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PACIFIC SURVEY & ENGINEERING INC
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE: 671.7387 FAX: 671.4685

PACIFIC HIGHLANDS P.U.D. PHASE 4

SITUATE IN THE SE 1/4 OF SECTION 13, TOWNSHIP 39 NORTH, RANGE 1 EAST, W.M.
CITY OF FERDALE, WHATCOM COUNTY, STATE OF WASHINGTON

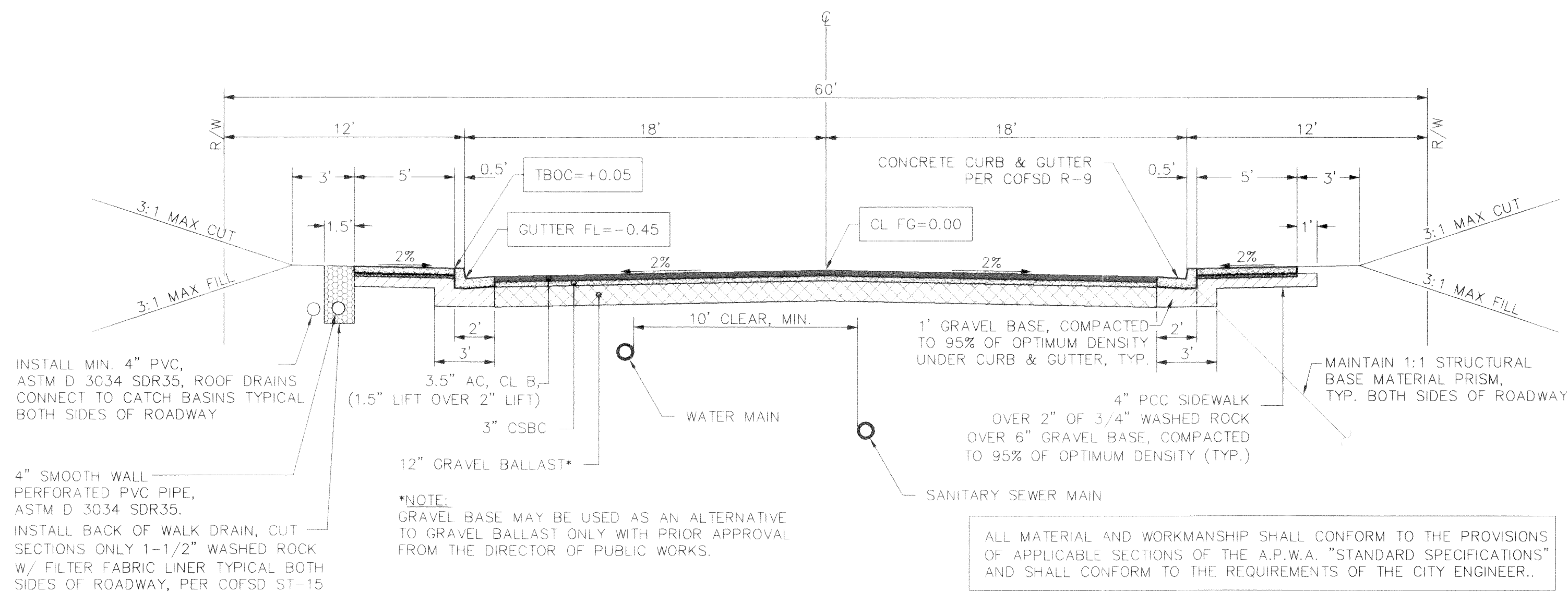
ROADWAY AND UTILITY IMPROVEMENT PLANS

SURVEY NOTES:

- 1) ALL BOUNDARY SURVEY INFORMATION UTILIZED BY ENGINEER WAS PROVIDED BY BRIAN D. CHRISTIE, PLS NO. 18897, OF CHRISTIE AND CHRISTIE LAND SURVEYING, INC.
- 2) TOPOGRAPHIC NOTES:
ALL TOPOGRAPHIC INFORMATION UTILIZED BY ENGINEER WAS PROVIDED BY BRIAN D. CHRISTIE, PLS NO. 18897, OF CHRISTIE AND CHRISTIE LAND SURVEYING, INC. THE AERIAL TOPOGRAPHIC MAP PROVIDED BY MR. CHRISTIE IS ANNOTATED TO STATE THAT IT WAS COMPILED BY EAGLE MAPPING SERVICES, LTD., AND WAS BASED UPON AERIAL PHOTOGRAPHY FLOWN ON SEPTEMBER 10, 2001. AERIAL MAPPING CONTROL WAS PROVIDED BY CHRISTIE AND CHRISTIE.
- 3) BASIS OF BEARINGS: (PER CHRISTIE AND CHRISTIE, LAND SURVEYING, INC.) CENTERLINE OF CHURCH ROAD, BEING THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 13, TOWNSHIP 39 NORTH, RANGE 1 EAST, WILLAMETTE MERIDIAN, AS SHOWN ON THE "FERDALE SHORT PLAT", A.F. NO. 1478125 RECORD INVERSE: N 00°00'30" E
- 4) PROJECT BENCHMARK: (PER CHRISTIE AND CHRISTIE, LAND SURVEYING, INC.) CITY OF FERDALE MONUMENT NET, JUNE 2001
BENCHMARK DESIGNATION: FERNO4
ELEVATION: 366.05'

ROAD INTERSECTION EQUATIONS

STA 10+00.00 ARGYLE ST. = STA 9+09.28 GLENMORE ST.
STA 20+54.06 ARGYLE ST. = STA 38+77.76 LOHCARRON DR.



TYPICAL ROADWAY SECTION - ALL STREETS

Not To Scale

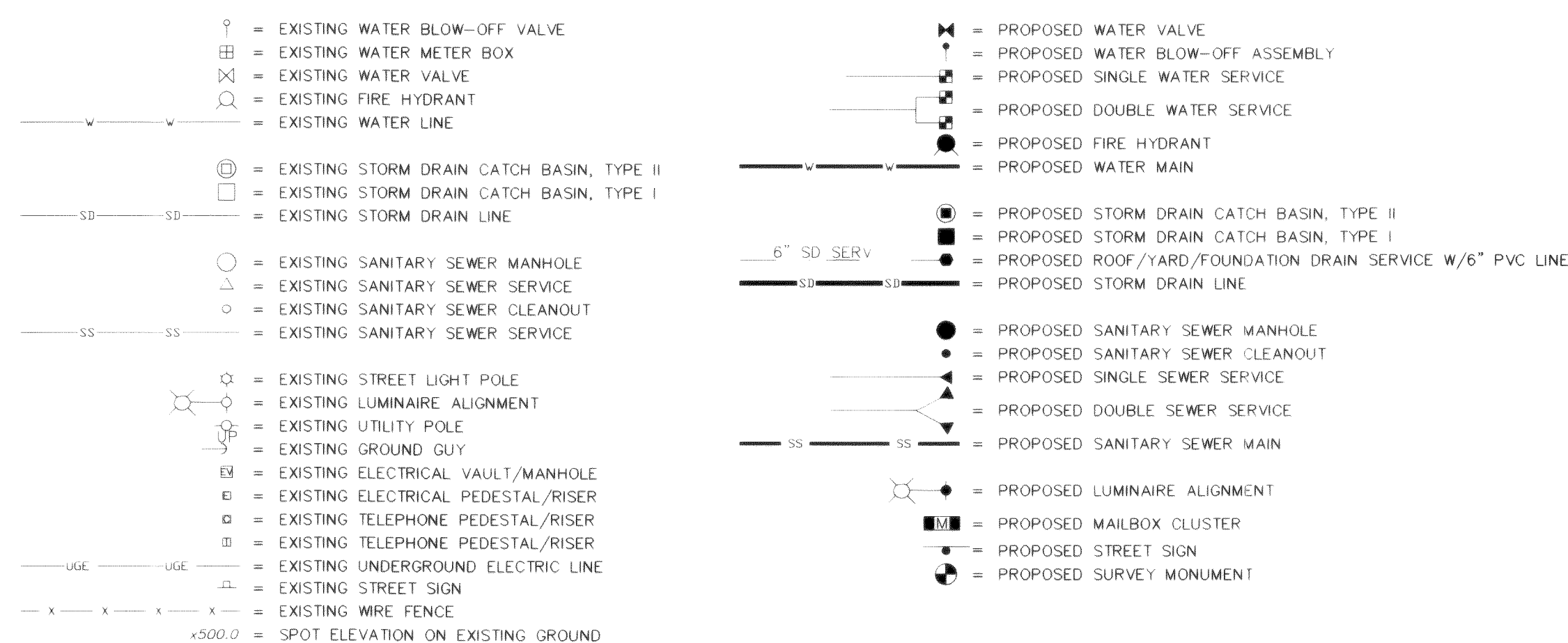
ABBREVIATIONS

B/C BACK OF CURB
B/W BOTTOM OF WALL
BCR BEGIN CURB RETURN
BOW BACK OF SIDEWALK
BVC BEGIN VERTICAL CURVE
C&G CURB AND GUTTER
CL CENTERLINE
CMP CORRUGATED METAL PIPE
COFSD CITY OF FERDALE STANDARD DRAWING
CPP CORRUGATED POLYETHYLENE PIPE
C/D CURVE DELTA
ECR END CURB RETURN
EG EXISTING GRADE
EP EDGE OF PAVEMENT
EVC END VERTICAL CURVE
EXST EXISTING
F&G FRAME AND GRATE
F.HYD FIRE HYDRANT
F/C FACE OF CURB
FF FINISH FLOOR
FG FINISH GRADE
FL FLOWLINE
FS FINISH SURFACE
INV INVERT ELEVATION
INVT INVERT
L CURVE LENGTH
LT LEFT
PC POINT OF CURVATURE-BEGIN CURVE
PCC POINT OF COMPOUND CURVATURE
PRC POINT OF REVERSE CURVATURE
PT POINT OF TANGENCY = END CURVE
PVI POINT OF VERTICAL INTERSECTION
R CURVE RADIUS
R/W RIGHT OF WAY
RT RIGHT
SD STORM DRAIN
SDBC STORM DRAIN CATCH BASIN
SDMH STORM DRAIN MANHOLE
SERV SERVICE
SSCO SANITARY SEWER CLEAN-OUT
SSMH SANITARY SEWER MANHOLE
SVC SERVICE
SMD SIDEWALK DRAIN PER COFSD ST-15
SWK SIDEWALK
T/W TOP OF WALL
TBC TOP BACK OF CURB
TFC TOP FACE OF CURB
TC TOP OF CURB
TF TOP OF FOOTING
T/P TOP OF PIPE
TYP TYPICAL
WL WATER LINE

STREET NAME ABBREVIATIONS:

ARGYL ARGYLE STREET
GLNMR GLENMORE STREET
LCHRN LOHCARRON DRIVE

LEGEND



AS-BUILT SET

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN PACIFIC HIGHLANDS, PHASES 2 AND 3, 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 FERDALE DEPARTMENT OF PUBLIC WORKS.

JEFF VANDER YACHT
P.E. NO. 37432

APPROVED



NOV 22 2005
BY [Signature]
CITY OF FERDALE

CALL BEFORE YOU DIG



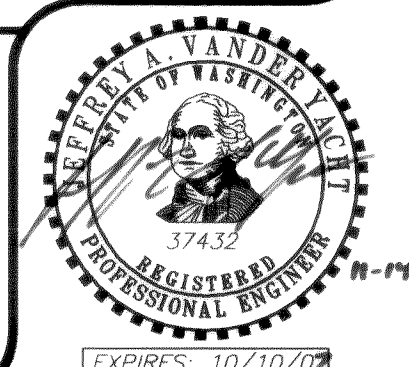
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2114 JAMES STREET
BELLINGHAM, WA 98225

PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS

COVER SHEET

JOB #: 2003 149

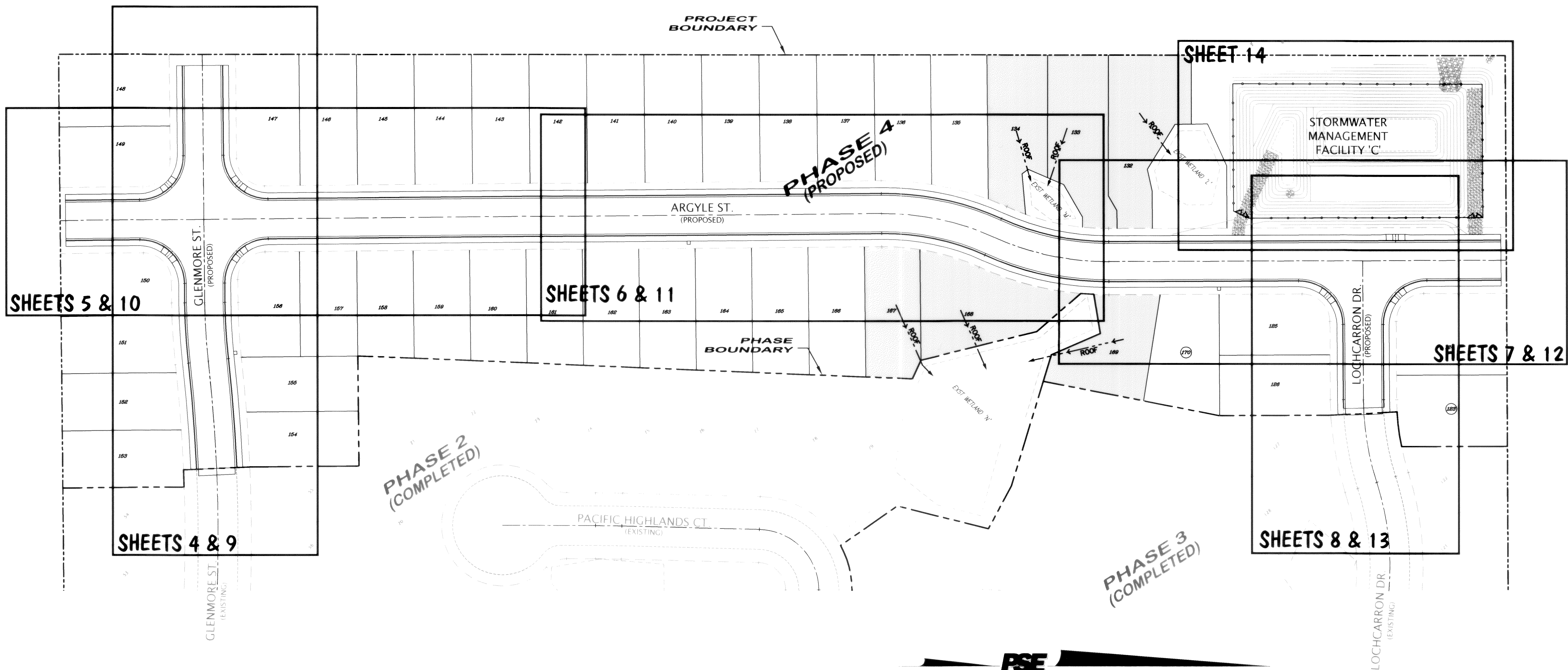
SHEET 1 OF 20



00313.00 8-22-08 K2



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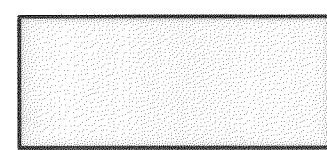


WETLAND HYDRATION NOTES

THE CONSTRUCTION OF STREETS, WALKS, HOMES AND DRIVEWAYS WILL, INEVITABLY, INTERCEPT AND REDIRECT SOME OR ALL OF THE STORMWATER RUNOFF THAT PRESENTLY DRAINS INTO THE DELINEATED WETLANDS THAT ARE TO BE PRESERVED AS A PART OF THE PUD DESIGN. THE "PACIFIC HIGHLANDS SUBDIVISION WETLANDS HYDRATION STUDY", PREPARED AS A PART OF THE PRELIMINARY PLAT APPLICATION AND APPROVAL PROCESS, ADDRESSES THIS ISSUE BY RECOMMENDING THAT ROOF RUNOFF FROM CERTAIN SPECIFIED LOTS BE CARRIED BY BURIED PIPE FROM THE ROOF DOWNSPOUTS TO A DISPERSION TRENCH LOCATED UPHILL FROM EACH AFFECTED WETLAND.

THE LOTS THAT WILL HAVE ALL ROOF RUNOFF (AND/OR FOUNDATION DRAIN RUNOFF) DIRECTED TO ADJACENT WETLANDS ARE SHOWN ON THIS SHEET AS SHADED. THE APPROXIMATE ALIGNMENT OF THE PROPOSED DRAINAGE PIPELINES ARE ALSO SHOWN (SEE LEGEND).

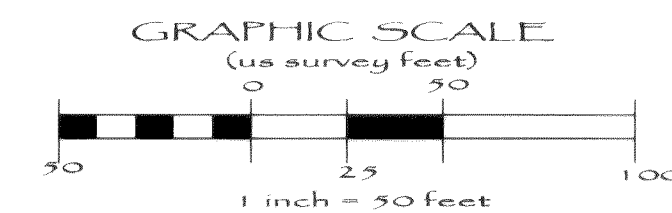
LEGEND



DENOTES LOTS SELECTED TO DRAIN ROOF RUNOFF AND/OR FOUNDATION DRAINS TO WETLANDS



DENOTES ROOF RUNOFF DRAIN PIPE TO WETLAND VIA SPLASH BLOCK AT END OF ROOF DOWNSPOUT



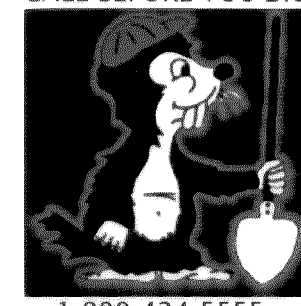
AS-BUILT NOTE:
ONLY INFORMATION NOTED AS
"AB" HAS BEEN FIELD SURVEYED
OR MEASURED DURING CONSTRUCTION.

**AS-BUILT
DRAWING**

APPROVED
NOV 22 2005
BY RC
CITY OF FERDALE

FIELD BOOKS	TBM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	No.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1	FERM04		366.05	BASE	AWU	AWU	HORIZ: 1" = 50'	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	EW	1	ISSUED FOR REVIEW Feb. 2, 2005
STAKING:				DESIGN	BRW	AWU	VERT: N.A.					2	ISSUED FOR PERMIT Mar. 29, 2005
ASBUILT:	CITY OF FERDALE MONUMENT NET, JUNE 2001			XREF:								3	AS-BUILT Oct. 12, 2005
				DWG: # PH4_Eng'_Base.dwg									
SURVEY REFERENCE	VERTICAL DATUM	PLAN CHECK	REVISIONS	ISSUE									

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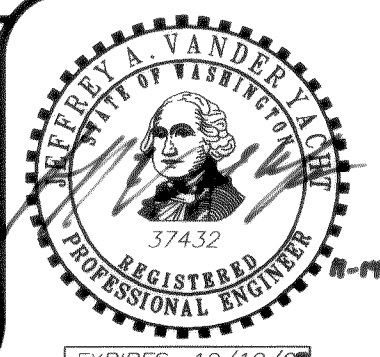
1-800-424-5555

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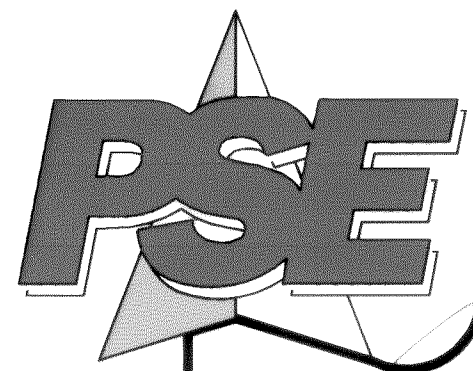
PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
**SHEET INDEX MAP
AND WETLAND HYDRATION EXHIBIT**

JOB #: 2003 149

SHEET 2 OF 20



00313.002 2-22-06 KR



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EAST GRAVEL ROAD

GLENMORE ST.
(PROPOSED)
GLENMORE ST.
(EXISTING)

ARGYLE ST.
(PROPOSED)

PROJECT
BOUNDARY

PHASE 4
(PROPOSED)

PHASE
BOUNDARY

PHASE 2
(COMPLETED)

PACIFIC HIGHLANDS CT.
(EXISTING)

EAST WETLAND "A"

EAST WETLAND "B"

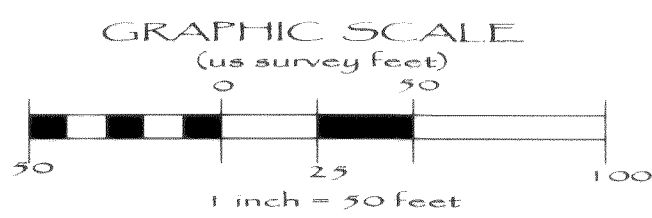
EAST WETLAND "C"

LOCHCARRON DR.
(PROPOSED)

LOCHCARRON DR.
(EXISTING)

PHASE 3
(COMPLETED)

LOCHCARRON DR.
(EXISTING)



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"AB" HAS BEEN FIELD SURVEYED
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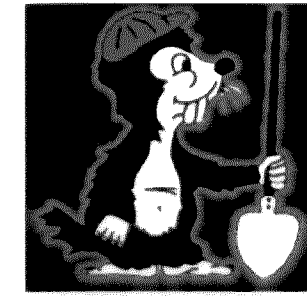
APPROVED

NOV 22 2005

BY RC
CITY OF FERDALE

FIELD BOOKS	TBM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	NO.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1	FERNO4		366.05	BASE	AWU	AWU	HORIZ: 1" = 50'	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	BW	1	ISSUED FOR REVIEW Feb. 2, 2005
STAKING:				DESIGN	BRW	AWU	VERT: N/A					2	ISSUED FOR PERMIT Mar. 29, 2005
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				OWG: # PH4_Engr_Base.dwg									
SURVEY REFERENCE	VERTICAL DATUM	PLAN CHECK	REVISIONS	ISSUE									

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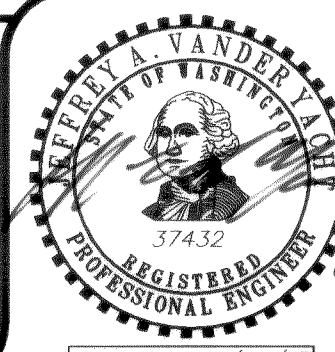
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PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
EXISTING CONDITIONS MAP

JOB #: 2003 149

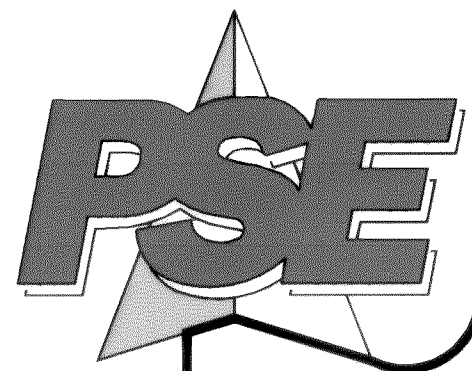
SHEET 3 OF 20



EXPIRES: 10/10/07

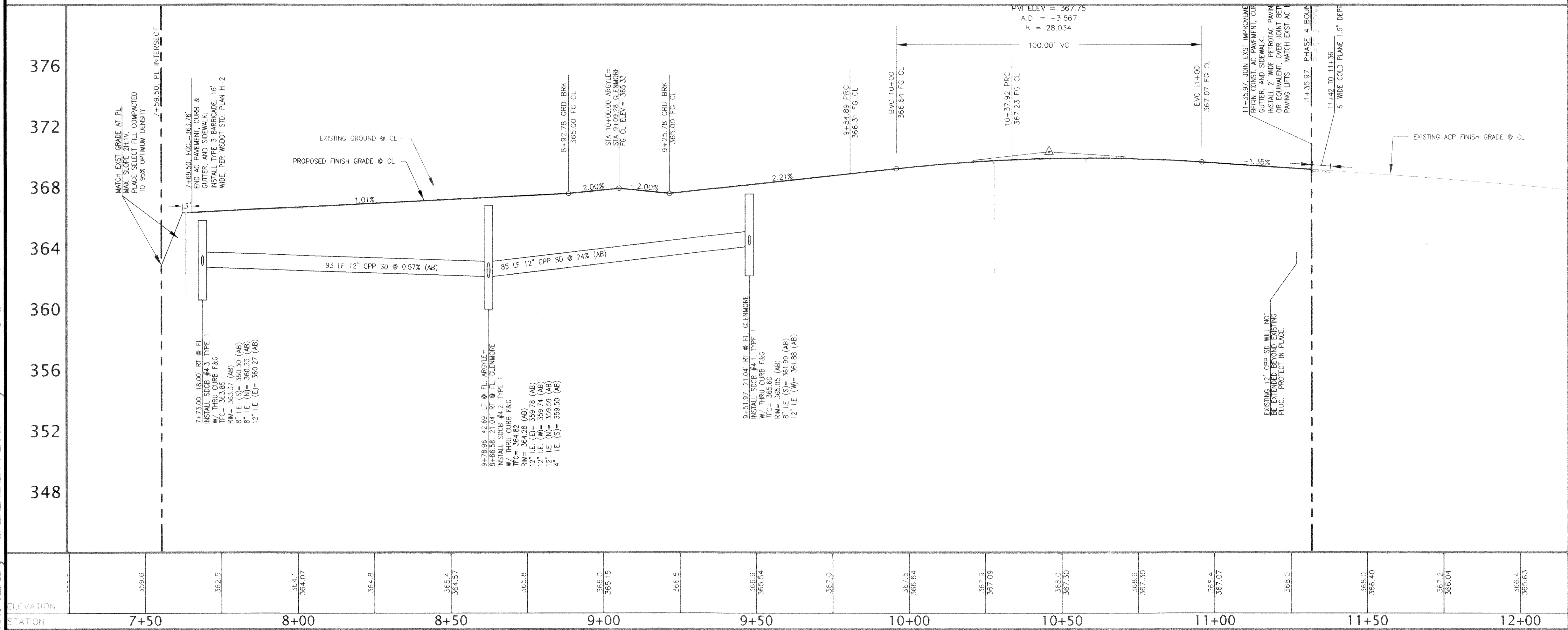
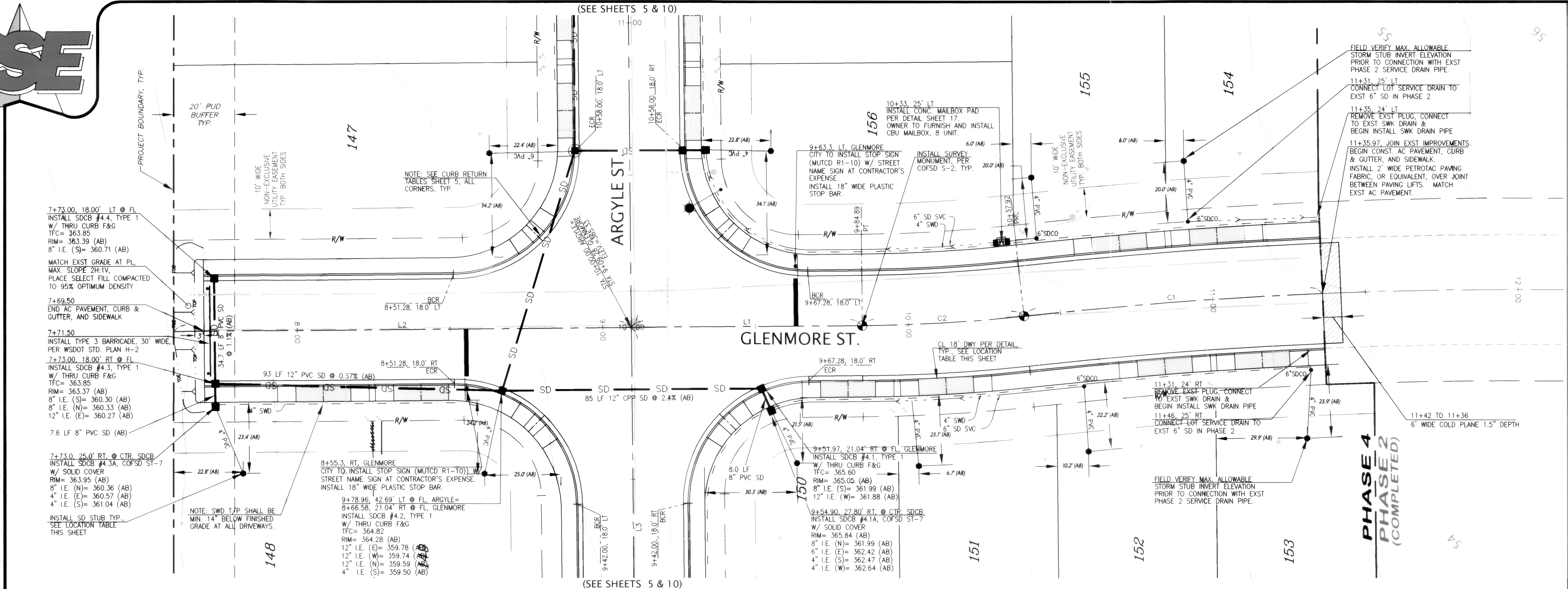
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00313.003 2-820642



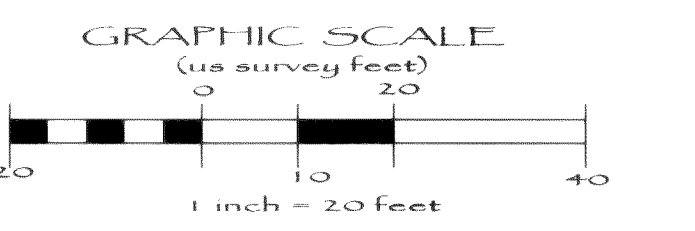
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HORIZONTAL SCALE: 1"= 20' VERTICAL SCALE: 1"= 4'

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.	DATA	DRAWN	CHECKED	SCALE	REV.	DATE	DESCRIPTION	BY	No.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1	FERN04		366.05	BASE	AWU	AWU	HORIZ: 1"=20'	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	EW	1	ISSUED FOR REVIEW Feb. 2, 2005
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AS-BUILT:		CITY OF FERNDALE MONUMENT NET, JUNE 2001		XREF:								3	AS-BUILT Oct. 12, 2005
SURVEY REFERENCE		VERTICAL DATUM		DWG: # PH4_Engr_Base.dwg			PLAN CHECK			REVISIONS			ISSUE



STORM STUB LOCATION TABLE				
LOT NO.	STREET	STA & OFFSET	STUB I.E.	
148	GLENMORE	7+81.2 45.0 RT	360.9	
149	GLENMORE	8+60.3 47.0 RT	360.2	
150	GLENMORE	9+63.5 45.0 RT	363.5	
151	GLENMORE	10+00.5 45.0 RT	363.5	
152	GLENMORE	10+51.2 45.0 RT	363.9	
153	GLENMORE	11+45.9 45.0 RT	FIELD VERIFY	
154	GLENMORE	11+30.9 45.0 LT	FIELD VERIFY	
155	GLENMORE	10+43.2 45.0 LT	363.5	

DRIVEWAY CENTERLINE TABLE				
LOT NO.	STREET	STA & OFFSET	F/C	
148	GLENMORE	8+08.3 18.0 RT		
149	GLENMORE	8+40.3 18.0 RT		
150	GLENMORE	9+80.0 18.0 RT		
151	GLENMORE	10+11.1 18.0 RT		
152	GLENMORE	10+82.6 18.0 RT		
153	GLENMORE	11+15.0 18.0 RT		
154	GLENMORE	11+02.7 18.0 LT		
155	GLENMORE	10+71.1 18.0 LT		

LINE TABLE - ROADWAY CENTERLINE			
LINE	LENGTH	BEARING	DESCRIPTION
L1	75.62'	N89°29'04"E	GLENMORE
L2	149.78'	N89°29'04"E	GLENMORE

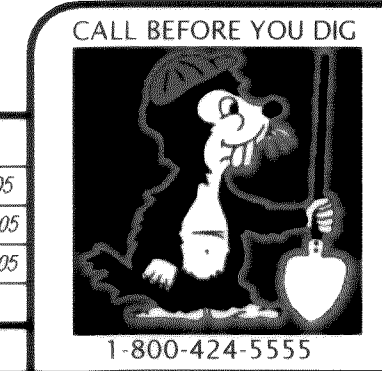
CURVE TABLE - ROADWAY CENTERLINE			
CURVE	DELTA	RADIUS	LENGTH
C1	3°49'18"	1470.00'	98.05'
C2	5°43'55"	530.00'	53.02'

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NOV 22 2005
BY [Signature]
CITY OF FERNDALE

AS-BUILT NOTE:
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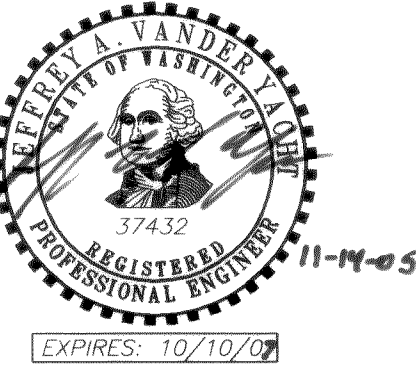
**AS-BUILT
DRAWING**

[CORRESPONDING WATER & SANITARY SEWER IMPROVEMENTS SEE SHEET 9]



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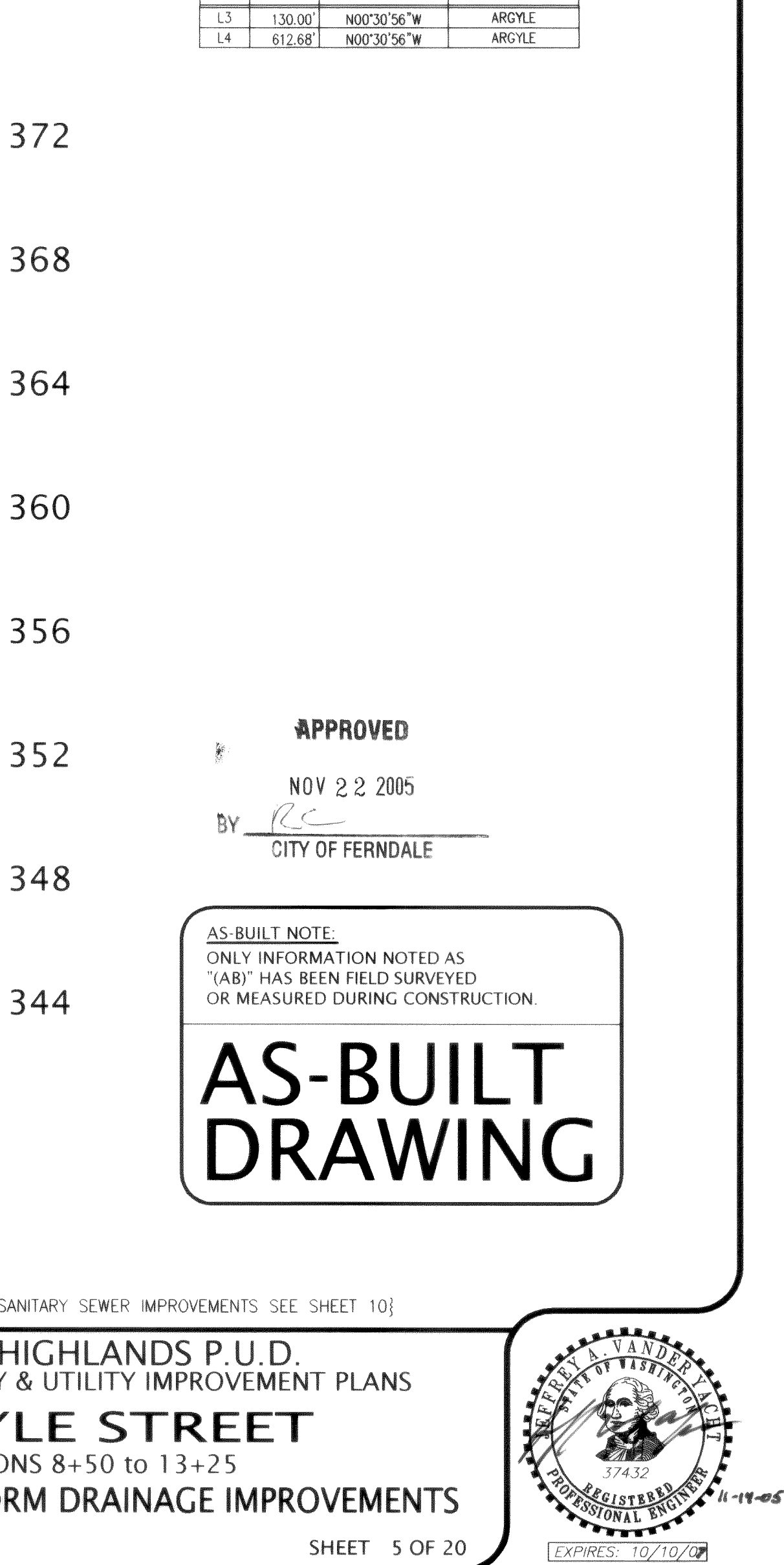
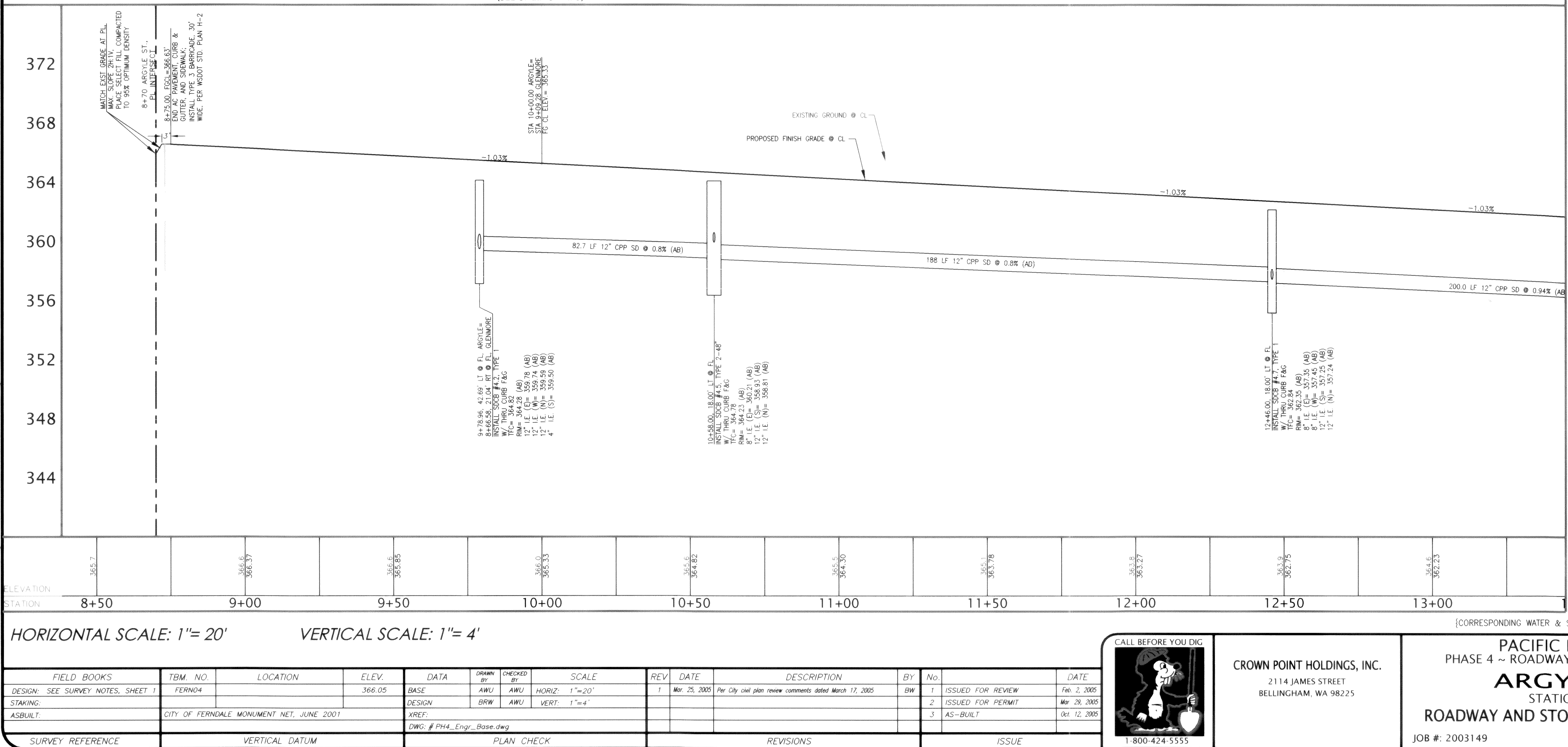
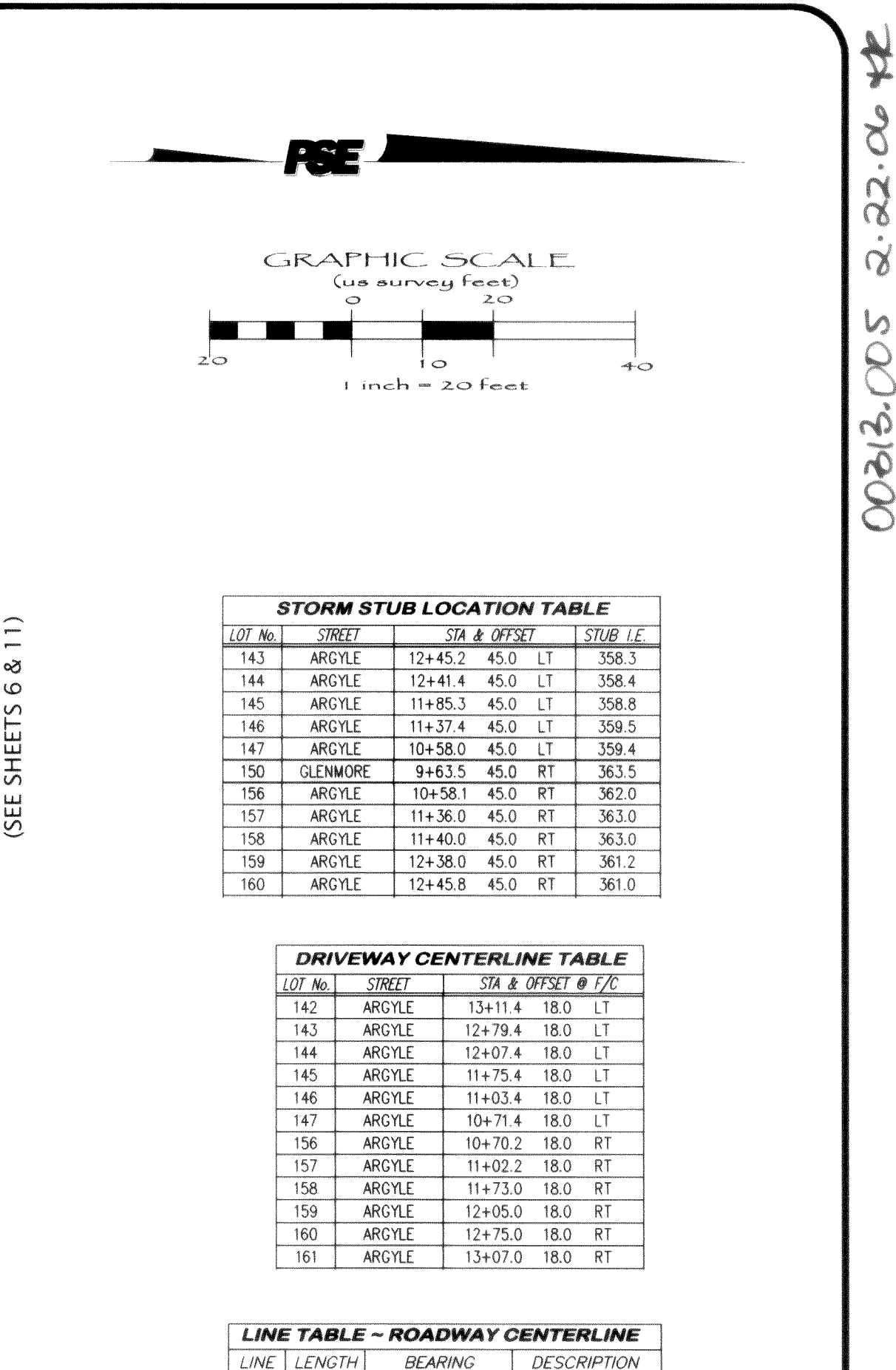
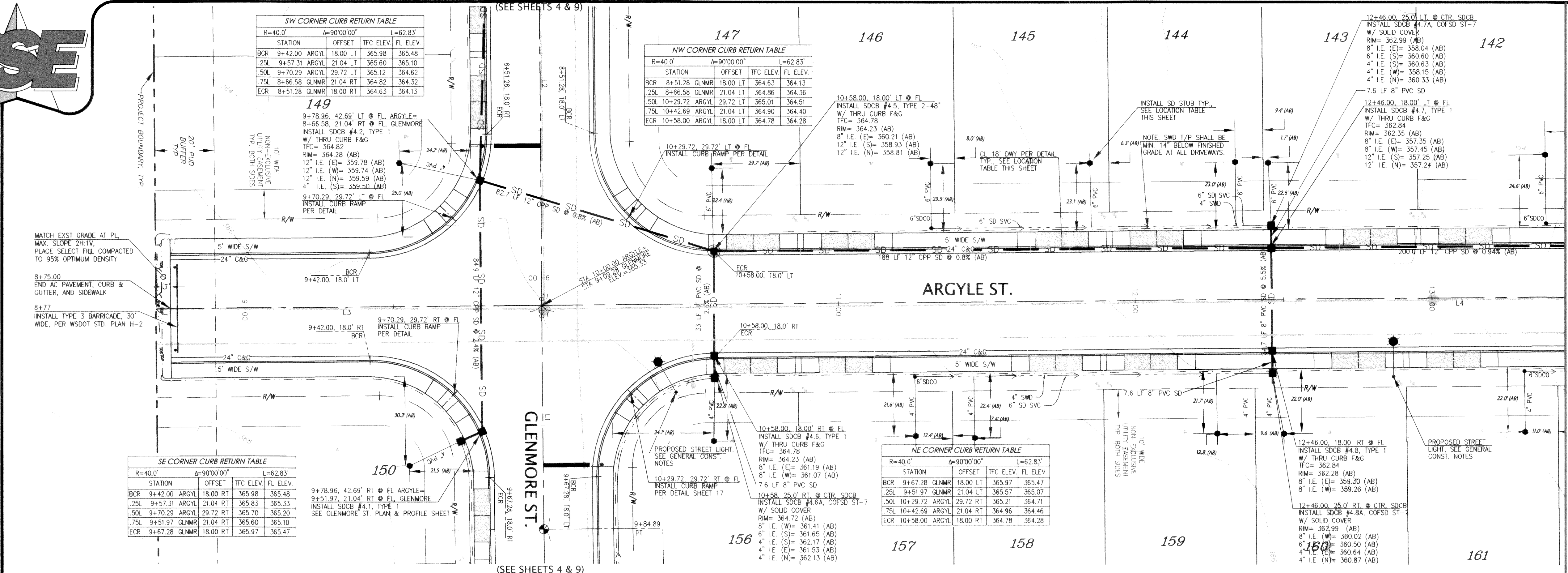
PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
GLENMORE STREET
STATIONS 7+50 TO 11+50
ROADWAY AND STORM DRAINAGE IMPROVEMENTS
JOB #: 2003149 SHEET 4 OF 20



00313.c04 2-22-06 HZ

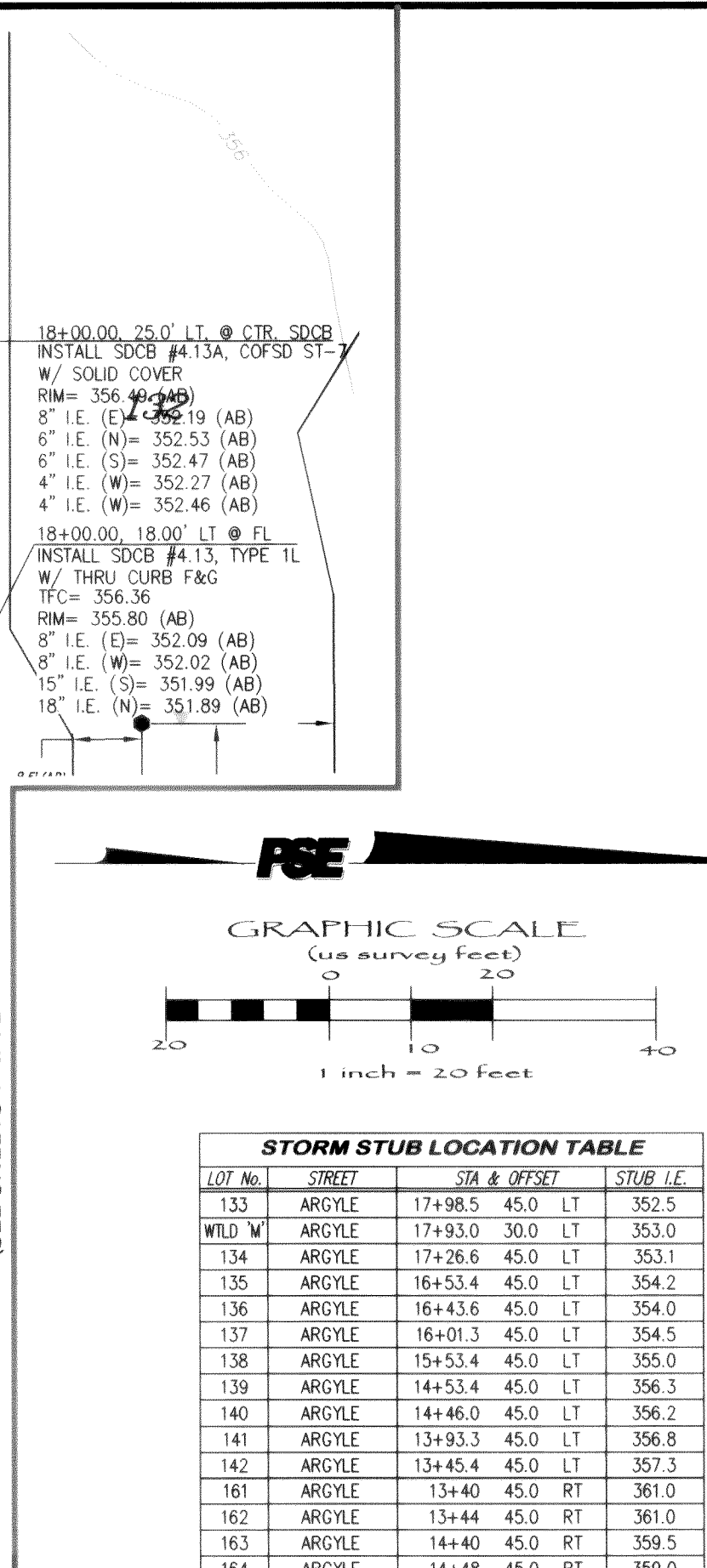
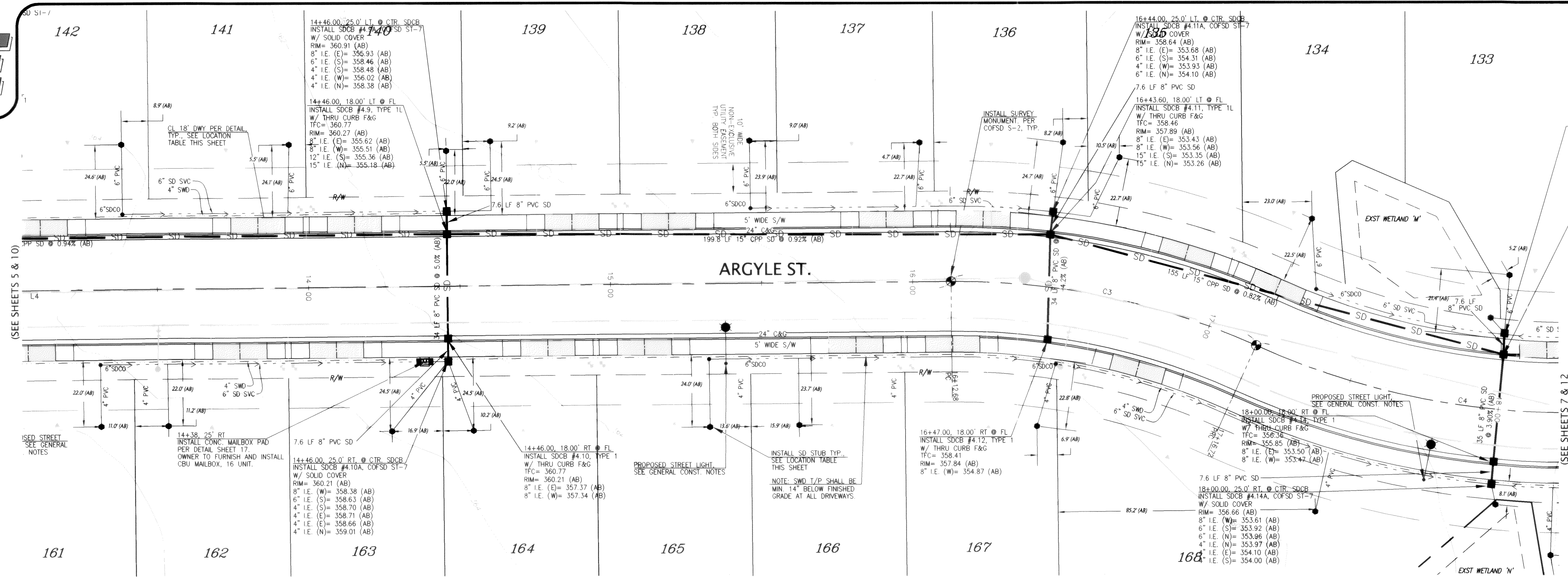


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LOT NO.	STREET	STA. & OFFSET	STUB ELEV.
133	ARGYLE	17+98.5 45.0 LT	352.5
134	ARGYLE	17+93.0 30.0 LT	353.0
135	ARGYLE	17+26.6 45.0 LT	353.1
136	ARGYLE	16+53.4 45.0 LT	354.2
137	ARGYLE	16+01.3 45.0 LT	354.5
138	ARGYLE	15+53.4 45.0 LT	355.0
139	ARGYLE	14+53.4 45.0 LT	356.3
140	ARGYLE	14+46.0 45.0 LT	356.2
141	ARGYLE	13+93.3 45.0 LT	356.8
142	ARGYLE	13+45.4 45.0 LT	357.3
161	ARGYLE	13+40 45.0 RT	361.0
162	ARGYLE	13+44 45.0 RT	361.0
163	ARGYLE	14+40 45.0 RT	359.5
164	ARGYLE	14+48 45.0 RT	359.0
165	ARGYLE	15+44 45.0 RT	357.5
166	ARGYLE	15+92 45.0 RT	356.5
167	ARGYLE	16+51.2 45.0 RT	356.0
168	ARGYLE	17+50 45.0 RT	355.5
WLD N	ARGYLE	18+02 30.0 RT	355.0

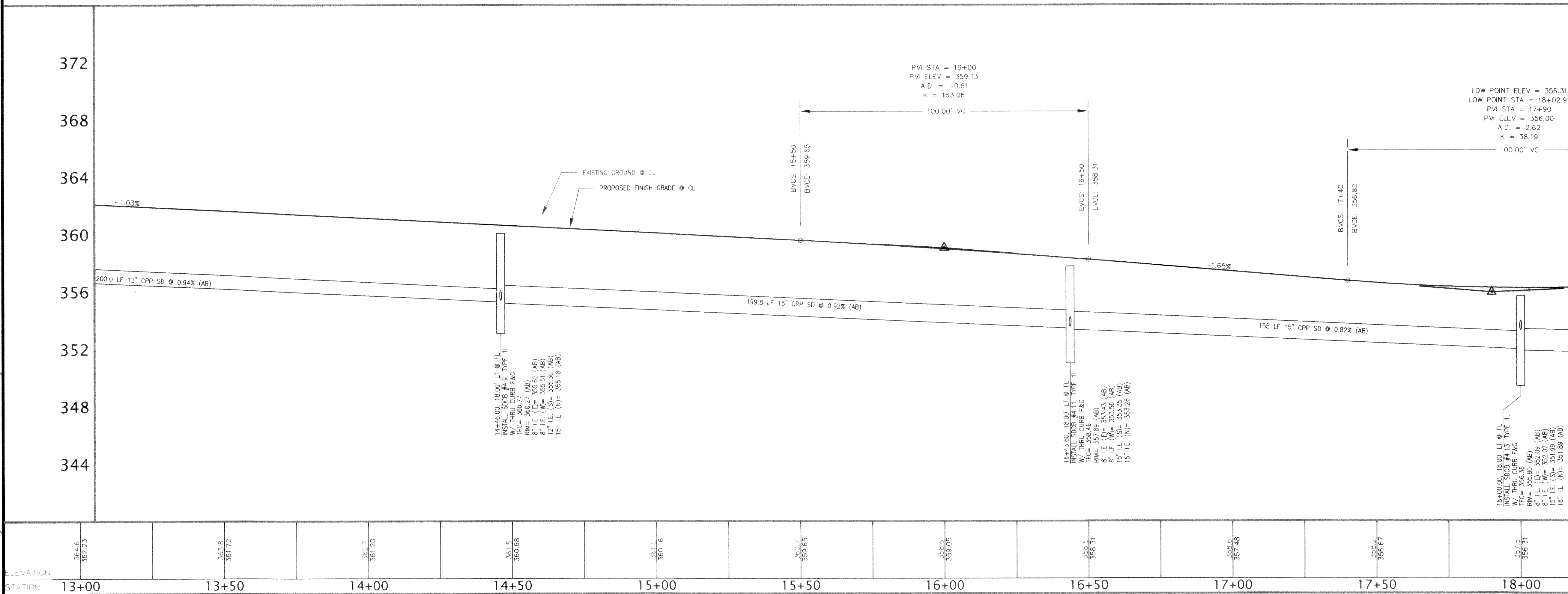
LOT NO.	STREET	STA. & OFFSET	TYPE
134	ARGYLE	17+15.5 18.0 LT	1/C
135	ARGYLE	16+85.7 18.0 LT	1/C
136	ARGYLE	16+22.7 18.0 LT	1/C
137	ARGYLE	15+91.4 18.0 LT	1/C
138	ARGYLE	15+19.4 18.0 LT	1/C
139	ARGYLE	14+87.4 18.0 LT	1/C
140	ARGYLE	14+15.4 18.0 LT	1/C
141	ARGYLE	13+83.4 18.0 LT	1/C
142	ARGYLE	13+11.4 18.0 LT	1/C
162	ARGYLE	13+77.0 18.0 RT	1/C
163	ARGYLE	14+09.0 18.0 RT	1/C
164	ARGYLE	14+79.0 18.0 RT	1/C
165	ARGYLE	15+11.0 18.0 RT	1/C
166	ARGYLE	15+81.0 18.0 RT	1/C
167	ARGYLE	16+13.0 18.0 RT	1/C
168	ARGYLE	16+80.9 18.0 RT	1/C

LINE	LENGTH	BEARING	DESCRIPTION
L4	612.68'	N00°30'56"W	ARGYLE

CURVE	DELTA	RADIUS	LENGTH	DESCRIPTION
C3	24°58'38"	238.66'	104.04'	ARGYLE
C4	24°42'33"	250.00'	107.84'	ARGYLE

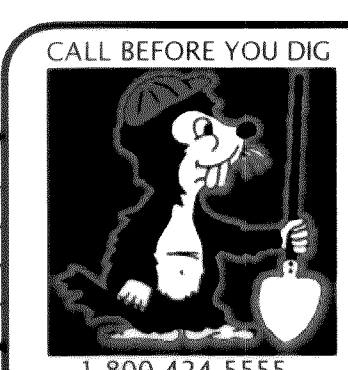
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NOV 2 2 2005
BY: [Signature]
CITY OF FERNDALE
AS-BUILT NOTE
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OR MEASURED DURING CONSTRUCTION.

AS-BUILT
DRAWING



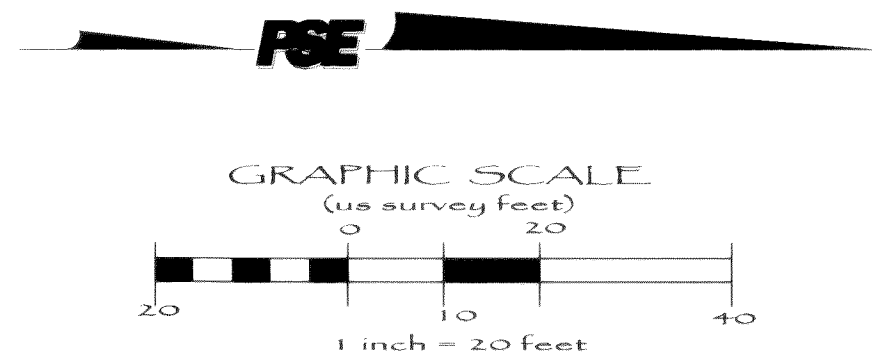
STATION	ELEVATION
13+00	362.25
13+50	361.72
14+00	362.70
14+50	361.55
15+00	361.10
15+50	360.75
16+00	359.05
16+50	358.31
17+00	358.67
17+50	357.51
18+00	356.31

FIELD BOOKS	TBM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	NO.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1	FERNO4		366.05	BASE	AWU	AWU	HORIZ: 1"=20'	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	BW	1	ISSUED FOR REVIEW Feb. 2, 2005
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		PLAN CHECK											
		REVISIONS											
		ISSUE											



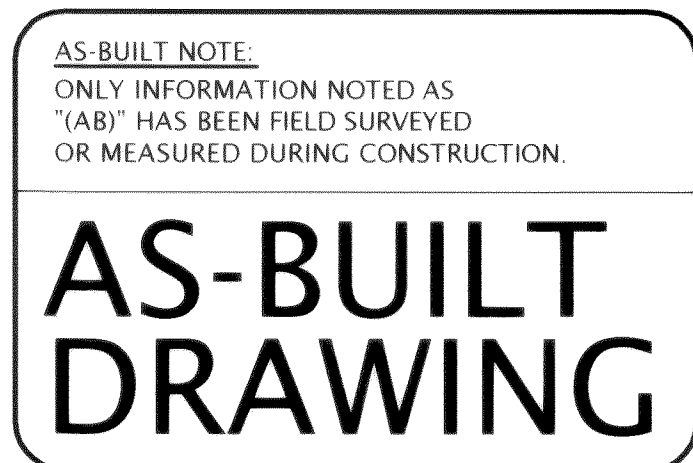
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PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
ARGYLE STREET
STATIONS 13+25 TO 18+00
ROADWAY AND STORM DRAINAGE IMPROVEMENTS
JOB #: 2003149
SHEET 6 OF 20
EXPIRES: 10/10/09



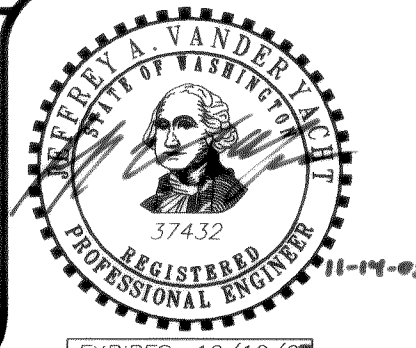
LOT No.	STREET	STA & OFFSET @ F/C
POND	ARGYLE	19+42.0 18.0 LT
POND	ARGYLE	21+56.1 18.0 LT
132	ARGYLE	18+50.7 18.0 LT
169	ARGYLE	18+55.1 18.0 RT
170	ARGYLE	18+87.1 18.0 RT

CURVE	DELTA	RADIUS	LENGTH	DESCRIPTION
C4	24°42'53"	250.00'	107.84'	ARGYLE

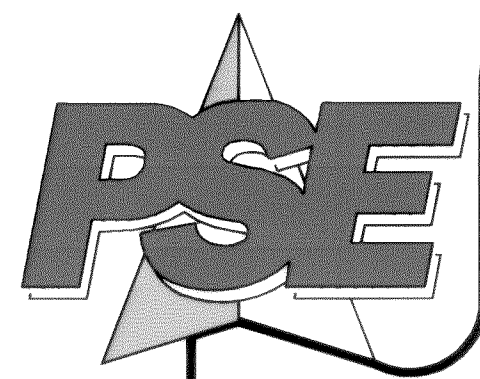


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ARGYLE STREET
STATIONS 18+00 to 21+85
ROADWAY AND STORM DRAINAGE IMPROVEMENTS

SHEET 7 OF 20

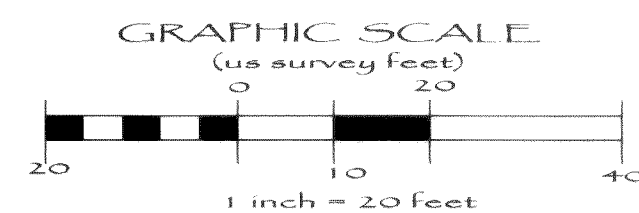
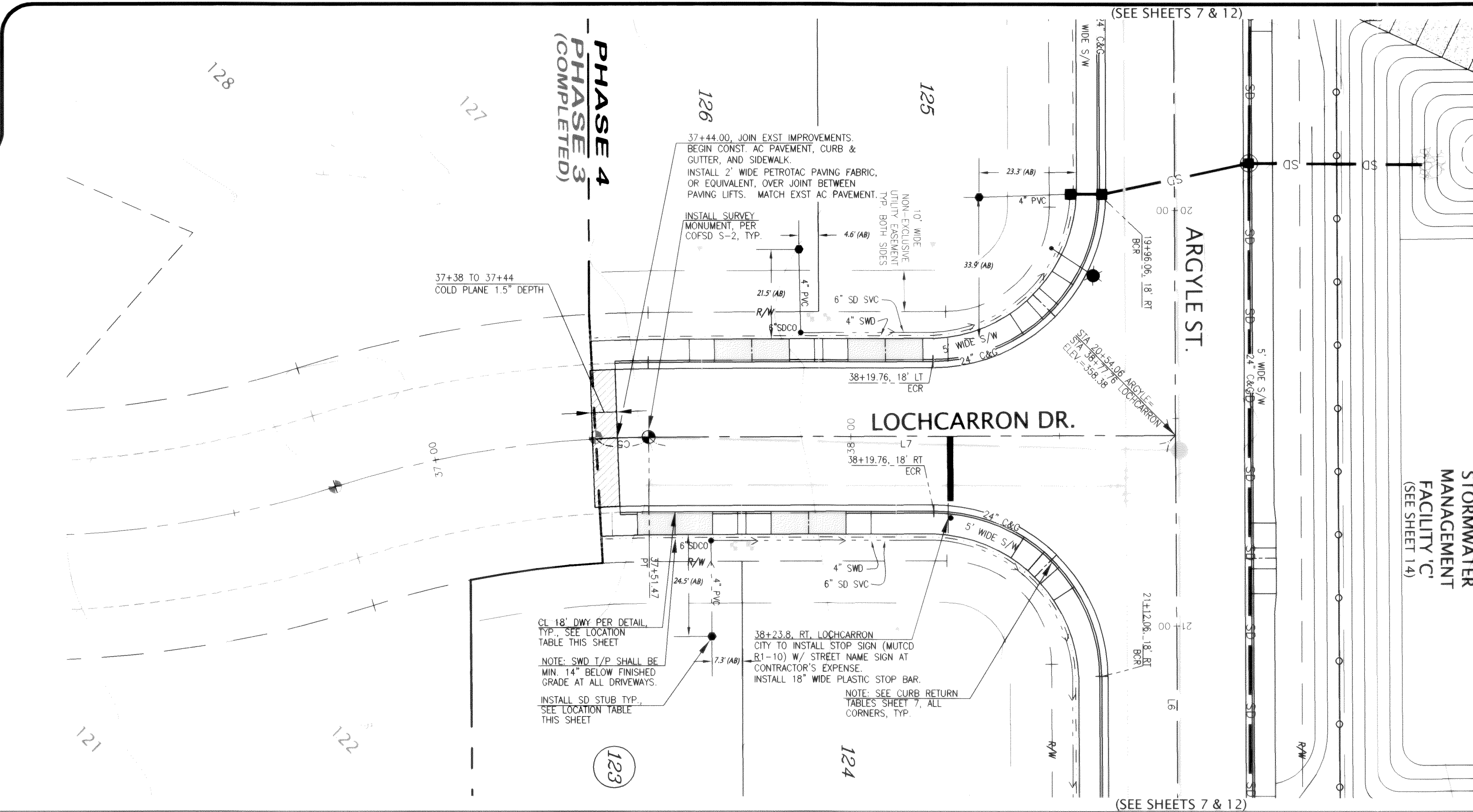


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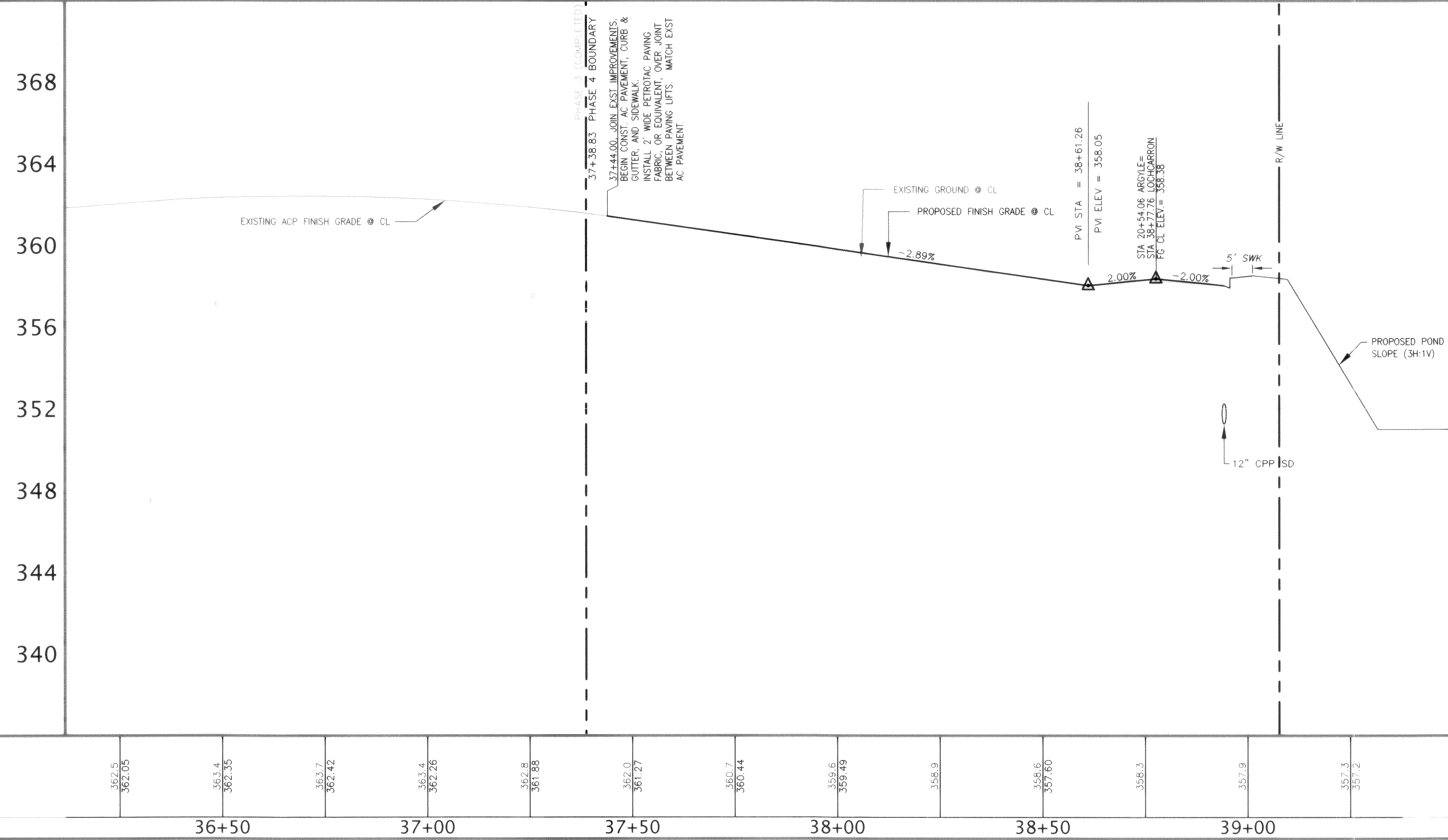


STORM STUB LOCATION TABLE				
LOT No.	STREET	STA & OFFSET	STUB I/E	
123	LOCHCARRON	37+68.9 45.0 RT	356.0	
124	ARGYLE	21+61.2 45.0 RT	354.5	
125	ARGYLE	19+96.2 45.0 RT	355.5	
126	LOCHCARRON	37+87.7 45.0 LT	356.5	

DRIVEWAY CENTERLINE TABLE				
LOT No.	STREET	STA & OFFSET @ T/C		
123	LOCHCARRON	37+57.7 18.0 RT		
124	LOCHCARRON	37+89.7 18.0 RT		
125	LOCHCARRON	38+08.3 18.0 LT		
126	LOCHCARRON	37+76.3 18.0 LT		

LINE TABLE - ROADWAY CENTERLINE			
LINE	LENGTH	BEARING	DESCRIPTION
L6	130.00'	N00°15'11"W	ARGYLE
L7	126.29'	N89°44'49"E	LOCHCARRON

CURVE TABLE - ROADWAY CENTERLINE				
CURVE	DELTA	RADIUS	LENGTH	DESCRIPTION
C5	2°53'55"	250.00'	12.65'	LOCHCARRON



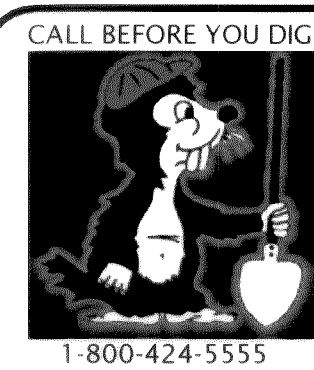
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HORIZONTAL SCALE: 1"= 20'
VERTICAL SCALE: 1"= 4'

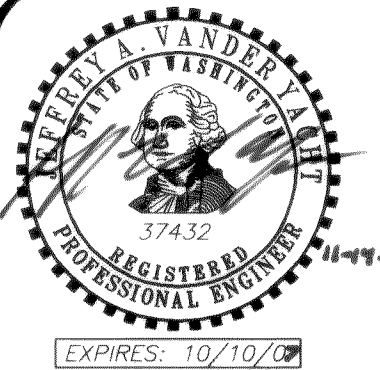
FIELD BOOKS	TBM. NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	No.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1	FERN04		366.05	BASE	AWU	AWU	HORIZ: 1"=20'	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	BW	1	ISSUED FOR REVIEW Feb. 2, 2005
STAKING:				DESIGN	BRW	AWU	VERT: 1"=4'					2	ISSUED FOR PERMIT Mar. 29, 2005
ASBUILT:		CITY OF FERDALE MONUMENT NET, JUNE 2001		XREF:								3	AS-BUILT Oct. 12, 2005
SURVEY REFERENCE		VERTICAL DATUM		PLAN CHECK		REVISIONS		ISSUE					

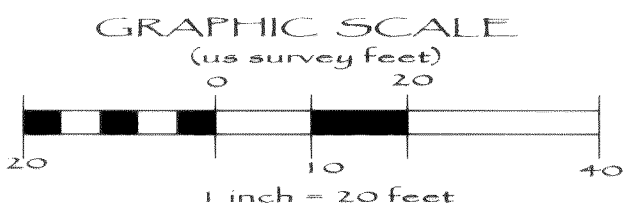
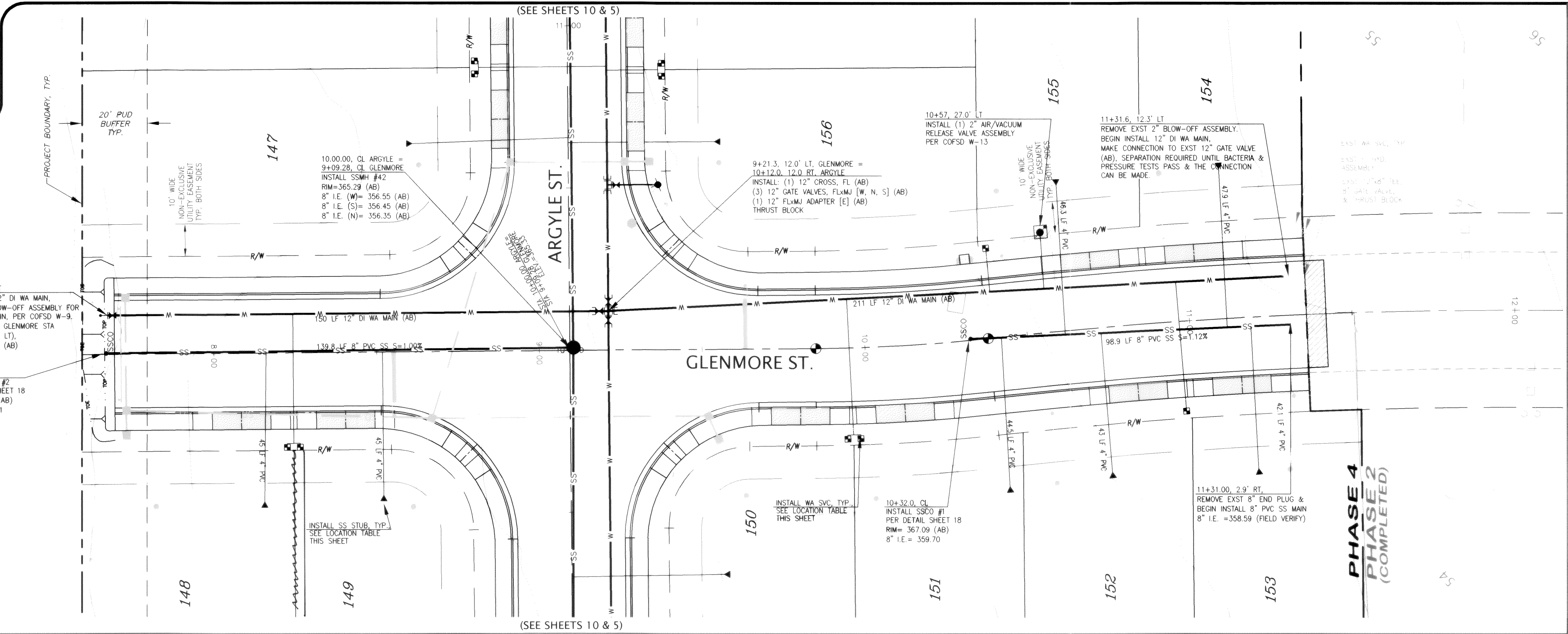


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{CORRESPONDING WATER & SANITARY SEWER IMPROVEMENTS SEE SHEET 13}

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LOCHCARRON DRIVE
STATIONS 37+00 TO 39+50
ROADWAY AND STORM DRAINAGE IMPROVEMENTS
JOB #: 2003149
SHEET 8 OF 20





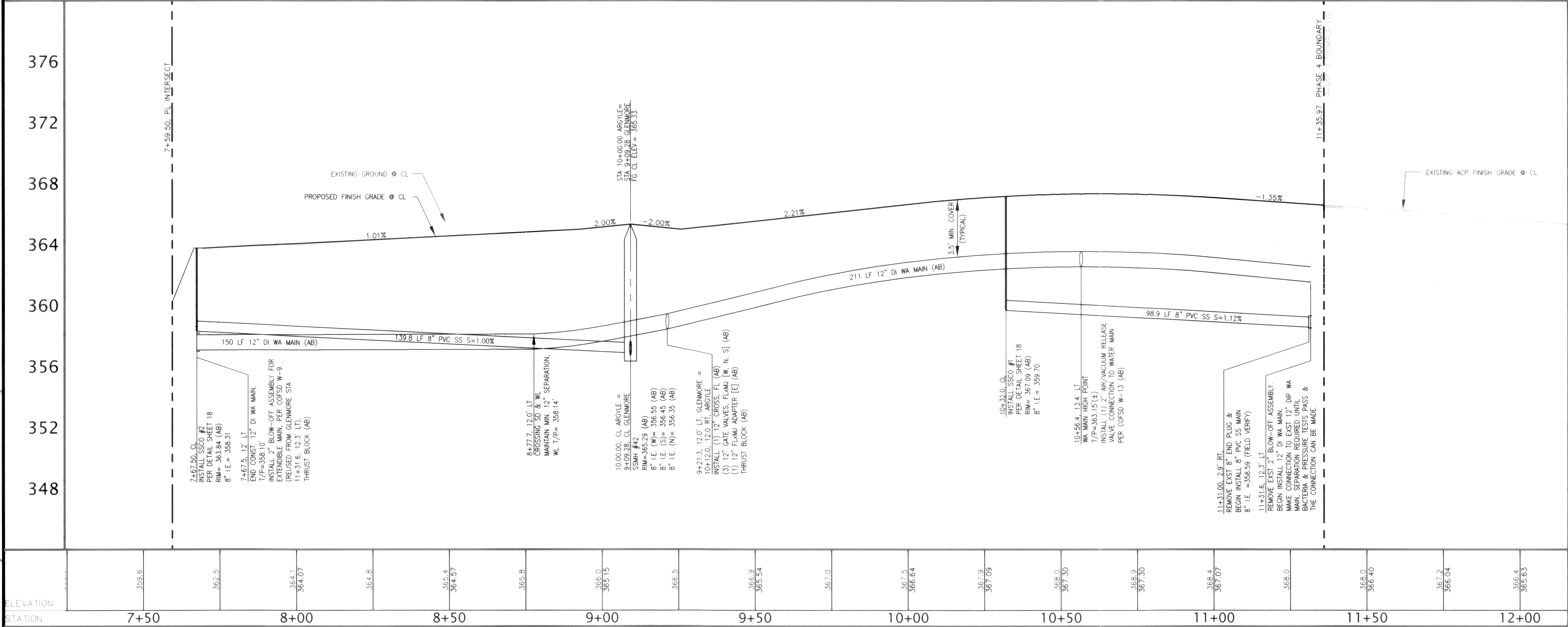
WATER SVC LOCATION TABLE				
LOT No.	STREET	STA & OFFSET	TYPE	
148	GLENMORE	8+22.3 26.5 RT	1" DUAL	
149	GLENMORE	8+26.3 26.5 RT		
150	GLENMORE	9+93.8 26.5 RT	1" DUAL	
151	GLENMORE	9+97.6 26.5 RT		
152	GLENMORE	10+96.7 26.5 RT	3/4" SINGLE	
153	GLENMORE	EXST PER PHASE 2	N/A	
154	GLENMORE	EXST PER PHASE 2	N/A	
155	GLENMORE	10+39.9 26.5 LT	3/4" SINGLE	

SEWER STUB LOCATION TABLE				
LOT No.	STREET	STA & OFFSET @ MAIN	STA & OFFSET @ STUB	STUB I.E.
148	GLENMORE	8+16.0 0.0 CL	8+16.0 45.0 RT	358.9
149	GLENMORE	8+51.8 0.0 CL	8+51.8 45.0 RT	358.6
150	ARGYLE	9+30.2 0.0 CL	9+30.2 45.0 RT	362.1
151	GLENMORE	10+42.0 0.6 RT	10+39.4 45.0 RT	362.1
152	GLENMORE	10+72.6 2.0 RT	10+71.2 45.0 RT	362.1
153	GLENMORE	11+24.9 3.0 RT	11+25.1 45.0 RT	362.1
154	GLENMORE	11+11.6 2.9 RT	11+11.8 45.0 LT	361.6
155	GLENMORE	10+61.6 1.3 RT	10+63.3 45.0 LT	362.1

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[CORRESPONDING ROADWAY & STORM DRAINAGE IMPROVEMENTS SEE SHEET 4]

FIELD BOOKS		IBM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	No.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1		FERN04		366.05	BASE	AWU	AWU	HORIZ: 1"=20'	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	BW	1	ISSUED FOR REVIEW Feb. 2, 2005
STAKING:					DESIGN	BRW	AWU	VERT: 1"=4'					2	ISSUED FOR PERMIT Mar. 29, 2005
AS-BUILT:		CITY OF FERNDAL MONUMENT NET, JUNE 2001			XREF:								3	AS-BUILT Oct. 12, 2005
SURVEY REFERENCE		VERTICAL DATUM			DWG: # PH4_Engn_Base.dwg		PLAN CHECK		REVISIONS		ISSUE			

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GLENMORE STREET
STATIONS 7+50 to 11+50
WATER AND SANITARY SEWER IMPROVEMENTS

JOB #: 2003149

SHEET 9 OF 20

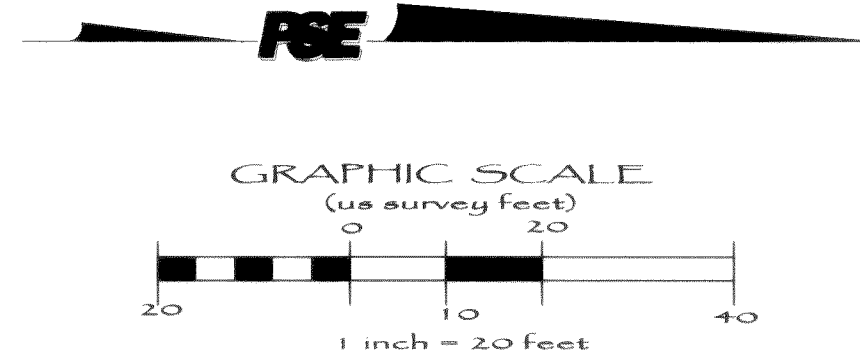
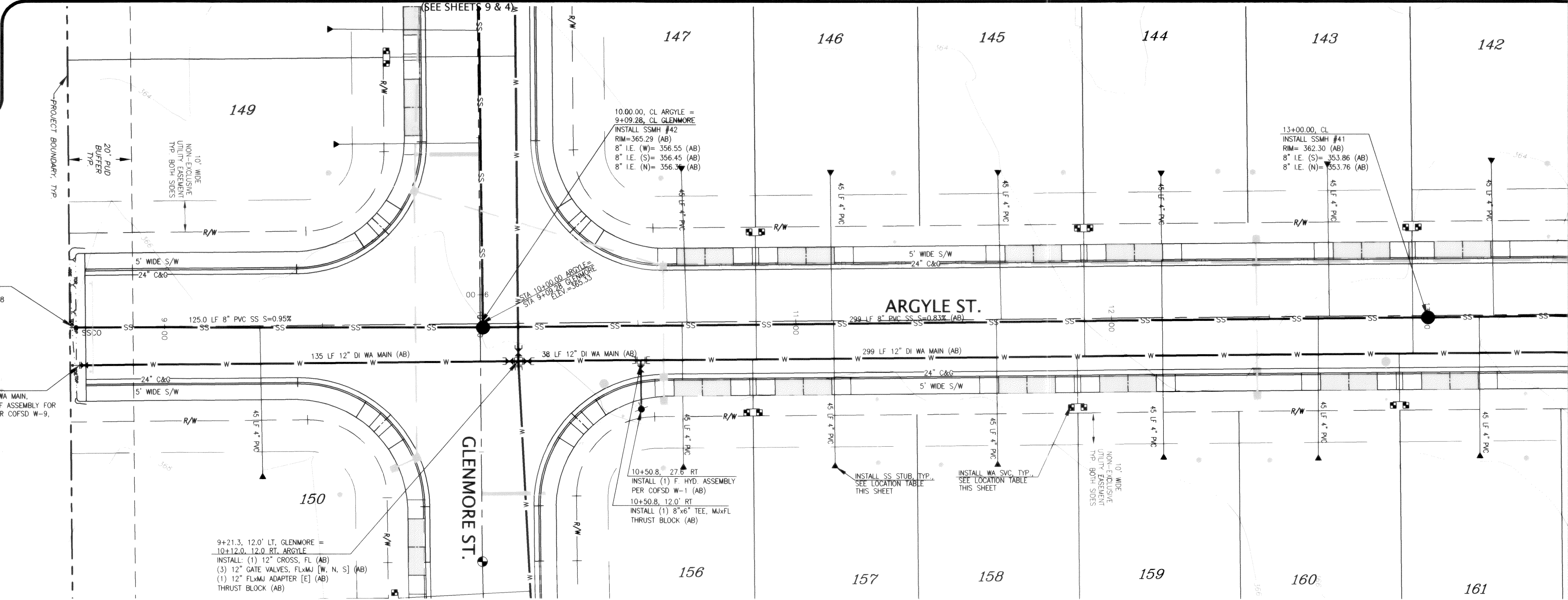


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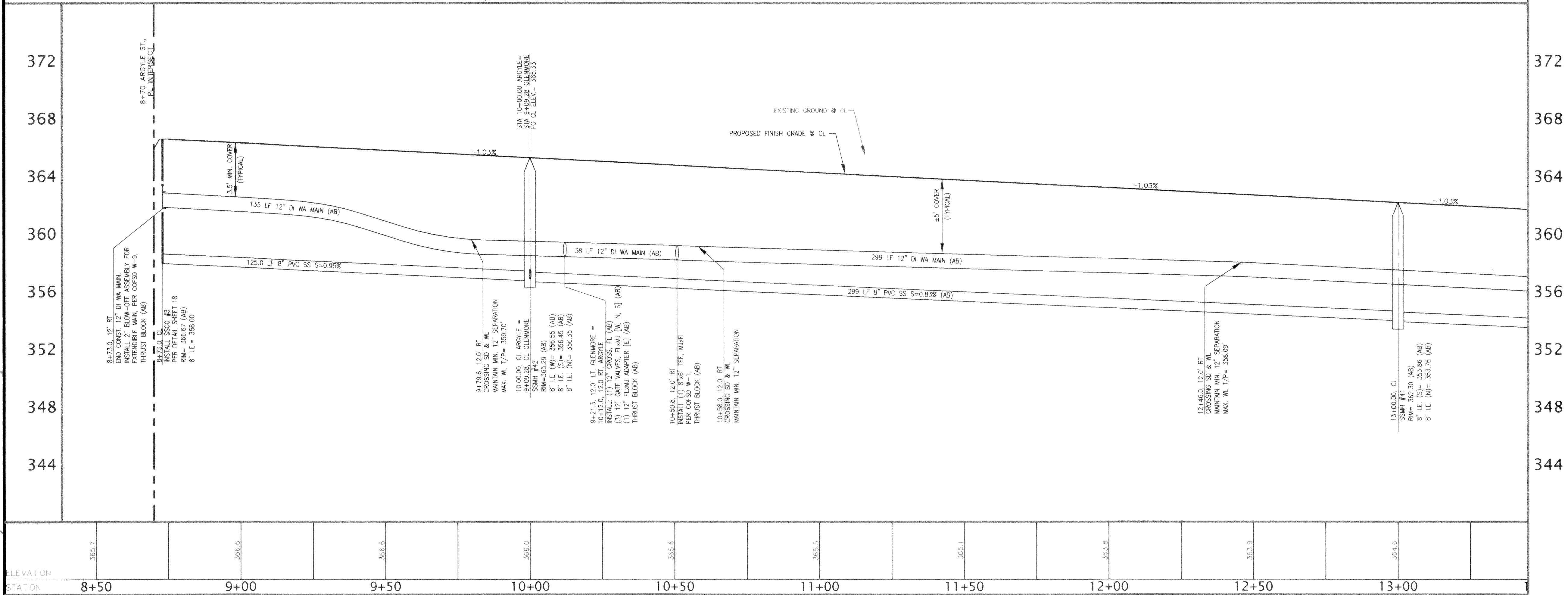
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WATER SVC LOCATION TABLE				
LOT No.	STREET	STA & OFFSET	TYPE	
142	ARGYLE	12+97.4 26.5 LT	1" DUAL	
143	ARGYLE	12+93.4 26.5 LT	1" DUAL	
144	ARGYLE	11+93.4 26.5 LT	1" DUAL	
145	ARGYLE	11+89.4 26.5 LT	1" DUAL	
146	ARGYLE	10+84.2 26.5 LT	1" DUAL	
147	ARGYLE	10+88.2 26.5 RT	1" DUAL	
148	ARGYLE	11+87.0 26.5 RT	1" DUAL	
149	ARGYLE	11+91.0 26.5 RT	1" DUAL	
150	ARGYLE	12+89.0 26.5 RT	1" DUAL	
151	ARGYLE	12+93.0 26.5 RT	1" DUAL	

SEWER STUB LOCATION TABLE				
LOT No.	STREET	STA & OFFSET @ MAN	STA & OFFSET @ STUB	STUB I.E.
142	ARGYLE	13+21.0 0.0 CL	13+21.0 45.0 LT	355.6
143	ARGYLE	12+69.0 0.0 CL	12+69.0 45.0 LT	356.1
144	ARGYLE	12+17.0 0.0 CL	12+17.0 45.0 LT	356.5
145	ARGYLE	11+65.0 0.0 CL	11+65.0 45.0 LT	356.9
146	ARGYLE	11+13.0 0.0 CL	11+13.0 45.0 LT	357.1
147	ARGYLE	10+65.5 0.0 CL	10+65.5 45.0 LT	357.4
148	ARGYLE	9+30.2 0.0 CL	9+30.2 45.0 RT	362.1
149	ARGYLE	10+64.0 0.0 CL	10+64.0 45.0 RT	357.2
150	ARGYLE	11+12.0 0.0 CL	11+12.0 45.0 RT	356.9
151	ARGYLE	11+63.5 0.0 CL	11+63.5 45.0 RT	356.5
152	ARGYLE	12+14.5 0.0 CL	12+14.5 45.0 RT	356.2
153	ARGYLE	12+85.5 0.0 CL	12+85.5 45.0 RT	356.1
154	ARGYLE	13+16.5 0.0 CL	13+16.5 45.0 RT	355.6

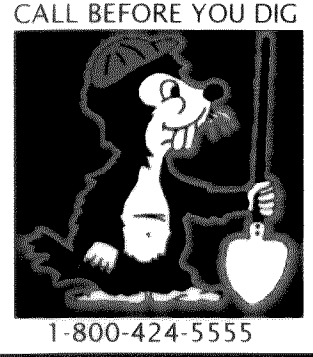


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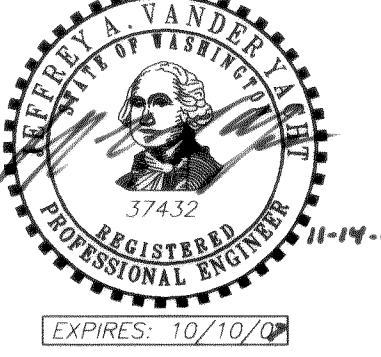
**AS-BUILT
DRAWING**

FIELD BOOKS		TBM. NO.	LOCATION	ELEV.	DATA	ORIGIN	CHECKED	SCALE	REV	DATE	DESCRIPTION	BY	No.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1		FERND4		366.05	BASE	AWU	AWU	HORIZ: 1"=20'	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	EW	1	ISSUED FOR REVIEW
STAKING:					DESIGN	BRW	AWU	VERT: 1"=4'					2	ISSUED FOR PERMIT
AS-BUILT:					XREF:								3	AS-BUILT
SURVEY REFERENCE			VERTICAL DATUM		DWG: # PH4_Engr_Base.dwg									
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					REVISIONS									
					ISSUE									



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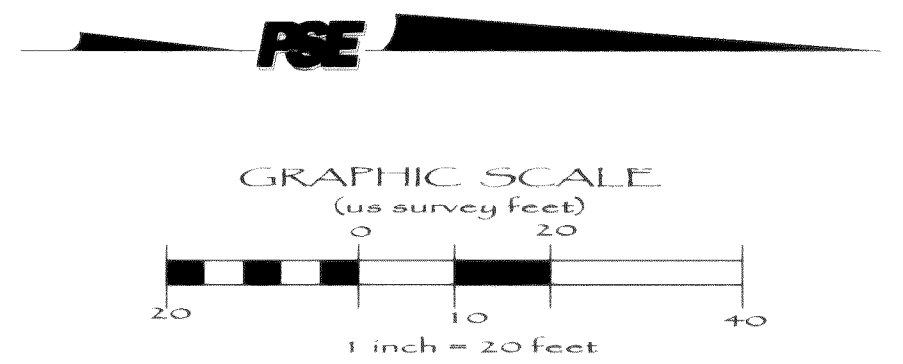
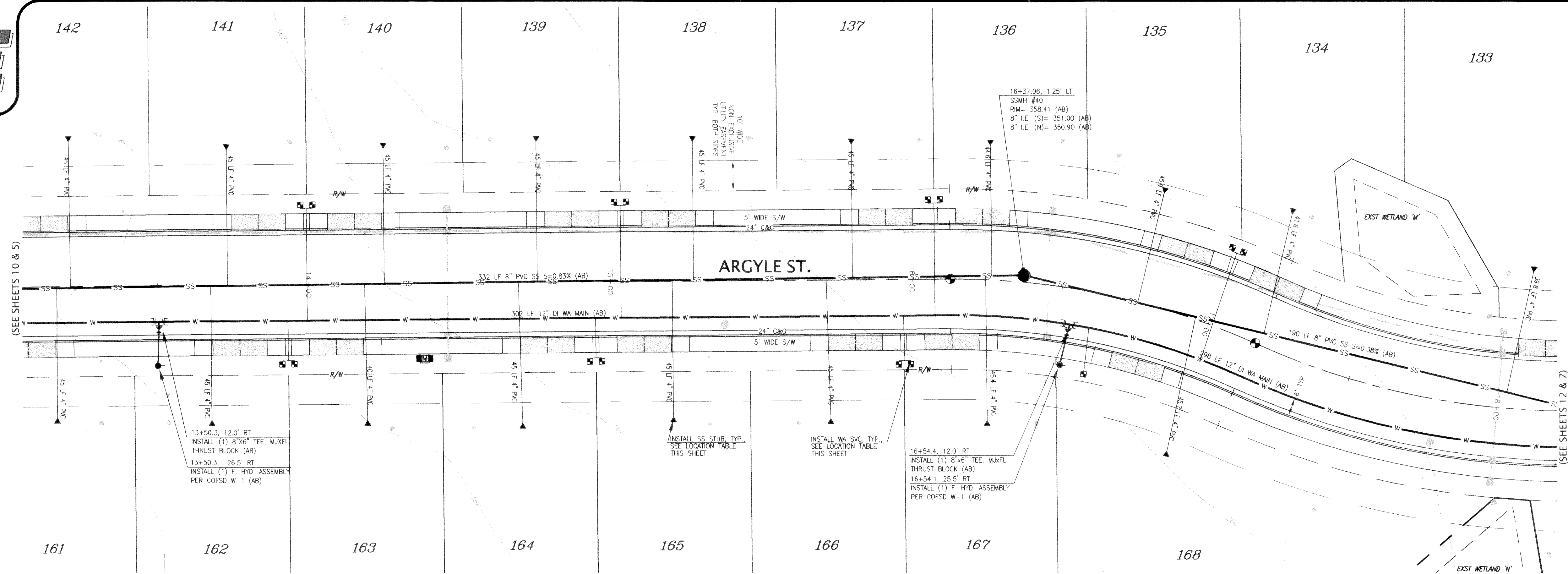
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ARGYLE STREET
STATIONS 8+50 TO 13+25
WATER AND SANITARY SEWER IMPROVEMENTS





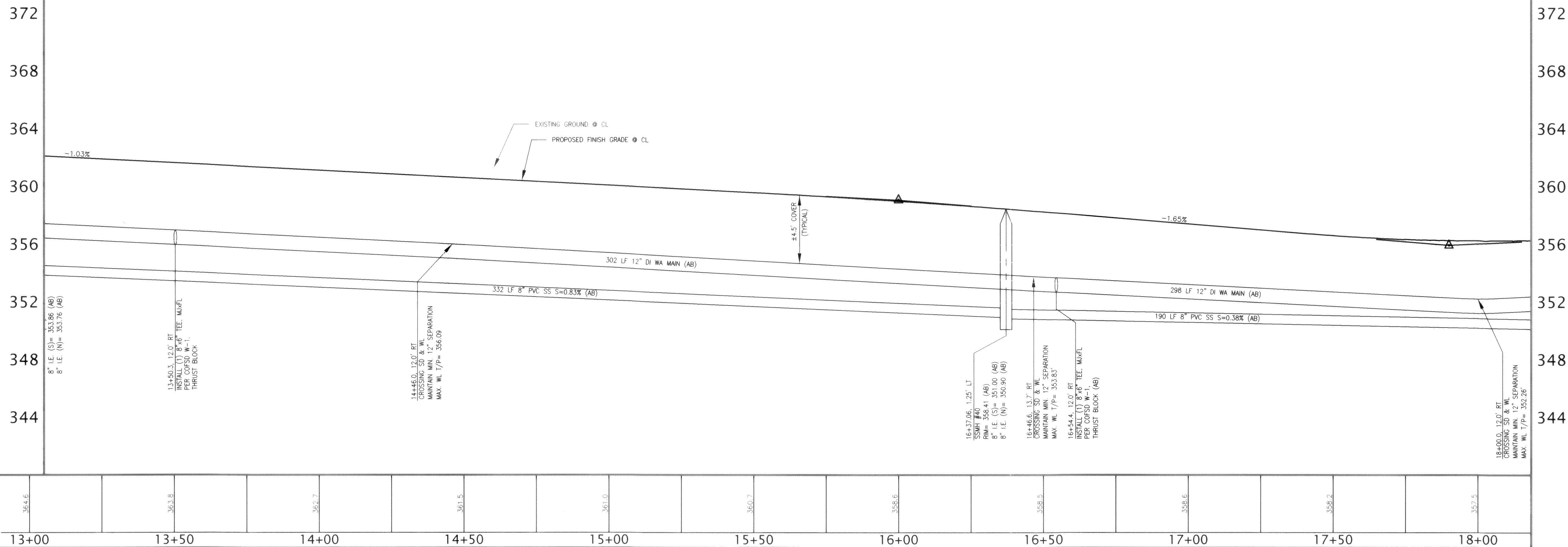
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WATER SVC LOCATION TABLE			
LOT No.	STREET	STA & OFFSET	TYPE
134	ARGYLE	17+02.3 26.5 LT	1" DUAL
135	ARGYLE	16+98.7 26.5 LT	1" DUAL
136	ARGYLE	16+09.4 26.5 LT	1" DUAL
137	ARGYLE	16+09.4 26.5 LT	1" DUAL
138	ARGYLE	15+05.4 26.5 LT	1" DUAL
139	ARGYLE	15+05.4 26.5 LT	1" DUAL
140	ARGYLE	14+01.4 26.5 LT	1" DUAL
141	ARGYLE	13+97.4 26.5 LT	1" DUAL
162	ARGYLE	13+91.0 26.5 RT	1" DUAL
163	ARGYLE	13+95.0 26.5 RT	1" DUAL
164	ARGYLE	14+93.0 26.5 RT	1" DUAL
165	ARGYLE	14+97.0 26.5 RT	1" DUAL
166	ARGYLE	15+95.0 26.5 RT	1" DUAL
167	ARGYLE	15+99.0 26.5 RT	1" DUAL
168	ARGYLE	16+61.3 26.5 RT	3/4" SINGLE

SEWER STUB LOCATION TABLE			
LOT No.	STREET	STA & OFFSET @ MAIN	STA & OFFSET @ STUB
133	ARGYLE	18+02.9 5.7 LT	18+10.1 45.0 LT
134	ARGYLE	17+19.0 4.1 LT	17+11.8 45.0 LT
135	ARGYLE	16+75.5 0.9 RT	16+74.6 45.0 LT
136	ARGYLE	16+27.1 0.4 RT	16+24.9 45.0 LT
137	ARGYLE	15+81.0 0.0 CL	15+81.0 45.0 LT
138	ARGYLE	15+29.0 0.0 CL	15+29.0 45.0 LT
139	ARGYLE	14+77.0 0.0 CL	14+77.0 45.0 LT
140	ARGYLE	14+25.0 0.0 CL	14+25.0 45.0 LT
141	ARGYLE	13+73.0 0.0 CL	13+73.0 45.0 LT
142	ARGYLE	13+21.0 0.0 CL	13+21.0 45.0 LT
161	ARGYLE	13+16.5 0.0 CL	13+16.5 45.0 RT
162	ARGYLE	13+67.5 0.0 CL	13+67.5 45.0 RT
163	ARGYLE	14+18.5 0.0 CL	14+18.5 45.0 RT
164	ARGYLE	14+79.5 0.0 CL	14+79.5 45.0 RT
165	ARGYLE	15+20.5 0.0 CL	15+20.5 45.0 RT
166	ARGYLE	15+71.5 0.0 CL	15+71.5 45.0 RT
167	ARGYLE	16+25.1 0.3 LT	16+28.1 45.0 RT
168	ARGYLE	16+95.2 0.4 LT	17+01.2 45.0 RT



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HORIZONTAL SCALE: 1"= 20' VERTICAL SCALE: 1"= 4'

FIELD BOOKS	TBM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	No.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1	FERND4		366.05	BASE	AWU	AWU	HORIZ: 1"=20'	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	BW	1	ISSUED FOR REVIEW Feb. 2, 2005
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SURVEY REFERENCE		VERTICAL DATUM		PLAN CHECK				REVISIONS		ISSUE			

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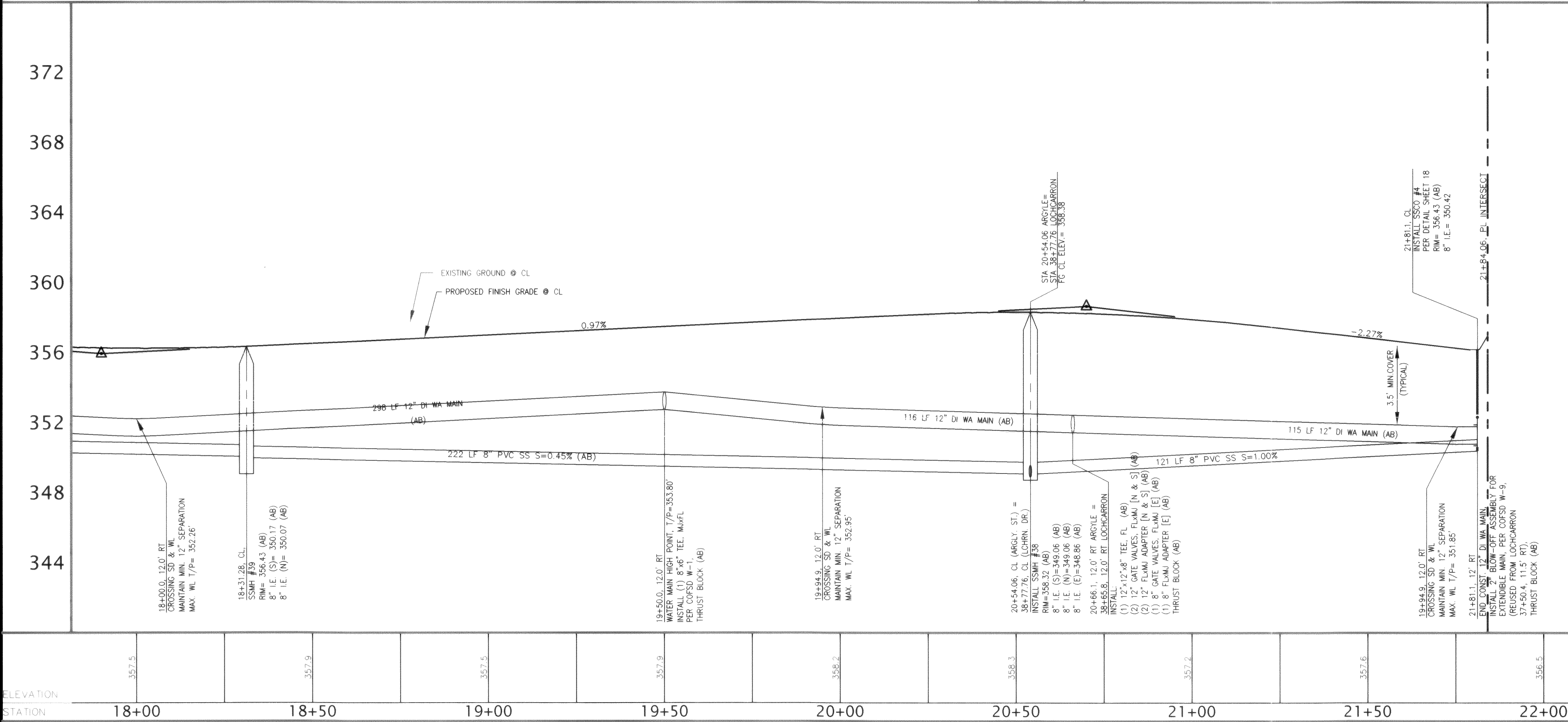
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PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
ARGYLE STREET
STATIONS 13+25 TO 18+00
WATER AND SANITARY SEWER IMPROVEMENTS

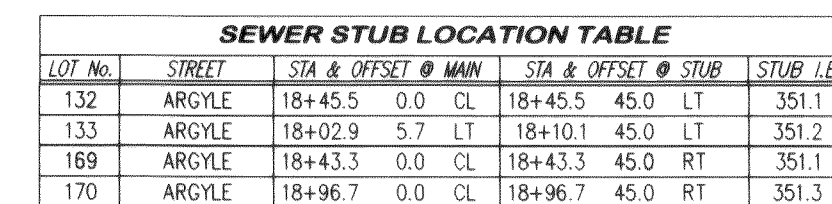
JOB #: 2003149

SHEET 11 OF 20



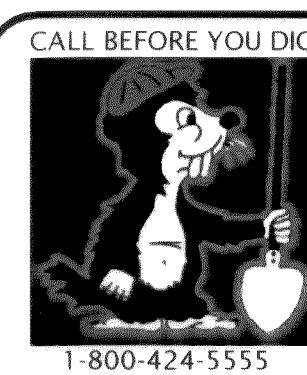


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STAKING:					DESIGN	BRW	AWU	VERT: 1"=4'					2	ISSUED FOR PERMIT	Mar. 29, 2005
ASBUILT:		CITY OF FERNDALE MONUMENT NET, JUNE 2001			XREF:								3	AS-BUILT	Oct. 12, 2005
					DWG: # PH4_Engr_Base.dwg										
SURVEY REFERENCE		VERTICAL DATUM			PLAN CHECK				REVISIONS				ISSUE		

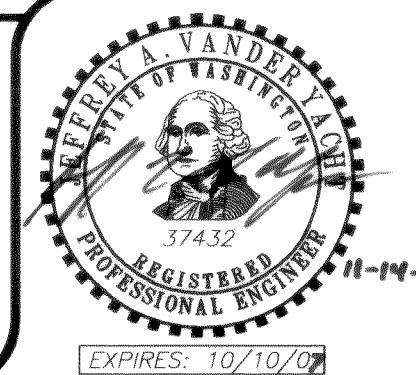


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STATIONS 18+00 TO 21+85
WATER AND SANITARY SEWER IMPROVEMENTS

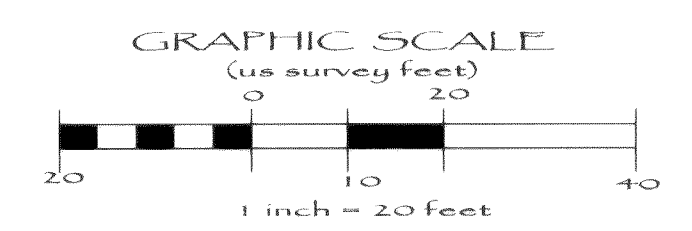
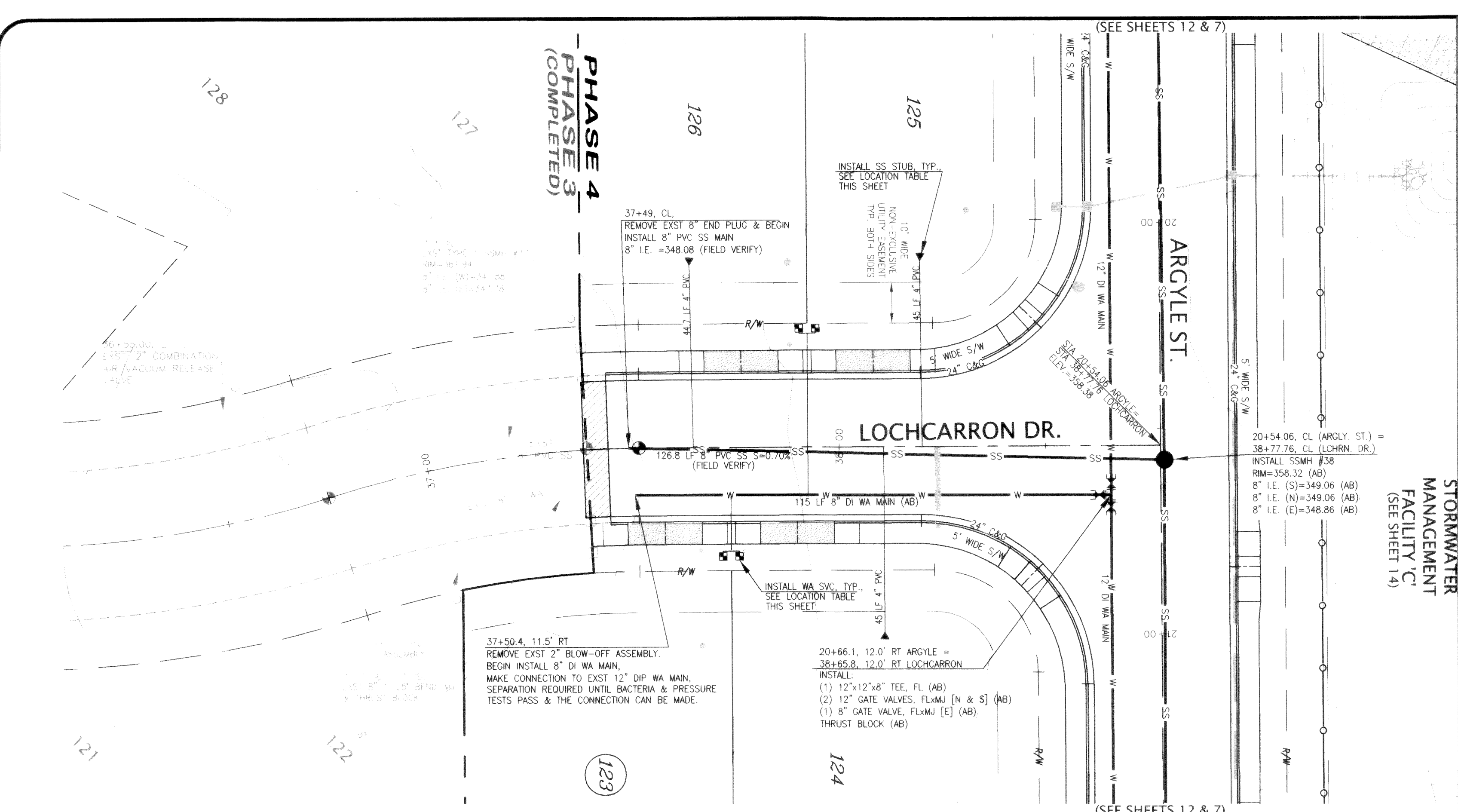


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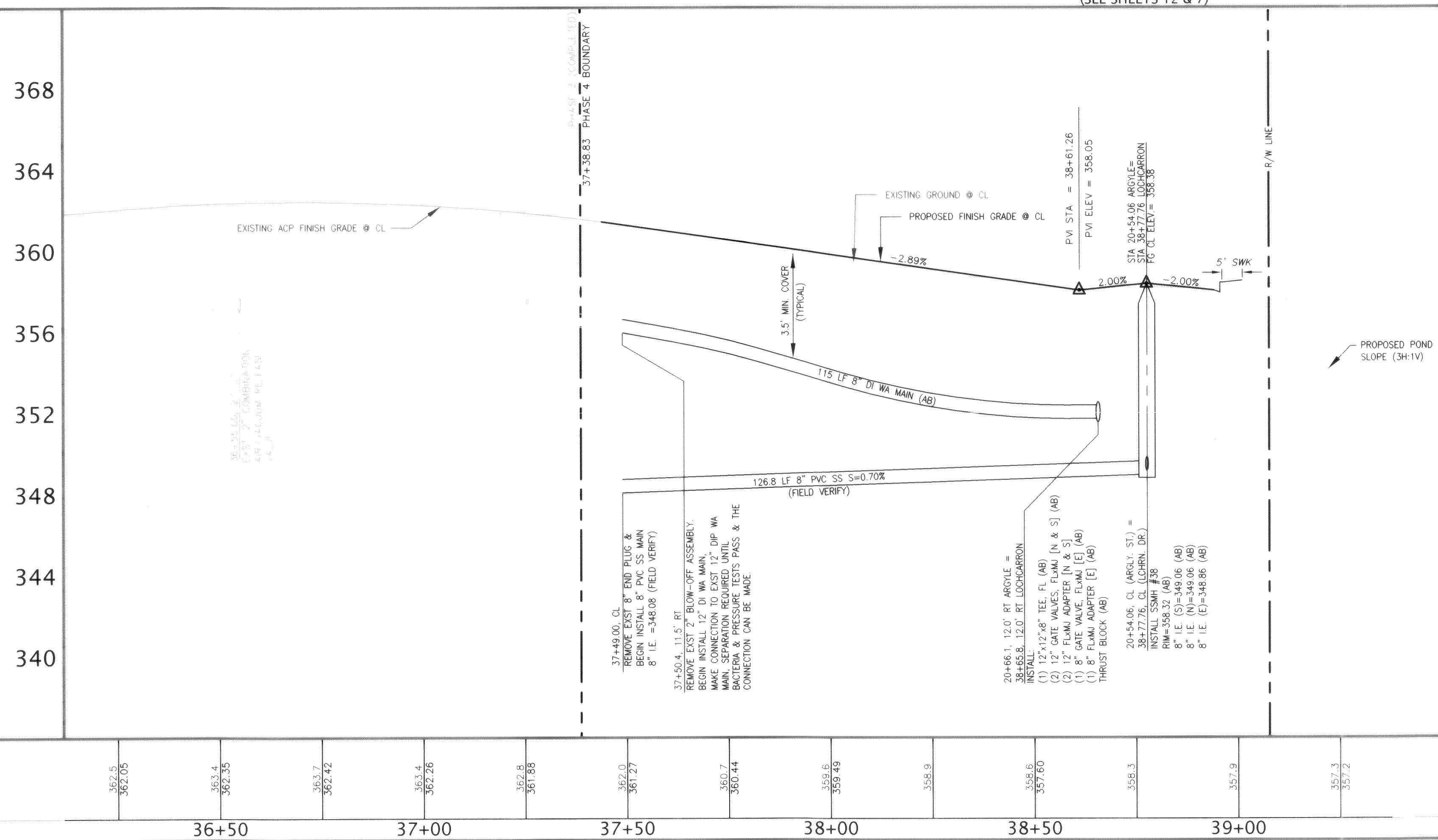


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EMAIL: pse@psurvey.com



WATER SVC LOCATION TABLE				
LOT NO.	STREET	STA & OFFSET	TYPE	
123	LOCHCARRON	37+71.7 26.5 RT	>1" DUAL	
124	LOCHCARRON	37+75.7 26.5 RT	>1" DUAL	
125	LOCHCARRON	37+94.3 26.5 LT	>1" DUAL	
126	LOCHCARRON	37+90.3 26.5 LT	>1" DUAL	

SEWER STUB LOCATION TABLE					
LOT NO.	STREET	STA & OFFSET @ MAN	STA & OFFSET @ STUB	STUB I/E	
123	LOCHCARRON	EXIST PER PHASE 3	EXIST PER PHASE 3	N/A	
124	LOCHCARRON	38+10.7 0.0 CL	38+10.7 45.0 RT	354.1	
125	LOCHCARRON	38+20.0 0.0 CL	38+20.0 45.0 LT	354.6	
126	LOCHCARRON	37+64.6 0.0 CL	37+64.6 44.7 LT	356.1	



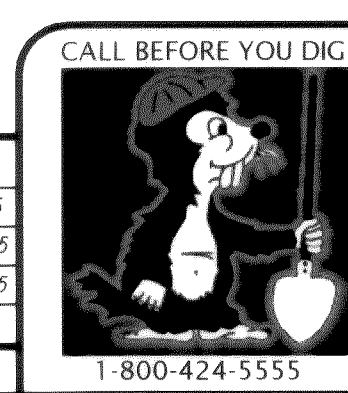
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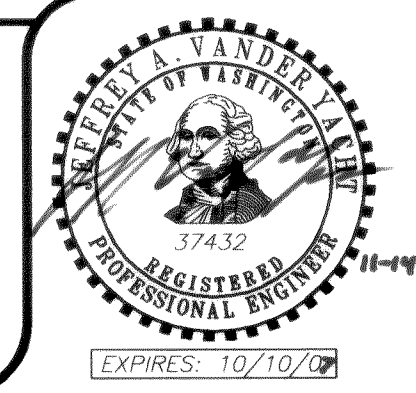
[CORRESPONDING ROADWAY & STORM DRAINAGE IMPROVEMENTS SEE SHEET 8]

FIELD BOOKS		TBM NO.	LOCATION	ELEV.	DATA	ORIGIN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	NO.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1		FERM04		366.05	BASE	AWU	AWU	HORIZ: 1"=20'	1	Mar 25, 2005	Per City civil plan review comments dated March 17, 2005	BW	1	ISSUED FOR REVIEW Feb 2, 2005
STAKING:					DESIGN	BRW	AWU	VERT: 1"=4'					2	ISSUED FOR PERMIT Mar 29, 2005
ASBUILT:			CITY OF FERDALE MONUMENT NET, JUNE 2001		XREF:								3	AS-BUILT Oct. 12, 2005
SURVEY REFERENCE			VERTICAL DATUM		DWG: PH4_Engr_Base.dwg									
					PLAN CHECK									
					REVISIONS									
					ISSUE									

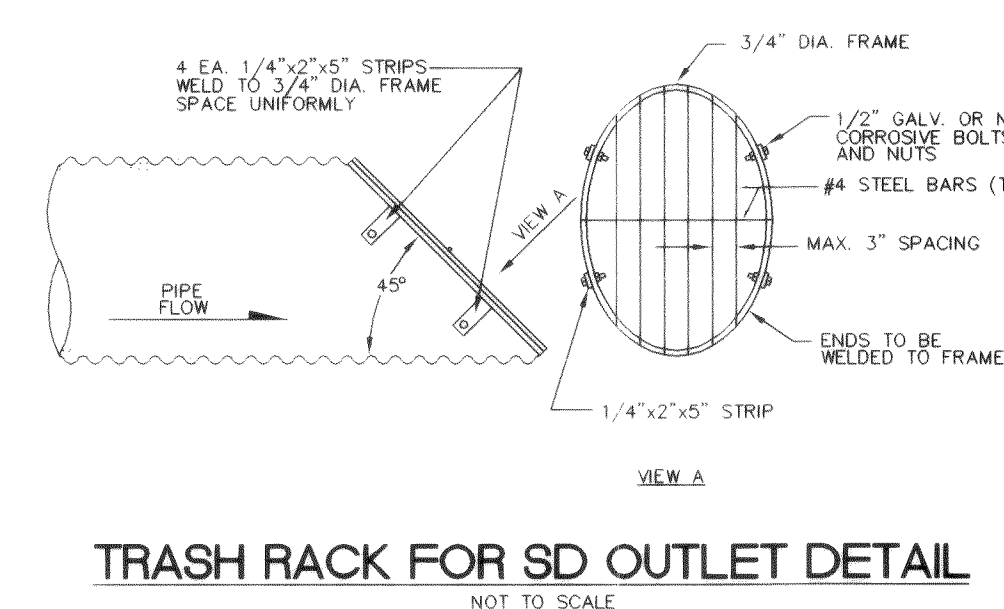
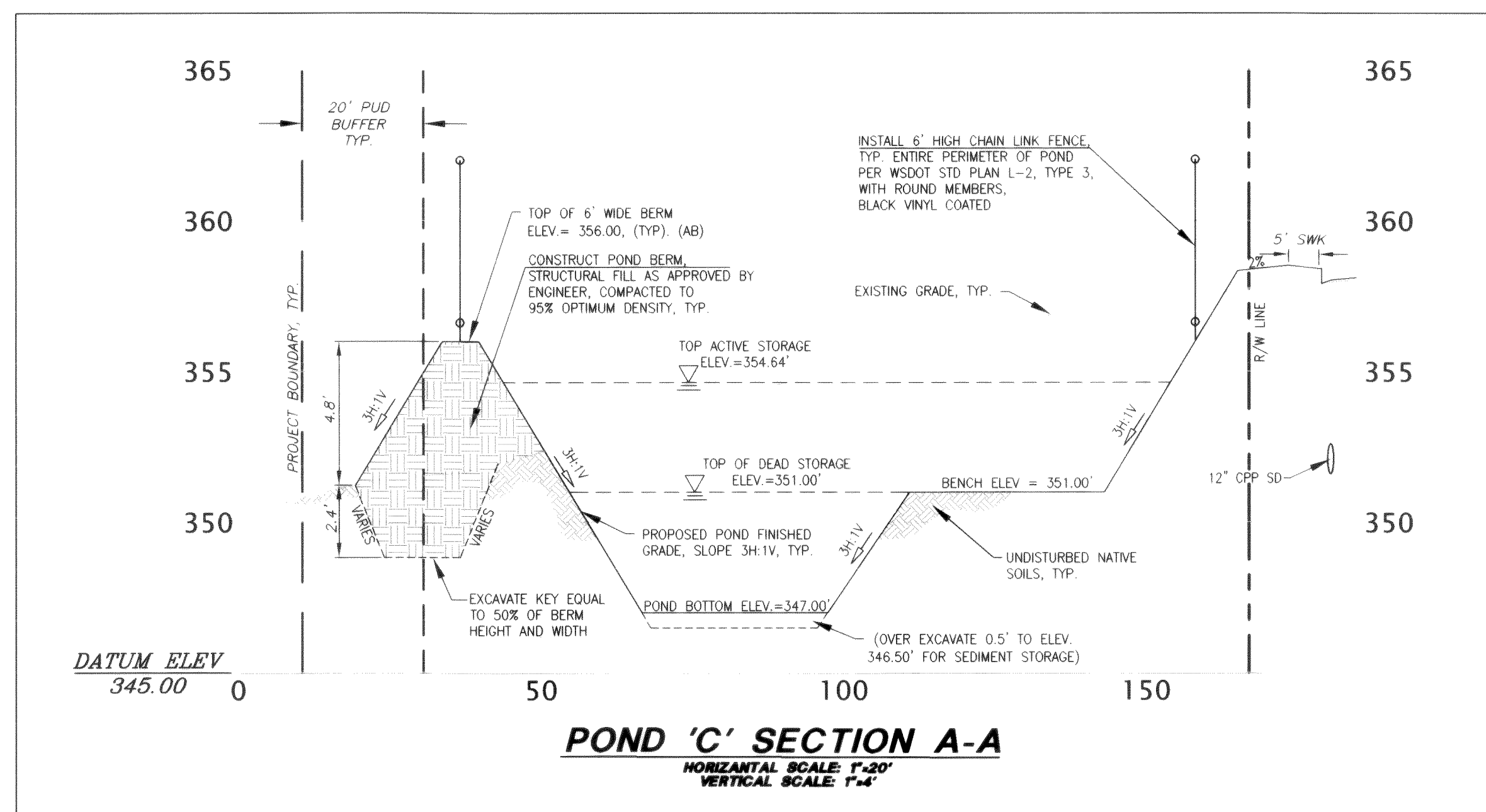
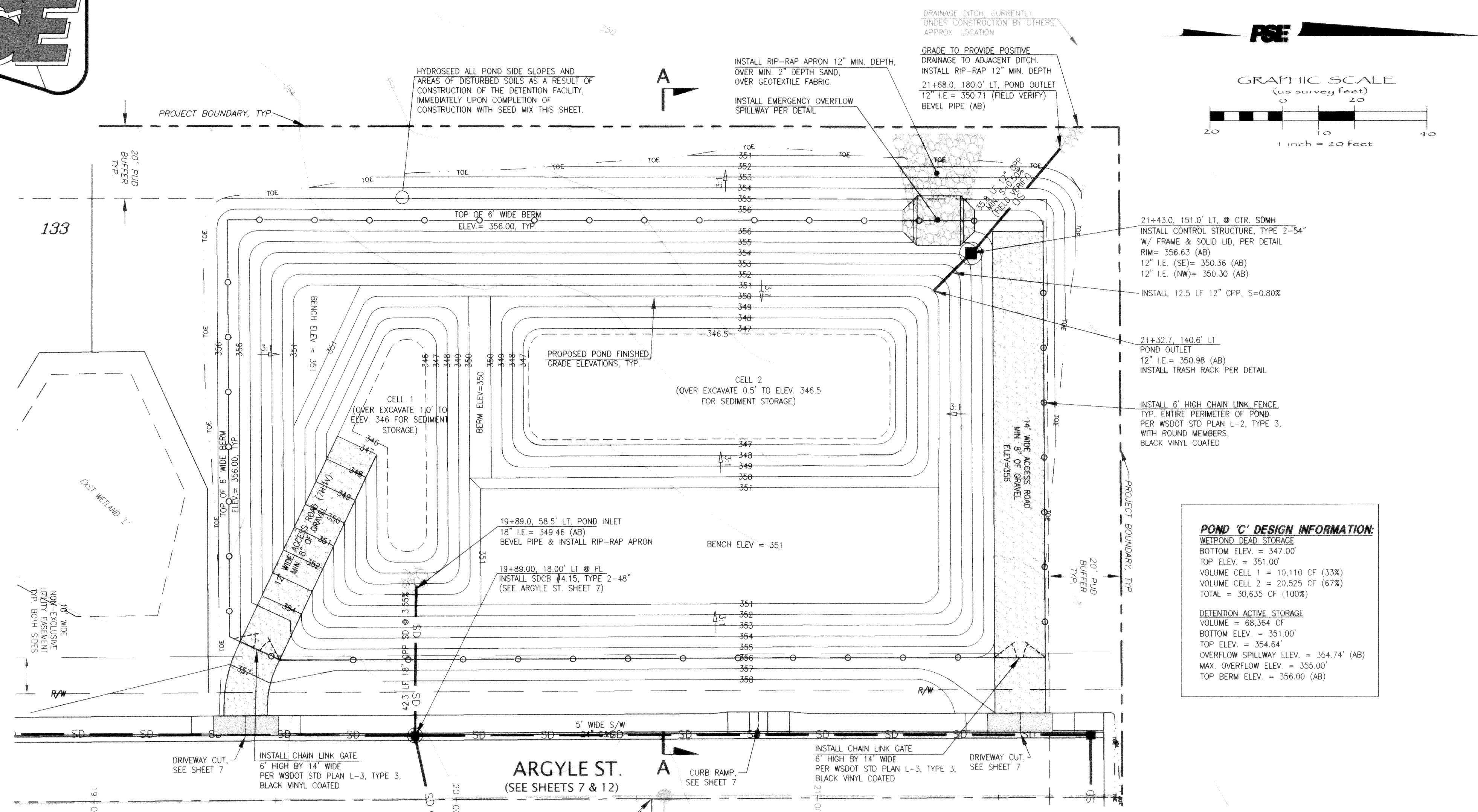


CROWN POINT HOLDINGS, INC.
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PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
LOCHCARRON DRIVE
STATIONS 37+00 TO 39+50
WATER AND SANITARY SEWER IMPROVEMENTS
JOB #: 2003149



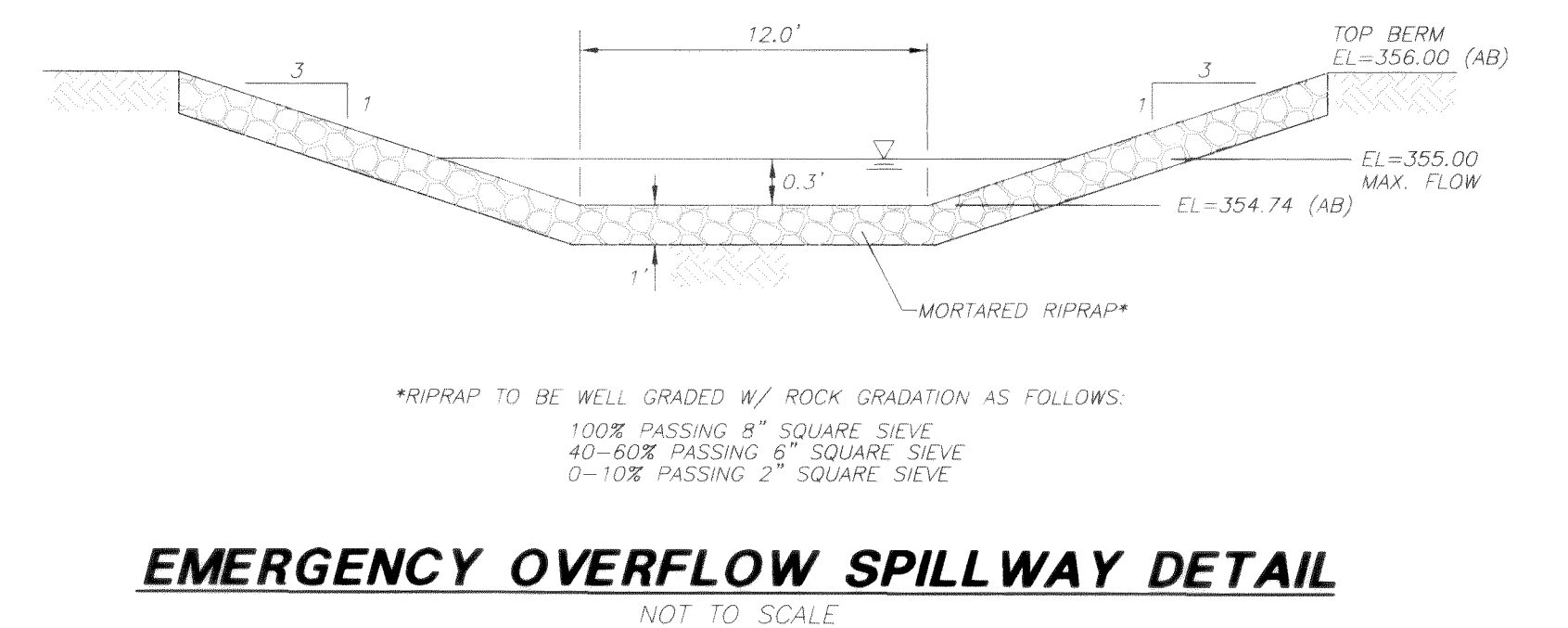
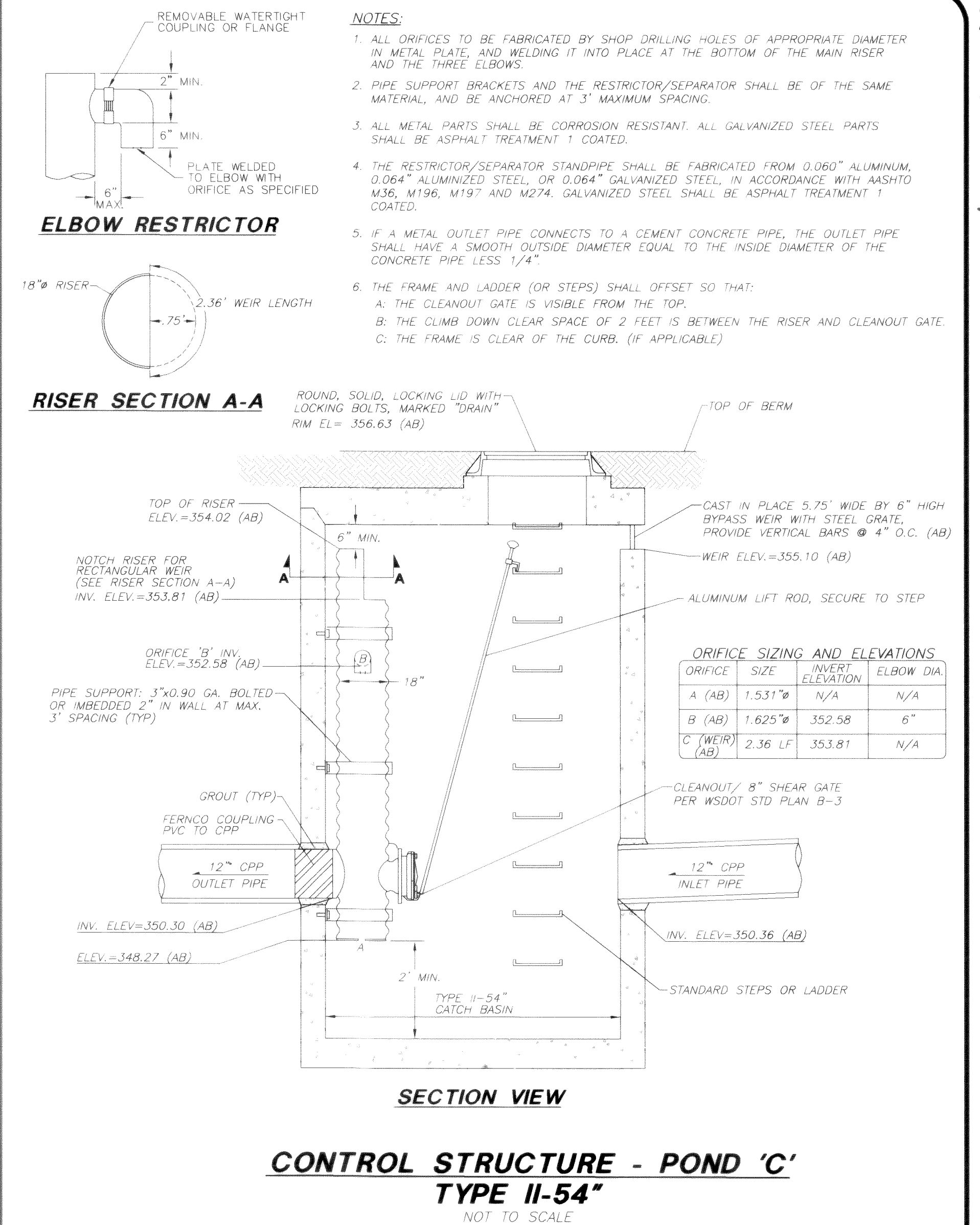
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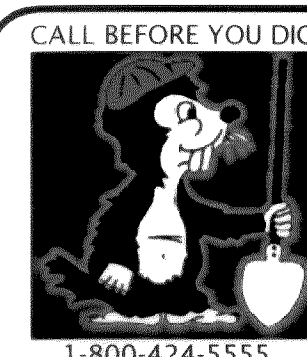
STORM DETENTION POND SLOPES SEED MIX CONSTITUENTS

ALL POND SIDE SLOPES AND AREAS DISTURBED AS A RESULT OF CONSTRUCTION OF THE
DETENTION POND FACILITY SHALL BE HYDROSEED WITH THE FOLLOWING "LOW GROW"
SEED MIX AT A RATE OF 2.5# PER 1000 SF:

<u>SEED NAME</u>	<u>% OF MIX</u>
DWARF TALL FESCUE	40%
DWARF PERENNIAL RYE "BARCLAY"	30%
RED FESCUE	25%
COLONIAL BENTGRASS	5%



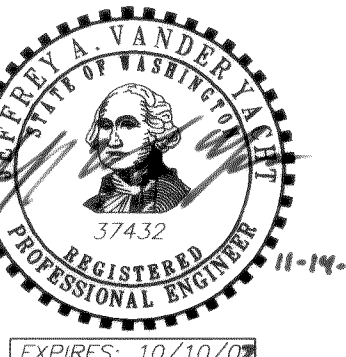
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STAKING:				DESIGN	BRW	AWU	VERT: 1"=4'					2	ISSUED FOR PERMIT Mar. 29, 2005
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SURVEY REFERENCE		VERTICAL DATUM		PLAN CHECK						REVISIONS			ISSUE



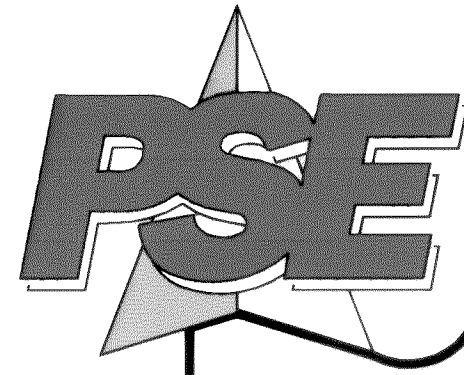
CROWN POINT HOLDINGS, INC.
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BELLINGHAM, WA 98225

PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS

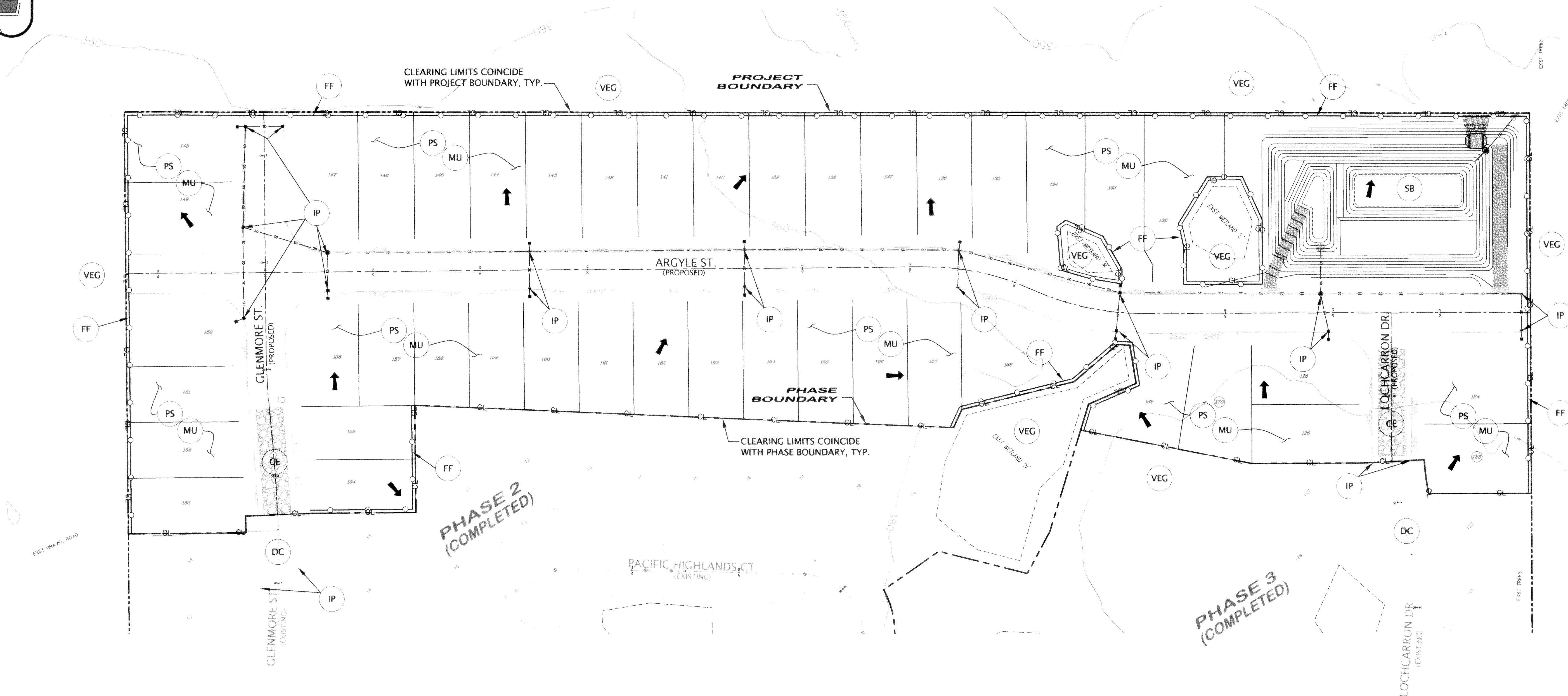
STORMWATER MANAGEMENT FACILITY 'C'
PLAN & DETAILS



00013.014 2.22.00 PK



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



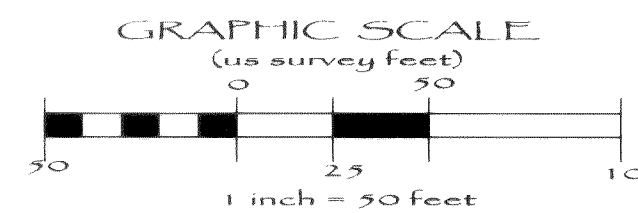
EROSION CONTROL LEGEND

- VEG WSDOE BMP C101
PRESERVING NATURAL VEGETATION
- CE WSDOE BMP C105
STABILIZED CONSTRUCTION ENTRANCE
- PS WSDOE BMP C120
TEMPORARY AND PERMANENT SEEDING
- MU WSDOE BMP C121
MULCHING
- DC WSDOE BMP C140
DUST CONTROL
- IP WSDOE BMP C220
STORM DRAIN INLET PROTECTION
- SB WSDOE BMP C241
TEMPORARY SEDIMENT POND
- FF WSDOE BMP C233
SILT FENCE
- CL-CL INDICATES CLEARING LIMITS
- DRAINAGE FLOW DIRECTION ARROWS
(SHEET FLOW OR SHALLOW CHANNEL FLOW)

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. CONSTRUCTION SCHEDULE- PENDING APPROVAL OF PLANS FROM CITY OF FERNDAL, APRIL 1 - OCTOBER 1, 2005.

SEE SHEET 16 FOR ADDITIONAL EROSION CONTROL NOTES & DETAILS



APPROVED

NOV 22 2005

BY CITY OF FERNDAL

AS-BUILT NOTE:
ONLY INFORMATION NOTED AS
"AB" HAS BEEN FIELD SURVEYED
OR MEASURED DURING CONSTRUCTION.

AS-BUILT
DRAWING

FIELD BOOKS	TBM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	No.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1	FERND4		366.05	BASE	AWU	AWU	HORIZ: 1"=50'	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	EW	1	ISSUED FOR REVIEW Feb. 2, 2005
STAKING:				DESIGN	BRW	AWU	VERT: N/A					2	ISSUED FOR PERMIT Mar. 29, 2005
ASBUILT:		CITY OF FERNDAL MONUMENT NET, JUNE 2001		XREF:								3	AS-BUILT Oct. 12, 2005
				DWG: PH4_Engn_Base.dwg									
SURVEY REFERENCE	VERTICAL DATUM	PLAN CHECK	REVISIONS	ISSUE									

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1-800-424-5555

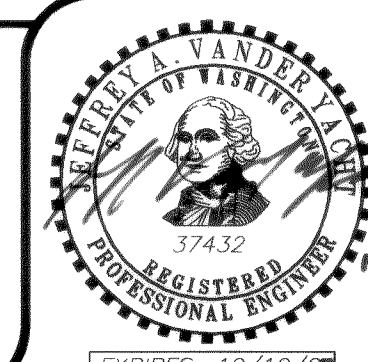
CROWN POINT HOLDINGS, INC.
2114 JAMES STREET
BELLINGHAM, WA 98225

PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS

TEMPORARY EROSION AND
SEDIMENTATION CONTROL PLAN

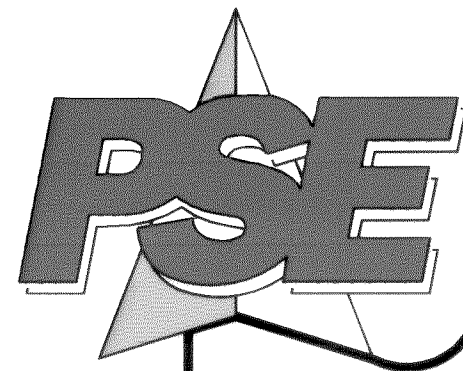
JOB #: 2003 149

SHEET 15 OF 20



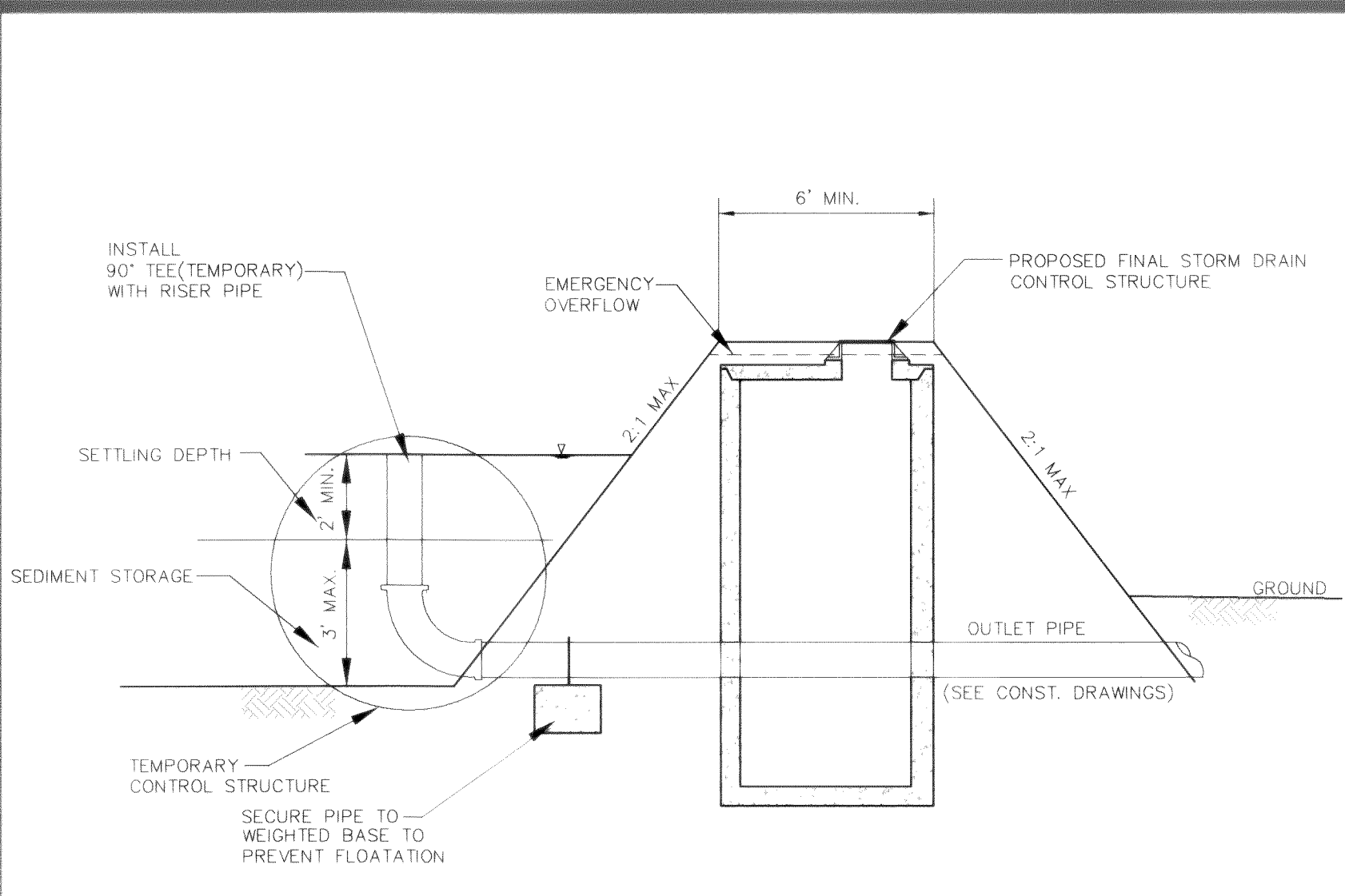
11-14-05

00213.015 2:22:06 KR



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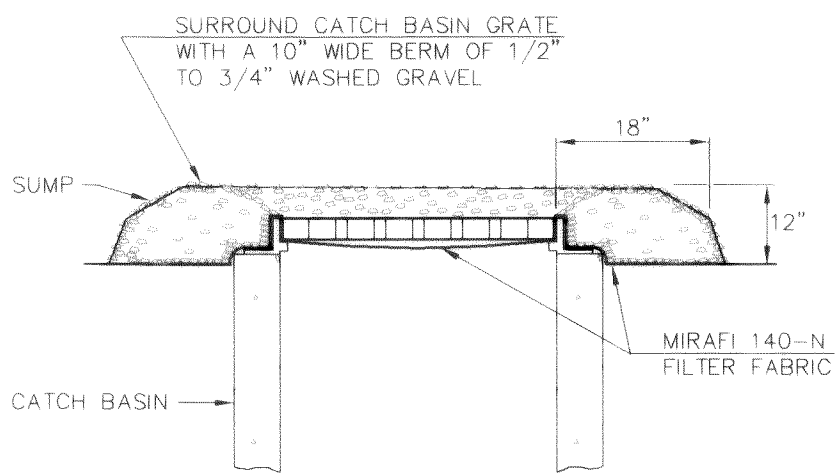
EROSION AND SEDIMENT CONTROL DETAILS



TEMPORARY CONTROL STRUCTURE DETAIL

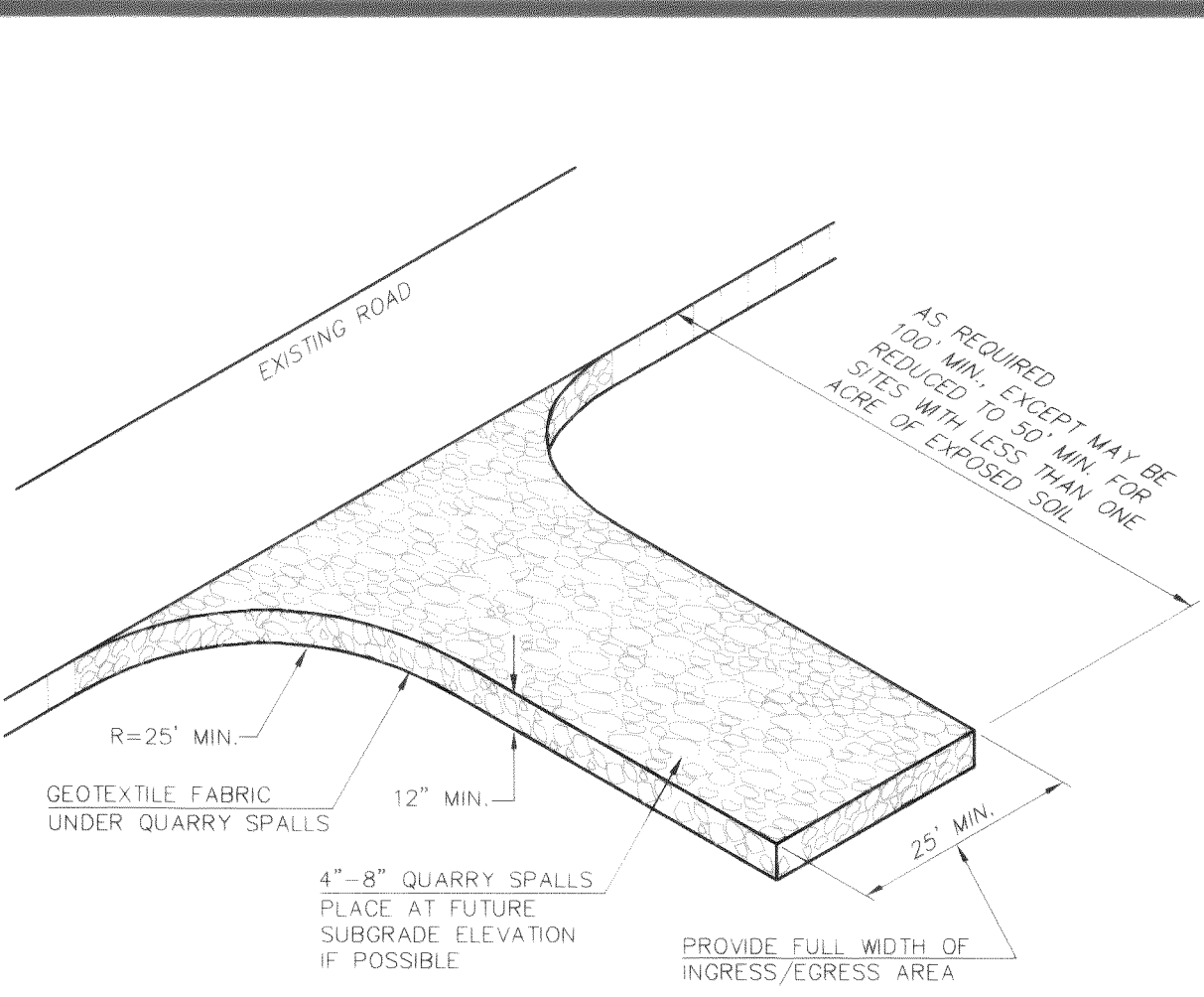
NOT TO SCALE

MULCH SPECIFICATIONS			
Mulch Material	Quality Standards	Application Rates	Remarks
Straw	Air-dried; free from undesirable seed and coarse material	2"-3" thick; 2-3 bales per 1000 sq. ft. or 2-3 tons per acre	Cost-effective protection when applied with adequate thickness. Hand-application generally requires greater thickness than blown straw. Straw should be crimped to avoid wind blow. The thickness of straw may be reduced by half when used in conjunction with seeding.
Wood Fiber Cellulose	No growth inhibiting factors	Approx. 25-30 lbs. per 1000 sq. ft. or 1000-1500 lbs per acre	Shall be applied with hydromulcher. Shall not be used without seed and tackifier unless the application rate is at least doubled. Some wood fiber with very long fibers can be effective at lower application rates and without seed or tackifier.
Compost	No visible water or dust during handling. Must be purchased from supplier with Solid Waste Handling Permit.	2" thick min.; approx. 100 tons per acre (approx. 800 lbs per yard)	More effective control can be obtained by increasing thickness to 3". Excellent mulch for protecting final grades until landscaping because it can be directly seeded or tilled into soil as an amendment. Sources for compost are available from the King County Commission for Marketing Recyclable Materials at 296-4439.
Chipped Site Vegetation	Average size shall be several inches.	2" minimum thickness	This is a cost-effective way to dispose of debris from clearing and grubbing and eliminates the problems associated with burning. It should generally not be used on slopes above approx. 10% because of its tendency to be transported by runoff. It is not recommended within 200 feet of surface waters. If seeding is expected shortly after mulch, the decomposition of the chipped vegetation may tie up nutrients important to grass establishment.



INTERIM CATCH BASIN GRADE PROTECTION

NOT TO SCALE

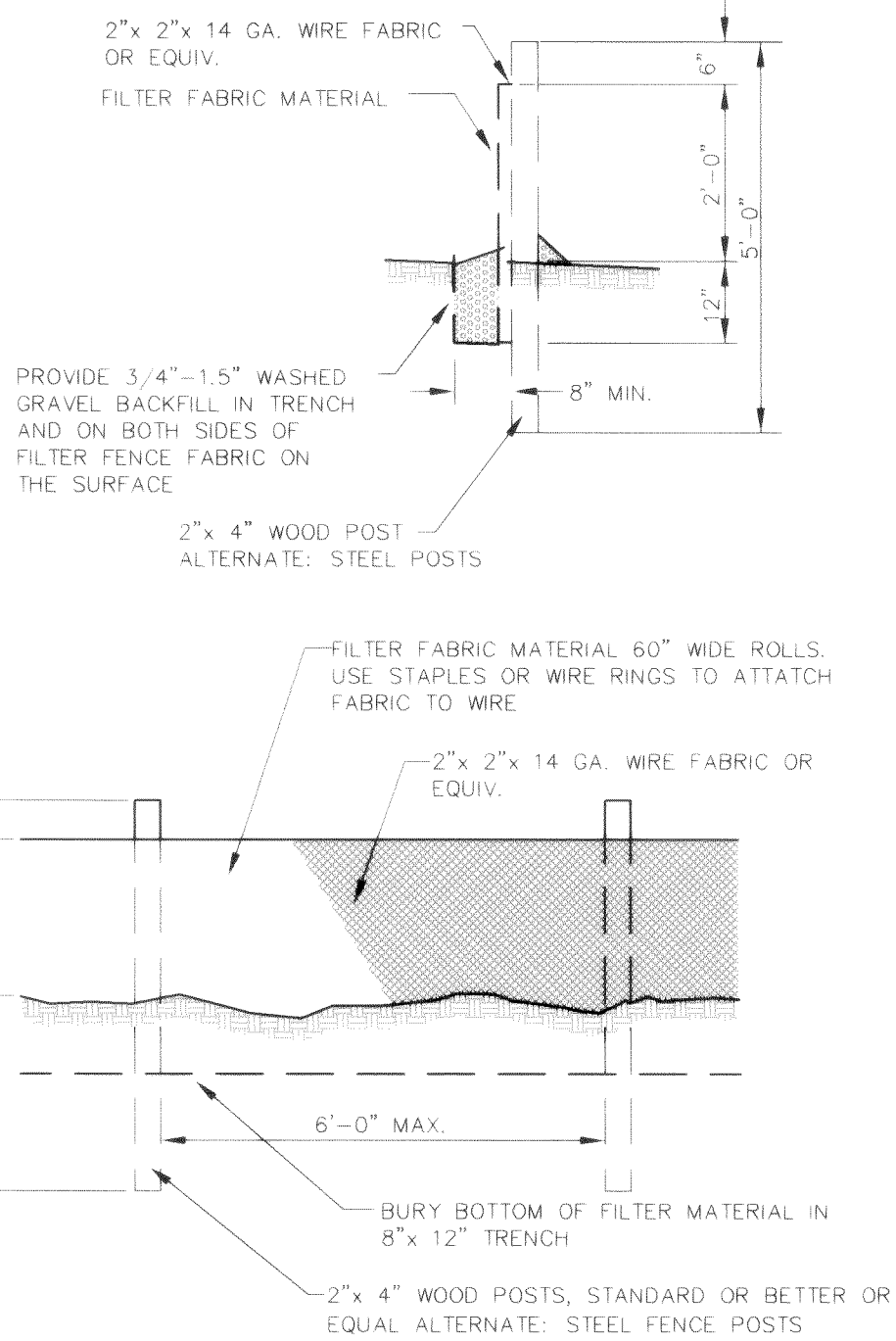


ROCK STABILIZATION CONSTRUCTION ROAD ENTRANCE

NOT TO SCALE

MAINTENANCE:

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 4 TO 8-INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.



SILT FILTER FENCE DETAIL

NOT TO SCALE

TEMPORARY EROSION/SEDIMENTATION CONTROL

1. A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
2. APPROVAL OF THESE TEMPORARY EROSION/SEDIMENTATION CONTROL (TESC) PLANS 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.).
3. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
4. 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.
5. THE TESC 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.
6. THE TESC FACILITIES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED (E.G. ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.
7. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
8. 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 TESC METHODS (E.G., SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.).
9. ANY AREA NEEDING TESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
10. THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
11. 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.
12. 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.
13. DURING THE TIME PERIOD OF OCTOBER 1 THROUGH APRIL 30, 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.
14. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION OR DISPERSION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN. NO UNDERGROUND DETENTION TANK, DETENTION VAULT, OR SYSTEM WHICH BACKS UNDER OR INTO A POND SHALL BE USED AS A TEMPORARY SETTLING BASIN.
15. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (E.G. ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).
16. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO INCHES.
17. ALL EROSION/SEDIMENTATION CONTROL PONDS WITH A DEAD STORAGE DEPTH EXCEEDING 6 INCHES MUST HAVE SLOPES NOT STEEPER THAN 3H:1V.
18. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
19. EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IN THESE PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY INSPECTOR.

NPDES NOTES

1. THE CONTRACTOR SHALL KEEP A RECORD OF THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE IMPLEMENTED.
2. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED, MAINTAINED AND REPAIRED BY THE CONTRACTOR AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL ON SITE EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES PER 24 HOUR PERIOD. AN INSPECTION REPORT FILE SHALL BE MAINTAINED BY THE CONTRACTOR.

FILTER FENCE NOTES

1. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-INCH OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.
2. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS (WHERE FEASIBLE). THE FENCE POSTS SHALL BE SPACED AT A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30 INCHES).
3. A TRENCH SHALL BE EXCAVATED, ROUGHLY 8 INCHES WIDE AND 12 INCHES DEEP, UPSLOPE AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED.
4. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, THE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
5. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF STANDARD NOTE 5 APPLYING.
7. THE TRENCH SHALL BE BACKFILLED WITH 3/4-INCH MINIMUM DIAMETER WASHED GRAVEL.
8. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
9. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

SEEDING NOTES

1. SEEDBED PREPARATION MAY INCLUDE THE FOLLOWING:
 - A. IF INFERTILE OR COARSE TEXTURED SUBSOIL WILL BE EXPOSED DURING GRADING, STOCKPILE TOPSOIL AND RE-SPREAD IT OVER THE FINISHED SLOPE AND ROLL IT TO PROVIDE A FIRM BASE.
 - B. IF CONSTRUCTION FILLS HAVE LEFT SOIL EXPOSED WITH A LOOSE, ROUGH OR IRREGULAR SURFACE, TRACK WALK UP SLOPE.
 - C. IF CUTS OR CONSTRUCTION EQUIPMENT HAVE LEFT A TIGHTLY COMPACTED SURFACE, BREAK WITH CHISEL PLOW OR OTHER SUITABLE EQUIPMENT.
 - D. PERFORM ALL CULTURAL OPERATIONS ACROSS OR AT RIGHT ANGLES TO THE SLOPES (CONTOURED). THE SEEDBED SHOULD BE FIRM WITH A FAIRLY FINE SURFACE AFTER ROUGHENING.
2. FERTILIZATION - AS PER SUPPLIER'S RECOMMENDATIONS. DEVELOPMENTS ADJACENT TO WATER BODIES MUST USE NON-PHOSPHOROUS FERTILIZER.
3. HYDROSEEDING APPLICATIONS WITH APPROVED SEED-MULCH-FERTILIZER MIXTURES MAY ALSO BE USED.
4. SEEDING - APPLY APPROPRIATE MIXTURE TO THE PREPARED SEEDBED AT A RATE OF 120 LBS./ACRE. COVER THE SEED WITH TOPSOIL OR MULCH NO DEEPER THAN ONE-HALF INCH.

TEMPORARY EROSION CONTROL SEED MIX	PROPORTIONS BY WEIGHT	PERCENT PURITY	PERCENT GERMINATION
CHEWINGS OR RED FESCUE	40%	98	90
ANNUAL OR PERENNIAL RYE	40%	98	90
REDTOP OR COLONIAL BENTGRASS	10%	92	85
WHITE DUTCH CLOVER	10%	98	90

FIELD BOOKS	TBM. NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV.	DATE	DESCRIPTION	BY	No.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1	FERM04		364.05	BASE	AWU	AWU	HORIZ: N.A.	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	BW	1	ISSUED FOR REVIEW Feb. 2, 2005
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SURVEY REFERENCE	VERTICAL DATUM			PLAN CHECK				REVISIONS		ISSUE			

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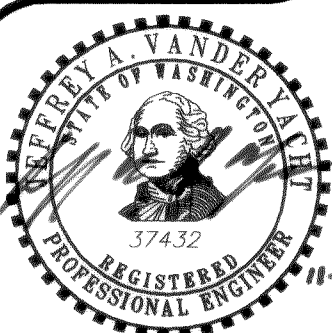


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PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
EROSION AND SEDIMENT CONTROL
NOTES & DETAILS

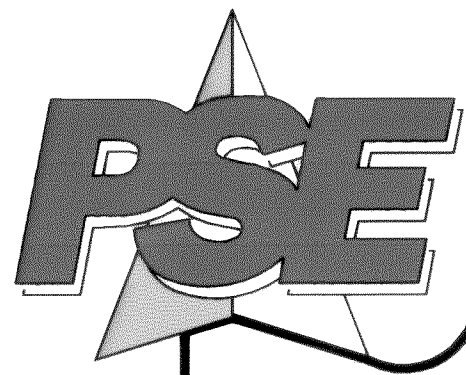
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SHEET 16 OF 20



EXPIRES: 10/10/09

00213.016 2.22.06 R2

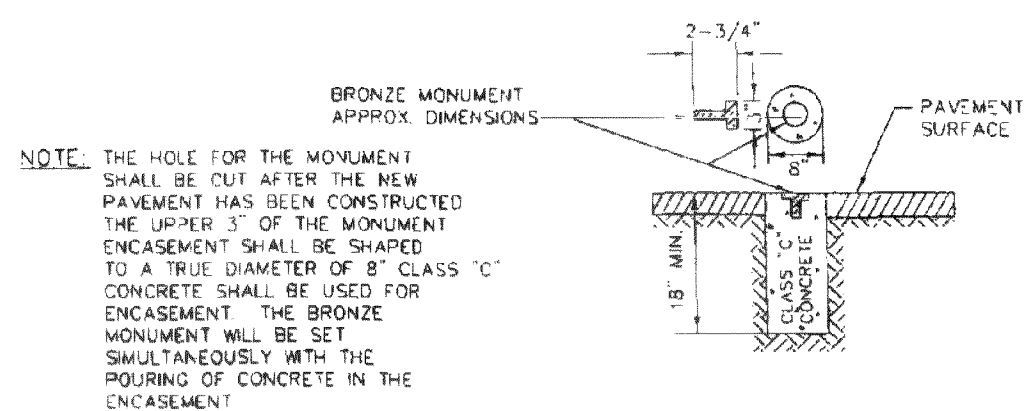


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EMAIL: pse@psurvey.com

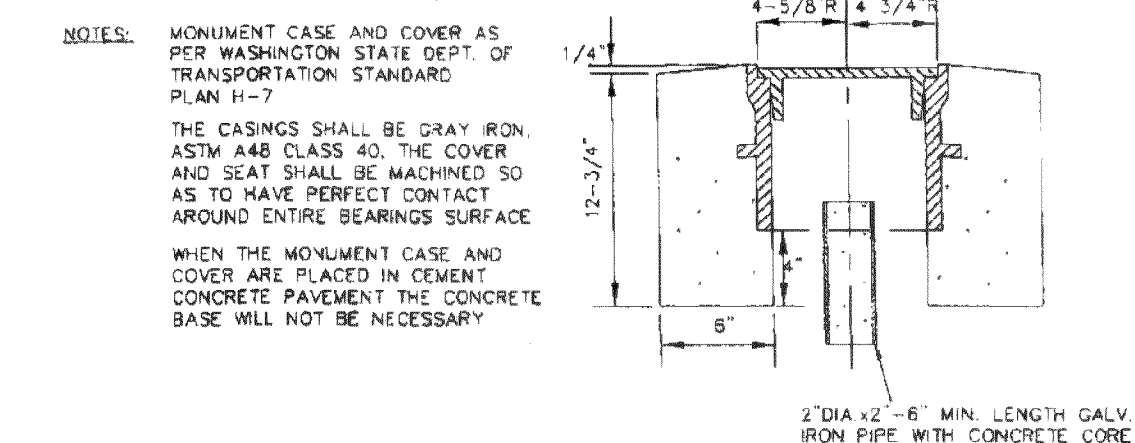
PACIFIC SURVEY & ENGINEERING INC

1812 CORNWALL, BELLINGHAM, WA 98225 PHONE: 671.7387 FAX: 671.4685

ROADWAY AND SURFACE IMPROVEMENT DETAILS

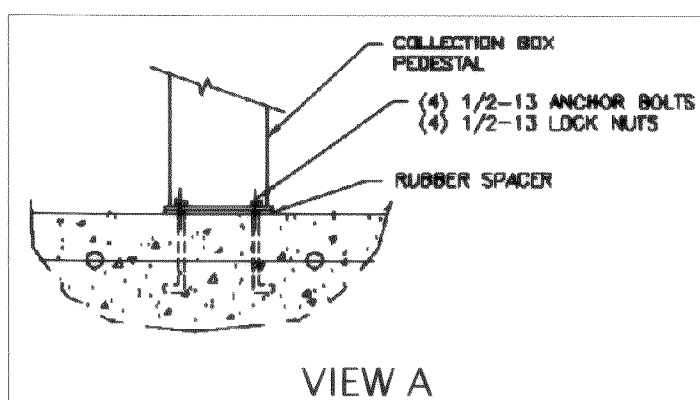
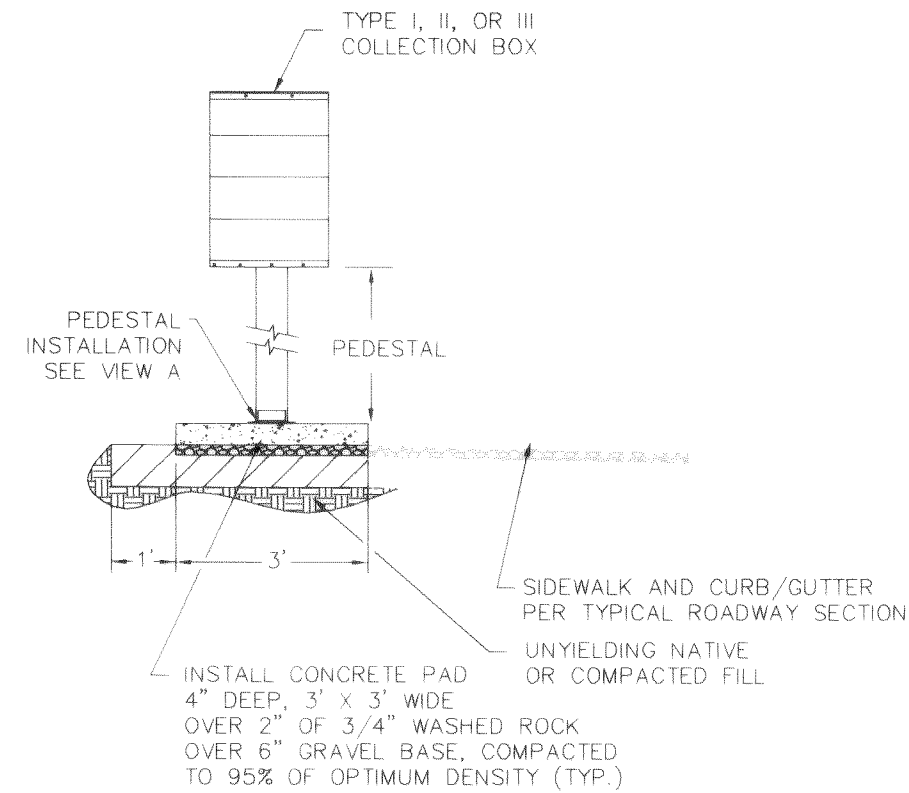


SURVEY MONUMENT DETAIL



SURVEY MONUMENT AND CASE DETAILS

APPROVED	CITY OF FERDALE	DRAWING
<i>[Signature]</i>	SURVEY MONUMENTS	S-2
Public Works Director	FOR ON-ROAD USE	
JUNE 1995		20915VIA/S-2



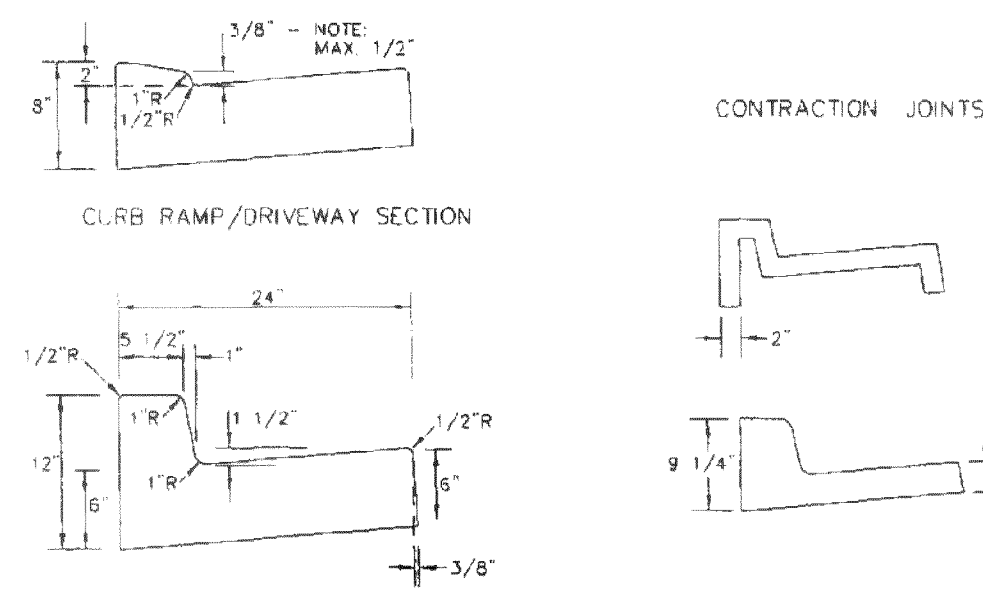
VIEW A

NOTES:

- MAILBOXES SHALL BE TYPE I, II, AND/OR III - CBU (CENTRAL BOX UNIT), USPS APPROVED.
- FINAL LOCATION AS DETERMINED BY USPS AND APPROVED BY CITY OF FERDALE.

MAILBOX IMPROVEMENT DETAIL

NOT TO SCALE

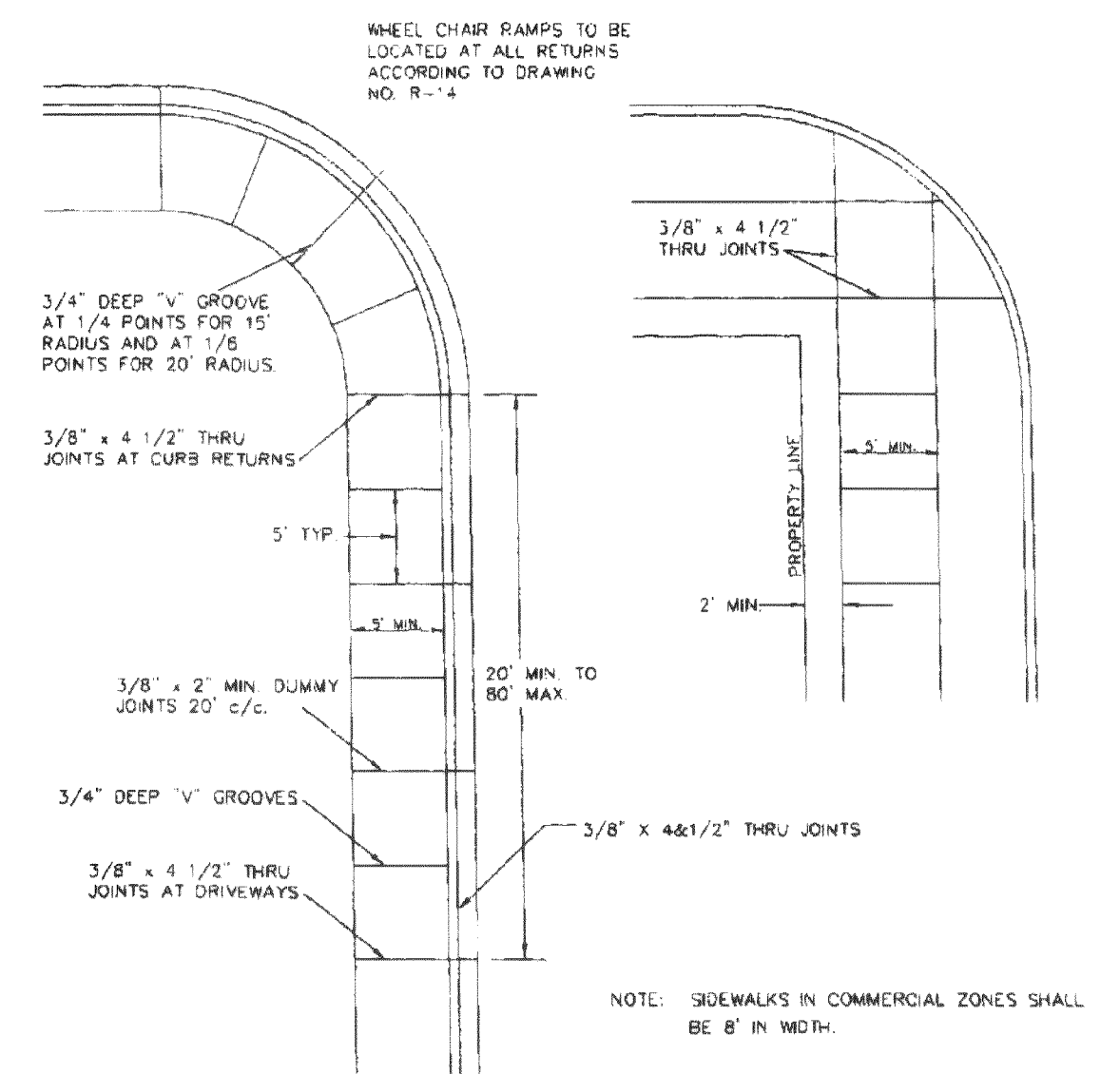


TYPICAL CURB SECTION

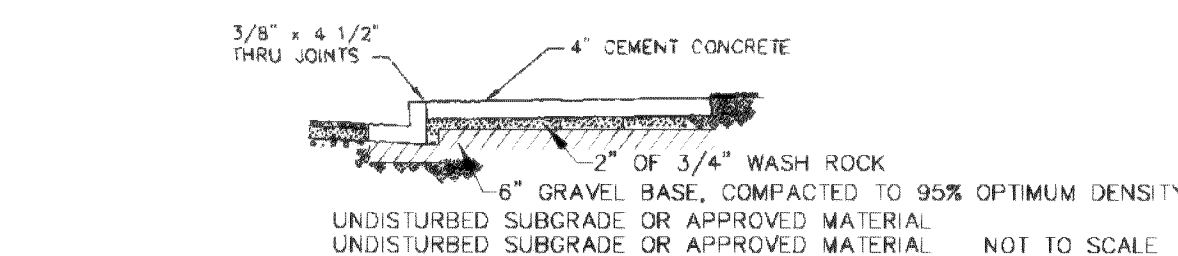
GENERAL NOTES:

- CONTRACTION JOINTS OF ONE OF THE TYPES SHOWN ABOVE TO BE PLACED TO C/C. JOINTS MUST COMPLETELY SEVER THE STRUCTURE TO THE POINTS SHOWN. JOINTS MAY BE MADE BY INSERTING MINIMUM 3/16" RIMMUS FILLER DUMMY JOINTS. JOINTS SHALL BE CLEANED AND EGGED.
- WEEP HOLES TO BE PLACED ON EACH SIDE OF DRIVEWAY SECTIONS, CURB RETURNS, CURB RAMPS AND COLD JOINTS OR A MAXIMUM OF 80' C/C. EXPANSION JOINTS SHALL PROTRUDE 1" BELOW THE BOTTOM OF GUTTER.
- CONCRETE SHALL BE CEMENT CONCRETE CLASS 3000.
- FINISHED WORK SHALL NOT VARY MORE THAN 1/8" IN GRADE AND 1/4" IN ALIGNMENT WHEN CHECKED WITH 10' STRAIGHT EDGE.
- EXPOSED SURFACES SHALL BE BRUSHED WITH A FIBER BRUSH.
- WHITE PIGMENTED OR TRANSPARENT CURING COMPOUND SHALL BE APPLIED AS OUTLINED IN THE STANDARD SPECIFICATIONS.
- FURTHER REQUIREMENTS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

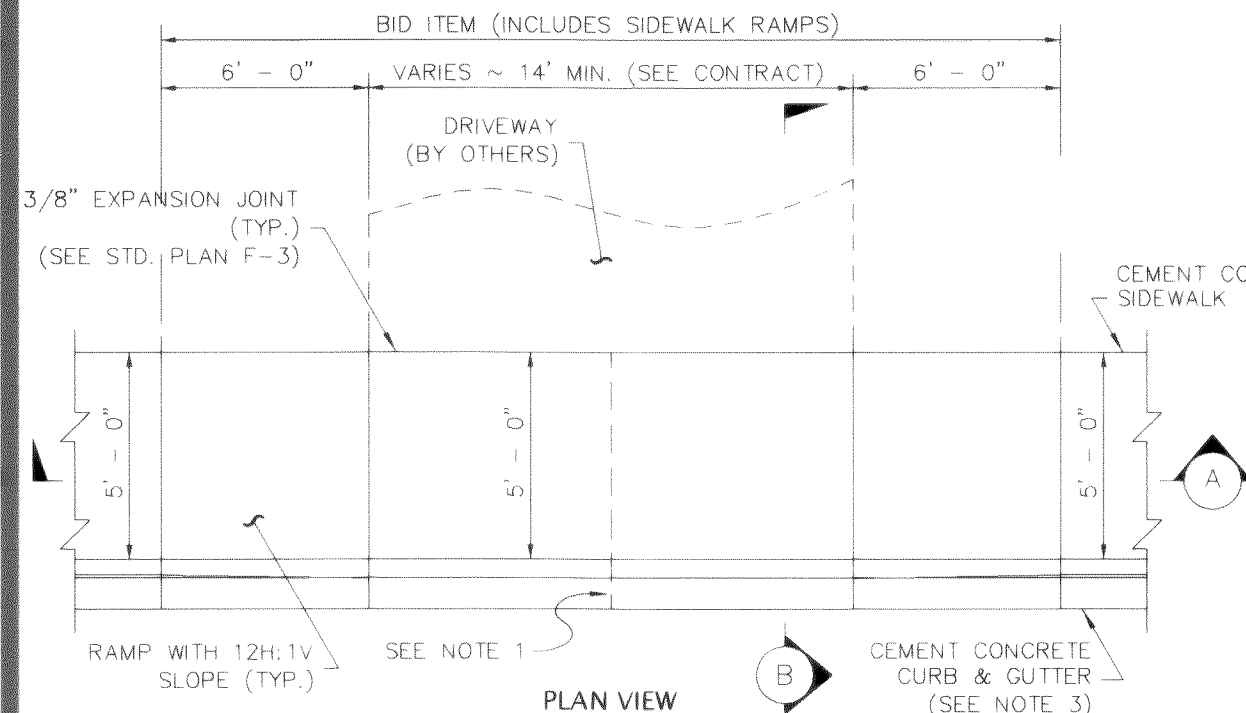
APPROVED	CITY OF FERDALE	DRAWING
<i>[Signature]</i>	CURB AND GUTTER	R-9
Public Works Director		
JUNE 1995		2091R02A/R-9



NOTE: SIDEWALKS IN COMMERCIAL ZONES SHALL BE 8' IN WIDTH.

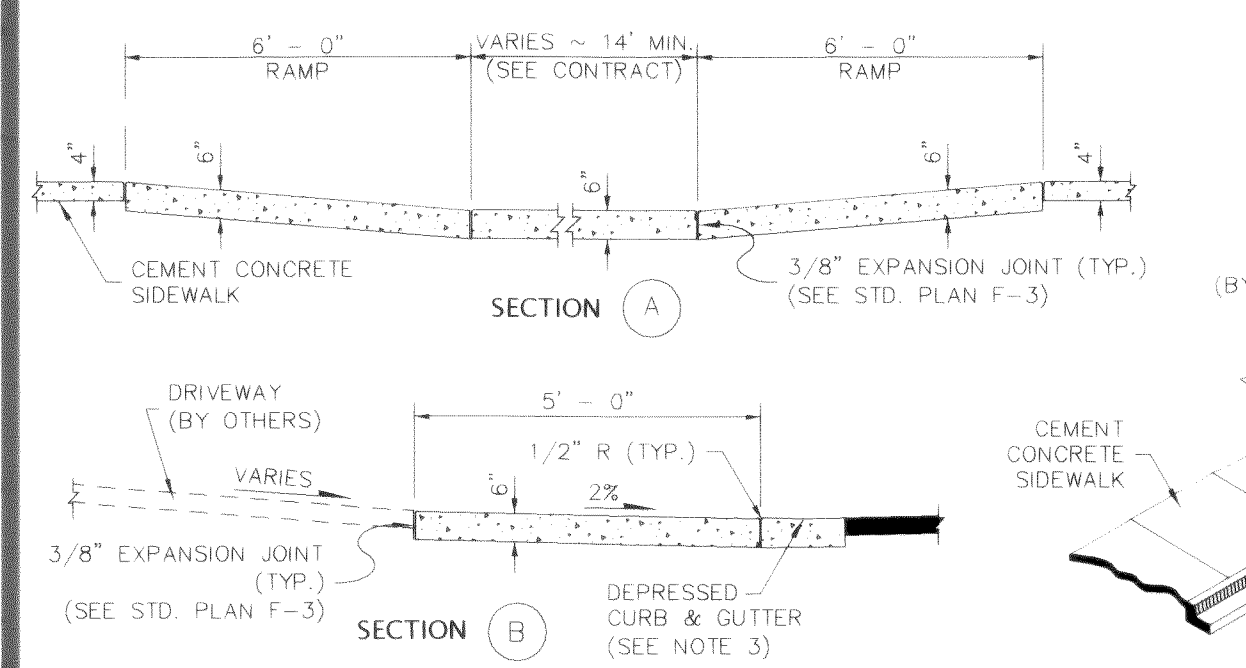


APPROVED	CITY OF FERDALE	DRAWING
<i>[Signature]</i>	TYPICAL SIDEWALK PLAN	R-12
Public Works Director	AND CROSS SECTION	
JUNE 1995		2091R02A/R-12



NOTES:

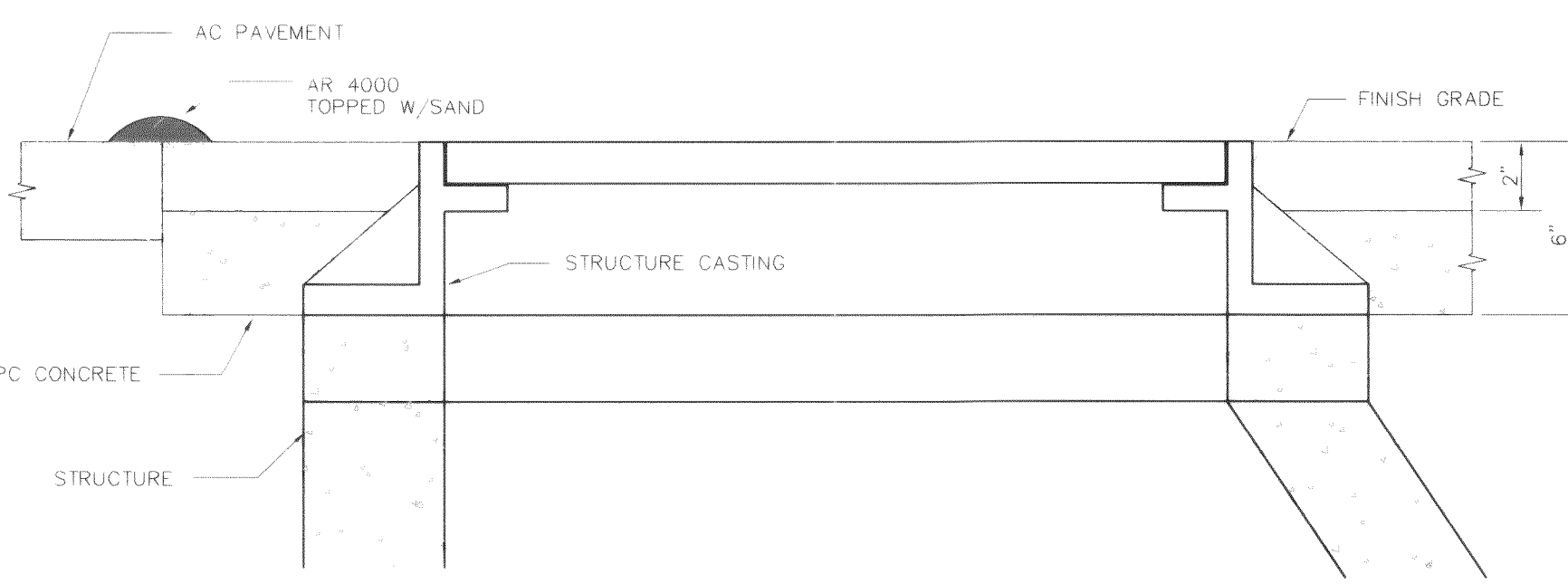
- When the driveway width exceeds 15 feet, construct a full depth expansion joint (see Standard Plan F-3) with 3/8" joint filler along the driveway centerline. Construct expansion joints parallel with the centerline as required at 15' maximum spacing when driveway widths exceed 30'.
- See Std. Plan F-3 for sidewalk details.
- Curb and gutter shown, see the Contract Plans for the curb design specified. See Std. Plan F-1 for curb details.
- Avoid placing drainage structures, junction boxes or other obstructions in front of driveway entrances.



CONCRETE DRIVEWAY APPROACH DETAIL

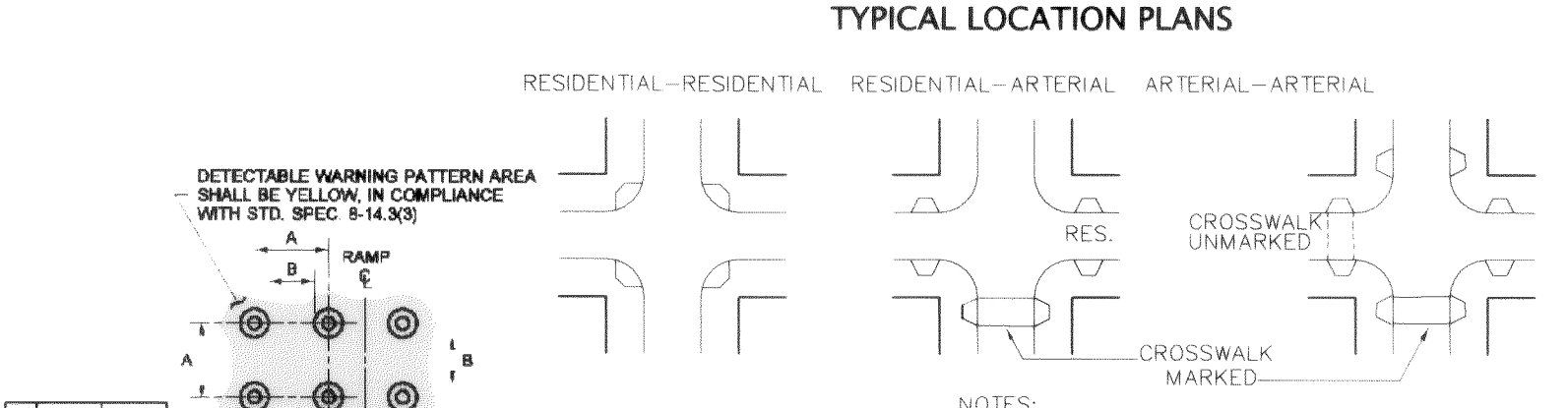
NOTES:

- ALL FRAMES, COVERS AND VALVE BOXES SHALL BE RAISED TO FINISHED GRADE AFTER THE FINAL LIFT OF PAVING HAS BEEN COMPLETED. THE FOLLOWING PROCEDURE SHALL BE USED:
- CUT THE ASPHALT IN AN EVEN CIRCLE AROUND THE STRUCTURE CASTING TO BE ADJUSTED.
- REMOVE THE FILL MATERIAL WITHIN THE CUT PAVEMENT AREA TO 6 INCHES MIN. BELOW FINISH GRADE.
- PLACE THE CASTING AT FINISH GRADE.
- PLACE PORTLAND CEMENT CONCRETE TO WITHIN THE TOP 2 INCHES OF FINISH GRADE.
- APPLY TACK TO THE STRUCTURE CASTING, CUT PAVEMENT, AND PC CONCRETE.
- PLACE AND COMPACT 2 INCHES OF ASPHALT CONCRETE CLASS B TO FINISH GRADE.
- SEAL PAVEMENT JOINTS WITH HOT AR4000 AND TOP WITH SAND.

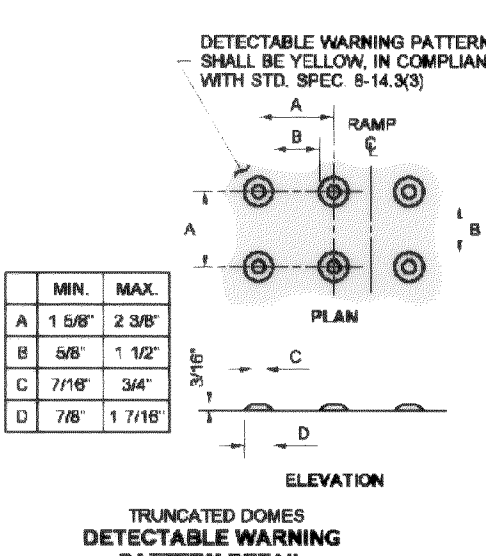


ADJUSTING CASTINGS TO FINISHED GRADE

NTS

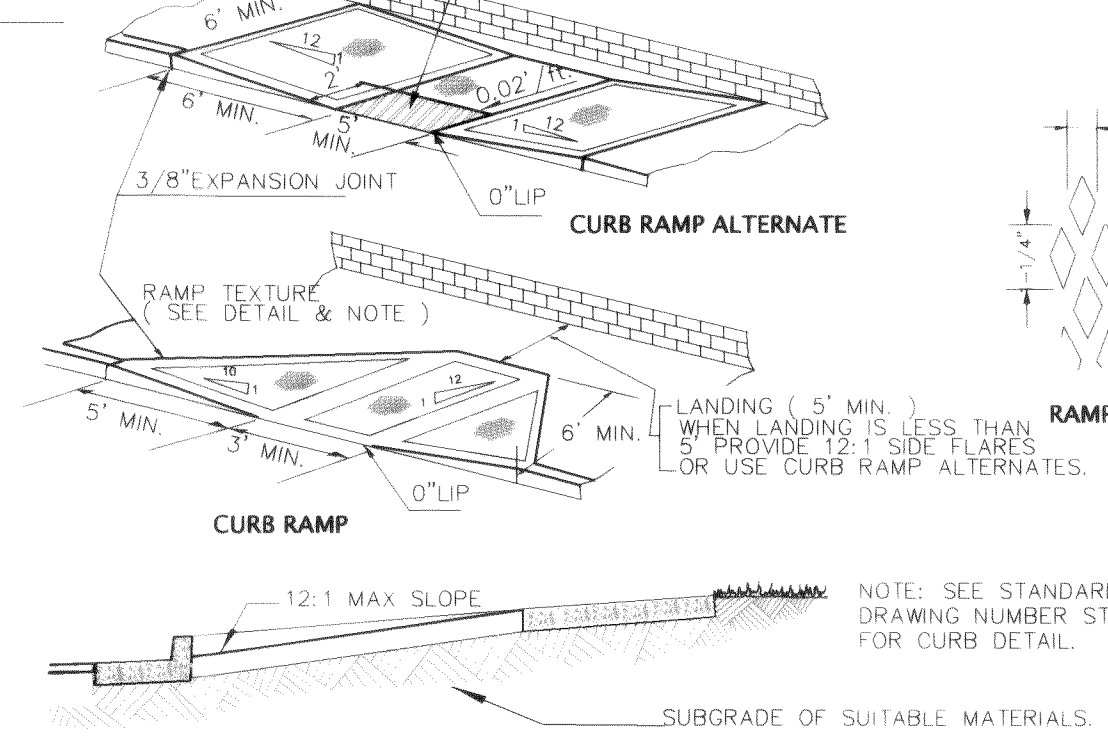


TYPICAL LOCATION PLANS



	MIN.	MAX.
A	1 5/8"	2 3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	1 7/16"

- RAMP TEXTURING IS TO BE DONE WITH AN EXPANDED METAL GRATE PLACED AND REMOVED FROM WET CONCRETE TO LEAVE A DIAMOND PATTERN AS SHOWN. THE LONG AXIS OF THE DIAMOND PATTERN SHALL BE PERPENDICULAR TO THE CURB GROOVES SHALL BE 1/8" DEEP AND 1/4" WIDE.
- CURB RAMPS SHALL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES, BUT NOT AT END OF RAMP ADJACENT TO THE ROADWAY.



CURB RAMPS

NTS

PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
ROADWAY AND SURFACE IMPROVEMENT
DETAILS

JOB #: 2003 149

SHEET 17 OF 20



EXPIRES: 10/10/07



CROWN POINT HOLDINGS, INC.
2114 JAMES STREET
BELLINGHAM, WA 98225

PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
ROADWAY AND SURFACE IMPROVEMENT
DETAILS

JOB #: 2003 149

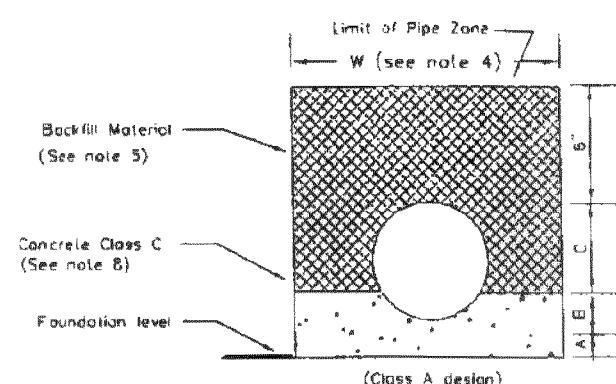
SHEET 17 OF 20



EXPIRES: 10/10/07

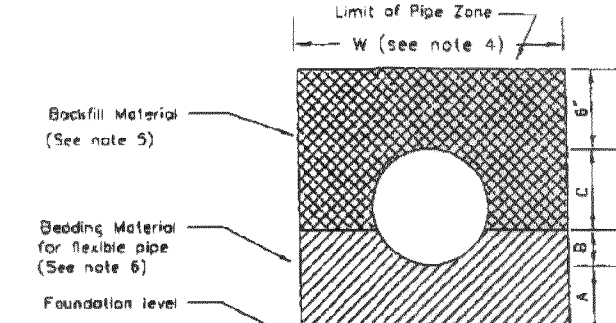


SANITARY SEWER & STORM DRAINAGE DETAILS



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' (12" x 12").
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.

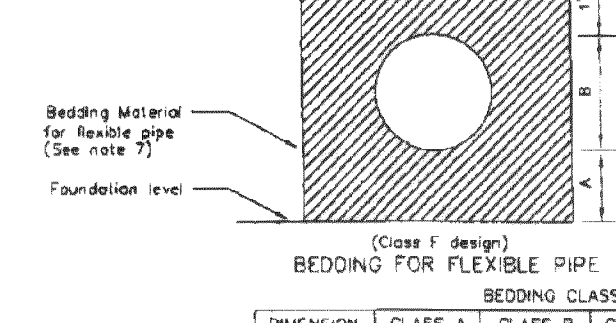


CLASS B, C, D design

BEDDING FOR RIGID PIPE

Level of Pipe Zone

W (see note 4)



CLASS E design

BEDDING FOR FLEXIBLE PIPE

Level of Pipe Zone

W (see note 4)

NOT TO SCALE

APPROVED

CITY OF FERDALE

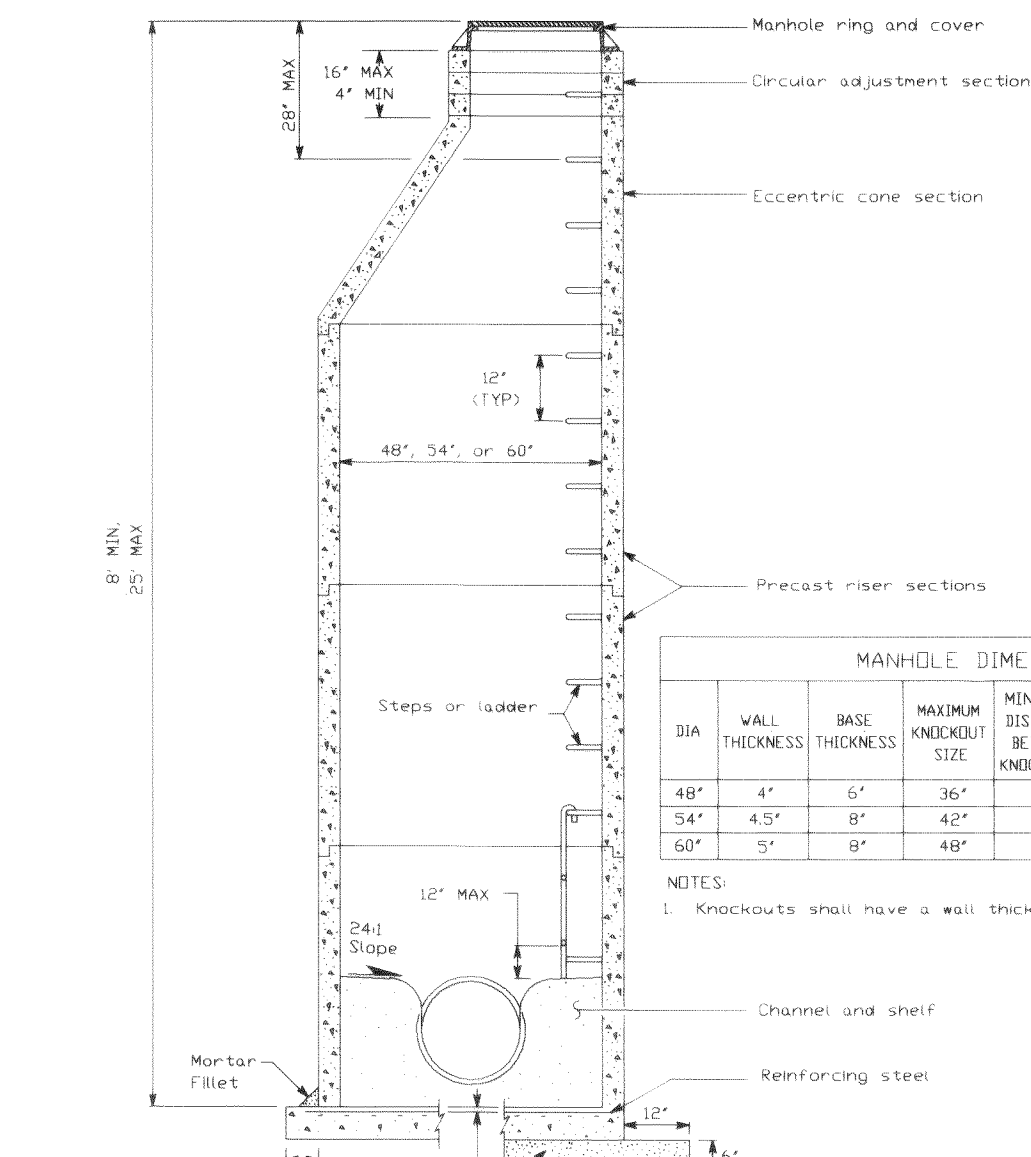
PIPE BEDDING FOR

SANITARY SEWERS

DRAWING

SS-1

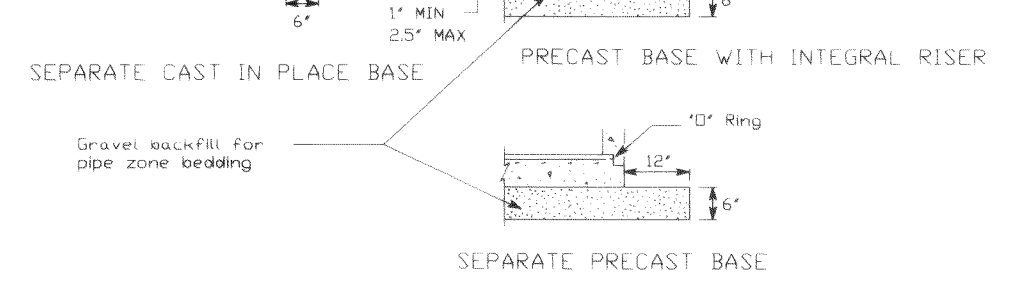
JUNE 1995



MANHOLE DIMENSION TABLE									
3/4"	WALL THICKNESS	BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS	BASE REINFORCING STEEL, SQ IN/FT EACH DIRECTION	INTEGRAL BASE	SEPARATE BASE		
48"	4"	6"	36"	8"	0.15	0.23			
54"	4.5"	8"	42"	8"	0.19	0.19			
60"	5"	8"	48"	8"	0.25	0.25			

NOTES:

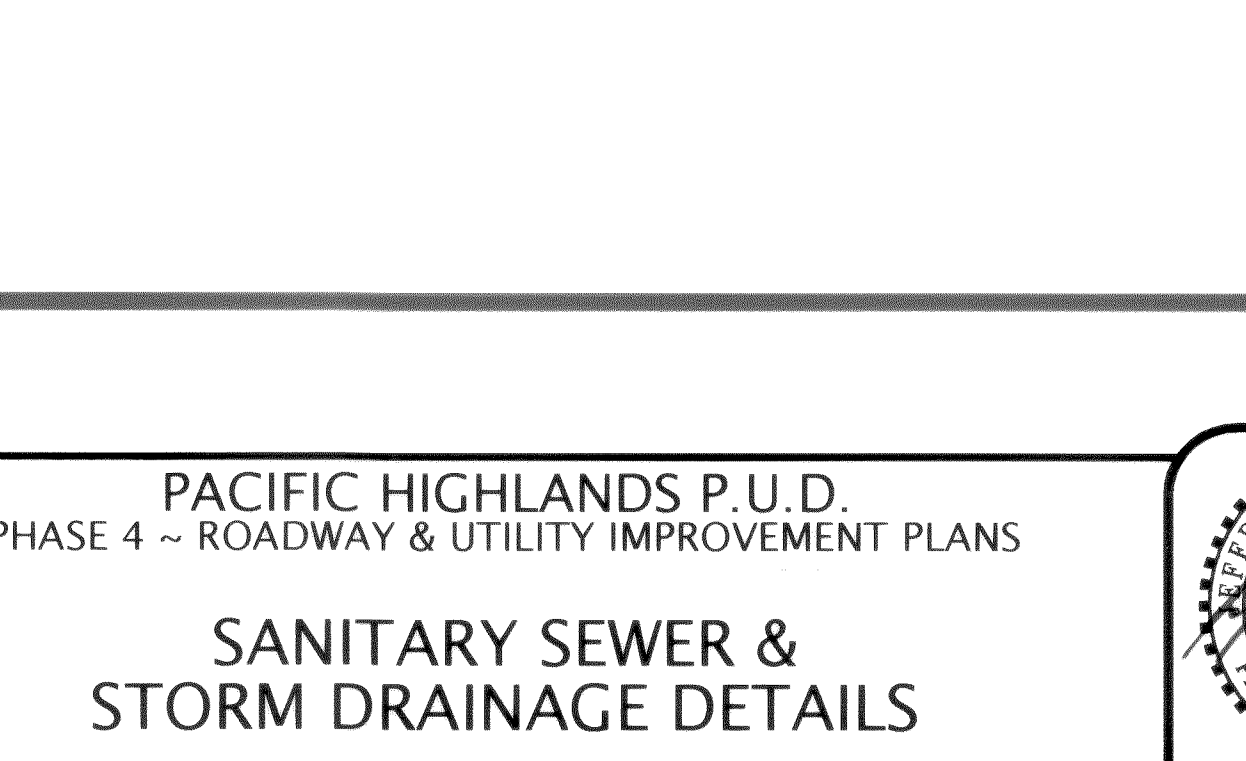
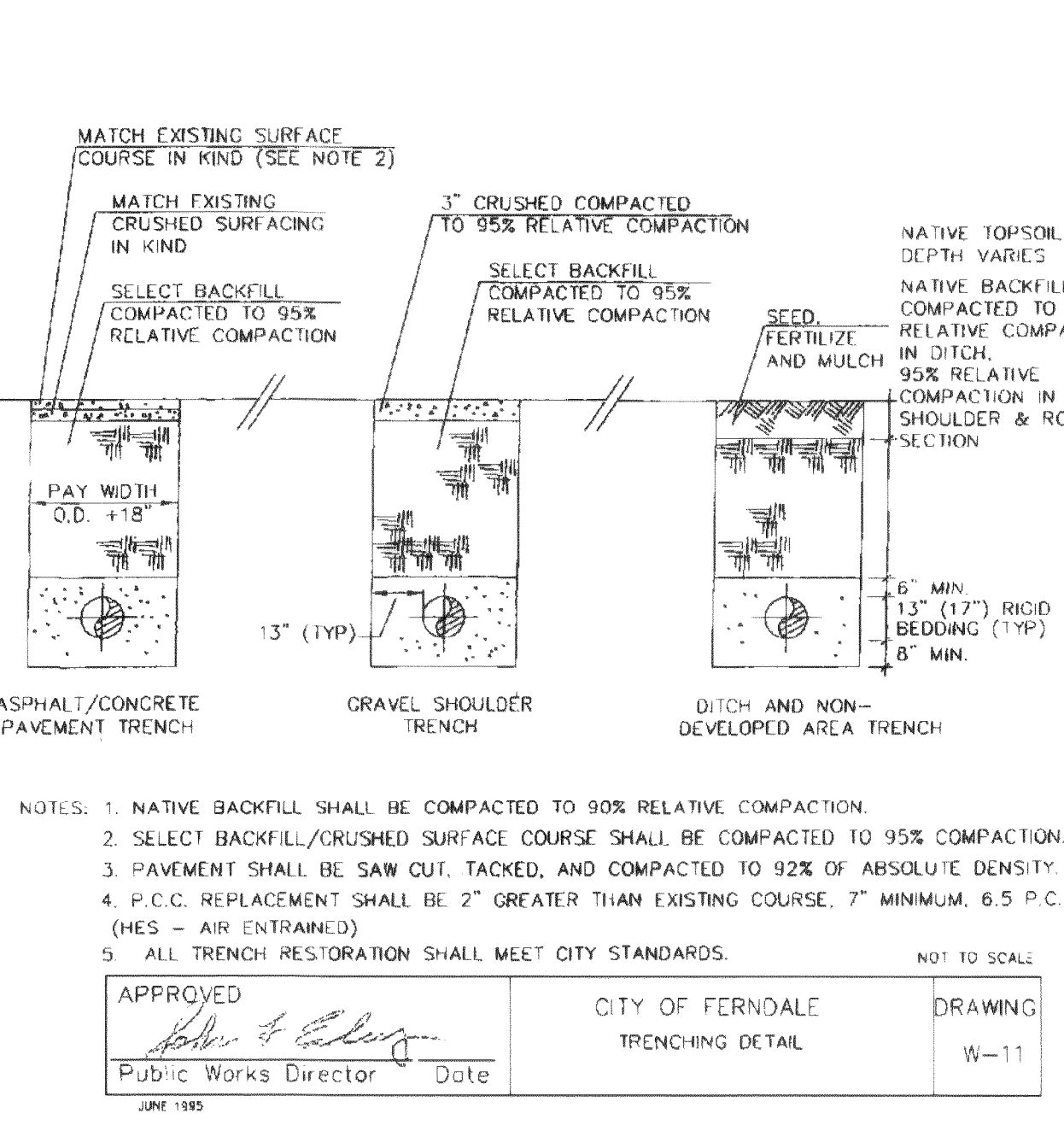
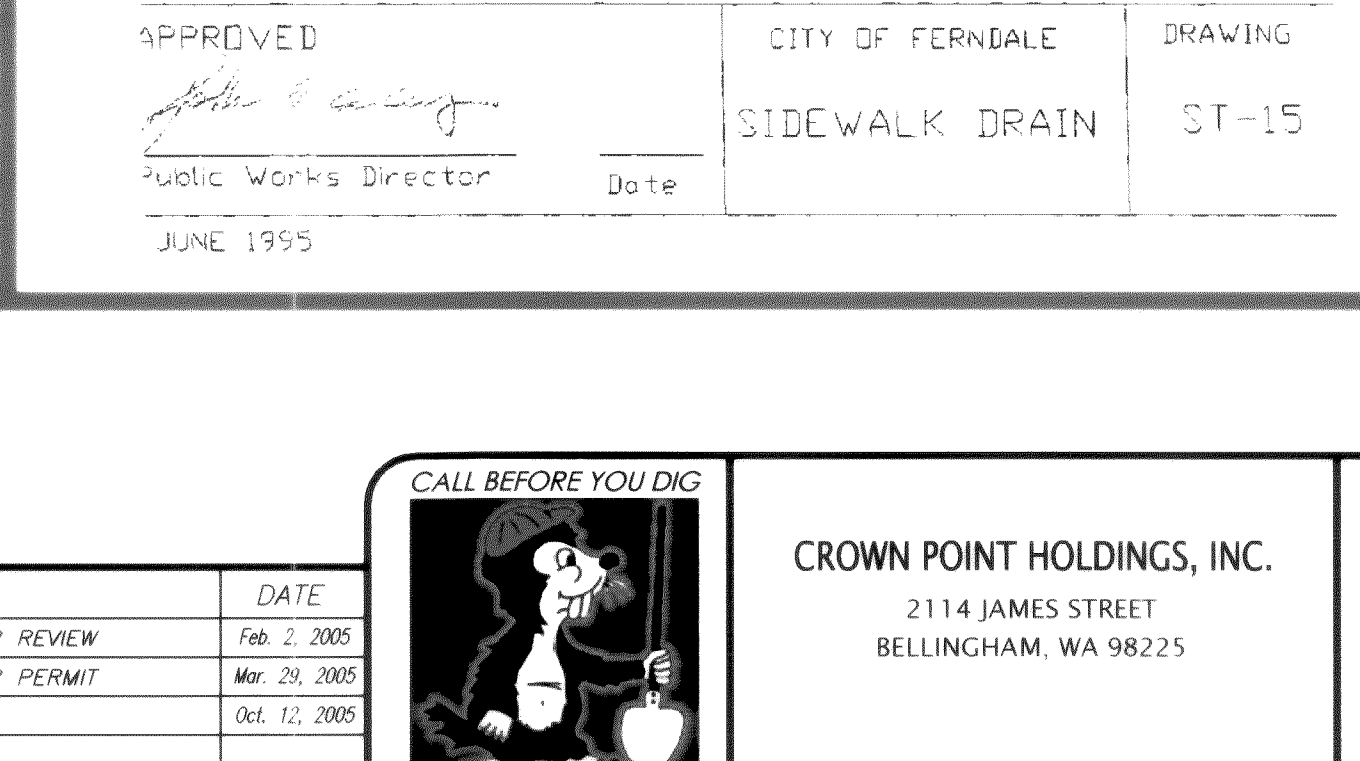
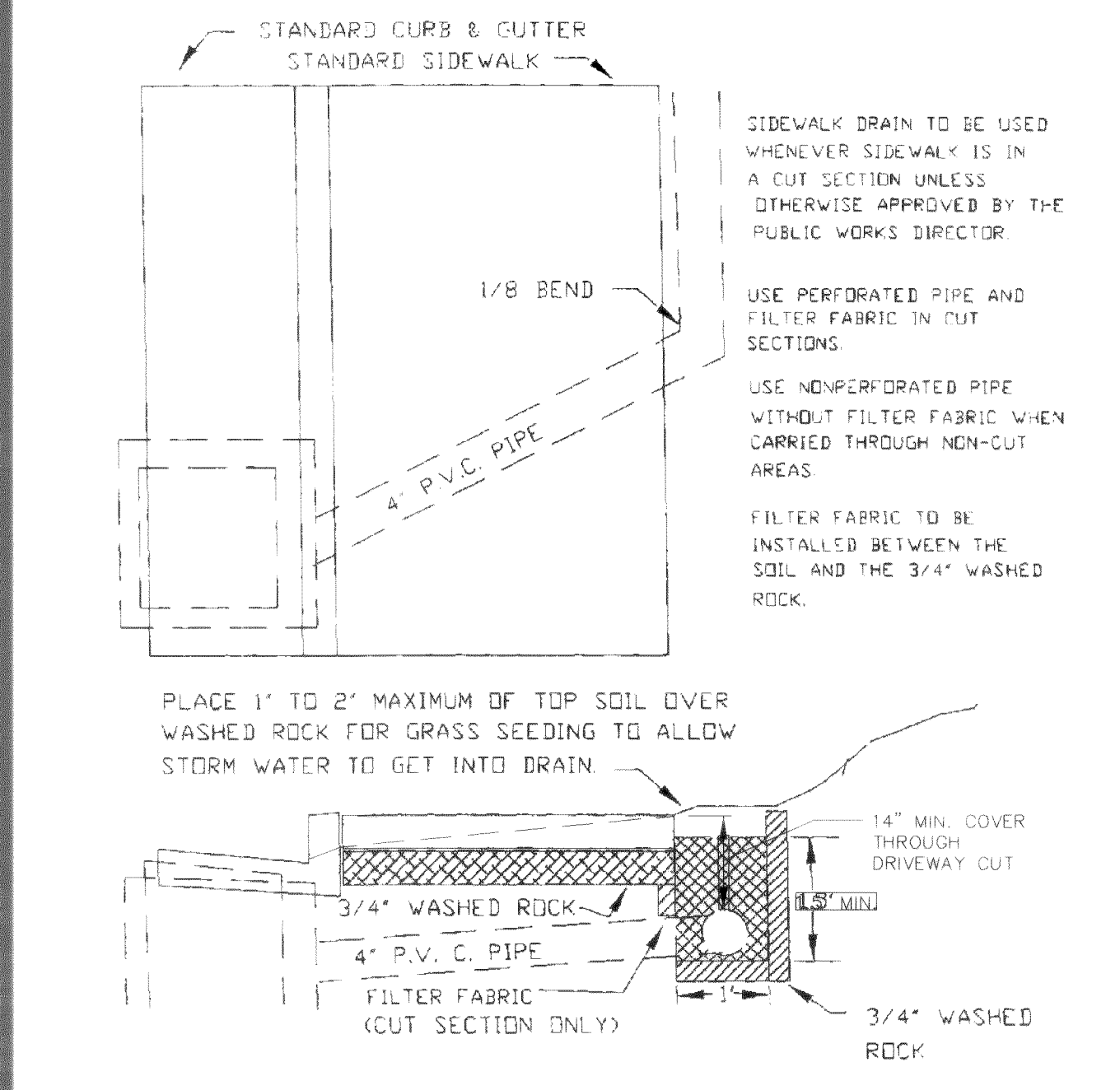
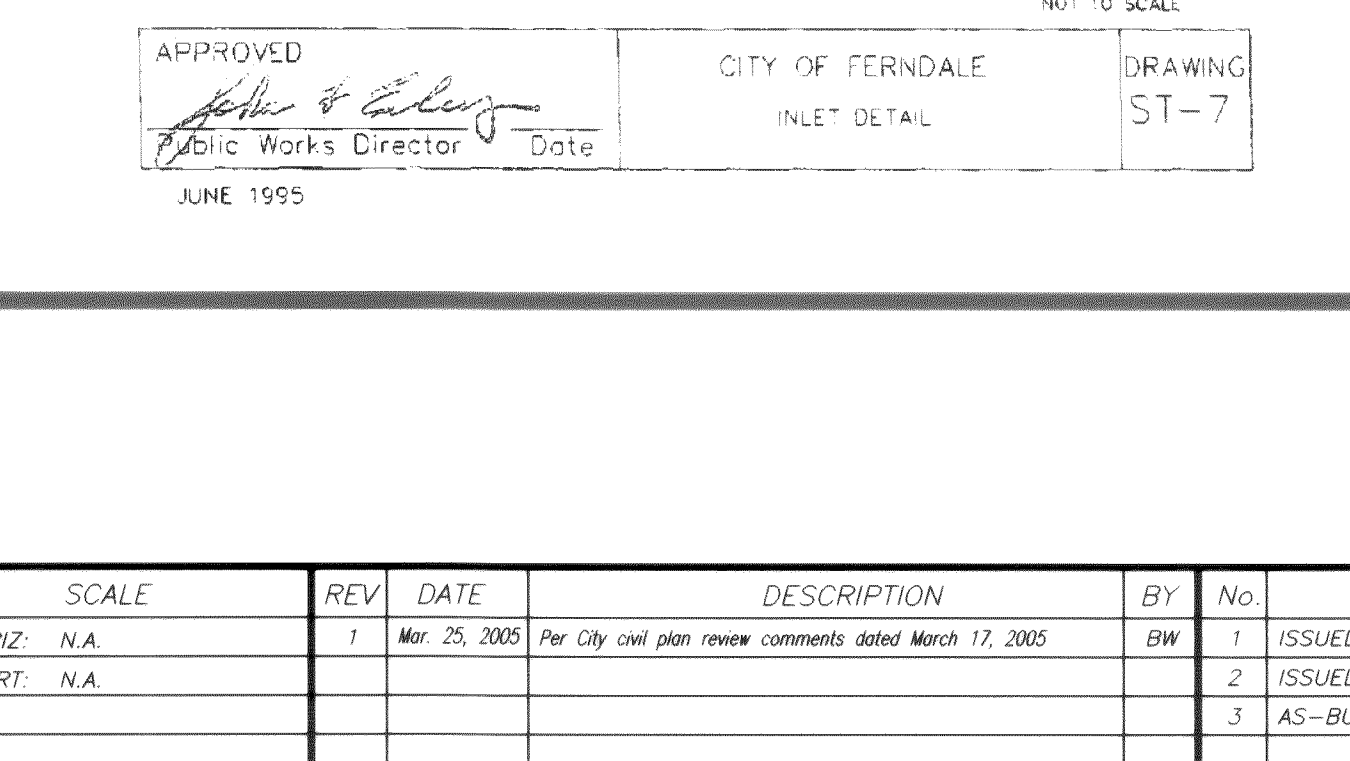
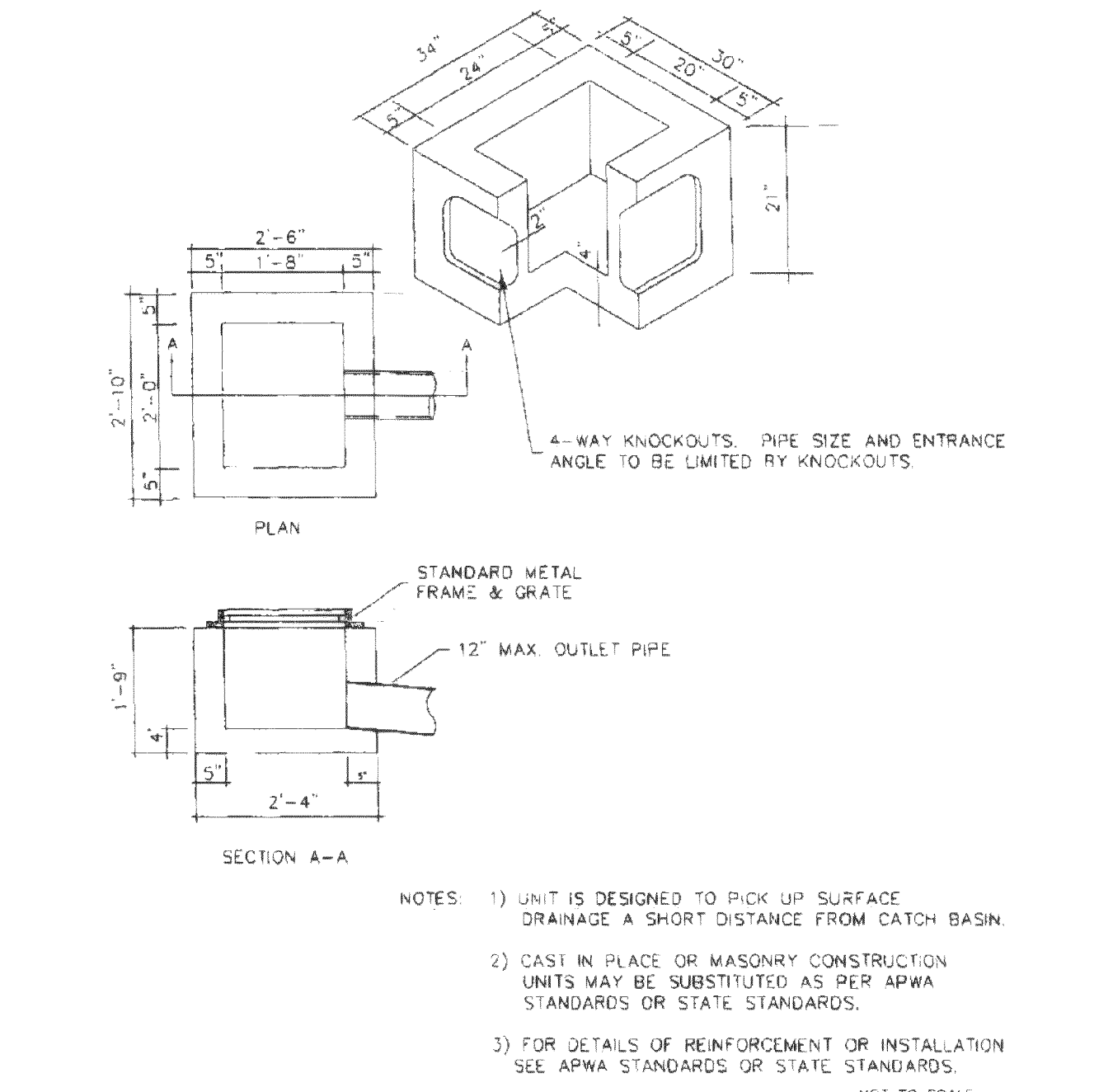
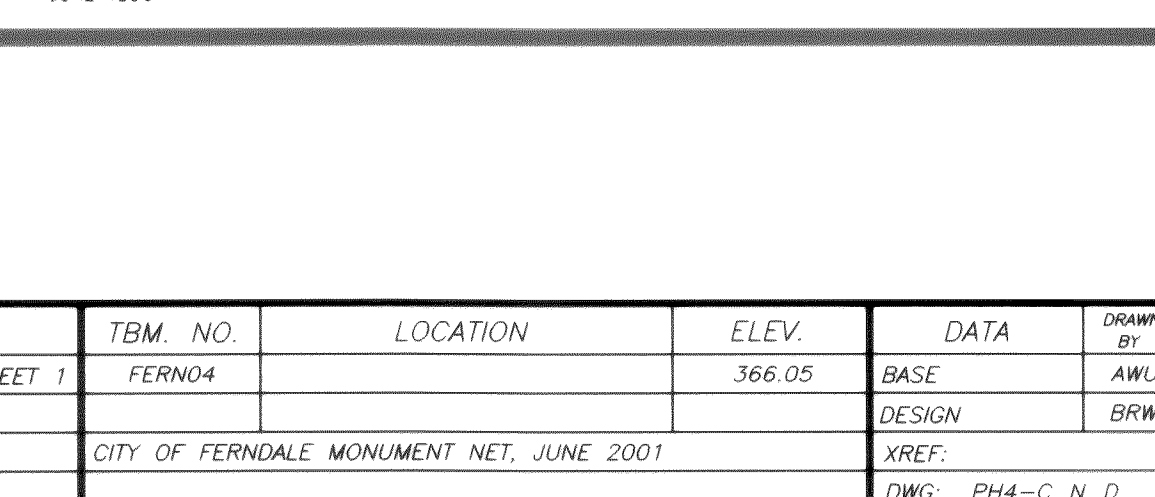
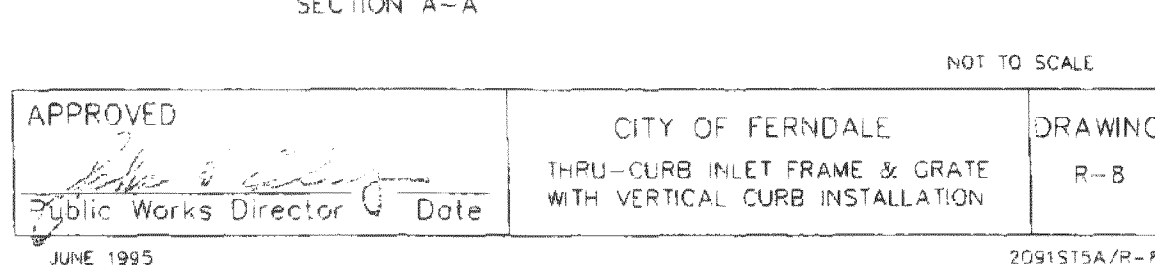
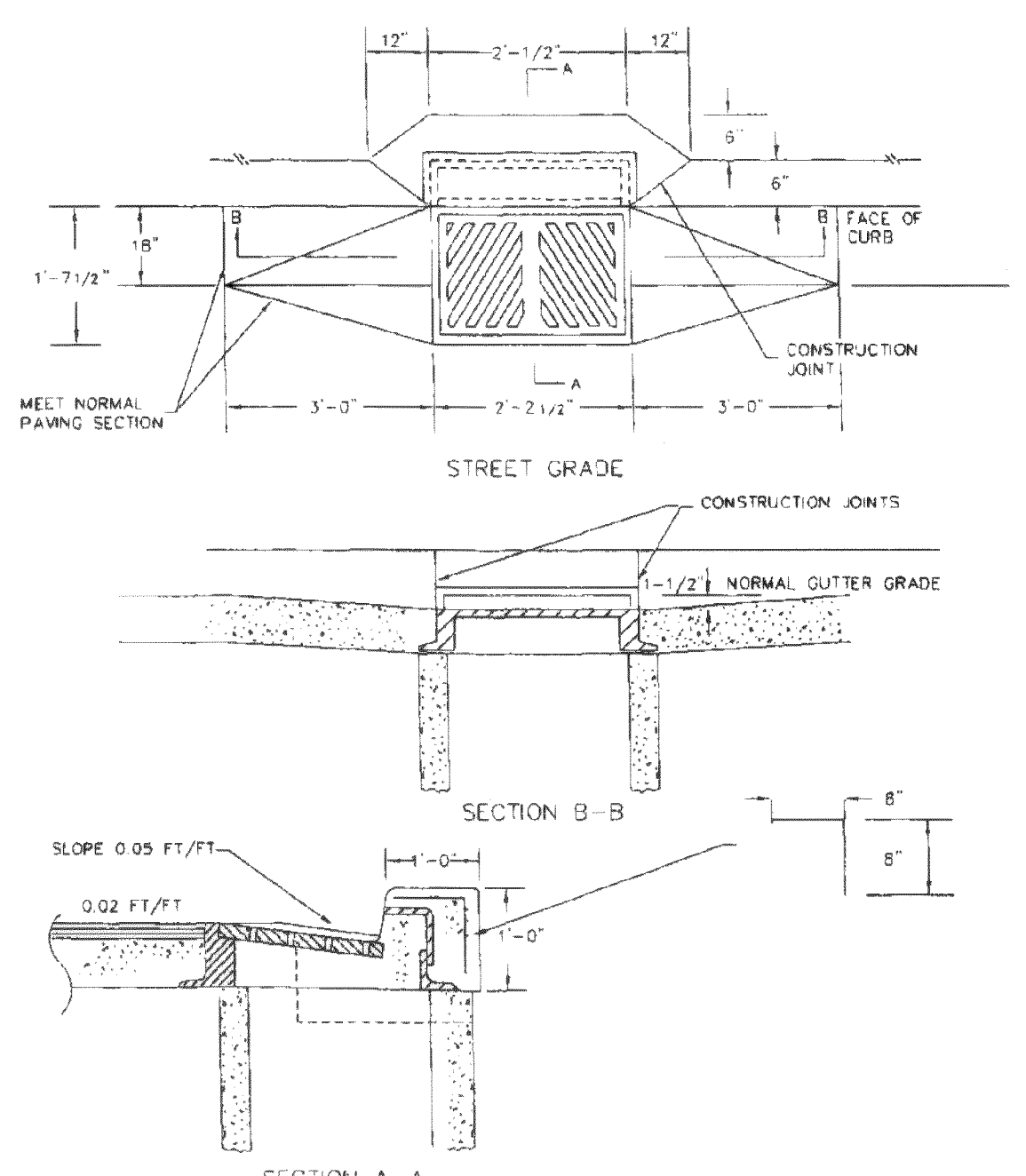
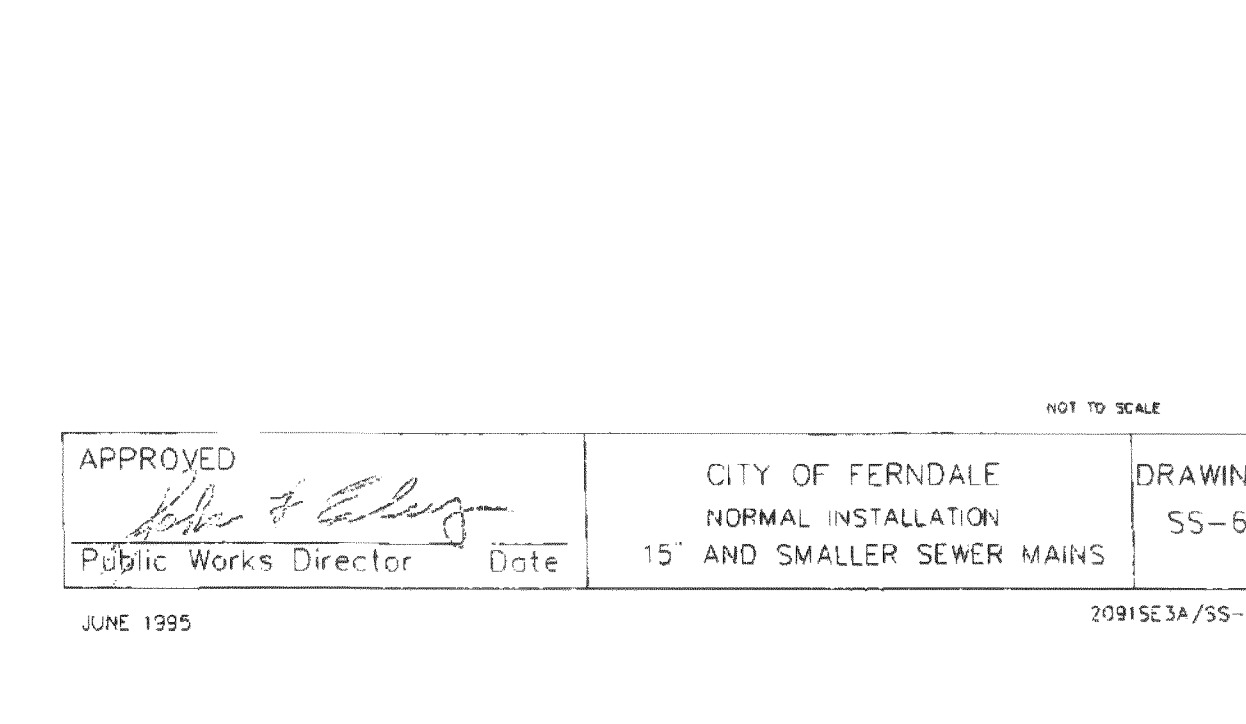
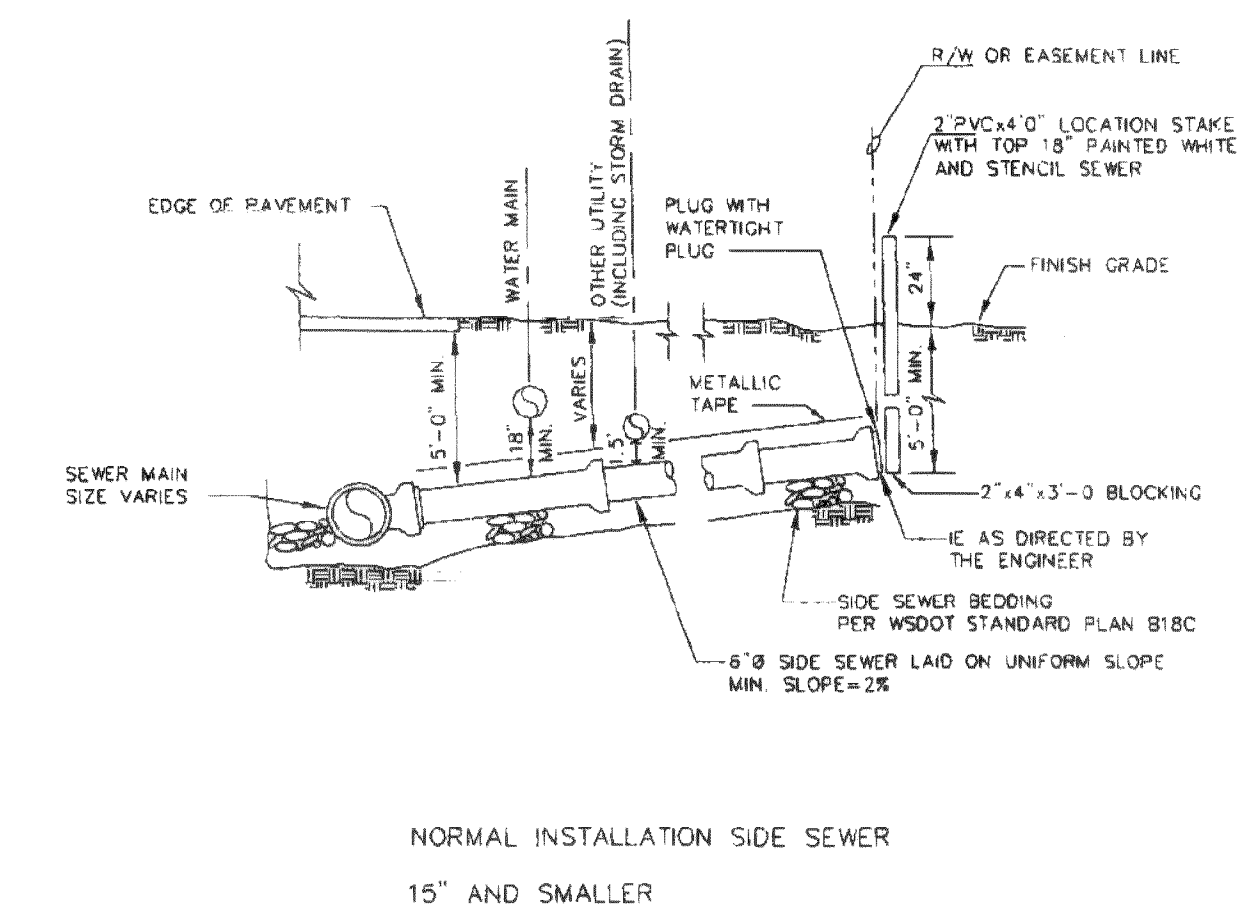
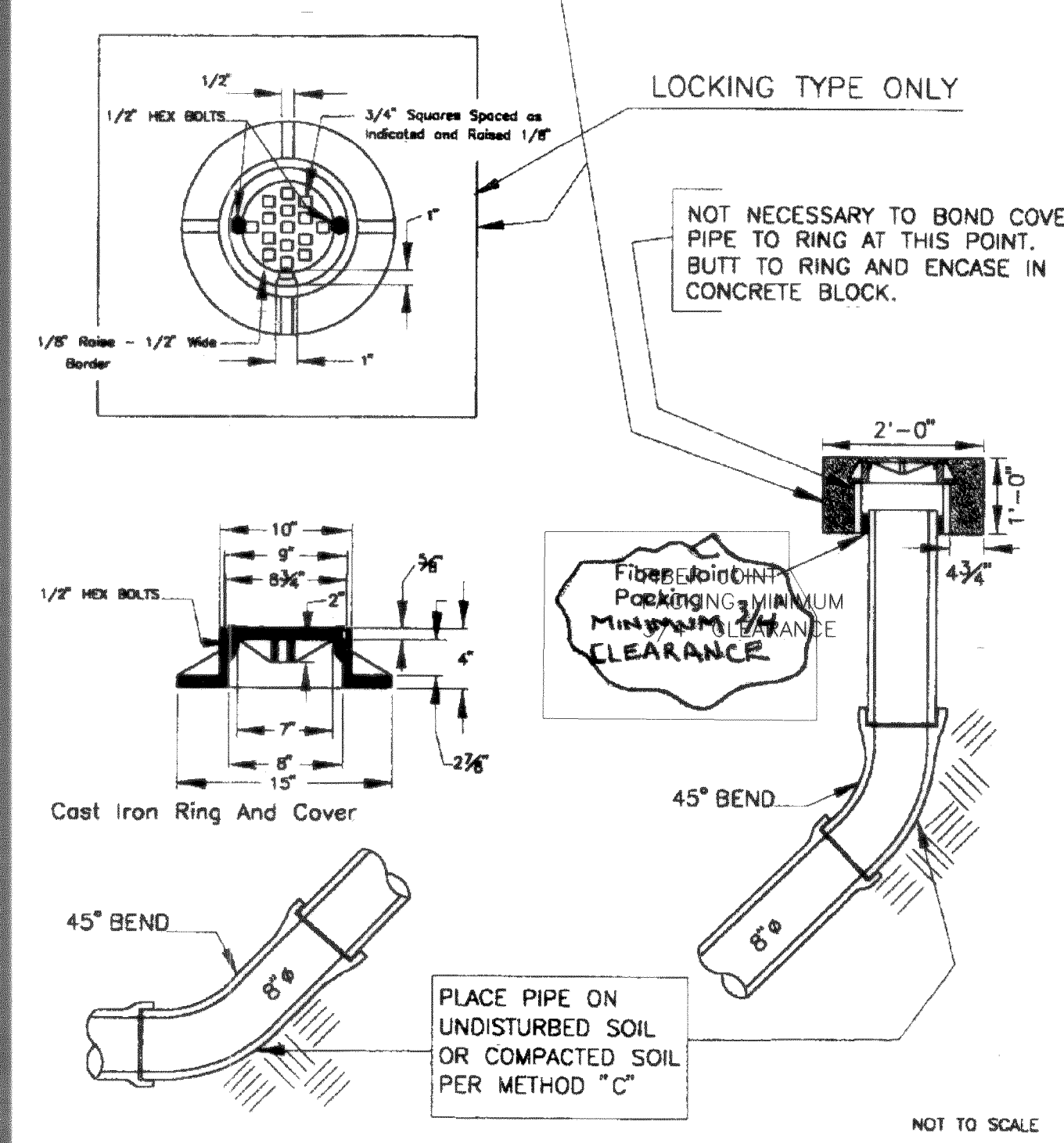
1. Knockouts shall have a wall thickness of 2" minimum to 25" maximum.



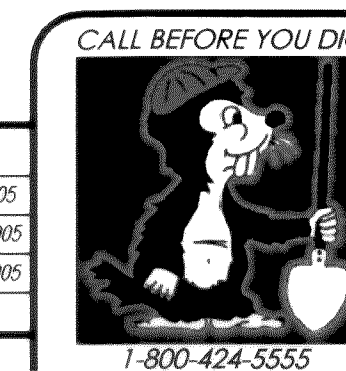
TYPE 1 MANHOLE DETAIL

NOT TO SCALE

2" SQUARE CONCRETE BLOCK TO ENCASE CLEAN-OUT. IF CLEAN-OUT IS IN ASPHALT, THE BLOCK IS TO BE LEFT APPROX. 1 1/2" LOW TO ALLOW FOR AN ASPHALT TOPPING OF LIKE MIXTURE AS THE SURROUNDING AREA. IN ALL CASES THE CONCRETE BLOCK WILL BE 1" THICK.



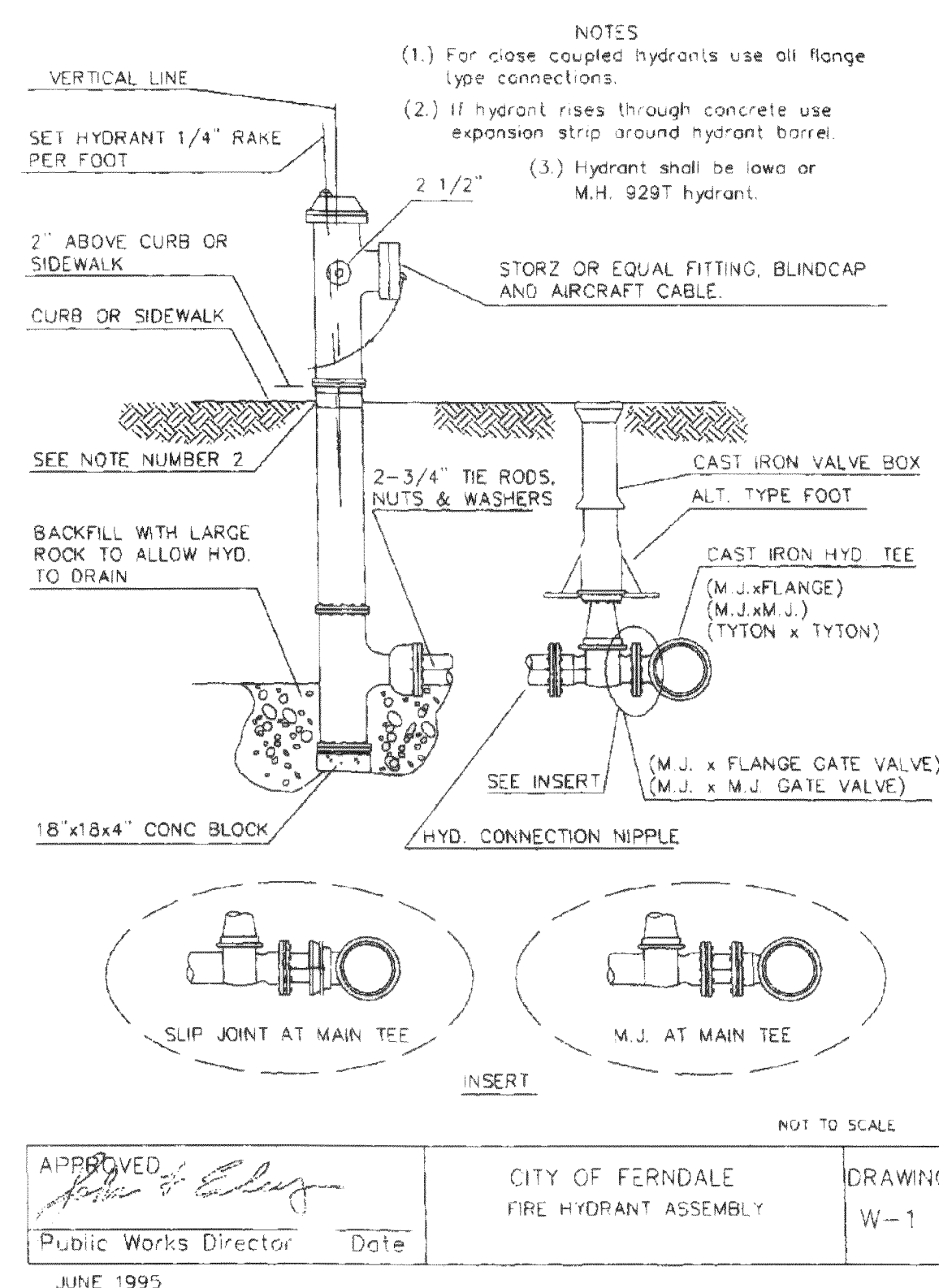
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DESIGN: SEE SURVEY NOTES, SHEET 1	FERM04		366.05	BASE	AWU	AWU	HORIZ: N.A.	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	BW	1	ISSUED FOR REVIEW Feb. 2, 2005
STAKING:				DESIGN	BRW	AWU	VERT: N.A.					2	ISSUED FOR PERMIT Mar. 29, 2005
ASBUILT:				XREF:								3	AS-BUILT Oct. 12, 2005
				DWG: PH4-C.N.D.									
SURVEY REFERENCE		VERTICAL DATUM		PLAN CHECK						REVISIONS			ISSUE



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2114 JAMES STREET
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PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS
SANITARY SEWER & STORM DRAINAGE DETAILS
JOB #: 2003 149 SHEET 18 OF 20
EXPIRES: 10/10/07

WATER SYSTEM DETAILS

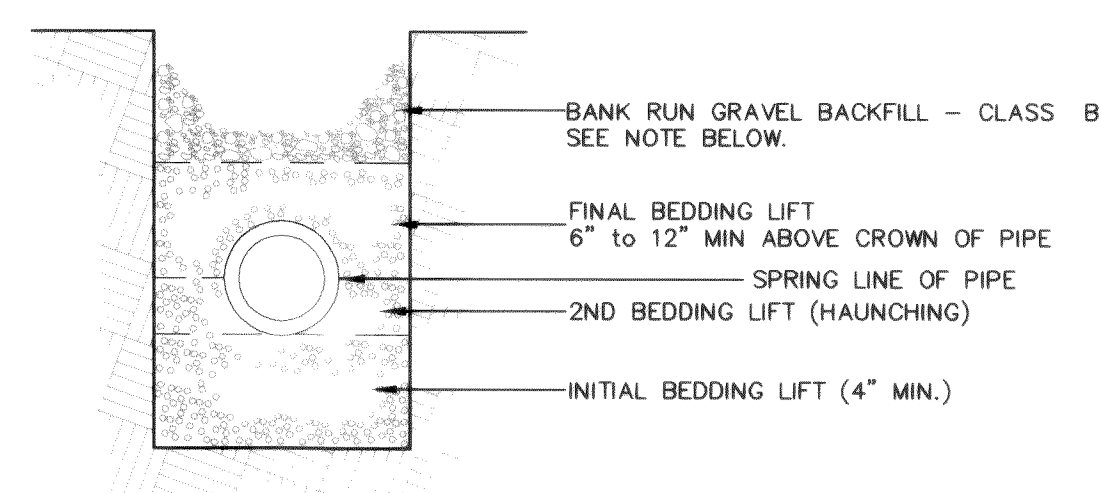


BEDDING SPECIFICATIONS FOR D.I.P. WATERLINE

THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS ARE TO BE USED IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION:

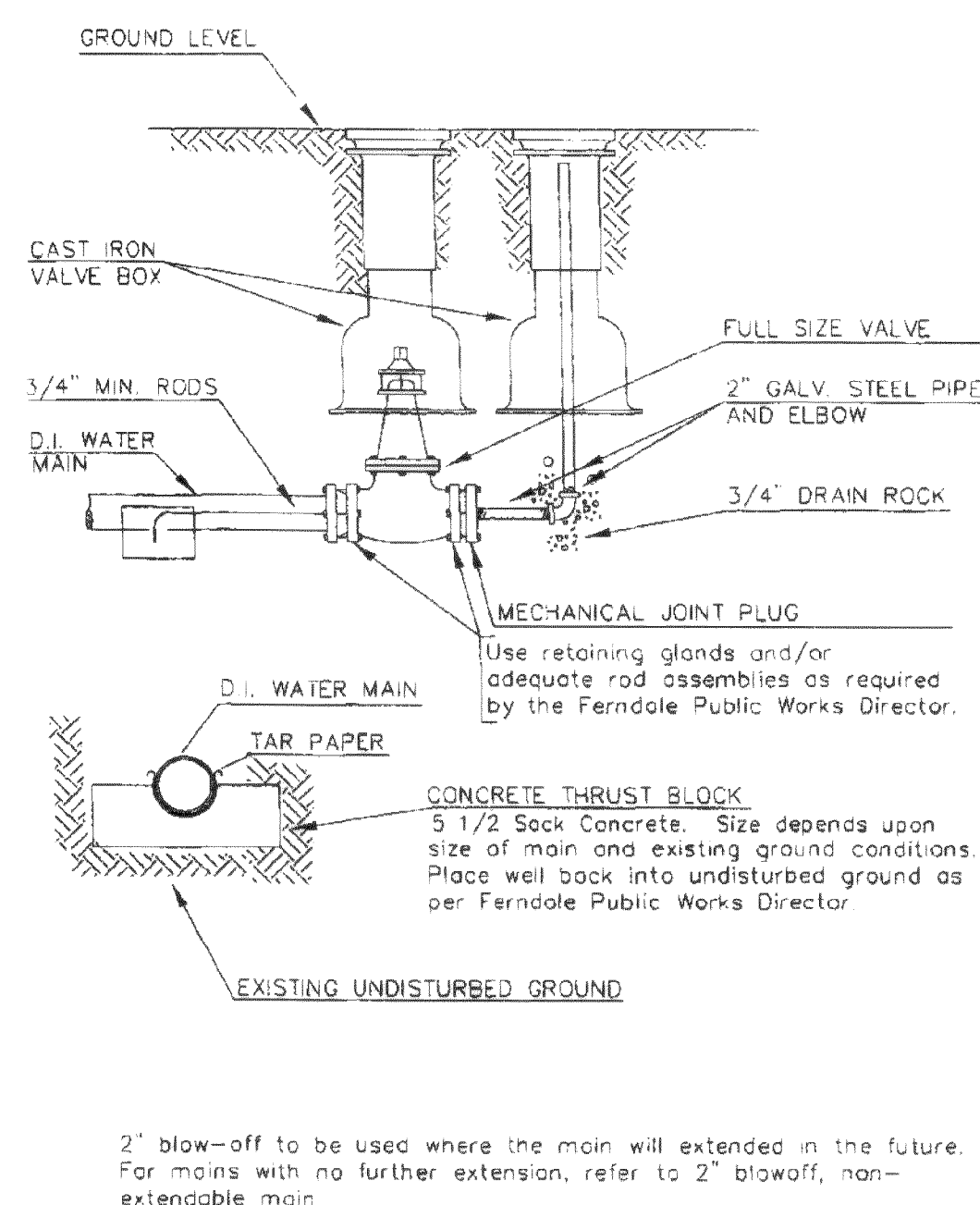
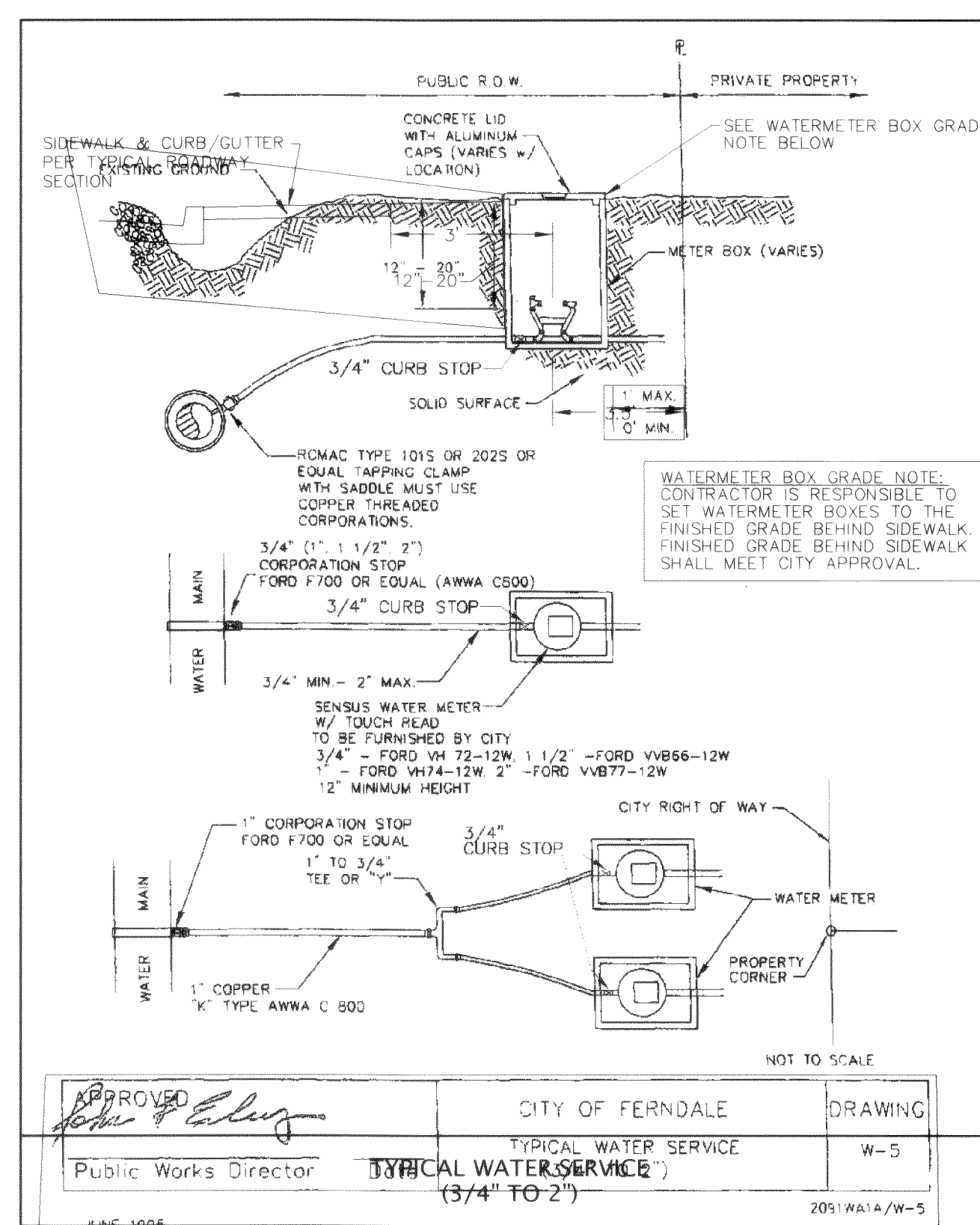
BEDDING FOR DUCTILE IRON PIPE WATERLINE—

BEDDING MATERIAL FOR THE DUCTILE IRON PIPE SHALL BE SELECTED GRANULAR MATERIAL FREE FROM WOOD WASTE, ORGANIC MATERIAL, OR OTHER EXTRANEOUS OR QUESTIONABLE MATERIALS AND SHALL HAVE A MAXIMUM DIMENSION OF 1-1/2 INCHES. THE BEDDING SHALL BE PLACED TO A MINIMUM DEPTH OF 10 INCHES. THE MATERIAL SHALL BE PLACED TO A MINIMUM DEPTH OF INCHES. THE BEDDING MATERIAL SHALL BE RAMMED AND THE TOP OF THE PIPE SHALL BE COVERED WITH A MAXIMUM DEPTH OF INCHES. HAND-HELD TOOLS, SUCH AS TOOLS, SHALL BE PROVIDED TO FORM AND SET FOR THE FULL LENGTH OF THE PIPE, VALVES, AND FITTINGS. CARE SHALL BE TAKEN TO PREVENT ANY DAMAGE TO THE PIPE OR ITS PROTECTIVE COATING. PEAK GRAVEL AND BUCKSHOT ARE NOT ACCEPTABLE BEDDING MATERIALS.

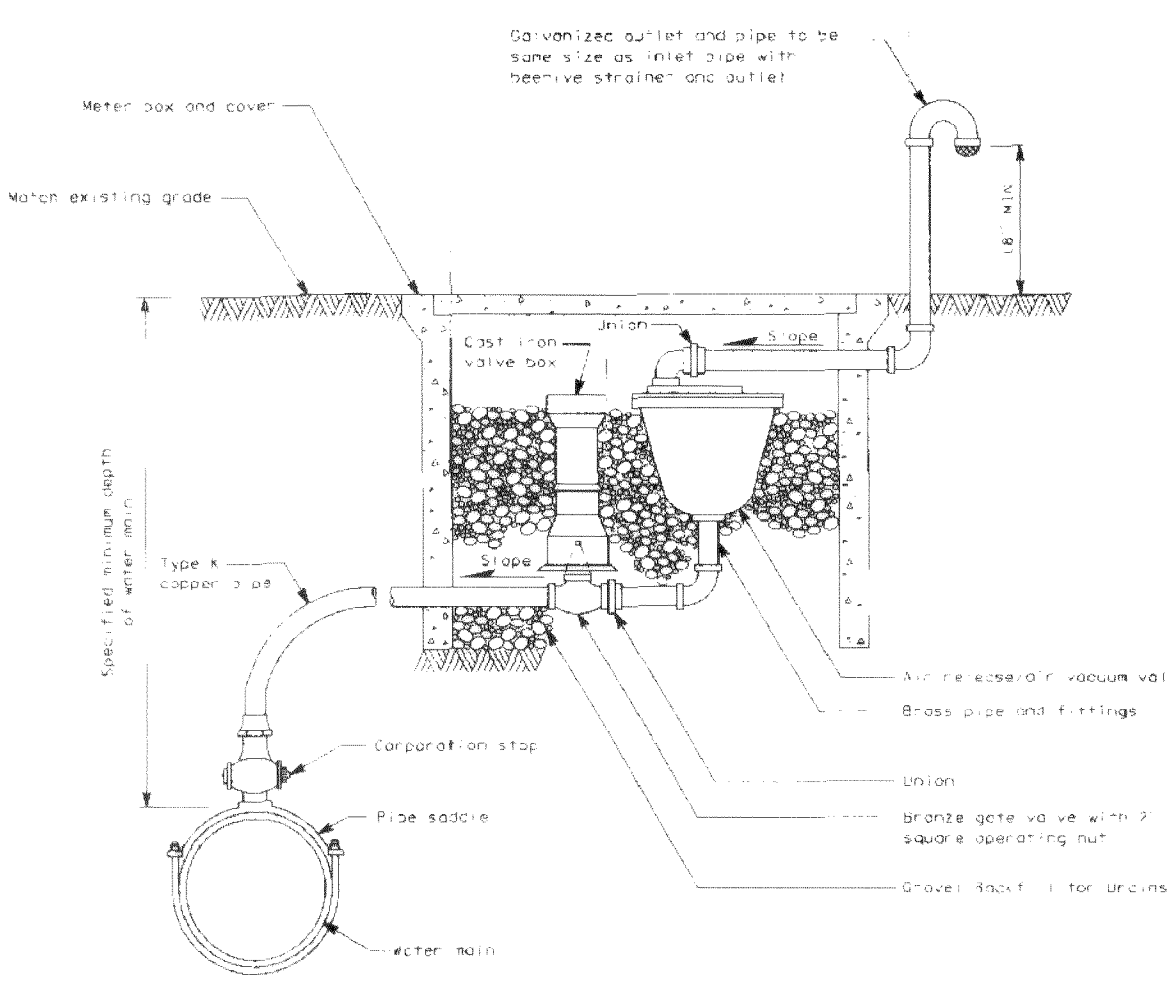


BACKFILL - WHEREVER A TRENCH IS EXCAVATED IN THE EXISTING OR PROPOSED ROADWAY, SIDEWALK OR OTHER AREAS WHERE SETTLEMENT WOULD BE DETRIMENTAL, THE ENTIRE TRENCH SHALL BE BACKFILLED WITH IMPORTED GRAVEL AND COMPACTED TO 95% OF MAXIMUM DENSITY.

DIP WATERLINE BEDDING DETAIL

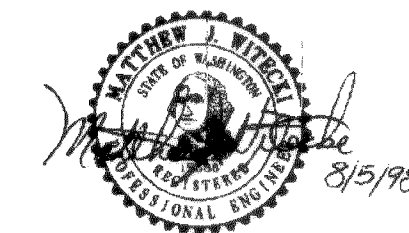


2" blow-off to be used where the main will be extended in the future. For mains with no further extension, refer to 2" blowoff, non-extendable main.



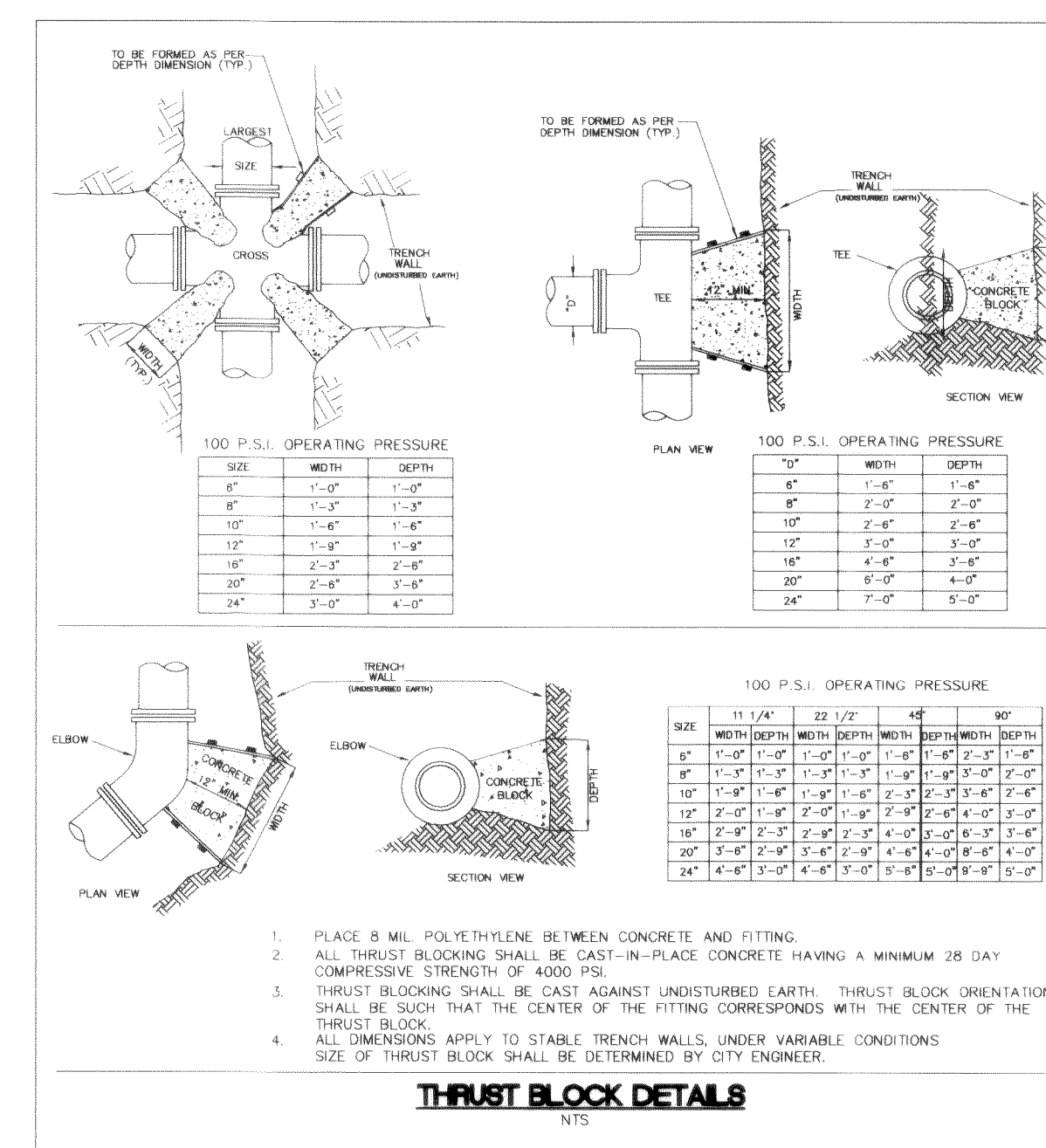
NOTES

1. Size of combination air releaser/air vacuum valve shall be specified in the Contract. Piping and valves shall be the same size as the combination air releaser/air vacuum valve.
2. Locate at the high point of the main, top of main.

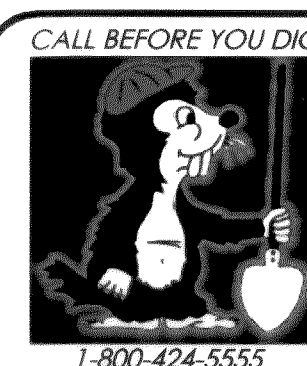


COMBINATION AIR RELEASE/
AIR VACUUM VALVE ASSEMBLY
STANDARD PLAN B-21a

APPROVED FOR PUBLICATION
Clifford E. Mansfield 8/10/94
PORT STATE DESIGN ENGINEER DATE
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION



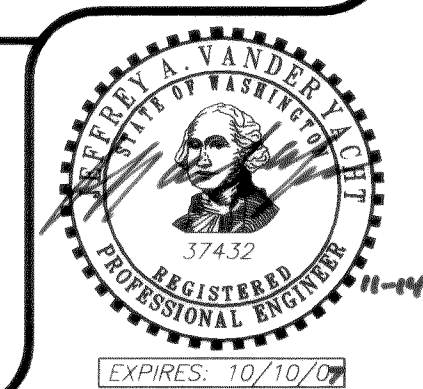
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STAKING:				DESIGN	BRW	AWJ	VERT: N.A.					2	ISSUED FOR PERMIT Mar. 29, 2006
ASBUILT:	CITY OF FERNDALE MONUMENT NET, JUNE 2001			XREF:								3	AS-BUILT Oct. 12, 2006
				DWG: PH4-C-N_D									
SURVEY REFERENCE	VERTICAL DATUM			PLAN CHECK				REVISIONS				ISSUE	



CROWN POINT HOLDINGS, INC.
2114 JAMES STREET
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PACIFIC HIGHLANDS P.U.D. PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS

WATER SYSTEM DETAILS



JOB #: 2003 149

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EXPIRES: 10/10/07

00313.019 2.22.06 142



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

GENERAL CONSTRUCTION NOTES

GENERAL REQUIREMENTS

- ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. WORK AND MATERIALS SHALL ALSO CONFORM TO THE CITY OF FERNDALE DEVELOPMENT STANDARDS. IN CASE OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
- THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDALE AND WHATCOM COUNTY PRIOR TO COMMENCING WORK WITHIN PUBLIC RIGHTS-OF-WAY.
- THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH REPRESENTATIVES OF THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT AND THE PROJECT ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- ALL WORK AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE. REPRESENTATIVES FROM THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT MUST INSPECT ALL WORK. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS AS FOLLOWS:
 - PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.
 - PLACEMENT OF WATER MAIN AND BACKFILLING OF WATER MAIN TRENCH WITHIN ROAD RIGHTS-OF-WAY OR IN WATERLINE EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDALE.
 - PLACEMENT AND BACKFILLING OF UNDERGROUND UTILITIES, STORM SEWER AND SANITARY SEWER WITHIN ROAD RIGHTS-OF-WAY OR IN EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDALE.
 - GRADING OF PUBLIC ROADWAY AT:
 - COMPLETION OF EXCAVATION TO SUBGRADE.
 - COMPLETION OF BALLAST COURSE PLACEMENT.
 - COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT.
 - POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
 - ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
 - OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
 - END OF MAINTENANCE PERIOD.
- SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SUB-SURFACE CONDITIONS AND SOILS TYPES.
- 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.
- A COPY OF THESE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATIONS FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON A COMBINATION OF FIELD RECONNAISSANCE, FIELD SURVEY AND UTILITY COMPANY RECORDS AND ARE SHOWN ON THESE PLANS IN AN APPROXIMATE WAY ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL OF THE VARIOUS UTILITY COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES PRIOR TO STARTING CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR COSTS INCURRED BECAUSE OF DAMAGE DONE TO EXISTING FACILITIES BY THE CONTRACTOR'S WORK FORCE, INCLUDING COSTS FOR REPAIRS, WHICH WILL BE CONTRACTOR'S SOLE RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE ENGINEER PROMPTLY OF ANY CONFLICT BETWEEN THE APPROVED PLANS AND THE LOCATION OF ANY EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT UTILITY LOCATION SERVICE AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-424-5555.
- THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST BETWEEN ACTUAL FIELD CONDITIONS AND THE ASSUMED CONDITIONS SHOWN ON THE APPROVED PLANS PRIOR TO PROCEEDING WITH CONSTRUCTION. NO NECESSARY PLAN OR DESIGN CHANGES CAN BE MADE. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR EXTRA WORK, INCLUDING REMOVAL AND RECONSTRUCTION OF NEWLY BUILT IMPROVEMENTS, MADE NECESSARY BY ERRORS OF DIMENSION OR GRADE ON THE APPROVED PLANS, UNLESS SUCH NOTIFICATION WAS GIVEN.
- THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING.
- ALL MATERIALS TESTING REQUIREMENTS FOR THE IMPROVEMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED IN ACCORDANCE WITH THE INSTRUCTIONS OF THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR. CONTRACTOR SHOULD DETERMINE THESE REQUIREMENTS PRIOR TO THE START OF CONSTRUCTION.
- ALL PORTLAND CEMENT CONCRETE SHALL BE APWA CLASS 3000, PER APWA STANDARD SPECIFICATIONS, SECTION 6-02.3(2)B.
- UNDERGROUND UTILITIES CONSTRUCTION
 - 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 LOCATIONS OF ALL UNDERGROUND UTILITIES, BOTTOM OF PIPE ELEVATIONS, INVERT ELEVATIONS, MANHOLE LOCATIONS, BLOW-OFF LOCATIONS AND INVERTS OF SERVICE CONNECTIONS (BOTH AT PIPE AND AT PROPERTY LINE), VERTICAL AND HORIZONTAL BENDS, SERVICE BOXES AND METERS, VALVES AND HYDRANTS. CALL AT LEAST 48-HOURS BEFORE BUYING 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.
 - THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
 - NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.
 - WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.
 - TRENCH DEWATERING DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT PONDS.
 - WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.
 - UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS.
 - TESTING OF NEW WATER LINES, SANITARY SEWER LINES, AND STORM SEWER SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.

ROAD

- THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF THE STANDARD STREET SECTION:

TYPICAL STREET SECTION PCC CURB AND GUTTER PCC SIDEWALKS PCC CURB RAMPS, ADA APPROACHES SIDEWALK DRAINS MONUMENTS	TYPICAL SECTION ON SHEET 1 OF THESE PLANS CITY OF FERNDALE STANDARD DETAIL (COFSD) R-9 COFSD R-12 & TYP. SECTION ON SHEET 1 WSDOT STD. DETAIL F-3 COFSD ST-15 COFSD S-2
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- ALTERNATE PAVEMENT SECTIONS, WHEN DESIGNED BY A LICENSED GEOTECHNICAL ENGINEER, MAY BE SUBMITTED TO THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR FOR CONSIDERATION AND, IF APPROVED, USED IN PLACE OF THE PAVEMENT SECTION SHOWN ON THESE PLANS.
- PROJECT SURVEYOR OR THEIR DESIGNEE SHALL SURVEY THE ELEVATION OF THE COMPLETED SUBGRADE ALONG THE ROADWAY CENTERLINE AT 25-FOOT INTERVALS. THE PROJECT SURVEYOR SHALL SUBMIT THE SURVEY DATA TO THE CITY OF FERNDALE AND THE ENGINEER FOR REVIEW. ALL SUBGRADE ELEVATIONS SHALL BE AT OR BELOW THE DESIGN SUBGRADE ELEVATION. NO TOLERANCE IS PROVIDED FOR SUBGRADE ABOVE THE DESIGN SUBGRADE ELEVATION. OTHER METHODS OF SUBGRADE CERTIFICATION MAY BE USED IF MUTUALLY AGREED UPON BY THE CITY, CONTRACTOR, AND ENGINEER.
- ROADWAY EXCAVATION WITHIN THE ROADWAY PRISM SHALL BE CUT TO A UNIFORM GRADE. THE COMPLETED SUBGRADE SURFACE SHALL NOT VARY MORE THAN 0.10-FOOT FROM THE LOWER EDGE OF A 15-FOOT STRAIGHTEDGE PLACED ON THE SUBGRADE PARALLEL TO THE CENTERLINE UNLESS APPROVED BY THE ENGINEER.
- EARTHWORK**
 - THE CONTRACTOR SHALL CLEAR, GRUB AND CLEAN UP THOSE AREAS SHOWN ON THE PLANS.
 - 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.
 - 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.
 - THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE ENGINEER.
 - MAXIMUM DENSITY AND OPTIMUM MOISTURE FOR GRANULAR MATERIALS WILL BE DETERMINED USING ASTM D-1557 TEST METHOD.
 - UNSUITABLE MATERIAL NOT FIT FOR USE AS A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.
 - THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.
- BASE COURSES**
 - GRAVEL BASES AND BALLAST SHALL NOT HAVE THE PERCENT PASSING THE U.S. NO. 200 SIEVE EXCEED 5%.
 - BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY.
 - OWNER SHALL BE RESPONSIBLE FOR ALL COMPACTION TESTING. ALL TESTING SHALL BE THROUGH ENG. REV. ACCOUNT AND PAID FOR BY OWNER.
- PAVEMENTS**
 - SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.
 - A TACK COAT OF ASPHALT SHALL BE APPLIED BEFORE LAYING COURSES OF ASPHALT.
 - ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT.
 - WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE APPLICANT SHALL PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. CONTRACTOR SHALL COLD PLANE PER DIMENSIONS SPECIFIED ON THE PLANS, AND INSTALL A MINIMUM 2-FOOT WIDE PETRO-TAC PAVING FABRIC, OR EQUIVALENT, OVER JOINT BETWEEN PAVING LIFTS.
 - ALL PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD.
- STREET LIGHTING**
 - CONTRACTOR SHALL PROVIDE STREET ILLUMINATION IN ACCORDANCE WITH THE PROVISIONS OF SECTION 707 OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS. WHAT 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 THE PAVEMENT CENTERLINE. POLE LOCATIONS ARE SHOWN ON THESE PLANS.
 - FINAL LOCATIONS OF STREET LIGHTS IS TO BE COORDINATED WITH PUGET SOUND ENERGY.
 - CONTRACTOR IS TO COMPLY WITH THE SPECIFICATIONS SHOWN ON WSDOT STANDARD DETAIL J-11A, STANDARD JUNCTION BOX, UNLESS OTHERWISE DIRECTED BY THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR.
 - CONTRACTOR MUST INFORM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR (4) WORKING DAYS IN ADVANCE.
- MAILBOXES**
 - MAILBOX STRUCTURES SHALL BE IN ACCORDANCE WITH DETAIL SHEET 17, FINAL LOCATION AS DETERMINED BY USPS AND APPROVED BY CITY OF FERNDALE.
 - MAILBOXES SHALL BE TYPE I, II, AND/OR III - CBU (CENTRAL BOX UNIT), USPS APPROVED.

STORM DRAINAGE

- THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF STORM DRAIN IMPROVEMENTS:

"MAIN LINE" CATCH BASINS "RESIDENTIAL SERVICE LINE" CATCH BASINS "THRU-CURB INLET FRAME AND GRATE" SIDEWALK DRAINS	TYPE 1, 1L OR 2, WSDOT STD. DETAILS B-1, B-1A OR B-1E CITY OF FERNDALE STANDARD DETAIL (COFSD) ST-7 CITY OF FERNDALE STANDARD DETAIL (COFSD) ST-8 COFSD ST-15
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- ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS SECTION 7-08.3(1) 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 WSDOT STANDARD SPECIFICATIONS SECTION 9-05.
- STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP) AND SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS, SECTION 9-05.20. STORM SEWER PIPE HAVING DIAMETERS 8" AND SMALLER SHALL BE POLYVINYL CHLORIDE (PVC) PIPE AND SHALL CONFORM TO WSDOT STANDARD SPECIFICATIONS, SECTION 9-05.12.
- BACK OF WALK DRAIN SHALL BE 4" SMOOTH WALL PERFORATED PVC PIPE, ASTM D 3034 SDR35, INSTALLED IN CUT SECTIONS PER COFSD ST-15.
- ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
- 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".
- ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS. ALL DRAINAGE STRUCTURES ASSOCIATED WITH A PERMANENT RETENTION/DETENTION FACILITY SHALL HAVE SOLID LOCKING LIDS.
- ALL DRAINAGE SERVICE STUBS SHALL BE MARKED FOR LOCATION WITH A PRESSURE TREATED 2" X 4" TIMBER, PAINTED WHITE OR A WHITE 2" DIA. PVC PIPE. BOTH TYPES OF LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.
- LOT/ROOF DRAIN SERVICES SHALL BE MIN. 4" PVC PIPE, ASTM D 3034 SDR35. MULTIPLE RESIDENTIAL STORM DRAIN SERVICES SHALL BE 6" PVC PIPE, DRAINING TO A COFSD ST-7 INLET. 8" PVC PIPE SHALL BE USED TO CONNECT EACH ST-7 INLET TO A NEARBY TYPE 1, TYPE 1L, OR TYPE 2 CATCH BASIN.
- ALL STORM STUB INVERT ELEVATIONS SHALL BE CONSTRUCTED TO FACILITATE POSITIVE FLOW TO CATCH BASIN.

SANITARY SEWER

- THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING SANITARY SEWER IMPROVEMENTS:

PIPE BEDDING TRENCH BACKFILL SS MANHOLE, TYPE 1-48" SSMH RING & COVER, TYPE 2 SS CLEANOUTS SIDE SEWERS	CITY OF FERNDALE STANDARD DETAIL (COFSD) SS-1 COFSD SS-15 & SS-1 & WSDOT STD. SPEC. SEC. 9-03.12 COFSD SS-2 COFSD SS-9 (BOLT DOWN/WATERTIGHT) COFSD SS-5 COFSD SS-6, SS-8 & SS-13
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- 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.
- ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERNDALE. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK. TESTING OF THE SEWER SYSTEM AND ALL CONNECTIONS TO EXISTING MAINS SHALL BE DONE IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERNDALE REPRESENTATIVE.
- SANITARY SEWER MAINS SHALL BE A MINIMUM 8 INCH DIAMETER PVC PIPE (SDR-35) CONFORMING TO THE PROVISIONS OF ASTM D 3034 AND INSTALLED TO CITY SPECIFICATIONS.
- SANITARY SEWER PIPE BEDDING SHALL BE PEA GRAVEL PER COFSD SS-1. 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.
- ALL MANHOLES SHALL BE INSTALLED PER CITY OF FERNDALE SS-2, SS-3 OR SS-4, AND SHALL BE BE PIPE CHANNELLED. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RUNGS ARE PARALLEL TO THE FLOW.
- ALL SIDE SEWERS SHALL BE INSTALLED PER CITY OF FERNDALE STANDARD DETAILS SS-6, SS-8 OR SS-13, EXCEPT THAT SINGLE SIDE SEWERS SHALL HAVE A MINIMUM DIAMETER OF 4".
- CONTRACTOR SHALL EXTEND SEWER STUBS BEYOND THE STREET RIGHT-OF-WAY LINE.
- EACH SIDE SEWER STUB SHALL BE CAPPED WITH A WATERTIGHT PLUG. EACH STUB SHALL BE MARKED FOR LOCATION WITH A 2" DIA. PVC PIPE (MIN. SCHEDULE 40) WITH THE TOP 18" PAINTED GREEN AND STENCILED WITH THE WORD "SEWER". THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

WATER

- THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING WATER SUPPLY SYSTEM IMPROVEMENTS:

PIPE BEDDING TRENCH BACKFILL AIR/VACUUM RELEASE VALVE BLOW-OFF ASSEMBLY FIRE HYDRANT ASSEMBLY THRUST BLOCKING WATER SERVICE	SEE DETAIL, SHEET 19 COFSD W-11 & WSDOT STD. SPEC. SEC. 9-03.12 WSDOT STD. DETAIL B21-g COFSD W-9 & W-10 COFSD W-1 COFSD W-2, W-3 & W-4 COFSD W-6, & DETAIL SHEET 19
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- ALL WATER MAIN PIPE SHALL BE DUCTILE IRON, MINIMUM CLASS 50, PER AWWA STANDARDS H3-71 AND C151-71, WITH CEMENT LINING PER AWWA STANDARD C104-71. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705.
- 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 AWWA SPECIFICATIONS C-110-71 AND C-104-71.
- CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERNDALE STANDARD DETAILS W-2, W-3 AND W-4, OR AS DIRECTED BY THE 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.
- CONNECTIONS TO EXISTING WATER MAINS - THE CONTRACTOR MUST NOTIFY THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE. ALL CONNECTIONS SHALL BE DONE BY THE CONTRACTOR. CONNECTION TO EXISTING CITY WATER SYSTEM SHALL BE PAID IN ADVANCE BY A DEPOSIT.
- 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 TEST PRESSURE FOR WATER MAIN ACCEPTANCE, SHALL BE 225 PSI AND SHALL BE DONE ACCORDING TO CITY OF FERNDALE REQUIREMENTS. ALL DISINFECTION AND BACTERIOLOGICAL TESTS SHALL BE CONDUCTED BY THE CITY OF FERNDALE LABORATORY. THE PIPE WILL NOT PASS TESTING UNLESS A ZERO BACTERIAL COUNT IS MEASURED ON TWO CONSECUTIVE TESTS, CONDUCTED 24 HOURS APART.
- BACKFILL SHALL BE GRAVEL BASE, CLASS B, IN ALL STREET RIGHTS-OF-WAY, COMPACTED TO MINIMUM 95% OPTIMUM DENSITY. IN UNIMPROVED AREAS, MINIMUM COMPACTION SHALL BE 90% OF OPTIMUM DENSITY.
- ALL PIPE SHALL HAVE A MINIMUM COVER OF 42".
- ALL VALVES SHALL BE EITHER GATE OR BUTTERFLY TYPE VALVES AND SHALL BE INSTALLED WITH SLIP TYPE CAST IRON VALVE BOXES.

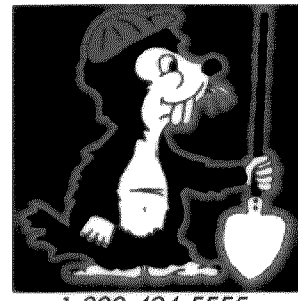
GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH 8 INCHES IN DIAMETER. SHORT-BODY VALVES SUITABLE FOR A NON-SHOCK SHUT-OFF PRESSURE OF 130 PSI AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED. GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE MOUNTED VALVES CONFORMING TO AWWA C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS OF PIPE USED.

ALL VALVES SHALL HAVE NON-RIISING 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.
- WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS. ALL WATER SERVICE STUB ENDS SHALL BE MARKED FOR LOCATION WITH A 4" LONG 2" X 4" TIMBER, PAINTED BLUE.
- CONTRACTOR IS RESPONSIBLE TO SET WATERMETER BOXES TO THE FINISHED GRADE BEHIND SIDEWALK. FINISHED GRADE BEHIND SIDEWALK SHALL MEET CITY APPROVAL.
- FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COF STANDARD DETAIL W-1 (WSDOT B-19) AND THE FOLLOWING STANDARDS:
 - 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.
 - 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.
 - IF THE PUBLIC WORKS DIRECTOR DETERMINES THAT FIRE HYDRANTS ARE VULNERABLE TO VEHICULAR DAMAGE, APPROPRIATE CRASH POSTS SHALL BE PROVIDED TO PROTECT HYDRANTS. CRASH POSTS SHALL BE 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.
 - 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.
 - 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.

FIELD BOOKS	TBM NO.	LOCATION	ELEV.	DATA	DRAWN BY	CHECKED BY	SCALE	REV	DATE	DESCRIPTION	BY	NO.	DATE
DESIGN: SEE SURVEY NOTES, SHEET 1	FERNO4		366.05	BASE	ANU	ANU	HORIZ: N/A	1	Mar. 25, 2005	Per City civil plan review comments dated March 17, 2005	BW	1	ISSUED FOR REVIEW Feb. 2, 2005
STAKING:				DESIGN	BRW	ANU	VERT: N/A					2	ISSUED FOR PERMIT Mar. 29, 2005
ASBUILT:	CITY OF FERNDALE MONUMENT NET, JUNE 2001			XREF:								3	AS-BUILT Oct. 12, 2005
				DWG: PH4-C-N_L-D									
SURVEY REFERENCE		VERTICAL DATUM					PLAN CHECK			REVISIONS			ISSUE

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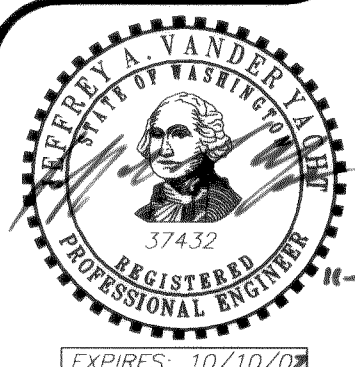
2114 JAMES STREET
BELLINGHAM, WA 98225

PACIFIC HIGHLANDS P.U.D.
PHASE 4 ~ ROADWAY & UTILITY IMPROVEMENT PLANS

GENERAL CONSTRUCTION NOTES

JOB #: 2003 149

SHEET 20 OF 20



EXPIRES: 10/10/09

00213.020 2-22-06 KZ