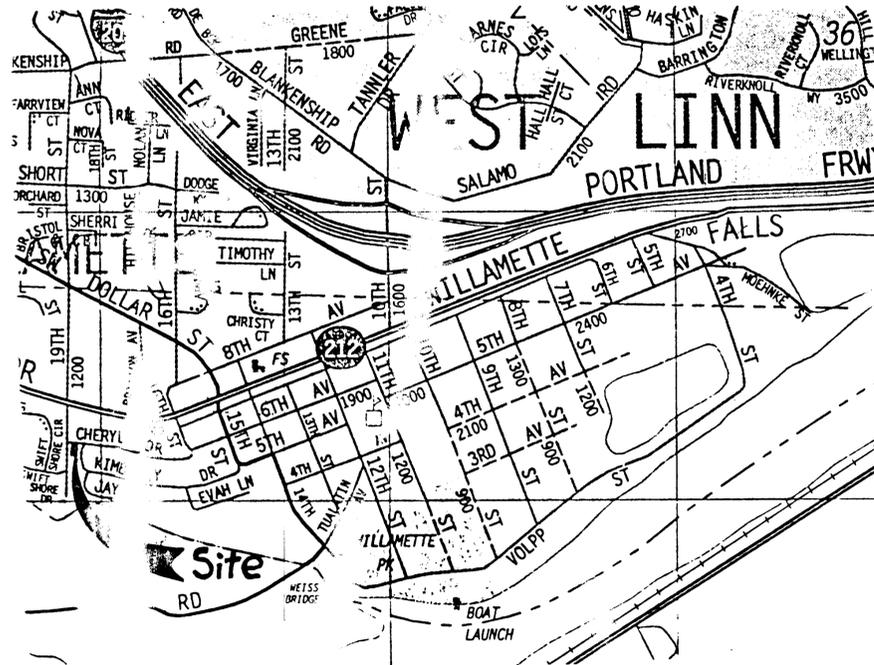


HOGAN'S VALLEY

FILE NO. SUB-98-02 (THE VALLEY)

DEVELOPED BY
OREGON DEVELOPMENT, INC

2308 CHERRY DRIVE
WEST LINN, OR 97068
PH: 557-0122 FAX: 656-



VICINITY MAP

SISUL ENGINEERING
375 PORTLAND AVE
GLADSTONE, OR 97027
(503) 657-0188

DECISION

Based upon the aforementioned findings and conclusions, the Director hereby approves the subdivision, Tualatin River control zone, and two variations to the application identified as "The Valley" (SUB-98-02) under the following conditions:

1. Lots 3, 4, and 5 shall have conservation easements that coincide with the 100-year flood level. Easements will prohibit the construction of any structure in those areas unless a Tualatin River control zone permit is obtained. The applicant shall be prohibited from removing any vegetation in those areas unless it is part of a Tualatin River control zone permit application. That easement shall allow for the ingress/egress by City maintenance vehicles to attend to the detention pond on lot 3.
2. The applicant shall install a clay liner on the bottom of the detention pond for the purpose of reducing infiltration of water to tax lot 1204.
3. The applicant shall dedicate to the City a 20-foot wide easement at the end of the cul-de-sac and shall construct a 10-foot wide path from the cul-de-sac to the riverfront area for the purpose of providing public ingress/egress to the riverfront area.
4. The applicant shall be responsible for completing the tree mitigation plan as shown on Sheet 8 of 8 (pg. A-77) of the submittal for the detention facility with the following exception: plant materials such as water quality grasses shall not puncture or weaken the clay seal shall be planted in the sealed area. Plant materials that might damage the seal shall be kept away from the seal to a distance at least equal to their average root spread at installation.
5. The applicant shall be responsible for constructing the subdivision pursuant to the application submitted. Modifications per CDC Section 85.080 are allowed.
6. Mutual maintenance agreements and reciprocal access and utility easements shall be provided for lots 5 and 6.
7. The applicant shall construct a 14-foot wide paved access to lots 5 and 6 with a hammerhead turn-around approved by the Fire Department.
8. Private utility easements shall be provided along the east and west sides of lot 6 to provide sanitary sewer and storm water laterals for lot 9.

I/We declare to have no interest in the outcome of this decision due to some past or present involvement with the applicant, the subject property, or surrounding properties, and therefore, can render an impartial decision. The provisions of the Community Development Code Chapter 99 have been met.

11-9-98
DATE
9 98
DA

Dan Drenth
DAN E. DRENTH, Planning Director
Dave Monson
DAVE MONSON, City Engineer

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AS BUILT

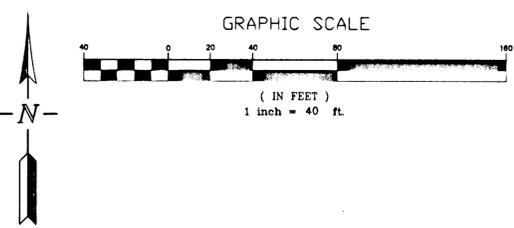
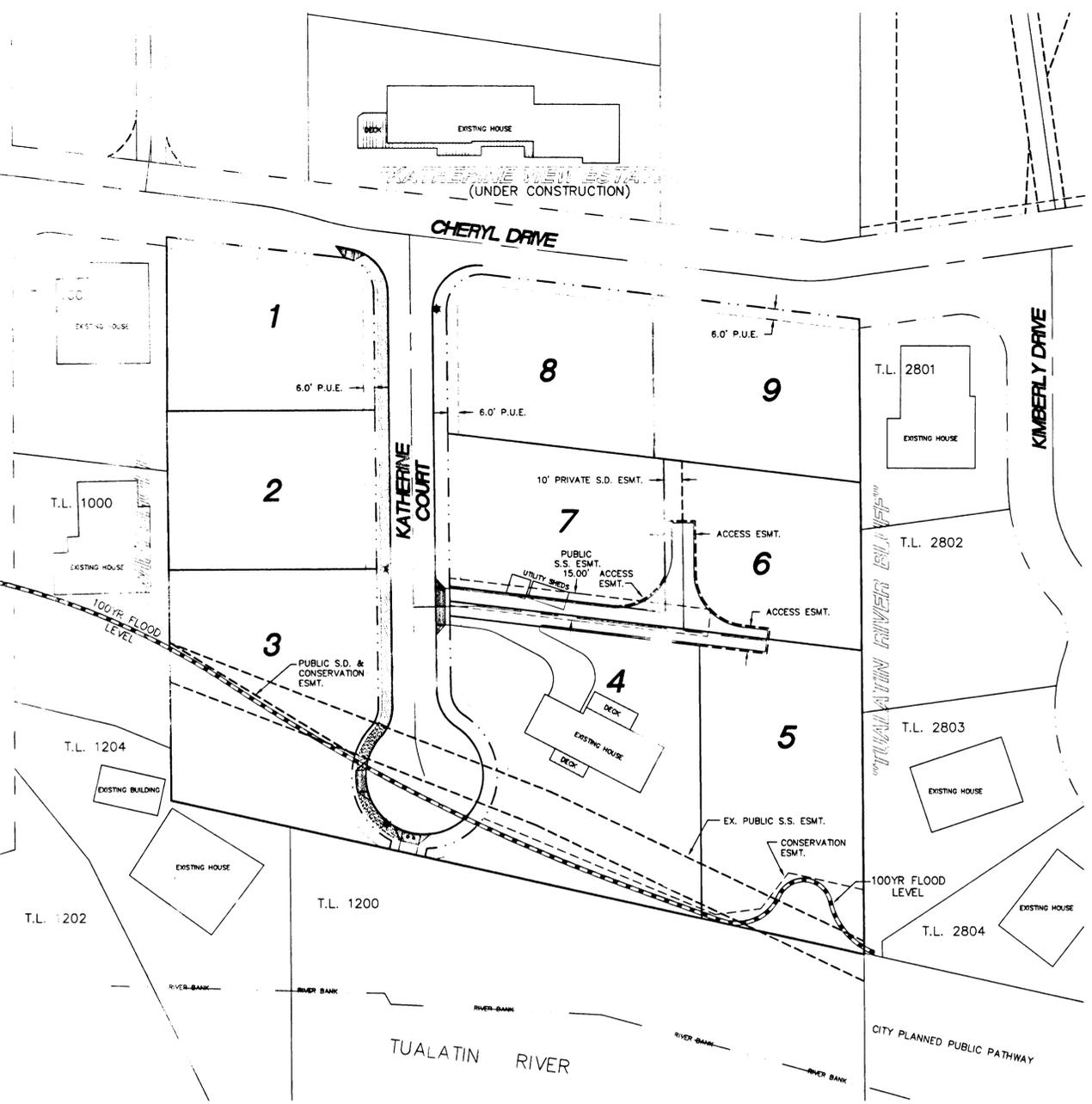
INDEX

SHEET	DESCRIPTION
1	COVER
2	NOTES
3	TREE PROTECTION PLAN AND DETAILS
4	WATER AND SANITARY SEWER PLAN AND PROFILE
5	STREET AND STORM DRAIN PLAN AND PROFILES
6	GRADING AND EROSION CONTROL PLAN DETAILS

MOST RECENT REVISION TO
THIS SET OF PLANS:

AS-BUILT 1/10/00

Hogan's Valley



AS BUILTS

General Notes:

- The Design Engineer will be responsible for inspection of the proposed improvements with oversight from the City's Public Works and Engineering staff.
- A work schedule will be required from the contractor so that the Engineer can have an inspector onsite at the appropriate times. If the work schedule is revised the contractor is to notify the Engineer of the changes. Additionally, the contractor is to give the Engineer at least 24 hours notice of any testing requiring the presence of the Engineer and/or City staff.
- The contractor is to receive the approval of the Engineer of any proposed changes to the plans or standard requirements.
- Building Department Plumbing Permit is required for utilities beyond the first cleanout or meter on private property.
- Public Improvement Guarantee Agreement, a pre-construction meeting with the City of West Linn, and installation of erosion control measures are required prior to beginning construction.
- Prior to site clearing, construction "snow" fencing shall be placed around trees to be preserved 10 feet beyond the dripline of the trees and shall remain in place throughout the infrastructure improvements.

Utilities:

- If not noted on the plans utility information and crossing locations will have to be obtained from the utilities.
- Utility contacts are as follows: PGE - Cindy Manselle, 650-1411; TCI Cable - Linda Petersen, 605-4987; U.S. West Communications - Lori Dorney 242-4596; Northwest Natural Gas - Scott Palmer 721-2447.

Streets:

- New street sections are to be cleared of all surface vegetation and other miscellaneous structures or materials. Grub improvement areas to remove all buried vegetative matter and debris to a depth of 8" below subgrade. Properly dispose of all waste material.
- Katherine Court has had structural fill constructed in conjunction with the Katherine View Estates project in the right-of-way. The top disturbed surface is to be removed to the point that the fill is structurally sound and meets the City of West Linn Standards. This surface is to be tested for compaction by a certified testing lab in accordance with APWA Division II, Section 206.3.05.

- Street subgrade shall conform to APWA Division II, Section 206. Areas to receive fill are to be inspected by City of West Linn personnel prior to placement of the fill. The Contractor shall have fill area tested for compaction by a certified testing lab in accordance with APWA Division II, Section 206.3.05.
- Aggregate base rock shall conform to the requirements of APWA Division II, Section 207. Base course shall be 1 1/2" crushed rock and leveling course shall be 3/4"-0. City of West Linn requires a proof roll with a loaded 10 yard dump truck of the subgrade prior placement of the rock and again after placement of the base rock and prior to paving. All underground utilities including laterals, services and power or gas conduits will be in place before subgrade proof roll will take place.
- Asphalt concrete shall conform to the requirements of APWA Division II, Section 211. 1 1/2" base lift shall be Class 'A' A.C. and 1 1/2" final lift shall be Class 'C' A.C. as per APWA Division II, Section 211.2.01. The top lift of asphalt concrete shall not be placed prior to receiving permission from the City of West Linn Engineering Department.
- Construct curb and gutter using Class 'A' 3300 psi concrete with maximum 1 1/2" aggregate size. Construction joints at 15' maximum on centers. Three inch weepholes are to be installed on all lots uphill or even with the street. Generally weepholes shall be located at the center and lowest edge of curb for each lot. Curb depressions for handicap ramps shall be centered between curb returns at intersections unless otherwise noted on the plans. Contractor shall stamp location of sewer and water crossings with an (S) or (W).
- All materials, installation, tests, and inspections to be in strict accordance with APWA's Standard Specifications for Public Works Construction and the supplemental standards and specifications of the City of West Linn Street/Utility Design and Construction Standards.
- A street construction encroachment permit or similar permit may be required from the City of West Linn. Construction permit fees or other similar fees or bonding required of the contractor will be the contractor's responsibility to obtain.
- Access to the existing home on Lot 4 is to remain assessable until the new street has been constructed to a point that the home can be accessed. The contractor shall maintain access to the existing home on Lot 4 throughout the duration of the project or make special arrangements with the developer and the home owner otherwise.

Structural Fill Notes:

- Besides the structural fill that will be required for construction of street improvements a structural fill is also to be built on lots where noted on the plans to the specifications noted below.
- All miscellaneous materials and the organic layer under the fill area shall be stripped or removed. All stumps in the fill area must be removed in their entirety.
- The contractor shall retain the services of a Geotechnical Engineer and testing lab to inspect and provide testing services and to certify that the structural fill meets the compaction requirements appropriate for home construction and the requirements of the City of West Linn Grading Permit for this project. The contractor must obtain the grading permit prior to beginning work on the project.
- Fill material should be placed in horizontal lifts approximately 10 inches thick (loose) and compacted to at least 95% of the maximum dry density, as determined by ASTM D 698, except as modified by the Geotechnical Engineer. Moisture content of the structural fill shall be controlled to within 2% of the optimum moisture content at the time of compaction, unless modified by the Geotechnical Engineer.
- Inspections by City of West Linn personnel will be required after stripping of topsoil and prior to fill placement, after each lift completed under a roadway and after all fill is completed. To request an inspection, call City of West Linn at least 24 hours in advance.
- At the completion of fill activities a final report to the City of West Linn by the Geotechnical Engineer is required.

Water Supply

- Water mains shall be ductile iron pipe conforming to AWWA C151 Class 52. Pipe is to have cement mortar lining and bituminous seal coat conforming to AWWA C104. Joints are to be push-on joint. Pipe fittings are to be of the same material and class as pipe and of domestic origin.
- Water mains to be provided at all changes in direction and branches. Thrust blocks are to be provided at all changes in direction and branches. Thrust blocking concrete strength is to be 2000 psi. See details for thrust block sizing. Pour thrust blocks against undisturbed earth.
- Gate valves shall be a double disc type conforming to AWWA C500. Butterfly valves shall be Class 150 B short body type in conformance with AWWA C504. Valve boxes shall be Rich Model 925 or equal.
- Fire hydrants shall conform to and shall be installed in accordance with APWA Division IV, Section 404. All fire hydrants will be restrained by thrust blocks plus one other means of restraint such as all thread rods or restraint blocks to face the direction of access.
- Granular backfill (3/4"-0) is to be compacted to 95% maximum dry density per AASHTO T-99 test method and native material shall be compacted to 85% per AASHTO T-99 test method and native material shall be compacted to 85% in-place dry density of surrounding soil. Backfill under streets shall be in accordance with Class 'B' backfill as indicated on the detail sheet of the plans. Excavation, bedding and backfill shall be in accordance with APWA Division IV, Section 401.
- Service laterals shall be type K. Lateral sizes shall be 1" except where noted as larger. For double services two 1" water services shall be laid side by side. Corporation stops shall be Ford or approved equal. Curb stop shall be 1" Ford installed 3/4" above finish grade.
- All waterlines will be pressure tested and purification tested before connection to the city water system. Pressure test shall be conducted at 180 psi and shall meet the requirements of APWA Division IV, Section 402.3.04.
- Disinfection shall conform with APWA Division 4, Section 402.3.05.
- Do not connect new pipe to existing pipe prior to testing. The City of West Linn requires acceptance of new waterline prior to connection to existing water system.
- Service to existing home on Lot 4 is to remain uninterrupted until the new waterline has been tested and accepted by the City. The water service is located on 19th Street. City crews are to be contacted when the new service is ready to be connected. The existing service is to be shut-off and disconnected as per the City requirements on abandoning a water service. The developer is responsible for all the cost involved with disconnected and abandoning this service line.
- A plumbing permit from the City of West Linn Building Department is required for service lateral installations beyond the water meter.
- All materials, installation, tests, and inspections to be in strict accordance with APWA's Standard Specifications for Public Works Construction, the supplemental standards and codes of the City of West Linn, and the Oregon State Health Division Administrative Rules, Chapter 333.

Sanitary Sewer:

- Pipe shall be PVC sewer pipe conforming to ASTM D-3034-SDR 35. Minimum stiffness shall be 46 psi and joint type shall be elastomeric gasket conforming to ASTM D-3212.
- Manhole base shall be poured in-place concrete base with a minimum compressive strength of 2500 psi or precast. Manhole risers and tops shall be precast sections with minimum compressive strength of 4000 psi. Tops shall be eccentric cones except where insufficient headroom requires flat tops. Inverts shall be constructed so as to provide smooth flow-through characteristics. PVC pipe shall be connected to manhole by means of an elastomeric gasket, an approved waterstop, or flexible sleeve. Cement grout for connecting PVC sewer pipe to manhole will not be permitted.
- All manholes located in easement areas require tamper proof lids. All manhole rims not in pavement area to be set 12 inches above proposed grade.
- Cleanout pipe, fittings, and joints shall be the same specifications as for pipe. Castings are as shown on detail and shall conform to ASTM A48 (Grade 30). Cleanout riser shall match downstream pipe diameter.
- Granular backfill (3/4"-0) is to be compacted to 95% maximum dry density per AASHTO T-99 test method and native material shall be compacted to 85% of in-place dry density of surrounding soil.
- PVC service laterals shall be 4" pipe conforming to the same specifications as the sewer mains. Service laterals shall be installed to a point beyond the line of the sewer or utility easement as shown on the plan. The service lateral shall be plugged with a 2" x 4" stake painted green.
- Sanitary sewer pipe and appurtenances shall be tested for leakage in accordance with APWA Division III requirements. Leakage tests will include required APWA air pressure test for sewer lines and required APWA vacuum test of manholes. All PVC pipe shall be tested for deflection. Deflection shall be tested with a mandrel equal to 95% of the pipe size being tested. In addition, sewer lines shall be video inspected by the contractor per APWA, Division III, Section 303.3.11. All tests shall be witnessed by the Engineer and the City of West Linn.
- A plumbing permit from the City of West Linn Building Department is required for sanitary sewer laterals beyond the first cleanout.
- All materials, installation, tests, and inspections to be made in strict accordance with APWA's Standard Specifications for Public Works Construction, and with the Uniform Plumbing Code.

Storm Drains:

- Ten inch and larger storm drain pipe shall be Class 3, non-reinforced, concrete pipe conforming to ASTM C14, PVC pipe conforming to ASTM D-3034 or seamless PVC pipe conforming to ASTM F794. (PW Rib). Where required, reinforced concrete pipe shall conform to ASTM C-76, Class IV. Rubber joints are required for all concrete pipe. Eight inch and smaller storm drain pipe shall conform to ASTM D-3034 PVC pipe.
- Gutter inlets shall be poured in-place concrete with a minimum compressive strength of 3000 psi. Frame shall be fabricated of structural steel, ASTM A-7, A-36, A-273.
- Manhole base may be poured in-place concrete or precast. Manhole risers and tops shall be precast sections with a minimum compressive strength of 4000 psi. Tops shall be eccentric cones except where insufficient headroom requires flat tops. Some or all of the storm drain manholes required will be oversized manholes. Interior dimensions noted on the plans are minimums. Check with manhole manufacturer for actual size needed for type of pipe to be used. Pipe shall be connected to manhole by means of a rubber boot or sand collar, and shall have a shear joint located 18" outside of the manhole.
- All manholes located in easement areas require tamper proof lids. All manhole rims not in pavement area to be set 12 inches above proposed grade.
- Cleanout pipe, fittings, and joints shall conform to ASTM A48 (Grade 30). Castings are as shown on detail and shall conform to ASTM A48 (Grade 30). Cleanout riser shall match downstream pipe diameter.
- Granular backfill (3/4"-0) is to be compacted to 95% maximum dry density per AASHTO T-99 test method and native material shall be compacted to 85% of in-place dry density of surrounding soil.
- Storm drain service laterals shall be 4" pipe conforming to the same specifications as the storm drain main lines. Service laterals shall be installed to a point beyond the line or utility easement as shown on the plan. The service lateral shall be plugged with a 2" x 4" stake painted white.
- Riprap where noted on the plans is to be Class 50 in accordance with Oregon State Highway Division specification 714.
- Storm drains shall be tested for deflection with a mandrel equal to 95% of the pipe size being tested. In addition, storm lines shall be video inspected by the contractor per APWA, Division III, Section 303.3.11. All tests shall be witnessed by the Engineer.
- A plumbing permit from the City of West Linn Building Department is required for storm drain installation beyond the first cleanout.
- All materials, installation, tests, and inspections to be in strict accordance with APWA's Standard Specifications for Public Works Construction and the supplemental standards and specifications of the City of West Linn Street/Utility Design and Construction Standards.

Detention Pond

- Detention Pond constructed as part of "Katherine View Estates" is to be over excavated 12-18 inches, per detail.
- Pond bottom and sides are to be seal with a clay liner. Bentonite is an acceptable sealant. The Bentonite is to be incorporated into the top surface of soil per manufacturer's instructions to seal the pond of all seepage. Replace 12-18 inches with native top soil over Bentonite seal.
- Vegetation is to be established as soon as possible after pond has been constructed. Recommended seed mixtures and larger plantings are shown on detail.
- No erodible or floatable material shall be placed in the landscaping of the pond.

Erosion Control:

- A sediment fence/barrier must be constructed at the points where sediment will cross outside the construction area. The sediment barrier shall be a sediment fence. Minimum locations of sediment barrier are noted on the Erosion Control Plans.
- If more than one foot of sediment builds up behind the sediment barriers, the contractor will be required to clean out the sediment and keep the barrier in good repair.
- If dirt mounds or piles are created, sediment barriers shall be placed around the mounds or piles.
- Areas of site to be landscaped must be seeded or covered with some ground protection cover prior to removal of the erosion control measures. Seeded areas must have a minimum, seed and mulch at 2000 lbs/ac with bonding agent.
- The implementation of these erosion/sedimentation control (ESC) plans and the construction, maintenance, replacement and upgrading of these ESC facilities, is the responsibility of the applicant/contractor until all construction is completed and approved, and permanent vegetation is established.
- The ESC facilities shown on this plan must be constructed prior to all clearing and grading activities, and in such a manner as to ensure that sediment does not enter the drainage system or violate applicable water standards.
- The ESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESC facilities shall be upgraded as needed for unexpected storm events, or as directed by the inspector, to ensure that sediment does not leave the site.
- The ESC facilities shall be inspected daily by the applicant/contractor and maintained as necessary to insure their continued functioning.
- Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to insure that all paved areas are kept clean for the duration of the project.
- All projects with exposed ground surfaces anticipated between October 1 and April 30 must apply seeding/mulching or other type of cover, immediately after ground surfaces are exposed from grading/clearing operations.

General Grading and Erosion Control (Residential)

- Clean waste material excavated from road cut or trenching areas not used in street fill areas may be spread evenly across lot areas in depths of less than one foot, except where noted otherwise on the plans.
- During construction, straw bales, cutoff trenches or some other method of runoff construction, straw bales, cutoff trenches or some other method of runoff construction shall be used to prevent erosion and/or siltation from construction outside the work area boundaries.
- Large organic material, miscellaneous pipe or construction material must be removed from the site and disposed of properly.

Seeding/Mulching:

- All areas disturbed during construction to be graded to drain and compacted to a minimum of 90% of AASHTO T-99 immediately after installation of utilities or grading.
- Recommended Seed Mixture: 80% ELKA Dwarf Perennial Ryegrass and 20% Creeping Red Fescue, by weight. Application Rate shall be 100 pounds minimum per acre.
- Fertilizer shall be 12-16-8 with 50% of the nitrogen derived from UREA FORMALDEHYDE, and applied at a rate of 400 pounds per acre.
- Seed and mulch at a rate of 2000 lbs/ac with heavy bonding agent or netting and anchors. Mulch shall be a wood cellulose fiber or other material suitable for hydromulching.
- Temporary or Permanent Hydroseeding or acceptable seeding and mulching must be provided whenever permanent cover cannot be established on sites which will be exposed for 60 days or more.

Sediment Fence:

- The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6 inch overlap, and both ends securely fastened to the post.
- The filter fabric fence shall be installed to follow the contours, where feasible. The fence posts shall be spaced a maximum of six feet apart and driven securely into the ground a minimum of 18 inches.
- A trench shall be excavated, roughly 6 inches wide by 6 inches deep, upslope and adjacent to the wood post to allow the filter fabric to be buried. Bury the bottom of the fabric 6" vertically below finished grade. All areas of filter fabric trench shall be compacted.
- The filter fabric shall be installed with stitched loops over fence posts. The fence post shall be constructed of 2" x 2" fir, pine, or steel. The fence post must be a minimum of 48" long. The filter fabric shall not be stapled or attached to existing trees.
- Sediment fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.
- Sediment fences shall be inspected by applicant/contractor immediately after each rainfall, and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

Erosion Control:

Summary:

- The intent of the requirement is to prevent siltation from reaching storm drain systems and drainage ways.
- The minimum measures need to be made on all projects.
 - A gravel pad, at least 50 feet long, is required where vehicles will leave the construction site.
 - A sediment barrier is to be constructed of straw bales or a sediment fence where noted in the details or where sediment will cross outside the work area.
 - Where excavated material is placed on hard surfaces (such as streets) material must be broomed or scraped clean as soon as possible.
 - Riprap exits from all culverts and storm drain pipes draining into the ditches or swales. Riprap is to be Class 50 riprap or larger or as noted elsewhere in the plans.
 - Reseed or cover disturbed areas as soon as is possible and practical but no later than the completion of construction on the other phases of work. Erosion control measures such as hay bales and silt fences must remain in place until seeded areas show growth substantial to prevent erosion.

General:

- Approval of this erosion control (ESC) plan does not constitute an approval of permanent road or drainage design (e.g. size and location of roads, pipes, restrictions, channels, retention facilities, utilities, etc.).
- The implementation of these ESC plans and the construction, maintenance, replacement, and upgrading of these ESC facilities is the responsibility of the applicant/contractor until all construction is completed and approved, and the applicant/contractor until all construction is completed and approved, and vegetation of landscaping is established.
- The ESC facilities on this plan must be constructed in such a manner as to ensure that clearing and grading activities, and in such a manner as to ensure that sediment laden water does not enter the drainage system or violate applicable water standards.
- The ESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESC facilities shall be upgraded as needed for unexpected storm events and to ensure that sediment laden water does not leave the site.
- The ESC facilities shall be inspected daily by the applicant/contractor and maintained as necessary to insure their continued functioning.
- The ESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these ESC facilities shall be upgraded as needed for unexpected storm events, or as directed by the inspector, to ensure that sediment does not leave the site.
- The ESC facilities shall be inspected daily by the applicant/contractor and maintained as necessary to insure their continued functioning.
- Stabilized construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures may be required to insure that all paved areas are kept clean for the duration of the project.

REVISIONS	BY
REVISED PER CITY COMMENTS 2/2/99	JH

HOGAN'S VALLEY
CITY # SUB-98-07
OREGON DEVELOPMENT, INC.

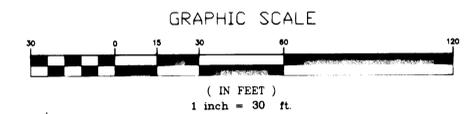
Notes

SISUL ENGINEERING
3775 PORTLAND AVENUE
CLATSOP COUNTY, OREGON 97027
(503) 657-0188

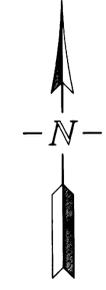


DATE	NOV. 1998
SCALE	NOTED
DRAWN	JH
JOB	98-023
SHEET	1
OF 6 SHEETS	

REVISIONS	BY
REVISED PER CITY COMMENTS: 2/2/99	JH
ADDED 11/15/99	LD

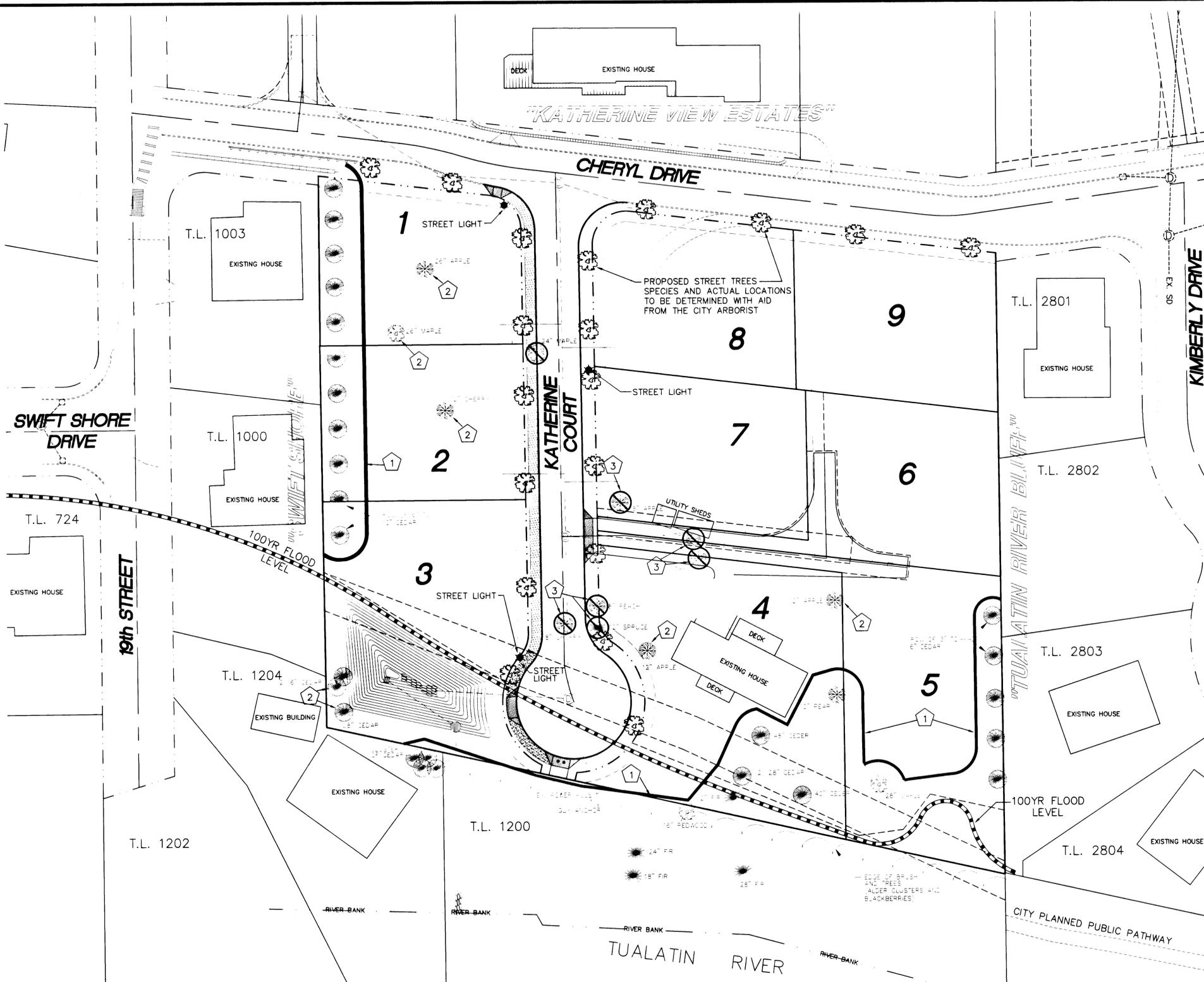


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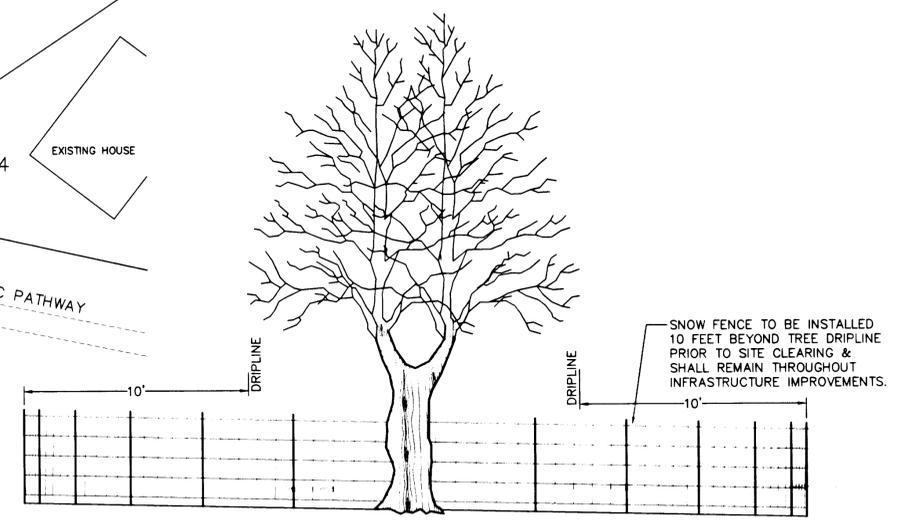
STREET LIGHT DESIGNED BY: (1/18/99)
 ROUSE ELECTRIC
 16285 SW 85TH AVE #407
 TIGARD, OR 97224-5424
 PH. 639-5996 FAX 639-5891

INSTALLRD - Street Lights: Dark bronze, direct bury, round, fiberglass light pole. The pole is 30 feet long with a 5-foot burial depth. Fixture is a 100-Watt, 120/240Volt, HPS, "Shoe-Box" style luminaire, mounted on an 8-inch steel mast arm, 25-feet above the roadway. (Same as the ones used in the Katherine View Estates project.)



TREE NOTE LEGEND:

- 1. INSTALL SNOW FENCE MINIMUM 10 FEET BEYOND DRIPLINE OF THE TREE.
- 2. TREES OUTSIDE OF GRADING AREA ARE NOT TO BE REMOVED WITHOUT FIRST OBTAINING A TREE CUTTING PERMIT.
- 3. TREES LOCATED IN THE STREET GRADING AREA & SHALL BE REMOVED.



SNOW FENCE DETAIL
N.T.S.



HOGAN'S VALLEY
 CITY FILE #: SUB-98-02
 OREGON DEVELOPMENT, INC.

SISUL ENGINEERING
 Tree Protection Plan and Detail

375 PORTLAND AVENUE
 CLATSOP, OREGON 97027
 (503) 867-0188

DATE	NOV. 1998
SCALE	NOTED
DRAWN	JH
JOB	98-023
SHEET	2
OF 6 SHEETS	

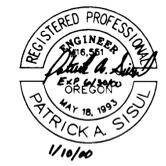
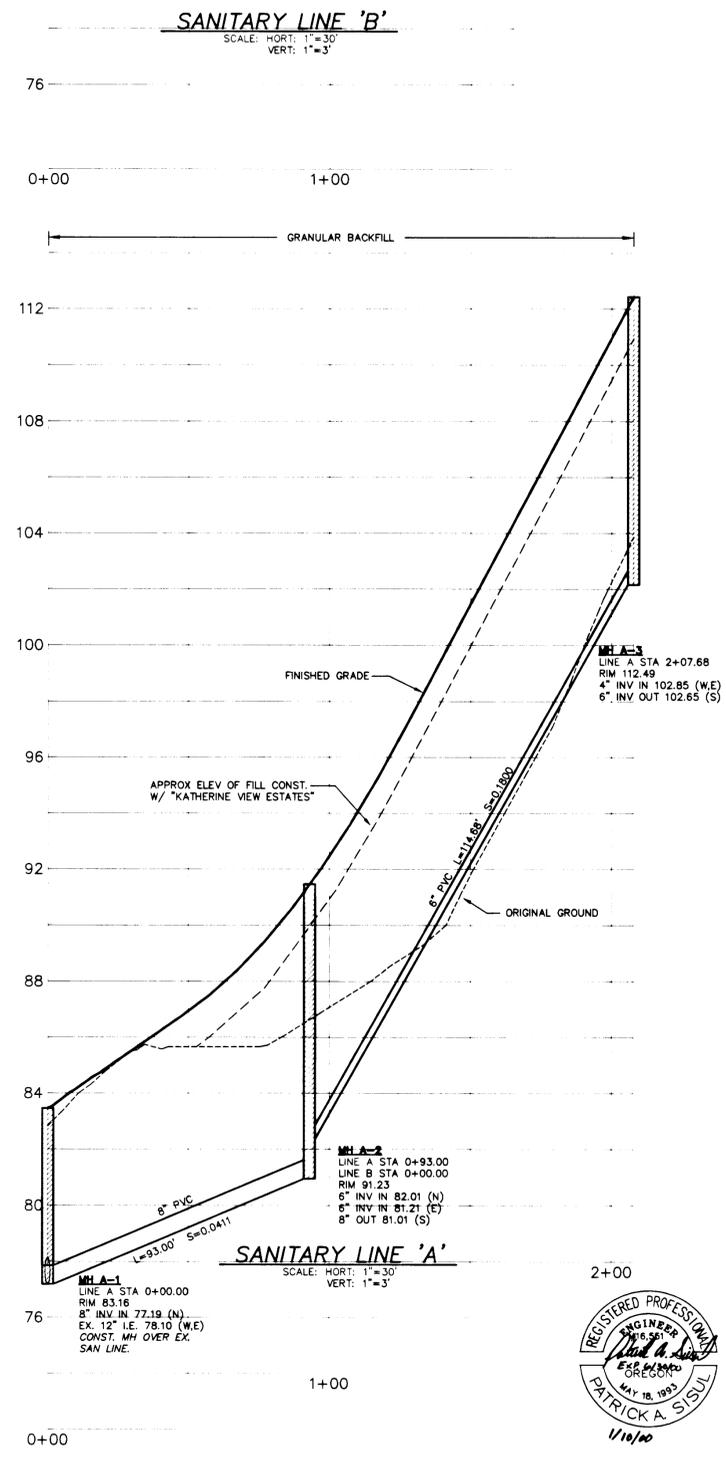
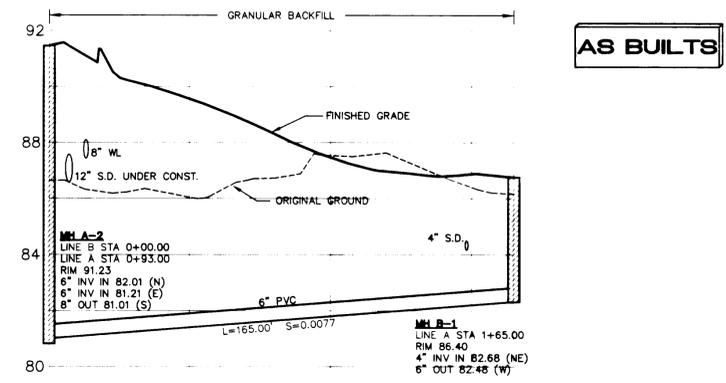
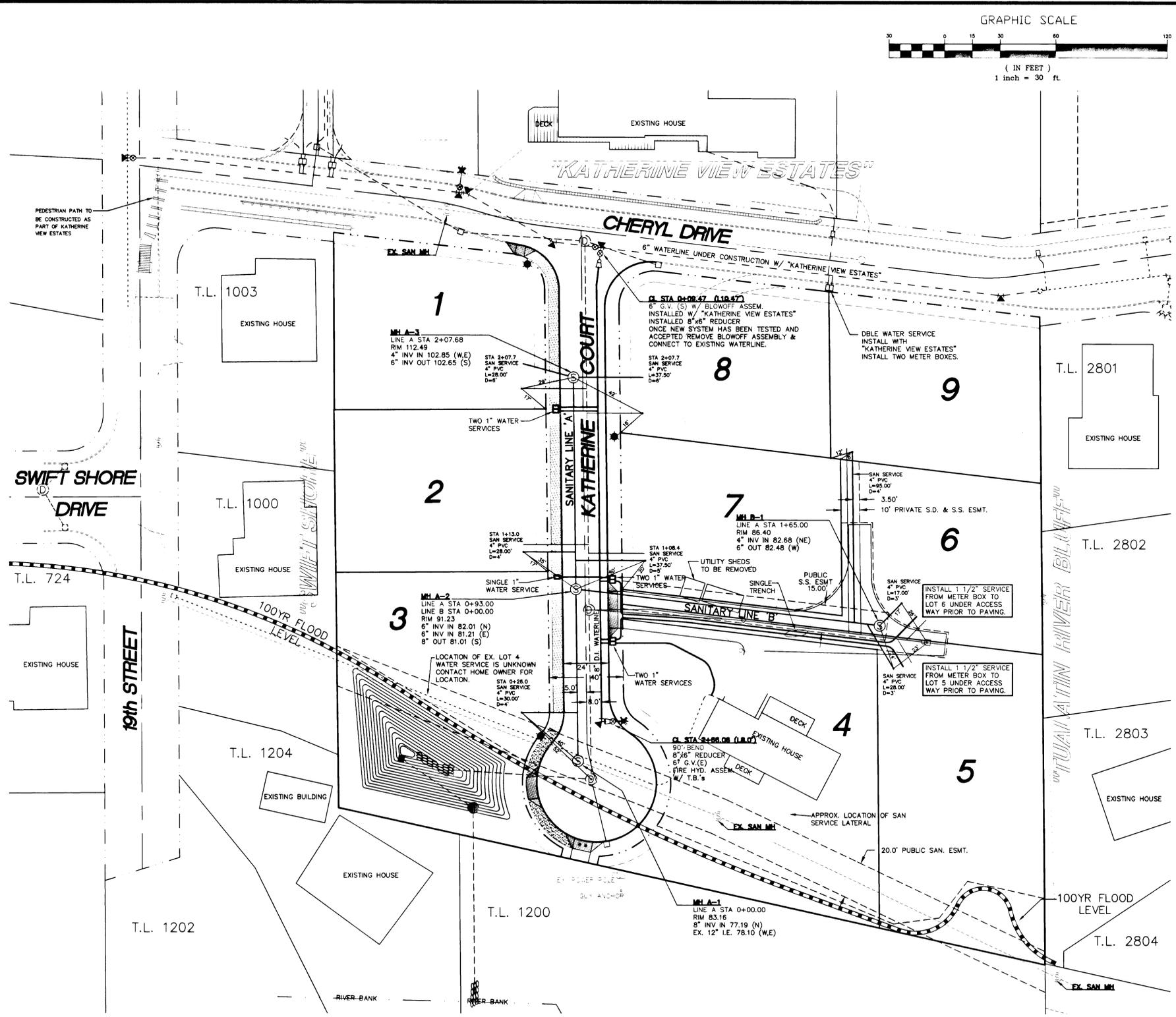
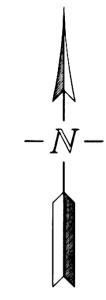
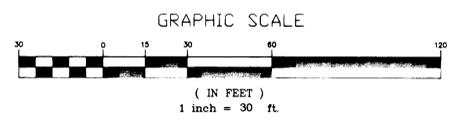
REVISIONS	BY
REVISED PER CITY COMMENTS 2/2/99	JH
AS-BUILT 11/15/99	LD

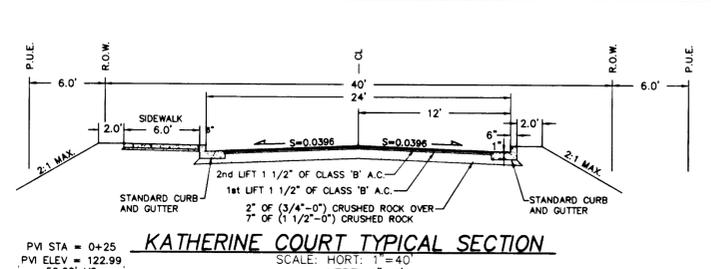
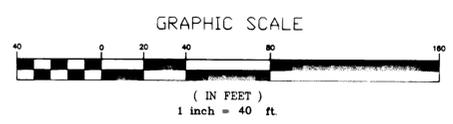
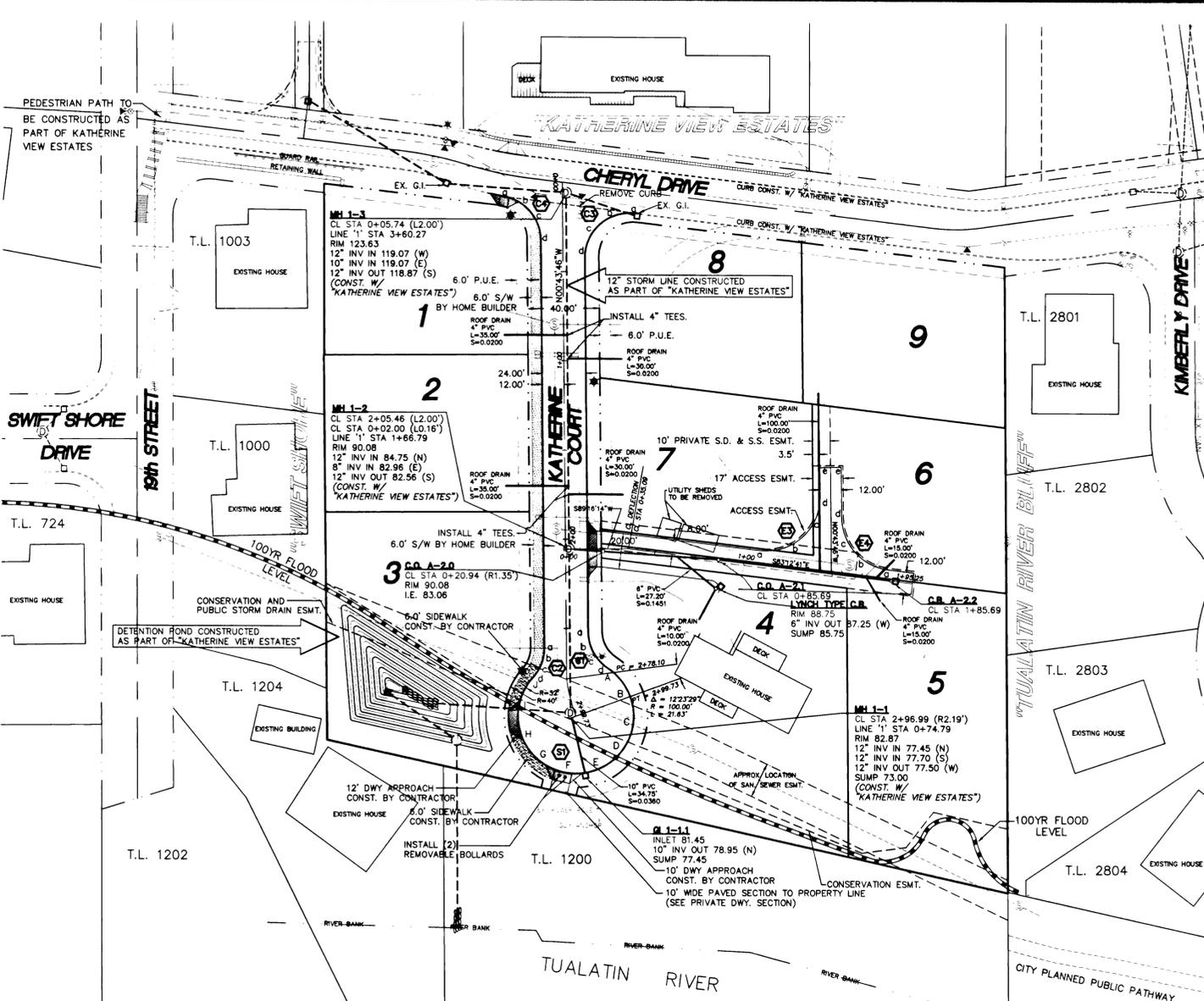
HOGAN'S VALLEY
CITY FILE # SUB-88-02
OREGON DEVELOPMENT, INC.

Waterline & Sanitary Sewer Plan and Profile

SISUL ENGINEERING
3715 PORTLAND AVENUE
CLATSOP COUNTY OREGON 97027
(503) 667-0188

DATE	NOV. 1998
SCALE	NOTED
DRAWN	JH
JOB	98-023
SHEET	3





CUL-DE-SAC CURVE DATA (S)

CURVE DATA: $\Delta = 2782337$
 $R = 32.00$
 $L = 155.44'$

POINT	DELTA	ELEVATION	NOTES
A	00°00'00"	84.40	CURVE 'C1' PNT d
B	30°55'57"	83.41	
C	61°51'54"	82.83	
D	92°47'52"	82.38	
E	123°43'49"	82.08	LOW PNT $\Delta = 1391'148"$
F	154°39'47"	82.01	CENTER OF 12' DWY $\Delta = 1590'320"$
G	185°35'44"	82.25	10' DWY APPROACH $\Delta = 1590'320"$
H	216°31'42"	82.67	12' DWY APPROACH $\Delta = 231'48'10"$
I	247°27'39"	83.29	
J	278°23'37"	84.21	CURVE 'C2' PNT d

CURB RETURN DATA

CURVE	DATA	PNT a (PC)	PNT b (1/3 Δ)	PNT c (2/3 Δ)	PNT d (PC)	ELEVATION
C1	$\Delta = 55'48'14"$ $R = 25.00'$ $L = 24.35'$	86.10	85.53	84.96	84.40	CURVE 'S1' PNT A
C2	$\Delta = 41'22'26"$ $R = 25.00'$ $L = 18.00'$	85.47	85.05	84.63	84.21	CURVE 'S1' PNT J
C3	$\Delta = 97'31'04"$ $R = 25.00'$ $L = 42.50'$	124.91	123.49	121.53	119.63	STA 0+42.20 (13.00')
C4	$\Delta = 78'31'14"$ $R = 25.00'$ $L = 34.42'$	122.74	122.67	122.28	121.18	STA 0+31.97 (13.00')

EDGE OF PAVEMENT DATA (E)

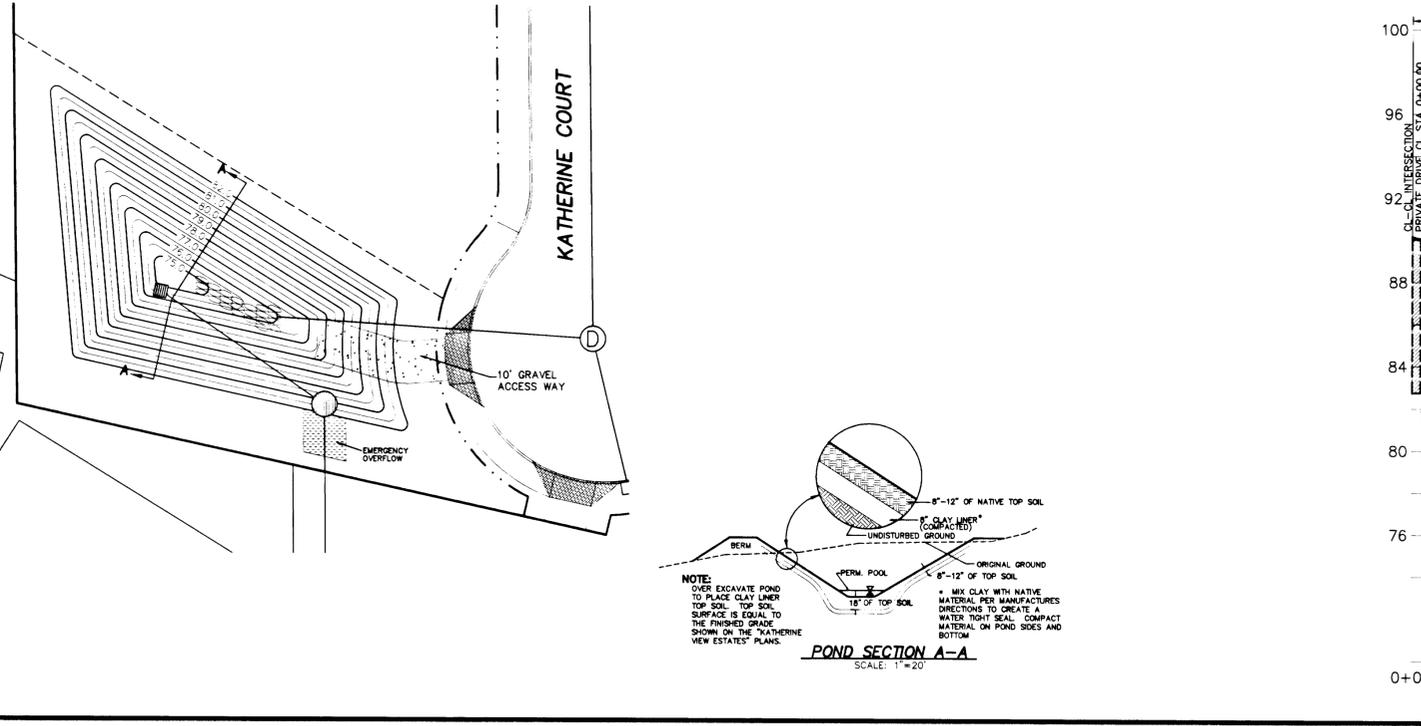
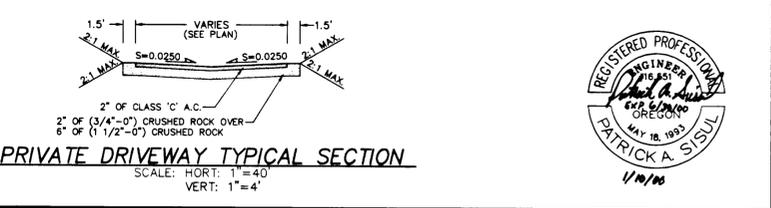
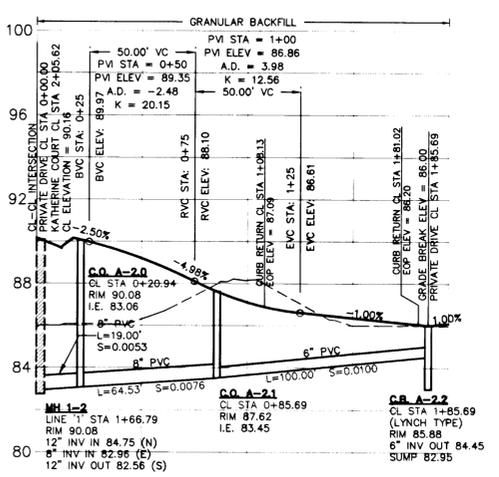
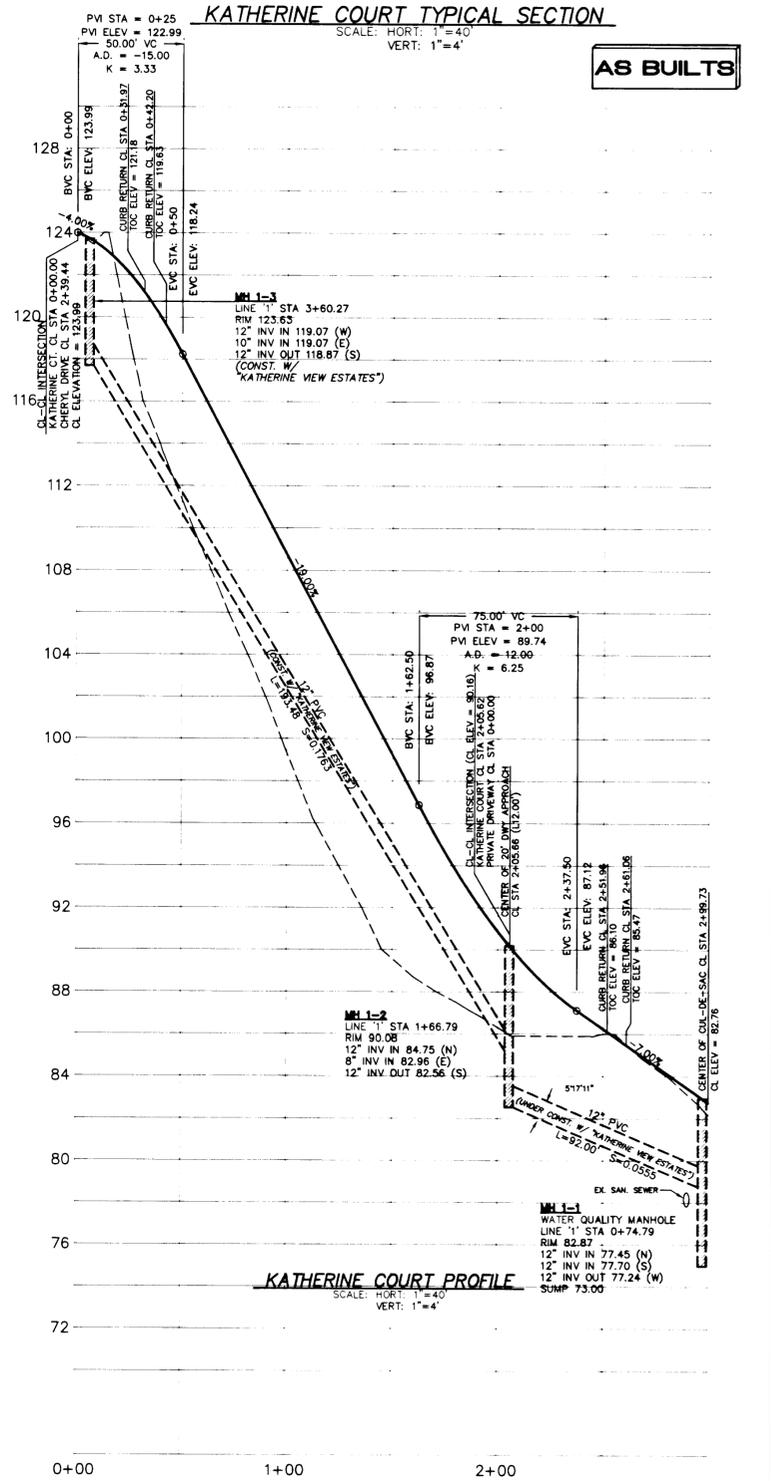
$\Delta = 97'31'04"$
 $R = 30.00'$
 $L = 51.06'$

PNT a (PC)	PNT b (1/3 Δ)	PNT c (2/3 Δ)	PNT d (PC)	PNT e (END OF A.C.)
87.09	87.12	87.95	89.65	90.50
STA 1+08.13 (18.00')		STA 1+37.87 (141.83')		END OF PAVEMENT

EDGE OF PAVEMENT DATA (E)

$\Delta = 82'38'56"$
 $R = 30.00'$
 $L = 43.10'$

PNT a (PC)	PNT b (1/3 Δ)	PNT c (2/3 Δ)	PNT d (PC)	PNT e (END OF A.C.)
86.20	86.77	87.76	88.92	90.50
STA 1+18.02 (18.00')			STA 1+37.87 (132.07')	END OF PAVEMENT



REVISIONS	BY
REVISED PER CITY COMMENTS 2/2/99	JH
AS-BUILT 11/15/99	LD

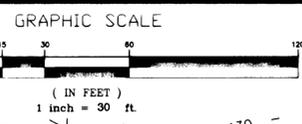
HOGAN'S VALLEY
 CITY FILE #: SUB-98-02
 OREGON DEVELOPMENT, INC.

Sisul Engineering
 Street & Storm Drain
 Plan and Profiles

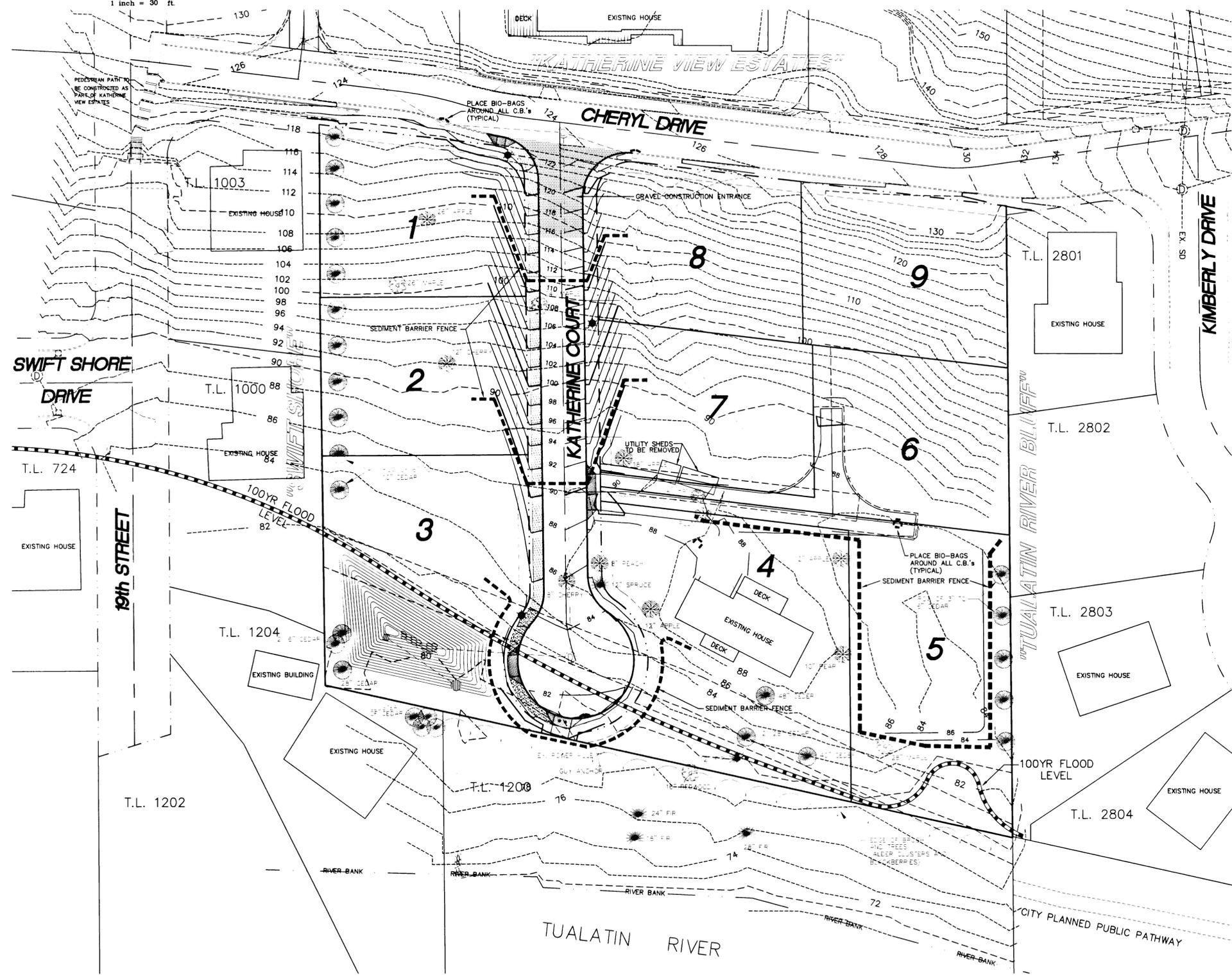
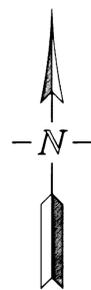
SISUL ENGINEERING
 375 PORTLAND AVENUE
 GLADSTONE, OREGON 97027
 (503) 667-0188

DATE	NOV. 1998
SCALE	NOTED
DRAWN	JH
JOB	98-023
SHEET	4
OF	6 SHEETS

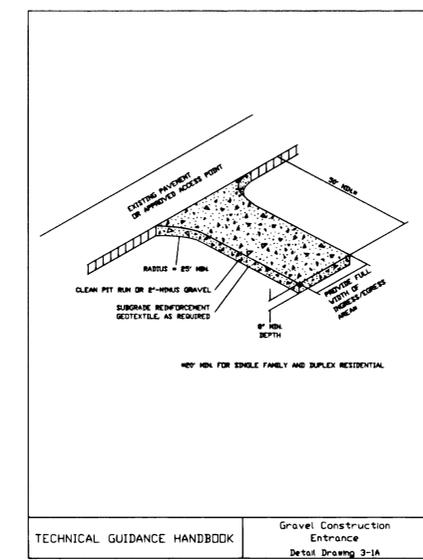
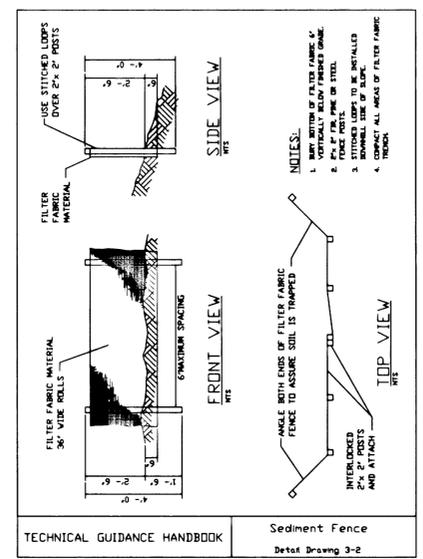
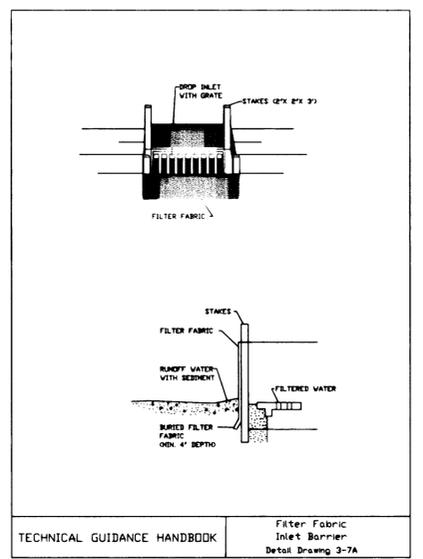




- 80 PROPOSED FINISHED GRADE CONTOURS
- 78
- 90 EXISTING GROUND CONTOURS
- 92
- SEDIMENT BARRIER FENCE
- BIO-BAG INLET PROTECTION



AS BUILTS



REVISIONS	BY
RELEASED PER CITY COMMENTS 2/2/99	JH
AS-BUILT 11/15/99	LD

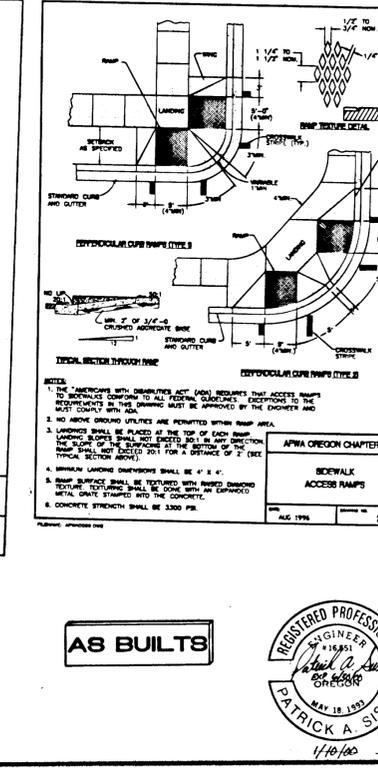
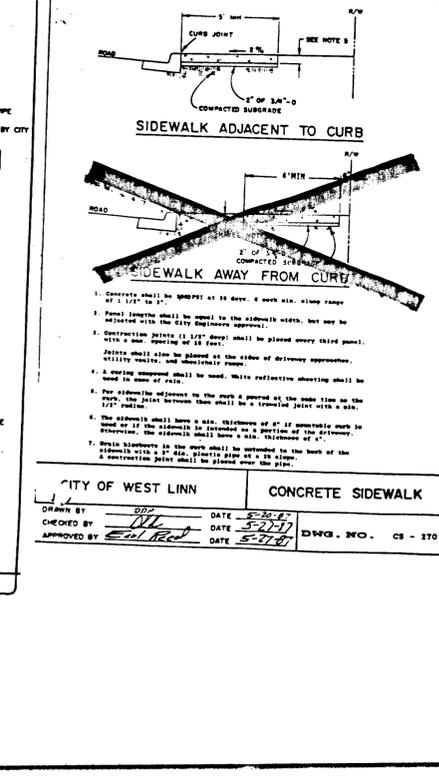
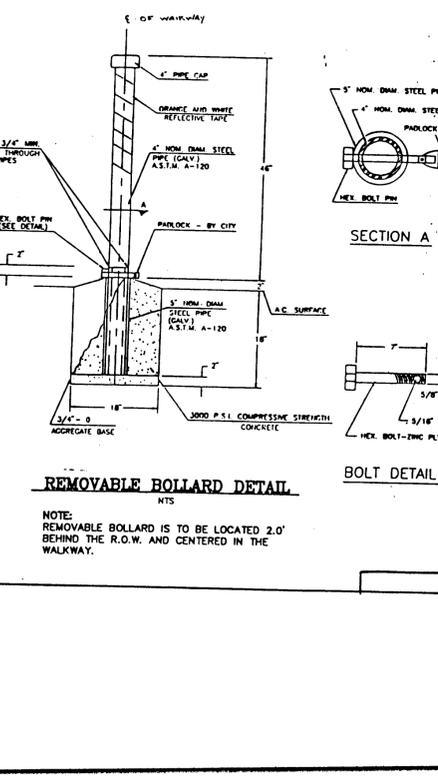
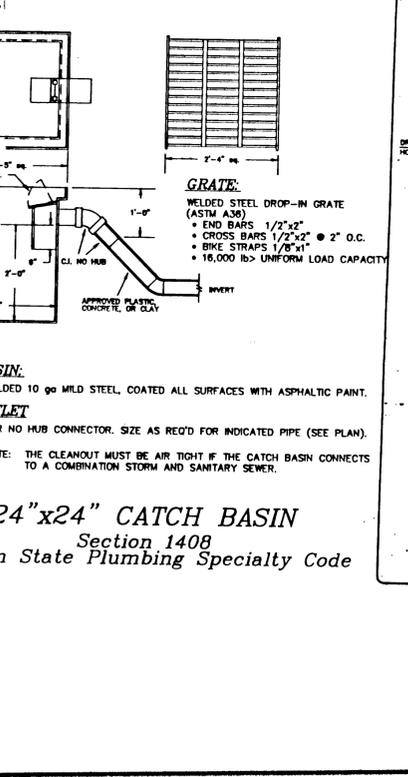
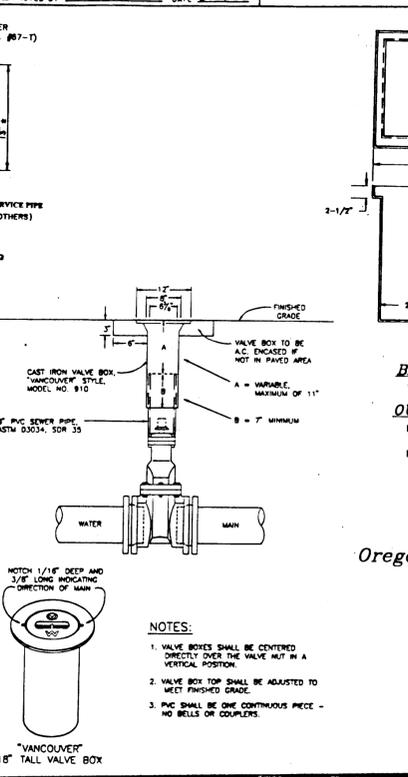
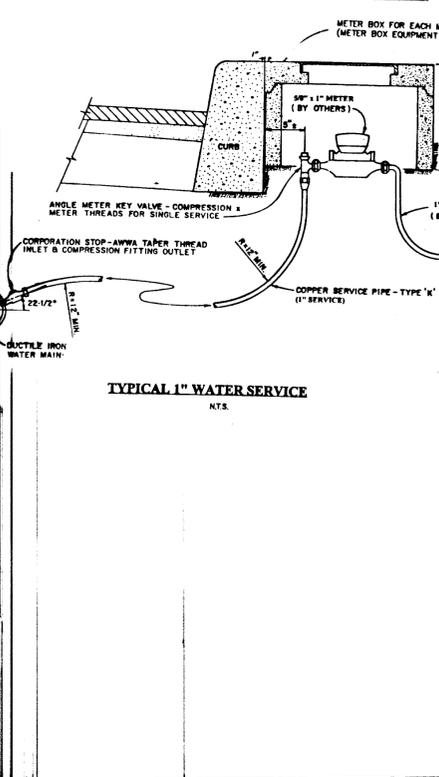
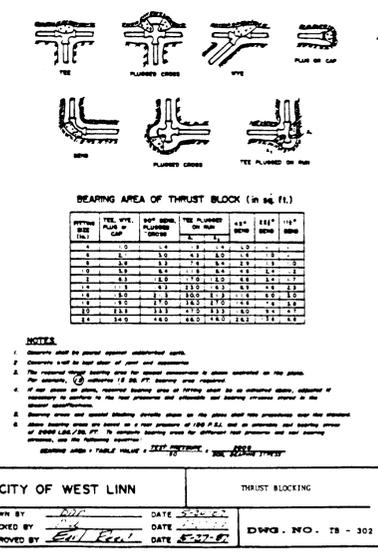
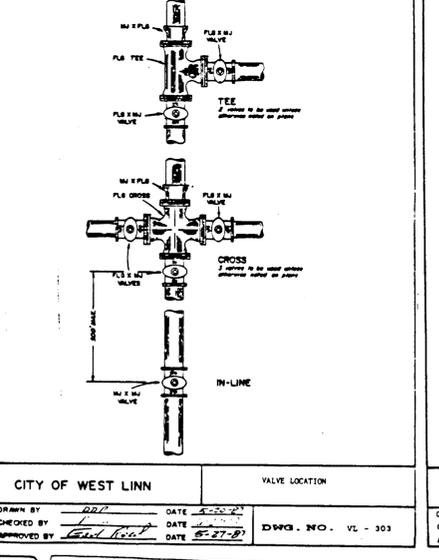
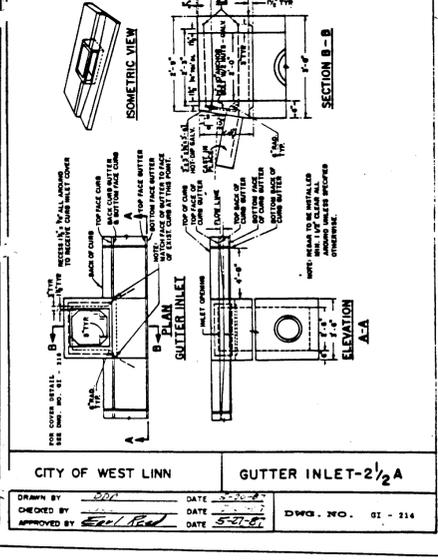
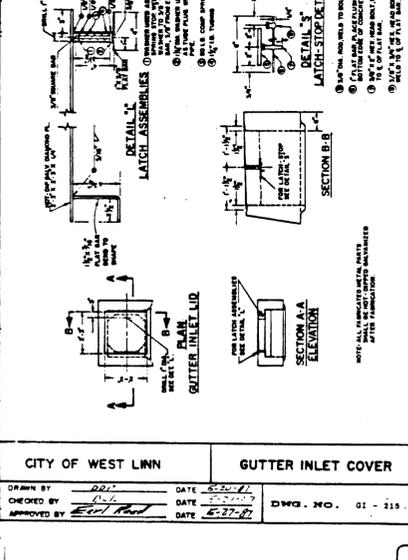
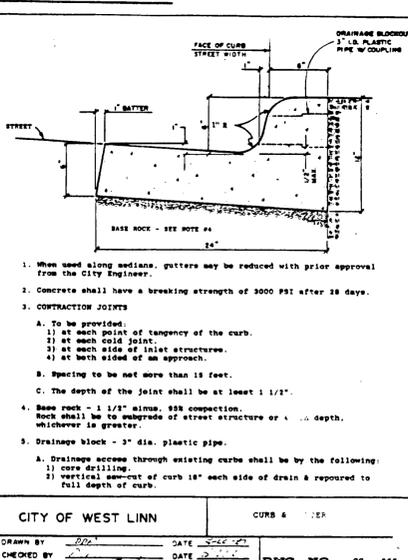
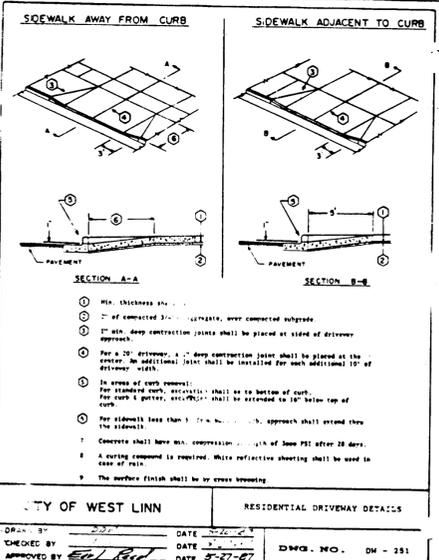
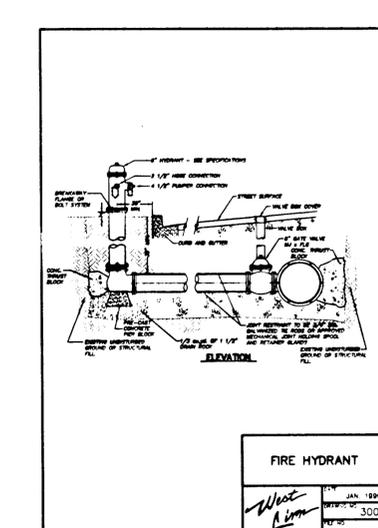
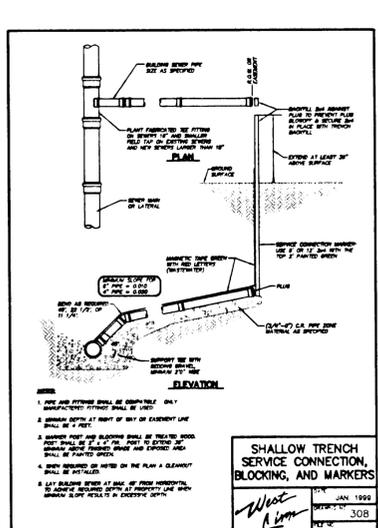
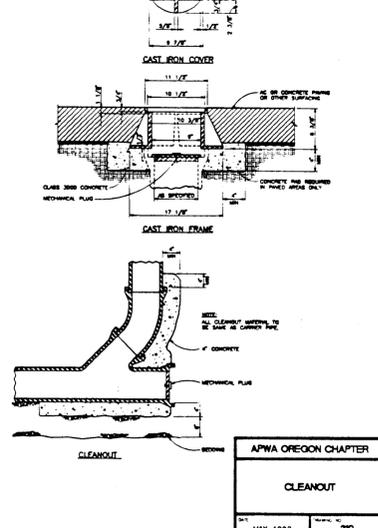
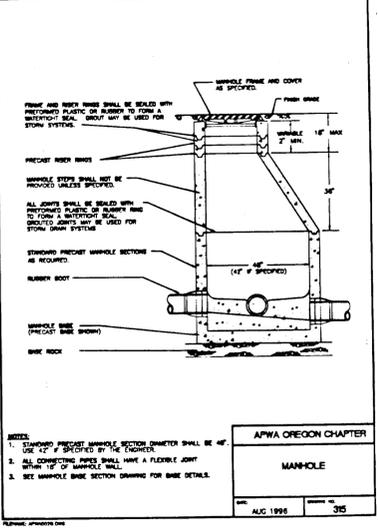
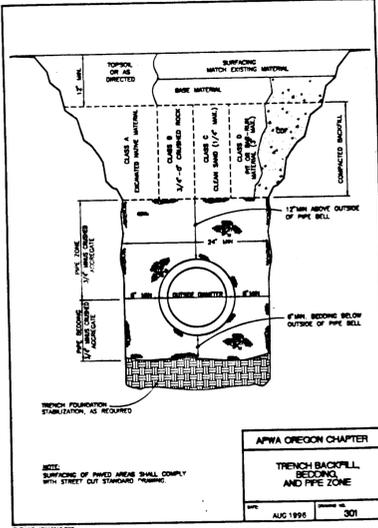
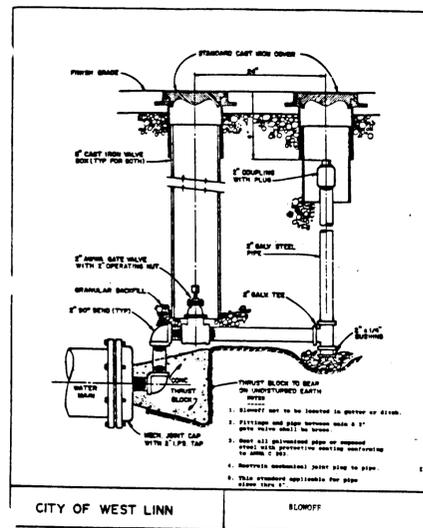
HOGAN'S VALLEY
CITY FILE # SUB-98-02
OREGON DEVELOPMENT, INC.

Grading and Erosion Control Plan

SISUL ENGINEERING
376 PORTLAND AVENUE
GLADSTONE, OREGON 97027
(503) 657-0188



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SHEET	5
OF	6 SHEETS



AS BUILTS

REGISTERED PROFESSIONAL ENGINEER
 PATRICK A. SISUL
 MAY 18 1993