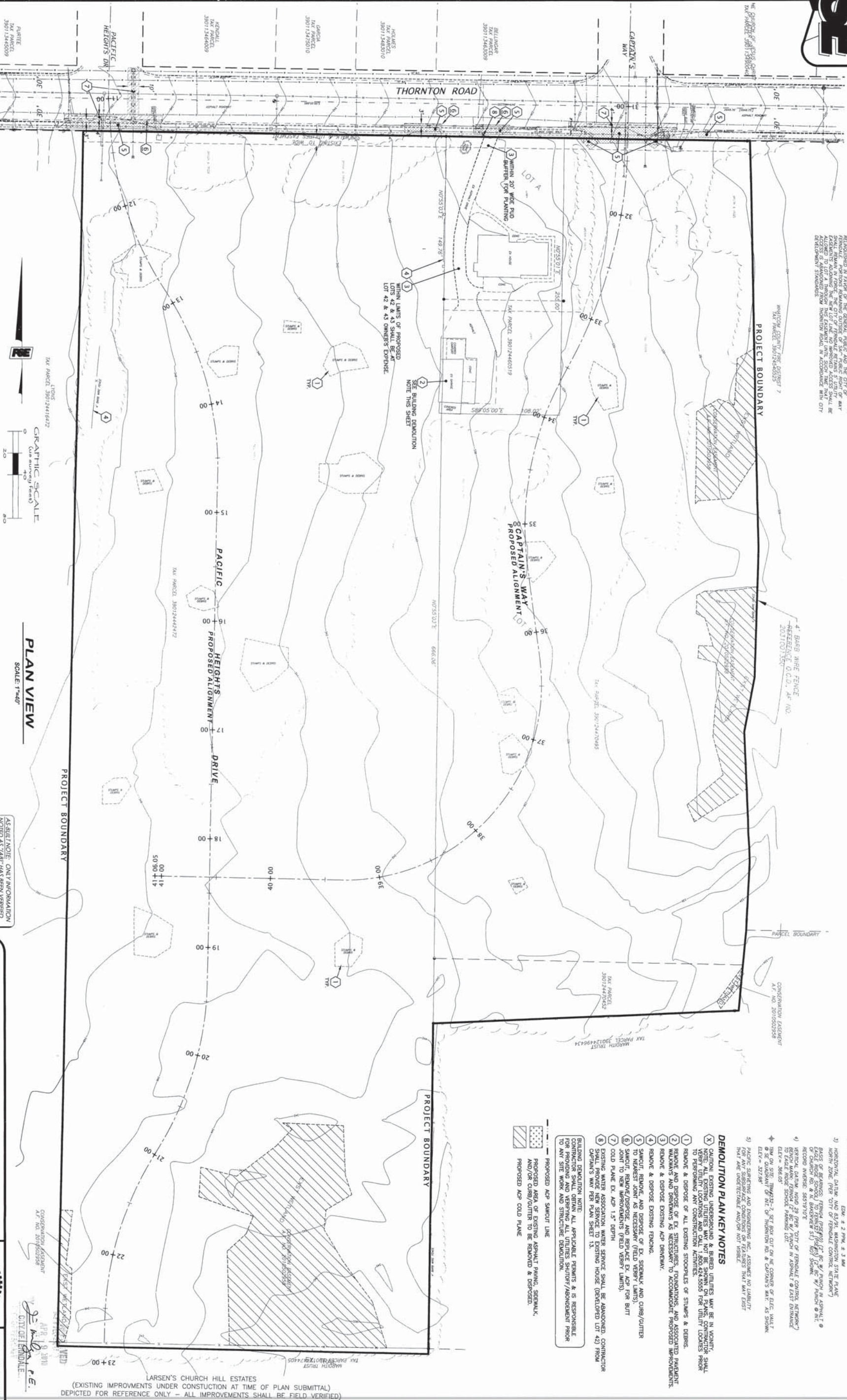


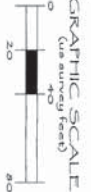


FIELD BOOK	LOCATION	ELEV.	DATA	SCALE	REV	DATE	REVISION DESCRIPTION	BY	NO.	ISSUE DESCRIPTION	DATE
TBM. No.	SET BOX CUT ON NE CORNER OF	322.88'	BASE	1" = 40'	1	Apr. 20, 2008	Rev. City name corrected.	BSW	1	REVISED	Apr. 20, 2008
STATION	ELEC. VALT. @ SE QUADRANT OF INT.		DESIGN	1" = 40'	2	May 1, 2008	REVISED	BSW	2	REVISED	May 1, 2008
ASSET	OF THORNTON RD. & CAPTAIN'S WAY		DESIGN	1" = 40'	3	AS BUILT		BSW	3	AS BUILT	May 28, 2009
DATE OF SET	24 APR 2008		DATE		4	REVISED		BSW	4	REVISED	May 21, 2009

VERTICAL DATUM	PLAN CHECK	REVISIONS	ISSUE	FOR



EASIMENT NOTES
 1. THE EASIMENT NOTES ARE LOCATED IN THE
 2. THE EASIMENT NOTES ARE LOCATED IN THE
 3. THE EASIMENT NOTES ARE LOCATED IN THE
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 7. THE EASIMENT NOTES ARE LOCATED IN THE
 8. THE EASIMENT NOTES ARE LOCATED IN THE
 9. THE EASIMENT NOTES ARE LOCATED IN THE
 10. THE EASIMENT NOTES ARE LOCATED IN THE



PLAN VIEW
SCALE: 1"=40'

AS BUILT NOTE: ONLY INFORMATION NOTED AS TRUE HAS BEEN VERIFIED MEASURED DURING CONSTRUCTION.

THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF FERNDALE, WASHINGTON
ROADWAY AND UTILITY IMPROVEMENT PLANS

EXISTING CONDITIONS MAP & DEMOLITION PLAN

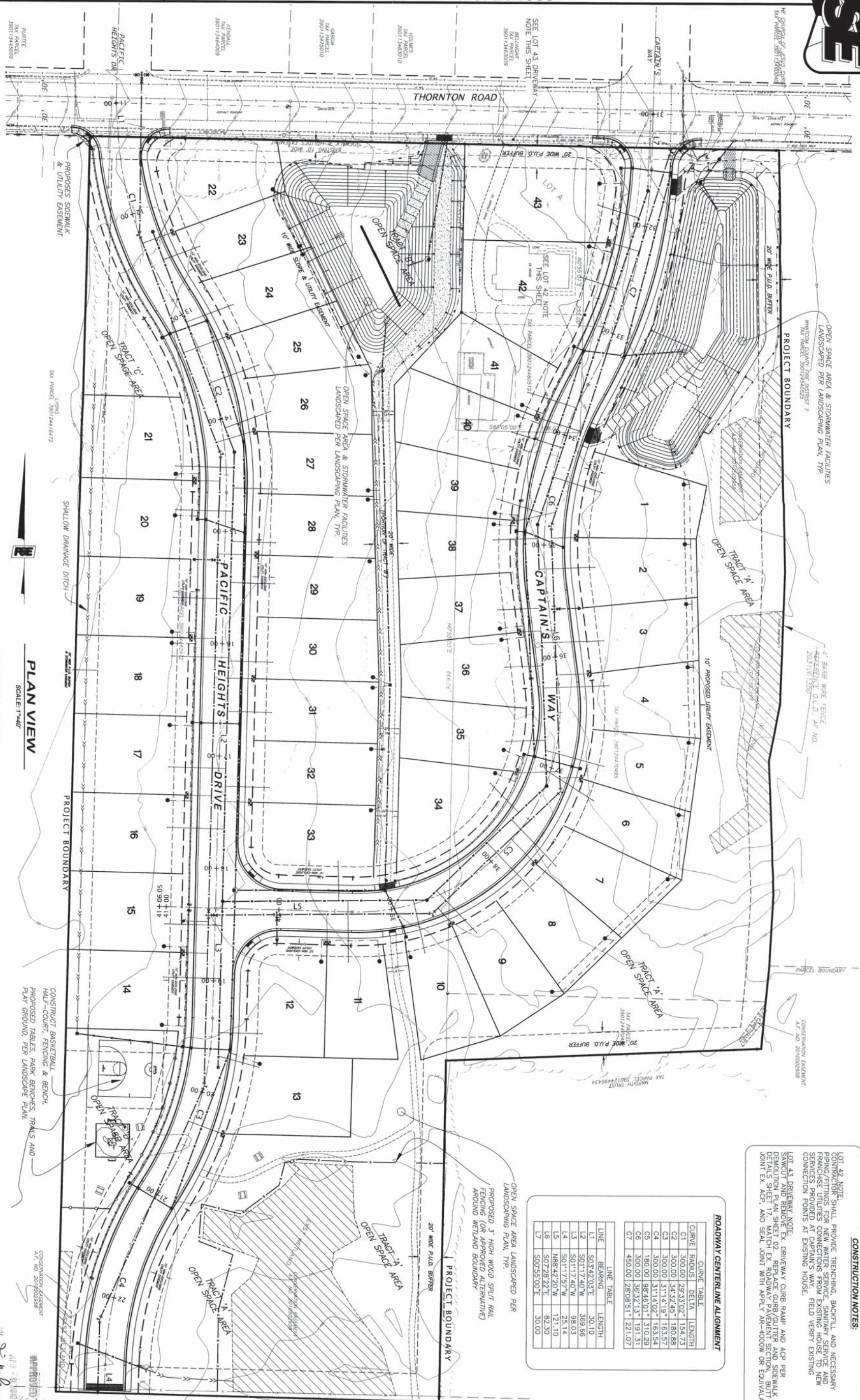
AS-BUILT DRAWING



JOB No. 2002085
SHEET
02
OF
22

- TOPOGRAPHIC SURVEY NOTES**
- 1) DATA FOR THIS SURVEY WAS OBTAINED BY FIELD TRAVERSE.
 - 2) EQUIPMENT USED: ELEV. & 2 PULL, 3.1 MM.
 - 3) HORIZONTAL DATUM: NAD 83/BL, WASHINGTON STATE PLANE.
 - 4) VERTICAL DATUM: FERNDALE (1985) 12' 00" W/ PUNCH IN ASPHALT @ OF CHURCH RD. & W/ BAKERSVIEW ST. (NOT SHOWN).
 - 5) RECORD INVERSE: 5637910'E.
 - 6) VERTICAL DATUM: 29' (PER CITY OF FERNDALE CONTROL NETWORK) TO ELEV. 327.88'.
 - 7) TBM ON SITE: TBM#2-7, SET BOX CUT ON NE CORNER OF ELEC. VALT. ELEV. = 327.88'.
 - 8) PLACING SURFACING AND ENGINEERING INC. ASSUMES NO LIABILITY FOR ANY SUBSURFACE CONDITIONS OR FEATURES THAT MAY EXIST THAT ARE UNDETECTABLE AND/OR NOT VISIBLE.
- DEMOLITION PLAN KEY NOTES**
- 1) CAUTION: EXISTING UNDERGROUND & BURIED UTILITIES MAY BE IN VICINITY. NOTES: ALL EXISTING UTILITIES MAY NOT BE SHOWN ON PLANS. CONTRACTOR SHALL TO PERFORMING ANY CONSTRUCTION ACTIVITIES.
 - 2) REMOVE & DISPOSE OF EX. STRUCTURES, FOUNDATIONS, AND ASSOCIATED PAVEMENT.
 - 3) REMOVE & DISPOSE EXISTING ASP. DRIVEWAY.
 - 4) REMOVE & DISPOSE EXISTING FENCING.
 - 5) REMOVE & DISPOSE OF EX. SIDEWALK AND CURB/GUTTER.
 - 6) REMOVE & DISPOSE AND REPLACE EX. ASP. FOR BUTT JOINT TO NEW IMPROVEMENTS (FIELD VERIFY LIMITS).
 - 7) COLD PLANE EX. ASP. 1.5" DEPTH.
 - 8) EXISTING WATER ASSOCIATION WATER SERVICE SHALL BE ABANDONED. CONTRACTOR SHALL PROVIDE NEW SERVICE TO EXISTING HOUSE (DEVELOPED LOT 42) FROM EXISTING MAIN PER PLAN SHEET 15.
- BUILDING DEMOLITION NOTE**
 ALL APPLICABLE PERMITS & IS RESPONSIBLE FOR PROVIDING AND VERIFYING ALL UTILITIES SHUT/OFF/ABANDONMENT PRIOR TO ANY SITE WORK AND STRUCTURE DEMOLITION.
- PROPOSED ACP SMOOT LINE**
 PROPOSED AREA OF EXISTING ASPHALT PAVING, SIDEWALK, AND/OR CURB/GUTTER TO BE REMOVED & DISPOSED.
 PROPOSED ACP COLD PLANE

LARSEN'S CHURCH HILL ESTATES
 (EXISTING IMPROVMENTS UNDER CONSTRUCTION AT TIME OF PLAN SUBMITTAL)
 DEPICTED FOR REFERENCE ONLY - ALL IMPROVEMENTS SHALL BE FIELD VERIFIED



LOT 43, DRIVEWAY NOTE:
SAWCUT AND REMOVE EX. DRIVEWAY CURB RAMP AND ACP PER
DEMOLITION PLAN SHEET 02. REPLACE CURB/GUTTER AND SIDEWALK PER
DETAILS SHEET 17. MATCH EX. ROADWAY PAVEMENT SECTION, BUTT
JOINT EX. ACP, AND SEAL JOINT WITH APPLY AR-4000W OR EQUIVALENT

ROADWAY CENTERLINE ALIGNMENT			
CURVE TABLE		CURVE TABLE	
CURVE	RADIUS	DELTA	LENGTH
C1	500.00	29.53502°	194.753
C2	500.00	34.52445°	180.865
C3	500.00	31.74149°	163.557
C4	500.00	31.14002°	165.534
C5	1500.00	98.46401°	510.249
C6	500.00	35.52133°	311.513
C7	4500.00	28.06451°	221.017

LINE TABLE		
LINE	BEARING	LENGTH
L1	S03.42 O.D.E.	50.10
L2	S01.174 O.W.	369.66
L3	S01.174 O.W.	96.83
L4	S01.175 O.W.	131.10
L5	N86.42 E.O.W.	52.30
L6	S07.28 E.O.E.	50.00
L7	S00.55 O.O.E.	50.00

PROPOSED 3' HIGH WOOD SPLIT RAIL FENCING (OR APPROVED ALTERNATIVE AROUND WETLAND BOUNDARY

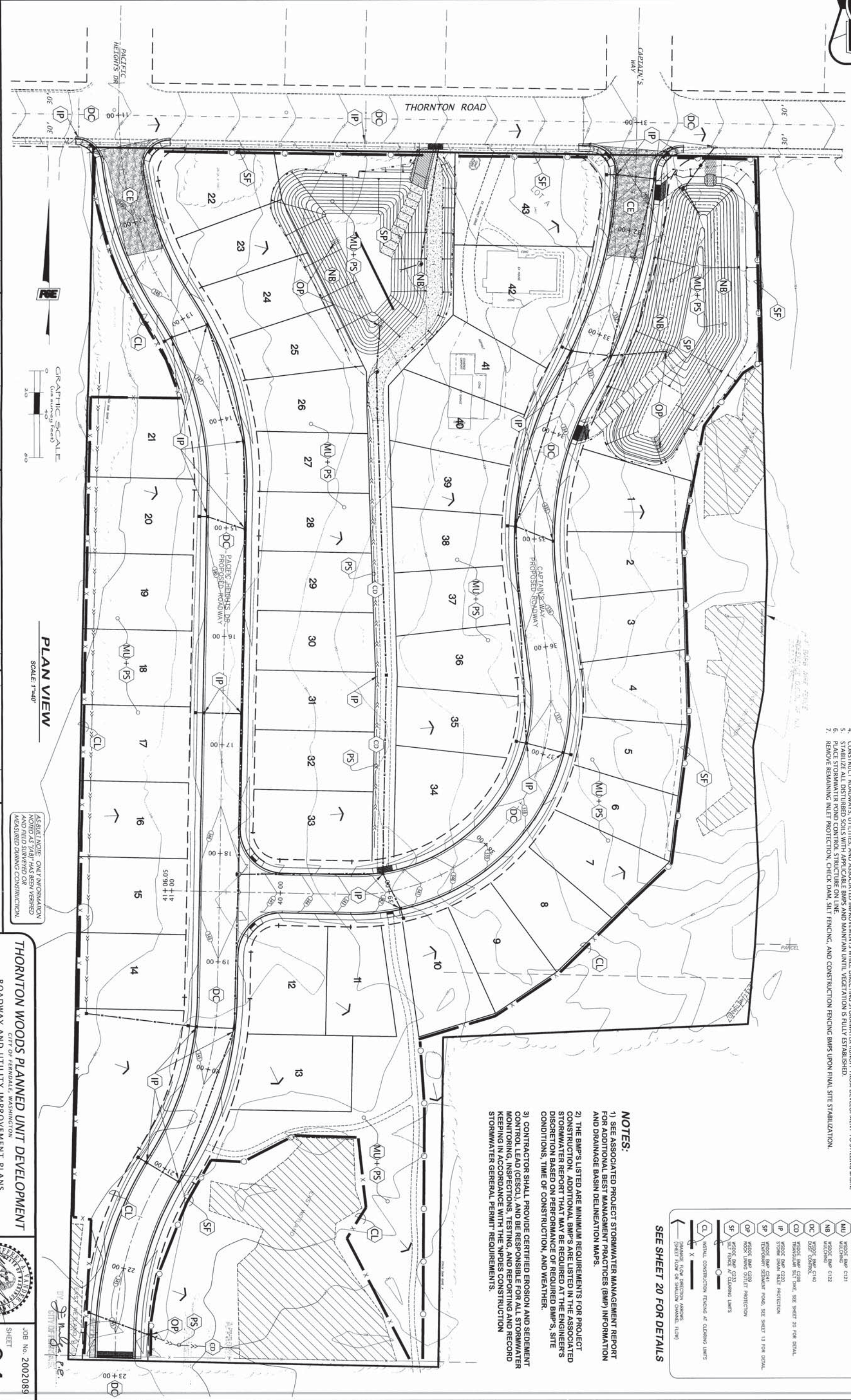
AS-BUILT DRAWING



03



FIELD BOOK	LOCATION	ELEV.	DATA	REVISION	DESCRIPTION	DATE
DESIGN	232-7	327.98	DESIGN	1	4/10/2008	4/10/2008
STATIONING	0+00		STATIONING	2	07/20/2008	07/20/2008
ASSEMBLY	0+00		ASSEMBLY	3	08/01/2008	08/01/2008
NE OF 24' WIDE 30' R/W			NE OF 24' WIDE 30' R/W	4	08/01/2008	08/01/2008



- ### CONSTRUCTION SEQUENCING
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE, INLET PROTECTION, CHECK DAM, SILT FENCING, AND CONSTRUCTION FENCING BARS.
 2. MAINTAIN ALL TEMPORARY EROSION CONTROL BMPs AND IMPLEMENT DUST CONTROL BMPs AS NECESSARY THROUGH ENTIRE DURATION OF ALL CONSTRUCTION ACTIVITIES.
 3. CONSTRUCT & STABILIZE SLOPES OF PERMANENT STORMWATER MANAGEMENT PONDS FOR USE AS TEMPORARY STILLING BASIN BMP TO REMOVE SEDIMENT FROM CONSTRUCTION ACTIVITIES PRIOR TO DISCHARGE OFF-SITE INTO CITY STORMWATER SYSTEM.
 4. CONSTRUCT ROADWAYS, UTILITIES, AND ASSOCIATED IMPROVEMENTS WHILE DIRECTING STORMWATER RUNOFF FROM DEVELOPMENT TO STILLING BASIN.
 5. STABILIZE ALL DISTURBED SOILS WITH APPLICABLE BMPs AND MAINTAIN UNTIL VEGETATION IS FULLY ESTABLISHED.
 6. PLACE STORMWATER POND CONTROL STRUCTURE ON LINE.
 7. REMOVE REMAINING INLET PROTECTION, CHECK DAM, SILT FENCING, AND CONSTRUCTION FENCING BARS UPON FINAL SITE STABILIZATION.

EROSION CONTROL LEGEND

CE	STABILIZED CONSTRUCTION ENTRANCE
SF	STORMWATER FLOW CONTROL
MU+PS	MULCH AND PERMANENT SEEDING
NB	NATURAL BERM
SP	STORMWATER POND
DC	DUST CONTROL
IP	INLET PROTECTION
CL	CLEARING LIMITS

- ### NOTES:
- 1) SEE ASSOCIATED PROJECT STORMWATER MANAGEMENT REPORT FOR ADDITIONAL BEST MANAGEMENT PRACTICES (BMP) INFORMATION AND DRAINAGE BASIN DELINEATION MAPS.
 - 2) THE BMPs LISTED ARE MINIMUM REQUIREMENTS FOR PROJECT CONSTRUCTION. ADDITIONAL BMPs ARE LISTED IN THE ASSOCIATED STORMWATER REPORT THAT MAY BE REQUIRED AT THE ENGINEER'S DISCRETION BASED ON PERFORMANCE OF REQUIRED BMPs, SITE CONDITIONS, TIME OF CONSTRUCTION, AND WEATHER.
 - 3) CONTRACTOR SHALL PROVIDE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL), AND BE RESPONSIBLE FOR ALL STORMWATER MONITORING, INSPECTIONS, TESTING, AND REPORTING AND RECORD KEEPING IN ACCORDANCE WITH THE NPDES CONSTRUCTION STORMWATER GENERAL PERMIT REQUIREMENTS.

THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF BELLINGHAM, WASHINGTON

ROADWAY AND UTILITY IMPROVEMENT PLANS
TEMPORARY EROSION & SEDIMENTATION CONTROL PLAN
AS-BUILT DRAWING

JOB No. 2002089
SHEET 04 OF 22

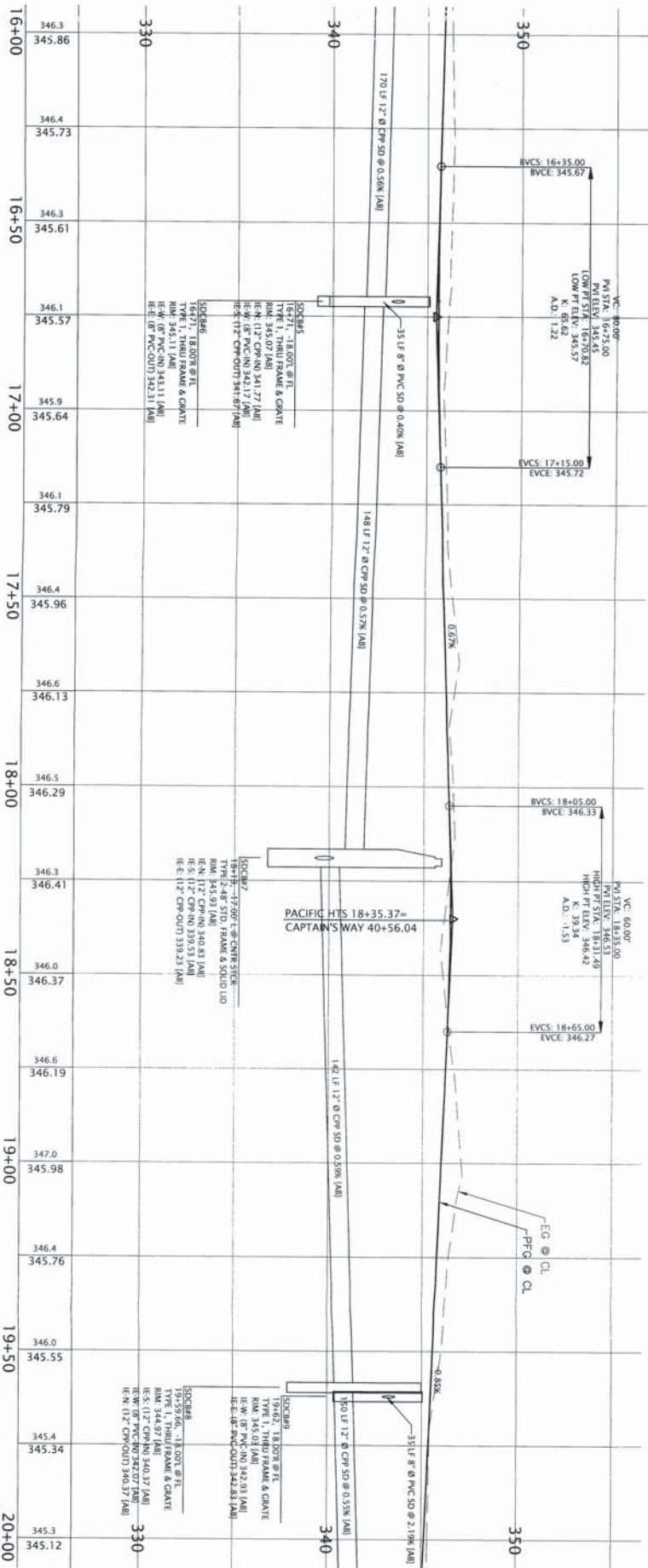
DATE: 12-21-09



DESIGN	FIELD BOOK	LOCATION	ELEV.	DATA	SCALE	REV	DATE	REVISION	DESCRIPTION	BY	NO.	ISSUE	DATE	WHATCOM-SAGIT HOUSING
212-7	SET BOX CUT ON NE CORNER OF	327.89'				1	04-20-2008	REV. 01	REVISION	BY	1	ISSUE	04-20-2008	5373 QUIDE MERIDIAN BUILDING, E. 105
212-7	SET BOX CUT ON NE CORNER OF	327.89'				2	07-22-2008	REV. 02	REVISION	BY	2	ISSUE	07-22-2008	BELLINGHAM, WA 98226
212-7	SET BOX CUT ON NE CORNER OF	327.89'				3	07-22-2008	REV. 03	REVISION	BY	3	ISSUE	07-22-2008	
212-7	SET BOX CUT ON NE CORNER OF	327.89'				4	07-22-2008	REV. 04	REVISION	BY	4	ISSUE	07-22-2008	

PROFILE VIEW

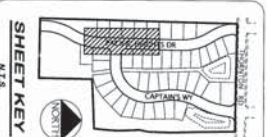
H. SCALE: 1"=20' V. SCALE: 1"=4'



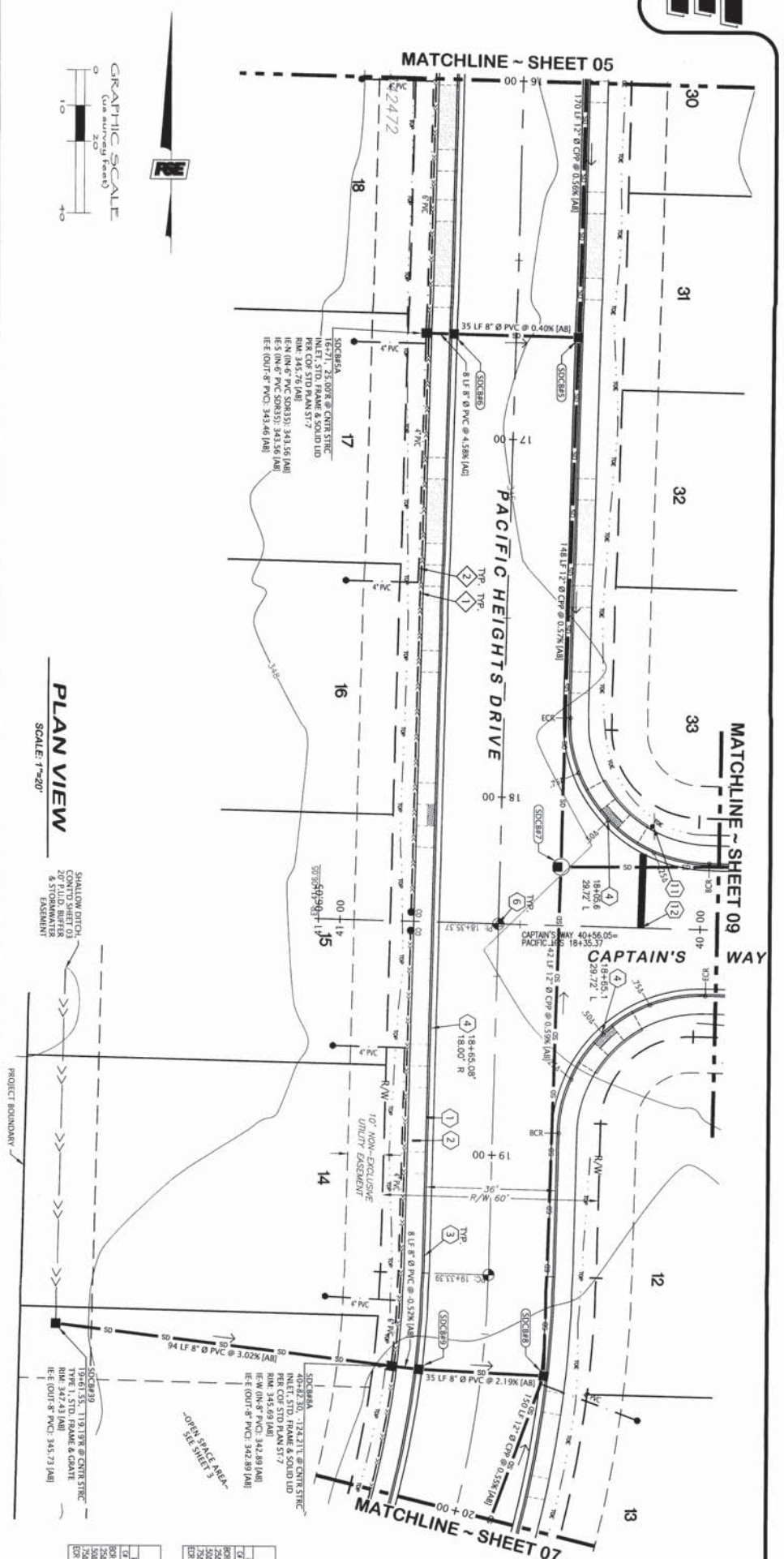
THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF FERNDALE, WASHINGTON
ROADWAY AND UTILITY IMPROVEMENT PLANS
ROADWAY & DRAINAGE IMPROVEMENT PLAN & PROFILE
PACIFIC HEIGHTS DR 16+00 TO 20+00
(AS-BUILT DRAWING)

AS-BUILT NOTE: ONLY INFORMATION NOTED AS (A/B) HAS BEEN VERIFIED MEASURED DURING CONSTRUCTION.

BY: [Signature] DATE: 12-11-09



SHEET
06
22



STATION	ELEVATION	REMARKS
16+00	345.12	START OF PROFILE
16+50	345.61	END OF PROFILE
17+00	345.9	START OF PROFILE
17+50	345.64	END OF PROFILE
18+00	346.5	START OF PROFILE
18+50	346.29	END OF PROFILE
19+00	347.0	START OF PROFILE
19+50	345.55	END OF PROFILE
20+00	345.12	START OF PROFILE

STATION	ELEVATION	REMARKS
16+00	345.12	START OF PROFILE
16+50	345.61	END OF PROFILE
17+00	345.9	START OF PROFILE
17+50	345.64	END OF PROFILE
18+00	346.5	START OF PROFILE
18+50	346.29	END OF PROFILE
19+00	347.0	START OF PROFILE
19+50	345.55	END OF PROFILE
20+00	345.12	START OF PROFILE

STATION	ELEVATION	REMARKS
16+00	345.12	START OF PROFILE
16+50	345.61	END OF PROFILE
17+00	345.9	START OF PROFILE
17+50	345.64	END OF PROFILE
18+00	346.5	START OF PROFILE
18+50	346.29	END OF PROFILE
19+00	347.0	START OF PROFILE
19+50	345.55	END OF PROFILE
20+00	345.12	START OF PROFILE

SEE GENERAL NOTES ON SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS

- CAUTION: EXISTING UNDERGROUND UTILITIES IN AREA. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AND CALL 1-800-424-5555 FOR UTILITY LOCATOR PRIOR TO PERFORMING ANY CONSTRUCTION ACTIVITIES.
- CONSTRUCT 24" CURB AND CUTTER PER C&P STD DRAWING R-9. SEE SHEET 17.
- INSTALL 5" WIDE CEMENT CONC. SIDEWALK, 4" DEPTH, TYP. SEE SHEET 17, C&P STD. PLAN R-12. (6" DEPTH SIDEWALK AT DRIVEWAY CUTS).
- INSTALL DRIVEWAY CUT PER DETAIL SHEET 03.
- SEE DRAWING CONSTRUCTION TABLE FOR LOCATION AND WIDTH.
- INSTALL CURB RAMP PER WSDOT STD. PLAN F-38. TYPE 2A. SEE SHEET 17.
- INSTALL CURE MONUMENT PER DETAIL SHEET 17, TYP.
- STA 40+14, 28.5' L. INSTALL STOP SIGN, R1-1.
- STA 40+16, INSTALL STOP BAR STRIPING, PER WSDOT STD. PLAN M-15.10-00.

DRAINAGE IMPROVEMENTS KEY NOTES:

- INSTALL 4" SMOOTH WALL PERFORATED PVC PIPE BACK OF WALK.
- INSTALL DRAIN, ASTM D 3034 SDOCS, PER TYP. ROADWAY SECTION.
- 4" DIA. FOR PIPE SERVING 2 OR MORE LOTS.

SEE GENERAL NOTES ON SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS

SEE GENERAL NOTES ON SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS

PACIFIC SURVEY & ENGINEERING INC

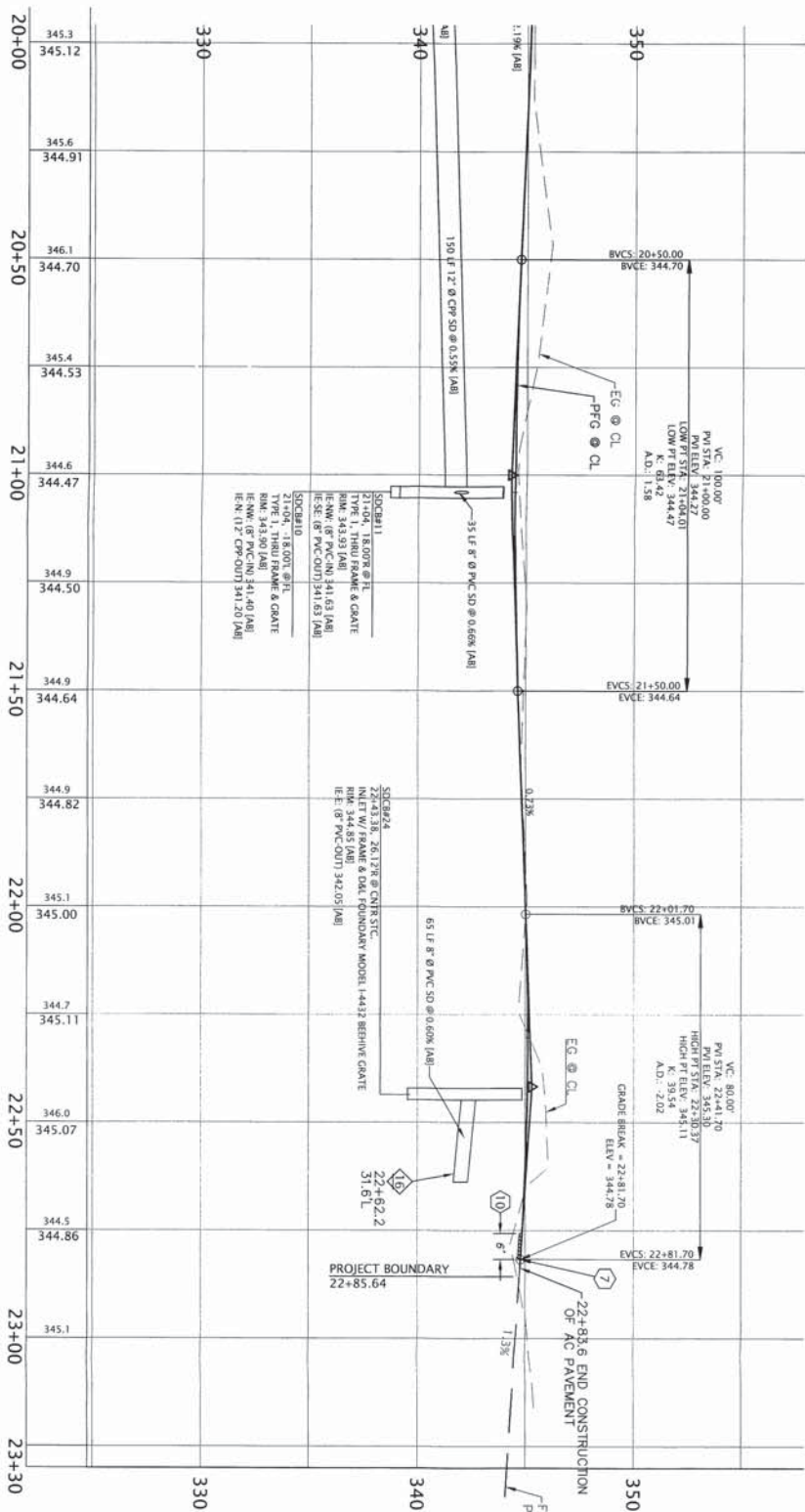
1812 CORNWALL, BELLINGHAM, WA 98225 PHONE: 671.7387 FAX: 671.4685

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

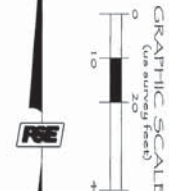
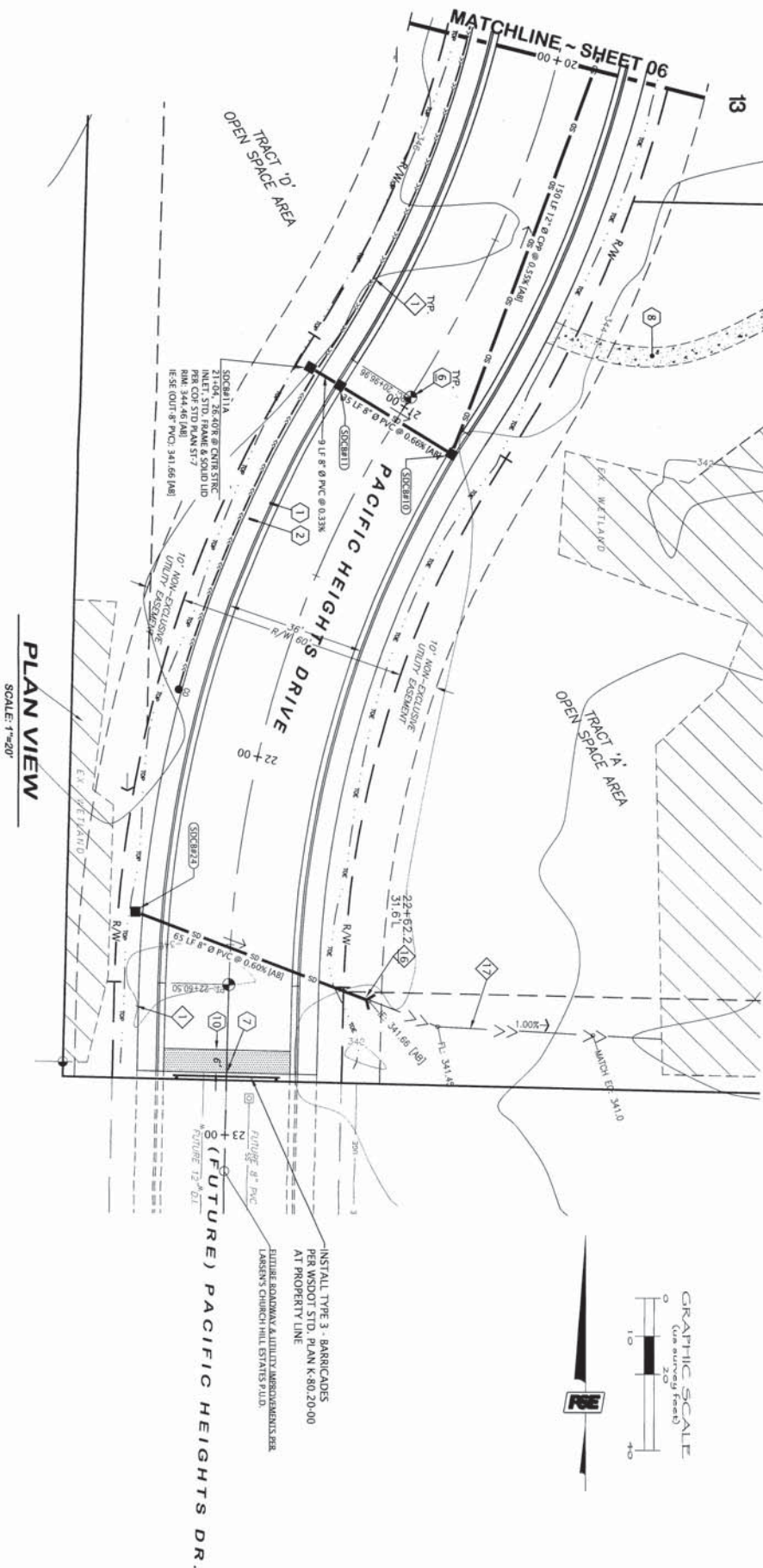


DESIGN:	23-7	LOCATION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	DATA:	DATE: 12/18/12	REVISION:	DESCRIPTION: ROADWAY AND UTILITY IMPROVEMENT PLANS	BY:	NO. 1	DATE:	12/18/12
STAGING:	23-7	ELEV.:	327.98'	BASE:	12/18/12	REVISION:	DESCRIPTION: ROADWAY AND UTILITY IMPROVEMENT PLANS	BY:	NO. 1	DATE:	12/18/12
AS-BUILT:	23-7	ELEV.:	327.98'	BASE:	12/18/12	REVISION:	DESCRIPTION: ROADWAY AND UTILITY IMPROVEMENT PLANS	BY:	NO. 1	DATE:	12/18/12
DESIGN:	23-7	ELEV.:	327.98'	BASE:	12/18/12	REVISION:	DESCRIPTION: ROADWAY AND UTILITY IMPROVEMENT PLANS	BY:	NO. 1	DATE:	12/18/12
STAGING:	23-7	ELEV.:	327.98'	BASE:	12/18/12	REVISION:	DESCRIPTION: ROADWAY AND UTILITY IMPROVEMENT PLANS	BY:	NO. 1	DATE:	12/18/12
AS-BUILT:	23-7	ELEV.:	327.98'	BASE:	12/18/12	REVISION:	DESCRIPTION: ROADWAY AND UTILITY IMPROVEMENT PLANS	BY:	NO. 1	DATE:	12/18/12

PROFILE VIEW



PLAN VIEW



CONSTRUCTION KEY NOTES:

1. EXISTING UNDERGROUND UTILITIES IN AREA. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AND CALL 1.800.424.5555 FOR UTILITY LOCATES PRIOR TO PERFORMING ANY CONSTRUCTION ACTIVITIES.
2. CONSTRUCT 24" CURB AND CUTTER PER COT STD DRAWING R-9, SEE SHEET 17.
3. INSTALL 5" WIDE CONCRETE CONC. SIDEWALK, 4" DEPTH, TYP.
4. SEE SHEET 17, COT STD. PLAN R-12, (6" DEPTH SIDEWALK AT DRIVEWAY CUTS).
5. INSTALL SURVEY MONUMENT PER DETAIL SHEET 17, TYP.
6. 22+43.6' END CONSTRUCTION OF AC PAVEMENT, CURB/CUTTER, & SIDEWALK. PLAN SHEET 02.
7. CONSTRUCT 5'-FOOT WIDE GRAVEL FOOT TRAIL, SEE TYPICAL SECTION SHEET 21.
8. CONSTRUCT ONLY FIRST LIFT OF ASP. FROM STA. 22+77.6 TO 22+43.6 TO FACILITATE FUTURE ROADWAY CONSTRUCTION TO SOUTH.

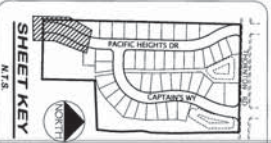
DRAINAGE IMPROVEMENTS KEY NOTES:

1. INSTALL 4" SMOOTH WALL PERFORATED PVC PIPE BACK OF WALK CURTAIN DRAIN, ASTM D 3034 SDR35, PER TYP. ROADWAY SECTION.
2. OUTLET 6" 341.7' BENT. PREP. DND & INSTALL QUARRY SPALL APRON PER DETAIL SHEET 18.
3. GRADE DRAINAGE CHANNEL FOR POSITIVE FLOW TO EXIST. WETLAND BOUNDARY ACTIVITIES IMMEDIATELY UPON COMPLETION OF CONSTRUCTION WITH EROSION CONTROL. SEE MAX. SEE SHEET 20 FOR SEED MIX.
4. INSTALL 1.5'-FT WIDE CURTAIN DRAIN: 6" SMOOTH WALL PERFORATED PVC PIPE, ASTM D 3034 SDR35, 1'-1/2" WASHED ROCK BACKFILL WITH FILTER FABRIC LINER ALL SOLES OF TRENCH BETWEEN ROCK AND SUBGRADE.

SEE GENERAL NOTES ON SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS

AS-BUILT NOTE: ONLY INFORMATION NOTED AS 'TYP.' HAS BEEN VERIFIED AND FIELD SURVEYED OR MEASURED DURING CONSTRUCTION.

BY: *[Signature]* P.E.



THORNTON WOODS PLANNED UNIT DEVELOPMENT

ROADWAY AND UTILITY IMPROVEMENT PLANS
PACIFIC HEIGHTS DR 20+00 TO 23+00
AS-BUILT DRAWING



SHEET 07

22



LOT	STW/OHSEI	PL	MO/DO
CHP/AN	34,24.1	18.00	30
CHP/AN	35,42.6	18.00	30
CHP/AN	35,76.7	18.00	30
CHP/AN	35,38.4	18.00	30
CHP/AN	35,06.8	18.00	30
CHP/AN	34,44.5	18.00	30
CHP/AN	34,22.9	18.00	30
CHP/AN	33,66.9	18.00	30
CHP/AN	32,94.8	18.00	30
CHP/AN	32,02.3	18.00	30
CHP/AN	31,92.0	18.00	30
CHP/AN	31,62.7	18.00	30

LOT DRAIN TABLE			
LOT	SIZE/TYPE	SN/APP/SET	SL/PE E @ LOT
1	4" Pvc SDR35	34+00, -115' L	19.9%
2	4" Pvc SDR35	34+00, -125' L	20.2%
3	4" Pvc SDR35	35+00, -122' L	23.9%
36	4" Pvc SDR35	35+79, 45' R	2.0%
37	4" Pvc SDR35	35+69, 45' R	2.0%
38	4" Pvc SDR35	34+05, 45' R	2.0%
39	4" Pvc SDR35	34+78, 45' R	2.0%



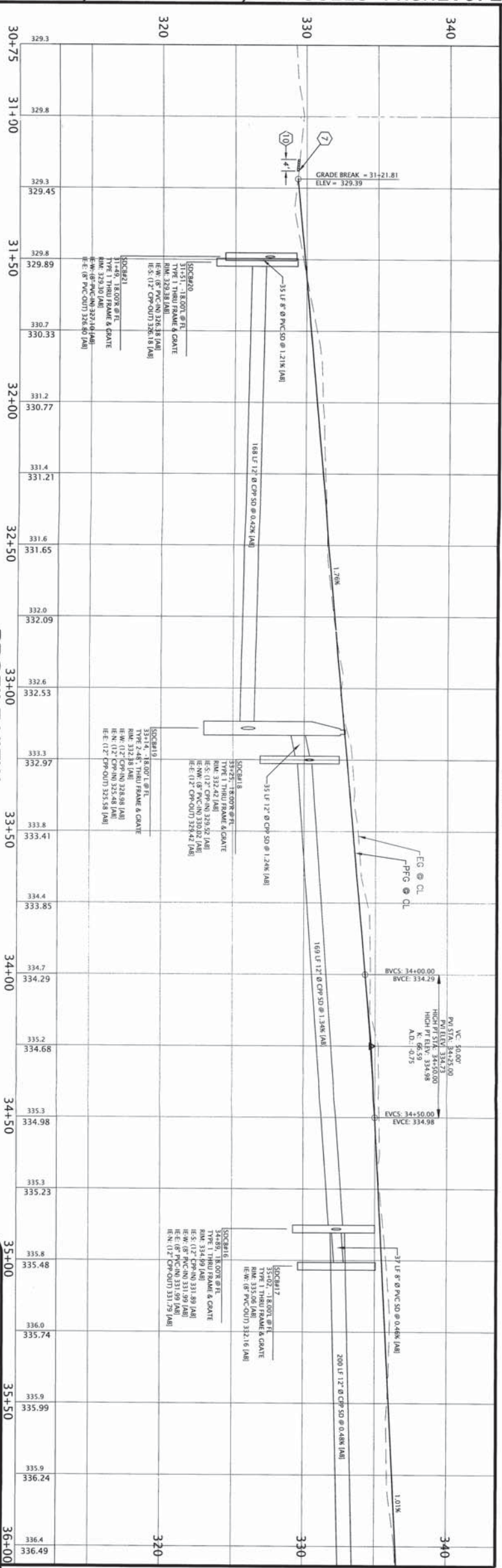
CONSTRUCTION KEY NOTES:

11. CONSTRUCT 2" CURB AND CUTTER PER C/S DETAILING R-9, SEE SHEET 17.
12. INSTALL 5" WIDE CEMENT CONC. SIDEWALK, 4" DEPTH, 17%.
13. SEE SHEET 17, C/S STD. PLAN R-12, (9" DEPTH) SIDEWALK AT BREWERY CUTS.
14. INSTALL BREWERY CUT PER DETAIL SHEET 17.
15. INSTALL 12" WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
16. INSTALL CURB AND CUTTER PER W/SCOT STD. PLAN R-28, TYPE 2, SEE SHEET 17.
17. 35'-42.2' 23.5% S. S. BACK OF WALK.
18. INSTALL CEMENT CONC. PAD AND 18" UNIT, TYPE III CBI MATERIAL PER DETAIL SHEET 17. FINAL LOCATION IS DETERMINED BY UTILITY.
19. INSTALL SLOPED MONUMENT PER DETAIL SHEET 17, 17%.
20. 31'-11.5' BEIGN CONSTRUCTION OF 2" C/P PAVEMENT CURB/CUTTER, & SIDEWALK.
21. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
22. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
23. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
24. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
25. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
26. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
27. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
28. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
29. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
30. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
31. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
32. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
33. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
34. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
35. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
36. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
37. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
38. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
39. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
40. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
41. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
42. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
43. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
44. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
45. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
46. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
47. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
48. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
49. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
50. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
51. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
52. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
53. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
54. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
55. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
56. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
57. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
58. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
59. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
60. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
61. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
62. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
63. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
64. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
65. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
66. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
67. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
68. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
69. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
70. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
71. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
72. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
73. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
74. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
75. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
76. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
77. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
78. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
79. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
80. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
81. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
82. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
83. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
84. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
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86. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
87. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
88. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
89. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
90. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
91. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
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95. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
96. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
97. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
98. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
99. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.
100. 10' WIDE CONC. SIDEWALK, 4" DEPTH, 17%.

DRAINAGE IMPROVEMENTS KEY NOTES

- 1 INSTALL 4" SMOOTH WALL PERFORATED PVC PIPE BACK OF WALK CURTAIN DRAIN, ASTM D 3034 SDR35, PER TYP. ROADWAY SECTION.
- 2 INSTALL SMOOTH WALL PVC PIPE ASTM D 3034 SDR35, 6" DIA. FOR PIPE SERVING SINGLE LOT, 8" DIA. FOR PIPE SERVING 2 OR MORE LOTS.
- 4 ADJUST LOCATION & ELEVATION OF EX SDOB FRAME & GRATE TO MATCH NEW CURB. TBC: 332.43, RIM 331.83

SEE GENERAL NOTES ON SHEET 22 FOR
BACKFILL & TRENCHING SPECIFICATIONS



PROFILE VIEW

H. SCALE: 1"=20' V. SCALE: 1"=4'

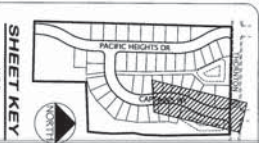
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AS-BUILT NOTE: ONLY INFORMATION NOTED AS "TABJ" HAS BEEN VERIFIED AND FIELD SURVEYED OR MEASURED DURING CONSTRUCTION.

APPROVED

APR - 9 1988

BY J. H. G. F. E.
CITY OF BIRMINGHAM



JOB No. 2002089

SHEET

08

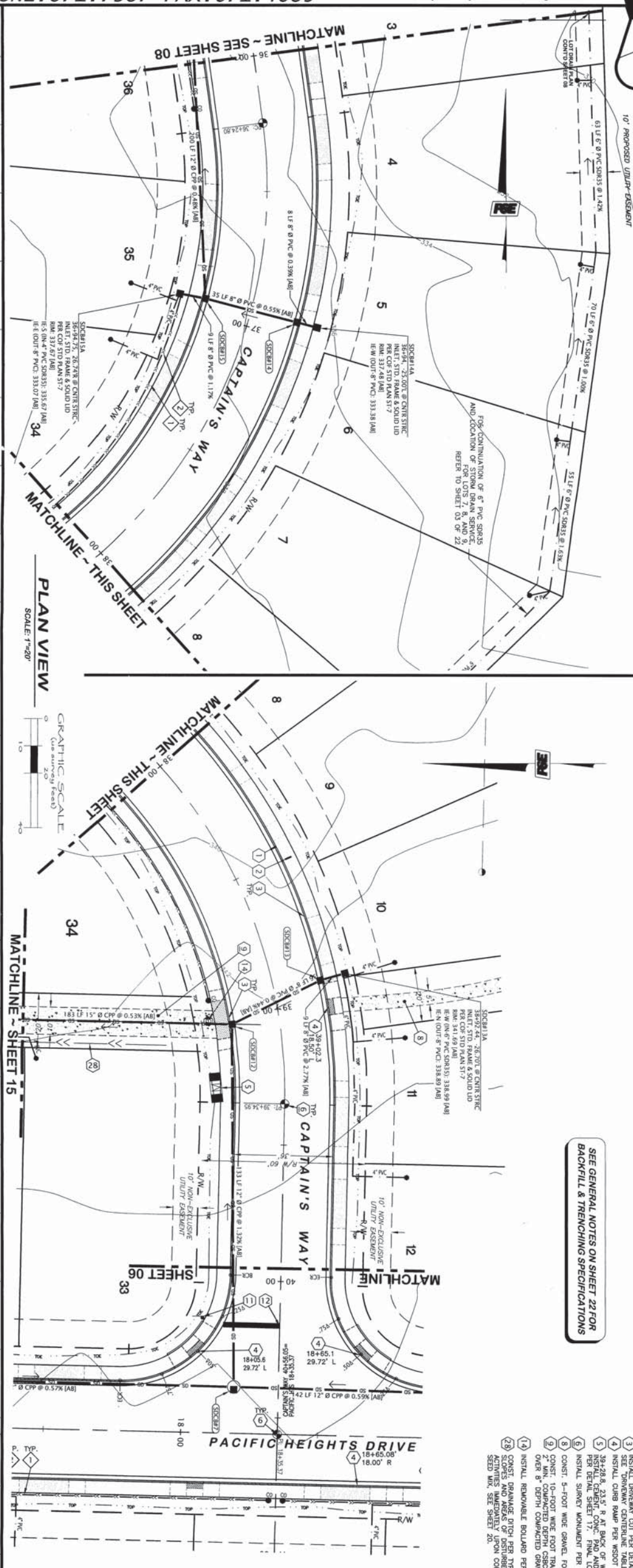
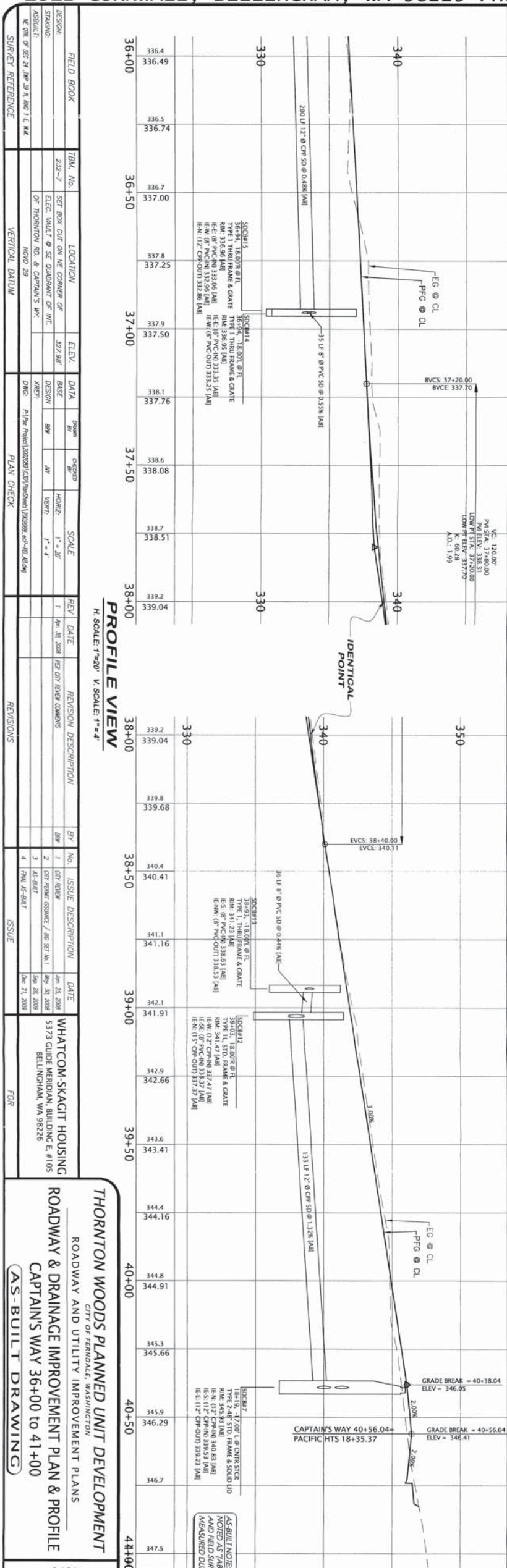
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PACIFIC SURVEY & ENGINEERING INC

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EMAIL: pse@psurvey.com



- DRAINAGE IMPROVEMENTS KEY NOTES:**
- 1. INSTALL 4" SMOOTH WALL PERFORATED PVC PIPE BACK OF WALK.
 - 2. INSTALL SMOOTH WALL PVC PIPE ASH D 3034 SOROS, PER TYP. ROADWAY SECTION.
 - 3. 6" DIA. FOR SERVING 2 OR MORE LOTS.

SEE GENERAL NOTES ON SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS

- CONSTRUCTION KEY NOTES:**
- 1. DRAINAGE EXISTING UNDERGROUND UTILITIES IN AREA. CONTRACTOR SHALL VERIFY EXISTING UTILITIES AND LOCATIONS FOR UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
 - 2. CONSTRUCT 24" CURB AND CUTTER PER COF STD DRAWING R-9, SEE SHEET 17.
 - 3. INSTALL 5" WIDE CEMENT CONC. SIDEWALK, 4" DEPTH, TYP.
 - 4. SEE SHEET 17, COF STD. PLAN R-12, (6" DEPTH SIDEWALK AT DRIVEWAY CUTS).
 - 5. INSTALL DRIVEWAY CUT PER DETAIL SHEET 17.
 - 6. INSTALL CURB RAMP PER DETAIL SHEET 17, TYP.
 - 7. INSTALL CURB RAMP PER DETAIL SHEET 17, TYP.
 - 8. INSTALL SURVEY MONUMENT PER DETAIL SHEET 17, TYP.
 - 9. INSTALL CEMENT CONC. PAV. AND 12" UNF. TYPE II FILL MATERIAL PER DETAIL SHEET 17, TYP.
 - 10. INSTALL SURVEY MONUMENT PER DETAIL SHEET 17, TYP.
 - 11. CONSTRUCT 5-FOOT WIDE GRAVEL FOOT TRAIL, SEE TYPICAL SECTION SHEET 21.
 - 12. 2" UNF. COMPACTED DEPTH CSB, STD. SPEC 9-0.10.
 - 13. OVER 8" DEPTH COMPACTED GRAVEL BASE STD SPEC 9-0.10.
 - 14. INSTALL REMOVABLE BOLLARD PER DETAIL SHEET 17.
 - 15. CONSTRUCT 10-FOOT WIDE FOOT TRAIL/ACCESS ROAD.
 - 16. CONSTRUCT 10-FOOT WIDE GRAVEL FOOT TRAIL, SEE TYPICAL SECTION SHEET 21.
 - 17. CONSTRUCT 5-FOOT WIDE GRAVEL FOOT TRAIL, SEE TYPICAL SECTION SHEET 21.
 - 18. CONSTRUCT 5-FOOT WIDE GRAVEL FOOT TRAIL, SEE TYPICAL SECTION SHEET 21.
 - 19. CONSTRUCT 5-FOOT WIDE GRAVEL FOOT TRAIL, SEE TYPICAL SECTION SHEET 21.
 - 20. CONSTRUCT 5-FOOT WIDE GRAVEL FOOT TRAIL, SEE TYPICAL SECTION SHEET 21.
 - 21. CONSTRUCT 5-FOOT WIDE GRAVEL FOOT TRAIL, SEE TYPICAL SECTION SHEET 21.
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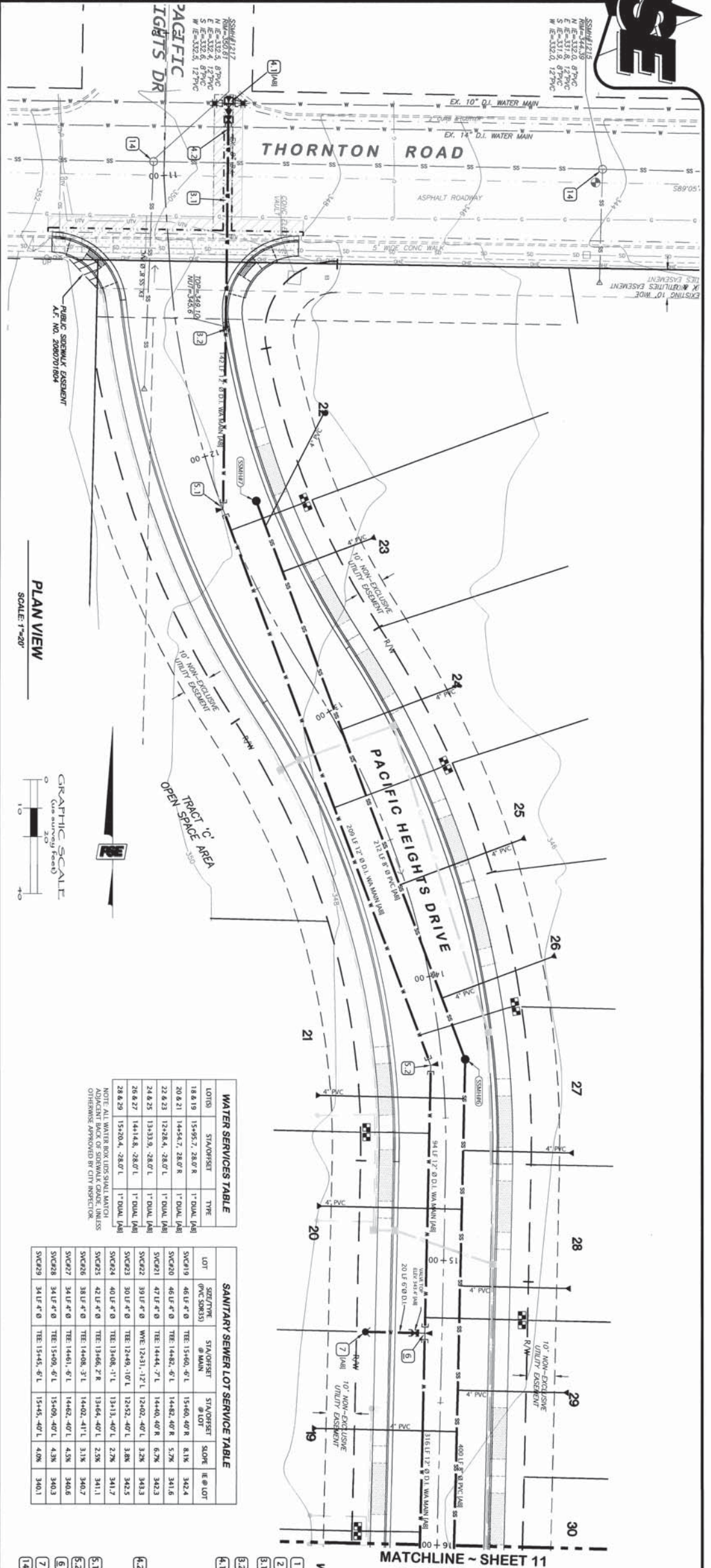
THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF TERNATE, WASHINGTON
ROADWAY AND UTILITY IMPROVEMENT PLANS
CAPTAIN'S WAY 36+00 TO 41+00
AS-BUILT DRAWING

LOT DRAIN TABLE

LOT	SIZE/TYPE	STATION	SIZE	TYPE	REMARKS
1	4" x 8" PVC	36+00	12"	12"	12"
2	4" x 8" PVC	36+00	12"	12"	12"
3	4" x 8" PVC	36+00	12"	12"	12"
4	4" x 8" PVC	36+00	12"	12"	12"
5	4" x 8" PVC	36+00	12"	12"	12"
6	4" x 8" PVC	36+00	12"	12"	12"
7	4" x 8" PVC	36+00	12"	12"	12"
8	4" x 8" PVC	36+00	12"	12"	12"
9	4" x 8" PVC	36+00	12"	12"	12"
10	4" x 8" PVC	36+00	12"	12"	12"
11	4" x 8" PVC	36+00	12"	12"	12"
12	4" x 8" PVC	36+00	12"	12"	12"
13	4" x 8" PVC	36+00	12"	12"	12"
14	4" x 8" PVC	36+00	12"	12"	12"

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

THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF TERNATE, WASHINGTON
ROADWAY AND UTILITY IMPROVEMENT PLANS
CAPTAIN'S WAY 36+00 TO 41+00
AS-BUILT DRAWING

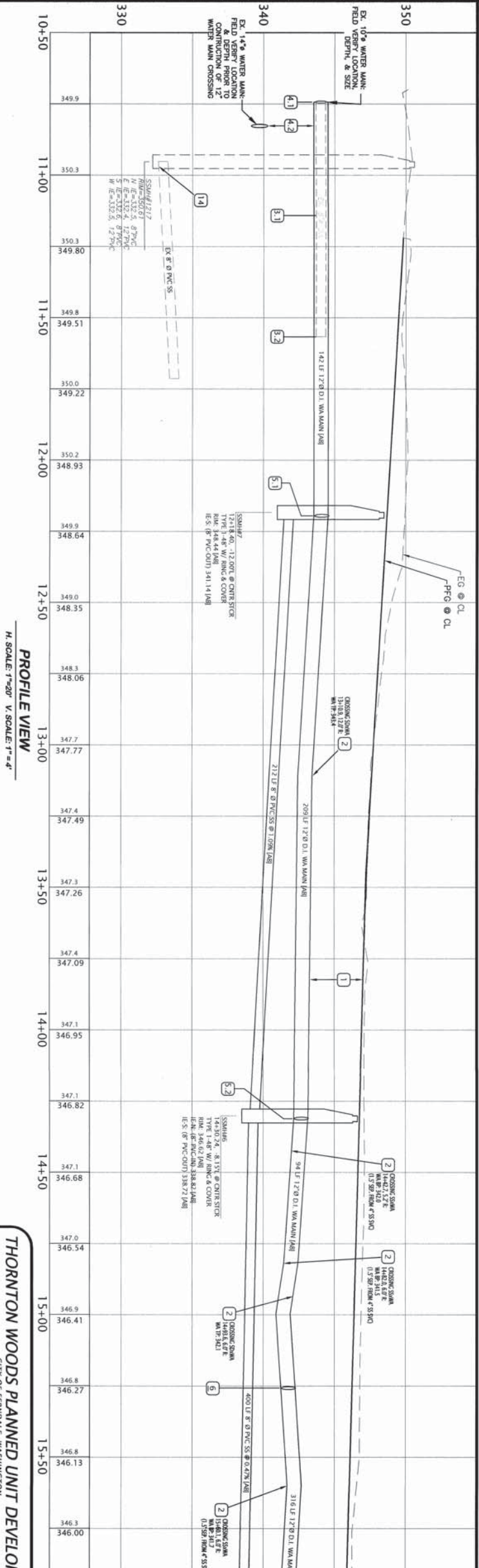


SEE GENERAL NOTES ON SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS

WATER DISTRIBUTION & SANITARY SEWER CONSTRUCTION KEY NOTES

- 1) MAINLINE MANHOLE 36" COVER, 17%.
- 2) MAINLINE MAN. VERTICAL SEPARATION FROM BA. MAN: 10'-0" MIN. (SEE DETAIL 18)
- 3) 10'-0" MIN. VERTICAL SEPARATION FROM 12" WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. SLOPE EX. 1:30 11+57 17'0" L. REDUCE EX. 79LF 8" DUAL WATER MAIN. 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- WATER DISTRIBUTION & SANITARY SEWER CONSTRUCTION KEY NOTES**
1. MAINTAIN MINIMUM 36" COVER, TYP.
 2. MAINTAIN MIN. VERTICAL SEPARATION FROM WA. MAIN: 10" FOR 12" DIA. PIPE, 12" FOR 14" DIA. PIPE, 14" FOR 16" DIA. PIPE, 16" FOR 18" DIA. PIPE, 18" FOR 20" DIA. PIPE.
 3. MAINTAIN MIN. VERTICAL SEPARATION FROM EX. 10" DIA. WATER MAIN: 10" FOR 12" DIA. PIPE, 12" FOR 14" DIA. PIPE, 14" FOR 16" DIA. PIPE, 16" FOR 18" DIA. PIPE, 18" FOR 20" DIA. PIPE.
 4. MAINTAIN MIN. VERTICAL SEPARATION FROM EX. 10" DIA. WATER MAIN: 10" FOR 12" DIA. PIPE, 12" FOR 14" DIA. PIPE, 14" FOR 16" DIA. PIPE, 16" FOR 18" DIA. PIPE, 18" FOR 20" DIA. PIPE.
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350	340	330	320	310	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	0
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DESIGN	FIELD BOOK	LOCATION	ELEV.	DATA	SCALE	REV	DATE	REVISION DESCRIPTION	BY	NO.	ISSUE DESCRIPTION	DATE
DESIGN: 232-7	TBM No.	SET BOX CUT ON NE CORNER OF INT.	327.98'	BASE	1" = 20'	1	10/20/08	100' CITY REVIEW COMMENTS	BM	1	CITY REVIEW	10/20/08
STATIONING: 11+00 TO 16+00	LOC. VAL. @ SE QUADRANT OF INT.	OF THORNTON RD. & CAPTAIN'S HWY.	327.98'	DESIGN	1" = 20'	2	10/20/08	100' CITY REVIEW COMMENTS	BM	2	CITY REVIEW	10/20/08
AS-BUILT: 11+00 TO 16+00	LOC. VAL. @ SE QUADRANT OF INT.	OF THORNTON RD. & CAPTAIN'S HWY.	327.98'	DESIGN	1" = 20'	3	10/20/08	100' CITY REVIEW COMMENTS	BM	3	CITY REVIEW	10/20/08
AS-BUILT: 11+00 TO 16+00	LOC. VAL. @ SE QUADRANT OF INT.	OF THORNTON RD. & CAPTAIN'S HWY.	327.98'	DESIGN	1" = 20'	4	10/20/08	100' CITY REVIEW COMMENTS	BM	4	CITY REVIEW	10/20/08

REVISIONS	FOR
1. 10/20/08	100' CITY REVIEW COMMENTS
2. 10/20/08	100' CITY REVIEW COMMENTS
3. 10/20/08	100' CITY REVIEW COMMENTS
4. 10/20/08	100' CITY REVIEW COMMENTS

THORNTON WOODS PLANNED UNIT DEVELOPMENT
ROADWAY AND UTILITY IMPROVEMENT PLANS
CITY OF FERNDALE, WASHINGTON
WATER & SANITARY SEWER IMPROVEMENT PLAN & PROFILE
PACIFIC HEIGHTS DR 11+00 TO 16+00
AS-BUILT DRAWING

APPROVED
APR - 9 2010
BY: [Signature]
CITY OF FERNDALE

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

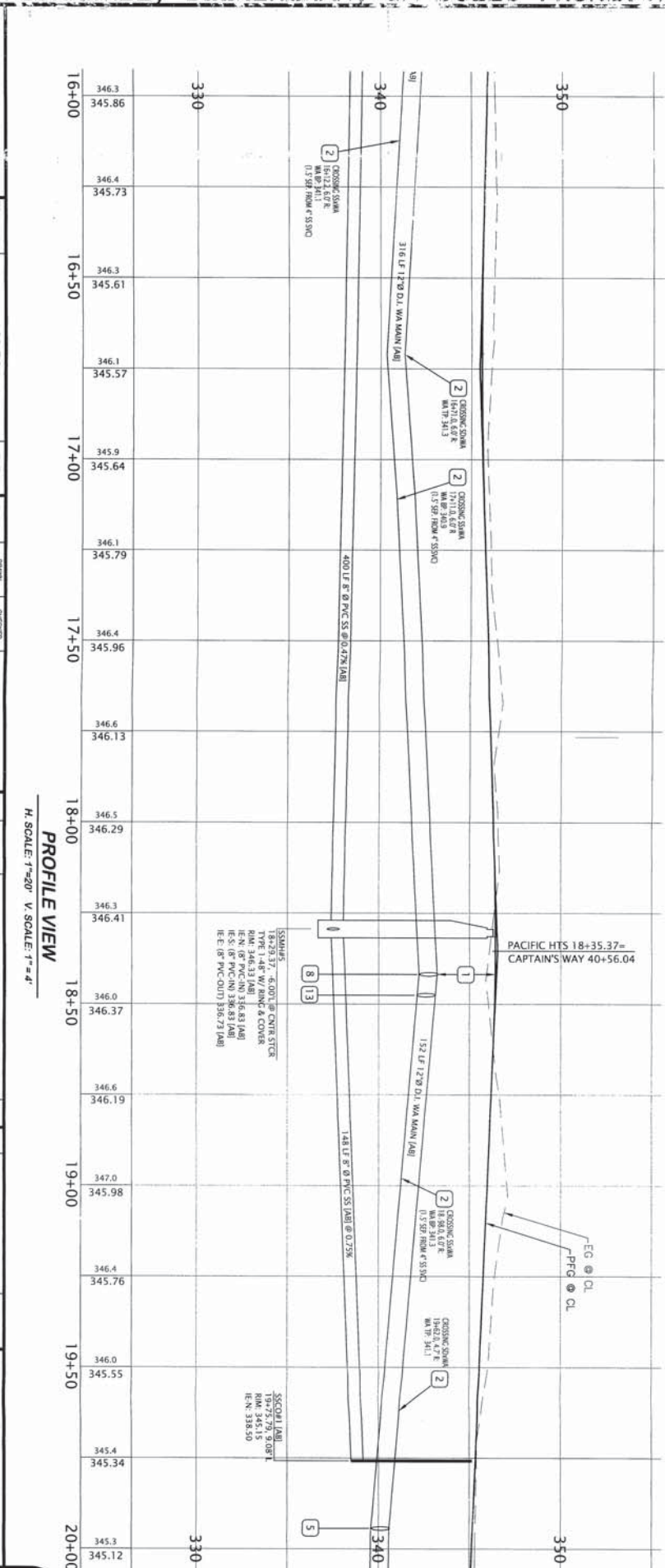
SHEET KEY

10
SHEET
22

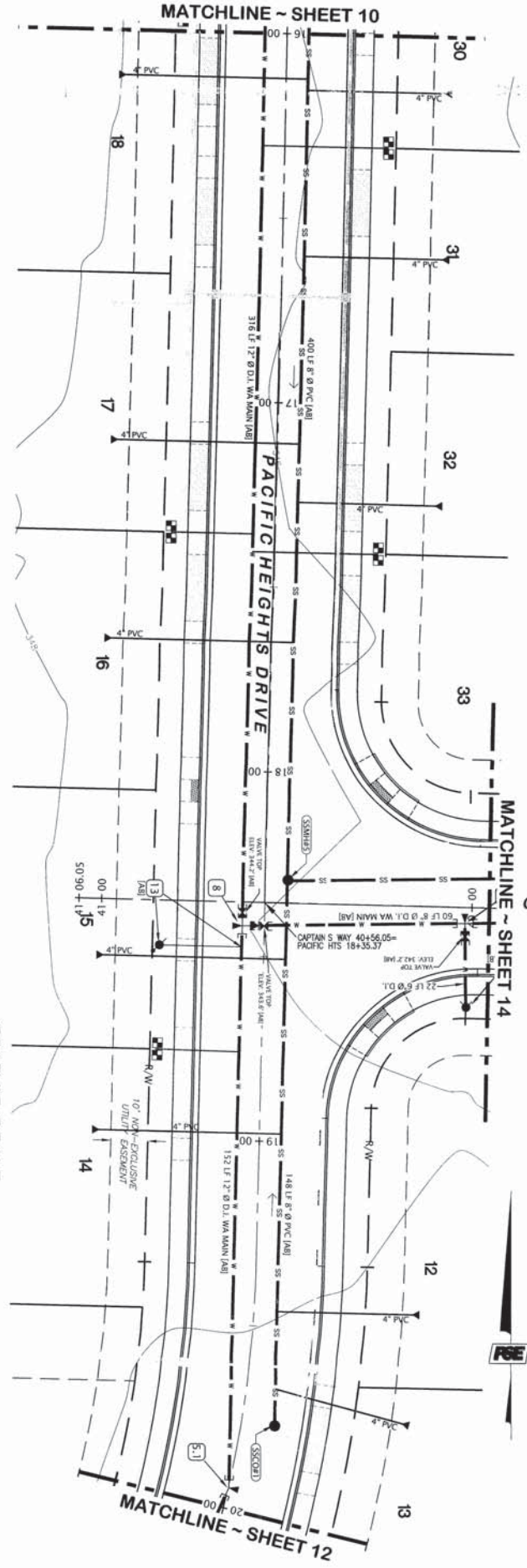
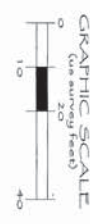
JOB No. 2002089



FIELD BOOK	DATE	LOCATION	ELEV.	DATA	SCALE	REV.	DATE	REVISION DESCRIPTION	BY	NO.	ISSUE DESCRIPTION	DATE
DESIGN	2-23-07	SET BOX CUT ON NE CORNER OF	327.88'	DESIGN	1" = 20'	1	APR 30, 2008	REV. ON REVISION COMMENTS	BM	1	ON REVISION	JAN 25, 2008
STATIONING		ELC. VALVE & SET QUADRANT OF INT.		DESIGN	1" = 20'							
AS-BUILT		OF THORNTON RD. & CAPTAIN'S WAY		DESIGN	1" = 20'							
NE COR. OF SEC. 24, TWP. 36 N., R. 6E, S. 16E				DESIGN	1" = 20'							
SURVEY REFERENCE				DESIGN	1" = 20'							



PLAN VIEW
SCALE: 1"=20'



CAPTAIN'S WAY

LOT(S)	STATION	TYPE
14 & 15	18+75.2, 28.0' R	1" DUAL (A)
16 & 17	17+35.7, 28.0' R	1" DUAL (A)
30 & 31	16+50.4, 28.0' L	1" DUAL (A)
32 & 33	17+40.4, 28.0' L	1" DUAL (A)

NOTE: ALL WATER BOX LIDS SHALL MATCH EXISTING LIDS. SEE SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS.

LOT	STATION	TYPE	SIZE	DEPTH	REMARKS
14 & 15	18+75.2, 28.0' R	1" DUAL (A)	14" x 14"	2.00'	SEE SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS
16 & 17	17+35.7, 28.0' R	1" DUAL (A)	14" x 14"	2.00'	SEE SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS
30 & 31	16+50.4, 28.0' L	1" DUAL (A)	14" x 14"	2.00'	SEE SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS
32 & 33	17+40.4, 28.0' L	1" DUAL (A)	14" x 14"	2.00'	SEE SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS

SEE GENERAL NOTES ON SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS

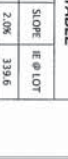
1. MAINTAIN MINIMUM 36" COVER, TYP.
2. MAINTAIN MIN. VERTICAL SEPARATION FROM MAIN.
3. 19+44.4, 0.2' L, 12" FROM SD.
4. 12" x 24" BEND, 12" FROM SD.
5. 12" x 24" BEND, 12" FROM SD.
6. 12" x 24" BEND, 12" FROM SD.
7. 12" x 24" BEND, 12" FROM SD.
8. 12" x 24" BEND, 12" FROM SD.
9. 12" x 24" BEND, 12" FROM SD.
10. 12" x 24" BEND, 12" FROM SD.
11. 12" x 24" BEND, 12" FROM SD.
12. 12" x 24" BEND, 12" FROM SD.
13. 12" x 24" BEND, 12" FROM SD.

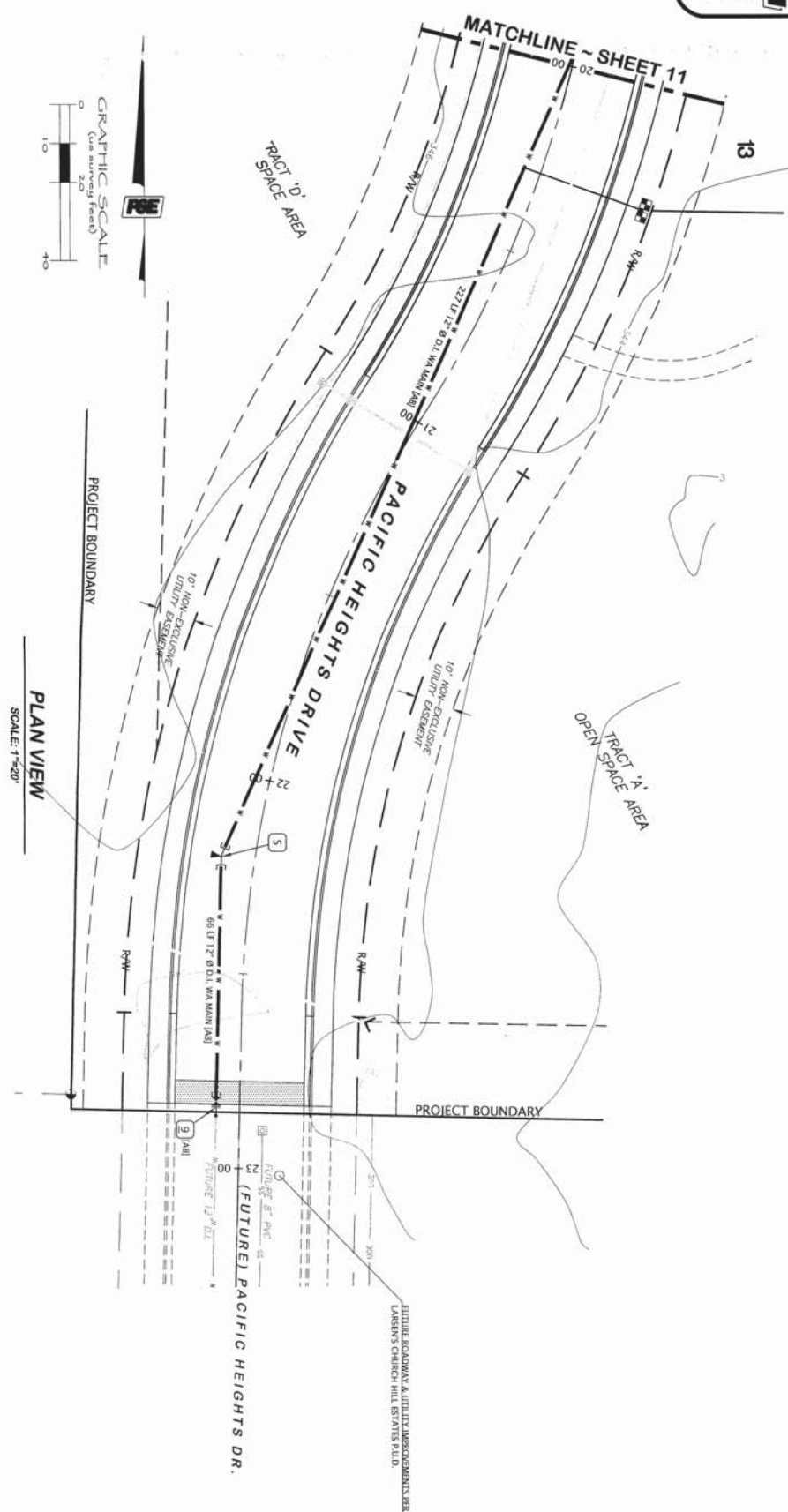
WATER DISTRIBUTION & SANITARY SEWER CONSTRUCTION KEY NOTES

THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF BELLINGHAM, WASHINGTON
ROADWAY AND UTILITY IMPROVEMENT PLANS
WATER & SANITARY SEWER IMPROVEMENT PLAN & PROFILE
PACIFIC HEIGHTS DR 16+00 TO 20+00
AS-BUILT DRAWING

AS-BUILT/NOTE: ONLY INFORMATION NOTED ON THIS PLAN HAS BEEN VERIFIED MEASURED DURING CONSTRUCTION.

APPROVED
BY: [Signature]
DATE: [Date]





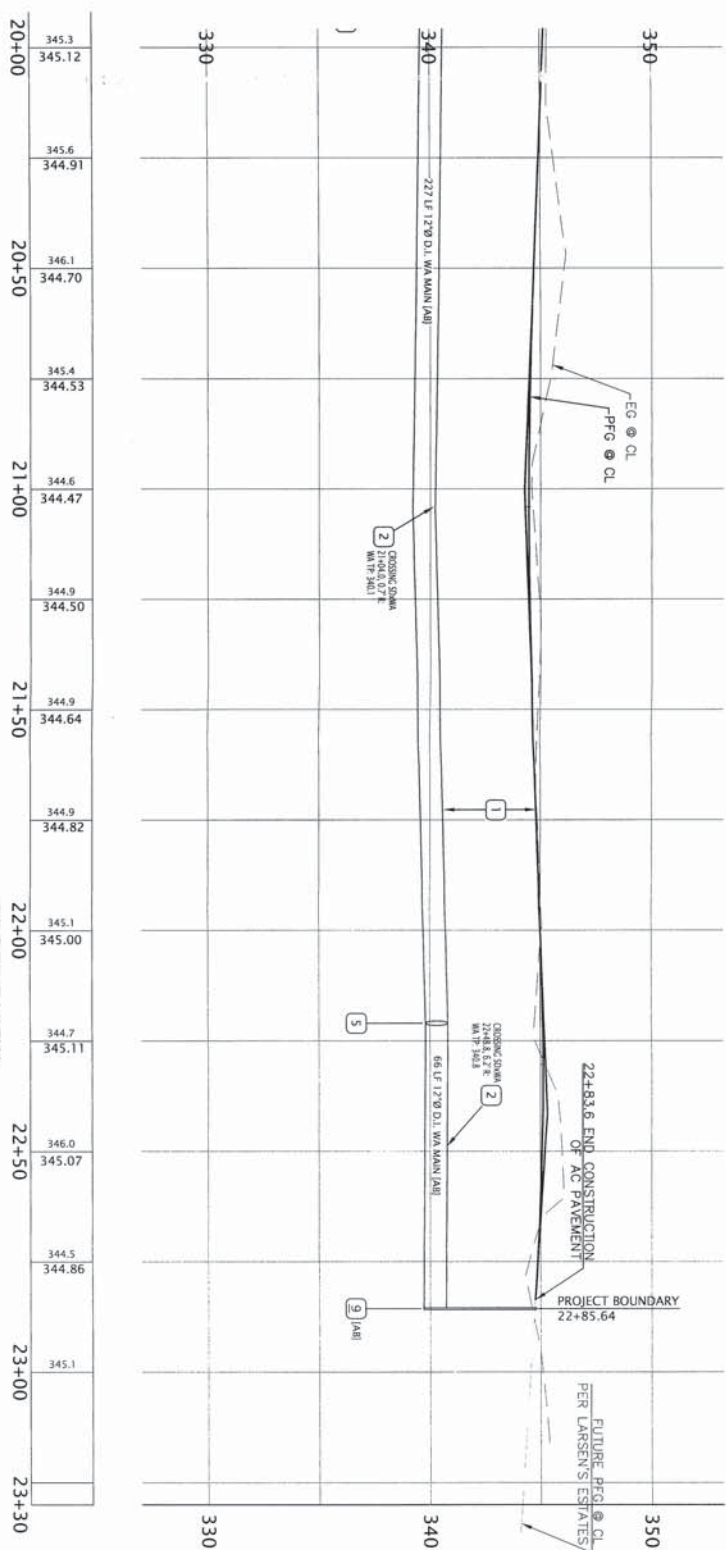
WATER SERVICES TABLE		
LOT(S)	STA/OFFSET	TYPE
13 & TRACT	20+28.9, +28.0' L	1" DUAL

NOTE: ALL WATER BOX LIDS SHALL MATCH ADJACENT BACK OF SIDEWALK GRADE, UNLESS OTHERWISE APPROVED BY CITY INSPECTOR.

WATER DISTRIBUTION & SANITARY SEWER
CONSTRUCTION KEY NOTES

- 1 MAINTAIN MINIMUM 36" COVER, TYP.
- 2 MAINTAIN MIN. VERTICAL SEPARATION FROM WA MAIN:
(MIN. 18" FROM SS; MIN. 12" FROM SD).
- 9 22+85.6, 6.0' R: INSTALL TEMPORARY BLOW-OFF PER COF STD. DMC W-9

SEE GENERAL NOTES ON SHEET 22 FOR
BACKFILL & TRENCHING SPECIFICATIONS

[illegible]

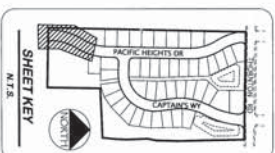
PROFILE VIEW

H. SCALE: 1"=20' V. SCALE: 1"=4'

20+00	345.3 345.12	345.6 344.91
20+50	346.1 344.70	345.4 344.53
21+00	344.6 344.47	344.9 344.50
21+50	344.9 344.64	344.9 344.82
22+00	345.1 345.00	344.7 345.11
22+50	346.0 345.07	344.5 344.86
23+00	345.1	
23+30		

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

APR - 9 2016
BY J. M. L. P.E.
CITY OF PEORIA



THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF FERNDALE, WASHINGTON

ROADWAY AND UTILITY IMPROVEMENT PLANS

WATER & SANITARY SEWER IMPROVEMENT PLAN & PROFILE
PACIFIC HEIGHTS DR 20+00 to 23+00

AS-BUILT DRAWING

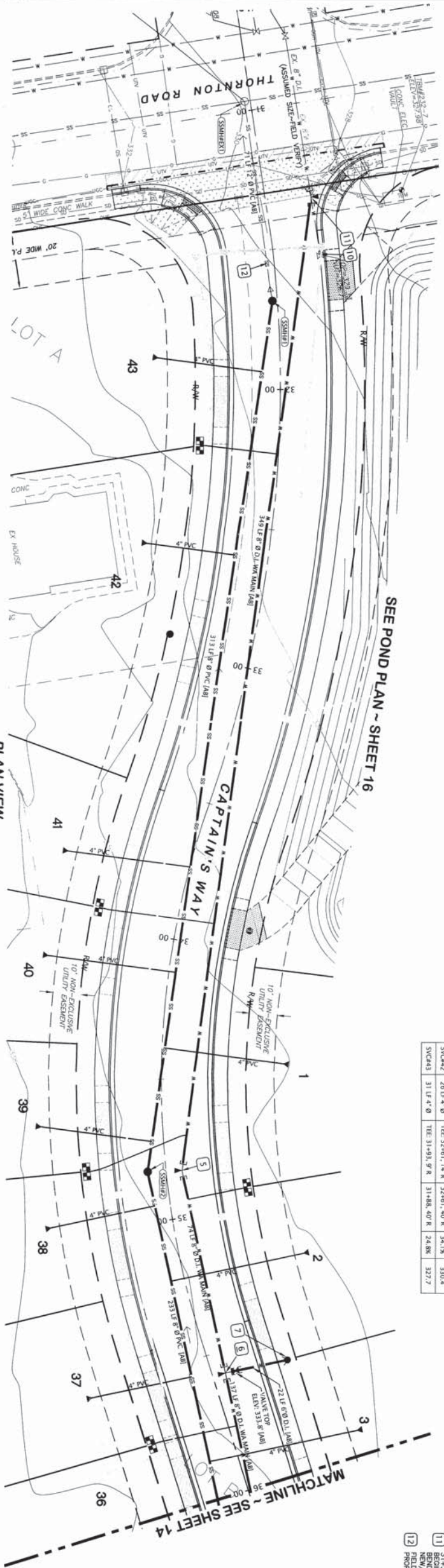
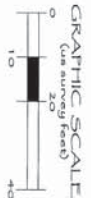


JOB No. 2002089

SHEET

12

22



SEE POND PLAN - SHEET 16

SCALE: 1"=20'

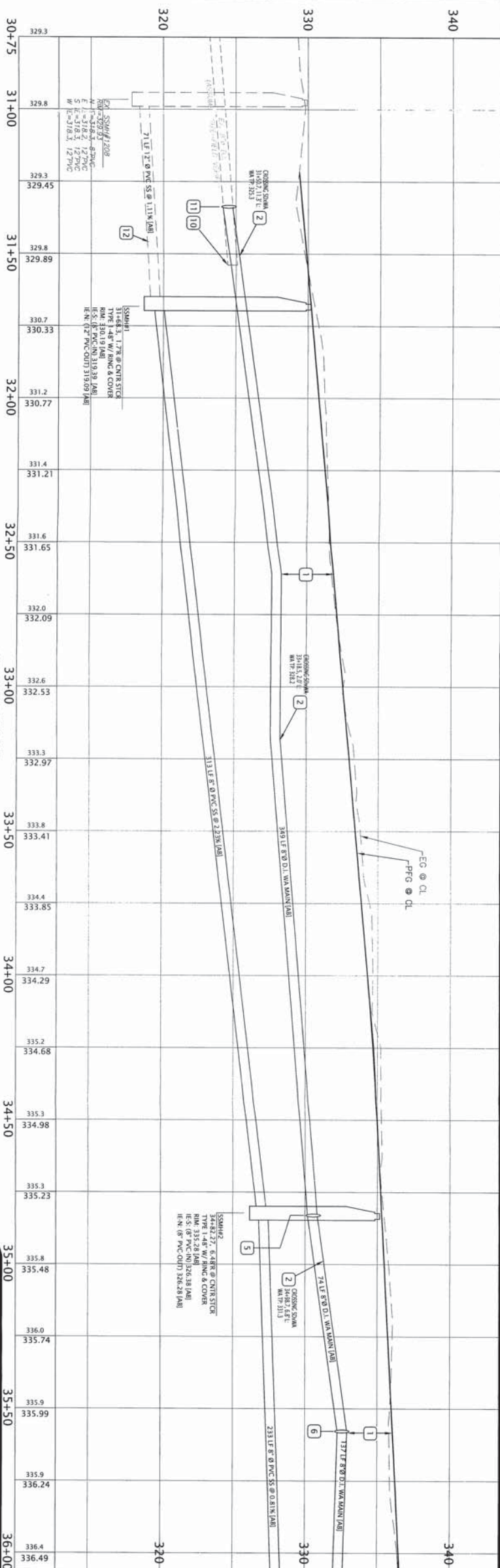
SANITARY SEWER LOT SERVICE TABLE				
LOT	SEWER	STA. OFFSET	STA. OFFSET	IE @ LOT
(PVC SDR33)	@ MAIN	@ LOT	@ LOT	
SWC#1	40" LF 4" TEE 34+30, 1" L	34+43, 40" L	7.98	314.9
SWC#2	45" LF 4" TEE 35+21, 5" R	35+22, 40" L	4.28	323.1
SWC#3	50" LF 4" TEE 35+48, 10" R	35+49, 40" L	2.08	329.0
SWC#4	33" LF 4" TEE 35+56, 7" R	35+53, 40" R	11.08	331.3
SWC#5	35" LF 4" TEE 34+54, 5" R	34+46, 40" R	14.08	332.1
SWC#6	36" LF 4" TEE 34+72, 4" R	34+66, 40" R	15.28	332.1
SWC#7	40" LF 4" TEE 34+12, 2" L	34+12, 40" R	15.98	331.8
SWC#8	40" LF 4" TEE 33+74, 1" R	33+78, 40" R	17.08	331.2
SWC#9	36" LF 4" TEE 32+61, 1" R	32+61, 40" R	34.18	330.4
SWC#10	31" LF 4" TEE 31+93, 9" R	31+88, 40" R	24.88	322.7

WATER SERVICES TABLE		
LOT(S)	STATION	TYPE
1 & 2	34+92.2, 28.0' L	1" DUAL (L&R)
3 & 4	35+74.3, 28.0' R	1" DUAL (L&R)
5 & 6	34+80.3, 28.0' R	1" DUAL (L&R)
7 & 8	33+94, 28.0' R	1" DUAL (L&R)
9 & 10	32+21.4, 28.0' R	1" DUAL (L&R)

WATER DISTRIBUTION & SANITARY SEWER CONSTRUCTION KEY NOTES

1. MAINTAIN MINIMUM 36" COVER, TYP.
2. (MIN. 18" FROM S.S. MIN. 12" FROM S.D.)
3. 34+43.1, 5.8' L, INSTALL 12" 22.5° BEND, 40" AND THURSTER BLOCK & THURSTER BLOCK
4. 40+6.41, 33+94, 28.0' R, 1" DUAL (L&R)
5. 42+6.43, 32+21.4, 28.0' R, 1" DUAL (L&R)
6. 35+60.0, 27.0' L, INSTALL (1) FIRE HYD. ASSEMBLY
7. PER STD. PLAN W-1, BOTTOM FLANGE ELEV. 335.0'
8. BEG. OF FEMALE PIPER WORKS HERE
9. BEG. OF FEMALE PIPER WORKS HERE
10. BEG. OF FEMALE PIPER WORKS HERE
11. BEG. OF FEMALE PIPER WORKS HERE
12. BEG. OF FEMALE PIPER WORKS HERE

SEE GENERAL NOTES ON SHEET 22 FOR BACKFILL & TRENCHING SPECIFICATIONS



SCALE: 1"=20' V. SCALE: 1"=4'

FIELD BOOK		LOCATION		ELEV.		DATA		SCALE		REV.		DATE		REVISION DESCRIPTION		BY		ISSUE DESCRIPTION		DATE	
DESIGN	222-7	SET BOX CUT ON NE CORNER OF	322.88'	BASE	BM	DATE	1	1"	20'	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008
STATIONING	222-7	ELEV. VALVE @ SE CORNER OF INT.	322.88'	LOCATION	BM	DATE	1	1"	20'	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008
ASSIGNED	222-7	OF THORNTON RD. & CAPTAIN'S WAY	322.88'	DATE	BM	DATE	1	1"	20'	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008
NE OF SEC. 24, TWP. 24 N, RNC. 1 E, S. 4 E	222-7	OF THORNTON RD. & CAPTAIN'S WAY	322.88'	DATE	BM	DATE	1	1"	20'	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008
SURVEY REFERENCE	222-7	OF THORNTON RD. & CAPTAIN'S WAY	322.88'	DATE	BM	DATE	1	1"	20'	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008	1	1	10/10/2008	10/10/2008	10/10/2008	10/10/2008
PLAN CHECK																					
REVISIONS																					
FOR																					

THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF BELLINGHAM, WASHINGTON
ROADWAY AND UTILITY IMPROVEMENT PLANS
WATER & SANITARY SEWER IMPROVEMENT PLAN & PROFILE
CAPTAIN'S WAY 31+00 TO 36+00
AS-BUILT DRAWING





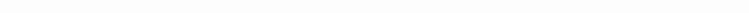
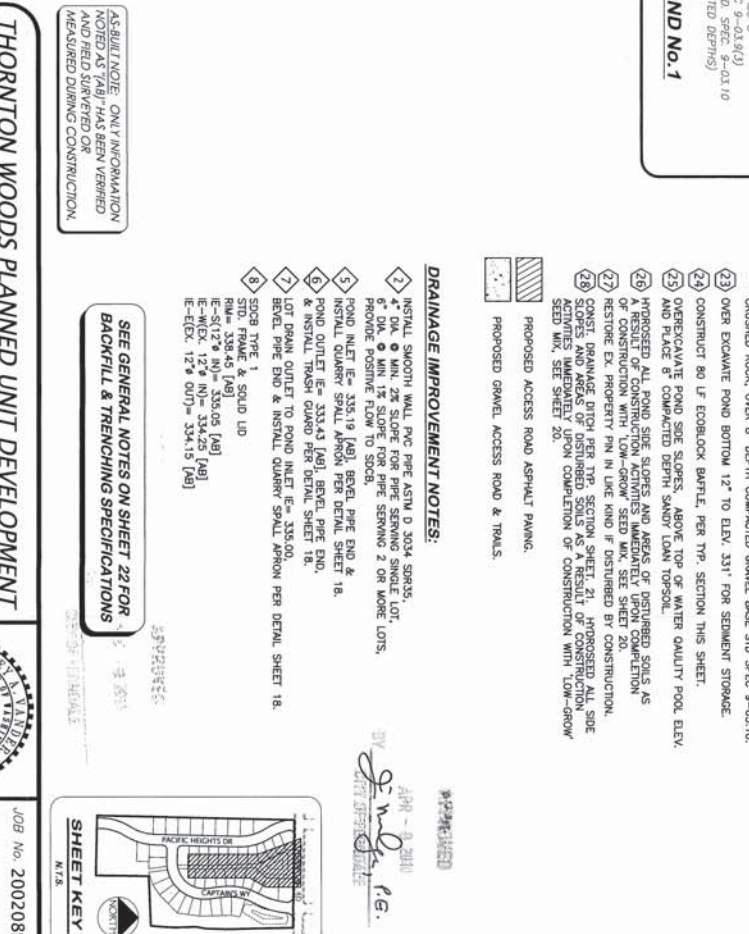
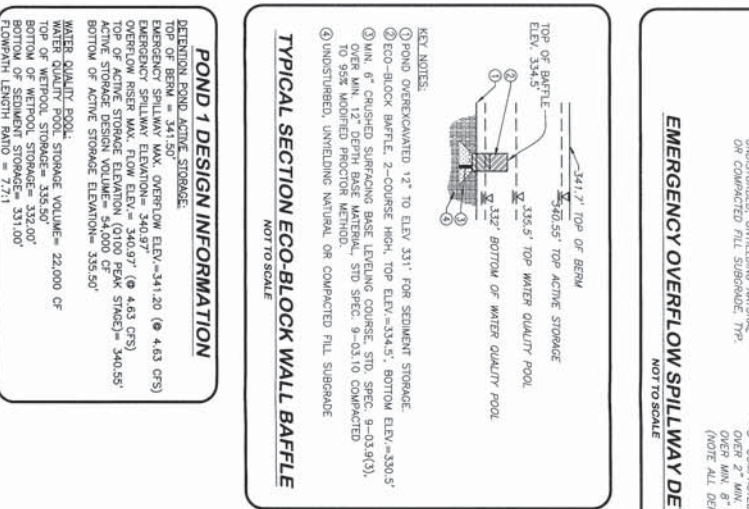
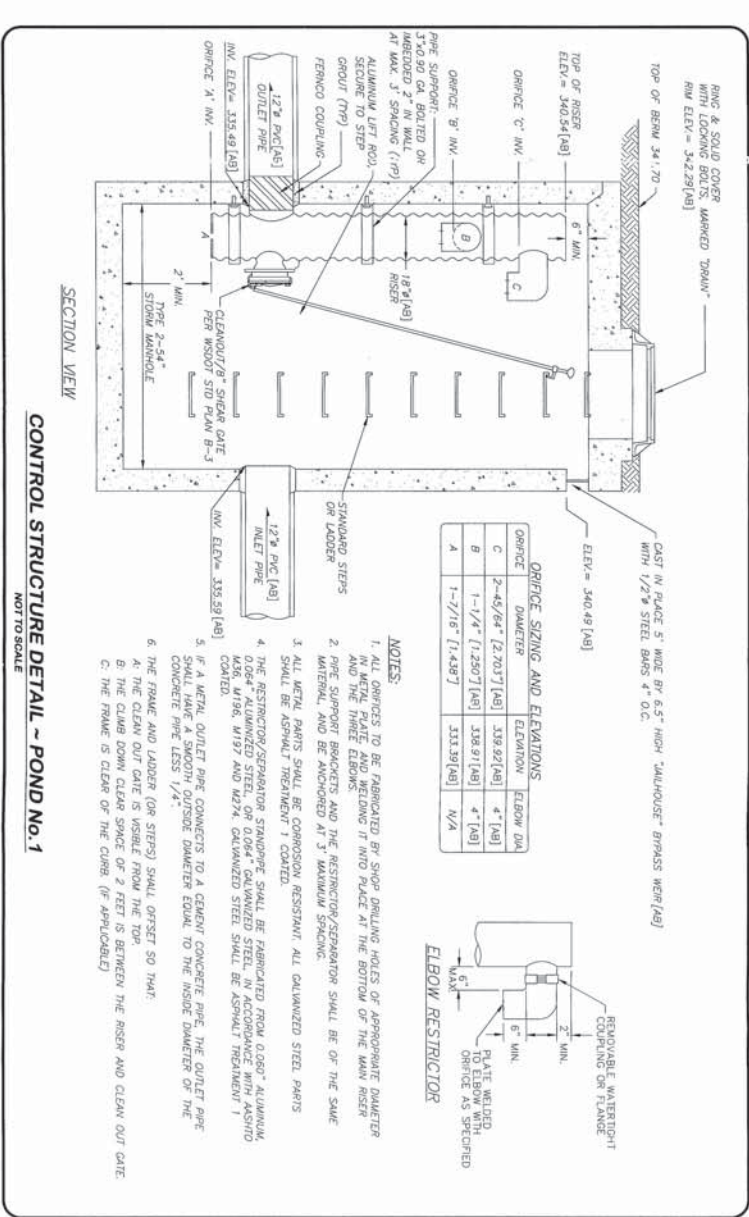
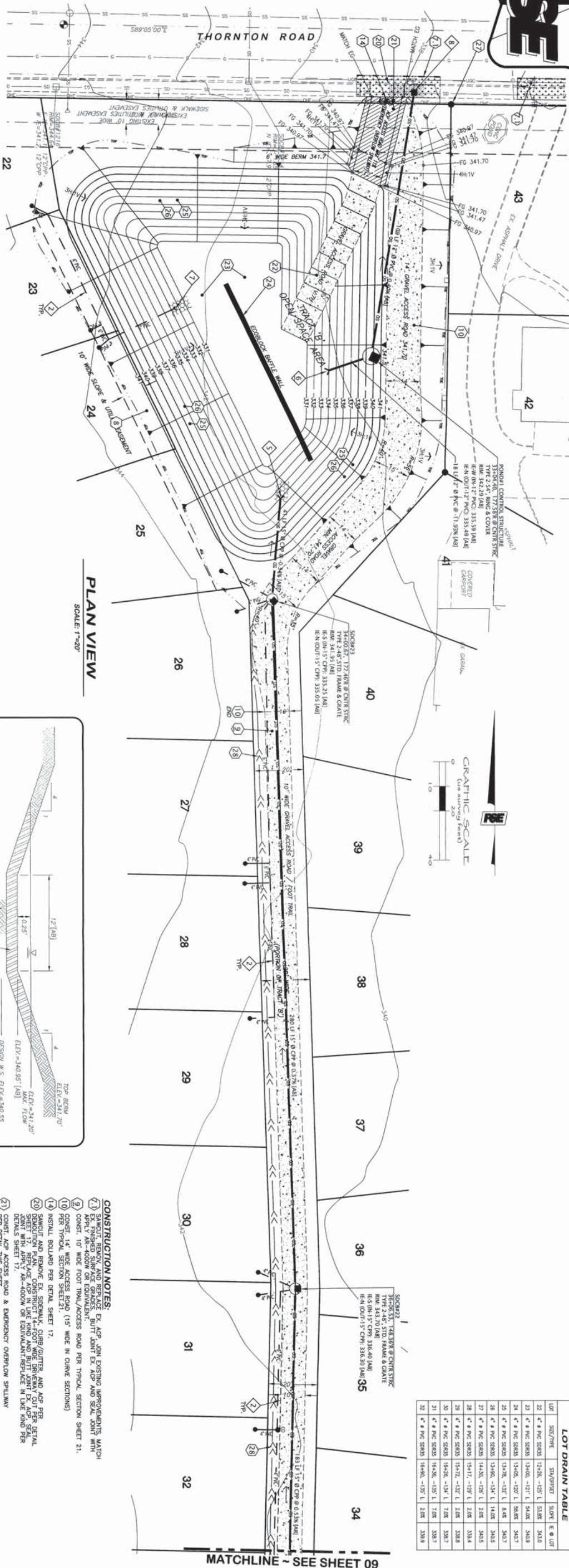
WATER SERVICES TABLE		
LOT(S)	STAFF/OFFSET	TYPE
3 & 4	361'18.7', -28.07'L	1" DUAL
5 & 6	37-01.2', -28.07'L	1" DUAL
7 & 8	37-75.8", -28.07'L	1" DUAL
9 & 10	38-55', -28.07'L	1" DUAL
11 & 12	39-56.1', -28.07'L	1" DUAL
14 & 15	37-14.4', -28.07'L	1" DUAL

NOTE: ALL WATER BOX LIDS SHALL MATCH
 THE SURROUNDING PAVEMENT
 OTHERWISE APPROVED BY CSP.

SEE GENERAL NOTES ON SHEET 22 FOR
BACKFILL & TRENCHING SPECIFICATIONS

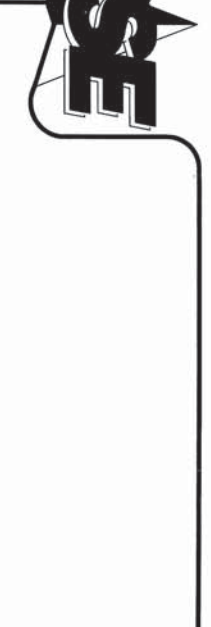
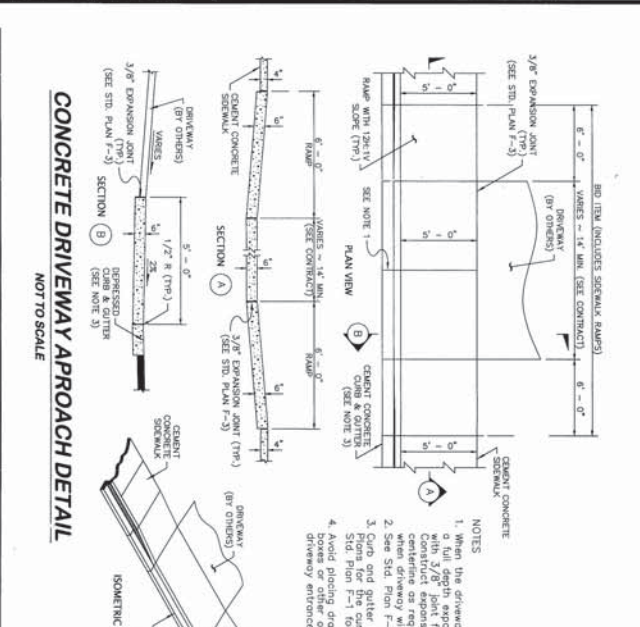
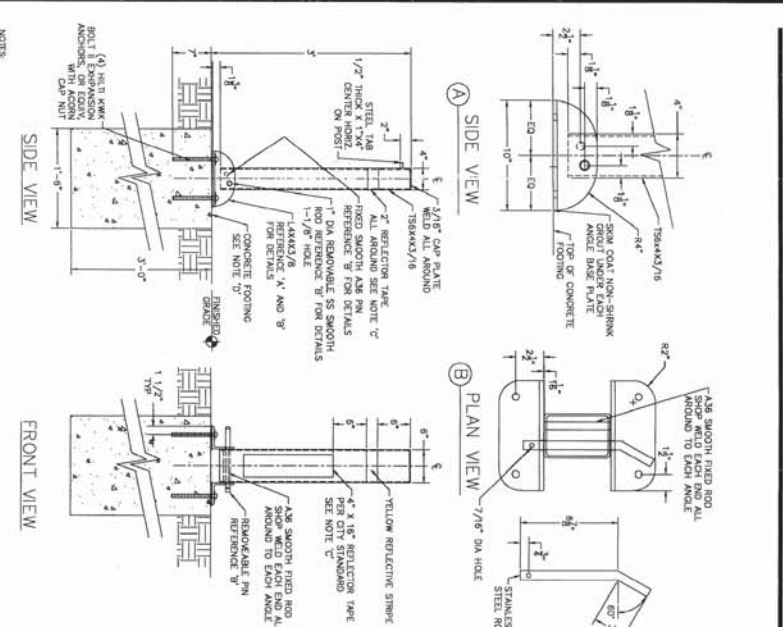
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ROADWAY AND UTILITY IMPROVEMENT
WATER & SANITARY SEWER IMPROVEMENT PL
CAPTAIN'S WAY 36+00 to 41+00
AS-BUILT DRAWING

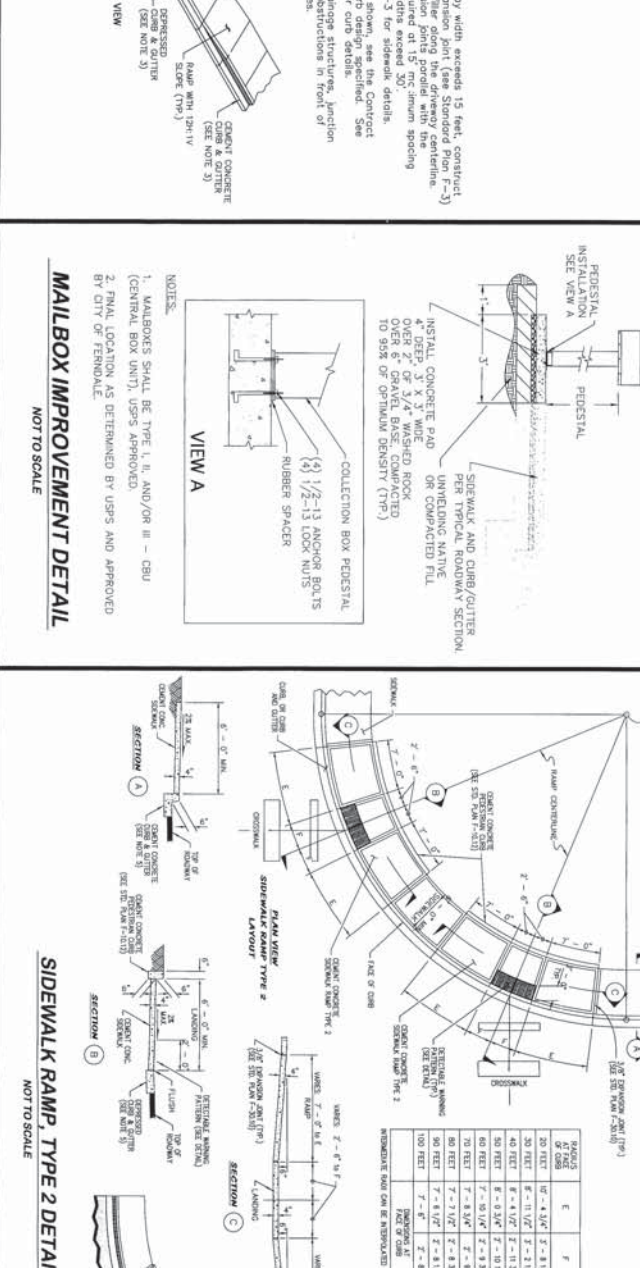
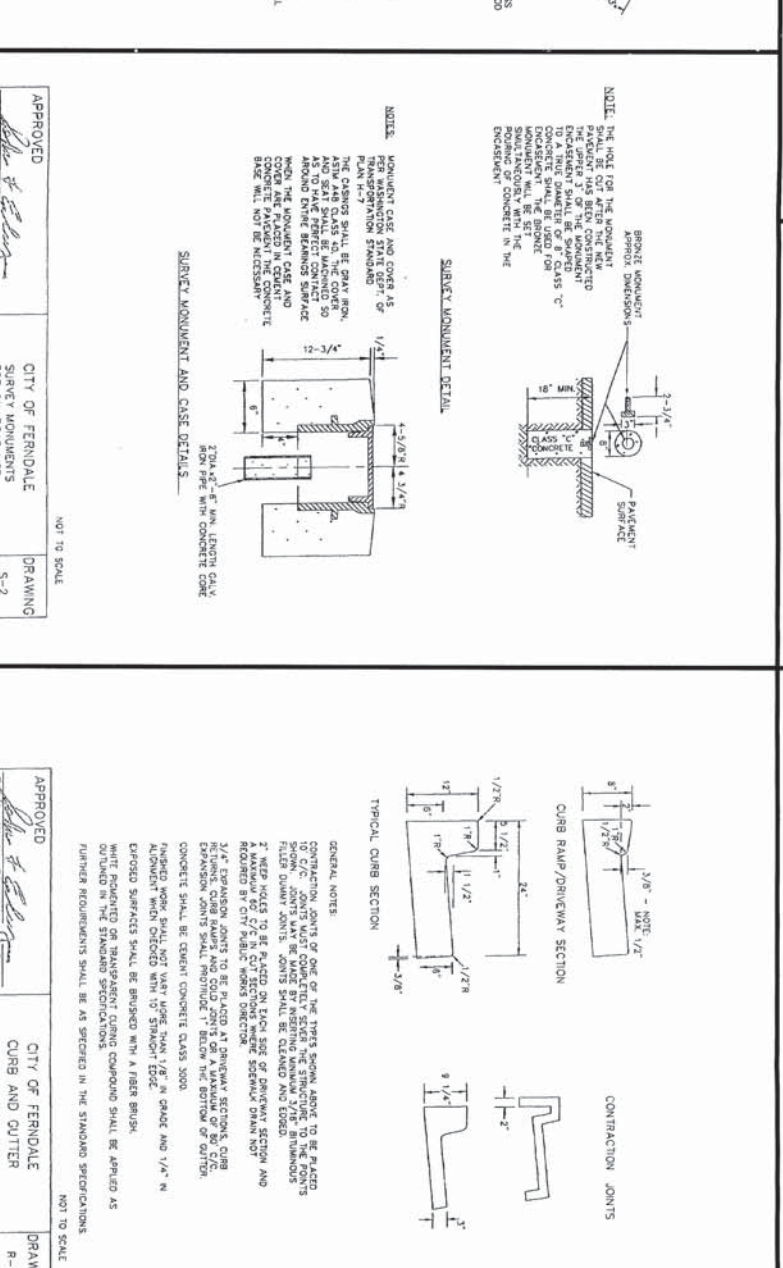
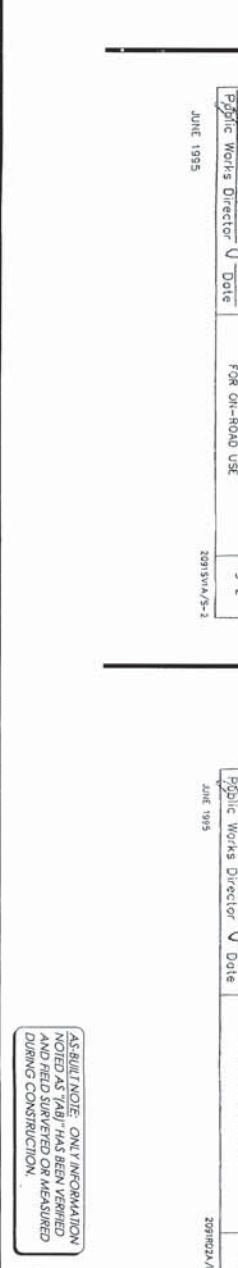




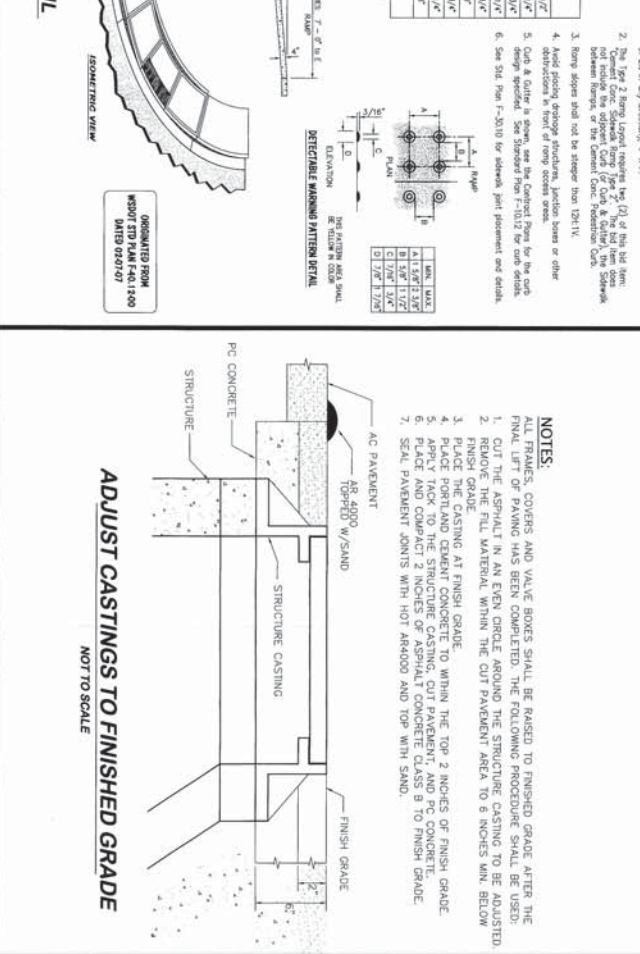
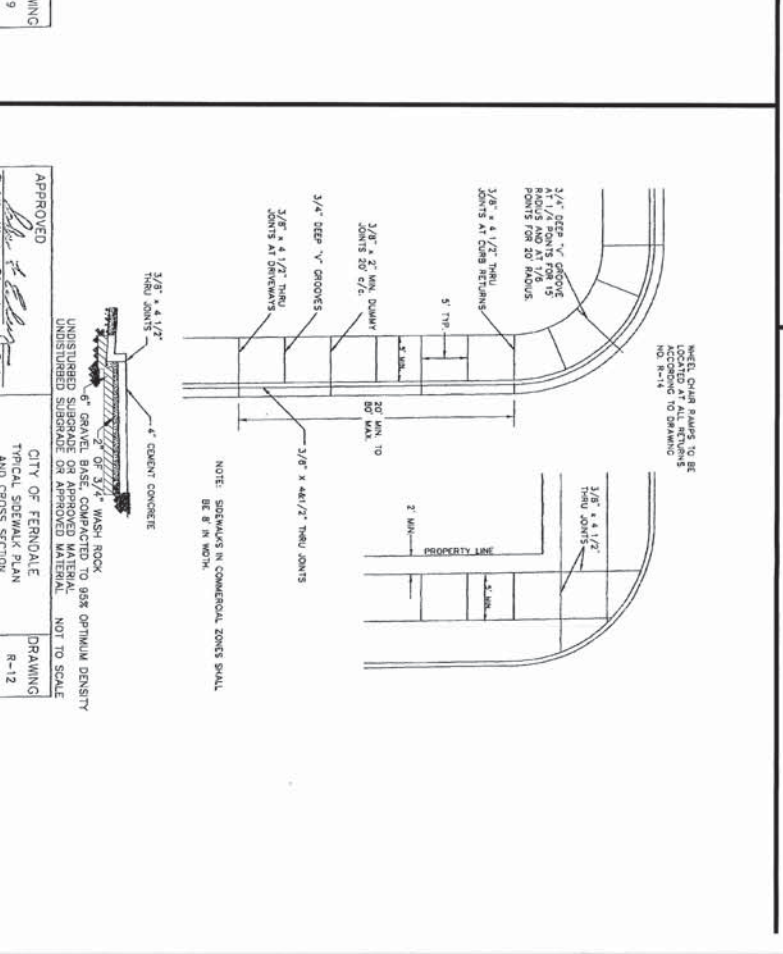
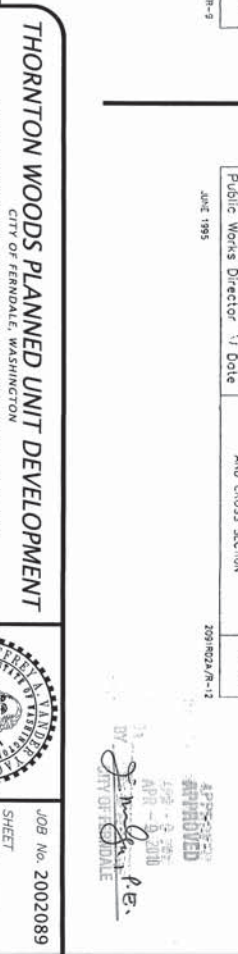
DESIGN	FIELD BOOK	LOCATION	ELEV	DATA	SCALE	REV	DATE	REVISION DESCRIPTION	BY	NO.	ISSUE DESCRIPTION	DATE
STATIONING	232-7	SET BOX CUT ON NE CORNER OF INT.	327.81	BASE	AS NOTED	1	APR 20, 2008	REVISED	BM	1	1ST REVISION	JUN 25, 2008
ASPHALT		OF THORNTON RD. & CAPTAIN'S WY.		DESIGN	BM	2	JUN 25, 2008	REVISED	BM	2	2ND REVISION	JUN 25, 2008
NE COR. OF SEC. 24, TWP. 36 N., R. 1 E., W. 4		NO. 29		DESIGN	BM	3	JUN 25, 2008	REVISED	BM	3	3RD REVISION	JUN 25, 2008
SURVEY REFERENCE				DESIGN	BM	4	JUN 25, 2008	REVISED	BM	4	4TH REVISION	JUN 25, 2008

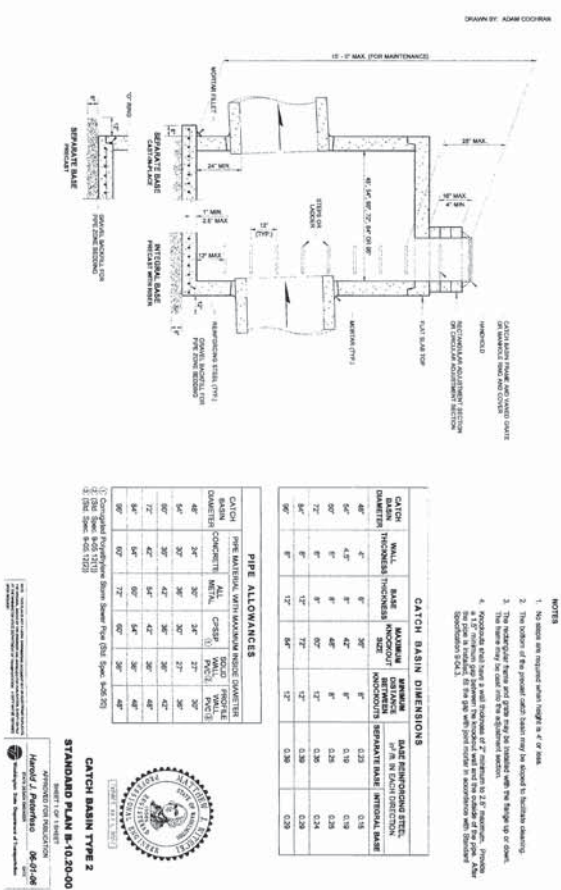
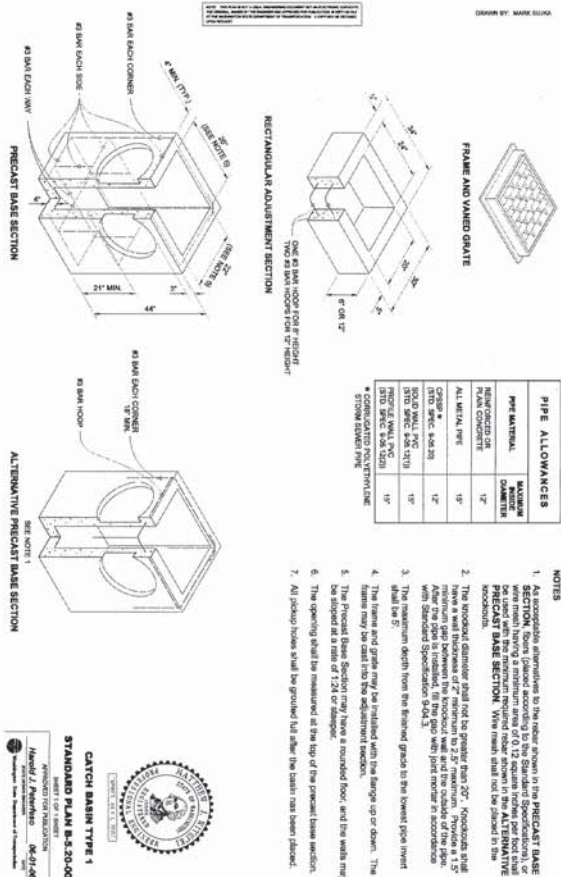
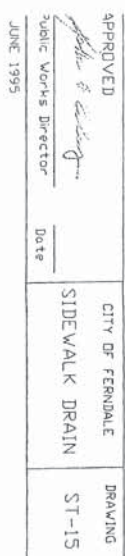
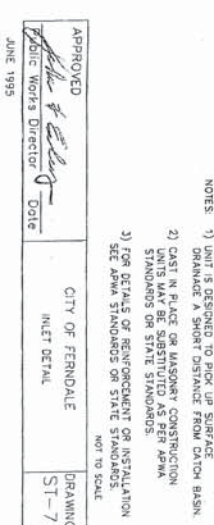
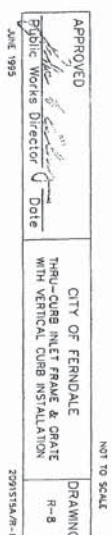


DESIGN	FIELD BOOK	LOCATION	ELEV	DATA	SCALE	REV	DATE	REVISION DESCRIPTION	BY	NO.	ISSUE DESCRIPTION	DATE
STATIONING	232-7	SET BOX CUT ON NE CORNER OF INT.	327.81	BASE	AS NOTED	1	APR 20, 2008	REVISED	BM	1	1ST REVISION	JUN 25, 2008
ASPHALT		OF THORNTON RD. & CAPTAIN'S WY.		DESIGN	BM	2	JUN 25, 2008	REVISED	BM	2	2ND REVISION	JUN 25, 2008
NE COR. OF SEC. 24, TWP. 36 N., R. 1 E., W. 4		NO. 29		DESIGN	BM	3	JUN 25, 2008	REVISED	BM	3	3RD REVISION	JUN 25, 2008
SURVEY REFERENCE				DESIGN	BM	4	JUN 25, 2008	REVISED	BM	4	4TH REVISION	JUN 25, 2008



DESIGN	FIELD BOOK	LOCATION	ELEV	DATA	SCALE	REV	DATE	REVISION DESCRIPTION	BY	NO.	ISSUE DESCRIPTION	DATE
STATIONING	232-7	SET BOX CUT ON NE CORNER OF INT.	327.81	BASE	AS NOTED	1	APR 20, 2008	REVISED	BM	1	1ST REVISION	JUN 25, 2008
ASPHALT		OF THORNTON RD. & CAPTAIN'S WY.		DESIGN	BM	2	JUN 25, 2008	REVISED	BM	2	2ND REVISION	JUN 25, 2008
NE COR. OF SEC. 24, TWP. 36 N., R. 1 E., W. 4		NO. 29		DESIGN	BM	3	JUN 25, 2008	REVISED	BM	3	3RD REVISION	JUN 25, 2008
SURVEY REFERENCE				DESIGN	BM	4	JUN 25, 2008	REVISED	BM	4	4TH REVISION	JUN 25, 2008





AS-BUILT DRAWING

THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF SPRING, TEXAS

ROADWAY AND UTILITY IMPROVEMENT PLANS



JOB No. 2002089

18

22



DESIGN:	233-7	SET BOX CUT ON NE CORNER OF INT.
STATIONS:	0+00 TO 0+20	ELEC. W/ALT. @ 5' INTERVALS
AS-BUILT:	0+20 TO 0+25	OF THORNTON RD. & CAPTAIN'S WY.
DATE:	08/24/2009	BY: J. E. KIM
PROJECT:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
LOCATION:	5373 GUIDE MERIDIAN, BELLINGHAM, WA 98226	
SCALE:	AS SHOWN	
REVISION:	1. 08/24/2009	FOR CONSTRUCTION
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
NO.:	1	ISSUE
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
NO.:	2	ISSUE
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
NO.:	3	ISSUE
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
NO.:	4	ISSUE
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	

REVISION:	DESCRIPTION:	DATE:	BY:
1	FOR CONSTRUCTION	08/24/2009	J. E. KIM
2	FOR CONSTRUCTION	08/24/2009	J. E. KIM
3	FOR CONSTRUCTION	08/24/2009	J. E. KIM
4	FOR CONSTRUCTION	08/24/2009	J. E. KIM

REVISION:	DESCRIPTION:	DATE:	BY:
1	FOR CONSTRUCTION	08/24/2009	J. E. KIM
2	FOR CONSTRUCTION	08/24/2009	J. E. KIM
3	FOR CONSTRUCTION	08/24/2009	J. E. KIM
4	FOR CONSTRUCTION	08/24/2009	J. E. KIM

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REVISION:	DESCRIPTION:	DATE:	BY:
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2	FOR CONSTRUCTION	08/24/2009	J. E. KIM
3	FOR CONSTRUCTION	08/24/2009	J. E. KIM
4	FOR CONSTRUCTION	08/24/2009	J. E. KIM

DESIGN:	233-7	SET BOX CUT ON NE CORNER OF INT.
STATIONS:	0+00 TO 0+20	ELEC. W/ALT. @ 5' INTERVALS
AS-BUILT:	0+20 TO 0+25	OF THORNTON RD. & CAPTAIN'S WY.
DATE:	08/24/2009	BY: J. E. KIM
PROJECT:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
LOCATION:	5373 GUIDE MERIDIAN, BELLINGHAM, WA 98226	
SCALE:	AS SHOWN	
REVISION:	1. 08/24/2009	FOR CONSTRUCTION
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
NO.:	1	ISSUE
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
NO.:	2	ISSUE
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
NO.:	3	ISSUE
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	
NO.:	4	ISSUE
DATE:	08/24/2009	BY: J. E. KIM
DESCRIPTION:	THORNTON WOODS PLANNED UNIT DEVELOPMENT	

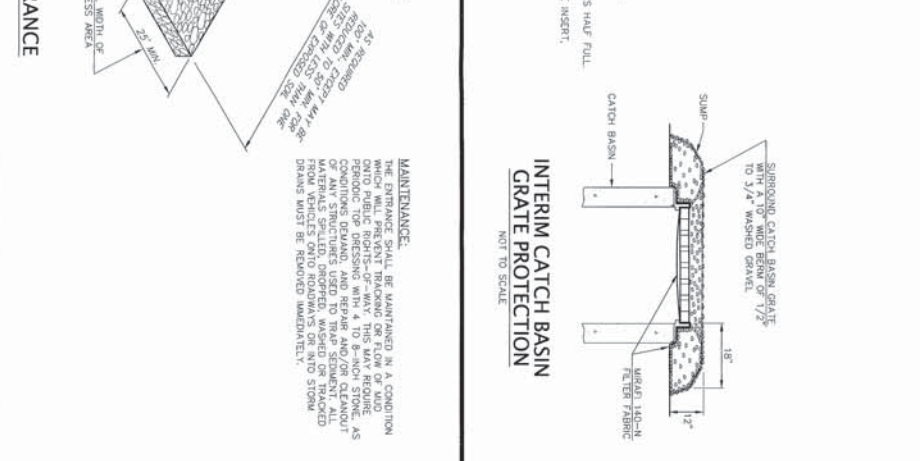
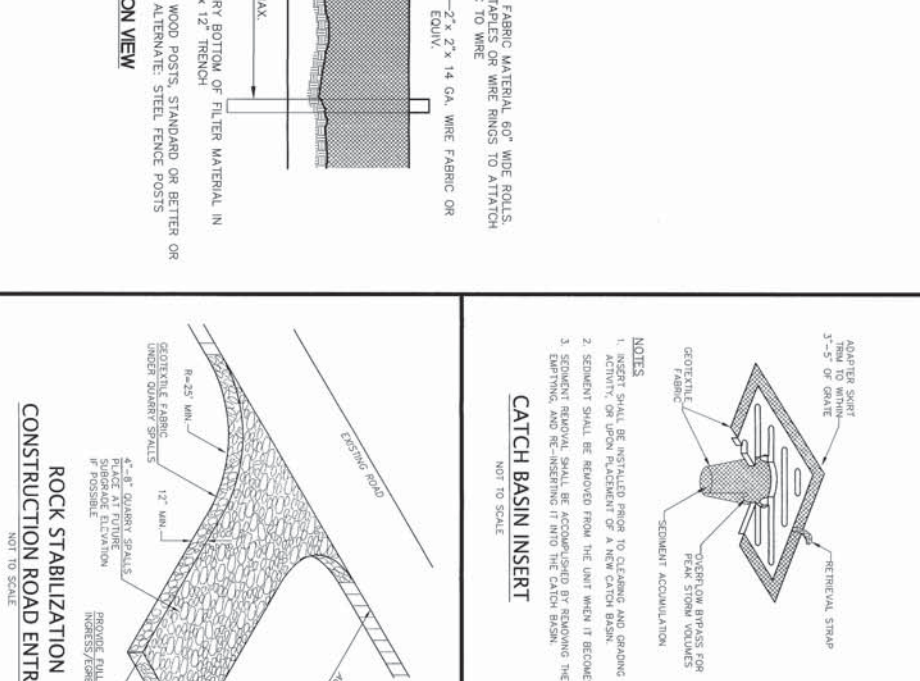
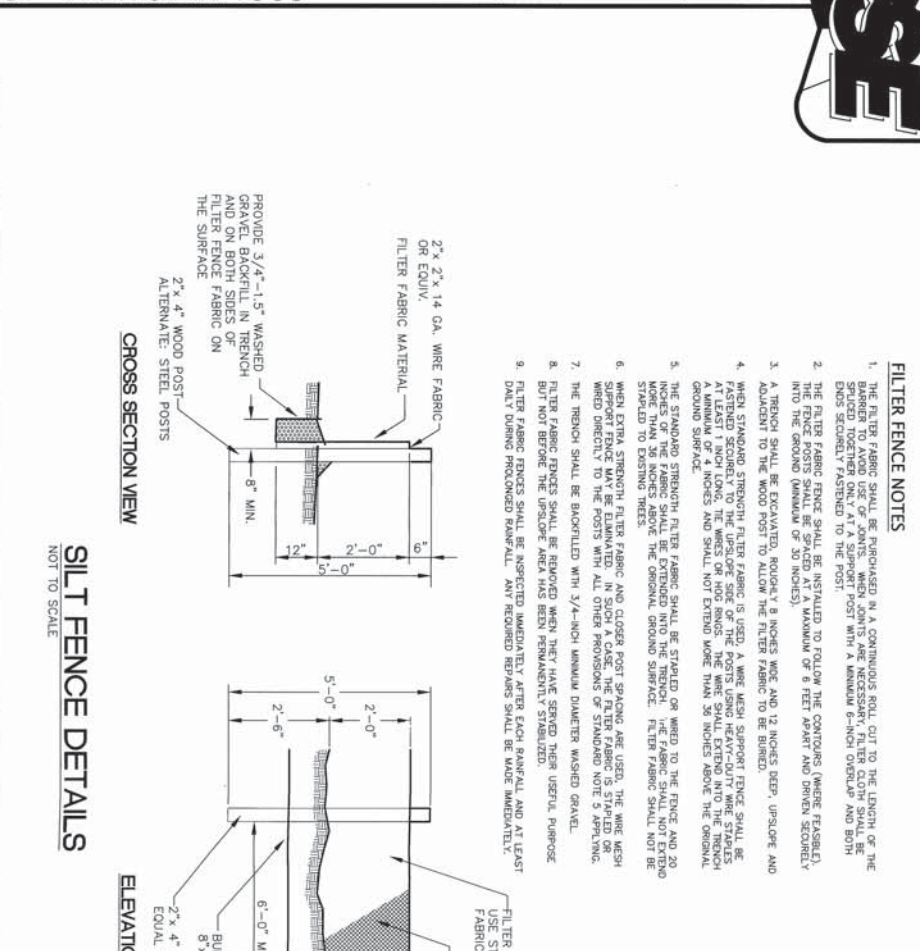
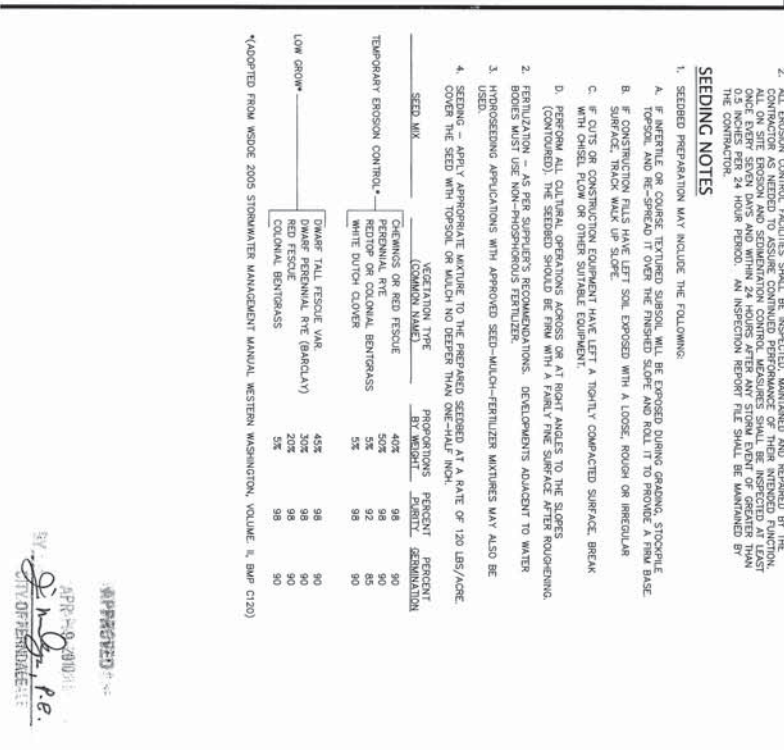
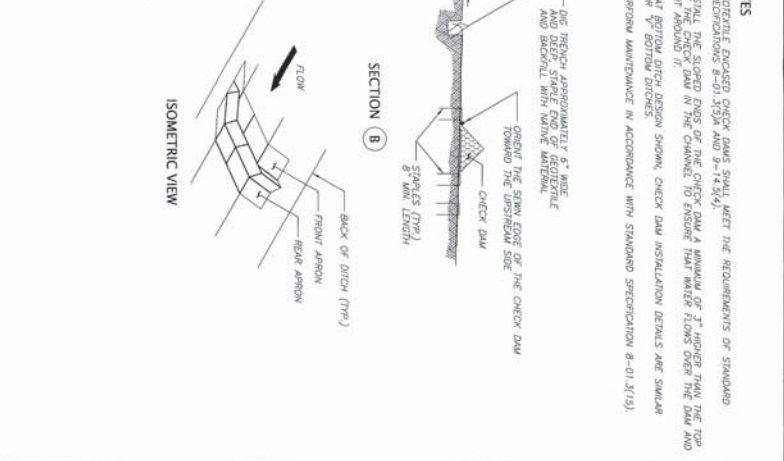
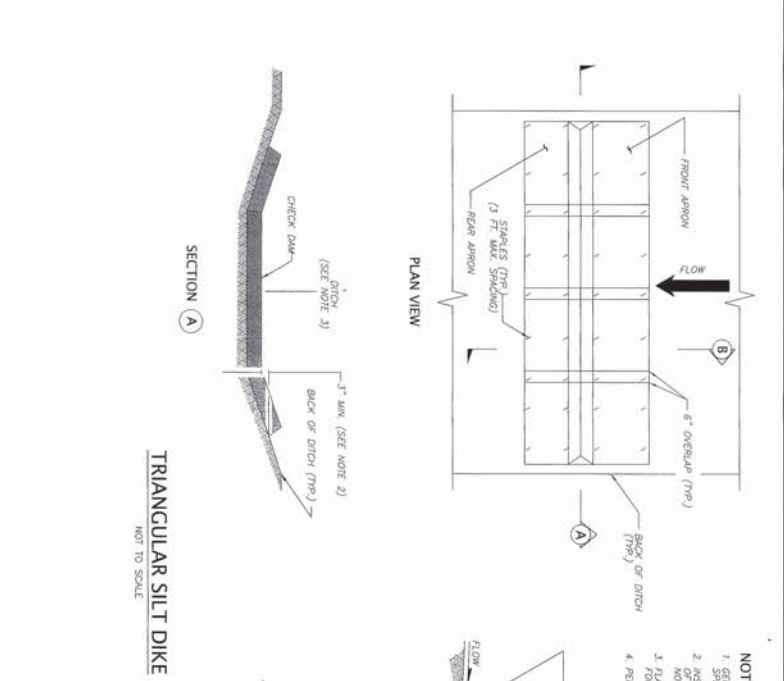
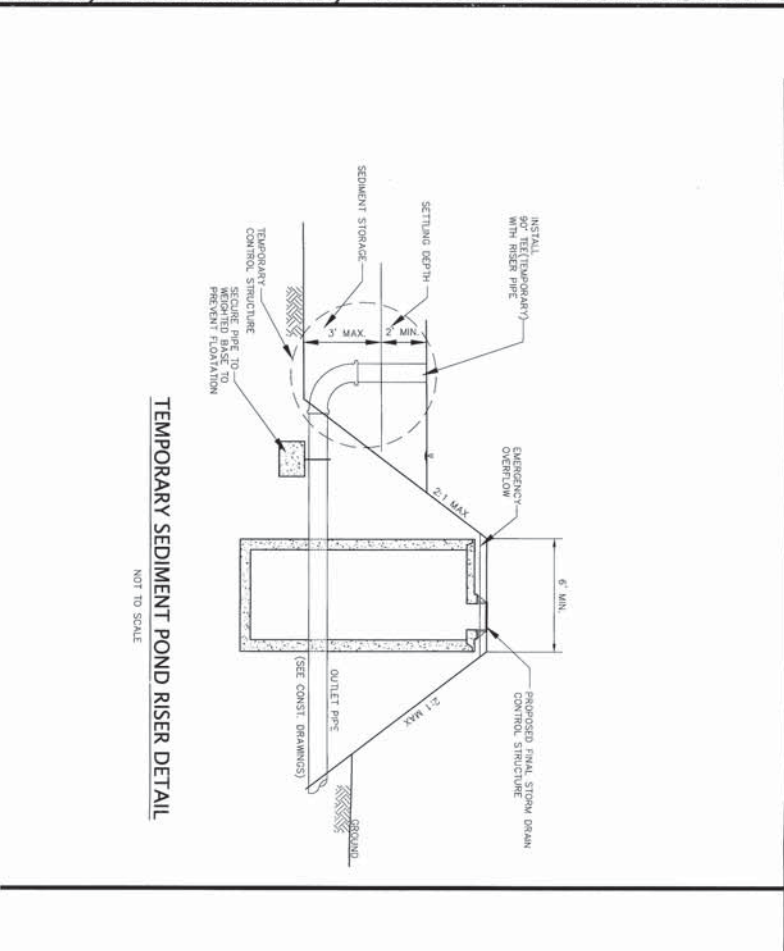
REVISION:	DESCRIPTION:	DATE:	BY:
1	FOR CONSTRUCTION	08/24/2009	J. E. KIM
2	FOR CONSTRUCTION	08/24/2009	J. E. KIM
3	FOR CONSTRUCTION	08/24/2009	J. E. KIM
4	FOR CONSTRUCTION	08/24/2009	J. E. KIM

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4	FOR CONSTRUCTION	08/24/2009	J. E. KIM





FIELD BOOK	DATE	LOCATION	ELEV.	DATA	SCALE	REV.	DATE	REVISION DESCRIPTION	BY	NO.	ISSUE DESCRIPTION	DATE
DESIGN	2/23/07	SET BOX CUT ON NE CORNER OF	327.98'	BASE	AS NOTED	1	APR. 30, 2008	Per City review comments	PHW	1	1ST REVISION	JAN. 25, 2008
STAKING		ELEC. WALK @ SE QUADRANT OF INT.		DESIGN	AS NOTED	2			PHW	2	1ST REVISION	MAY 1, 2008
AS-BUILT		OF THORNTON RD. & CAPTAIN'S HWY.		DESIGN	AS NOTED	3			PHW	3	AS-BUILT	MAY 26, 2008
		NE COR. OF SEC. 24, TWP. 36 N., R. 12 E., S. 4 W.		DESIGN	AS NOTED	4			PHW	4	AS-BUILT	DEC. 21, 2008

AS-BUILT INDICATE ONLY INFORMATION
NOTED AS (TAB) HAS BEEN VERIFIED
AND FIELD CORRECTIONS MEASURED
DURING CONSTRUCTION.

THORNTON WOODS PLANNED UNIT DEVELOPMENT
CITY OF FERNDALE, WASHINGTON
ROADWAY AND UTILITY IMPROVEMENT PLANS

TYPICAL SECTIONS

AS-BUILT DRAWING



APPROVED
J. H. O'CONNELL
P.E.
CITY OF FERNDALE

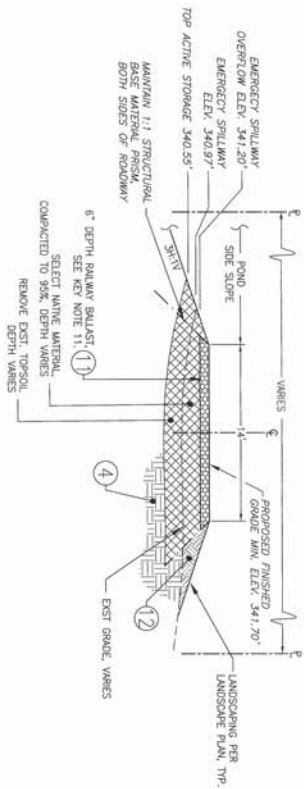
JOB NO. 2002089

SHEET

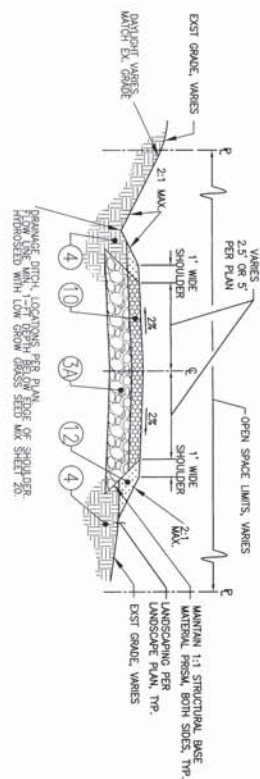
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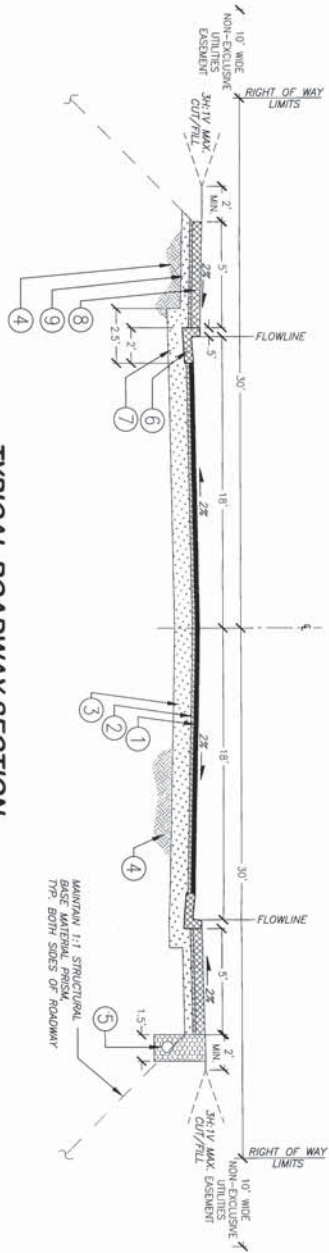
TYPICAL SECTION - 14' WIDE ACCESS ROAD
NOT TO SCALE



TYPICAL SECTION - FOOT TRAIL / MAINT. ACCESS ROAD
NOT TO SCALE



TYPICAL ROADWAY SECTION
NOT TO SCALE



KEY NOTES

- 1" CLASS B ASPHALT CONCRETE PAVEMENT, COMPACTED TO 91% RICE DENSITY (2 LIFTS)
- 2" CRUSHED SURFACING BASE COURSE
- 12" MIN. GRAVEL BASE* COMPACTED TO 90% MAX. DENSITY PER THE MODIFIED PROCTOR METHOD

GRADE	PERCENT RANGES
1-1/2" GRADE	10-100
1-1/2" GRADE	10-100
1-1/2" GRADE	10-100
1-1/2" GRADE	10-100
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1-1/2" GRADE	10-100
1-1/2" GRADE	10-100
1-1/2" GRADE	10-100

- 6" MIN. GRAVEL BASE* COMPACTED TO 90% MAX. DENSITY (95% COMPACTION OVER ALL UTILITY TRENCHES) PER THE MODIFIED PROCTOR METHOD.
- UNDISTURBED AND UNWEIGHED NATURAL SUBGRADE.
- INSTALL CURB/PAV. DRAIN TYPICAL BOTH SIDES OF ROADWAY (CUT SECTIONS ONLY) PER COF STD. PLAN ST-15.
- 4" SMOOTH WALL PERFORATED PVC PIPE, ASTM D 3034 SDR35 (PROVIDE POSITIVE FLOW TO CATCH BASIN).
- 1-1/2" MASHED ROCK W/ FILTER FABRIC LINER.
- CONCRETE CURB & GUTTER PER COF STD. DETAIL R-9, TYP.
- 6" MIN. GRAVEL BASE* UNDER CURB/GUTTER, COMPACTED TO 90% MAX. DENSITY PER THE MODIFIED PROCTOR METHOD.
- 4" DEPTH CEMENT CONCRETE SIDEWALK PER COF STD. PLAN R-12.
- OPEN 2' (2' 0" MINUS) MASHED ROCK. SIDEWALK COMPACTED TO 95% MAX. DENSITY PER THE MODIFIED PROCTOR METHOD.
- 3" DEEP 1/2" MINUS CRUSHED SURFACING LIMESTONE** 95% COMPACTION.

- 6" DEEP GRAVEL BASE** CONFORMING TO SECTION 4-02 OF THE WSDOT SPEC.
- 6" DEEP GRAVEL BASE** CONFORMING TO SECTION 4-02 OF THE WSDOT SPEC.

1. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE PROVISIONS OF WSDOT STANDARD SPECIFICATIONS.
2. ALL MATERIALS SHALL BE TESTED AND APPROVED BY A QUALIFIED ENGINEER TO REVIEW AND APPROVE ALL SUBGRADE PRIOR TO PLACEMENT OF GRAVEL BASE.



GENERAL REQUIREMENTS

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9. THE CONTRACTOR SHALL NOTIFY 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 ANY WORKS. THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR'S REVIEW OF THE PLANS SHALL BE LIMITED TO WHETHER THEY TO THE ENGINEER AND TO THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT SHALL
 10. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON A COMBINATION OF FIELD APPROPRIATE, FIELD SURVEY AND UTILITY COMPANY RECORDS AND ARE SHOWN ON THESE PLANS IN AN APPROXIMATE WAY ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL OF THE VARIOUS UTILITIES COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UTILITIES OF DAMAGE DONE TO EXISTING FACILITIES BY THE CONTRACTOR'S WORK, INCLUDING COSTS FOR REPAIR WHICH WILL BE CONTRACTOR'S SOLE RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACT BETWEEN THE APPLICABLE PLANS AND THE LOCATION OF ANY EXISTING UTILITIES.
 11. THE CONTRACTOR SHALL CONTACT UTILITY LOCATION SERVICE AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-424-5555.
 12. THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESOLVE ALL PRIVATE AND PUBLIC PROPERTY DISAPPROVED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
 13. 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 TO PRECEEDING WITH CONSTRUCTION, SO THAT 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 NEW BUT IMPROVEMENTS, MAKE NECESSARY BY ERRORS OF DIMENSION OR GRADE THE PROVIDED PLANS, UNLESS SUCH VIOLATION WAS GIVEN.
 14. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.
 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ESSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. EMISSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEAVING OR GRADING.
 16. 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 SHALL DETERMINE THESE REQUIREMENTS PRIOR TO THE START OF CONSTRUCTION.
 17. ALL PORTLAND CEMENT CONCRETE SHALL BE AYMA CLASS 3000, PER AYMA STANDARD SPECIFICATIONS, SECTION 6-402-3.08.
- D. UNDERGROUND UTILITIES CONSTRUCTION

ROAD

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

TRUCK STREET SECTION	TYPICAL SECTION ON SHEET 21 OF THESE PLANS
POC CURB AND GUTTER	OUT OF FURNISHABLE STANDARD DETAIL (COST) R-9
POC SIDEWALKS	0050 R-12 & TYP. SECTION ON SHEET 21
POC SIDEWALKS, SIDEWALK DRIVE	0050 R-12 & TYP. SECTION ON SHEET 21
NOVAMENTS	0050 S1-1-00 (SEE SHEET 17)
	0050 S1-1-00
2. ALTERNATE PAVEMENT SECTIONS, WHEN DESIGNED BY A LICENSED PROFESSIONAL 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.
3. PROJECT SURVEYOR OR THEIR DESIGNEE SHALL SURVEY THE ELEVATION OF THE COMPLETED SUBGRADE ALONG THE ROADWAY CENTERLINE AT 25'-00" 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 FINISHED GRADE ELEVATION. THE FINISHED GRADE ELEVATION SHALL BE THE FINISHED GRADE ELEVATION. OTHER METHODS OF SUBGRADE CERTIFICATION MAY BE USED IF MUTUALLY AGREED UPON BY THE CITY, CONTRACTOR, AND ENGINEER.
4. ROADWAY EXCAVATION WITHIN THE ROADWAY PRISM SHALL BE CUT TO A UNIFORM GRADE. THE COMPLETED SUBGRADE SURFACE SHALL NOT VARY MORE THAN 0.10'-00" FROM THE LOWER SIDE OF A 15'-00" SHOULDER/DECK PLACED ON THE SUBGRADE PARALLEL TO THE CENTERLINE UNLESS APPROVED BY THE ENGINEER.
5. EXTERIORS:
 - A. THE CONTRACTOR SHALL CLEAR, GRAB AND CLEAN UP HOUSE SIGNS SHOWN ON THE PLANS.
 - B. THE CONTRACTOR SHALL RAZE, REMOVE AND DISPOSE OF ALL BUILDING AND FOUNDATIONS, STRUCTURES, FENCES AND OTHER OBSTRUCTIONS THAT BE IN WHOLLY OR PARTIALLY WITHIN THE PROJECT LIMITS.
 - C. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UNDEVELOPED OR POORLY MAINTAINED FILL SOILS WITHIN THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.
 - D. THE CONTRACTOR SHALL EXCAVATE AND GRAB TO THE ALIGNMENT, GRAB AND PROCESS SECTIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER.
 - E. EXCAVATE FILL AND CRUSHED MATERIAL FOR GRANULAR MATERIALS SHALL BE DETERMINED USING ASTM D-1557 TEST METHOD.
6. BASE COURSES:
 - A. GRAVEL, BASES SHALL MEET SPECIFICATIONS PER SPECIFICATION SHEET SHEET.

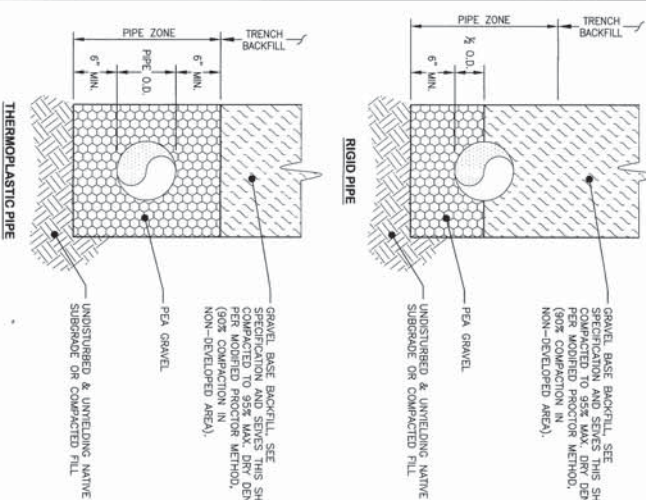
SANITARY SEWER

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WAIT

2. ALL WATER MAINS SHALL BE DUCTILE IRON, MINIMUM CLASS 50, PER AWWA STANDARDS H-21 AND C151-71, WITH JOINTS USING FIVE RING STANDARD C14-71. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNHULE DISTRICT STANDARDS, SECTIONS 702 AND 703.
 3. MATERIAL FOR FITTINGS SUCH AS CROSSES, TEES, BONGS, REDUCERS AND STEERS SHALL BE DUCTILE IRON. JOINTS SHALL BE A.W. FLANGED OR PUSH-IN JOINTS AND SHALL CONFORM TO AWWA SPECIFICATIONS C-119-71 AND C-104-71.
 4. CONCRETE BLOODING SHALL BE SPECIFIED IN CITY OF FERNHULE STANDARD DETAILS W-2, W-3 AND W-4, WITH JOINTS TO BE CONCRETE. JOINTS SHALL BE SPECIFIED IN CITY OF FERNHULE STANDARD DETAILS IN SECTION 7-04-3.2(1) OF THE RESORT STANDARD SPECIFICATIONS. NO PRE-CAST BLOCKS ARE ALLOWED.
 5. CONNECTIONS TO EXISTING WATER MAINS - THE CONTRACTOR MUST NOTIFY THE CITY OF FERNHULE 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 IN ADVANCE BY A DESIGNER.
 6. ALL HYDROSTATIC TESTING AND INSPECTION OF WATER MAINS SHALL CONFORM TO SECTION 7-04-3.2(3) AND (3d) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONCRETE AND MASONRY. TESTING SHALL BE DONE AT 100 PSI AND 150 PSI AND 200 PSI PRESSURE FOR WATER MAIN ACCEPTANCE. SHALL BE 225 PSI AND SHALL BE DONE ACCORDING TO CITY OF FERNHULE REQUIREMENTS. ALL INSPECTION AND BACTERIOLOGICAL TESTS SHALL BE CONDUCTED BY THE CITY OF FERNHULE. ADDITIONAL TESTS WILL NOT BE TESTED UNLESS A ZERO BACTERIAL COUNT IS REQUESTED OR TWO CONSECUTIVE TESTS CONDUCTED AT 10000 CFU/100 ML.
 7. BACULUS SHALL BE GALVALUMED PER SPECIFICATION SHEET, IN STREET RIGHTS-OF-WAY, COMPACTED TO MINIMUM 95% OPTIMUM DENSITY. IN UNIMPAVED AREAS, MINIMUM COMPACTON SHALL BE 85% OF OPTIMUM DENSITY.
 8. ALL PIPE SHALL HAVE A MINIMUM COVER OF 36 INCHES.
 9. ALL VALVES SHALL BE EITHER GATE OR BUTTERFLY TYPE VALVES AND SHALL BE INSTALLED WITH SUMP TYPE CAST IRON VALVE BOXES.
 10. GATE VALVES SHALL BE USED FOR RUN AREAS. GATE VALVES HANGING A HANGER IN PLANTED, SOFT-GROU VALVES SUITABLE FOR A NON-SOFT SOFT-GROU PRESSURE OF 100 PSI AND SUITABLE FOR OPTIMUM BULK ARE SPECIFIED. GATE VALVES SHALL BE RESISTANT SERVICE, NON-ROD, FULL-BOSS AND CLASS OF PIPE USED. CONFORMING TO AWWA C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS OF PIPE USED.
 11. VALVES SHALL HAVE NON-IRON, NON-LEAD AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH A 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGE OR M.Y. JOINTS.
- WATER MARCHES SHALL BE LOCATED OUTSIDE OF PARADEMENT STRIPS.

PIPE ZONE BEDDING AND BACKFILL SPECIFICATIONS



GRAVEL BASE AND BACKFILL

LOADING REQUIREMENTS FOR GRAVEL	
SERE SIZE	PERCENT PASSING
1/4" SQUARE	100
1-1/2" SQUARE	70-100
1/2" SQUARE	35-80
U.S. NO. 4	15-50
U.S. NO. 10	12-40
U.S. NO. 20	5-27
U.S. NO. 40	2-14
U.S. NO. 200	5 MAX

SHOULDER EQUIPMENT SHALL BE 40% MAX.

THORNTON WOODS PLANNED UNIT DEVELOPMENT

GENERAL CONSTRUCTION NOTES

AS-BUILT DRAWING

