COVER SHEET FOR
SANDY RIDGE 1ST ADDITION P.U.D.
STREET AND STORM DRAINAGE PLANS
SEC. 31, T. 26 N., R. 44 E, W.M.
SPOKANE COUNTY, WASHINGTON

RECORD DRAWING

SCALE: 1" = 100'-0"

STREET GENERAL NOTES

THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT TO CONSTRUCT AND INSTALL TO PROPER WORKING ORDER ALL IMPROVEMENTS AS DETAILED OR CALLED OUT ON THESE PLANS.

1. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE "SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION 2001", AND AS AMENDED.

2. THE CONTRACTOR IS REQUIRED TO HAVE A VALID CONSTRUCTION PERMIT ON SITE AT ALL TIMES. THE ABSENCE OF THE PERMIT WILL RESULT IN AN IMMEDIATE SHUTDOWN OF WORK AND THE POSSIBLE REMOVAL OF THOSE ITEMS CONSTRUCTED WITHOUT THE PERMIT.

3. LOCATIONS OF EXISTING UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE. PRIOR TO SITE CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY LOCATION SERVICE AT 456-8000 BEFORE YOU DIG. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE FACILITIES.

4. 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.

5. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER, MARK L. KRIGBAUM, P.E., @ 456-6840, AND THE SITE/PROJECT INSPECTING ENGINEER OR HIS REPRESENTATIVE, ALLWEST, BOB GRAHAM, @ 534-4411.

6. THE CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO VERIFY THAT THE CROSS-GUTTER FORMS ARE THE CORRECT PLAN GRADE PRIOR TO CONCRETE PLACEMENT. THE CROSS-GUTTERS SHALL BE CONSTRUCTED PRIOR TO PAVING, AND THE PAVEMENT SHALL THEN MATCH THE EDGE OF CONCRETE GUTTER.

7. FOR ANY CURB GRADES LESS THAN 0.8 % (0.008 FT./FT.), A WASHINGTON STATE LICENSED PROFESSIONAL LAND SURVEYOR SHALL VERIFY THAT THE CURB FORMS ARE AT THE GRADES NOTED ON THE APPROVED PLANS, PRIOR TO PLACEMENT OF CURB MATERIAL. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING AND COORDINATING WORK WITH THE PROFESSIONAL LAND SURVEYOR.

EMBANKMENT DESIGN AND CONSTRUCTION

BASED ON OBSERVATIONS AND LABORATORY TESTS, THE STOCKPILED MATERIAL WILL BE SUITABLE FOR USE AS EMBANKMENT FILL. THE EMBANKMENT CAN BE CONSTRUCTED AT SLOPES AS STEEP AS 2:1 (H:V). VEGETATION SHOULD BE ESTABLISHED IMMEDIATELY AFTER EMBANKMENT CONSTRUCTION TO PROTECT AGAINST SURFACE EROSION.

PRIOR TO PLACING EMBANKMENT FILL, REMOVE TOPSOIL, VEGETATION, AND ROOT ZONE FROM THE EMBANKMENT FOOTPRINT. PLACE FILL IN THIN LIFTS AND COMPACT TO A MINIMUM OF 92% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY TO WITHIN 2 FEET OF THE SUBGRADE ELEVATION. ABOVE THIS DEPTH, COMPACT TO A MINIMUM OF 95%.

TO INCREASE STABILITY, "KEY" THE EMBANKMENT FILL INTO THE NATIVE SOILS ON SLOPES BY BENCHING INTO THE EXISTING SLOPES DURING FILL PLACEMENT WITH A MINIMUM 5-FOOT BENCH WIDTH AND MAXIMUM 5-FOOT BENCH HEIGHT.

STORM DRAINAGE GENERAL NOTES

1. SEE STREET PLAN AND PROFILE SHEETS FOR DRYWELL AND CATCH BASIN TYPES AND LOCATIONS.

2. PONDS SHALL BE CONSTRUCTED PER THE REQUIREMENTS OF THESE DRAWINGS INCLUDING GRADING, SOD, AND DRYWELL INSTALLATION. ALL PONDS WITHIN TRACTS SHALL INCLUDE AN IRRIGATION SYSTEM. ALL IRRIGATION SHALL CONFORM TO SPOKANE COUNTY POND IRRIGATION SYSTEM GUIDELINES.

3. ALL "208" PONDS SHOWN SHALL BE ROUGH GRADED PRIOR TO PAVING OF ADJACENT ROADWAY.

4. ALL STORM DRAINAGE PIPE 18" IN DIAMETER OR LARGER SHALL HAVE A TRASH RACK INSTALLED PER FIGURE 39 IN THE SPOKANE COUNTY GUIDELINES FOR STORMWATER MANAGEMENT.

5. ALL PONDS WITHIN THE COUNTY RIGHT-OF-WAY, IN THE AREA ASSOCIATED WITH THIS PROJECT, SHALL BE COMPLETED DURING THE CONSTRUCTION OF THE ROADWAY. THE CONTRACTOR SHALL PERFORM THE POND GRADE WORK, INSTALL THE IRRIGATION SYSTEM, AND PLACE THE SOD WITHIN THE PONDS FOLLOWING THE ROAD PAVING WORK. INSTALL "AMOCO" #4545 FILTER FABRIC (OR APPROVED EQUAL) IN ALL DRYWELLS. SEE SPOKANE COUNTY STANDARDS (1999 EDITION) SHEET B-1a FOR INSTALLATION LOCATIONS.

6. THE CONTRACTOR SHALL MAKE AN EFFORT TO PROTECT ALL DRAINAGE STRUCTURES FROM BEING CONTAMINATED WITH SILT BY INSTALLING FILTER FABRIC UNDER THE LID FOR AT LEAST 6 WEEKS, OR UNTIL THE ESTABLISHMENT OF GRASS AND/OR OTHER SITE CONSTRUCTION WORK HAS ENDED. IN THE EVENT THAT SILT OR OTHER DELETERIOUS MATERIAL IS ALLOWED TO ENTER THE DRYWELLS. OR CATCH BASINS, THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE DRYWELL OR CATCH BASIN OUT TO THE SATISFACTION OF THE CERTIFYING ENGINEER.

7. ALL DRYWELL CONNECTION PIPES SHALL BE PLACED BELOW THE DRYWELL CONE AND SHALL FLOW AS DIRECTED IN THE PLANS.

8. ALL LANDSCAPE AREAS ('208' PONDS) ARE TO BE IRRIGATED BY AN AUTOMATIC IRRIGATION SYSTEM INSTALLED BY OR UNDER THE DIRECTION OF THE LANDSCAPE CONTRACTOR. THE IRRIGATION SYSTEM SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES (90 DAY GUARANTEE). AN APPROVED BACKFLOW DEVICE SHALL BE INSTALLED TO PREVENT WATER FROM GOING BACK INTO THE WATER SUPPLY.

SLEEVING: PROVIDE SLEEVING AS REQUIRED UNDER SIDEWALKS, PATHS, CURBING, PAVING, ETC. AS NEEDED FOR IRRIGATION ACCESS. ALL SLEEVING TO BE 4" PVC. WITH AT LEAST 12" OF COVER (1') FOOT BELOW FINISH GRADE. THE OWNER/GENERAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING SLEEVING BEFORE CURBING, SIDEWALKS, PAVING, ETC. IS INSTALLED. PATCH ASPHALT AS NEEDED.

LAWN AREAS: LAWN AREAS ARE TO BE IRRIGATED WITH TORO POP-UP HEADS OR EQUIVALENT. (TEST SYSTEM BEFORE BACKFILLING).

ADJUSTMENT: AFTER INSTALLATION, ADJUST VALVES, HEADS, EMITTERS, ETC. TO PROVIDE UNIFORM COVERAGE AND TO MINIMIZE OVER SPRAY ON WALLS, FENCES, WALKS, DRIVES, ETC.

WATER POWER SUPPLY: THE OWNER/ GENERAL CONTRACTOR IS TO SUPPLY WATER TAPS FOR HOOK-UP AND SUPPLY POWER FOR CONTROLLER.

9. THE FLOOR OF A GRASSED PERCOLATION AREA (GPA) SWALE INCLUDES THE LEVEL PORTION OF THE FLOOR OF THE SWALE, AND THE SIDE SLOPES OF THE SWALE UP TO THE GPA OVERFLOW ELEVATION OR TOP OF DRYWELL. THE SOIL LOCATED IN THE FLOOR OF THE GPA SWALE SHALL BE A MEDIUM TO WELL-DRAINING MATERIAL, WITH A MINIMUM INFILTRATION RATE OF 0.5 INCHES PER HOUR. THE ENGINEER SHALL PROVIDE A WRITTEN STATEMENT WHICH VERIFIES THAT ALL GPA SWALES CONFORM TO THIS REQUIREMENT. THIS WRITTEN STATEMENT SHALL BE SUBMITTED TO THE SPOKANE COUNTY ENGINEER'S OFFICE PRIOR TO INSTALLING FINISHED LANDSCAPING/SOD AND PRIOR TO FINAL ACCEPTANCE, THE SWALE FLOOR MATERIAL SHALL BE INSTALLED TO A NATIVE SOIL STRATUM WHICH ALSO MEETS OR EXCEEDS THIS MINIMUM PERCOLATION RATE OF 0.5 INCHES PER HOUR.

NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

CAUTION: NOTICE TO CONTRACTOR

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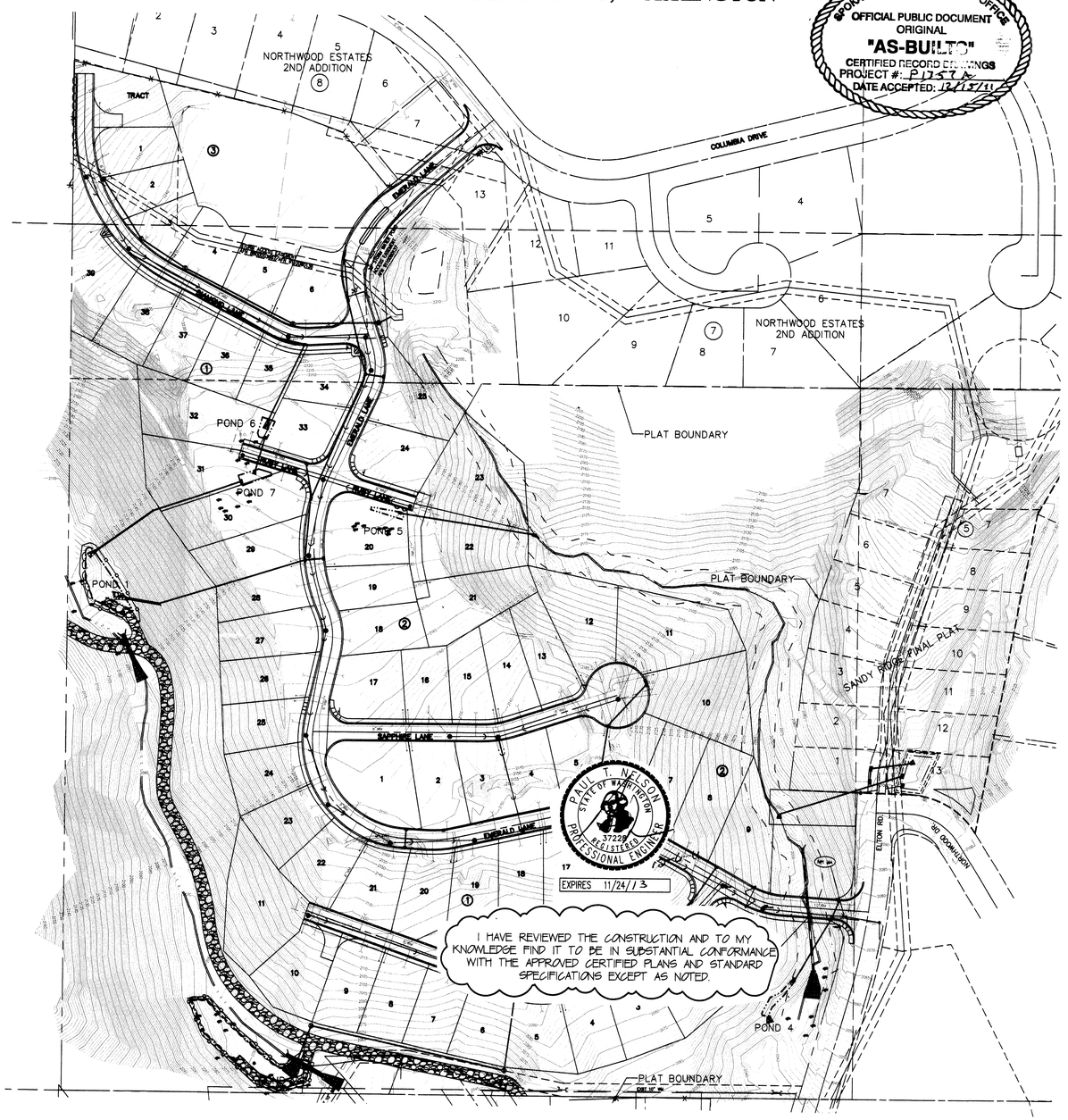


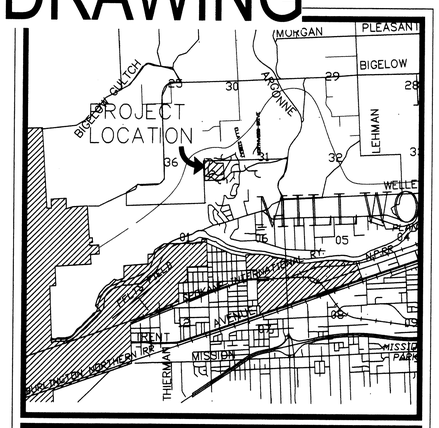
SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILT"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/15/11

PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 11/24/13

GRADING NOTE: DUE TO THE GRADES PROPOSED FOR ROADWAYS WITHIN THIS PROJECT, THE DESIGN ENGINEER AND INSPECTING ENGINEER ARE TO BE NOTIFIED UPON COMPLETION OF SUBGRADE PREPARATION PRIOR TO INSTALLATION OF CRUSHED SURFACING TOP COURSE IN THE AREA OF ALL PROPOSED INTERSECTIONS TO VERIFY PROPOSED CURB AND ASPHALT GRADES.

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORMWATER MANAGEMENT. ALL DESIGN DEVIATIONS HAVE BEEN APPROVED BY THE SPOKANE COUNTY ENGINEER. I APPROVE THESE PLANS FOR CONSTRUCTION.

DEVELOPER'S APPROVAL DATE



VICINITY MAP

TABLE OF CONTENTS

COVER SHEET	SHEET 1
EMERALD LANE STA. 10+00 TO STA. 21+50	SHEET 2
EMERALD LANE STA. 21+50 TO STA. 30+49.92	SHEET 3
EMERALD LN PROFILE STA. 25+00 TO STA. 30+49.92	SHEET 4
DIAMOND LANE STA. 10+00 TO STA. 16+66.88	SHEET 5
GARNET LANE STA. 10+00 TO STA. 17+13.13	SHEET 6
SAPPHIRE LANE STA. 10+00 TO STA. 17+72.40	SHEET 7
RUBY LANE STA. 10+00 TO STA. 12+77.07	SHEET 8
STREET DETAILS	SHEET 9
STREET DETAILS	SHEET 10
EMERALD LANE STORM STA 13+50 TO STA 18+00	SHEET 11
EMERALD LANE STORM STA 21+50 TO 28+00	SHEET 12
GARNET LANE STORM STA 10+00 TO STA 17+13.40	SHEET 13
STORM DETAILS	SHEET 14
STORM DETAILS	SHEET 14A
POND DETAILS	SHEET 15
POND DETAILS	SHEET 15A
POND DETAILS	SHEET 16
SEWER ACCESS ROAD	SHEET 17

LEGEND

EXISTING / PROPOSED

GENERAL
- ROADWAY CENTER LINE
- RIGHT OF WAY LINE
- PROPERTY LINE
- EASEMENT LINE
- FENCE
- CURB
- PAVEMENT
- GRAVEL
- PLAT BOUNDARY
- BUILDINGS & STRUCTURES

SANITARY SEWER
- SANITARY SEWER
- MANHOLE
- CLEANOUT
- SEWER SERVICE

WATER
- WATER LINE
- VALVE
- FIRE HYDRANT
- SERVICE
- METER
- BLOWOFF
- AIR VACUUM RELIEF STATION

STORM DRAINAGE
- DRAINAGE LINE
- MANHOLE
- DRYWELL
- CATCH BASIN
- DITCH

CLC ASSOCIATES
12730 E. MIRABEAU PKWY
SUITE 100
SPOKANE VALLEY
WASHINGTON 99216
P 509 458 6840
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ARCHITECTURE
ENGINEERING PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING

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STREET PLANS
SANDY RIDGE
1ST ADDITION P.U.D.
COVER SHEET
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM, P.E. WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

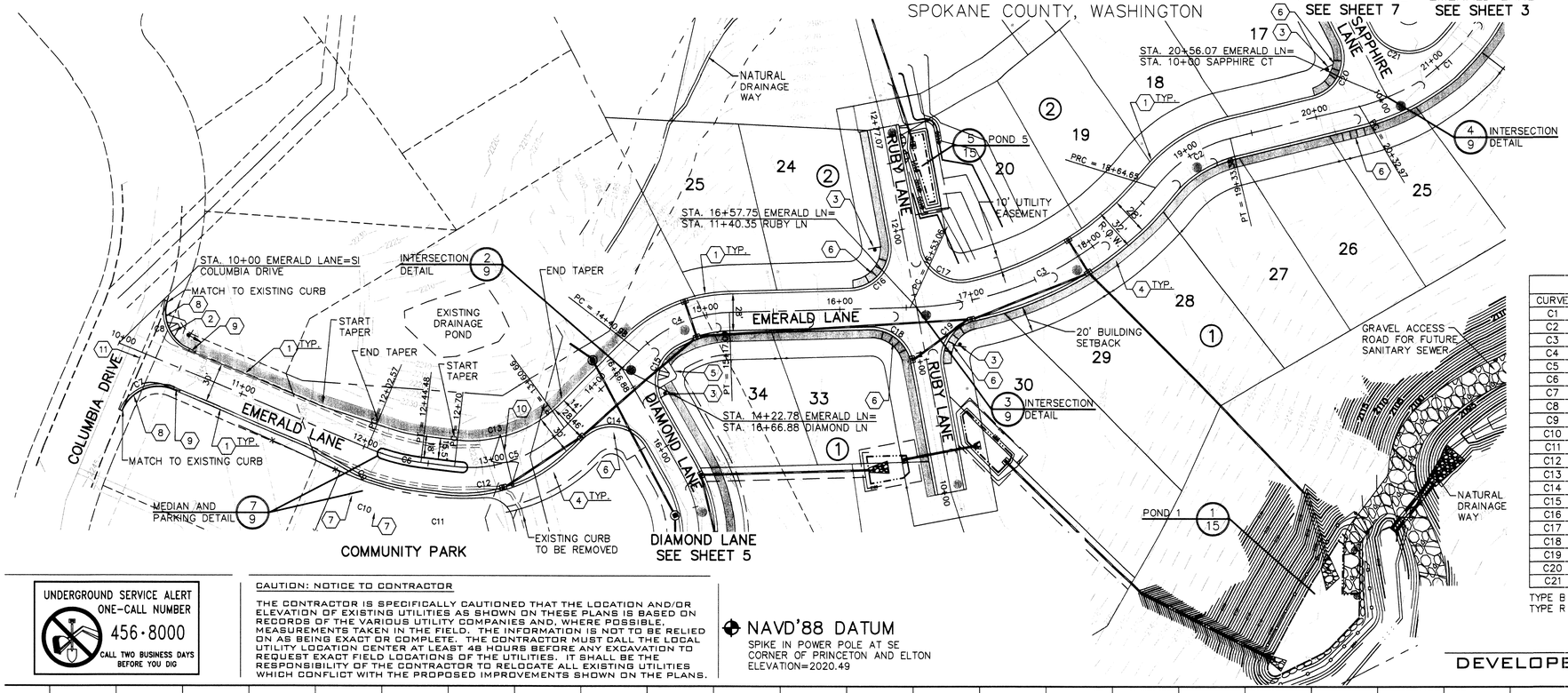
DATE	DESCRIPTION
09/27/04	ORIGINAL PREPARATION
11/23/04	SECOND SUBMITTAL
6/30/05	FINAL SUBMITTAL
10/1/11	STREET & DRAINAGE RECORD DRAWING by ALLWEST TESTING AND ENGINEERING

COVER SHEET

PROJECT #S030100
DRAWN BY: JCR
DESIGNED BY: SKM
CHECKED BY: MLK

P-1975A "As Builts" Eng

SECTION 31, T.26 N., R44 E., W.M.
SPOKANE COUNTY, WASHINGTON



CONSTRUCTION NOTES

1. TYPE 'R' CURB AND GUTTER PER SPOKANE COUNTY STANDARD PLAN A-3 (TYPICAL).
2. PUBLIC ROAD (COLUMBIA DRIVE) AND PRIVATE ROAD (EMERALD LANE) STREET NAME SIGNS AND "STOP" SIGN (MUTCD R1-1) PER MUTCD AND SPOKANE COUNTY STANDARD PLAN A-16.
3. PRIVATE ROAD STREET NAME SIGN PER MUTCD AND SPOKANE COUNTY STANDARD PLAN A-16.
4. CONSTRUCT 6' WIDE CONCRETE SIDEWALK.
5. CONSTRUCT CURB RAMP, DESIGN "B", PER SPOKANE COUNTY STANDARD PLAN A-5.
6. CONSTRUCT CURB RAMP, DESIGN "A", PER SPOKANE COUNTY STANDARD PLAN A-5.
7. CONSTRUCT CURB RAMP, MODIFIED DESIGN "A", PER SPOKANE COUNTY STANDARD PLAN A-5.
8. TYPE 'B' CURB AND GUTTER PER SPOKANE COUNTY STANDARD PLAN A-3.
9. CONSTRUCT 5' TRANSITION FROM TYPE 'B' TO TYPE 'R' CURB AND GUTTER.
10. ACCESS GATE WITH KNOX KEY SWITCH STA 13+10. SEE ARCHITECTURAL PLANS.
11. SAWCUT EXISTING PAVEMENT STA 11+19 OFFSET 45.26' RT TO 42.42' LT. REMOVE ASPHALT AND CURB SOUTH OF SAWCUT LINE AND TACK COAT.

CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD	DELTA
C1	262.01	150.00	179.02	229.95	100°04'49"
C2	63.77	100.00	33.01	62.70	36°32'20"
C3	211.60	250.00	112.60	205.34	48°29'40"
C4	76.11	100.00	40.01	74.29	43°36'34"
C5	90.66	100.00	48.71	87.58	51°56'35"
C6	41.91	150.00	21.09	41.78	16°00'35"
C7	46.89	30.00	29.76	42.26	89°32'54"
C8	44.12	30.00	27.14	40.25	84°16'01"
C9	26.42	18.00	16.24	24.11	84°05'51"
C10	48.02	189.50	24.14	47.89	14°31'11"
C11	16.07	139.50	8.04	16.06	6°35'56"
C12	30.19	28.00	16.75	28.75	61°46'33"
C13	88.84	98.00	47.74	85.83	51°56'35"
C14	54.98	30.00	39.10	47.60	105°00'00"
C15	47.42	30.00	30.30	42.64	90°34'26"
C16	51.77	30.00	35.05	45.58	98°52'51"
C17	48.31	30.00	31.21	43.26	92°15'43"
C18	42.47	30.00	25.68	39.01	81°07'09"
C19	46.31	30.00	29.19	41.85	88°26'29"
C20	54.16	30.00	38.01	47.10	103°25'45"
C21	56.49	30.00	41.21	48.51	107°53'44"

TYPE B CURB RADIUS TO TOP FRONT FACE OF CURB.
TYPE R CURB RADIUS TO TOP BACK OF CURB.

RECORD DRAWING

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P 1757 A
DATE ACCEPTED: 12/15/11

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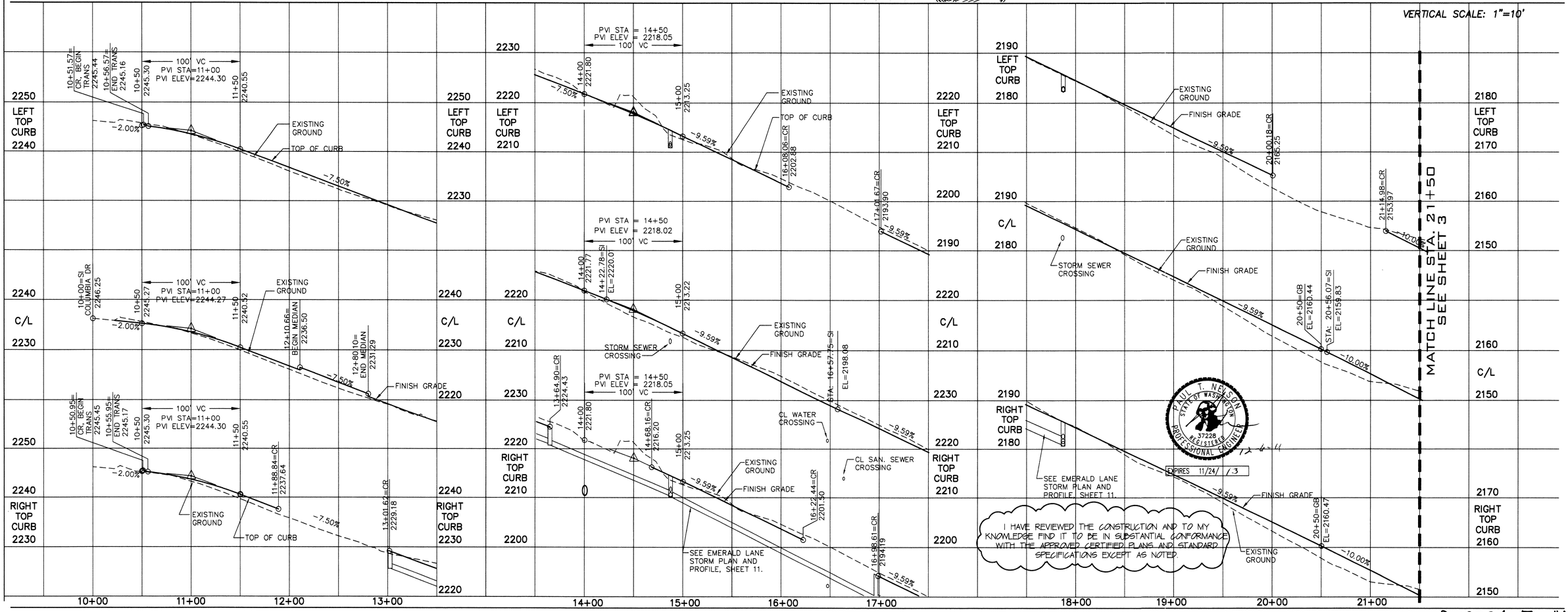
NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

DEVELOPER'S APPROVAL DATE

NORTH 50' 0 25' 50'
SCALE: 1" = 50'-0"

VERTICAL SCALE: 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.

PAUL T. NELSON, STATE OF WASHINGTON, 37228, REGISTERED PROFESSIONAL ENGINEER
EXPIRES 11/24/13
12-6-11

MARK L. KRIGBAUM, STATE OF WASHINGTON, 39236, REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07
PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 33236 FOR AND ON BEHALF OF CLC ASSOCIATE

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ENGINEERING PLANNING
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LAND SURVEYING

STREET/DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
EMERALD LANE STA. 10+00 TO STA. 21+50
SPOKANE COUNTY, WA

DATE		DESCRIPTION
05/19/04	-	ORIGINAL PREPARATION
09/27/04	-	FIRST SUBMITTAL
11/23/04	-	SECOND SUBMITTAL
06/30/05	-	FINAL SUBMITTAL
-10/1/11	-	- STREET & DRAINAGE RECORD DRAWING - by ALLWEST TESTING AND ENGINEERING

EMERALD LANE P AND P

PROJECT #: 5030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

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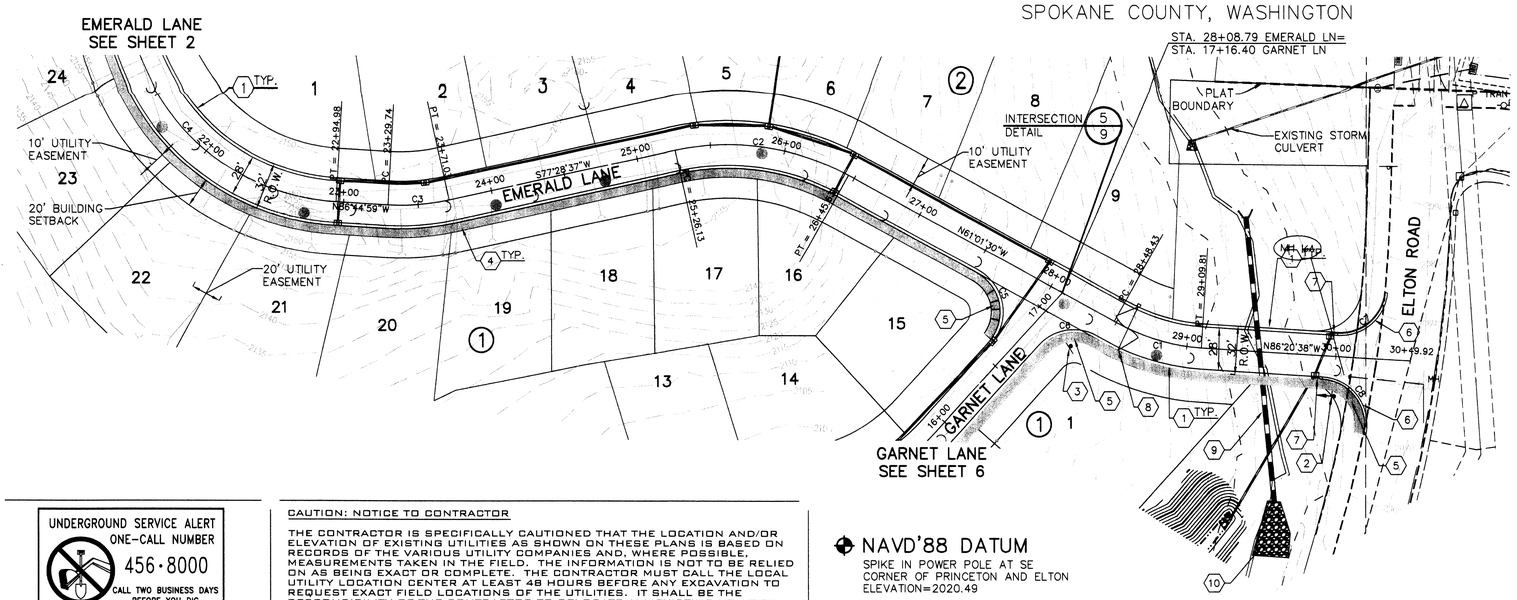

CONSTRUCTION NOTES

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2. PUBLIC ROAD (ELTON ROAD) AND PRIVATE ROAD (EMERALD LANE) STREET NAME SIGNS PER MUTCD AND SPOKANE COUNTY STANDARD PLAN A-16.
3. PRIVATE ROADS STREET NAME SIGN PER MUTCD AND SPOKANE COUNTY STANDARD PLAN A-16.
4. CONSTRUCT 6' WIDE CONCRETE SIDEWALK.
5. CONSTRUCT CURB RAMP, DESIGN "A", PER SPOKANE COUNTY STANDARD PLAN A-5.
6. TYPE 'B' CURB AND GUTTER PER SPOKANE COUNTY STANDARD PLAN A-3 (TYPICAL).
7. CONSTRUCT 5' TRANSITION FROM TYPE 'B' TO TYPE 'R' CURB AND GUTTER.
8. ACCESS GATE WITH KNOX KEY SWITCH, STA 28+59. SEE ARCHITECTURAL PLANS.
9. 36" N-12 ADS CULVERT WITH CONCRETE HEADWALL WINGWALL. SEE DETAIL 6, SHEET 16. UPSTREAM INVERT= 2053.12, DOWNSTREAM INVERT 2045.12. L = 190 L.F. S= 0.042 FT/FT. SEE PROFILE, BELOW.
10. RIPRAP PAD. SEE DETAIL 1, THIS SHEET.

CURVE TABLE					
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C1	61.44	135.00	31.26	60.91	26°04'35"
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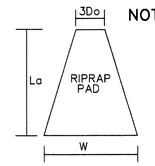
C7	46.26	30.00	29.15	41.81	88°21'19"
C8	51.57	30.00	34.81	45.45	98°29'19"

TYPE B CURB RADIUS TO TOP FRONT FACE OF CURB.
TYPE R CURB RADIUS TO TOP BACK OF CURB.



NOTE: RIPRAP PAD MUST BE INSTALLED WITH FILTER FABRIC (AMOCO OR EQUAL) BETWEEN THE NATIVE SOIL AND THE WASHED DRAIN ROCK.

RIPRAP PAD DIMENSIONS					
CULVERT	3Do	La	W	STONE SIZE	THICK.
OUTFALL	9.0'	37'	24'	16" MIN.	2'

EMERALD CULVERT RIPRAP PAD (1)
NOT TO SCALE

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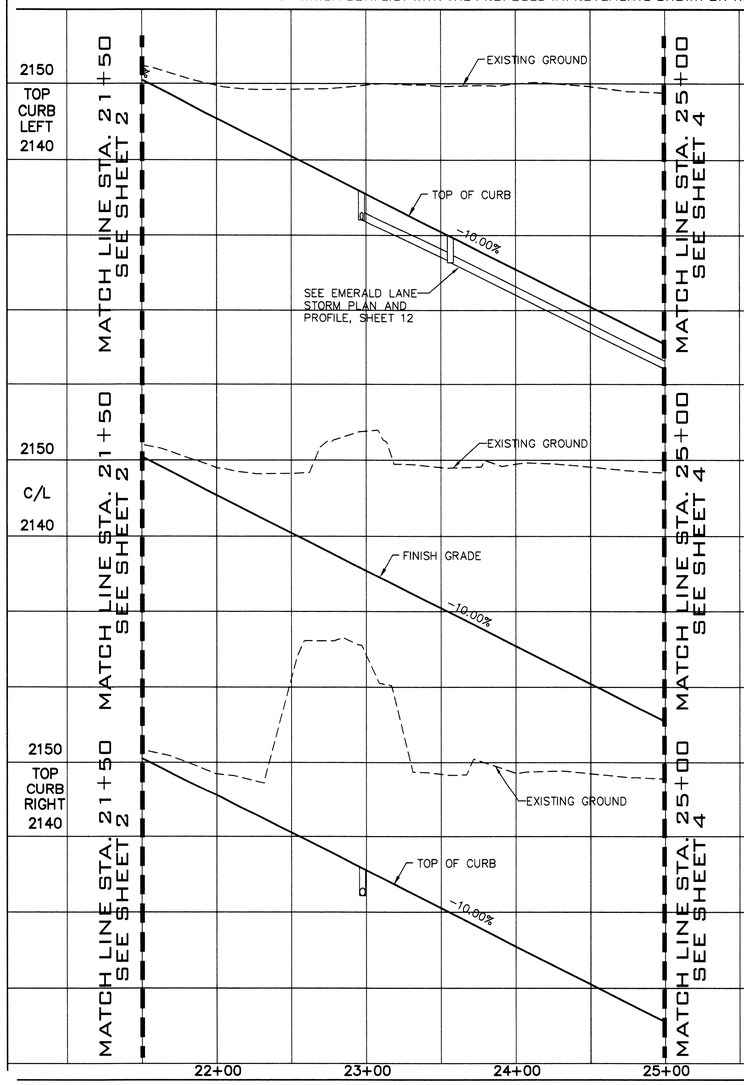

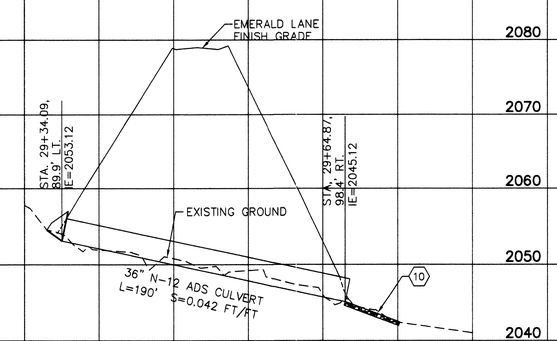

EMERALD LANE CULVERT PROFILE

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1975A
DATE ACCEPTED: 12/15/11

PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED PROFESSIONAL ENGINEER
12-6-4
EXPIRES 11/24/13

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.

P-1975A Eng "As Builts"

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CLC ASSOCIATES
12730 E. MIRABEAU PKWY
SUITE 100
SPOKANE VALLEY
WASHINGTON 99216
P 509 458 6840
F 509 458 6844
CLCASSOC.COM
ARCHITECTURE
ENGINEERING PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING

STREET/DRAINAGE PLANS

SANDY RIDGE
1 ST ADDITION P.U.D.
EMERALD LANE STA. 21+50 TO STA. 30+49.52
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

DATE		DESCRIPTION
05/19/04	-	ORIGINAL PREPARATION
09/28/04	-	FIRST SUBMITTAL
11/23/04	-	SECOND SUBMITTAL
06/30/05	-	FINAL SUBMITTAL
10/1/11	-	STREET & DRAINAGE RECORD DRAWING by ALLWEST TESTING AND ENGINEERING

EMERALD LANE P AND P

PROJECT #: 5030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

CAUTION: NOTICE TO CONTRACTOR

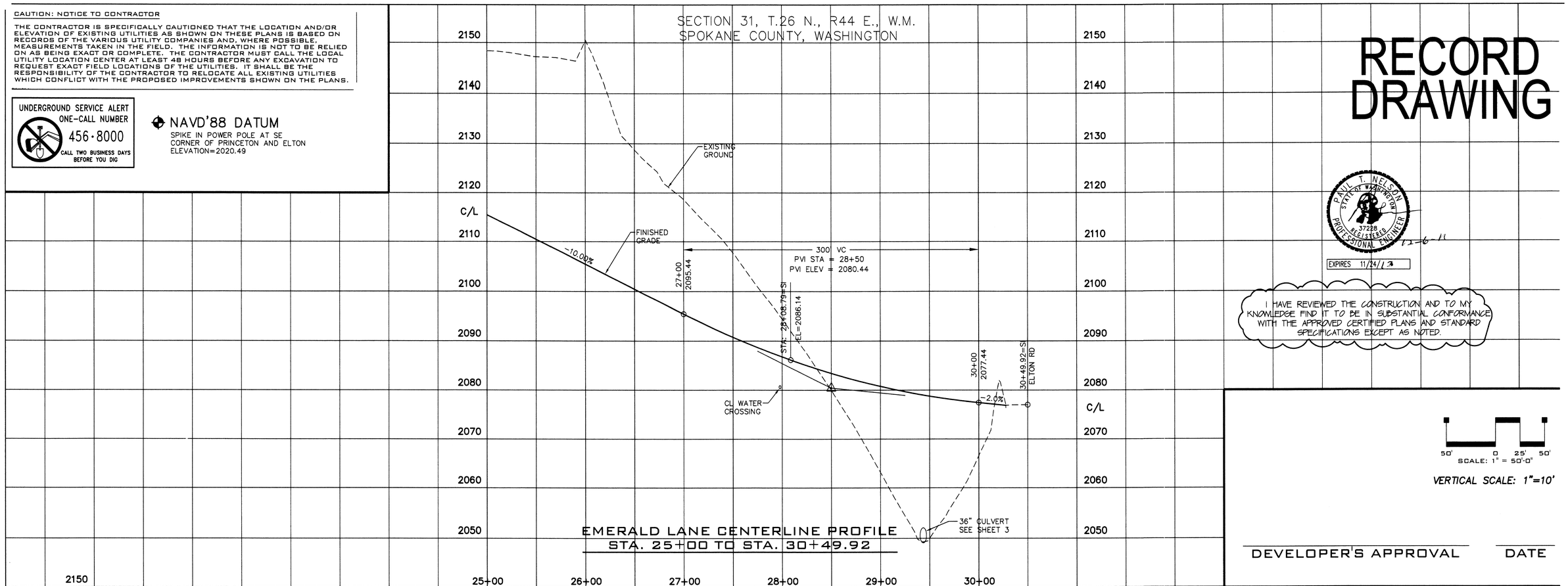
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

SECTION 31, T.26 N., R44 E., W.M.
SPOKANE COUNTY, WASHINGTON

RECORD DRAWING



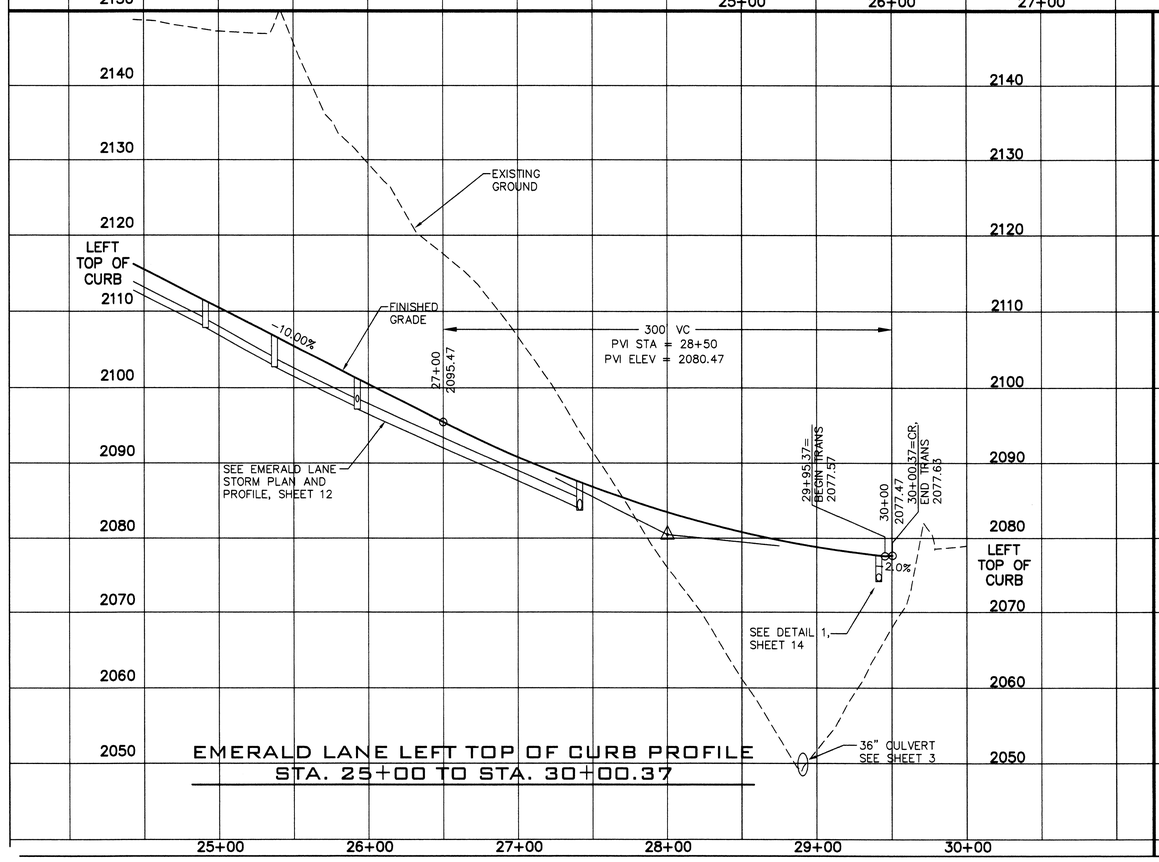
EMERALD LANE CENTERLINE PROFILE
STA. 25+00 TO STA. 30+49.92

PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED
PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

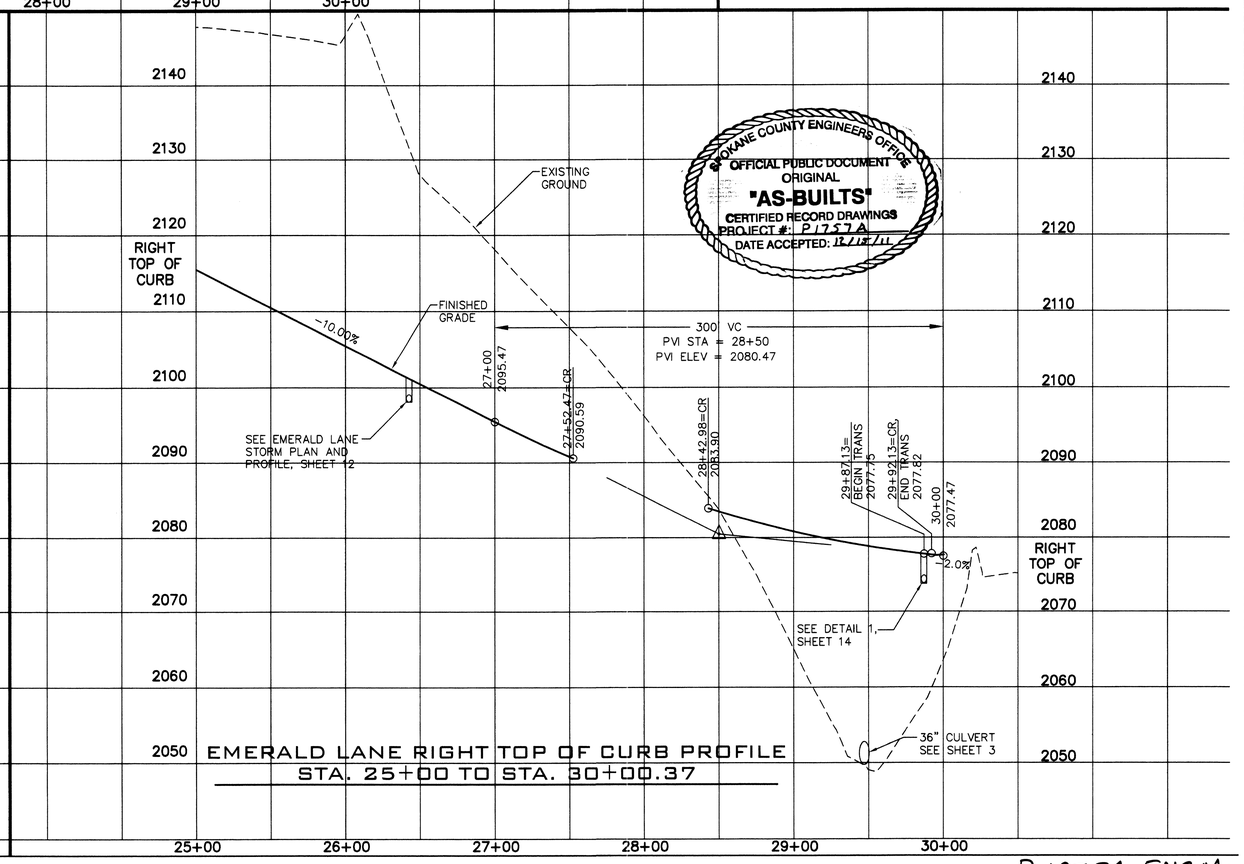
I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

50' 0 25' 50'
SCALE: 1" = 50'-0"
VERTICAL SCALE: 1"=10'

DEVELOPER'S APPROVAL DATE



EMERALD LANE LEFT TOP OF CURB PROFILE
STA. 25+00 TO STA. 30+00.37



EMERALD LANE RIGHT TOP OF CURB PROFILE
STA. 25+00 TO STA. 30+00.37

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/18/11

P-1975A ENG "As Builts"

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ARCHITECTURE
ENGINEERING PLANNING
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LAND SURVEYING

STREET/DRAINAGE PLANS

SANDY RIDGE
1 ST ADDITION P.U.D.
EMERALD LANE STA. 25+00 TO STA. 30+49.52
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 6/14/07

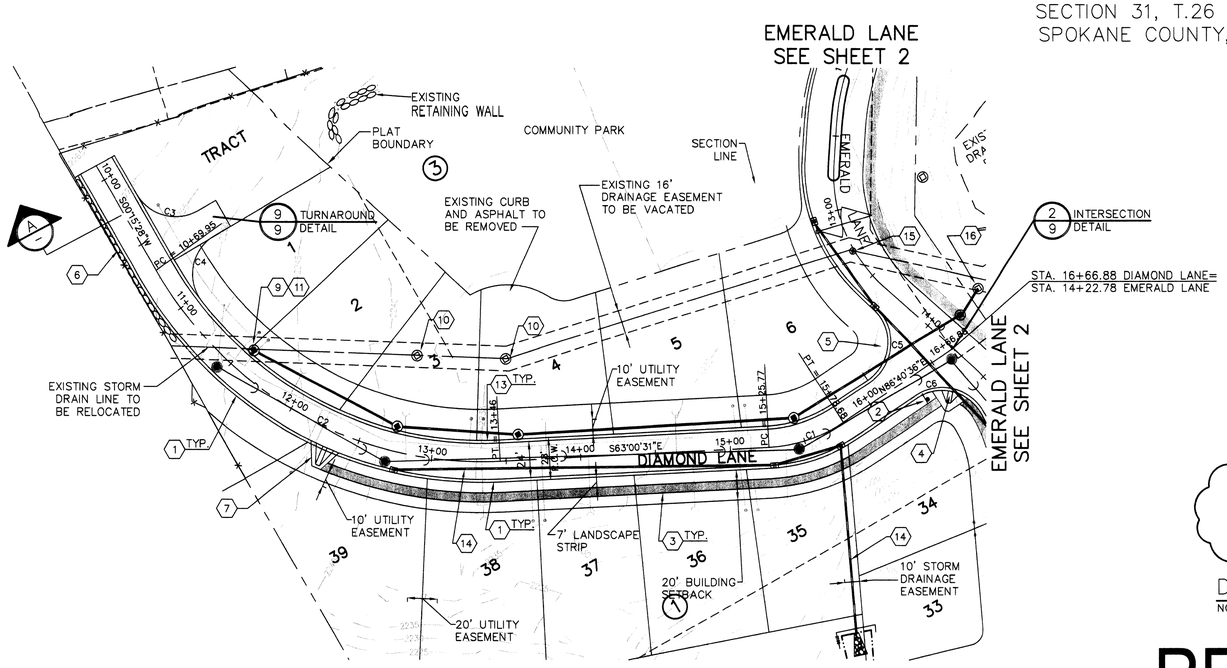
PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

DATE	DESCRIPTION
05/19/04	ORIGINAL PREPARATION
09/27/04	FIRST SUBMITTAL
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
- 12/1/11	- STREET & DRAINAGE RECORD DRAWING
-	- by ALLWEST TESTING AND ENGINEERING

EMERALD LANE PROFILE

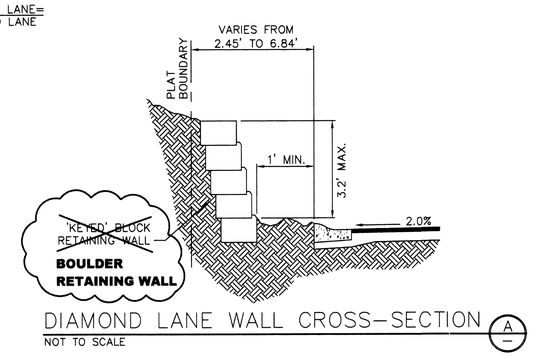
PROJECT #:S030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

SECTION 31, T.26 N., R44 E., W.M.
SPOKANE COUNTY, WASHINGTON



CURVE TABLE					
CURVE	LENGTH	RADIUS	TANGENT	CHORD	DELTA
C1	52.91	100.00	27.09	52.29	30°18'53"
C2	276.05	250.00	154.00	262.24	63°15'59"
C3	47.26	30.00	30.14	42.52	90°15'28"
C4	51.23	30.00	34.42	45.23	97°51'02"
C5	54.98	30.00	39.10	47.60	105°00'00"
C6	47.42	30.00	30.30	42.64	90°34'26"

TYPE R CURB RADIUS TO TOP BACK OF CURB.



DIAMOND LANE WALL CROSS-SECTION (A)
NOT TO SCALE

CONSTRUCTION NOTES

1. TYPE 'R' CURB AND GUTTER PER SPOKANE COUNTY STANDARD PLAN A-3 (TYPICAL).
2. PRIVATE ROAD STREET NAME SIGN PER MUTCD AND SPOKANE COUNTY STANDARD PLAN A-16.
3. CONSTRUCT 6' WIDE CONCRETE SIDEWALK.
4. CONSTRUCT CURB RAMP, DESIGN "B", PER SPOKANE COUNTY STANDARD PLAN A-5.
5. CONSTRUCT CURB RAMP, DESIGN "A", PER SPOKANE COUNTY STANDARD PLAN A-5.
6. RETAINING WALL DESIGNED BY OTHERS, STA 10+00 TO STA 11+15, SEE DETAIL A, THIS SHEET.
7. CONSTRUCT CURB RAMP, MODIFIED DESIGN "B", PER SPOKANE COUNTY STANDARD PLAN A-5.
8. NOT USED.
9. TYPE I-48 SEWER MANHOLE PER SPOKANE COUNTY STANDARD PLAN U-2.
10. EXISTING STORM DRAINAGE STRUCTURE AND PIPES TO BE REMOVED.
11. CONTRACTOR TO CONNECT TO EXISTING STORM SEWER AND PROVIDE MINIMUM 0.1' DROP BETWEEN EXISTING INVERT AND PROPOSED INVERT AT PROPOSED MANHOLE. CONTRACTOR TO FIELD VERIFY LOCATION AND SLOPE OF EXISTING PIPE. STORM PROFILE LOCATED ON SHEET 14A, DETAIL 5.
12. NOT USED.
13. SPILL CURB SEE DETAIL 10, SHEET 9.
14. STORM DRAINAGE, SEE PROFILE SHEET 14A.
15. REMOVE EXISTING STRUCTURE.
16. CORE DRILL EXISTING SDMH FOR 24" PIPE FROM SOUTHWEST. ~~REMOVE EXISTING 24" PIPE FROM NORTHWEST.~~ PLUG AND GROUT OPENING.

PIPE ABANDONED IN PLACE; FILLED WITH SAND AND BOTH ENDS FILLED WITH CONCRETE

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

CAUTION: NOTICE TO CONTRACTOR

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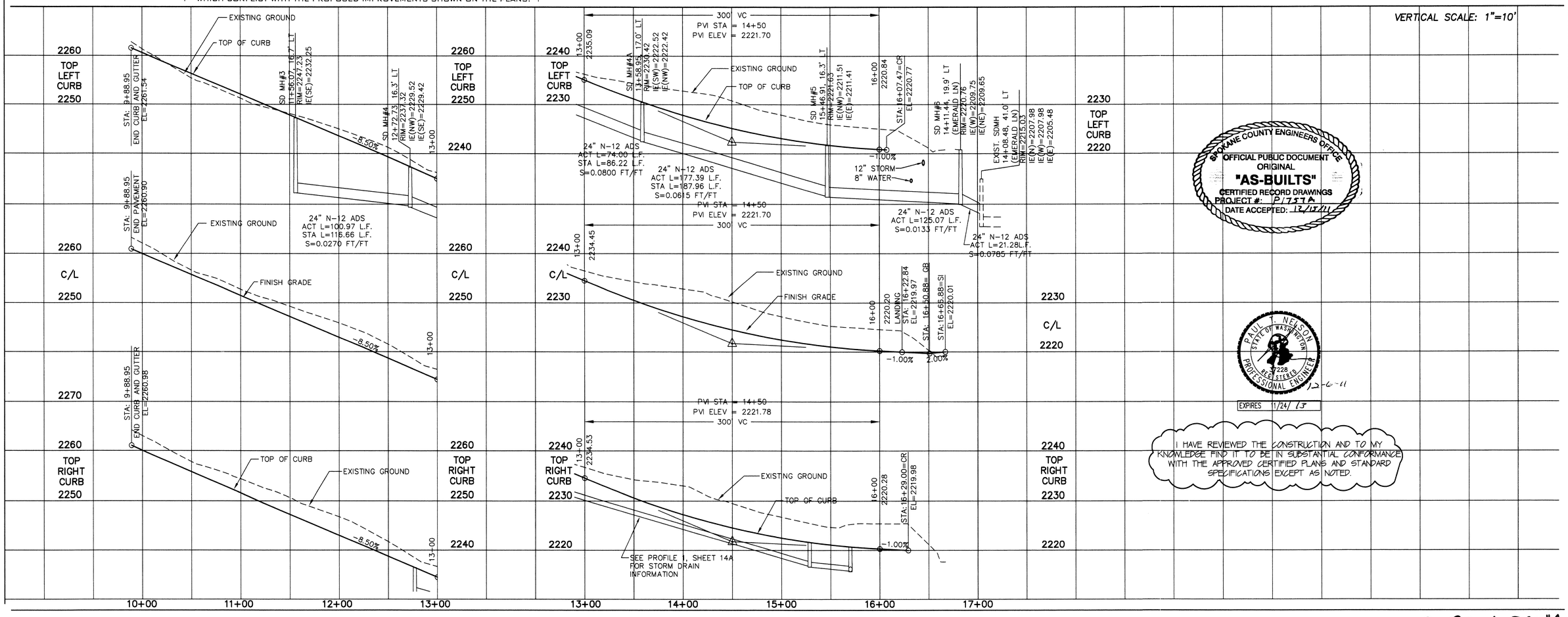
NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

RECORD DRAWING

DEVELOPER'S APPROVAL DATE

NORTH 50' 0 25' 50'
SCALE: 1" = 50'-0"

VERTICAL SCALE: 1"=10'



SPOKANE COUNTY ENGINEERS OFFICE
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CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/13/11

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PAUL T. NELSON
STATE OF WASHINGTON
22228
REGISTERED PROFESSIONAL ENGINEER
12-6-11
EXPIRES 1/24/13

CLC ASSOCIATES
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ARCHITECTURE
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LAND SURVEYING

STREET/DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
DIAMOND LANE STA. 10+00 TO STA. 16+66.88
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

DATE	DESCRIPTION
05/19/04	ORIGINAL PREPARATION
09/28/04	FIRST SUBMITTAL
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
10/1/11	STREET & DRAINAGE RECORD DRAWING by ALLWEST TESTING AND ENGINEERING

DIAMOND LANE P AND P

PROJECT #: S030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

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P-1975A Eng "As Built"

SECTION 31, T.26 N., R44 E., W.M.
SPOKANE COUNTY, WASHINGTON

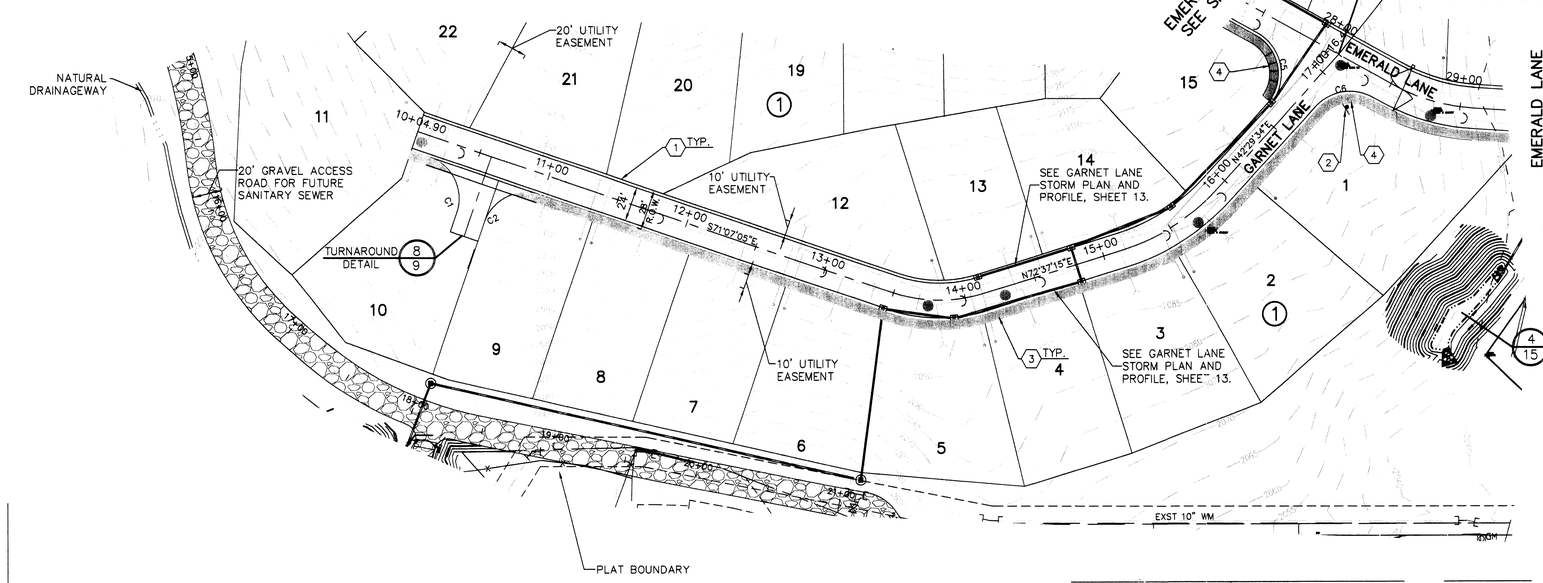
RECORD DRAWING

CONSTRUCTION NOTES

1. TYPE 'R' CURB AND GUTTER PER SPOKANE COUNTY STANDARD PLAN A-3 (TYPICAL).
2. PRIVATE ROAD STREET NAME SIGN PER MUTCD AND SPOKANE COUNTY STANDARD PLAN A-16.
3. CONSTRUCT 6' WIDE CONCRETE SIDEWALK.
4. CONSTRUCT CURB RAMP, DESIGN "A", PER SPOKANE COUNTY STANDARD PLAN A-5.

CURVE TABLE					
CURVE	LENGTH	RADIUS	TANGENT	CHORD	DELTA
C1	47.12	30.00	30.00	42.43	90°00'00"
C2	47.12	30.00	30.00	42.43	90°00'00"
C3	110.75	175.00	57.30	108.91	36°15'41"
C4	76.25	145.00	39.03	75.37	30°07'40"
C5	54.20	30.00	38.07	47.12	103°31'05"
C6	40.05	30.00	23.64	37.14	76°28'55"

TYPE R CURB RADIUS IS TOP BACK OF CURB.



UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

CAUTION: NOTICE TO CONTRACTOR

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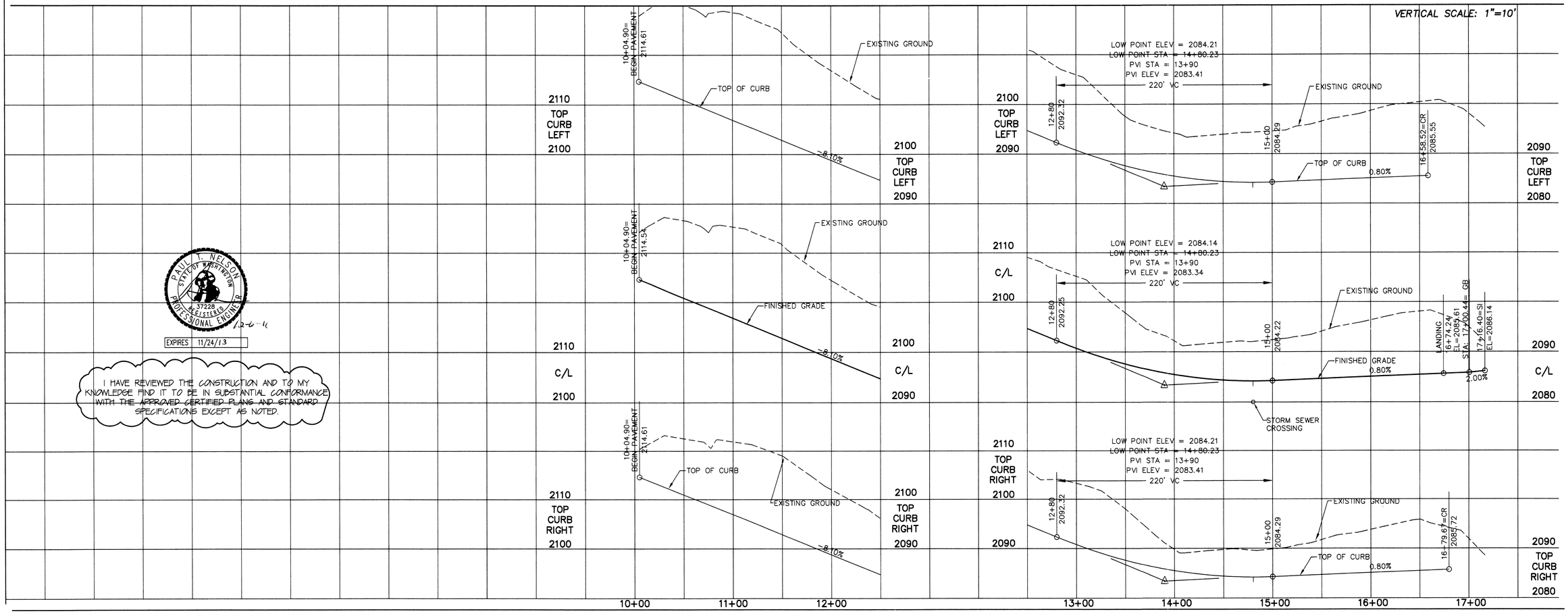
DEVELOPER'S APPROVAL — DATE

NORTH 50' 0 25' 50'
SCALE: 1" = 50'-0"

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 11/15/11

VERTICAL SCALE: 1"=10'



PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

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STREET/DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
GARNET LANE STA. 10+00 TO STA. 17+13.40
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
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39236
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07

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DATE		DESCRIPTION
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- 10/1/11	-	- STREET & DRAINAGE RECORD DRAWING
	-	- by ALLWEST TESTING AND ENGINEERING

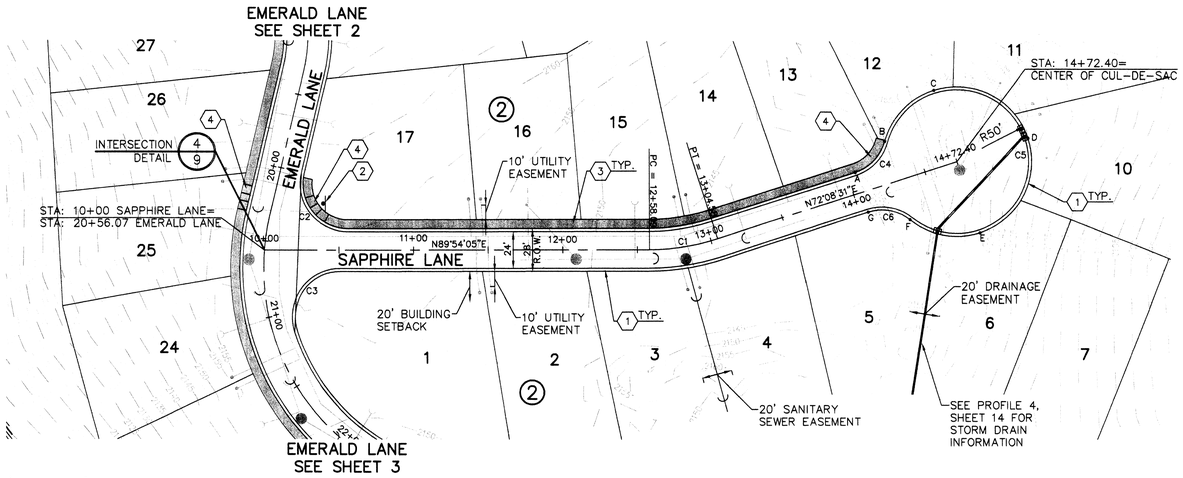
GARNET LANE P AND P

PROJECT #: S030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

P-1975A "Eng "As Builts"

SECTION 31, T.26 N., R44 E., W.M.
SPOKANE COUNTY, WASHINGTON

RECORD DRAWING



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PROJECT #: P1757A
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CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD	DELTA
C1	46.49	150.00	23.43	46.31	17°45'33"
C2	54.16	30.00	38.01	47.10	103°25'45"
C3	56.49	30.00	41.21	48.51	107°53'44"
C4	29.65	30.00	16.16	28.46	56°37'59"
C5	255.92	50.00	32.93	55.00	293°15'58"
C6	29.65	30.00	16.16	28.46	56°37'59"

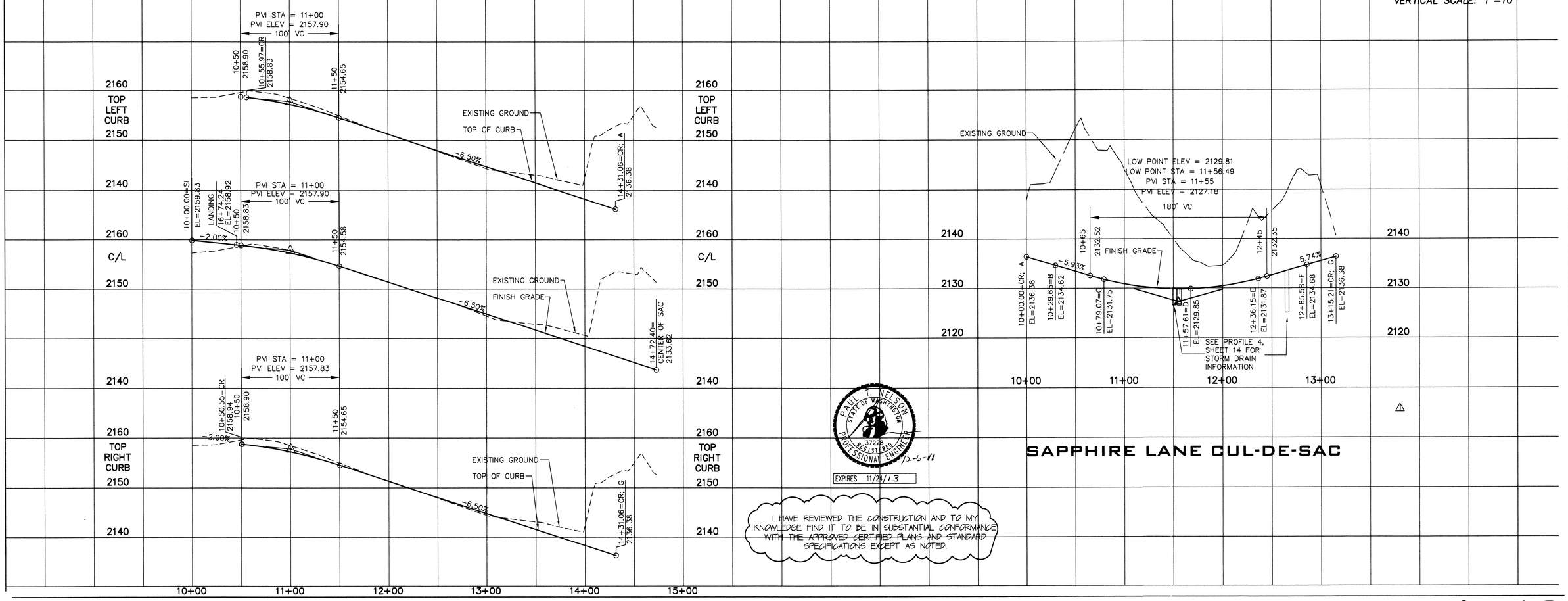
TYPE R CURB RADIUS IS TOP BACK OF CURB.

DEVELOPER'S APPROVAL

DATE

NORTH 50' 0 25' 50'
SCALE: 1" = 50'-0"

VERTICAL SCALE: 1"=10'



SAPPHIRE LANE CUL-DE-SAC

PAUL T. NELSON
STATE OF WASHINGTON
#37228
REGISTERED PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

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05/19/04	-	ORIGINAL PREPARATION
05/23/05	1	SAPHIRE CDS REVISION
06/30/05	-	FINAL SUBMITTAL
12/1/11	-	- STREET & DRAINAGE RECORD DRAWING - by ALLWEST TESTING AND ENGINEERING

SAPPHIRE LANE P AND P

PROJECT #: S030100
DRAWN BY: DJ/JR
DESIGNED BY: SKM
CHECKED BY: MLK

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P-1975A Eng "As Builts"

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SPOKANE COUNTY, WASHINGTON

RECORD DRAWING

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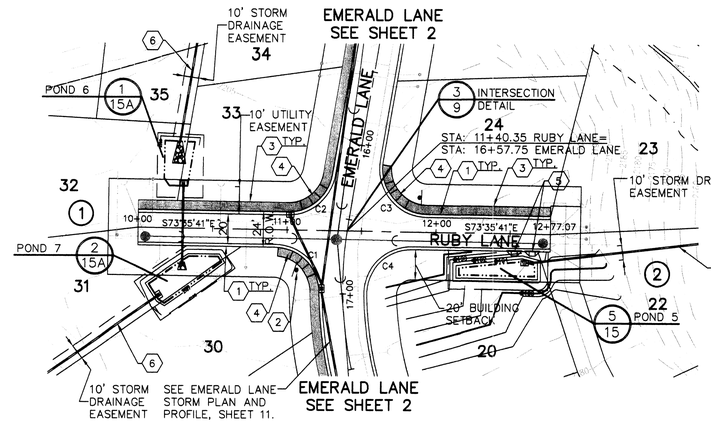
4. CONSTRUCT CURB RAMP, DESIGN "A", PER SPOKANE COUNTY STANDARD PLAN A-5.
5. CURB INLET TYPE 1 PER SPOKANE COUNTY STANDARD PLAN B-8, L=6', STA 12+53.00 AND STA 12+65.00.
6. STORM DRAINAGE, SEE PROFILE SHEET 14A.

CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD	DELTA
C1	46.31	30.00	29.19	41.85	88°26'29"
C2	42.47	30.00	25.68	39.01	81°07'09"
C3	51.77	30.00	35.05	45.58	98°52'51"
C4	48.31	30.00	31.21	43.26	92°15'43"



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PROJECT #: P1975A
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NAVD'88 DATUM
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CALL TWO BUSINESS DAYS BEFORE YOU DIG

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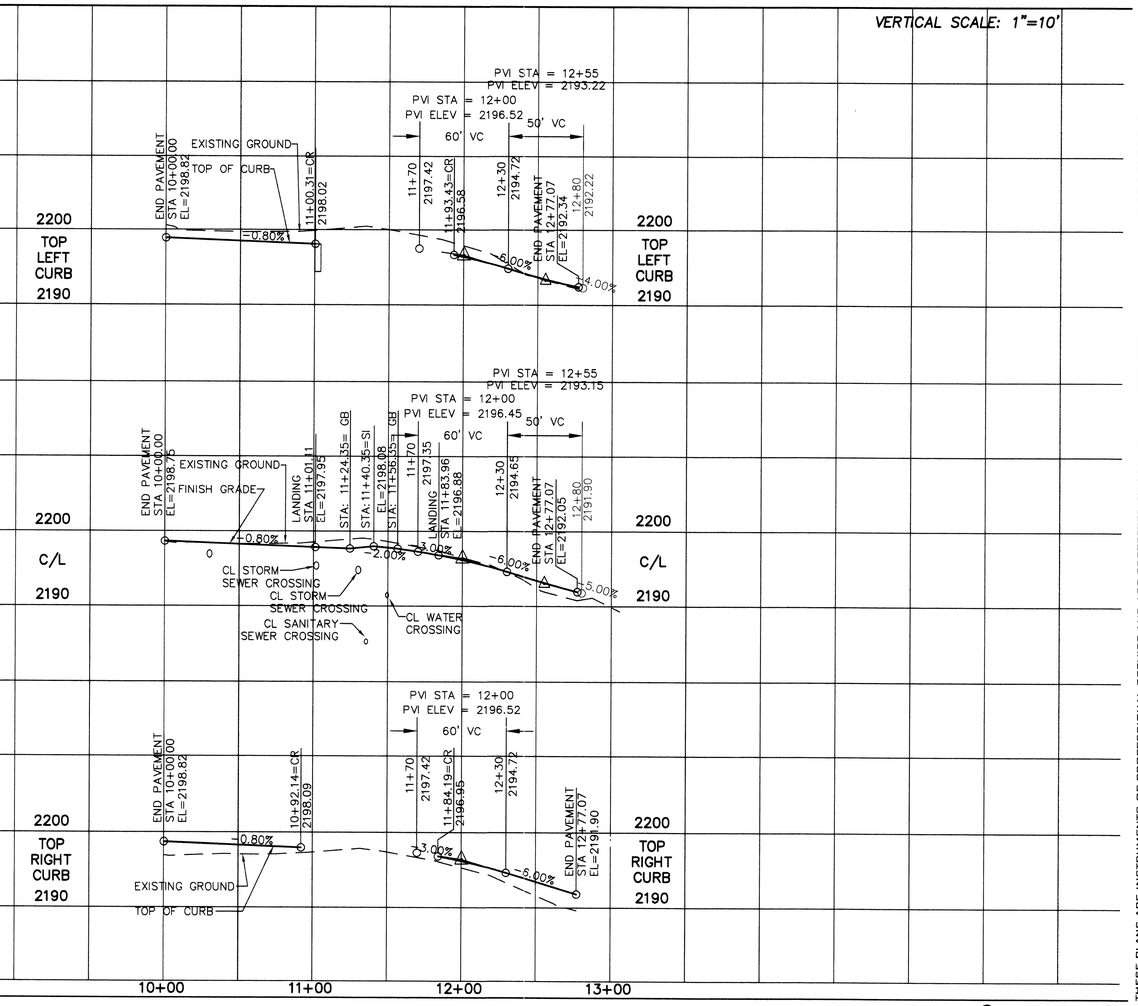
DEVELOPER'S APPROVAL DATE

NORTH 50' 0 25' 50'
SCALE: 1" = 50'-0"

VERTICAL SCALE: 1"=10'



PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 11/24/13

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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ARCHITECTURE
ENGINEERING PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING

STREET/DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
RUBY LANE STA. 10+00 TO STA. 12+77.07
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07

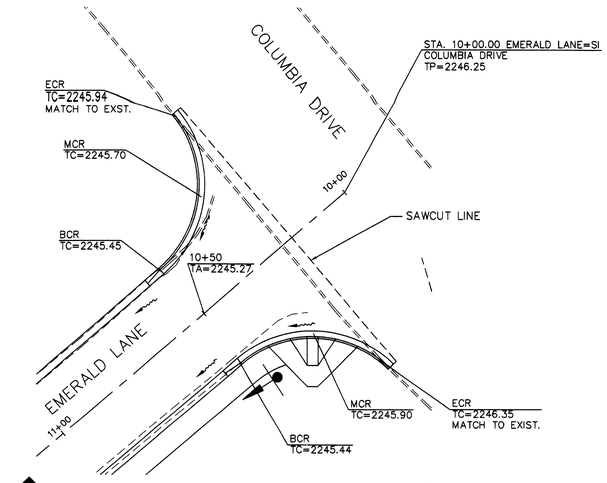
PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM,P.E. WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

DATE		DESCRIPTION
05/19/04	-	ORIGINAL PREPARATION
09/28/04	△	FIRST SUBMITTAL
11/23/04	△	SECOND SUBMITTAL
06/30/05	△	FINAL SUBMITTAL
- 10/1/11	-	- STREET & DRAINAGE RECORD DRAWING
-	-	- by ALLWEST TESTING AND ENGINEERING

RUBY LANE PLAN AND PROFILE

PROJECT #:S030100
DRAWN BY: DJ/JR
DESIGNED BY: SKM
CHECKED BY: MLK

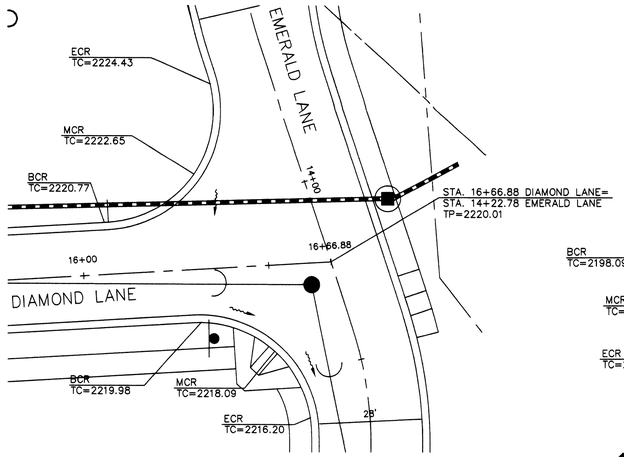
P-1975A Eng "As Builts"



NORTH

INTERSECTION 1

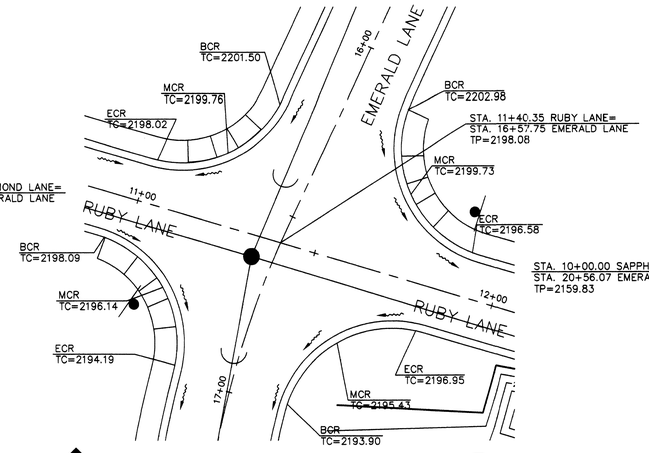
SCALE: 1"=20'



NORTH

INTERSECTION 2

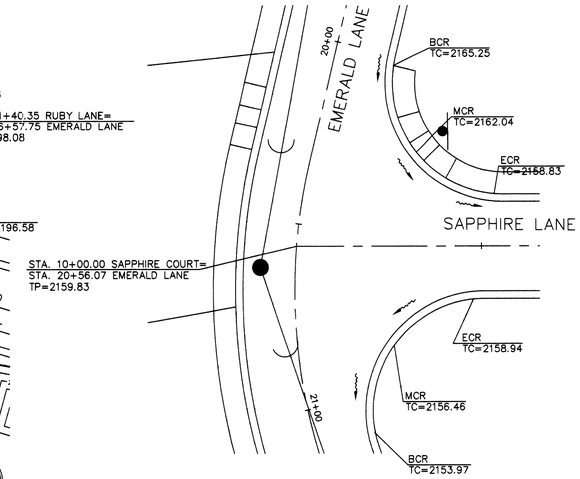
SCALE: 1"=20'



NORTH

INTERSECTION 3

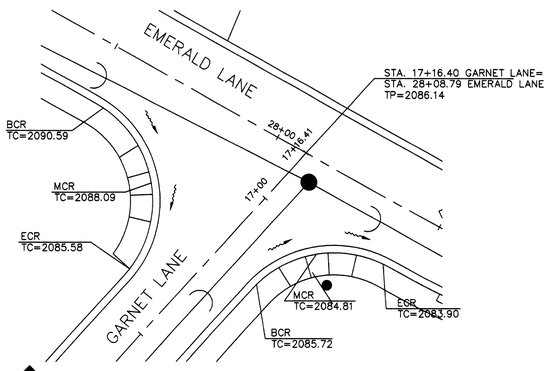
SCALE: 1"=20'



NORTH

INTERSECTION 4

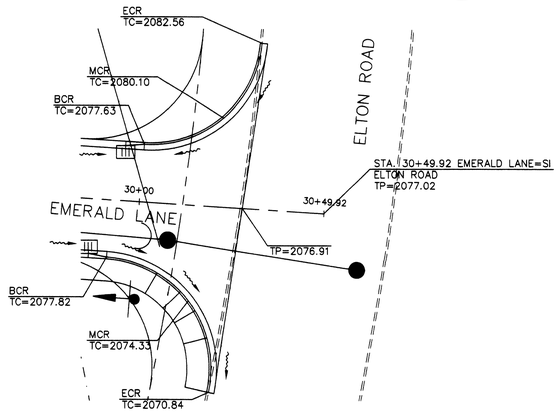
SCALE: 1"=20'



NORTH

INTERSECTION 5

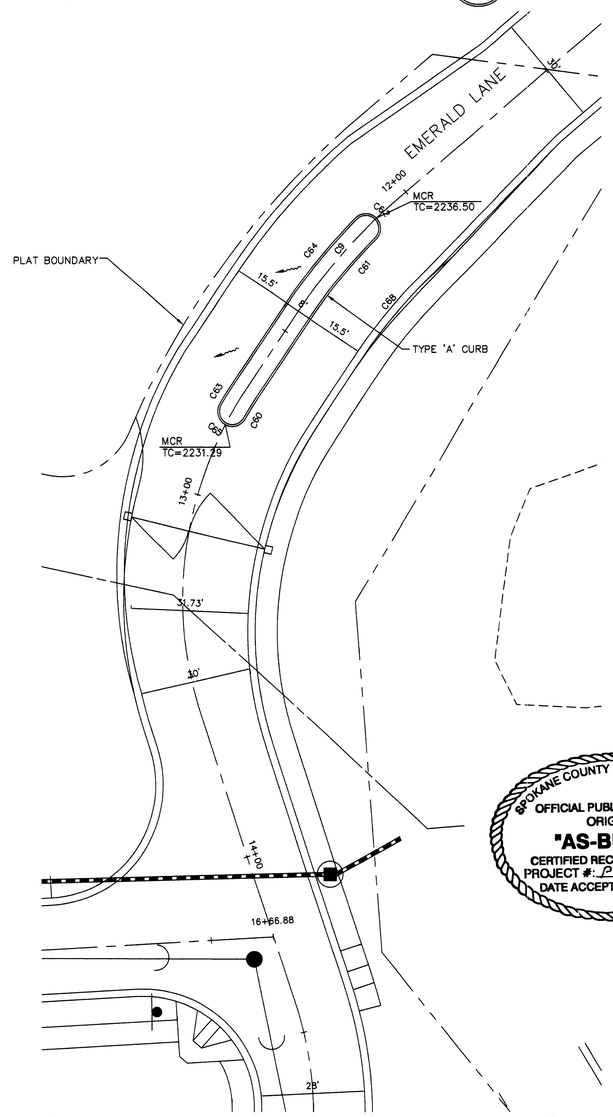
SCALE: 1"=20'



NORTH

INTERSECTION 6

SCALE: 1"=20'



NORTH

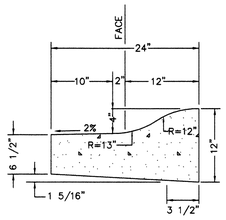
MEDIAN DETAIL 7

SCALE: 1"=20'

CURVE TABLE					
CURVE	LENGTH	RADIUS	TANGENT	CHORD	DELTA
C9	41.91	150.00	21.09	S41°37'28"W	16°00'35"
C60	5.63	96.00	2.82	S31°56'24"W	3°21'34"
C61	28.89	146.57	14.49	S39°16'43"W	11°17'33"
C62	12.57	4.00	INFINITE	N43°00'12"W	180°00'00"
C63	6.58	98.34	3.29	S31°48'05"W	3°49'53"
C64	30.75	153.97	15.43	S39°20'28"W	11°26'41"
C65	12.57	4.00	INFINITE	S63°09'49"E	180°00'00"

NOTE: TYPE A CURB MEASURED FROM FACE OF CURB.
TYPE R CURB MEASURED FROM BACK OF CURB.

RECORD DRAWING



TYPE "R" SPILL CURB 10

NOT TO SCALE

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/13/11

PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED
PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

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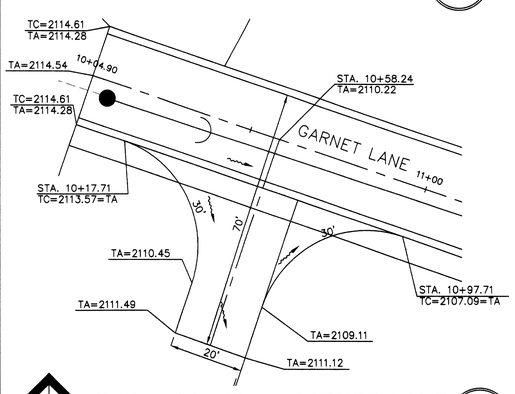
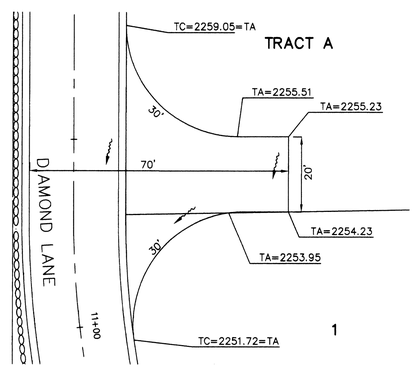


NORTH

TURNAROUND – GARNET LANE 8

SCALE: 1"=20'



NORTH

TURNAROUND – DIAMOND LANE 9

SCALE: 1"=20'

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
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NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

DEVELOPER'S APPROVAL

DATE

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STREET AND STORM DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
STREET DETAILS
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

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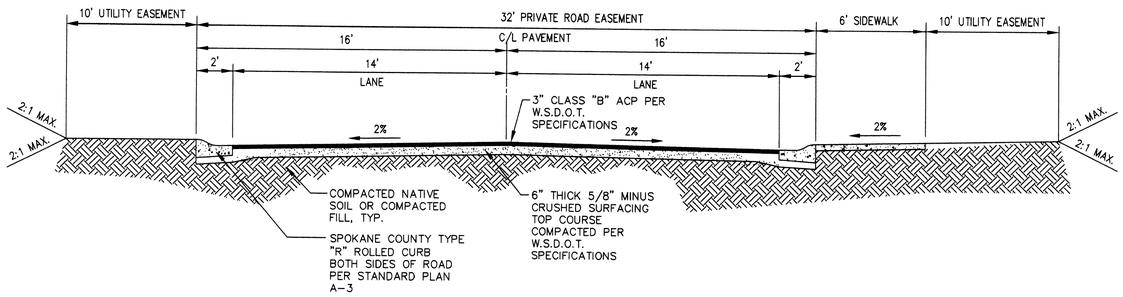
09/28/04	FIRST SUBMITTAL
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
12/1/11	STREET & DRAINAGE RECORD DRAWING by ALLWEST TESTING AND ENGINEERING

STREET DETAILS

PROJECT #S030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

P-1975A "Eng "As Builts"

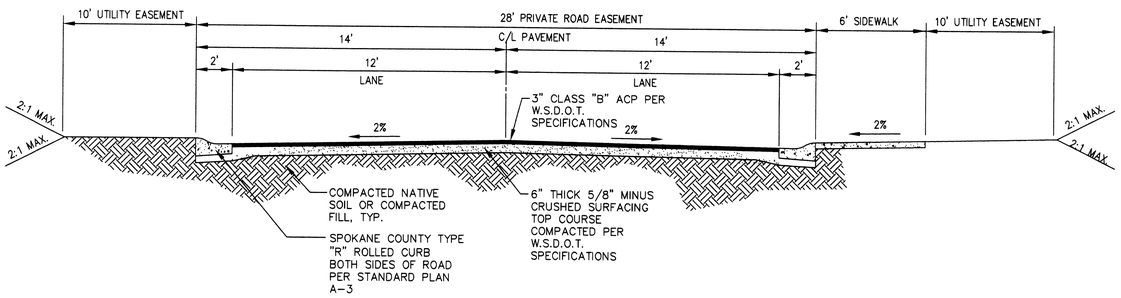
RECORD DRAWING



TYPICAL ROAD SECTION – EMERALD LANE (1)

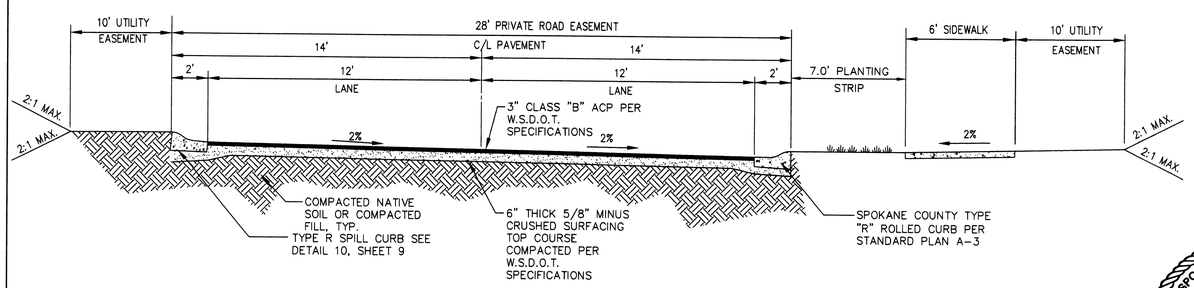
NOT TO SCALE

STA 14+22.78 TO STA 30+00



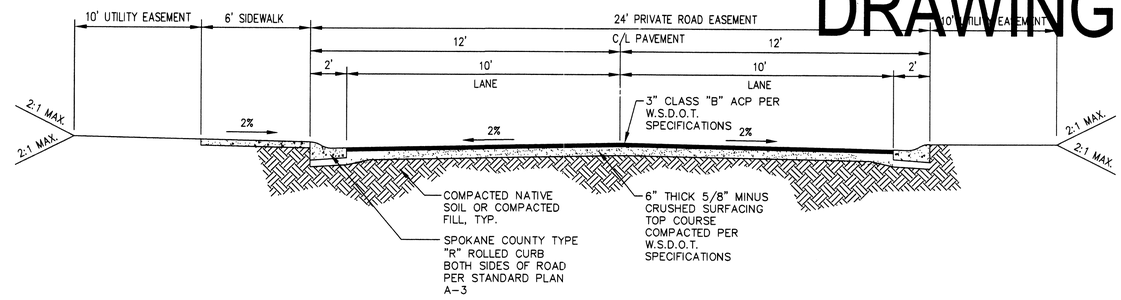
TYPICAL ROAD SECTION – GARNET LANE (2)

NOT TO SCALE



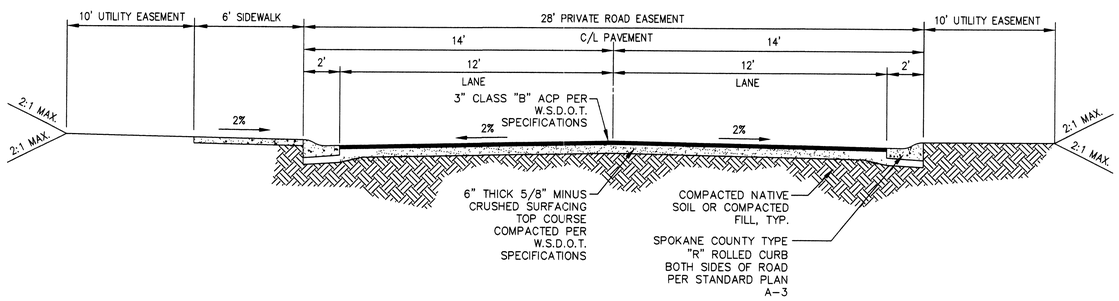
TYPICAL ROAD SECTION – DIAMOND LANE (3)

NOT TO SCALE



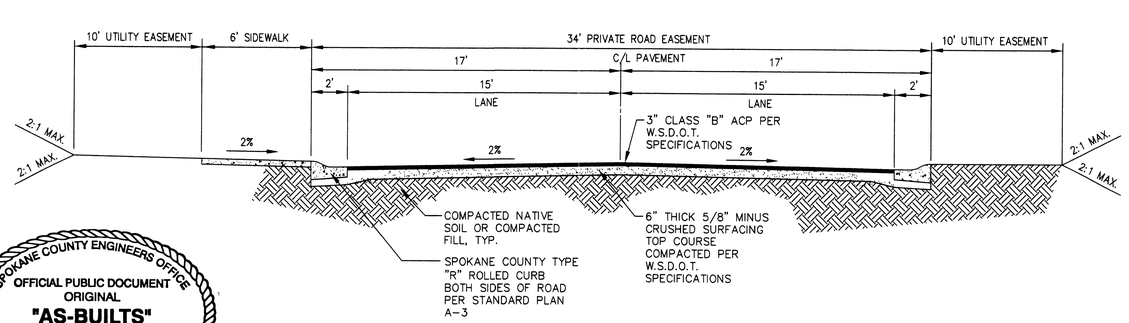
TYPICAL ROAD SECTION – RUBY LANE (4)

NOT TO SCALE



TYPICAL ROAD SECTION – SAPPHIRE LANE (5)

NOT TO SCALE



TYPICAL ROAD SECTION – EMERALD LANE STA 10+50 TO STA 14+22.78 (6)

NOT TO SCALE

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/15/11

NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

UNDERGROUND SERVICE ALERT
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456·8000
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NOTE:
TYPICAL ROAD CROSS SECTIONS PER SPOKANE COUNTY STANDARD DRAWING A-1.

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PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED
PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

DEVELOPER'S APPROVAL DATE

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STREET AND STORM DRAINAGE PLANS

SANDY RIDGE
FIRST ADDITION P.U.D.
STREET DETAILS
SPOKANE COUNTY, WA

MARK L KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 6/14/07
PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

DATE	DESCRIPTION
05/19/04	ORIGINAL PREPARATION
09/28/04	FIRST SUBMITTAL
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
10/1/11	- STREET & DRAINAGE RECORD DRAWING
	- by ALLWEST TESTING AND ENGINEERING

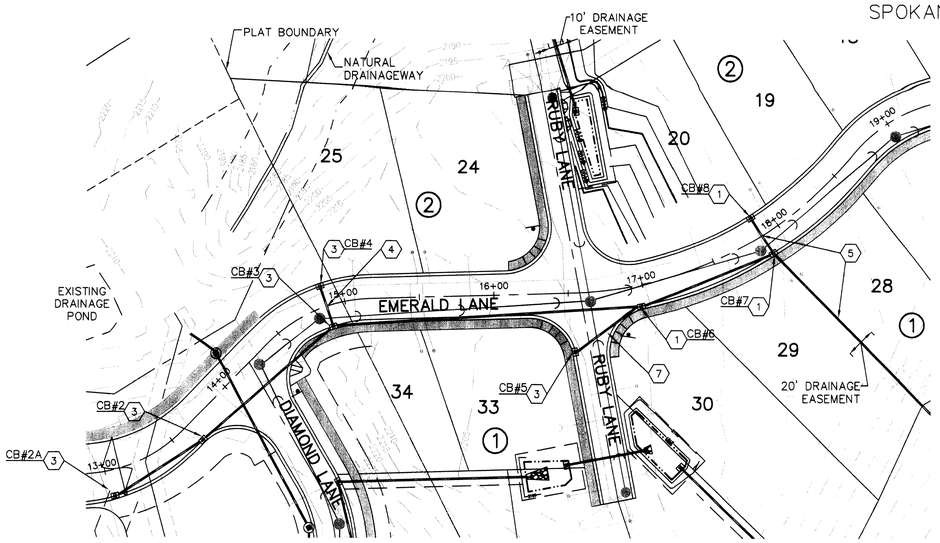
STREET DETAILS

PROJECT #S030100
DRAWN BY: DJ/JR
DESIGNED BY: SKM
CHECKED BY: MLK

P-1975A "Eng As Builts"

SECTION 31, T.26 N., R44 E., W.M.
SPOKANE COUNTY, WASHINGTON

RECORD DRAWING



CONSTRUCTION NOTES

1. W.S.D.O.T. GRATE INLET TYPE 2 WITH FRAME AND VANED GRATE PER W.S.D.O.T. STANDARD PLANS, B-4D. INLET SHALL BE ORIENTATED SO THAT THE 42" SIDE IS PERPENDICULAR TO THE CURB. SEE CATCH BASIN SCHEDULE BELOW FOR LOCATION AND RIM ELEVATION.
2. NOT USED.
3. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE PER SPOKANE COUNTY STANDARD PLANS, B-4, B-10, & B-12. SEE CATCH BASIN SCHEDULE BELOW FOR LOCATION AND RIM ELEVATION.
4. INSTALL APPROX. 28.5' OF 12" N-12 ADS; IE CB#3=2210.90, IE CB#4=2211.25, S=0.0123 FT/FT.
5. SEE DETAIL 5, SHEET 14 FOR PROFILE.
6. NOT USED.
7. INSTALL APPROX. 53.5' OF 12" N-12 ADS; IE CB #5=2194.64, IE CB#6=2191.08, S=0.0665 FT/FT.

CATCH BASIN SCHEDULE		
CB NUM.	STATION	RIM ELEV.
CB 2	13+64.90, RT.	2223.83
CB 2A	13+02.39, RT.	2228.62
CB 3	14+87.43, RT.	2214.12
CB 4	14+87.43, LT.	2214.12
CB 5	16+53.47, 39.4' RT.	2197.53
CB 6	16+95.45, RT.	2193.91
CB 7	17+86.99, RT.	2185.39
CB 8	17+86.99, LT.	2185.39

* STATIONS REFERENCE EMERALD LANE CENTERLINE.

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/15/11

UNDERGROUND SERVICE ALERT
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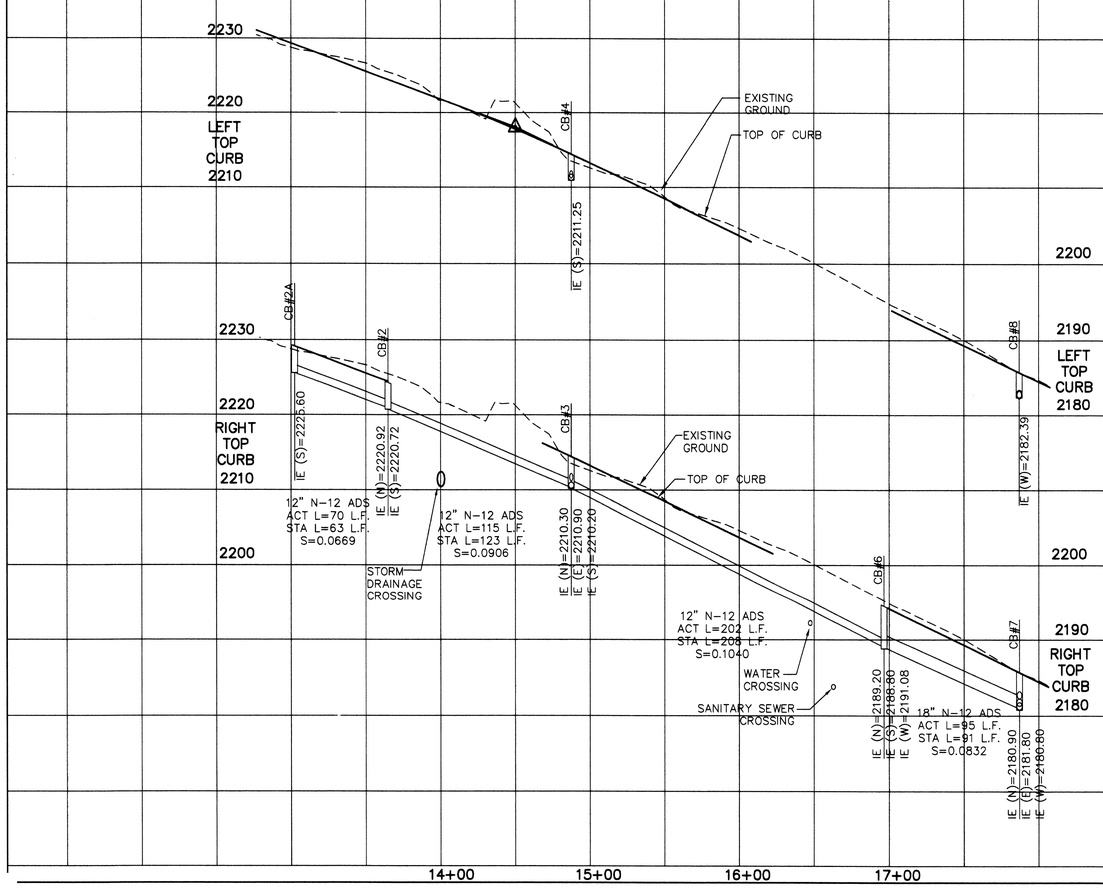
ELEVATION=2020.49

DEVELOPER'S APPROVAL DATE

NORTH 50' 0 25' 50'
SCALE: 1" = 50'-0"

VERTICAL SCALE: 1"=10'



PAUL T. NELSON
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37228
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12-6-11
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1ST ADDITION P.U.D.
EMERALD LANE STA. 13+50 TO STA. 18+00
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 33236 FOR AND ON BEHALF OF CLC ASSOCIATE

DATE	DESCRIPTION
05/19/04	ORIGINAL PREPARATION
09/28/04	FIRST ADDITION
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
10/1/11	- STREET & DRAINAGE RECORD DRAWING
-	- by ALLWEST TESTING AND ENGINEERING

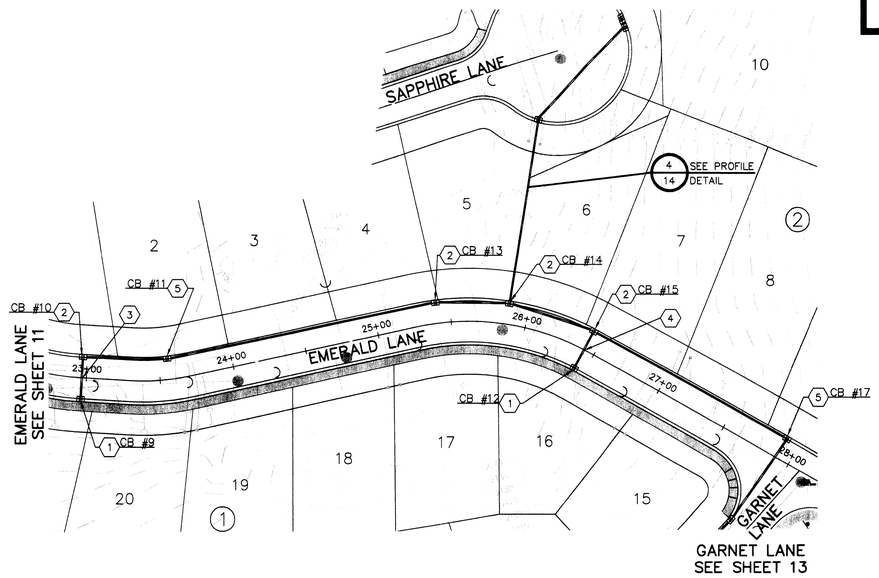
EMERALD LANE SD PROFILE

PROJECT #:S030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

P-1975A Eng "As Builts"

SECTION 31, T.26 N., R44 E., W.M.
SPOKANE COUNTY, WASHINGTON

RECORD DRAWING



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2. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE PER SPOKANE COUNTY STANDARD PLANS, B-4, B-10 & B-12. SEE CATCH BASIN SCHEDULE BELOW FOR LOCATION AND RIM ELEVATION.
3. INSTALL APPROX. 28.5' OF 12" N-12 ADS; IE CB#9=2132.46, IE CB#10=2132.17, S=0.0102
4. INSTALL APPROX. 28.5' OF 12" N-12 ADS; IE CB#15=2098.07, IE CB #12=2097.48, S=0.0207
5. INSTALL 48" DIAMETER CATCH BASIN PER W.S.D.O.T. STANDARD PLAN B-1E, WITH FRAME AND VANED GRATE PER W.S.D.O.T. STANDARD PLANS, B-4D. SEE CATCH BASIN SCHEDULE BELOW FOR LOCATION AND RIM ELEVATION.

CATCH BASIN SCHEDULE

CB NUM.	STATION	RIM ELEV.
CB 9	22+96.88, RT.	2135.46
CB 10	22+96.94, LT.	2135.28
CB 11	23+56.41, LT.	2129.34
CB 12	26+42.60, RT.	2100.90
CB 13	25+41.05, LT.	2110.87
CB 14	25+87.16, LT.	2106.26
CB 15	26+42.59, LT.	2100.72
CB 17	27+91.32, LT.	2087.13

* STATIONS REFERENCE EMERALD LANE CENTERLINE.

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/15/11

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CALL TWO BUSINESS DAYS BEFORE YOU DIG

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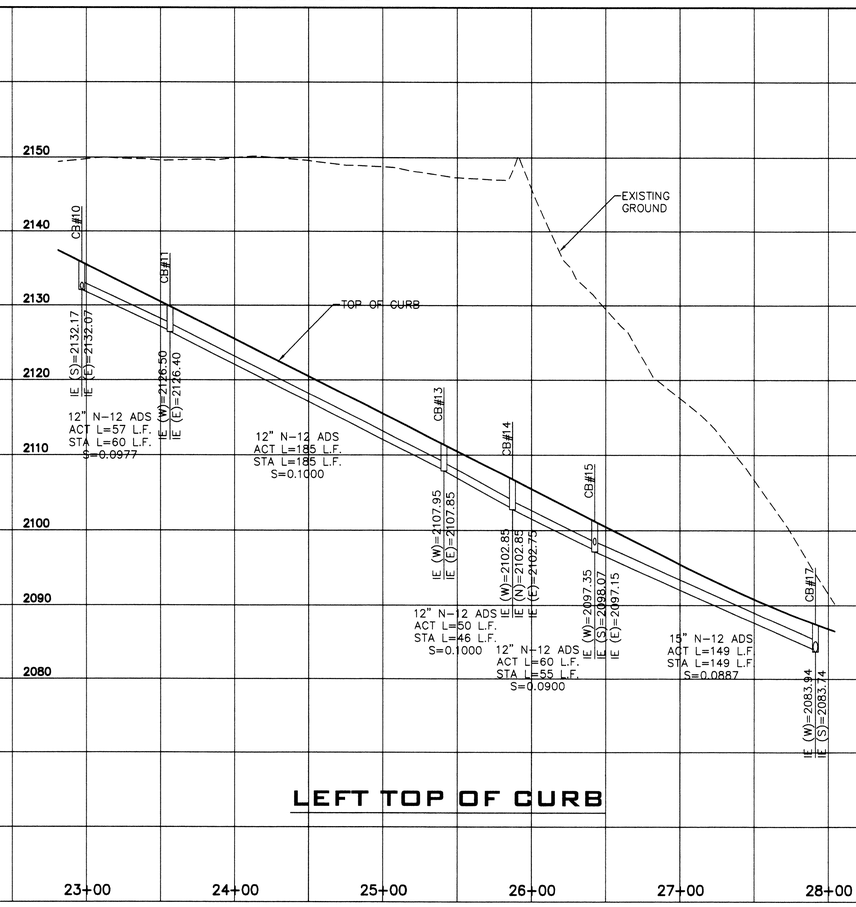
NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

DEVELOPER'S APPROVAL

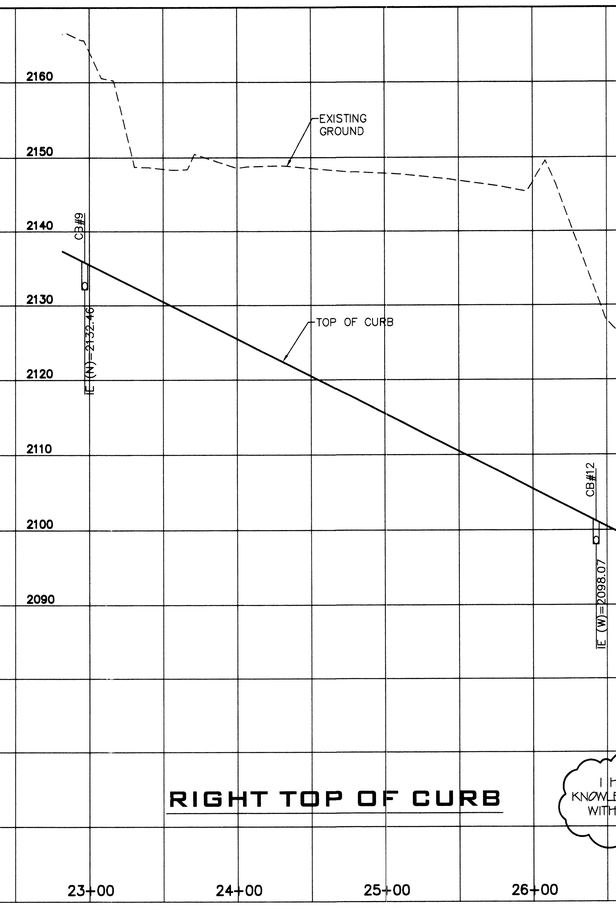
DATE

NORTH 50' 0 25' 50'
SCALE: 1" = 50'-0"

VERTICAL SCALE: 1"=10'



LEFT TOP OF CURB



RIGHT TOP OF CURB

PAUL T. NELSON
STATE OF WASHINGTON
37228
PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

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.

CLC ASSOCIATES
12730 E. MIRABEAU PKWY
SUITE 100
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WASHINGTON 99216
P 509 458 6840
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ARCHITECTURE
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LANDSCAPE ARCHITECTURE
LAND SURVEYING

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STREET/DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
EMERALD LANE STA. 22+50 TO STA 28+00
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 33236 FOR AND ON BEHALF OF CLC ASSOCIATE

DATE		DESCRIPTION
05/19/04	-	ORIGINAL PREPARATION
09/28/04	-	FIRST SUBMITTAL
11/23/04	-	SECOND SUBMITTAL
06/30/05	-	FINAL SUBMITTAL
10/1/11	-	-STREET & DRAINAGE RECORD DRAWING by ALLWEST TESTING AND ENGINEERING

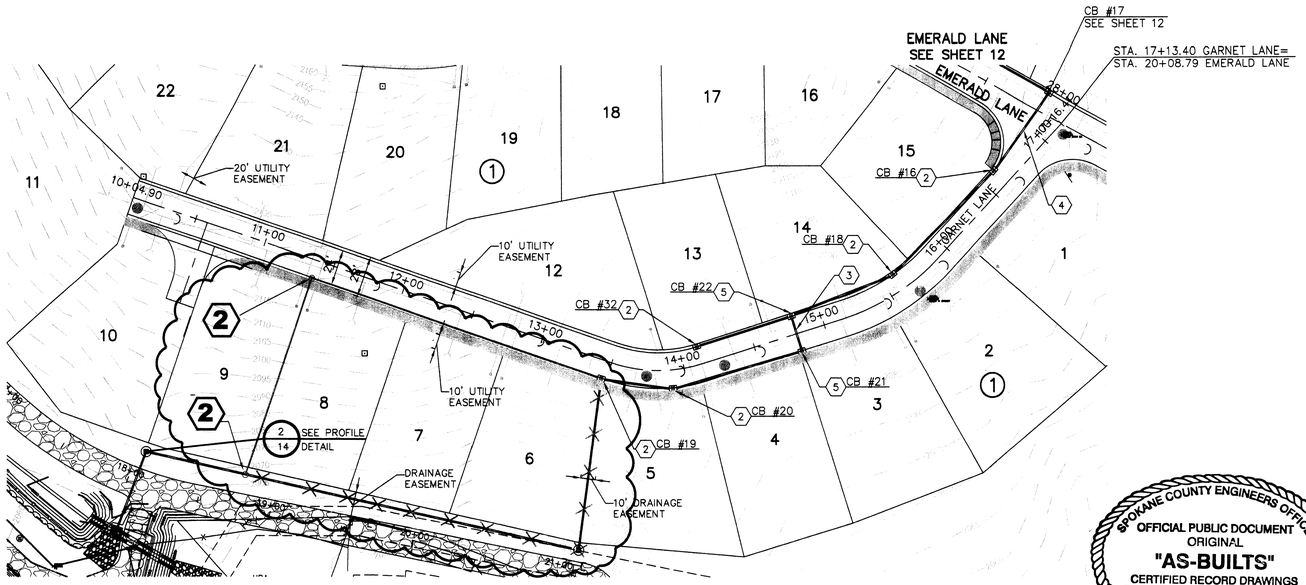
EMERALD LANE SD PROFILE

PROJECT #:S030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

P-1975A "Eng "As Builts"

SECTION 31, T.26 N., R44 E., W.M.
SPOKANE COUNTY, WASHINGTON

RECORD DRAWING



CONSTRUCTION NOTES

1. NOT USED
2. INSTALL 48" DIAMETER TYPE 2 CATCH BASIN PER W.S.D.O.T. STANDARD PLAN B-1E, WITH TYPE 1 METAL FRAME AND GRATE PER SPOKANE COUNTY STANDARD PLANS B-10 & B-12. SEE CATCH BASIN SCHEDULE BELOW FOR LOCATION AND RIM ELEVATION.
3. INSTALL APPROX. 24.5' OF 24" N-12 ADS; IE CB#21=2078.59, IE CB#22=2079.08, S=0.020 FT/FT.
4. INSTALL APPROX. 65.6' OF 24" N-12 ADS; IE CB#17=2083.10, IE CB#16=2081.26, S=0.0280 FT/FT.
5. INSTALL 48" DIAMETER TYPE 2 CATCH BASIN PER W.S.D.O.T. STANDARD PLAN B-1E, WITH TYPE 2 METAL FRAME WITH HOOD AND TYPE 3 GRATE PER SPOKANE COUNTY STANDARD PLANS B-11 & B-14. SEE INLET DETAIL SHEET 15A. SEE CATCH BASIN SCHEDULE BELOW FOR LOCATION AND RIM ELEVATION.
6. NOT USED.

CATCH BASIN/INLET SCHEDULE

CB NUM.	STATION	RIM ELEV.
CB 16	16+61.07, LT.	2085.09
CB 18	15+59.09, LT.	2084.27
CB 19	13+46.25, RT.	2087.41
CB 20	13+91.26, RT.	2085.39
CB 21	14+80.23, RT.	2083.71
CB 22	14+80.23, LT.	2083.71
CB 32	14+12.65, LT.	2084.72

* STATIONS REFERENCE GARNET LANE CENTERLINE.

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/15/11

NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
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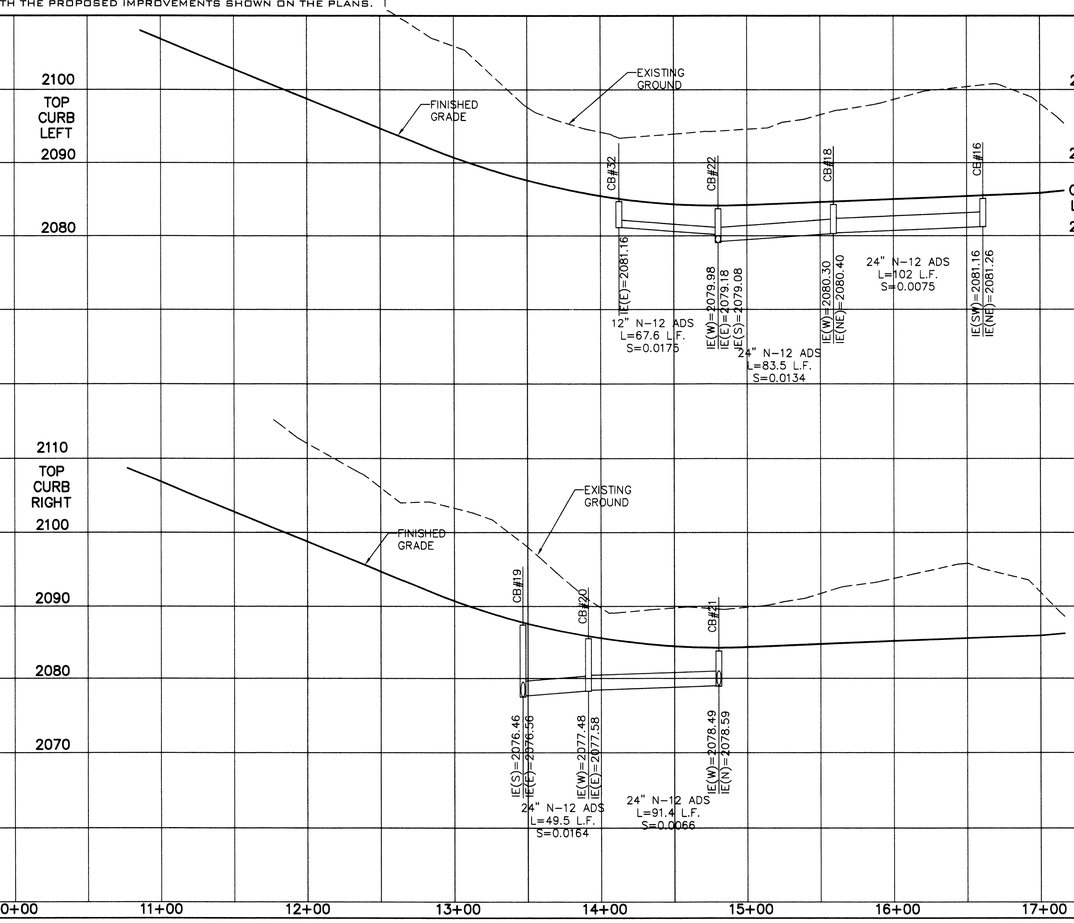
DEVELOPER'S APPROVAL DATE

NORTH 50' 0 25' 50'
SCALE: 1" = 50'-0"

VERTICAL SCALE: 1"=10'



PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

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ARCHITECTURE
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STREET/DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
GARNET LANE STA. 10+00 TO STA.17+13.40
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07

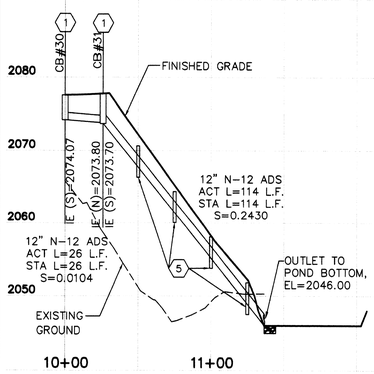
PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

DATE	DESCRIPTION
05/19/04	ORIGINAL PREPARATION
09/28/04	FIRST SUBMITTAL
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
12/1/11	STREET & DRAINAGE RECORD DRAWING by ALLWEST TESTING AND ENGINEERING

GARNET LANE SD PROFILE

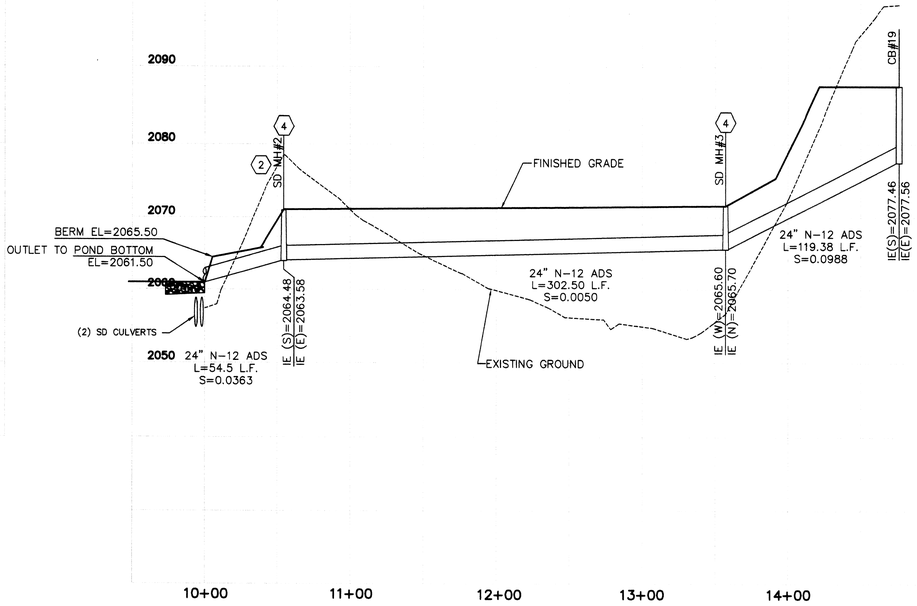
PROJECT #:S030100
DRAWN BY: KD/JR
DESIGNED BY: AKF
CHECKED BY: MLK

P-1975A "Eng As Builts"



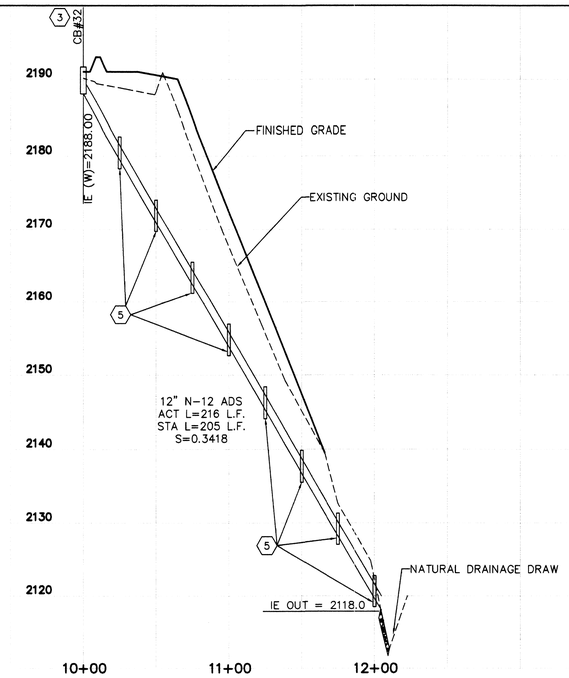
SD PROFILE – POND 4 (1)

HOR. SCALE: 1"=50'; VERT. SCALE: 1"=10'



SD PROFILE – POND 2 (2)

HOR. SCALE: 1"=50'; VERT. SCALE: 1"=10'



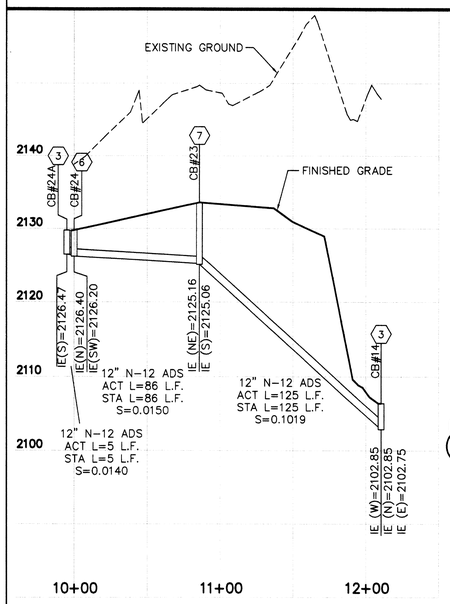
SD PROFILE – POND 5 (3)

HOR. SCALE: 1"=50'; VERT. SCALE: 1"=10'

CONSTRUCTION NOTES

1. W.S.D.O.T. GRATE INLET TYPE 2 WITH FRAME AND VANED GRATE PER W.S.D.O.T. STANDARD PLANS, B-4D. INLET SHALL BE ORIENTATED SO THAT THE 42" SIDE IS PERPENDICULAR TO THE CURB. SEE CATCH BASIN SCHEDULE BELOW FOR LOCATION AND RIM ELEVATION.
2. TYPE "III-48" MANHOLE PER SPOKANE COUNTY STANDARD PLANS, U-5.
3. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE PER SPOKANE COUNTY STANDARD PLANS, B-4, B-11, & B-13.
4. TYPE "I-54" MANHOLE PER SPOKANE COUNTY STANDARD PLANS, U-3.
5. ~~INSTALL CONCRETE PIPE ANCHORS AT LOCATIONS INDICATED ON PROFILES, SEE DETAIL 6, THIS SHEET. MAX SPACING 25'.~~
6. TYPE 1 CATCH BASIN WITH TYPE 2 METAL FRAME WITH HOOD AND TYPE 3 BI-DIRECTIONAL VANED GRATE PER SPOKANE COUNTY STANDARD PLANS B5, B11 AND B14. SEE SUMP INLET DETAIL SHEET 15A. SEE CATCH BASIN SCHEDULE FOR LOCATION AND RIM ELEVATION.
7. TYPE "I-60" MANHOLE WITH STEPS PER SPOKANE COUNTY STANDARD PLANS, U-3. WITH TYPE 1 METAL FRAME AND GRATE PER SPOKANE COUNTY STANDARD PLANS, B-11, & B-13.

RECORD DRAWING



SD PROFILE – SAPPHIRE TO EMERALD (4)

HOR. SCALE: 1"=50'; VERT. SCALE: 1"=10'

PAUL T. NELSON
STATE OF WASHINGTON
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REGISTERED
PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

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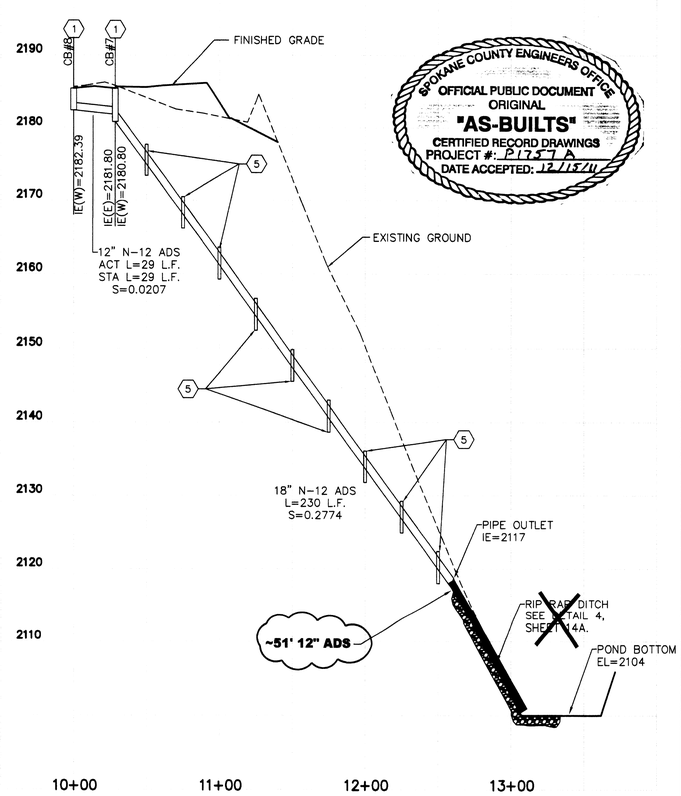
SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757 A
DATE ACCEPTED: 12/15/11



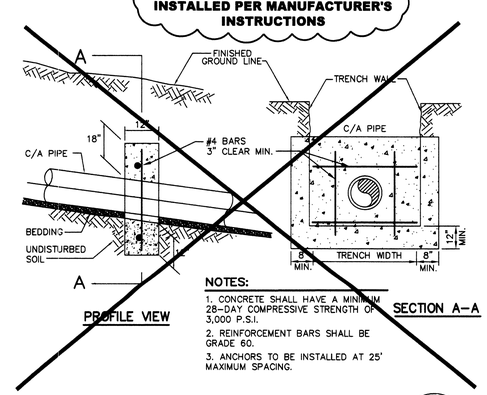
SD PROFILE – POND 1 (5)

HOR. SCALE: 1"=50'; VERT. SCALE: 1"=10'

MANHOLE SCHEDULE					
MH NUM.	STREET	STATION	OFFSET	RIM ELEV.	TYPE
SDMH 2	GARNETT	10+68.80	160.20 RT.	2071.00	I-54
SDMH 3	GARNETT	13+58.19	128.29 RT.	2071.60	I-54

CATCH BASIN SCHEDULE			
CB NUM.	STREET ALIGNMENT	STATION	RIM ELEV.
CB 7	EMERALD LANE	17+86.99	2185.39
CB 8	EMERALD LANE	17+86.99	2185.39
CB 14	EMERALD LANE	25+87.16	2106.44
CB 19	GARNET LANE	13+46.48	2087.41
CB 23	SAPPHIRE LANE	14+45.74	2133.03
CB 24	SAPPHIRE CDS	11+52.97	2129.29
CB 24A	SAPPHIRE CDS	11+46.88	2129.31
CB 30	EMERALD LANE	26+95.41	2077.16
CB 31	EMERALD LANE	29+87.00	2077.26
CB 32	RUBY LANE	12+60.00	2190.67

PREFABRICATED ANCHORS OBTAINED FROM ADVANCED DRAINAGE SYSTEMS AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS



NOTES:

1. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 P.S.I.
2. REINFORCEMENT BARS SHALL BE GRADE 60.
3. ANCHORS TO BE INSTALLED AT 25' MAXIMUM SPACING.

ANCHOR BLOCK PIPE SUPPORT (6)

NOT TO SCALE

NAVD'88 DATUM

SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
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STREET AND STORM DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
STORM DRAINAGE DETAILS

SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

DATE	DESCRIPTION
05/19/04	ORIGINAL PREPARATION
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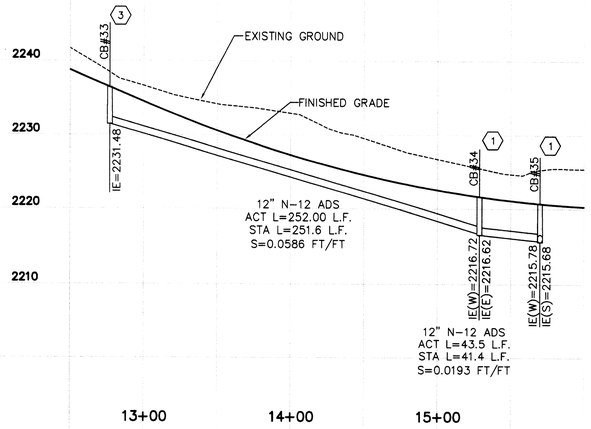
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
10/1/11	· STREET & DRAINAGE RECORD DRAWING · by ALLWEST TESTING AND ENGINEERING

STORM DRAINAGE PROFILES

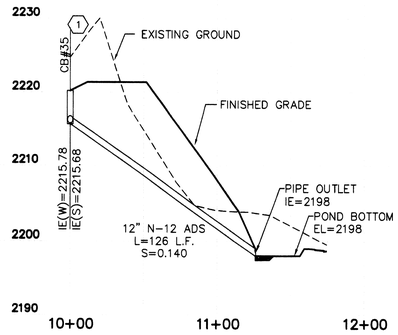
PROJECT #S030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

P-1975A Eng "As Builts"



SD PROFILE – DIAMOND LANE RIGHT (1)

HOR. SCALE: 1"=50'; VERT. SCALE: 1"=10'



SD PROFILE – DIAMOND TO POND 6 (2)

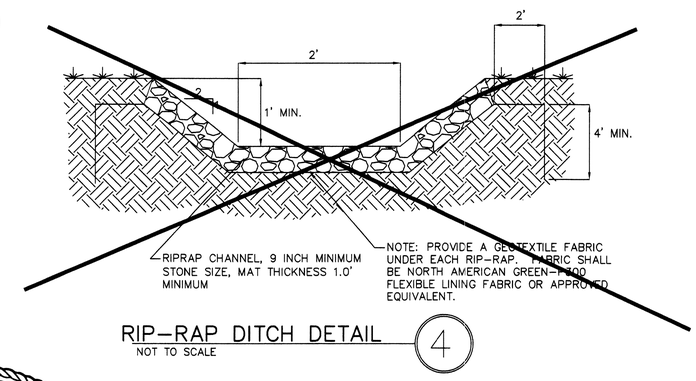
HOR. SCALE: 1"=50'; VERT. SCALE: 1"=10'

CATCH BASIN SCHEDULE			
CB NUM.	STREET ALIGNMENT	STATION	RIM ELEV.
CB 33	DIAMOND LANE	12+76.93, 12.25' RT.	2236.00
CB 34	DIAMOND LANE	15+28.52, 12.25' RT.	2221.14
CB 35	DIAMOND LANE	15+69.94, 12.25' RT.	2220.20
CB 36	RUBY LANE	10+14.65, 44.84'RT.	2197.07

CONSTRUCTION NOTES

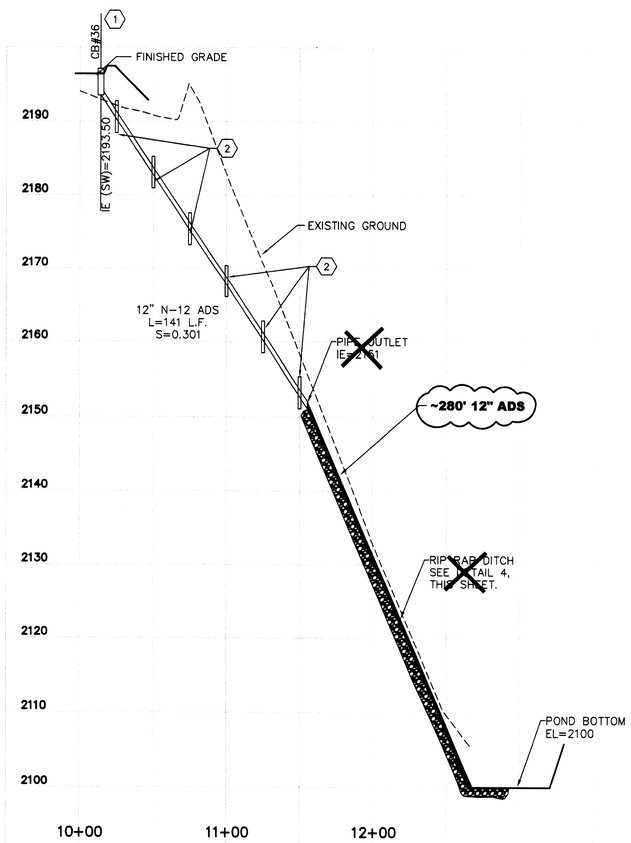
1. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE PER SPOKANE COUNTY STANDARD PLANS, B-4, B-11, & B-13.
2. ~~INSTALL CONCRETE PIPE ANCHORS AT LOCATIONS INDICATED ON PROFILES, SEE DETAIL 6, SHEET 14. MAX SPACING 25'.~~
3. W.S.D.O.T. GRATE INLET TYPE 2 WITH FRAME AND GRATE PER W.S.D.O.T. STANDARD PLAN B-4D. INLET SHALL BE ORIENTED SO THAT THE 42" SIDE IS PERPENDICULAR TO THE CURB. SEE CATCH BASIN SCHEDULE FOR LOCATION AND RIM ELEVATION.

RECORD DRAWING



RIP-RAP DITCH DETAIL (4)

NOT TO SCALE



SD PROFILE – FROM POND 7 TO POND 1 (3)

HOR. SCALE: 1"=50'; VERT. SCALE: 1"=10'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/15/11

PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED
PROFESSIONAL ENGINEER
12-6-11

EXPIRES 11/24/13

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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ELEVATION=2020.49

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STREET AND STORM DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
STORM DRAINAGE DETAILS
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED
PROFESSIONAL ENGINEER

EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

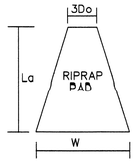
DATE	DESCRIPTION
05/19/04	ORIGINAL DRP
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
10/1/11	- STREET & DRAINAGE RECORD DRAWING
	- by ALLWEST TESTING AND ENGINEERING

STORM DRAINAGE PROFILES

PROJECT #S030100
DRAWN BY: JKD
DESIGNED BY: LDR
CHECKED BY: MLK

P-1975A Eng "As Builts"

NOTE: RIPRAP PAD MUST BE INSTALLED WITH FILTER FABRIC (AMOCO OR EQUAL) BETWEEN THE NATIVE SOIL AND THE WASHED DRAIN ROCK.



RIPRAP PAD DIMENSIONS					
POND	3Do	La	W	STONE SIZE	THICK.
1	4.5'	23'	14'	11" MIN.	2'
1 A	3'	15'	9'	4" MIN.	1'
2	6'	27'	17'	6" MIN.	3'
4 INLET	3'	8'	6.5'	6" MIN.	1'
4 WEIR	9'	15'	12'	4" MIN.	1'
5 (PIPE OUTLET)	3'	8.5'	6.5'	7" MIN.	1'
6	3'	15'	9'	6" MIN.	1'
7	3'	8'	6'	4" MIN.	1'

TYPICAL RIPRAP PAD (3/–)

NOT TO SCALE

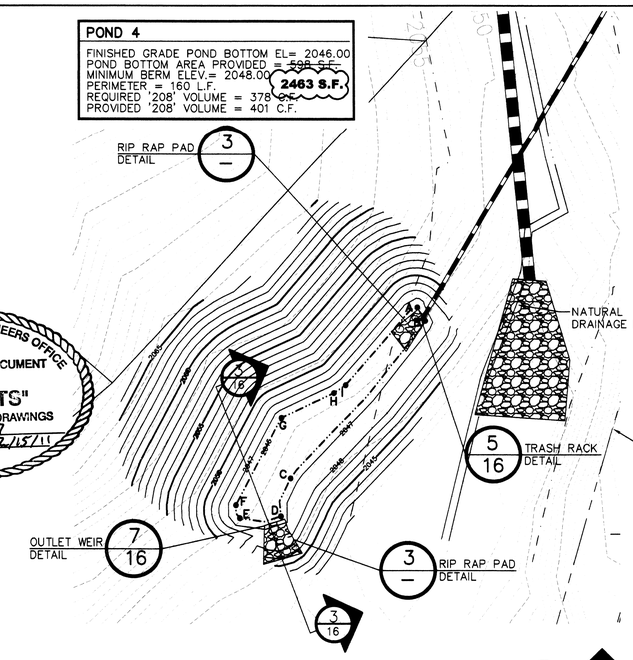
CONSTRUCTION NOTES

1. TYPE 'B' DRYWELL PER SPOKANE COUNTY STANDARD PLAN B-1A. RIM ELEV=2061.67
2. TYPE 'B' DRYWELL PER SPOKANE COUNTY STANDARD PLAN B1-A. RIM ELEV=2100.67
3. INSTALL 6' HIGH VISIBLE THOUGH FENCE.
4. INSTALL 14' ACCESS GATE.
5. BLOCK RETAINING WALL, POND PERIMETER FROM POINT 'A' TO POINT 'M', BOTTOM EL=2061, TOP EL=2064.50. LENGHT=484'
6. BLOCK RETAINING WALL, BOTTOM EL=2100, TOP EL=2103. LENGTH=147'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757
DATE ACCEPTED: 12/15/11

POND 4

FINISHED GRADE POND BOTTOM EL= 2046.00
POND BOTTOM AREA PROVIDED = ~~598 S.F.~~
MINIMUM BERM ELEV.= 2048.00
PERIMETER = 160 L.F.
REQUIRED '208' VOLUME = 378 C.F.
PROVIDED '208' VOLUME = 401 C.F.
2463 S.F.



POND 4 DETAIL (4/–)

SCALE: 1"= 20'

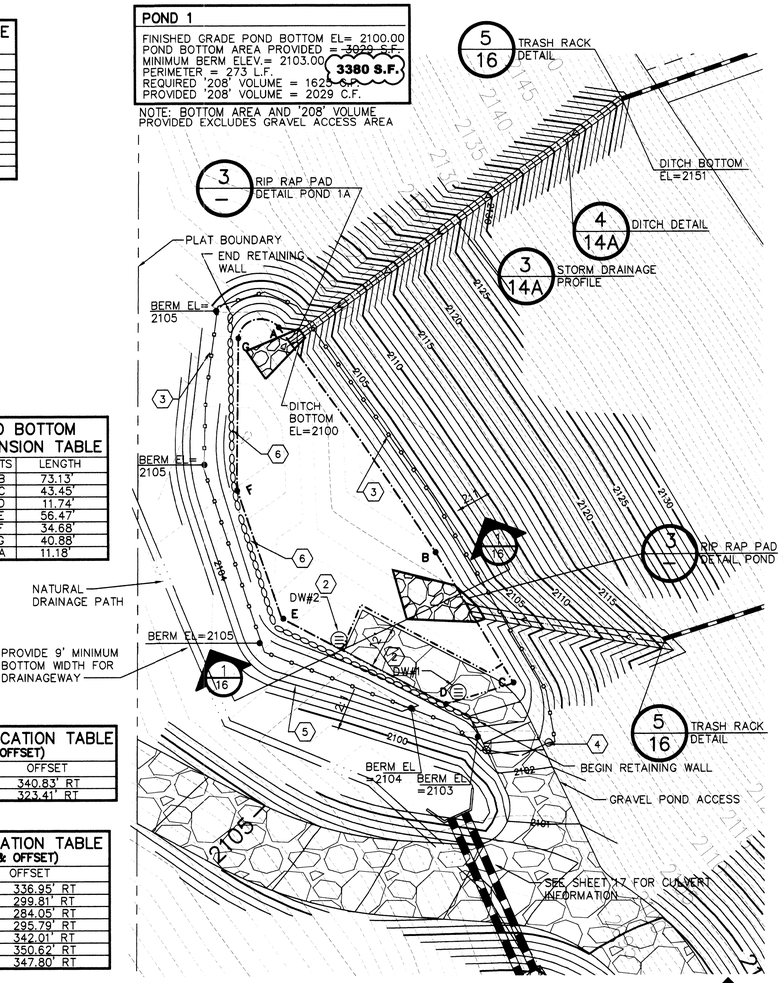
POND BOTTOM LOCATION TABLE (EMERALD LANE STATION & OFFSET)		
POINT	STATION	OFFSET
A	29+35.32	107.29' RT
B	29+37.59	110.58' RT
C	29+08.15	155.21' RT
D	29+07.37	165.46' RT
E	29+02.10	166.27' RT
F	29+01.65	163.90' RT
G	29+06.22	139.21' RT
H	29+14.47	131.43' RT
I	29+17.43	129.12' RT

POND BOTTOM DIMENSION TABLE	
POINTS	LENGTH
A–B	6.25'
B–C	54.14'
C–D	11.16'
D–E	8.96'
E–F	2.55'
F–G	26.42'
G–H	15.56'
H–I	3.76'
I–A	28.88'

POND 1

FINISHED GRADE POND BOTTOM EL= 2100.00
POND BOTTOM AREA PROVIDED = ~~3025 S.F.~~
MINIMUM BERM ELEV.= 2103.00
PERIMETER = 273 L.F.
REQUIRED '208' VOLUME = 1625 C.F.
PROVIDED '208' VOLUME = 2029 C.F.
3380 S.F.

NOTE: BOTTOM AREA AND '208' VOLUME PROVIDED EXCLUDES GRAVEL ACCESS AREA



POND 1 DETAIL (1/–)

SCALE: 1"= 20'

POND BOTTOM DIMENSION TABLE	
POINTS	LENGTH
A–B	73.13'
B–C	43.45'
C–D	11.74'
D–E	56.47'
E–F	34.68'
F–G	40.88'
G–A	11.18'

POND 1 DRYWELL LOCATION TABLE (EMERALD LANE STATION & OFFSET)		
DW#	STATION	OFFSET
1	17+71.57	340.83' RT
2	17+83.16	323.41' RT

POND BOTTOM LOCATION TABLE (EMERALD LANE STATION & OFFSET)		
POINT	STATION	OFFSET
A	17+68.41	336.95' RT
B	17+96.14	299.81' RT
C	18+14.83	284.05' RT
D	18+14.92	295.79' RT
E	18+00.66	342.01' RT
F	17+89.57	350.62' RT
G	17+69.53	347.80' RT

POND BOTTOM LOCATION TABLE (EMERALD LANE STATION & OFFSET)		
POINT	STATION	OFFSET
A	22+59.53	363.08' RT
B	22+60.00	393.64' RT
C	22+54.84	405.62' RT
D	22+50.16	419.08' RT
E	22+40.15	419.23' RT
F	22+12.18	394.66' RT
G	21+98.74	367.56' RT
H	22+04.32	351.68' RT
I	22+23.72	366.61' RT
J	22+34.91	376.95' RT
K	22+45.63	385.49' RT
L	22+50.31	377.22' RT
M	22+52.07	363.03' RT

POND BOTTOM DIMENSION TABLE	
POINTS	LENGTH
A–B	30.60'
B–C	23.07'
C–D	22.11'
D–E	37.98'
E–F	106.55'
F–G	54.74'
G–H	24.75'
H–I	67.45'
I–J	40.27'
J–K	38.91'
K–L	20' R=14'
L–M	15.46'
M–A	25.50

POND 2

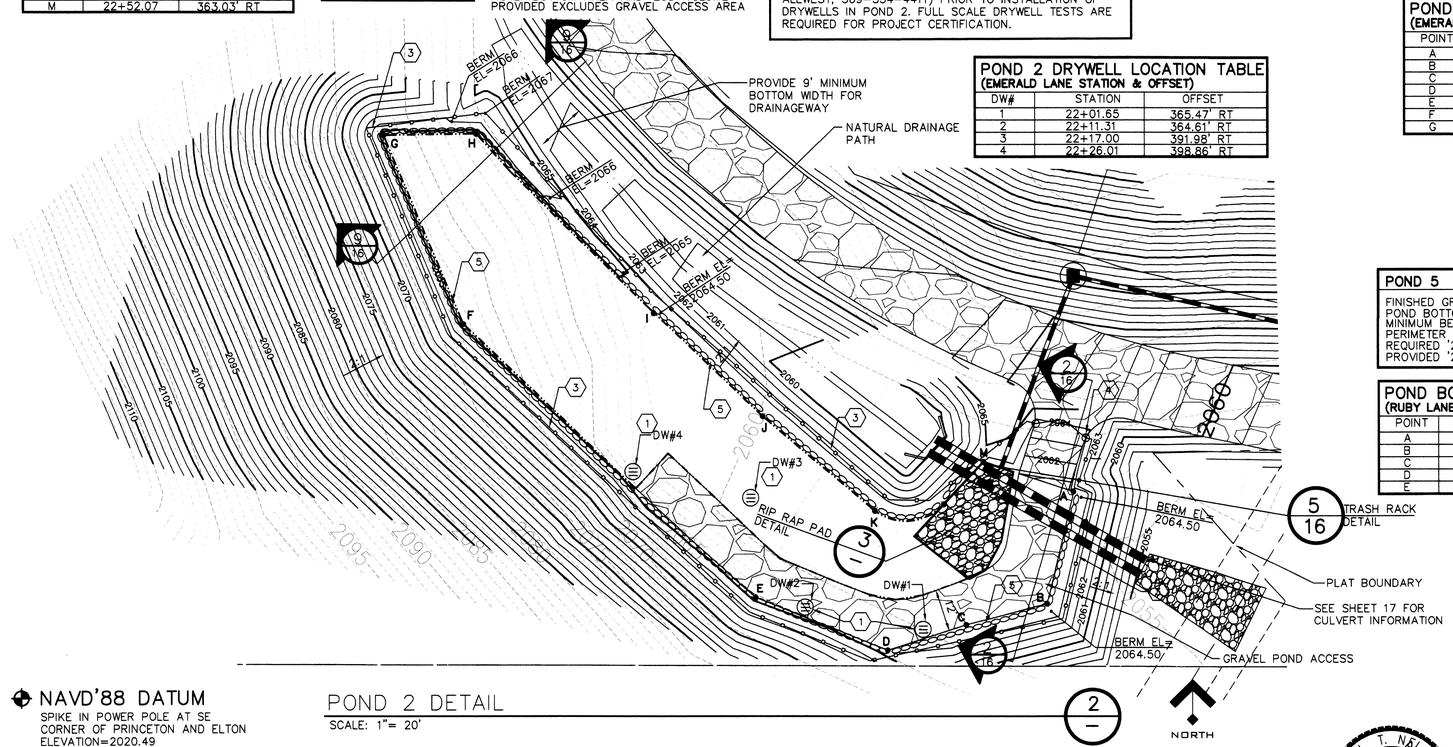
FINISHED GRADE POND BOTTOM EL=2061.00
POND BOTTOM AREA PROVIDED = ~~5304 S.F.~~
MINIMUM BERM ELEV.= 2065.50
PERIMETER = 446 L.F.
REQUIRED '208' VOLUME = 3577 C.F.
PROVIDED '208' VOLUME = 3614 C.F.
6138 S.F.

NOTE: BOTTOM AREA AND '208' VOLUME PROVIDED EXCLUDES GRAVEL ACCESS AREA

NOTE: EXISTING CLOSED DEPRESSION TO BE MAINTAINED FOR PASS THROUGH DRAINAGE SYSTEM.

NOTE: SET TOP OF ACTIVE BARREL SECTIONS AT ELEVATION OF CLEAN SOILS – APPROXIMATELY ELEVATION 2052. SOIL CONDITIONS TO BE VERIFIED BY GEOTECHNICAL ENGINEER (PAUL NELSON, P.E. @ ALLWEST, 509-534-4411) PRIOR TO INSTALLATION OF DRYWELLS IN POND 2. FULL SCALE DRYWELL TESTS ARE REQUIRED FOR PROJECT CERTIFICATION.

POND 2 DRYWELL LOCATION TABLE (EMERALD LANE STATION & OFFSET)		
DW#	STATION	OFFSET
1	22+01.65	365.47' RT
2	22+11.31	364.61' RT
3	22+17.00	391.98' RT
4	22+26.01	398.86' RT



POND 2 DETAIL (2/–)

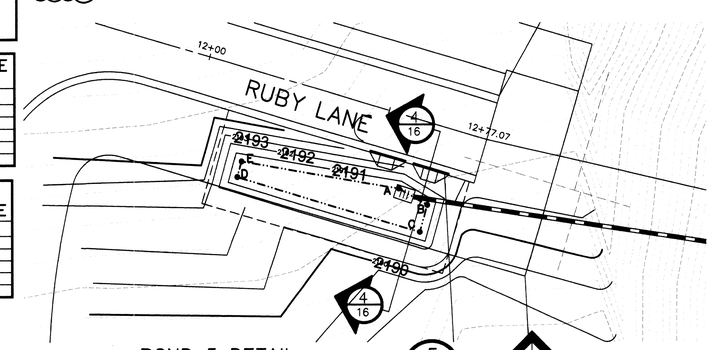
SCALE: 1"= 20'

POND 5

FINISHED GRADE POND BOTTOM EL= 2190.00
POND BOTTOM AREA PROVIDED = ~~361 S.F.~~
MINIMUM BERM ELEV.= 2192.59
PERIMETER = 114 L.F.
REQUIRED '208' VOLUME = 231 C.F.
PROVIDED '208' VOLUME = 242 C.F.
422 S.F.

POND BOTTOM LOCATION TABLE (RUBY LANE STATION & OFFSET)		
POINT	STATION	OFFSET
A	12+58.18	19.08' RT.
B	12+66.66	21.06' RT
C	12+66.79	28.55' RT
D	12+15.92	28.32' RT
E	12+15.88	24.11' RT

POND BOTTOM DIMENSION TABLE	
POINTS	LENGTH
A–B	8.70'
B–C	7.50'
C–D	50.87'
D–E	4.22'
E–A	42.59'



POND 5 DETAIL (5/–)

SCALE: 1"= 20'

RECORD DRAWING

NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

CAUTION: NOTICE TO CONTRACTOR

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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.

PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

DEVELOPER'S APPROVAL — DATE

CLC ASSOCIATES
12730 E. MIRABEAU PKWY.
SUITE 100
SPOKANE VALLEY
WASHINGTON 99216
P 509 458 6840
F 509 458 6844
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ARCHITECTURE
ENGINEERING PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING

STREET AND STORM DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
POND DETAILS

SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

DATE	DESCRIPTION
05/19/04	ORIGINAL PREPARATION
09/28/04	FIRST SUBMITTAL
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
12/1/11	STREET & DRAINAGE RECORD DRAWING by ALLWEST TESTING AND ENGINEERING

POND DETAILS

PROJECT #S030100
DRAWN BY: LR
DESIGNED BY: LR
CHECKED BY: MLK

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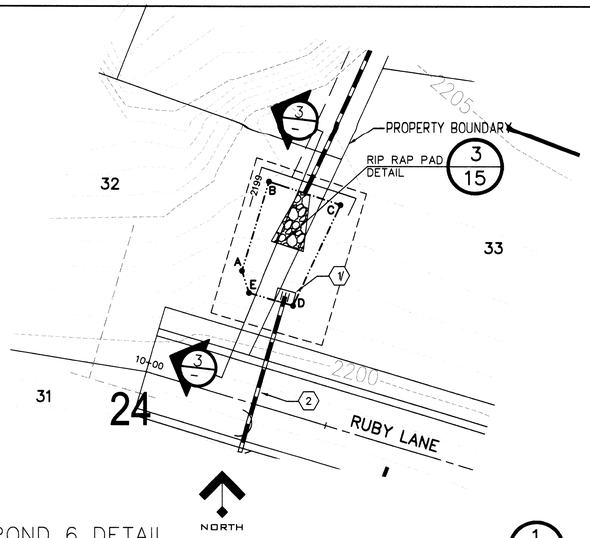
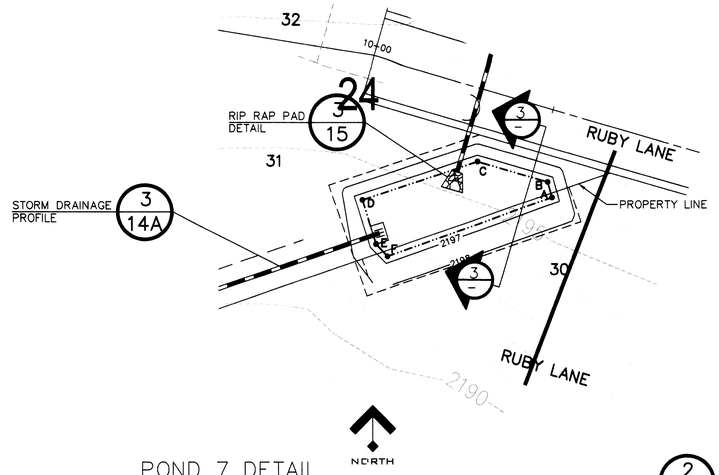
P-1975A "Eng As Builts"



POND 6 DETAIL

SCALE: 1"= 20'

1



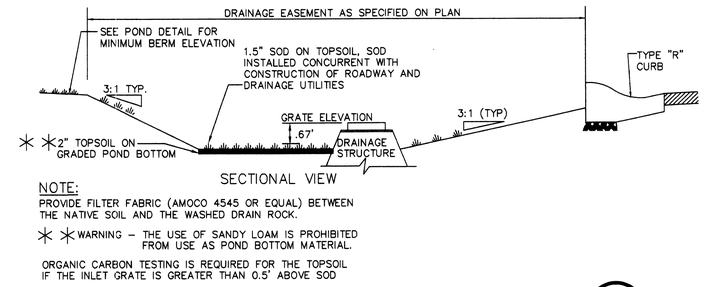
POND 7 DETAIL

SCALE: 1"= 20'

2

CONSTRUCTION NOTES

1. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE PER SPOKANE COUNTY STANDARD PLANS, B-4, B-11, & B-13. STA 10+29.97, 29.74' LT. (RUBY LANE) RIM=2198.67
2. INSTALL APPROXIMATELY 53 L.F. OF 12" DI PIPE, IE(N)=2196.67, IE(S)=2196.40, S=0.00509.



SECTIONAL VIEW

NOTE:
PROVIDE FILTER FABRIC (AMOCO 4545 OR EQUAL) BETWEEN THE NATIVE SOIL AND THE WASHED DRAIN ROCK.

WARNING – THE USE OF SANDY LOAM IS PROHIBITED FROM USE AS POND BOTTOM MATERIAL.

ORGANIC CARBON TESTING IS REQUIRED FOR THE TOPSOIL IF THE INLET GRATE IS GREATER THAN 0.5' ABOVE SOD

POND 6 & 7 CROSS SECTION

NOT TO SCALE

3

POND 6

FINISHED GRADE POND BOTTOM EL= 2198
POND BOTTOM AREA PROVIDED = ~~527 S.F.~~
MINIMUM BERM ELEV.= 2199.00
PERIMETER = 93.5 L.F.
REQUIRED '208' VOLUME
(PONDS 6 & 7) = 802 C.F.
PROVIDED '208' VOLUME = 353 C.F.
575 S.F.

POND BOTTOM LOCATION TABLE (RUBY LANE STATION & OFFSET)

POINT	STATION	OFFSET
A	10+17.02	33.00' LT
B	10+17.16	58.14' LT
C	10+37.22	57.49' LT
D	10+32.71	28.00' LT
E	10+20.44	28.00' LT

POND BOTTOM DIMENSION TABLE

POINTS	LENGTH
A–B	25.14'
B–C	20.17'
C–D	29.85'
D–E	12.28'
E–A	6.06'

POND 7

FINISHED GRADE POND BOTTOM EL= 2196.4
POND BOTTOM AREA PROVIDED = ~~685 S.F.~~
MINIMUM BERM ELEV.= 2197.40
PERIMETER = 120 L.F.
REQUIRED '208' VOLUME
(PONDS 6 & 7) = 802 C.F.
PROVIDED '208' VOLUME = 459 C.F.
803 S.F.

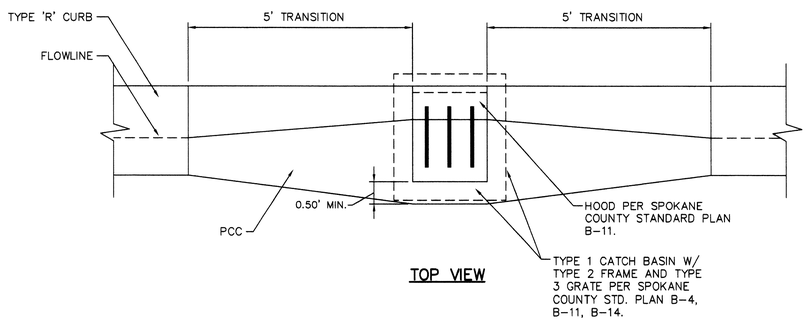
POND BOTTOM LOCATION TABLE (RUBY LANE STATION & OFFSET)

POINT	STATION	OFFSET
A	10+56.35	22.76' RT
B	10+54.05	19.05' RT
C	10+34.45	19.04' RT
D	10+07.78	37.70' RT
E	10+14.58	47.89' RT
F	10+18.44	50.18' RT

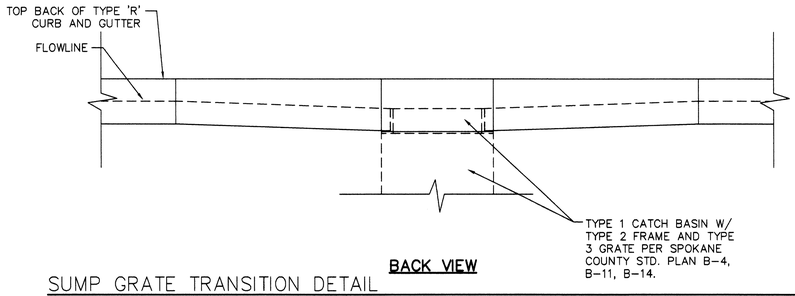
POND BOTTOM DIMENSION TABLE

POINTS	LENGTH
A–B	4.37'
B–C	19.6'
C–D	32.15'
D–E	12.26'
E–F	4.35'
F–A	46.79'

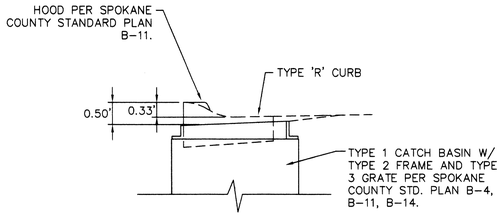
RECORD DRAWING



TOP VIEW



BACK VIEW



SIDE VIEW

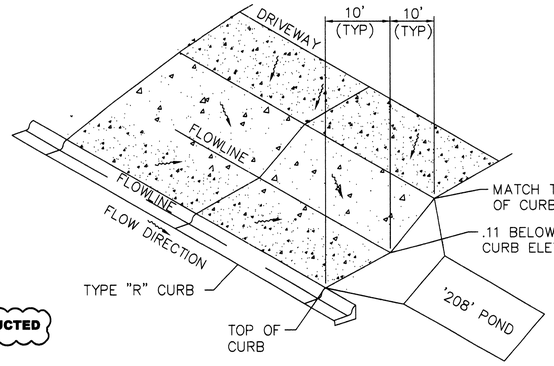
SUMP GRATE TRANSITION DETAIL

NOT TO SCALE

4

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/15/11

ROADSIDE SWALES NOT CONSTRUCTED

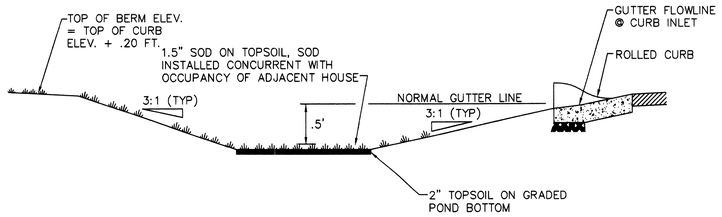


PROVIDE 64 SF MINIMUM, 0.5' DEEP GRASSED AREA FOR EACH LOT ON DOWNSTREAM END OF DRIVEWAY FOR '208' (GPA) TREATMENT. SEE DETAIL BELOW.

TYPICAL DRIVEWAY DETAIL

NOT TO SCALE

5



SECTIONAL VIEW

TYPICAL '208' POND WITHOUT DRAINAGE STRUCTURE

NOT TO SCALE

6

NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

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PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED
PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

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 — DATE

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WASHINGTON 99216
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ARCHITECTURE
ENGINEERING PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING

STREET AND STORM DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
POND DETAILS
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
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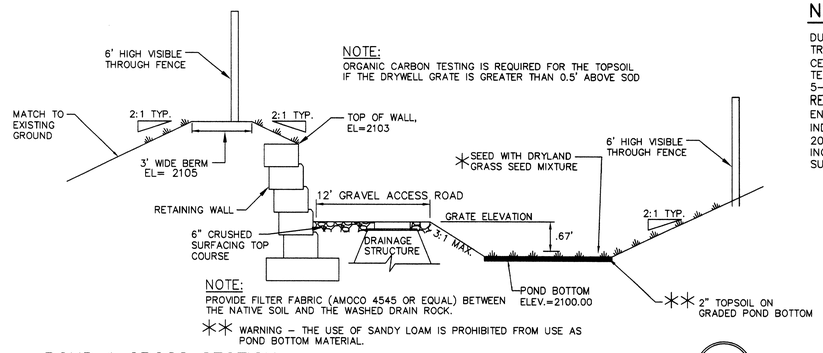
11/23/04	SECOND SUBMITTAL
6/30/05	FINAL SUBMITTAL
12/1/11	- STREET & DRAINAGE RECORD DRAWING - by ALLWEST TESTING AND ENGINEERING

POND DETAILS

PROJECT #S030100
DRAWN BY: LR
DESIGNED BY: LR
CHECKED BY: MLK

P-1975A Eng "As Builts"



NOTE:
ORGANIC CARBON TESTING IS REQUIRED FOR THE TOPSOIL IF THE DRYWELL GRATE IS GREATER THAN 0.5' ABOVE SOD

NOTE:
PROVIDE FILTER FABRIC (AMOCO 4545 OR EQUAL) BETWEEN THE NATIVE SOIL AND THE WASHED DRAIN ROCK.

✳✳ WARNING – THE USE OF SANDY LOAM IS PROHIBITED FROM USE AS POND BOTTOM MATERIAL.

POND 1 CROSS SECTION (1)
NOT TO SCALE

NOTE:
DUE TO THE PROPOSAL TO UTILIZE 8 INCHES VERSUS 6 INCHES OF PONDED WATER QUALITY TREATMENT DEPTH BETWEEN THE POND BOTTOM AND DRYWELL RIM ELEVATION, PRIOR TO FINAL CERTIFICATION OF THESE ROAD AND DRAINAGE FACILITIES, CATION EXCHANGE CAPACITY (CEC) TESTING WILL NEED TO BE PERFORMED ACCORDING TO THE PROCEDURE AS DESCRIBED ON PAGE 5-5 OF THE SPOKANE COUNTY GUIDELINES FOR STORMWATER MANAGEMENT. SHOULD THE CEC RESULTS INDICATE THAT THE SOIL IS NOT SUITABLE FOR STORMWATER TREATMENT, THE DESIGN ENGINEER HAS TWO OPTIONS: 1) REVISE AND RESUBMIT THE ROAD AND DRAINAGE PLANS, INDICATING THAT THE REQUIRED POND BOTTOM AREA (NECESSARY TO ACHIEVE THE REQUIRED 208 VOLUME BASED UPON A 6" DEPTH) IS PROVIDED; OR 2) APPROPRIATELY AMEND THE TOP 6 INCHES OF TOPSOIL UNTIL CEC TESTING INDICATES THAT THE COMPOSITION OF THE SOIL IS SUITABLE FOR STORMWATER TREATMENT.

RECORD DRAWING

✳ DRYLAND GRASS SEED MIX
SPOKANE COUNTY PUBLIC WORKS, FEBRUARY 1998

GRASS SEED: PROVIDE FRESH, CLEAN, NEW CROP SEED COMPLYING WITH TOLERANCE OF PURITY AND GERMINATION ESTABLISHED BY THE OFFICIAL SEED ANALYSIS OF NORTH AMERICA. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PERCENTAGES AS FOLLOWS:

20 PERCENT	ELKA PERENNIAL RYE
20 PERCENT	DURAR HARD FESCUE
45 PERCENT	COVAR SHEEP/FESCUE
15 PERCENT	RUBE'S CANADIAN BLUEGRASS

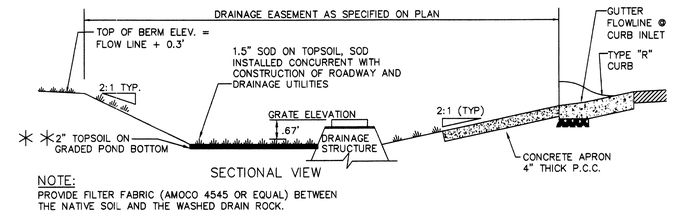
PROVIDE MIXTURE COMPOSED OF GRASS SEED AND FERTILIZER IN PERCENTAGES AS FOLLOWS:

GRASS SEED: 90 LBS. PER ACRE
FERTILIZER: 16-16-16 TIMED RELEASE COMPOSITION, 300 LBS. PER ACRE.

ALL SEEDING OF SLOPES SHALL BE DONE IN ACCORDANCE WITH THE W.S.D.O.T. STANDARD SPECIFICATIONS, SEC. 8-01.

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1757A
DATE ACCEPTED: 12/13/11

NOTE:
ORGANIC CARBON TESTING IS REQUIRED FOR THE TOPSOIL IF THE INLET GRATE IS GREATER THAN 0.5' ABOVE SOD



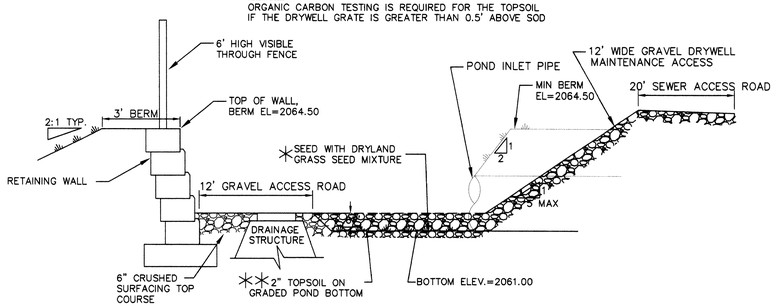
SECTIONAL VIEW

NOTE:
PROVIDE FILTER FABRIC (AMOCO 4545 OR EQUAL) BETWEEN THE NATIVE SOIL AND THE WASHED DRAIN ROCK.

✳✳WARNING – THE USE OF SANDY LOAM IS PROHIBITED FROM USE AS POND BOTTOM MATERIAL.

POND 5 CROSS SECTION (4)
NOT TO SCALE

NOTE:
ORGANIC CARBON TESTING IS REQUIRED FOR THE TOPSOIL IF THE DRYWELL GRATE IS GREATER THAN 0.5' ABOVE SOD



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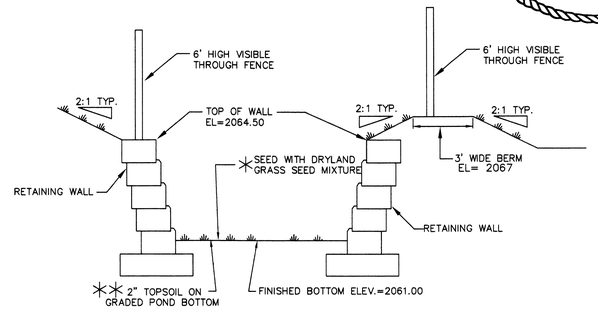
POND 2 CROSS SECTION A (2)
NOT TO SCALE



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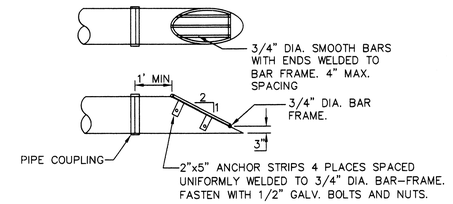
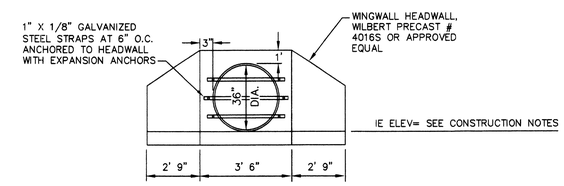
✳✳ WARNING – THE USE OF SANDY LOAM IS PROHIBITED FROM USE AS POND BOTTOM MATERIAL.

POND 2 CROSS SECTION B (9)
NOT TO SCALE



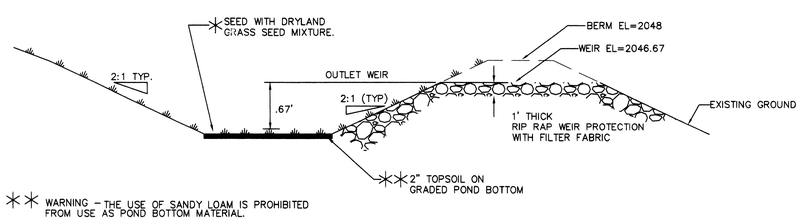
NOTE: ALL STEEL PARTS MUST BE GALVANIZED AND ASPHALT COATED (TREATMENT 1 OR BETTER) REFER TO FIGURE 39 IN SPOKANE COUNTY GUIDELINES FOR STORMWATER MANAGEMENT.

TRASH RACK DETAIL (5)
NOT TO SCALE



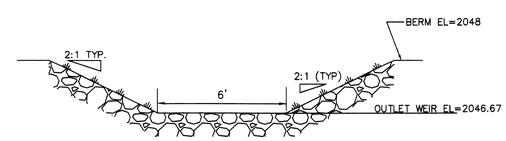
36" CULVERT HEADWALL (6)
NOT TO SCALE

NOTE:
ORGANIC CARBON TESTING IS REQUIRED FOR THE TOPSOIL IF THE OUTLET IS GREATER THAN 0.5' ABOVE SOD

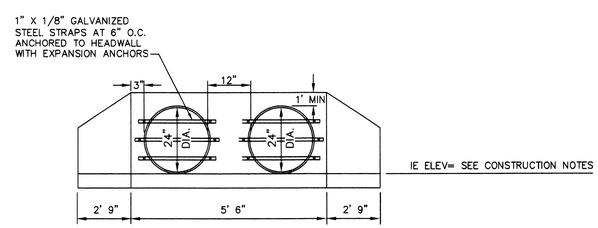


✳✳ WARNING – THE USE OF SANDY LOAM IS PROHIBITED FROM USE AS POND BOTTOM MATERIAL.

POND 4 CROSS SECTION (3)
NOT TO SCALE



POND 4 WEIR DETAIL (7)
NOT TO SCALE



DOUBLE CULVERT WINGWALL HEADWALL (8)
NOT TO SCALE

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

CAUTION: NOTICE TO CONTRACTOR

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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.

PAUL T. NELSON
STATE OF WASHINGTON
37228
REGISTERED PROFESSIONAL ENGINEER
12-6-11
EXPIRES 11/24/13

DEVELOPER'S APPROVAL DATE

P-1975A Eng "As Builts"

CLC ASSOCIATES
12730 E. MIRABEAU PKWY. SUITE 100
SPOKANE VALLEY
WASHINGTON 99216
P 509 458 6840
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ARCHITECTURE
ENGINEERING PLANNING
LANDSCAPE ARCHITECTURE
LAND SURVEYING

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STREET AND STORM DRAINAGE PLANS

SANDY RIDGE 1ST ADDITION P.U.D.
POND DETAILS
SPOKANE COUNTY, WA

MARK L. KRIGBAUM
STATE OF WASHINGTON
39236
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 6/14/07

PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

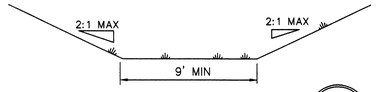
DATE	DESCRIPTION
05/19/04	ORIGINAL PREPARATION
11/23/04	SECOND SUBMITTAL
6/30/05	FINAL SUBMITTAL
10/1/11	STREET & DRAINAGE RECORD DRAWING by ALLWEST TESTING AND ENGINEERING

POND DETAILS

PROJECT #S030100
DRAWN BY: JKC
DESIGNED BY: LR
CHECKED BY: MLK

SECTION 31, T.26 N., R44 E., W.M.
SPOKANE COUNTY, WASHINGTON

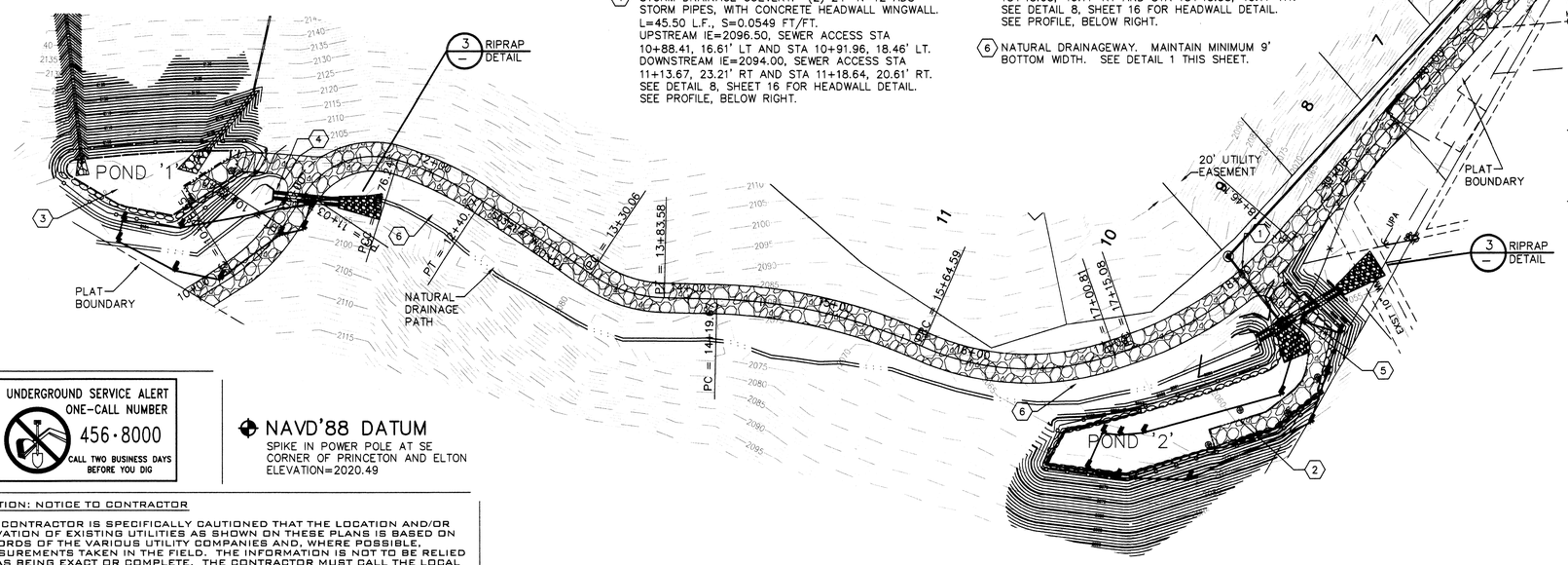
RECORD DRAWING



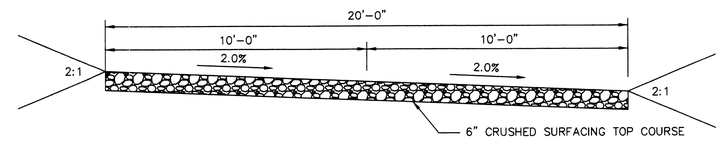
DRAINAGE WAY DETAIL (1)
NOT TO SCALE

CONSTRUCTION NOTES

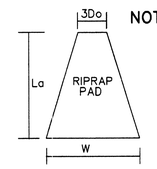
1. STORM SEWER MANHOLE, SEE SHEET 14.
2. POND 2, SEE SHEET 15 FOR DETAILS.
3. POND 1, SEE SHEET 15 FOR DETAILS.
4. STORM DRAINAGE CULVERT. (2) 24" N-12 ADS STORM PIPES, WITH CONCRETE HEADWALL WINGWALL. L=45.50 L.F., S=0.0549 FT/FT. UPSTREAM IE=2096.50, SEWER ACCESS STA 10+88.41, 16.61' LT AND STA 10+91.96, 18.46' LT. DOWNSTREAM IE=2094.00, SEWER ACCESS STA 11+13.67, 23.21' RT AND STA 11+18.64, 20.61' RT. SEE DETAIL 8, SHEET 16 FOR HEADWALL DETAIL. SEE PROFILE, BELOW RIGHT.
5. STORM DRAINAGE CULVERT. (2) 24" N-12 ADS STORM PIPES, WITH CONCRETE HEADWALL WINGWALL. L=64.80 L.F., S=0.0538 FT/FT. UPSTREAM IE=2058.50, SEWER ACCESS STA 17+87.89, 35.04' RT AND 17+88.16, 31.06' RT. DOWNSTREAM IE=2055.00, SEWER ACCESS STA 18+43.05, 49.11' RT AND STA 18+43.58, 45.11' RT. SEE DETAIL 8, SHEET 16 FOR HEADWALL DETAIL. SEE PROFILE, BELOW RIGHT.
6. NATURAL DRAINAGEWAY. MAINTAIN MINIMUM 9' BOTTOM WIDTH. SEE DETAIL 1 THIS SHEET.



CURVE TABLE					
CURVE	LENGTH	RADIUS	TANGENT	CHORD	DELTA
C1	15.24	20.01	8.01	14.87	43°37'03"
C2	56.06	361.14	28.09	56.00	8°53'07"
C3	14.78	83.33	7.41	14.76	10°09'35"
C4	42.50	801.65	21.26	42.50	3°02'16"
C5	11.57	100.00	5.79	11.56	6°37'42"
C6	31.13	2363.60	15.56	31.13	0°45'16"
C7	15.95	93.08	8.00	15.93	9°49'15"
C8	9.97	79.93	4.99	9.96	7°08'37"
C9	49.32	212.81	24.77	49.21	13°16'46"
C10	37.01	342.61	18.53	37.00	6°11'24"
C11	130.79	365.97	66.10	130.09	20°28'34"
C12	53.98	94.91	27.74	53.26	32°35'14"
C13	63.93	232.39	32.17	63.73	15°45'44"
C14	72.58	56.61	42.25	67.71	73°27'59"
C15	46.75	110.00	23.73	46.40	24°20'58"



SEWER ACCESS CROSS SECTION (2)
NOT TO SCALE



NOTE: RIPRAP PAD MUST BE INSTALLED WITH FILTER FABRIC (AMOCO OR EQUAL) BETWEEN THE NATIVE SOIL AND THE WASHED DRAIN ROCK.

RIPRAP PAD DIMENSIONS					
CULVERT	3Do	La	W	STONE SIZE	THICK.
POND 1	6'	29'	18'	11" MIN.	1.1'
POND 2	6'	32'	19'	11" MIN.	1.4'

EMERALD CULVERT RIPRAP PAD (3)
NOT TO SCALE

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

NAVD'88 DATUM
SPIKE IN POWER POLE AT SE CORNER OF PRINCETON AND ELTON
ELEVATION=2020.49

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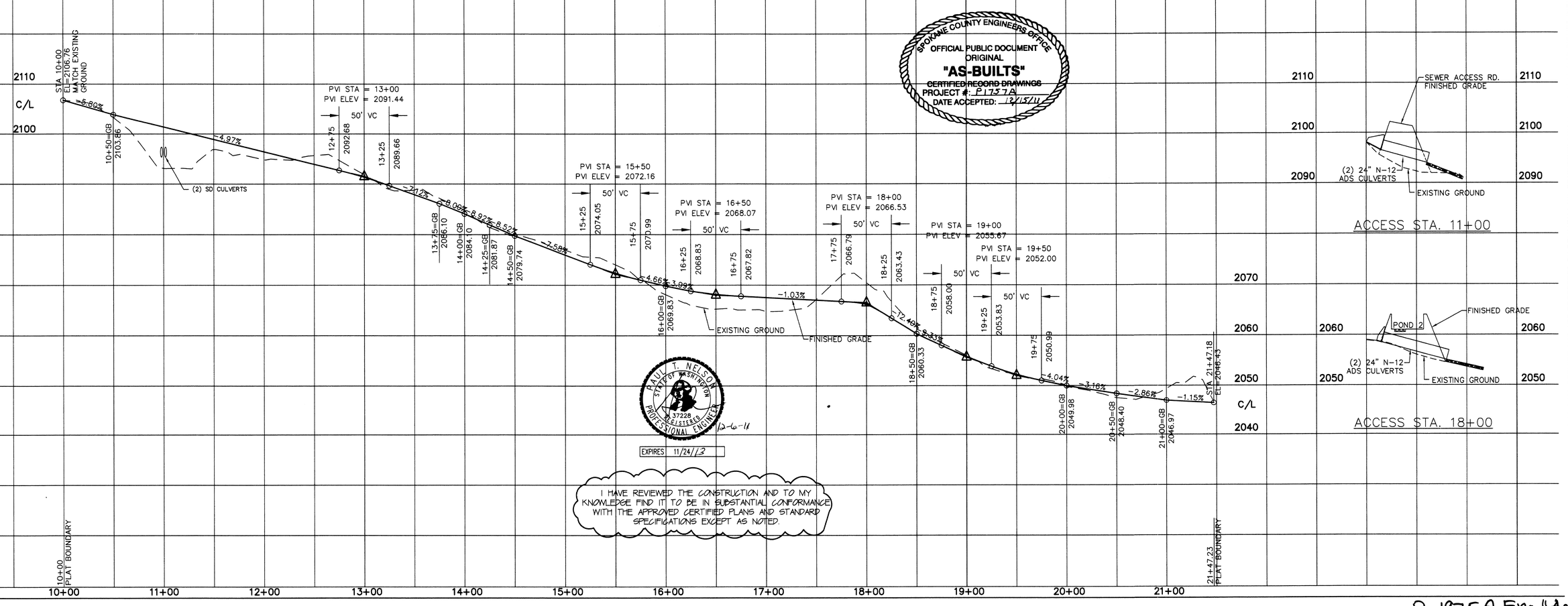
DEVELOPER'S APPROVAL DATE

NORTH 50' 0 25' 50'
SCALE: 1" = 50'-0"

VERTICAL SCALE: 1"=10'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
~~CERTIFIED RECORD DRAWINGS~~
PROJECT #: P1757A
DATE ACCEPTED: 12/15/11



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STREET/DRAINAGE PLANS

SANDY RIDGE
1ST ADDITION P.U.D.
SEWER ACCESS ROAD

SPOKANE COUNTY, WA

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EXPIRES 6/14/07
PREPARED UNDER THE DIRECT SUPERVISION OF MARK L. KRIGBAUM WASHINGTON REGISTRATION NO. 39236 FOR AND ON BEHALF OF CLC ASSOCIATES

DATE	DESCRIPTION
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09/28/04	FIRST SUBMITTAL
11/23/04	SECOND SUBMITTAL
06/30/05	FINAL SUBMITTAL
12/1/11	STREET & DRAINAGE RECORD DRAWING by ALLWEST TESTING AND ENGINEERING

SEWER ACCESS PLAN & PROFILE

PROJECT #: S030100
DRAWN BY: DJ/JR
DESIGNED BY: AKF
CHECKED BY: MLK

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