N.W.1/4 SEC.25 T.11S. R.5W. W.M. 11525B

BENTON COUNTY

1" = 200'

FIGURE 1

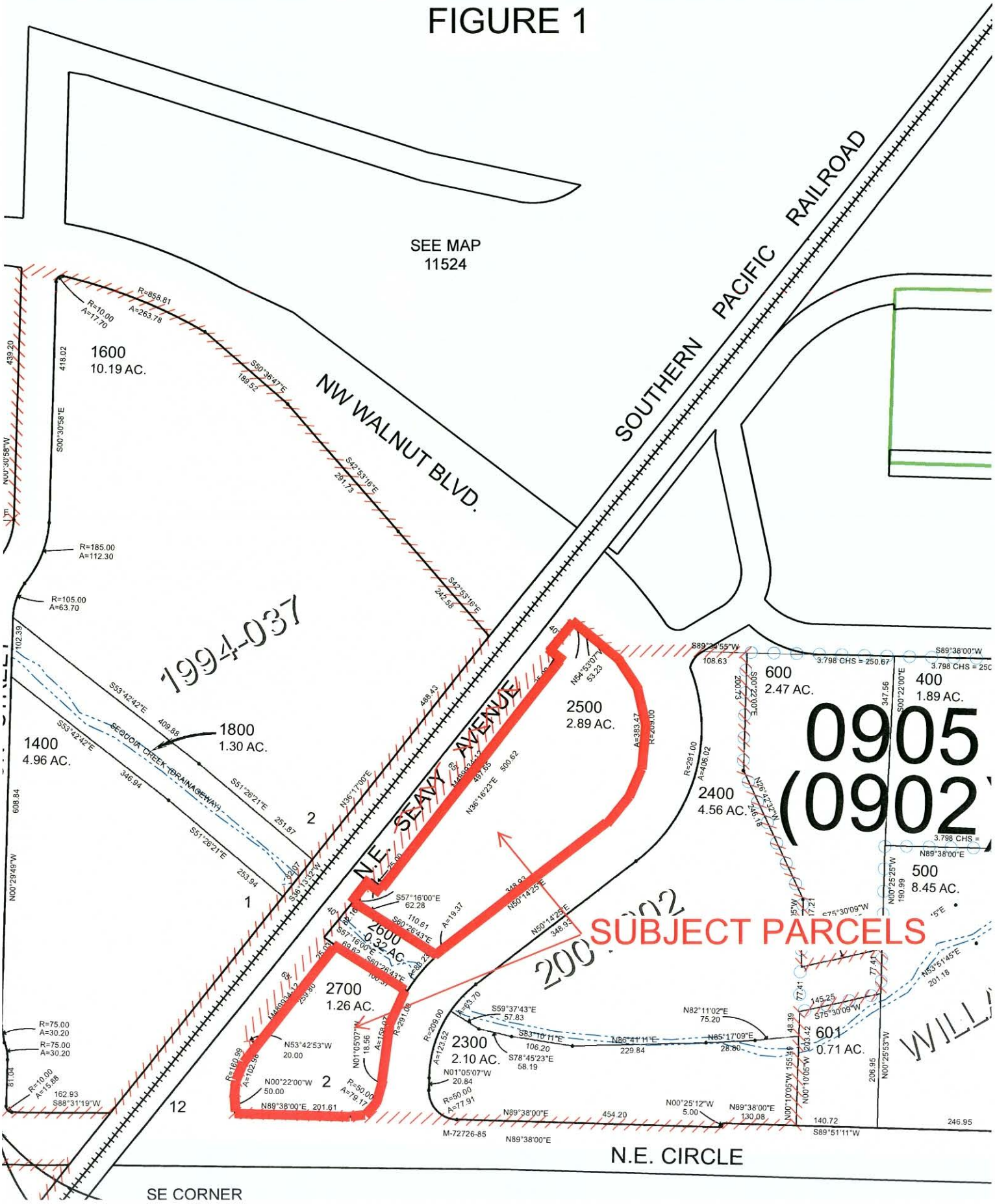


Figure 2

Site Location (USGS, 2011)

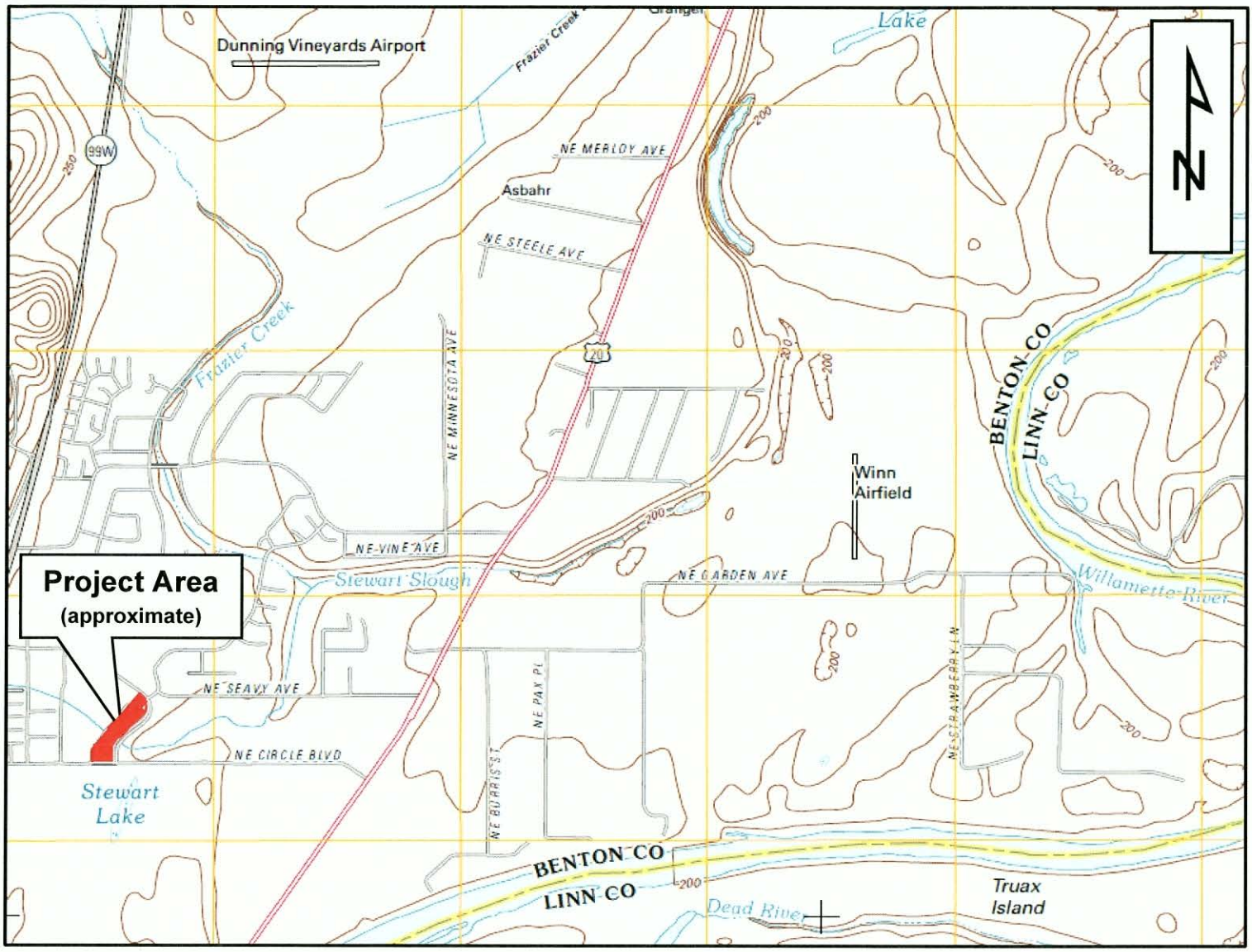
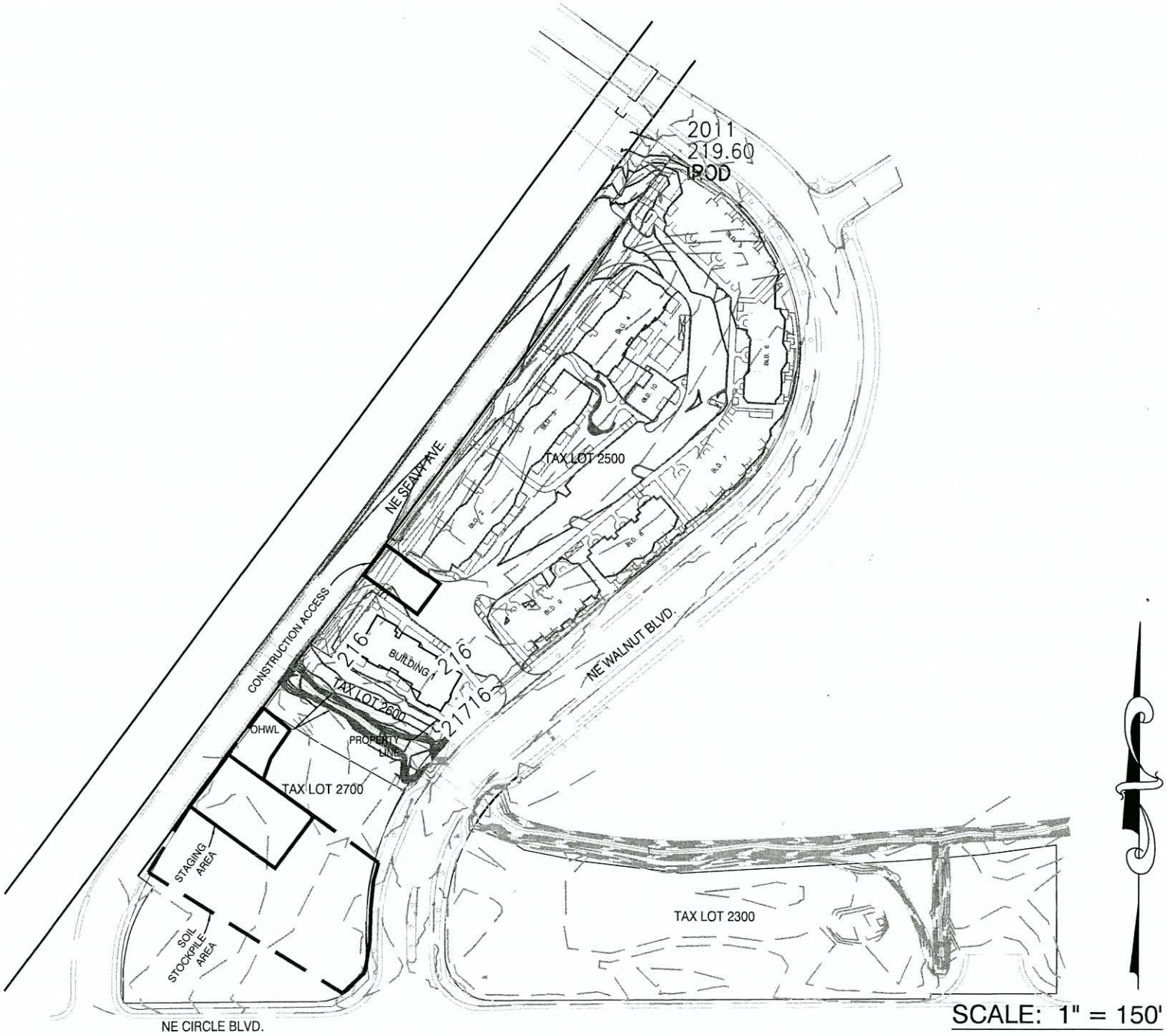


FIGURE 3



ENTIRE PROJECT SITE

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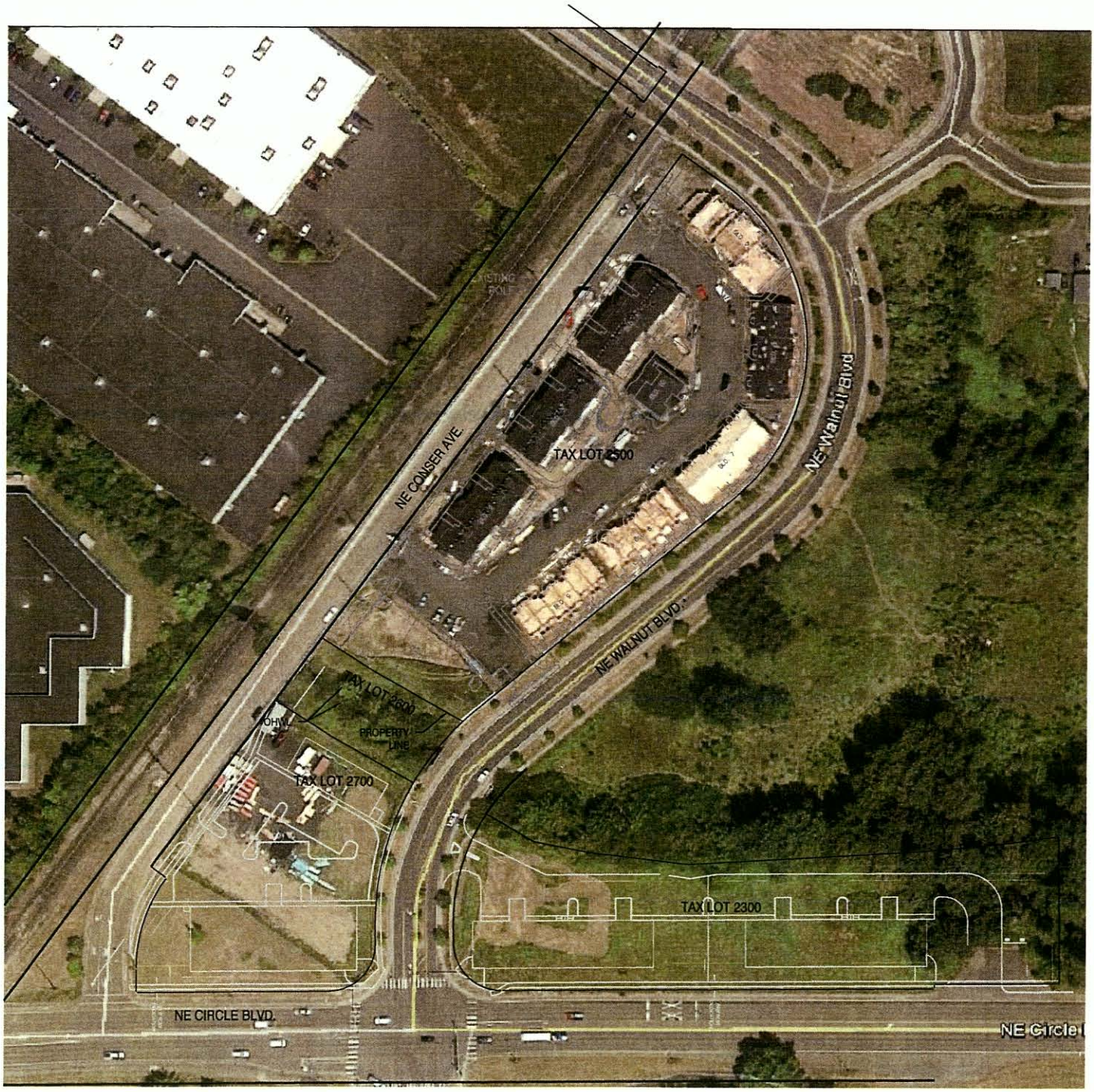
Figure 4



SCALE: 1" = 150'

AERIAL PHOTO

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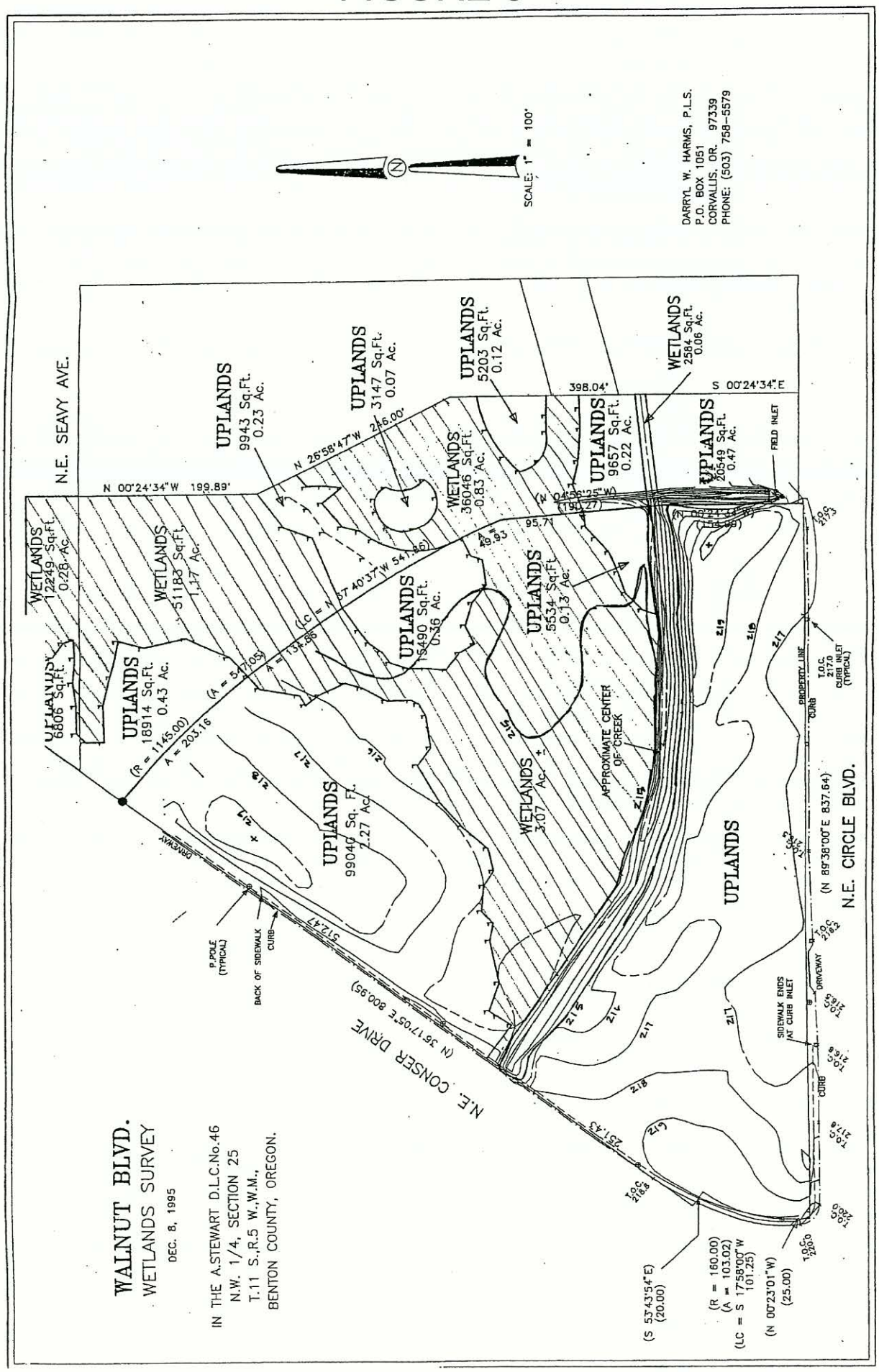
FIGURE 5



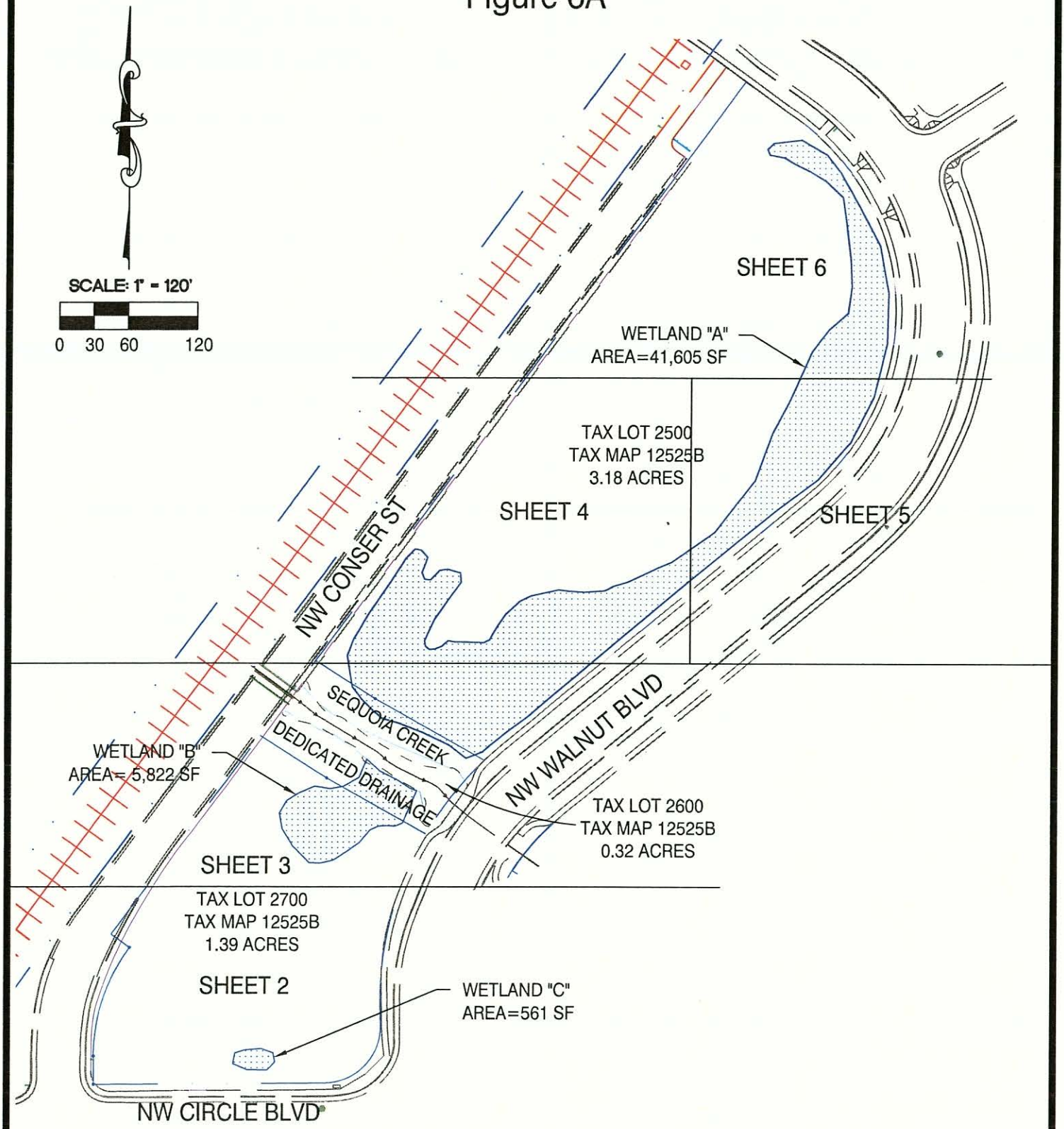
WALNUT BLVD.
WETLANDS SURVEY
DEC. 8, 1995
IN THE A.STEWART D.L.C.No.46
N.W. 1/4, SECTION 25
T.11 S.,R.5 W.,W.M.,
BENTON COUNTY, OREGON.
SCALE: 1" = 100'
DARRYL W. HARMS, P.L.S.
P.O. BOX 1051
CORVALLIS, OR. 97339
PHONE: (503) 758-5579
N.E. SEAVY AVE.
N.E. CONSER DRIVE
N.E. CIRCLE BLVD.
N 00°24'34"W 199.89'
N 26°58'47"W 246.00'
398.04'
S 00°24'34"E
UPLANDS 9943 Sq.Ft. 0.23 Ac.
UPLANDS 3147 Sq.Ft. 0.07 Ac.
UPLANDS 5203 Sq.Ft. 0.12 Ac.
WETLANDS 2584 Sq.Ft. 0.06 Ac.
UPLANDS 9657 Sq.Ft. 0.22 Ac.
UPLANDS 20549 Sq.Ft. 0.47 Ac.
WETLANDS 36046 Sq.Ft. 0.83 Ac.
WETLANDS 12249 Sq.Ft. 0.28 Ac.
WETLANDS 51183 Sq.Ft. 1.17 Ac.
UPLANDS 6806 Sq.Ft.
UPLANDS 18914 Sq.Ft. 0.43 Ac.
UPLANDS 15490 Sq.Ft. 0.36 Ac.
UPLANDS 5534 Sq.Ft. 0.13 Ac.
UPLANDS 99040 Sq. Ft. 2.27 Ac.
WETLANDS 3.07 Ac.
UPLANDS
APPROXIMATE CENTER OF CREEK
FIELD INLET
PROPERTY LINE
CURB
T.O.C. 217.0 CURB INLET (TYPICAL)
(N 89°38'00"E 837.64)
SIDEWALK ENDS AT CURB INLET
DRIVEWAY
P.POLE (TYPICAL)
BACK OF SIDEWALK
(N 36°17'05"E 800.95)
(S 53°43'54"E) (20.00)
(R = 160.00) (A = 103.02) (LC = S 17°58'00"W 101.25)
(N 00°23'01"W) (25.00)

DEVCO engineering inc.

245 N.E. Conifer, P.O. Box 1211
Corvallis, OR 97339
Fax: (541) 757-9885

(541) 757-8991

Figure 6A



*MAP ACCURACY IS +/- 10 cm
*MAPPING METHOD: PROFESSIONALLY LAND SURVEYED

PROJECT: WALNUT CREEK WETLANDS			PROJECT NO: 11-406
DESIGN: DEVCO	DATE: 11/20/12	SCALE: 1"=120'	PAGE: 1

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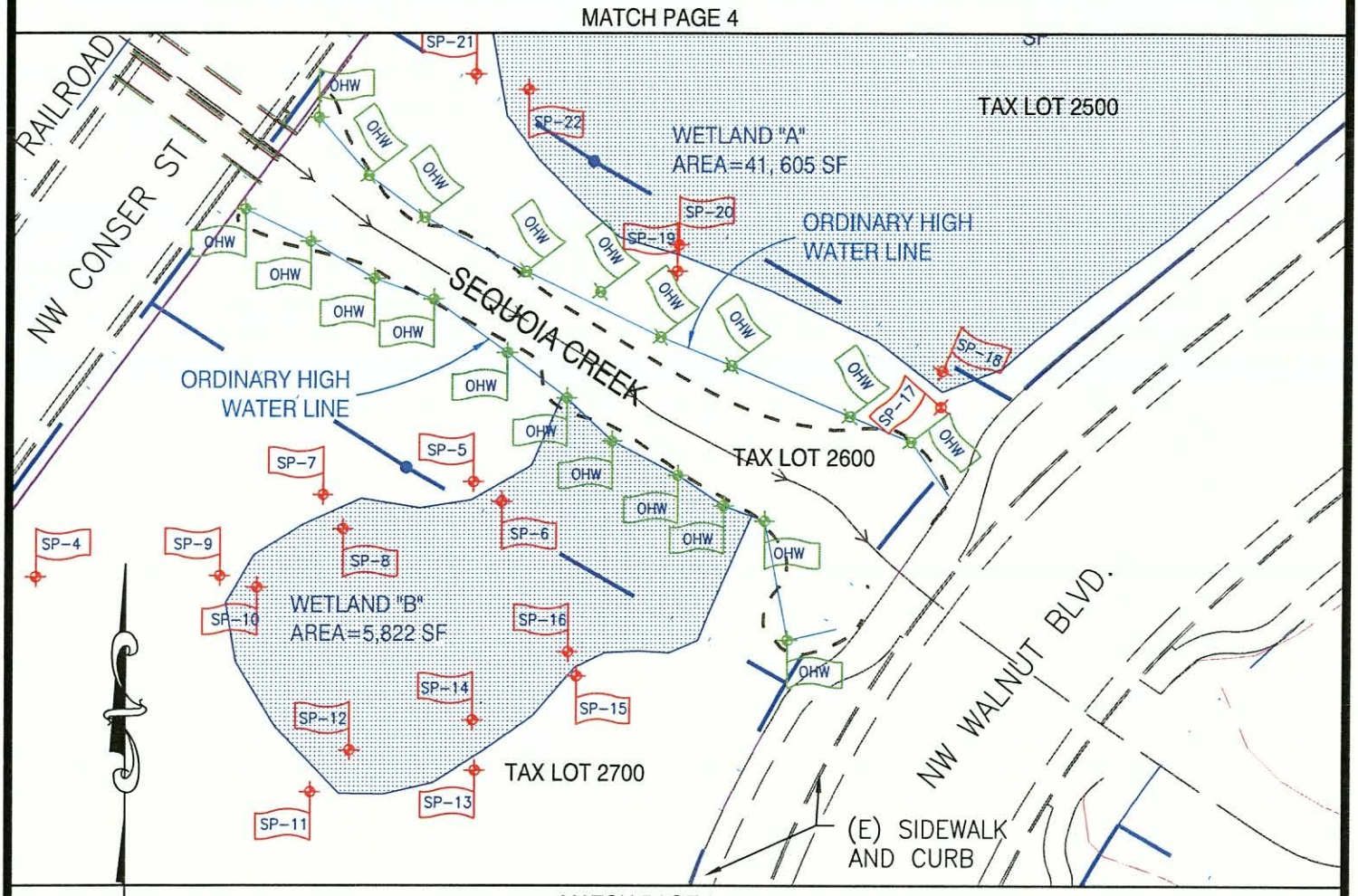
Figure 6C



SCALE: 1" = 40'

0 10 20 40

LEGEND

	EXISTING IMPROVEMENTS		SEQUOIA CREEK FLOW
	EXISTING PROPERTY LINE OR RIGHT OF WAY		CREEK TOP OF BANK
	LIMITS OF STUDY AREA	PP3	PHOTOPOINT NUMBER AND DIRECTION
	ORDINARY HIGH WATER LINE	OHW	ORDINARY HIGH WATER FLAG LOCATION
	WETLAND AREAS AS NOTED	SP-7	SAMPLE PLOT LOCATION
225	EXISTING CONTOURS		

*MAPPING METHOD: PROFESSIONALLY LAND SURVEYED

*MAP ACCURACY IS +/- 10 cm

PROJECT: WALNUT CREEK WETLANDS		PROJECT NO: 11-406	© COPYRIGHT DEVCO ENGINEERING, INC. ALL RIGHTS RESERVED. 2012
DESIGN: DEVCO	DATE: 11/20/12	SCALE: 1"=40'	PAGE: 3

FIGURE 7
CROSS SECTION LOCATIONS

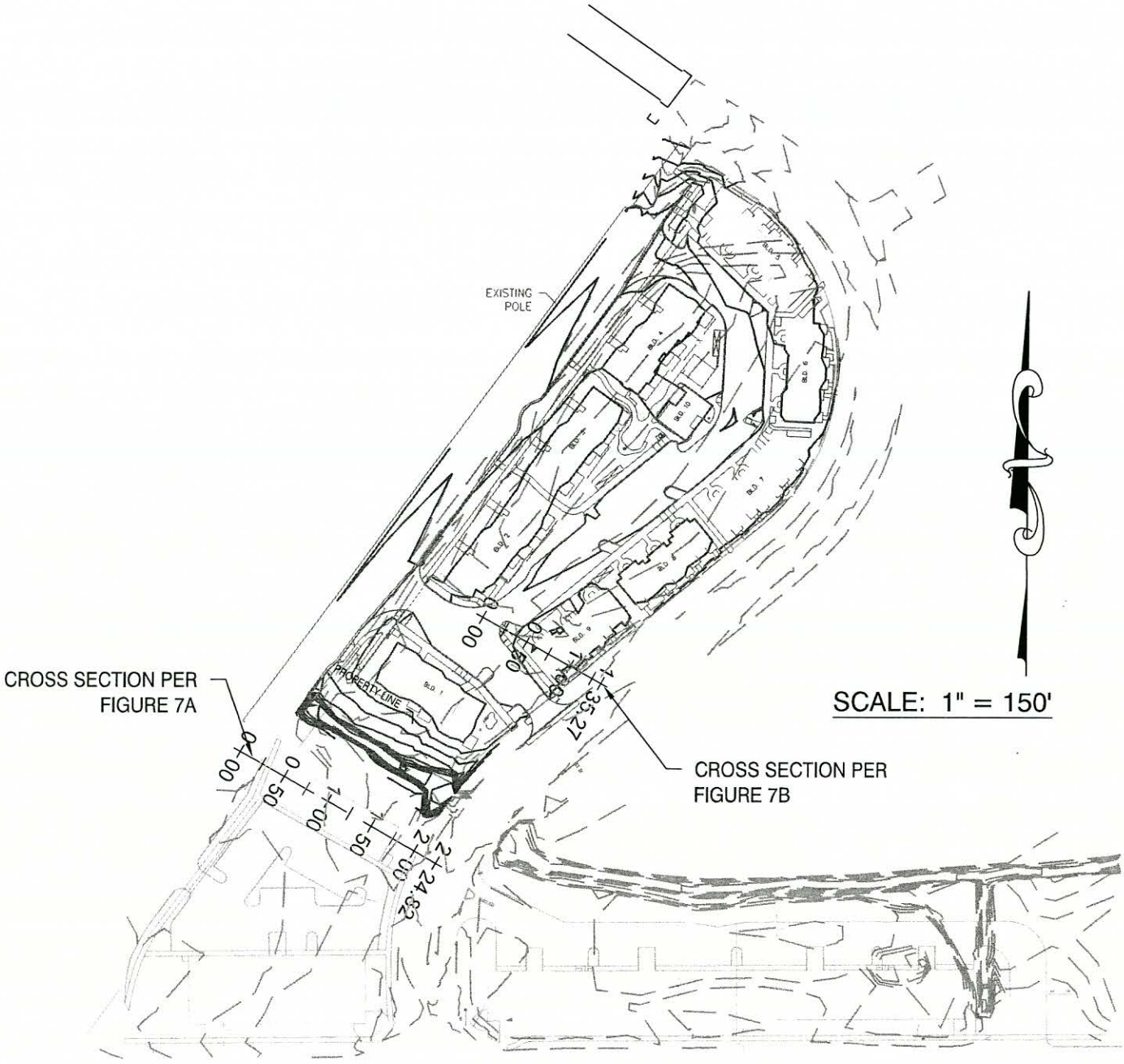


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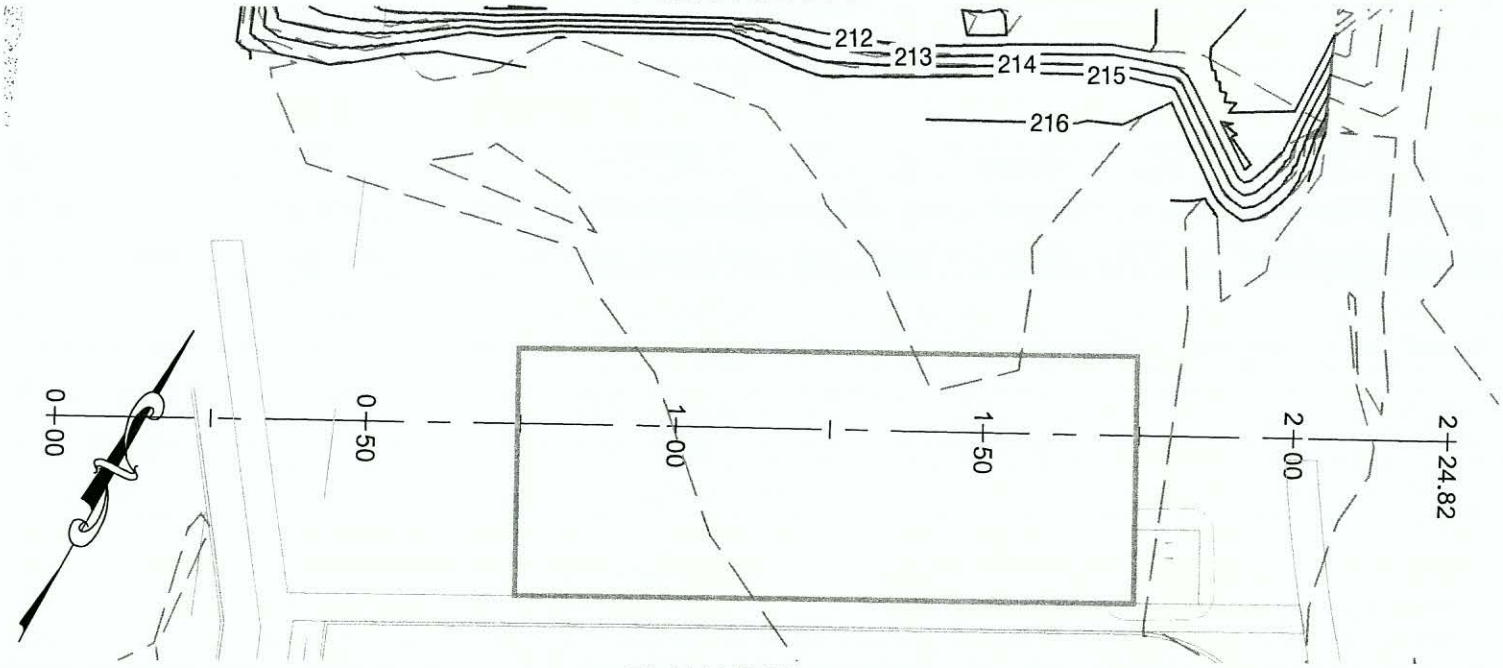
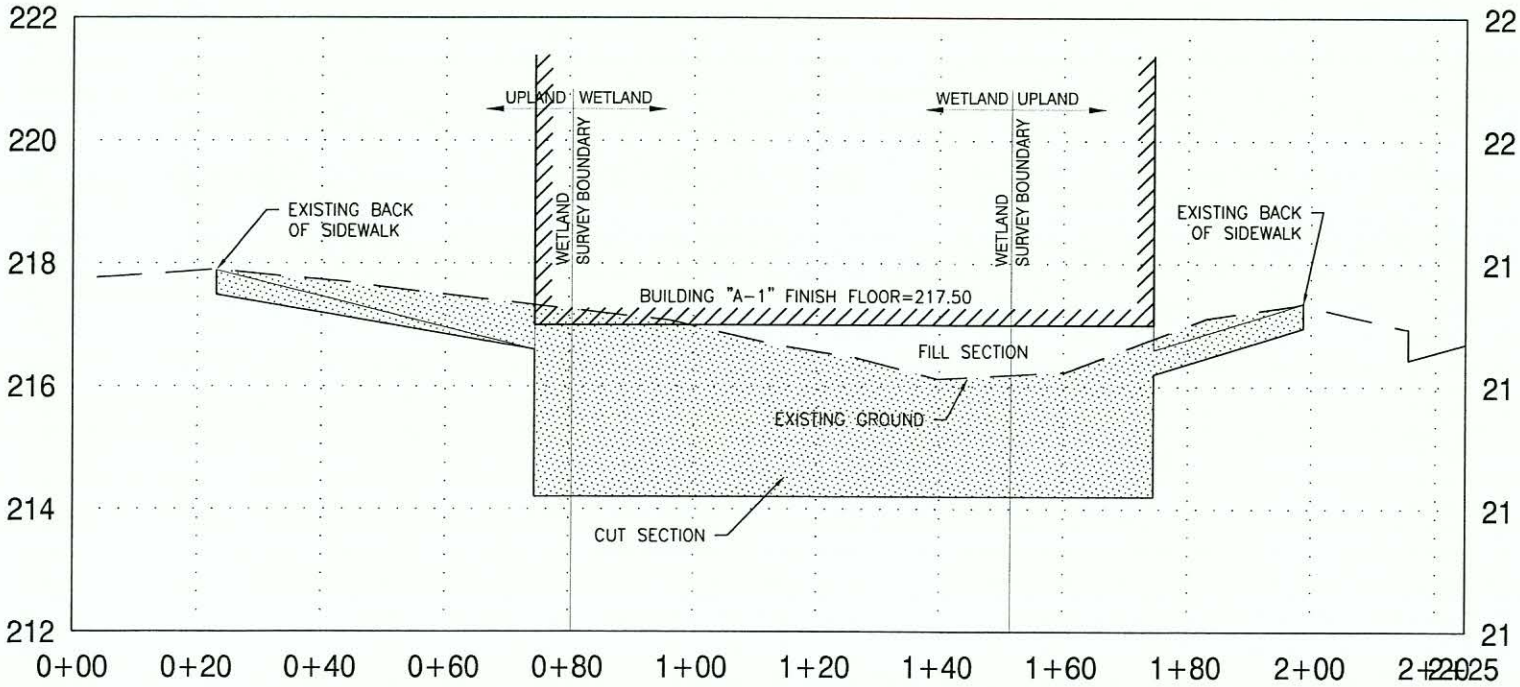
FIGURE 7A



PLAN VIEW
SCALE: 1" = 30'



PROFILE VIEW
SCALE: 1"=30' HOR.
1"=3 VERT.

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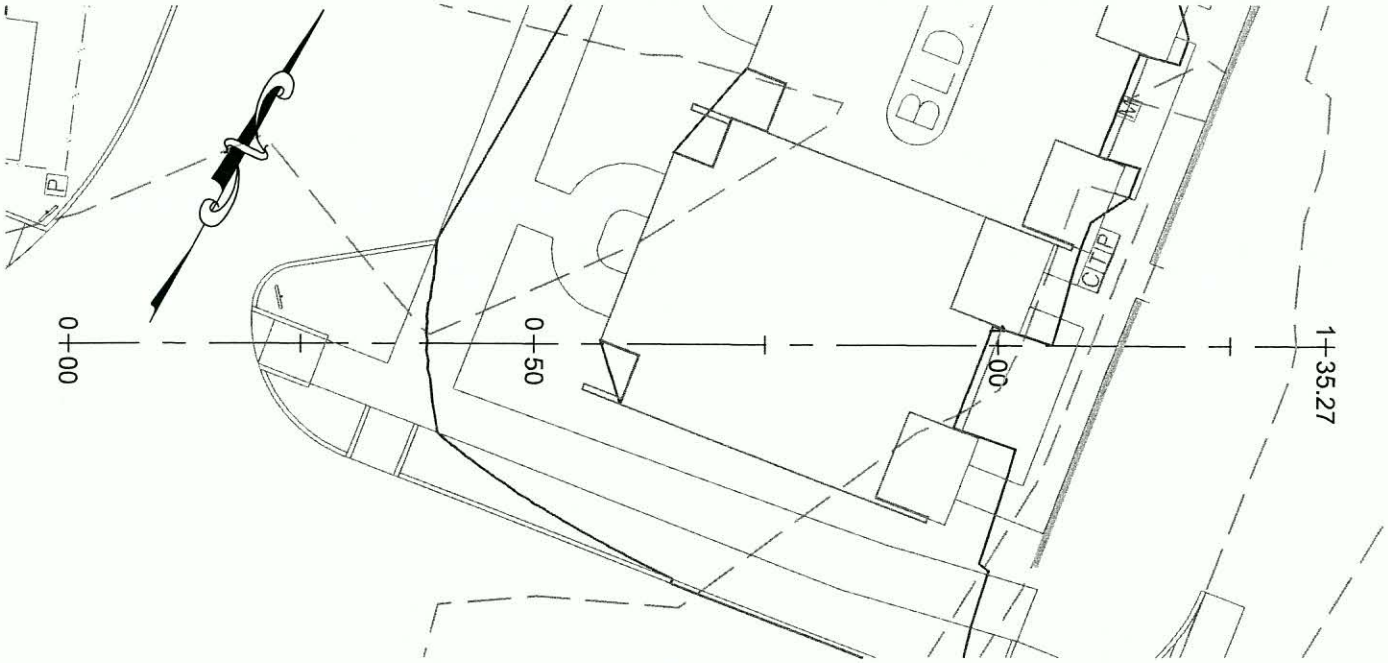
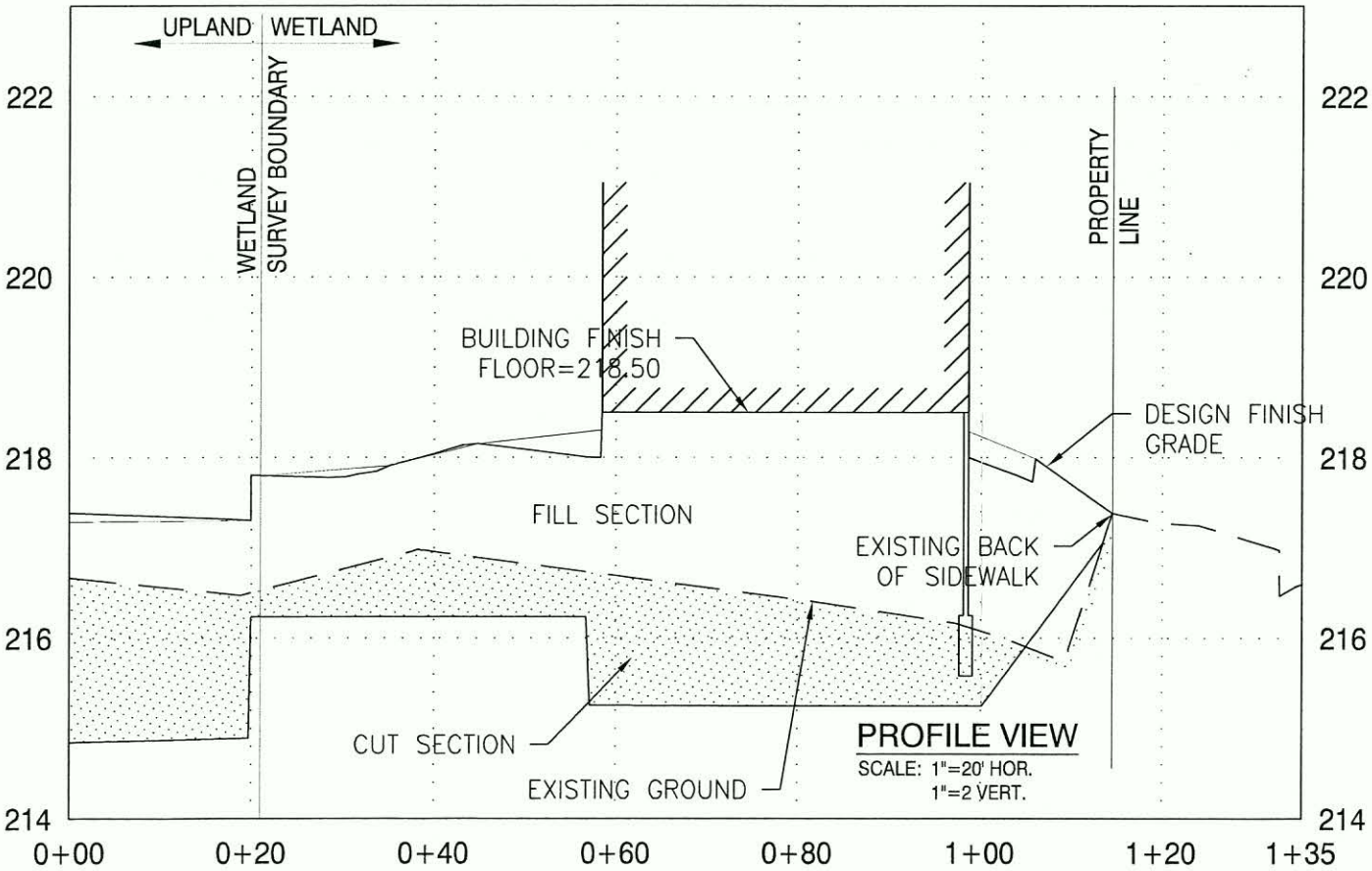
FIGURE 7B



PLAN VIEW
SCALE: 1" = 20'



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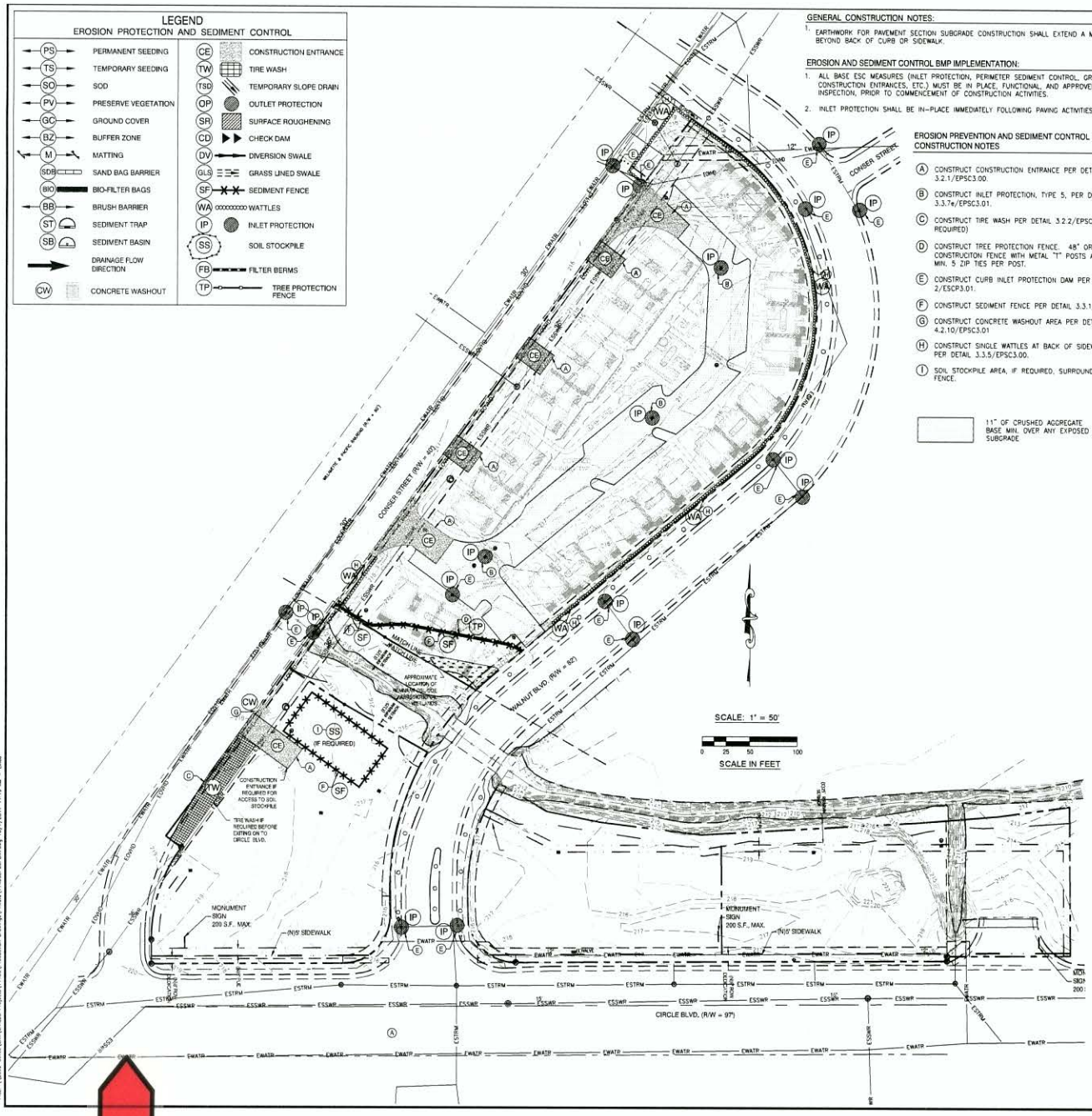
LEGEND
EROSION PROTECTION AND SEDIMENT CONTROL

PS	PERMANENT SEEDING	CE	CONSTRUCTION ENTRANCE
TS	TEMPORARY SEEDING	TW	TIRE WASH
SO	SOD	TSD	TEMPORARY SLOPE DRAIN
PV	PRESERVE VEGETATION	OP	OUTLET PROTECTION
GC	GROUND COVER	SR	SURFACE ROUGHENING
BZ	BUFFER ZONE	CD	CHECK DAM
M	MATTING	DV	DIVERSION SWALE
SDB	SAND BAG BARRIER	GLS	GRASS LINED SWALE
BIO	BIO-FILTER BAGS	SF	SEDIMENT FENCE
BB	BRUSH BARRIER	WA	WATTLES
ST	SEDIMENT TRAP	IP	INLET PROTECTION
SB	SEDIMENT BASIN	SS	SOIL STOCKPILE
	DRAINAGE FLOW DIRECTION	FB	FILTER BERMS
CW	CONCRETE WASHOUT	TP	TREE PROTECTION FENCE



GENERAL CONSTRUCTION NOTES:

1. EARTHWORK FOR PAVEMENT SECTION SUBGRADE CONSTRUCTION SHALL EXTEND A MINIMUM OF 6" BEYOND BACK OF CURB OR SIDEWALK.

EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES

EROSION PREVENTION AND SEDIMENT CONTROL CONSTRUCTION NOTES

(A) CONSTRUCT CONSTRUCTION ENTRANCE PER DETAIL 3.2.1/EPSC3.00.

(B) CONSTRUCT INLET PROTECTION, TYPE 5, PER DETAIL 3.3.7e/EPSC3.01.

(C) CONSTRUCT TIRE WASH PER DETAIL 3.2.2/EPSC3.00 (IF REQUIRED)

(D) CONSTRUCT TREE PROTECTION FENCE. 48" ORANGE CONSTRUCITON FENCE WITH METAL "T" POSTS AT 6'-0" O.C., MIN. 5 ZIP TIES PER POST.

(E) CONSTRUCT CURB INLET PROTECTION DAM PER DETAIL 2/ESCP3.01.

(F) CONSTRUCT SEDIMENT FENCE PER DETAIL 3.3.1/EPSC3.00.

(G) CONSTRUCT CONCRETE WASHOUT AREA PER DETAIL 4.2.10/EPSC3.01

(H) CONSTRUCT SINGLE WATTLES AT BACK OF SIDEWALK OR PATH PER DETAIL 3.3.5/EPSC3.00.

(I) SOIL STOCKPILE AREA, IF REQUIRED, SURROUNDED BY SILT FENCE.

11" OF CRUSHED AGGREGATE BASE MIN. OVER ANY EXPOSED SUBGRADE

GENERAL EROSION PREVENTION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
2. THE IMPLEMENTATION OF THESE EPSC PLANS AND CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE EPSC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED BY THE LOCAL JURISDICTION, AND VEGETATION/LANDSCAPING IS ESTABLISHED. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE AFTER THE PROJECT IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE CLEARING PLAN SHEET SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE MARKINGS SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE EPSC 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 AND SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE EPSC FACILITIES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE EPSC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
6. THE EPSC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
7. THE EPSC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
8. AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE MORE THAN 1/3 THE BARRIER HEIGHT. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATIONS SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
   - A. DWARF GRASS MIX (MIN. 100 LB./AC.)
     1. DWARF PERENNIAL RYEGRASS (80% BY WEIGHT)
     2. CREEPING RED FESCUE (20% BY WEIGHT)
   - B. STANDARD HEIGHT GRASS MIX (MIN. 100 LB./AC.)
     1. ANNUAL RYEGRASS (40% BY WEIGHT)
     2. TURF-TYPE FESCUE (60% BY WEIGHT)
10. SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY. SEE DETAIL 3.2.5a/C6.00.
11. LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.
12. TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
13. ALL EXCESS STRIPPINGS AND EARTHWORK SHALL BE HAULED OFF-SITE. SOME MATERIAL MAY BE STOCKPILED ON SITE FOR FUTURE USE IN PERMANENT LANDSCAPED AREAS.
14. EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.
15. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, STRAW MULCHING, OR OTHER APPROVED MEASURES
16. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING, AND VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
17. ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.
18. SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
19. USE BMP's SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.
20. COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC. TO PREVENT INTRODUCING THESE MATERIALS TO THE STORM WATER SYSTEM.
21. STORM DRAIN INLETS, BASINS, AND AREA DRAINS SHALL BE PROTECTED UNTIL PAVEMENT SURFACES ARE COMPLETED AND/OR VEGETATION IS RE-ESTABLISHED.
22. PAVEMENT SURFACES AND VEGETATION ARE TO BE PLACED AS RAPIDLY AS POSSIBLE.
23. SEEDING SHALL BE PERFORMED NO LATER THAN SEPTEMBER 1 FOR EACH PHASE OF CONSTRUCTION.
24. IF THERE ARE EXPOSED SOILS OR SOILS NOT FULLY ESTABLISHED FROM OCTOBER 1ST THROUGH APRIL 30TH, THE WET WEATHER EROSION PREVENTION MEASURES WILL BE IN EFFECT.
25. THE EPSC MEASURES SHALL BE REMOVED ONLY AFTER VEGETATION IS FULLY ESTABLISHED.
26. ANY DEWATERING OPERATION PERFORMED ON-SITE SHALL BE IN ACCORDANCE WITH THE CITY OF CORVALLIS EROSION PREVENTION AND SEDIMENT CONTROL MANUAL, BMP-1 DEWATERING OPERATIONS.
27. REESTABLISH PERMANENT GROUND COVER PRIOR TO REMOVING EROSION CONTROL MEASURES.

	SITE SLOPE							STOCK PILES
	<2%	<10%	<15%	<20%	<30%	<50%	>50%	
WET WEATHER MEASURES								
28. ESTABLISHED GRASS (BMP 3.1.3)			**	**	**	**	**	
29. 2" MIN. STRAW MULCH COVER (BMP 3.1.4)		O	O	O	O	O		O
30. EROSION BLANKET WITH ANCHORS (BMP 3.1.7)		O	O	O	O	O	O	
31. 6-MIL PLASTIC SHEET COVER (BMP 3.1.8)		O	O	O	O	O	**	**
32. SEDIMENT TRAPS OR PONDS (BMP 3.3.9 AND 3.3.10)		O	O	O	O	O		
POST CONSTRUCTION								
33. REESTABLISHED PERMANENT GROUND COVER PRIOR TO REMOVING EROSION MEASURES (BMP 3.1.3)	X	X	X	X	X	X	X	

KEY:
X BASE MEASURE, REQUIRED
** PRIMARY WET WEATHER MEASURES (OCTOBER - APRIL) (SEEDING PRIOR TO SEPTEMBER 1)
O ALTERNATE WET WEATHER MEASURES, REQUIRED AS DIRECTED

DRAWING STATUS	DATE:	No.	REVISION:	DATE:
PRELIMINARY		1		
SUBMITTED		2		
BID SET		3		
PERMIT SET	10/10/11	4		
CONST SET		5		
		6		
		7		

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Corvallis Oregon
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245 NW CONSER, P.O. BOX 120
CORVALLIS, OR 97339
WWW.DEVCOENGINEERING.COM

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PROJECT: WALNUT CREEK APARTMENTS

PROJECT LOCATION: T.L. 2500
MAP 11-5-25BO
CITY OF CORVALLIS

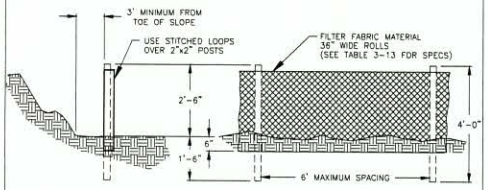
OWNER: WALNUT CREEK, LLC

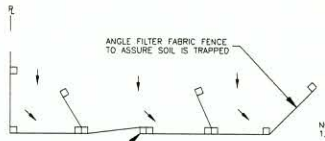
SHEET TITLE: EROSION PREVENTION AND SEDIMENT CONTROL PLAN

JOB NO. 11406

DRAWN BY: DEVCO

DRAWING: EPSC2.00





NOTES:
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. 2"x2" FIR, PINE, OR STEEL FENCE POSTS.
3. POST TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
4. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
5. PANELS MUST BE PLACED ACCORDING TO SPACING TABLE 3-12.

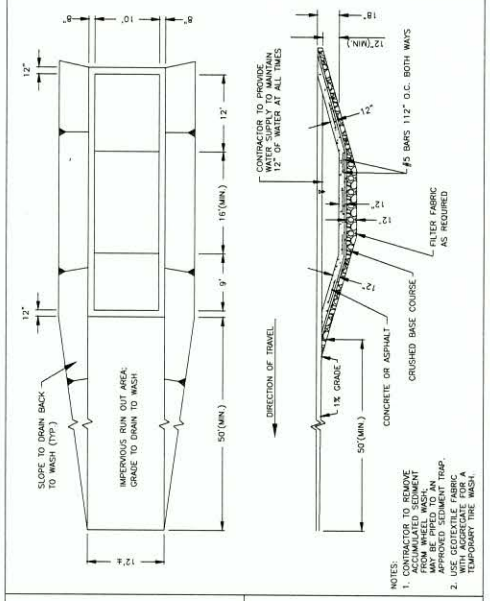
TABLE 3-13 WOVEN POLYPROYLENE SEDIMENT FENCE FABRIC SPECIFICATIONS

PROPERTY	TEST PROCEDURE	MINIMUM FABRIC VALUE
Grab Tensile Strength	ASTM D-4632	180 lbs.
Grab Elongation	ASTM D-4632	15%
Trapezoid Tear	ASTM D-4533	70 lbs.
Mullen Burst	ASTM D-3786	300 psi
Puncture	ASTM D-4833	80 lbs
Permitivity	ASTM D-4491	0.07 sec-1
Permeability	ASTM D-4491	0.005 cm/sec
Apparent Opening Size (AOS)	ASTM D-4751	50 U.S. Sieve
UV Resistance (500 hrs)	ASTM D-4355	80%

TABLE 3-12 BARRIER SPACING FOR GENERAL APPLICATION

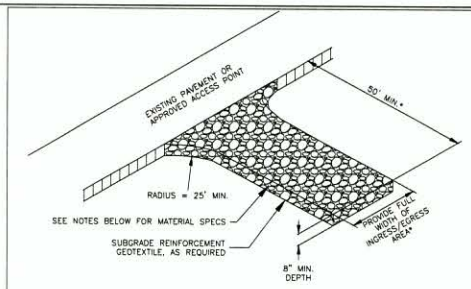
% SLOPE	SLOPE	MAX SPACING ON SLOPE
<10%	<10:1	300 ft
10-15%	10:1 to 7.5:1	150 ft
15-20%	7.5:1 to 5:1	100 ft
20-30%	5:1 to 3.5:1	50 ft
30-50%	3.5:1 to 2:1	25 ft

SEDIMENT FENCE | Detail Drawing 3.3.1

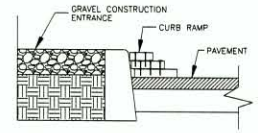


NOTES:
1. CONTRACTOR TO REMOVE MUD AND SEDIMENT FROM WHEELS. WASH MAY BE PIPED TO AN APPROVED SEDIMENT TRAP.
2. USE GEOTEXTILE FABRIC WITH AGGREGATE FOR A TEMPORARY TIRE WASH.

TIRE WASH | Detail Drawing 3.2.2

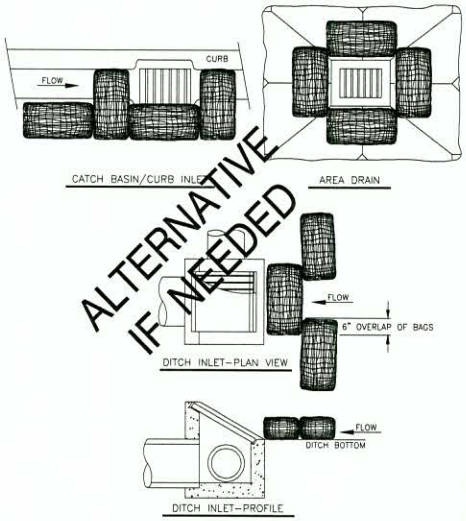


*20' MIN. FOR SINGLE FAMILY AND DUPLEX RESIDENTIAL



NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT-LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS:
   SINGLE FAMILY AND DUPLEX
   20' LONG BY 20' WIDE, 8" DEEP OF 3/4" MINUS CLEAN ROCK.
   COMMERCIAL
   50' LONG BY 20' WIDE, 3-6" DEEP CLEAN ROCK.
   GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE | Detail Drawing 3.2.1



NOTES:
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIOFILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.

INLET PROTECTION TYPE 4 - BIOFILTER BAGS | Detail Drawing 3.3.7d

INLET PROTECTION TYPE 1 - GRAVEL & WIRE MESH | Detail Drawing 3.3.7a

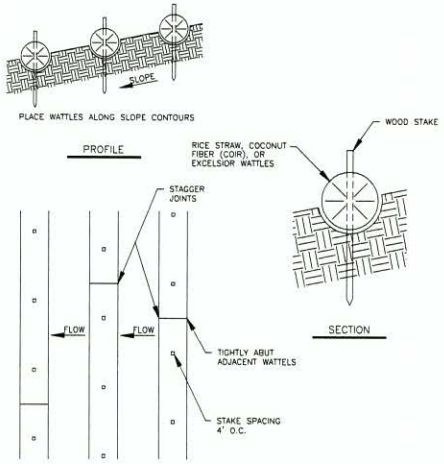


TABLE 3-12 BARRIER SPACING FOR GENERAL APPLICATION

% SLOPE	SLOPE	MAX SPACING ON SLOPE
<10%	<10:1	300 ft
10-15%	10:1 to 7.5:1	150 ft
15-20%	7.5:1 to 5:1	100 ft
20-30%	5:1 to 3.5:1	50 ft
30-50%	3.5:1 to 2:1	25 ft

NOTES:
1. STAKING SPECIFICATIONS:
   A. 1"x2" WOODEN STAKES.
   B. ADDITIONAL STAKES MAY BE INSTALLED ON DOWNHILL SIDE OF WATTLES ON STEEP SLOPES OR HIGHLY EROSIVE SOILS.
2. SPACING IN ACCORDANCE WITH TABLE 3-12.

WATTLES | Detail Drawing 3.3.5

DRAWING STATUS:	DATE:	No.	REVISION:	DATE:
PRELIMINARY				
SUBMITTED				
BID SET				
PERMIT SET	10/10/11			
CONST SET				

DEVCO engineering inc.
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CORVALLIS, OR 97339
WWW.DEVCOENGINEERING.COM

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PROJECT: WALNUT CREEK APARTMENTS

PROJECT LOCATION: T.L. 2500 MAP 14-5-25BO CLATSKANIE, OR WALNUT CREEK, LLC

SHEET TITLE: EROSION PREVENTION AND SEDIMENT CONTROL DETAILS

JOB NO. 11406

DRAWN BY: DEVCO

DRAWING: EPSC3.00

SEEDING

Temporary Seeding

Seed Purity

All seed applied should be those specified herein and should be measured by Pure Live Seed (PLS) weight. Pure live seed refers to the portion of a seed lot that is live seed of the desired kind.

The seed lots should be tested and meet the minimum seed standards. Lots showing Oregon prohibited weeds are not approved. Seed must meet minimum viability standards. Oregon State University Extension Service keeps a listing of seed varieties that area certified in the OSU Extension Certified Seed Handbook. The seed variety must be approved by the OSU Seed Certification Board to be eligible for certification or meet the standards for certification.

- Temporary grass cover measures must be fully established by October 1st or other ground cover measures will have to be implemented. In order to establish an 80% healthy stand of grass, all seeding applications must be completed prior to September 1st.
- Apply seeding when no further disturbances are planned.
- Seed should be applied immediately after seedbed preparation while the soil is loose and moist.
- Apply seed before applying straw mulch.
- Dry, loose, weed-free straw used as mulch shall be applied at 4,000 lb./acre. Anchor straw by working in by hand or with equipment (rollers, cleat tracks, etc.)
- Permanent or temporary irrigation shall be supplied especially in abnormally hot or dry weather or on adverse sites. Water application rates should be controlled to provide adequate moisture without causing runoff.

Site Preparation

- Bring the seedbed area to final grade, remove all rocks and debris, and smooth surface undulations larger than 2 inches.
- Divert concentrated flows away from the seeded area.
- For optimum seeding conditions preserve topsoil and stockpile material until final grades are established. Spread topsoil over new grades.
- Roughen the soil by harrowing, tracking, grooving or furrowing.
- Apply amendments as needed to adjust pH to 6.0-7.5. Incorporate these amendments into the soil.
- The seedbed should be firm but not compact. The top 4-6 inches of soil should be loose, moist and free of large clods and stones.
- If the seedbed has been idle long enough for the soil to become compact, the top soil should be harrowed with a disk, spring tooth drag, spike tooth drag, or other equipment designed to condition the soil for seeding.
- Harrowing, tracking or furrowing should be done horizontally across the face of the slope, so ridges are along the slope contour.

Seeding

- Seed to soil contact is the key to good germination.
- Apply seed at the rates specified using calibrated seed spreaders, cyclone seeders, mechanical drills, or hydro seeder so the seed is applied uniformly on the site.
- Broadcast seed should be incorporated into the soil by raking or chain dragging, and then lightly compacted to provide good seed-soil contact.
- Apply mulch over the seeded areas.
- To prevent seed from being washed away, confirm installation of all required surface water control measures.
- Double the rate of seed application when mulch and seed is applied in a single application.
- Recommended erosion control grass seed mixes are as follows. Similar mixes designed to achieve erosion control may be substituted with approval

1. Dwarf Grass mix (low height, low maintenance)
   Dwarf Perennial Ryegrass, 80% by weight
   Creeping Red Fescue, 20% by weight
   Application rate: 100 pounds minimum per acre

2. Standard Height Grass Mix
   Annual Ryegrass, 40% by weight
   Turf-type Fescue, 60% by weight
   Application rate: 100 pounds minimum per acre

Fertilizer

- **Slow-release fertilizers are more efficient and have fewer environmental impacts.**
- **Areas being seeded may require soil tests to determine the exact type and quantity of fertilizer needed to prevent the over-application of fertilizer. Use non-phosphorous fertilizer on disturbed areas within 50 feet of water bodies and wetlands.**
- **The use of stockpiled topsoil or compost reduces the need for fertilizer and improves the overall soil quality.**
- **Application rate per manufacturer's recommendation.**

Mulch

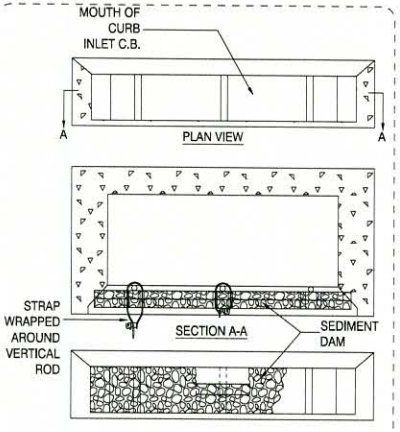
- **The straw mulch shall not be moldy, caked, decayed or of otherwise low quality.**
- **Can be applied on top of the seed or applied with the seed during hydro seeding.**
- **The application rate of seed per acre should be increased if seed and mulch are applied in a single application.**

Mulch Material	Quality Standards	Application Rate Per Acre	Depth of Material	Considerations
Straw	Air dried, free from unwanted seeds and coarse materials	2-2 ½ tons or 90-120 bales	2 inches min. uniform spread	Use where the mulching effects is to be maintained < 3 months. When chopped straw is applied use a tackifier.

Inspection & Maintenance

- **Inspect once per week in active sites, once every two weeks on in-active sites, and within 24 hours following a 0.5-inch rain event.**
- **Newly seeded areas need to be inspected frequently to ensure the grass is growing.**
- **If the seeded area is damaged due to runoff. Re-seed and mulch damaged areas.**
- **Spot seeding can be done on small areas to fill in bare spots where grass did not grow properly.**
- If spot seeding is ineffective, use an alternate method, such as sod or matting.
- Re-seed and protect with mulch any areas affected by erosion. If the erosion is caused by concentrated runoff, fix the runoff problem and then re-seed and mat the area.

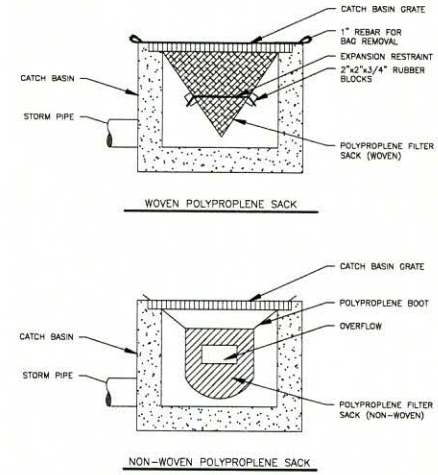
1 SEEDING NOTES



NOTES:
1. CURB INLET SEDIMENT DAMS ARE TO BE USED FOR CURB INLET DRAINAGE AREAS DURING CONSTRUCTION.
2. AFTER SETTING CURB INLET CATCH BASIN, PLACE DAM CENTER TO MOUTH OF C.B. AND WRAP STRAPS AROUND CORRESPONDING ROD (OPTIONAL) FEED STRAP AND BACK THROUGH THE HOLE OPPOSITE ROD, INSERT DAM INTO THE MOUTH OF C.B. TUCKING EDGES INTO MOUTH OF C.B., THEN PULL STRAP THROUGH SECURING MEANS. PULL STRAP TIGHT FOR A SNUG FIT. MAKE SURE THAT ALL EDGES AND ENDS OF DAM ARE TUCKED INTO THE MOUTH OF C.B. TO FILL ALL VOIDS.
3. MONITOR DAM DURING CONSTRUCTION PERIOD AND CLEAN AS NEEDED. PRIOR TO REMOVING DAM CLEAN SEDIMENT FROM IN FRONT OF C.B. AND AFFECTED GUTTERS.

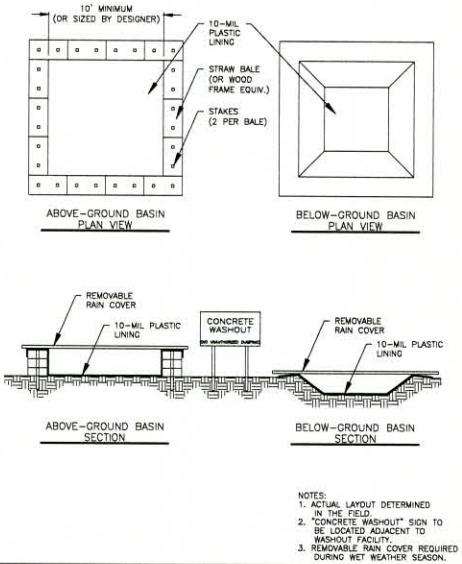
2 CURB INLET SEDIMENT DAM - FOR 48" AND 30" CURB INLET C.B.

MANUFACTURER: AMERICAN ENVIRONMENTAL PRODUCTS AND SOLUTIONS
29377 AIRPORT ROAD
EUGENE, OREGON 97402
PHONE: (541) 688-5923 (CALL FOR A LIST OF SUPPLIERS)
http://www.erosiondam.com



NOTE:
1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

INLET PROTECTION TYPE 5 – CATCH BASIN INSERT | Detail Drawing 3.3.7e



NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. "CONCRETE WASHOUT" SIGN TO BE LOCATED ADJACENT TO WASHOUT FACILITY.
3. REMOVABLE RAIN COVER REQUIRED DURING WET WEATHER SEASON.

CONCRETE WASHOUT | Detail Drawing 4.2.10

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☒ PERMIT SET	10/10/11	△		
☐ CONST. SET		△		
☐		△		

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PROJECT: WALNUT CREEK APARTMENTS

PROJECT LOCATION: T.L. 2500 MAP 11-5-25 BO
CLIENT: WALNUT CREEK, LLC

SHEET TITLE: EROSION PREVENTION AND SEDIMENT CONTROL DETAILS

JOB NO. 11406
DRAWN BY: DEVCO
DRAWING: EPSC3.01

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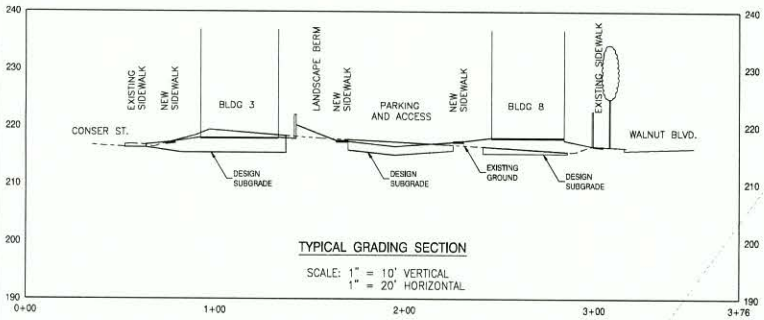
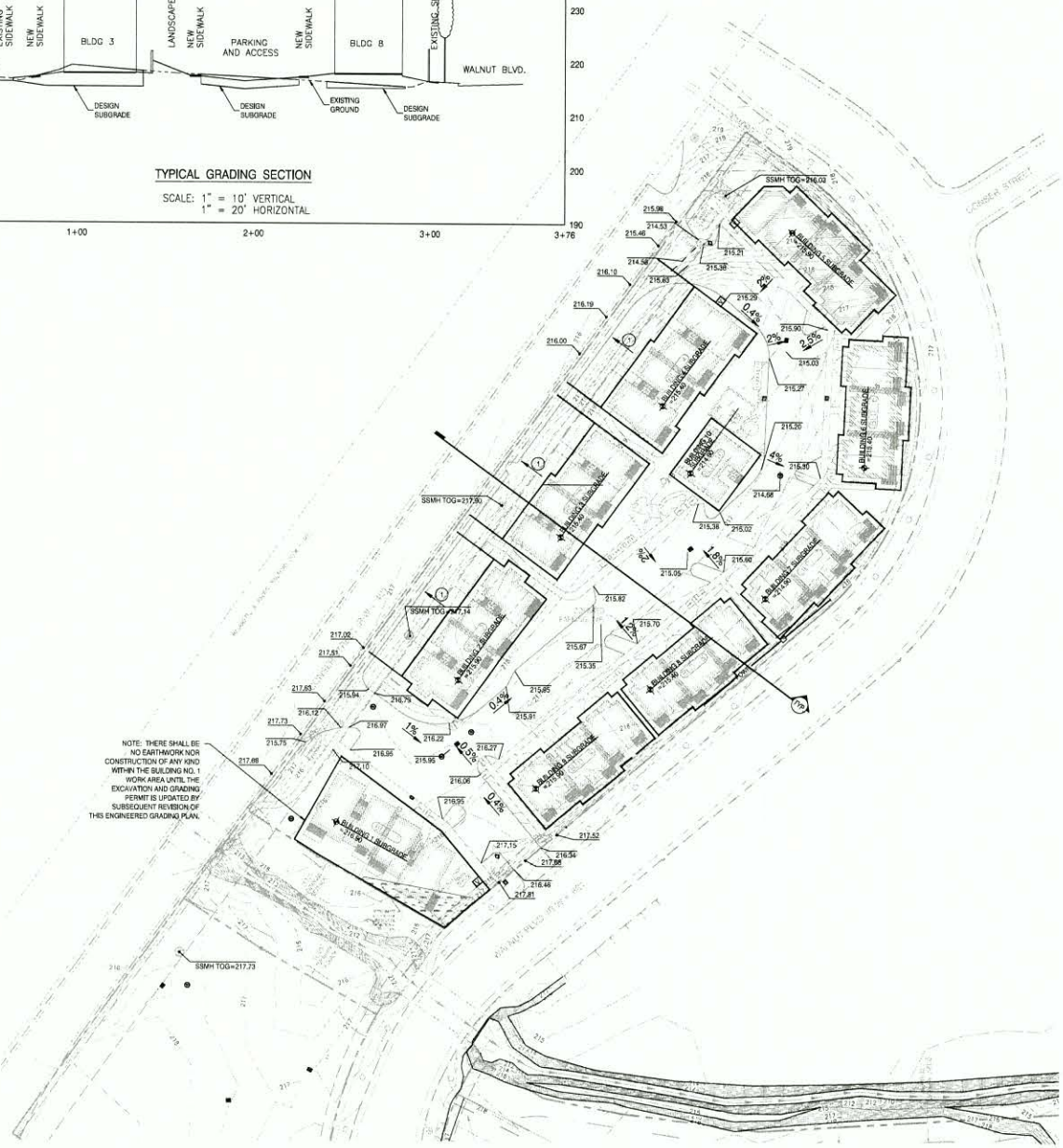


TYPICAL GRADING SECTION

SCALE: 1" = 10' VERTICAL
1" = 20' HORIZONTAL



SCALE: 1" = 40'

0 10 20 40 80

SCALE IN FEET

EARTHWORK QUANTITIES	
EXCAVATION:	4900 CU.YD.
FILL:	0 CU.YD.

THESE QUANTITIES ARE PRESENTED FOR PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL MAKE THE CONTRACTOR'S OWN DETERMINATION AS TO THE QUANTITIES INVOLVED.

GENERAL EARTHWORK NOTES:

1. ALL EXCAVATION AND FILL EMBANKMENT SHALL BE IN ACCORDANCE WITH THE CURRENT APPLICABLE REQUIREMENTS OF OREGON OSHA SUBDIVISION P–EXCAVATION, AND THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY FOUNDATION ENGINEERING, INC., DATED SEPTEMBER 28, 2011, FOUNDATION PROJECT 2111055–100
2. EARTHWORK FOR PAVEMENT SECTION SUBGRADE CONSTRUCTION SHALL EXTEND A MINIMUM OF 6" BEYOND BACK OF CURB OR SIDEWALK.

EARTHWORK CONSTRUCTION NOTES:

1. STRAIGHT GRADE FROM BACK OF EXISTING SIDEWALK TO BUILDING SUBGRADE ELEVATION. EXCAVATE ADDITIONAL MATERIAL AS REQUIRED FOR EPSC CONSTRUCTION ENTRANCE.

LEGEND

(E)	EXISTING
(N)	NEW
EGAS	EXISTING GAS
ERRIG	EXISTING IRRIGATION
EPOWR	EXISTING POWER
ESSWR	EXISTING SANITARY SEWER
ESTEM	EXISTING STEAM AND RETURN
ESTRM	EXISTING STORM DRAIN
ECOMM	EXISTING TELECOMMUNICATIONS
ECABL	EXISTING TV CABLE
EWATR	EXISTING WATER
GAS	NEW GAS
IRRIG	NEW IRRIGATION
POWR	NEW POWER
SSWR	NEW SANITARY SEWER
STRM	NEW STORM DRAIN
COMM	NEW TELECOMMUNICATIONS
CABL	NEW TV CABLE
WATR	NEW WATER
	EXISTING IMPROVEMENTS
	NEW IMPROVEMENTS
	FUTURE IMPROVEMENTS
	EXISTING PROPERTY LINE
	EXISTING IRON PIPE OR ROD
	EXISTING EASEMENT
	EXISTING RIGHT-OF-WAY
	EXISTING BUILDINGS
	EXISTING BUILDING OVERHANG
	CENTERLINE
	SAWCUT LINE
CLR	APPROXIMATE CLEARING LIMITS
	EXISTING DECIDUOUS TREE
	EXISTING EVERGREEN TREE
	EXISTING SHRUB
	FENCE
	DITCH FLOW LINE
	SANITARY SEWER MANHOLE
	STEAM AND RETURN MANHOLE
	STORM DRAIN MANHOLE
	TELECOMMUNICATIONS MANHOLE
	GAS VALVE
	WATER VALVE, AIR RELEASE VALVE
	WATER METER, GAS METER
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	HOSE BIB
	IRRIGATION SPRINKLER HEAD
	CATCH BASIN
	CURB INLET
	CLEAN OUT
	RAIN DRAIN
	THRUST BLOCK
	STREET LIGHT, PARKING LOT LIGHT
	LANDSCAPE LIGHT
	UTILITY POLE
	UTILITY VAULT
	ELECTRICAL PEDESTAL
	TRANSFORMER
	CABLE PEDESTAL
	TELECOMMUNICATIONS PEDESTAL
	SIGN
	MAILBOX
249	EXISTING CONTOUR
252	NEW CONTOUR
	BENCH MARK
+ XXX.XX	EXISTING SPOT ELEVATION
XXX.XX	EXISTING TOP OF STRUCTURE OR CURB (TOG=TOP OF STRUCTURE)
XXX.XX	DESIGN SUBGRADE

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PERMIT SET	10/10/11
CONST SET	

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PROJECT: WALNUT CREEK APARTMENTS

PROJECT LOCATION: T.L. 2500
MAP [illegible]5-25BO
CL[illegible] CREEK, LLC
WA[illegible]

SHEET TITLE: ENGINEERED GRADING PLAN

JOB NO. 11406

DRAWN BY: DEVCO

DRAWING: C2.03

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