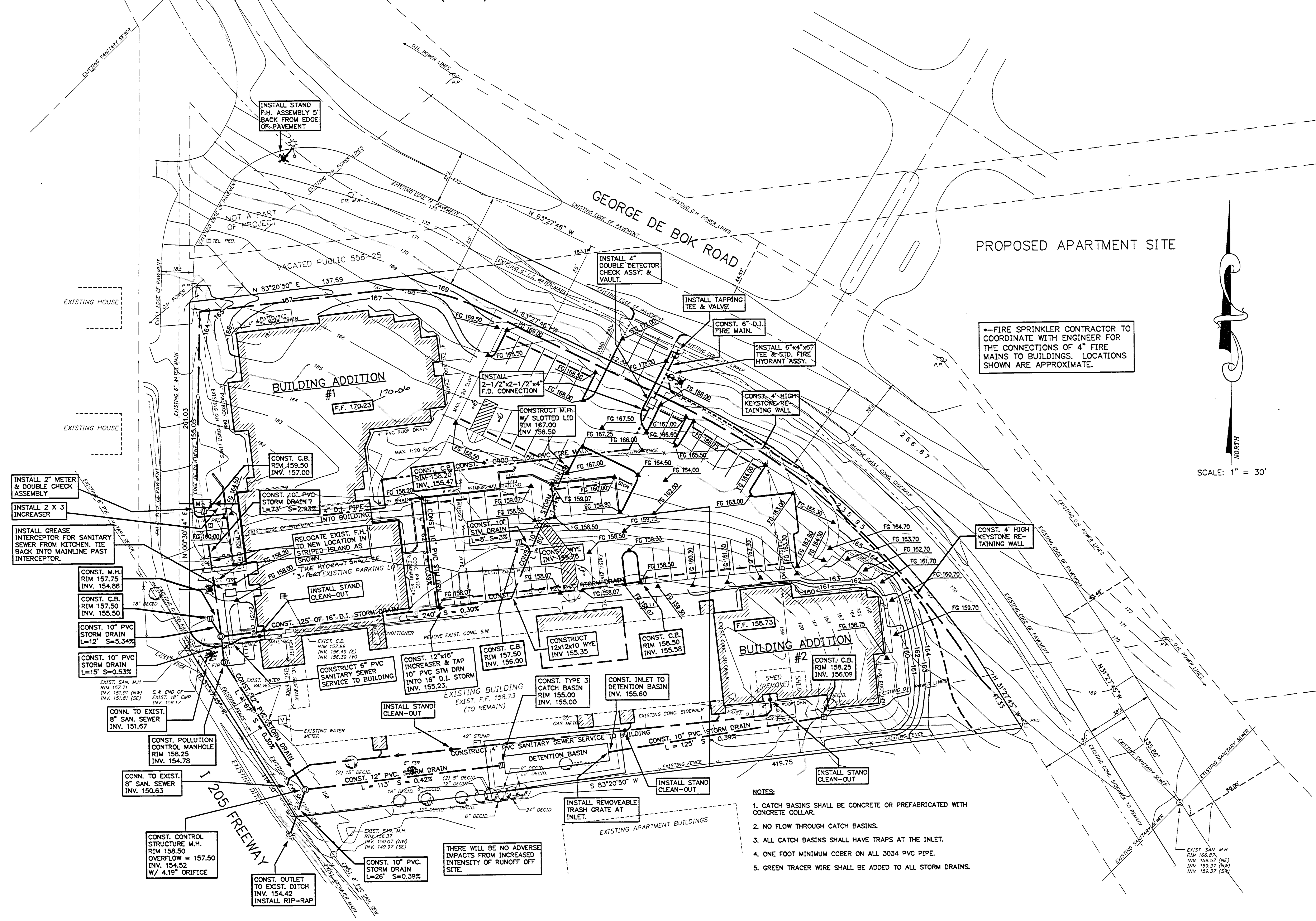
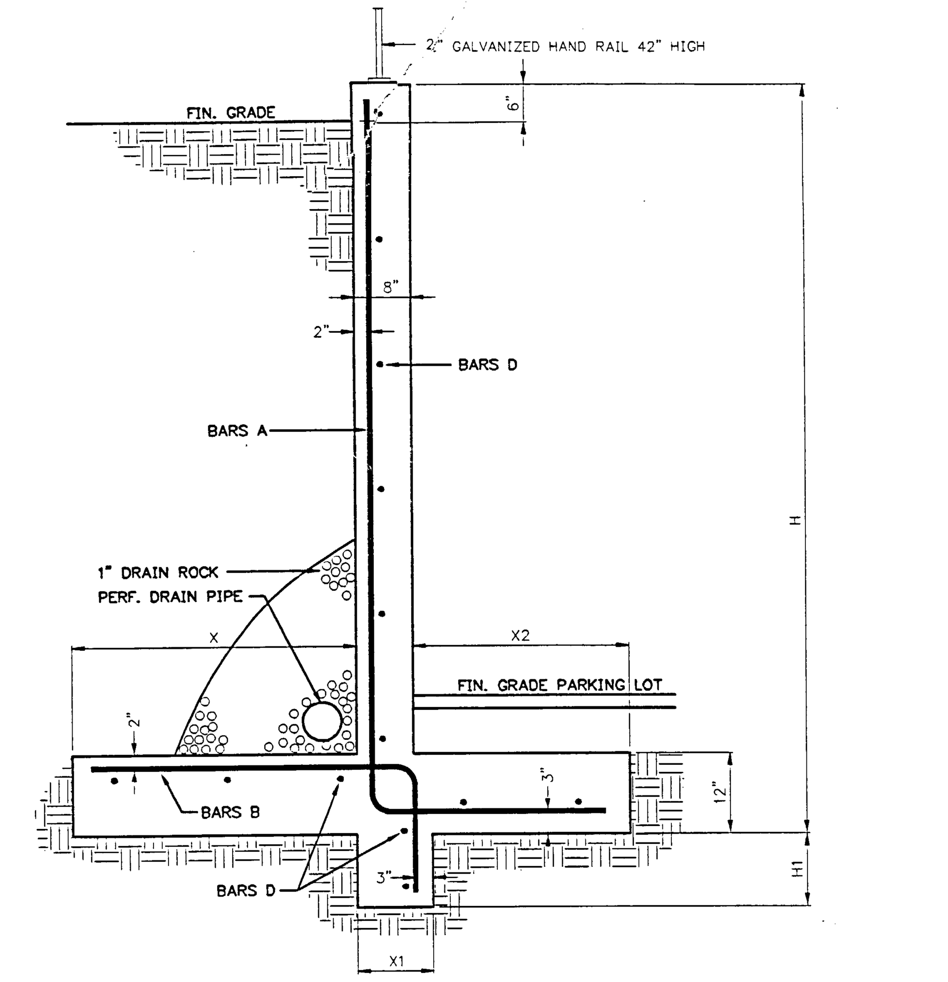
Applicant / Developer:
KILLEN CONSTRUCTION LLC.
1250 E. MAIN / P.O. BOX 40
MONMOUTH, OR. 97361
(503) 838-2780



*—FIRE SPRINKLER CONTRACTOR TO COORDINATE WITH ENGINEER FOR THE CONNECTIONS OF 4" FIRE MAINS TO BUILDINGS. LOCATIONS SHOWN ARE APPROXIMATE.

NOTES:

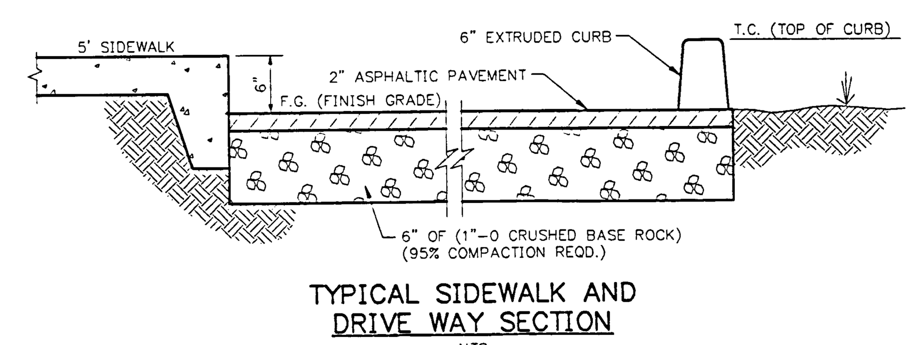
1. CATCH BASINS SHALL BE CONCRETE OR PREFABRICATED WITH CONCRETE COLLAR.
2. NO FLOW THROUGH CATCH BASINS.
3. ALL CATCH BASINS SHALL HAVE TRAPS AT THE INLET.
4. ONE FOOT MINIMUM COBER ON ALL 3034 PVC PIPE.
5. GREEN TRACER WIRE SHALL BE ADDED TO ALL STORM DRAINS.



WALL DETAIL
N.T.S.

WALL DIMENSIONS					BARS			
H	H1	X	X1	X2	A	B	C	D
9' – 14'	1.5'	3.5'	1.0'	2.5'	#6 @ 11" O.C.	#6 @ 15" O.C.	TURN STEM STEEL INTO TOE	#4 @ 10" O.C.
5.5' – 9'	0.5'	3.5'	1.0'	2.0'	#5 @ 15" O.C.	#5 @ 12" O.C.		#4 @ 10" O.C.
2' – 5.5'	–	1.33	–	1.0'	#4 @ 15" O.C.	#4 @ 24" O.C.		#4 @ 10" O.C.

13. REVISED LOCATION OF FIRE SERVICE & ADDED F. H. G.I.D. 10-13-99.
12. REVISED STORM DRAIN UNDER BUILDING & ADDED F.H.'S. G.I.D. 9-27-99.
11. CHANGED A M.H. TO A "POLLUTION CONTROL M.H." G.I.D. 6-14-99.
10 REVISED STORM DRAIN DESIGN. G.I.D. 5-14-99
9. REVISED & ADDED GRADES TO PLAN. G.I.D. 5-10-99
8. ADDED (2) BATHROOMS TO EXISTING NURSING HOME. G.I.D. 3-8-99
7. REVISED F. F. ELEVATION & PARKING LOT GRADES AT N. END. G.I.D. 9-22-98
6. RELOCATED ENTRANCE AND REVISED GRADES. G.I.D. 8-31-98
5. REVISED AS PER CITY OF WEST LINN REVIEW. G.I.D. 6-1-98
4. REVISED AS PER CITY OF WEST LINN REVIEW. G.I.D. 5-28-98
3. REVISED STORM DRAIN DESIGN TO ADD DETENTION BASIN. G.I.D. 2-4-98
2. REVISED AS PER CITY OF WEST LINN REVIEW. G.I.D. 2-3-98
1. REVISED AS PER CITY OF WEST LINN REVIEW. G.I.D. 10-3-97



TYPICAL SIDEWALK AND
DRIVE WAY SECTION
-NTS-

Rose Linn Care Center
01/10/98

TIME (minutes)	C*A (acres)	RAINFALL INTENSITY (in/hr) 50 year	INFLOW (cfs)	INFLOW (cu. ft.)	OUTFLOW (cfs)	OUTFLOW (cu. ft.)	REQUIRED STORAGE (cu. ft.)
5	1.63	3	4.89	1467	0.8	240	1227
10	1.63	2.4	3.912	2347.2	0.8	480	1867.2
15	1.63	1.95	3.1785	2860.65	0.8	720	2140.65
20	1.63	1.7	2.771	3325.2	0.8	960	2365.2
25	1.63	1.5	2.445	3667.5	0.8	1200	2467.5
30	1.63	1.35	2.2005	3960.9	0.8	1440	2520.9
40	1.63	1.1	1.793	4303.2	0.8	1920	2383.2
50	1.63	0.95	1.5485	4645.5	0.8	2400	2245.5
60	1.63	0.84	1.3692	4929.12	0.8	2880	2049.12

Assumptions

Rainfall intensities are taken from the I-D-F curves
prepared by Oregon Dept. of Transportation
Inflow is based on the formula Q = C*I*A
Inflow volumes are based on the Inflow rate times the storm duration
Outflow rate is based on the weighted area (.47 acres)*(1.7 in/hr) = .80 cfs
which is based on a 19 min. time of concentration for a
50 year storm, I = 1.7 in/hr

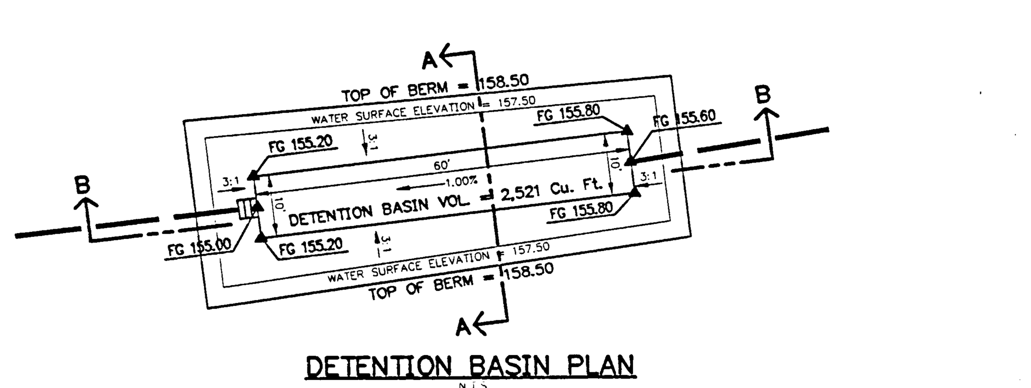
Undeveloped Area

2.33 acres at .2
Weighted Area = .47

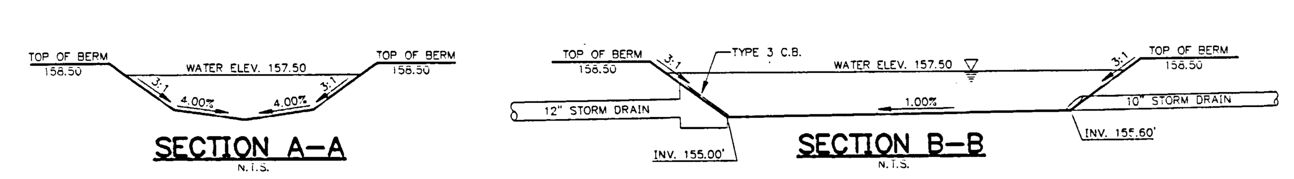
Developed Area

2.33 @ .7
Weighted Area (C*A) = 1.63 acres

The site storage is = 2,521 cu. ft.
Outflow is controlled by a single orifice at the basin outlet
Orifice Diameter = 4.19 inches
Design Head = 2.98 feet

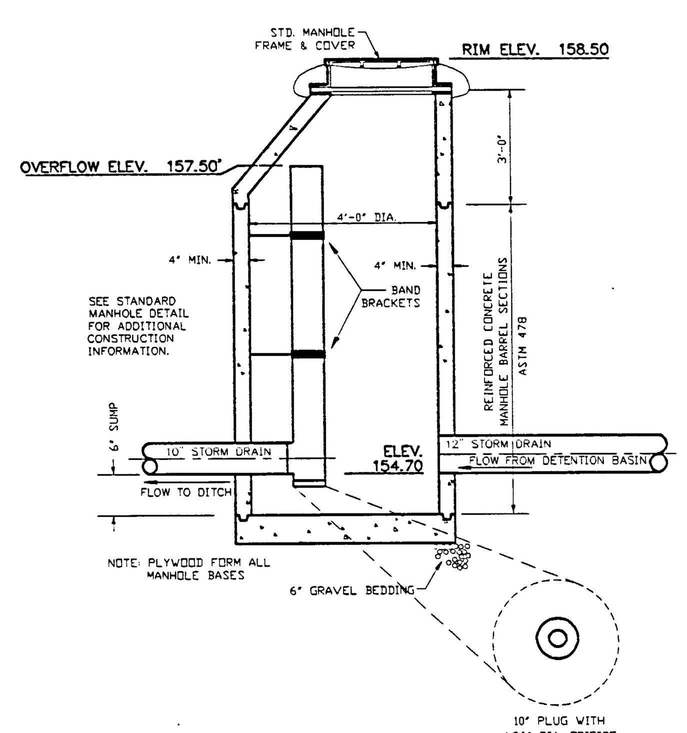


DETENTION BASIN PLAN
N.T.S.

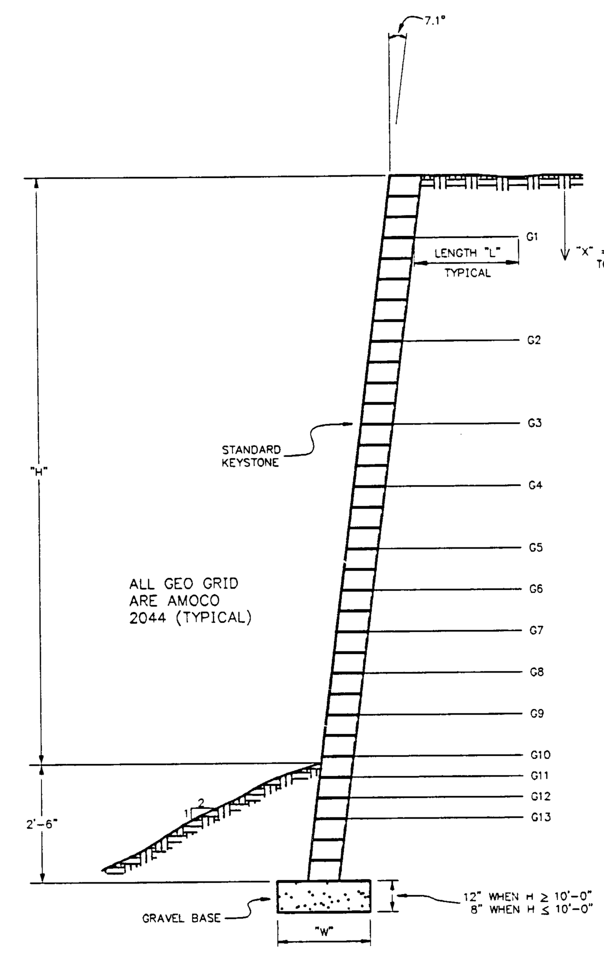


SECTION A-A
N.T.S.

SECTION B-B
N.T.S.



MANHOLE – CONTROL STRUCTURE
-NTS-



KEYSTONE RETAINING WALL
N.T.S.

WALL HEIGHT (H)

	H ≤ 20'-0"		15 ≥ H ≥ 10'-0"		10 ≥ H ≥ 5'-0"		5 ≥ H	
BASE WIDTH(W)	"36"		"36"		"24"		"24"	
GEO GRID	LENGTH(L)	DEPTH(X)	LENGTH(L)	DEPTH(X)	LENGTH(L)	DEPTH(X)	LENGTH(L)	DEPTH(X)
G1	12'-0"	2'-0"	9'-6"	2'-0"	8'-0"	2'-0"	6'-0"	2'-0"
G2	12'-0"	5'-4"	9'-6"	5'-4"	8'-0"	5'-4"		
G3	12'-0"	8'-0"	9'-6"	8'-0"	8'-0"	8'-0"		
G4	12'-0"	10'-0"	9'-6"	10'-0"				
G5	12'-0"	12'-0"	9'-6"	12'-0"				
G6	12'-0"	13'-4"	9'-6"	13'-4"				
G7	12'-0"	14'-8"	9'-6"	14'-8"				
G8	12'-0"	16'-0"						
G9	12'-0"	17'-4"						
G10	12'-0"	18'-8"						
G11	12'-0"	19'-4"						
G12	12'-0"	20'-0"						
G13	12'-0"	20'-8"						

NOTES:

1. ALL SANITARY SEWER CONSTRUCTION TO BE TO THE CITY OF WEST LINN STANDARDS.
2. ALL DOMESTIC WATER IMPROVEMENTS TO BE TO THE CITY OF WEST LINN STANDARDS.
3. ALL GRADING & STORM DRAINAGE IMPROVEMENTS TO BE TO CITY OF WEST LINN STANDARDS.
4. COORDINATION WITH UTILITIES:
   A. THE LOCATION AND DESCRIPTION OF EXISTING UTILITIES SHOWN ARE COMPILED FROM AVAILABLE RECORDS AND/OR FIELD SURVEYS. THE CITY OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY NOR THE COMPLETENESS OF SUCH RECORDS.
   B. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF ORS 757.541 TO 757.571. THE CONTRACTOR SHALL NOTIFY EACH UNDERGROUND UTILITY AT LEAST 48 BUSINESS DAY HOURS PRIOR TO EXCAVATING, BORING, OR POTHOLING. ALL UTILITY CROSSINGS SHALL BE POTHOLED AS NECESSARY PRIOR TO EXCAVATING OR BORING TO ALLOW THE CONTRACTOR TO PREVENT GRADE OR ALIGNMENT CONFLICTS.
   C. PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO KEEP ALL EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION.
   D. UTILITIES, OR INTERFERING PORTIONS OF UTILITIES, THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES.
5. CONTRACTOR TO NOTIFY ENGINEER 24 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.
6. ALL TRENCHES TO BE COMPACTED BY MECHANICAL MEANS.
7. CONTRACTOR TO USE 1"-0 CRUSHED ROCK BACKFILL FOR ALL MAINS AND SERVICES THAT LIE IN THE IMPROVED PORTION OF ALL ROADWAYS.
8. ALL TEES & SERVICES TO BE INSTALLED AS PART OF CONTRACT.
9. ALL WATER SERVICES TO BE 1-1/4" PVC UNLESS OTHERWISE NOTED.
10. ALL WATER PIPE & FITTINGS TO BE PRESSURE RATED P.V.C. UNLESS OTHERWISE NOTED.
11. ALL SANITARY SEWER PIPE & FITTINGS TO BE P.V.C. – A.S.T.M. 3034, S.D.R. 35 UNLESS OTHERWISE NOTED
12. RIM ELEVATIONS SHOWN ON PLAN ARE FOR REFERENCE ONLY. CONTRACTOR TO SET MANHOLE RIMS TO FINISH GRADE IMMEDIATELY AFTER COMPLETION OF BASE ROCK GRADING.
13. ALL SANITARY SEWER SERVICES TO BE 4" PVC UNLESS OTHERWISE NOTED. CLEAN-OUTS TO BE SPACED EVERY 100'.
14. ALL SANITARY SEWER MAINS SHALL BE INSTALLED AT 1/8" PER 1' SLOPE MIN. UNLESS OTHERWISE NOTED.
15. ALL STORM DRAIN PIPE TO BE P.V.C. (CLASS 3034-S.D.R. 35) OR CONCRETE (CLASS III-A.S.T.M. C-14)
16. ALL CATCH BASINS TO BE ENLARGED TYPE 1, EXCEPT WHERE NOTED OTHERWISE.
17. ALL ROOF DRAINS MUST BE PIPED TO CATCH BASINS IN DETENTION AREA.
18. USE CLASS 'B' PIPE BEDDING FOR ALL PIPES UNLESS OTHERWISE SPECIFIED.
19. GRADING IS CRITICAL TO FUNCTIONING OF DETENTION SYSTEMS AND PLAN MUST BE STRICTLY FOLLOWED. POND VOLUMES TO BE INSPECTED PRIOR TO PAVING AS PER CITY OF WEST LINN DESIGN STANDARDS.
20. CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM CITY OF WEST LINN PUBLIC WORKS ENGINEERING & SHALL CONTACT CONSTRUCTION MANAGEMENT, (DURING WORKING HOURS) 48 HOURS (EXCLUDING HOLIDAYS & WEEKENDS) PRIOR TO STARTING WORK.

MULTI/TECH
CONSULTANTS
ENGINEERING SERVICES, INC.
1155 13th ST. S.E. SALEM, OR. 97302
(503) 363 – 9227

GRADING, DRAINAGE AND UTILITY PLAN

ADDITION TO: ROSE LINN CARE CENTER BUILDING ADDITION #1

NO CHANGES, MODIFICATIONS OR REPRODUCTIONS TO BE MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM THE DESIGN ENGINEER.

DIMENSIONS & NOTES TAKE PRECEDENCE OVER SCALE

MULTI/TECH ENGINEERING EXEMPT FROM LIABILITY IF NOT STAMPED APPROVED

GRD/SCALE:30
Design: M.D.G.
Drawn: G.I.D.
Checked: M.D.G.
Date: NOV 98
Scale: AS SHOWN
As-Built:

JOB # 3102

REGISTERED PROFESSIONAL ENGINEER 8664 OREGON JULY 14, 1978 MARK D. GRENZ
CERT. EXP. JUNE 30, 2001