

Loop 360 Landfill Remediation Update

Presentation to Environmental Board

August 17, 2011

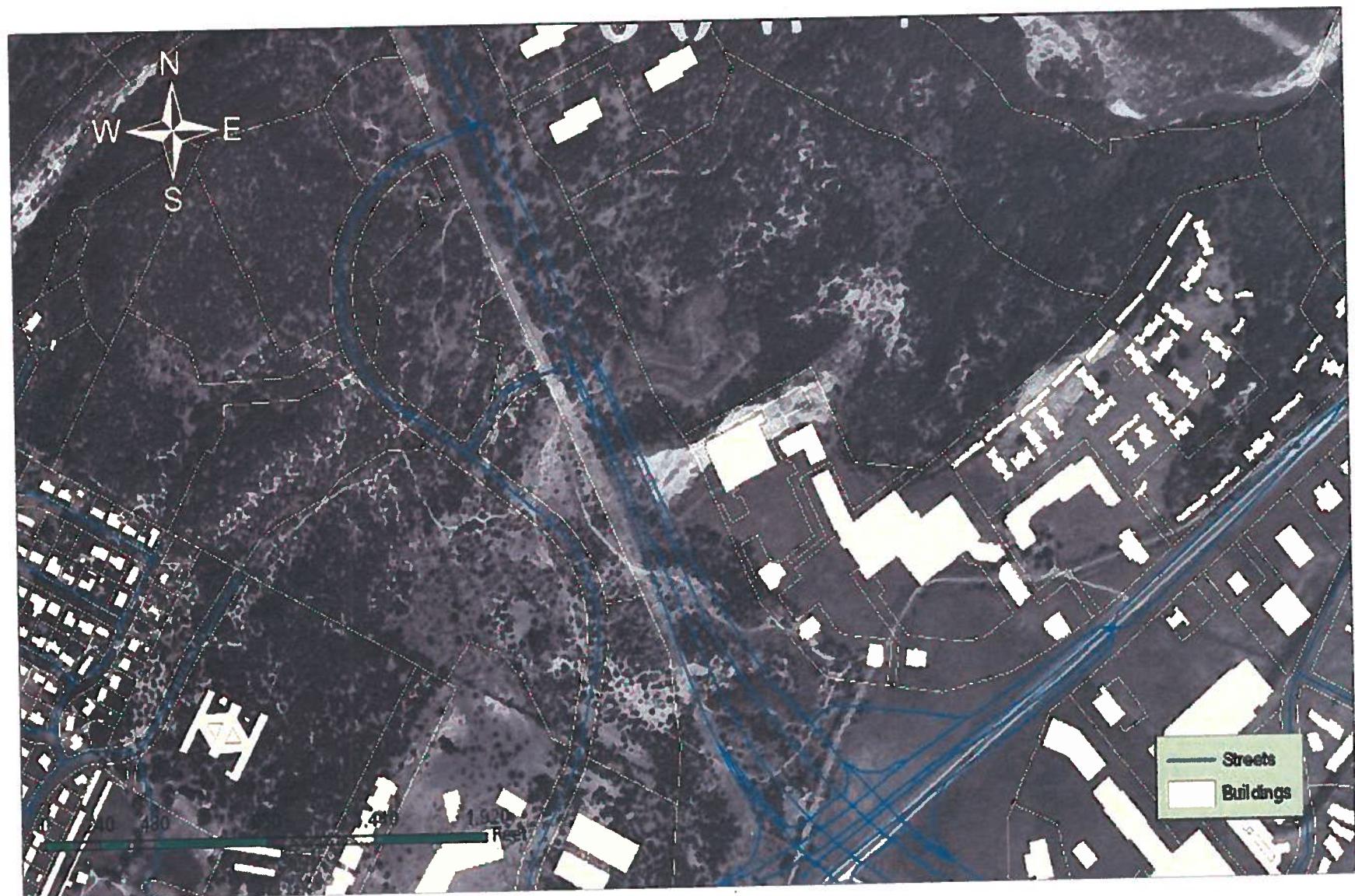
Presentation Overview

- Site History
- Assessment
- Remediation Design
- Cost and Schedule

Site History

- Located on a slope in the Barton Creek greenbelt south of Barton Creek and east of Loop 360
- Probably operated as a rural dump or landfill in the 1940's or 1950's.
- One of approximately 70 similar sites in the Austin area

Loop 360 Landfill - 1940







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Loop 360
Google

Site Assessment

- Soil - Lead and antimony elevated
- Soil gas - No methane found
- Sediment - Low level of antimony in tributary
- Surface water – Low level of antimony found in 3 samples
- Groundwater – low levels of VOC's and metals

Environmental Concerns

- Presence of known and possible unknown contaminants over Barton Springs recharge area
- Mature trees in and near waste
- Endangered bird habitat

Remediation Design

Options considered:

- No action
- Fence and leave in place
- Phytoremediation
- Limited vegetation removal, partial cap
- Clear vegetation and full cap
- **Excavate and remove all waste**

Remediation Design

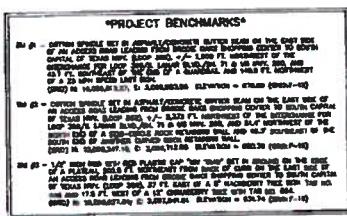
Excavate and remove all waste

- Permanently remove threat to Barton Springs
- Tree removal similar to full cap option
- Restore natural land contours
- Revegetate to replicate surrounding greenbelt and bird habitat
- Leave monitoring well in place



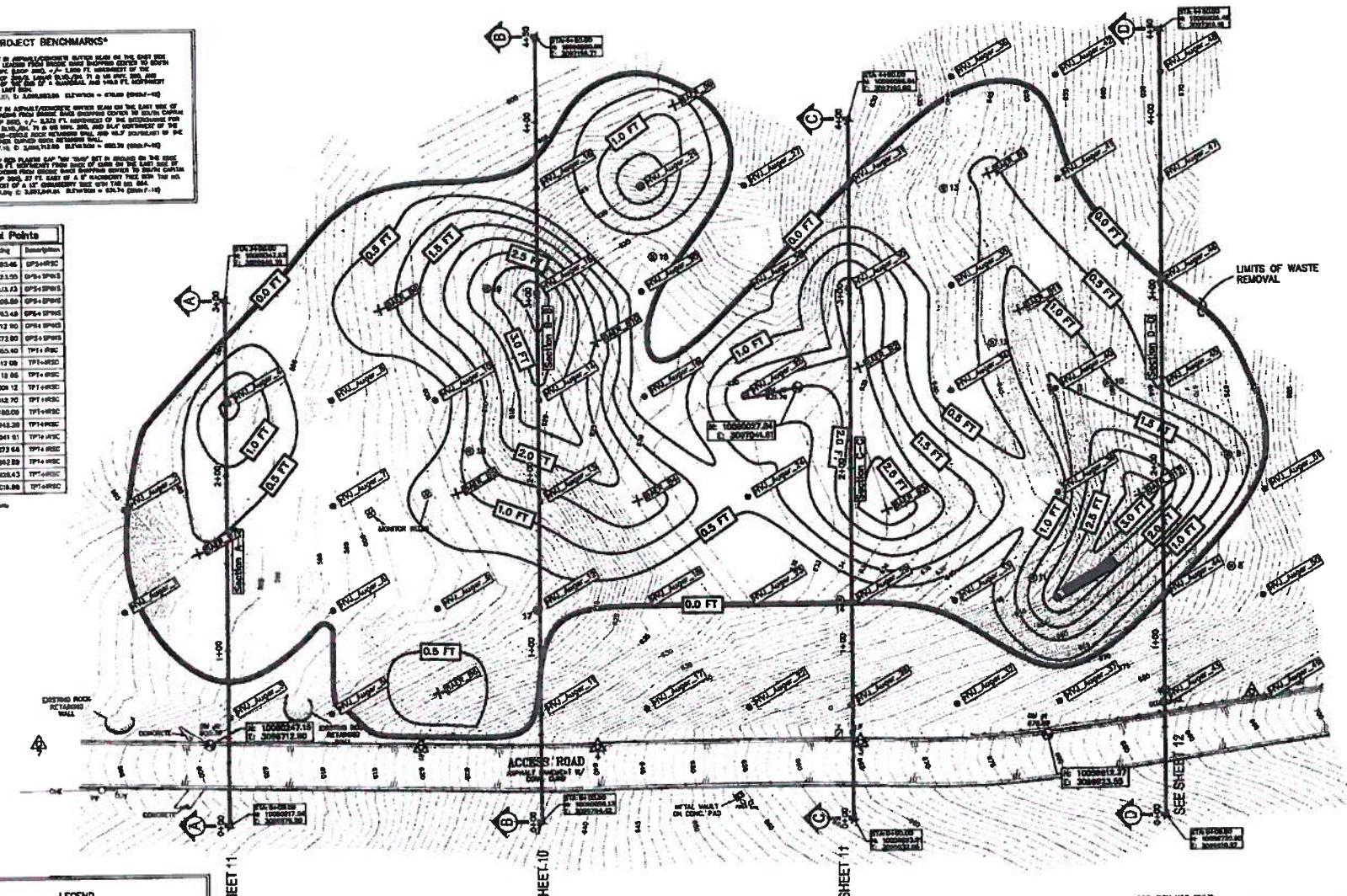
HALFF
Half Associates TPS Firm No. 312
4000 WEST BRAKERS LANE, SUITE 450
AUSTIN, TEXAS 78756-3565
TEL (512) 252-5164
FAX (512) 252-5141

LOOP 360 LANDFILL
BOTH SHEETS OF WASTE



Horizontal Control Points		
Point #	Latitude	Longitude
1	3089875.47	3098965.46
2	3089899.23	3098923.59
3	3089890.15	3098923.12
4	3089894.44	3098920.89
5	3089893.44	3098923.48
6	30898947.18	3098921.93
7	30898933.71	3098923.93
8	30898977.71	3098925.43
9	30898978.98	3098921.08
10	30898988.47	3098918.65
11	30898908.08	3098902.12
12	30898938.38	3098912.70
13	30898999.95	3098912.00
14	30898933.41	3098912.80
15	30898923.71	3098911.61
16	30898926.90	3098912.44
17	30898908.37	3098912.89
18	30898948.46	3098912.43
19	30898924.23	3098912.89
20	30898924.23	3098912.89

DOC = Dot Set of Red Points
TPF = Topo Points
SPRS = Survey Points



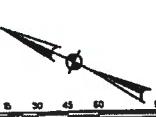
SEE SHEET 11

Refer to Sheet 10 for table detailing the findings of the HVG and Baser bearings.

Units and depth of waste determined from construction 51 hand auger surveys at 1 foot centers performed between Oct 2000 to 1st Nov 2000 by HVG Engineering, Inc. combined with 12 borings performed by Baser Engineering (July 2000).

Tree species and total diameter of the tree located on this plan were verified in the field by Concho Morseth (arborist certification number Tx-33424M) from Capital City Environmental Consulting, Inc. on September 19, 28, and 30, 2000.

SEE SHEET 10



SEE SHEET 11

FOR CITY USE ONLY:



City of Austin

WATERSHED PROTECTION

09

SHEET NO.

REVISION

CITY OF AUSTIN, TEXAS
DEPARTMENT OF PUBLIC WORKS
MAILING ADDRESS:
P.O. BOX 166
AUSTIN, TX 78771
(512) 974-7445 FAX: 974-7423



Half Association TIRPC Plan No. 312

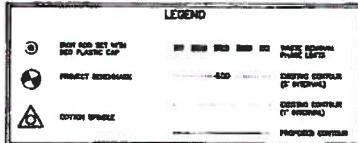
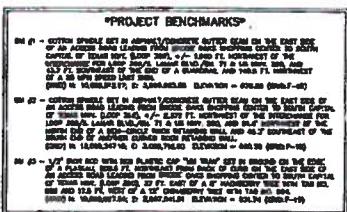
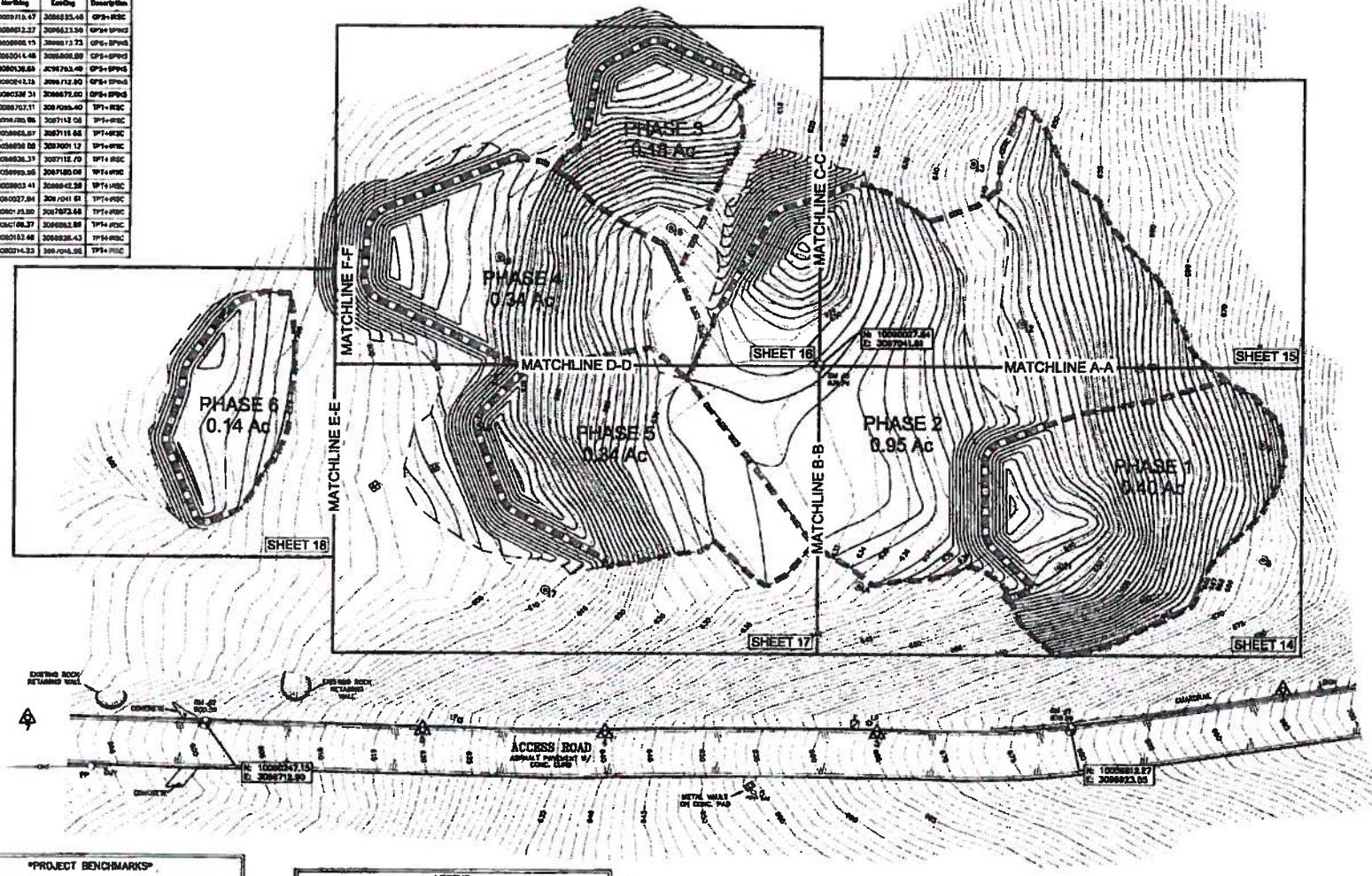
HALFF

4030 WEST BRAKER LANE, SUITE 450
AUSTIN, TEXAS 78756-5538
TEL (512) 252-5114
FAX (512) 252-8141

LOOP 360 JARRELL
WEST BIRMINGHAM TRACT

BY	DATE										

Horizontal Control Points			
Pond #	Marking	Location	Description
1	100000018.67	3004825.48	CPS+TPRSC
2	100000012.27	3004823.59	CPS+TPRSC
3	100000008.15	3004823.73	CPS+TPRSC
4	100000014.48	3004820.93	CPS+TPRSC
5	100000016.49	3004793.49	CPS+TPRSC
6	100000012.15	3004792.80	CPS+TPRSC
7	100000013.51	3004687.60	CPS+TPRSC
8	100000017.11	3004686.40	TP1+TPRSC
9	100000018.96	3004712.08	TP1+TPRSC
10	100000015.67	3004718.86	TP1+TPRSC
11	100000016.06	3004700.12	TP1+TPRSC
12	100000018.37	3004712.79	TP1+TPRSC
13	100000019.05	3004740.05	TP1+TPRSC
14	100000034.41	3004682.59	TP1+TPRSC
15	100000037.04	3004701.61	TP1+TPRSC
16	100000035.87	3004702.68	TP1+TPRSC
17	100000033.43	3004698.89	TP1+TPRSC
18	100000034.42	3004692.42	TP1+TPRSC
19	100000034.23	3004704.95	TP1+TPRSC



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1/10/04



**WATERSHED
PROTECTION**

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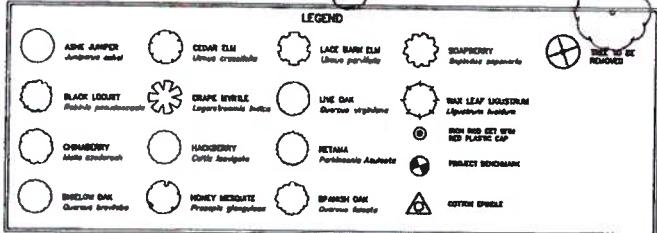
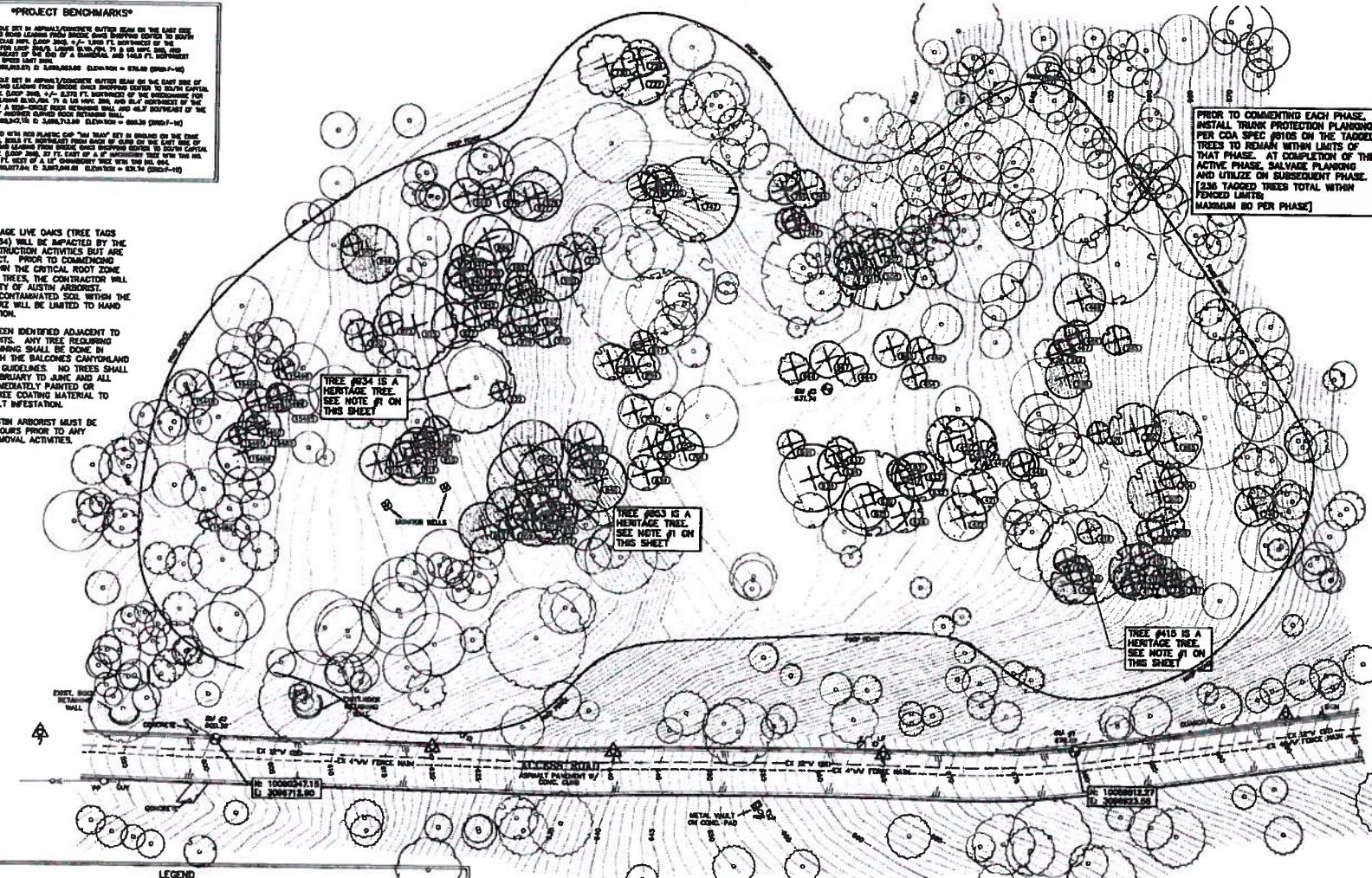
PROJECT BENCHMARKS

BM #1 - COTTON EPOXY SET IN APPROXIMATE CENTER BEAM ON THE EAST SIDE OF AN ACCESSED ROAD. ELEVATION = 800 FT. 10 IN. FROM GROUND. BM #2 - COTTON EPOXY SET IN APPROXIMATE CENTER BEAM ON THE WEST SIDE OF AN ACCESSED ROAD. ELEVATION = 800 FT. 10 IN. FROM GROUND. BM #3 - 1/2 FT. WEST OF THE END OF A DRAINSIDE AND TAIL P.T. SECTION OF THE 1000 FT. DRAINSIDE IN A DRAINSIDE SECTION = STAB (BM#1-10)

BM #4 - COTTON EPOXY SET IN APPROXIMATE CENTER BEAM ON THE EAST SIDE OF AN ACCESSED ROAD. ELEVATION = 800 FT. 10 IN. FROM GROUND. BM #5 - COTTON EPOXY SET IN APPROXIMATE CENTER BEAM ON THE WEST SIDE OF AN ACCESSED ROAD. ELEVATION = 800 FT. 10 IN. FROM GROUND. BM #6 - 1/2 FT. WEST OF THE END OF A DRAINSIDE SECTION OF THE 1000 FT. DRAINSIDE IN A DRAINSIDE SECTION = STAB (BM#1-10)

NOTES:

1. THREE (3) HERITAGE LINE OAKS (TREE TAGS #415, #533 & #534) WILL BE IMPACTED BY THE PROPOSED CONSTRUCTION ACTIVITIES BUT ARE TO REMAIN INTACT. PRIOR TO COMMENCING EXCAVATION, MARK THE CUTOFF ROOT ZONE (CRZ) OF THESE TREES. NO TRENCHES SHALL CONTACT THE CITY OF AUSTIN ARBORIST. EXCAVATION OF CONTAMINATED SOIL WITHIN THE LINE OF THE CRZ WILL BE LIMITED TO HAND SHOVEL EXCAVATION.
2. OAK WILT HAS BEEN IDENTIFIED ADJACENT TO THE PROJECT LIMITS. ANY TREE REQUIREMENT REMOVAL OR PRUNING SHALL BE DONE IN ACCORDANCE WITH THE BALCONES CANYONLAND PRESERVE (BCP) GUIDELINES. NO TREES SHALL BE CUT DOWN OR PRUNED UNTIL ALL CUTS WILL BE IMMEDIATELY PAINTED OR SPRAYED WITH TREE COATING MATERIAL TO PREVENT OAK WILT INFESTATION.
3. THE CITY OF AUSTIN ARBORIST MUST BE CONTACTED 48 HOURS PRIOR TO ANY PRUNING OR REMOVAL ACTIVITIES.



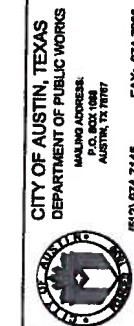
Tree species and dbh diameter of the trees indicated on this plan were verified in the field by Compton Associates (firm identification number TX-3382AM) from Compton Associates Consulting, Inc. on September 18, 28, and 30, 2006.

TREE MITIGATION:
MITIGATION FOR TREE REMOVAL WILL FUND THE PLANTING FOR THE FUTURE PROGRAM.
TOTAL DIAMETER OF PROPOSED REMOVAL = 1452 INCHES
COST OF TREE MITIGATION: (1,452 INCHES) * (\$175/INCH) = \$108,800



PRIOR TO COMMENCING EACH PHASE,
INSTALL TRUNK PROTECTION PLANKING
PER CODE (2010) ON THE TAGGED
TREES TO REINFORCE THE TRUNK
THAT PHASE. AT COMPLETION OF THE
ACTIVE PHASE, SALVAGE PLANKING AND
UTILIZE ON SUBSEQUENT PHASE.
236 TAGGED TREES TOTAL WITHIN
LIMITS
MAXIMUM 80 PER PHASE

HARRY ALEXANDER, INC. FORM No. 312
HALFF
4000 WEST BRANNER LANE, SUITE 450 AUSTIN, TEXAS 78759-3355 TEL (512) 265-5114 FAX (512) 265-3111
LOOP 360 LANDFILL TREE REMOVAL
DATE _____
SHEET NO. 08 OF 39



Shaded trees are to be removed.



Remediation Design

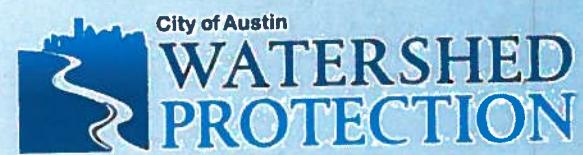
Revegetation

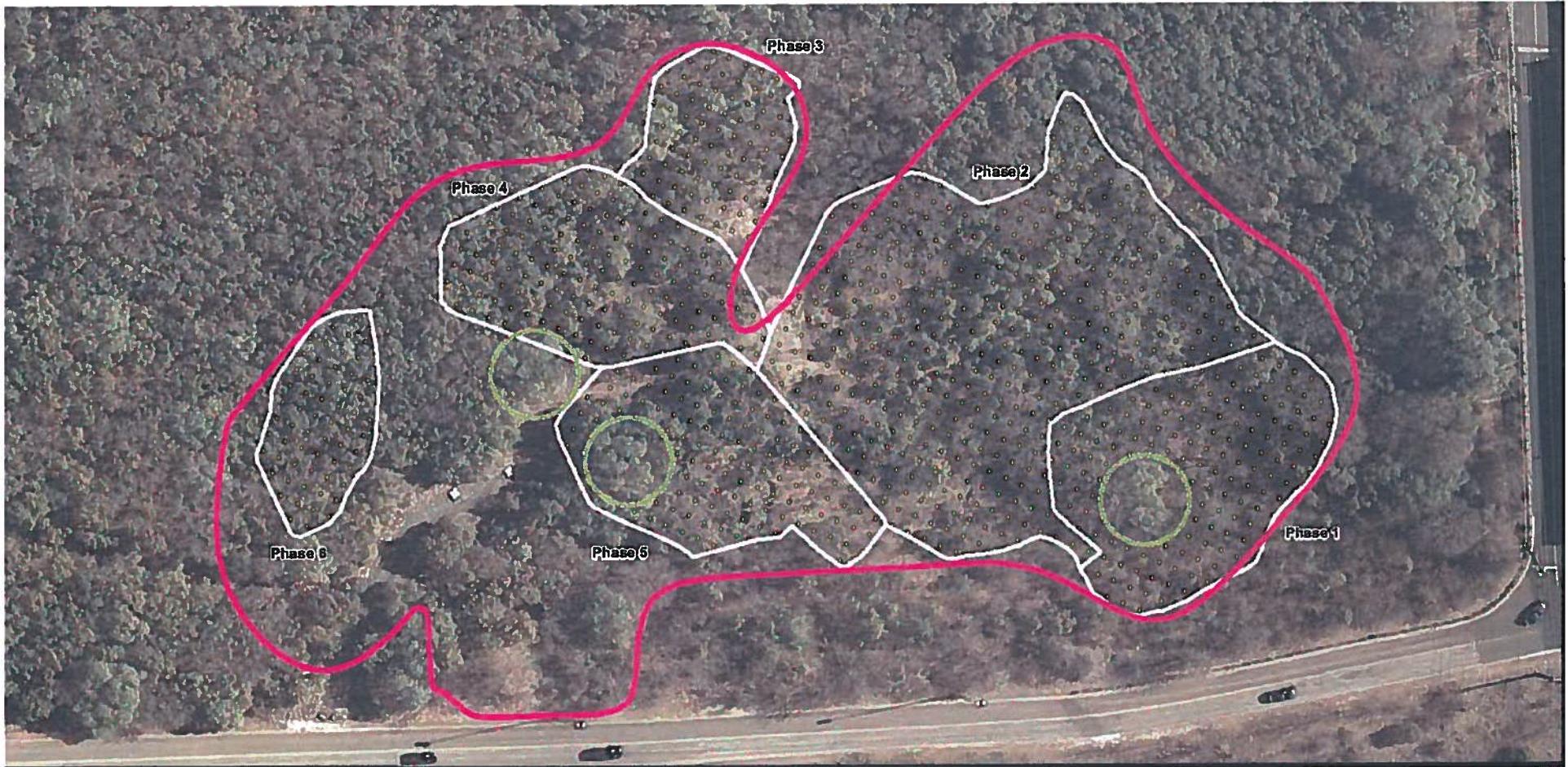
Mix of native trees and shrubs, 2 gal., 2-3' high:
Plateau live oak, Texas red oak, pecan, Carolina buckthorn, Mexican buckeye, sugar hackberry

		Required	Provided
Tree seedlings	90% of total	883	900
Shrubs	10% of total	98	100

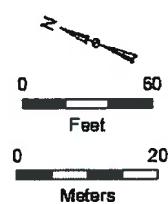
Native grasses – Indiangrass, green sprangletop, sideoats grama, Little bluestem, Prairie/ Canada wild rye, Big bluestem, Switchgrass, Eastern gamagrass

Irrigation – Site will be fenced and irrigated for 2 years.





- Proposed Tree Location
- Heritage Tree
- Approximate Limits of Waste Removal



 COX | McLAIN
Environmental Consulting

Figure 1
**Proposed Tree/Shrub
Planting Layout**

Project No.: 027-001-001	Scale: 1"=60' (1:720)
Prepared by: AP	Date: 11/15/2010
Re: CCHS Dps/360 Land/Figure MxDs/Rvcs B 2010/112.indd	

Cost and Schedule

- Design engineer's est. is approx. \$1.2M
- Bids to go out in early September
- Construction start in November 2011 (?)
- Completion prior to return of endangered birds in March 2012