

**ORDINANCE NO. 20100729-120**

**AN ORDINANCE REZONING AND CHANGING THE ZONING MAP FOR THE PROPERTY COMMONLY KNOWN AS THE BULL CREEK PLANNED UNIT DEVELOPMENT PROJECT LOCATED AT 4909, 4923, AND 4925 FM 2222 ROAD FROM LAKE AUSTIN RESIDENCE (LA) DISTRICT, SINGLE FAMILY RESIDENCE STANDARD LOT (SF-2) DISTRICT AND TOWNHOUSE AND CONDOMINIUM RESIDENCE (SF-6) DISTRICT TO PLANNED UNIT DEVELOPMENT (PUD) DISTRICT**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:**

**PART 1.** The zoning map established by Section 25-2-191 of the City Code is amended to change the base district from Lake Austin residence (LA) district, single family residence standard lot (SF-2) district, and townhouse and condominium residence (SF-6) district to planned unit development (PUD) district on the property described in Zoning Case No. C814-2009-0139, on file at the Planning and Development Review Department, as follows:

Approximately 53.8741 acres in Travis County, consisting of two tracts of land and being more particularly described in Exhibit "A" incorporated into this ordinance (the "Property"),

locally known as 4909, 4923, and 4925 RM 2222 Road, in the City of Austin, Travis County, Texas, and generally identified in the map attached as Exhibit "B".

**PART 2.** This ordinance and the attached Exhibits A through O are the land use plan for the Bull Creek planned unit development district (the "PUD") created by this ordinance. Development of and uses within the PUD shall conform to the limitations and conditions set forth in this ordinance and in the land use plan attached as Exhibit B (the "Land Use Plan"). If this ordinance and the attached exhibits conflict, this ordinance controls.

**PART 3.** The attached exhibits are incorporated into this ordinance in their entirety as though set forth fully in the text of this ordinance. The exhibits are as follows:

- Exhibit A: Description of Property
- Exhibit B: Zoning Map
- Exhibit C: Land Use Plan
- Exhibit D: Notes
- Exhibit E: Ecological Preservation/Rehabilitation Plan
- Exhibit F: Constructed Habitat for Migratory Waterfowl Plan
- Exhibit G: Green Building & Environmental Benefits
- Exhibit H: Artwork
- Exhibit I: Swim Pier
- Exhibit J: Environmental Modification Plan – Cut & Fill
- Exhibit K: Environmental Modification Plan – Construction on Slopes
- Exhibit L: Slope Analysis
- Exhibit M: Driveway Details
- Exhibit N: Critical Environmental Features
- Exhibit O: Tree Protection

**PART 4.** In accordance with Chapter 25-2, Subchapter V, Article 2, Division 5 (*Planned Unit Developments*) of the Code, the Bull Creek PUD development shall comply with the requirements for a PUD, except as otherwise modified by this ordinance.

A. Use Regulations.

1. Except as otherwise provided in this ordinance the Property is subject to Lake Austin residence (LA) district permitted and conditional uses and site development regulations.
2. Crop production use and urban farm use are additional permitted uses of the Property.
3. Section 25-2-863 (C) (*Urban Farms*) of the Code is modified to allow an urban farm on a site greater than five acres.
4. Section 25-2-893 (C) (*Accessory Uses for a Principal Residential Use*) of the Code is modified to allow two guest houses.
5. Section 25-2-900 (*Home Occupations*) of the Code is modified so that only the following home occupation regulations apply: a) a home

occupation may occur within the primary residence or accessory structures, and b) a home occupation may include the occupant of the primary residence and staff assisting with property and household management, domestic service household maintenance (interior and exterior), landscaping, security, bookkeeping, and personnel working for the owner or owner's nonprofit foundation.

B. Zoning and Site Development Regulations.

1. The maximum impervious cover is 14 percent. Section 25-8-64 (*Impervious Cover Assumptions*) of the Code is modified to allow impervious cover to be calculated over the entire property and not on a lot by lot basis.
2. Section 25-2-551(B) (2) (*Lake Austin (LA) District Regulations*) of the Code is modified to allow additional improvements within the shoreline setback area as shown on Exhibits C and J. These improvements may include a constructed habitat for migratory waterfowl, decks, trails, impervious walks, boardwalk, terraces, skyspace structure, site electrical, weir system, berms, swimming area, and related improvements. Maintenance and remodel of existing swimming area, boat docks, walkways, and associated facilities is allowed.
3. Section 25-2-551(B) (5) (*Lake Austin (LA) District Regulations*) of the Code is modified to allow development of a guest house and recreation building on limited gradients that exceed 35 percent in accordance with Exhibit K.
4. Section 25-2-492 (*Site Development Regulations*) of the Code is modified to allow interior side yard setbacks to be zero feet.
5. Section 25-2 Subchapter F: Residential Design and Compatibility Standards, 2.5 (*Side Yard Setbacks*) and 2.6 (*Setback Planes*) of the Code are modified to allow interior side yard setbacks to be zero feet and interior lot line setback planes not to apply.

C. Hill Country Roadway.

1. The PUD shall comply with the Hill Country Roadway Ordinance except as shown in a) through e) of this section.
  - a) Section 25-2-1122 (*Floor to Area Ratio of a Nonresidential Building*) of the Code is modified to allow compliance with Exhibit K for construction on slopes.
  - b) Section 25-2-1123 (*Construction on Slopes*) of the Code is modified to allow construction of the guest house to comply only with Exhibit K.
  - c) Section 25-2-1126 (*Building Materials*) of the Code is modified to allow reflective and non-native building materials for structures built 100 feet behind a 10-foot high masonry wall that is constructed 100 feet from the right-of-way of FM 2222 Road. A vegetative buffer with native plants and trees shall be provided as additional screening.
  - d) A 100-foot wide vegetative buffer shall be provided and maintained along the property line adjacent to the FM 2222 right-of-way. At approximately the 100-foot setback line a 10-foot high wall or fence shall be constructed for visibility and sound attenuation. Additional native trees will be planted to supplement the existing native vegetation. Entryway features are allowed within the setback in the vicinity of the driveways.
  - e) At least 40 percent of the site within the Hill Country Roadway 1000 foot setback area shall be left in a natural state, except for vegetative management activities in accordance with a) the existing wildlife management plan approved by the Travis County Appraisal District for the property and, b) the Ecological Conservation and Preservation Plan outlined in Exhibit E of this ordinance.

D. Environmental Regulations.

1. Development of the Property shall comply with the criteria, plans, or requirements as written or illustrated on Exhibits D, E, F, G, J, K, L, N, and O.
2. Section 25-8-261(C) (*Critical Water Quality Zone Development*) of the Code is modified to allow the following improvements within the critical water quality zone as shown on Exhibit C and described in Exhibit J:
  - a) migratory bird habitat, birdbath facilities, decks, levees, trails, sidewalks, boardwalk, remnant foundation, terraces, skyspace structure, security equipment, wiring, swimming area, and related facilities;
  - b) maintenance and remodel of existing swimming area, boat docks, walkways, and terraces; and
  - c) cut and fill as required for the above improvements in accordance with Exhibit J.
3. Section 25-8-281(B) (*Critical Environmental Features*) of the Code is modified to allow critical environmental features ("CEF") to be located on a residential lot.
4. Section 25-8-281(C) (*Critical Environmental Features*) of the Code is modified to provide buffer requirements for the CEFs on the Property in accordance with Exhibit N.
5. Sections 25-8-281 (*Critical Environmental Features*) and Section 25-8-282 (*Wetland Protection*) of the Code do not apply to any proposed manmade environmental features.
6. Section 25-8-302 (*Construction of a Building or Parking Area*) of the Code is modified to allow small portions of building and parking areas to be constructed on slopes greater than 25 percent, as shown on Exhibit K. Terracing shall be optional for portions of the slopes that are not constructed on, but spanned by a building.

7. Section 25-8-341 (*Cut Requirements*) of the Code is modified to allow cuts to exceed four feet in accordance with Exhibit J.
8. Section 25-8-342 (*Fill Requirements*) of the Code is modified to allow fills to exceed four feet in accordance with Exhibit J.
9. The requirements of Sections 3 through 3.3.5 (*Tree Survey*) of the Environmental Criteria Manual ("ECM") are modified to allow only trees of eight inch and greater diameter to be surveyed and for single family tree regulations to apply.
10. CEF Buffers and Construction. The following conditions apply to the 50-foot wide buffer for Rimrocks 1 and 2 as shown on Exhibit N:
  - a) a 40-foot limit of construction shall be maintained from Rimrock 1 and 2;
  - b) the 10-foot wide area with the CEF buffer that is disturbed during construction must be revegetated with plants and seeds from the City of Austin Standard Specification Item No. 609S, and
  - c) erosion and sedimentation controls must be placed at the limits of construction.
11. A 150-foot wide buffer shall be provided for the emergent wetland fringe located within Bull Creek. The following may be located within the buffer area:

Trails, existing retaining wall, proposed trees, stone stairs, regraded slope, migratory habitat for waterfowl, raised wood boardwalk, native plant garden, security equipment, wiring, and related facilities.
12. A setback is not required for or associated with a cypress fringe located on portions of the Property.

E. Shoreline Swim Area/Docks and Wetlands Area.

1. Swim area reconstruction shall not exceed 50 feet from the shoreline in accordance with Exhibit I.

2. Shoreline modifications for the swim area will exceed Code and ECM requirements in order to preserve the natural and traditional character of the shoreline as set forth under Section 25-7-61(A)(5) (*Criteria for Approval of Plats, Construction Plans, and Site Plans*), maintain the integrity of protected riparian areas and minimize damage to physical and biological characteristics set forth in Section 1.7.7(A) ECM. Parts of the proposed plan will:
  - f) maintain the water quality benefits and biological integrity of a functioning, natural vegetated shoreline by providing landscape details which replace existing shoreline vegetation with more desirable native species that provide bank stabilization and natural character;
  - g) provide the slope of a natural shoreline with minimal stone toe armor pursuant to the current recommendations for bank stabilization of City of Austin Environmental Resource Management Division wetlands biologist;
  - h) provide native wetland plantings as mitigation for any impacts to protected wetland areas with the approval of City of Austin Environmental Resource Management Division wetlands biologist; and
  - i) provide the seal of a Texas professional engineer to certify that the hydraulic and structural design of dock and shoreline treatment are adequate that the improvement complies with the ordinances of the City, Drainage Criteria Manual, and the laws of the State as set forth in Section 25-7-62 (*Certificate of Professional Engineer Required for Certain Alterations and Improvements*) of the Code.
3. Additionally, boat slips may not exceed 12, and a boat slip may not be used for commercial purposes.

F. Transportation Regulations

1. The southern internal driveway shall be built in accordance with Exhibit M.

2. The requirements of the Transportation Criteria Manual Section 5.3P and the City of Austin Standard Detail 433S-1 are modified to allow a driveway apron to slope away from the street and to exceed a two percent grade for the driveway apron. (See Exhibit M)

G. Drainage Regulations.

Section 25-7-152 (*Dedication of Easements and Rights-of Way*) of the Code is modified so that a drainage easement dedicated to the public is not required for flows onto the property; provided however, the property shall accept flows from adjacent tracts in accordance with natural drainage patterns. An easement for the FEMA floodplain shall satisfy dedication requirements along Bull Creek.

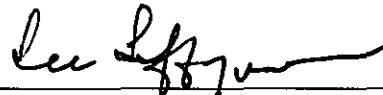
- H. Artwork. At least 2 art installations shall be provided on the Property in accordance with Exhibit H.

**PART 5.** This ordinance takes effect on August 9, 2010.

**PASSED AND APPROVED**

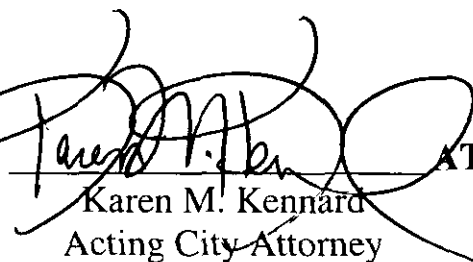
July 29, 2010

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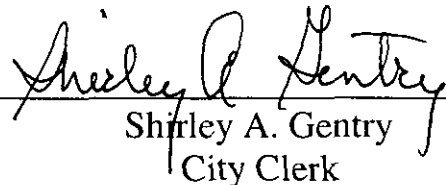
Lee Leffingwell  
Mayor

APPROVED:



Karen M. Kennard  
Acting City Attorney

ATTEST:



Shirley A. Gentry  
City Clerk



# EXHIBIT A

## TRACT 1

### FIELD NOTES FOR

#### 44.572 ACRES OF LAND

ALL OF THAT CERTAIN TRACT OR PARCEL OF LAND OUT OF THE THOMAS J. CHAMBERS 8 LEAGUE GRANT IN TRAVIS COUNTY, TEXAS, BEING ALL OF THAT CERTAIN 44.572 ACRE TRACT OF LAND CONVEYED TO KEY ENTERPRISES, INC., TED L. STEWART AND RON AMINI BY INSTRUMENT RECORDED IN DOCUMENT NO. 2004145327 OF THE OFFICIAL PUBLIC RECORDS OF TRAVIS COUNTY, TEXAS, SAID TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a ½ inch iron pin found at the Northeast corner of said 44.572 acre tract, being at the Southeast corner of Lot 1, Bull Creek Road Subdivision, a subdivision recorded in Plat Book 28, Page 17 of the Plat Records of Travis County, Texas, being in the West r.o.w. line of F.M. Hwy No. 2222, for the PLACE OF BEGINNING hereof;

THENCE along the East line of said 44.572 acre tract, being along the West r.o.w. line of F.M. Hwy No. 2222 for the following courses:

Along a curve to the left whose radius is 408.15 feet, whose arc is 57.65 feet and whose chord bears S 07°20'50" W for a distance of 57.60 feet to a ½ inch iron pin found

S 01°29'54" E for a distance of 119.52 feet to a ½ inch iron pin found

S 03°17'00" W for a distance of 751.90 feet to a ½ inch capped iron pin set for the Southeast corner of said 44.572 acre tract;

THENCE along a Southerly line of said 44.572 acre tract for the following courses:

N 88°15'00" W for a distance of 287.50 feet to a ½ inch capped iron pin set

N 60°30'00" W for a distance of 387.50 feet to a ½ inch capped iron pin set

N 88°30'00" W for a distance of 200.00 feet to a ½ inch capped iron pin set

S 44°30'00" W for a distance of 222.50 feet to a ½ inch capped iron pin set

S 01°30'00" W for a distance of 180.00 feet to a ½ inch capped iron pin set

S 36°20'00" E for a distance of 353.21 feet to a ½ inch capped iron pin set

S 39°20'00" W for a distance of 540.43 feet to a point at the water's edge of the North bank of Lake Austin, for a Southerly corner of said 44.572 acre tract;

THENCE along the water's edge of the North bank of Lake Austin for the following courses:

N 50°41'13" W for a distance of 293.66 feet to an angle point

N 54°13'30" W for a distance of 481.15 feet to an angle point

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FIELD NOTES  
FOR

44.572 ACRES OF LAND - Page Two

N 49°50'24" W for a distance of 135.83 feet to a point at the water's edge of the East bank of Bull Creek, for the Southwest corner of said 44.572 acre tract;

THENCE along the water's edge of the East bank of Bull Creek for the following courses:

N 03°09'58" E for a distance of 9.95 feet to an angle point

N 39°03'55" E for a distance of 500.02 feet to an angle point

N 33°35'47" W for a distance of 57.70 feet to an angle point

N 25°18'41" W for a distance of 152.65 feet to an angle point

N 17°04'31" W for a distance of 23.61 feet to an angle point

N 13°59'42" W for a distance of 159.33 feet to an angle point

N 00°28'15" W for a distance of 177.67 feet to an angle point

N 11°27'02" E for a distance of 183.31 feet to an angle point

N 24°04'28" E for a distance of 73.27 feet to a 60-d nail set in a tree stump for the Northwest corner of said 44.572 acre tract;

THENCE along the North line of said 44.572 acre tract for the following courses:

N 89°29'31" E for a distance of 232.09 feet to a ½ inch iron pin found

N 89°10'10" E for a distance of 76.00 feet to an iron bolt found

N 89°15'25" E for a distance of 569.23 feet to a ½ inch iron pin found

N 89°00'02" E for a distance of 555.61 feet to a ½ inch iron pin found

N 89°14'44" E for a distance of 216.58 feet to the PLACE OF BEGINNING and containing 44.572 acres of land, more or less.

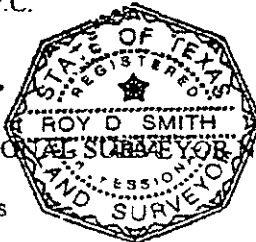
SURVEYED BY:  
Roy D. Smith Surveyors, P.C.

*Roy D. Smith*  
ROY D. SMITH

REGISTERED PROFESSIONAL SURVEYOR NO. 4094

August 18, 2005

44.572 ac. - T.J. Chambers



**TRACT 2**

Part A: Lot 1, BULL CREEK ROAD SUBDIVISON, a subdivision in Travis County, Texas, according to the map or plat thereof, recorded in Volume 28, Page(s) 17 of the Plat Records of Travis County, Texas

and

Part B: Being 8.495 acres of land, more or less, and lying in and situated out of the Thomas J. Chambers Survey in Travis County, Texas and being more particularly described on Exhibit B-1 attached hereto and made a part hereof.

EXHIBIT B-1

**LEGAL DESCRIPTION:** BEING A 8.495 ACRE TRACT OF LAND LYING IN AND BEING SITUATED OUT THE THOMAS J. CHAMBERS SURVEY, ABSTRACT NO. 198 IN TRAVIS COUNTY, TEXAS AND BEING ALL OF THOSE CERTAIN FOUR PARCELS OF LAND CONVEYED TO 4-D PARTNERS L.P. AS TRACTS 2-5 BY DEED RECORDED IN DOCUMENT NO. 19999133413 OF THE OFFICIAL PUBLIC RECORDS OF TRAVIS COUNTY, TEXAS; SAID 8.495 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS AND AS SURVEYED UNDER THE SUPERVISION OF JAMES E. GARON & ASSOCIATES IN OCTOBER, 2007:

**BEGINNING** at an iron pipe found in the northerly line of that certain 44.572-acre tract of land conveyed to Danforth Partners I, LTD by deed recorded in Document No. 2001057457 of said deed records for the southeast corner of said 4-D Partners Tract 5 (3.845 acres) and the southwesterly corner of Lot 1, Bull Creek Road Subdivision, a subdivision of record in plat book 28, page 17 of the Plat Records of Travis County, Texas;

**THENCE** along the north line of said Danforth tract and the south line hereof and said 4-D Partners tract the following six (6) calls:

1. N 89°45'40" W a distance of 555.41 feet to a ½" iron rod found for angle point and common corner of tracts 2 and 5;
2. N 89°25'30" W a distance of 152.99 feet to a ½" iron pipe found for angle point and common corner of tracts 2 and 3;
3. N 89°22'13" W a distance of 122.77 feet to a ½" iron rod found for angle point;
4. N 89°36'49" W a distance of 293.52 feet to a 5/8" iron bolt found for angle point and common corner of tracts 3 and 4;
5. N 89°35'58" W a distance of 75.97 feet to a ½" iron rod found for angle point;
6. N 89°26'01" W a distance of 234.85 feet to a calculated point in Lake Austin for the southwest corner hereof and said 4-D Partners L.P. Tract 4;

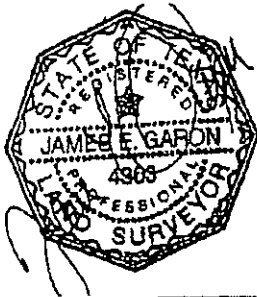
**THENCE** along Lake Austin and Bull Creek the following eleven (11) calls:

1. N 33°56'59" E a distance of 39.50 feet to a ½" iron rod found for angle point;
2. N 38°51'40" E a distance of 162.51 feet to a ½" iron rod found for angle point;

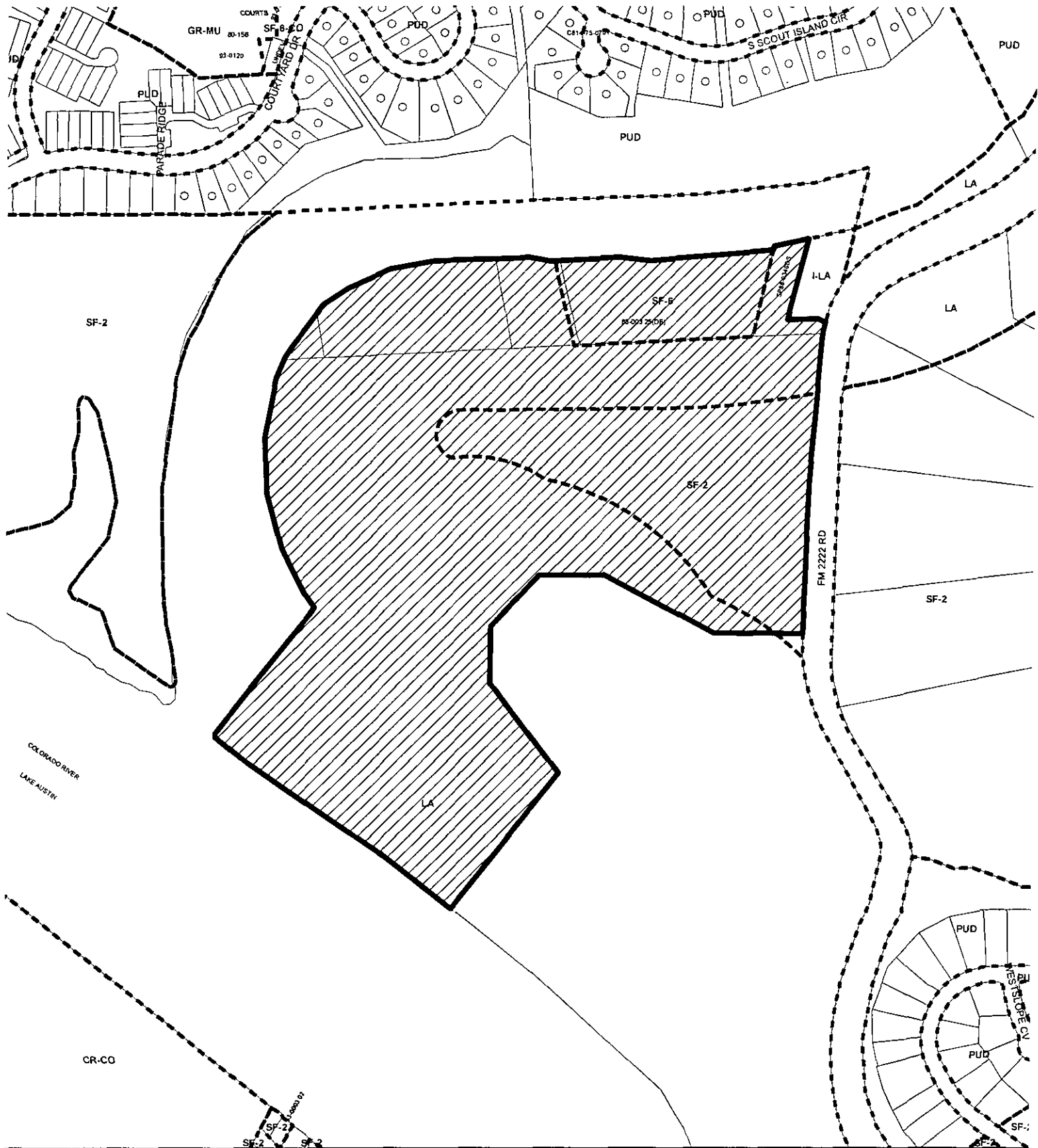
3. N 58°15'39" E a distance of 92.69 feet to a ½" iron rod found for angle point;
4. N 67°58'38" E a distance of 140.40 feet to a ½" iron rod found for angle point;
5. N 81°34'15" E a distance of 137.21 feet to a ½" iron rod found for angle point;
6. S 89°24'48" E a distance of 209.81 feet to a ½" iron rod found for angle point;
7. N 89°52'53" E a distance of 85.01 feet to a ½" iron rod set for angle point;
8. S 78°00'25" E a distance of 71.35 feet to a ½" iron rod found for angle point;
9. N 89°12'18" E a distance of 215.78 feet to a calculated point in water;
10. S 81°08'51" E a distance of 94.90 feet to a calculated point in water;
11. N 87°20'09" E a distance of 373.03 feet to a ½" iron rod set for the northeast corner hereof and said 4-D Partners tract 5 and the northwest corner of the aforesaid Lot 1, Bull Creek Road Subdivision;

THENCE S 15°57'31" W a distance of 291.00 feet along the west line of said Lot 1 to the **POINT OF BEGINNING**, containing 8.495 acres of land, more or less and as shown on sketch of survey prepared herewith.

Surveyed by:



James E. Garon  
Registered Professional Land Surveyor  
Server: ColTravis\Surveys\Thomas J Chambers\B58607.doc



## PLANNED UNIT DEVELOPMENT

*EXHIBIT B*

ZONING CASE#: C814-2009-0139

LOCATION: 4909, 4923 & 4925 FM 2222

SUBJECT AREA: 53.8741 ACRES

GRID: G29

MANAGER: C. PATTERSON



SUBJECT TRACT



PENDING CASE



ZONING BOUNDARY



This map has been produced by the Communications Technology Management Dept on behalf of the Planning Development Review Dept. for the sole purpose of geographic reference. No warranty is made by the City of Austin regarding specific accuracy or completeness.



**BULL CREEK PUD  
EXHIBIT D – NOTES**

1. During construction, the existing structure on the property may be used as a dwelling and for activities to assist the site with construction.
2. The project will comply with the single family residential tree removal and clearing requirements of the City Code in effect on the date the PUD application was submitted. The PUD is for one single family residence with accessory uses. A tree clearing permit shall be required only for 19 inch diameter and larger protected trees.
3. Lighting for the skyspace structure shall only allow a low level of interior lighting outward. Only a very small amount of light will escape skyward through the opening, but no lights will be directed at the opening itself. Light fixtures will have a diffusing cover over them. Luminaires shall not shine directly onto neighboring properties, roadways or distribute excessive light skyward.
4. The proposed main house, barn, recreation center, and guest house structures shall provide fire sprinkler protection. As part of the building permit process, the Owner shall work with Austin Fire Department to develop final designs in accordance with NFPA standards.
5. In lieu of a dedicated drainage easement, the Owner shall:
  - a. Continue to accept and convey all offsite runoff through the Property.
  - b. Not increase the velocity of the runoff beyond the Property, including appropriate detention, if necessary.
  - c. Operate, maintain, replace, upgrade, and repair any natural drainage ways and related facilities.
  - d. Allow the City to inspect the drainage area with prior written notice and an appointment with the Owner or Owner's agent.
6. Administrative site plans shall be submitted for review and approval for new improvements to the swim area, boat docks, and proposed habitat for migratory waterfowl. If environmental variances are requested for the recreation building, then an administrative site plan shall be submitted for it. Due to the overall residential use, no other site plans shall be required.

Site plan regulations, such as landscaping and other requirements applicable to commercial uses shall not be applied to the administrative site plan(s). Tree surveys shall be submitted when required by single family regulations, in accordance with such regulations for 19 inch and greater trees.



## **BULL CREEK PUD**

### **EXHIBIT E – ECOLOGICAL PRESERVATION/REHABILITATION PLAN**

The Bull Creek PUD property has remained more or less intact in the midst of a highly developed urban area. However, over the years it has been overgrazed by domestic livestock and generally neglected which has resulted in a proliferation of nonnative and invasive species. Its diverse attractions include lake and creekside frontage, gently rolling hills, arroyos, mature oaks and junipers, and a wide expanse of meadows. Thus, the property has the potential to become a species-rich biosphere with many benefits to wildlife, water quality and the neighboring landscape.

#### **GOAL**

To initiate an on-going program of landscape interventions designed to hasten positive changes that will help the property self-heal, so that more diverse plant communities with greater ecological stability will thrive. The intention is to make the property more hospitable and attractive to wildlife and humans alike.

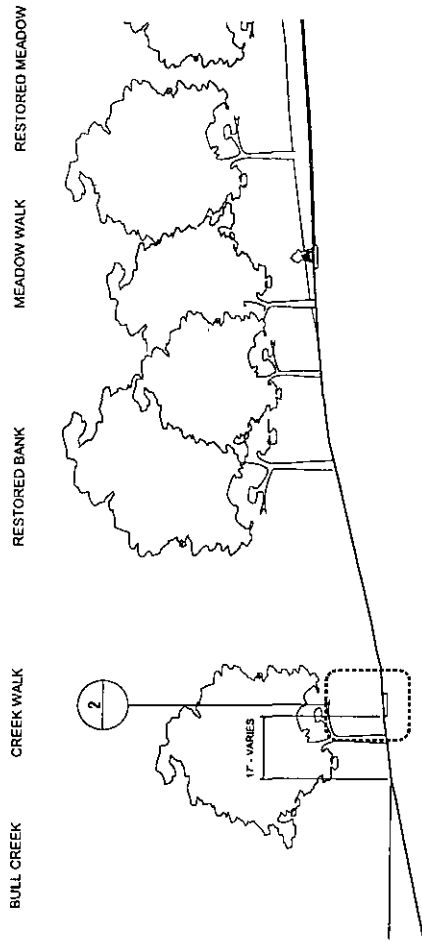
#### **PREVIOUSLY INITIATED WORK**

1. Meadow Rehabilitation – Native grasses have been planted to restore the grassland area to its natural state. This process was started in 2008 and efforts will continue for four seasons on approximately 12 acres of the site.
2. Removal of Invasive Tree Species – Non-native species of trees have been removed. However, this is an ongoing project and most efforts have been focused on woody plant species. This program of removing aggressive invasive species will be part of the continuing management plan for the property.
3. Native Hardwood Tree Plantings – Over the last year, the following trees and shrubs have been planted, with appropriate irrigation, to create diversity to the woodlands areas on the site: 125 – 15 gallon trees, 6 – 20 gallon trees, 27 – 30 gallon trees, 30 – 65 gallon maple trees (4 inch caliper balled and burlapped), for a total of 188 trees and shrubs. Numerous additional trees are proposed to be planted over the next several years.
4. Slope Stabilization – Slope stabilization has been installed where dense stands of invasive species have been removed and in the woodlands areas where some of the cedar or ashe juniper have been thinned to help control erosion. In accordance with the proposed removal of invasive species, additional slope stabilization is proposed.

#### **GENERAL STRATEGIES FOR IMPROVING CONDITIONS**

1. Remove invasive species each growing season and replacing with native trees, shrubs, grasses, and forbs.
2. Through plowing, direct seeding of native grasses and forbs, and cultivation of cover crops, suppress noxious weeds, reduce soil compaction, and gradually increase the successful establishment of native grasses and wildflowers.

3. Improve soil ecology through a program of organic fertilization and inoculation with micro-organisms. This will enhance the establishment of native grasses.
4. Reduce the domination of ashe juniper through select clearing, in order to allow understory plants a chance to thrive.
5. Enrich the woodlands by planting more native hardwoods and shrubs over multi-seasons.
6. Improve the filtering of stormwater run off by the establishment of native grasslands, and by proper management techniques such as timely mowing, creation of swales to guide runoff to areas where it can be absorbed, and to monitor fragile and unstable areas to avoid wash outs.
7. Stabilize eroded slopes, old roads, bare areas, and other remnants of past land uses practices by setting check logs, rock berms, and mulch.
8. Construct “guzzlers” or wildlife water features to provide water during drought periods.
9. Coordinate landscape efforts to comply with wildlife management plans. This includes following Plateau Consultant’s guidelines for clearing, mowing, and other activities.
10. Avoid or strictly limit use of any chemicals that could have a negative effect on groundwater quality or wildlife.
11. Provide brush piles in certain areas of the property for wildlife use.
12. Seek the advice and consultation of other experts such as the U.S. Fish and Wildlife Service, the Ladybird Johnson Wildflower Center, Texas A&M range ecologists, and the Natural Resource and Conservation Service on restoration projects.
13. Continue to conduct annual bird and mammal surveys to assess the health of the wildlife population.



1 SITE SECTION - TYP.

SCALE 1/32"=1'-0"

GRAVEL/PAVE2 STABILIZING STRUCTURE  
(OR APPROVED EQUAL)  
FILL RING SECTION WITH FINE NATIVE  
LIMESTONE GRAVEL - TYPE 8 OR APPROVED EQUAL

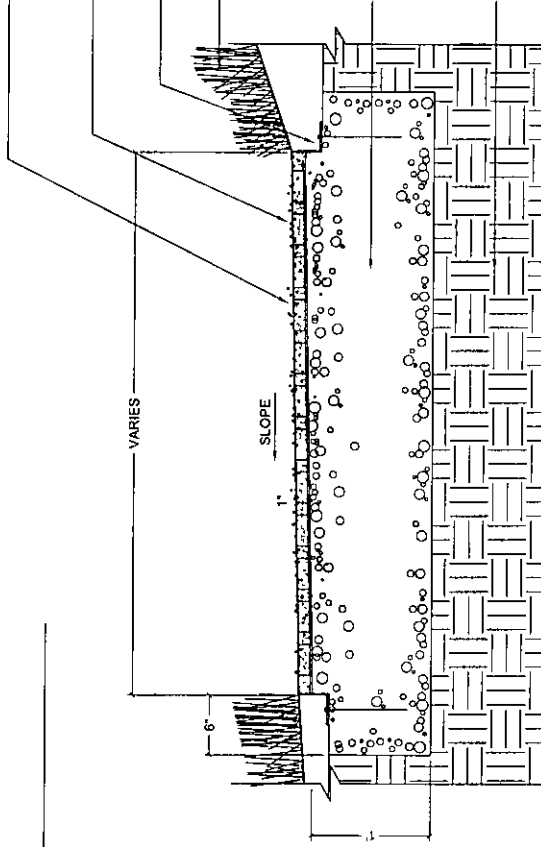
FILTER FABRIC UNDERNEATH

ALUMINUM EDGING, TYP

SEEDED SURFACING (AS SPECIFIED)

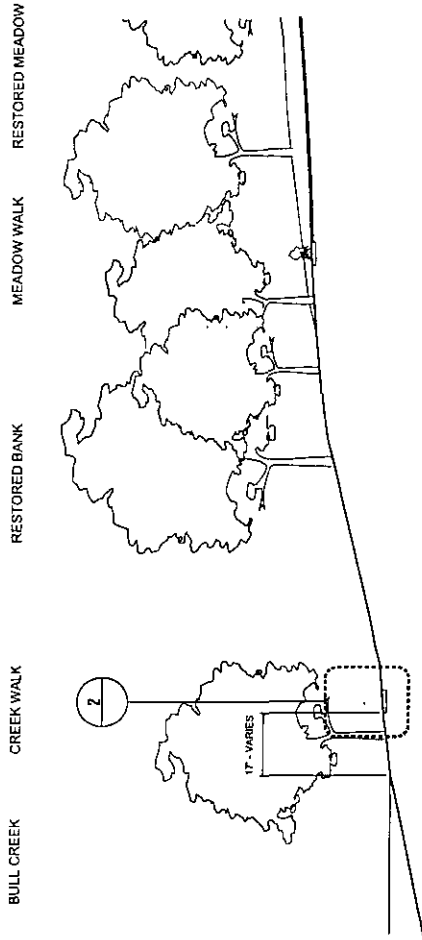
OPEN GRADED BASE COURSE (TYPE #57)  
COMPACT TO 95% MODIFIED PROCTOR DENSITY

COMPACTED OR UNDISTURBED SUBGRADE



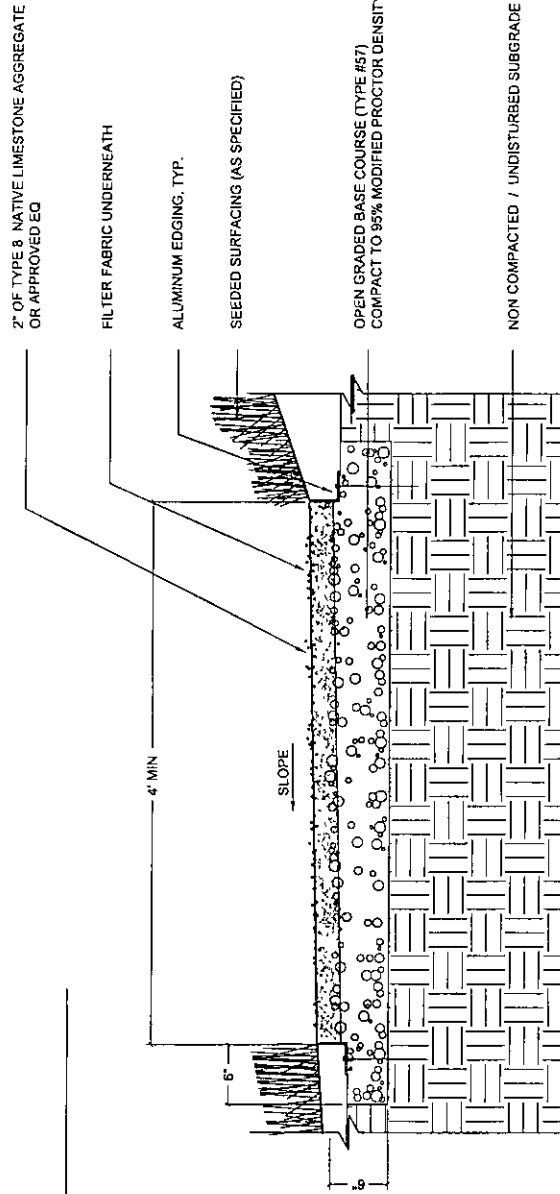
2 VEHICULAR PERVIOUS WALK SECTION - TYP.

SCALE 1/4"=1'-0"



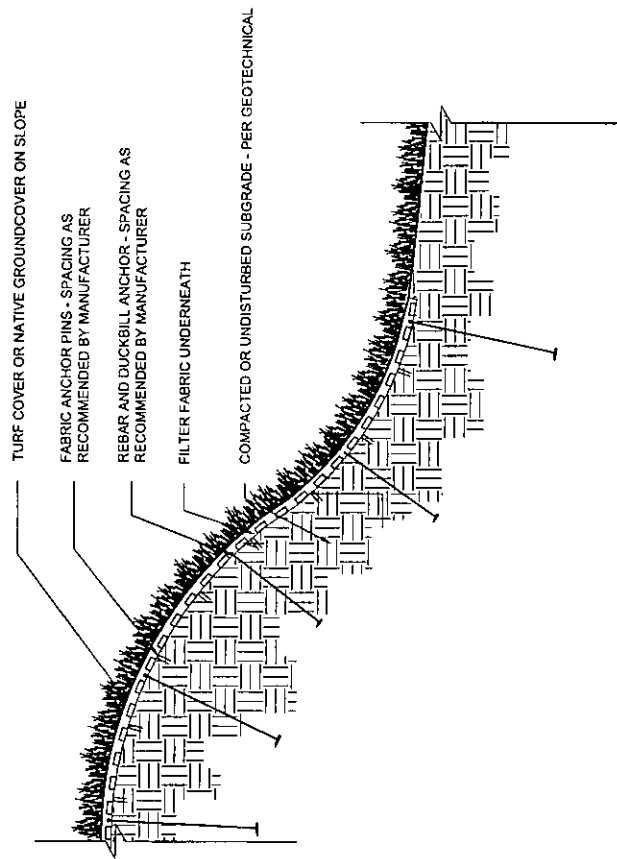
1 SITE SECTION - TYP.

SCALE: 1/2"=1'-0"

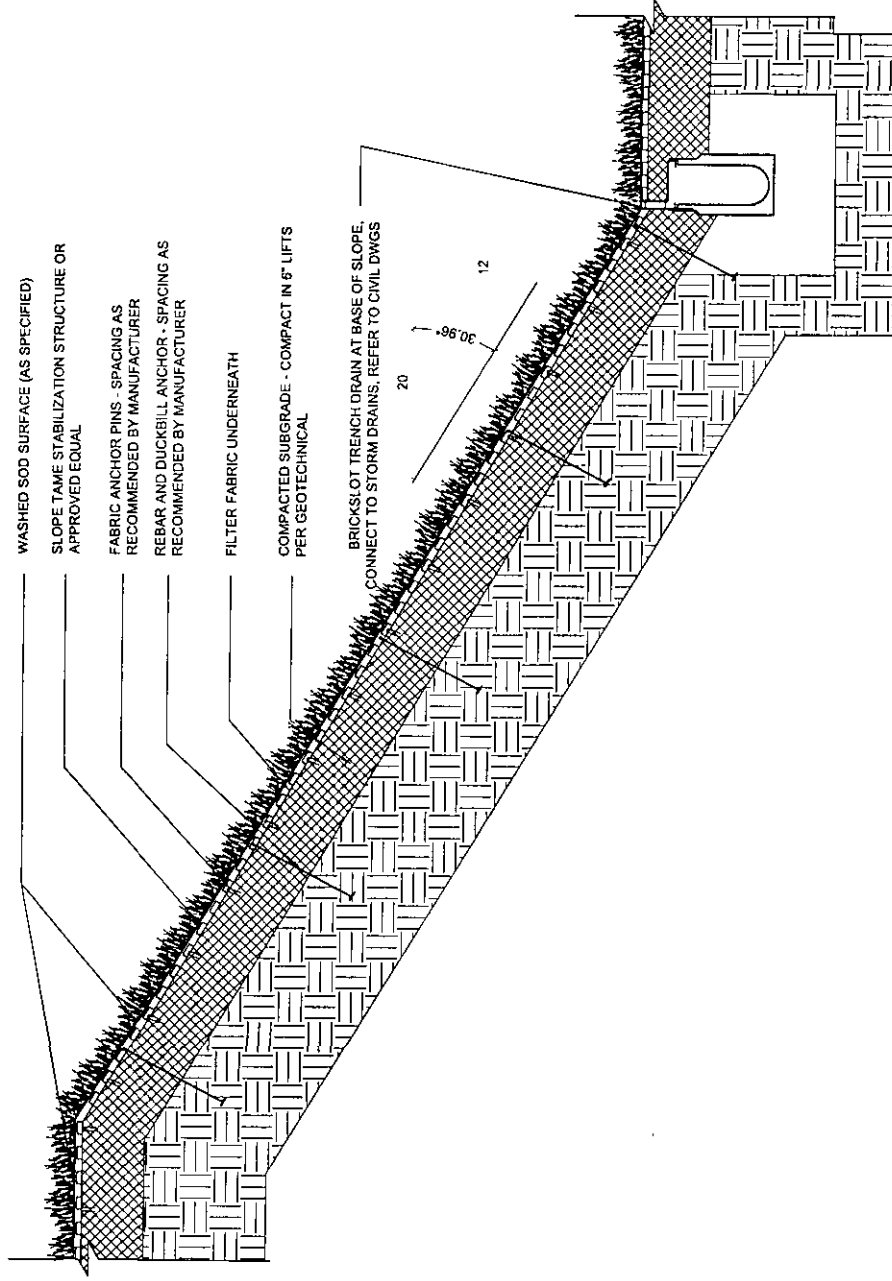


2 PEDESTRIAN PERVIOUS WALK SECTION - TYP.

SCALE: 1"=1'-0"

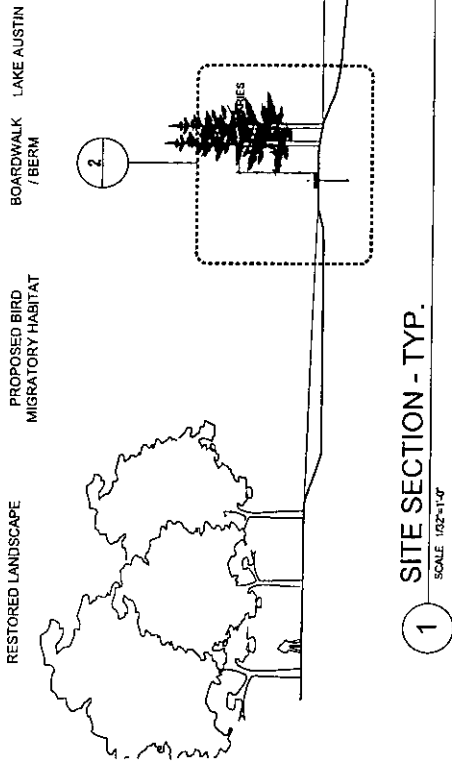


1 NATURAL SLOPE STABILIZATION DETAIL - GREATER THAN 3:1 - TYP.  
SCALE 1"=1'-0"



1 ARCHITECTURAL SLOPE STABILIZATION DETAIL - TYP.

SCALE 1"=1'-0"



PROPOSED BIRD MIGRATORY AREA

LAKE AUSTIN

EX CYPRESS TREE LINE (C.E.F.)  
NO GRADING WITHIN DRIP LINE OF TREES

PROPOSED ELEVATED BOARDWALK  
W/ HELICAL PIER STRUCTURAL SUPPORT

VARIES

4'-0"

DECK LEVEL - 494.00'

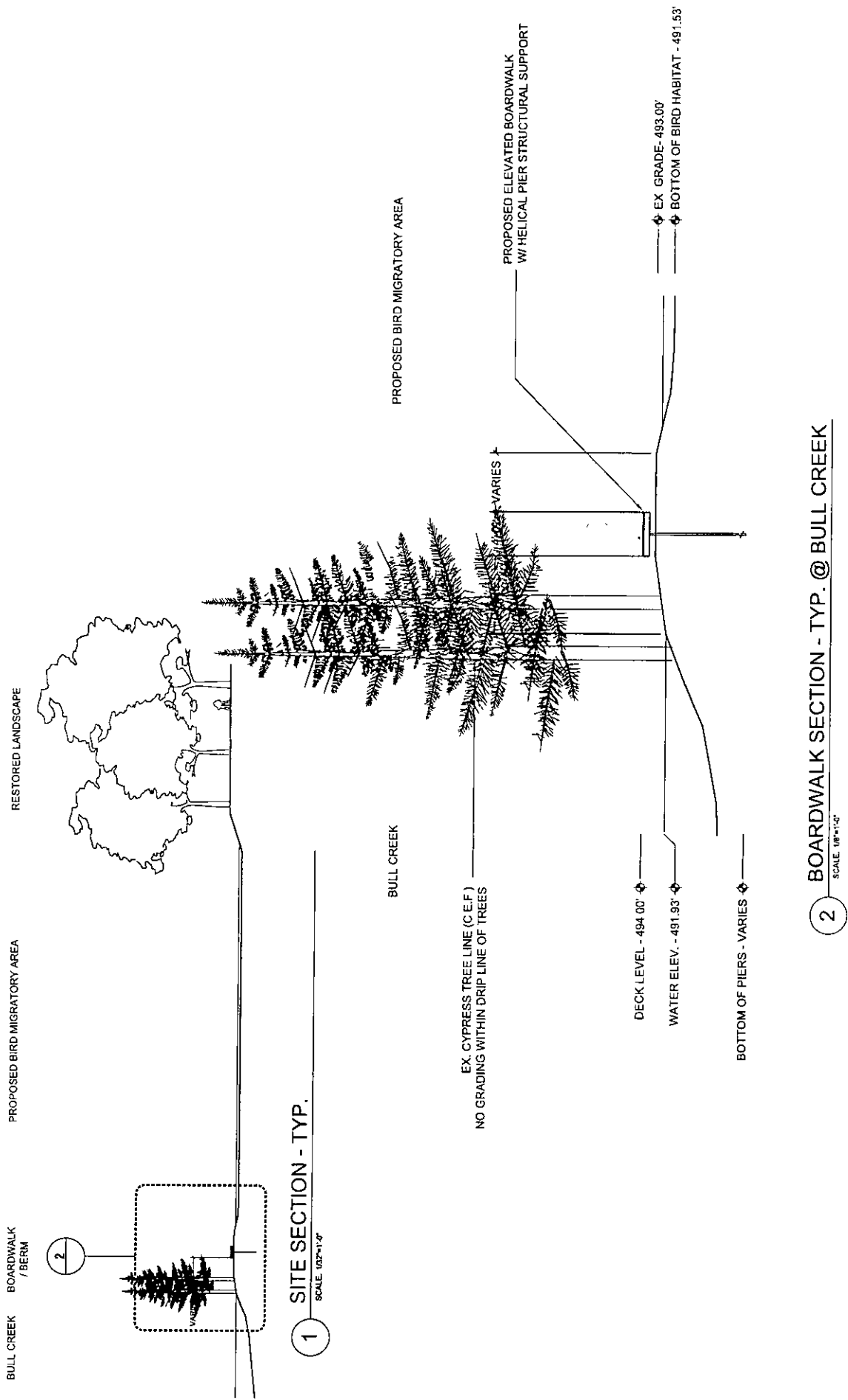
WATER ELEV - 491.93'

BOTTOM OF PIERS - VARIES

EX GRADE - 493.00' - 491.53'

BOTTOM OF BIRD HABITAT - 491.53'

2 BOARDWALK SECTION - TYP. @ LAKE AUSTIN  
SCALE 1/8"=1'-0"





**BULL CREEK PUD**  
**EXHIBIT F – CONSTRUCTED HABITAT FOR MIGRATORY WATERFOWL PLAN**

Aerial maps from before 1960 show that the previous owners impounded the western edge of the property where Bull Creek flows into Lake Austin to create more pasture land. Though composed of untold amounts of fill and contained by a low concrete bulkhead, this area composed of roughly three acres continues to have a high water table.

Because of these conditions, it is proposed that this area comprising approximately three acres bordering on Bull Creek and Lake Austin be converted into a constructed seasonal habitat for migratory waterfowl. This will involve dividing the area into three shallow basins that will allow each separate area to be filled up to two feet deep with water so as to provide a forage site for migratory birds.

While Lake Austin is important to all kinds of wildlife, it is too deep to provide ducks and other birds the opportunity to wade and peck at muddy bottoms for plants, small fish, tadpoles and insects to eat. Lake Austin's shoreline has almost been completely urbanized with lawns, planted vegetation and golf courses, and therefore has very few remaining seasonal wetlands to attract birds on their ancient migrations. From their vantage point high above, birds can gauge the depth of water by the particular reflected glare. They can also see to the bottom of the shallow zone, and that will attract them to this spot.

The US Fish and Wildlife Service (USFWS) have offered to provide technical expertise for the design, construction supervision, and other advice concerning how best to attract waterfowl and other wildlife to this unique and diverse ecosystem.

Installation of this constructed habitat is contingent upon obtaining the appropriate permits from all applicable jurisdictions, as well as the results of ongoing studies that the size, location, and depth have a positive impact on migratory waterfowl.

**BULL CREEK PUD**  
**EXHIBIT G – GREEN BUILDING AND ENVIRONMENTAL BENEFITS**

**OVERALL**

The proposed land use plan will greatly reduce the amount of development that could occur on the property. City staff has estimated that current zoning and subdivision regulations allow 23 single family residences and six condominium units, while the proposed plan is for one single family residence with related accessory uses.

**GREEN BUILDING**

The Project currently proposes to comply with the Austin Energy PUD Green Building Program in effect when the PUD application was submitted. Items presently being studied along with the design of the main house and accessory structures include, but are not limited to the following:

*Water Conservation*

1. Reuse of gray water - Pending permitting and feasibility issues, the project intends to incorporate reuse water systems into the building design.
2. Irrigation from Lake Austin - The Owners currently have a permit to draw water for irrigation of the planting on site. The overall percentage of the site that is covered with vegetation which requires irrigation is low and the dominant planting strategy involves using drought-tolerant natives.
3. Water conservation, low flow fixtures - Water efficient plumbing fixtures will be used wherever possible in the project.

*Energy Use*

1. Green roof - A portion of the main house roof will incorporate a green roof with vegetation.
2. Photovoltaics – Subject to appropriate metering, the roof of the barn is planned to be covered with solar PV panels to generate electricity. The barn is envisioned as an energy center with solar panels consolidated for power generation across the site and to all buildings. The buildings may be metered separately for their individual power consumption but the barn is anticipated to be the central plant for much of the mechanical and electrical equipment.
3. Commissioning - A commissioning agent has been brought into the project to ensure that building systems are running at their intended design criteria.
4. Green energy subscription – The Owners will purchase Green Energy through Austin Energy, as needed.

5. Geothermal – The proposed geothermal heat exchange system is a central plant system. It is more efficient than a traditional chiller and boiler system, therefore reducing energy consumption of the central plant system over the year.
6. Reduced lighting loads, reduced site levels - A building management system will be installed to allow for lights to be dimmed and controlled from any point in house. Site lighting levels will be markedly reduced from what would be present in a conventional subdivision.
7. Energy use efficiency through glass performance - High performance glazing will be used throughout the project to achieve energy-efficient envelope design while allowing daylight into the spaces.
8. Maximize vegetated areas - The majority of the site will remain vegetated, thus reducing the site's contribution to an urban "heat island" effect.

### *Environmental Impact*

1. Storm water runoff and water quality for watershed protection - All roof and area drainage will be collected and redistributed on site via non-erosive devices.
2. Reduced impervious cover - The guesthouse free spans a natural ravine to reduce site disturbance. The recreation pavilion has a paddle tennis court on its roof to reduce the amount of impervious coverage.
3. Recycling storage - Each building will have facilities for recycling.
4. Bicycle storage for staff - The barn will have bicycle racks for house staff and grounds crew.
5. Certified wood - Certified wood will be used wherever possible on interior finishes and millwork.
6. Construction waste management - Contractor will recycle waste materials and excavated dirt as part of Austin Energy's Green Building program.
7. Utilizing existing site features - Regrading of the site is minimal. It is primarily limited to building and parking areas.
8. Restore or protect open areas - Much of the site has been impacted by overgrazing. At project completion there will be more plant material per acre than currently. Improvement of the soil quality is an ongoing part of the restoration program.

### ENVIRONMENTAL

In addition to the innovative ecological preservation and conservation plan, constructed habitat for migratory waterfowl, and green building elements included within this single family project, there are other more traditional environmental benefits from the project. These include the following:

1. A reduction of impervious cover and overall density well below that which is otherwise allowed by the code. A maximum of 14 percent impervious cover is proposed over the entire 53.8741 acre property with far fewer structures than could be constructed under conventional zoning.
2. Revegetation and restoration of three acres of land to enhance the spread of water and minimize erosion. These areas will function as rough textured medium to tall height prairie grasses, which slow down and disperse storm water, enhancing the water quality along the drainage feature that runs through the property.
3. An integrated pest management plan shall be established.

**BULL CREEK PUD**  
**EXHIBIT H – ARTWORK**

The project presently proposes to incorporate at least two art installations which may be seen from Lake Austin or Bull Creek. Approximate locations of these installations are shown on Exhibit C.







The first piece has been commissioned by artist James Turrell, who specializes in skyspace structures which utilize natural light, combined with a complex internal lighting system, to create a visually pleasing experience.

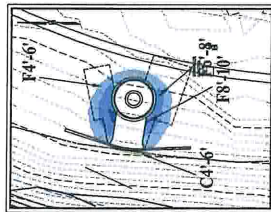
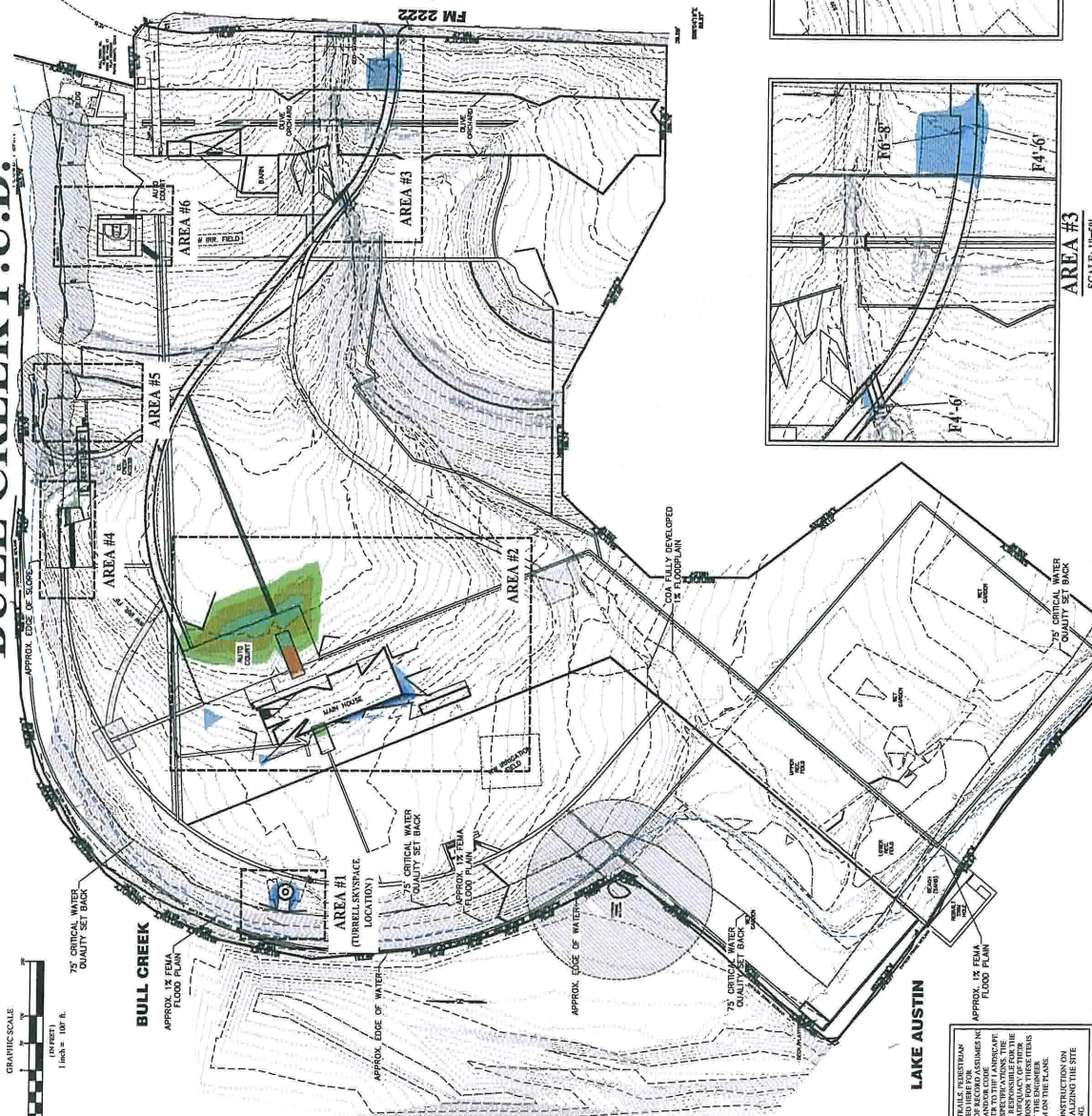
In addition, the owners have proposed to commission artist Jorge Pardo to assist with the remodeling of one of the existing boat docks. Jorge Pardo is well known for his work in maintaining the functionality of everyday items, but at the same time increasing their aesthetic value as works of art.



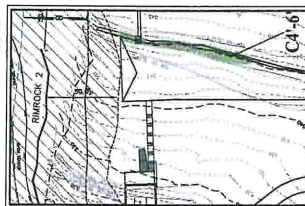


GRAPHIC SCALE  
(IN FEET)  
1 inch = 100 ft.

FILL TABLE					CUT TABLE				
Minimum Elevation (feet)	Maximum Elevation (feet)	Color	AREA (SF)	AREA (%)	Minimum Elevation (feet)	Maximum Elevation (feet)	Color	AREA (SF)	AREA (%)
4,000	6,000		7784.8	78.8	-6,000	-4,000		13851.2	40.2
6,000	8,000		8,000	12.3	-8,000	-10,000		12889.4	38.9
8,000	10,000		1231.9	6.3	-10,000	-12,000		6297.4	18.3
10,000	11,551		616.5	2.8	-12,000	-14,000		1314.3	3.8
			258.7	0.7	-14,000	-17,000		236.2	0.7
					-16,402	-14,000		50.1	0.1



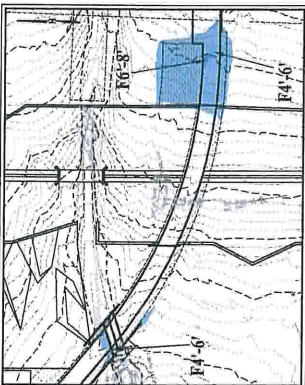
**EXACT FINAL LOCATION  
TO BE DETERMINED**



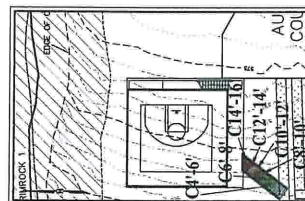
**AREA #5**  
SCALE: 1"=40'



**AREA #4**  
SCALE: 1"=10'



**AREA #3**  
SCALE: 1"=50'



**AREA #6**

# ENVIRONMENTAL MODIFICATION PLAN

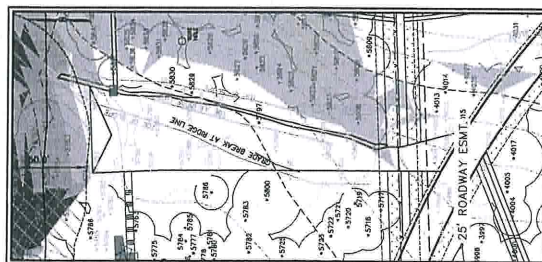
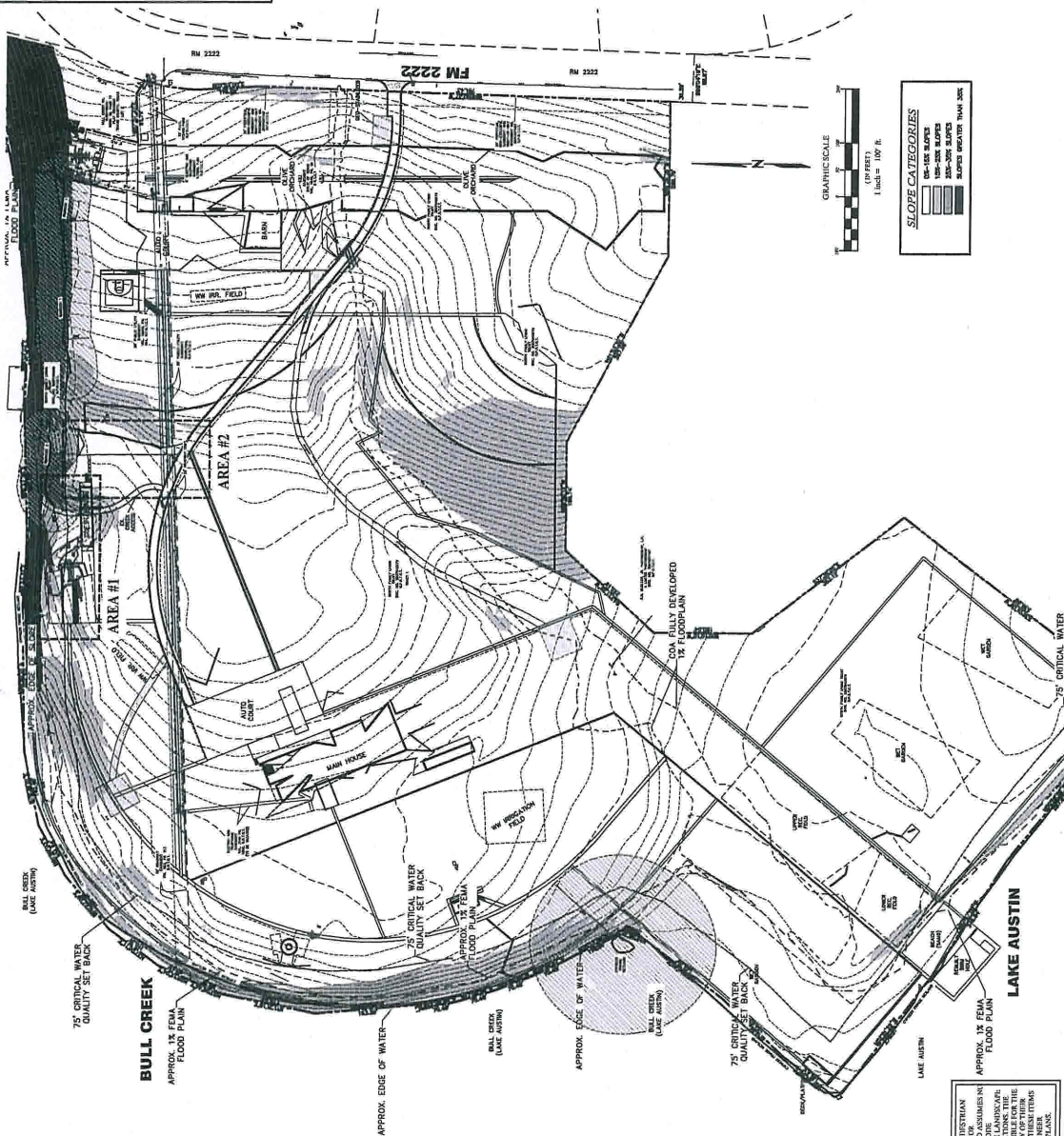
**EXHIBIT J - CUT AND FILL**

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[www.cunningham-allen.com](http://www.cunningham-allen.com)  
TYPE REG. NO. E-254

TYPE REG. NO. F-284

Shaw, P. B., & Mitchell-Olds, K. E. (1993). Dispersal in a patchy landscape: Patterns of seed dispersal and recruitment success in a temperate forest. *Ecology*, 74, 1760-1771.





**AREA #2**  
SCALE: 1" = 30'

# ENVIRONMENTAL MODIFICATION PLAN EXHIBIT K - CONSTRUCTION ON SLOPES

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IBF E REG. NO. F-2284  
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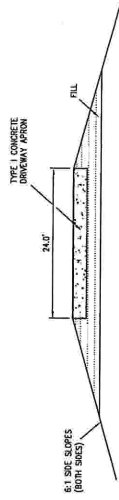
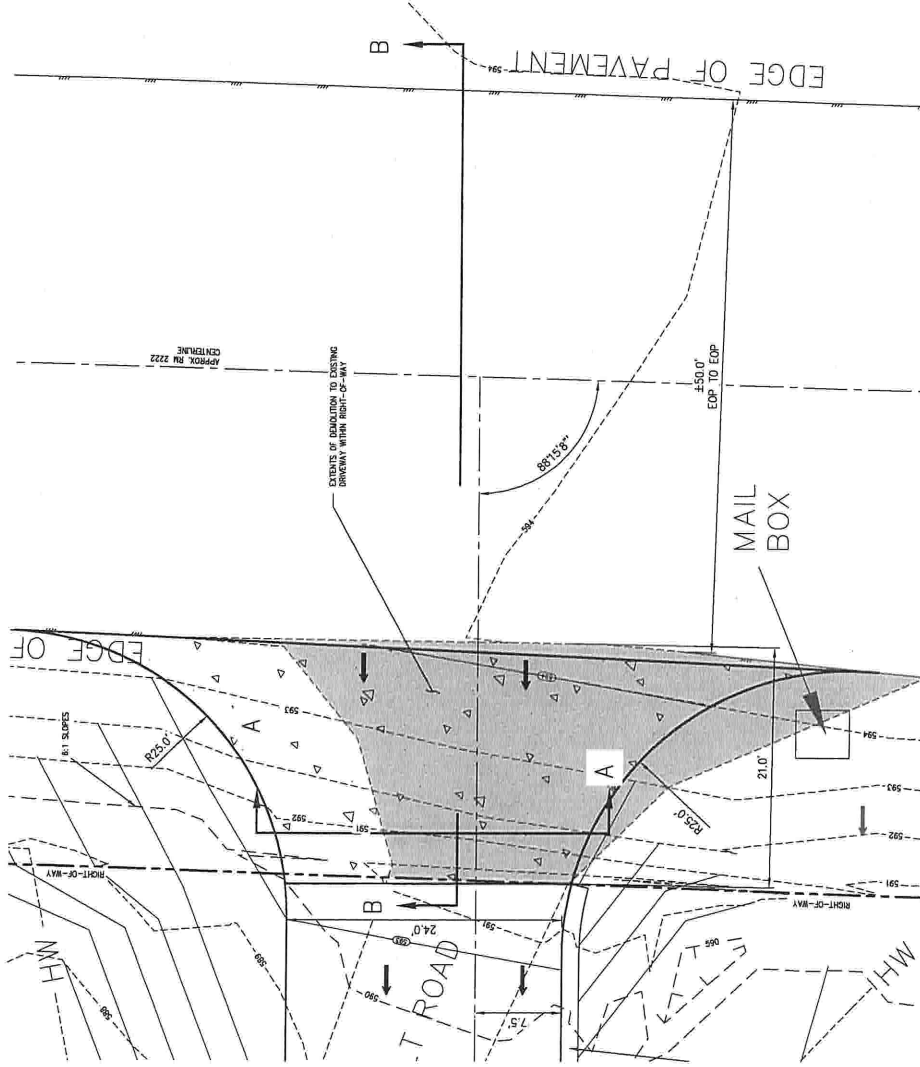
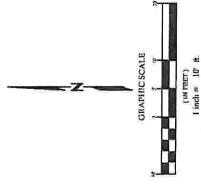
[illegible]

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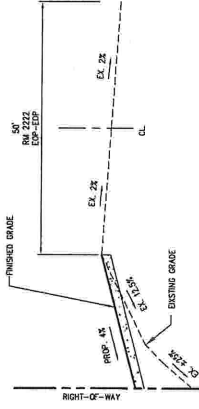
APPENDIX C.1 NET SITE AREA		
Total gross site area =	53.8 Acres	
Site Deductions:		
Cellular site within zone (WCOW) =	0.72 Acres	43.54 Acres
Water quality benefits area (WQBA) =	5.08 Acres	37.74 Acres
Wetlands/Impervious areas =	0.08 Acres	37.66 Acres
Defectives/unknown =	7.12 Acres	30.54 Acres
Net Site Area Calculated:		46.88 Acres
Area of Impervious with Slopes < 15%:		43.54 ft 100%
Area of Impervious with Slopes 15% - 25%:		0.10 ft 100%
Area of Impervious with Slopes 25% - 30%:		0.10 ft 100%
Area of Impervious with Slopes more than 30%:		0.22 ft 100%
		43.96 Acres

[illegible]

# BULL CREEK P.U.D.



TYPICAL X-SECTION A-A  
WITHIN RIGHT-OF-WAY  
SCALE: N.T.S.



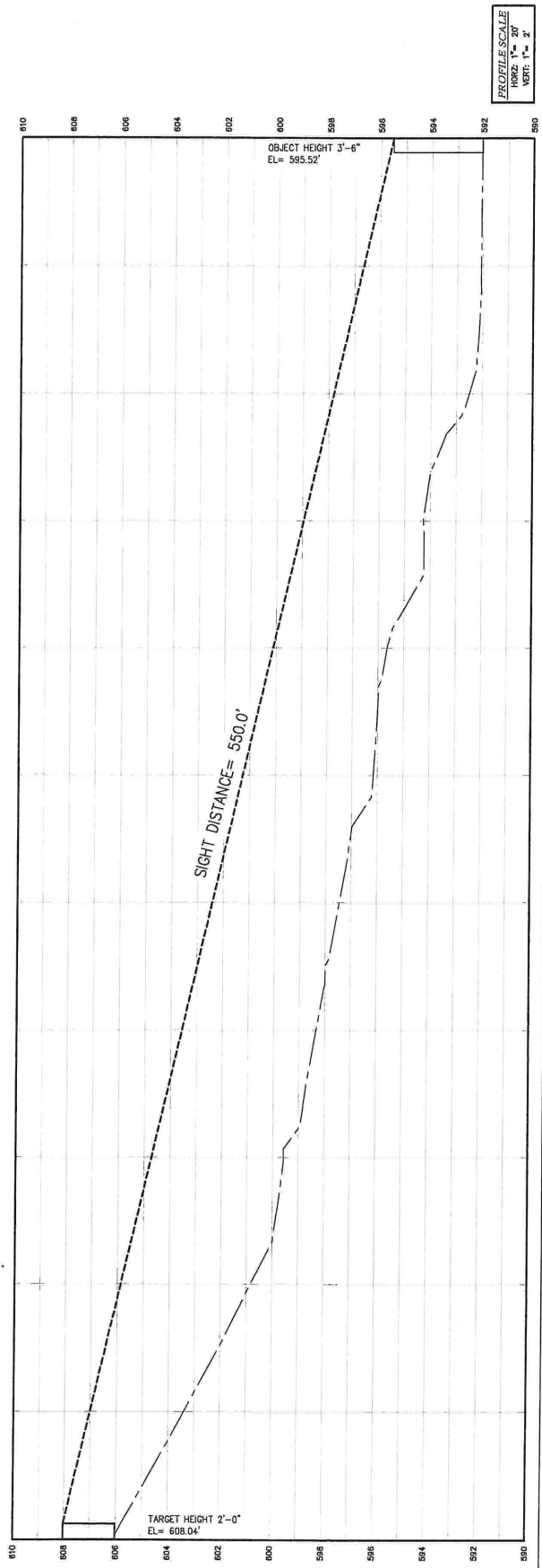
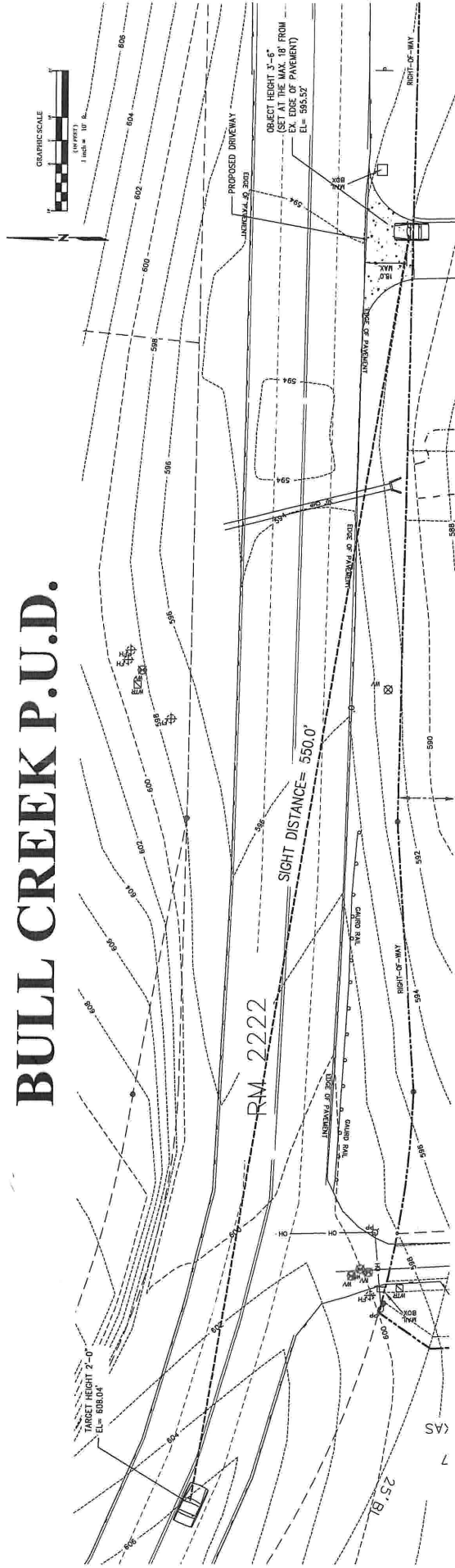
X-SECTION B-B  
DRIVEWAY APRON  
SCALE: N.T.S.

## EXHIBIT M - DRIVEWAY DETAILS - (1 of 5)



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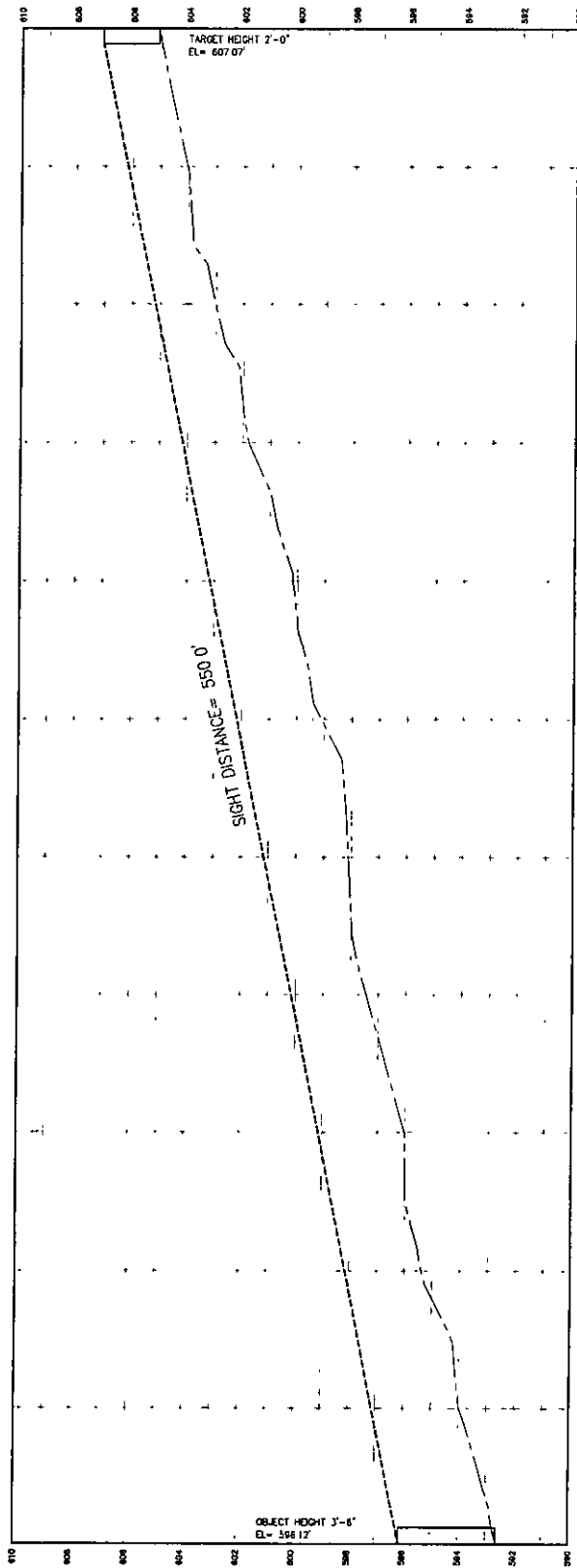
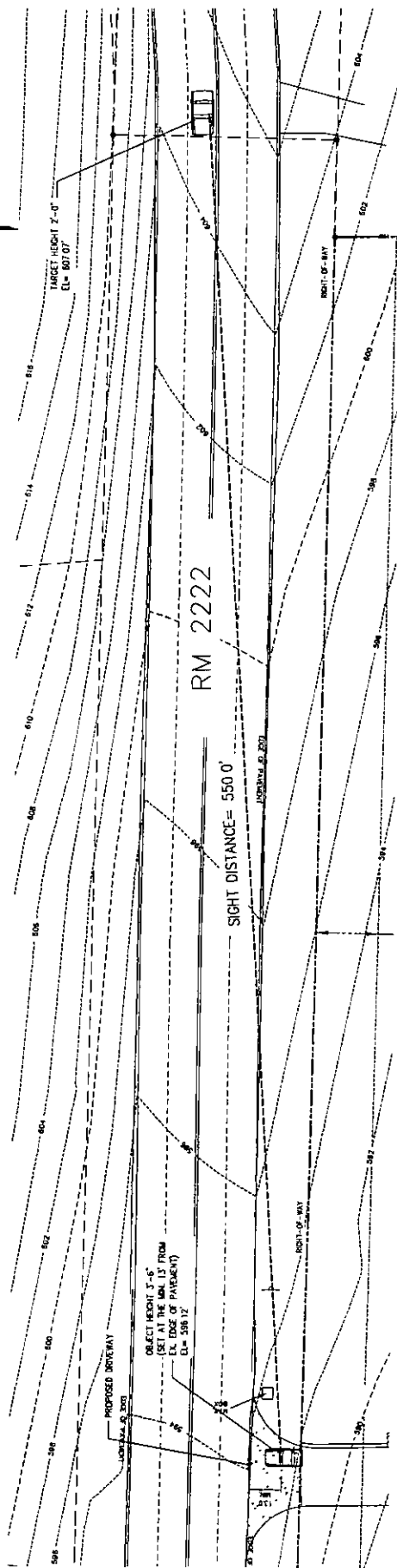
# BULL CREEK P.U.D.



## EXHIBIT M - DRIVEWAY DETAILS - (2 of 5)



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[illegible]

**EXHIBIT M - DRIVEWAY DETAILS - (3 of 5)**

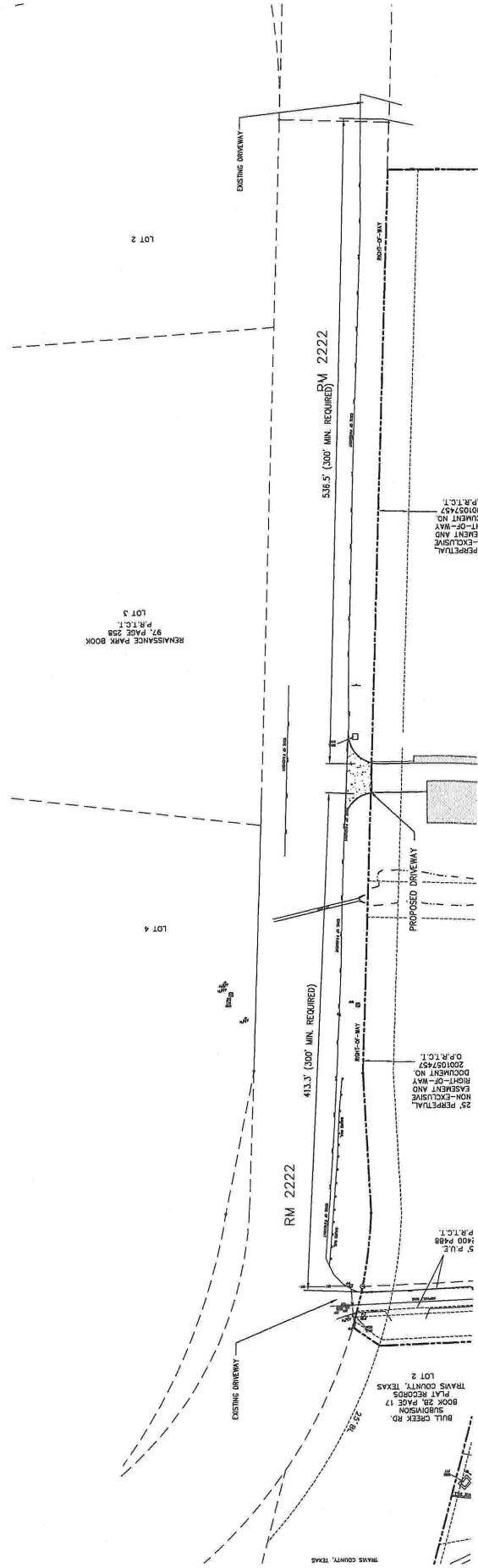
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1800E KEC, NO. F-284

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LIFE CELL NR3 F-234

GRAPHIC SCALE

(IN FEET)

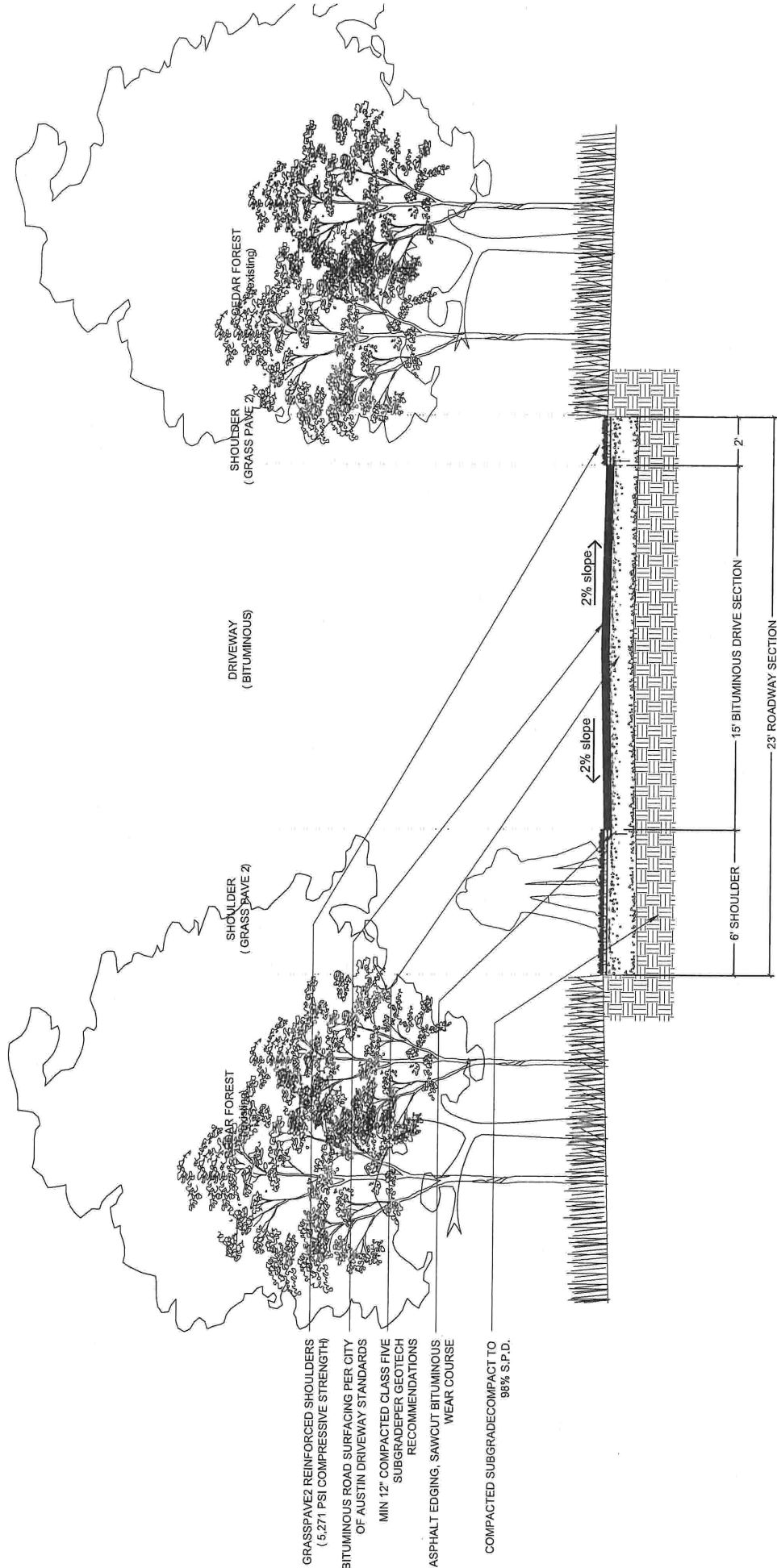
1 inch = 40 ft.



**EXHIBIT M - DRIVEWAY DETAILS - (4 of 5)**

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Drawing Path: B:\050060\_Overview\FPD Software\FPD Software Springing (Plotted By): Paul Thomas Date: 01/20/09 8:33:44 AM Layers: Civil 24x36



GRASSPAVE2 REINFORCED SHOULDERS  
(5,271 PSI COMPRESSIVE STRENGTH)  
BITUMINOUS ROAD SURFACING PER CITY  
OF AUSTIN DRIVEWAY STANDARDS  
MIN 12" COMPACTED CLASS FIVE  
SUBGRADE PER GEOTECH  
RECOMMENDATIONS  
ASPHALT EDGING, SAWCUT BITUMINOUS  
WEAR COURSE

COMPACTED SUBGRADE COMPACT TO  
98% S.P.D.

1 BITUMINOUS DRIVEWAY SECTION - TYP.

SCALE: 1/4"=1'-0"



[illegible]

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City of Austin Site Review Critical Environmental Feature Worksheet									
Project Name	55-acre Bull Creek Tract	5	Primary Contact Name	Project Address		Project Dates		Project Status	Environmental Assessment Date
				Bull Creek and Lake Austin		Phase Number	Phase Dates		
Environmental Assessment of Date		1/25/2020	6	CEC Location	Yes/No/Yes				
FEATURE TYPE (Wetland, Rimrock, Recreating Feature, Scenic, Spring)	FEATURE ID	FEATURE LENGTH (ft)	FEATURE WIDTH (ft)	FEATURE COORDINATE	FEATURE ELEVATION	FEATURE TYPE	FEATURE DIMENSIONS (ft)	FEATURE DIMENSIONS (ft)	FEATURE DIMENSIONS (ft)
				coordinate	elevation		X	Y	Long Height
Wetland	Wetland 1	37,700,000	37,700,000	38,350,000	100	Wetland	37,700,000	38,350,000	100
Wetland	Wetland 2	37,700,000	37,700,000	38,350,000	100	Wetland	37,700,000	38,350,000	100
Wetland	Wetland 3	37,700,000	37,700,000	38,350,000	100	Wetland	37,700,000	38,350,000	100
Rimrock	Rimrock 1	37,700,000	37,700,000	38,350,000	100	Rimrock	37,700,000	38,350,000	100
Rimrock	Rimrock 2	37,700,000	37,700,000	38,350,000	100	Rimrock	37,700,000	38,350,000	100
Rimrock	Rimrock 3	37,700,000	37,700,000	38,350,000	100	Rimrock	37,700,000	38,350,000	100

# EXHIBIT N - CRITICAL ENVIRONMENTAL FEATURES



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EXTENTS OF PROTECTION AROUND  
SIGNIFICANT TREES

EXISTING LIVE OAK  $\geq 19'$

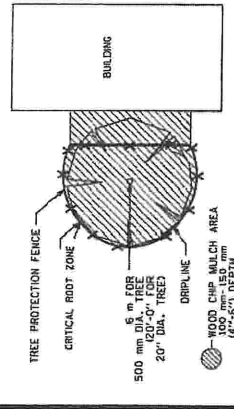
EXISTING TREE  $\geq 19'$

EXISTING TREE  $\geq 19'$ , TO BE REMOVED

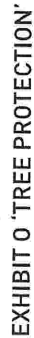
EXISTING TREE  $\geq 19'$ , TO BE TRANSPLANTED

EXTENTS OF WORK

1. PROTECT AND SAVE EXISTING TREES WITHIN LIMITS OF CONSTRUCTION AS IDENTIFIED ON PLAN. FINAL LOCATIONS TO BE VERIFIED BY LANDSCAPE ARCHITECT IN FIELD.
2. ALL FENCING PROTECTS CRITICAL ROOT ZONE (CRZ) OF SIGNIFICANT TREES PER CITY OF AUSTIN TREE PROTECTION ORDINANCE. SEE DETAIL.
3. THE CRITICAL ROOT ZONE (CRZ) IS ONE FOOT FROM THE TREE TRUNK FOR EACH DIAMETER INCH OF TRUNK SIZE.
4. FENCING IS REQUIRED TO BE CHAIN-LINK MESH AT A MINIMUM HEIGHT OF FIVE FEET. A SIX INCH LAYER OF MULCH WITHIN THE ENTIRE AVAILABLE ROOT ZONE AREA IS REQUIRED FOR TREES WHICH HAVE ANY DISTURBANCE INDICATED WITHIN ANY PORTION OF THE CRZ.
5. ALL TREES LESS THAN 19" DIAMETER ARE NOT SHOWN.

[illegible]

CITY OF AUSTIN	WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION FENCE MODIFIED TYPE A - CHAIN LINK	STANDARD HO, 610S-4
RECORD COPY SIGNED BY: A. PATRICK MURPHY	11/15/99	THE ADJUNCT/DESIGNER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	ADJUNCT



BULL CREEK RESIDENCE

MAY 18, 2010

1" = 100'  $\odot$   
SHEET 1 OF 3



[illegible]

## EXHIBIT O 'TREE SUMMARY'

**SAVED TREES (CONTINUED)**

[illegible]

## REMOVED TREES

REP. OFFICER	REP. 1	REP. 2	REP. 3	REP. 4	REP. 5	REP. 6	REP. 7	REP. 8	REP. 9	REP. 10	REP. 11	REP. 12	REP. 13	REP. 14	REP. 15	REP. 16	REP. 17	REP. 18	REP. 19	REP. 20	REP. 21	REP. 22	REP. 23	REP. 24	REP. 25	REP. 26	REP. 27	REP. 28	REP. 29	REP. 30	REP. 31	REP. 32	REP. 33	REP. 34	REP. 35	REP. 36	REP. 37	REP. 38	REP. 39	REP. 40	REP. 41	REP. 42	REP. 43	REP. 44	REP. 45	REP. 46	REP. 47	REP. 48	REP. 49	REP. 50	REP. 51	REP. 52	REP. 53	REP. 54	REP. 55	REP. 56	REP. 57	REP. 58	REP. 59	REP. 60	REP. 61	REP. 62	REP. 63	REP. 64	REP. 65	REP. 66	REP. 67	REP. 68	REP. 69	REP. 70	REP. 71	REP. 72	REP. 73	REP. 74	REP. 75	REP. 76	REP. 77	REP. 78	REP. 79	REP. 80	REP. 81	REP. 82	REP. 83	REP. 84	REP. 85	REP. 86	REP. 87	REP. 88	REP. 89	REP. 90	REP. 91	REP. 92	REP. 93	REP. 94	REP. 95	REP. 96	REP. 97	REP. 98	REP. 99	REP. 100	REP. 101	REP. 102	REP. 103	REP. 104	REP. 105	REP. 106	REP. 107	REP. 108	REP. 109	REP. 110	REP. 111	REP. 112	REP. 113	REP. 114	REP. 115	REP. 116	REP. 117	REP. 118	REP. 119	REP. 120	REP. 121	REP. 122	REP. 123	REP. 124	REP. 125	REP. 126	REP. 127	REP. 128	REP. 129	REP. 130	REP. 131	REP. 132	REP. 133	REP. 134	REP. 135	REP. 136	REP. 137	REP. 138	REP. 139	REP. 140	REP. 141	REP. 142	REP. 143	REP. 144	REP. 145	REP. 146	REP. 147	REP. 148	REP. 149	REP. 150	REP. 151	REP. 152	REP. 153	REP. 154	REP. 155	REP. 156	REP. 157	REP. 158	REP. 159	REP. 160	REP. 161	REP. 162	REP. 163	REP. 164	REP. 165	REP. 166	REP. 167	REP. 168	REP. 169	REP. 170	REP. 171	REP. 172	REP. 173	REP. 174	REP. 175	REP. 176	REP. 177	REP. 178	REP. 179	REP. 180	REP. 181	REP. 182	REP. 183	REP. 184	REP. 185	REP. 186	REP. 187	REP. 188	REP. 189	REP. 190	REP. 191	REP. 192	REP. 193	REP. 194	REP. 195	REP. 196	REP. 197	REP. 198	REP. 199	REP. 200	REP. 201	REP. 202	REP. 203	REP. 204	REP. 205	REP. 206	REP. 207	REP. 208	REP. 209	REP. 210	REP. 211	REP. 212	REP. 213	REP. 214	REP. 215	REP. 216	REP. 217	REP. 218	REP. 219	REP. 220	REP. 221	REP. 222	REP. 223	REP. 224	REP. 225	REP. 226	REP. 227	REP. 228	REP. 229	REP. 230	REP. 231	REP. 232	REP. 233	REP. 234	REP. 235	REP. 236	REP. 237	REP. 238	REP. 239	REP. 240	REP. 241	REP. 242	REP. 243	REP. 244	REP. 245	REP. 246	REP. 247	REP. 248	REP. 249	REP. 250	REP. 251	REP. 252	REP. 253	REP. 254	REP. 255	REP. 256	REP. 257	REP. 258	REP. 259	REP. 260	REP. 261	REP. 262	REP. 263	REP. 264	REP. 265	REP. 266	REP. 267	REP. 268	REP. 269	REP. 270	REP. 271	REP. 272	REP. 273	REP. 274	REP. 275	REP. 276	REP. 277	REP. 278	REP. 279	REP. 280	REP. 281	REP. 282	REP. 283	REP. 284	REP. 285	REP. 286	REP. 287	REP. 288	REP. 289	REP. 290	REP. 291	REP. 292	REP. 293	REP. 294	REP. 295	REP. 296	REP. 297	REP. 298	REP. 299	REP. 300	REP. 301	REP. 302	REP. 303	REP. 304	REP. 305	REP. 306	REP. 307	REP. 308	REP. 309	REP. 310	REP. 311	REP. 312	REP. 313	REP. 314	REP. 315	REP. 316	REP. 317	REP. 318	REP. 319	REP. 320	REP. 321	REP. 322	REP. 323	REP. 324	REP. 325	REP. 326	REP. 327	REP. 328	REP. 329	REP. 330	REP. 331	REP. 332	REP. 333	REP. 334	REP. 335	REP. 336	REP. 337	REP. 338	REP. 339	REP. 340	REP. 341	REP. 342	REP. 343	REP. 344	REP. 345	REP. 346	REP. 347	REP. 348	REP. 349	REP. 350	REP. 351	REP. 352	REP. 353	REP. 354	REP. 355	REP. 356	REP. 357	REP. 358	REP. 359	REP. 360	REP. 361	REP. 362	REP. 363	REP. 364	REP. 365	REP. 366	REP. 367	REP. 368	REP. 369	REP. 370	REP. 371	REP. 372	REP. 373	REP. 374	REP. 375	REP. 376	REP. 377	REP. 378	REP. 379	REP. 380	REP. 381	REP. 382	REP. 383	REP. 384	REP. 385	REP. 386	REP. 387	REP. 388	REP. 389	REP. 390	REP. 391	REP. 392	REP. 393	REP. 394	REP. 395	REP. 396	REP. 397	REP. 398	REP. 399	REP. 400	REP. 401	REP. 402	REP. 403	REP. 404	REP. 405	REP. 406	REP. 407	REP. 408	REP. 409	REP. 410	REP. 411	REP. 412	REP. 413	REP. 414	REP. 415	REP. 416	REP. 417	REP. 418	REP. 419	REP. 420	REP. 421	REP. 422	REP. 423	REP. 424	REP. 425	REP. 426	REP. 427	REP. 428	REP. 429	REP. 430	REP. 431	REP. 432	REP. 433	REP. 434	REP. 435	REP. 436	REP. 437	REP. 438	REP. 439	REP. 440	REP. 441	REP. 442	REP. 443	REP. 444	REP. 445	REP. 446	REP. 447	REP. 448	REP. 449	REP. 450	REP. 451	REP. 452	REP. 453	REP. 454	REP. 455	REP. 456	REP. 457	REP. 458	REP. 459	REP. 460	REP. 461	REP. 462	REP. 463	REP. 464	REP. 465	REP. 466	REP. 467	REP. 468	REP. 469	REP. 470	REP. 471	REP. 472	REP. 473	REP. 474	REP. 475	REP. 476	REP. 477	REP. 478	REP. 479	REP. 480	REP. 481	REP. 482	REP. 483	REP. 484	REP. 485	REP. 486	REP. 487	REP. 488	REP. 489	REP. 490	REP. 491	REP. 492	REP. 493	REP. 494	REP. 495	REP. 496	REP. 497	REP. 498	REP. 499	REP. 500	REP. 501	REP. 502	REP. 503	REP. 504	REP. 505	REP. 506	REP. 507	REP. 508	REP. 509	REP. 510	REP. 511	REP. 512	REP. 513	REP. 514	REP. 515	REP. 516	REP. 517	REP. 518	REP. 519	REP. 520	REP. 521	REP. 522	REP. 523	REP. 524	REP. 525	REP. 526	REP. 527	REP. 528	REP. 529	REP. 530	REP. 531	REP. 532	REP. 533	REP. 534	REP. 535	REP. 536	REP. 537	REP. 538	REP. 539	REP. 540	REP. 541	REP. 542	REP. 543	REP. 544	REP. 545	REP. 546	REP. 547	REP. 548	REP. 549	REP. 550	REP. 551	REP. 552	REP. 553	REP. 554	REP. 555	REP. 556	REP. 557	REP. 558	REP. 559	REP. 560	REP. 561	REP. 562	REP. 563	REP. 564	REP. 565	REP. 566	REP. 567	REP. 568	REP. 569	REP. 570	REP. 571	REP. 572	REP. 573	REP. 574	REP. 575	REP. 576	REP. 577	REP. 578	REP. 579	REP. 580	REP. 581	REP. 582	REP. 583	REP. 584	REP. 585	REP. 586	REP. 587	REP. 588	REP. 589	REP. 590	REP. 591	REP. 592	REP. 593	REP. 594	REP. 595	REP. 596	REP. 597	REP. 598	REP. 599	REP. 600	REP. 601	REP. 602	REP. 603	REP. 604	REP. 605	REP. 606	REP. 607	REP. 608	REP. 609	REP. 610	REP. 611	REP. 612	REP. 613	REP. 614	REP. 615	REP. 616	REP. 617	REP. 618	REP. 619	REP. 620	REP. 621	REP. 622	REP. 623	REP. 624	REP. 625	REP. 626	REP. 627	REP. 628	REP. 629	REP. 630	REP. 631	REP. 632	REP. 633	REP. 634	REP. 635	REP. 636	REP. 637	REP. 638	REP. 639	REP. 640	REP. 641	REP. 642	REP. 643	REP. 644	REP. 645	REP. 646	REP. 647	REP. 648	REP. 649	REP. 650	REP. 651	REP. 652	REP. 653	REP. 654	REP. 655	REP. 656	REP. 657	REP. 658	REP. 659	REP. 660	REP. 661	REP. 662	REP. 663	REP. 664	REP. 665	REP. 666	REP. 667	REP. 668	REP. 669	REP. 670	REP. 671	REP. 672	REP. 673	REP. 674	REP. 675	REP. 676	REP. 677	REP. 678	REP. 679	REP. 680	REP. 681	REP. 682	REP. 683	REP. 684	REP. 685	REP. 686	REP. 687	REP. 688	REP. 689	REP. 690	REP. 691	REP. 692	REP. 693	REP. 694	REP. 695	REP. 696	REP. 697	REP. 698	REP. 699	REP. 700	REP. 701	REP. 702	REP. 703	REP. 704	REP. 705	REP. 706	REP. 707	REP. 708	REP. 709	REP. 710	REP. 711	REP. 712	REP. 713	REP. 714	REP. 715	REP. 716	REP. 717	REP. 718	REP. 719	REP. 720	REP. 721	REP. 722	REP. 723	REP. 724	REP. 725	REP. 726	REP. 727	REP. 728	REP. 729	REP. 730	REP. 731	REP. 732	REP. 733	REP. 734	REP. 735	REP. 736	REP. 737	REP. 738	REP. 739	REP. 740	REP. 741	REP. 742	REP. 743	REP. 744	REP. 745	REP. 746	REP. 747	REP. 748	REP. 749	REP. 750	REP. 751	REP. 752	REP. 753	REP. 754	REP. 755	REP. 756	REP. 757	REP. 758	REP. 759	REP. 760	REP. 761	REP. 762	REP. 763	REP. 764	REP. 765	REP. 766	REP. 767	REP. 768	REP. 769	REP. 770	REP. 771	REP. 772	REP. 773	REP. 774	REP. 775	REP. 776	REP. 777	REP. 778	REP. 779	REP. 780	REP. 781	REP. 782	REP. 783	REP. 784	REP. 785	REP. 786	REP. 787	REP. 788	REP. 789	REP. 790	REP. 791	REP. 792	REP. 793	REP. 794	REP. 795	REP. 796	REP. 797	REP. 798	REP. 799	REP. 800	REP. 801	REP. 802	REP. 803	REP. 804	REP. 805	REP. 806	REP. 807	REP. 808	REP. 809	REP. 810	REP. 811	REP. 812	REP. 813	REP. 814	REP. 815	REP. 816	REP. 817	REP. 818	REP. 819	REP. 820	REP. 821	REP. 822	REP. 823	REP. 824	REP. 825	REP. 826	REP. 827	REP. 828	REP. 829	REP. 830	REP. 831	REP. 832	REP. 833	REP. 834	REP. 835	REP. 836	REP. 837	REP. 838	REP. 839	REP. 840	REP. 841	REP. 842	REP. 843	REP. 844	REP. 845	REP. 846	REP. 847	REP. 848	REP. 849	REP. 850	REP. 851	REP. 852	REP. 853	REP. 854	REP. 855	REP. 856	REP. 857	REP. 858	REP. 859	REP. 860	REP. 861	REP. 862	REP. 863	REP. 864	REP. 865	REP. 866	REP. 867	REP. 868	REP. 869	REP. 870	REP. 871	REP. 872	REP. 873	REP. 874	REP. 875	REP. 876	REP. 877	REP. 878	REP. 879	REP. 880	REP. 881	REP. 882	REP. 883	REP. 884	REP. 885	REP. 886	REP. 887	REP. 888	REP. 889	REP. 890	REP. 891	REP. 892	REP. 893	REP. 894	REP. 895	REP. 896	REP. 897	REP. 898	REP. 899	REP. 900	REP. 901	REP. 902	REP. 903	REP. 904	REP. 905	REP. 906	REP. 907	REP. 908	REP. 909	REP. 910	REP. 911	REP. 912	REP. 913	REP. 914	REP. 915	REP. 916	REP. 917	REP. 918	REP. 919	REP. 920	REP. 921	REP. 922	REP. 923	REP. 924	REP. 925	REP. 926	REP. 927	REP. 928	REP. 929	REP. 930	REP. 931	REP. 932	REP. 933	REP. 934	REP. 935	REP. 936	REP. 937	REP. 938	REP. 939	REP. 940	REP. 941	REP. 942	REP. 943	REP. 944	REP. 945	REP. 946	REP. 947	REP. 948	REP. 949	REP. 950	REP. 951	REP. 952	REP. 953	REP. 954	REP. 955	REP. 956	REP. 957	REP. 958	REP. 959	REP. 960	REP. 961	REP. 962	REP. 963	REP. 964	REP. 965	REP. 966	REP. 967	REP. 968	REP. 969	REP. 970	REP. 971	REP. 972	REP. 973	REP. 974	REP. 975	REP. 976	REP. 977	REP. 978	REP. 979	REP. 980	REP. 981	REP. 982	REP. 983	REP. 984	REP. 985	REP. 986	REP. 987	REP. 988	REP. 989	REP. 990	REP. 991	REP. 992	REP. 993	REP. 994	REP. 995	REP. 996	REP. 997	REP. 998	REP. 999	REP. 1000	REP. 1001	REP. 1002	REP. 1003	REP. 1004	REP. 1005	REP. 1006	REP. 1007	REP. 1008	REP. 1009	REP. 1010	REP. 1011	REP. 1012	REP. 1013	REP. 1014	REP. 1015	REP. 1016	REP. 1017	REP. 1018	REP. 1019	REP. 1020	REP. 1021	REP. 1022	REP. 1023	REP. 1024	REP. 1025	REP. 1026	REP. 1027	REP. 1028	REP. 1029	REP. 1030	REP. 1031	REP. 1032	REP. 1033	REP. 1034	REP. 1035	REP. 1036	REP. 1037	REP. 1038	REP. 1039	REP. 1040	REP. 1041	REP. 1042	REP. 1043	REP. 1044	REP. 1045	REP. 1046	REP. 1047	REP. 1048	REP. 1049	REP. 1050	REP. 1051	REP. 1052	REP. 1053	REP. 1054	REP. 1055	REP. 1056	REP. 1057	REP. 1058	REP. 1059	REP. 1060	REP. 1061	REP. 1062	REP. 1063	REP. 1064	REP. 1065	REP. 1066	REP. 1067	REP. 1068	REP. 1069	REP. 1070	REP. 1071	REP. 1072	REP. 1073	REP. 1074	REP. 1075	REP. 1076	REP. 1077	REP. 1078	REP. 1079	REP. 1080	REP. 1081	REP. 1082	REP. 1083	REP. 1084	REP. 1085	REP. 1086	REP. 1087	REP. 1088	REP. 1089	REP. 1090	REP. 1091	REP. 1092	REP. 1093	REP. 1094	REP. 1095	REP. 1096	REP. 1097	REP. 1098	REP. 1099	REP. 1100	REP. 1101	REP. 1102	REP. 1103	REP. 1104	REP. 1105	REP. 1106	REP. 1107	REP. 1108	REP. 1109	REP. 1110	REP. 1111	REP. 1112	REP. 1113	REP. 1114	REP. 1115	REP. 1116	REP. 1117	REP. 1118	REP. 1119	REP. 1120	REP. 1121	REP. 1122	REP. 1123
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## TRANSPLANTED TREES

TREATMENT	SIDE 1	SIDE 2	SIDE 3	SIDE 4	SIDE 5	PAGE TYPE
2017-21 PAPER	21					Transcribed
2020-9 LAM C&A	18					Transcribed
2020-25 LAM C&A	26					Transcribed
2020-26 LAM C&A	18					Transcribed
2021-14 ELEM	18					Transcribed
2016-9 & 11 C&A	9	14				Transcribed
2016-11 & 17 ELEM	11	13				Transcribed
<b>Total:</b>	<b>118</b>	<b>27</b>	<b>14</b>			

Grand Total: 164

**TREE SUMMARY (Trees Greater than 19 inches)**

	<u>Total Caliper Inch</u>	<u>Percentage</u>
Saved Trees	11,110	92%
Transplanted Trees	154	1%
Removed Trees	792	7%
<b>Total</b>	<b>12,056</b>	