

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "CITY OF WEST LINN STREET/UTILITY DESIGN AND CONSTRUCTION STANDARDS" DATED JULY 14, 1988.
- PRIOR TO ANY CONSTRUCTION, LOCATIONS OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- ORGANIC AND NON-DESIRABLE MATERIALS SHALL BE REMOVED FROM THE CONSTRUCTION AREA AS DIRECTED BY THE ENGINEER.
- ALL FILL AREAS SHALL BE STRIPPED OF ORGANIC MATERIAL. FILL WILL BE PLACED IN 9-INCH LAYERS AND COMPACTED TO 95 PERCENT RELATIVE MAXIMUM DENSITY ACCORDING TO AASHTO T-99 STANDARDS. BASE ROCK IN THE STREET WILL BE COMPACTED TO THE SAME STANDARD. LANDSCAPE AREAS WILL BE COMPACTED TO 90 PERCENT. THE CONTRACTOR WILL PROVIDE DENSITY TESTING, ONE FOR EVERY 10,000 SQUARE FEET OF AREA AND FOR EVERY 2 FEET OF FILL PLACED. COMPACTION REPORTS FROM A REPUTABLE TESTING LAB WILL BE SUPPLIED TO THE ENGINEER.
- CONTRACTOR SHALL LEAVE ALL AREAS OF THE PROJECT FREE OF DEBRIS AND UNUSED CONSTRUCTION MATERIALS.
  - AREAS TO BE LANDSCAPED SHALL BE SMOOTHED AND LEFT TO THE GRADES INDICATED ON THE GRADING PLAN, PLUS OR MINUS 0.1 FOOT.
  - ALL DISTURBED AREAS NOT TO BE LANDSCAPED ARE TO BE SEEDED TO PREVENT EROSION.
- ANY CHANGES FROM THE APPROVED PLANS SHALL BE REQUESTED BY THE CONTRACTOR IN WRITING. THE DESIGN ENGINEER AND THE CITY OF WEST LINN'S PROJECT ENGINEER MUST APPROVE THE CHANGE PRIOR TO ITS IMPLEMENTATION. COMPLEXITY OF MODIFICATION WILL DETERMINE IF REVISED PLANS ARE REQUIRED.
- STANDARD SIDEWALK RAMP CURB-DROPS SHALL BE LOCATED AT MIDPOINTS OF CURB RETURNS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE FOLLOWING CITY OF WEST LINN DETAILS SHALL BE USED AT LOCATIONS AS SPECIFIED IN THE PLANS:
  - COMMERCIAL DRIVEWAY - DWG. NO. DW-260
  - STANDARD MANHOLE - DWG. NO. MH-209
  - SHALLOW MANHOLE - DWG. NO. MH-210
  - MANHOLE FRAME & COVER - DWG. NO. MH-212
  - GUTTER, INLET 2 1/2" A - DWG. NO. GI-214
  - GUTTER, INLET COVER - DWG. NO. GI-215
  - CURB & GUTTER - DWG. NO. CG-265
  - SIDEWALK RAMP - DWG. NO. CS-271
  - STREET BARRICADE TYPE III - DWG. SB-276
  - CENTERLINE SURVEY MONUMENTS - SM-278
  - PIPE BEDDING & BACKFILL DETAILS - DWG. NO. PB-280
  - FIRE HYDRANT - DWG. NO. FH-300
  - BLOWOFF - DWG. NO. BO-301
  - THRUST BLOCKING - DWG. NO. TB-302
  - WATER METER - DWG. NO. WM-304
  - STANDARD CUL-DE-SAC DWG. NO. CD-279

**STORM/SANITARY SEWERS:**

- MANHOLE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF WEST LINN'S STANDARD PLANS. PRECAST BASES WILL NOT BE PERMITTED FOR MANHOLES.
- TRENCH BACKFILL IN PAVED AREAS WILL BE 3/4-INCH TO 0-INCH CRUSHED ROCK COMPACTED TO 95 PERCENT RELATIVE MAXIMUM DENSITY, AASHTO T-99.
- ALL SANITARY SEWER AND STORM PIPE SHALL BE PVC IN ACCORDANCE WITH ASTM SPECIFICATIONS D-3033 AND D-3034.
- SANITARY SEWER SERVICES SHALL BE 4-INCH PVC WITH A MINIMUM SLOPE OF 2%.
- PRIOR TO ACCEPTANCE, ALL PUBLIC SANITARY AND STORM SEWERS SHALL BE AIR TESTED IN ACCORDANCE WITH THE CITY OF WEST LINN'S REQUIREMENTS. PVC PIPE SHALL ALSO BE TESTED FOR DEFLECTION.
- MANHOLE RIM ELEVATIONS SHOWN ARE APPROXIMATE AND FOR INFORMATION ONLY. FINAL ELEVATIONS SHALL BE SET TO MATCH CONSTRUCTED FINISH GRADE.
- ALL STORM SEWER PIPES OVER 12" IN DIAMETER SHALL BE CONCRETE, ASTM C-14 CLASS III, BELL AND SPIGOT WITH RUBBER O-RING.

**WATERLINES:**

- ALL WATER PIPE AND FITTINGS SHALL BE DUCTILE CAST IRON CLASS 52 AND CONFORM TO STANDARD CITY SPECIFICATIONS AND DETAILS.
- WATERLINES SHALL BE PRESSURE TESTED FOLLOWING COMPLETION. PRESSURE TESTS AT THE LOWEST POINT IN TEST SECTION SHALL BE IN ACCORDANCE TO THE CITY OF WEST LINN'S STANDARDS. LEAKAGE MUST BE WITHIN ALLOWABLE LEAKAGE LIMITS. SERVICE LINES WILL ALSO BE TESTED TO THE METER LOCATION IF INSTALLED BY THE CONTRACTOR.
- PRIOR TO BEING PLACED INTO SERVICE, THE WATERLINE SHALL BE FLUSHED, STERILIZED AND FLUSHED AGAIN ALL IN ACCORDANCE WITH STANDARD METHODS OF THE HEALTH DIVISION, DEPARTMENT OF HUMAN RESOURCES, STATE OF OREGON.
- PRIOR TO ALLOWING HUMAN CONSUMPTION OF THE WATER FROM THE NEW WATERLINE, A SAMPLE SHALL BE TAKEN AND TESTED FOR BACTERIOLOGICAL QUALITY. RESULTS MUST BE WITHIN STANDARDS OF THE STATE OF OREGON.
- CONCRETE THRUST BLOCKING SHALL BE PROVIDED AT ALL WATERLINE FITTINGS AS REQUIRED BY CITY STANDARDS. BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH AND CLEAR OF JOINT ACCESSORIES. BEARING AREA OF THRUST BLOCK SHALL BE COMPUTED ON THE BASIS OF ALLOWABLE SOIL BEARING PRESSURE.
- IN CASE OF A DISCREPANCY BETWEEN THE DRAWINGS AND THE FIGURES WRITTEN THEREON, THE FIGURES SHALL BE DEEMED TO GOVERN.
- THE OWNER WILL SUPPLY ONE SET OF STAKES FOR EACH CONSTRUCTION OPERATION AS DESCRIBED IN THE CONTRACT DOCUMENTS AND SPECIFICATIONS. THE CONTRACTOR SHALL DESIGNATE A REPRESENTATIVE OR REPRESENTATIVES WHO ARE AUTHORIZED TO REQUEST STAKES. REQUESTS FROM AUTHORIZED REPRESENTATIVES SHALL BE MADE TO DAVE LIDEN AT OTAK (888-2401) AT LEAST 24 HOURS IN ADVANCE OF THE NEED FOR SAID STAKES. ONLY REQUESTS FROM AUTHORIZED REPRESENTATIVES WILL BE HONORED. ANY RESTAKING SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR.

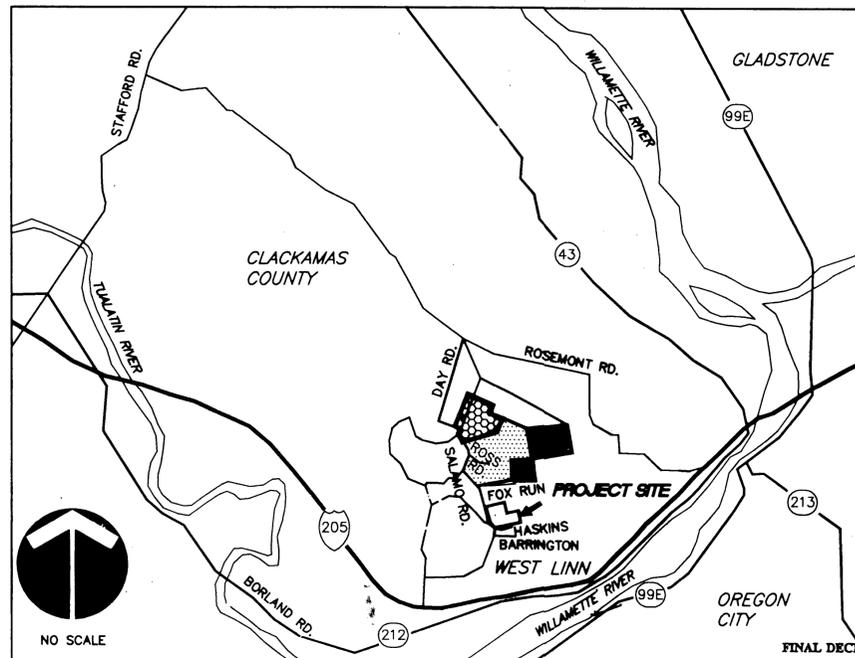
**LOCATES (48 HOURS NOTICE REQUIRED PRIOR TO EXCAVATION)**

ONE CALL SYSTEM	246-6899
GENERAL TELEPHONE, NORTHWEST (NATURAL GAS, U.S. WEST, U.S. SPRINT)	
PORTLAND GENERAL ELECTRIC	643-3454, EXT. 312, 313, 314
TCI CABLE TELEVISION	243-7491
<b>REPAIR EMERGENCIES</b>	
NORTHWEST NATURAL GAS	226-4211, EXT. 4413
GENERAL TELEPHONE	629-2121
CITY OF WEST LINN	
WATER OPERATIONS	656-3535
SANITARY SEWER OPERATIONS	

THE CONTRACTOR, IN LOCATIONS AND PROTECTING UNDERGROUND UTILITIES, MUST COMPLY WITH THE REGULATIONS OF O.R.S. 757.541 TO 757.571

# CRYSTAL TERRACE RESIDENTIAL SUBDIVISION CITY OF WEST LINN

## STREET, STORM, SANITARY SEWER & WATERLINE CONSTRUCTION



**VICINITY MAP**

**BENCH MARK**

BENCH MARK: CITY OF WEST LINN BENCH MARK "B" IS 93.5' EAST AND 17.0' SOUTH OF EDGE OF PAVEMENT FROM 5-WAY INTERSECTION OF ROSEMONT/SANTA ANA. 3" CAP ON PIPE WITH YELLOW WATER WORKS LTD. ELEV. = 667.22.

These A-Built Plans were compiled from survey data, data collected from others, and periodic observation during construction. It is suggested that these plans be used in conjunction with field verification of location and elevations of improvements in question. These plans are an accurate record of public improvements to the best of my information, knowledge and belief.

*M. Fares Kek Nid*  
Signature  
Date: 7-17-95

**SHEET INDEX**

- TITLE SHEET
- COMPOSITE UTILITY PLAN
- GRADING AND EROSION CONTROL PLAN
- GRADING AND EROSION CONTROL NOTES AND DETAILS
- STREET AND STORM DRAINAGE PLAN
- STREET AND STORM SEWER PROFILES
- STORM SEWER PROFILES
- SANITARY SEWER AND WATER PLAN
- SANITARY SEWER PROFILES

**AS BUILT**

BY: JH DATE: 2-11-97

**LEGEND**

EXISTING	PROPOSED

RECEIVED  
JUL 28 1995

IN THE MATTER OF CRYSTAL TERRACE, A 18-LOT SUBDIVISION, SUB-95-02/ZC-95-02.

The West Linn Planning Commission, at its regular meeting of July 19, 1995, convened a public hearing pursuant to the provisions of Chapter 99 of the Community Development Code. The Commission considered the application of Koss-Brod-Goodrich for the development of an 18-lot tentative subdivision plan approval (File No. SUB-95-02/ZC-95-02). The applicant's proposal was for 18 single-family residential homes and one tract for street-view detached development (Exhibit 1). In addition, the applicant had proposed a zone change from Community R-7 to City R-7 consistent with the Tanager Basin Master Plan. Approval by the Commission would allow the applicant to develop this site as proposed.

In the Planning Commission's consideration of this application, the following chapters of the Community Development Code were used as criteria for approval: 1) Land Division, Chapter 85; 2) Chapter 89, Quasi-Judicial Decision-Making Authority; and 3) Chapter 103 which sets the standard for zone change criteria. The Planning Commission received testimony from five individuals in opposition to the proposed application. The issues raised from the impact of future realignments of Salamo Road to the subject site, to the issue of the Tanager Basin Master Plan regarding density on the subject site, and to the accuracy of a possible trail ad located adjacent to the proposed site. In addition to receiving testimony from the public, the Commission received testimony from the applicant's representative in support of the application. Among the Commission's findings were that the applicant is fully at risk if they proceed prior to final approval of the Salamo Road realignment. Based upon the public hearing and the testimony received, the findings contained in the Staff Report, and findings made by the Planning Commission, the Planning Commission approved the application with the following conditions of approval.

- The applicant shall provide a plan to the Planning Director that demonstrates their ability to meet the provisions of CDC Section 57.020. Sole.
- The applicant shall provide the City with a final plan.
- The applicant shall provide a street tree planting schedule prior to final platting.
- The applicant shall provide a street lighting plan prior to final platting.
- The applicant shall underground utilities that front the development site on the east side of Salamo Road.
- Landscaping and development plans for entryway treatments and decorative fences shall be submitted to the Planning Director for approval prior to final platting.
- The applicant shall remove only those Douglas Fir trees that are within grading envelope for streets, sidewalks and utility improvements, based upon an approved grading plan. Douglas Fir trees outside the grading envelope for streets and sidewalks shall be removed only by individual lot owners or home builders in accordance with the City Tree Ordinance. The applicant shall identify all existing trees over six inches caliper that are affected by sewer, sidewalk and utility grading. This plan shall be reviewed and approved by the City arboretist prior to the commencement of any site grading.
- A landscaping plan shall be prepared and improvements installed for the pedestrian trail which is parallel to the Salamo Road for the length of the subject's property frontage on Salamo Road. A landscaping plan shall be submitted to the City Planning Department prior to approval of the final plan. Improvements shall be installed prior to release of the one-year construction maintenance bond, provided that the alignment of Salamo Road has been finalized. If the alignment has not been finalized, installation of the trail improvements will be completed within one year of the finalization of Salamo Road alignment.

- The applicant shall be required to show five-foot utility easements on the final plat along all front and rear lot lines.
- If the Salamo Road realignment is changed from the alignment as shown on the applicant's tentative subdivision plan, the applicant will be required to resubmit an amended tentative subdivision plan.
- The applicant shall be required to have received an approved application from the Army Corps of Engineers, regarding the natural drainage on the site, prior to approval of final platting.
- A preannexation agreement shall be signed and recorded if such an agreement has not already been signed and recorded.

This decision shall become effective 14 days from the date of mailing of this final decision as identified below. Those parties with standing (e.g., those individuals who submitted letters into the record or provided testimony during the course of the hearing, or who signed in on the attendance sheet at the hearing) may appeal this decision to the West Linn City Council within 14 days of the mailing of this decision pursuant to the provisions of Chapter 99 of the Community Development Code. Such appeals would require a fee of \$400 and a completed appeal application form together with the specific grounds for appeal to the Planning Director prior to the filing deadline.

*Bill Prentice*  
BILL PRENTICE, ACTING CHAIR  
WEST LINN PLANNING COMMISSION  
7/24/95  
DATE

Mailed this 26 day of July, 1995.  
Appeal filing deadline: 5 p.m., AUGUST 9th, 1995.

06/14/96  
Date  
G.S.  
Designed  
G.S.  
Drawn  
7-26-96  
Checked By  
Date

22595 DAY ROAD  
WEST LINN, OREGON 97068  
MAILING: 19363 WILLAMETTE DRIVE, #509  
WEST LINN, OREGON 97068  
PHONE: (503)-650-4636  
FAX: (503)-557-5677

**KOSS & BROS. GOODRICH ASSOCIATES**

CRYSTAL TERRACE  
RESIDENTIAL SUBDIVISION  
CITY OF WEST LINN OREGON  
TITLE SHEET

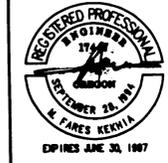
otak  
Incorporated  
17356 SW Boones Ferry Rd.  
Lake Oswego, Oregon 97035  
Phone: (503) 635-3618  
FAX: (503) 635-5395

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Project No.  
5477S01  
File No.  
1 OF 9  
Sheet No.  
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CRYSTAL TERRACE '97

XREF LIST  
 Lscale: 1  
 Resolved:  
 D477X001  
 D477X500  
 D477X600  
 Unresolved:

06/14/96  
 Date  
 G.S.  
 Designed  
 G.S.  
 Drawn  
 Checked By Date



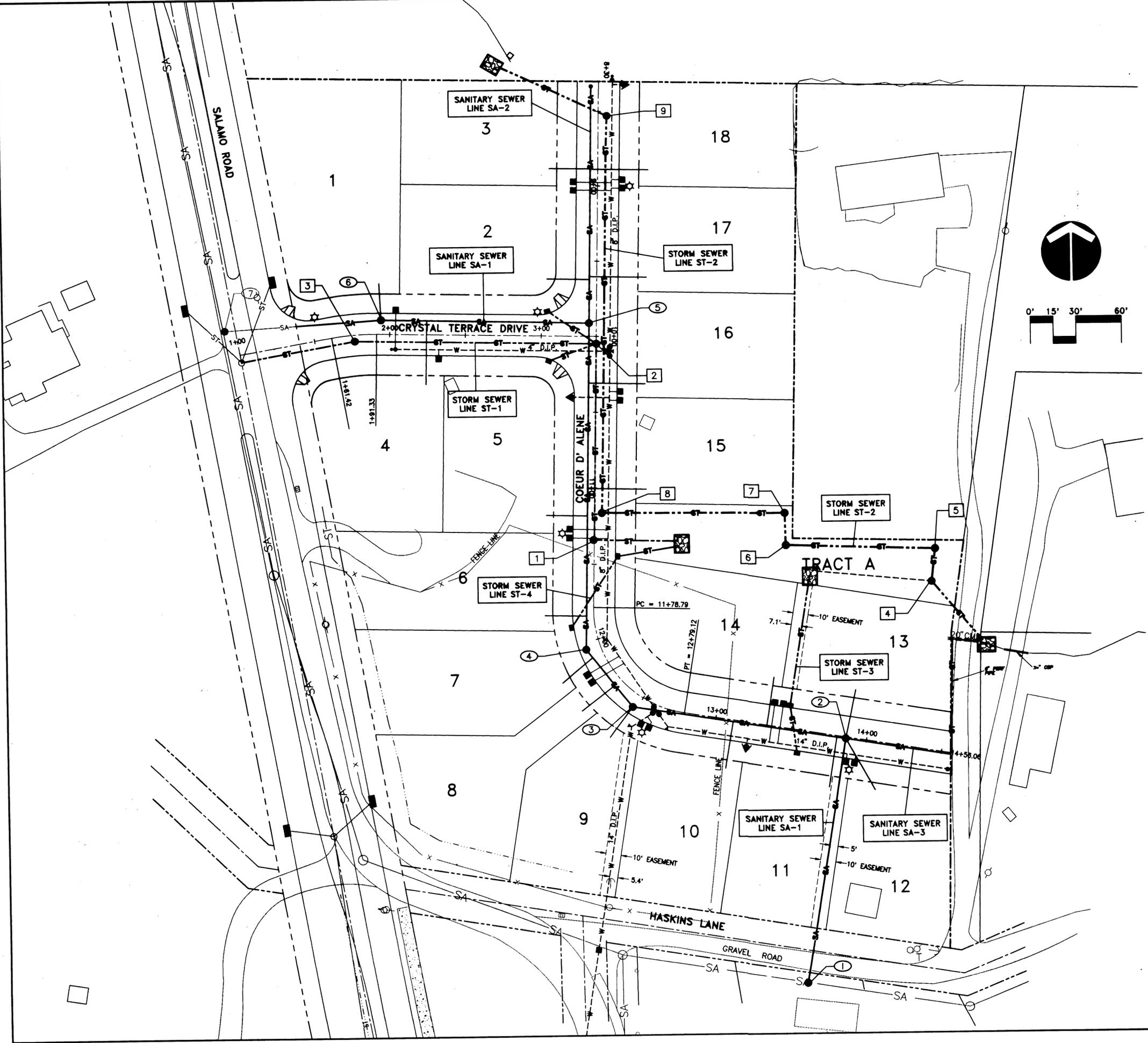
22595 DAY ROAD  
 WEST LINN, OREGON 97068  
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 WEST LINN, OREGON 97068  
 PHONE: (503) 650-4636  
 FAX: (503) 557-5677

**KOSS & BROADBENT GOODRICH**

**CRYSTAL TERRACE**  
 RESIDENTIAL SUBDIVISION  
 CITY OF WEST LINN OREGON  
 COMPOSITE UTILITY PLAN

**otak**  
 Incorporated  
 17365 SW Boones Ferry Rd.  
 Lake Oswego, Oregon 97035  
 Phone: (503) 635-3818  
 FAX: (503) 635-5385

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 Project No.  
 5477A02  
 File No.  
**2 OF 9**  
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**"AS-BUILT"**  
 DATE 07-17-97 BY JH

5477A02 1st Dwg. 4.06.26.1. JRG JEREMY HUDSON

XREF LIST  
 Ltacate: 1  
 Resolved:  
 D477X001  
 D477X340  
 D477X400  
 D477X430  
 D477X500  
 D477X630  
 Unresolved:



**LEGEND**

- 160— EXISTING CONTOUR
- - -180- - - PROPOSED CONTOUR
- 480 LOT NUMBER
- - - LIMITS OF CONSTRUCTION
- - - PROPOSED SEDIMENT FENCE
- ⊕ PROPOSED BIO-FILTER SEDIMENT BARRIER AT INLET
- PROPOSED GRAVEL CONSTRUCTION ENTRANCE
- TREES TO BE SAVED
- x - DETENTION POND FENCE
- + 438.16 FINAL GRADE SPOT SHOTS

**FENCE FABRICATORS**

REFERENCE: FENCING WATER RETENTION PONDS  
 SUBJECT: 4'-6" COLOR CHAIN LINK SPECIFICATIONS

**FABRIC:**  
 2' mesh, 8 gauge finish, polyvinyl coated, with an 11 gauge galvanized core wire per ASTM F668.

**POSTS, RAILS AND FRAMEWORK:**  
 Polyester color resin coating over galvanized pipe

**TOP RAIL:**  
 1 5/8" O.D. #1.8

**LINE POSTS:**  
 1 7/8" O.D. #2.2

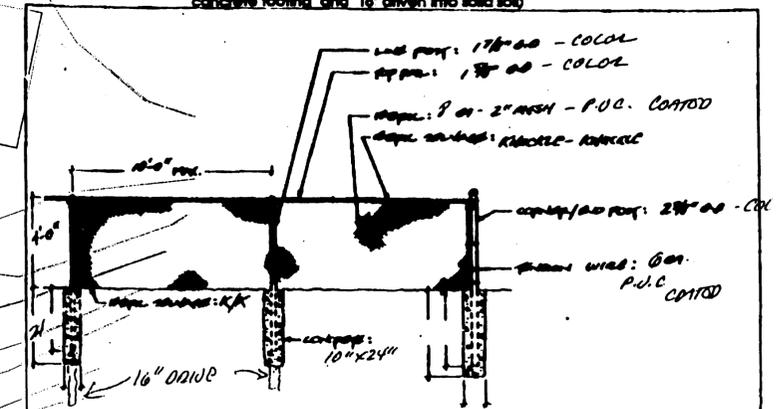
**TERMINAL POSTS:**  
 2 3/8" O.D. #2.8

**GATE POSTS:**  
 2 7/8" O.D. #6.79

**BOTTOM TENSION WIRE:**  
 6 gauge coil PVC coated

Color to be selected from standard colors by engineer

All fence posts to be set in ground minimum of 40" (24" in 10" diameter concrete footing and 16" driven into solid soil)



**4'-6" CHAIN LINK FENCING DETAIL**  
 STYLE: Approx - *See drawing for details*

"AS-BUILT"  
 DATE 2-17-97 BY *JH*

Date 06/14/96  
 G.S.  
 Designed G.S.  
 Drawn  
 Checked By Date  
  
 REGISTERED PROFESSIONAL ENGINEER  
 JAMES KENIA  
 LICENSE NO. 11417  
 EXPIRES JUNE 30, 1997

22995 DAY ROAD  
 WEST LINN, OREGON 97068  
 MAILING: 19363 WILLAMETTE DRIVE, #509  
 WEST LINN, OREGON 97068  
 PHONE: (503)-650-4636  
 FAX: (503)-557-5677

**KOSS & BROADGOODRICH**

CRYSTAL TERRACE  
 RESIDENTIAL SUBDIVISION  
 CITY OF WEST LINN OREGON  
 GRADING AND EROSION CONTROL,  
 TREE PRESERVATION PLAN

Incorporated  
 17355 SW Boones Ferry Rd.  
 Lake Oswego, Oregon 97035  
 Phone: (503) 635-3618  
 FAX: (503) 635-5395

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 Project No. 5477A03  
 File No. 3 OF 9  
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DATE: 06/14/96  
 Labeled: 1  
 Approved: [Signature]  
 D477001  
 Unapproved:

Date 06/14/96  
 Designed G.S.  
 Drawn G.S.  
 Checked By Date 7-26-96



22595 DAY ROAD  
 WEST LINN, OREGON 97068  
 MAILING: #509  
 19365 WILLAMETTE DRIVE, #509  
 WEST LINN, OREGON 97068  
 PHONE: (503)-650-4636  
 FAX: (503)-557-5677



CRYSTAL TERRACE  
 RESIDENTIAL SUBDIVISION  
 CITY OF WEST LINN OREGON  
 GRADING AND EROSION CONTROL  
 NOTES AND DETAILS



17365 SW Boones Ferry Rd.  
 Lake Oswego, Oregon 97035  
 Phone: (503) 635-9818  
 FAX: (503) 635-5395

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 Project No. 5477S04  
 File No. 4 OF 9  
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**EROSION CONTROL GENERAL NOTES**

APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, DETENTION 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 VEGETATION/LANDSCAPING IS ESTABLISHED.

THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE 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 ENSURE THEIR CONTINUED FUNCTIONING.

THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A STORM EVENT.

AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.

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.

**EROSION CONTROL AND POLLUTION CONTROL MEASURE**

**EROSION CONTROL MEASURES FOR DISTURBED AREAS:**

ALL DISTURBED SLOPES GREATER THAN 3:1 HAVE BEEN GRADED AND COMPACTED PRIOR TO OCTOBER 1ST SHALL BE HYDROSEEDING USING THE FOLLOWING SPECIFICATIONS:

SEEDING SHALL NOT BE DONE DURING WINDY WEATHER OR WHEN THE GROUND IS FROZEN, EXCESSIVELY WET OR OTHERWISE UNTILLABLE.

SEED MAY BE DOWN BY THE FOLLOWING METHOD:

HYDROSEEDING WHICH UTILIZED WATER AS THE CARRYING AGENT, AND MAINTAINS CONTINUOUS AGITATION THROUGH PADDLE BLADES. IT SHALL HAVE AN OPERATING CAPACITY SUFFICIENT TO AGITATE, SUSPEND AND MIX INTO A HOMOGENEOUS SLURRY OF THE SPECIFIED AMOUNT OF SEED AND WATER OR OTHER MATERIAL. DISTRIBUTION AND DISCHARGE LINES SHALL BE LARGE ENOUGH TO PREVENT STOPPAGE AND SHALL BE EQUIPPED WITH A SET OF HYDRAULIC DISCHARGE SPRAY NOZZLES WHICH WILL PROVIDE A UNIFORM DISTRIBUTION OF THE SLURRY.

GRASS SHALL BE SEED AT THE RATE OF NOT LESS THAN ONE HUNDRED THIRTY (130) POUNDS PER ACRE. SEED MIX SHALL INCLUDE:

STATE HIGHWAY ROADSIDE SEEDING MIX.

FERTILIZER SHALL BE APPLIED AT THE RATE OF 300 POUNDS PER ACRE.

- NITROGEN - 22%
- PHOSPHORIC ACID - 16%
- SOLUBLE POTASH - 8%

WOOD CELLULOSE FIBER SHALL BE APPLIED AT THE RATE OF ONE AND ONE (1-1/2) TONS PER ACRE.

THE EXACT TIME FOR SEEDING WILL BE DETERMINED BY ACTUAL WEATHER CONDITIONS. THE NORMAL SATISFACTORY PERIOD FOR SEEDING SHALL BE CONSIDERED BETWEEN MARCH 1 TO JUNE 1 AND SEPTEMBER 1 TO OCTOBER 1 UNLESS OTHERWISE AUTHORIZED BY THE OWNER EXCEPT THAT CONTRACTOR MAY PERFORM SEEDING OPERATIONS FROM JUNE 1 TO SEPTEMBER 1 PROVIDED THAT HE WATERS THE NEW GRASS TO THE SATISFACTION OF THE OWNER.

WHEN DELAYS IN OPERATIONS CARRY THE WORK BEYOND THE MOST FAVORABLE PLANTING SEASON, OR WHEN WEATHER CONDITIONS ARE SUCH THAT SATISFACTORY RESULTS ARE NOT LIKELY TO BE OBTAINED FOR ANY STAGE OF THE SEEDING OPERATIONS, THE CONTRACTOR WILL STOP THE WORK AND IT SHALL BE RESUMED ONLY WHEN THE DESIRED RESULTS ARE LIKELY TO BE OBTAINED. IF OPERATIONS EXTEND PAST OCTOBER 1 ALTERNATE HAY PLACEMENT AND SPRING SEEDING SHALL BE SUBSTITUTED.

THE CONTRACTOR SHALL PROTECT ALL SEEDED AREAS FROM EROSION UNTIL FINAL INSPECTION AND ACCEPTANCE HAS BEEN MADE. AREAS DAMAGED BY EROSION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

ALL DISTURBED AREAS WITH SLOPES LESS THAN 3:1 THAT HAVE BEEN GRADED AND COMPACTED SHALL BE SEED PRIOR TO OCTOBER 1, WITH THE SAME SEED AND FERTILIZER MIX AS USED IN HYDROSEEDING AND SPREAD EVENLY OVER THE SITE.

ALL DISTURBED AREAS NOT GRADED AND COMPACTED PRIOR TO OCTOBER 1, SHALL BE SEED WITH 200 LBS PER ACRE OF HIGHWAY MIX AND SPREAD WITH A HAY MULCH LAYER 1 1/2" TO 2" THICK.

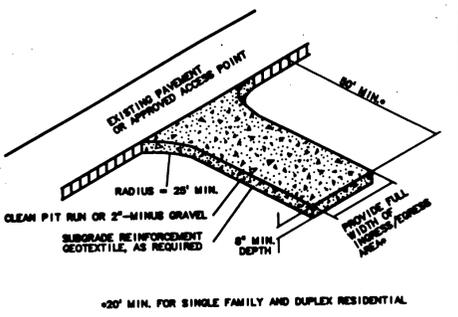
EROSION CONTROL PROTECTION SHALL BE CONSIDERED COMPLETE AND SUCCESSFUL WHEN A GRASS MAT HAS BEEN ESTABLISHED.

**ADDITIONAL TEMPORARY EROSION CONTROL (DURING CONSTRUCTION)**

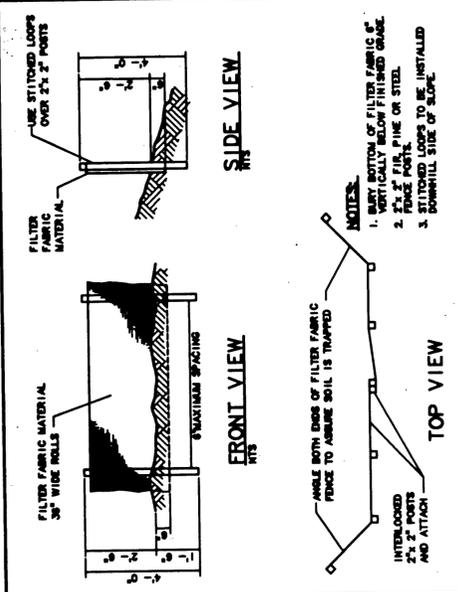
HAY BALES WILL BE PLACED AT THE TOP OF ALL MAJOR FILL SLOPES WHEN NECESSARY, TO PREVENT SILT FROM WASHING INTO EXISTING DRAINAGE WAYS. (SILTATION BARRIER).

TEMPORARY DITCHES WILL BE CONSTRUCTED AS NECESSARY TO ASSURE DRAINAGE IS CHANNLED TO THE FACILITIES BEING PROVIDED.

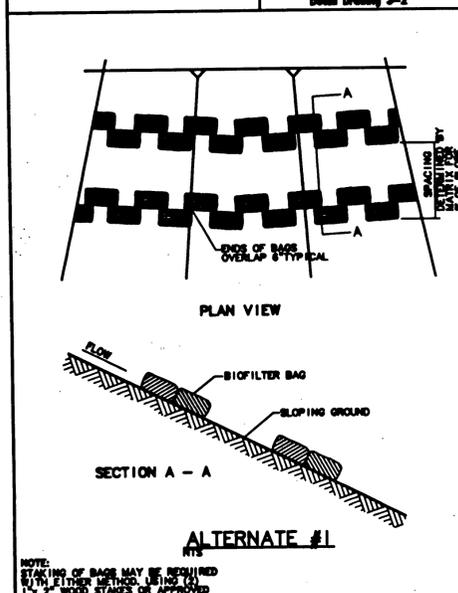
IF CONSTRUCTION TAKES PLACE DURING RAINY SEASON, HAY BALES AND "MIRAFI" 140 S FABRIC WILL BE REQUIRED AT ALL STORM DRAINAGE INLETS UNTIL ROCKING OF STRETCH IS COMPLETED AND DISTURBED SLOPES STABILIZED BY HYDROSEEDING.



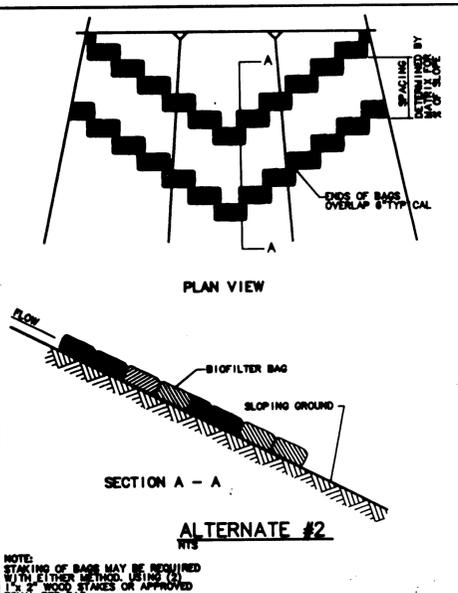
Gravel Construction Entrance  
 Detail Drawing 2-1A



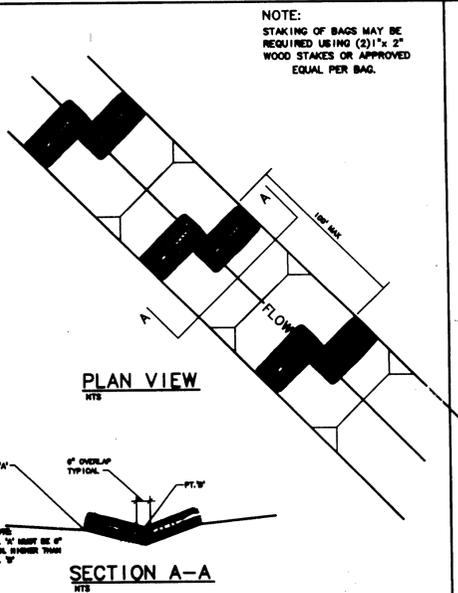
Sediment Fence  
 Detail Drawing 2-2



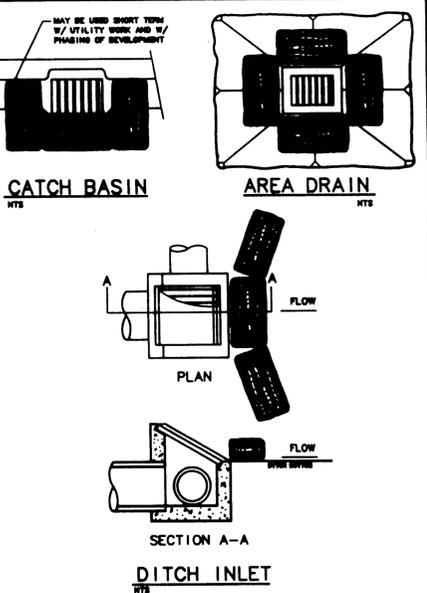
Biofilter Bag  
 Detail Drawing 2-3



Biofilter Bag  
 Detail Drawing 2-3C



Ditch Inlet  
 Detail Drawing 2-7D



Catch Basin  
 Area Drain  
 Ditch Inlet  
 Detail Drawing 2-7D

**EROSION CONTROL MATRIX**

EROSION MEASURES	SITE SITUATION													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
GRAVEL CONSTRUCTION ENTRANCE														
SEDIMENT FENCE/BARRIER AT TOE OF DISTURBED AREA OR STOCKPILE														
SIDEWALK SUBGRADE GRAVEL BARRIER (SITE SLOPES TO STREET AT <5% GRADE) ALTERNATE TO #2														
UNDISTURBED BUFFER AT TOE OF DISTURBED AREAS (ALTERNATE TO #2) (SITE SLOPES <10%)														
SEDIMENT FENCE OR BARRIER INSTALLED ON CONTOURS (SPACING)														
TEMP. INTERCEPTOR DITCHES/SWALES AROUND ACTIVE WORK AREAS														
CHECK DAMS														
STORM DRAIN INLET PROTECTION BARRIER														
6-MIL PLASTIC SHEET COVER														
2\"/>														
EROSION BLANKETS WITH ANCHORS														
SEDIMENT TRAP OR POND														
RE-ESTABLISH VEGETATION OR LANDSCAPE PRIOR TO REMOVAL OF EROSION CONTROL MEASURES														
SINGLE FAMILY/DUPLEX RESIDENTIAL SLOPE <2% STOCK PILES	X	X		A(2)	X									X
COMMERCIAL SUBDIVISION LARGE SITE CONSTRUCTION SITE SLOPE <2% SITE SLOPE <10% SITE SLOPE <15% SITE SLOPE <20% SITE SLOPE <30% SITE SLOPE <50% STOCK PILE SLOPE >50%	X	X	X	A(2)	X	X	X	X	X	X	X	X	X	X
UTILITIES CONSTRUCTION CATCH BASIN DRAINAGE DITCH DRAINAGE									X	X				X
STOCK PILES STOCK PILES														
DITCHES/SWALES (CONSTRUCTION/PROTECTION)	X								X					X

KEY: X = BASE MEASURE A = ALTERNATE TO BASE MEASURE INDICATED IN PARENTHESIS # = OPTIONAL BASE MEASURE CAN USE AS APPLICABLE  
 \* = SUPPLEMENTAL WET WEATHER MEASURE (NOVEMBER 1-APRIL 30) (SEEDING PRIOR TO SEPTEMBER 1) O = ALTERNATE WET WEATHER MEASURE TO \*



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WEST LINN, OREGON 97068  
MAILING:  
19363 WILLAMETTE DRIVE #509  
WEST LINN, OREGON 97068  
PHONE: (503) 650-4636  
FAX: (503) 557-5677



CRYSTAL TERRACE  
RESIDENTIAL SUBDIVISION  
CITY OF WEST LINN OREGON  
STREET AND STORM DRAINAGE PLAN



Incorporated  
17356 SW Boones Ferry Rd.  
Lake Oswego, Oregon 97035  
Phone: (503) 635-3618  
FAX: (503) 635-5395

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CONSTRUCTION NOTES

- ① CONSTRUCT CURB AND GUTTER PER CITY OF WEST LINN STD. DWG. NO CG-265
- ② CONSTRUCT SIDEWALK RAMP PER CITY OF WEST LINN STD. DWG. NO CS-271
- ③ INSTALL STREET BARRICADE TYPE 111 PER CITY OF WEST LINN STD. DWG. NO SB-276

CENTERLINE CURVE DATA

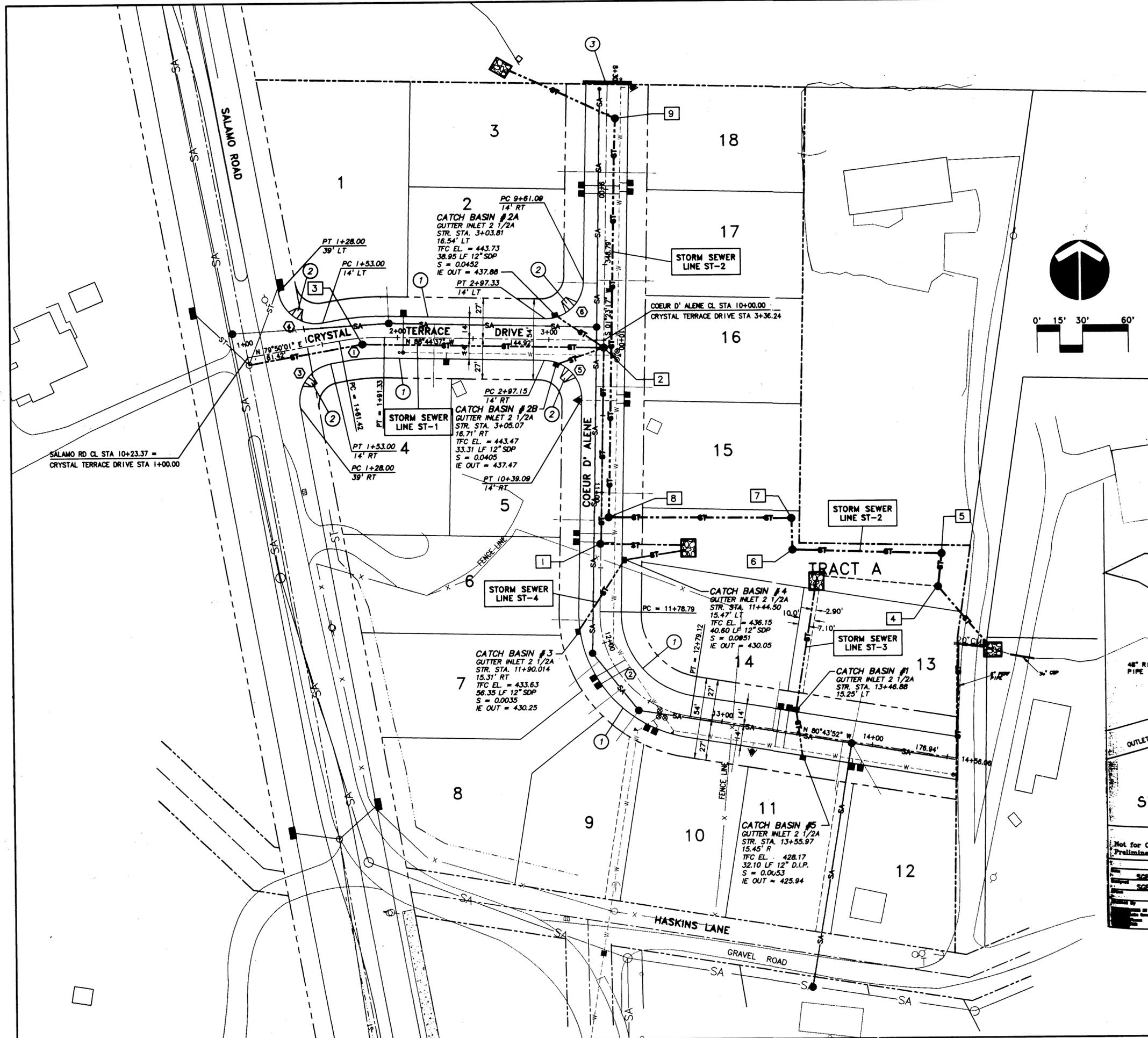
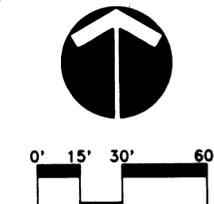
CURVE	RADIUS	LENGTH	DELTA
1	150.00'	29.90'	11°25'22"
2	70.00'	100.33'	82°07'08"

CURB RETURN CURVE DATA

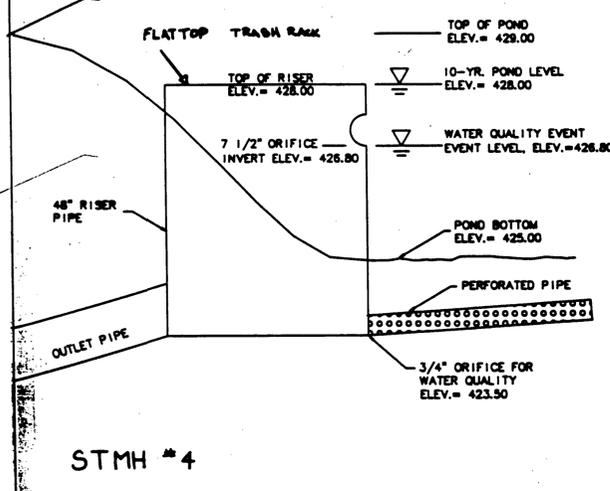
CURVE	RADIUS	LENGTH	DELTA
3	25.00'	39.27'	90°00'00"
4	25.00'	39.27'	90°00'00"
5	25.00'	39.33'	90°07'54"
6	25.00'	39.21'	89°52'08"

TOP OF CURB ELEVATIONS

CURVE	P.C.	1/4	1/2	3/4	P.T.
3	458.15	458.18	458.01	457.87	457.14
4	457.14	457.73	458.32	458.84	459.09
5	443.78	443.33	442.90	442.48	441.88
6	448.18	445.52	444.51	443.72	443.75



CRYSTAL TERRACE  
DETENTION POND



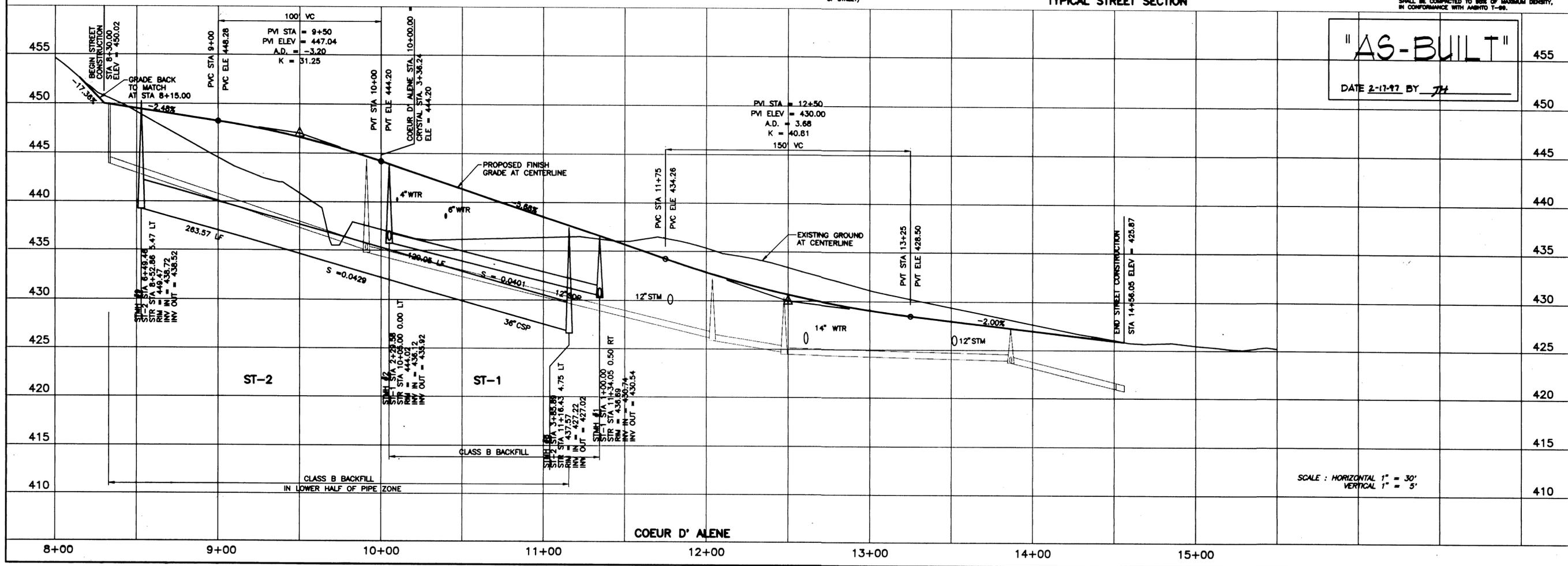
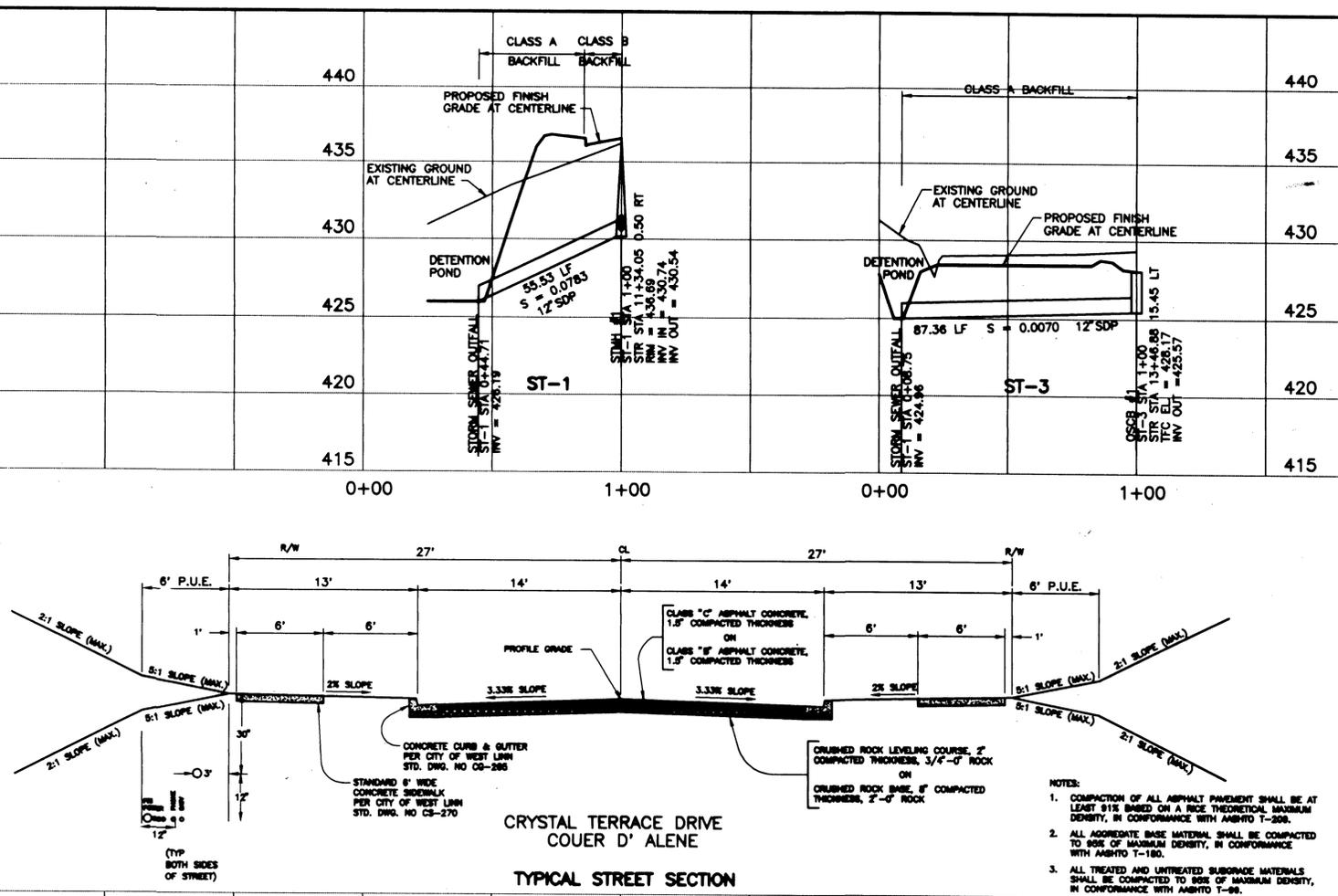
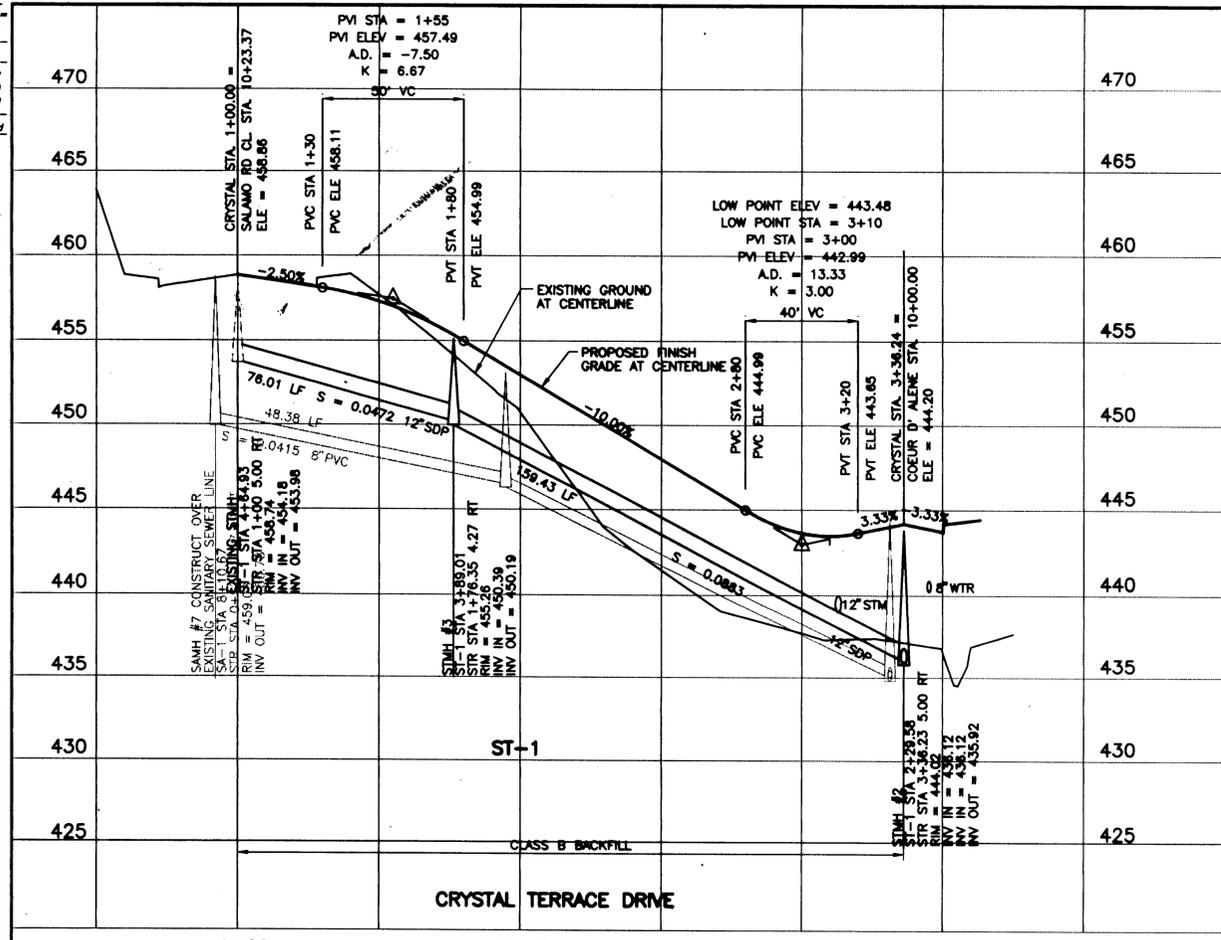
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Otak  
CRYSTAL TERRACE  
DETENTION POND

5477  
DETPOND  
1

"AS-BUILT"  
DATE 2-17-97 BY JH

XREF LIST  
 Lscale: 1  
 Resolved  
 D477X002  
 D477X500  
 D477X900  
 Unresolved



"AS-BUILT"  
 DATE 2-17-97 BY JH

SCALE: HORIZONTAL 1" = 30'  
 VERTICAL 1" = 5'

Date 06/14/96  
 Designed G.S.  
 Drawn G.S.  
 Checked By Date



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 WEST LINN, OREGON 97068  
 PHONE: (503) 650-4636  
 FAX: (503) 557-5677



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 CITY OF WEST LINN OREGON  
 STREET AND STORM SEWER PROFILES  
 TYPICAL STREET SECTION



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 Lake Oswego, Oregon 97035  
 Phone: (503) 636-3618  
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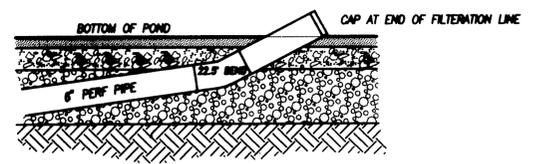
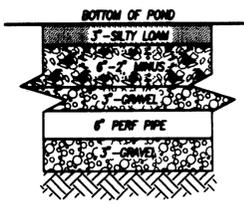
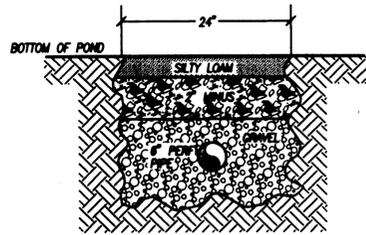
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 Project No. 5477A06  
 File No. 6 OF 9  
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XREF LIST  
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 Resolved  
 D477002  
 D477000  
 D477000  
 Unresolved



SCALE: HORIZONTAL 1" = 30'  
VERTICAL 1" = 5'

**PERF PIPE DETAILS**  
NOT TO SCALE



"AS-BUILT"  
 DATE 2-17-97 BY JH

06/14/96  
 Date  
 G.S.  
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 G.S.  
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**KOSS & BROADBENT GOODRICH**

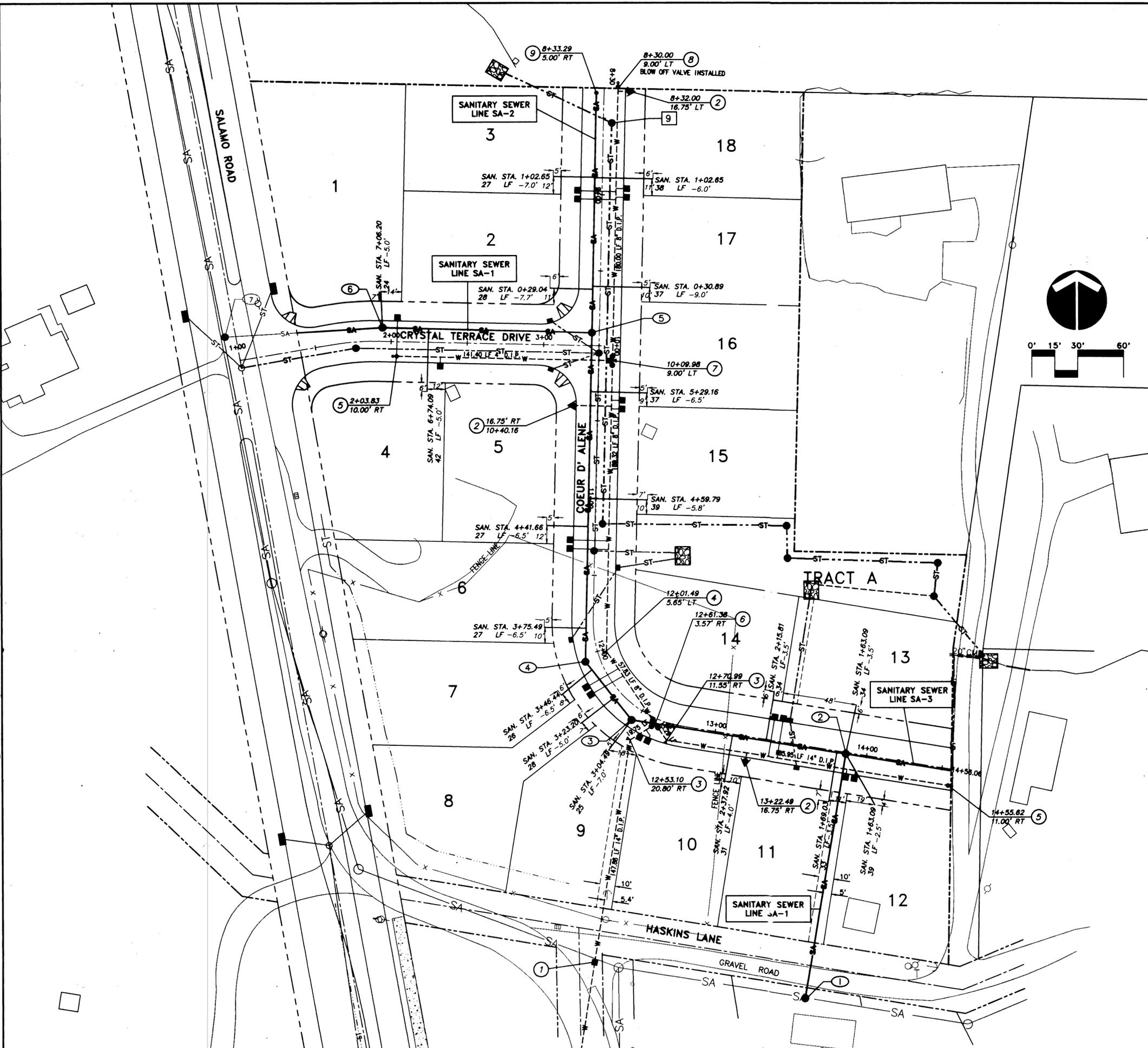
CRYSTAL TERRACE  
 RESIDENTIAL SUBDIVISION OREGON  
 CITY OF WEST LINN  
 STORM SEWER PROFILES

Incorporated  
 17355 SW Boones Ferry Rd.  
 Lake Oswego, Oregon 97035  
 Phone: (503) 636-3618  
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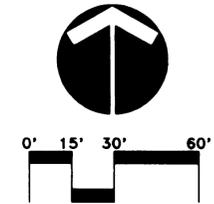
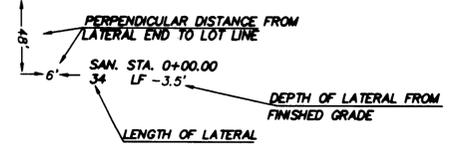
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XREF LIST  
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 Resolved  
 D477X001  
 D477X230  
 D477X500  
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 D477X620  
 D477X630  
 D477X690  
 Unresolved



**CONSTRUCTION NOTES**

- ① REMOVE EXISTING BLOW OFF ASSEMBLY AND CONNECT NEW 14" D.I.P. WATER LINE WITH 11.25' BEND AND THRUST BLOCK PER DETAIL ON SHEET 10
- ② INSTALL FIRE HYDRANT ASSEMBLY PER DETAIL ON SHEET 10
- ③ INSTALL 1 - 14" 45° BEND AND THRUST BLOCK PER DETAIL ON SHEET 10
- ④ INSTALL 1 - 8" 22.5° AND 11.25° BEND AND THRUST BLOCK PER DETAIL ON SHEET 10
- ⑤ INSTALL 2" BLOW OFF ASSEMBLY PER DETAIL ON SHEET 10
- ⑥ INSTALL 14" TEE, 14" x 8" REDUCER, 2-14" GATE VALVES 1 - 8" GATE VALVE AND THRUST BLOCK
- ⑦ INSTALL 8" x 8" x 4" TEE, 2-8" GATE VALVES, 1 - 4" GATE VALVE AND THRUST BLOCK
- ⑧ PLUG END OF WATERLINE
- ⑨ INSTALL SANITARY SEWER CLEANOUT



06/14/96  
 Date  
 G.S.  
 Designed  
 G.S.  
 Drawn  
 Checked By Date  
 REGISTERED PROFESSIONAL ENGINEER  
 FEBRUARY 26, 1991  
 E. FARES KEVILA  
 EXPIRES JUNE 30, 1997

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 WEST LINN, OREGON 97068  
 MAILING:  
 19363 WILLAMETTE DRIVE, #509  
 WEST LINN, OREGON 97068  
 PHONE: (503)-650-4636  
 FAX: (503)-557-5677

**KOSS & BROADBENT GOODRICH**

CRYSTAL TERRACE  
 RESIDENTIAL SUBDIVISION  
 CITY OF WEST LINN OREGON  
 SANITARY SEWER AND WATER PLAN

**otak**  
 Incorporated  
 17955 SW Boones Ferry Rd.  
 Lake Oswego, Oregon 97035  
 Phone: (503) 636-3618  
 FAX: (503) 636-5395

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