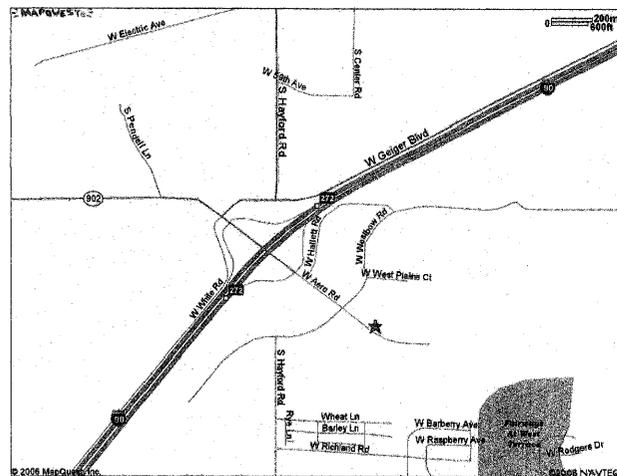


# STREET AND DRAINAGE PLANS FOR CRYSTAL MEADOWS

# RECORD DRAWING

A PORTION OF THE SW 1/4 OF SECTION 7, TOWNSHIP 24N, RANGE 42E W.M.  
SPOKANE COUNTY, WASHINGTON

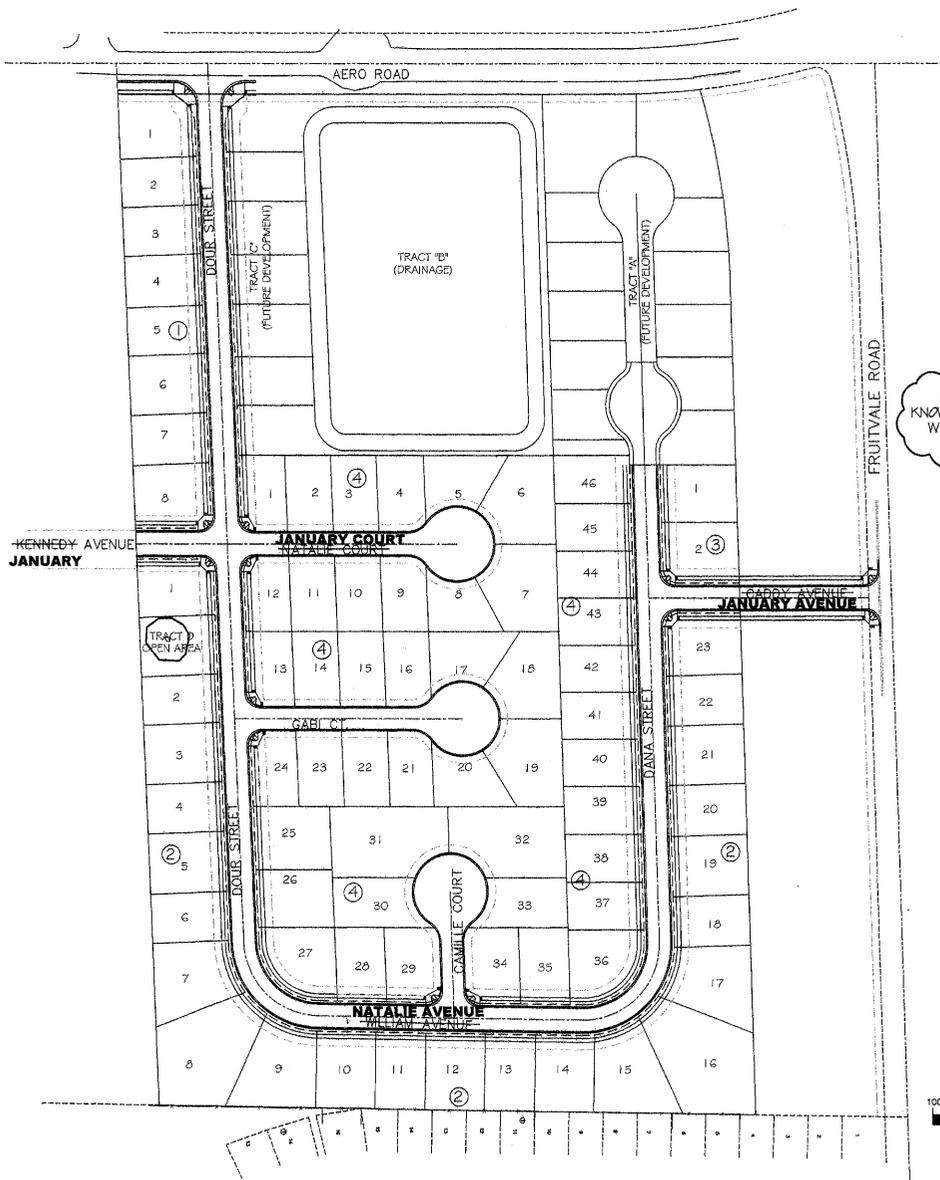


VICINITY MAP

GENERAL NOTES

- ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE "SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION" 2001, AND AS AMENDED.
- LOCATIONS OF EXISTING UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE FACILITIES.
- THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF THE APPROVED ROAD AND DRAINAGE PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER AND THE SPOKANE COUNTY ENGINEER'S OFFICE.
- PRIOR TO SITE CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY LOCATION SERVICE AT 456-8000 BEFORE YOU DIG.
- THE CONTRACTOR SHALL HAVE A RESPONSIBLE PARTY WHO SHALL HAVE THE AUTHORITY TO REPRESENT AND ACT FOR THE CONTRACTOR AT THE JOB SITE DURING ALL WORKING HOURS.
- CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL MATERIALS REQUIRED FOR CONSTRUCTION OF THE IMPROVEMENTS SHOWN IN THIS PLAN SET.
- UNLESS OTHERWISE INDICATED, ALL DISTURBED AREAS SHALL BE RETURNED TO THE EQUIVALENT OF THEIR PRECONSTRUCTION CONDITION.
- ALL APPROVED DEVIATIONS FROM THESE PLANS SHALL BE RECORDED ON A SET OF "AS-BUILT" DRAWINGS WHICH SHALL BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
- SLOPE OF FINISHED GRADE SHALL BE CONSTANT BETWEEN FINISHED CONTOURS OR SPOT ELEVATIONS SHOWN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE, AND REMOVAL OF SHORING AND BRACING NECESSARY TO PROTECT WORKERS, EXISTING BUILDINGS, STREETS, WALKWAYS, UTILITIES AND OTHER IMPROVEMENTS AND EXCAVATIONS AGAINST LOSS OF GROUND OR CAVING EMBANKMENTS.
- SURVEY INFORMATION AND UNDERGROUND UTILITY LOCATIONS USED IN THE PREPARATION OF THESE DRAWINGS WERE FURNISHED BY OTHERS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR COMPLETENESS OR ACCURACY.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY EROSION AND SEDIMENTATION CONTROL FACILITIES AS REQUIRED TO PREVENT EROSION AND TO ENSURE THAT SEDIMENT-LOADED WATER DOES NOT LEAVE THE CONSTRUCTION SITE.
- EXISTING UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND SHALL BE INSPECTED BY THE ENGINEER OF RECORD.
- PIPE LENGTH SHOWN ON THE PLANS ARE APPROXIMATE AND MAY CHANGE DUE TO FIELD CONDITIONS.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR CONSTRUCTION IDENTIFIED ON THESE PLANS.
- ALL DISTURBED SOIL AREAS SHALL BE SEEDED OR STABILIZED BY OTHER APPROVED METHODS FOR PREVENTION OF ON-SITE EROSION AFTER THE COMPLETION OF CONSTRUCTION.
- ALL SUBGRADE PREPARATION, COMPACTION, ROAD BASE, AND ASPHALT CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH GEOTECHNICAL EVALUATION PREPARED BY STRATA, INC. DATED OCTOBER 19, 2005. CONTRACTOR SHALL HAVE A COPY ON-SITE AT ALL TIMES DURING CONSTRUCTION.
- ALL DRAINAGE PONDS SHOWN ON THE PLANS SHALL BE INSTALLED INCLUDING THE ROUGH GRADING CONCURRENT WITH THE ROAD CONSTRUCTION.
- FOR ANY CURB GRADES LESS THAN 0.8% (0.008 FT/FT), A WASHINGTON STATE PROFESSIONAL LAND SURVEYOR SHALL VERIFY THAT THE CURB FORMS ARE AT THE GRADES NOTED ON THE APPROVED PLANS, PRIOR TO PLACEMENT OF CURB MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING AND COORDINATING WORK WITH THE PROFESSIONAL LAND SURVEYOR.
- THE CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO VERIFY THAT THE CROSS-GUTTER FORMS ARE AT THE CORRECT PLANE GRADE PRIOR TO CONCRETE PLACEMENT. THE CROSS-GUTTERS SHALL BE CONSTRUCTED PRIOR TO PAVING, AND THE PAVEMENT SHALL MATCH THE EDGE OF CONCRETE GUTTER.

CALL BEFORE YOU DIG: 456-8000



BENCH MARK DATUM

ELEVATION: 2412.34' (NAVD-88)  
LOCATION: USGS MONUMENT W354  
NEAR THE INTERSECTION OF  
GEIGER BLVD. & HAYFORD RD.



10/15/07	BOND REDUCTION REQUEST					
10/15/08	RECORD DRAWING					
By ALLWEST TESTING AND ENGINEERING						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
DATE OF ISSUE	DWN BY	MHE	CHK BY			
DEC. 26, 2008	DES BY	MHE	APP BY			



I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

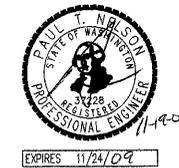


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ROAD PLAN - KENNEDY AVENUE - JANUARY AVENUE (WBST)	-----	SHEET 5
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LEGEND

	ROADWAY CENTERLINE
	PLAT BOUNDARY
	EASEMENT LINE
	PROPOSED CURB
	EXISTING SEWER MAIN
	PROPOSED SEWER MAIN
	EXISTING WATER MAIN
	PROPOSED WATER MAIN
	PROPOSED WATER SERVICE
	PROPOSED SEWER SERVICE
	PROPOSED SAN. SEWER MANHOLE
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
	SLEEVE SIDE SEWERS

ABBREVIATIONS

MH	MANHOLE
SAN	SANITARY SEWER
D.I.W.M.	DUCTILE IRON WATER MAIN
EXIST	EXISTING
HYD	FIRE HYDRANT
RT	RIGHT
LT	LEFT
PC	POINT OF CURVE
PT	POINT OF TANGENT
PRC	POINT OF REVERSE CURVE
SI	STREET INTERSECTION
STA. L	STATION LENGTH
ACT. L	ACTUAL LENGTH
G	GRADE

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORM WATER MANAGEMENT. I APPROVE THESE PLANS FOR CONSTRUCTION.

MAMDOUH H. EL-AARAG, P.E. -- PROJECT ENGINEER DATE \_\_\_\_\_

DEVELOPER'S APPROVAL: \_\_\_\_\_ DATE \_\_\_\_\_

SIMS I, LLC \_\_\_\_\_ DATE \_\_\_\_\_

**MHE ENGINEERING**  
9702 W. Masters Lane  
Cheney, WA 99004  
(509) 230-1980  
FAX: (509) 747-2769

**CRYSTAL MEADOWS**  
COVER SHEET

DRAWING NO  
1  
16

P1972 Eng As-Built

# RECORD DRAWING

LINE TABLE		
LINE	LENGTH	BEARING
L1	1149.74	S02°18'21"E
L2	120.10	N89°59'10"E
L3	302.38	S89°59'10"E
L4	299.94	S89°59'10"E
L5	347.10	S89°04'41"E
L6	185.49	S01°42'13"E
L7	835.39	N01°42'13"W
L8	290.13	N89°59'11"E

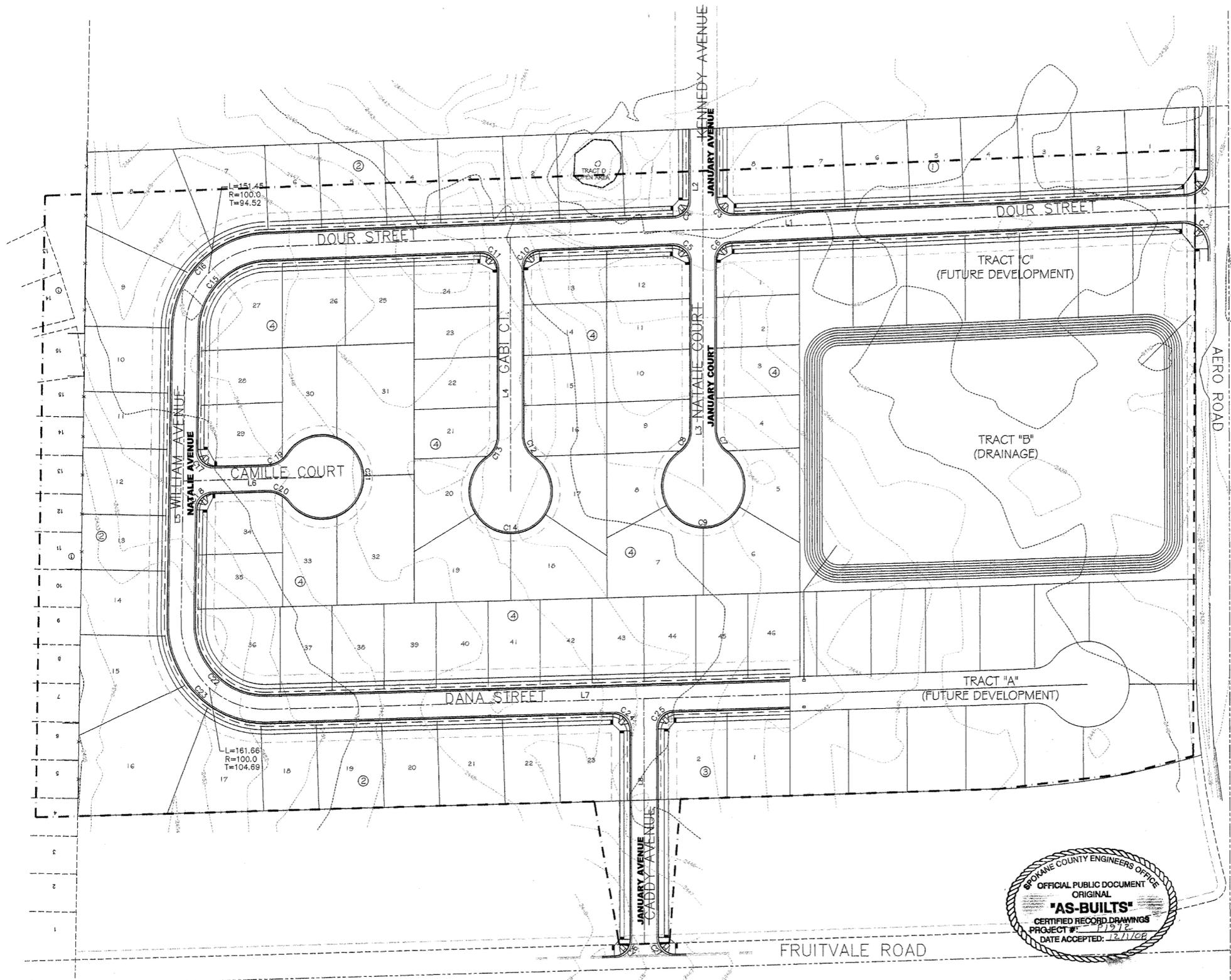
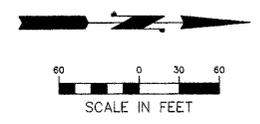
CURVE TABLE			
CURVE	LENGTH	RADIUS	Tangent
C1	45.16	28.50	28.34
C2	47.52	28.50	30.71
C3	31.41	19.50	20.30
C4	29.85	19.50	18.73
C5	31.41	19.50	20.29
C6	29.85	19.50	18.74
C7	28.87	30.00	15.53
C8	28.82	30.00	15.63
C9	282.90	50.00	35.14
C10	28.84	19.50	18.73
C11	31.42	19.50	20.31
C12	28.75	30.00	15.58
C13	28.75	30.00	15.58
C14	282.90	50.00	35.14
C15	125.70	83.00	78.45
C16	177.19	117.00	110.59
C17	31.52	19.50	20.41
C18	29.74	19.50	18.63
C19	28.75	30.00	15.58
C20	28.75	30.00	15.58
C21	282.90	50.00	35.14
C22	134.18	83.00	86.89
C23	189.14	117.00	122.48
C24	31.21	19.50	20.08
C25	30.06	19.50	18.93
C26	30.10	19.50	18.97
C27	31.25	19.50	20.13

NOTE: CURVE DATA IS FOR BACK OF CURB.

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

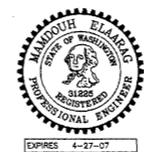


EXPIRES 11/24/09



DEVELOPER'S APPROVAL:  
 \_\_\_\_\_ DATE \_\_\_\_\_  
 SIMS I, LLC

CALL BEFORE YOU DIG: 456-8000



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
10/15/07		BOND REDUCTION REQUEST				
10/15/08		RECORD DRAWING				
by ALLWEST TESTING AND ENGINEERING						
DATE OF ISSUE	DWN BY	DES BY	CHK BY	APP BY		
DEC. 26, 2008	MHE	MHE				

**MHE ENGINEERING**  
 9702 W. Masters Lane  
 Cheney, WA 99004  
 (509) 230-1960  
 FAX: (509) 747-2769

**CRYSTAL MEADOWS**  
 OVERALL ROAD/DRAINAGE PLAN

DRAWING NO  
 2 / 16

P.1912 Enfs Bull

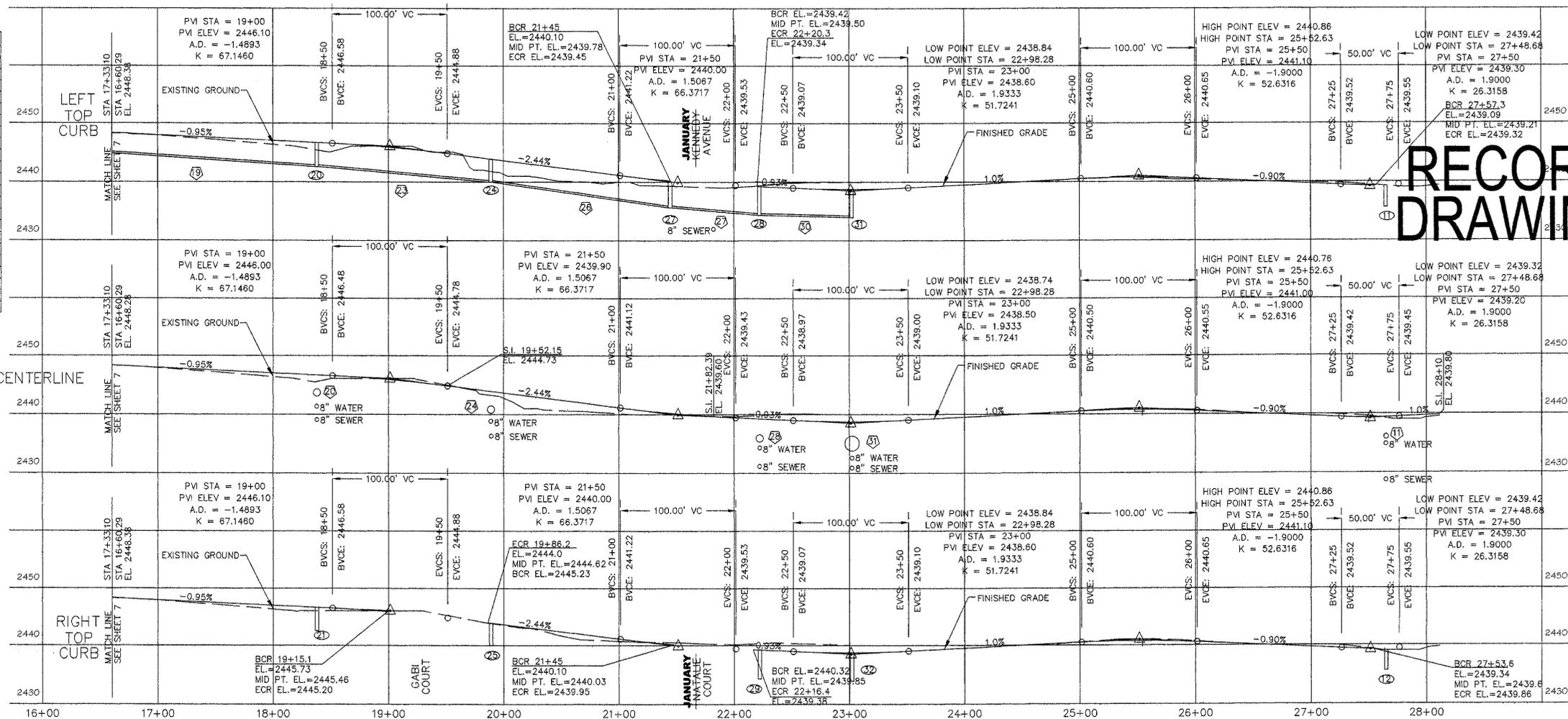
L:\2007\1687 Crystal Meadows\sh2\STREET 2.dwg, 11/18/2008 2:12:16 PM, 1:1

STATION/OFFSET	RIM EL.	STRUCT.	GRATE	FRAME
11 27+65/16.5' LT.	2438.60	COUNTY/ CB 1	3	2 W/ HOOD
12 27+65/16.5' RT.	2438.85	COUNTY/ CB 1	3	2 W/ HOOD
13 27+65/117.1' RT.	2439.00	WSDOT CB2-48	-	-
14 20+94.76/16.5' LT.	2451.74	COUNTY/ CB 1	1	1
15 20+94.76/16.5' RT.	2448.75	COUNTY/ CB 1	1	1
16 18+44.05/16.5' RT.	2449.26	COUNTY/ CB 1	1	1
17 17+93.9/16.5' RT.	2448.75	COUNTY/ CB 1	1	1
18 17+93.9/16.5' LT.	2448.75	COUNTY/ CB 1	1	1
19 17+43.47/16.5' LT.	2448.25	COUNTY/ CB 1	1	1
20 18+37.85/16.5' LT.	2446.30	COUNTY/ CB 1	1	1
21 18+37.85/16.5' RT.	2446.30	COUNTY/ CB 1	1	1
22 18+37.85/274.5' RT.	2447.50	WSDOT CB2-48	-	-
23 17+85.49	2448.00	COUNTY/ CB 1	3	2 W/ HOOD
24 19+89.05/16.5' LT.	2443.56	WSDOT CB 1L	1	1
25 19+89.05/16.5' RT.	2443.56	COUNTY/ CB 1	1	1
26 18+23.33/15.0' RT.	2444.70	COUNTY/ CB 1	3	2 W/ HOOD
27 21+44.8/16.5' LT.	2439.60	WSDOT CB2-48	1	1
28 22+22.12/16.5' LT.	2438.84	WSDOT CB2-48	1	1
29 22+22.12/16.5' RT.	2438.84	COUNTY/ CB 1	1	1
30 18+21.46/15.0' RT.	2439.45	COUNTY/ CB 1	3	2 W/ HOOD
31 23+02.4/16.5' LT.	2438.44	WSDOT CB2-54	3	2 W/ HOOD
32 23+02.4/16.5' RT.	2438.44	WSDOT CB2-54	3	2 W/ HOOD
33 23+02.4/120.5' RT.	2440.00	WSDOT CB2-54	-	-

NOTES:  
 COUNTY/ CB 1 SHALL CONFORM TO STANDARD PLAN B-4  
 WSDOT CB 1L SHALL CONFORM TO STANDARD PLAN B-5.40-00  
 WSDOT CB 2 SHALL CONFORM TO STANDARD PLAN B-10.20-00  
 TYPE 1 GRATE SHALL CONFORM TO STANDARD PLAN B-12  
 TYPE 3 GRATE SHALL CONFORM TO STANDARD PLAN B-14

ID	LENGTH	SIZE	UP INV.	DOWN INV.	SLOPE
11	29'	10"	2435.77	2435.60	0.58%
12	101.84'	15"	2435.10	2434.50	0.53%
13	50'	15"	2434.00	2432.50	3.0%
14	29'	10"	2448.91	2448.76	0.52%
15	252.98'	12"	2448.76	2446.26	0.99%
16	54.30'	12"	2446.10	2445.50	1.10%
17	29'	10"	2445.92	2445.67	0.85%
18	54.32'	15"	2445.25	2444.92	0.61%
19	188.94'	15"	2444.92	2442.80	1.12%
20	29'	12"	2443.30	2443.00	1.03%
21	258.05'	12"	2444.67	2443.30	0.53%
22	82.96'	12"	2445.17	2444.67	0.79%
23	147.86'	15"	2442.97	2440.06	1.97%
24	29'	12"	2440.56	2440.06	1.72%
25	56.98'	12"	2441.87	2440.56	2.29%
26	152.50'	18"	2439.80	2436.16	2.43%
27	74'	24"	2435.60	2434.84	1.03%
28	29'	12"	2435.84	2435.34	1.72%
29	58.19'	12"	2436.62	2435.84	1.34%
30	77.50'	30"	2434.34	2433.94	0.52%
31	29'	30"	2433.94	2433.79	0.52%
32	104.41'	30"	2433.79	2433.26	0.51%
33	60.32'	30"	2433.26	2432.50	1.27%

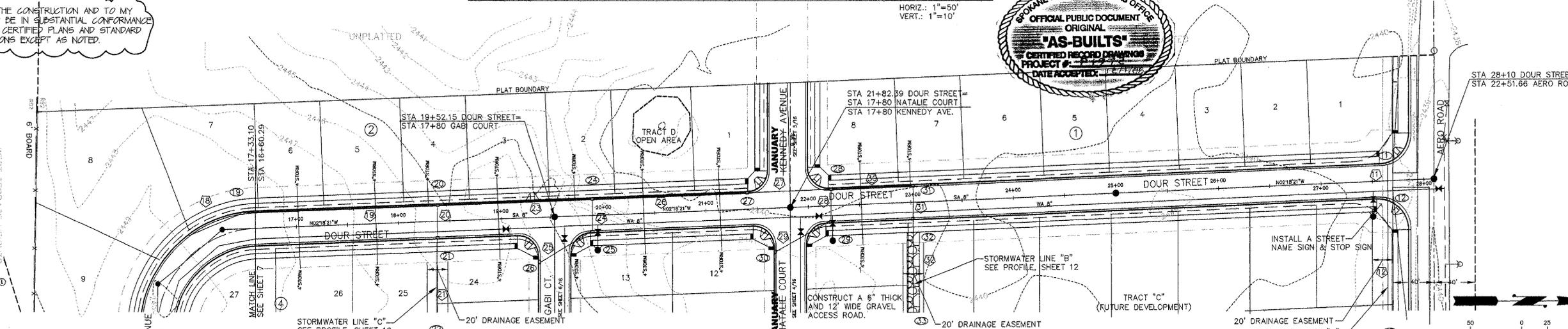
NOTE:  
 STORM DRAIN PIPING SHALL BE N-12 ADS OR EQUAL.



**RECORD DRAWING**

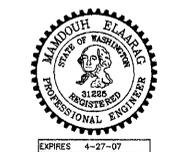
ROAD PROFILE STA 16+60 TO 28+10

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



ROAD PLAN STA 16+60 TO 28+10

DEVELOPER'S APPROVAL: \_\_\_\_\_ DATE \_\_\_\_\_  
 SIMS I, LLC



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	10/15/07	BOND REDUCTION REQUEST	MHE	MHE		
2	10/15/08	RECORD DRAWING	MHE	MHE		

by ALLWEST TESTING AND ENGINEERING

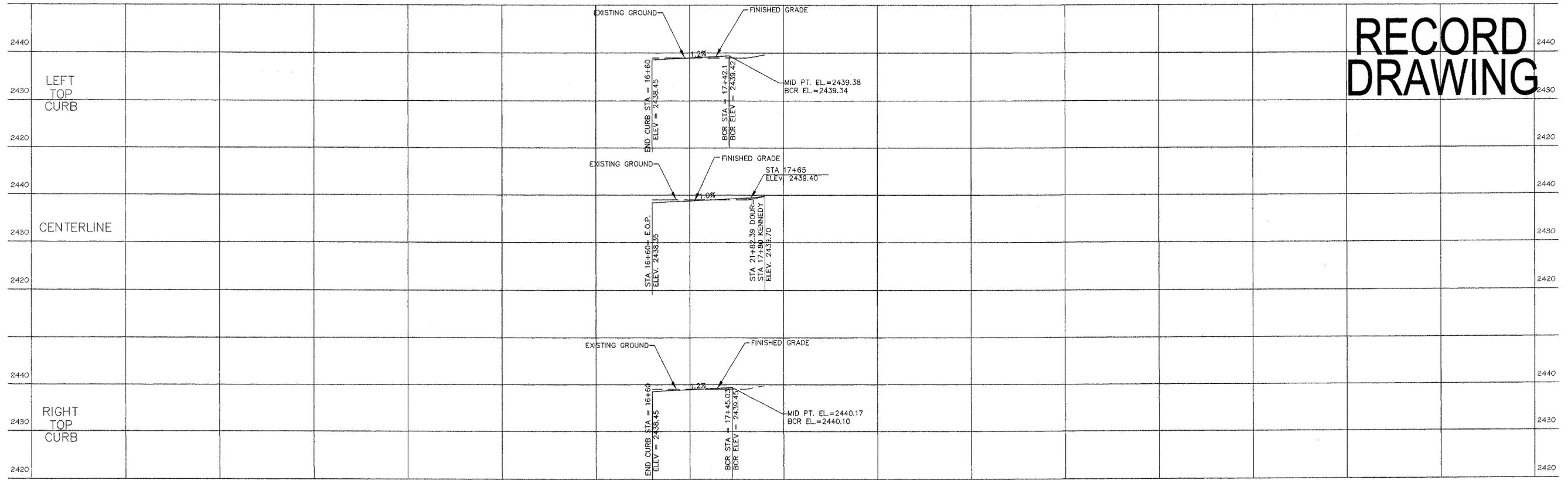
MHE ENGINEERING  
 9702 W. Masters Lane  
 Cheney, WA 99004  
 (509) 330-1660  
 FAX: (509) 747-2769

CRYSTAL MEADOWS  
 DOUR STREET  
 ROAD PLAN STA 16+60 TO 28+10  
 PLAN AND PROFILE

DRAWING NO  
 3  
 16



# RECORD DRAWING



## ROAD PROFILE STA 16+60 TO 17+80

HORIZ.: 1"=50'  
VERT.: 1"=10'

**DRAINAGE STRUCTURE TABLE**

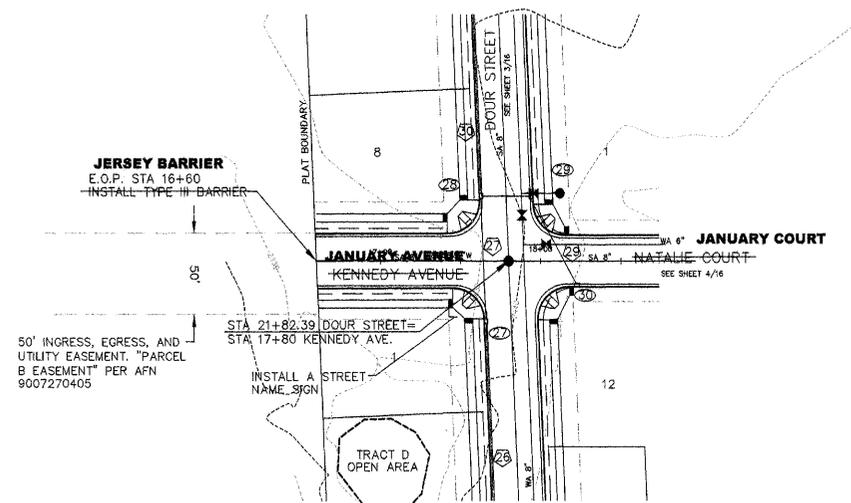
ID	STATION/OFFSET	RIM EL.	STRUCT.	GRATE	FRAME
26	18+23.33/15.0' RT	2444.70	COUNTY/ CB 1	3	2 W/ HOOD
27	21+44.8/16.5' LT	2439.60	WSDOT CB2-48	1	1
28	22+22.12/16.5' LT	2438.84	WSDOT CB2-48	1	1
29	22+22.12/16.5' RT	2438.84	COUNTY/ CB 1	1	1
30	18+21.46/15.0' RT	2439.45	COUNTY/ CB 1	3	2 W/ HOOD

NOTES:  
COUNTY/ CB 1 SHALL CONFORM TO STANDRAD PLAN B-4  
WSDOT CB 1L SHALL CONFORM TO STANDARD PLAN B-5.40-00  
WSDOT CB2 SHALL CONFORM TO STANDARD PLAN B-10.20-00  
TYPE 1 GRATE SHALL CONFORM TO STANDARD PLAN B-12  
TYPE 3 GRATE SHALL CONFROM TO STANDARD PLAN B-14

**STORM DRAIN PIPE TABLE**

ID	LENGTH	SIZE	UP INV.	DOWN INV.	SLOPE
26	152.50'	18"	2439.80	2436.10	2.42%
27	74'	24"	2435.60	2434.84	1.03%
28	29'	12"	2435.84	2435.34	1.72%
29	58.19'	12"	2436.62	2435.84	1.34%
30	77.50'	30"	2434.34	2433.94	0.52%

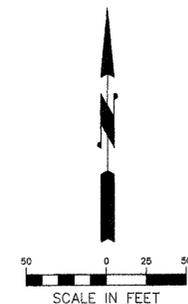
NOTE:  
STORM DRAIN PIPING SHALL BE N-12 ADS OR EQUAL.



I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



EXPIRES 11/24/09



DEVELOPER'S APPROVAL:

SIMS I, LLC

DATE \_\_\_\_\_

## ROAD PLAN STA 16+60 TO 17+80

1"=50'



EXPIRES 4-27-07

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
10/15/07		BOND REDUCTION REQUEST				
10/15/08		RECORD DRAWING				
By ALLWEST TESTING AND ENGINEERING						
DATE OF ISSUE	DWN BY	DES BY	CHK BY	APP BY		
DEC. 26, 2008	MHE	MHE				

**MHE ENGINEERING**  
9702 W. Masters Lane  
Cheney, WA 99004  
(509) 730-1960  
FAX: (509) 747-2760

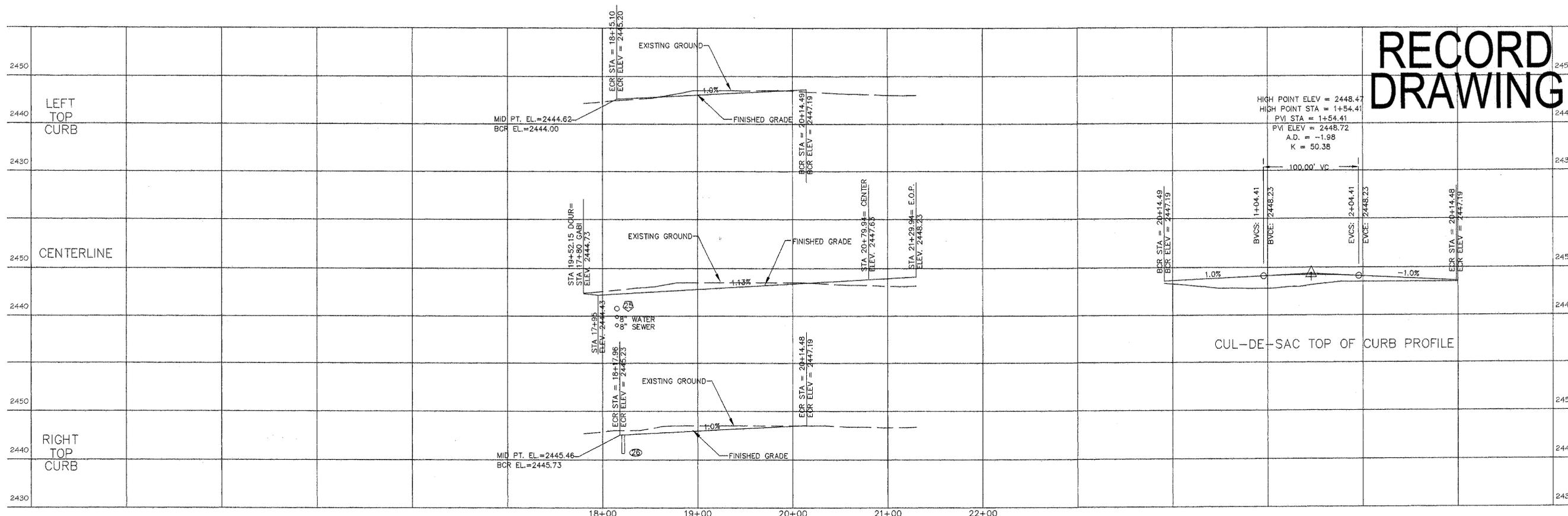
CRYSTAL MEADOWS  
JANUARY -KENNEDY AVENUE  
ROAD PLAN STA 16+60 TO 17+80  
PLAN AND PROFILE

DRAWING NO  
5 / 16

CALL BEFORE YOU DIG: 456-8000

P1972 Eng As Built

# RECORD DRAWING



HIGH POINT ELEV = 2448.47  
 HIGH POINT STA = 1+54.41  
 PVI STA = 1+54.41  
 PVI ELEV = 2448.72  
 A.D. = -1.98  
 K = 50.38

## ROAD PROFILE STA 17+80 TO 21+29.94

HORIZ.: 1"=50'  
 VERT.: 1"=10'

DRAINAGE STRUCTURE TABLE

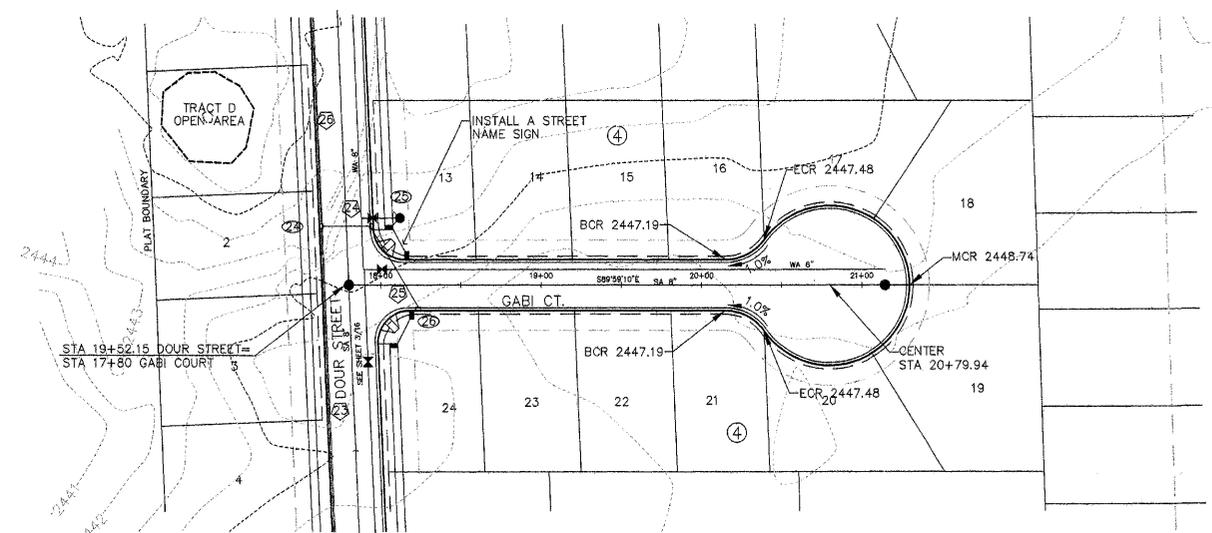
ID	STATION/OFFSET	RIM EL.	STRUCT.	GRATE	FRAME
23	17+85.49	2448.00	COUNTY/ CB 1	3	2 W/ HOOD
24	19+89.05/16.5' LT.	2443.56	WSDOT CB 1-L	1	1
25	19+89.05/16.5' RT.	2443.56	COUNTY/ CB 1	1	1
26	18+23.33/15.0' RT.	2444.70	COUNTY/ CB 1	3	2 W/ HOOD
27	21+44.8/16.5' LT.	2439.60	WSDOT CB2-48"	1	1

NOTES:  
 COUNTY/ CB 1 SHALL CONFORM TO STANDARD PLAN B-4  
 WSDOT CB 1L SHALL CONFORM TO STANDARD PLAN B-5.40-00  
 WSDOT CB2 SHALL CONFORM TO STANDARD PLAN B-10.20-00  
 TYPE 1 GRATE SHALL CONFORM TO STANDARD PLAN B-12  
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STORM DRAIN PIPE TABLE

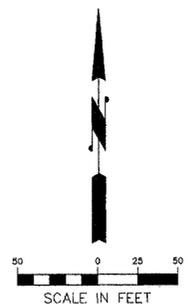
ID	LENGTH	SIZE	UP INV.	DOWN INV.	SLOPE
23	147.86'	15"	2442.97	2440.06	1.97%
24	29'	12"	2440.56	2440.06	1.72%
25	56.88'	12"	2441.87	2440.56	2.29%
26	152.50'	18"	2439.80	2436.10	2.42%
27	74'	24"	2435.60	2434.84	1.03%

NOTE:  
 STORM DRAIN PIPING SHALL BE N-12 ADS OR EQUAL.



## ROAD PLAN STA 17+80 TO 21+29.94

1"=50'



I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



DEVELOPER'S APPROVAL:

SIMS I, LLC

DATE \_\_\_\_\_

CALL BEFORE YOU DIG: 456-8000



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
10/15/07		BOND REDUCTION REQUEST				
10/15/08		RECORD DRAWING				
by ALLWEST TESTING AND ENGINEERING						
DATE OF ISSUE	DWN BY	DES BY	CHK BY	APP BY		
DEC. 26, 2008	MHE	MHE				

MHE ENGINEERING  
 9702 W. Masters Lane  
 Cheney, WA 99004  
 (509) 230-1960  
 FAX: (509) 747-2769

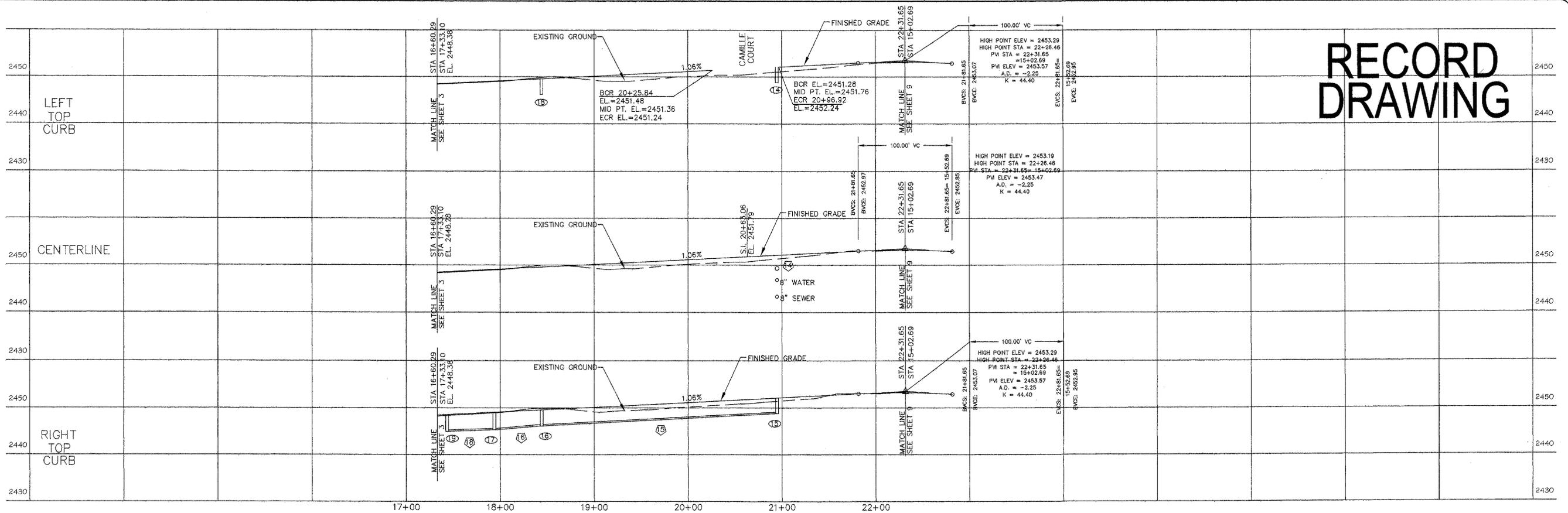
CRYSTAL MEADOWS  
 GABI COURT  
 ROAD PLAN STA 17+80 TO 21+29.94  
 PLAN AND PROFILE

DRAWING NO  
 6  
 16

P.19.72 Eng. As Built

I:\207-1687-Crystal Meadows\Submittal STREET 6.dwg, 10/29/2008 10:33:31 AM, 1:1

# RECORD DRAWING



ROAD PROFILE STA 17+33.1 TO 22+31.65

HORIZ.: 1"=50'  
VERT.: 1"=10'

DRAINAGE STRUCTURE TABLE

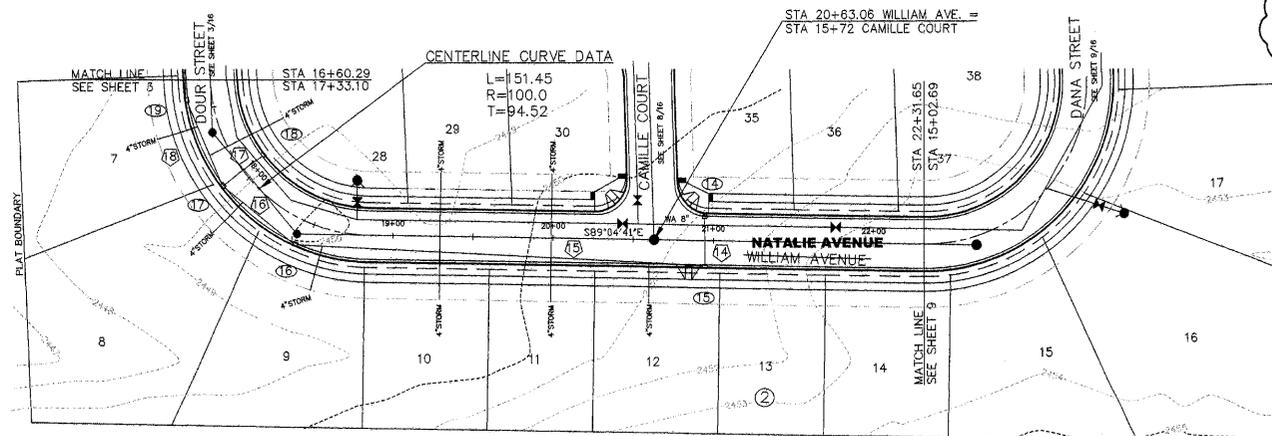
ID	STATION/OFFSET	RIM EL.	STRUCT.	GRATE	FRAME
14	20+94.76/16.5' LT	2451.74	COUNTY/ CB 1	1	1
15	20+94.76/16.5' RT	2451.74	COUNTY/ CB 1	1	1
16	18+44.05/16.5' RT	2449.26	COUNTY/ CB 1	1	1
17	17+93.9/16.5' RT	2448.75	COUNTY/ CB 1	1	1
18	17+93.9/16.5' LT	2448.75	COUNTY/ CB 1	1	1
19	17+43.47/16.5' LT	2448.25	COUNTY/ CB 1	1	1

NOTES:  
COUNTY/ CB 1 SHALL CONFORM TO STANDARD PLAN B-4  
WSDOT CB 1L SHALL CONFORM TO STANDARD PLAN B-5.40-00  
WSDOT CB 2 SHALL CONFORM TO STANDARD PLAN B-10.20-00  
TYPE 1 GRATE SHALL CONFORM TO STANDARD PLAN B-12  
TYPE 3 GRATE SHALL CONFORM TO STANDARD PLAN B-14

STORM DRAIN PIPE TABLE

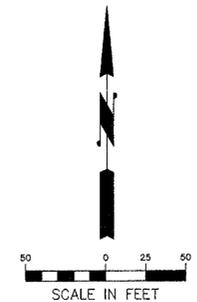
ID	LENGTH	SIZE	UP INV.	DOWN INV.	SLOPE
14	29'	10"	2448.91	2448.76	0.52%
15	252.98'	12"	2448.76	2446.26	0.99%
16	54.30'	12"	2446.10	2445.50	1.10%
17	29'	10"	2445.92	2445.67	0.85%
18	54.32'	15"	2445.25	2444.92	0.61%
19	186.94'	15"	2444.92	2442.80	1.12%

NOTE:  
STORM DRAIN PIPING SHALL BE N-12 ADS OR EQUAL.



ROAD PLAN STA 17+33.1 TO 22+31.65

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



DEVELOPER'S APPROVAL:

SIMS I, LLC

DATE

CALL BEFORE YOU DIG: 456-8000



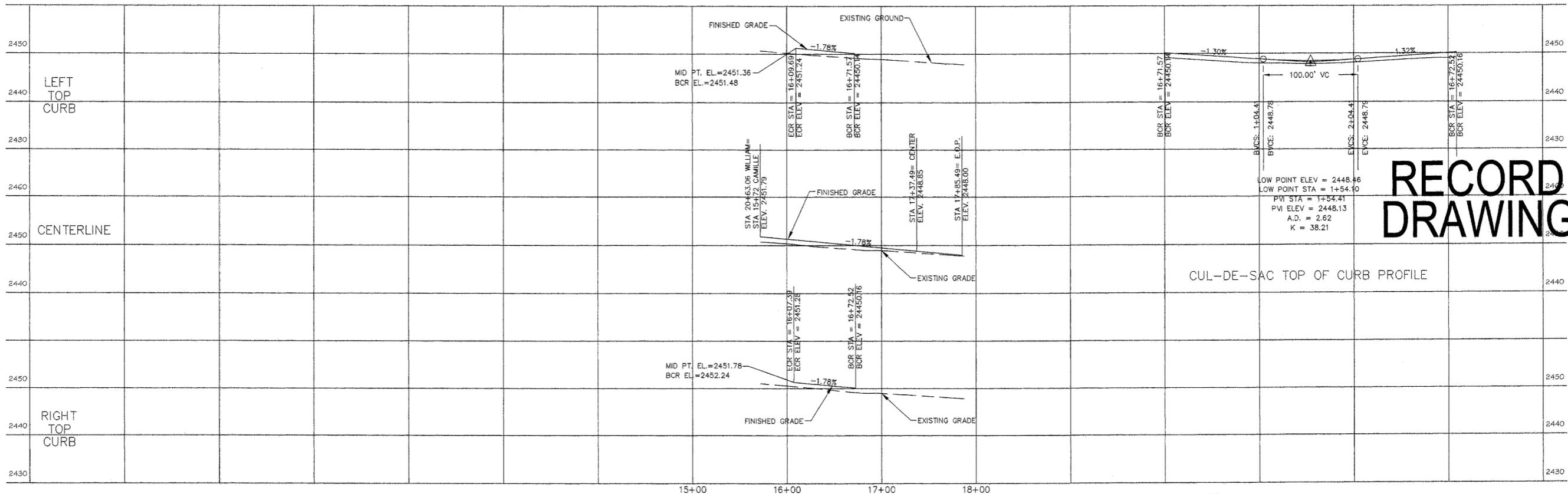
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
10/15/07		BOND REDUCTION REQUEST				
10/15/08		RECORD DRAWING				
		by ALLWEST TESTING AND ENGINEERING				

MHE ENGINEERING  
9702 W. Masters Lane  
Cheney, WA 99004  
(509) 230-1960  
FAX: (509) 747-2769

CRYSTAL MEADOWS  
NATALIE WILLIAM AVENUE  
ROAD PLAN STA 17+33.10 TO 22+31.65  
PLAN AND PROFILE

DRAWING NO  
7  
16

P-1972 Eng A. Built



**RECORD DRAWING**

ROAD PROFILE STA 15+72 TO 17+85.49

HORIZ.: 1"=50'  
VERT.: 1"=10'



DRAINAGE STRUCTURE TABLE

ID	STATION/OFFSET	RIM EL.	STRUCT.	GRATE	FRAME
14	20+94.76/16.5' LT	2451.74	COUNTY/ CB 1	1	1
15	20+94.76/16.5' RT	2451.74	COUNTY/ CB 1	1	1
22	18+37.85/274.5' RT	2447.50	COUNTY/ CB 1	-	-
23	17+85.49	2448.00	COUNTY/ CB 1	3	2 W/ HOOD

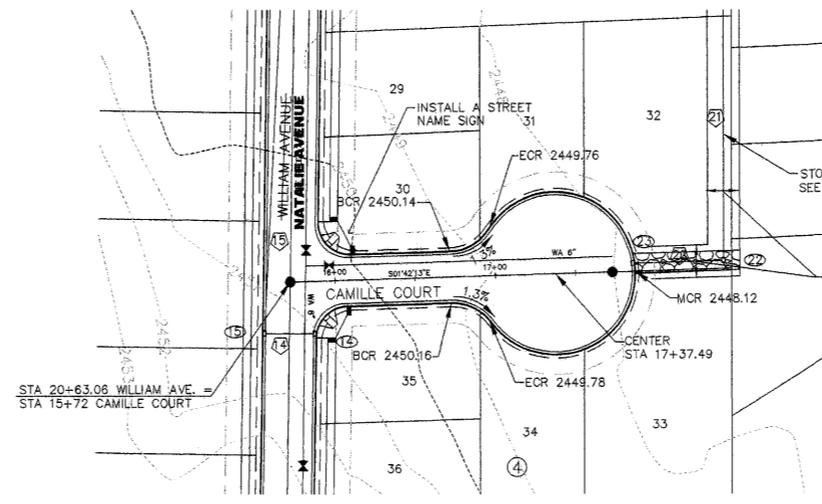
NOTES:  
COUNTY/ CB 1 SHALL CONFORM TO STANDRAD PLAN B-4  
WSDOT CB 1L SHALL CONFORM TO STANDARD PLAN B-5.40-00  
WSDOT CB2 SHALL CONFORM TO STANDARD PLAN B-10.20-00  
TYPE 1 GRATE SHALL CONFORM TO STANDARD PLAN B-12  
TYPE 3 GRATE SHALL CONFORM TO STANDARD PLAN B-14

STORM DRAIN PIPE TABLE

ID	LENGTH	SIZE	UP INV.	DOWN INV.	SLOPE
14	29'	10"	2448.91	2448.76	0.52%
15	252.98'	12"	2448.76	2446.26	0.99%
21	258.05'	12"	2444.67	2443.30	0.53%
22	62.98'	12"	2445.17	2444.67	0.79%

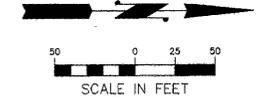
NOTE:  
STORM DRAIN PIPING SHALL BE N-12 ADS OR EQUAL.

DEVELOPER'S APPROVAL: \_\_\_\_\_ DATE \_\_\_\_\_  
SIMS I, LLC



ROAD PLAN STA 15+72 TO 17+85.49

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



10/15/07	BOND REDUCTION REQUEST					
10/15/08	RECORD DRAWING					
by ALLWEST TESTING AND ENGINEERING						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
	DATE OF ISSUE					
	DEC. 26, 2006					
	DWN BY	MHE				
	DES BY	MHE				

MHE ENGINEERING  
9702 W. Masters Lane  
Cheney, WA 99004  
(509) 230-1960  
FAX: (509) 747-2769

CRYSTAL MEADOWS  
CAMILLE COURT  
ROAD PLAN STA 15+72 TO 17+85.49  
PLAN AND PROFILE

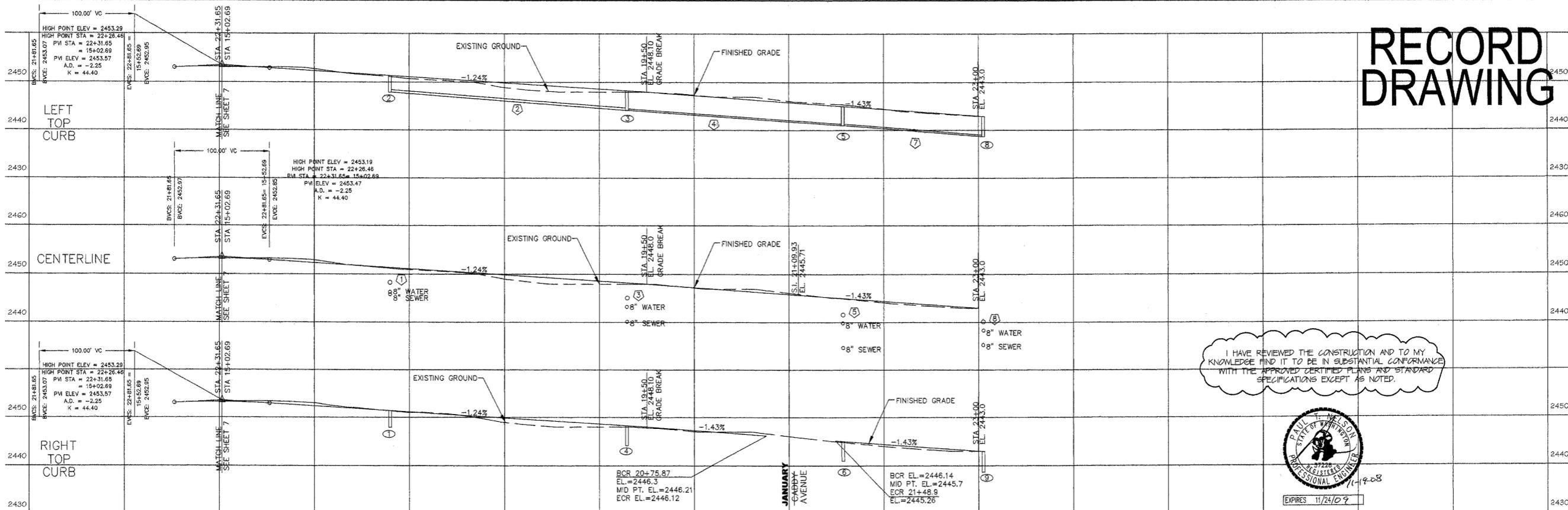
DRAWING NO  
8 / 16

CALL BEFORE YOU DIG: 456-8000

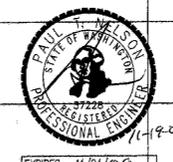
P.1972 Eng As-Built

207-168T Crystal Meadows\asbuilt STREET & dwg\_10/29/2008 10:33:44 AM 1:1

# RECORD DRAWING



I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



**STORM DRAIN PIPE TABLE**

ID	LENGTH	SIZE	UP INV.	DOWN INV.	SLOPE
1	29'	12"	2448.08	2447.92	0.5%
2	246.41'	12"	2447.92	2444.71	1.3%
3	29'	10"	2445.13	2444.71	1.44%
4	224.96'	12"	2444.21	2441.24	1.32%
5	29'	12"	2441.74	2441.49	0.862%
6	62.74'	12"	2442.32	2441.94	1.56%
7	144.6'	15"	2441.00	2439.20	1.24%
8	29'	10"	2439.87	2439.70	0.58%
9	120.67'	24"	2438.70	2438.09	0.51%
10	51.22'	24"	2437.59	2432.50	9.9%

## ROAD PROFILE STA 15+02.69 TO 23+00

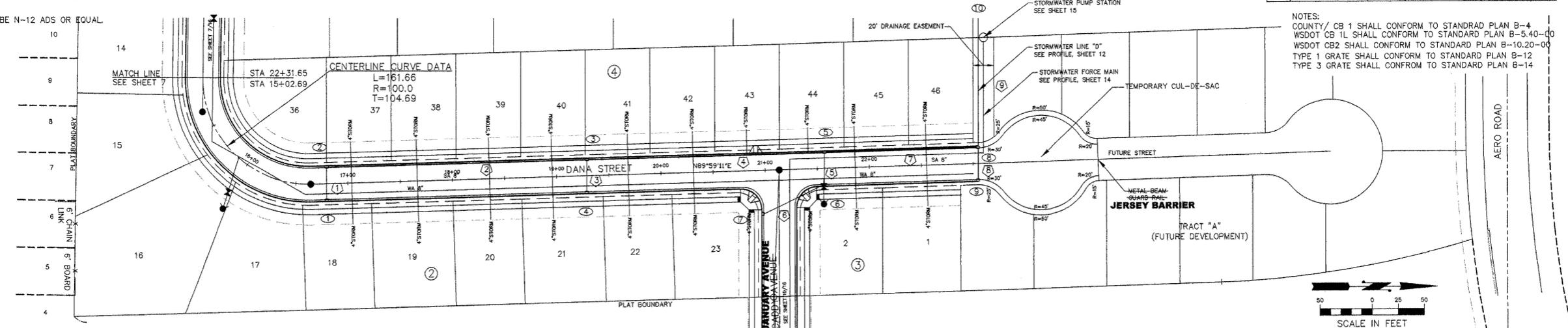
HORIZ.: 1"=50'  
VERT.: 1"=10'



**DRAINAGE STRUCTURE TABLE**

ID	STATION/OFFSET	RIM EL.	STRUCT.	GRATE	FRAME
1	16+79.6/16.5' RT.	2451.08	COUNTY/ CB 1	1	1
2	16+79.6/16.5' LT.	2451.08	COUNTY/ CB 1	1	1
3	19+29.01/16.5' LT.	2447.98	COUNTY/ CB 1	1	1
4	19+29.01/16.5' RT.	2447.98	COUNTY/ CB 1	1	1
5	21+56.97/16.5' LT.	2444.74	COUNTY/ CB 1	1	1
6	21+56.97/16.5' RT.	2444.74	COUNTY/ CB 1	1	1
7	23+61.46/16.5' RT.	2445.75	COUNTY/ CB 1	3	2 W/ HOOD
8	23+05/16.5' LT.	2442.7	WSDOT CB2-48"	1	1
9	23+05/16.5' RT.	2442.7	COUNTY/ CB 1	1	1
10	23+05/136.5' LT.	2443.00	WSDOT CB2-48"	-	-

NOTE: STORM DRAIN PIPING SHALL BE N-12 ADS OR EQUAL.



NOTES:  
COUNTY/ CB 1 SHALL CONFORM TO STANDARD PLAN B-4  
WSDOT CB 1L SHALL CONFORM TO STANDARD PLAN B-5.40-00  
WSDOT CB2 SHALL CONFORM TO STANDARD PLAN B-10.20-00  
TYPE 1 GRATE SHALL CONFORM TO STANDARD PLAN B-12  
TYPE 3 GRATE SHALL CONFORM TO STANDARD PLAN B-14



## ROAD PLAN STA 15+02.69 TO 23+00

1"=50'

DEVELOPER'S APPROVAL:  
Sims I, LLC \_\_\_\_\_ DATE \_\_\_\_\_



10/15/07	BOND REDUCTION REQUEST					
10/15/08	RECORD DRAWING					
by ALLWEST TESTING AND ENGINEERING						
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	DEC 26, 2006		MHE			

**MHE ENGINEERING**  
9702 W. Masters Lane  
Cheney, WA 99004  
(509) 230-1960  
FAX: (509) 747-2769

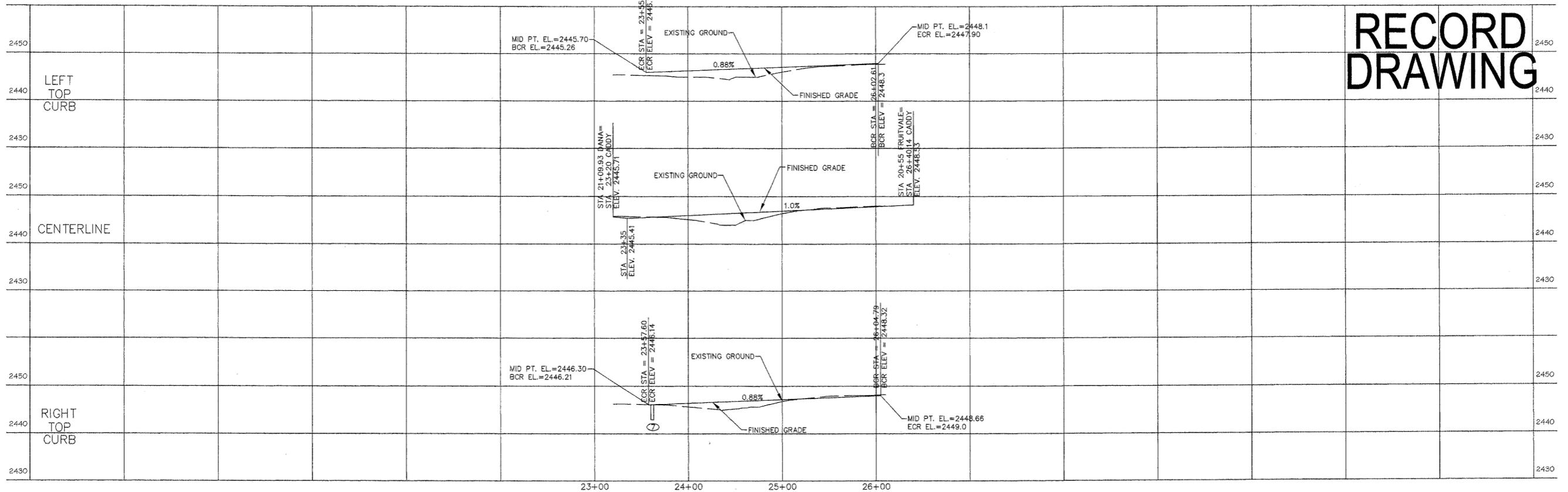
**CRYSTAL MEADOWS**  
DANA STREET  
ROAD PLAN STA 15+02.69 TO 23+00  
PLAN AND PROFILE

DRAWING NO  
9  
16

CALL BEFORE YOU DIG: 456-8000

P-1972 Eng. AS-Built

# RECORD DRAWING



ROAD PROFILE STA 23+20 TO 26+40.14

HORIZ.: 1"=50'  
VERT.: 1"=10'



DRAINAGE STRUCTURE TABLE

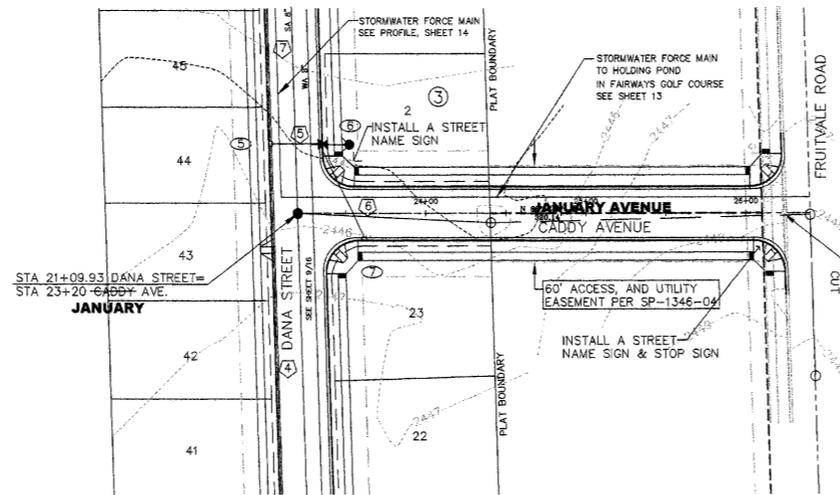
ID	STATION/OFFSET	RIM EL.	STRUCT.	GRATE	FRAME
4	19+29.01/16.5' RT	2447.96	COUNTY/ CB 1	1	1
5	21+56.97/16.5' LT	2444.74	COUNTY/ CB 1	1	1
6	21+56.97/16.5' RT	2444.74	COUNTY/ CB 1	1	1
7	23+61.46/16.5' RT	2445.75	COUNTY/ CB 1	1	1

NOTES:  
COUNTY/ CB 1 SHALL CONFORM TO STANDARD PLAN B-4  
WSDOT CB 1L SHALL CONFORM TO STANDARD PLAN B-5.40-00  
WSDOT CB 2 SHALL CONFORM TO STANDARD PLAN B-10.20-00  
TYPE 1 GRATE SHALL CONFORM TO STANDARD PLAN B-12  
TYPE 3 GRATE SHALL CONFORM TO STANDARD PLAN B-14

STORM DRAIN PIPE TABLE

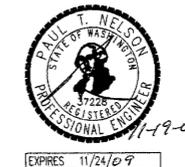
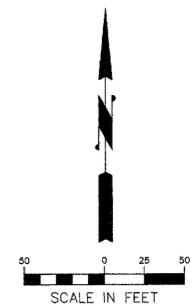
ADS	LENGTH	SIZE	UP INV.	DOWN INV.	SLOPE
4	224.96'	12"	2444.21	2441.24	1.32%
5	29'	12"	2441.74	2441.49	0.862%
6	62.74'	12"	2442.92	2441.94	1.56%
7	144.6'	15"	2441.00	2439.20	1.24%

NOTE:  
STORM DRAIN PIPING SHALL BE N-12 ADS OR EQUAL.



ROAD PLAN STA 23+20 TO 26+40.14

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



DEVELOPER'S APPROVAL:

SIMS I, LLC \_\_\_\_\_ DATE \_\_\_\_\_

CALL BEFORE YOU DIG: 456-8000



REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
10/15/07		BOND REDUCTION REQUEST				
10/15/08		RECORD DRAWING				
		by ALLWEST TESTING AND ENGINEERING				
DATE OF ISSUE	DWN BY	DES BY	CHK BY	APP BY		
DEC. 26, 2006	MHE	MHE				

MHE ENGINEERING

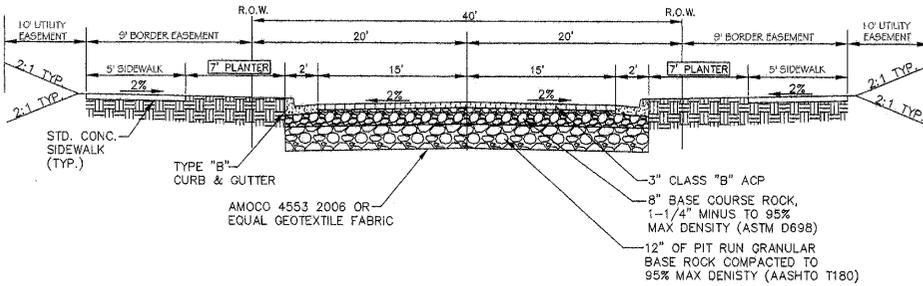
9702 W. Masters Lane  
Cheney, WA 99004  
(509) 230-1960  
FAX: (509) 747-2769

CRYSTAL MEADOWS  
JANUARY-CADDY AVENUE  
ROAD PLAN STA 23+20 TO 26+40.14  
PLAN AND PROFILE

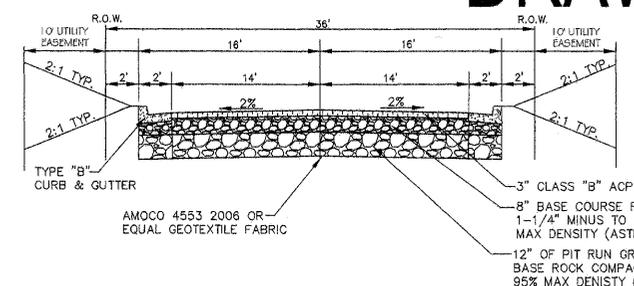
DRAWING NO  
10  
16

P1972 Eng As Built

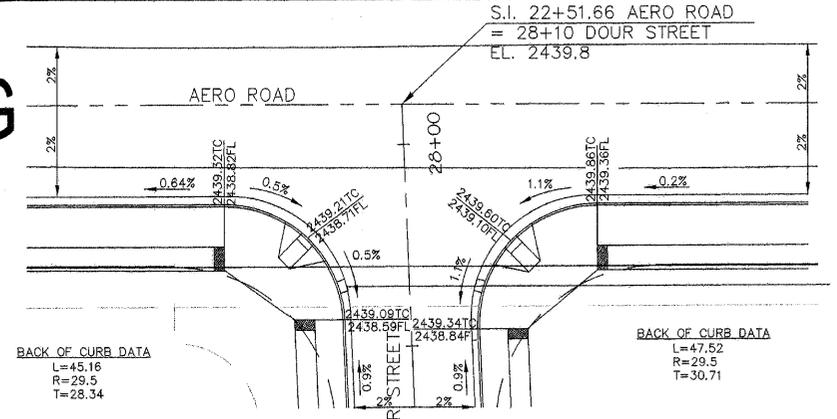
# RECORD DRAWING



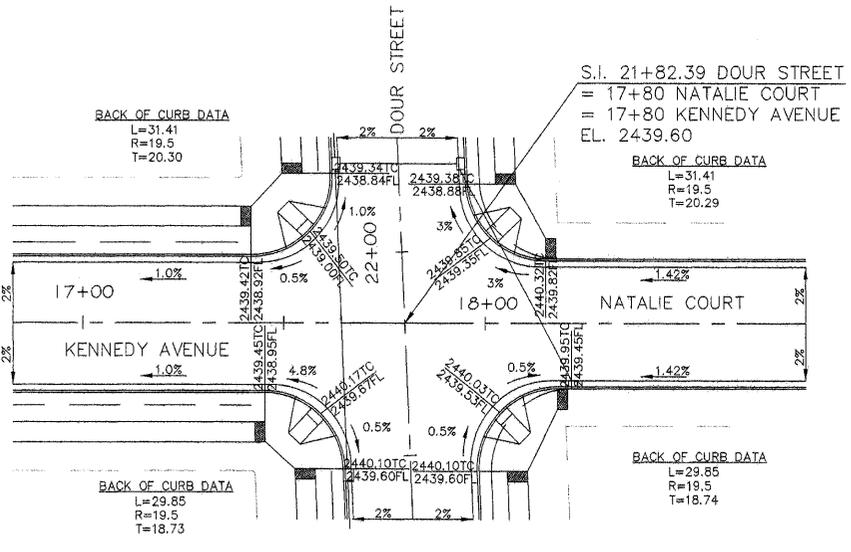
**1** JANUARY AVE, NATALIE AVE  
DOUR, KENNEDY, WILLIAM, DANA & CADDY ROAD SECTION  
NOT TO SCALE



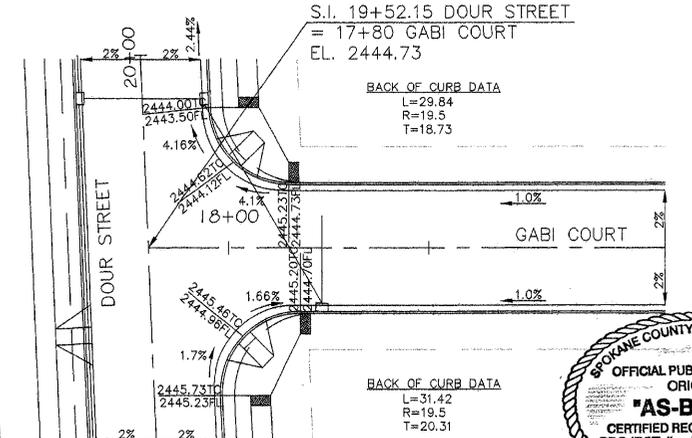
**2** JANUARY COURT, GABI COURT & CAMILLE COURT  
NATALIE, GABI & CAMILLE ROAD SECTION  
NOT TO SCALE



**3** AERO ROAD & DOUR STREET  
SCALE: 1" = 20'

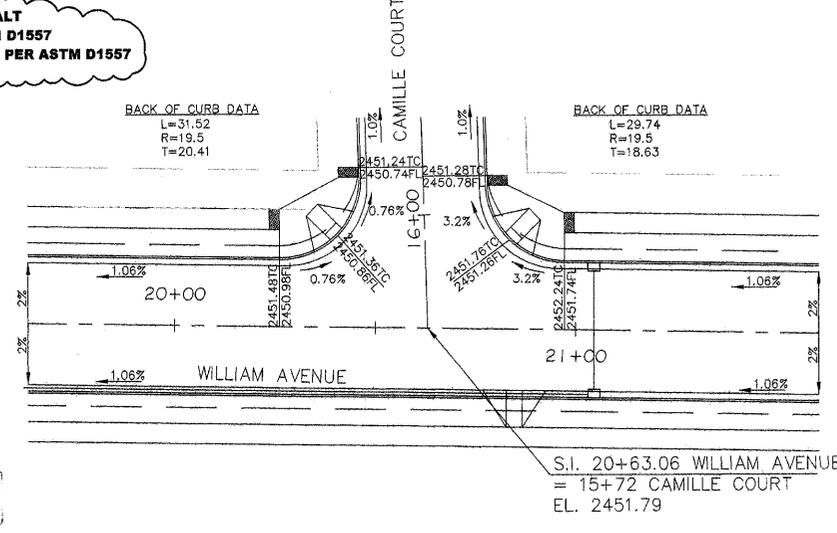


**4** JANUARY AVE & JANUARY COURT  
DOUR STREET & KENNEDY AVE. & NATALIE COURT  
SCALE: 1" = 20'

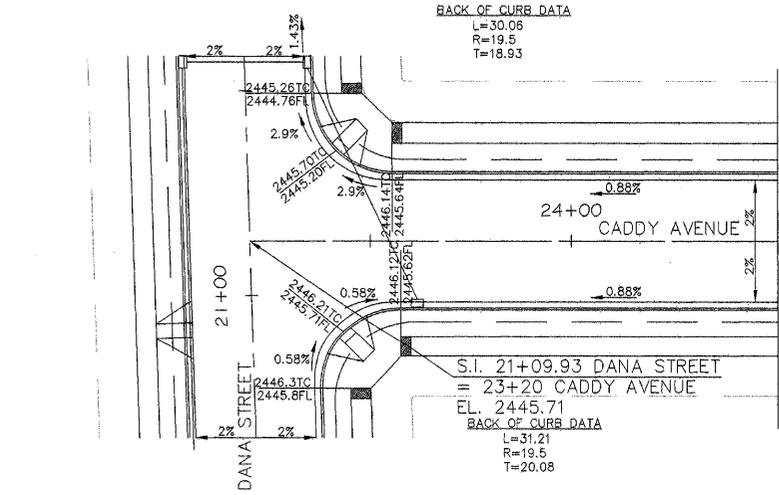


**5** DOUR STREET & GABI COURT  
SCALE: 1" = 20'

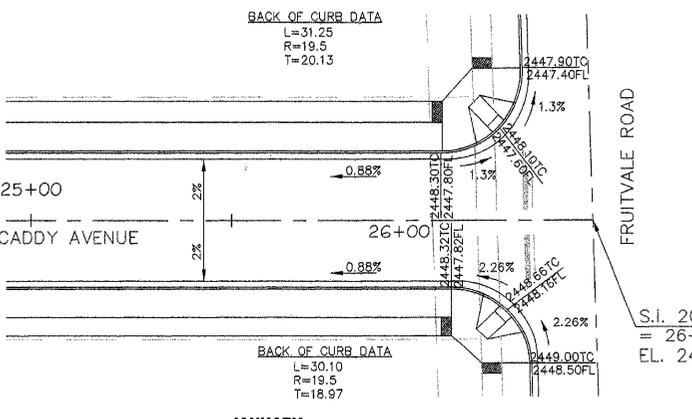
**CLASS 'A' ASPHALT**  
**8" CSTC PER ASTM D1557**  
**12" GRANULAR SUB-BASE PER ASTM D1557**



**6** NATALIE WILLIAM AVENUE & CAMILLE COURT  
SCALE: 1" = 20'



**7** JANUARY DANA STREET & CADDY AVENUE  
SCALE: 1" = 20'



**8** JANUARY CADDY AVENUE & FRUITVALE ROAD  
SCALE: 1" = 20'

DEVELOPER'S APPROVAL:

SIMS I, LLC

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



10/15/07	BOND REDUCTION REQUEST				
10/15/08	RECORD DRAWING				
by ALLWEST TESTING AND ENGINEERING					
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY
DATE OF ISSUE	DWN BY	DES BY	CHK BY	APP BY	
DEC. 26, 2008	MHE	MHE			

**MHE ENGINEERING**  
9702 W. Masters Lane  
Cheney, WA 99004  
(509) 230-1960  
FAX: (509) 747-2769

**CRYSTAL MEADOWS**  
ROADWAY SECTIONS &  
INTERSECTION DETAIL PLANS

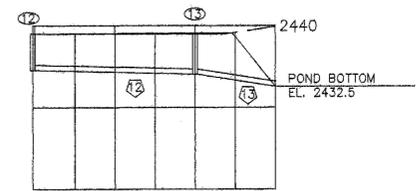
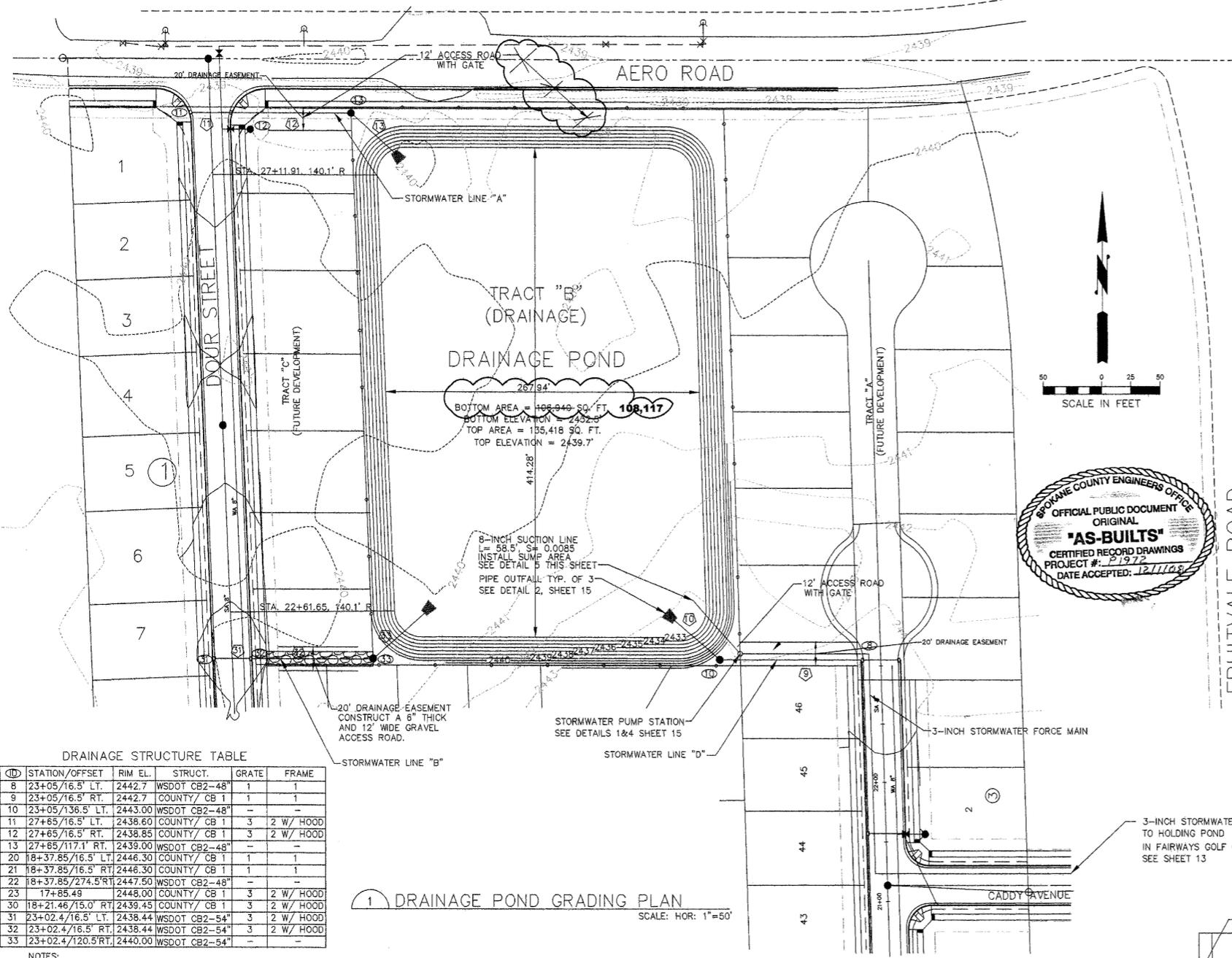
DRAWING NO  
11  
16

CALL BEFORE YOU DIG: 456-8000

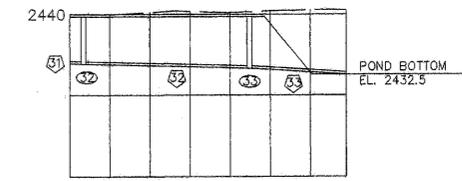
P-1972 Eng As-Built

L:\207-1687-Crystal Meadows\asbuilt\STREET 11.dwg, 10/29/2008 10:34:01 AM, 1:1

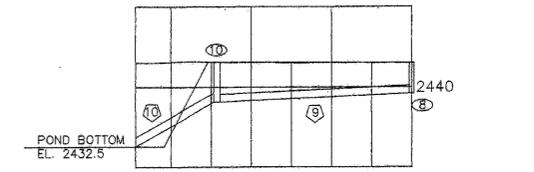
# RECORD DRAWING



2 LINE "A" PROFILE  
SCALE: HOR: 1"=50'  
VER: 1"=10'

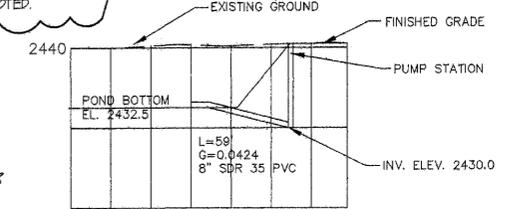


3 LINE "B" PROFILE  
SCALE: HOR: 1"=50'  
VER: 1"=10'

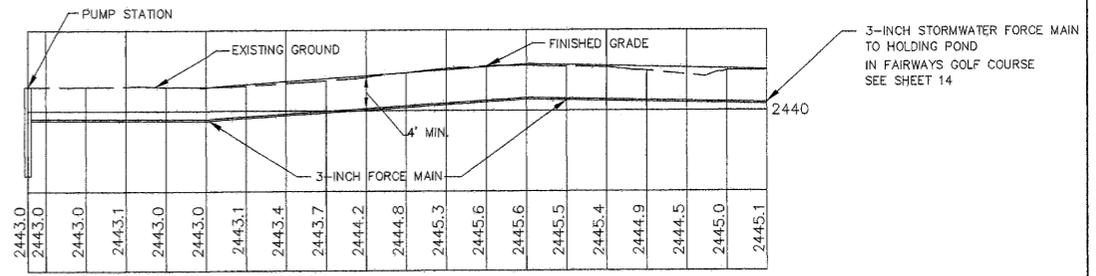


4 LINE "D" PROFILE  
SCALE: HOR: 1"=50'  
VER: 1"=10'

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



5 SUCTION LINE PROFILE  
SCALE: HOR: 1"=50'  
VER: 1"=10'



6 FORCE MAIN PROFILE  
SCALE: HOR: 1"=50'  
VER: 1"=10'

**DRAINAGE STRUCTURE TABLE**

ID	STATION/OFFSET	RIM EL.	STRUCT.	GRATE	FRAME
8	23+05/16.5' LT.	2442.7	WSDOT CB2-48"	1	1
9	23+05/16.5' RT.	2442.7	COUNTY/ CB 1	1	1
10	23+05/136.5' LT.	2443.00	WSDOT CB2-48"	-	-
11	27+65/16.5' LT.	2438.60	COUNTY/ CB 1	3	2 W/ HOOD
12	27+65/16.5' RT.	2438.85	COUNTY/ CB 1	3	2 W/ HOOD
13	27+65/117.1' RT.	2439.00	WSDOT CB2-48"	-	-
20	18+37.85/16.5' LT.	2446.30	COUNTY/ CB 1	1	1
21	18+37.85/16.5' RT.	2446.30	COUNTY/ CB 1	1	1
22	18+37.85/274.5' RT.	2447.50	WSDOT CB2-48"	-	-
23	17+85.49	2448.00	COUNTY/ CB 1	3	2 W/ HOOD
30	18+21.46/15.0' RT.	2439.45	COUNTY/ CB 1	3	2 W/ HOOD
31	23+02.4/16.5' LT.	2438.44	WSDOT CB2-54"	3	2 W/ HOOD
32	23+02.4/16.5' RT.	2438.44	WSDOT CB2-54"	3	2 W/ HOOD
33	23+02.4/120.5' RT.	2440.00	WSDOT CB2-54"	-	-

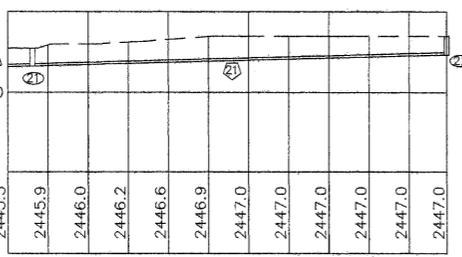
NOTES:  
COUNTY/ CB 1 SHALL CONFORM TO STANDRAD PLAN B-4  
WSDOT CB 1L SHALL CONFORM TO STANDARD PLAN B-5.40-00  
WSDOT CB 2 SHALL CONFORM TO STANDARD PLAN B-10.20-00  
TYPE 1 GRATE SHALL CONFORM TO STANDARD PLAN B-12  
TYPE 3 GRATE SHALL CONFORM TO STANDARD PLAN B-14

**STORM DRAIN PIPE TABLE**

ID	LENGTH	SIZE	UP INV.	DOWN INV.	SLOPE
8	29'	10"	2439.87	2439.70	0.58%
9	120.67'	24"	2438.70	2438.09	0.51%
10	51.22'	24"	2437.59	2432.50	9.9%
11	29'	10"	2435.77	2435.60	0.58%
12	101.64'	15"	2435.10	2434.50	0.59%
13	50'	15"	2434.00	2432.50	3.0%
20	29'	12"	2443.30	2443.00	1.03%
21	258.05'	12"	2444.67	2443.30	0.53%
22	62.96'	12"	2445.17	2444.67	0.79%
23	147.86'	15"	2442.97	2440.06	1.97%
30	77.50'	30"	2434.34	2433.94	0.52%
31	29'	30"	2433.94	2433.79	0.52%
32	104.41'	30"	2433.79	2433.26	0.51%
33	60.32'	30"	2433.26	2432.50	1.27%

NOTE:  
STORM DRAIN PIPING SHALL BE N-12 ADS OR EQUAL.

1 DRAINAGE POND GRADING PLAN  
SCALE: HOR: 1"=50'



6 LINE "C" PROFILE  
SCALE: HOR: 1"=50'  
VER: 1"=10'



DEVELOPER'S APPROVAL:  
SIMS I, LLC  
DATE \_\_\_\_\_



**10/15/07 BOND REDUCTION REQUEST**  
**10/15/08 RECORD DRAWING**  
**by ALLWEST TESTING AND ENGINEERING**

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY
1	DEC 26, 2008	DWN BY: MHE DES BY: MHE				

**MHE ENGINEERING**  
9702 W. Masters Lane  
Cheney, WA 99004  
(509) 230-1960  
FAX: (509) 747-2769

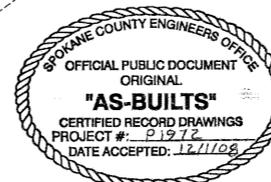
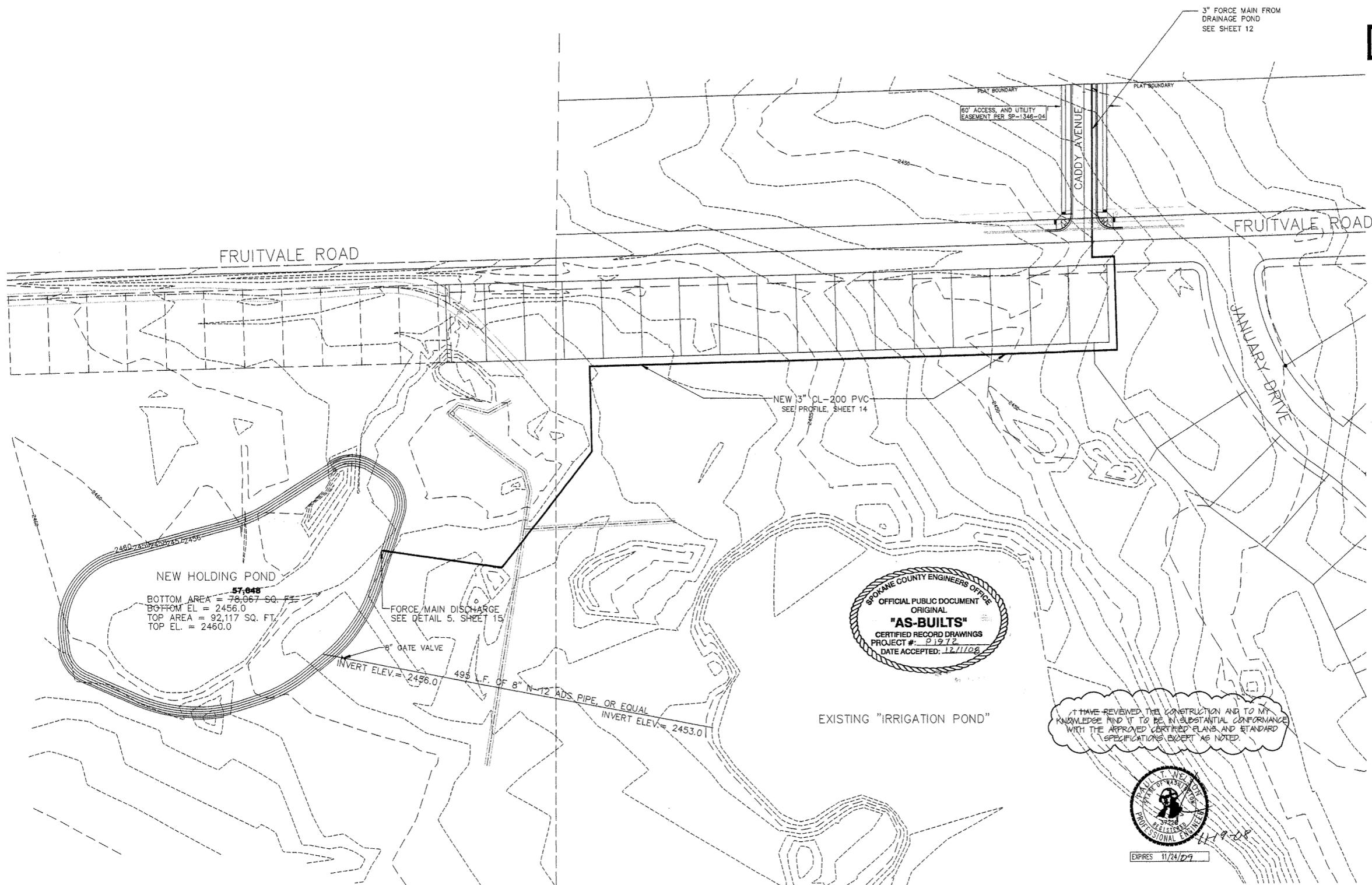
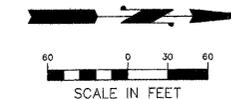
**CRYSTAL MEADOWS**  
DRAINAGE POND GRADING PLAN  
AND STORMWATER LINES  
PLAN AND PROFILE

DRAWING NO  
12 / 16

CALL BEFORE YOU DIG: 456-8000

P.1972 Eng As-Built

# RECORD DRAWING



I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



EXPIRES 11/24/09

DEVELOPER'S APPROVAL:

SIMS I, LLC \_\_\_\_\_ DATE \_\_\_\_\_

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EXPIRES 4-27-07

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DEC. 26, 2008		DES BY	APP BY			

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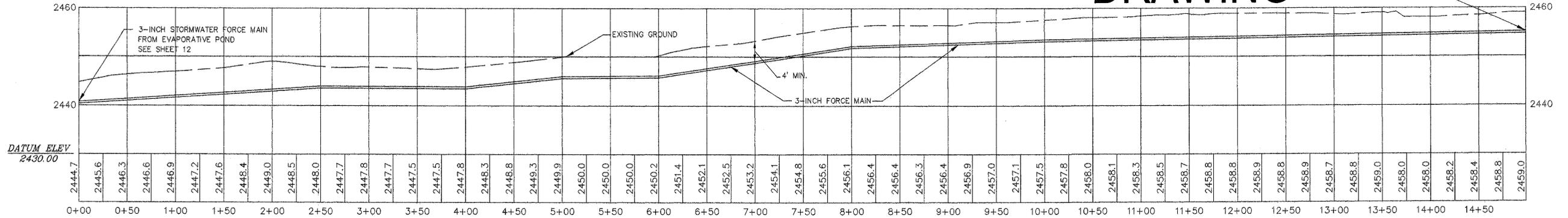
CRYSTAL MEADOWS  
STORMWATER HOLDING POND  
AND FORCE MAIN

DRAWING NO.  
13  
16

P-1972 Eng. As-Built

# RECORD DRAWING

FORCE MAIN DISCHARGE  
SEE DETAIL 5, SHEET 15



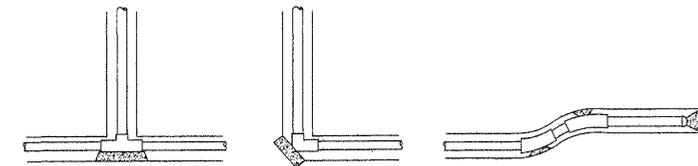
1 FORCE MAIN PROFILE  
SCALE: HOR.: 1"=50'  
VER.: 1"=10'

PIPE DIAMETER	VOLUME OF THRUST BLOCKING (CU. YDS.)			
	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
3"	1.0	0.5	0.3	---

NOTE: THRUST BLOCK VOLUME BASED ON 4000 lbs/cu. Yd. FOR CONCRETE AND A HYDRAULIC TEST PRESSURE OF 150 psi. THRUST BLOCK VOLUMES SHALL BE PROPORTIONALLY ADJUSTED FOR DIFFERENT HYDRAULIC TEST PRESSURES.

PIPE DIAMETER	BEARING AREA (SQ. FT.)				
	TEE, CAP, LINE VALVE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
3"	3	5	3	1	---

NOTE: BEARING AREA BASED ON 2000 lbs/sq. ft. ALLOWABLE SOIL PRESSURE AND 150 psi HYDRAULIC TEST PRESSURE. BEARING AREA SHALL BE PROPORTIONALLY ADJUSTED FOR DIFFERENT ALLOWABLE SOIL PRESSURES OR HYDRAULIC TEST PRESSURES.



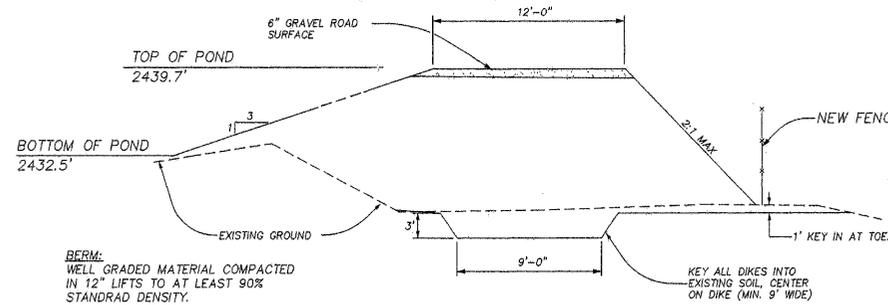
FOR FITTINGS WITHOUT DIRECTLY ATTACHED VALVES, PLUGS, OR BLIND FLANGES.

2 VERTICAL THRUST BLOCK TABLE

3 CONCRETE THRUST BLOCK TABLE - FOR VALVES AND FITTINGS

4 LOCATION OF THRUST BLOCKS  
NOT TO SCALE

**POND CLAY LINER NOTES**  
WHERE FINE GRAINED CLAY SOILS EXIST, SCARIFY AND RECOMPACT THE UPPER 12" TO DISRUPT PREFERENTIAL GROUND WATER FLOW PATHS. IN AREAS OF COURSE SAND AND GRAVEL, EXCAVATE AT LEAST 18" OF FINE GRAINED CLAY SOIL FROM OTHER AREAS OF THE SITE. COMPACTED FINE GRAINED CLAY SOILS RESULTS IN A PERMEABILITY THAT RANGES FROM 4X10-8 CM/S TO 5X10-7 CM/S.



5 DRAINAGE POND TYPICAL X-SECTION  
N.T.S.

- NOTES:
- BOTTOM OF POND AND NON-BERM AREAS OF POND SHALL BE PLANTED WITH NATIVE-TYPE GRASSES.
  - THE BASE OF THE BERM SHALL BE FIRM, UNYIELDING SUBGRADE, FREE OF ORGANICS AND FILL MATERIAL.
  - STANDARD DENSITY SHALL BE IN ACCORDANCE WITH ASTM D-1557.

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DEVELOPER'S APPROVAL:  
\_\_\_\_\_  
SIMS I, LLC DATE \_\_\_\_\_

CALL BEFORE YOU DIG: 456-8000



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FAX: (509) 747-2769

CRYSTAL MEADOWS  
STORMWATER FORCE MAIN PROFILE  
AND DETAILS

DRAWING NO  
14  
16

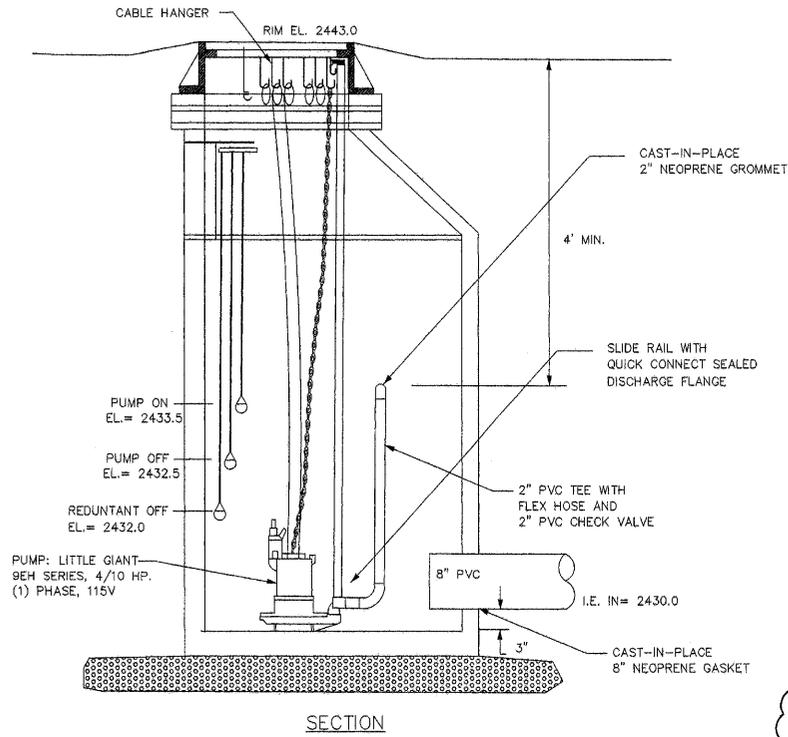
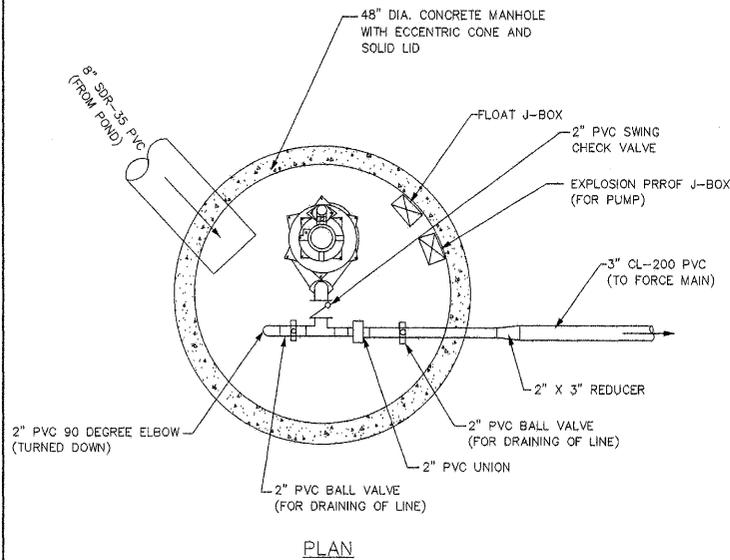


EXPIRES 11/24/09

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# RECORD DRAWING

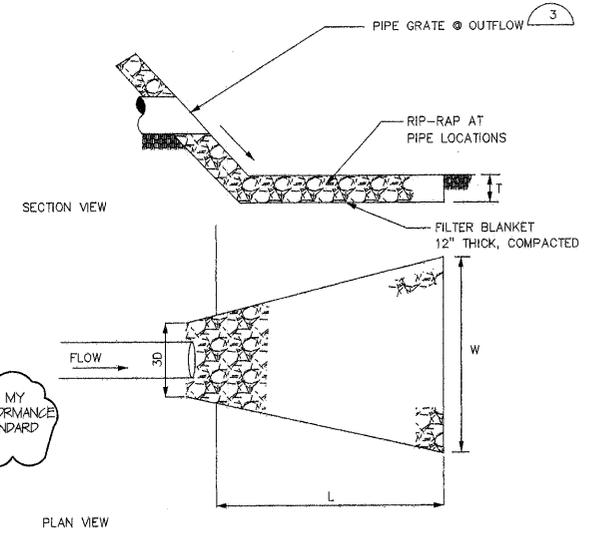
LOCATION	L (ft)	W (ft)	T (in.)	MIN. STONE DIAMETER (in.)	3D (ft)
LINE "A"	16.0	10.2	12	3"	3.75
LINE "B"	38.2	22.8	12	7"	7.5
LINE "D"	26.3	16.6	12	5"	6.0



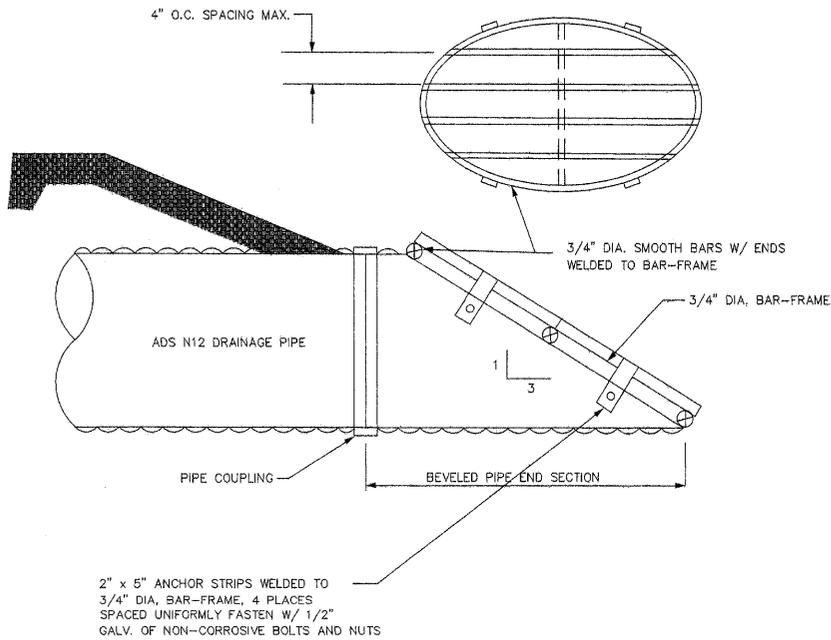
1 **PUMP STATION DETAIL**  
SCALE: NOT TO SCALE



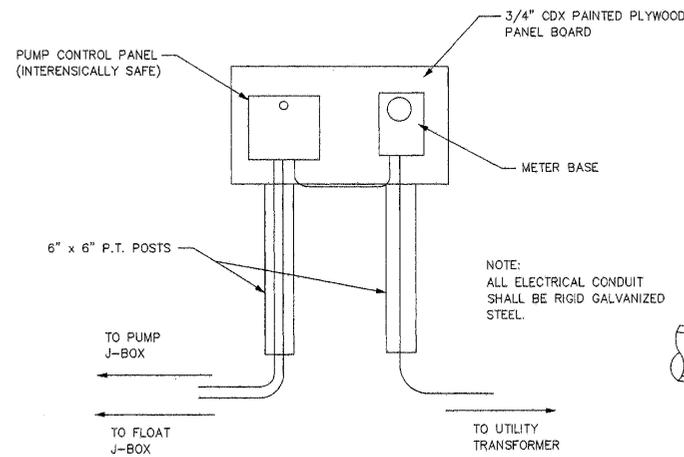
I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



2 **DRAINAGE PIPE OUTFALL**  
SCALE: NOT TO SCALE



3 **PIPE GRATE DETAIL**  
SCALE: NOT TO SCALE



4 **PUMP STATION CONTROL PANEL**  
SCALE: NOT TO SCALE

DEVELOPER'S APPROVAL:

SIMS I, LLC

DATE \_\_\_\_\_



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MHE ENGINEERING

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FAX: (509) 747-2769

CRYSTAL MEADOWS  
STORMWATER PUMP STATION  
AND  
DRAINAGE DETAILS

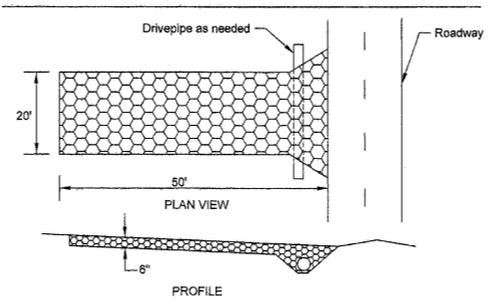
DRAWING NO  
15  
16

CALL BEFORE YOU DIG: 456-8000

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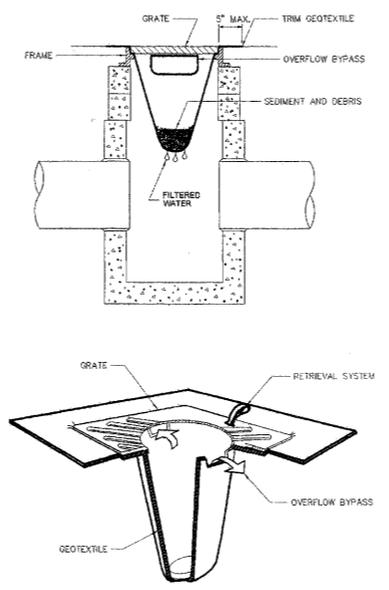
**EROSION/SEDIMENTATION CONTROL NOTES**

1. AN EROSION/SEDIMENTATION CONTROL (ESC) PLAN IS REQUIRED FOR THIS PROJECT. IMPLEMENTATION OF THE ESC PLAN, AND CONSTRUCTION, MAINTENANCE, AND UPGRADING OF THE ESC FACILITIES ARE THE RESPONSIBILITY OF THE DEVELOPER UNTIL ALL CONSTRUCTION IS COMPLETED AND ACCEPTED BY SPOKANE COUNTY, OR UNTIL VEGETATION IS ESTABLISHED THROUGHOUT THE SITE, AND ACCEPTED BY SPOKANE COUNTY, WHICHEVER IS LATER.
2. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF ANY PROPOSED ROAD, STORM DRAINAGE, GRADING OR UTILITY DESIGN ELEMENTS SHOWN ON THE ESC PLAN.
3. THE EROSION/SEDIMENTATION CONTROL MEASURES SHOWN ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. THE CONTRACTOR SHALL INSPECT AND MAINTAIN THESE ESC MEASURES DAILY, AND SHALL MAINTAIN AND UPGRADE THESE MEASURES AS NECESSARY TO PREVENT SEDIMENT-LADEN WATER FROM EITHER FLOWING OFF THE SITE, OR INTO NEW/EXISTING STORM DRAINAGE FACILITIES, SUCH AS DRYWELLS, CULVERTS, OR GRAVEL GALLERIES.
4. THE CONTRACTOR/DEVELOPER IS RESPONSIBLE FOR INSTALLING ROCK CONSTRUCTION ENTRIES AT ANY AND ALL LOCATIONS USED TO ENTER OR EXIT THE PROJECT SITE.
5. GEOTEXTILE FABRIC IS TO BE PLACED ON THE RIMS OF DRYWELLS, CATCH BASINS AND INLETS UNTIL SUCH TIME THE VEGETATION ON THE SITE IS ESTABLISHED AND THE THREAT OF SEDIMENT DEPOSITION INTO THE DRAINAGE SYSTEM IS MITIGATED.
6. THE BOUNDRIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE SET BY SURVEY AND CLEARLY FLAGGED IN THE FIELD BY A CLEARING CONTROL FENCE PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE OR REMOVAL OF ANY GROUND COVER BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE PERMITTEE/CONTRACTOR FOR THE DURATION OF CONSTRUCTION. ALL GROUND COVER IS TO REMAIN OUTSIDE OF CLEARING AREA(S).
7. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS, AND MUST BE INSTALLED AND IN OPERATION PRIOR TO ANY GRADING OR LAND CLEARING. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
8. THE ESC FACILITIES SHALL BE INSPECTED BY THE PERMITTEE/CONTRACTOR DAILY DURING NON-RAINFALL PERIODS, EVERY HOUR (DAYLIGHT) DURING A RAINFALL EVENT, AND AT THE END OF EVERY RAINFALL, AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. ALL TEMPORARY SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
9. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.
10. 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 ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
11. THE ESC FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE APPROVED PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER.
12. A COPY OF THE APPROVED EROSION CONTROL PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
13. IF ANY PART(S) OF THE CLEARING LIMIT BOUNDARY OR TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN IS/ARE DAMAGED, IT SHALL BE REPAIRED IMMEDIATELY.
14. ALL PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND RUNOFF.
15. DO NOT FLUSH CONCRETE BY-PRODUCTS OR TRUCKS NEAR OR INTO THE STORM DRAINAGE SYSTEM.



1. Stone Size - Two-inch stone shall be used, or recycled concrete equivalent.
2. Length - The construction entrance shall be as required to stabilize high traffic areas but not less than 50 ft. (except on single residence for where a 30-ft. minimum length applies).
3. Thickness - The stone layer shall be at least 6 in. thick.
4. Width - The entrance shall be at least 20 ft. wide, but not less than the full width at points where ingress or egress occurs.
5. Bedding - A geotextile shall be placed over the entire area prior to placing stone. It shall have a Grab Tensile Strength of at least 200 lb. and a mullen Burst Strength of at least 190 lb.
6. Culvert - A pipe or culvert shall be constructed under the entrance if needed to prevent surface water flowing across the entrance from being directed out onto paved surfaces.
7. Maintenance - Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surface where runoff is not checked by sediment controls shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
8. Construction Entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction site shall be restricted from muddy areas.

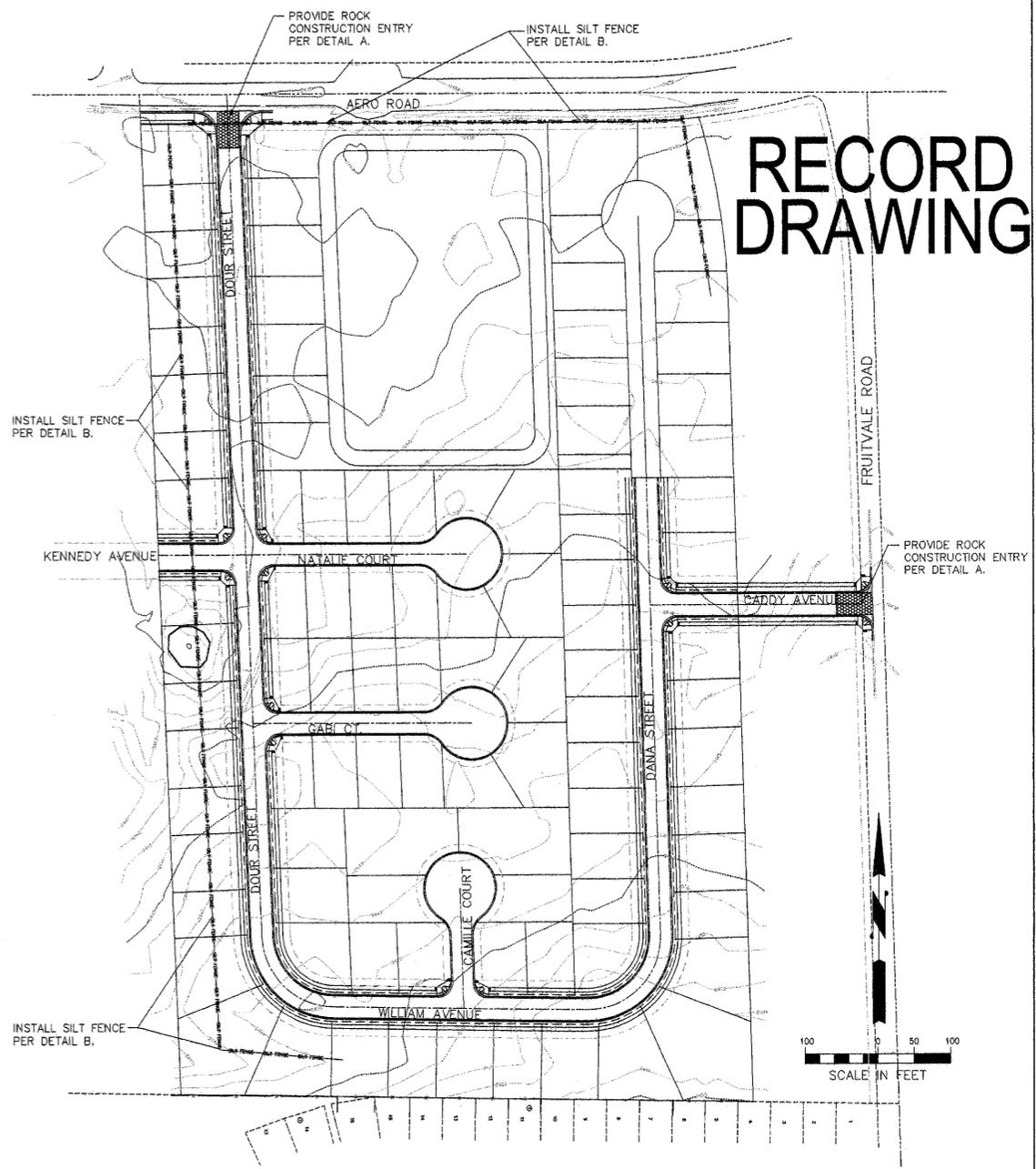
**A STABILIZED CONSTRUCTION ENTRANCE**  
NOT TO SCALE



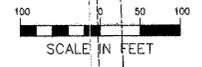
- NOTES**
1. MAXIMIZE DETENTION OF STORMWATER BY PLACING FENCE AS FAR AWAY FROM THE TOE OF SLOPE AS POSSIBLE WITHOUT ENCRoACHING ON SENSITIVE AREAS OR OUTSIDE OF THE CLEARING BOUNDARIES.
  2. INSTALL SILT FENCING ALONG CONTOURS WHENEVER POSSIBLE.
  3. INSTALL THE ENDS OF THE SILT FENCE TO POINT SLIGHTLY UP-SLOPE TO PREVENT SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.

**B SILT FENCE**  
NOT TO SCALE

**C STORM DRAIN INLET PROTECTION**  
NOT TO SCALE



**RECORD DRAWING**



**PROPERTY DESCRIPTION:**  
A PORTION OF THE SW 1/4 OF SECTION 7, TOWNSHIP 24 NORTH, RANGE 42 EAST, W.M. SPOKANE COUNTY, WASHINGTON.

**ON-SITE CONTACT:**  
MICHAEL E. KENNEDY  
995-2537

**PROPERTY OWNER:**  
SIMS I, LLC  
301 W. INDIANA AVE., SUITE 100  
SPOKANE, WA 99205

**APPLICANT:**  
SIMS I, LLC  
301 W. INDIANA AVE., SUITE 100  
SPOKANE, WA 99205

**PLAN PREPARATION:**  
MAMDOUH H. EL-AARAG, P.E.  
MHE ENGINEERING  
9702 W. MASTERS LANE  
CHENEY, WA 99004

- NOTES:**
1. THE PROJECT IS CURRENTLY VEGETATED WITH UPLAND GRASSES.
  2. THE PROJECT CONSISTS OF THE CONSTRUCTION OF RESIDENTIAL STREETS AND DRAINAGE RETENTION PONDS.
  3. EROSION AND SEDIMENT CONTROL MEASURES WILL CONSIST OF THE INSTALLATION OF SILT FENCES.
  4. SOILS AT THIS SITE ARE CLASSIFIED BY THE SCS AS CHENEY AND UHLIG SILT LOAM.

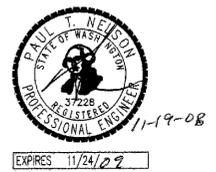
I CERTIFY THAT THIS PLAN MEETS THE REQUIREMENTS FOR E.S.C. AS LISTED IN CHAPTER 4.5 OF THE GUIDELINES FOR STORMWATER MANAGEMENT.

DATE \_\_\_\_\_  
MAMDOUH H. EL-AARAG, P.E.

DATE \_\_\_\_\_  
DEVELOPER'S APPROVAL:  
SIMS I, LLC



I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.



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**CRYSTAL MEADOWS**  
EROSION CONTROL PLAN

DRAWING NO  
16 / 16

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