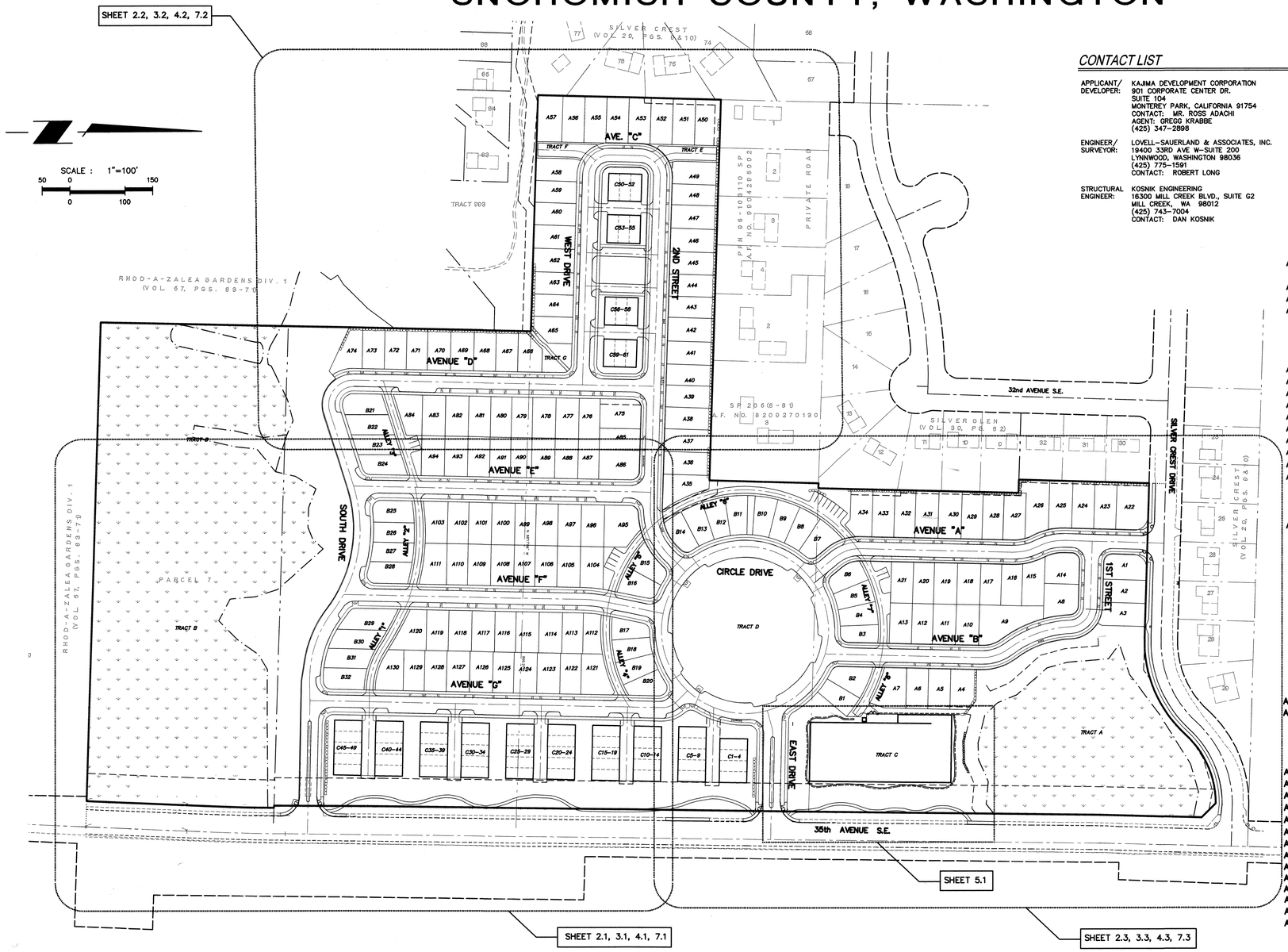
MILL CREEK EAST

IN EAST 1/2 OF SECTION 32, T. 28 N., R. 5 E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

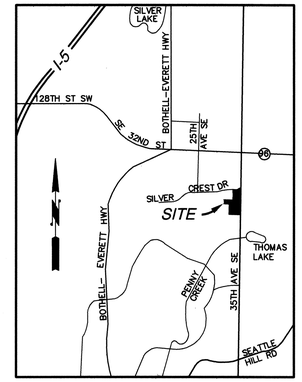


CONTACT LIST

APPLICANT/ DEVELOPER: KAJIMA DEVELOPMENT CORPORATION
901 CORPORATE CENTER DR.
SUITE 104
MONTEREY PARK, CALIFORNIA 91754
CONTACT: MR. ROSS ADACHI
AGENT: GREGG KRABBE
(425) 347-2898

ENGINEER/ SURVEYOR: LOVELL-SAUERLAND & ASSOCIATES, INC.
19400 33RD AVE W-SUITE 200
LYNNWOOD, WASHINGTON 98036
(425) 775-1591
CONTACT: ROBERT LONG

STRUCTURAL ENGINEER: KOSNIK ENGINEERING
16300 MILL CREEK BLVD., SUITE G2
MILL CREEK, WA 98012
(425) 743-7004
CONTACT: DAN KOSNIK



VICINITY MAP

SCALE: 1" = 2000' (APPROX.)
ADJACENT LAND USES ARE RESIDENTIAL

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AB–2.2 HORIZONTAL CONTROL PLAN
AB–2.3 HORIZONTAL CONTROL PLAN
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AB– W–2 WATER PLAN
AB– W–3 WATER PLAN

AS-BUILT

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web: lsaengineering.com

ROBERT L. LONG — STATE OF WASHINGTON — 36508 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 8/17/08

07/27/07

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 6-28-05 MM
3. REV. CB41C & CB44A CALLOUTS 8-8-05 MM
4. AS-BUILT 7-07-06 MH
5. AS-BUILT – PDF 01-15-07 MH
6. AS-BUILT REVISIONS 06-18-07 BJA
7. AS-BUILT MYLARS 07-25-07 RLL

COVER SHEET FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=100'		
DRAWN MM	CHECKED RLL		SHEET
DATE 1-17-05	P.B. –		1.0
PFN	–		
LSA FILE NO.	4700		

HDEV-2244

NORTH POINTE

I:\Projects\LSA Admin-2003\4400 Civil-Arch\dwg\ //2//07 9:46:1 PM, PDT-SEA

LEGAL DESCRIPTION

PARCEL 1

THE NORTH 3/4 OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M.,

EXCEPT THE SOUTH 561 FEET,

EXCEPT 35th AVENUE S.E.; AND,

EXCEPT ANY PORTION THEREOF WITHIN THE PLAT OF SILVER CREST, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 29 OF PLATS, PAGES 9 AND 10, RECORDS OF SNOHOMISH COUNTY, WASHINGTON; AND,

EXCEPT THAT PORTION CONVEYED TO SNOHOMISH COUNTY FOR ROAD BY STATUTORY WARRANTY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 200105240466.

PARCEL 2

THAT PORTION OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M., DESCRIBED AS FOLLOWS:
BEGINNING AT A POINT ON THE EAST LINE OF SAID SUBDIVISION WHICH IS S 0°17'24" E, 434.44 FEET FROM THE NORTHEAST QUARTER THEREOF, AND THE TRUE POINT OF BEGINNING;
THENCE S 89°57'46" W 790 FEET;
THENCE S 0°02'14" E 137.47 FEET;
THENCE N 80°05'30" E 801.87 FEET TO THE TRUE POINT OF BEGINNING;

EXCEPT PORTION THEREOF LYING WITHIN SILVER GLEN, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 30 OF PLATS, PAGE 62, RECORDS OF SNOHOMISH COUNTY, WASHINGTON; AND,

EXCEPT PORTION LYING WITHIN 35TH AVENUE S.E.; AND,

EXCEPT THAT PORTION CONVEYED TO SNOHOMISH COUNTY FOR ROAD BY STATUTORY WARRANTY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 200105240466.

PARCEL 3

THE NORTH 363 FEET OF THE SOUTH 561 FEET OF THE NORTH 3/4ths OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M.;

EXCEPT THE WEST 700 FEET THEREOF; AND,

EXCEPT THAT PORTION THEREOF LYING WITHIN THE FOLLOWNG DESCRIBED TRACT:
BEGINNING AT A POINT ON THE EAST LINE OF SAID SUBDIVISION, WHICH IS S 0°17'24"E, 434.44 FEET FROM THE NORTHEAST CORNER THEREOF, AND THE TRUE POINT OF BEGINNING;
THENCE S 89°57'46" W, 790 FEET;
THENCE S 0°02'14" E, 137.47 FEET;
THENCE N 80°05'30" E, 801.87 FEET TO THE TRUE POINT OF BEGINNING.

ALSO EXCEPT ANY PORTION THEREOF LYING WITHIN THOMAS LAKE ROAD (35th AVENUE S.E.); AND,

EXCEPT THAT PORTION CONVEYED TO SNOHOMISH COUNTY FOR ROAD BY STATUTORY WARRANTY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 200105240466.

PARCEL 4

THE EAST 635 FEET OF THE SOUTH 198 FEET OF THE NORTH 3/4ths OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M.;

EXCEPT ANY PORTION THEREOF LYING WITHIN THOMAS LAKE ROAD (35th AVENUE S.E.); AND,

EXCEPT THAT PORTION CONVEYED TO SNOHOMISH COUNTY FOR ROAD BY STATUTORY WARRANTY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 200105240466.

PARCEL 5

THE SOUTH HALF OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTET OF SECTION 32, TOWNSHIP 28 NORTH, RANGE 5 EAST; W.M.;

EXCEPT COUNTY ROADS; AND,

EXCEPT THAT PORTION CONVEYED TO SNOHOMISH COUNTY FOR ROAD BY STATUTORY WARRANTY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 200105240466.

PARCEL 6

THE NORTH 439.25 FEET, AS MEASURED ALONG EAST LINE, OF THE EAST 894.84 FEET. AS MEASURED ALONG THE NORTH LINE OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 32, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M., RECORDS OF SNOHOMISH COUNTY, WASHINGTON;

EXCEPT THE EAST 30 FEET THEREOF FOR COUNTY ROAD; AND,

EXCEPT THAT PORTION CONVEYED TO SNOHOMISH COUNTY FOR ROAD BY STATUTORY WARRANTY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 200105240466.

PARCEL 7

THE SOUTH 340 FEET OF THE NORTH 779.95 FEET, AS MEASURED ALONG EAST LINE THEREOF, ??OF THE EAST 894.84 FEET. AS MEASURED ALONG THE NORTH LINE THEREOF, OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 32, TOWNSHIP 28 NORTH, RANGE 5 EAST, W.M.;

EXCEPT THAT PORTION CONVEYED TO SNOHOMISH COUNTY FOR ROAD BY STATUTORY WARRANTY DEED RECORDED UNDER AUDITOR'S FILE NUMBER 200105240466.

ALL SITUATE IN THE CITY OF MILL CREEK, COUNTY OF SNOHOMISH OF SNOHOMISH, STATE OF WASHINGTON.

ALL SUBJECT TO EASEMENTS, RESTRICTIONS AND RESERVATIONS OF RECORD.

BENCHMARK AND DATUM:

PROJECT BENCHMARK ESTABLISHED ON EAST QUARTER SECTION MONUMENT AS SHOWN HEREON. TOP OF BRASS DISC = 393.21 FEET NAVD 88.

VERTICAL DATUM – NAVD 88
VERTICAL DATUM IS BASED ON A G.P.S. TIE TO SNOHOMISH COUNTY CONTROL BENCHMARK #1349. BENCHMARK ELEVATION = 276.83 FEET NAVD 88.

SITE ADDRESS

14002 35TH AVENUE S.E.
MILL CREEK, WASHINGTON 98012

ACCEPTED FOR CONSTRUCTION BY:

DIRECTOR OF PUBLIC WORKS
CITY OF MILL CREEK — DATE 7/28/05

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56

DIRECTOR OF COMMUNITY DEVELOPMENT — DATE 7.29.05

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ROBERT L. LONG — STATE OF WASHINGTON — 36508 — REGISTERED PROFESSIONAL ENGINEERS
EXPIRES 8/17/06

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 6-28-05 MM

PROPERTY INFORMATION FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE NONE		
DRAWN MM	CHECKED RLL	SHEET 1.1
DATE 1-17-05	F.B. –	
PFN –		
LSA FILE NO. 4700		

HDEV-2245

NORTH POINTE

SEE SHEET 2.2

SEE SHEET 2.3

SCALE : 1"=50

25 0 0 50 75

TRACT B

TRACT D

PARCEL 7

RHOD-A-ZALEA GARDENS DIV. 1 (VOL. 57, PGS. 83-71)

N 88°17'06" W 867.95'

B22 B23 B24 B25 B26 B27 B28 B29 B30 B31 B32

ALLEY "3" ALLEY "2" ALLEY "1"

SOUTH DRIVE

AVENUE "E" AVENUE "F" AVENUE "G"

A94 A93 A92 A91 A90 A89 A88 A87 A86

A103 A102 A101 A100 A99 A98 A97 A96 A95

A111 A110 A109 A108 A107 A106 A105 A104

A120 A119 A118 A117 A116 A115 A114 A113 A112

A130 A129 A128 A127 A126 A125 A124 A123 A122 A121

A36 A35

ALLEY "6" ALLEY "5" ALLEY "4"

B11 B10 B12 B14 B13 B15 B16 B17 B18 B19 B20

CIRCLE DRIVE

EAST DRIVE

C45-49 C40-44 C35-39 C30-34 C25-29 C20-24 C15-19 C10-14 C5-9 C1-4

6~16 UNIT CBU'S w/ PARCEL LOCKERS

TRANSITION FROM E-2 CURB TO VERTICAL CURB AND GUTTER @ ¼Δ

INSTALL ALL ACCESS RAMPS @ ½Δ UNLESS OTHERWISE NOTED. (SEE DETAIL ON SHT. 6.2)

INSTALL ACCESS RAMP @ PC

INSTALL ACCESS RAMP @ ¼Δ

INSTALL ACCESS RAMP @ 6+69.41 11.50'RT

INSTALL POST AND RAIL FENCE PER NORTH CREEK TRAIL STANDARDS. (INSTALL ALONG WETLAND BUFFER)

DRIVEWAY TYPE "B" SEE DETAIL ON SHT. 6.2 (TYPE FOR ALL ALLEY ACCESS POINTS)

DRIVEWAY TYPE "B" SEE DETAIL ON SHT. 6.2 (TYPE FOR ALL MULTI-FAMILY ACCESS POINTS)

CONC. E-2 CURB(TYP.)

CONC. VERTICAL CURB AND GUTTER(TYP.)

5' CONC. SIDEWALK(TYP.)

7' UTILITY EASEMENT(TYP.)

10' UTILITY EASEMENT(TYP.)

6' CONC. SIDEWALK(TYP.) LOCATION TO BE APPROVED IN FIELD BY CITY STAFF (SEE DTAIL ON. SHT. 6.2)

15'WIDE CONC. PAD FOR BUS STOP.

WETLAND/BUFFER

EX. ASPHALT SIDEWALK

EXISTING PAVEMENT

EAST QUARTER SECTION OF 32-28-5

SECTION CORNER

INT. 2+40.06 CL SOUTH DRIVE= 0+00.00 CL AVENUE "G"

INT. 4+47.93 CL SOUTH DRIVE= 0+00.00 CL AVENUE "F"

INT. 6+47.81 CL SOUTH DRIVE= 0+00.00 CL AVENUE "E"

INT. 11+21.23 CL 2ND STREET= 5+38.82 CL AVENUE "E"

INT. 12+84.06 CL 2ND STREET= 3+96.67 CL CIRCLE DRIVE

INT. 5+81.96 CL AVENUE "F"= 3+09.23 CL CIRCLE DRIVE

INT. 6+96.07 CL AVENUE "G"= 1+56.05 CL CIRCLE DRIVE

INT. 14+02.20 CL 35TH AVENUE S.E.= 0+00.00 CL SOUTH DRIVE

STA. 2+00.56 RADIUS POINT

STA. 0+59.11 RADIUS POINT

N 01°08'17" E 427.45'

N 01°27'03" E 198.

S 11°27'22" W 100.50'

N 88°17'06" W 2615.18'

S 01°08'17" W 183.75'

N 02°25'28" E 184.31'

N 00°39'45" E 840.03'

LEGEND

✣ - SET SURVEY CONTROL MONUMENT (SEE DETAIL ON SHEET 6.2)

NUMBER OF STALLS

E-2 CONC. CURB

CONC. SIDEWALK

21' MIN PER STALL

TYPICAL PARALLEL PARKING DETAIL

NO SCALE

9' MIN. PER STALL

INSTALL PRECAST PARKING CURB(TYP. EA. STALL)

EDGE OF ASPHALT

TYPICAL PERPENDICULAR PARKING DETAIL

NO SCALE

AS-BUILT

NORTH POINTE

LSA

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web: lsaengineering.com

ROBERT L. LOVELL — STATE OF WASHINGTON — 36508 REGISTERED PROFESSIONAL ENGINEER

EXPIRES 8/17/08

07/27/07

REVISIONS

1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS — MM — 5-19-05
2. REVISED PER CITY COMMENTS — MM — 6-28-05
5. AS-BUILT - PDF — MH — 01-15-07
6. AS-BUILT REVISIONS — BJA — 06-18-07
7. AS-BUILT MYLARS — RLL — 07-25-07

ASBUILT HORIZONTAL CONTROL PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=50'	
DRAWN MM	CHECKED RLL	SHEET 2.1
DATE 1-17-05	F.B. -	
PFN	-	
LSA FILE NO. 4700		

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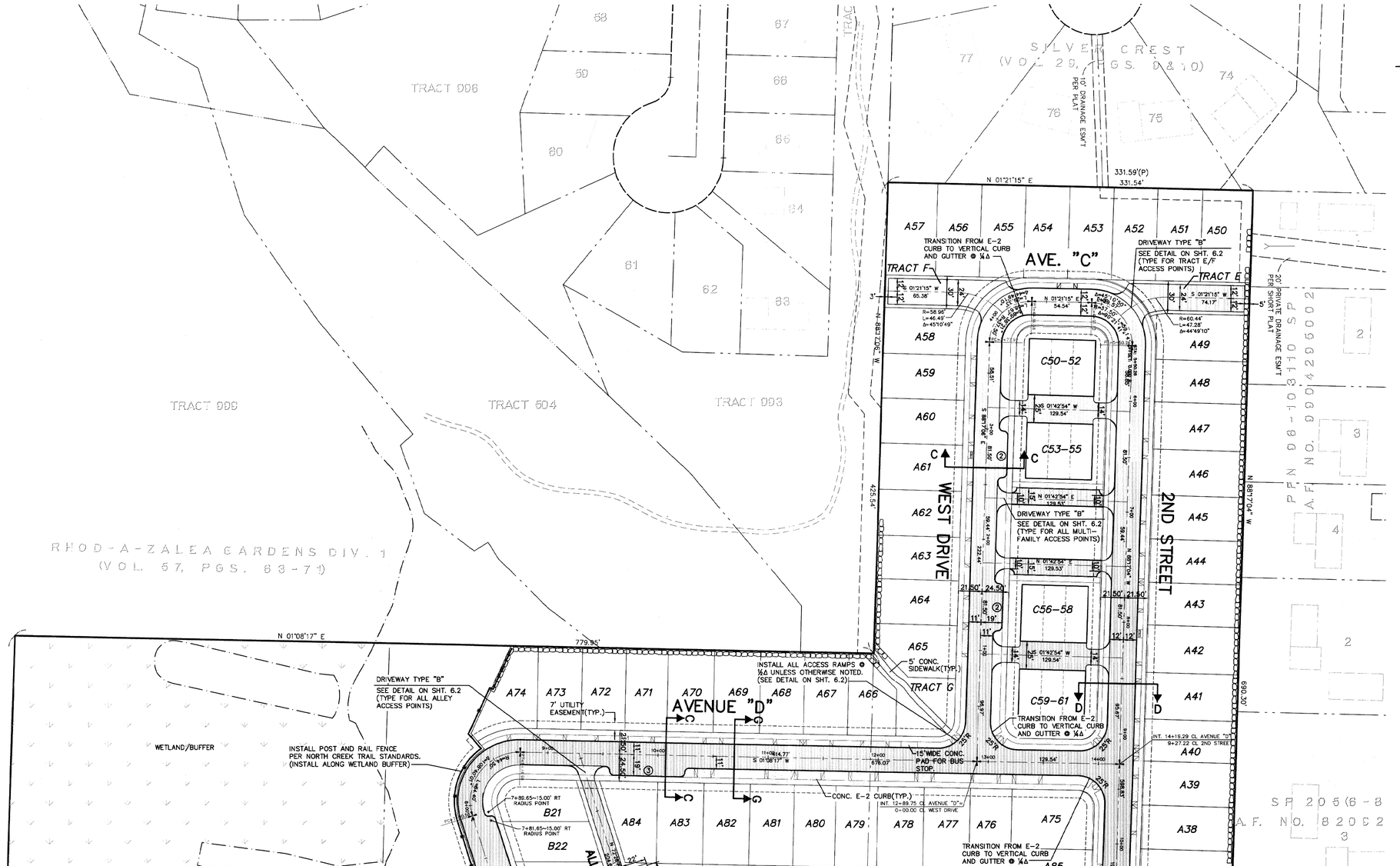

SCALE : 1"=50
25 0 75
0 50

LEGEND
✛ – SET SURVEY CONTROL MONUMENT (SEE DETAIL ON SHEET 6.2)

SEE SHEET 2.1

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ROBERT L. LOVELL
STATE OF WASHINGTON
35508
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 8/17/08
07/27/07

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ASBUILT HORIZONTAL CONTROL PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

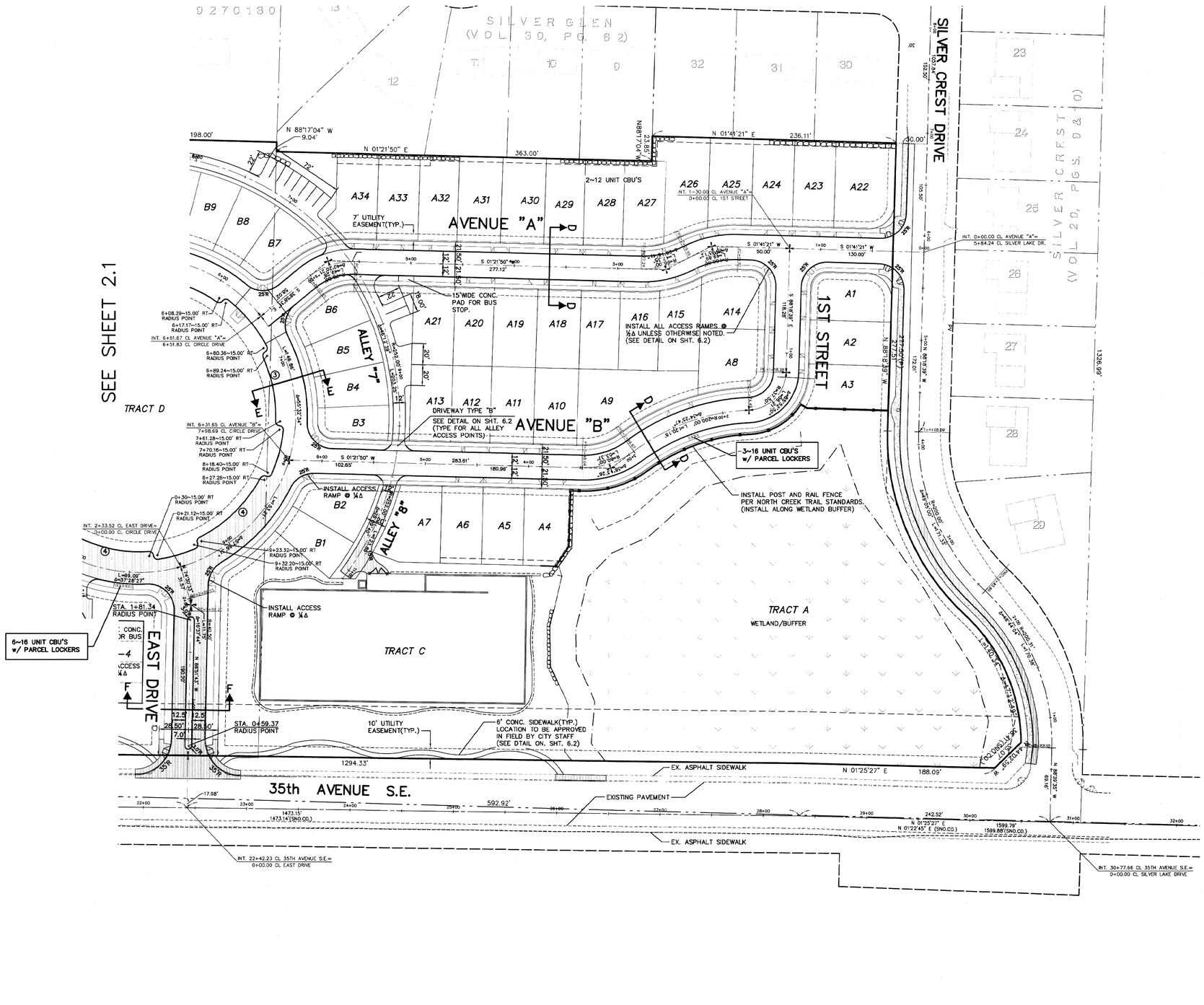
SCALE 1"=50'		
DRAWN MM	CHECKED RLL	SHEET 2.2
DATE 1-17-05	F.B. –	
PFN –		
LSA FILE NO. 4700		

AS-BUILT

HDEV-2247

NORTH POINTE

T:\4700\dwg\LSA ENGINEERING\4700HC - AB.dwg, 7/27/2007 3:57:46 PM, MJ7995



SCALE : 1"=50
25 0 75
0 50

LEGEND
✛ – SET SURVEY CONTROL MONUMENT (SEE DETAIL ON SHEET 6.2)

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ROBERT L. LOVELL STATE OF WASHINGTON 35606 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 8/17/08
07/27/07

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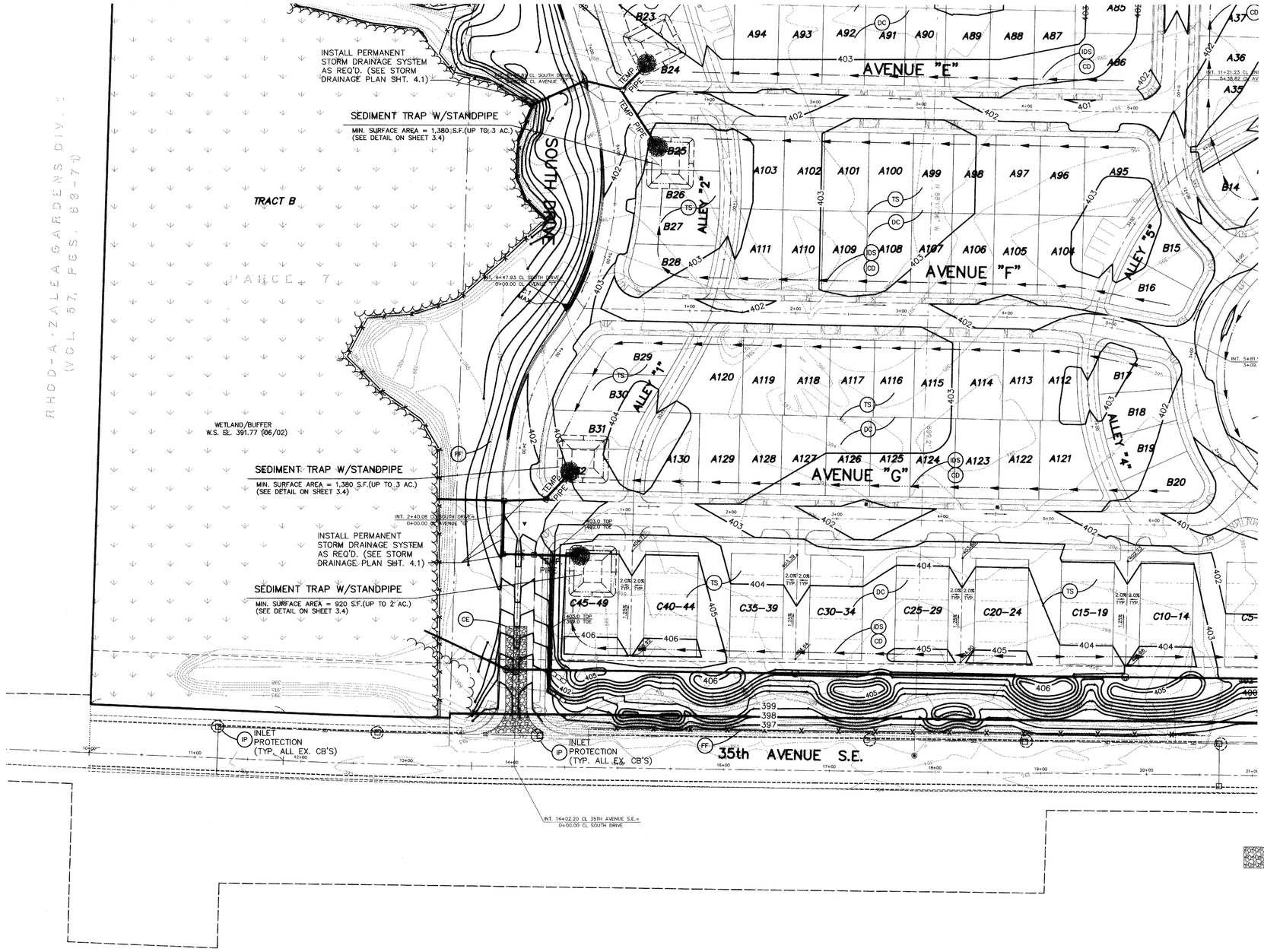
ASBUILT HORIZONTAL CONTROL PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE 1"=50'			
DRAWN MM	CHECKED RLL	SHEET 2.3	
DATE 1-17-05	F.B. –		
PFN –			
LSA FILE NO. 4700			

AS-BUILT
NORTH POINTE
MDEV-2248

T:\4700\cad_SA ENG NEED\PLAN\4700HC 1 AB.dwg, 7/27/2007 3:34:40 PM, MPM95

SEE SHEET 3.2



SEE SHEET 3.3

SCALE : 1"=50

25 0 75

0 50

*TOPOGRAPHY NOTE:

EXISITNG CONTOURS FOR THIS PROJECT WERE TAKEN FROM PRELIMINARY ENGINEERING PLANS DONE BY PERTERSON CONSULTING ENGINEERS DATED 3-7-03. EXISTING GROUND WILL CHANGE DURING RECLAMATION OF PACIFIC TOPSOILS SITE. NEW TOPOGRAPHY MAY BE ADDED TO PLANS PRIOR TO FINAL ENGINEERING APPROVAL.

CONSTRUCTION SEQUENCE SCHEDULE

1. ATTEND PRE-CONSTRUCTION MEETING.
2. FLAG CLEARING LIMITS IN FIELD. CALL FOR CITY INSPECTION.
3. INSTALL FILTER BARRIER/SILT FENCE AND STORM DRAIN INLET PROTECTION. CALL FOR CITY INSPECTION.
4. INSTALL ROCKED CONSTRUCTION ENTRANCES.
5. CLEAR AND GRUB SITE.
6. DIG TEMPORARY SEDIMENT TRAPS. INSTALL NECESSARY STORM SYSTEM.
7. CONSTRUCT INTERCEPTOR DIKE/SWALES AND CHECK DAMS TO DIRECT DRAINAGE TO SEDIMENT TRAPS (RECONSTRUCT AS NECESSARY DURING GRADING OPERATIONS).
8. GRADE SITE PER GRADING PLAN (ROUGH GRADING).
9. CONSTRUCT ROCKERIES, DETENTION POND AND INSTALL UTILITIES (SANITARY, STORM, WATER, POWER, ETC.).
10. INSTALL STORM DRAIN INLET PROTECTION ON ALL NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION.
11. FINAL GRADE & PAVE, MAINTAIN MINIMAL STORM DRAIN INLET PROTECTION.
12. HYDROSEED EXPOSED AREAS FOR PERMANENT COVER.
13. FLUSH STORM DRAINAGE SYSTEM (I.E., CLEAN OUT AND TEST SYSTEM).
14. REMOVE ALL TESCP FACILITIES ONLY WHEN ENTIRE SITE IS STABILIZED.

CONSTRUCTION NOTES

1. ALL EXISTING IMPROVEMENTS(STRUCTURES,UTILITIES,ETC) ON SITE SHALL BE REMOVED UNLESS OTHERWISE NOTED.
2. ALL ROCKERIES OR WALLS OVER 4 FEET HIGH WILL REQUIRE A CITY BUILDING PERMIT.

LEGEND:

SYMBOL	ITEM	CODE	D.O.E. 2001 BMP#
	INSTALL CECK DAM/FILTER FENCE DAM AT ALL EXISTING INLET PIPES	CD / FF	–
	FILTER FENCE (ORANGE FABRIC, TYP.)	FF	C2.33
	CLEARING LIMITS		
	INTERCEPTOR DIKE & SWALE	IDS	C200
	SEDIMENT TRAP	ST	C240/241
	STORM DRAIN INLET PROTECTION	IP	C220
	CHECK DAMS (200' MIN. O.C.)	CD	C140
	TEMPORARY SEEDING	TS	C105/107
	DUST CONTROL (TO INCLUDE SPRINKLING THE SITE WITH WATER UNTIL SURFACE IS WET)	DC	E2.20
	STABILIZED CONSTRUCTION ENTRANCE	CE	E2.10

ACCEPTED FOR CONSTRUCTION BY:

Douglas Peterson 7/28/05

DIRECTOR OF PUBLIC WORKS, CITY OF MILL CREEK — DATE

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56

7.29.05

DIRECTOR OF COMMUNITY DEVELOPMENT — DATE

LSA

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ROBERT L. LOVELL — STATE OF WASHINGTON — 16508 — REGISTERED PROFESSIONAL ENGINEER — 7-8-05

EXPIRES 8/17/06

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS — 5-18-05 MM
2. REVISED PER CITY COMMENTS — 6-28-05 MM

GRADING AND T.E.S.C./S.W.P.P.P. PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=50'	
DRAWN MM	CHECKED RLL	SHEET 3.1
DATE 1-17-05	F.B. –	
PPN	–	
LSA FILE NO.	4700	

HDEV-2249

NORTH POINTE

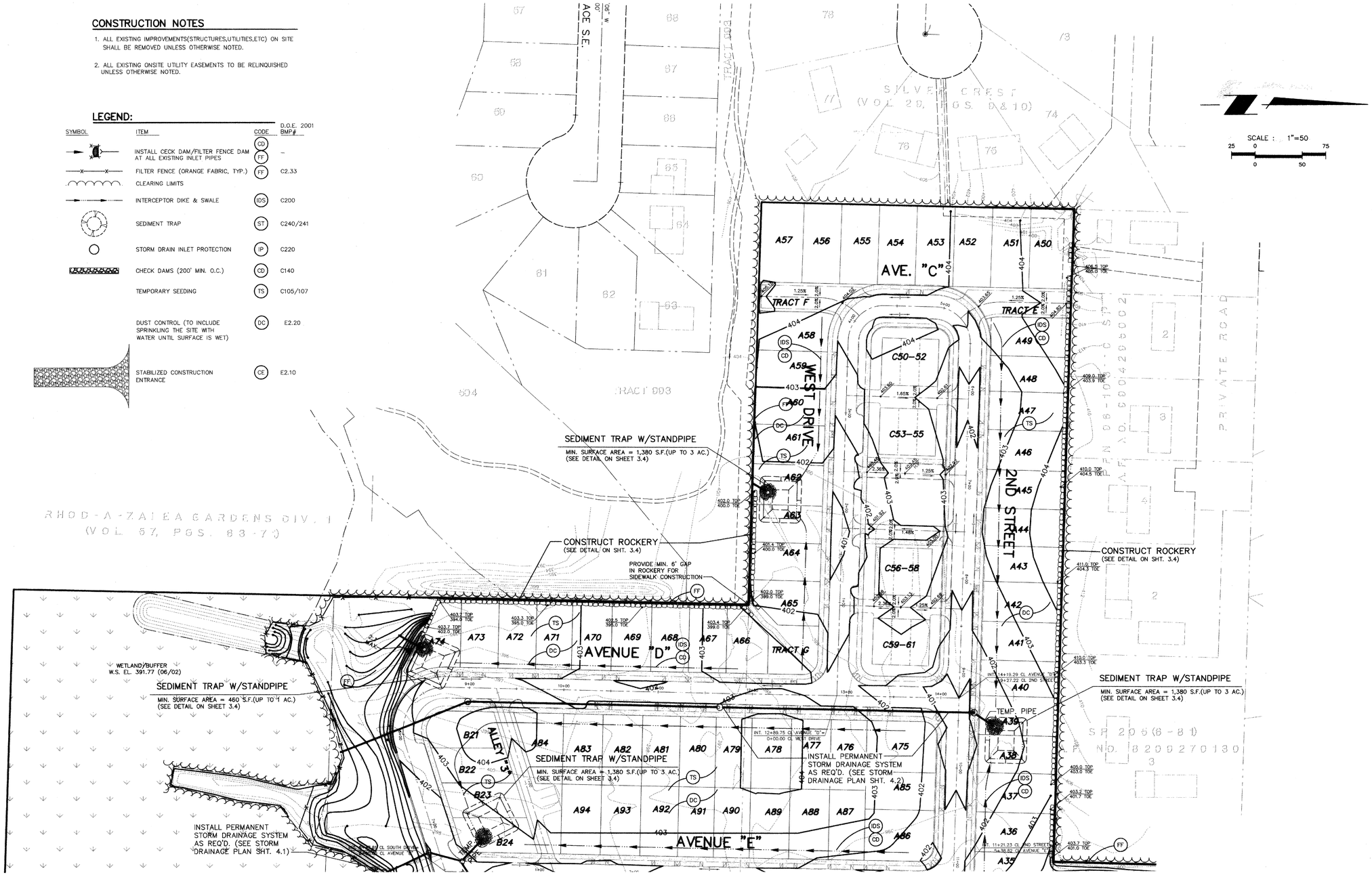
CONSTRUCTION NOTES

1. ALL EXISTING IMPROVEMENTS(STRUCTURES,UTILITIES,ETC) ON SITE SHALL BE REMOVED UNLESS OTHERWISE NOTED.

2. ALL EXISTING ONSITE UTILITY EASEMENTS TO BE RELINQUISHED UNLESS OTHERWISE NOTED.

LEGEND:

SYMBOL	ITEM	CODE	D.O.E. 2001 BMP#
	INSTALL CECK DAM/FILTER FENCE DAM AT ALL EXISTING INLET PIPES	CD / FF	–
	FILTER FENCE (ORANGE FABRIC, TYP.)	FF	C2.33
	CLEARING LIMITS		
	INTERCEPTOR DIKE & SWALE	IDS	C200
	SEDIMENT TRAP	ST	C240/241
	STORM DRAIN INLET PROTECTION	IP	C220
	CHECK DAMS (200' MIN. O.C.)	CD	C140
	TEMPORARY SEEDING	TS	C105/107
	DUST CONTROL (TO INCLUDE SPRINKLING THE SITE WITH WATER UNTIL SURFACE IS WET)	DC	E2.20
	STABILIZED CONSTRUCTION ENTRANCE	CE	E2.10



SEE SHEET 3.1

ACCEPTED FOR CONSTRUCTION BY:

DIRECTOR OF PUBLIC WORKS, CITY OF MILL CREEK — DATE 7/28/05

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56

DIRECTOR OF COMMUNITY DEVELOPMENT — DATE 7-29-05

LSA

Lovell-Sauerland & Associates, Inc.

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Development Consultants

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ROBERT L. LANE — STATE OF WASHINGTON — 16508 — REGISTERED PROFESSIONAL ENGINEER — 7-8-05

EXPIRES 8/17/06

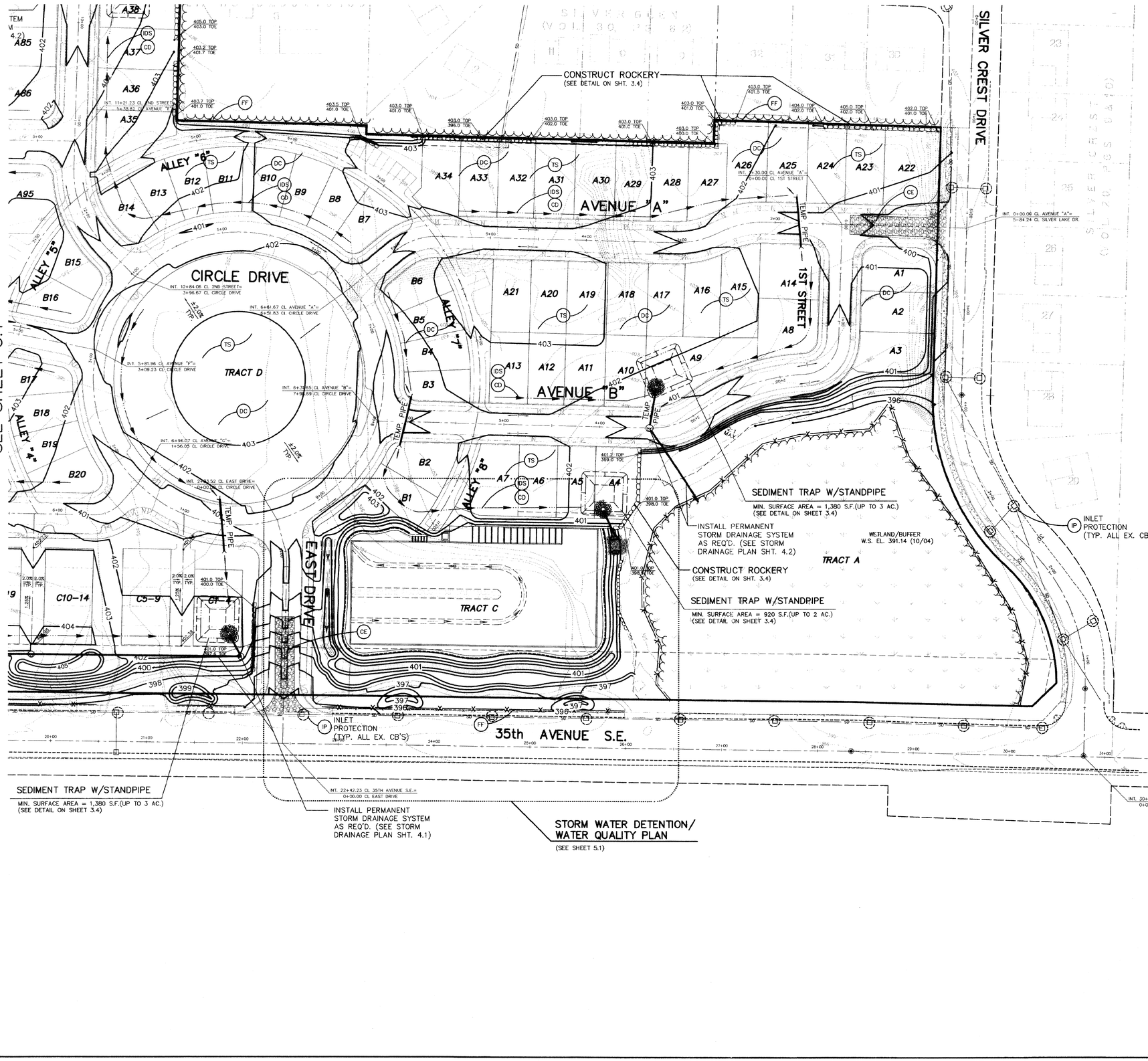
REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS 6-28-05 MM

GRADING AND T.E.S.C./S.W.P.P. PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=50'	
DRAWN MM	CHECKED RLL	SHEET 3.2
DATE 1-17-05	F.B. –	
PPN –		
LSA FILE NO. 4700		

NORTH POINTE

HDEV2250



SCALE : 1"=50

25 0 75

0 50

CONSTRUCTION NOTES

1. ALL EXISTING IMPROVEMENTS(STRUCTURES,UTILITIES,ETC) ON SITE SHALL BE REMOVED UNLESS OTHERWISE NOTED.
2. ALL EXISTING ONSITE UTILITY EASEMENTS TO BE RELINQUISHED UNLESS OTHERWISE NOTED.

LEGEND:

SYMBOL	ITEM	CODE	D.O.E. 2001 BMP#
	INSTALL CECK DAM/FILTER FENCE DAM AT ALL EXISTING INLET PIPES	CD	–
	FILTER FENCE (ORANGE FABRIC, TYP.)	FF	C2.33
	CLEARING LIMITS		
	INTERCEPTOR DIKE & SWALE	IDS	C200
	SEDIMENT TRAP	ST	C240/241
	STORM DRAIN INLET PROTECTION	IP	C220
	CHECK DAMS (200' MIN. O.C.)	CD	C140
	TEMPORARY SEEDING	TS	C105/107
	DUST CONTROL (TO INCLUDE SPRINKLING THE SITE WITH WATER UNTIL SURFACE IS WET)	DC	E2.20
	STABILIZED CONSTRUCTION ENTRANCE	CE	E2.10

ACCEPTED FOR CONSTRUCTION BY:

Douglas Jamilton 7/28/05

DIRECTOR OF PUBLIC WORKS, CITY OF MILL CREEK — DATE

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56

7-29-05

DIRECTOR OF COMMUNITY DEVELOPMENT — DATE

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ROBERT L. DONE — STATE OF WASHINGTON — 36508 — REGISTERED PROFESSIONAL ENGINEER — 7-8-05

EXPIRES 8/17/06

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS — 5-18-05 MM
2. REVISED PER CITY COMMENTS — 6-28-05 MM

GRADING AND T.E.S.C./S.W.P.P.P. PLAN FOR MILL CREEK EAST

IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=50'	
DRAWN MM	CHECKED RLL	SHEET 3.3
DATE –	F.B. –	
PPN	–	
LSA FILE NO.	4700	

HDEV-22 SI

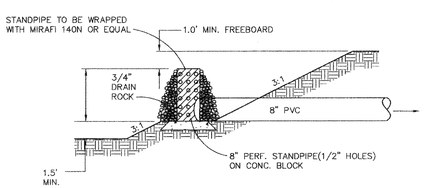
NORTH POINTE

SITE GRADING AND T.E.& S.C.P. NOTES

1. NON COMPLIANCE WITH THE EROSION CONTROL REQUIREMENTS, WATER QUALITY REQUIREMENTS AND CLEARING LIMITS VIOLATIONS MAY RESULT IN REVOCATION OF PROJECT PERMITS, PLAN APPROVAL AND BOND FORECLOSURES.
2. PRIOR TO ANY SITE CONSTRUCTION TO INCLUDE CLEARING/LOGGING OR GRADING THE SITE/LOT, CLEARING LIMITS SHALL BE LOCATED AND FIELD IDENTIFIED BY THE PROJECT SURVEYOR/ENGINEER AS REQUIRED BY THESE PLANS. THE PROJECT SURVEYOR/ENGINEER'S NAME AND TELEPHONE NUMBER ARE LOVELL–SAUERLAND & ASSOCIATES, INC., 775–1591.
3. THE DEVELOPER/PROJECT ENGINEER IS RESPONSIBLE FOR WATER QUALITY AS DETERMINED BY THE MONITORING PROGRAM, ESTABLISHED BY THE PROJECT ENGINEER. THE PROJECT ENGINEER'S NAME AND PHONE NUMBER ARE LOVELL–SAUERLAND & ASSOCIATES, INC., 775–1591. IN ADDITION, THE ON–SITE CONSTRUCTION SUPERINTENDENT SHALL BE CURRENTLY CERTIFIED AS A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL) PER BMP C160.
4. THE TEMPORARY EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING IN ACCORDANCE WITH THE APPROVED TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING IS COMPLETED AND THE POTENTIAL FOR ON–SITE EROSION HAS PASSED.
5. ALL SITE WORK MUST COMPLY WITH CHAPTER A33 OF THE UNIFORM BUILDING CODE, AND CITY OF MILL CREEK REQUIREMENTS.
6. ALL EARTH WORK SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARDS. PRECONSTRUCTION SOILS INVESTIGATION MAY BE REQUIRED TO EVALUATE SOILS STABILITY.
7. SLOPE: THE SLOPE OF CUT SURFACES SHALL BE NO STEEPER THAN IS SAFE FOR THE INTENDED USE. CUT SLOPES SHALL BE NO STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL.
8. FILL LOCATION: FILL SLOPES SHALL NOT BE CONSTRUCTED ON NATURAL SLOPES STEEPER THAN TWO TO ONE.
9. PREPARATION OF GROUND: THE GROUND SURFACE SHALL BE PREPARED TO RECEIVE FILL BY REMOVING VEGETATION, NONCOMPLYING FILL, TOP–SOIL AND OTHER UNSUITABLE MATERIALS SCARIFYING TO PROVIDE A BOND WITH THE NEW FILL.
10. FILL MATERIAL: DETRIMENTAL AMOUNTS OF ORGANIC MATERIAL SHALL NOT BE PERMITTED IN FILLS. EXCEPT AS PERMITTED BY THE BUILDING OFFICIAL, NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL WITH A MAXIMUM DIMENSION GREATER THAN 12 INCHES SHALL BE BURIED OR PLACED IN FILLS.
11. COMPACTION: ALL STRUCTURAL FILLS SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DENSITY BY MODIFIED PROCTOR TEST FOR THE TOP 5 FEET AND 90 PERCENT THEREAFTER OR ACCORDING TO SOIL ENGINEERS RECOMMENDATIONS OR AS APPROVED BY THE BUILDING OFFICIAL.
12. IF CUT AND FILL SLOPES EXCEED MAXIMUM OF TWO FEET HORIZONTAL TO ONE FOOT VERTICAL, A ROCK OR CONCRETE RETAINING WALL MAY BE REQUIRED. ALL ROCK RETAINING WALLS GREATER THAN FOUR (4) FEET IN HEIGHT ARE TO FOLLOW COUNTY SPECIFICATIONS AND TO BE DESIGNED AND CERTIFIED BY A CIVIL ENGINEER EXPERIENCED IN SOILS MECHANICS.
13. AREAS TO RECEIVE FILL SHALL BE PROOFROLLED. ALL LOOSE AND SOFT AREAS SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL.
14. STRUCTURAL FILLS SHALL BE PLACED IN 8" TO 10" THICK HORIZONTAL LIFTS AND SPREAD UNIFORMLY.
15. THE SURFACE OF ALL LIFTS SHALL BE COMPACTED. THIS MAY BE ACCOMPLISHED BY OVER–BUILDING THE SLOPES THEN CUTTING BACK TO FINAL GRADES, OR BY RUNNING THE COMPACTOR OVER THE SLOPE AS EACH LIFT IS TO BE PLACED. ALL SLOPES SHALL BE COMPACTED BY THE END OF EACH WORK DAY.
16. FIELD DENSITY TESTS WILL BE TAKEN BY A QUALIFIED SOILS ENGINEERING FIRM. DENSITY TESTS SHALL BE TAKEN AT OR JUST BELOW THE SURFACE AT THE FREQUENCY AND AT LOCATIONS DETERMINED BY THE SOILS ENGINEERING FIRM. WHEN THE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE SPECIFIED DENSITY, THE PARTICULAR SECTION SHALL BE REWORKED UNTIL THE REQUIRED DENSITY HAS BEEN OBTAINED.
17. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO APPLY FOR AND OBTAIN GRADING PERMITS REQUIRED FOR ANY OFFSITE UNPERMITTED DUMP SITES.

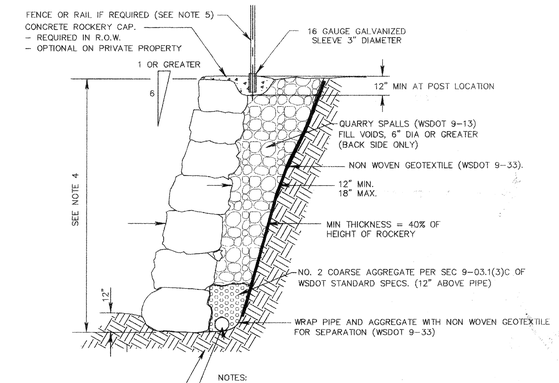
EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S)

1. GRADING AND CONSTRUCTION SHALL BE TIMED AND CONDUCTED IN STAGES TO MINIMIZE SOIL EXPOSURE.
2. THE CONTRACTOR SHALL MINIMIZE OR PREVENT THE TRANSPORT OF SEDIMENT ONTO PAVED SURFACE DURING CONSTRUCTION. IF SEDIMENT IS TRANSPORTED ONTO A PAVED SURFACE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN IT AT THE END OF EACH DAY.
3. SUFFICIENT TESC BMP MATERIALS AND SUPPLIES TO PROTECT THE ENTIRE SITE SHALL BE STOCKPILED ON–SITE PRIOR TO ANY SITE ACTIVITY.
4. THE CONTRACTOR SHALL MAINTAIN AND REPAIR AS NECESSARY ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMP'S TO ASSURE THEIR CONTINUED PERFORMANCE.
5. MAINTENANCE AND REPAIR OF TESC FACILITIES AND STRUCTURES SHALL BE CONDUCTED IMMEDIATELY UPON RECOGNITION OF A PROBLEM OR WHEN THE TESC MEASURES BECOME DAMAGED.
6. ALL STREETS ARE TO BE KEPT CLEAR OF DIRT AND DEBRIS. STREETS SHALL BE SWEPT IMMEDIATELY WHEN DIRT HAS BEEN TRACKED ONTO THE PAVED SURFACES.
7. SEDIMENT DEPOSITS SHALL BE REMOVED FROM ALL TEMPORARY DRAINAGE FACILITIES AND STRUCTURES UPON REACHING A DEPTH OF 6 INCHES.
8. SOIL STOCKPILES SHALL BE STABILIZED WITHIN 24 HOURS. WHEN ACTIVELY WORKING WITH THE SOIL STOCKPILE, STABILIZATION SHALL OCCUR AT THE END OF EACH WORK DAY.
9. SILTATION BARRIERS AND ALL OTHER TESC MEASURES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL EVENT GREATER THAN 0.1" RAINFALL, AND AT LEAST DAILY DURING PROLONGED RAINFALL EVENTS.
10. INLETS OF THE PERMANENT DRAINAGE SYSTEM SHALL BE PROTECTED FROM SEDIMENT INFLUX BY USE OF FILTER FABRIC, MICROPORE BAGS, OR SIMILAR FILTERING MATERIALS AND METHODS.
11. DURING A STORM EVENT, NO CONSTRUCTION ACTIVITY SHALL OCCUR ON SITE EXCEPT FOR WORK ON EROSION CONTROL FACILITIES.



SEDIMENT POND STANDPIPE DETAIL

N.T.S.

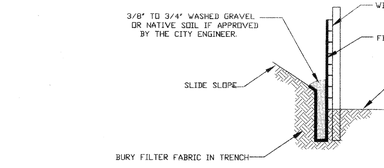


NOTES:

1. ROCK FACINGS SHALL BE CONSTRUCTED BY INTERLOCKING THE ROCKS SO THAT EACH ROCK IS IN CONTACT WITH AT LEAST TWO OTHER ROCKS WITH EACH ROCK HAVING A MINIMUM OF THREE BEARING SURFACES PER ROCK.
2. EACH ROCK SHALL BE LAID WITH A FLAT SURFACE ON THE FACE OF THE ROCK FACING AND WITH THE LONG DIMENSION HORIZONTAL.
3. VOIDS IN THE ROCKERY FACE SHALL NOT BE GREATER THAN 50 SQUARE INCHES FOR ROCKS OVER 3 FEET HIGH AND 36 SQUARE INCHES FOR ROCKERIES UNDER 3 FEET HIGH.
4. ROCKERIES OVER FOUR (4) FEET HIGH MUST BE DESIGNED BY A CIVIL ENGINEER LICENSED IN THE STATE OF WASHINGTON. MAXIMUM ROCKERY HEIGHT IS 8 FEET.
5. ROCKERIES WHICH ARE MORE THAN 30 INCHES ABOVE GRADE OR FLOOR BELOW SHALL BE PROTECTED BY A FENCE OR PEDESTRIAN RAILING. TYPE TO BE APPROVED BY THE CITY.

ROCKERY DETAIL (MILL CREEK STD. PLAN STR 030A)

NO SCALE



NOTES:
1. SILT FENCE IS NOT INTENDED TO TREAT CONCENTRATED FLOWS, NOR IS IT INTENDED TO TREAT SUBSTANTIAL AMOUNTS OF OVERLAND FLOW. ANY CONCENTRATED FLOWS MUST BE CONVEYED THROUGH THE DRAINAGE SYSTEM TO A SEDIMENT POND.

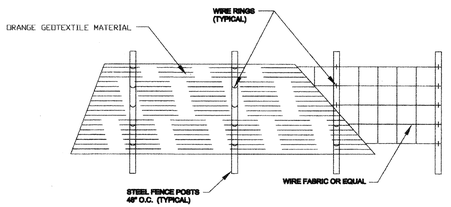
2. THE GEOTEXTILE USED SHALL MEET THE FOLLOWING: POLYMERIC MESH AOS (ASTM D4751). 0.60MM MAX. FOR SILT FILM WOVENS (#30 SIEVE). 0.30MM MAX. FOR ALL OTHER GEOTEXTILE TYPES (#50 SIEVE). 0.15MM MIN. FOR ALL FABRIC TYPES (#100 SIEVE).

3. STANDARD STRENGTH FABRICS SHALL BE SUPPORTED WITH WIRE MESH, CHICKEN WIRE, 2–INCH X 2–INCH WIRE, SAFETY FENCE, OR AS APPROVED BY THE CITY ENGINEER.

4. THE MINIMUM HEIGHT OF THE TOP OF SILT FENCE SHALL BE 2 FEET AND THE MAXIMUM HEIGHT SHALL BE 2.5 FEET ABOVE THE ORIGINAL GROUND SURFACE.

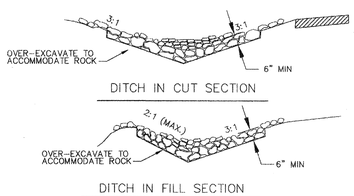
5. THE FENCE POSTS SHALL BE PLACED OR DRIVEN A MINIMUM OF 18 INCHES. FENCE POSTS DEPTHS SHALL BE INCREASED BY 6 INCHES IF THE FENCE IS LOCATED ON SLOPES OF 3:1 OR STEEPER AND THE SLOPE IS PERPENDICULAR TO THE FENCE.

6. SILT FENCE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEASE DAILY DURING PROLONGED RAINFALL.



TYPICAL SILT FENCE DETAIL (MILL CREEK STD. PLAN STM 014)

NO SCALE

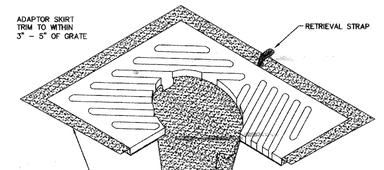


NOTES:

1. ROCK MATERIAL SHALL BE 8" X 4" QUARRY SPALLS MEETING WSDOT 9–13.6. CHECK DAMS MAY ALSO BE CONSTRUCTED OF PEA–GRAVEL FILLED BAGS OR OTHER MANUFACTURED PRODUCTS AVAILABLE FOR THIS PURPOSE OR AS APPROVED BY THE CITY ENGINEER.
2. DEPTH OF ROCK SHALL BE A MAXIMUM OF 2 FEET AT THE CENTER. THE CENTER OF THE CHECK DAM SHALL BE AT LEAST TWELVE INCHES LOWER THAN THE OUTER EDGES AT NATURAL GROUND ELEVATION.
3. THE MAXIMUM SPACING BETWEEN THE DAMS SHALL BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM.
4. CHECK DAMS SHALL BE CONSTRUCTED PER THE WASHINGTON STATE DOE MANUAL FOR WESTERN WASHINGTON.
5. CHECK DAMS SHALL BE MONITORED FOR PERFORMANCE AND SEDIMENT ACCUMULATION DURING AND AFTER EACH RUNOFF PRODUCING RAINFALL. SEDIMENT SHALL BE REMOVED WHEN IT REACHES ONE HALF THE SUMP DEPTH.
6. KEY THE STONE INTO THE DITCH BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18 INCHES TO AVOID WASHOUTS FROM OVERFLOW AROUND THE DAM.

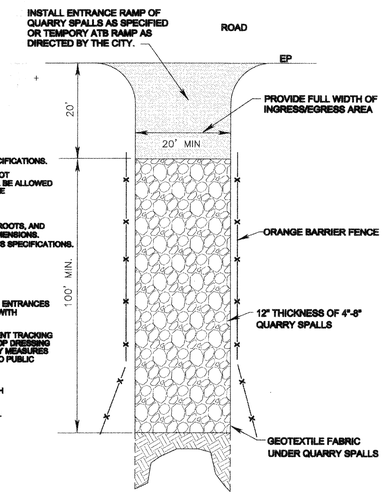
CHECK DAMS (MILL CREEK STD. PLAN STM 011)

NO SCALE



NOTES
1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL .
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE–INSERTING IT INTO THE CATCH BASIN.

CATCH BASIN INLET PROTECTION INSERT



PLAN

DETAIL NOTES:

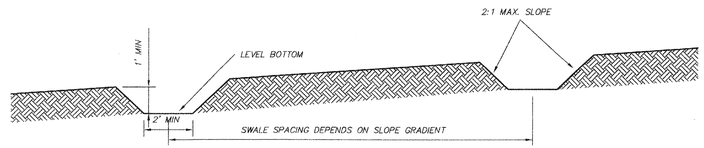
1. 4" TO 8" QUARRY SPALLS AS SPECIFIED IN SECTION 9-13.6 OF THE WSDOT STANDARD SPECIFICATIONS.
2. THE MINIMUM LENGTH SHALL BE LENGTHENED AS NECESSARY TO ENSURE MATERIAL IS NOT TRACKED INTO THE PUBLIC RIGHT-OF-WAY. ALTERNATE CONSTRUCTION ENTRANCES WILL BE ALLOWED WITH APPROVAL OF THE CITY ENGINEER ON A CASE BY CASE BASIS, WHERE PHYSICAL SITE CONDITIONS AND SIZE DICTATE
3. INSTALL ORANGE BARRIER FENCE TO DIRECT TRAFFIC ONTO CONSTRUCTION ENTRANCE
4. INSTALLATION: THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. IF WASH RACKS ARE USED, THEY SHOULD BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

GENERAL NOTES:

1. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
2. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
3. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS USED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
4. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

GRAVEL CONSTRUCTION ENTRANCE (MILL CREEK STD. PLAN STR 061)

NO SCALE



HORIZONTAL SPACING OF INTERCEPTOR SWALES:

AVERAGE SLOPE	SPACING
< 5%	300 FEET
5–10%	200 FEET
10–40%	100 FEET

INSTALL ROCK CHECK DAMS AS REQUIRED

INTERCEPTOR SWALE

NOT TO SCALE

ACCEPTED FOR CONSTRUCTION BY:

DIRECTOR OF PUBLIC WORKS CITY OF MILL CREEK — DATE 7/28/05

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56

DIRECTOR OF COMMUNITY DEVELOPMENT — DATE 7.28.05

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ROBERT L. LOVELL — STATE OF WASHINGTON — 36508 REGISTERED PROFESSIONAL ENGINEER — 7-8-05

EXPIRES 8/17/06

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS — 5–18–05 MM
2. REVISED PER CITY COMMENTS — 6–28–05 MM

GRADING AND T.E.S.C. NOTES & DETAILS FOR MILL CREEK EAST

IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M. CITY OF MILL CREEK SNOHOMISH COUNTY, WASHINGTON

SCALE	AS SHOWN
DRAWN MM	CHECKED RLL
DATE 1–17–05	F.B. –
PPN	–
LSA FILE NO.	4700
SHEET	3.4 OF

HDEV-2252

NORTH POINTE

SEE SHEET 4.2

SEE SHEET 4.3

RHOD-A-ZALEA GARDENS DIV. 1
(VOL 67, PGS. 63-73)

PARCEL 7

TRACT B
WETLAND/BUFFER
W.S. EL. 391.77 (06/02)

DISPERSION TRENCH#3
64 L.F. TRENCH DRAIN
TOP 397.0
(SEE DETAIL ON SHT. 6.4)
EXACT LOCATION TO BE DETERMINED IN FIELD.

OUTFALL#35
W/DEBRIS BARRIER & RIP RAP PAD
(SEE WETLAND OUTFALL DETAIL ON SHT. 6.3)

CB#35
TYPE 1-L
W/THRU-CURB INLET
6+72.38~10.54'LT

DISPERSION TRENCH#2
64 L.F. TRENCH DRAIN
TOP 397.0
(SEE DETAIL ON SHT. 6.4)
EXACT LOCATION TO BE DETERMINED IN FIELD.

DISPERSION TRENCH#1
64 L.F. TRENCH DRAIN
TOP 397.0
(SEE DETAIL ON SHT. 6.4)
EXACT LOCATION TO BE DETERMINED IN FIELD.

CB#17
TYPE 1-L
2+50.54~14.30'LT

OUTFALL#17
W/DEBRIS BARRIER & RIP RAP PAD
(SEE WETLAND OUTFALL DETAIL ON SHT. 6.3)

CB#18
2+00.00~14.69'LT

CB#18A
2+00.00~14.69'RT

OUTFALL#1-BP
W/DEBRIS BARRIER & RIP RAP PAD
(SEE WETLAND OUTFALL DETAIL ON SHT. 6.3)

CB#1-BP
54"DIA., TYPE 2
W/SOLID ROUND LOCKING LID
0+89.93~9.25'LT

CB#65A
W/THRU-CURB INLET

CB#65
W/THRU-CURB INLET

EX. CB

CB#33B
0+27.97~ON CL

CB#33
1+17.36~10.19'LT

CB#34
1/4Δ~25.81' OFF RADIUS PT.

CB#31
48"DIA., TYPE 2
4+50.00~9.41'LT

CB#30
48"DIA., TYPE 2
W/SOLID ROUND LOCKING LID
11+10.82~12.00'RT

CB#33A
1+66.42~ON CL

CB#32
48"DIA., TYPE 2
1+63.87~9.41'LT

6"PVC ROOFDRAIN TIGHTLINE @ 1.0% MIN.

CB#29
48"DIA., TYPE 2
1/4Δ~26.59' OFF RADIUS PT.

CB#47
W/THRU-CURB INLET
4+75.00~10.54'LT

CB#28
48"DIA., TYPE 2
12+05.19~10.41'RT

CB#25B
0+27.47~ON CL

CB#25
W/THRU-CURB INLET
1+43.91~10.54'LT

CB#23B
2+25.35~ON CL

CB#26
48"DIA., TYPE 2
3+53.46~10.89'LT

CB#25A
1+77.61~ON CL

CB#24
W/THRU-CURB INLET
4+00.00~10.54'LT

CB#23
48"DIA., TYPE 2
4+87.87~9.41'LT

CB#23A
1+69.23~ON CL

CB#19
3+50.00~10.19'LT

CB#13
48"DIA., TYPE 2
W/THRU-CURB INLET
3+25.75~9.76'LT

CB#16
1/2Δ~25.81' OFF RADIUS PT.

CB#15B
0+26.50~ON CL

CB#11B
0+31.05~ON CL

CB#15
48"DIA., TYPE 2
1+12.73~9.41'LT

CB#15A
1+07.51~29.50'RT

CB#14
48"DIA., TYPE 2
2+63.63~9.41'LT

CB#14A
2+63.63~29.50'RT

CB#12
48"DIA., TYPE 2
4+19.76~9.41'LT

CB#12A
4+19.76~29.50'RT

CB#11
48"DIA., TYPE 2
5+75.88~9.41'LT

CB#11A
5+75.88~29.50'RT

CB#10
60"DIA., TYPE 2
W/THRU-CURB INLET
1/4Δ~26.86' OFF RADIUS PT.

CB#2-BP
54"DIA., TYPE 2
W/SOLID ROUND LOCKING LID

CB#3-BP
54"DIA., TYPE 2
W/SOLID ROUND LOCKING LID

AVENUE "E"
AVENUE "F"
AVENUE "G"
SOUTH DRIVE
ALLEY "1"
ALLEY "2"
ALLEY "3"
ALLEY "4"
ALLEY "5"
ALLEY "6"

INT. 6+47.81 CL SOUTH DRIVE= 0+00.00 CL AVENUE "E"
INT. 11+21.23 CL 2ND STREET= 54+38.62 CL AVENUE "E"
INT. 4+47.93 CL SOUTH DRIVE= 0+00.00 CL AVENUE "F"
INT. 2+40.06 CL SOUTH DRIVE= 0+00.00 CL AVENUE "G"
INT. 14+02.20 CL 35TH AVENUE S.E.= 0+00.00 CL SOUTH DRIVE

EX. 12"SD

SCALE : 1"=50
25 0 75
0 50

SPECIAL DRAINAGE NOTES

1. ALL ROOF DRAINS AND DRIVEWAY SURFACES SHALL BE CONSTRUCTED TO DRAIN TO THE STORM DRAINAGE SYSTEM UNLESS OTHERWISE NOTED.
2. ALL FOUNDATION DRAINS SHALL BE CONSTRUCTED TO DRAIN TO THE STORM DRAINAGE SYSTEM.
3. ROOF DRAIN LINE TO BE 6" PVC (OR CPEP) FOR EACH INDIVIDUAL LOT. WHENEVER 5 OR MORE LOTS ARE CONNECTED TO THE SAME ROOF DRAIN LINE, THEN INCREASE THE LINE SIZE TO 8" MIN. PVC (OR CPEP). ROOF DRAIN LINE TO BE CONSTRUCTED AT SL = 1% MIN. OR AS APPROVED BY INSPECTOR.

AS-BUILT

NORTH POINTE

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ROBERT L. LOVELL
STATE OF WASHINGTON
18808
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 8/17/08
07/27/07

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS 6-28-05 MM
3. AS-BUILT 7-07-06 MH
5. AS-BUILT - PDF 01-15-07 MH
6. AS-BUILT REVISIONS 06-18-07 BJA
7. AS-BUILT MYLARS 07-25-07 RLL

AS-BUILT ROAD AND STORM DRAINAGE PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=50'	
DRAWN MM	CHECKED RLL	SHEET 4.1
DATE 1-17-05	F.B. –	
PFN	–	
LSA FILE NO.	4700	

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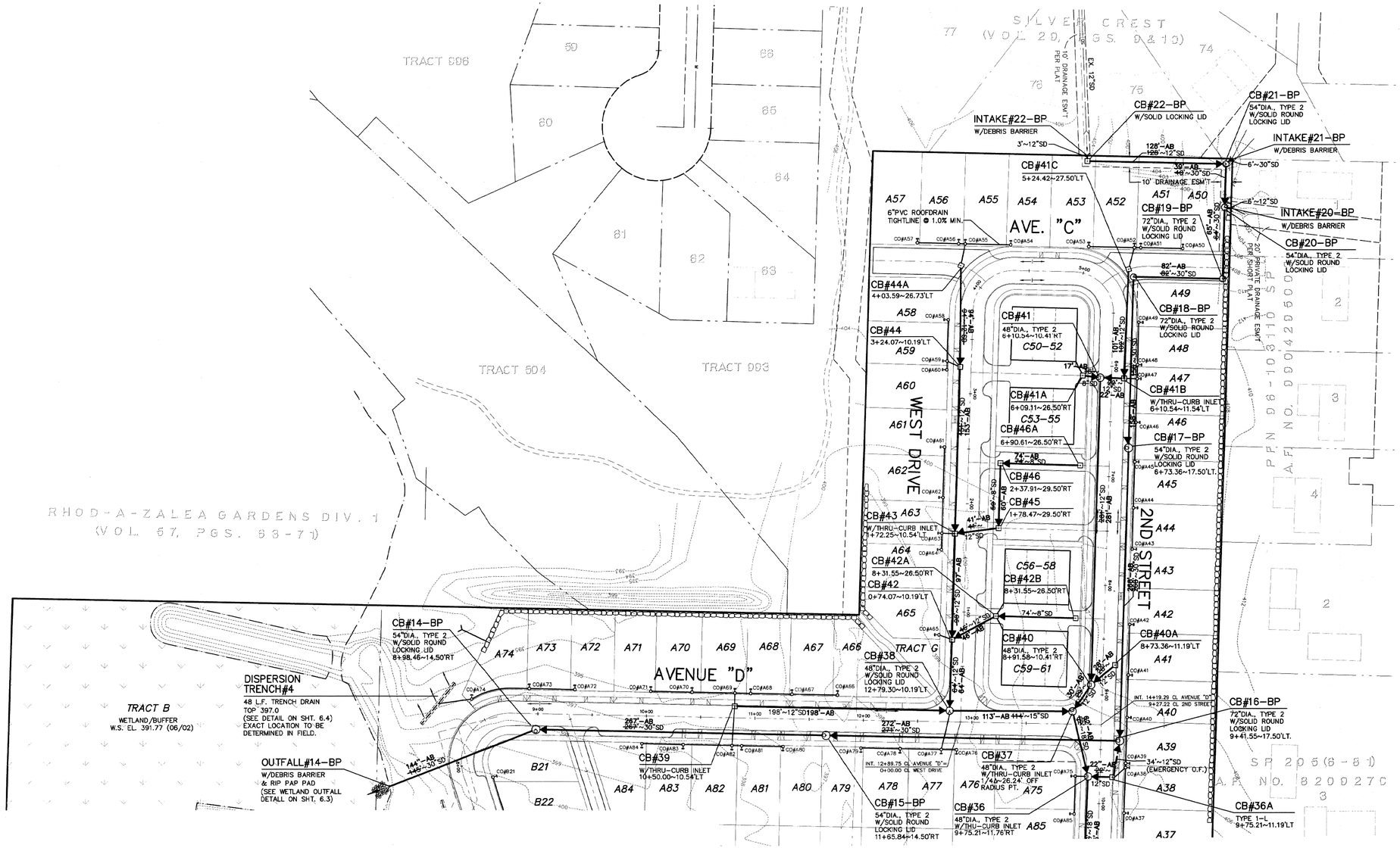

SEE SHEET 4.1

SPECIAL DRAINAGE NOTES

1. ALL ROOF DRAINS AND DRIVEWAY SURFACES SHALL BE CONSTRUCTED TO DRAIN TO THE STORM DRAINAGE SYSTEM UNLESS OTHERWISE NOTED.
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AS-BUILT

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ROBERT L. LOVELL — STATE OF WASHINGTON — 19808 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 8/17/08
07/27/07

REVISIONS

1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS	5-18-05	MM
2. REVISED PER CITY COMMENTS	6-28-05	MM
3. REV. GRAVITY & CB#4A CALLOUTS	8-8-06	MM
4. AS-BUILT - PDF	07-15-07	MH
5. AS-BUILT REVISIONS	06-18-07	BJA
6. AS-BUILT MYLARS	07-25-07	RLL

AS-BUILT ROAD AND STORM DRAINAGE PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=50'	
DRAWN MM	CHECKED RLL	SHEET 4.2
DATE 1-17-05	F.B. -	
PFN	-	
LSA FILE NO.	4700	

MDEV-2254

T:\4700\cwq\LSA ENGINEERING\4700SD - AB.cwg, 7/27/2007 4:01:53 PM, PDT995

SEE SHEET 4.1

SILVER GLEN (VOL. 30, PG. 82)

SILVER CREST (VOL. 29, PGS. 9 & 10)

SILVER CREST DRIVE

CIRCLE DRIVE

ALLEY "5"

ALLEY "6"

ALLEY "7"

ALLEY "8"

ALLEY "4"

EAST DRIVE

AVENUE "A"

AVENUE "B"

1ST STREET

35th AVENUE S.E.

TRACT A
WETLAND/BUFFER
W.S. EL. 391.14 (10/04)

TRACT C

TRACT D

CB#1 72"DIA., TYPE 2 W/RESTRICTOR & SOLID ROUND LOCKING LID (SEE DETAIL THIS SHT.)

CB#4-BP 54"DIA., TYPE 2 W/SOLID ROUND LOCKING LID

CB#5-BP 72"DIA., TYPE 2 W/SOLID ROUND LOCKING LID

CB#6-BP 54"DIA., TYPE 2 W/SOLID ROUND LOCKING LID

CB#7-BP 54"DIA., TYPE 2 W/SOLID ROUND LOCKING LID

CB#8-BP 48"DIA., TYPE 2 W/SOLID ROUND LOCKING LID 5+48.04~ON CL

CB#9-BP 48"DIA., TYPE 2 W/SOLID ROUND LOCKING LID 5+21.07~ON CL

CB#10-BP 48"DIA., TYPE 2 W/SOLID ROUND LOCKING LID 8+62.20~20.47'LT

CB#11-BP 48"DIA., TYPE 2 W/SOLID ROUND LOCKING LID 7+33.97~5.38'LT

CB#12-BP 48"DIA., TYPE 2 W/SOLID ROUND LOCKING LID

CB#13-BP 48"DIA., TYPE 2 W/SOLID ROUND LOCKING LID SET ON END OF EX. 12"SD. (EXTEND 12"SD IF REQ'D)

CB#20 48"DIA., TYPE 2 W/THRU-CURB INLET 1/4@-26.59' OFF RADIUS PT.

CB#22 48"DIA. TYPE 2 W/THRU-CURB INLET 1/4@-26.24' OFF RADIUS PT.

CB#23A 1+69.23~ON CL

CB#26 48"DIA., TYPE 2 3+53.46~10.89'LT

CB#27 48"DIA., TYPE 2 W/THRU-CURB INLET 1/4@-26.24' OFF RADIUS PT.

CB#28 48"DIA., TYPE 2 12+05.19~10.41'RT

CB#47 W/THRU-CURB INLET 4+75.00~10.54'LT

CB#48 5+24.25~10.19'LT

CB#49 5+56.46~ON CL

CB#50 48"DIA., TYPE 2 2+10.44~18.82'RT

CB#51 48"DIA., TYPE 2 W/THRU-CURB INLET 1/2@-26.24' OFF RADIUS PT.

CB#52 48"DIA., TYPE 2 5+27.57~11.89'RT

CB#52A 9+59.33~ON CL

CB#53 5+27.57~11.19'LT

CB#53A 11+00.00~ON CL

CB#54 W/THRU-CURB INLET 3+14.95~11.54'RT

CB#54A TYPE 1-L W/THRU-CURB INLET 3+14.95~11.54'LT

CB#55 W/THRU-CURB INLET 7+60.70~9.76'LT

CB#56 48"DIA., TYPE 2 1/4@-26.59' OFF RADIUS PT.

CB#56A W/THRU-CURB INLET 1/4@-25.46' OFF RADIUS PT.

CB#57 48"DIA., TYPE 2 5+59.15~10.41'LT

CB#57A 8+14.41~ON CL

CB#57B 7+51.73~ON CL

CB#58 48"DIA., TYPE 2 3+10.71~10.41'LT

CB#58A 3+10.71~11.19'RT

CB#59 1+70.00~11.19'LT

CB#59A 1+70.00~11.19'RT

CB#60 W/THRU-CURB INLET 1/4@-25.46' OFF RADIUS PT.

CB#61 0+94.00~11.19'LT

CB#61A 0+94.00~11.19'RT

CB#62 W/THRU-CURB INLET 0+44.99~11.54'LT

CB#62A W/THRU-CURB INLET 0+44.99~11.54'LT

CB#63 W/SOLID LID 5+73.69~17.4'±LT. (SET ON EX. 12"SD)

CB#64 W/THRU-CURB INLET

CB#64A W/THRU-CURB INLET

CB#6A 48"DIA., TYPE 2 1+60.00~13.91'RT

CB#8A 0+90.59~26.50'LT

CB#10 60"DIA., TYPE 2 W/THRU-CURB INLET 1/4@-26.86' OFF RADIUS PT.

CB#9 48"DIA., TYPE 2 W/THRU-CURB INLET 1+25.00~10.89'LT

CB#7 1+60.00~14.69'LT.

DISPERSION TRENCH#5
48 L.F. TRENCH DRAIN
TOP 397.0
(SEE DETAIL ON SHT. 6.4)
EXACT LOCATION TO BE DETERMINED IN FIELD.

DISPERSION TRENCH#6
64 L.F. TRENCH DRAIN
TOP 397.0
(SEE DETAIL ON SHT. 6.4)
EXACT LOCATION TO BE DETERMINED IN FIELD.

OUTFALL#8-BP
W/DEBRIS BARRIER & RIP RAP PAD
(SEE WETLAND OUTFALL DETALL ON SHT. 6.3)

INTAKE#7-BP
W/DEBRIS BARRIER

STORM WATER DETENTION/ WATER QUALITY PLAN
(SEE SHEET 5.1)

SCALE : 1"=50
25 0 75
0 50

SPECIAL DRAINAGE NOTES

1. ALL ROOF DRAINS AND DRIVEWAY SURFACES SHALL BE CONSTRUCTED TO DRAIN TO THE STORM DRAINAGE SYSTEM UNLESS OTHERMISE NOTED.
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AS-BUILT

NORTH POINTE

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ROBERT L. LOVELL — STATE OF WASHINGTON — 36508 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES 8/17/08

07/27/07

REVISIONS

1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS	MM	5-18-05
2. REVISED PER CITY COMMENTS	MM	6-28-05
3. ADDED CALLOUTS TO PIPES	MM	8-8-05
4. AS-BUILT	MH	7-12-06
5. AS-BUILT - PDF	MH	01-16-07
6. AS-BUILT REVISIONS	BJA	06-18-07
7. AS-BUILT MYLARS	RLL	07-25-07

AS-BUILT ROAD AND STORM DRAINAGE PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=50'		
DRAWN	MM	CHECKED	RLL
DATE	1-17-05	F.B.	-
PFN	-		
LSA FILE NO.	4700		

SHEET 4.3

HDAV-2255

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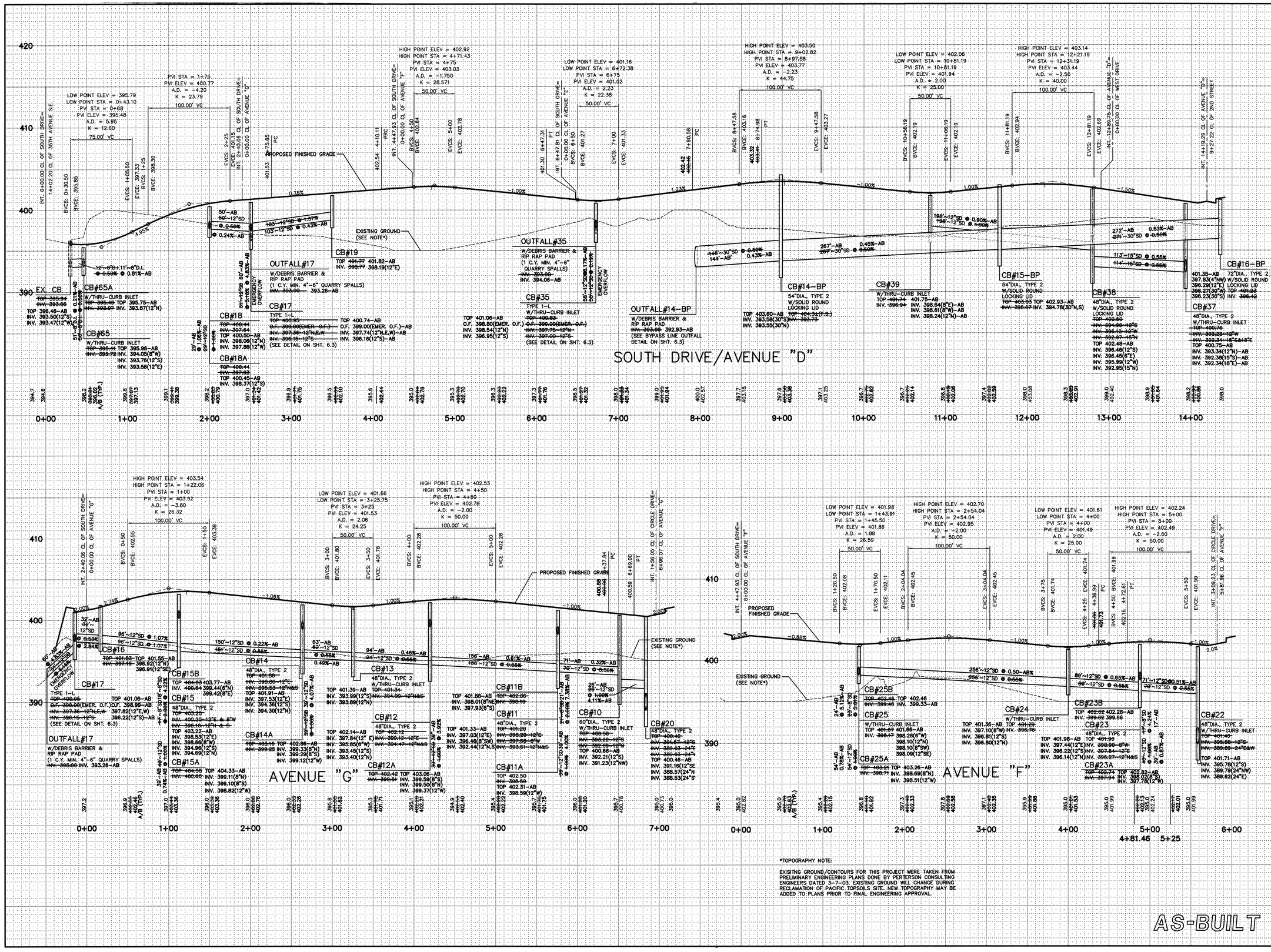

*TOPOGRAPHY NOTE:

EXISTING GROUND/CONTOURS FOR THIS PROJECT WERE TAKEN FROM PRELIMINARY ENGINEERING PLANS DONE BY PERTERSON CONSULTING ENGINEERS DATED 3-7-03. EXISTING GROUND WILL CHANGE DURING RECLAMATION OF PACIFIC TOPSOILS SITE. NEW TOPOGRAPHY MAY BE ADDED TO PLANS PRIOR TO FINAL ENGINEERING APPROVAL.

AS-BUILT

NORTH POINTE

HDEV-2256

LSA

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ROBERT L. LAY — STATE OF WASHINGTON — 36808 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES 8/17/07

07/27/07

REVISIONS

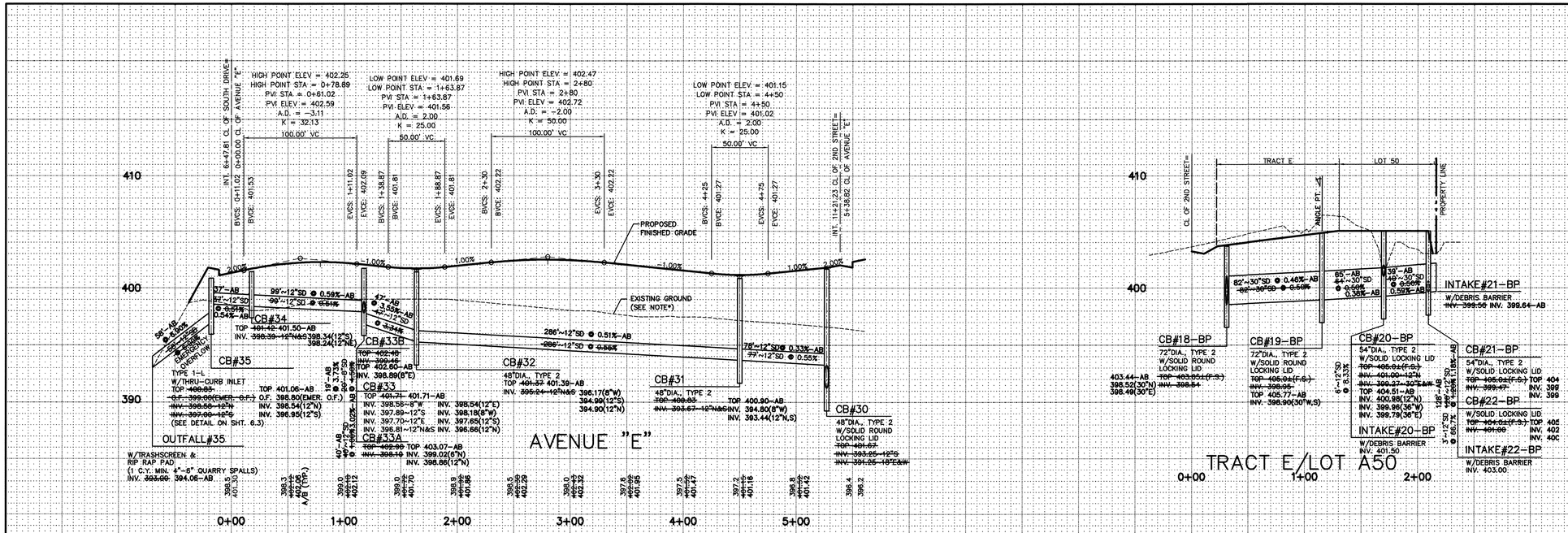
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS 6-28-05 MM
4. AS-BUILT - PDF 7-07-06 MH
5. AS-BUILT REVISIONS 01-15-07 MH
6. AS-BUILT MYLARS 06-18-07 BJA
7. AS-BUILT 07-25-07 RLL

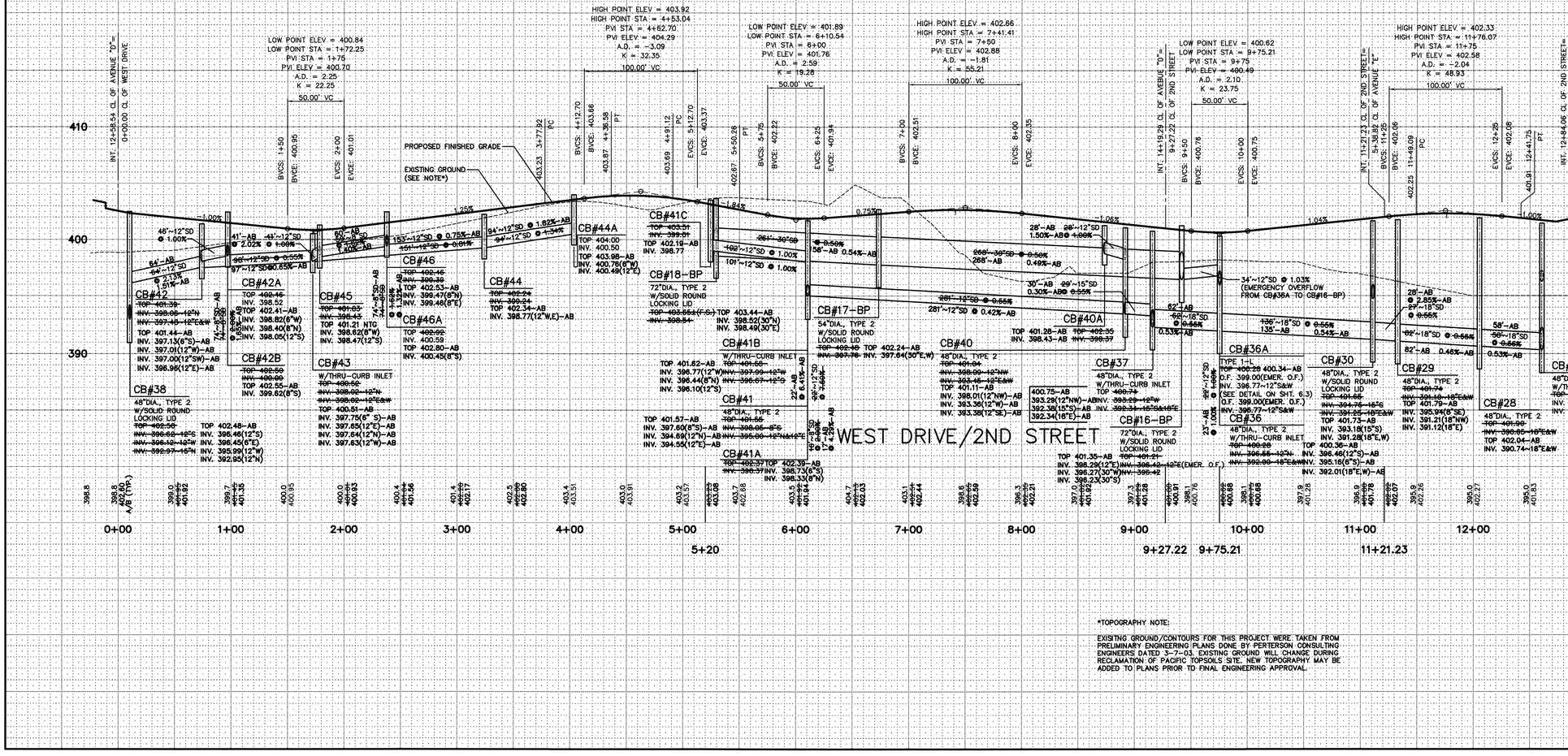
AS-BUILTROAD AND STORM DRAINAGE PROFILES FOR *MILL CREEK EAST*

IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE 1"=50'HOR./1"=5'VERT.

DRAWN	CHECKED	SHEET
MM	RLL	4.4
DATE 1-17-05	F.B. .	
PFN —		
LSA FILE NO. 4700		





*TOPOGRAPHY NOTE:

EXISTING GROUND/CONTOURS FOR THIS PROJECT WERE TAKEN FROM PRELIMINARY ENGINEERING PLANS DONE BY PERTERSON CONSULTING ENGINEERS DATED 3-7-03. EXISTING GROUND WILL CHANGE DURING RECLAMATION OF PACIFIC TOPSOILS SITE. NEW TOPOGRAPHY MAY BE ADDED TO PLANS PRIOR TO FINAL ENGINEERING APPROVAL.

AS-BUILT

NORTH POINTE

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web: lsaengineering.com

ROBERT L. LEE
STATE OF WASHINGTON
36608
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 8/17/08
07/27/07

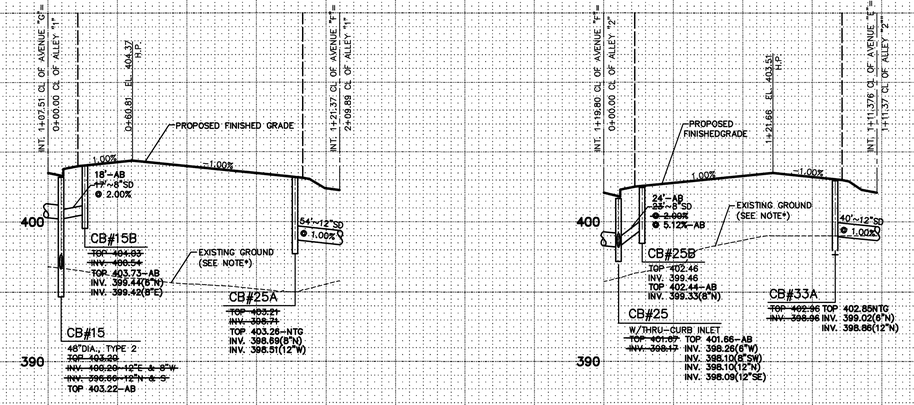
REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS — 5-18-05 — MM
2. REVISED PER CITY COMMENTS — 6-28-05 — MM
4. AS-BUILT - PDF — 7-07-06 — MH
5. AS-BUILT REVISIONS — 01-15-07 — MH
6. AS-BUILT MYLARS — 06-18-07 — BJA
7. AS-BUILT MYLARS — 07-25-07 — RLL

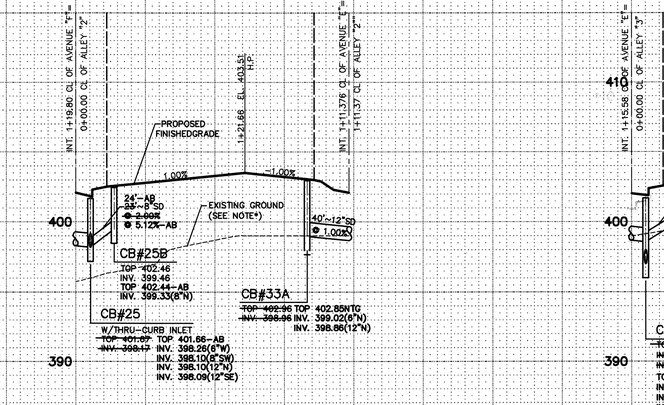
AS-BUILTROAD AND STORM DRAINAGE PROFILES FOR MILL CREEK EAST

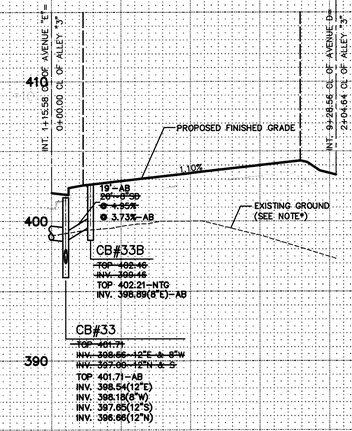
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

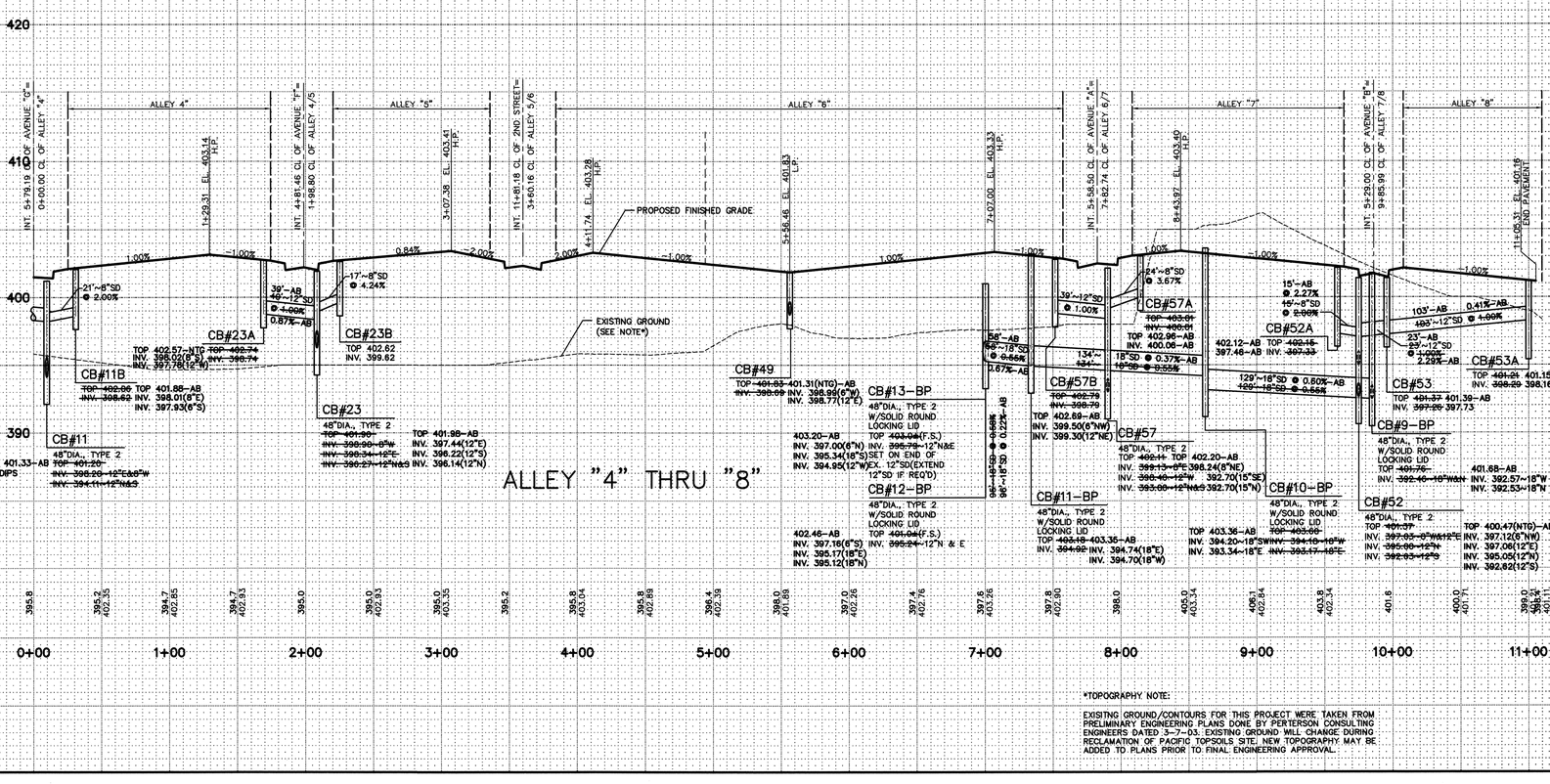
SCALE	1"=50'HOR./1"=5'VERT.
DRAWN MM	CHECKED RLL
DATE 1-17-05	F.B. -
PFN	-
LSA FILE NO.	4700
SHEET	4.5

HDEV-2257









*TOPOGRAPHY NOTE:

EXISITNG GROUND/CONTOURS FOR THIS PROJECT WERE TAKEN FROM PRELIMINARY ENGINEERING PLANS DONE BY PERTERSON CONSULTING ENGINEERS DATED 3-7-03. EXISTING GROUND WILL CHANGE DURING RECLAMATION OF PACIFIC TOPSOILS SITE. NEW TOPOGRAPHY MAY BE ADDED TO PLANS PRIOR TO FINAL ENGINEERING APPROVAL.

AS-BUILT

NORTH POINTE

LSA

Lovell-Sauerland & Associates, Inc.

Engineers/Surveyors/Planners
Development Consultants

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ROBERT L. LOVELL — STATE OF WASHINGTON — 9850 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES 8/17/08

07/21/07

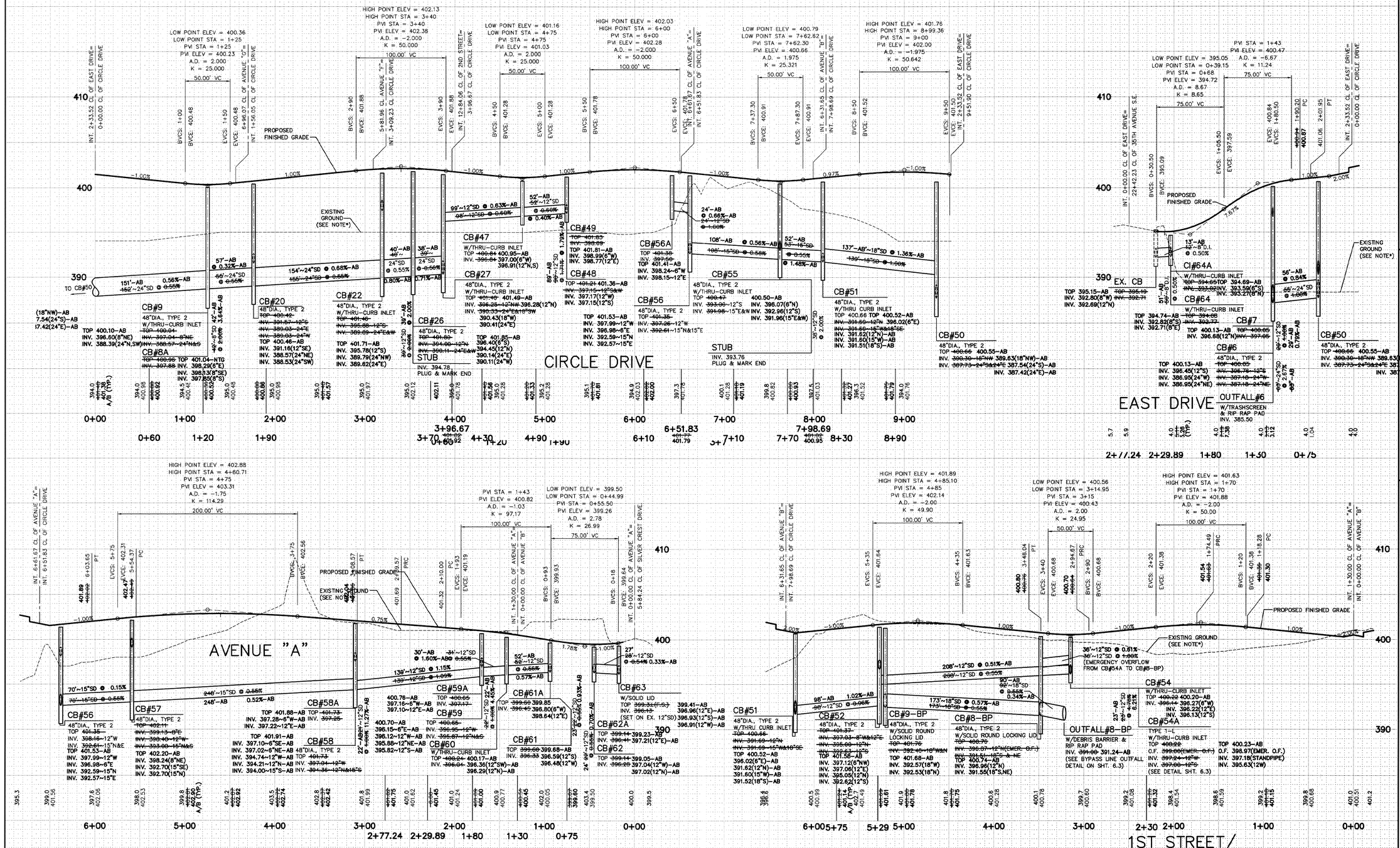
REVISIONS

1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS	5-18-05	MM
2. REVISED PER CITY COMMENTS	6-28-05	MM
4. AS-BUILT - PDF	7-07-06	MH
5. AS-BUILT REVISIONS	01-15-07	MH
6. AS-BUILT MYLARS	06-18-07	BJA
7. AS-BUILT MYLARS	07-25-07	RLL

AS-BUILTROAD AND STORM DRAINAGE PROFILES
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE 1"=50'HOR./1"=5'VERT.		
DRAWN MM	CHECKED RLL	SHEET 4.6
DATE 1-17-05	F.B. -	
PFN -		
LSA FILE NO. 4700		

HDEV-2258



AS-BUILT

NORTH POINTE

HDEV-2259

LSA
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ROBERT L. LOVELL — STATE OF WASHINGTON — 36508 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES 8/17/08

07/27/07

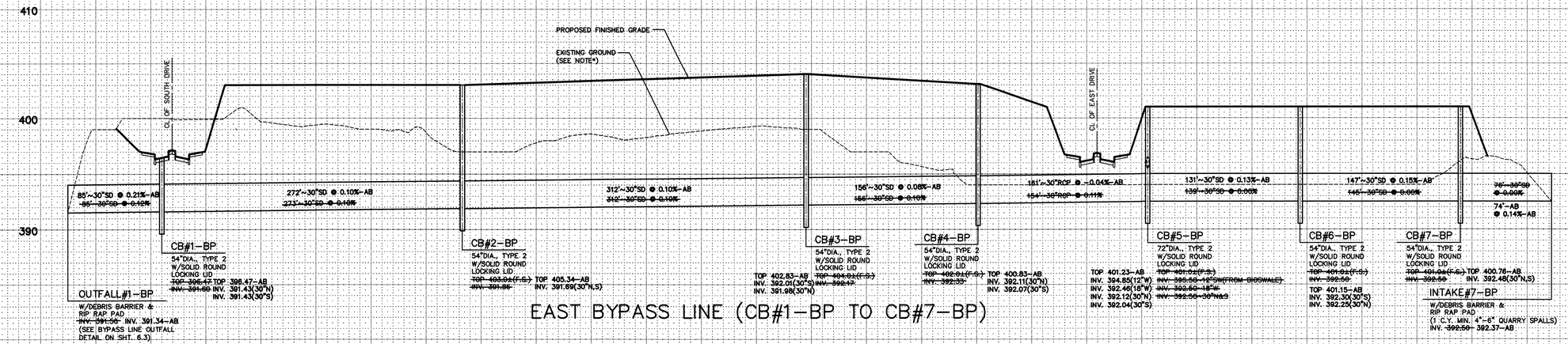
REVISIONS

1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS	5-18-05	MM
2. REVISED PER CITY COMMENTS	6-28-05	MM
	7-07-06	MH
4. AS-BUILT - PDF	01-16-07	BJA
5. AS-BUILT REVISIONS	06-18-07	BJA
6. AS-BUILT MYLARS	07-25-07	RLL
7. AS-BUILT MYLARS		

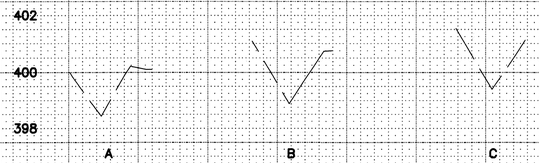
AS-BUILTROAD AND STORM DRAINAGE PROFILES FOR *MILL CREEK EAST*

IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE 1"=50'HOR./1"=5'VERT.		
DRAWN MM	CHECKED RLL	SHEET 4.7
DATE 1-17-05	F.B. -	
PFN	–	
LSA FILE NO. 4700		



EAST BYPASS LINE (CB#1-BP TO CB#7-BP)



SWALE CROSS-SECTIONS
1"=10' H 1"=2.5' V

*TOPOGRAPHY NOTE:

EXISTING GROUND/CONTOURS FOR THIS PROJECT WERE TAKEN FROM PRELIMINARY ENGINEERING PLANS DONE BY PERTERSON CONSULTING ENGINEERS DATED 3-7-03. EXISTING GROUND WILL CHANGE DURING RECLAMATION OF PACIFIC TOPSOILS SITE. NEW TOPOGRAPHY MAY BE ADDED TO PLANS PRIOR TO FINAL ENGINEERING APPROVAL.

AS-BUILT

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Development Consultants
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phone: (425)775-1591
fax: (425)672-7998
e-mail: info@lsaengineering.com
web: lsaengineering.com

ROBERT L. LOVELL 38508 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 8/17/08
07/27/07

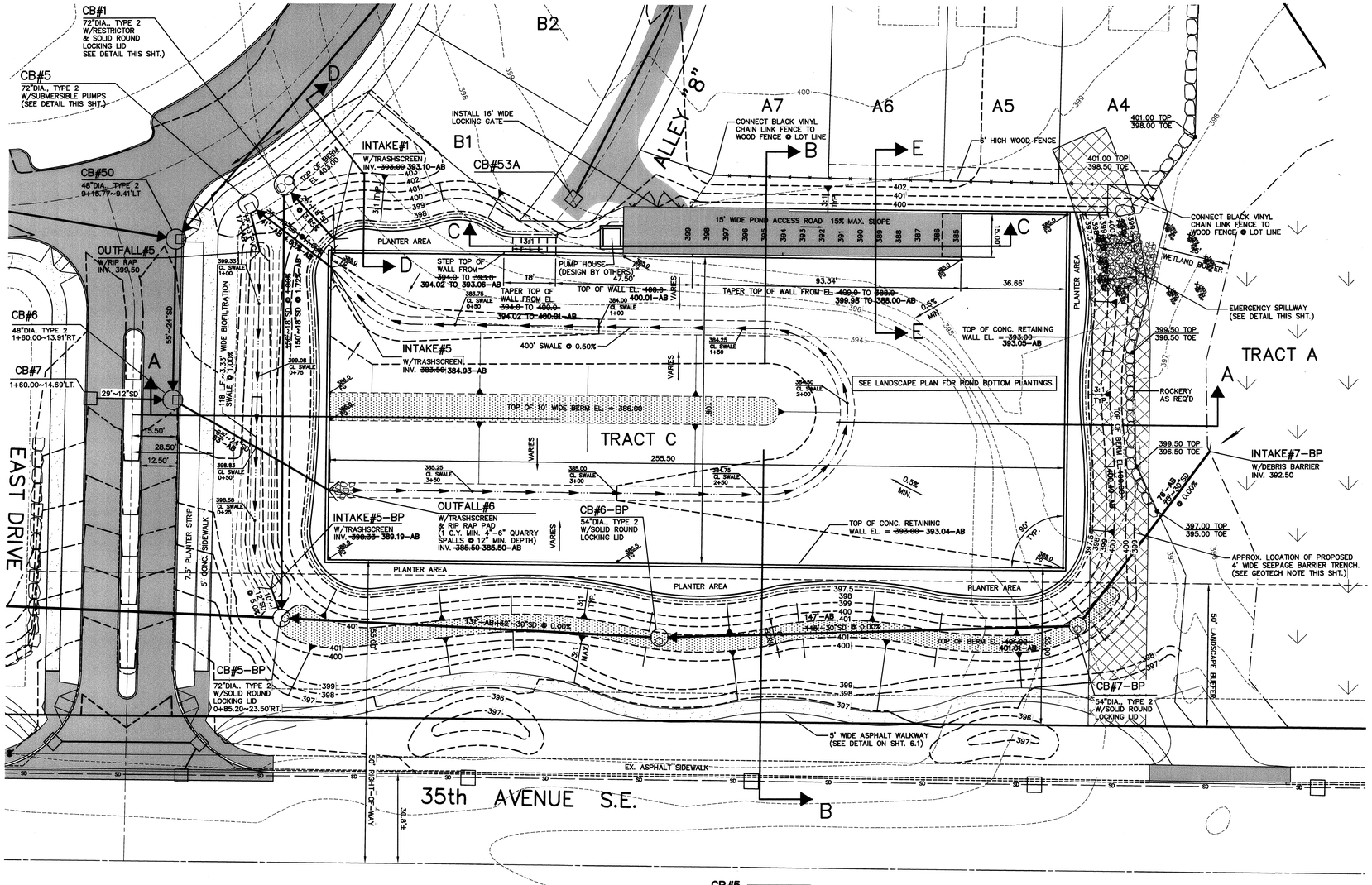
REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS 6-28-05 MM
4. AS-BUILT 7-07-06 MH
5. AS-BUILT - PDF 01-15-07 MH
6. AS-BUILT REVISIONS 06-18-07 BJA
7. AS-BUILT MYLARS 07-25-07 RLL

AS-BUILTROAD AND STORM DRAINAGE PROFILES
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE 1"=50'HOR./1"=5'VERT.		
DRAWN MM	CHECKED RLL	SHEET 4.8
DATE 1-17-05	P.B. -	
PFN -		
LSA FILE NO. 4700		

HDEV-2260

NORTH POINTE



SCALE : 1"=20'

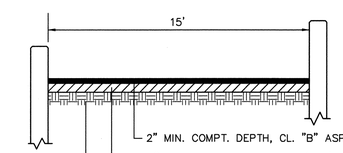
10 0 30

0 20

GEOTECHNICAL NOTES:

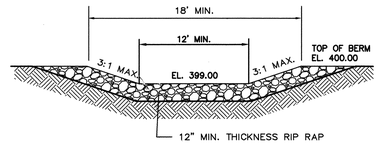
1. APPROXIMATE LOCATION OF 4' WIDE SEEPAGE BARRIER TO CONSIST OF A MINIMUM 4 FOOT WIDE TRENCH EXCAVATED AT LEAST 3 FEET INTO THE GLACIAL DRIFT SOILS BELOW THE PEAT OR FILL. (SEE GEOTECHNICAL ENGINEERING REPORT BY ASSOCIATED EARTH SCIENCES, INC. PROJECT NO. KE01248T, DATED MAY 5, 2005 FOR DETAILS AND SPECIFICATIONS)

2. A MINIMUM HORIZONTAL THICKNESS OF 10 FEET OF LOW PERMEABILITY FILL SHOULD BE PLACED BETWEEN OTHER STRUCTURAL FILL AND THE BACK OF THE DRAINAGE FOR POND WALLS. (SEE GEOTECHNICAL ENGINEERING REPORT BY ASSOCIATED EARTH SCIENCES, INC. PROJECT NO. KE01248T, DATED MAY 5, 2005 FOR DETAILS AND SPECIFICATIONS)



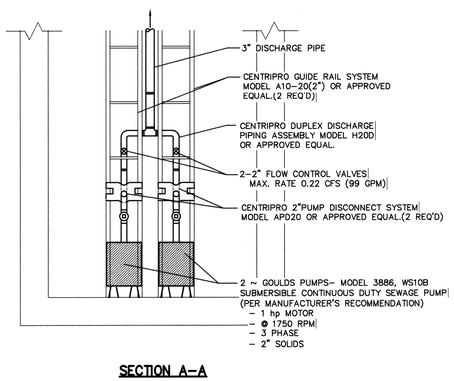
DETENTION POND PAVED ACCESS ROAD

NO SCALE

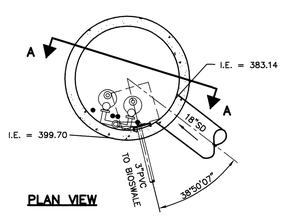


EMERGENCY SPILLWAY

NO SCALE

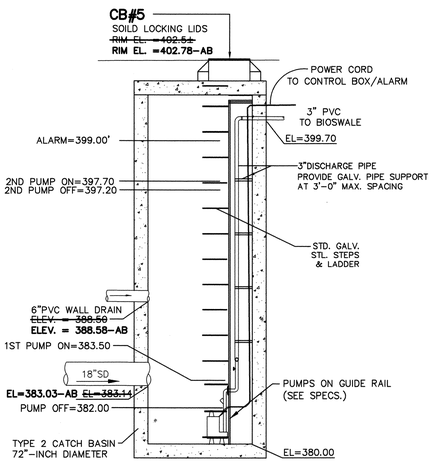


SECTION A-A



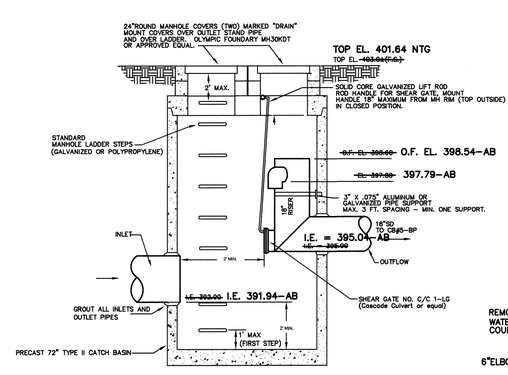
PLAN VIEW

NOTE:
1. SYSTEM SHALL UTILIZE PRESSURE SWITCHES.
2. INSTALL VISUAL ALARM SYSTEM.
3. INSTALL BATTERY OPERATED BACKUP FOR ALARM SYSTEM. (PER MANUFACTURER'S RECOMMENDATION)
4. PUMPS INSTALLED ON A GUIDE RAIL SYSTEM FOR EASY REMOVAL. WITH DUPLEX DISCHARGE KIT.



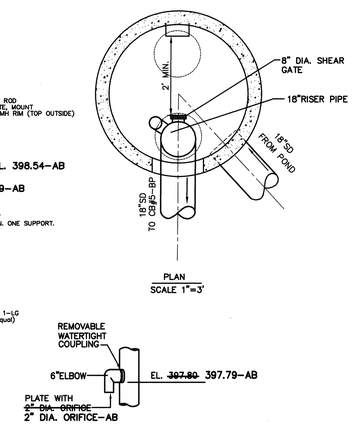
2YR. CONTROL PUMP STATION DETAIL (CBMH#5)

N.T.S.



RESTRICTOR CATCH BASIN #1

N.T.S.



AS-BUILT

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ROBERT L. LOVELL 36508 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 8/17/08

07/27/07

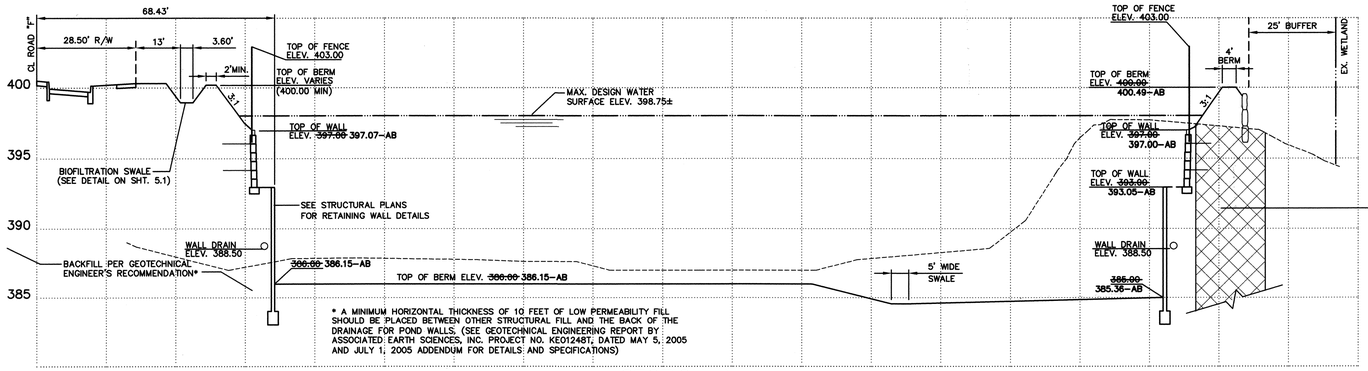
REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS — MM — 5-18-05
2. REVISED PER CITY COMMENTS — MM — 6-28-05
3. REVISED CB# CALLOUT/ADDED PIPE CALLOUT — MM — 8-8-05
5. AS-BUILT - PDF — MH — 01-15-07
6. AS-BUILT REVISIONS — BJA — 08-18-07
7. AS-BUILT MYLARS — RLL — 07-25-07

ASBUILT STORM WATER DETENTION/WATER QUALITY PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=20'
DRAWN MM	CHECKED RLL
DATE 1-17-05	P.B. -
PFN	-
LSA FILE NO.	4700
SHEET	5.1 OF

HDEV-2261

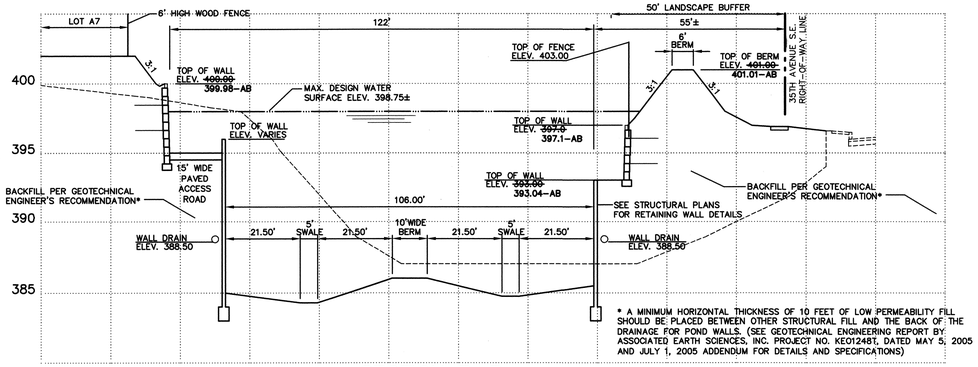
NORTH POINTE



GEOTECHNICAL NOTE:
APPROXIMATE LOCATION OF 4' WIDE SEEPAGE BARRIER TO CONSIST OF A MINIMUM 4 FOOT WIDE TRENCH EXCAVATED AT LEAST 3 FEET INTO THE GLACIAL DRIFT SOILS BELOW THE PEAT OR FILL.
(SEE GEOTECHNICAL ENGINEERING REPORT BY ASSOCIATED EARTH SCIENCES, INC. PROJECT NO. KE012487, DATED MAY 5, 2005 FOR DETAILS AND SPECIFICATIONS)

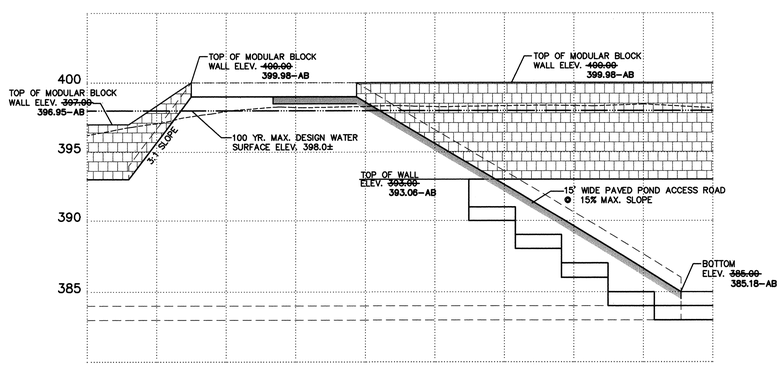
SECTION A-A

SCALE: 1"=20' HOR.
1"=5' VERT.



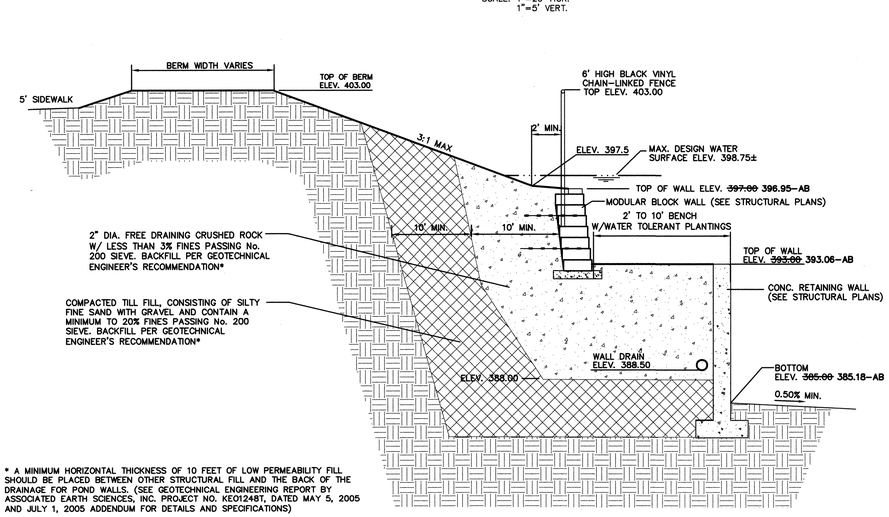
SECTION B-B

SCALE: 1"=20' HOR.
1"=5' VERT.



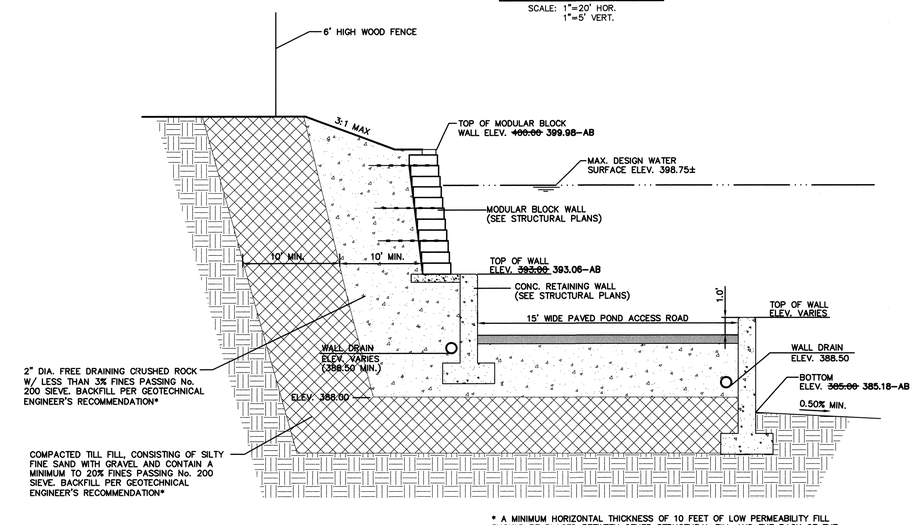
SECTION C-C

SCALE: 1"=20' HOR.
1"=5' VERT.



POND WALL SECTION D-D

SCALE: 1" = 4'-0"



POND WALL SECTION E-E

SCALE: 1" = 4'-0"

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web: lsaengineering.com

ROBERT L. LOVELL — STATE OF WASHINGTON — 24800 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 8/17/08
07/27/07

REVISIONS

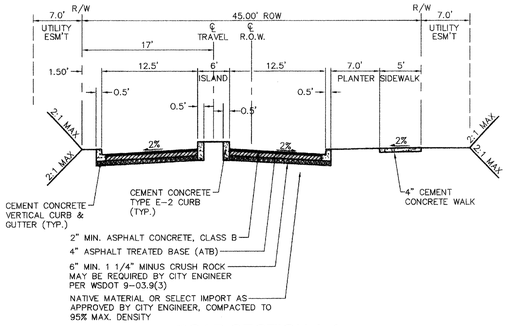
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS	MM	5-18-05	
2. REVISED PER CITY COMMENTS	MM	6-28-05	
5. AS-BUILT - PDF	MH	01-15-07	
6. AS-BUILT REVISIONS	BJA	06-18-07	
7. AS-BUILT MYLARS	RLL	07-25-07	

DETENTION POND/WATER QUALITY DETAILS
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	AS SHOWN		
DRAWN MM	CHECKED RLL	SHEET	
DATE 1-17-05	F.B. -	5.2	
PFN -			
LSA FILE NO. 4700		OF	

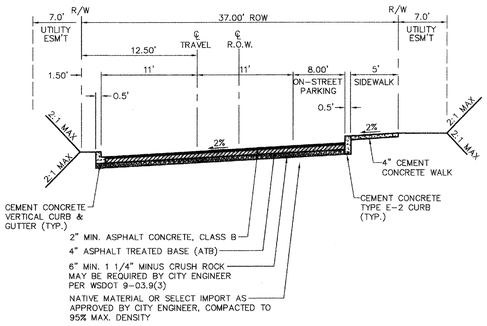
HDEV-2262

NORTH POINTE



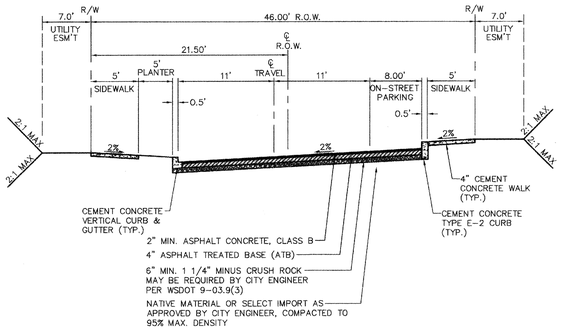
ROAD SECTION A-A

NOT TO SCALE



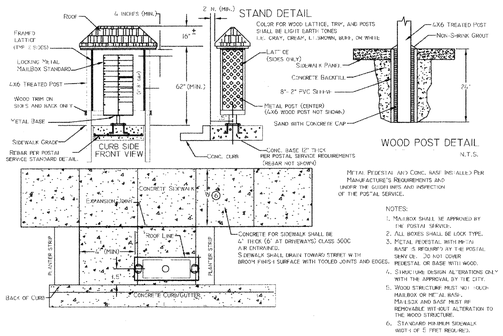
ROAD SECTION B-B

NOT TO SCALE



ROAD SECTION C-C

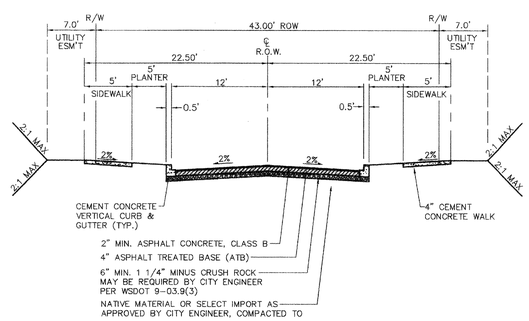
NOT TO SCALE



MAILBOX STAND IN PLANTER STRIP

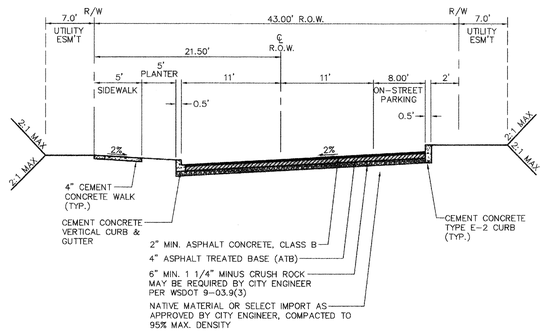
NO SCALE

(MILL CREEK STD. PLAN STR. 80A)



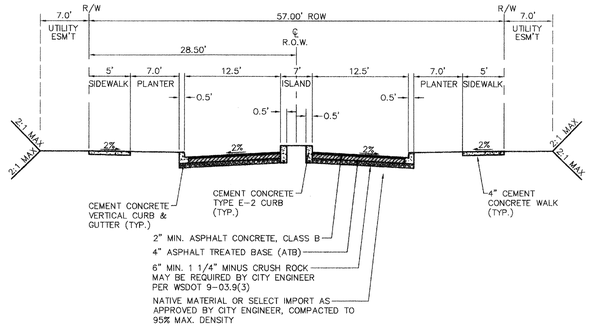
ROAD SECTION D-D

NOT TO SCALE



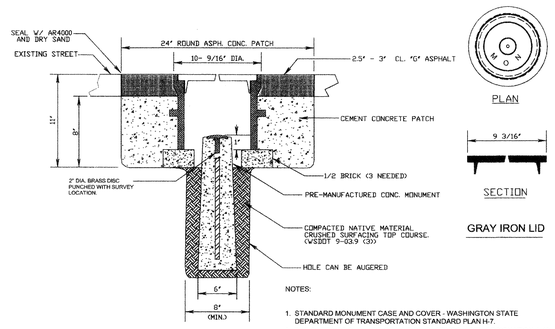
ROAD SECTION E-E

NOT TO SCALE



ROAD SECTION F-F

NOT TO SCALE



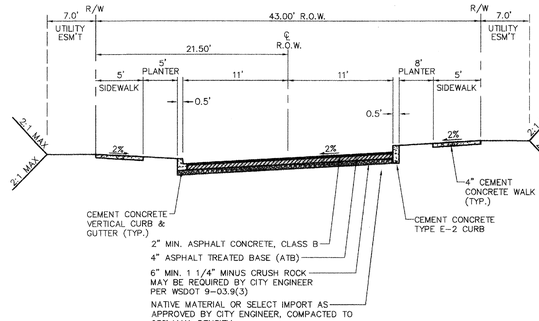
NOTES:

1. STANDARD MONUMENT CASE AND COVER - WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD PLAN H-7.
2. THE CASTINGS SHALL BE GRAY-IRON CASTINGS, ASTM DESIGNATION A-48, CLASS 35. THE COVER AND SEAT SHALL BE MACHINED SO AS TO HAVE PERFECT CONTACT AROUND THE ENTIRE CIRCUMFERENCE AND FULL WIDTH OF BEARING SURFACE.
3. MONUMENT CASE AND COVER SHALL BE EAST JORDAN IRON WORKS # 313 OR APPROVED EQUAL.

SURVEY CONTROL MONUMENT

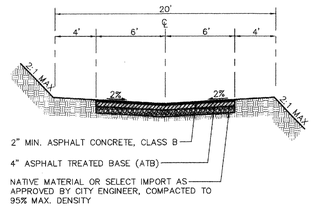
NO SCALE

(MILL CREEK STD. PLAN STR. 041)



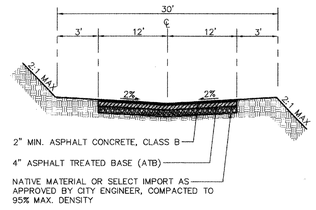
ROAD SECTION G-G

NOT TO SCALE



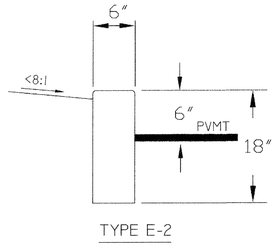
TYPICAL ALLEY CROSS-SECTION

NOT TO SCALE



TRACT E/F CROSS-SECTION

NOT TO SCALE



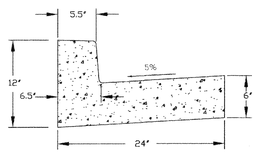
NOTES:

1. DUMMY JOINTS SHALL BE PLACED AT 10 FEET ON CENTER.
2. CONCRETE MIX ON "E" CURBING SHALL BE CLASS 3000 (3000 PSI) W/AIR ENTRAINMENT.
3. THROUGH JOINTS SHALL BE USED ON ALL "E" CURBING OR AS DIRECTED BY THE CITY ENGINEER.

CEMENT CONCRETE E-CURB TYPES

(MILL CREEK STD. PLAN STR. 02B)

NO SCALE



VERTICAL CURB & GUTTER

NOTES:

1. CONCRETE SHALL BE CLASS 3000 AIR ENTRAINED.
2. IN-SITU NATIVE MATERIAL MAY BE USED FOR A BASE IF APPROVED BY THE CITY ENGINEER. ALTERNATIVE BASE SHALL BE CRUSHED SURFACING TOP COURSE, PER WSDOT SEC. 9-03.9(3) WITH A MINIMUM DEPTH OF 6 INCH.
3. STEEL FORMS SHALL BE USED ON ALL STRAIGHT SECTIONS. WOOD HEADER BOARD SHALL BE USED ON RADIUS.
4. FULL DEPTH EXPANSION JOINTS SHALL BE PLACED AT 10 FEET CENTER TO CENTER, AT THE TOP OF EACH DRIVEWAY, AT TOP OF ACCESS RAMPS, AND ON BOTH SIDES OF A STORM BASIN.
5. FINISH SHALL BE BROOMED WITH TOOLED EDGES.

VERTICAL CURB AND GUTTER

(MILL CREEK STD. PLAN STR. 02)

NO SCALE

ACCEPTED FOR CONSTRUCTION BY:

DIRECTOR OF PUBLIC WORKS, CITY OF MILL CREEK — DATE 7/28/05

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56

DIRECTOR OF COMMUNITY DEVELOPMENT — DATE 7.28.05

LSA
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e-mail: info@lsaengineering.com
web: lsaengineering.com

ROBERT L. KOPF — STATE OF WASHINGTON — 36508 — REGISTERED PROFESSIONAL ENGINEER — 7-8-05

EXPIRES 8/17/06

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS 6-28-05 MM

ROADWAY SECTIONS AND DETAILS FOR *MILL CREEK EAST*

IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	AS SHOWN	
DRAWN MM	CHECKED RLL	SHEET
DATE 1-17-05	F.B. -	6.1
PPN	–	
LSA FILE NO.	4700	OF

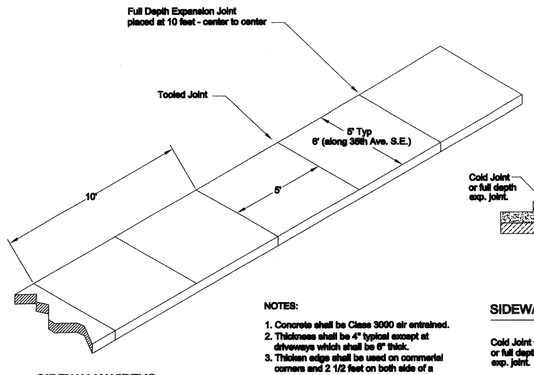
HDEV-2263

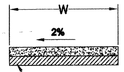
NORTH POINTE

DRIVEWAY SCHEDULE

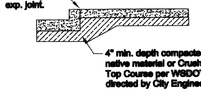
LOT NO.	DRIVEWAY CENTERLINE STATION	STREET	D/W WIDTH
A1	0+54.00	1ST STREET	21'
A2/A3	1+09.50	1ST STREET	12'
A4	3+76.60	AVENUE "B"	21'
A5	4+29.60	↓	↓
A6	4+56.60		
A8	0+91.79	1ST STREET	
A9	2+38.28	AVENUE "B"	↓
A10/A11	3+95.97	↓	12'
A12	4+51.47		21'
A14	0+64.79	1ST STREET	
A15	2+32.19	AVENUE "A"	
A16	2+86.62		
A17	3+10.10		↓
A18/A19	3+76.61		12'
A20	4+32.11		21'
A22	0+74.50		
A23	1+14.50		
A24	1+41.50		↓
A25/A26	2+10.00		12'
A27	2+61.67		21'
A28	3+20.41		↓
A29	3+47.41		
A30/A31	4+13.91		12'
A32	4+69.41		21'
A33	5+20.41		
A34	5+45.91	↓	↓
A36/A37	10+45.89	2ND STREET	12'
A38	9+77.39		21'
A39	9+50.39		↓
A40	8+99.39		
A41/A42	8+43.89		12'
A43	7+77.39		21'
A44	7+50.39		↓
A45	6+97.39		
A46/A47	6+41.89		12'
A48	5+86.39	↓	21'
A59	3+51.57	WEST DRIVE	↓
A60	2+98.57		
A61/A62	2+43.07		12'
A63	1+87.57		21'
A64	1+34.57		
A65	1+07.57	↓	↓

LOT NO.	DRIVEWAY CENTERLINE STATION OR RADIAL BEARING		D/W WIDTH
A66	11+96.61	AVENUE "D"	20'
A67	11+45.11	↓	21'
A68	11+18.11		21'
A69/A70	10+49.61		12'
A71	9+83.11		21'
A72	9+56.11		↓
A73	9+03.11		
A74	8+76.11		
A75	13+35.89		↓
A76	12+97.89		21'
A77/A78	12+42.39		12'
A79	11+86.89		21'
A80	11+37.89		↓
A81	11+10.89		↓
A82/A83	10+42.39	↓	12'
A86	4+57.37	AVENUE "E"	21'
A87	4+19.37	↓	21'
A88/A89	3+63.87		12'
A90	3+08.37		21'
A91	2+59.37		↓
A92	2+32.37		
A93/A94	1+63.87		12'
A96/A97	4+13.67		12'
A98	3+45.17		21'
A99	3+18.17		21'
A100/A101	2+51.67		12'
A102	1+85.17		21'
A104/A105	4+13.67	AVENUE "F"	12'
A106	3+45.17	↓	21'
A107	3+18.17		21'
A108/A109	2+51.67		12'
A110	1+85.17		21'
A113	3+96.65		21'
A114/A115	3+40.91		12'
A116	2+74.65		21'
A117/A118	2+19.15		12'
A119	1+50.65		21'
A122	3+94.65	AVENUE "G"	21'
A123/A124	3+39.15	↓	12'
A125	2+72.65		21'
A126/A127	2+17.15		12'
A128	1+48.65		21'
A129	1+21.65		21'





SIDEWALK ONLY



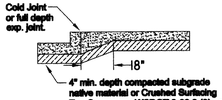
SIDEWALK WIDTHS

Residential & Commercial	5'
Arterials	6'
Town Center	10'
Use as Multi-Purpose Trail	10'

NOTES:

1. Concrete shall be Class 3000 air entrained.
2. Thickness shall be 4" typical except at driveways which shall be 6" thick.
3. Thicken edge shall be used on commercial corners and 2 1/2 feet on both side of a commercial driveway.
4. Sidewalk shall drain toward the street.
5. Broom finish surface with tooled joints and edges.
6. Expansion joint material may be used between curb and sidewalk joint.

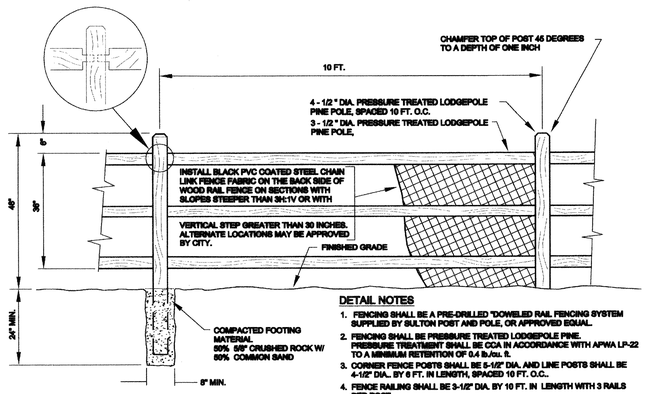
SIDEWALK WITH CURB & GUTTER



SIDEWALK WITH THICKENED EDGE

CONCRETE SIDEWALK (MILL CREEK STD. PLAN STR. 03A)

NO SCALE

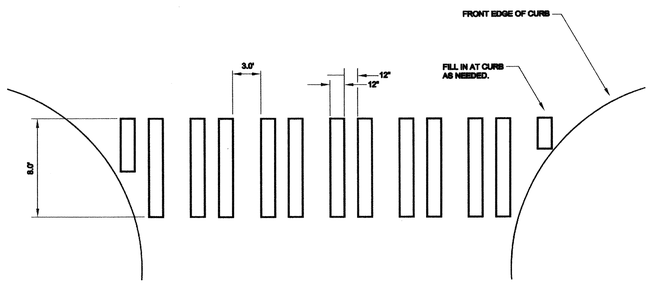


DETAIL NOTES

1. FENCING SHALL BE A PRE-DRILLED "DOWELED RAIL FENCING SYSTEM SUPPLIED BY SULTON POST AND POLE, OR APPROVED EQUAL.
2. FENCING SHALL BE PRESSURE TREATED LODGEPOLE PINE. PRESSURE TREATMENT SHALL BE CCA IN ACCORDANCE WITH APWA LP-22 TO A MINIMUM RETENTION OF 0.4 lb./cu. ft.
3. CORNER FENCE POSTS SHALL BE 5-1/2" DIA. AND LINE POSTS SHALL BE 4-1/2" DIA.. BY 6 FT. IN LENGTH, SPACED 10 FT. O.C..
4. FENCE RAILING SHALL BE 3-1/2" DIA. BY 10 FT. IN LENGTH WITH 3 RAILS PER POST..
5. THE TOP OF THE POSTS SHALL BE 4 FT. ABOVE FINISH GRADE.
6. ALL POSTS AND RAILS SHALL BE INSTALLED PER THE MANUFACTURE'S WRITTEN INSTRUCTIONS.
7. CHAIN LINK FENCING SHALL BE FASTENED TO WOOD FENCE RAILING USING MINIMUM 1-1/4" LONG CORROSION RESISTANT STAPLES SPACED 16" O.C..
8. CHAIN LINK FENCING SHALL NOT EXTEND ABOVE THE TOP HORIZONTAL RAILING OR BELOW THE GROUND FINISH GRADE. FENCING SHALL BE CLASS 2B -ASTM F669 OR APPROVED EQUAL.

POST AND RAIL FENCE

NO SCALE (MILL CREEK STD. PLAN STM. 032)



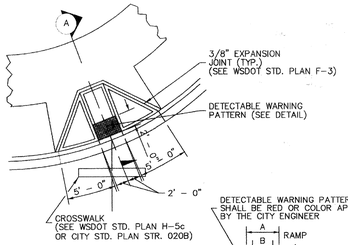
PLAN

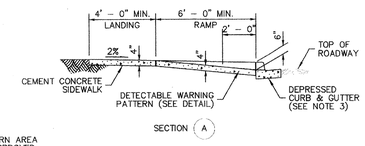
NOTES:

1. CROSSWALKS SHALL BE THERMO-PLASTIC WITH GLASS BEAD SURFACE.
2. PAVEMENT SHALL BE SWEEPED BEFORE APPLICATION.
3. LOCATIONS SHALL BE PRE-APPROVED BY THE CITY PRIOR TO INSTALLATION.

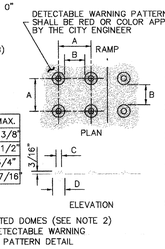
CROSSWALK DETAIL

NO SCALE (MILL CREEK STD. PLAN STR. 020B)





SECTION (A)



RAMP DETAIL FOR SIDEWALK RAMP TYPES 1B, 1C, 1D

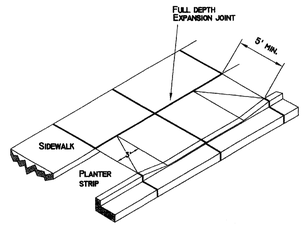
	MIN.	MAX.
A	5/8"	3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	7/16"

NOTES

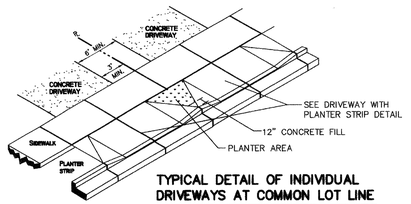
1. AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
2. DETECTABLE WARNING PATTERNS SHALL BE A MANUFACTURED CAST-IN-PLACE PRODUCT BY ARMOR-TILE OR CITY APPROVED EQUAL.
3. CURB AND GUTTER SHOWN, SEE THE CONTRACT PLANS FOR THE CURB DESIGN SPECIFIED.
4. THE PLAN VIEWS FOR SIDEWALK RAMP TYPES 1B, 1C & 1D ARE PROVIDED TO DEFINE EACH RAMP TYPE. SEE THE RAMP DETAIL ON THIS SHEET. SEE WSDOT STD. PLAN F-3 FOR SIDEWALK JOINT PLACEMENT AND DETAILS.
5. RAMP SLOPES SHALL NOT BE STEEPER THAN 12H:1V.

ACCESS RAMP - CORNER PLACEMENT (WSDOT STD. PLAN F-3A)

NO SCALE



DRIVEWAY WITH PLANTER STRIP



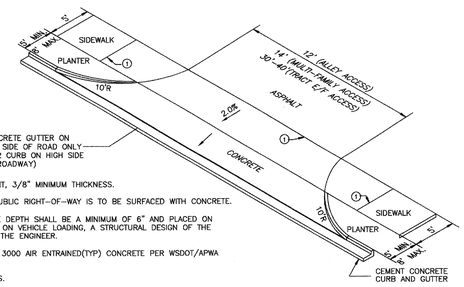
TYPICAL DETAIL OF INDIVIDUAL DRIVEWAYS AT COMMON LOT LINE

NOTES:

1. CURB AND APRON TO BE POURED SEPARATELY. MONOLITHIC CURB AND APRON IS NOT ALLOWED.
2. DRIVEWAY SHALL BE 6 INCHES THICK CLASS 3000 CONCRETE AIR ENTRAINED.
3. BROOM FINISH SURFACE WITH TOOLED JOINTS AND EDGES.
4. DEPTH OF CURB AND LOW POINT SHALL BE 1 INCH MAX. FROM GUTTER FLOW LINE.

VERTICAL CURB DRIVEWAY TYPE "A" (SINGLE FAMILY ACCESS)

NO SCALE (MILL CREEK STD. PLAN STR. 06)

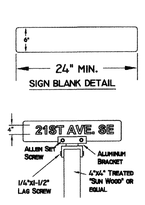


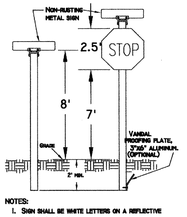
NOTES:

1. FULL DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS.
2. DRIVEWAY SECTION WITHIN PUBLIC RIGHT-OF-WAY IS TO BE SURFACED WITH CONCRETE.
3. DRIVEWAY CEMENT CONCRETE DEPTH SHALL BE A MINIMUM OF 6" AND PLACED ON COMPACTED GRADE. DEPENDING ON VEHICLE LOADING, A STRUCTURAL DESIGN OF THE DRIVEWAY MAY BE REQUIRED BY THE ENGINEER.
4. CONCRETE SHALL BE CLASS 3000 AIR ENTRAINED(TYP) CONCRETE PER WSDOT/APWA SPECIFICATIONS.
5. CLEAN AND EDGE ALL JOINTS.

VERTICAL CURB DRIVEWAY TYPE "B" (ALLEY/TRACTS/MULTI-FAMILY ACCESS POINTS)

NO SCALE





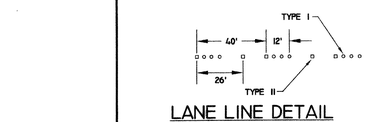
NOTES:

1. SIGN SHALL BE WHITE LETTERS ON A REFLECTIVE GREEN BACKGROUND.
2. ALL STREET NAME SIGNS MUST BE PRINTED ON BOTH SIDES OF THE SIGN.
3. USE 6" LETTERS AT INTERSECTIONS WITH 35TH AVE. S.E.

STREET NAME SIGN (MILL CREEK STD. PLAN SGN 01)

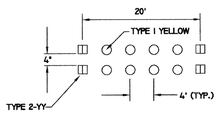
NO SCALE

AND SILVER CREST DRIVE.

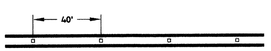


LANE LINE DETAIL

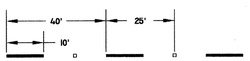
N.T.S.



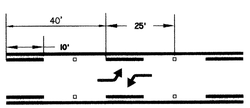
DOUBLE YELLOW CENTER STRIPE



MEDIAN PATTERN

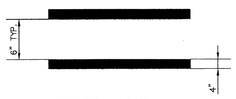


CENTER LANE SKIP PATTERN



TWO-WAY LEFT TURN LANE

N.T.S.



DUAL STRIPE DETAIL

N.T.S.

NOTES:

1. MATCH EXISTING PAVEMENT MARKINGS.
2. PAINT LINE SHALL BE 4" WIDE AND SHALL BE WSDOT APPROVED. SURFACE SHALL BE GLASS BEAD FINISHED.
3. TYPE I MARKER SHALL BE WSDOT APPROVED TYPE I.
4. TYPE 2 MARKERS SHALL BE TYPE 2 ROUND SHOULDER ABS HOUSING WITH OPTIC GRADE METHYL METHACRYLATE ACRYLIC (MMA) FACE AND 3.25 SQ. IN. IN SIZE.

LANE MARKING DETAILS

NO SCALE (MILL CREEK STD. PLAN STR. 021)

ACCEPTED FOR CONSTRUCTION BY:

DIRECTOR OF PUBLIC WORKS CITY OF MILL CREEK — DATE 7/28/05

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56

DIRECTOR OF COMMUNITY DEVELOPMENT — DATE 7.29.05

LSA
Lovell-Sauerland & Associates, Inc.
Engineers/Surveyors/Planners
Development Consultants
19400 33rd Avenue W.
Suite 200
Lynnwood, WA 98036
phone: (425)775-1591
fax: (425)672-7998
e-mail: info@lsaengineering.com
web: lsaengineering.com

ROBERT L. LOVELL — STATE OF WASHINGTON — 16508 REGISTERED PROFESSIONAL ENGINEER — 7-22-05 — EXPIRES 8/17/06

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS 6-28-05 MM
3. REVISED PER CITY: PLANTER BETWEEN COMMON LOT D/W 7-22-05 RLL

ROAD AND STORM DRAINAGE NOTES & DETAILS
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	AS SHOWN
DRAWN MM	CHECKED RLL
DATE 1-17-05	F.B. -
PFN	-
LSA FILE NO.	4700
SHEET	6.2

HDEV-2264

NORTH POINTE

GENERAL PLAN NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF MILL CREEK STANDARDS AND SPECIFICATIONS AND WASHINGTON STATE DEPARTMENT OF TRANSPORTATION 2004 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.

2. ALL WORK WITHIN THE SITE SHALL BE SUBJECT TO THE INSPECTION OF THE CITY ENGINEER OR DESIGNATED REPRESENTATIVE.

3. PRIOR TO BEGINNING ROAD CONSTRUCTION, THE APPLICANT, THEIR ENGINEER AND ROAD CONTRACTOR SHALL MEET WITH THE DEPARTMENT OF PUBLIC WORKS FOR A PRE-CONSTRUCTION MEETING.

4. A COPY OF THESE APPROVED PLANS MUST BE ON THE SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

5. PRIOR TO ANY SITE CONSTRUCTION THAT INCLUDES CLEARING/LOGGING OR GRADING THE SITE/LOT CLEARING LIMITS SHALL BE LOCATED AND IDENTIFIED BY THE PROJECT SURVEYOR/ENGINEER AS REQUIRED BY THESE PLANS AND APPROVED BY THE CITY.

6. THE TEMPORARY EROSION/SEDIMENTATION CONTROL FACILITY SHALL BE CONSTRUCTED PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING IN ACCORDANCE WITH APPROVED TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.

7. PUBLIC STREETS SHALL BE CLEANED ONCE PER DAY OR AS DIRECTED BY THE CITY. FLUSHING OF STREETS WITH WATER WILL NOT BE ALLOWED.

8. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITIES SHOWN HERE ARE FOR THE PURPOSES OF ASSISTING THE CONTRACTOR IN LOCATING SAID UTILITIES. CONTRACTOR SHALL CONTACT UNDERGROUND UTILITIES LOCATION CENTER (1-800-424-5555) 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION AND OBTAIN ON-SITE UTILITY LOCATIONS.

9. THE CONTRACTOR SHALL COMPLY WITH ALL OTHER NECESSARY PERMITS AND REQUIREMENTS BY THE CITY OF MILL CREEK GOVERNING AUTHORITY/AGENCY.

10. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER FROM OCTOBER 1 THROUGH APRIL 30, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 2 DAYS AND FROM MAY 1 THROUGH SEPTEMBER 30, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS. ANY UNWORKED SOIL SHALL BE STABILIZED WITH A CITY APPROVED BEST MANAGEMENT PRACTICE (BMP).

STORM DRAINAGE NOTES

1. ALL PIPE SHALL BE PLACED ON STABLE EARTH, OR IF IN THE OPINION OF THE CITY INSPECTOR, THE EXISTING FOUNDATION IS UNSATISFACTORY, THEN IT SHALL BE EXCAVATED BELOW GRADE AND BACK-FILLED PER STANDARD PLAN STM 01.

2. TRENCH BACK FILL OF NEW UTILITIES AND STORM DRAINAGE FACILITIES SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (MODIFIED PROCTOR) UNDER ROADWAYS AND SIDEWALKS AND 90% MAXIMUM DENSITY (MODIFIED PROCTOR) OFF ROADWAYS.

3. ALL CATCH BASINS TO BE TYPE I UNLESS OTHERWISE NOTED.

4. ALL CATCH BASINS WITH A DEPTH OVER 5.0 FEET TO THE FLOW LINE SHALL BE TYPE II.

5. ALL TYPE II CATCH BASINS AND ALL INLETS AND CATCH BASINS OUTSIDE OF PUBLIC RIGHT OF WAY SHALL HAVE SOLID LOCKING LIDS UNLESS OTHERWISE APPROVED BY THE CITY. CATCH BASINS OUTSIDE THE RIGHT OF WAY COLLECTING SURFACE WATER SHALL HAVE LOCKING GRATES.

6. STANDARD LADDER STEPS SHALL BE PROVIDED IN ALL CATCH BASINS AND MANHOLES EXTENDING 5 FEET IN DEPTH. TOP RUNG SHALL BE NO MORE THAN 18" BELOW RIM.

7. CATCH BASIN FRAME AND GRATES SHALL BE DUCTILE IRON (H20 RATING) VANED GRATE (OLYMPIC FOUNDRY ITEM NUMBER SM50VG OR APPROVED EQUAL).
THROUGH CURB INLETS SHALL BE 18" X 24" DUCTILE IRON – DIAGONAL SLOT GRATE WITH 9" HIGH DIAMOND PLATE HOOD, AND H20 RATING (OLYMPIC FOUNDRY ITEM NUMBER SM50VG OR APPROVED EQUAL).

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL INLET, AND CATCH BASIN FRAMES AND GRATES JUST PRIOR TO PAVING. DURING OVERLAY PROJECTS, ALL MANHOLES, VALVES, AND MONUMENTS SHALL BE ADJUSTED AFTER PAVING.

9. PRIOR TO SIDEWALK CONSTRUCTION, CONSTRUCT THE LOT DRAINAGE AND/OR STUB OUTS BEHIND SIDEWALK DRAINS AS REQUIRED. POSITIVE DRAINAGE IS TO BE PROVIDED WHERE FEASIBLE WITH CONNECTION TO STORM DRAIN. STUB-OUTS SHALL BE MARKED WITH 2" X 4" AND LABELED "STORM."

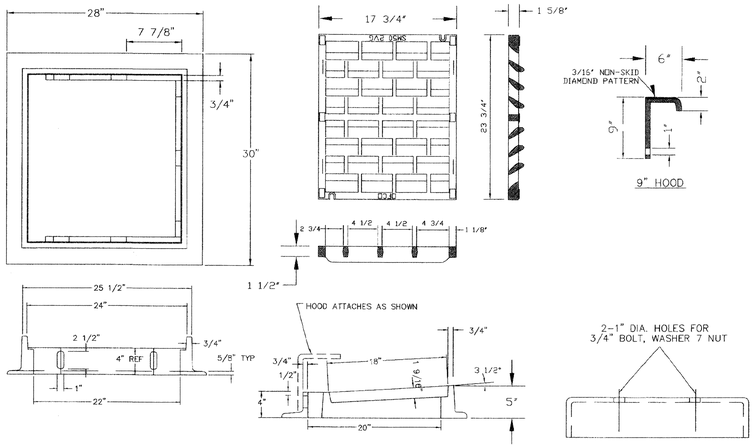
10. STORM WATER RETENTION/DETENTION FACILITIES, CONTROL STRUCTURES, STORM DRAINAGE PIPES AND CATCH BASINS SHALL BE JETTED AND CLEANED PRIOR TO ACCEPTANCE.

11. PIPE SPECIFICATION: ALL STORM DRAIN PIPES SHALL BE 12" MIN. DIAMETER. PIPE MATERIAL, JOINTS AND PROTECTIVE TREATMENT, SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS, SECTION 9.05 AND AASHTO AND ASTM DESIGNATIONS AS NOTED BELOW.

MATERIALS ALLOWED FOR STORM DRAIN LINES:
PLAIN CONCRETE PIPE (CP)
REINFORCED CONCRETE PIPE (RCP)
ALUMINUM SPIRAL RI PIPE (ASRP)
ASTM D3034 PVC
HDPE – HIGH DENSITY POLYETHYLENE PIPE (OUTSIDE PUBLIC RIGHT OF WAY ONLY).

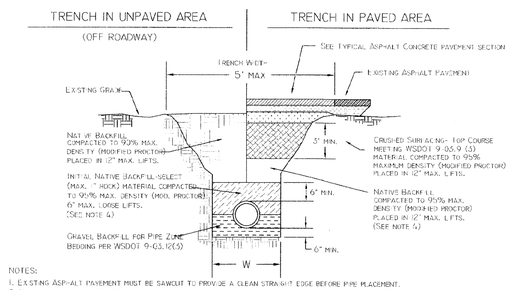
MATERIALS ALLOWED FOR 6" ROOF DRAIN LINES.
ASTM D3034 PVC
SDR35

ALLOWABLE JOINTS:
CONCRETE PIPE SHALL BE RUBBER GASKETED.
SPIRAL RIB PIPE SHALL BE "HAT BANDED" WITH NEOPRENE GASKETS
PVC PIPE SHALL BE RUBBER GASKETED.



NOTES:
1. THROUGH CURB CATCH BASIN SHALL BE 16" x 22" DUCTILE IRON DIAGONAL SLOT GRATE OR 2-WAY VANED GRATE WITH 9" HIGH DIAMOND PLATE HOOD WITH H20 RATING. (OLYMPIC FOUNDRY ITEM NO. SM52, SM52VG OR APPROVED EQUAL).

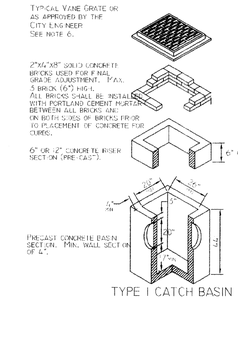
THROUGH CURB INLET
(MILL CREEK STD. PLAN STM 04)
NO SCALE



NOTES:
1. EXISTING ASPHALT PAVEMENT MUST BE SAWCUT TO PROVIDE A CLEAN STRAIGHT EDGE BEFORE PIPE PLACEMENT.
2. EXISTING MATERIAL DISTURBED UNDER THE PIPE SHALL BE REPLACED WITH BEDDING MATERIAL AND COMPACTED TO 95% MAX. DENSITY.
3. BACKFILL MATERIAL SHALL BE INSTALLED IN AN APPROVED MANNER TO INSURE NO DAMAGES TO THE PIPE.
4. IF NATIVE BACKFILL IS DETERMINED UNSATISFACTORY BY THE CITY, USE CRUSHED SURFACING- TOP COURSE PER WSDOT 9-03.9 (3)

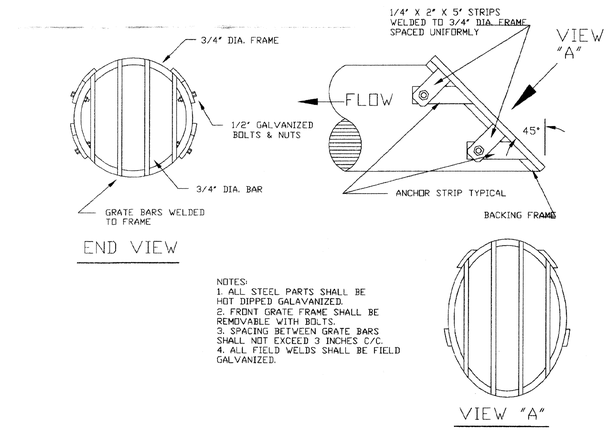
W = 40" FOR 15" DIAMETER PIPE & SMALLER.
W = I 1/2" X PIPE DIAMETER + 18" FOR PIPE 18" IN DIAMETER AND LARGER.

TYPICAL TRENCH DETAIL
(MILL CREEK STD. PLAN STR 062)
NO SCALE



NOTES:
1. BASE TO BE CONSTRUCTED IN ACCORDANCE WITH WSDOT/APWA SPECIFICATIONS OR AS APPROVED BY THE CITY ENGINEER.
2. REINFORCING SHALL BE EQUIVALENT TO WELDED WIRE FABRIC HAVING A MINIMUM AREA OF 0.2 SQUARE FEET PER FOOT. FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
3. ALL SLAB ACCESS INTO THE BASE SHALL BE THROUGH A PRECAST KNOCKOUT.
4. BOTTOM OF THE BASE MAY BE ROUNDED.
5. KNOCKOUTS SHALL HAVE A THICKNESS NOT LESS THAN 2 INCHES.
6. GRATE TYPE SHALL TYPICALLY BE VANE TYPE UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.
7. FRAME MAY BE RISERS ALL INVERTED TO MAKE FINAL GRADE ADJUSTMENT.
8. RISERS SHALL BE USED FOR ADJUSTMENT OF GRADE.
9. IF THE GRATE IS OFFSET FROM THE STRUCTURE SO NO SUPPORT IS PROVIDED UNDER THE ADJUSTMENT BRICKS ON THE BACK SIDE, A 1/2" X 2" X 52" STEEL PLATE SHALL BE INSTALLED ACROSS THE BACK PRIOR TO PLACEMENT OF THE BRICKS.

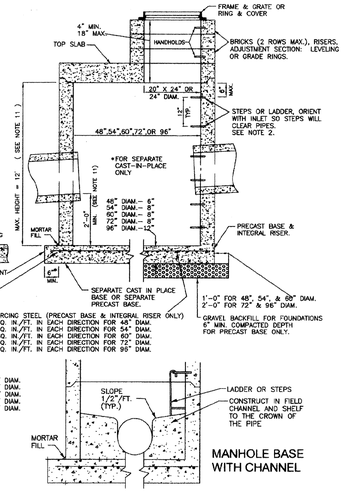
TYPE 1 CATCH BASIN AND INLET
(MILL CREEK STD. PLAN STM 01)
NO SCALE



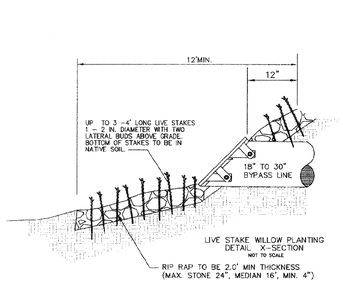
NOTES:
1. ALL STEEL PARTS SHALL BE HOT DIPPED GALAVANIZED.
2. FRONT GRATE FRAME SHALL BE REMOVABLE WITH BOLTS.
3. SPACING BETWEEN GRATE BARS SHALL NOT EXCEED 3 INCHES C/C.
4. ALL FIELD WELDS SHALL BE FIELD GALVANIZED.

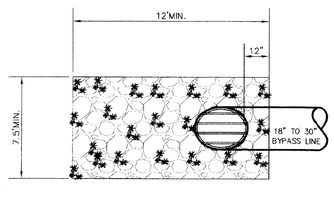
TYPICAL DEBRIS BARRIER
(MILL CREEK STD. PLAN STM 013)
NO SCALE

NOTES:
1. CATCH BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO M199) AND ASTM C890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
2. HANDHOLDS IN ADJUSTMENT SECTION SHALL HAVE 3" MIN. CLEARANCE. STEPS IN CATCH BASIN SHALL HAVE 6" MIN. CLEARANCE. HANDHOLDS SHALL BE PLACED IN ALTERNATING GRADE RINGS OR LEVELING BRICK COURSE WITH A MIN. OF ONE HANDHOLD BETWEEN THE LAST STEP AND TOP OF THE FINISHED GRADE.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE WALL THICKNESS OF 2" MIN. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT. PIPES SHALL BE INSTALLED ONLY IN FACTORY KNOCKOUTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. KNOCKOUT OR CUTOUT HOLE SIZE SHALL EQUAL PIPE OUTER DIAM. PLUS CATCH BASIN WALL THICKNESS. MAX. HOLE SIZE SHALL BE 36" FOR 48" CATCH BASIN, 42" FOR 54" C.B., 48" FOR 60" C.B., 60" FOR 72" C.B., 84" FOR 96" C.B. MIN. DISTANCE BETWEEN HOLES SHALL BE 8" FOR 48", 54", AND 60" C.B.; 12" FOR 72" AND 96" C.B.
6. CATCH BASIN FRAMES AND GRATES OR COVERS SHALL BE IN ACCORDANCE WITH SEC. 7.05 OF THE WSDOT STANDARD SPECIFICATIONS. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
7. ALL BASE REINFORCING STEEL SHALL HAVE A MIN. YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MIN. CLEARANCE.
8. MIN. SOIL BEARING VALUE SHALL EQUAL 3,300 POUNDS PER SQUARE FOOT.
9. SEE THE WSDOT STANDARD SPECIFICATIONS SEC. 7-05.3 FOR JOINT REQUIREMENTS.
10. MORTAR SHALL BE PLACED BETWEEN EACH LEVEL OF ADJUSTING RINGS, TOP OF TOP SLAB, AND BOTTOM OF IRON RING.
11. STORM MANHOLE OVER 12 FT. DEEP SHALL HAVE CONCRETE CHANNEL WITH NO TWO FEET DEEP CATCH.



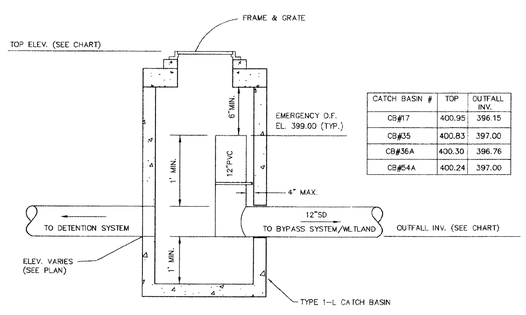
TYPE II CATCH BASIN
(MILL CREEK STD. PLAN STM 02)
NO SCALE





PLANTING NOTES:
LIVE STAKE CUTTINGS ARE TO BE FRESHLY CUT 1"-2" IN DIAMETER & 3' LONG. SIDE BRANCHES SHOULD BE PRUNED OFF AND BARK LEFT INTACT. BASAL ENDS SHOULD BE CUT CLEANLY AT AN ANGLE AND THE TOPS SHOULD BE CUT SQUARE. ALL LIVE STAKES SHOULD BE KEPT MOIST DURING TRANSPORT TO THE SITE AND SHOULD BE INSTALLED THE SAME DAY AS HARVESTING. LIVE STAKES WILL BE INSTALLED BY CREATING A PILOT HOLE INTO NATIVE SOIL 1' – 2'. THE PILOT HOLE SHOULD BE CREATED AT A RIGHT ANGLE TO THE SLOPE WITH AN IRON BAR OR OTHER TOOL. THE LIVE STAKE IS THEN INSERTED INTO THE PILOT HOLE AND TAPPED INTO PLACE WITH A DEAD BLOW HAMMER OR OTHER SIMILAR TOOL. APPROXIMATELY 20% OF THE LIVE STAKE SHOULD BE EXPOSED ABOVE THE SURFACE WITH TWO (2) LATERAL BUDS ABOVE GRADE. LIVE STAKES SHOULD BE SPACED WITH A TRIANGULAR PLACEMENT PATTERN.

TYPICAL WETLAND OUTFALL DETAIL
NO SCALE

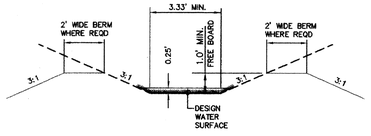


CATCH BASIN #	TOP	OUTFALL INV.
CB#17	400.95	396.15
CB#35	400.83	397.00
CB#36A	400.30	396.76
CB#54A	400.24	397.00

EMERGENCY OVERFLOW CATCH BASIN
NO SCALE

NOTES:
1. BIOFILTERS SHALL BE SODDED AND OVERSEEDED. VEGETATION SHALL BE PERMANENTLY ESTABLISHED IN BIOFILTERS BEFORE STORMWATER RUNOFF IS ALLOWED TO FLOW THROUGH THEM.
   i. BIOFILTERS WITH GRADES GREATER THAN 2% SHALL BE OVERSEEDED WITH WATER-TOLERANT GRASSES.
2. LEVEL SPREADERS SHALL BE INSTALLED AT A MINIMUM OF EVERY 50 FEET IN BIOFILTRATION SWALES.
3. SWALES SHALL BE CONSTRUCTED AS FOLLOWS:
   i. OVEREXCAVATE THE SWALE 8 TO 12 INCHES AND INSTALL 4 TO 8 INCHES OF COMPACTED, AMENDED TOPSOIL AND 4 INCHES OF TURF SOD ON THE TOPSOIL.
   ii. TOPSOIL AND TURF SHALL EXTEND AT LEAST ONE (1) FOOT ABOVE THE DESIGN WATER SURFACE AND SHALL COVER THE ENTIRE BOTTOM OF THE SWALE.
   iii. THE TOP OF THE SOD SHALL BE TWO (2) INCHES BELOW THE INVERT OF THE INLET AND OUTLET PIPES.
   iv. NO WOOD IS ALLOWED.
4. VEGETATION COVER MIX

APPLICATION NAME	VARIETY OR SPECIES	% BY WEIGHT	% PURITY	MIN. % GERMINATION
KENTUCKY BLUEGRASS	POA PRATENSIS	30	85	85
CREEPING RED FESCUE	LOLIUM PERENNE	40	98	90
PERENNIAL RYE		30	95	90



BIOFILTRATION SWALE
NO SCALE

ACCEPTED FOR CONSTRUCTION BY:
DIRECTOR OF PUBLIC WORKS, CITY OF MILL CREEK — DATE 7/28/05

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56
DIRECTOR OF COMMUNITY DEVELOPMENT — DATE 7-29-05

LSA
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web: lsaengineering.com

ROBERT L. LOVE — STATE OF WASHINGTON — 36508 REGISTERED PROFESSIONAL ENGINEER — 7-8-05
EXPIRES 8/17/06

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS — 5-18-05 MM
2. REVISED PER CITY COMMENTS — 6-28-05 MM

ROAD AND STORM DRAINAGE NOTES & DETAILS
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	AS SHOWN	
DRAWN MM	CHECKED RLL	SHEET 6.3
DATE 1-17-05	P.E.	
PPN —		
LSA FILE NO. 4700		

HDEV-2265

NORTH POINTE

CLEANOUT SCHEDULE

CO#	TOP ±	AS-BUILT	INV.	AS-BUILT	TYPE	COMMENTS
A1	401.3	401.87	397.30	397.55		MCSE=399.50
A2	401.6	403.14	396.90	397.05		
A3	401.9	402.67	396.50	396.53		
A4	401.4	402.53	396.40	396.45		
A5	401.8	402.80	396.80	397.56		
A6	402.2	402.73	397.20	397.98		
A7	402.3	401.63	397.60	397.55		
A8	401.8	404.03	397.30	398.77		
A9	401.0	404.20	396.30	399.10		
A10	401.6	402.93	397.60	398.36		
A11	402.0	403.72	397.20	398.74		
A12	402.3	402.14	396.80	398.53		
A13	402.3	402.28	396.60	398.20		
A14	401.3	401.18	396.30	396.03		MCSE=400.00
A15	402.1	403.79	397.10	398.67		
A16	402.4	402.95	396.60	397.78		
A17	402.4	402.63	396.50	397.53		
A18	402.7	403.03	397.00	397.47		
A19	403.0	403.58	397.50	399.34		
A20	403.2	403.94	397.90	400.10		
A21	403.3	403.79	398.30	400.44		
A22	400.3	401.99	396.65	397.36		
A23	400.4	401.51	396.57	397.12		
A24	401.3	401.70	397.30	396.92		
A25	401.4	401.30	397.40	396.90		
A26	402.0	403.04	398.20	399.15		
A27	402.3	403.15	397.80	398.65		
A28	402.5	403.04	397.40	397.54		
A29	402.7	403.33	397.70	398.95		
A30	403.0	404.41	398.10	400.75		
A31	403.3	403.72	398.60	400.84		
A32	403.2	403.65	398.20	400.49		
A33	403.0	403.84	397.80	400.41		
A34	402.8	403.06	397.50	399.58		
A35	402.1	403.93	398.26	399.08		MCSE=400.50
A36	401.7	403.41	397.88	398.65		
A37	401.2	402.61	397.42	397.86		
A38	401.1	403.01	397.00	397.34		
A39	401.1	402.21	397.10	397.45		
A40	401.5	403.01	397.52	398.16		
A41	401.9	403.93	397.90	399.09		
A42	402.4	404.46	398.36	399.53		
A43	403.0	404.46	398.40	398.58		MCSE=401.00
A44	403.1	404.57	398.02	399.74		
A45	402.8	404.03	397.60	399.17		
A46	402.6	403.31	397.20	398.48		
A47	402.3	403.11	396.80	397.53		
A48	402.3	403.09	396.93	398.21		
A49	402.9	404.21	397.33	399.16		
A50	404.2	405.49	399.68	400.59		
A51	403.5	404.49	399.28	399.70		
A52	403.5	404.40	399.22	399.50		
A53	404.0	405.65	399.64	400.49		
A54	404.3	406.10	401.13	401.19		MCSE=401.20
A55	404.0	405.60	400.71	400.76		MCSE=401.00
A56	404.0	405.67	400.77	400.86		MCSE=401.00
A57	404.5	407.06	401.15	402.16		MCSE=401.20
A58	403.5	405.19	399.76	400.22		MCSE=401.00
A59	403.0	404.36	399.37	399.36		
A60	402.9	403.56	399.45	398.59		
A61	402.0	404.38	398.93	399.41		
A62	401.4	403.28	398.47	398.37		
A63	401.2	402.80	398.14	397.911		
A64	401.3	402.81	398.30	397.86		
A65	402.0	403.45	398.00	397.38		
A66	403.3	405.17	398.01	400.29		

CLEANOUT SCHEDULE

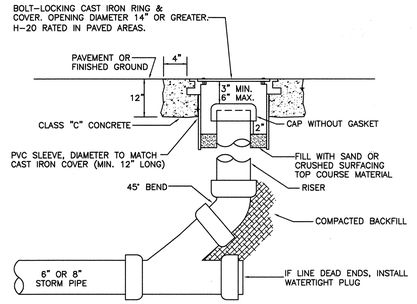
CO#	TOP ±	AS-BUILT	INV.	AS-BUILT	TYPE	COMMENTS
A67	402.8	404.93	397.59	399.90		MCSE=401.00
A68	402.5	403.93	397.21	398.93		
A69	402.5	404.12	397.06	399.54	8" PVC	
A70	402.7	404.62	397.46	399.66		
A71	403.1	405.12	397.84	400.23		
A72	403.7	405.44	398.70	400.56		MCSE=399.50
A73	403.7	405.29	398.20	400.28		
A74	403.4	403.37	397.60	399.69		
A75	401.0	401.65	395.85	395.99		MCSE=400.50
A76	403.6	405.29	398.84	400.15		MCSE=401.00
A77	403.7	406.28	398.70	400.29		
A78	404.1	405.77	399.08	400.55		
A79	404.1	405.79	399.44	400.64		
A80	403.5	404.15	398.40	400.00		
A81	403.1	404.01	398.00	399.80		
A82	403.0	404.93	397.30	398.78	8" PVC	
A83	403.4	404.17	398.40	399.97		
A84	403.8	404.60	398.80	400.47		
A85	401.3	402.41	396.20	399.18		MCSE=400.50
A86	401.6	402.90	396.10	395.10	8" PVC	MCSE=400.60
A87	401.6	402.96	396.30	396.17	8" PVC	
A88	401.9	403.30	396.68	397.11		
A89	402.3	404.22	397.14	398.53		
A90	402.7	404.77	397.50	399.14		
A91	402.9	404.54	397.90	398.91		
A92	402.4	404.31	397.40	398.61		MCSE=401.00
A93	402.1	404.89	396.90	397.65		
A94	402.1	404.17	397.10	397.07		
A95	402.6	404.49	396.30	396.71	8" PVC	MCSE=400.00
A96	402.2	403.63	396.90	398.00		
A97	402.4	403.90	397.40	398.39		
A98	402.9	404.08	397.80	398.42		
A99	403.3	404.05	398.20	398.44		
A100	403.4	404.66	399.54	399.51		MCSE=401.25
A101	403.1	404.52	399.08	399.53		
A102	402.7	404.52	398.68	399.53		
A103	402.9	404.84	398.25	399.16		
A104	402.2	403.78	397.30	397.65		MCSE=400.00
A105	402.0	404.05	396.90	397.33		
A106	402.1	404.29	397.10	397.25		
A107	402.5	404.15	397.50	398.56		
A108	402.9	400.70	397.90	398.09		
A109	403.0	404.01	399.20	398.36		MCSE=400.50
A110	402.7	403.63	398.80	398.44		
A111	402.5	403.91	398.30	398.04		
A112	403.0	404.43	398.10	398.14	8" PVC	MCSE=400.00
A113	402.7	404.22	398.43	398.45		
A114	402.7	403.54	398.81	398.39		
A115	403.1	403.18	399.27	398.13		
A116	403.4	404.31	399.65	398.64		
A117	403.6	404.39	400.05	398.76		MCSE=400.50
A118	403.4	404.48	399.57	399.39		
A119	403.0	405.52	399.17	399.38		
A120	403.1	404.68	398.89	398.72		
A121	402.3	403.79	398.30	398.81		MCSE=400.00
A122	402.9	403.26	398.15	398.14		MCSE=400.50
A123	402.8	402.65	397.80	395.71		
A124	402.7	403.87	397.98	397.93		
A125	402.1	402.16	397.20	396.05		MCSE=400.75
A126	402.1	403.29	397.00	396.24		MCSE=400.75
A127	402.6	403.69	397.50	397.55		MCSE=401.00
A128	402.8	403.76	397.80	398.51		
A129	403.2	403.77	398.20	398.51		
A130	404.0	404.54	399.00	399.10		

CLEANOUT SCHEDULE

CO#	TOP ±	AS-BUILT	INV.	AS-BUILT	TYPE	COMMENTS
B1	401.8	402.91	396.80	398.02		MCSE=399.50
B2	401.3	401.56	397.20	396.37		
B3	401.2	401.27	396.20	396.52		
B4	401.3	402.03	396.40	397.58		
B5	401.5	402.73	396.80	398.45		
B6	402.1	401.75	397.10	397.73		
B7	402.3	403.08	397.80	398.00		
B8	402.4	403.64	398.00	398.54		
B9	402.4	403.76	398.40	398.69		
B10	402.0	403.73	397.30	398.63		MCSE=400.00
B11	401.7	403.70	397.30	398.35		
B12	401.6	403.24	397.00	397.16		
B13	401.6	403.34	397.20	397.62		
B14	401.8	404.20	397.50	397.13		
B15	402.5	403.86	397.40	397.22		
B16	402.5	404.25	397.50	397.12		
B17	402.1	402.63	397.10	398.93		MCSE=399.50
B18	401.8	402.21	396.70	398.60		
B19	401.8	401.24	396.60	394.94		
B20	401.5	401.33	397.00	397.25		
B21	402.7	404.10	398.10	400.50		
B22	402.8	402.87	397.60	399.16		
B23	402.6	403.62	397.80	400.03		
B24	402.3	403.56	398.20	400.00		
B25	402.9	403.74	398.80	400.22		
B26	403.2	X.X	398.40	X.X		
B27	403.3	405.11	398.30	399.94		
B28	403.6	404.67	398.70	400.66		
B29	403.4	404.35	398.50	401.54		
B30	403.1	404.24	398.10	401.42		
B31	403.0	404.17	398.00	400.35		
B32	402.7	403.77	398.40	400.44		

NOTES:

1. ROOFDRAIN TIGHTLINES SHALL BE 6"PVC @ 1.00% MIN. (1 TO 4 LOTS) OR 8"PVC @ 1.00% MIN. (5 OR MORE LOTS)
2. MCSE = MINIMUM CRAWLSPACE ELEVATION



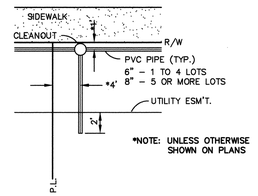
NOTES:

1. CAST IRON COVER SHALL READ "DRAIN".
2. LOCKING BOLTS FOR COVER SHALL BE 5/8" -11 NC STAINLESS STEEL TYPE 304 SOCKET (ALLEN) HEAD BOLTS, 2 INCHES LONG.
3. 14" BOLT-LOCKING COVER SHALL BE EQUAL TO INLAND FOUNDRY NO. 209.

STORM CLEANOUT

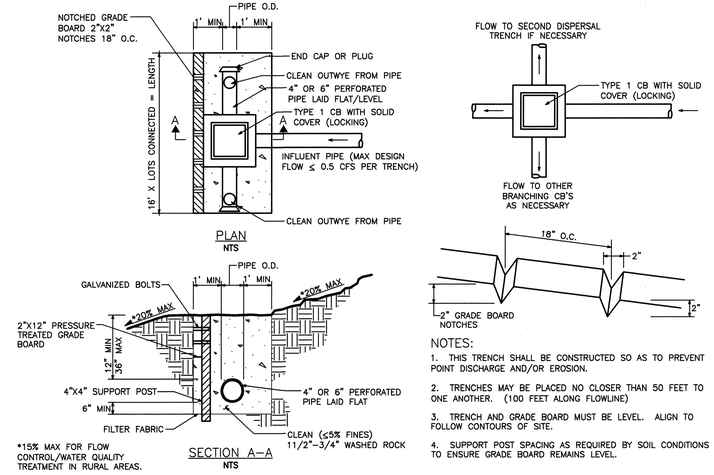
(MILL CREEK STD. PLAN STM 03)

NO SCALE



STORM DRAIN CLEANOUT/YARD DRAIN PLACEMENT

NO SCALE



NOTES:

1. THIS TRENCH SHALL BE CONSTRUCTED SO AS TO PREVENT POINT DISCHARGE AND/OR EROSION.
2. TRENCHES MAY BE PLACED NO CLOSER THAN 50 FEET TO ONE ANOTHER. (100 FEET ALONG FLOWLINE)
3. TRENCH AND GRADE BOARD MUST BE LEVEL. ALIGN TO FOLLOW CONTOURS OF SITE.
4. SUPPORT POST SPACING AS REQUIRED BY SOIL CONDITIONS TO ENSURE GRADE BOARD REMAINS LEVEL.

DISPERSION TRENCH WITH NOTCHED GRADE BOARD

N.T.S. 2001 DEPT. OF ECOLOGY FIGURE 5.2, VOL. V (BMP T5.10)

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e-mail: info@lsaengineering.com
web: lsaengineering.com

ROBERT L. LL... STATE OF WASHINGTON 36508 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 8/17/08

07/27/07

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS 6-28-05 MM
4. AS-BUILT - PDF 7-07-06 MH
5. AS-BUILT REVISIONS 01-15-07 MH
6. AS-BUILT MYLARS 06-18-07 BJA
7. AS-BUILT MYLARS 07-25-07 RLL

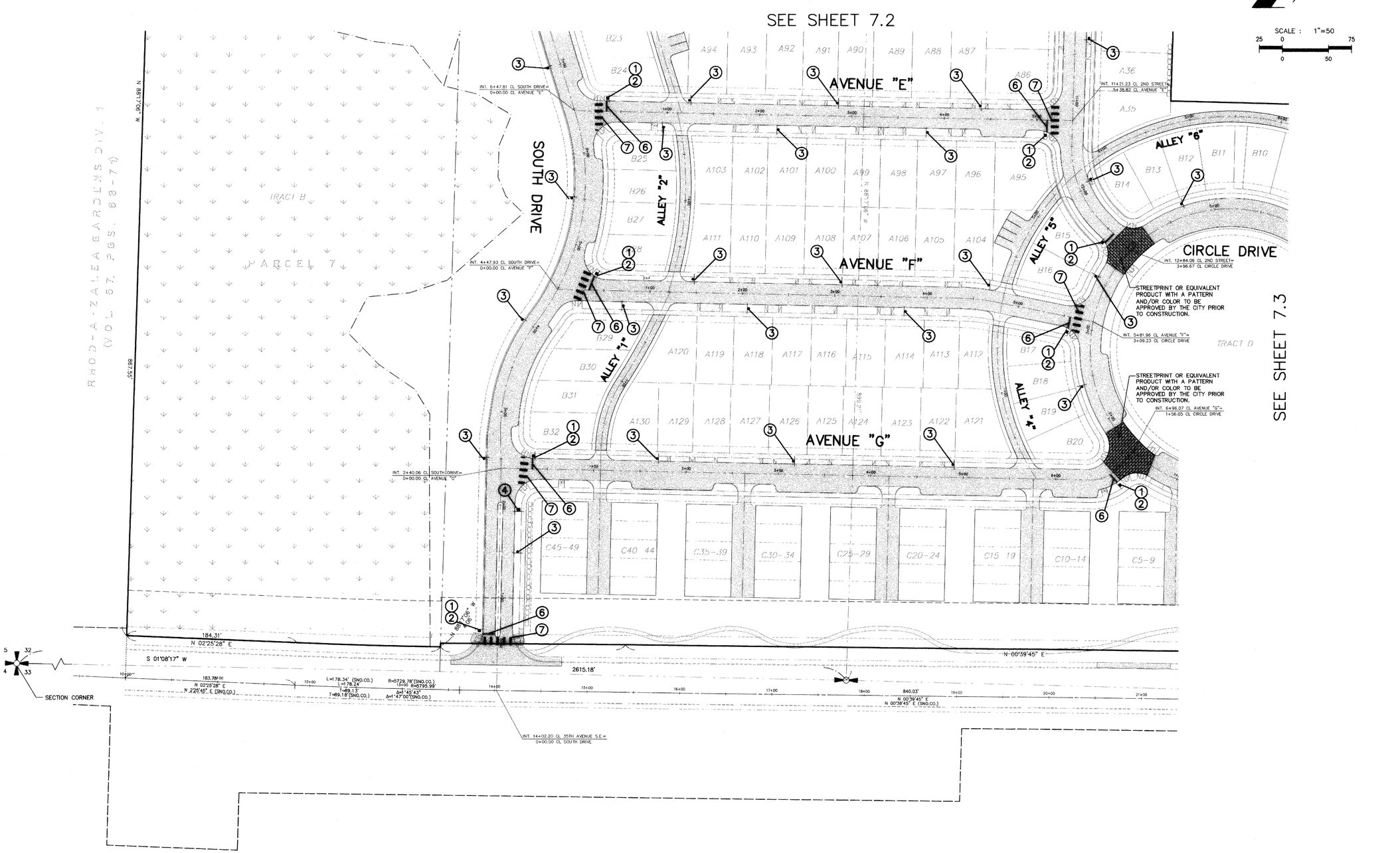
AS-BUILT ROAD AND STORM DRAINAGE NOTES & DETAILS
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	AS SHOWN	
DRAWN MM	CHECKED RLL	SHEET 6.4
DATE 1-17-05	F.B. -	
PFN	-	
LSA FILE NO.	4700	

AS-BUILT

NORTH POINTE

HDEV-2266



CHANNELIZATION AND SIGNING SCHEDULE

	MUTCD	SIGN TYPE	COMMENTS
①	R1-1	STOP	PER CITY DETAIL SGN. 01
②	SNS	STREET NAME	PER CITY DETAIL SGN. 01
③	R7-1	NO PARKING	12" x 18" SIGN
④	R2-1	"SPEED LIMIT 25"	24" X 30" SIGN
⑤	N/A	DOUBLE YELLOW CENTERLINE RPM'S	PER CITY DETAIL STR. 021
⑥	N/A	WHITE THERMOPLASTIC STOP BAR	12" WIDE
⑦	N/A	WHITE THERMOPLASTIC CROSSWALK	PER CITY DETAIL STR 020B

ACCEPTED FOR CONSTRUCTION BY:
DIRECTOR OF PUBLIC WORKS, CITY OF MILL CREEK — DATE 7/28/05

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56
DIRECTOR OF COMMUNITY DEVELOPMENT — DATE 7-29-05

LSA
Lovell-Sauerland & Associates, Inc.
Engineers/Surveyors/Planners
Development Consultants
19400 33rd Avenue W.
Suite 200
Lynnwood, WA 98036
phone: (425)775-1591
fax: (425)672-7998
e-mail: info@lsaengineering.com
web: lsaengineering.com

ROBERT L. LOVELL — STATE OF WASHINGTON — 36508 REGISTERED PROFESSIONAL ENGINEER — 7-8-05
EXPIRES 8/17/06

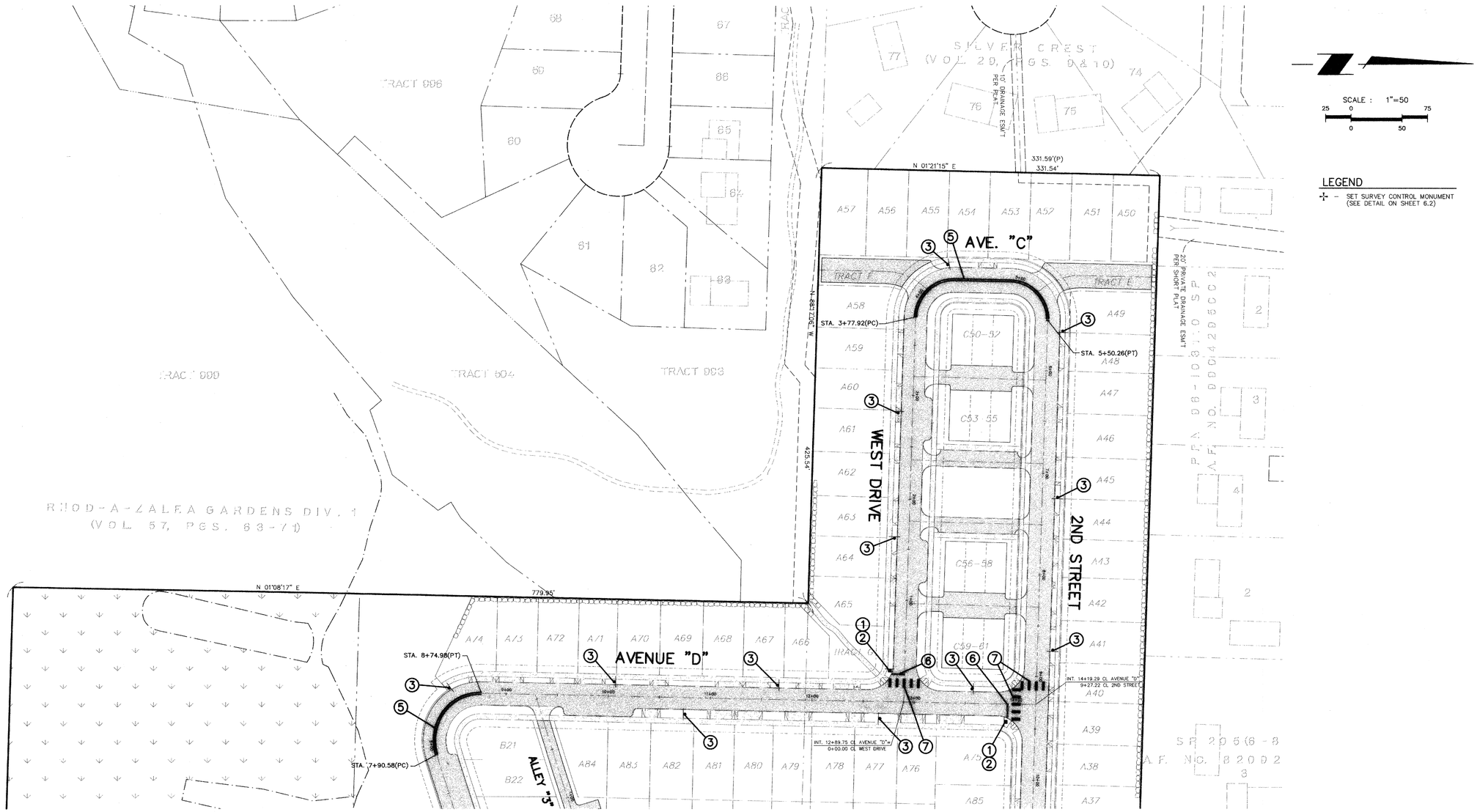
REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS — MM — 5-18-05
2. REVISED PER CITY COMMENTS — MM — 6-28-05

CHANNELIZATION AND SIGNING PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=50'	
DRAWN MM	CHECKED RLL	SHEET 7.1
DATE 1-17-05	F.B. –	
PPN	–	
LSA FILE NO.	4700	

HDEV-2267

NORTH POINTE



SEE SHEET 7.1

CHANNELIZATION AND SIGNING SCHEDULE

	MUTCD	SIGN TYPE	COMMENTS
①	R1-1	STOP	PER CITY DETAIL SGN. 01
②	SNS	STREET NAME	PER CITY DETAIL SGN. 01
③	R7-1	NO PARKING	–
④	R2-1	"SPEED LIMIT 25"	–
⑤	N/A	DOUBLE YELLOW CENTERLINE RPM'S	PER CITY DETAIL STR. 021
⑥	N/A	WHITE THERMOPLASTIC STOP BAR	–
⑦	N/A	WHITE THERMOPLASTIC CROSSWALK	PER CITY DETAIL STR 0208

ACCEPTED FOR CONSTRUCTION BY:

DIRECTOR OF PUBLIC WORKS CITY OF MILL CREEK — DATE 7/28/05

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56

DIRECTOR OF COMMUNITY DEVELOPMENT — DATE 7/28/05

LSA
Lovell-Sauerland & Associates, Inc.
Engineers/Surveyors/Planners
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19400 33rd Avenue W.
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phone: (425)775-1591
fax: (425)672-7998
e-mail: info@lsaengineering.com
web: lsaengineering.com

ROBERT L. LOVELL — STATE OF WASHINGTON — 19508 — REGISTERED PROFESSIONAL ENGINEER — 7-8-05
EXPIRES 8/17/06

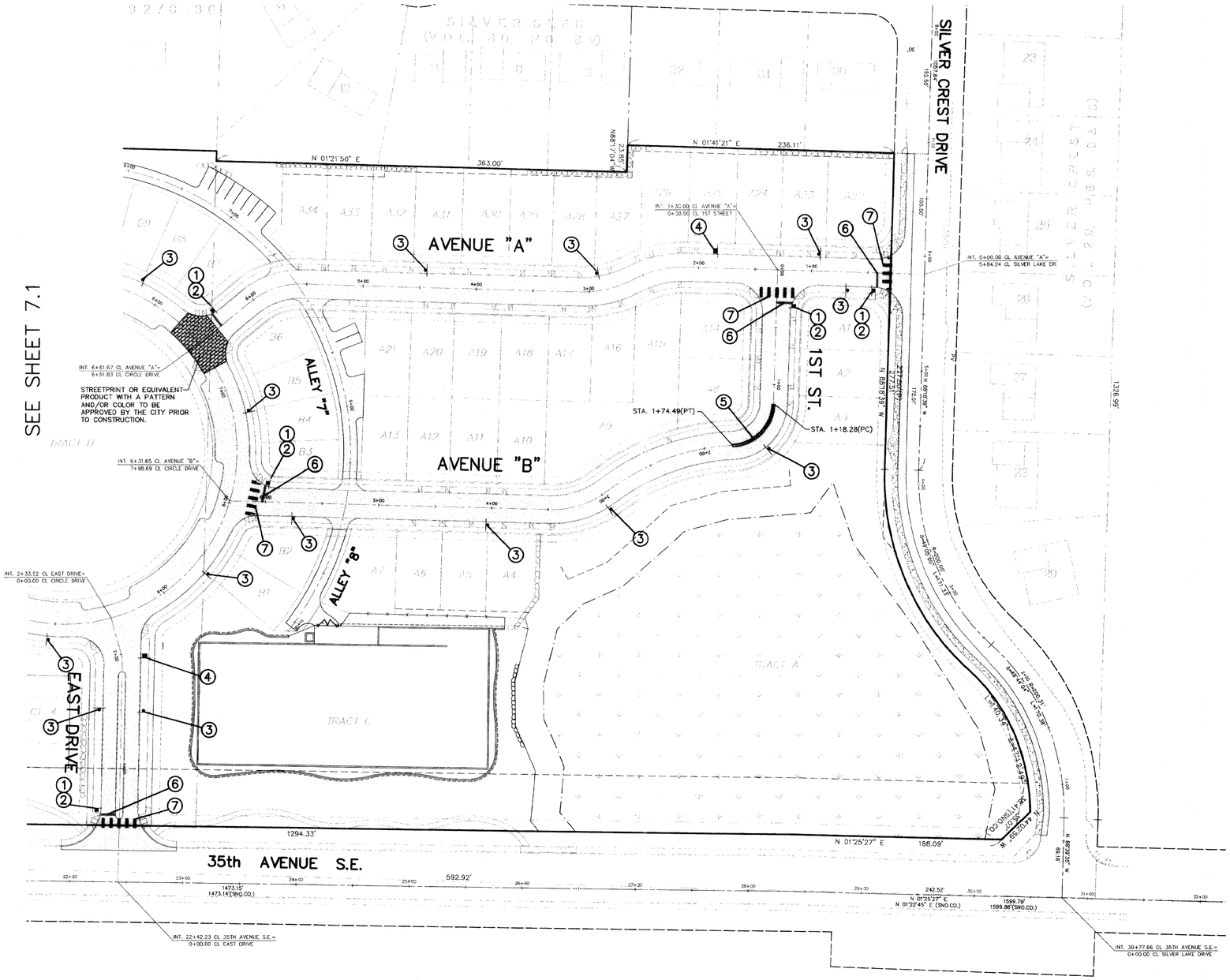
REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-19-05 MM
2. REVISED PER CITY COMMENTS 6-28-05 MM

CHANNELIZATION AND SIGNING PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE 1"=50'		
DRAWN MM	CHECKED RLL	SHEET 7.2
DATE 1-17-05	F.B. –	
PFN –		
LSA FILE NO. 4700		

H/DEV-2268

NORTH POINTE



SCALE : 1"=50

25 0 75

0 50

LEGEND

⊹ – SET SURVEY CONTROL MONUMENT (SEE DETAIL ON SHEET 6.2)

CHANNELIZATION AND SIGNING SCHEDULE

	MUTCD	SIGN TYPE	COMMENTS
①	R1-1	STOP	PER CITY DETAIL SGN. 01
②	SNS	STREET NAME	PER CITY DETAIL SGN. 01
③	R7-1	NO PARKING	–
④	R2-1	"SPEED LIMIT 25"	–
⑤	N/A	DOUBLE YELLOW CENTERLINE RPM'S	PER CITY DETAIL STR. 021
⑥	N/A	WHITE THERMOPLASTIC STOP BAR	–
⑦	N/A	WHITE THERMOPLASTIC CROSSWALK	PER CITY DETAIL STR 020B

ACCEPTED FOR CONSTRUCTION BY:

DIRECTOR OF PUBLIC WORKS CITY OF MILL CREEK — DATE 7/28/05

ACCEPTED AS IN COMPLIANCE OF APPROVAL FOR PP 01-56

DIRECTOR OF COMMUNITY DEVELOPMENT — DATE 7/28/05

LSA

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web: lsaengineering.com

ROBERT L. LOVELL — STATE OF WASHINGTON — 18908 REGISTERED PROFESSIONAL ENGINEER — 7-8-05

EXPIRES 8/17/06

REVISIONS
1. REVISED PER CITY COMMENTS/DEVELOPER REVISIONS 5-18-05 MM
2. REVISED PER CITY COMMENTS 6-28-05 MM

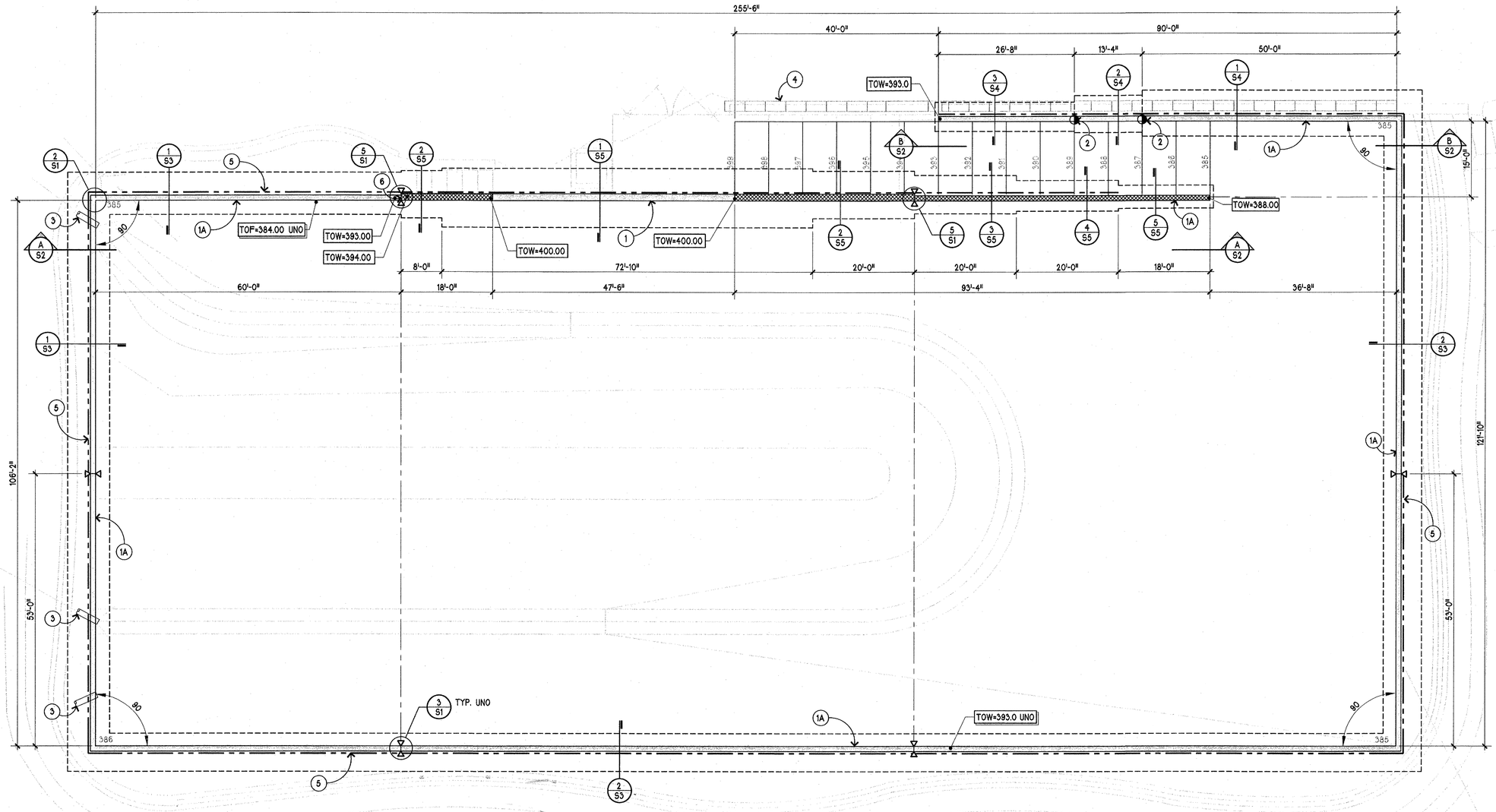
CHANNELIZATION AND SIGNING PLAN
FOR
MILL CREEK EAST
IN EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.
CITY OF MILL CREEK
SNOHOMISH COUNTY, WASHINGTON

SCALE	1"=50'	
DRAWN MM	CHECKED RLL	SHEET 7.3
DATE 1-17-05	P.B. –	
PPN	–	
LSA FILE NO.	4700	

HDSV-2269

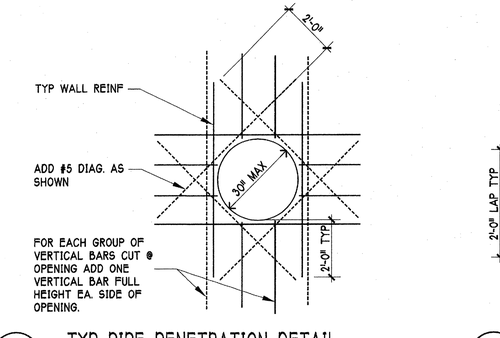
NORTH POINTE

EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.



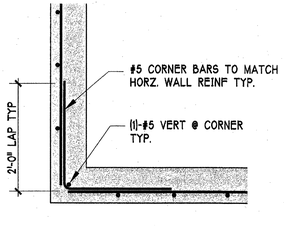
POND RETAINING WALL SITE PLAN

SCALE 3/32" = 1'-0"



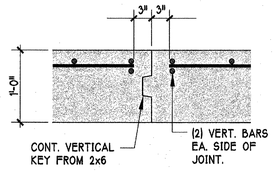
1/S1 TYP PIPE PENETRATION DETAIL

SCALE N/A



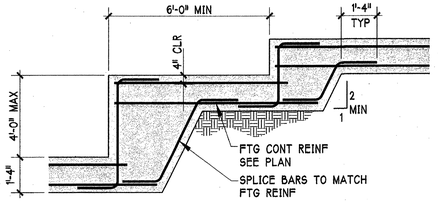
2/S1 TYP WALL CORNER REINF.

SCALE 3/4"=1'-0"



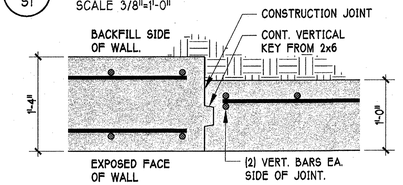
3/S1 TYP RETAINING WALL CONSTRUCTION JOINT DETAIL

SCALE 1"=1'-0"



4/S1 TYPICAL STEPPED FTG DETAIL

SCALE 3/8"=1'-0"



5/S1 WALL THICKNESS TRANSITION DETAIL

SCALE 1"=1'-0"

PLAN KEYNOTES

1. 16" THICK C.I.P CONC. RETAINING WALL. SEE WALL SECTIONS FOR DIMENSIONS & REINFORCING. SEE 2/S1. FOR WALL REINF @ CORNER SEE WALL ELEVATION A/S2 FOR EXTENT OF 16" THICK WALL. SEE 5/S1 FOR WALL TRANSITION DETAIL.
- 1A. 12" THICK C.I.P CONC. RETAINING WALL AT THE PERIMETER OF THE DETENTION POND. SEE WALL SECTIONS FOR DIMENSIONS & REINFORCING. SEE 2/S1. FOR WALL REINF @ CORNER. SEE 1/S1 FOR WALL REINF @ PIPE PENETRATIONS.
2. STEPPED FOOTING. SEE 4/S1
3. PIPE INLET & OUTLET SEE CIVIL DWGS FOR ALL INVERTS & LOCATIONS. SEE 1/S1 FOR WALL REINF @ PIPE PENETRATIONS.
4. MODULAR BLOCK RETAINING WALL TO BE DESIGNED BY OTHERS. SEE CIVIL DWGS FOR EXTENT LOCATION & HEIGHT. HEIGHT SHALL NOT EXCEED THAT SHOWN IN THE WALL SECTIONS ON SHEETS 3 & 4.
5. FOOTING DRAIN. SEE CIVIL DWGS FOR LOCATION OF DISCHARGE.
6. STEP IN TOP OF WALL. SEE WALL ELEVATION A/S2

LEGEND

- CIP CONCRETE WALL
- CONCRETE SPREAD FOOTING
- TOW = TOP OF WALL
- INLET / OUTLET PIPE, SEE CIVIL DWGS
- EXTENT OF WALL WITH VARYING TOP OF WALL ELEVATION.
- FOOTING DRAIN
- FOOTING STEP LOCATION SEE 4/S1
- CONSTRUCTION JOINT. SEE 3 & 5/S1

DATE.	REVISIONS.
07-26-05	ISSUED FOR CONST. PERMIT APPLICATION

Site Structures
A Division of Kosnik Engineering PC
16300 MILL CREEK BLVD., SUITE G2
MILL CREEK, WASHINGTON 98012
PH: (425) - 743 - 7004 FAX: (425) - 743 - 1848

7-26-05

DANIEL J. KOSNIK STATE OF WASHINGTON 20744 REGISTERED PROFESSIONAL ENGINEER

EXPIRES 9/12/2006

MILL CREEK EAST
STORM WATER DETENTION POND
CITY OF MILL CREEK, WASHINGTON

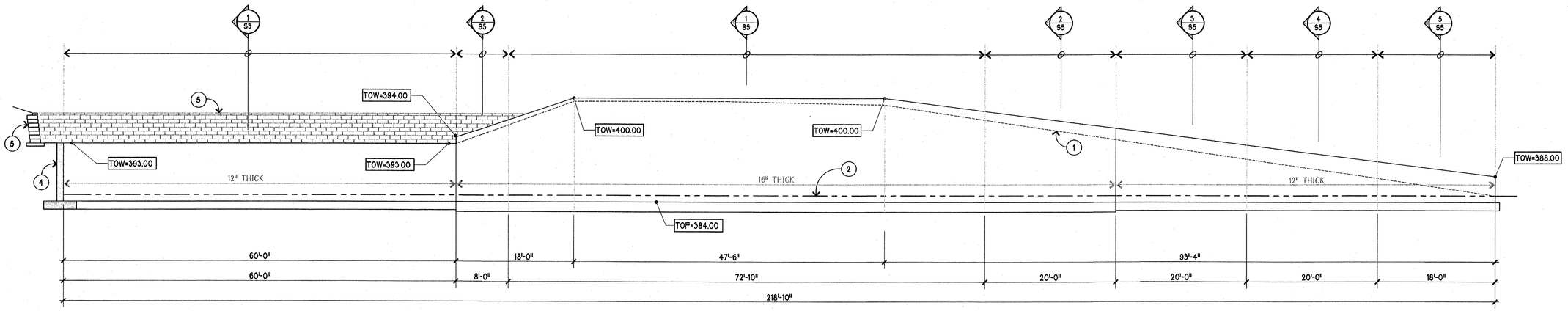
POND RETAINING WALL PLAN
STANDARD DETAILS

SHEET:
S1 OF 5
S-05-007

HDEV-2270

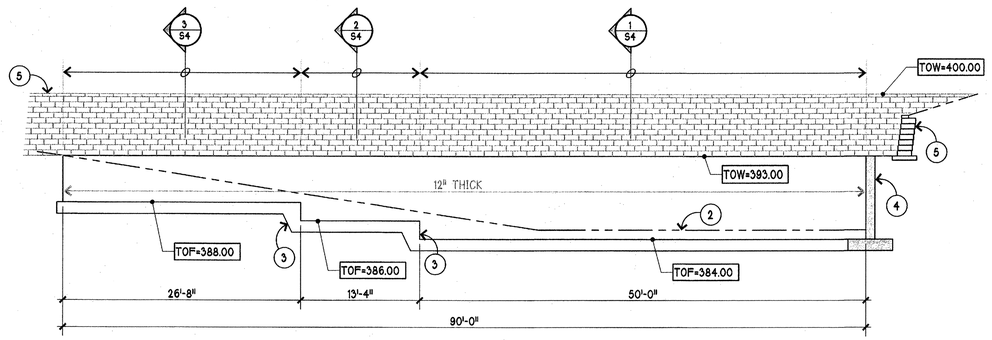
NORTH POINTE

EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.



A S2 WALL ELEVATION

SCALE 1/8"=1'-0"



B S2 WALL ELEVATION

SCALE 1/8"=1'-0"

WALL ELEVATION KEYNOTES

1. FINISHED GRADE ELEVATION @ FAR FACE OF WALL.
2. FINISHED GRADE ELEVATION @ NEAR FACE OF WALL.
3. STEP IN FOOTING TYPICAL SEE 4/S1 FOR REINFORCING.
5. MODULAR BLOCK WALL TO BE DESIGNED BY OTHERS.

GENERAL KEYNOTES

A. VERIFY ALL DIMENSIONS & ELEVATION w/ THE CIVIL DRAWINGS & SITE CONDITIONS. NOTIFY ENGINEER OF ALL DISCREPENCIES.

B. FOR DETAIL OF TRANSITION FROM 12" WALL TO 16" WALL SEE 5/S1.

REINFORCING BAR

MATERIAL REQUIREMENT:

REINFORCING BARS:
USE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT AS NOTED ON THE DRAWINGS.

FABRICATION AND PLACING REQUIREMENTS:

BENDING:
BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS NOTED OR SHOWN OTHERWISE OR AUTHORIZED BY THE ENGINEER.

PLACING:
REINFORCEMENT SHALL BE SUPPORTED AND TIED TO PREVENT DISPLACEMENT BY CONSTRUCTION LOADS OR BY PLACING OF CONCRETE. MAXIMUM SPACING OF SUPPORTS SHALL BE 3'-6".

CONCRETE COVER:
MINIMUM CONCRETE COVER FOR REINF. SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH_____ 3"

CONCRETE CAST AGAINST FORMS AND EXPOSED TO EARTH_____ 2"

WELDING:
DO NOT WELD REINFORCING BARS.

WET SETTINGS:
REINFORCEMENT ANCHOR BOLTS, OR ANY EMBEDDED ITEM WITHIN THE CONCRETE, MAY NOT BE SET INTO THE CONCRETE AFTER IT HAS BEEN POURED WITHIN THE FORMS.

LAP SPLICES:
PROVIDE LAP LENGTHS AS SHOWN ON THESE DRAWINGS.

CONCRETE

CONCRETE REQUIREMENTS:

LOCATION	STRENGTH	MAX W/C RATIO
WALLS & FTGS	3500PSI @ 28 DAYS	0.53

AIR CONTENT:
CONCRETE EXPOSED TO WEATHER SHALL CONTAIN 5% +/-1% ENTRAINED AIR.

MIX DESIGN:
SHALL BE BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE WITH THE SPECIFICATIONS.

MATERIAL REQUIREMENTS:
CEMENT: ASTM C150. ADMIXTURES: ACI 301.
AGGREGATES: ASTM C33. WATER: ASTM C94.

PLACING REQUIREMENTS:

PLACING:
PLACE CONCRETE AS NEARLY AS PRACTICABLE TO ITS FINAL POSITION TO AVOID SEGREGATION. THE FREE UNCONFINED FALL OF THE CONCRETE SHALL NOT EXCEED 5 FEET.

DEBRIS:
REMOVE ALL DEBRIS FROM FORMS PRIOR TO PLACING CONCRETE.

CONSOLIDATION:
CONSOLIDATE CONCRETE BY SUITABLE MEANS. THOROUGHLY WORK CONCRETE AROUND EMBEDDED ITEMS AND INTO CORNERS OF FORMS.

CURING REQUIREMENTS:

CURING:
CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A SUITABLE PERIOD OF TIME AFTER PLACEMENT.

WEATHER CONDITIONS:
ADEQUATE PRECAUTIONS SHALL BE TAKEN DURING HOT AND COLD WEATHER IN ACCORDANCE WITH THE SPECIFICATIONS.

SPECIAL INSPECTION

GENERAL:
SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED IN ACCORDANCE WITH THE 2003 IBC AS ADOPTED BY THE CITY OF MILL CREEK, WASHINGTON ON THE FOLLOWING ITEMS.

a. CONCRETE STRENGTH AND PLACEMENT
b. REINFORCING BAR PLACEMENT

CERTIFICATION & SUPERVISION:
THE SPECIAL INSPECTOR SHALL BE SUPERVISED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY THE FIRM PROVIDING THE INSPECTION SERVICES.

PERFORMANCE OF THE WORK:
THE SPECIAL INSPECTOR SHALL PERFORM THE FOLLOWING TASKS AS A MINIMUM AND SHALL PERFORM ALL ADDITIONAL TASKS REQUIRED BY THE 2003 IBC AND THE BUILDING OFFICIAL:

a. OBSERVE THE WORK FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DRAWINGS AND SPECIFICATIONS.
b. FURNISH REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER AND ARCHITECT OF RECORD, AND OTHER DESIGNATED PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF NOT CORRECTED, TO THE PROPER DESIGN AUTHORITY AND TO THE BUILDING OFFICIAL.
c. SUBMIT A FINAL REPORT, SIGNED BY THE REGISTERED ENGINEER SUPERVISING THE INSPECTOR, STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS COMPLETED IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND APPLICABLE WORKMANSHIP PROVISIONS OF THE 2003 IBC.

GENERAL CONSTRUCTION NOTES

CODE:
BUILDING DESIGN AND CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF THE 2003 IBC AS ADOPTED THE CITY OF MILL CREEK, WASHINGTON.

GENERAL DETAILS:
TYPICAL OR GENERAL NOTES AND DETAILS ON THESE SHEETS SHALL APPLY TO ALL CONSTRUCTION UNLESS SPECIFICALLY NOTED OR SHOWN OTHERWISE. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

DISCREPANCIES:
THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A WRITTEN REQUEST FOR CLARIFICATION UPON FINDING ANY DISCREPANCY OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS.

SHORING:
IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, RESHORING AND BRACING OF THE WORK AS REQUIRED TO PROTECT LIFE AND PROPERTY DURING THE CONSTRUCTION OF THIS BUILDING.

EXCAVATION:
THE CONTRACTOR SHALL BE SOLEY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES, INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES.

DESIGN CRITERIA

VERTICAL LOAD DESIGN:

DESCRIPTION:	LIVE LOAD:	DEAD LOAD:
SURCHARGE	150 PSF	NA

SEISMIC LOAD DESIGN:
DUE TO THE LOW PROBABILITY OF LIQUEFACTION OF BACKFILL SOILS TYPICAL TO THIS AREA, AND THE LACK OF RECORD OF RETAINING WALL FAILURE DURING A SEISMIC EVENT, WE HAVE DETERMINED THAT ADDITIONAL LATERAL LOADING PRODUCED BY A SEISMIC EVENT IS RELATIVELY SMALL OR INSIGNIFICANT. WE HAVE ALSO DETERMINED THAT FACTORS OF SAFTEY USED IN THIS DESIGN PROVIDE ADEQUATE STRENGTH TO SUPPORT ADDITIONAL LATERAL LOADING THAT MAY OCCUR DURING A SEISMIC EVENT.

WIND LOAD DESIGN:
WIND LOADING ON BELOW GRADE WALLS IS NOT APPLICABLE

FOUNDATION DESIGN:
FOUNDATION DESIGN IS BASED ON THE FOLLOWING ASSUMED VALUES TYPICAL OF THE SOIL TYPES DESCRIBED IN THE GEOTECHNICAL REPORT BY ASSOCIATED EARTH SCIENCES, INC. DATED MAY 5, 2005 & RECORD OF CONVERSATION DATED JULY 7, 2005:

ALLOWABLE BEARING PRESSURE:	2,000 PSF
LATERAL EARTH PRESSURES:	
RETAINING WALLS:	35 PCF EFW (DRAINED)
PASSIVE RESISTANCE:	400 PCF EFW (ULTIMATE)
COEFFFICIENT OF BASE FRICTION	0.50 (ULTIMATE)
SATURATED SOIL DENSITY	125 PCF

DATE:	REVISIONS:
07-28-05	ISSUED FOR CONST. PERMIT APPLICATION

Site Structures
A Division of Kosnik Engineering PC
18320 MILL CREEK BLVD., SUITE G2
MILL CREEK, WASHINGTON 98012
PH: (425) - 743 - 7004 FAX: (425) - 743 - 1948

DANIEL J. KOSNIK — STATE OF WASHINGTON — 20744 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES 9/12/2006

MILL CREEK EAST
STORM WATER DETENTION POND
CITY OF MILL CREEK, WASHINGTON

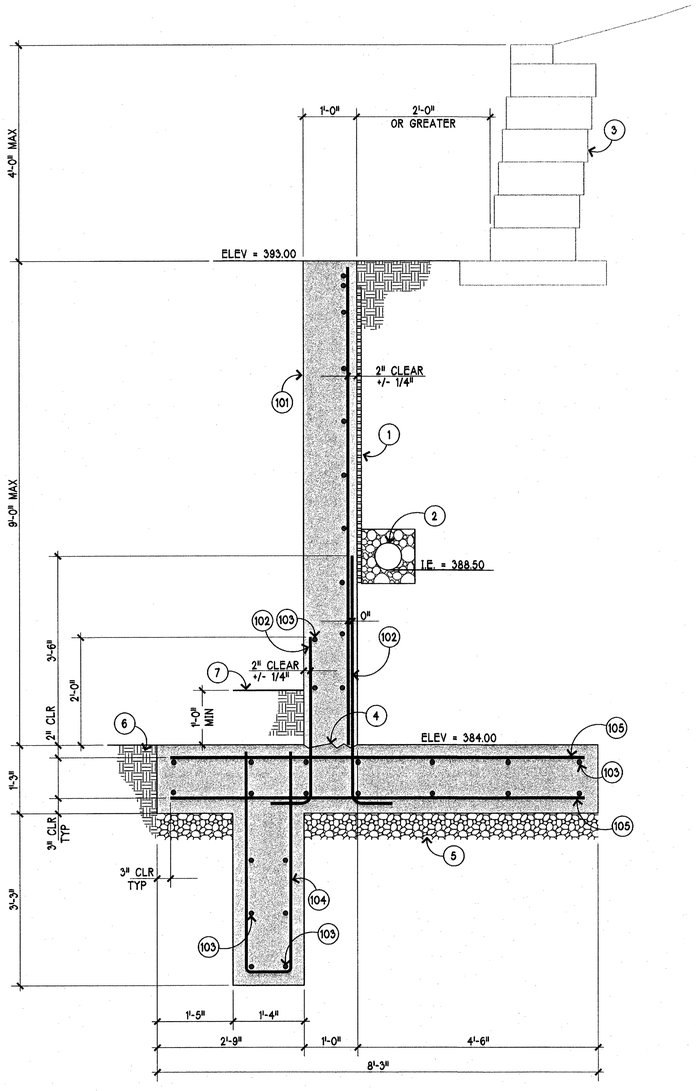
WALL ELEVATION
STRUCTURAL NOTES

SHEET:
S2 OF 5
S-05-007

INDEX 2231

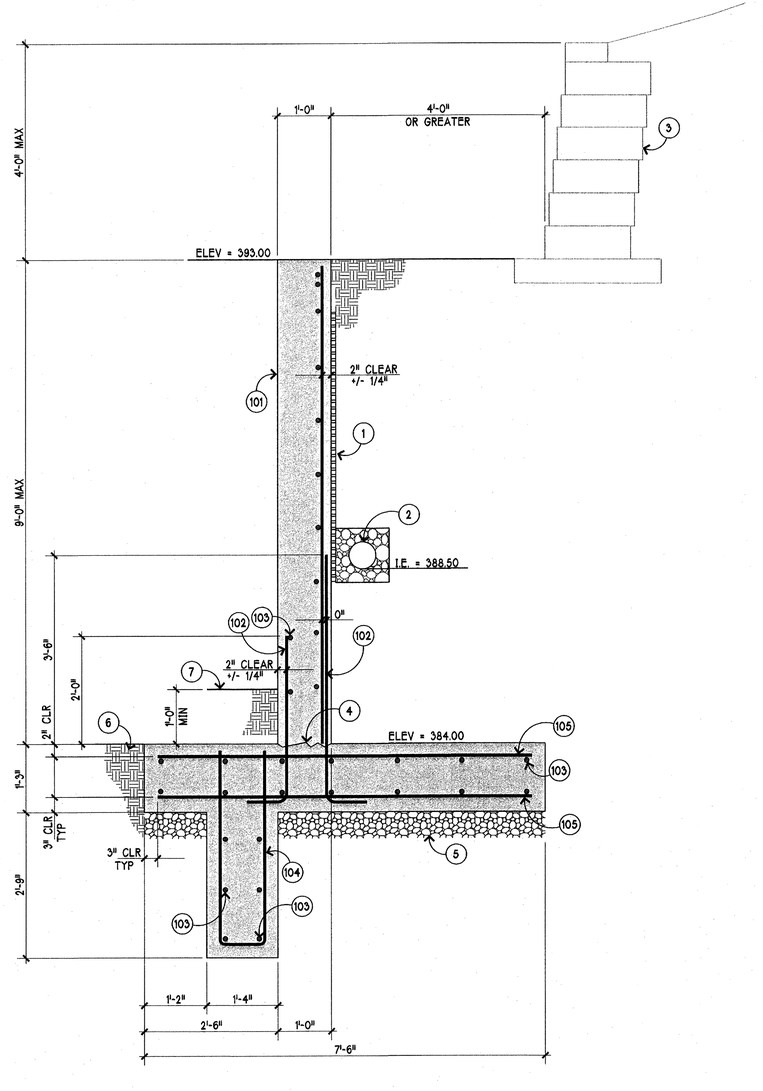
NORTH POINTE

EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.



1 S3 RETAINING WALL SECTION

SCALE 3/4"=1'-0"



2 S3 RETAINING WALL SECTION

SCALE 3/4"=1'-0"

SECTION KEYNOTES (3)

1. APPLY PREFABRICATED DRAINAGE PANEL OR FREE DRAINING GRAVEL BACKFILL AS SPECIFIED IN THE GEOTECHNICAL REPORT.
2. 6"ø PERFORATED PVC FOOTING DRAIN WRAPPED IN 12"x12" MINIMUM DRAIN ROCK BEDDING & FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
3. MODULAR BLOCK WALL TO BE DESIGNED BY OTHERS.
4. LEAVE SURFACE BETWEEN FOOTING & WALL ROUGH.
5. INSTALL QUARRY SPAULS @ BASE OF FOOTINGS.
6. FOOTING TO BE CAST NEAT AGAINST DENSE GLACIAL DRIFT
7. FINISHED GRADE INSIDE OF POND

REINFORCING KEYNOTES (101)

101. 12" THICK CONCRETE RETAINING WALL REINF w/ #5 @ 12"o/c HORZ. & VERT. PLACED AS SHOWN IN THE WALL SECTIONS. PROVIDE (2)-#5 CONTINUOUS HORZ BARS @ THE TOP OF THE WALL. SEE 5/S1 FOR REINF @ WALL TRANSITION. SEE 2/S1 FOR HORZ REINF @ WALL CORNERS
102. #6 WALL TO FOOTING DOWELS @ 12"o/c.
103. #5 LONG AS SHOWN LAP 30" AT ALL SPLICE LOCATIONS.
104. #5 @ 12"o/c AS SHOWN.
105. #6 @ 12"o/c AS SHOWN.

DATE:	REVISIONS:
07-26-05	ISSUED FOR CONST. PERMIT APPLICATION

Site Structures
A Division of Koenik Engineering PC
16300 MILL CREEK BLVD., SUITE 62
MILL CREEK, WASHINGTON 98012
PH: (425) 743 - 7004 FAX: (425) 743 - 1848

7-26-05
DANIEL J. KOENIK
STATE OF WASHINGTON
20744
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 9/12/2006

MILL CREEK EAST
STORM WATER DETENTION POND
CITY OF MILL CREEK, WASHINGTON

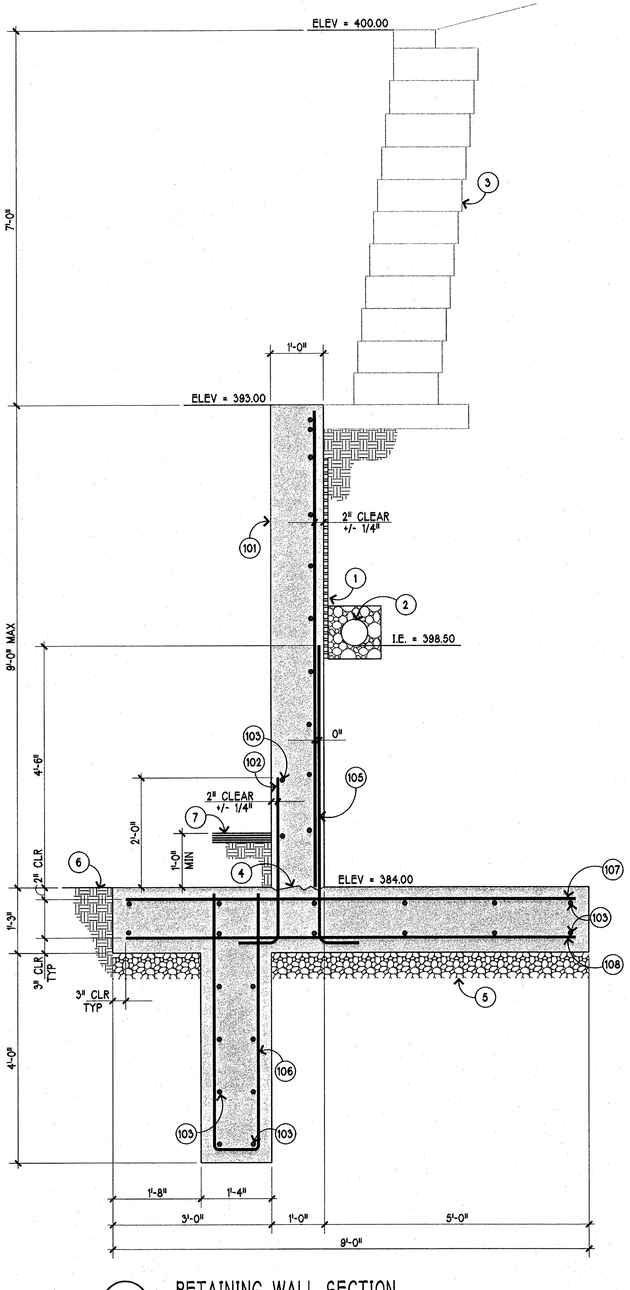
WALL SECTIONS

SHEET:
S3 OF 5
S-05-007

HDSW-2272

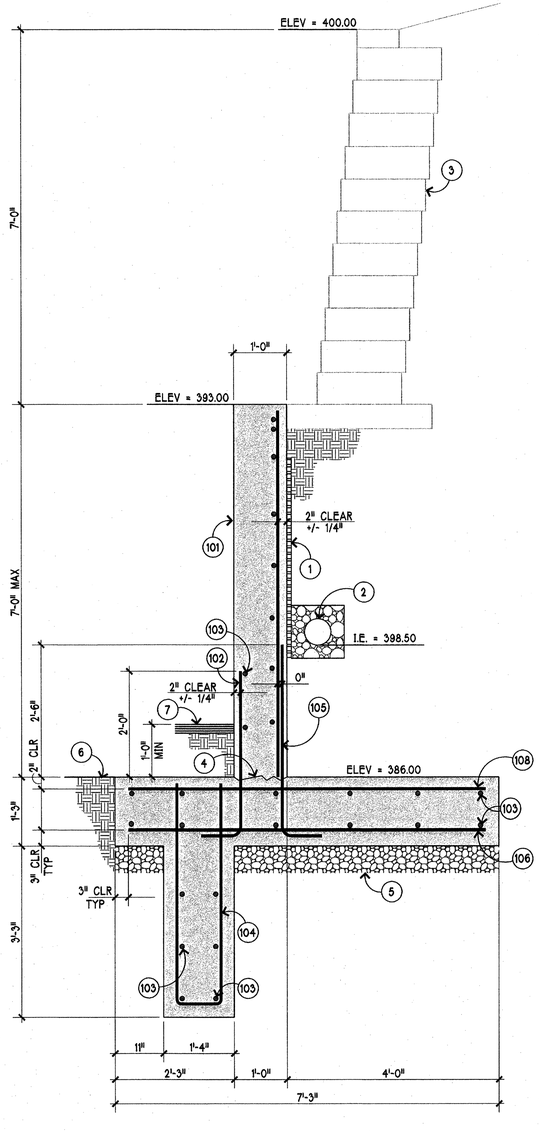
NORTH POINTE

EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.



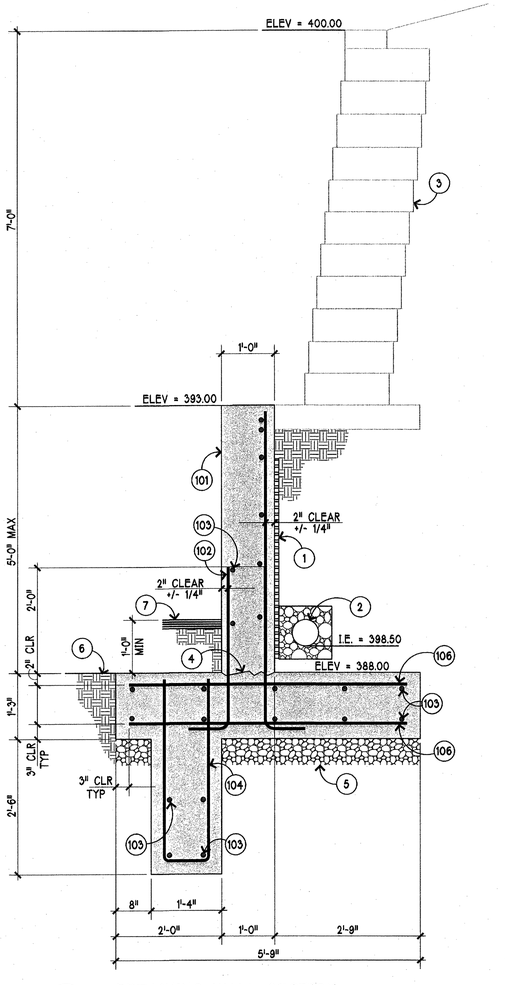
1 S4 RETAINING WALL SECTION

SCALE 3/4"=1'-0"



2 S4 RETAINING WALL SECTION

SCALE 3/4"=1'-0"



3 S4 RETAINING WALL SECTION

SCALE 3/4"=1'-0"

SECTION KEYNOTES (3)

1. APPLY PREFABRICATED DRAINAGE PANEL OR FREE DRAINING GRAVEL BACKFILL AS SPECIFIED IN THE GEOTECHNICAL REPORT.
2. 6"ø PERFORATED PVC FOOTING DRAIN WRAPPED IN 12"x12" MINIMUM DRAIN ROCK BEDDING & FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
3. MODULAR BLOCK WALL TO BE DESIGNED BY OTHERS.
4. LEAVE SURFACE BETWEEN FOOTING & WALL ROUGH.
5. INSTALL QUARRY SPAULS @ BASE OF FOOTINGS.
6. FOOTING TO BE CAST NEAT AGAINST DENSE GLACIAL DRIFT
7. PAVED ACCESS ROAD. ELEVATION VARIES SEE CIVIL DWGS.

REINFORCING KEYNOTES (101)

101. 12" THICK CONCRETE RETAINING WALL REINF w/ #5 @ 12"o/c HORZ. & #6@12" o/c VERT. PLACED AS SHOWN IN THE WALL SECTIONS. PROVIDE (2)-#5 CONTINUOUS HORZ BARS @ THE TOP OF THE WALL. SEE 2/S1 FOR HORZ REINF @ WALL CORNERS
102. #6 WALL TO FOOTING DOWELS @ 12"o/c.
103. #5 LONG AS SHOWN LAP 30" AT ALL SPLICE LOCATIONS.
104. #5 @ 12"o/c AS SHOWN.
105. #6@12" o/c AS SHOWN.
106. #8@12" o/c AS SHOWN.
107. #8@12" o/c AS SHOWN.
108. #7@12" o/c AS SHOWN.

DATE:	REVISIONS:
07-26-05	ISSUED FOR CONST. PERMIT APPLICATION

Site Structures
A Division of Kosnik Engineering PC
16300 MILL CREEK BLVD., SUITE G2
MILL CREEK, WASHINGTON 98012
PH: (425) - 743 - 7004 FAX: (425) - 743 - 1848

7-26-05

JOHN E. KOSNIK — STATE OF WASHINGTON — 20741 — REGISTERED PROFESSIONAL ENGINEER

EXPIRES 9/12/2006

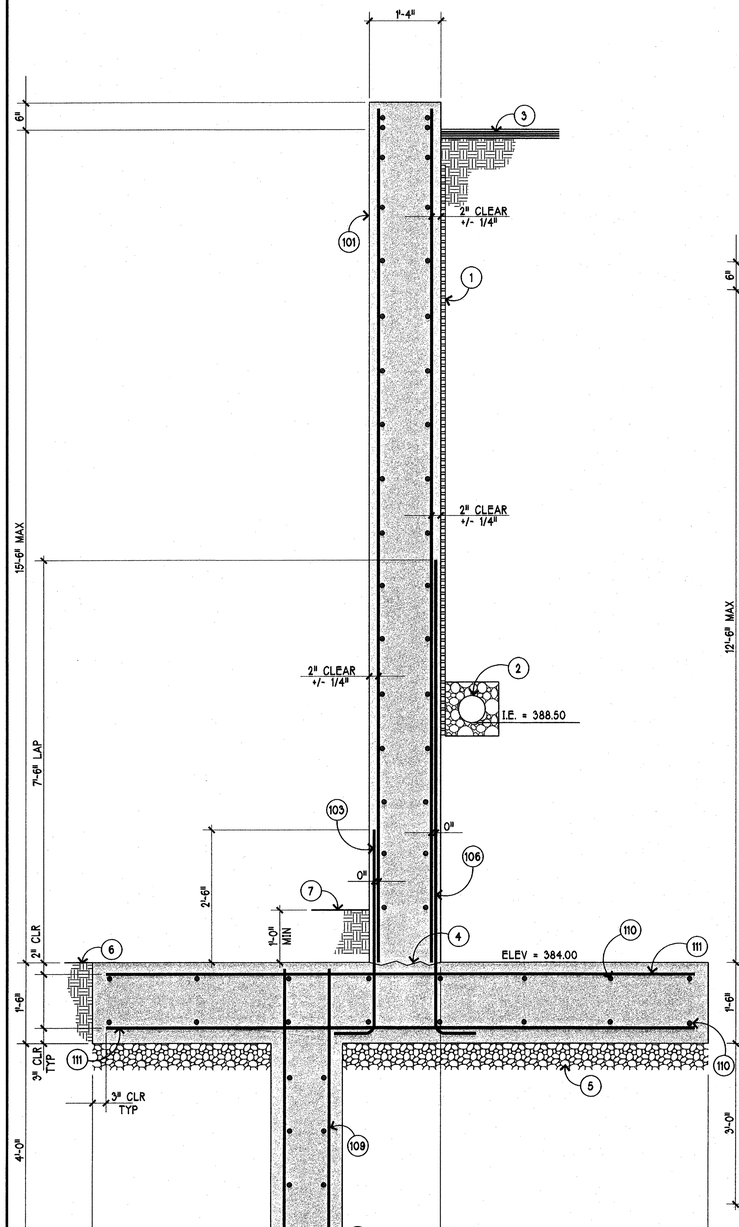
MILL CREEK EAST
STORM WATER DETENTION POND
CITY OF MILL CREEK, WASHINGTON

WALL SECTIONS

SHEET:
S4 OF 5
S-05-007

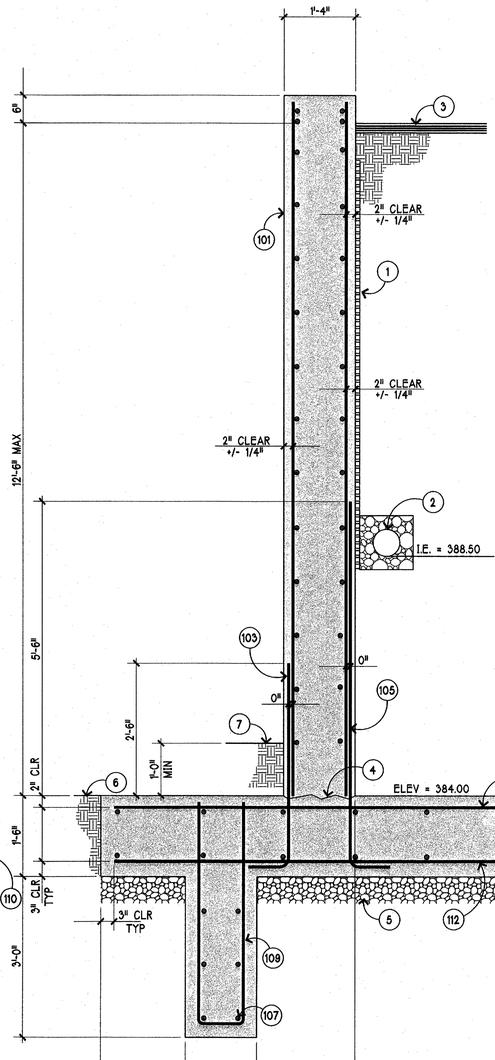
NORTH POINTE

EAST 1/2 OF SECTION 32, T.28N., R.5E., W.M.



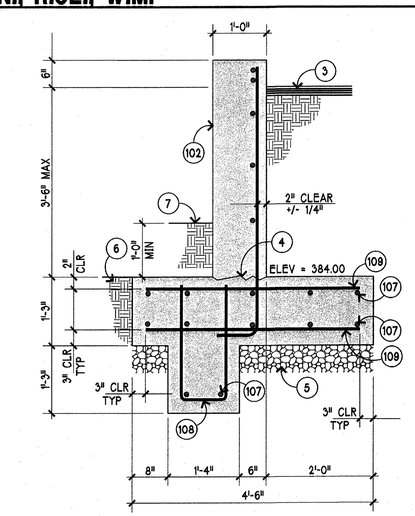
1 S5 RETAINING WALL SECTION

SCALE 3/4"=1'-0"



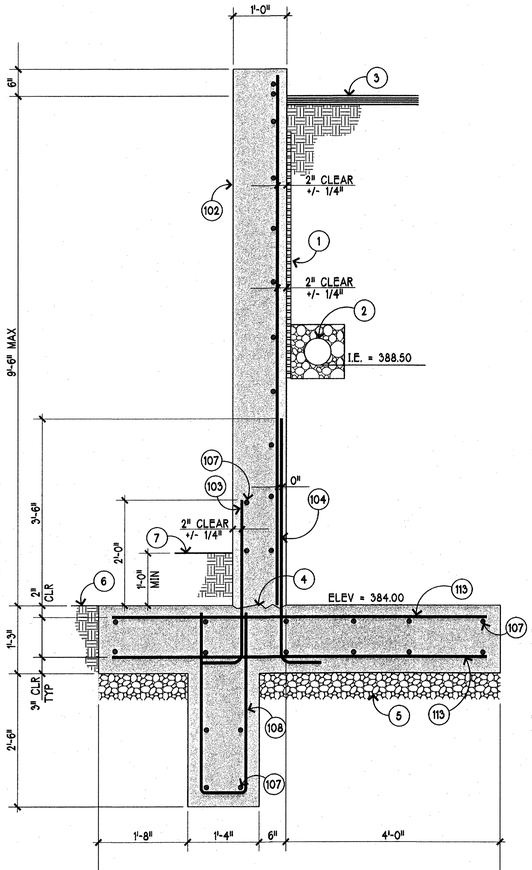
2 S5 RETAINING WALL SECTION

SCALE 3/4"=1'-0"



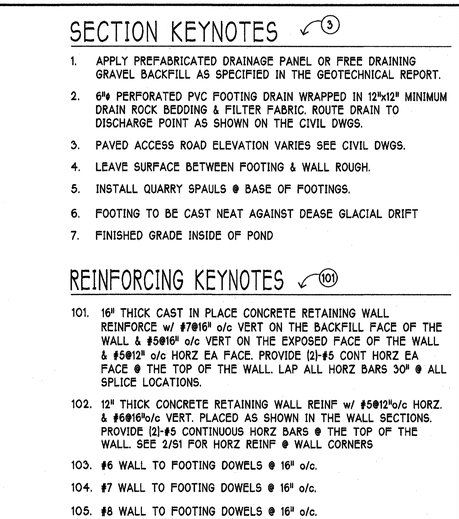
5 S5 RETAINING WALL SECTION

SCALE 3/4"=1'-0"



3 S5 RETAINING WALL SECTION

SCALE 3/4"=1'-0"



4 S5 RETAINING WALL SECTION

SCALE 3/4"=1'-0"

SECTION KEYNOTES (3)

1. APPLY PREFABRICATED DRAINAGE PANEL OR FREE DRAINING GRAVEL BACKFILL AS SPECIFIED IN THE GEOTECHNICAL REPORT.
2. 6"ø PERFORATED PVC FOOTING DRAIN WRAPPED IN 12"x12" MINIMUM DRAIN ROCK BEDDING & FILTER FABRIC. ROUTE DRAIN TO DISCHARGE POINT AS SHOWN ON THE CIVIL DWGS.
3. PAVED ACCESS ROAD ELEVATION VARIES SEE CIVIL DWGS.
4. LEAVE SURFACE BETWEEN FOOTING & WALL ROUGH.
5. INSTALL QUARRY SPAULS @ BASE OF FOOTINGS.
6. FOOTING TO BE CAST NEAT AGAINST DEASE GLACIAL DRIFT
7. FINISHED GRADE INSIDE OF POND

REINFORCING KEYNOTES (101)

101. 16" THICK CAST IN PLACE CONCRETE RETAINING WALL REINFORCE w/ #7@16" o/c VERT ON THE BACKFILL FACE OF THE WALL & #5@16" o/c VERT ON THE EXPOSED FACE OF THE WALL & #5@12" o/c HORZ EA FACE. PROVIDE (2)-#5 CONT HORZ EA FACE @ THE TOP OF THE WALL. LAP ALL HORZ BARS 30" @ ALL SPLICE LOCATIONS.
102. 12" THICK CONCRETE RETAINING WALL REINF w/ #5@12"o/c HORZ. & #6@16"o/c VERT. PLACED AS SHOWN IN THE WALL SECTIONS. PROVIDE (2)-#5 CONTINUOUS HORZ BARS @ THE TOP OF THE WALL. SEE 2/S1 FOR HORZ REINF @ WALL CORNERS
103. #6 WALL TO FOOTING DOWELS @ 16" o/c.
104. #7 WALL TO FOOTING DOWELS @ 16" o/c.
105. #8 WALL TO FOOTING DOWELS @ 16" o/c.
106. #8 WALL TO FOOTING DOWELS @ 8" o/c.
107. #5 LONG AS SHOWN LAP 30" @ ALL SPLICE LOCATIONS.
108. #5@16" o/c AS SHOWN.
109. #6@16" o/c AS SHOWN.
110. #6 LONG AS SHOWN LAP 36" @ ALL SPLICE LOCATIONS.
111. #9@16" o/c AS SHOWN.
112. #8@16" o/c AS SHOWN.
113. #7@16" o/c AS SHOWN.

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7-26-05
DANIEL J. KOSNIK
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20744
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MILL CREEK EAST
STORM WATER DETENTION POND
CITY OF MILL CREEK, WASHINGTON

WALL SECTIONS

SHEET:
S5 OF 5
S-05-007

4DEV-2274

NORTH POINTE