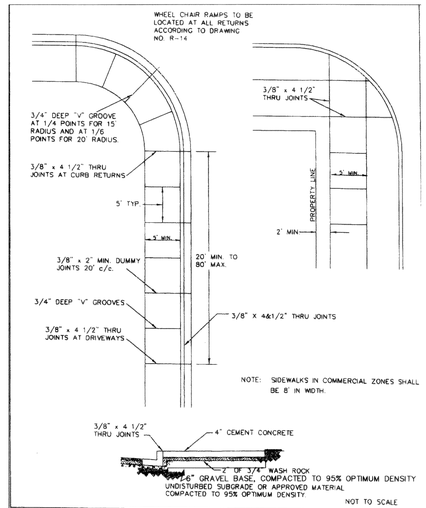
REV	DATE	DESCRIPTION	BY
		REVISIONS	

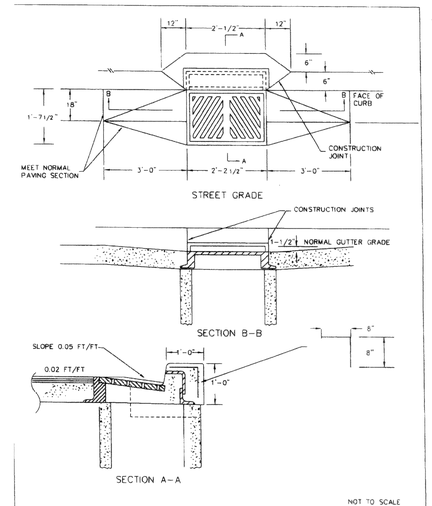
No.		DATE
1	ISSUED FOR PERMIT	7-19-02
2	ISSUED FOR PERMIT	9-16-02
3	ISSUED FOR PERMIT	1-17-03
4	ISSUED FOR PERMIT	3-07-03
5	AS-BUILT SET	12-04-03
	ISSUE	

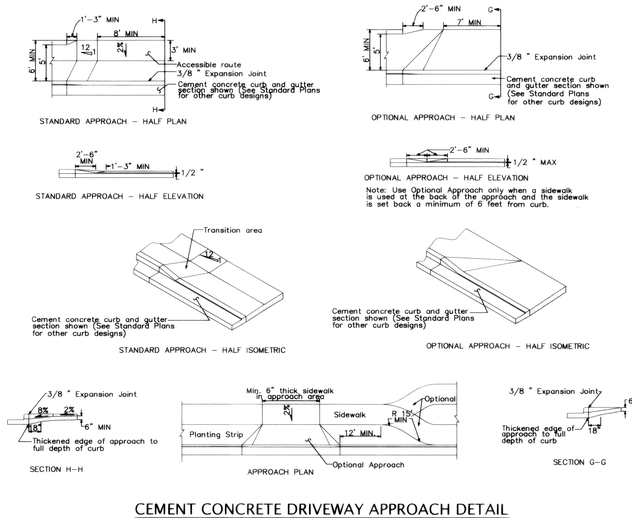
ALEXANDER W. URQUHART
STATE OF WASHINGTON
38240
REGISTERED PROFESSIONAL ENGINEER
12/4/03
EXPIRES: 04/28/2004

STREET AND STORM SEWER DETAILS

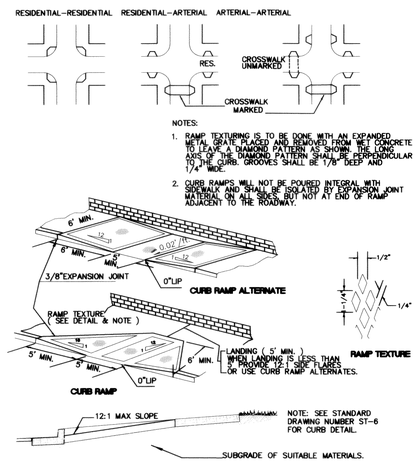






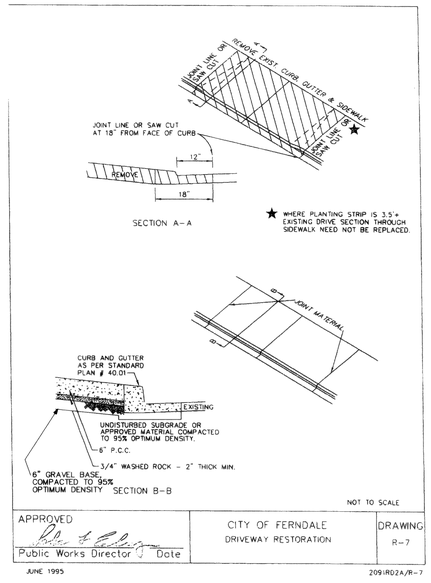


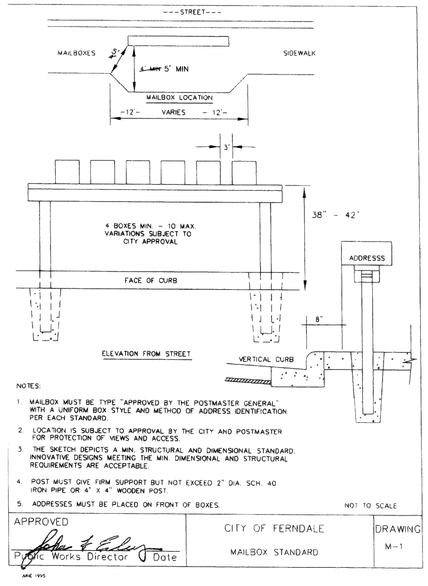
CEMENT CONCRETE DRIVEWAY APPROACH DETAIL

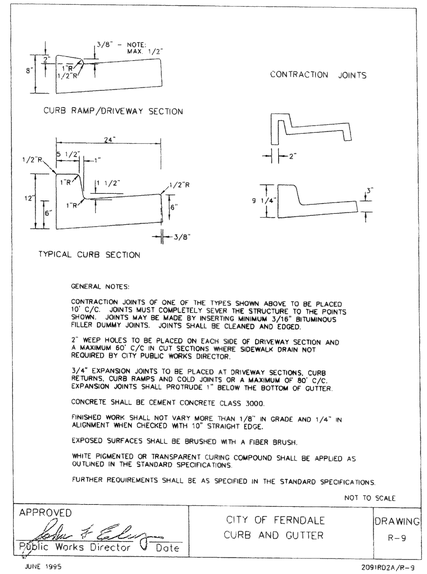


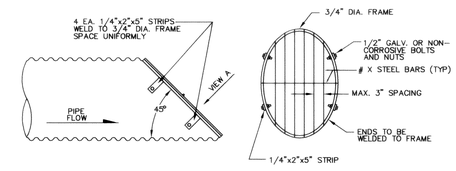
CURB RAMPS

NTS



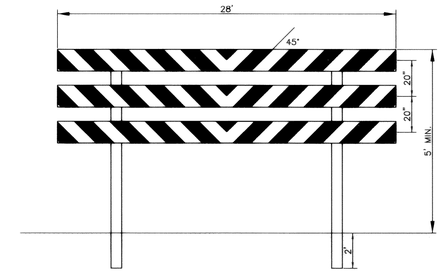






TRASH RACK FOR SD OUTLET DETAIL

NOT TO SCALE



NOTES:

WIDTH OF RAIL = UNIFORM, BETWEEN 8" AND 12"
LENGTH OF RAIL = 28'
WIDTH OF STRIPES = 6"
TYPE OF FRAME = 4"X4" POST BURIED 2' DEEP
COLOR = RED ON WHITE, FULLY REFLECTORIZED

TYPE- III BARRICADE

NTS

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1-800-424-5555

PSE JOB# 2001 006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF FIRE HYDRANT AT NW CORNER OF SEAMOUNT & VISTA	123.96
STAKING			
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_DETAILS		
PLAN CHECK					

REV	DATE	DESCRIPTION	BY
REVISIONS			

No.		DATE
1	ISSUED FOR PERMIT	7-19-02
2	ISSUED FOR PERMIT	9-16-02
3	ISSUED FOR PERMIT	1-17-03
4	ISSUED FOR PERMIT	3-07-03
5	AS-BUILT SET	12-04-03
ISSUE		

ALEXANDER W. UROSKART
STATE OF WASHINGTON
38240
REGISTERED
PROFESSIONAL ENGINEER
12/4/03
EXPIRES: 04/28/2004

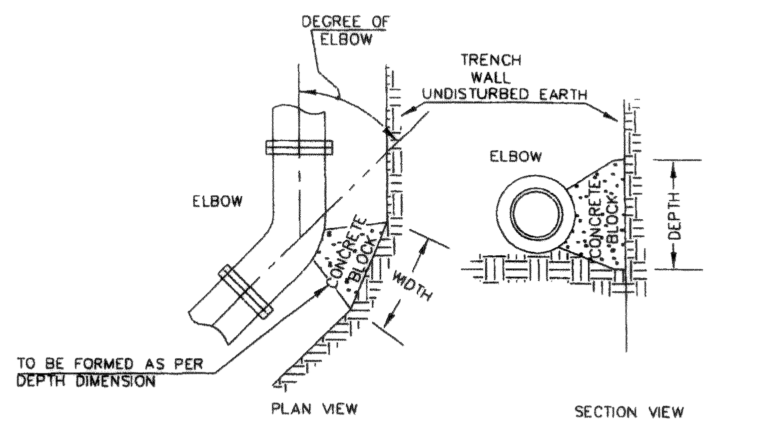
PACIFIC SURVEY & ENGINEERING INC
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685
EMAIL: pse@psesurvey.com
www.psesurvey.com

SHEET 14 OF 15 SHEETS

2001006.014 2.13.06 KR

PSE
PACIFIC SURVEY & ENGINEERING INC www.psesurvey.com
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE:671.7387 FAX:671.4685 EMAIL: pse@psesurvey.com

WATER AND SANITARY SEWER DETAILS



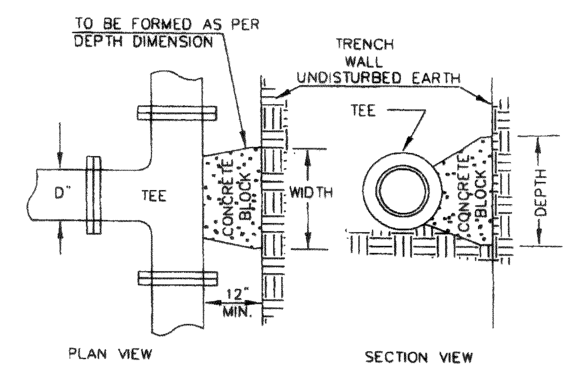
100 P.S.I. OPERATING PRESSURE

SIZE	11 1/4°		22 1/2°		45°		90°	
	W	D	W	D	W	D	W	D
6"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-6"	2'-3"	1'-6"
8"	1'-3"	1'-3"	1'-3"	1'-3"	1'-9"	1'-9"	3'-0"	2'-0"
10"	1'-9"	1'-6"	1'-9"	1'-6"	2'-3"	2'-3"	3'-6"	2'-6"
12"	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"	2'-6"	4'-0"	3'-0"
16"	2'-9"	2'-3"	2'-9"	2'-3"	4'-0"	3'-0"	6'-3"	3'-6"
20"	3'-6"	2'-9"	3'-6"	2'-9"	4'-6"	4'-0"	8'-6"	4'-0"
24"	4'-6"	3'-0"	4'-6"	3'-0"	5'-6"	5'-0"	9'-9"	5'-0"

NOTE:
ALL ABOVE DIMENSIONS APPLY TO STABLE TRENCH WALLS, UNDER VARIBLE CONDITIONS SIZE OF THRUST BLOCK SHALL BE DETERMINED BY ENGINEER.

NOT TO SCALE

APPROVED — Public Works Director — Date
CITY OF FERNDALE — THRUST BLOCKING — ELBOWS — DRAWING W-2



100 P.S.I. OPERATING PRESSURE

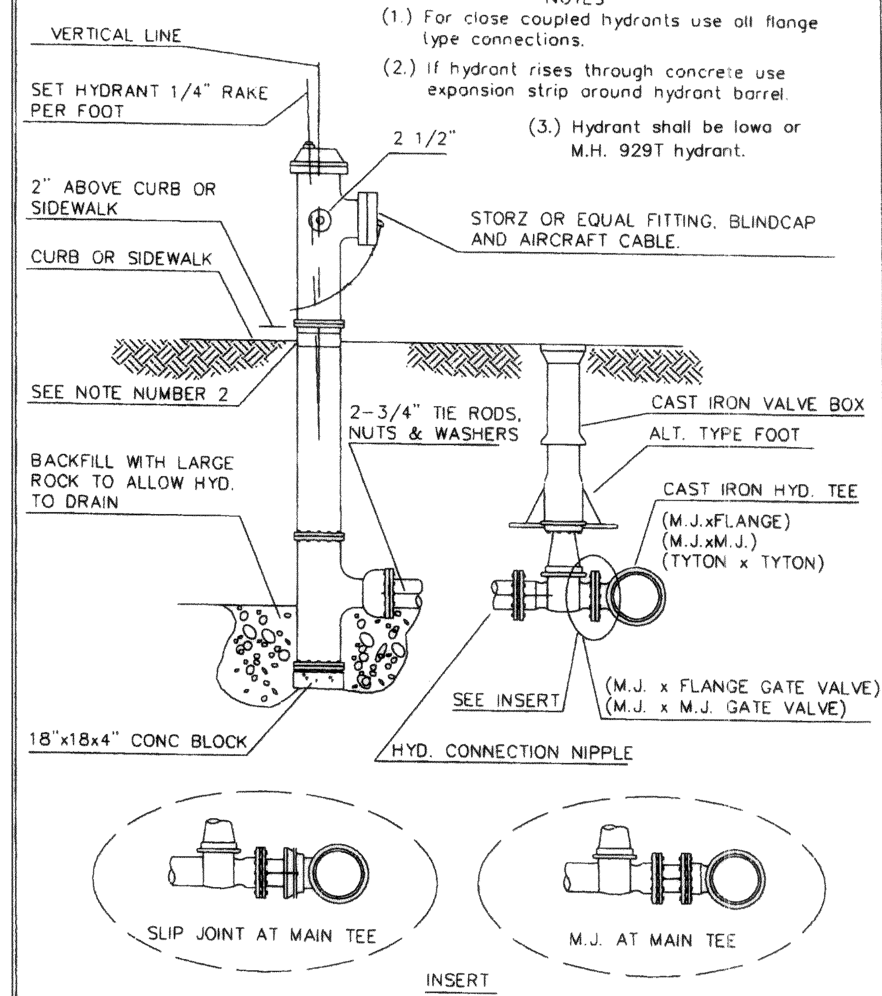
SIZE	WIDTH	DEPTH
6"	1'-6"	1'-6"
8"	2'-0"	2'-0"
10"	2'-6"	2'-6"
12"	3'-0"	3'-0"
16"	4'-6"	3'-6"
20"	6'-0"	4'-0"
24"	7'-0"	5'-0"

NOTE:
ALL ABOVE DIMENSIONS APPLY TO STABLE TRENCH WALLS, UNDER VARIBLE CONDITIONS SIZE OF THRUST BLOCK SHALL BE DETERMINED BY ENGINEER.

NOT TO SCALE

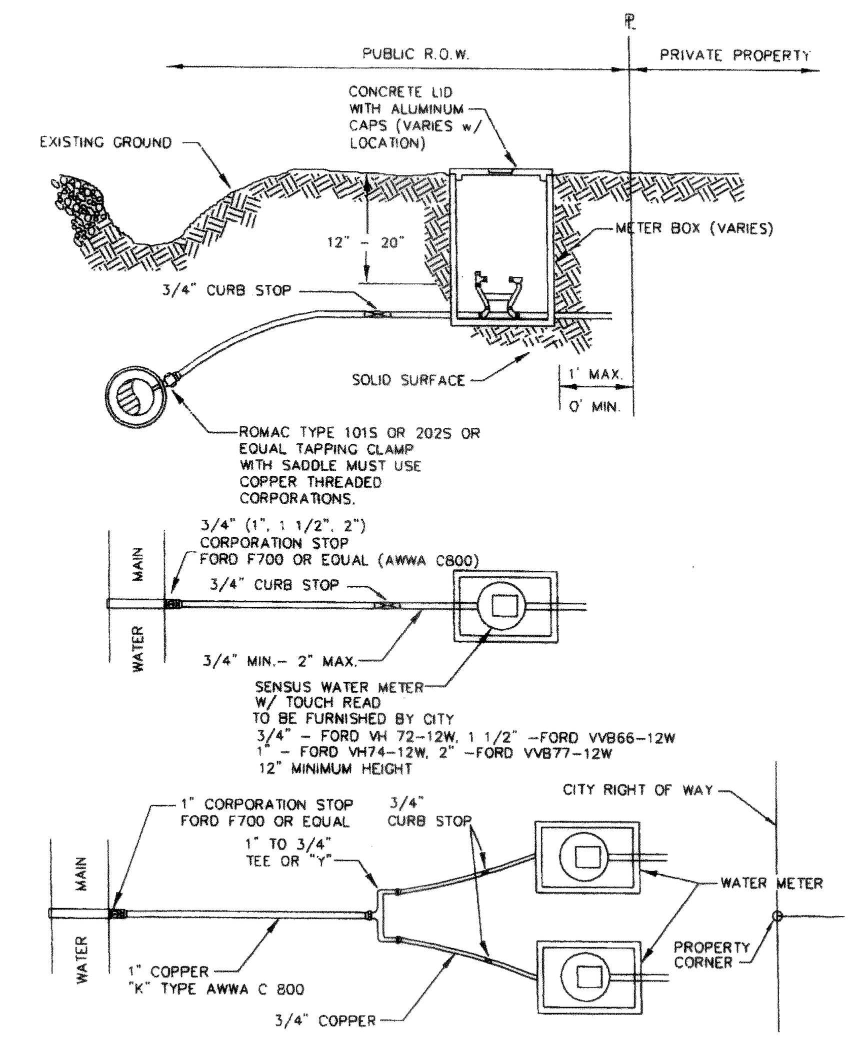
APPROVED — Public Works Director — Date
CITY OF FERNDALE — THRUST BLOCKING — TEES — DRAWING W-3
JUNE 1995
2091WA2A/W-3

NOTES
(1.) For close coupled hydrants use all flange type connections.
(2.) If hydrant rises through concrete use expansion strip around hydrant barrel.
(3.) Hydrant shall be Iowa or M.H. 929T hydrant.



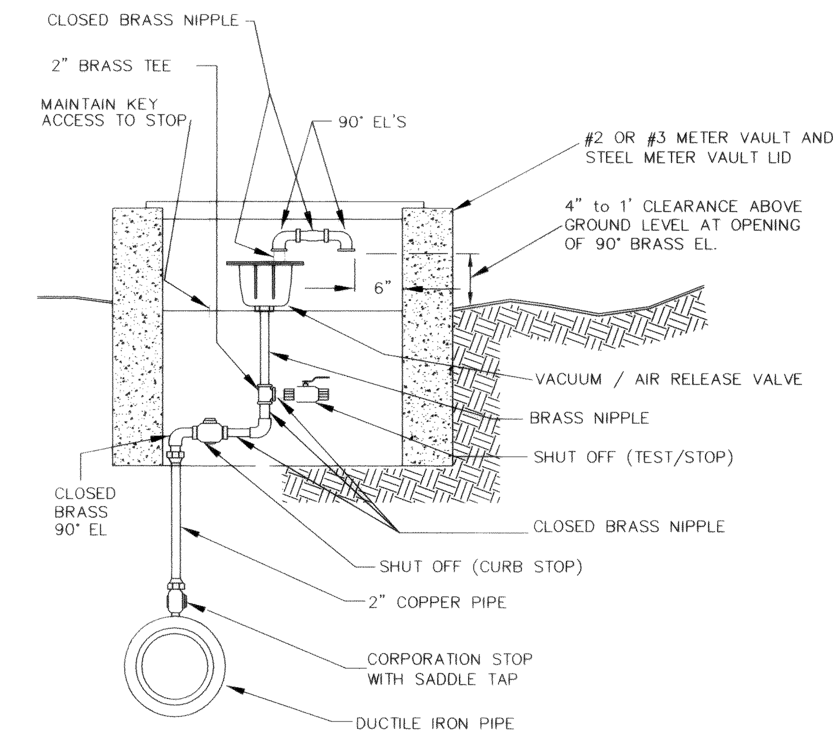
NOT TO SCALE

APPROVED — Public Works Director — Date
CITY OF FERNDALE — FIRE HYDRANT ASSEMBLY — DRAWING W-1

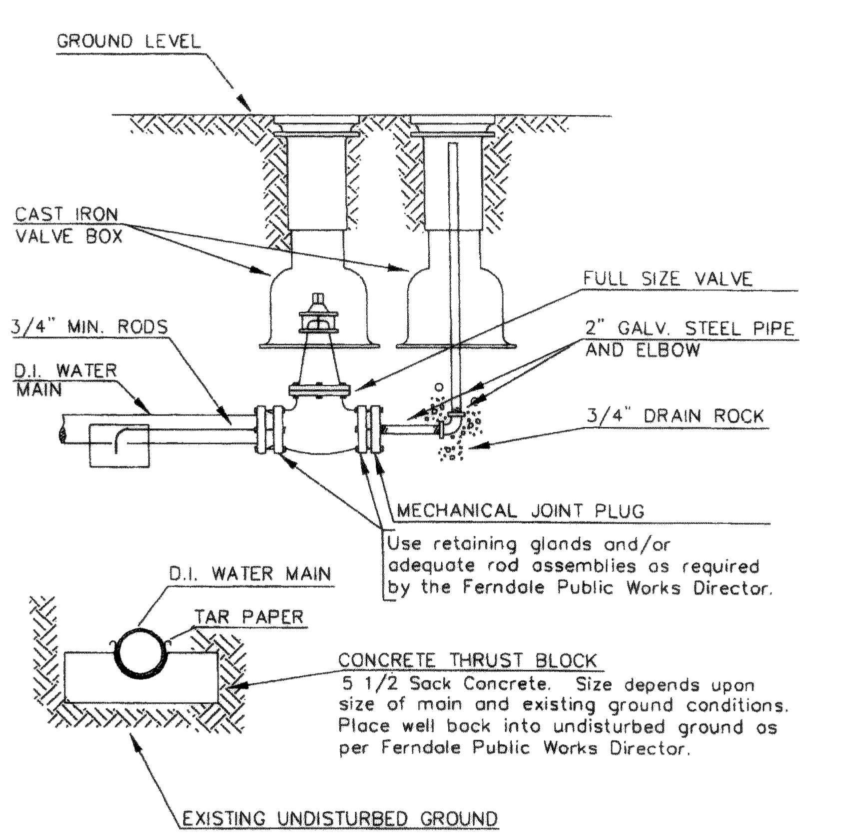


NOT TO SCALE

APPROVED — Public Works Director — Date
CITY OF FERNDALE — TYPICAL WATER SERVICE (3/4" TO 2") — DRAWING W-5
2091WA1A/W-5



TYPICAL 2" VACUUM/AIR RELEASE VALVE DETAIL

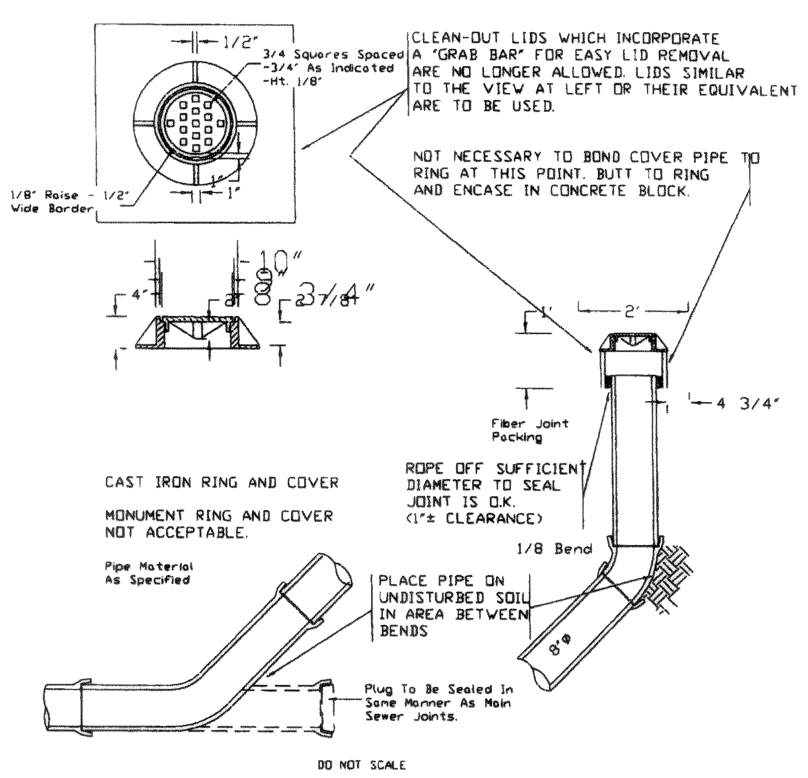


2" blow-off to be used where the main will extended in the future. For mains with no further extension, refer to 2" blowoff, non-extendable main.

NOT TO SCALE

APPROVED — Public Works Director — Date
CITY OF FERNDALE — 2" BLOW-OFF WATER MAIN EXTENSION — DRAWING W-9

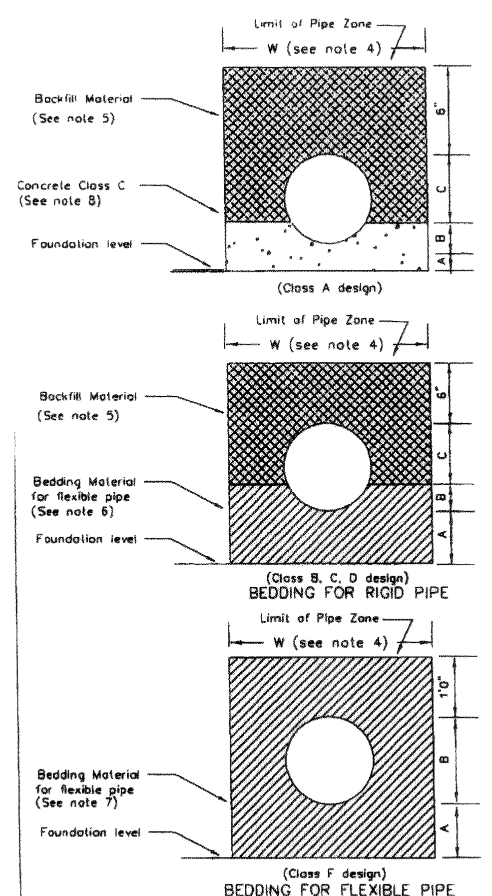
2' SQUARE CONCRETE BLOCK TO ENCASE CLEAN-OUT. IN AREAS WHERE CLEAN-OUT OCCURS IN ASPHALT, THIS BLOCK IS TO BE LEFT APPROX. 1 1/2" LOW TO ALLOW FOR AN ASPHALT TOPPING OF LIKE MIXTURE AS THE SURROUNDING AREA. IF CLEAN-OUT OCCURS IN CONCRETE OR IN SOME TYPE OF SOIL, THE BLOCK IS TO BE MADE THE FULL 1' DEPTH AND FLUSH WITH THE SURROUNDING SURFACE.



SSCO 04/30/92 16:17

NOT TO SCALE

APPROVED — Public Works Director Date
CITY OF FERNDALE — 8" CLEAN OUT — DRAWING SS-5



NOTES:
1. Provide uniform support under barrel.
2. Hand tamp under haunches.
3. Compact bedding material to 95% MAX density except directly over pipe, hand tamp only.
4. See "Excavation and Preparation of Trench" in the Sanitary Sewers section of the Standard Specifications for trench width "W" and trenching options. The pipe zone will be the actual trench width, except for Class A bedding. The minimum concrete width shall be 1 1/2" I.D. + 18".
5. Trench backfill shall conform to "Backfilling Sewer Trenches" in the Sanitary Sewers section of the Standard Specifications, except that rocks or lumps larger than 1" per foot of pipe diameter shall not be used in the backfill material.
7. See "Bedding Material for Flexible Pipe" in the Aggregates section of the Standard Specifications for the material specifications.
8. Pipe must be anchored in such a manner as to ensure flow line is maintained.

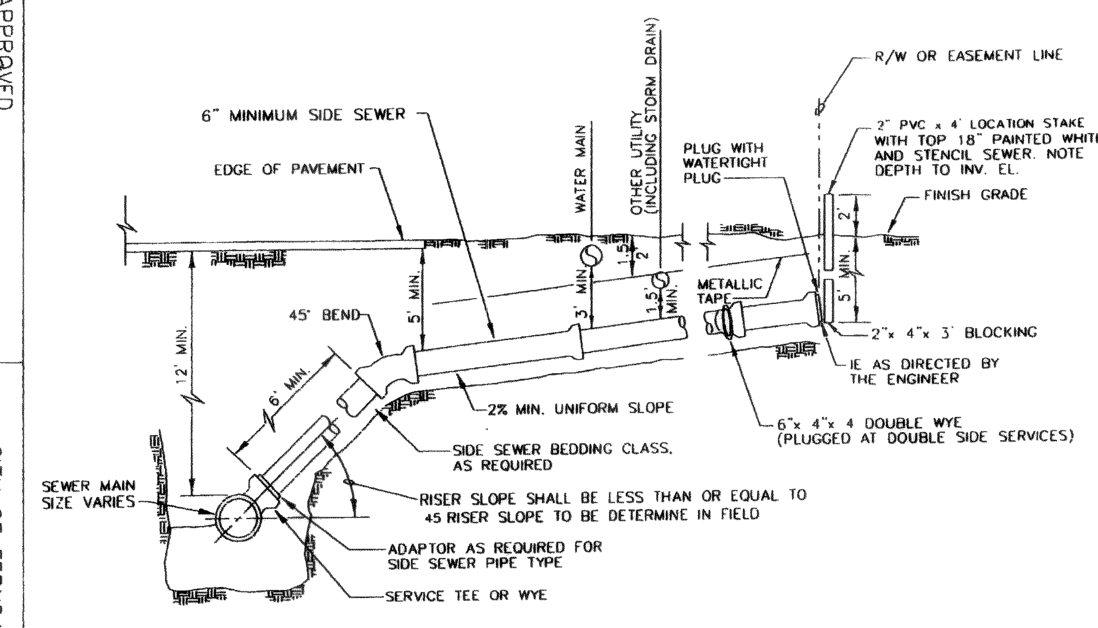
BEDDING CLASS DESIGN

DIMENSION	CLASS A	CLASS B	CLASS C	CLASS D	CLASS F
A	4" MIN 1/4 I.D. 12" MAX	*	*	*	*
B	1/4 O.D.	1/2 O.D.	1/8 O.D.	Zero	O.D.
C	3/4 O.D.	1/2 O.D.	7/8 O.D.	O.D.	-

*A = 4" MIN, 27" I.D. and under; 6" MIN, over 27" I.D.

NOT TO SCALE

APPROVED — Public Works Director — Date
CITY OF FERNDALE — PIPE BEDDING FOR SANITARY SEWERS — DRAWING SS-1



NOT TO SCALE

JUNE 1995
APPROVED — Public Works Director — Date
CITY OF FERNDALE — SANITARY SEWER SIDE SERVICE INSTALLATION DEEP MAINS — DRAWING SS-8
2091SE4A/SS-8

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1-800-424-5555

PSE JOB# 2001 006

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.
DESIGN 16 SERIES	VISTA	TOP CENTER BOLT OF	123.96
		FIRE HYDRANT AT NW	
STAKING		CORNER OF SEAMOUNT	
		& VISTA	
ASBUILT			
CONTRACTOR	SEE SURVEY NOTE NO. 3 ON SHEET 1		
INSPECTOR			
CONSTRUCTION RECORD	VERTICAL DATUM		

DATA	DRAWN BY	CHECKED BY	DATA	DRAWN BY	CHECKED BY
BASE	ELB	RWC	TELEPHONE		
TOPOGRAPHY	ELB	RWC	ELECTRIC		
PROFILE	AWU		CABLE TV		
SANITARY SEWER	AWU		DESIGN	AWU	
STORM SEWER	AWU		QUANTITIES		
WATER	AWU		FINAL CHECK		
GAS			DWG # 2001006_DETAILS		
PLAN CHECK					

REV	DATE	DESCRIPTION	BY
REVISIONS			

No.		DATE
1	ISSUED FOR PERMIT	7-19-02
2	ISSUED FOR PERMIT	9-16-02
3	ISSUED FOR PERMIT	1-17-03
4	ISSUED FOR PERMIT	3-07-03
5	AS-BUILT SET	12-04-03
ISSUE		

ALEXANDER W. URQUHART — STATE OF WASHINGTON — 38240 REGISTERED PROFESSIONAL ENGINEER
12/4/03
EXPIRES: 04/28/2004

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