

REF LIST  
 Ltscale: 1  
 Resolved  
 C-438X001  
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**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "CITY OF WEST LINN STREET/UTILITY DESIGN AND CONSTRUCTION STANDARDS", DATED JULY 14, 1988. ALL STREET, STORM SEWER AND SANITARY SEWER CONSTRUCTION THAT IS NOT ADDRESSED IN THE CITY'S STANDARDS SHALL BE IN ACCORDANCE WITH APWA STANDARDS. ALL WATER SYSTEM CONSTRUCTION THAT IS NOT ADDRESSED IN THE CITY'S STANDARDS SHALL BE IN ACCORDANCE WITH AWWA STANDARDS.
- PRIOR TO ANY CONSTRUCTION, LOCATIONS OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR. WHEN 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 SHALL BE COMPACTED TO THE SAME STANDARD. LANDSCAPE AREAS SHALL BE COMPACTED TO 90 PERCENT. THE CONTRACTOR SHALL 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 SHALL 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 SHALL 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.
- THE FOLLOWING CITY OF WEST LINN DETAILS SHALL BE USED AS SPECIFIED IN THE PLANS:  
 STANDARD MANHOLE - DWG. NO. MH-209  
 MANHOLE FRAME & COVER - DWG. NO. MH-212  
 CONCRETE SIDEWALK - DWG. NO. CS-270  
 SIDEWALK RAMP - DWG. NO. CS-271  
 PEDESTRIAN PATH - DWG. NO. PP-272  
 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
- DURING CONSTRUCTION, ALL EROSION CONTROL MEASURES SHALL CONFORM TO CLACKAMAS COUNTY EROSION CONTROL STANDARDS AND WILL BE STRICTLY ENFORCED.
- ALL AGGREGATE MATERIAL SHALL CONFORM TO APWA STANDARDS.
- 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. STAKING REQUESTS FROM AUTHORIZED REPRESENTATIVE SHALL BE MADE TO DAVE LIDEN AT OTAK (699-2401) AT LEAST 24 HOURS IN ADVANCE OF THE NEED FOR SAID STAKES. ONLY REQUESTS FROM AUTHORIZED REPRESENTATIVES WILL BE HONORED. ANY RESTAKING WILL BE DONE AT THE EXPENSE OF THE CONTRACTOR.

**STORM/SANITARY SEWERS:**

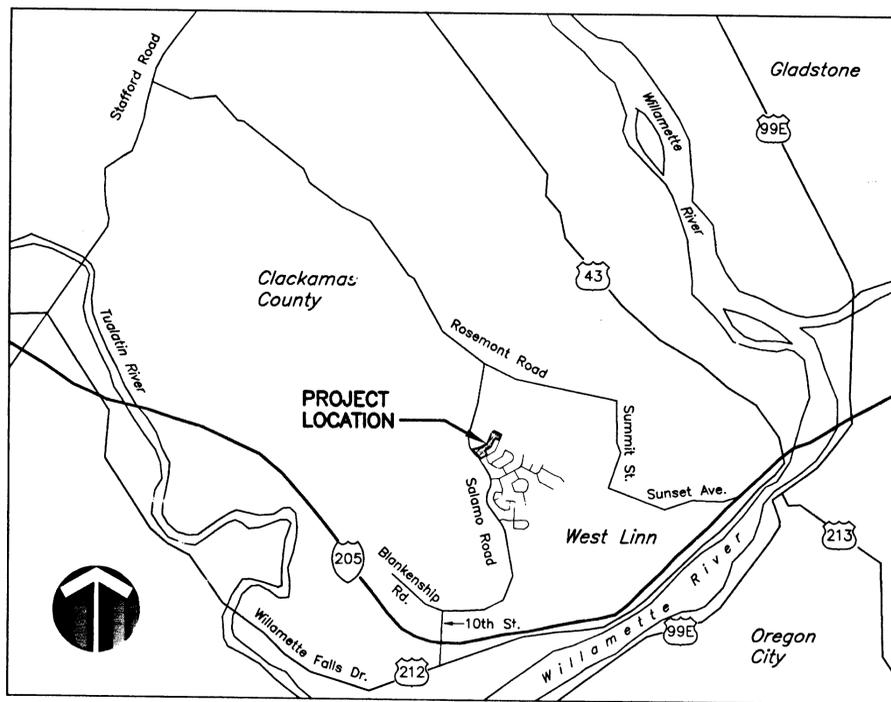
- MANHOLE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF WEST LINN'S STANDARDS. PRECAST BASES WILL NOT BE PERMITTED FOR MANHOLES.
- TRENCH BACKFILL IN PAVED AREAS WILL BE 3/4-INCH TO 0-INCH CRUSHED ROCK COMPACTED TO 95 PERCENT RELATIVE MAXIMUM DENSITY, AASHTO T-99.
- ALL SANITARY SEWER AND STORM SEWER PIPE SHALL BE PVC IN ACCORDANCE WITH ASTM SPECIFICATIONS D-3033 AND D-3034.
- SANITARY SEWER SERVICES SHALL BE 4-INCH PVC WITH A SLOPE OF 2%, UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED.
- 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 SANITARY SEWER LINES MUST BE TESTED AND APPROVED PRIOR TO CONNECTING TO CITY OF WEST LINN'S SANITARY SEWER SYSTEM.

**WATERLINES:**

- ALL WATER PIPE AND FITTINGS SHALL BE DUCTILE IRON, CLASS 52 AND SHALL BE IN CONFORMANCE WITH THE CITY OF WEST LINN'S STANDARDS.
- 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.
- ALL WATER LINES MUST BE TESTED AND APPROVED PRIOR TO CONNECTING TO CITY OF WEST LINN'S WATER SYSTEM.
- MINIMUM COVER OVER WATERLINES IS TO BE 36" AS MEASURED FROM FINISH GRADE TO TOP OF PIPE. MINIMUM VERTICAL SEPARATION BETWEEN WATERLINE AND SANITARY SEWER AT A CROSSING IS 18". SANITARY SEWER AT WATERLINE CROSSINGS WITH LESS THAN THE MINIMUM VERTICAL SEPARATION SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH WATERTIGHT JOINTS. IN SUCH CASES THE 18-FOOT LENGTH OF SANITARY SEWER SHALL BE CENTERED AT THE CROSSING.
- 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.
- ALL WATER SERVICES SHALL BE SEPARATED BY A MINIMUM OF 2' AT THE MAINLINE.

# CASCADE SUMMIT TOWN HOMES PHASE 2 CITY OF WEST LINN

## SANITARY SEWER, STORM SEWER, WATERLINE AND DRIVEWAY CONSTRUCTION



**VICINITY MAP**  
 NOT TO SCALE

These As-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.F. KEKHIA  
 Signature  
 Date 1/20/98

A TRAFFIC CONTROL PLAN IS REQUIRED TO BE SUBMITTED AND APPROVED BY THE CITY OF WEST LINN PRIOR TO ANY DEVELOPMENT RELATED ACTIVITIES WITHIN CITY STREETS.

**SHEET INDEX**

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

**LEGEND**

- PROPERTY BOUNDARY
- RIGHT-OF-WAY LINE
- SETBACK LINE
- EASEMENT LINE
- 620 EXISTING CONTOUR
- 620 PROPOSED CONTOUR
- 620 SPOT ELEVATION
- W WATER LINE
- SA SANITARY SEWER LINE
- ST STORM SEWER LINE
- MANHOLE
- STORM INLET
- ⊗ GATE VALVE
- ◆ FIRE HYDRANT
- ⊗ BLOW-OFF ASSEMBLY
- WATER SERVICE

NOTE: EXISTING FEATURES ARE SHOWN SCREENED OR SHADED. EXISTING UTILITY LINES ARE SHOWN DASHED.

**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 LID. ELEV. = 667.22.

**LOCATING EXISTING UTILITIES**

--- 48 HOUR NOTICE REQUIRED PRIOR TO EXCAVATION ---

ONE CALL SYSTEM (GENERAL TELEPHONE, NORTHWEST NATURAL GAS, U.S. WEST, U.S. SPRINT)	246-6699
PORTLAND GENERAL ELECTRIC	643-5454, EXT. 312, 313, 314
TCI CABLE TELEVISION	243-7491
REPAIR EMERGENCIES	
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 LOCATING AND PROTECTING UNDERGROUND UTILITIES, MUST COMPLY WITH THE REGULATIONS OF O.R.S. 757.541 TO 757.571

**AS BUILT**  
 BY: D. Singer DATE: 1/20/98

3/03/97  
 Date RSD  
 Designed RSD  
 Drawn  
 Checked By Date  
 Plot Date - Time  
 3-6-97  
  
 M. FARES KEKHIA  
 EXPIRES JUNE 30, 1997

2108 WILLAMETTE DRIVE  
 WEST LINN, OREGON 97068  
 PHONE: (503) 650-4636

**KOSS & BROS. ASSOCIATES**  
**GOODRICH**

CASCADE SUMMIT TOWN HOMES  
 PHASE 2  
 CITY OF WEST LINN, OREGON  
 TITLE SHEET



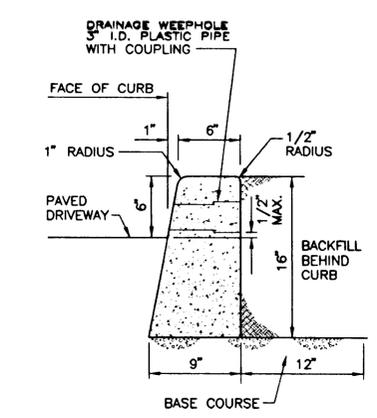
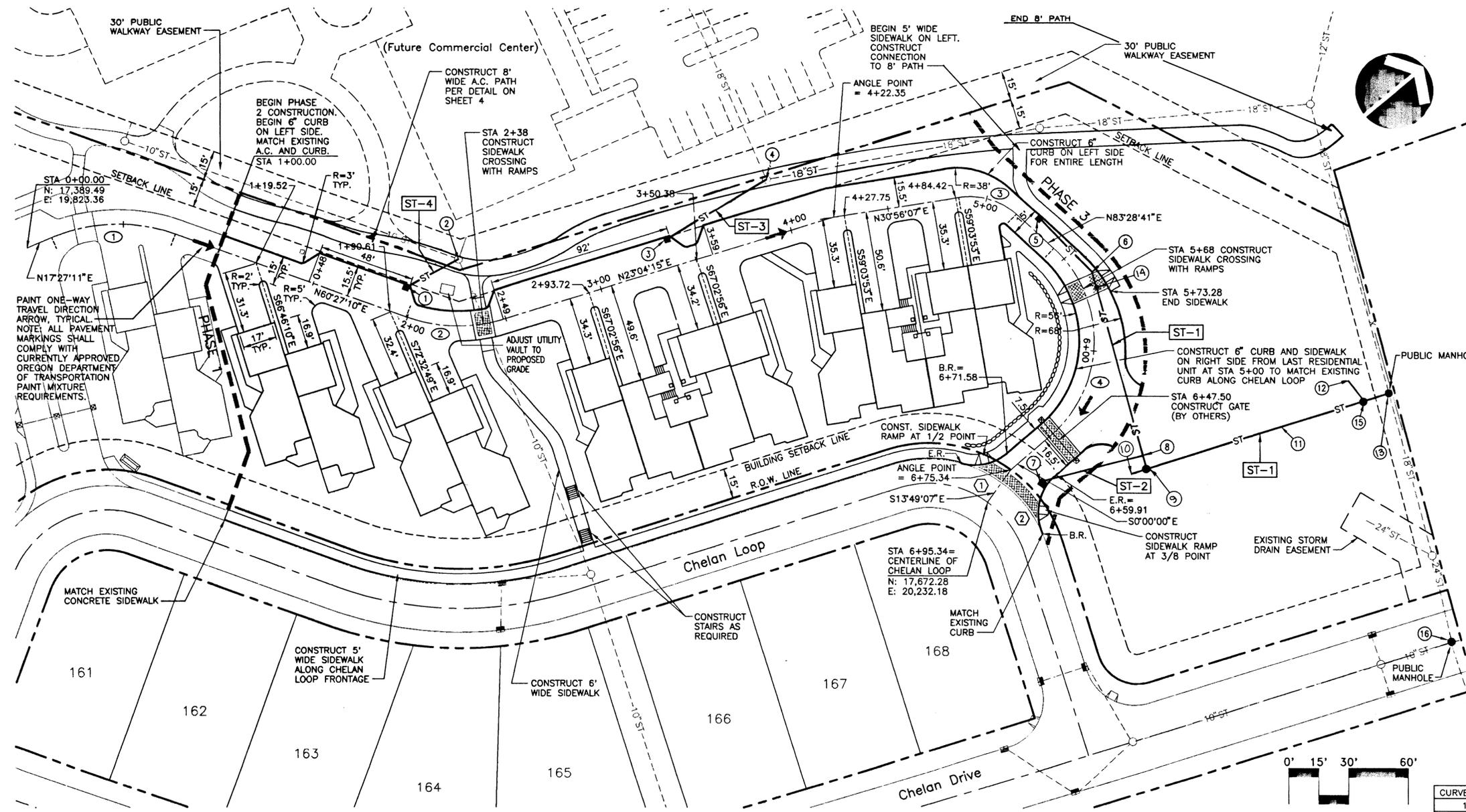
17355 SW Boones Ferry Rd.  
 Lake Oswego, Oregon 97035  
 Phone: (503) 635-3818  
 FAX: (503) 635-5395

L5438  
 Project No.  
 C438S001  
 File No.  
 1  
 Sheet No.

M.F.K

CASCADE SUMMIT  
 TOWNHOMES

XREF LIST  
 Ltscale: 1  
 Resolved:  
 C438X001  
 C438X104  
 C438X200  
 C438X300  
 C438X301  
 C438X600  
 C438X680  
 Unresolved:



- NOTES:
- CONCRETE TO HAVE COMPRESSIVE STRENGTH OF 4000 P.S.I. AFTER 28 DAYS.
  - EXPANSION JOINTS:
    - AT EACH POINT OF TANGENCY OF THE CURB.
    - AT EACH COLD JOINT.
    - AT EACH SIDE OF INLET STRUCTURES.
    - AT EACH END OF DRIVEWAYS.
  - CONTRACTION JOINTS:
    - SPACING TO BE NOT MORE THAN 15 FEET.
    - THE DEPTH OF THE JOINT SHALL BE AT LEAST 1-1/2 INCHES.
    - WEEPHOLE TO BE CENTERED WITH CONTRACTION JOINTS.
  - BASE ROCK 2'-0" OR 3'-4" -0.95% COMPACTION (ASHTO T-99). BASE ROCK SHALL BE TO SUBGRADE OF PARKING STRUCTURE OR 4" IN DEPTH WHICHEVER IS GREATER. SUBGRADE ROCK TO EXTEND 12" BEHIND CURB.

6" CURB  
N.T.S.

CURB RETURN CURVE DATA

CURVE	RADIUS	LENGTH	DELTA
1	25.00'	24.24'	55°32'47"
2	25.00'	32.05'	73°27'03"

BOTTOM CURB FACE ELEVATION

CURVE	B.R.	1/4	1/2	3/4	E.R.
1	609.13	608.96	609.17	609.54	609.91
2	606.54	607.17	608.08	608.90	609.28

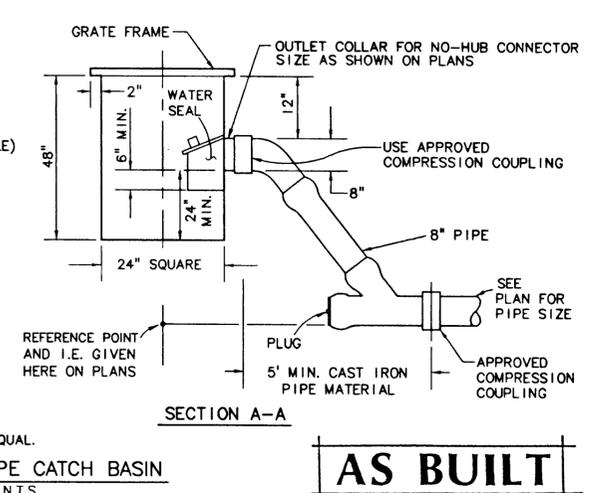
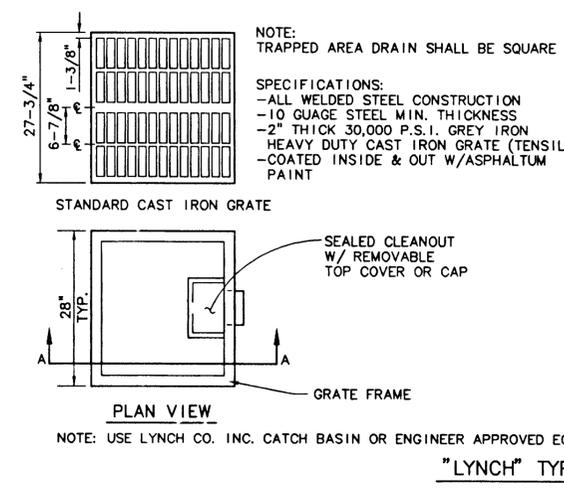
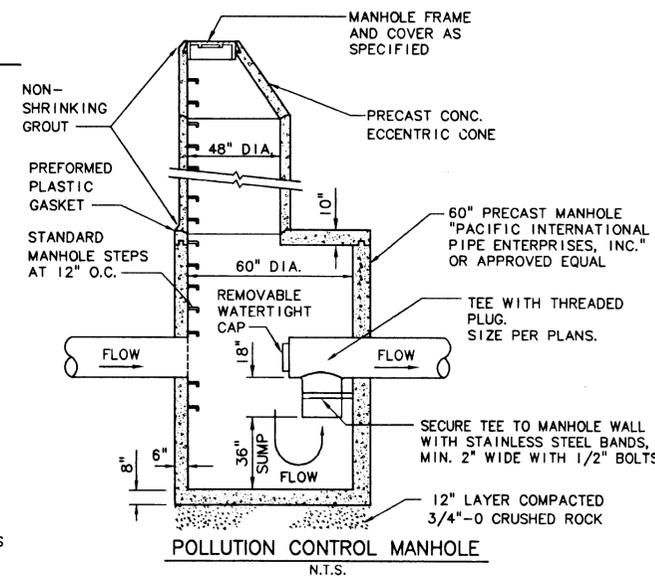
CENTERLINE CURVE DATA

CURVE NO.	PC	PT	RADIUS	LENGTH	DELTA
1	0+13.43	0+76.47	84.00'	63.04'	42°59'59"
2	1+99.42	2+48.72	75.55'	49.30'	37°22'55"
3	4+86.01	5+17.19	34.00'	31.18'	52°32'34"
4	5+42.66	6+49.63	63.50'	106.97'	96°31'19"

**STORM SEWER CONSTRUCTION NOTES**

- ST-4 STA. 0+29.32 = DRIVEWAY STA. 0+94.50, 15.50' LT. CATCH BASIN #4
- ST-4 STA. 0+00.00 CONNECT TO EXISTING MANHOLE, ADJUST RIM
- ST-3 STA. 0+58.27 DRIVEWAY STA. 3+39.59, 15.50' LT. CATCH BASIN #3
- ST-3 STA. 0+00.00 CONNECT TO EXISTING MANHOLE, ADJUST RIM
- ST-1 STA. 2+64.60 DRIVEWAY STA. 5+27.19, 7.50' LT. CATCH BASIN #1
- ST-1 STA. 2+29.50 DRIVEWAY STA. 5+62±, 8'± LT. 22'-1/2" BEND
- ST-2 STA. 0+52 DRIVEWAY STA. 6+67±, 16± LT. CATCH BASIN #2
- ST-1 STA. 1+34.50 = ST-2 STA. 0+00.00 10" TEE/WYE
- ST-1 STA. 1+27.50 STANDARD MANHOLE
- 10' LONG STUB WITH CAPPED END, 10" PIPE (FOR FUTURE AREA DRAIN)
- CONSTRUCT 36" DIAMETER CONCRETE PIPE WITH 36"x12" REDUCER AT UPSTREAM END. THIS PIPE IS FOR STORMWATER DETENTION.
- 10' LONG STUB WITH CAPPED END, 10" PIPE IE = 601.09 AT END (FOR FUTURE BUILDING ROOF DRAIN)
- ST-1 STA. 0+00.00 CONSTRUCT POLLUTION CONTROL MANHOLE PER DETAIL ON THIS SHEET OVER EXISTING 18" STORM SEWER PIPE
- ST-1 STA. 2+21.50 CONSTRUCT CLEANOUT
- ST-1 STA. 0+13.50 CONSTRUCT ORIFICE MANHOLE PER DETAIL ON SHEET 5
- REMOVE EXISTING MANHOLE AND CONSTRUCT POLLUTION CONTROL MANHOLE PER DETAIL ON THIS SHEET  
IE IN = 588.7 (EXISTING 24" WEST)  
IE IN = 589.9 (EXISTING 10" SOUTH)  
IE OUT = 588.5 (EXISTING 24" EAST)

NOTE: ALL PROPOSED STORM SEWER FACILITIES ARE PRIVATE UNLESS OTHERWISE NOTED.



Date: 3/03/97  
 Designed: RSD  
 Drawn: RSD  
 Checked By: Date  
 Plot Date - Time: 3-6-97  
 REGISTERED PROFESSIONAL ENGINEER  
 SEPTEMBER 28, 1984  
 M. PARES KENYA  
 EXPIRES JUNE 30, 1997

2108 WILLAMETTE DRIVE  
 WEST LINN, OREGON 97068  
 PHONE: (503)-650-4636

**KOSS & BROADBENT ASSOCIATES**  
**GOODRICH**

**CASCADE SUMMIT TOWN HOMES**  
 PHASE 2  
 CITY OF WEST LINN, OREGON  
 SITE AND STORM SEWER PLAN

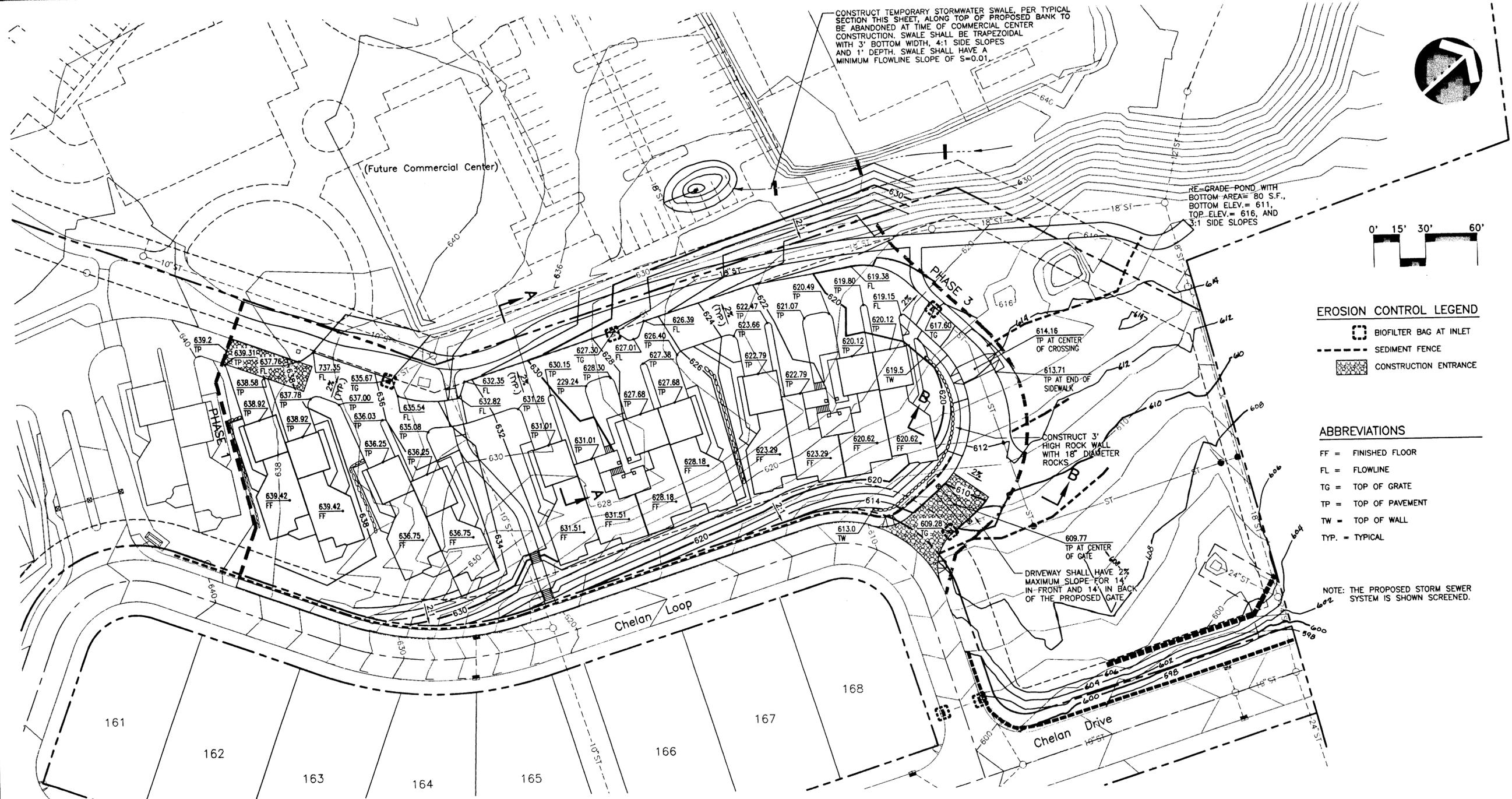
**otak**  
 Incorporated  
 17355 SW Boones Ferry Rd  
 Lake Oswego, Oregon 97035  
 Phone: (503) 635-3618  
 FAX: (503) 635-5395

Project No. L5438  
 File No. C438S002  
 Sheet No. 2

**AS BUILT**  
 BY: D. Singer DATE: 11/20/98

M.F.K

REF. LIST  
 Scale: 1" = 40'  
 Unresolved  
 4.38X001  
 4.38X104  
 4.38X200  
 4.38X300  
 4.38X301  
 4.38X400  
 4.38X430  
 4.38X600  
 4.38X680  
 Unresolved



3/03/97  
 Date  
 Designed RSD  
 Drawn RSD  
 Checked By Date  
 Plot Date - Time  
 3-6-97  
 REGISTERED PROFESSIONAL  
 ENGINEER  
 17447  
 J. S. FARNS  
 SEPTEMBER 26, 1994  
 EXPIRES JUNE 30, 1997

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

**KOSS & BROAD ASSOCIATES**  
**GOODRICH**

CASCADE SUMMIT TOWN HOMES  
 PHASE 2  
 CITY OF WEST LINN, OREGON  
 GRADING AND EROSION CONTROL PLAN

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L5438  
 Project No.  
 C438S003  
 File No.  
 3  
 Sheet No.

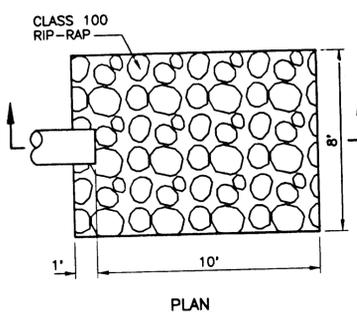
**EROSION CONTROL LEGEND**

- BIOFILTER BAG AT INLET
- SEDIMENT FENCE
- CONSTRUCTION ENTRANCE

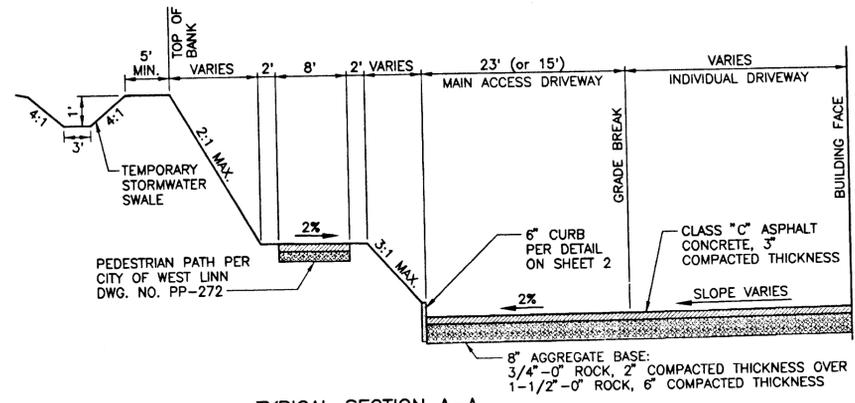
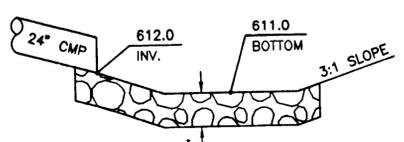
**ABBREVIATIONS**

- FF = FINISHED FLOOR
- FL = FLOWLINE
- TG = TOP OF GRATE
- TP = TOP OF PAVEMENT
- TW = TOP OF WALL
- TYP. = TYPICAL

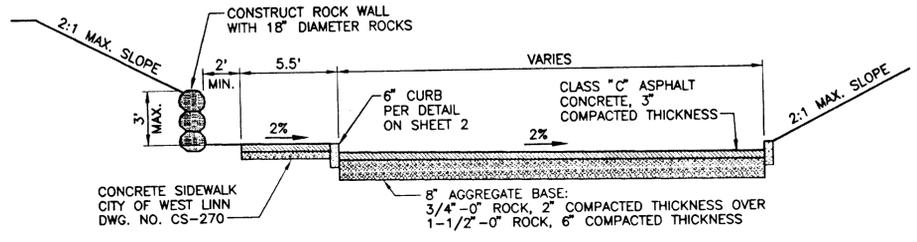
NOTE: THE PROPOSED STORM SEWER SYSTEM IS SHOWN SCREENED.



RIP-RAP OUTFALL  
 N.T.S.



TYPICAL SECTION A-A  
 N.T.S.



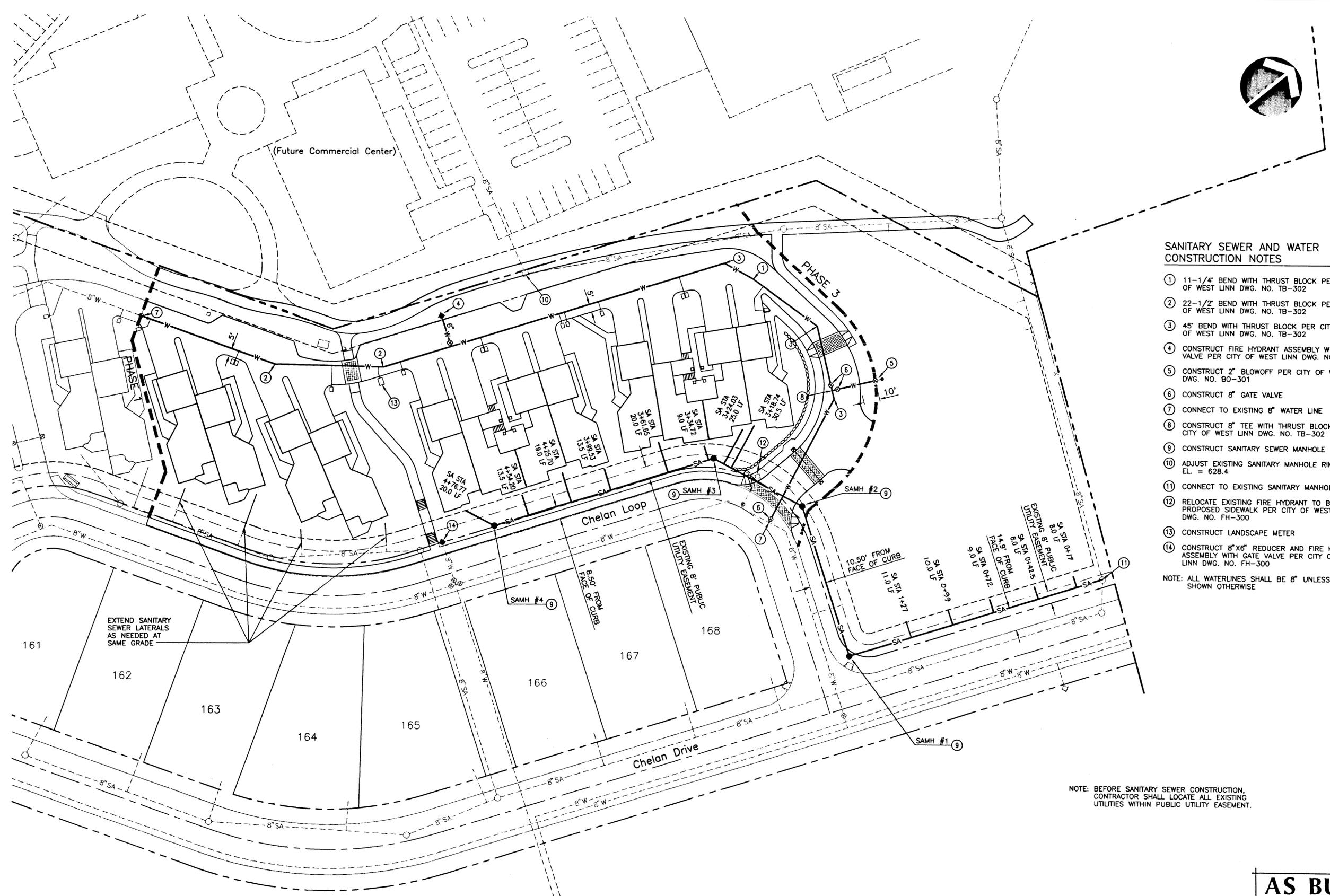
TYPICAL SECTION B-B  
 N.T.S.

**AS BUILT**

By: D. Singer DATE: 1/22/98

M.F.K

REF LIST  
 scale: 1  
 38X001  
 38X104  
 38X200  
 38X300  
 38X301  
 38X600  
 38X680  
 resolved



**SANITARY SEWER AND WATER  
 CONSTRUCTION NOTES**

- ① 11-1/4" BEND WITH THRUST BLOCK PER CITY OF WEST LINN DWG. NO. TB-302
- ② 22-1/2" BEND WITH THRUST BLOCK PER CITY OF WEST LINN DWG. NO. TB-302
- ③ 45' BEND WITH THRUST BLOCK PER CITY OF WEST LINN DWG. NO. TB-302
- ④ CONSTRUCT FIRE HYDRANT ASSEMBLY WITH GATE VALVE PER CITY OF WEST LINN DWG. NO. FH-300
- ⑤ CONSTRUCT 2" BLOWOFF PER CITY OF WEST LINN DWG. NO. BO-301
- ⑥ CONSTRUCT 8" GATE VALVE
- ⑦ CONNECT TO EXISTING 8" WATER LINE
- ⑧ CONSTRUCT 8" TEE WITH THRUST BLOCK PER CITY OF WEST LINN DWG. NO. TB-302
- ⑨ CONSTRUCT SANITARY SEWER MANHOLE
- ⑩ ADJUST EXISTING SANITARY MANHOLE RIM TO EL. = 628.4
- ⑪ CONNECT TO EXISTING SANITARY MANHOLE
- ⑫ RELOCATE EXISTING FIRE HYDRANT TO BEHIND PROPOSED SIDEWALK PER CITY OF WEST LINN DWG. NO. FH-300
- ⑬ CONSTRUCT LANDSCAPE METER
- ⑭ CONSTRUCT 8" X 6" REDUCER AND FIRE HYDRANT ASSEMBLY WITH GATE VALVE PER CITY OF WEST LINN DWG. NO. FH-300

NOTE: ALL WATERLINES SHALL BE 8" UNLESS SHOWN OTHERWISE

NOTE: BEFORE SANITARY SEWER CONSTRUCTION, CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES WITHIN PUBLIC UTILITY EASEMENT.

**AS BUILT**

BY: D. Singer DATE: 11/20/98



3/03/97  
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 REGISTERED PROFESSIONAL  
 ENGINEER  
 17447  
 SEPTEMBER 28, 1994  
 W. FARES KEKHA  
 EXPIRES JUNE 30, 1997

2108 WILLAMETTE DRIVE  
 WEST LINN, OREGON 97068  
 PHONE: (503)-650-4636



**CASCADE SUMMIT TOWN HOMES**  
 PHASE 2  
 CITY OF WEST LINN, OREGON  
 SANITARY SEWER AND WATER PLAN

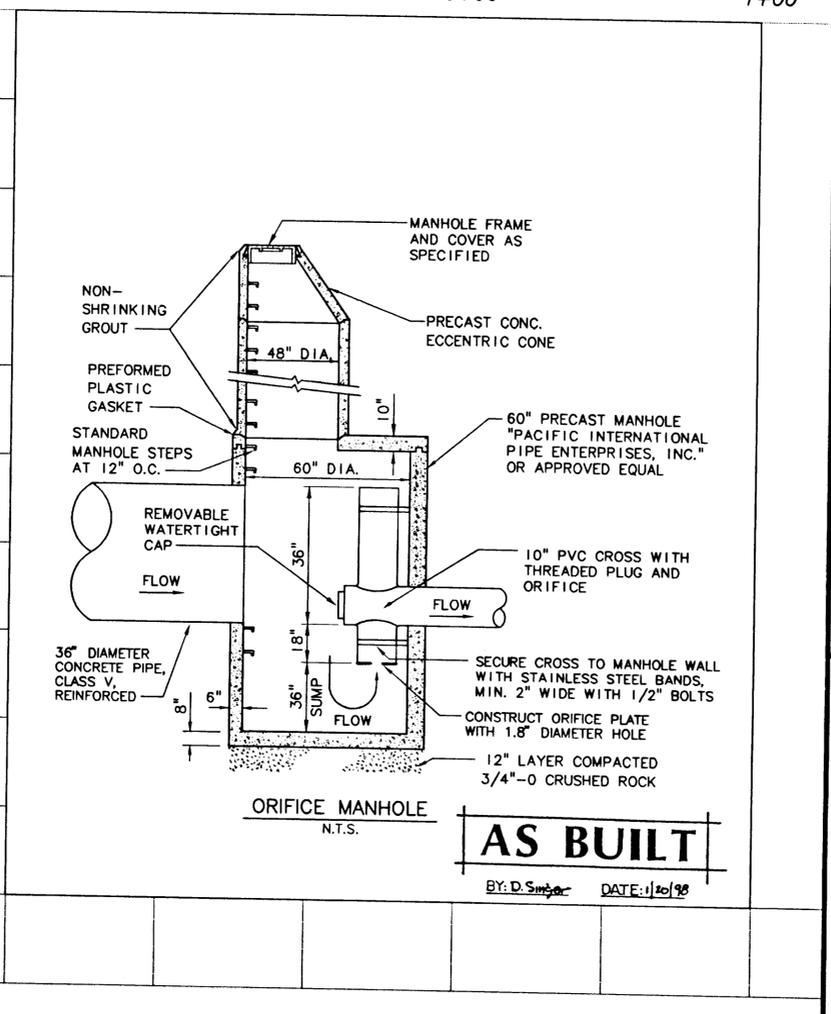
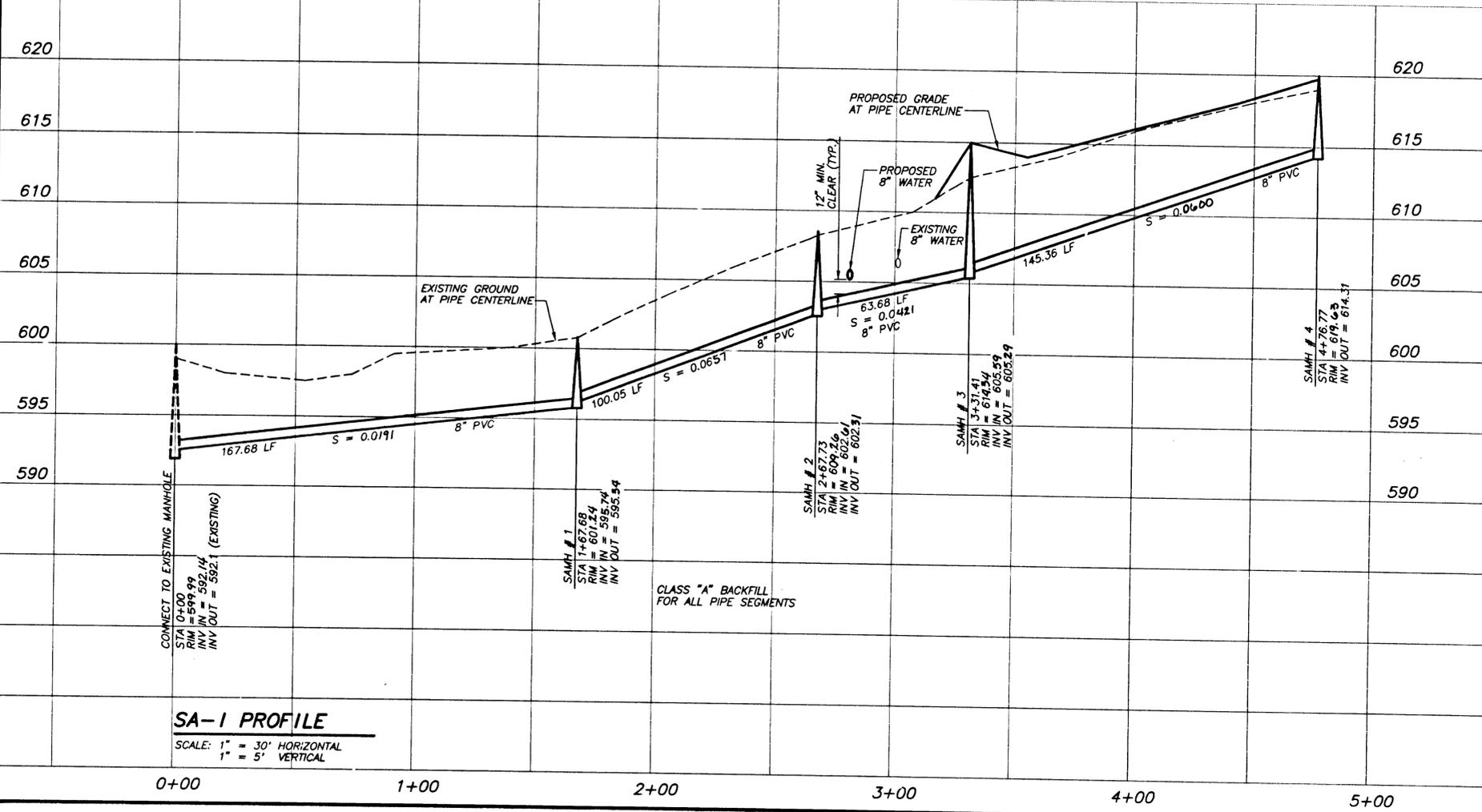
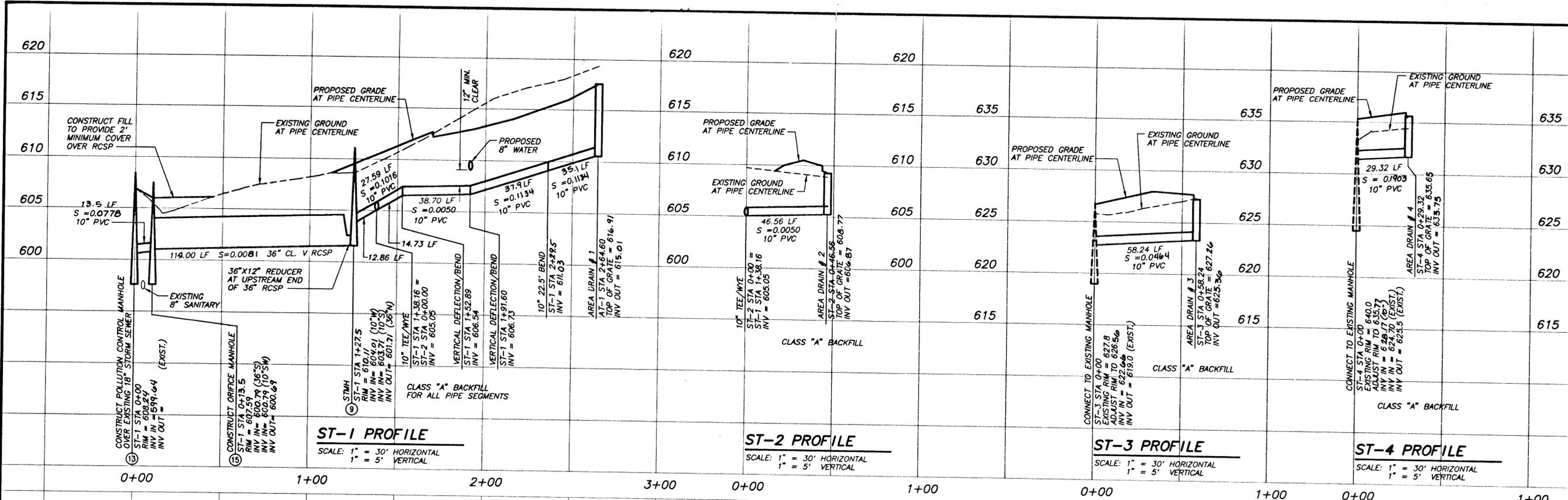


17355 SW Boones Ferry Rd.  
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L5438  
 Project No. C438S004  
 File No. 4  
 Sheet No.

M.F.K

Unresolved  
 438X001  
 438X900  
 438XGRO



Date 3/03/97  
 Designed RSD  
 Drawn RSD  
 Checked By Date  
 Plot Date - Time 3-8-97  
 REGISTERED PROFESSIONAL ENGINEER  
 37447  
 SEPTEMBER 28, 1988  
 W. FAIRES KEWHA  
 EXPIRES JUNE 30, 1997

2108 WILLAMETTE DRIVE  
 WEST LINN, OREGON 97068  
 PHONE: (503)-650-4636

**KOSS & BROS**  
 ASSOCIATES  
**GOODRICH**

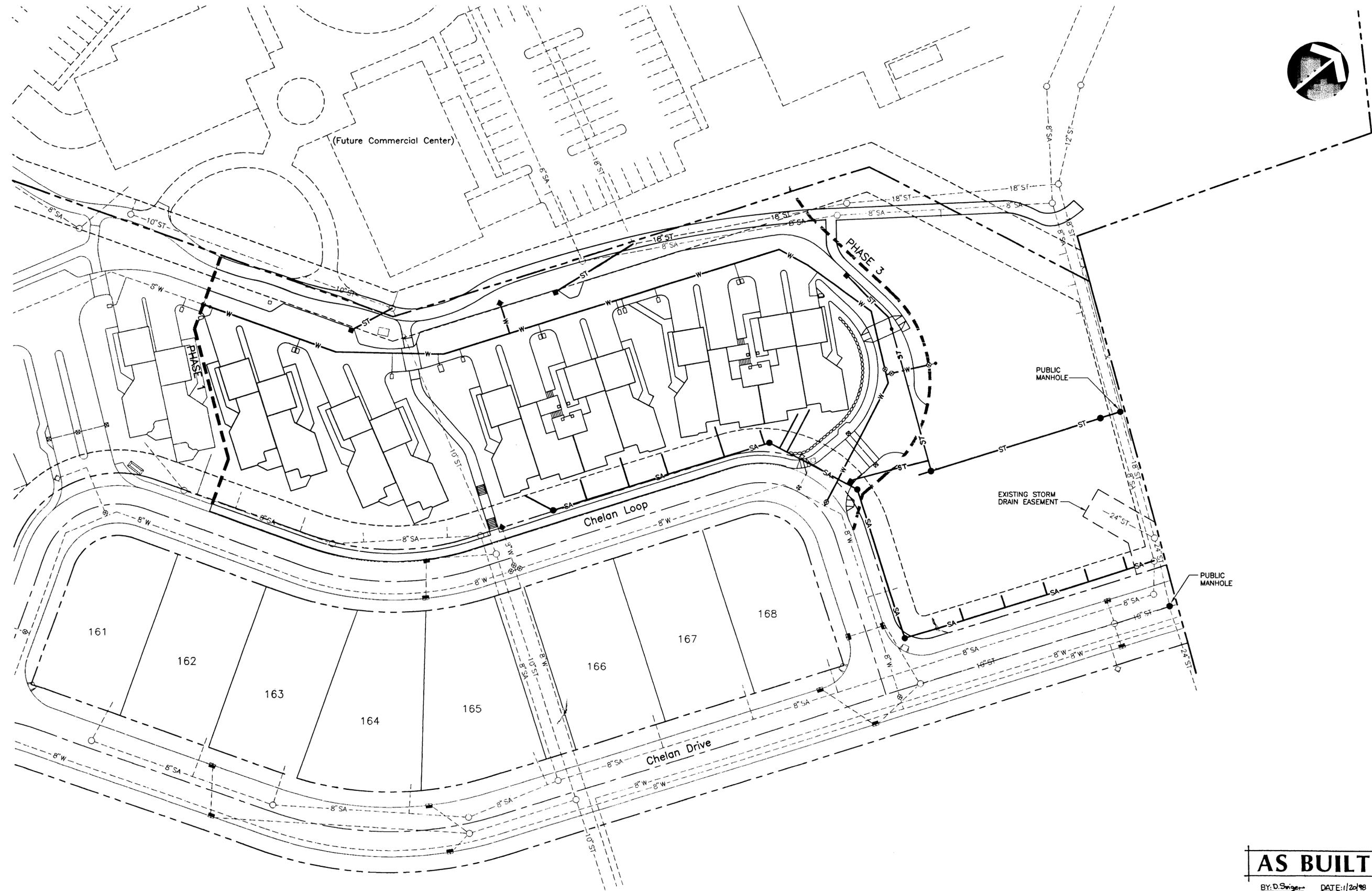
CASCADE SUMMIT TOWN HOMES  
 PHASE 2  
 CITY OF WEST LINN, OREGON  
 STORM AND SANITARY SEWER PROFILES

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L5438  
 Project No. C438S005  
 File No. 5  
 Sheet No.

M.F.K.

REF LIST  
 Scale: 1  
 Resolved  
 C438X001  
 C438X104  
 C438X200  
 C438X300  
 C438X301  
 C438X600  
 C438X680  
 Unresolved



3/03/97  
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 Drawn  
 Checked By Date  
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 3-6-97  
 REGISTERED PROFESSIONAL ENGINEER  
 19447  
 SEPTEMBER 28, 1984  
 M. FARES KERHIA  
 EXPIRES JUNE 30, 1997

2108 WILLAMETTE DRIVE  
 WEST LINN, OREGON 97068  
 PHONE: (503)-650-4636



CASCADE SUMMIT TOWN HOMES  
 PHASE 2  
 CITY OF WEST LINN, OREGON  
 COMPOSITE UTILITY PLAN



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

**AS BUILT**

BY: D. Swiger DATE: 1/22/98



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**GENERAL GRADING NOTES**

SUBGRADE NOT IN STRUCTURAL FILL WILL BE ROLLED AND COMPACTED TO 95 PERCENT RELATIVE MAXIMUM DENSITY AASHTO T-99, 6 INCHES DEEP

SOFT SPOTS IN THE SUBGRADE OF PAVED AREAS WILL BE EXCAVATED TO A DEPTH OF 18 INCHES AND BACKFILLED WITH 2"-0" CRUSHED ROCK, COMPACTED AS DIRECTED BY THE ENGINEER

ORGANIC MATERIAL (TREES, BRUSH ROOTS, STUMPS, ETC) SHALL BE REMOVED FROM THE SITE. STRIPPING SHALL GENERALLY BE 6 INCHES, BUT MAY BE DEEPER IN WOODED AREAS. STRIPPINGS SHALL BE REMOVED FROM THE CONSTRUCTION AREA.

PERMITS REQUIRED TO HAUL MATERIAL FROM THE SITE SHALL BE OBTAINED BY THE CONTRACTOR FROM THE COUNTY, STATE, AND OTHER AGENCIES AS NEEDED. ALL FLAGGING AND TRAFFIC CONTROL REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR.

CONTRACTOR TO BE RESPONSIBLE FOR MAINTAINING PROPER DRAINAGE OF THE SITE DURING WET WEATHER AND DUST CONTROL DURING DRY WEATHER FOR THE DURATION OF THE CONSTRUCTION CONTRACT.

**EROSION AND SEDIMENT 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, RETENTION FACILITIES,

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 SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION AS DIRECTED BY THE ENGINEER. 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 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.

SEDIMENT FENCES AND BIOFILTER BAGS WILL BE REPLACED AS NECESSARY.

HYDROSEEDING SHALL BE INITIATED AS SOON AS POSSIBLE AFTER GRADING OCCURS ON THE SITE.

ONCE THE HYDROSEEDING HAS BEEN APPLIED TO THE BARE TOP SOIL A MULCH LAYER SHALL BE UNIFORMLY APPLIED AT A DEPTH OF 2-3 INCHES.

HIGH QUALITY MIXED YARD DEBRIS COMPOST MATERIAL SHALL BE USED FOR A MULCH LAYER. FOR SLOPES LESS THAN 20% A FINE TO MEDIUM RANGE COMPOST SHALL BE USED. FOR GREATER THAN 20% A MORE COARSE COMPOST MULCH SHALL BE USED.

STRAW MULCH ALTERNATIVE CAN BE USED IF ANCHORED FIRMLY INTO THE GROUND BY HAND OR ROLLERS, CLEAT TACKS, ETC. AND IF STRAW IS WEED FREE. SIMPLY SPREADING THE MATERIAL OUT OVER THE SITE IS NOT ACCEPTABLE.

WATER MUST BE PROVIDED DURING DRY MONTHS SO SEEDING IS GIVEN ADEQUATE MOISTURE TO ESTABLISH GRASS. AREAS WHICH FAIL TO ESTABLISH COVER MUST BE RE-SEEDDED AS SOON AS SUCH AREAS ARE IDENTIFIED.

GRASS COVER SHOULD BE ESTABLISHED BEFORE EROSION CONTROL MEASURES ARE REMOVED FROM THE SITE.

**EROSION CONTROL MEASURES FOR DISTURBED AREAS**

ALL DISTURBED SLOPES THAT HAVE BEEN GRADED AND COMPACTED SHALL BE HYDROSEEDED NO LATER THAN OCTOBER 1ST USING THE FOLLOWING SPECIFICATIONS UNLESS OTHERWISE AUTHORIZED BY THE CITY. AFTER OCTOBER 1ST THE CITY MAY REQUIRE OTHER MEANS OF RE-VEGETATION OF DISTURBED AREAS.

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

SEED MAY BE SOWN 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 SEEDDED AT THE RATE OF NOT LESS THAN ONE HUNDRED (100) POUNDS PER ACRE. SEED MIX SHALL INCLUDE:

DWARF GRASS MIX (LOW HEIGHT, LOW MAINTENANCE)  
 DWARF PERENNIAL RYEGRASS, 80% BY WEIGHT  
 CREEPING RED FESCUE, 20% BY WEIGHT  
 APPLICATION RATE 100 POUNDS MIN. PER ACRE

STANDARD HEIGHT GRASS MIX  
 ANNUAL RYEGRASS, 40% BY WEIGHT  
 TURF-TYPE FESCUE, 60% BY WEIGHT  
 APPLICATION RATE 100 POUNDS MIN. 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 BUT NO LATER THAN OCTOBER 1 UNLESS OTHERWISE AUTHORIZED BY THE CITY. 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 1ST. CONTACT DARYL WORTHINGTON (665-5175)

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.

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

ADDITIONAL TEMPORARY EROSION CONTROL (DURING CONSTRUCTION) MAY BE PLACED AT THE TOE 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, BIO-FILTER BAGS WILL BE REQUIRED AT ALL STORM DRAINAGE INLETS UNTIL ROCKING OF STRETCH IS COMPLETED AND DISTURBED SLOPES STABILIZED BY HYDROSEEDING.  
 \* RAINY SEASON IS OCTOBER 1ST. THRU FEBRUARY 28TH.

**STANDARD NOTES FOR 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 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 30 INCHES.

A TRENCH SHALL BE EXCAVATED, ROUGHLY 8 INCHES WIDE BY 12 INCHES DEEP, UPSLOPE AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED.

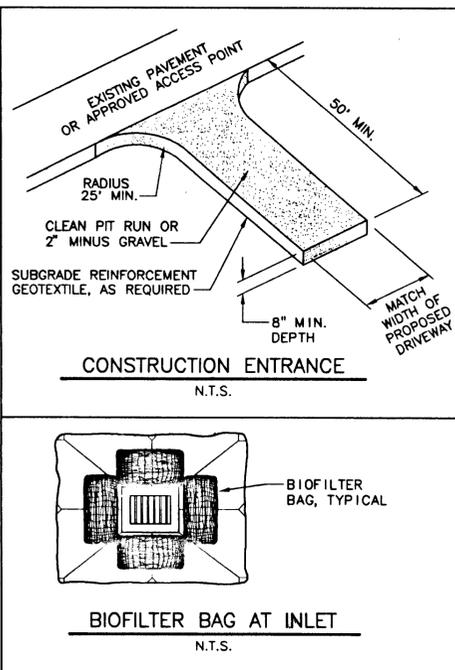
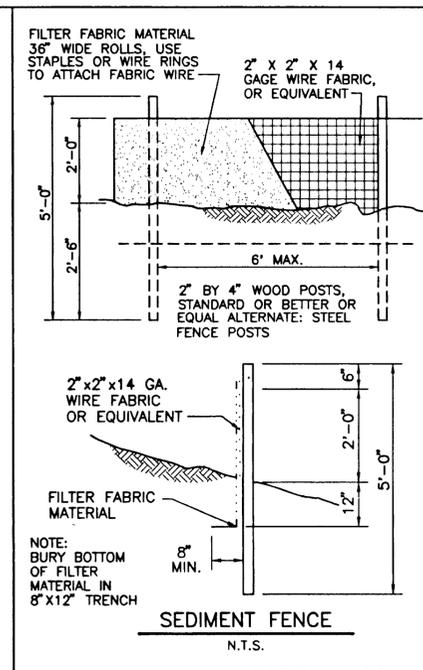
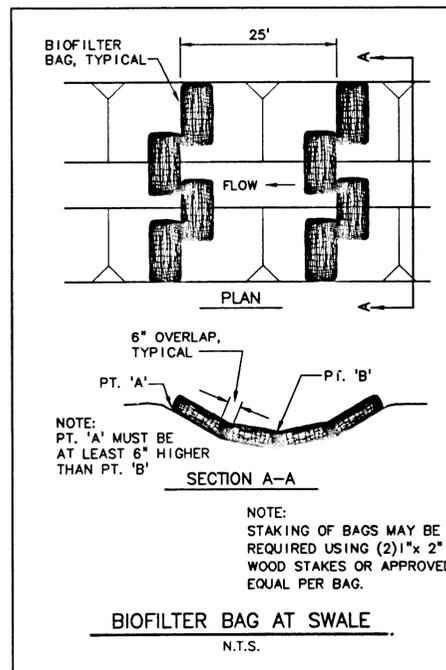
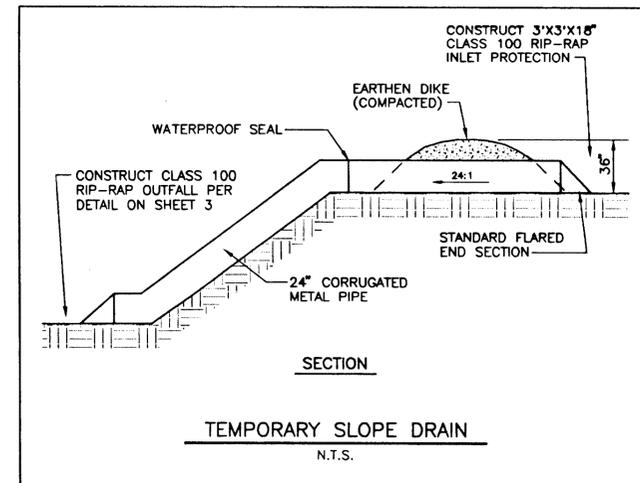
WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRE OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 30 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.

WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF THE ABOVE STANDARD NOTE FOR STANDARD STRENGTH FILTER FABRIC APPLYING.

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. AT NO TIME SHALL MORE THAN A ONE FOOT DEPTH SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND A SEDIMENT FENCE. SEDIMENT SHOULD BE REMOVED OR REGRADED INTO SLOPES AND THE SEDIMENT FENCES REPAIRED AND RE-ESTABLISHED AS NEEDED. SEDIMENT FENCE SPACING SHALL BE 150 FT., MAXIMUM.



**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 <3% 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 DIKES/SWALES AROUND ACTIVE WORK AREAS														
CHECK DAMS														
STORM DRAIN INLET PROTECTION BARRIER														
6-MIL PLASTIC SHEET COVER														
2\"/>														

3/03/97  
 Date  
 RSD  
 Designed  
 RSD  
 Drawn  
 Checked By Date  
 Plot Date - Time  
 3-6-97  
 REGISTERED PROFESSIONAL ENGINEER  
 17847  
 1242  
 SEPTEMBER 28, 1981  
 OREGON  
 J. FARES KEKIH  
 EXPIRES JUNE 30, 1997

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 EROSION CONTROL NOTES AND DETAILS

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