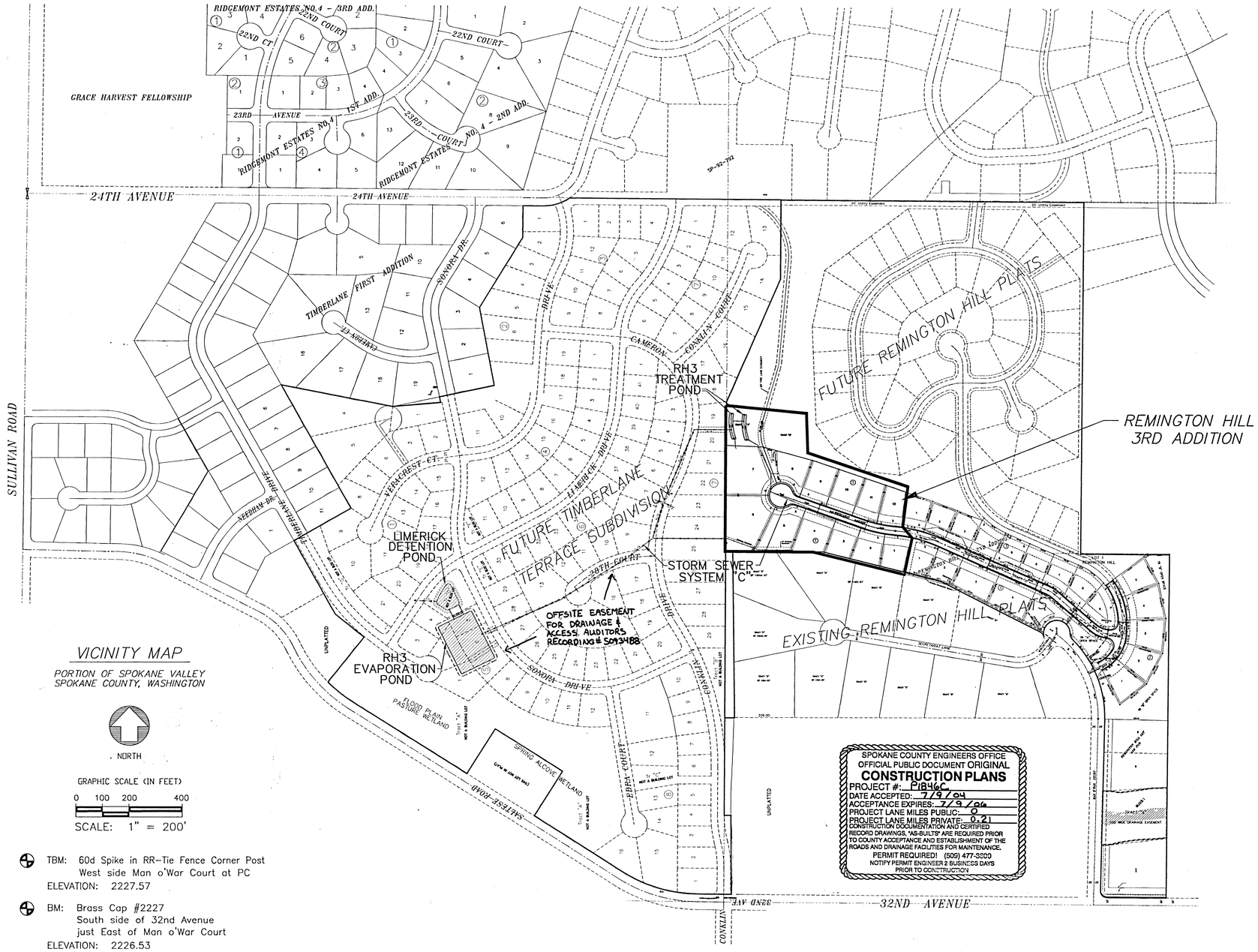
REMINGTON HILL 3RD ADDITION P.U.D.



VICINITY MAP

PORTION OF SPOKANE VALLEY
SPOKANE COUNTY, WASHINGTON

NORTH

GRAPHIC SCALE (IN FEET)

0 100 200 400

SCALE: 1" = 200'

TBM: 60d Spike in RR-Tie Fence Corner Post
West side Man o'War Court at PC
ELEVATION: 2227.57

BM: Brass Cap #2227
South side of 32nd Avenue
just East of Man o'War Court
ELEVATION: 2226.53

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1846C
DATE ACCEPTED: 7/9/04
ACCEPTANCE EXPIRES: 7/9/06
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 0.21
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED! (509) 477-3220
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

INDEX TO PLAN SET

SHEET 1 OF 8: VICINITY MAP & PLAN INDEX
SHEET 2 OF 8: EROSION & SEDIMENT CONTROL PLAN
SHEET 3 OF 8: WHIRLAWAY LANE PLAN-PROFILE
SHEET 4 OF 8: DRAINAGE PLAN
SHEET 5 OF 8: DRAINAGE DETAILS, ON-SITE FACILITIES
SHEET 6 OF 8: DRAINAGE DETAILS, OFF-SITE FACILITIES
SHEET 7 OF 8: STORM SYSTEM "C": DOWNSTREAM EXT.
SHEET 8 OF 8: STORM SYSTEM "C": DOWNSTREAM PROFILE

PROJECT INFORMATION

Property Owner: Rem-Rock Corp.
Permit Applicant: Jim Fox, President, Rem-Rock Corp.
Contact Number: (509) 216-7955
Contact Address: P.O. Box 989, Veradale WA 99037
Project Address: 16400 E. Whirlaway Lane, Spokane County
Property Description:

That portion of the NW ¼ of the SE ¼ of Section 25, T. 25 N., R. 44 E.W.M. described as follows:

Begin at the NW corner of the Plat of "REMINGTON HILL 2ND ADDITION PUD", the next 3 courses along the West line of said 2nd Addition; thence S07°24'48"W 132.21 feet; thence S40°22'19"E 56.26 feet; thence S12°22'24"W, 139.06 feet to the SW corner of said 2nd Addition and the NW corner of Tract B of Short Plat "SP-1165-97"; thence N76°06'01"W, along the Northerly line of said SP, 353.54 feet to the angle point in said SP; thence N89°36'41"W 328.87 feet to the West line of the SE ¼ of said Section 25; thence N00°16'07"E, along the West line of said SE ¼ 550.00 feet; thence S84°28'16"E 300.00 feet; thence S01°55'42"E 150.00 feet; thence S71°17'23"E 400.00 feet to the intersection with a line bearing N07°24'48"E from the Point of Beginning; thence S07°24'48"W 20.40 feet to the Point of Beginning.

Situate in the County of Spokane, State of Washington.

Site Soil Types:
BkD – Bernhill very rocky complex, 30–55% slopes
LaB – Lakesol silt loam, 0–20% slopes
BsB – Bong and Phoebe loamy sands, 0–20% slopes
HvC – Hesseltine very rocky complex, 0–30% slopes

Note: Soils per USDA S.C.S. (now N.R.C.S.), 1968, "Soil Survey of Spokane County, Washington"
For soil type locations and descriptions, refer to the project "Stormwater Drainage Report"

ENGINEER'S CERTIFICATION

The design improvements shown in this set of plans conform to the applicable editions of the Spokane County standards for road and sewer construction and Spokane County guidelines for stormwater management. All design deviations have been approved by the Spokane County Engineer. I approve these plans for construction.

DEVELOPERS APPROVAL

6-25-04
DATE

CALL BEFORE YOU DIG 456-8000

BY	DATE	REVISIONS / AS BUILT
DHC	7-17-02	PREVIOUS VERSION OF STORMWATER DISPOSAL CONCEPT
DHC	11-07-03	REVISED PROPOSED STORM SYSTEM WITHIN TIMBERLANE TERRACE
DHC	03-19-04	REVISED PLAN SET PER SPOKANE COUNTY REVIEW COMMENTS
DHC	06-10-04	REVISED STORM SYSTEM OFF-SITE & ADDED SECOND DETAIL SHEET

DATUM	SCALE		DATE
TBM NO.	HORIZONTAL 1"=200'	DRAWN D.H. CHRISTENSON	06-25-04
ELEVATION	VERTICAL 1"=10'	CHECKED C.E. SIMPSON	
LOCATION		APPROVED	

DOUGLAS H. CHRISTENSON, STATE OF WASHINGTON, 39210, REGISTERED PROFESSIONAL ENGINEER, 6-25-04, EXPIRES 4/10/05

Founded 1946
Simpson Engineers, Inc.
CIVIL ENGINEERS & LAND SURVEYORS
N. 909 ARGONNE ROAD, SPOKANE WA., 99212-2789
PHONE (509) 926-1322 FAX (509) 926-1323

TYPE OF IMPROVEMENT:	
PLAN SET – COVER	
PROJECT NUMBER	SHEET NUMBER
14044	1 OF 8

REMINGTON HILL 3RD ADDITION
WEST PORTION OF WHIRLAWAY LANE

VICINITY MAP & PLAN INDEX
THE SE 1/4 OF SEC.25, T25N, R44 EWM

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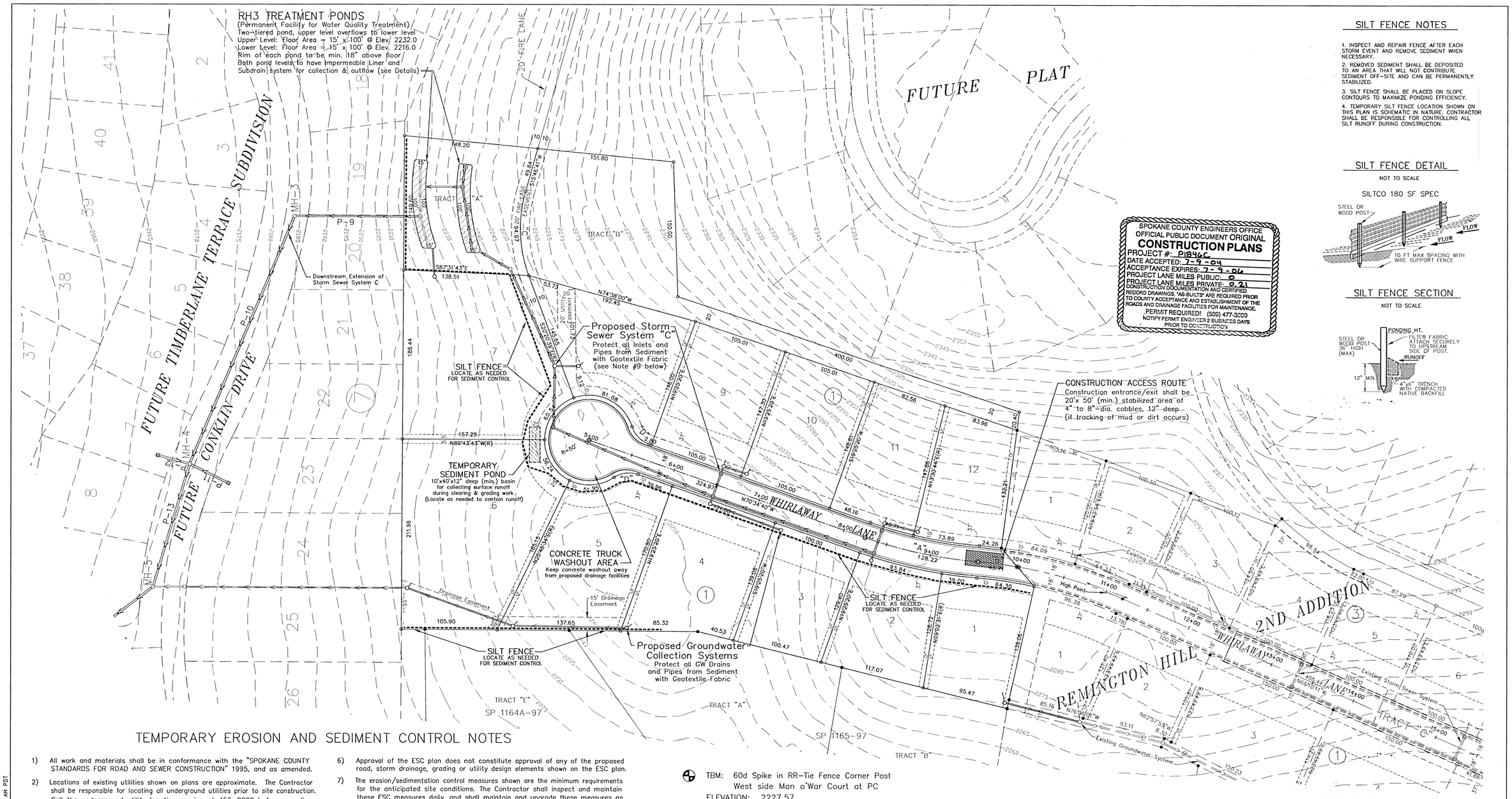
P-1846 C - Eng Road & Drainage



SPOKANE COUNTY ENGINEERS OFFICE
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PROJECT #: P1846C
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ACCEPTANCE EXPIRES: 7-9-06
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PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

SILT FENCE NOTES

1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
4. TEMPORARY SILT FENCE LOCATION SHOWN ON THIS PLAN IS SCHEMATIC IN NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING ALL SILT RUNOFF DURING CONSTRUCTION.

SILT FENCE DETAIL

NOT TO SCALE

SILTCO 180 SF SPEC

SILT FENCE SECTION

NOT TO SCALE

TEMPORARY EROSION AND SEDIMENT CONTROL NOTES

1) All work and materials shall be in conformance with the "SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION" 1995, and as amended.

2) Locations of existing utilities shown on plans are approximate. The Contractor shall be responsible for locating all underground utilities prior to site construction. Call the underground utility location service at 456-8000 before you dig. Any conflicting utilities shall be relocated prior to construction of road and drainage facilities.

3) The Contractor is required to have a complete set of the approved road and/or drainage plans on the job site whenever construction is in progress.

4) 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 Engineers office.

5) This Erosion & Sediment 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.

6) Approval of the ESC plan does not constitute approval of any of the proposed road, storm drainage, grading or utility design elements shown on the ESC plan.

7) 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.

8) The Contractor/Developer is responsible for installing Rock Construction Entries at any and all locations used to enter or exit the project site.

9) Geotextile fabric is to be placed on the rims of drywells, catch basins and inlets until such time as the vegetation on the site is established and the threat of sediment deposition into the drainage system is mitigated.

10) All temporary erosion and sediment control facilities shall be removed within 30 days after final site stabilization or after the temporary control facilities are no longer needed. Trapped sediment shall be removed from the project site or stabilized on-site. Stabilize disturbed soil areas resulting from the removal of the temporary control facilities.

TBM: 60d Spike in RR-Tie Fence Corner Post
West side Man o'War Court at PC
ELEVATION: 2227.57

BM: Brass Cap #2227
South side of 32nd Avenue
just East of Man o'War Court
ELEVATION: 2226.53

ENGINEER'S CERTIFICATION FOR ESC PLAN

The recommended provisions shown in this Erosion & Sediment Control Plan meet the applicable requirements for ESC plans as listed in Chapter 4.5 of the Spokane County Guidelines for Stormwater Management. I approve this plan for construction.

LEGEND FOR ESC PLAN

EXISTING
- 2250 — Existing Ground Contour (Contour Interval = 5')

PROPOSED
- Temporary Silt Fencing
- Proposed Catch Basin Locations (protect from silt infiltration)
- Proposed Storm Sewer Pipe Locations (protect from silt infiltration)
- Temporary Sediment Pond

NORTH

GRAPHIC SCALE (IN FEET)
0 25 50 100
SCALE: 1" = 50'

DEVELOPERS APPROVAL

6-25-04
DATE

CALL BEFORE YOU DIG 456-8000

BY	DATE	REVISIONS / AS BUILT
DHC	11-07-03	REVISED PROPOSED STORM SYSTEM WITHIN TIMBERLANE TERRACE
DHC	03-19-04	REVISED PLAN SET PER SPOKANE COUNTY REVIEW COMMENTS
DHC	05-07-04	FINALIZED PLAN SET
DHC	06-10-04	REVISED STORM SYSTEM OFF-SITE & ADDED SECOND DETAIL SHEET

DATUM	SCALE		DATE
TBM NO.	HORIZONTAL 1"=50'	DRAWN D.H. CHRISTENSON	06-25-04
ELEVATION	VERTICAL	CHECKED C.E. SIMPSON	
LOCATION		APPROVED	

DOUGLAS H. CHRISTENSON, STATE OF WASHINGTON, 35016, REGISTERED PROFESSIONAL ENGINEER, EXPIRES 4/10/05

Founded 1946
Simpson Engineers, Inc.
CIVIL ENGINEERS & LAND SURVEYORS
N. 909 ARGONNE ROAD, SPOKANE WA., 99212-2789
PHONE (509) 926-1322 FAX (509) 926-1323

TYPE OF IMPROVEMENT: EROSION CONTROL

PROJECT NUMBER	SHEET NUMBER
14044	2 OF 8

REMINGTON HILL 3RD ADDITION
WEST PORTION OF WHIRLAWAY LANE

EROSION & SEDIMENT CONTROL PLAN
THE SE 1/4 OF SEC.25, T25N, R44 EWM

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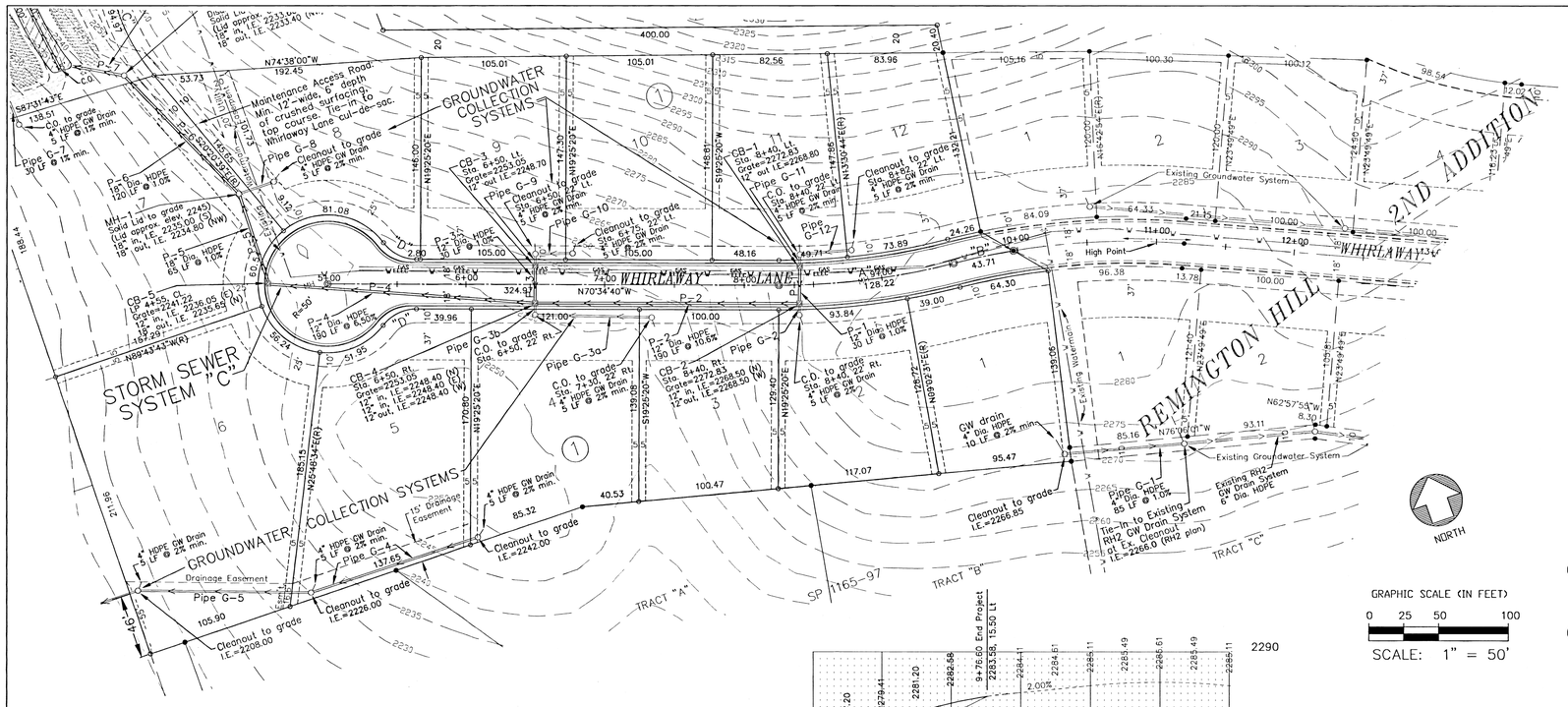
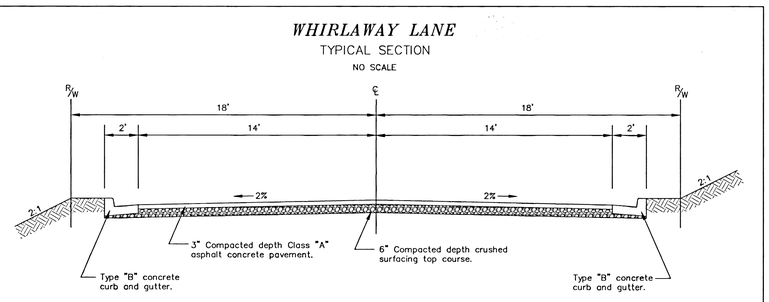
P-1846C Eng Road & Drainage





NOTE: Roadway Section as per existing portion of Whirlaway Lane in Remington Hill 2nd Add.

Whirlaway Lane Curve Data

Centerline "A"	Centerline "B"	Curb "D"
R=500.00	R=500.00	R=30.00
L=128.22	L=43.70	L=27.57
T=64.46	T=21.87	T=14.84
Δ=14°41'33"	Δ=5°00'29"	Δ=52°39'04"

NOTE: See "Drainage Plan," Sheet 4 of 6, for Storm Sewer System "C" and Groundwater Collection Systems Data Tables

GRAPHIC SCALE (IN FEET)
0 25 50 100
SCALE: 1" = 50'

TBM: 60d Spike in RR-Tie Fence Corner Post West side Man o'War Court at PC
ELEVATION: 2227.57

BM: Brass Cap #2227 South side of 32nd Avenue just East of Man o'War Court
ELEVATION: 2226.53

The design improvements shown in this set of plans conform to the applicable editions of the Spokane County standards for road and sewer construction and Spokane County guidelines for stormwater management. All design deviations have been approved by the Spokane County Engineer. I approve these plans for construction.

DEVELOPERS APPROVAL — DATE 6-25-04

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1846C
DATE ACCEPTED: 7-9-04
ACCEPTANCE EXPIRES: 7-9-06
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 0.21
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
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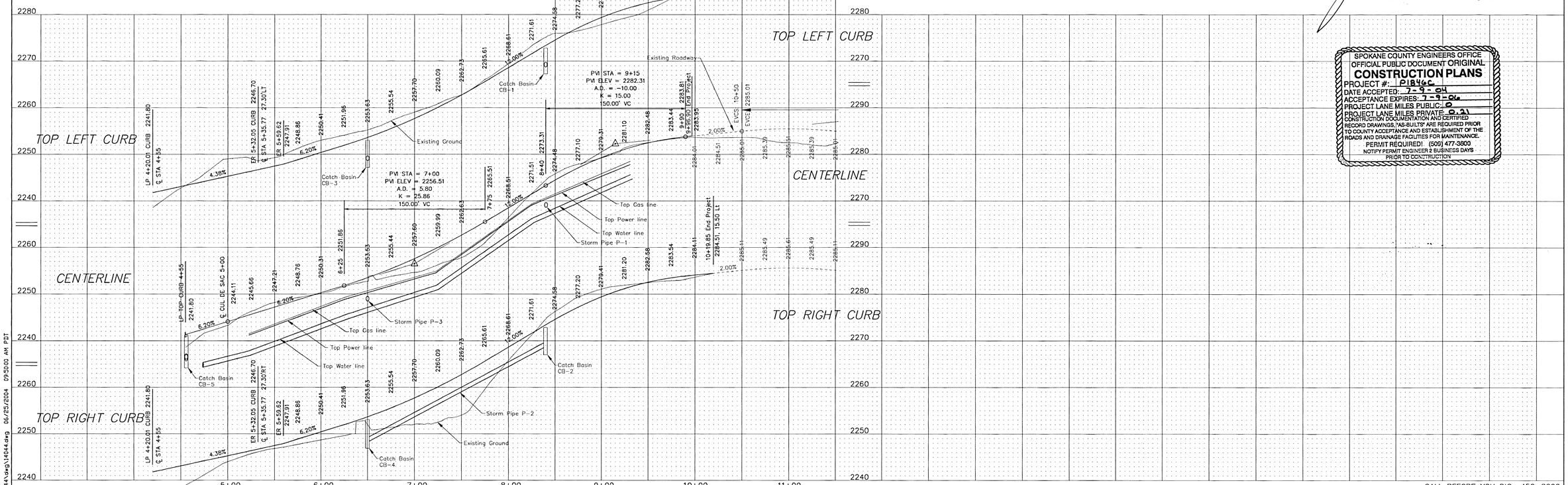

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BY	DATE	REVISIONS / AS BUILT
DHC	11-07-03	REVISIONS TO PORTIONS OF PLAN SET; PROFILE NOT AFFECTED
DHC	03-19-04	REVISED PLAN SET PER SPOKANE COUNTY REVIEW COMMENTS
DHC	05-07-04	FINALIZED PLAN SET
DHC	06-10-04	REVISED STORM SYSTEM OFF-SITE & ADDED SECOND DETAIL SHEET

DATUM	SCALE		DATE
TBM NO.	HORIZONTAL 1"=50'	DRAWN MCP, DHC	06-25-04
ELEVATION	VERTICAL 1"=10'	CHECKED C.E. SIMPSON	
LOCATION		APPROVED	

DOUGLAS H. CHRISTENSEN — STATE OF WASHINGTON — 39010 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 4/10/05

Founded 1946
Simpson Engineers, Inc.
CIVIL ENGINEERS & LAND SURVEYORS
N. 909 ARGONNE ROAD, SPOKANE WA., 99212-2789
PHONE (509) 926-1322 FAX (509) 926-1323

TYPE OF IMPROVEMENT: STREET

PROJECT NUMBER	SHEET NUMBER
14044	3 OF 8

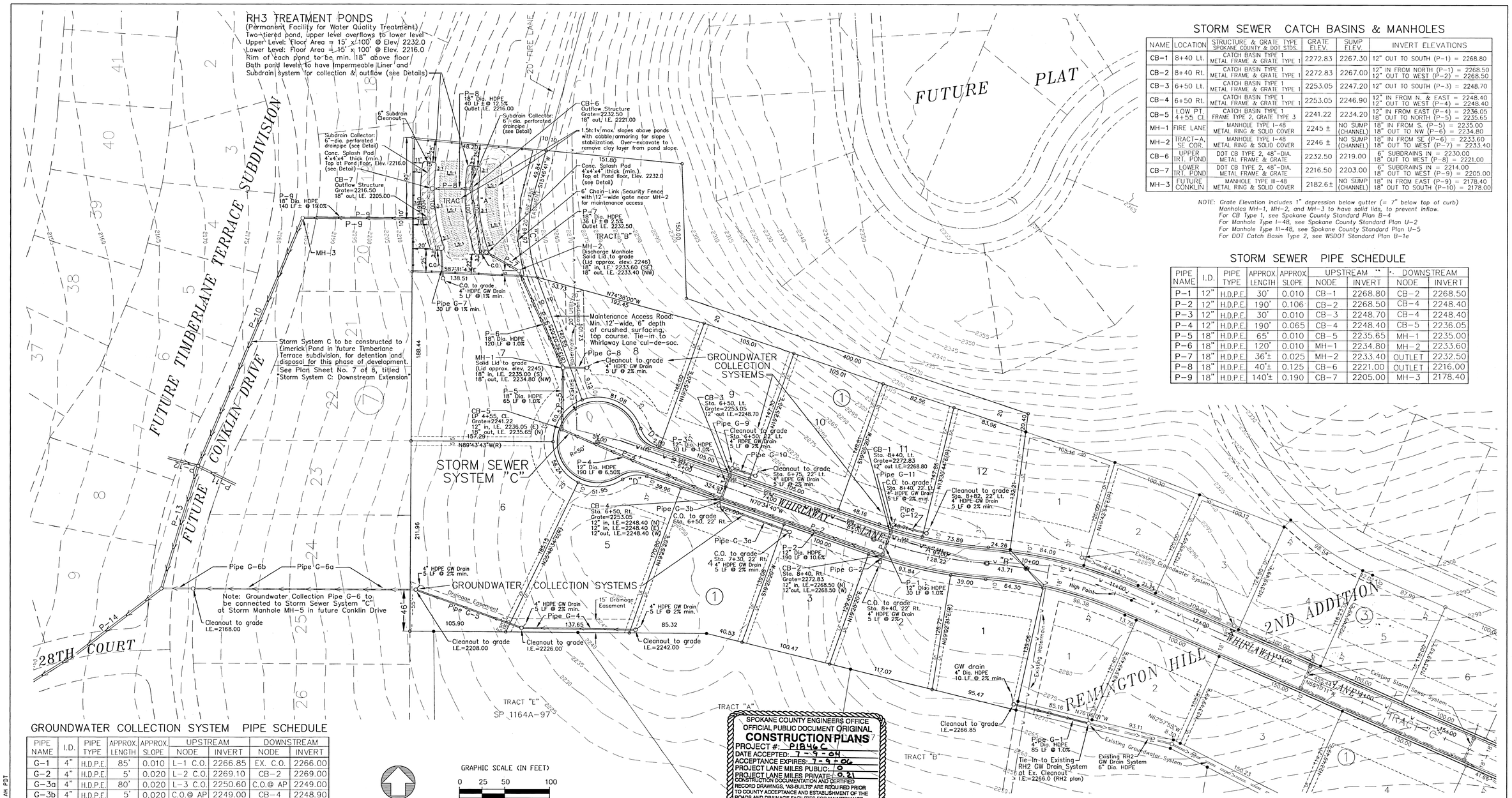
REMINGTON HILL 3RD ADDITION

PLAN-PROFILE: WHIRLAWAY LANE

CENTERLINE STATION 4+55 TO 9+96.90

THE SE 1/4 OF SEC.25, T25N, R44 EWM

P-1846 C Eng Road + Drainage



STORM SEWER CATCH BASINS & MANHOLES

NAME	LOCATION	STRUCTURE & GRATE TYPE SPOKANE COUNTY & DOT STDS.	GRATE ELEV.	SUMP ELEV.	INVERT ELEVATIONS
CB-1	8+40 Lt.	CATCH BASIN TYPE 1 METAL FRAME & GRATE TYPE 1	2272.83	2267.30	12" OUT TO SOUTH (P-1) = 2268.80
CB-2	8+40 Rt.	CATCH BASIN TYPE 1 METAL FRAME & GRATE TYPE 1	2272.83	2267.00	12" IN FROM NORTH (P-1) = 2268.50 12" OUT TO WEST (P-2) = 2268.50
CB-3	6+50 Lt.	CATCH BASIN TYPE 1 METAL FRAME & GRATE TYPE 1	2253.05	2247.20	12" OUT TO SOUTH (P-3) = 2248.70
CB-4	6+50 Rt.	CATCH BASIN TYPE 1 METAL FRAME & GRATE TYPE 1	2253.05	2246.90	12" IN FROM N. & EAST = 2248.40 12" OUT TO WEST (P-4) = 2248.40
CB-5	LOW PT. 4+55 CL	CATCH BASIN TYPE 1 FRAME TYPE 2, GRATE TYPE 3	2241.22	2234.20	12" IN FROM EAST (P-4) = 2236.05 18" OUT TO NORTH (P-5) = 2235.65
MH-1	FIRE LANE	MANHOLE TYPE I-48 METAL RING & SOLID COVER	2245 ±	NO SUMP (CHANNEL)	18" IN FROM S. (P-5) = 2235.00 18" OUT TO NW (P-6) = 2234.80
MH-2	TRACT-A, SE COR.	MANHOLE TYPE I-48 METAL RING & SOLID COVER	2246 ±	NO SUMP (CHANNEL)	18" IN FROM SE (P-6) = 2233.60 18" OUT TO WEST (P-7) = 2233.40
CB-6	UPPER TRT. POND	DOT CB TYPE 2, 48"-DIA. METAL FRAME & GRATE	2232.50	2219.00	6" SUBDRAINS IN = 2230.00 18" OUT TO WEST (P-8) = 2221.00
CB-7	LOWER TRT. POND	DOT CB TYPE 2, 48"-DIA. METAL FRAME & GRATE	2216.50	2203.00	6" SUBDRAINS IN = 2214.00 18" OUT TO WEST (P-9) = 2205.00
MH-3	FUTURE CONKLIN	MANHOLE TYPE III-48 METAL RING & SOLID COVER	2182.6±	NO SUMP (CHANNEL)	18" IN FROM EAST (P-9) = 2178.40 18" OUT TO SOUTH (P-10) = 2178.00

NOTE: Grate Elevation includes 1" depression below gutter (= 7" below top of curb)
Manholes MH-1, MH-2, and MH-3 to have solid lids, to prevent inflow.
For CB Type 1, see Spokane County Standard Plan B-4
For Manhole Type I-48, see Spokane County Standard Plan U-2
For Manhole Type III-48, see Spokane County Standard Plan U-5
For DOT Catch Basin Type 2, see WSDOT Standard Plan B-1e

STORM SEWER PIPE SCHEDULE

PIPE NAME	I.D.	PIPE TYPE	APPROX. LENGTH	APPROX. SLOPE	UPSTREAM NODE	UPSTREAM INVERT	DOWNSTREAM NODE	DOWNSTREAM INVERT
P-1	12"	H.D.P.E.	30'	0.010	CB-1	2268.80	CB-2	2268.50
P-2	12"	H.D.P.E.	190'	0.106	CB-2	2268.50	CB-4	2248.40
P-3	12"	H.D.P.E.	30'	0.010	CB-3	2248.70	CB-4	2248.40
P-4	12"	H.D.P.E.	190'	0.065	CB-4	2248.40	CB-5	2236.05
P-5	18"	H.D.P.E.	65'	0.010	CB-5	2235.65	MH-1	2235.00
P-6	18"	H.D.P.E.	120'	0.010	MH-1	2234.80	MH-2	2233.60
P-7	18"	H.D.P.E.	36'±	0.025	MH-2	2233.40	OUTLET	2232.50
P-8	18"	H.D.P.E.	40'±	0.125	CB-6	2221.00	OUTLET	2216.00
P-9	18"	H.D.P.E.	140'±	0.190	CB-7	2205.00	MH-3	2178.40

GROUNDWATER COLLECTION SYSTEM PIPE SCHEDULE

PIPE NAME	I.D.	PIPE TYPE	APPROX. LENGTH	APPROX. SLOPE	UPSTREAM NODE	UPSTREAM INVERT	DOWNSTREAM NODE	DOWNSTREAM INVERT
G-1	4"	H.D.P.E.	85'	0.010	L-1 C.O.	2266.85	EX. C.O.	2266.00
G-2	4"	H.D.P.E.	5'	0.020	L-2 C.O.	2269.10	CB-2	2269.00
G-3a	4"	H.D.P.E.	80'	0.020	L-3 C.O.	2250.60	C.O.@ AP	2249.00
G-3b	4"	H.D.P.E.	5'	0.020	C.O.@ AP	2249.00	CB-4	2248.90
G-4	4"	H.D.P.E.	125'	0.128	L-4 C.O.	2242.00	L-5 C.O.	2226.00
G-5	6"	H.D.P.E.	120'	0.150	L-5 C.O.	2226.00	L-6 C.O.	2208.00
G-6a	6"	H.D.P.E.	245'	0.163	L-6 C.O.	2208.00	C.O.@ VAP	2168.00
G-6b	6"	H.D.P.E.	35'	0.011	C.O.@ VAP	2168.00	MH-5	2167.60
G-7	4"	H.D.P.E.	30'	0.010	L-7 C.O.	2216.80	OUTLET	2216.50
G-8	4"	H.D.P.E.	25'	0.200	L-8 C.O.	2241.00	MH-1	2236.00
G-9	6"	H.D.P.E.	5'	0.020	L-9 C.O.	2249.30	CB-3	2249.20
G-10	4"	H.D.P.E.	25'	0.068	L-10 C.O.	2251.00	L-9 C.O.	2249.30
G-11	6"	H.D.P.E.	5'	0.020	L-11 C.O.	2269.40	CB-1	2269.30
G-12	4"	H.D.P.E.	35'	0.040	L-12 C.O.	2270.80	L-11 C.O.	2269.40

NOTE: Groundwater Collection System connects to each homesite's Groundwater Protection System. See "Groundwater Protection System" on Detail Sheet.

NORTH

GRAPHIC SCALE (IN FEET)
0 25 50 100
SCALE: 1" = 50'

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West side Man o'War Court at PC
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BM: Brass Cap #2227
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just East of Man o'War Court
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PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

ENGINEER'S CERTIFICATION

The design improvements shown in this set of plans conform to the applicable editions of the Spokane County standards for road and sewer construction and Spokane County guidelines for stormwater management. All design deviations have been approved by the Spokane County Engineer. I approve these plans for construction.

LEGEND FOR DRAINAGE PLAN

EXISTING

- 2250 = Existing Ground Contour (Contour Interval = 5')
- ELEC = Existing Electric Line
- GAS = Existing Gas Line
- W = Existing Water Main
- = Existing Storm or GW Pipe (in Remington Hill 2nd Add.)

PROPOSED

- CB-2 = Catch Basin, Type 1 (or as specified) with Metal Grate, Type 1 (Type 3 at Low Pt.) Spokane County Standards
- P-1 = Storm Sewer Pipe & Flow Direction
- MH = Manhole with Solid Lid (for cleaning access – no inflow)
- G-8 = Groundwater Collection Pipe & Flow Direction
- C.O. = Cleanout in Groundwater Drain System
- 90/90 = Drainage Pond Floor w/Perimeter Dimensions

NOTE: REFER TO THE REMINGTON HILL 3RD ADDITION "STORMWATER DRAINAGE REPORT" FOR DESIGN DATA, DRAINAGE BASINS, MAINTENANCE RECOMMENDATIONS, SOILS, AND OTHER DRAINAGE SYSTEM INFORMATION.

DEVELOPER'S APPROVAL

6-25-04
DATE

CALL BEFORE YOU DIG 456-8000

BY	DATE	REVISIONS / AS BUILT
DHC	7-17-02	PREVIOUS VERSION OF STORMWATER DISPOSAL CONCEPT
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ELEVATION	VERTICAL	CHECKED C.E. SIMPSON	
LOCATION		APPROVED	

DOUGLAS H. CHRISTENSON, STATE OF WASHINGTON, 35016, REGISTERED PROFESSIONAL ENGINEER, 6-25-04, EXPIRES 4/10/05

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N. 909 ARGONNE ROAD, SPOKANE WA., 99212-2789
PHONE (509) 926-1322 FAX (509) 926-1323

TYPE OF IMPROVEMENT: DRAINAGE

PROJECT NUMBER	SHEET NUMBER
14044	4 OF 8

REMINGTON HILL 3RD ADDITION
WEST PORTION OF WHIRLAWAY LANE

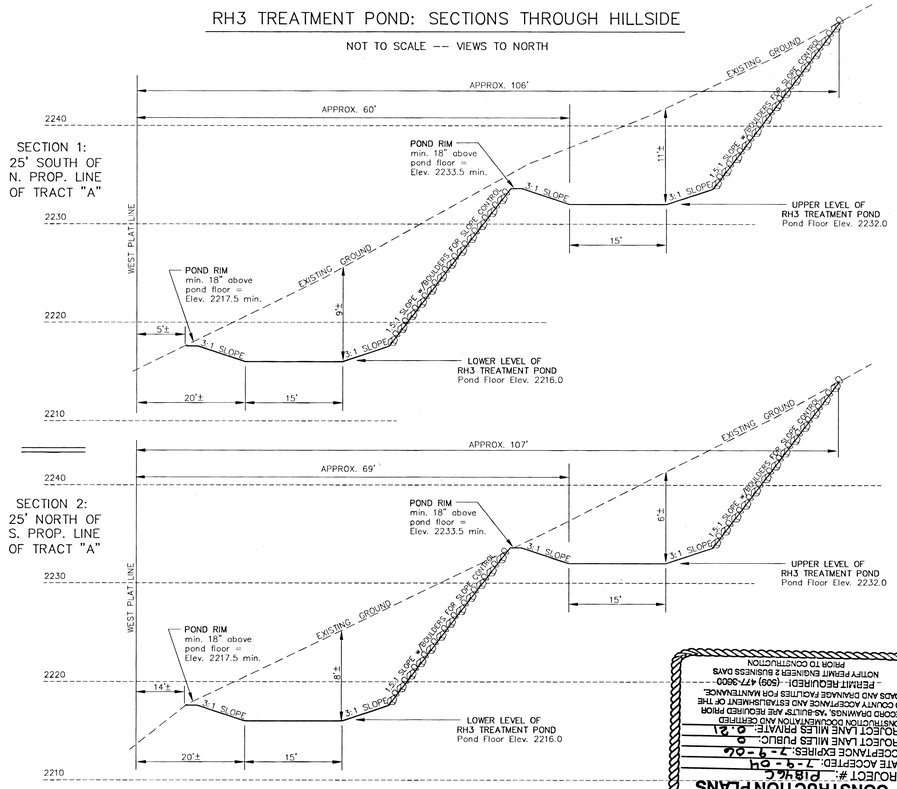
DRAINAGE PLAN
THE SE 1/4 OF SEC.25, T25N, R44 EWM

P-1846C Eng Road & Drainage

P:\Projects\14001-14500\14044\dwg\14044.dwg 06/25/2004 09:50:00 AM PDT

RH3 TREATMENT POND: SECTIONS THROUGH HILLSIDE

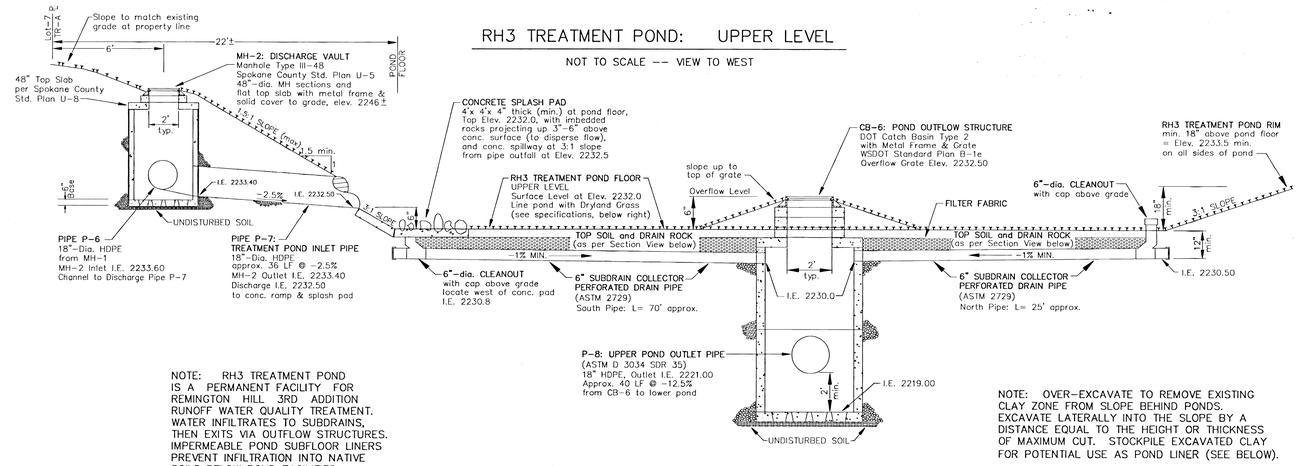
NOT TO SCALE -- VIEWS TO NORTH



SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1846C
DATE ACCEPTED: 7-9-04
ACCEPTANCE EXPIRES: 7-9-06
PROJECT LANE MILES PUBLIC: 0.21
PROJECT LANE MILES PRIVATE: 0.21
CONSTRUCTION OCCUPATION AND OBTAINED RECORD DRAWINGS. AS-BUILTS ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
- PERMIT REQUIRED: (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

RH3 TREATMENT POND: UPPER LEVEL

NOT TO SCALE -- VIEW TO WEST

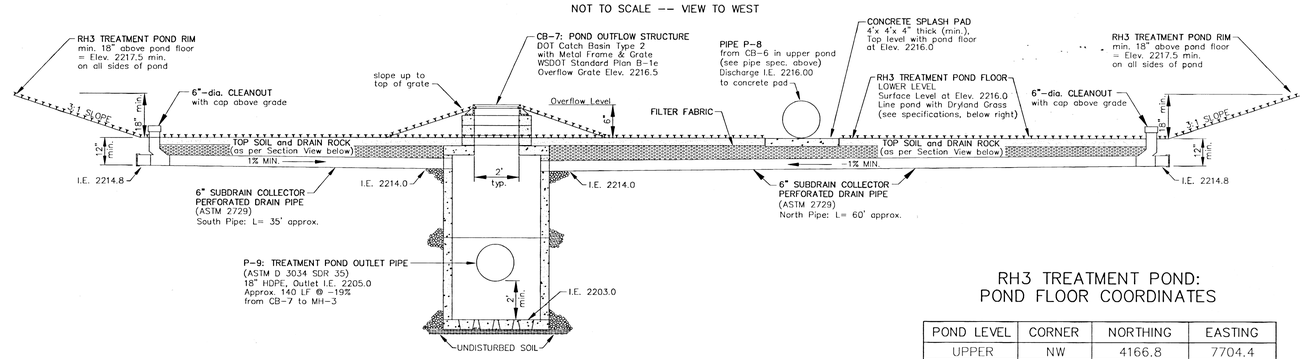


NOTE: RH3 TREATMENT POND IS A PERMANENT FACILITY FOR REMINGTON HILL 3RD ADDITION RUNOFF WATER QUALITY TREATMENT. WATER INFILTRATES TO SUBDRAINS, THEN EXITS VIA OUTFLOW STRUCTURES. IMPERMEABLE POND SUBFLOOR LINERS PREVENT INFILTRATION INTO NATIVE SOILS BELOW POND FACILITIES.

NOTE: OVER-EXCAVATE TO REMOVE EXISTING CLAY ZONE FROM SLOPE BEHIND PONDS. EXCAVATE LATERALLY INTO THE SLOPE BY A DISTANCE EQUAL TO THE HEIGHT OR THICKNESS OF MAXIMUM CUT. STOCKPILE EXCAVATED CLAY FOR POTENTIAL USE AS POND LINER (SEE BELOW).

RH3 TREATMENT POND: LOWER LEVEL

NOT TO SCALE -- VIEW TO WEST



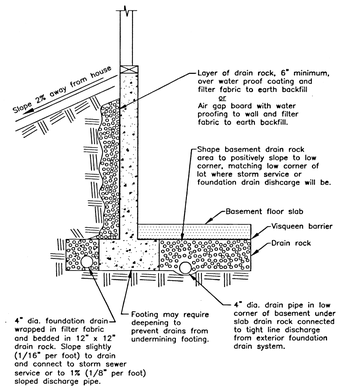
RH3 TREATMENT POND: POND FLOOR COORDINATES

POND LEVEL	CORNER	NORTHING	EASTING
UPPER	NW	4166.8	7704.4
UPPER	NE	4165.3	7719.2
UPPER	SE	4067.7	7728.5
UPPER	SW	4067.8	7713.0
LOWER	NW	4171.4	7655.6
LOWER	NE	4170.1	7670.1
LOWER	SE	4072.3	7679.4
LOWER	SW	4072.6	7663.8

GROUNDWATER PROTECTION SYSTEM

NOT TO SCALE

DETAIL AS PER STRATA GEOTECHNICAL ENGINEERING AND MATERIALS TESTING



NOTE: Ground Water Protection Systems shall connect via 4" GW Drains to Storm Sewer Systems for collection and conveyance as follows:

Lot 1, B-1 connects to existing Groundwater Conveyance System #1 in Remington Hill 2nd Addition, which connects to existing Storm Sewer System "A"; Lots 2, 3, and 7-12, B-1 connect directly to Storm Sewer System "C"; and Lots 4, 5 & 6, B-1 drain to the southwest, and daylight for surface dispersal.

CONSTRUCTION NOTES

1) All work and materials shall be in conformance with the "SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION" 1995, and as amended.

2) 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.

3) 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.

4) 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.

5) Prior to site construction, the Contractor is responsible for locating underground utilities. Call the underground utility location service at 456-8000 before you dig.

6) 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.

7) 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.

8) Approval of the ESC plan does not constitute approval of any of the proposed road, storm drainage, grading or utility design elements shown on the ESC plan.

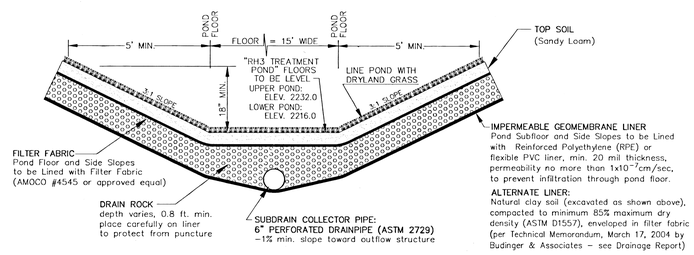
9) The erosion/sedimentation control measures shown are the minimum requirements for the anticipated site conditions. The Contractor shall inspect and maintain these ESC measures daily, and shall maintain and upgrade these measures as necessary to prevent sediment-laden water from either flowing off the site, or into new/existing storm drainage facilities, such as drywells, culverts, or gravel galleries.

10) 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.

DEVELOPER'S APPROVAL — DATE 6-25-04

RH3 TREATMENT PONDS: SECTION VIEW

NOT TO SCALE -- VIEW TO NORTH/SOUTH



DRYLAND GRASS SEED MIX

Specifications per Spokane County

The floor and interior side slopes of both levels of the RH3 Treatment Pond are to be seeded with dryland grass seed mix and mulch.

Grass seed: Provide fresh, clean, new-crop seed complying with tolerances of purity and germination established by the Official Seed Analysis of North America. Provide seed mixture composed of grass species and percentages as follows:

10 percent	Elka Perennial Rye
20 percent	Durar Hard Fescue
45 percent	Covar Sheep Fescue
15 percent	Reubens Canadian Bluegrass

Provide mixture composed of grass seed and fertilizer in percentages

Grass Seed: 90 lbs. per acre
Fertilizer: 16-16-16 timed release composition, 300 lbs. per acre

All seed work is to be completed prior to September 15, or a temporary mulch shall be placed over the denuded surface, and the seeding occur the following spring, after April 15.

ENGINEER'S CERTIFICATION

The design improvements shown in this set of plans conform to the applicable editions of the Spokane County Standards for Road and Sewer Construction and Spokane County Guidelines for Stormwater Management. All design deviations have been approved by the Spokane County Engineer. I approve these plans for construction.

CALL BEFORE YOU DIG 456-8000

BY	DATE	REVISIONS / AS BUILT
DHC	03-19-04	REVISED PLAN SET PER SPOKANE COUNTY REVIEW COMMENTS
DHC	04-20-04	ADDED "SECTIONS THROUGH HILLSIDE" PER SPOKANE COUNTY REVIEW
DHC	05-07-04	REVISED PLAN SET
DHC	06-10-04	REVISED STORM SYSTEM OFF-SITE & ADDED SECOND DETAIL SHEET

DATUM		SCALE			DATE
TBM NO.	Brass Cap #2227	HORIZONTAL	1"=50'	DRAWN D.H. CHRISTENSON	06-25-04
ELEVATION	2226.53	VERTICAL		CHECKED C.E. SIMPSON	
LOCATION	South side of 32nd Avenue just East of Man o'War Court			APPROVED	

DOUGLAS H. CHRISTENSON — STATE OF WASHINGTON — 39318 — REGISTERED PROFESSIONAL ENGINEER — 6-25-04 — EXPIRES 4/19/05

Founded 1946
Simpson Engineers, Inc.
CIVIL ENGINEERS & LAND SURVEYORS
N. 909 ARGONNE ROAD, SPOKANE WA., 99212-2789
PHONE (509) 926-1322 FAX (509) 926-1323

TYPE OF IMPROVEMENT: DRAINAGE	
PROJECT NUMBER	SHEET NUMBER
14044	5 OF 8

REMINGTON HILL 3RD ADDITION
WEST END OF WHIRLAWAY LANE

DRAINAGE DETAILS: ON-SITE

THE SE 1/4 OF SEC.25, T25N, R44 EWM

P-1846C Eng Road & Drainage

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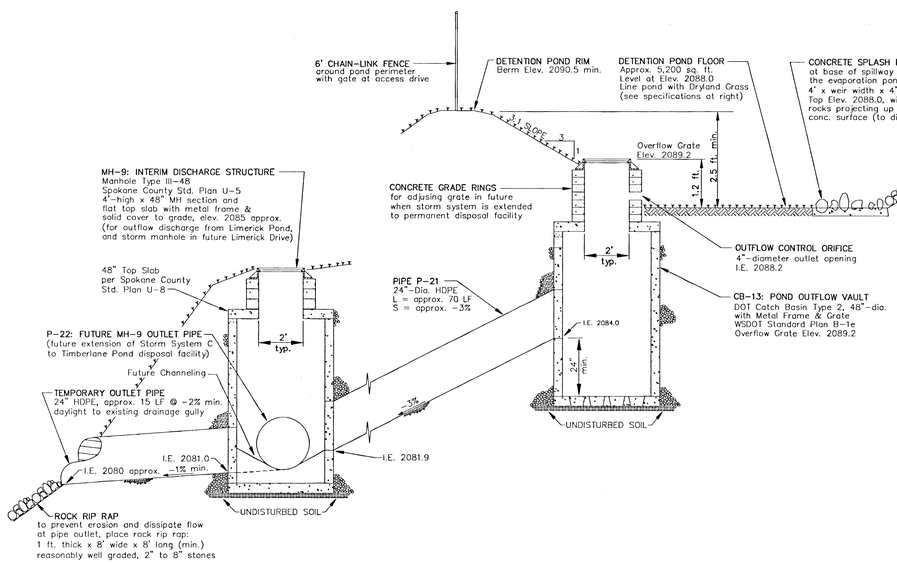
LIMERICK DETENTION POND & OUTFLOW STRUCTURE DETAIL

NOT TO SCALE -- VIEW TO NW

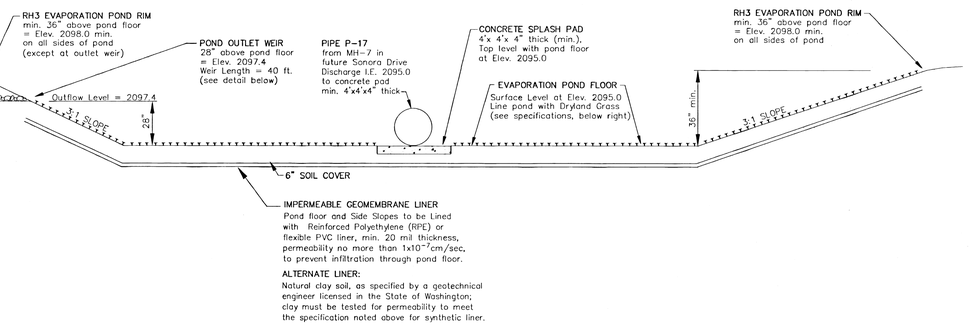
NOTE: LIMERICK DETENTION POND IS A PERMANENT FACILITY FOR RUNOFF WATER DETENTION. FOR INTERIM DISPOSAL OF WATER, A TEMPORARY PIPE DAYLIGHTS OUT OF MH-9 UNTIL STORM SEWER SYSTEM "C" IS EXTENDED TO THE PERMANENT STORMWATER DISPOSAL FACILITY ALONG TIMBERLANE DRIVE, TO BE BUILT DURING A FUTURE PHASE (AS PER "CONCEPTUAL DRAINAGE MAP" DATED SEPT. 1998).



RH3 EVAPORATION POND: SECTION DETAIL

NOT TO SCALE -- VIEW TO NE

NOTE: RH3 EVAPORATION POND IS A TEMPORARY FACILITY FOR RUNOFF WATER VOLUME CONTROL, FOR FLOWS FROM REMINGTON HILL 3RD ADDITION VIA STORM SEWER SYSTEM "C". WHEN THE STORM SEWER SYSTEM IS EXTENDED TO THE PERMANENT FACILITY (AS NOTED AT LEFT), STORMWATER DISPOSAL WILL BE VIA INFILTRATION, AND THE EVAPORATION POND WILL BE ELIMINATED.



LIMERICK DETENTION POND: POND FLOOR COORDINATES

CORNER	NORTHING	EASTING
NORTH	3522.0	6594.0
EAST	3445.3	6635.4
SOUTH	3421.6	6589.5
WEST	3450.6	6547.3

RH3 EVAPORATION POND: POND FLOOR COORDINATES

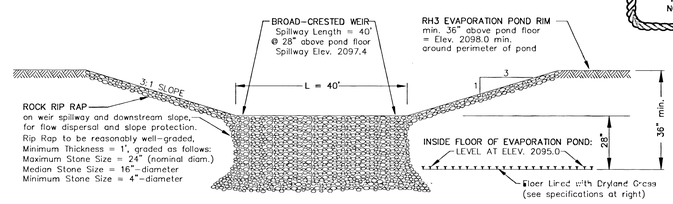
CORNER	NORTHING	EASTING
NORTH	3419.4	6679.4
EAST	3241.5	6767.8
SOUTH	3179.6	6642.2
WEST	3358.0	6554.7

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1846c
DATE ACCEPTED: 7-9-04
ACCEPTANCE EXPIRES: 7-9-06
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 0.21
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED! (509) 477-3200
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

RH3 EVAPORATION POND: OUTFLOW WEIR DETAIL

NOT TO SCALE

WEIR SPILLWAY (VIEW TO EAST)



NOTE: RH3 EVAPORATION POND IS A TEMPORARY FACILITY FOR RUNOFF WATER VOLUME CONTROL, FOR USE ONLY UNTIL STORM SEWER SYSTEM "C" IS EXTENDED TO A FUTURE PERMANENT FACILITY TO BE BUILT NEAR TIMBERLANE DRIVE (AS PER "CONCEPTUAL DRAINAGE MAP" DATED SEPT. 1998).

DRYLAND GRASS SEED MIX

Specifications per Spokane County

The floor and interior side slopes of both the RH3 Evaporation Pond and Limerick Detention Pond are to be seeded with dryland grass seed mix and mulch.

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:

10 percent	Elka Perennial Rye
20 percent	Durar Hard Fescue
45 percent	Covar Sheep Fescue
15 percent	Reubens 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 seed work is to be completed prior to September 15, or a temporary mulch shall be placed over the denuded surface, and the seeding occur the following spring, after April 15.

ENGINEER'S CERTIFICATION

The design improvements shown in this set of plans conform to the applicable editions of the Spokane County Standards for Road and Sewer Construction and 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 6-25-04

CALL BEFORE YOU DIG 456-8000

BY	DATE	REVISIONS / AS BUILT
DHC	03-19-04	REVISED PLAN SET PER SPOKANE COUNTY REVIEW COMMENTS
DHC	04-20-04	ADDED "SECTIONS THROUGH HILLSIDE" PER SPOKANE COUNTY REVIEW
DHC	05-07-04	REVISED PLAN SET
DHC	06-10-04	REVISED STORM SYSTEM OFF-SITE & ADDED SECOND DETAIL SHEET

DATUM		SCALE			DATE
TBM NO.	Brass Cap #2227	HORIZONTAL	1"=50'	DRAWN D.H. CHRISTENSON	06-25-04
ELEVATION	2226.53	VERTICAL		CHECKED C.E. SIMPSON	
LOCATION	South side of 32nd Avenue just East of Man o'War Court			APPROVED	

DOUGLAS H. CHRISTENSON — STATE OF WASHINGTON — 39216 — REGISTERED PROFESSIONAL ENGINEER — 6-16-2004 — EXPIRES 4/10/05

Founded 1946
Simpson Engineers, Inc.
CIVIL ENGINEERS & LAND SURVEYORS
N. 909 ARGONNE ROAD, SPOKANE WA., 99212-2789
PHONE (509) 926-1322 FAX (509) 926-1323

TYPE OF IMPROVEMENT: DRAINAGE	
PROJECT NUMBER	SHEET NUMBER
14044	6 OF 8

REMINGTON HILL 3RD ADDITION
WEST END OF WHIRLAWAY LANE

DRAINAGE DETAILS: OFF-SITE

THE SE 1/4 OF SEC.25, T25N, R44 EWM

P-1846c Eng Road-Drainage

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NORTH

GRAPHIC SCALE (IN FEET)

0 50 100 200

SCALE: 1" = 100'

TBM: 60d Spike in RR-Tie Fence Corner Post
West side Man o'War Court at PC
ELEVATION: 2227.57

BM: Brass Cap #2227
South side of 32nd Avenue
just East of Man o'War Court
ELEVATION: 2226.53

CONTOUR INTERVAL: 5 FEET

REMINGTON HILL 3RD ADDITION & FUTURE TIMBERLANE TERRACE

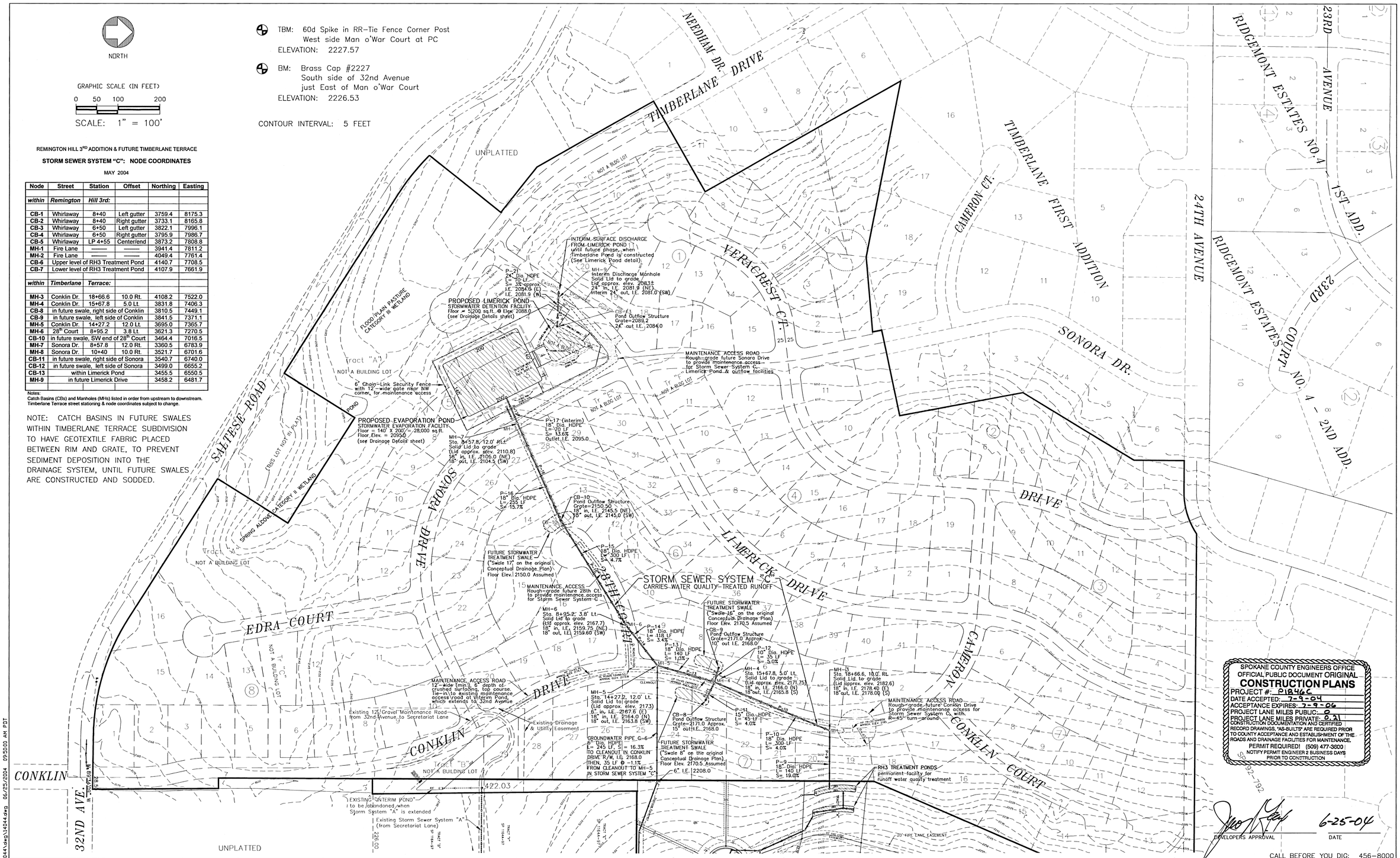
STORM SEWER SYSTEM "C": NODE COORDINATES

MAY 2004

Node	Street	Station	Offset	Northing	Easting
within	*Remington*	*Hill 3rd:*			
CB-1	Whirlaway	8+40	Left gutter	3759.4	8175.3
CB-2	Whirlaway	8+40	Right gutter	3733.1	8165.8
CB-3	Whirlaway	6+50	Left gutter	3822.1	7996.1
CB-4	Whirlaway	6+50	Right gutter	3795.9	7986.7
CB-5	Whirlaway	LP 4+55	Center/end	3873.2	7808.8
MH-1	Fire Lane	——	——	3941.4	7811.2
MH-2	Fire Lane	——	——	4049.4	7761.4
CB-6	Upper level of RH3 Treatment Pond			4140.7	7708.5
CB-7	Lower level of RH3 Treatment Pond			4107.9	7661.9
within	*Timberlane*	*Terrace:*			
MH-3	Conklin Dr.	18+66.6	10.0 Rt.	4108.2	7522.0
MH-4	Conklin Dr.	15+67.8	5.0 Lt.	3831.8	7406.3
CB-8	in future swale, right side of Conklin			3810.5	7449.1
CB-9	in future swale, left side of Conklin			3841.5	7371.1
MH-5	Conklin Dr.	14+27.2	12.0 Lt.	3695.0	7365.7
MH-6	28th Court	8+95.2	3.8 Lt.	3621.3	7270.5
CB-10	in future swale, SW end of 28th Court			3464.4	7016.5
MH-7	Sonora Dr.	8+57.8	12.0 Rt.	3360.5	6783.9
MH-8	Sonora Dr.	10+40	10.0 Rt.	3521.7	6701.6
CB-11	in future swale, right side of Sonora			3540.7	6740.0
CB-12	in future swale, left side of Sonora			3499.0	6655.2
CB-13	within Limerick Pond			3455.5	6550.5
MH-9	in future Limerick Drive			3458.2	6481.7

Notes:
Catch Basins (CBs) and Manholes (MHs) listed in order from upstream to downstream.
Timberlane Terrace street stationing & node coordinates subject to change.

NOTE: CATCH BASINS IN FUTURE SWALES WITHIN TIMBERLANE TERRACE SUBDIVISION TO HAVE GEOTEXTILE FABRIC PLACED BETWEEN RIM AND GRATE, TO PREVENT SEDIMENT DEPOSITION INTO THE DRAINAGE SYSTEM, UNTIL FUTURE SWALES ARE CONSTRUCTED AND SODDED.



SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1846C
DATE ACCEPTED: 7-9-04
ACCEPTANCE EXPIRES: 7-9-06
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 0.21
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

DEVELOPERS APPROVAL 6-25-04 DATE

CALL BEFORE YOU DIG: 456-8000

BY	DATE	REVISIONS / AS BUILT
DHC	03-19-04	REVISED PLAN SET PER SPOKANE COUNTY REVIEW COMMENTS
DHC	05-07-04	REVISED PLAN SET
DHC	06-10-04	REVISED STORM SYSTEM OFF-SITE & ADDED SECOND DETAIL SHEET

	DATUM	SCALE			DATE
TBM NO.	#2227	HORIZONTAL 1"=100'	DRAWN	D.H. CHRISTENSON	06-25-04
ELEVATION	2226.53	VERTICAL	CHECKED	C.E. SIMPSON	
LOCATION	Brass Cap, located on the South side of 32nd Avenue just East of Man o'War Court		APPROVED		

DOUGLAS H. CHRISTENSEN STATE OF WASHINGTON 38015 REGISTERED PROFESSIONAL ENGINEER 6-25-04 EXPIRES 4/10/05

Founded 1946
Simpson Engineers, Inc.
CIVIL ENGINEERS & LAND SURVEYORS
N. 909 ARGONNE ROAD, SPOKANE WA., 99212-2789
PHONE (509) 926-1322 FAX (509) 926-1323

TYPE OF IMPROVEMENT: DRAINAGE

PROJECT NUMBER	SHEET NUMBER
14044	7 OF 8

REMINGTON HILL 3RD ADDITION
SE 1/4 OF SECTION 25, T.25 N, R.44 E.W.M.

STORM SYSTEM "C": DOWNSTREAM EXTENSION
INTO FUTURE TIMBERLANE TERRACE SUBDIVISION

P-1846 C Eng Road & Drainage

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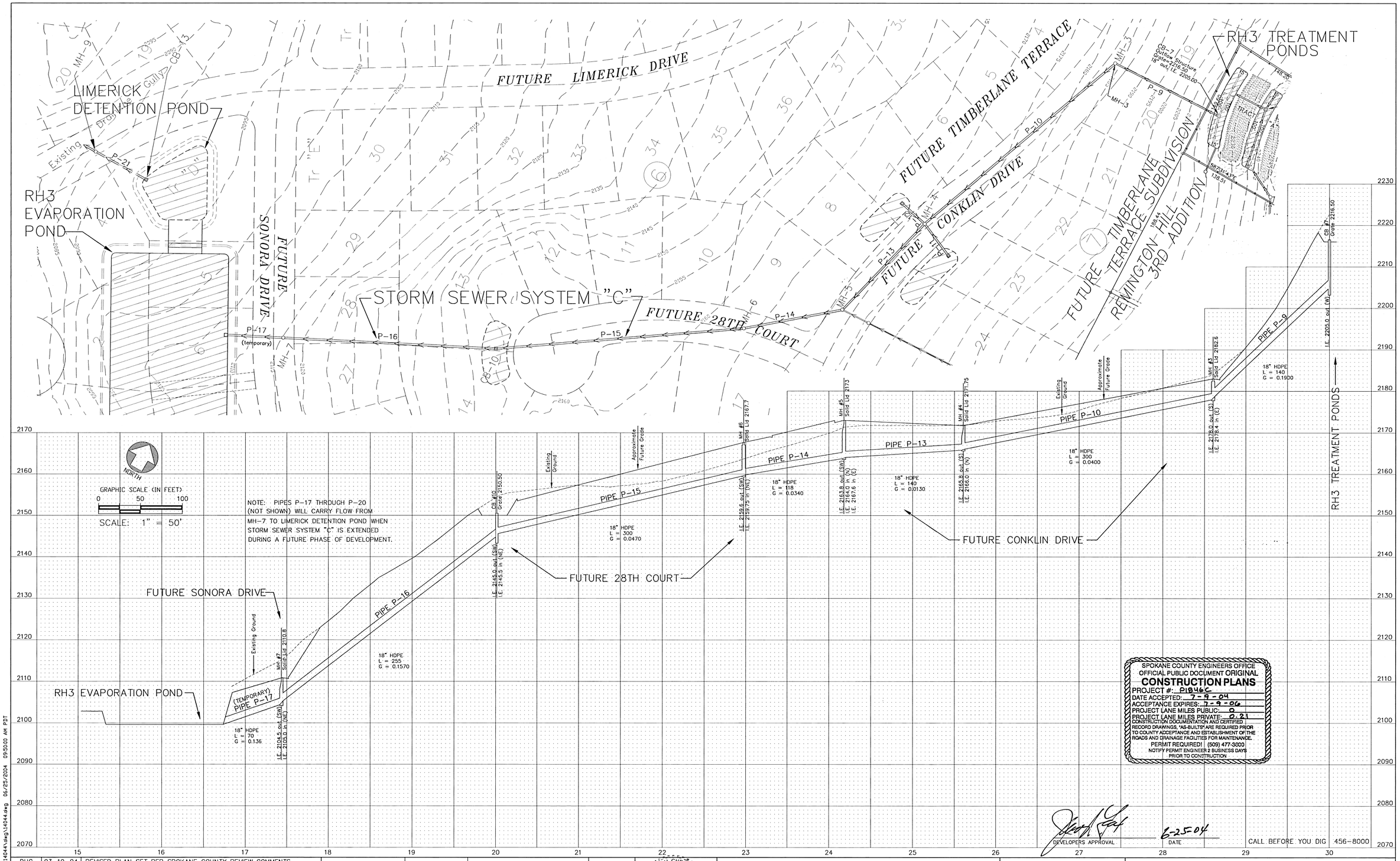

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: 01846C
DATE ACCEPTED: 7-9-04
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PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

DEVELOPERS APPROVAL _____ DATE 6-25-04

BY	DATE	REVISIONS / AS BUILT
DHC	03-19-04	REVISED PLAN SET PER SPOKANE COUNTY REVIEW COMMENTS
DHC	05-07-04	REVISED PLAN SET
DHC	06-10-04	REVISED STORM SYSTEM OFF-SITE & ADDED SECOND DETAIL SHEET

DATUM		SCALE			DATE
TBM NO.	#2227	HORIZONTAL	1"=50'	DRAWN DHC/MCP	06-25-04
ELEVATION	2226.53	VERTICAL	1"=10'	CHECKED CES	
LOCATION	Brass Cap, located on the South side of 32nd Avenue just East of Man o'War Court			APPROVED	

DOUGLAS H. CHRISTENSEN, STATE OF WASHINGTON, 35010, REGISTERED PROFESSIONAL ENGINEER, 6-25-04, EXPIRES 4/10/05

Founded 1946
Simpson Engineers, Inc.
CIVIL ENGINEERS & LAND SURVEYORS
N. 909 ARGONNE ROAD, SPOKANE WA., 99212-2789
PHONE (509) 926-1322 FAX (509) 926-1323

TYPE OF IMPROVEMENT: DRAINAGE

PROJECT NUMBER	SHEET NUMBER
14044	8 OF 8

REMINGTON HILL 3RD ADDITION
SE 1/4 OF SECTION 25, T.25 N, R.44 E.W.M.

STORM SYSTEM "C": DOWNSTREAM PROFILE
INTO FUTURE TIMBERLANE TERRACE SUBDIVISION

P:\Projects\14001-14500\14044\dwg\14044.dwg 06/25/2004 09:50:00 AM PDT

P-1846C Eng Road - Drainage