ORDINANCE NO. <u>040902-54</u>

AN ORDINANCE AMENDING ORDINANCE NO. 990408-14 TO REZONE AND CHANGE THE ZONING MAP FROM PLANNED UNIT DEVELOPMENT (PUD) DISTRICT FOR LAND KNOWN AS THE FORUM PLANNED UNIT DEVELOPMENT TO CHANGE REGULATIONS APPLICABLE TO THE PROJECT KNOWN AS THE SOUTHWEST MARKETPLACE, LOCATED AT 4201-4515 WEST WILLIAM CANNON DRIVE AND 6900-7238 SOUTH MOPAC EXPRESSWAY.

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

- PART 1. The Forum Planned Unit Development ("Forum PUD") is comprised of approximately 264 acres of land located along and near South Mopac Boulevard, West William Cannon Drive, Convict Hill Road and Brush Country Road in Travis County and more particularly described by metes and bounds in the land use plan incorporated into Ordinance No. 990408-14. The Forum PUD was approved April 8, 1999 under Ordinance No. 990408-14 (the "Original PUD Ordinance").
- **PART 2.** The zoning map established by Section 25-2-191 of the City Code is amended to change the base district from planned unit development district to planned unit development district to change the regulations applicable to property within Forum PUD described in Zoning Case No. C814-98-0001.01, on file at the Neighborhood Planning and Zoning Department, as follows:

A 71 acre tract of land, more or less, out of the Thomas Anderson League in Travis County, the tract of land being more particularly described by metes and bounds in Attachment No. 1 (Description of Property and Zoning Map), incorporated into this ordinance, (the "Property")

locally known as the Southwest Marketplace area within the Forum PUD, located at 4201 to 4515 West William Cannon Drive and 6900 to 7238 South Mopac Expressway, in the City of Austin, Travis County, Texas, and generally identified in the map attached with Attachment No. 1 (*Description of Property and Zoning Map*).

PART 3. This ordinance, together with Attachments Nos. 1 through 5, amends the Original PUD Ordinance. The Forum PUD shall conform to the limitations and conditions set forth in this ordinance and the Original PUD Ordinance.

PART 4. The attachments are incorporated into this ordinance in their entirety as though set forth fully in the text of this ordinance. The attachments are as follows:

Attachment No. 1: Description of Property and Zoning Map Attachment No. 2: Amended PUD Land Use Plan (4 sheets)

Attachment No. 3: Green Builder Standards for Parcels B through E

Attachment No. 4: Building Envelopes

Attachment No. 5: Roadway Runoff Areas to be Treated

PART 5. The Original PUD Ordinance is modified as shown in this part.

- (A) Exhibit A (Forum PUD Land Use Plan) of the Original PUD ordinance is deleted and replaced with Attachment No. 2 (Amended PUD Land Use Plan) of this ordinance.
- (B) Exhibit B (Forum PUD Land Use Plan Development Regulations) of the Original PUD ordinance is amended to add the following provisions:
 - 40. The water quality facilities required under Note 25 to manage and treat storm water runoff may be located in one or more facilities on Parcels B through E.
 - 41. Note 38 does not apply to Parcels B through E. Except as otherwise provided in this note, for Parcels B through E, a single occupant of a commercial use that is a permitted use identified on Exhibit D, as amended, may not exceed 50,000 square feet of gross floor area. Notwithstanding the previous sentence, one single occupant may occupy up to 153,000 square feet of gross floor area.
 - 42. Administrative and business office use and professional office use are prohibited as a principal use on Parcels B through E.
 - 43. For Parcels B through E, notwithstanding anything to the contrary in the Original PUD Ordinance or this ordinance, impervious cover may not exceed a total of 33.87 acres.
 - 44. For Parcels B through E, the water quality facilities described in Notes 25 and 40 shall be designed to manage and treat storm water runoff from a 3.49 acre area of MoPac Boulevard and a 1.59 acre area of Brush

- Country Road, more particularly described in Attachment No. 5 (Roadway Runoff Areas to be Treated) of this ordinance.
- 45. For Parcels B through E, the water quality facilities described in Notes 25 and 44 shall be designed to manage and treat storm water runoff to a capture depth of 2.59 inches.
- 46. Note 15 does not apply to Parcels B through E. Parcels B through E are subject to the Green Builder Standards attached as Attachment No. 3 (*Green Builder Standards for Parcels B thorough E*) of this ordinance.
- 47. Development of a building on Parcels B through E is confined to the building areas identified on Attachment No. 4 (*Building Envelopes*) of this ordinance.
- (C) Exhibit D (Permitted Uses table) of the Original PUD Ordinance is amended as shown in this section.
 - (1) For Parcel B, the acreage shown is changed from 21.85 to 24.95 to correct a scrivener's error.
 - (2) For Parcel C:
 - (a) the acreage shown is changed from 27.49 to 24.39 to correct a scrivener's error;
 - (b) the base district is changed from general office (GO) to community commercial (GR);
 - (c) liquor sales use is added as a permitted use; and
 - (d) service station use is added as an excluded use.
- **PART 6.** Except as otherwise proved in the ordinance, the terms and conditions of Ordinance No. 990408-14 remain in effect.

PART 7. This ordinance takes effect on September 13, 2004.		
PASSED AND APPROVED		
September 2 , 2004	§ § § 	Will Wynn Mayor
APPROVED: David Allan\Smith City Attorney	ATTEST:	Shirley A. Brown City Clerk

Altachmenti

TRACT IL

ESCRIPTION OF 71.63 ACRES, MORE OR LESS, OF LAND AREA, IN THE THOMAS ANDERSON LEAGUE, SURVEY NO. 17, IN TRAVIS COUNTY, TEXAS, AS DESCRIBED FROM RECORD INFORMATION AND OFFICE CALCULATIONS ONLY AND IS NOT TO BE CONSTRUED TO REPRESENT A BOUNDARY SURVEY, SAID 71.56 ACREAS BEING A PORTION OF THAT 26 7/8 ACRE TRACT OF LAND DESCRIBED IN A DEED DATED JANUARY 17, 1942 FROM H.E. WISE, ET UX, TO T.U. BRYANT, AS RECORDED IN VOLUME 693, PAGE 39 OF THE TRAVIS COUNTY DEED RECORDS, AND BEING A PORTION OF THAT 100 ACRE TRACT OF LAND DESCRIBED IN A DEED DATED MARCH 15, 1937, FROM J.L. MCCARTY, ET AL, TO T.U. BRYANT, AS RECORDED IN VOLUME 570, PAGE 270 OF THE TRAVIS COUNTY DEED RECORDS, AND BEING THAT 10 ACRE TRACT OF LAND DESCRIBED IN A DEED DATED FEBRUARY 26, 1948 FROM NETTIE JANUARY, ET AL, TO T.U. BRYANT, AS RECORDED IN VOLUME 906, PAGE 529 OF THE TRAVIS COUNTY DEED RECORDS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at the intersection of the southeast line of the aforereferenced 26 6/8 acre Bryant Tract, and the southwest line of William Cannon Drive, for the north corner of Lot 1, Block B, of Garga Ranch, a subdivision in Travis County, Texas, as recorded in Volume 90, Pages 4-7 of the Travis County Plat Records, same being the northerly east corner of the herein described tract of land;

THENCE leaving the PLACE OF BEGINNING and William Cannon Drive, with the common line of the 26 7/8 acre and the aforereferenced Garza Ranch, S 27-41'28" W 928.16 feet to the northeast line of the aforereferenced 100 acre Bryant Tract, for the south corner of the 10 acre Bryant Tract, same being the west corner of Lot 4, Block B of Garza Ranch, and being an interior corner of the herein described tract of land;

THENCE leaving the 26 7/8 acre Bryant Tract, with the common line of the 100 acre Bryant Tract and Garza Ranch, S 62^23'23" E 286.16 feet to the intersection of the northeast line of the 100 acre Bryant Tract, and the west line of MoPac Boulevard (also known as Loop 1), for the south corner of Lot 4, Block B of Garza Ranch, same being the east corner of the herein described tract of land;

THENCE leaving Garza Ranch, and crossing the 100 acre Bryant Tract with the line of MoPac Boulevard, the following five (5) courses:

- with a right breaking curve having a radius length of 2275.33 feet, an arc length of 688.49 feet, and a chord which bears S 49°33'44 W 685.87 feet to a point of compound curvature;
- with a right breaking curve having a radius length of 1620.52 feet, an arc length of 957.21 feet, and a chord which bears S 75 09 09 W 943.35 feet;
- 3. N 87°55'33" W 447.50 feet to the beginning of a left breaking curve;
- with said left breaking curve having a radius length of 118.50 feet, an arc length of 63.43 feet, and a chord which bears 8.76 44'09 W 62.68 feet; and
- 5. S 61²4'13" W 202.31 feet to the intersection of the north line of MoPac Boulevard, and the east line of Brush Country Drive;



THENCE leaving MoPac Boulevard, with the common line of Brush Country Drive and the 100 acre Bryant Tract, the following two (2) courses:

- with a right breaking curve having a radius length of 257.90 feet, an arc length of 277.17 feet, and a chord which bears N 02~25'05 W 264.02 feet; and 2. N 28~26'10" E 1439.04 feet to the north corner of the 100 acre
- Bryant Tract, same being the west corner of the remainder of the 26 7/8 acre Bryant;

THENCE leaving the 100 acre Bryant Tract, with the common line of Brush Country Drive, and the remainder of the 26 7/8 acre Bryant Tract, the following four (4) courses:

- 1. N 28³¹'20" E 600.43 feet; 2. S 61⁴⁶' E 15.00 feet;
- 3. N 28-13-45" E 323.39 feet to the beginning of a right breaking curve; and
- 4. with said right breaking curve having a radius length of 20.00 feet, an arc length of 25.93 feet, and a chord which bears S 65° 19'40" E 24.15 feet, to the intersection of the southeast line of Brush Country Drive, and the southwest line of William Cannon Drive, for the north corner of the herein described tract of land;

THENCE leaving Brush Country Drive, and crossing the 26 7/8 acre Bryant Tract, with the south line of William Cannon Drive, with a right breaking curve having a radius length of 2440.00 feet, an arc length of 1315.76 feet, and a chord which bears S 62° 04'55" E 1299.88 feet to the PLACE OF BEGINNING. There are contained within these metes and bounds, 71.63 acres, more or less, of land area, as described from record information and office calcualations only and is not to be construed to represent a boundary survey, as prepared by McMinn Land Surveying Company of Austin, Texas.

McMinn Land Surveying Company

4210 Spicewood Springs Road, Suite 201

Austin, Texas (512) 343-1970 78759

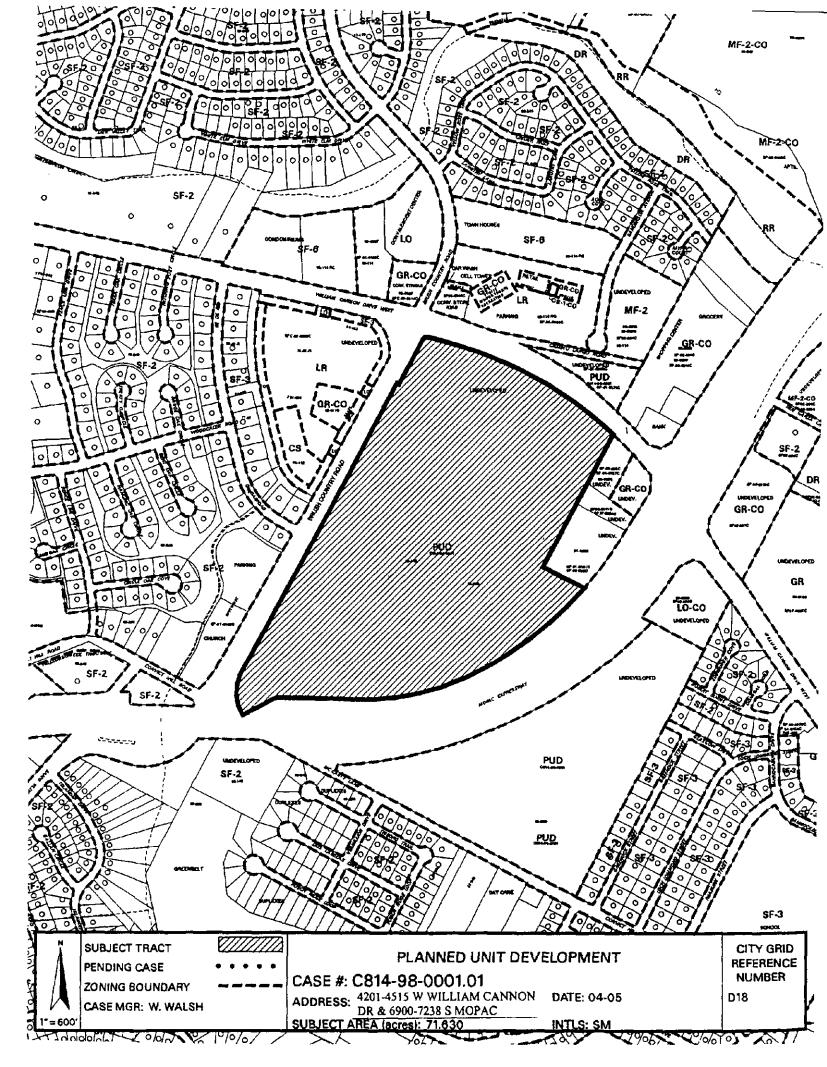
DATE : January 13, 1994

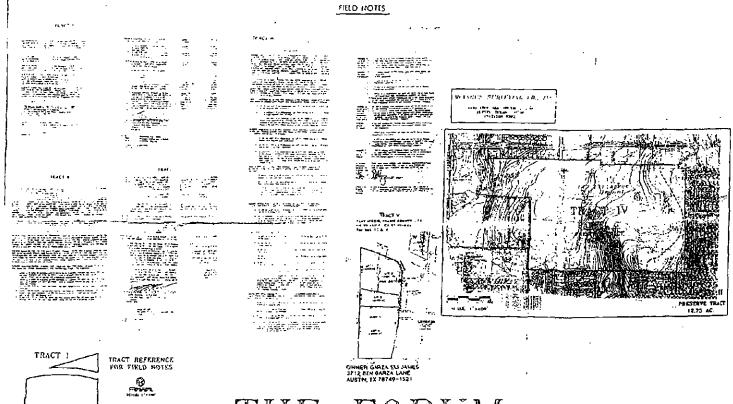
SURVEY : Thomas Anderson League

COUNTY : Travis, Texas

J.O. No. : 012394

LNDB0123





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TRACT II

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TRACT III

TABLE OF EXHIBITS

- 1. EXHIBIT A- LAND USE PLAN (see attached sheets 2-3 and 3-3)
- 2. EXHIBIT B- FORUM PUD DEVELOPMENT REGULATIONS
- 1. EXHIBIT C- DESCRIPTION OF PROPERTY AND ZONING MAP
- 4 EXHIBIT D- PERMITTED USES TABLE
- 5. EXHIBIT E- CREEN BUILDER STANDARDS
- 6. EXHIBIT F. DESCRIPTION OF MITIGATION PROPERTY
- 7. EXHIBIT OF WATER QUALITY CRITERIA





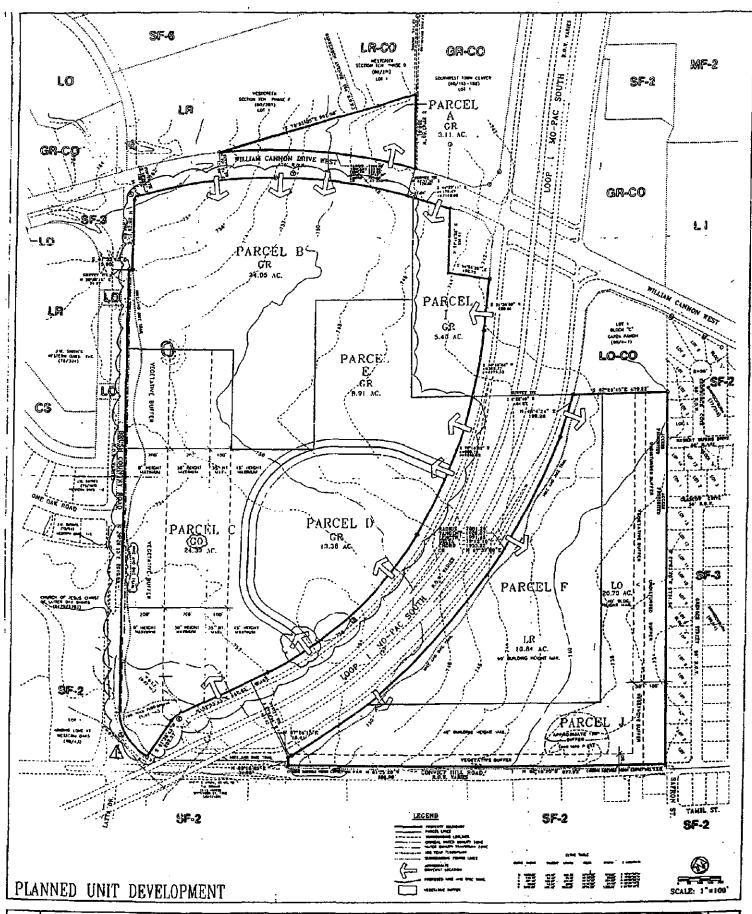












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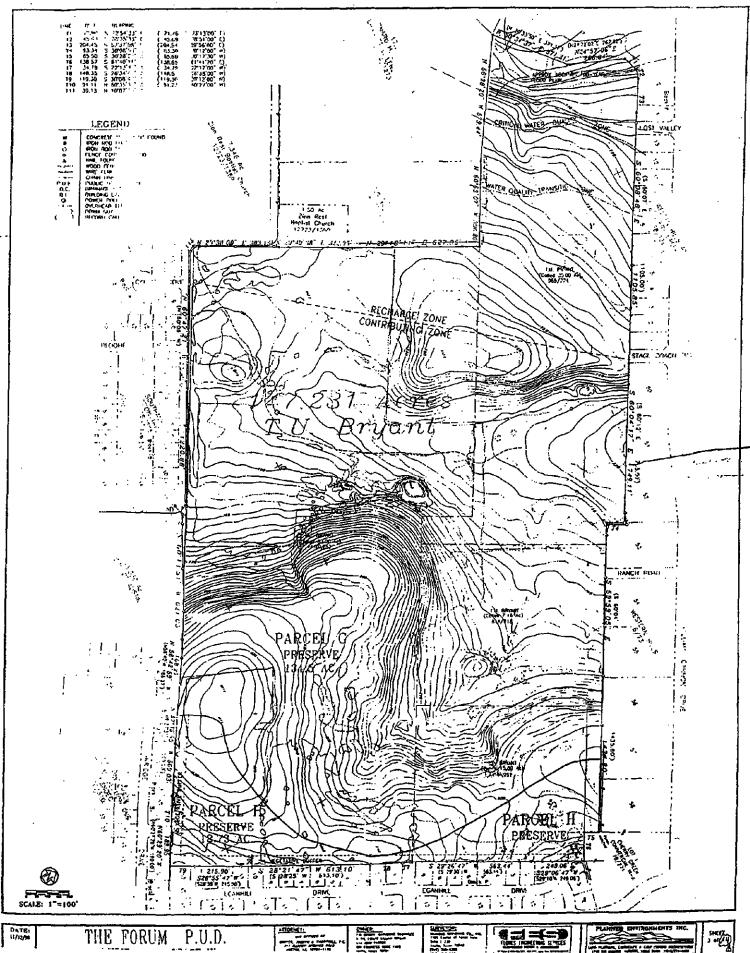












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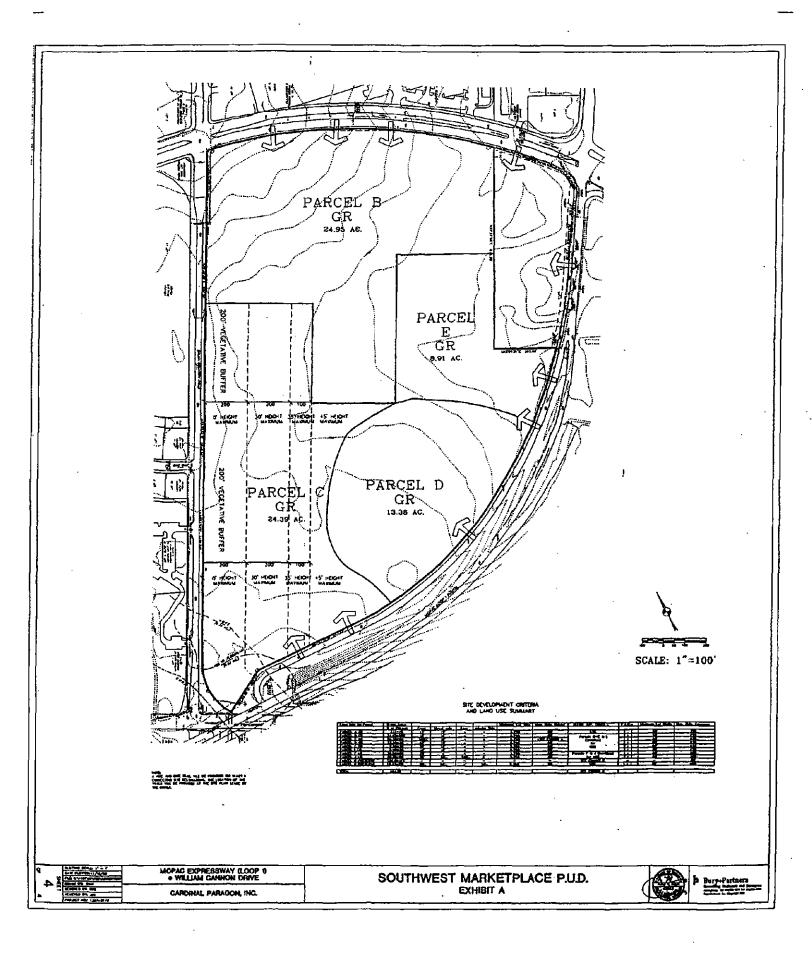












Attachment 3

Green Development Performance Standards For Parcels B-E Only

Introduction.

- 1.1 The owner or the owner's developer (the "Owner") of any retail development on any of Parcels B, C, D, or E of the PUD Property (each, a "Parcel", and collectively, the "Parcels") shall comply with the mandatory requirements set out in this Exhibit E, and shall also consider the optional standards as set out herein, provided, however, that if a mandatory requirement listed in this Exhibit E is not feasible, as determined by the reviewer described in Section 1.2 hereof, then Owner does not have to achieve or follow that standard, and Owner will be deemed to have complied with such mandatory requirement by virtue of a determination by the reviewer that the requirement is not feasible. For purposes of determining feasibility under this Exhibit E, the reviewer may consider, among other things and as applicable to the requirement in question, the ready availability of technology and/or materials, the cost of compliance compared to the benefits and as a component of overall cost of development or construction, whether the requirement would have more than a de minimis impact on environmental quality under the particular circumstances, and the requirements and limitations of applicable law. If the reviewer determines that a requirement listed herein as "mandatory" is feasible, then that requirement must be complied with.
- 1.2 Compliance with the requirements of Section 1.1 on any given Parcel, whether such requirements are mandatory or optional, shall be evidenced by the approval of plans by any one of (i) a licensed engineer, (ii) a licensed architect, or (iii) a U.S. Green Building Council LEED (Leadership in Energy & Environmental Design) Green Building Rating System accredited professional (or, if at such time as the evidence of compliance is being reviewed, the LEED program no longer exists or LEED accredited professionals are no longer readily available, a reviewer who is qualified according to standards agreed to by both the City and the Owner of the particular Parcel for which compliance is being determined). Such approval shall include the reviewer's calculation of the number of mandatory and optional Exhibit E requirements satisfied under the approved plan. If plans will be reviewed by a licensed engineer or architect under this Section 1.2, Owner will use reasonable efforts to find and use a licensed engineer or architect who is experienced with green building technology and practices and/or is familiar with the LEED program. Approval of plans as described in this Section 1.2 shall be sufficient and conclusive for all purposes, and no other review or approval, whether by the City or otherwise, shall be required.
- 1.3 The requirements hereof, as they apply to each Parcel, may, at the option of the Owner of a Parcel or the City, be reassessed by the City and such Parcel Owner, but no more often than every five years. Upon the agreement of the City and such an Owner, the standards applicable to that Parcel may be modified in a writing signed by the City and such Owner, and an amendment hereto reflecting the modification of standards applicable to that Parcel shall be

recorded in the appropriate records of Travis County, Texas. The Owner and the City shall invite the director of the Lady Bird Johnson Wildflower Center to participate in discussions regarding any such modification, but the director is not hereby obligated to so participate. If the LEED program and/or LEED accredited professionals are no longer available at the time of any such 5-year reassessment, the City and the Parcel Owner who asked for a reassessment shall also agree upon the qualifications of successor reviewers who, along with licensed engineers and licensed architects, may review plans for compliance with this Exhibit E (as described in Section 1.2).

- 1.4 Notwithstanding the provisions of Section 1.3 to the contrary, the plant species lists attached hereto as Appendices A, B, and C may be amended from time to time upon the mutual agreement of the owner of an affected Parcel and the director of the Lady Bird Johnson Wildflower Center. Any such amendment shall be recorded in the appropriate records of Travis County, Texas.
- 1.5 This <u>Exhibit E</u> applies only to Parcels B-E of the PUD Property, and supersedes the original Exhibit E Green Development Performance Standards for the Parcels. This <u>Exhibit E</u> has no affect on the balance of the PUD Property, including any green development performance standards applicable thereto.

Part One. Guiding Principles. Following are general site and design strategies and goals for development of the Parcels, which strategies and goals may or may not be achievable for a given site or use, all as set out more completely elsewhere in, and governed by the other provisions of, this Exhibit E:

I. Site Strategies.

- A. <u>Design with Nature</u>. Specify climate- and site-responsive design strategies & features to maximize building self-reliance and minimize ecological harm on multiple scales.
- B. <u>Design For Water Quality.</u> Minimize stormwater run-off by reducing impervious surfaces, installing rainwater harvesting systems and green roofs, and designing swales and appropriate set-backs integrated into a healthy landscape. For properties in the recharge zone, design for no net increase of stormwater runoff rates over existing conditions.
- C. <u>Design To Maximize Open Space.</u> Cluster development and hardscapes to preserve undisturbed open space and protect critical environmental features.
- D. <u>Design To Reduce Vehicle Miles.</u> Design providing walkable distances and pedestrian and bicycle pathways to accommodate transportation needs. Link destination points throughout the development and incorporate park & ride, vanpool, car sharing, and access to public transportation and incentives for employers to hire from nearby neighborhoods.

- E. <u>Design With Native Plant Landscapes & Maintain With Organic Methods & Materials.</u> Specify plant species indigenous to the Edwards Aquifer watershed and employ organic gardening methods eliminating use of toxic pesticides and herbicides. Prohibit turf on retail sites.
- F. <u>Design For Food Production</u>. Where permitted by zoning, designate lot- and neighborhood-scale gardens for individual and community food production.

II. Design Strategies.

- A. <u>Design with Flexibility</u>. Anticipate change in user needs by designing open building systems.
- B. <u>Design For Human Scale.</u> Establish appropriate square foot parameters that provide efficient and sufficient space allocations relative to user needs.
- C. <u>Design With Integrated Process and Systems.</u> Establish multi-discipline design decision process and optimize the efficiencies of complementary building elements.
- D. <u>Design for Indoor Environmental Quality.</u> Design for daylight as primary light source, provide occupants access to views, and optimize natural and mechanical ventilation and air conditioning systems while eliminating sources of indoor pollution.
- E. <u>Design With Healthy Materials</u>. Specify materials that are non-toxic, resist mold, eliminate emissions of volatile organic compounds (vocs) and are not responsible for the release of persistent bioaccumulative toxins (pbts) through the life cycle.
- F. <u>Design With Durable Materials</u>. Specify materials that are long-lasting and minimize maintenance and repair requirements.
- G. <u>Design With Regional Materials</u>. Specify environmentally-sound building materials and products that are sourced and manufactured within a 500 mile radius of building site thereby supporting the regional economy.
- H. <u>Design For Resource Efficiency</u>. Employ strategies that achieve greater energy and water efficiency than comparable (but non-green) buildings in Central Texas.
- I. <u>Design For Renewable Energy</u>. Integrate appropriately-scaled renewable energy technologies for water heating and electrical generation, and secure long-term contracts for grid-connected "green" energy where available through the provider.
- J. <u>Design For Waste Minimization</u>. Employ strategies to reduce, reuse, recycle, and compost construction, demolition and land-clearing debris, and design buildings to facilitate recycling during operations.

Part Two. Retail Development

I. Overview.

Subject to all of the terms of the Introduction, above, the requirements set out in Sections II through VII below shall govern retail development of the Parcels. All such development must comply with those requirements that are listed below as "mandatory", and must also comply with a total of at least five (5) in the aggregate of the items listed below as "optional".

II. Sustainable Sites.

A. Erosion and Sedimentation Control

- 1. Design in conformance with a site and erosion control plan that conforms to the best management practices identified in (i) the EPA's Stormwater Management for Construction Activities (EPA-832.R-92-005, Chapter 3), or (ii) the erosion and sedimentation control requirements in the City's Code, whichever is more stringent. At the least, the plan must (i) prevent loss of soil by stormwater and/or wind erosion during construction, including by calling for protection of topsoil by stockpiling for reuse, and (ii) prevent sedimentation or pollution of storm sewer and receiving streams from dust and particulate matter.
 - a. Mandatory
 - b. Documentation Requirement: conforming erosion and sedimentation control plan.
- 2. Revegetation for erosion control will be consistent with the project landscape standards while allowing for seasonally appropriate temporary seeding. Following the completion of all construction activities in the area, areas compacted by construction activities shall be aerated or the soils shall be amended as necessary to allow for appropriate revegetation. Seed mixes for permanent revegetation will include only native grasses and wildflowers from the approved plant list (see Appendix A).
 - a. Mandatory
 - b. Documentation Requirement: Conforming erosion and sedimentation control plan.
 - 3. [intentionally omitted]
- 4. Provision of on-site detention for 2-year 3-hour storm event.
 - a. Mandatory, unless site conditions and proposed development dictate that

it would be more prudent not to provide the facility.

- b. Documentation Requirement: Stormwater management plans and calculations.
- 5. Fertilizer containing not more than the equivalent of 40 pounds of nitrogen per acre per year will be applied, except where greater plant nitrogen uptake is demonstrated.
 - a. Mandatory
 - b. Documentation Requirement: Landscape plan and/or narrative description of fertilizing areas and measurements.

B. Site Selection

- 1. Establish specific setbacks from critical environmental features that meet or exceed minimum setback requirements under the City of Austin Code on a site-by-site basis.
 - a. Mandatory
 - b. Documentation Requirement: Provide site plan showing proposed project footprint and locations of critical environmental features.
- 2. Construction in City of Austin Critical Water Quality and Water Quality Transition Zones is prohibited except as permitted by City of Austin Code or pursuant to variances.
 - a. Mandatory
 - b. Documentation Requirement: Site plan showing locations of CWQZ and WQTZ and footprint of proposed construction, as well as copies of variance approvals, as appropriate.
- 3. Identify and consider preservation of significant trees and tree groups, as "significant trees" and "tree groups" are described in the City of Austin Environmental Criteria Manual, Section 3, as applicable to a Parcel.
 - a. Mandatory
 - b. Documentation Requirement: Provide tree survey and site plan, and/or narrative describing preservation plan.
- 4. No construction of buildings or development, excluding water quality facilities approved by the City of Austin, shall be permitted on any portion of a Parcel that

meets any of the following criteria: (i) is "prime farmland" as defined by the American Farmland Trust; (ii) is land lying lower than one foot (1') above the elevation of the 100-year flood plain as defined by FEMA; (iii) is within 100' of any "wetland" as defined by either 40 CFR, Parts 230-233 and Part 22, (iv) was public parkland prior to its acquisition by Owner, unless land of equal or greater value as parkland is accepted by the appropriate governmental entity in exchange for such former public parkland.

- a. Mandatory
- b. Documentation Requirement: Provide site plan showing the proposed project footprint, as well as the location of any 100-year floodplain, or designated wetlands, as well as a note confirming the absence of prime farmland and prior public parkland.
- 5. Construction is prohibited on any land that is habitat for any Texas or federally listed threatened or endangered species that is identified as such habitat by a federal or state agency prior to the date hereof, unless pursuant to permission from the U.S. Fish and Wildlife Service.
 - a. Mandatory
 - b. Documentation Requirement: Provide site plan showing the limits of proposed construction, if any, located within identified habitat for listed threatened or endangered species.

C. <u>Alternative Transportation</u>

- 1. Locate buildings (i) within one-half mile of a commuter rail, light rail, or subway station or (ii) within one-quarter mile of the stop(s) of two or more bus lines.
 - a. Optional
 - b. Documentation Requirement: Provide area plan highlighting building location, transportation features, and distances. Include scale bar for distance measurement.
- 2. [intentionally omitted]
- 3. [intentionally omitted]
- 4. If City Code requires a building to have bicycle parking, provide covered bicycle parking within 50 feet of such building entrance. The number of spaces must meet or exceed the number of such spaces required under City Code, but be not less than 5% of anticipated occupancy.

- a. Optional
- b. Documentation Requirement: Provide site plan showing number and location of parking spaces, and narrative regarding anticipated occupancy of relevant building.
- 5. Provide suitable means for storing bicycles, with convenient changing facilities for use by cyclists. Provide showers as appropriate to the scale and type of use of the facility.
 - a. Mandatory
 - b. Documentation Requirement: Provide site drawings showing bike area and number of bikes served, and a report describing estimated staffing and provisions for showers/changing area(s).
- 6. Install alternative-fuel refueling station(s) capable of servicing the number of cars equal to 3% of the total vehicle parking capacity of the Parcel. Liquid or gaseous fueling facilities must be separately ventilated or located outdoors.
 - a. Optional
 - b. Documentation Requirement: Provide site drawings & specifications showing any alternative-fuel refueling station, as well as the number of parking spaces.
- 7. For rehabilitation projects, add no new parking spaces.
 - a. Optional
 - b. Documentation Requirement: Provide parking plan highlighting total parking capacity and narrative describing previous parking space number, and number of spaces required by city code.
- 8. [intentionally omitted]
- 9. Evaluate the feasibility of parking ratios reduced from City Code requirements.
 - a. Mandatory
 - b. Documentation Requirement: Narrative describing analysis of feasibility, and calculations based on the square footage of the relative building.
- D. Reduced Site Disturbance

- 1. Protect open space by limiting site disturbance to the extent feasible based on good design practice and construction techniques. Limits of construction to be defined by silt fence, chain link fencing, orange plastic mesh fencing, or other appropriate methods.
 - a. Mandatory
 - b. Documentation Requirement: Provide site drawings showing limits of construction disturbance and location and type of containment method chosen.
- 2. Limits of construction to be defined by chain link fencing.
 - a. Optional
 - b. Documentation Requirement: Provide site drawings showing the development footprint and calculating the amount of open space on the Parcel.
- 3. Limit the area of construction disturbance to (i) within 40 feet of building perimeters, within 30 feet of parking lot perimeters, and to the extent feasible to permit construction of infrastructure such as utilities, stormwater facilities, pedestrian/bicycle paths and required landscaping, OR (ii) no more than 105% of the sum of the allowable impervious cover plus stormwater facilities and utilities.
 - a. Mandatory
 - b. Documentation Requirement: Site plan and/or erosion and sedimentation plan showing location of construction areas, and calculations indicating compliance with the standard.
- 4. Require contractor bonding to cover the estimated value of trees identified on the tree preservation plan as being preserved.
 - a. Optional
 - b. Documentation Requirement: Tree preservation plan showing trees to be preserved, narrative describing valuation of preserved trees, and evidence of contractor bonding.
- Construction contract documents will require contractor to be financially liable for the estimated value of damage to or destruction of trees identified to be preserved.
 - a. Mandatory

b. Documentation Requirement: Provide narrative and/or tree preservation plan and erosion and sedimentation control plan showing tree protection measures, and copy of executed construction contract with appropriate liability language.

E. Stormwater Management

- 1. With the exception of participation in existing regional stormwater facilities, implement a stormwater management plan (i) that results in no increase in the rate of stormwater runoff after development from pre-development levels, or (ii) if existing impervious cover is greater than 50%, that reduces the rate and quantity of stormwater runoff by at least 25% from existing levels.
 - a. Mandatory
 - b. Documentation Requirement: Provide stormwater management plan with calculations.
- 2. Implement a stormwater management plan that results in treatment systems designed to remove 80% of the average annual post development total suspended solids (TSS) and 40% of the average annual post development total phosphorous (TP) by implementing Best Management Practices (BMPs) outlined in the EPA's Guidance Specifying Management Measures for Sources of Non-point Pollution in Coastal Waters (EPA 840-B-92-002 1/93).
 - a. Mandatory
 - b. Documentation Requirement: Provide stormwater management plan with calculations and describing BMPs implemented.
- 3. Treat stormwater run-off to achieve no increase in the average annual pollutant load defined in Section 25-8-514 (A) of the City of Austin Code (as that section reads as of the date hereof), using vegetative filter areas and retention/re-irrigation water quality controls.
 - a. Mandatory
 - b. Documentation Requirement: Provide water quality control plans, including calculations of estimated pre- and post-construction average annual pollutant loads.
- Achieve a reduction in stormwater runoff volume by complying with one or more of the following performance standards:
 - A minimum of 20% of the roof construction on the site to utilize a green

roof.

- Pervious pavement required for at least 50% of all surface parking areas where soil depths are greater than 4 feet.
- Connecting paths for pedestrians and bikes will be decomposed granite, gravel or other pervious material, except where impervious pavement is required to meet applicable law, or where otherwise necessary to accommodate intended use.
- Substitute natural-bottom vegetated channel drainage for storm drainage conveyance, unless alternative lining is required to obtain City approval.
- Achieve impervious cover reductions through clustering, reduced parking requirements and/or narrower roadways.
- Disconnect impervious cover by providing swales rather than pipe drainage, or by sloping roofs, driveways and parking areas to vegetated filter areas rather than storm sewers.
- Achieve no decreased flow to Identified Aquifer Recharge Features.
- a. Mandatory
- b. Documentation Requirement: Provide a narrative describing compliance with this standard, including, as appropriate, plans, materials lists, and/or calculations.

III. Landscape and Exterior Design/Heat Island Reduction

A. Shade

- 1. Do at least one of the following: (i) provide shade (within 15 years) on at least 30% of non-roof impervious surfaces on the Parcel, including parking lots, walkways, plazas, etc., using trees or trellises with vines from the approved plant list (see Appendix A), (ii) use light colored/high albedo materials (with a reflectance of at least 0.3) for 30% of the Parcel's non-roof impervious surfaces, (iii) place at least 50% of the parking spaces underground, or (iv) use pervious pavement where soils are 4 feet or greater in depth.
 - a. Mandatory
 - b. Documentation Requirement: Depending on the option(s) chosen, provide (i) drawings showing 15-year shading plan with non-roof impervious surface calculations, (ii) specifications for high-albedo materials used and non-roof impervious surface calculations, (iii) parking plan with count of surface vs. underground spaces, or (iv) drawings showing areas of pervious pavement.

- 2. When considering placement of pedestrian and bicycle pathways on a Parcel, consider locating such pathways in existing shaded areas, and creating additional areas of shade, employing native trees and trellises with vines using plants from the approved list (see Appendix A), buildings, canopies, and/or any other permissible shade provider.
 - a. Optional
 - b. Documentation Requirement: Provide site plan and/or other drawings showing pedestrian and bicycle pathways and showing shade areas, with calculations.

B. Heat Island Reduction

- 1. Either (i) use ENERGY STAR Roof-compliant, high reflectance and high emissivity roofing (with initial reflectance of at least 0.65 and 3-year aged reflectance of at least 0.5 when tested in accordance with ASTM E903 and emissivity of at least 0.9 when tested in accordance with ASTM 408) for at least 75% of the roof surface, or (ii) install a vegetated roof for at least 50% of the roof area.
 - a. Optional
 - b. Documentation Requirement: Provide (i) specifications of materials and roof area calculations, or (ii) plans and roof area calculations.
- 2. Conduct a life cycle cost analysis for the use of concrete for all non-pervious paved parking and roadway surfaces.
 - a. Mandatory
 - b. Documentation Requirement: Provide a cost/benefit analysis for the anticipated life of the facility comparing construction and maintenance costs for concrete versus asphalt paving surfaces.

C. Exterior Light Pollution Reduction

- 1. In order to improve night sky access and reduce development impact on the nocturnal environment, do not exceed Illuminating Engineering Society of North America (IESNA) footcandle level requirements as stated in the IESNA's "Recommended Practice Manual: Lighting for Exterior Environments", and design interior and exterior lighting such that no direct-beam illumination leaves the building site.
 - a. Mandatory

- b. Documentation Requirement: Provide exterior lighting design plan highlighting footcandle contours and demonstrating compliance w/IESNA requirements. Provide design narrative showing that no direct-beam illumination leaves site.
- 2. Develop an exterior lighting plan for all development that sets maximum lighting levels for commercial areas at three footcandles, average maintained, measured horizontally at finished ground level with a 4:1 illumination ratio.
 - a. Optional
 - b. Documentation Requirement: Provide exterior lighting design plan and narrative demonstrating compliance with this requirement.
- 3. If permissible by City Code, free standing light fixtures shall not exceed 30 feet measured from the ground/pavement to the bottom base of the fixture.
 - a. Optional
 - b. Documentation Requirement: Provide narrative including measurements.
- 4. Fixture wattage shall not exceed 350 lamp watts and shall contain the lowest available mercury content at the time of purchase, consistent with fulfilling performance requirements.
 - a. Optional
 - b. Documentation Requirement: Provide specifications regarding fixtures.
- 5. Fixtures shall be limited to two per pole, and shall have no uplight or lamps/light-refracting lenses extending below the plane of the lowest point of the fixture housing. Fixtures will provide a cutoff not to exceed 90 degrees from nadir so that light is not emitted above the horizontal plane.
 - a. Optional
 - b. Documentation Requirement: Provide exterior lighting design plan highlighting lighting fixtures and describing light emissions.
- 6. Building-mounted wall packs shall not exceed a lamp wattage of 200 watts and shall be mounted no higher than 28 feet from the ground/pavement to the bottom of the fixture. Wall packs shall be configured with a full front metal shield with a sharp cutoff of at least 85 degrees to block the lamp source from line of sight view. Open-faced wall packs of any wattage or size are prohibited.
 - a. Optional

- b. Documentation Requirement: Provide exterior lighting design plan highlighting lighting fixtures.
- 7. All lighting fixtures to illuminate outdoor advertising shall utilize downlighting, backlighting, or internal illumination (using lamps of 100 watts or less).
 - a. Mandatory
 - b. Documentation Requirement: Provide exterior lighting design plan highlighting lighting fixtures and a narrative showing that no direct-beam illumination leaves site.
- 8. Lamp wattage for outdoor advertising signs constructed of translucent materials and wholly illuminated from within shall not exceed 75 watts.
 - a. Optional
 - b. Documentation Requirement: Provide specifications regarding fixtures and lamps.
- 9. If and to the extent that Owner chooses to pursue an optional standard under these Part C Exterior Light Pollution Reduction provisions, and such option is in conflict with otherwise applicable provisions of the City of Austin's Code, Owner will seek to obtain a waiver of or variance from such conflicting Code provisions, as appropriate.
 - a. Mandatory
 - b. Documentation Requirement: Provide such documentation to the City as is necessary under applicable law to obtain the waiver or variance in question. In pursuit of such waiver or variance, Owner may rely on the advice of legal counsel rather than only a licensed engineer, licensed architect, or LEED accredited professional as described herein.
- 11. For a Parcel with zoning allowing a service station, all luminaires mounted on the undersurface of service station canopies shall be fully shielded and utilize flat glass or flat plastic covers. The total light output used for illuminating service station canopies, defined as the sum of all under-canopy initial bare-lamp outputs in lumens, shall not exceed forty (40) lumens per square foot of canopy. All lighting mounted under the canopy, including but not limited to luminaires mounted on the lower surface of the canopy and auxiliary lighting within signs or panels over the pumps, is to be included toward the total outdoor light output for the Parcel.
 - a. Optional

b. Documentation Requirement: Provide exterior lighting design plan highlighting luminaries and specifications regarding fixtures.

IV. Water Efficiency

A. Water Efficient Landscaping

- 1. Use either (i) high efficiency irrigation technologies that are in keeping with the scale and requirements of the landscaped areas, or (ii) captured rain or recycled water, in either event to reduce potable water consumption for irrigation by 50% over conventional irrigation methods.
 - a. Mandatory
 - b. Documentation Requirement: Provide plans or a design narrative, including calculations, demonstrating compliance with this requirement.
- 2. Use captured rain or recycled water to eliminate potable water consumption for irrigation.
 - a. Optional
 - b. Documentation Requirement: Provide plans or a design narrative demonstrating compliance with this standard.
- 3. In order to preserve existing plant material, Owner shall (i) use reasonable efforts to select building, road, and parking sites from locations with the least ecological health rather than disturb places in the best health, (ii) if not in an area to be landscaped under City Code, restore healthy soils, native plant communities and fauna habitat in areas temporarily disturbed by construction activity, and (iii) have a tree and plant survey performed by a qualified professional, which may include a representative of the Lady Bird Johnson Wildflower Center (hereinafter referred to as TWC), which survey must include:
 - A field survey;
 - A species list;
 - Recommendations for rare, unique, or valuable plant recovery and reuse;
 - An evaluation of all trees 19 inches and larger in diameter performed in accordance with Section 3.5.1 of the City's Environmental Criteria Manual;
 - Recommendations for protection of significant trees during construction;
 and
 - Recommendations for long-term site management to protect the tree

- a. Optional
- b. Documentation Requirement: Provide a narrative describing the location decisions made for buildings, roads, and parking sites, a plan for soil recovery, and a tree and plant survey as described.
- 4. For plant species identified as "significant" in a tree and plant survey done pursuant to paragraph 3, above, that will be disturbed during construction activities, remove all or a material portion of such plants and replant in a compatible area that will not be disturbed. Preserve significant trees and tree groups.
 - a. Optional
 - b. Documentation Requirement: Provide copy of tree and plant survey, and plan for preservation, removal, and replanting.
- 5. In new plant assemblages, use plant species from the approved plant lists that take advantage of specific site conditions (e.g., water-loving plants in natural or created drainages, xeric plants on slopes and ridgelines) in order to reduce or eliminate reliance on supplemental water, fertilizer or pesticides in comparison to traditional landscaping assemblages.
 - a. Mandatory
 - b. Documentation Requirement: Provide list of plant species used in new assemblages along with plan showing planting locations, and narrative describing estimated reductions in water, fertilizer, or pesticide use compared to traditional landscaping.
- 6. To the extent practicable, the Owner will require in its contracts for landscape maintenance that only electric (or other non-gasoline) mowers and equipment be used.
 - a. Optional
 - b. Documentation Requirement: Provide copies of maintenance contracts and narrative regarding availability of non-gasoline based services.
- 7. A progressive Integrated Pest Management (IPM) plan will be developed and implemented for the site using standards at least as stringent as City of Austin standards, and which plan will call for the use of chemicals as a last resort in the progression, and in any event call for the least toxic chemicals approved for use. The plan will address construction and post-construction chemical use.

- a. Mandatory
- b. Documentation Requirement: Provide IPM plan.
- 8. Specify a minimum of 25% of building materials, including for planters, benches, and stone work, that contain in the aggregate a minimum weighted average of either (i) 20% post-consumer recycled content material or (ii) 40% post-industrial recycled content material.
 - a. Mandatory
 - b. Documentation Requirement: Provide requests for bids, specifications, and other information regarding the amount of recycled content materials to be used, and provide calculations demonstrating compliance with the standard.
- 9. A landscape materials plan will be developed that includes such requirements as:

 (i) no materials that leach pollutants, such as creosote-treated railroad ties and CCA (copper chromated arsenic) and pentachlorophenol treated wood, will be allowed, (ii) for wood in contact with soil, an approved treatment method, such as ACQ (ammonium copper quarternary), naturally-resistant wood, or a woodplastic composite will be required, (iii) topsoil from the site will be stockpiled using appropriate erosion control methods during storage, (iv) excavated boulders will be stored and incorporated into the site landscape, and (v) woody plant material will be used on site either for fenceposts and trim, or mulched and used on site for paths and planting beds to the greatest extent practicable. All woody plant material not used on-site will be made available for off-site use, and that none of the woody plant material will be disposed of in a landfill.
 - a. Mandatory
 - b. Documentation Requirement: Provide materials plan including all required components.
- B. <u>Innovative Wastewater Technologies</u>
- 1. Either (i) reduce the use of municipally-provided potable water for building sewage conveyance by at least 50% over standard usage as of the date of these restrictions, or (ii) treat 100% of wastewater on-site to tertiary standards.
 - a. Optional
 - b. Documentation Requirement: Provide plans or narrative, including calculations of standard usage and reduction, demonstrating compliance with this standard.

C. Water Use Reduction

- 1. [intentionally omitted]
- 2. Consider employing strategies that in the aggregate use 30% less potable water than the water use baseline calculated for the building (not including irrigation) after meeting 1992 Energy Policy Act fixture performance requirements.
 - a. Optional
 - b. Documentation Requirement: Provide information regarding all water consuming fixtures with performance compliance; provide a water budget calculation showing reduction calculation.
- 3. Design roofs to capture at least 50% of the roof area for rainwater harvesting, and provide rainwater collection and storage for at least 1 inch of capture volume, provided, however, that in no event shall the design and construction costs of such facilities be required to exceed a maximum cost of \$4,000 (w/ annual growth rate of 2% from the date of these restrictions) per 10,000 square feet of the roof area.
 - a. Optional
 - b. Documentation Requirement: Provide plans, specifications, and calculations demonstrating compliance with this standard.
- 4. Design and install roof-mounted HVAC equipment so that any leaking water is contained and captured.
 - a. Optional
 - b. Documentation Requirement: Provide plans showing containment and capture system.
- 5. Evaluate the feasibility of greywater reuse for internal (in buildings) and external (elsewhere on the Parcel) water demand. Evaluation of external greywater reuse must consider the potential for aquifer contamination in the system design.
 - a. Optional
 - b. Documentation Requirement: Provide narrative regarding the feasibility evaluation.

V. Energy and Atmosphere

A. Fundamental Building Systems Commissioning

- 1. Implement the following fundamental best practice commissioning procedures: engage a commissioning authority; review design intent and basis of design documentation; include commissioning requirements in the construction documents; develop and utilize a commissioning plan; verify installation, functional performance, training, and documentation; and complete a commissioning report.
 - a. Optional
 - b. Documentation Requirement: Submit a plan or narrative demonstrating compliance with this standard.

B. <u>Minimum Energy Performance</u>

- 1. Design to meet building energy efficiency and performance as required by ASHRAE/IESNA 90.1-1999 or the City's energy code.
 - a. Mandatory
 - b. Documentation Requirement: Provide code analysis & summary table demonstrating compliance.

C. CFC Reduction in HVAC/R Equipment

- 1. Use no CFC-based refrigerants in new building HVAC/R base building systems. When re-using existing base building HVAC/R equipment, complete a comprehensive CFC phaseout conversion.
 - a. Mandatory
 - b. Documentation Requirement: For new buildings provide information regarding CFC-free refrigerants for all HVAC/R equipment. For existing buildings list all existing HVAC/R equipment & copy of phase-out plan.

D. Optimize Energy Performance

- Reduce energy cost by 20% compared to the energy cost budget for regulated energy components described in the requirements of ASHRAE/IESMA Standard 90.1-1999, as demonstrated by a whole building simulation using the Energy Cost Budget Method described in Section 1.1. Regulated energy components include HVAC systems, building envelope, service hot water systems, lighting, and other regulated systems as defined by ASHRAE.
 - a. Mandatory

- b. Documentation Requirement: Provide building simulation and energy cost budget calculations demonstrating compliance with this standard.
- 2. Seek to reduce energy cost by 30% compared to the energy cost budget for regulated energy components described in the requirements of ASHRAE/IESMA Standard 90.1-1999, as demonstrated by a whole building simulation using the Energy Cost Budget Method described in Section 1.1. Regulated energy components include HVAC systems, building envelope, service hot water systems, lighting, and other regulated systems as defined by ASHRAE.
 - a. Optional
 - b. Documentation Requirement: Provide building simulation and energy cost budget calculations demonstrating compliance with this standard.
- 3. Seek to reduce energy cost by 40% compared to the energy cost budget for regulated energy components described in the requirements of ASHRAE/IESMA Standard 90.1-1999, as demonstrated by a whole building simulation using the Energy Cost Budget Method described in Section 1.1. Regulated energy components include HVAC systems, building envelope, service hot water systems, lighting, and other regulated systems as defined by ASHRAE.
 - a. Optional
 - b. Documentation Requirement: Provide building simulation and energy cost budget calculations demonstrating compliance with this standard.
- 4. Seek to reduce energy cost by 50% compared to the energy cost budget for regulated energy components described in the requirements of ASHRAE/IESMA Standard 90.1-1999, as demonstrated by a whole building simulation using the Energy Cost Budget Method described in Section 1.1. Regulated energy components include HVAC systems, building envelope, service hot water systems, lighting, and other regulated systems as defined by ASHRAE.
 - a. Optional
 - b. Documentation Requirement: Provide building simulation and energy cost budget calculations demonstrating compliance with this standard.
- 5. Seek to reduce energy cost by 60% compared to the energy cost budget for regulated energy components described in the requirements of ASHRAE/IESMA Standard 90.1-1999, as demonstrated by a whole building simulation using the Energy Cost Budget Method described in Section 1.1. Regulated energy components include HVAC systems, building envelope, service hot water systems, lighting, and other regulated systems as defined by ASHRAE.

- a. Optional
- b. Documentation Requirement: Provide building simulation and energy cost budget calculations demonstrating compliance with this standard.

E. Renewable Energy

- 1. Supply 5% Total Energy Cost through the use of on-site renewable energy systems.
 - a. Optional
 - b. Documentation Requirement: Provide drawings or narrative of energy systems, and include cost calculations.
- 2. Supply 10% Total Energy Cost through the use of on-site renewable energy systems.
 - a. Optional
 - b. Documentation Requirement: Provide drawings or narrative of energy systems, and include cost calculations.
- 3. Supply 20% Total Energy Cost through the use of on-site renewable energy systems.
 - a. Optional
 - b. Documentation Requirement: Provide drawings or narrative of energy systems, and include cost calculations.

F. Additional Commissioning

- 1. In addition to the Fundamental Building Commissioning pre-requisite, implement the following additional commissioning tasks:
 - Conduct a focused review of the design prior to the construction document phase;
 - Conduct a focused review of the construction documents when close to completion;
 - Conduct a selective review of contractor submittals for commissioned equipment;
 - [the above three reviews must be performed by a firm other than the designer]
 - Develop a recommissioning management manual; and
 - Have a contract in place for a near warranty-end or post-occupancy

review.

- a. Optional
- b. Documentation Requirement: Provide a plan or narrative regarding procedures for review and otherwise demonstrating compliance with this standard.

G. Ozone Depletion

- 1. Install base building level HVAC and refrigeration equipment and fire suppression chemicals and either replace those that contain HCFCs or Halon with an available non-ozone depleting alternative, or use chemicals that might have an ozone depleting potential but nevertheless have a superior TEWI rating, or use some combination of chemicals that in the judgment of the reviewer, and based on current technology, achieves the best environmental result for this goal.
 - a. Mandatory
 - b. Documentation Requirement: Supply lists of relevant equipment and chemicals used demonstrating compliance.

H. Measurement and Verification

- 1. Comply with long-term continuous measurement of performance as stated in Option B: Methods by Technology of the US DOE's International Performance Measurement and Verification Protocol (IPMVP) for the following: lighting systems and controls; constant and variable motor loads; variable frequency drive operations; chiller efficiency at variable loads; cooling load; air and water economizer and heat recovery cycles; air distribution static pressures and ventilation air volumes; boiler efficiencies; building specific process energy efficiency systems and equipment; and indoor water risers and outdoor irrigation systems.
 - a. Optional
 - b. Documentation Requirement: Provide copy of measurement and verification plan and schedule of instrumentation controls for each category.

I. Green Power

If available to serve the Parcel, and if such power, either alone or in combination with conventional power, can be obtained at no more than 110% of the cost of buying only the conventional power available from the same provider, contract to purchase power generated from renewable sources that meet the certification

requirements of the Center for Resource Solutions Green-e products.

- a. Mandatory
- b. Documentation Requirement: Provide information regarding availability of green-e products, costs and calculations, and copy of contract, if applicable.

VI. Materials and Resources

A. Storage and Collection of Recyclables

- 1. Provide an easily accessible area dedicated to separation, collection and storage of recyclable materials including, at a minimum, paper, glass, plastics, and metals.
 - a. Mandatory
 - b. Documentation Requirement: Provide drawings highlighting location of recycling area(s).

B. Building Reuse

- 1. Maintain at least 75% of existing building shells and structures in order to conserve the use of building materials and reduce demolition effects where practicable.
 - a. Optional
 - b. Documentation Requirement: Provide drawings and calculations demonstrating compliance with this standard.
- 2. Maintain 100% of existing building shells and structures in order to conserve the use of building materials and reduce demolition effects where practicable.
 - a. Optional
 - b. Documentation Requirement: Provide drawings and calculations demonstrating compliance with this standard.
- 3. Maintain 100% of existing building shells and structures, as well as 50% of nonshell improvements, in order to conserve the use of building materials and reduce demolition effects where practicable.
 - a. Optional
 - b. Documentation Requirement: Provide drawings and calculations

demonstrating compliance with this standard.

C. Construction Waste Management

- Recycle and/or salvage at least 50% (by weight) of construction, demolition, and land clearing wastes, including by mulching trees and recycling or reusing topsoil and rocks. Salvage may include donation of materials to charitable organizations.
 - a. Mandatory
 - b. Documentation Requirement: Provide estimated measurements (by weight), calculations, and narrative reports of recycling and salvage activity demonstrating compliance with this standard.
- 2. Develop and implement a waste management plan to recycle and/or salvage at least 75% (by weight) of construction, demolition, and land clearing wastes. Salvage may include donation of materials to charitable organizations.
 - a. Optional
 - b. Documentation Requirement: Provide estimated measurements (by weight), calculations, and narrative reports of recycling and salvage activity demonstrating compliance with this standard.

D. Resource Reuse

- 1. Specify salvaged or refurbished materials for at least 5% of the cost of building materials.
 - a. Optional
 - b. Documentation Requirement: Provide specifications and contractor submittals as well as calculations.
- 2. Specify salvaged or refurbished materials for at least 10% of the cost of building materials.
 - a. Optional
 - b. Documentation Requirement: Provide specifications and contractor submittals as well as calculations.

E. Recycled Content

1. Specify a minimum of 25% of building materials that contain in the aggregate a minimum weighted average of either (i) 20% post-consumer recycled content

material or (ii) 40% post-industrial recycled content material.

- a. Mandatory
- b. Documentation Requirement: Provide requests for bids, specifications, and other information regarding the amount of recycled content materials to be used, and provide calculations demonstrating compliance with the standard.
- 2. Seek to specify a minimum of 50% of building materials that contain in the aggregate a minimum weighted average of either (i) 20% post-consumer recycled content material or (ii) 40% post-industrial recycled content material.
 - a. Optional
 - b. Documentation Requirement: Provide requests for bids, specifications, and other information regarding the amount of recycled content materials to be used, and provide calculations demonstrating compliance with the standard.

F. Local/Regional Materials

- 1. Specify that a minimum of 20% of building materials used must be manufactured (final assembly) regionally within a radius of 500 miles from the Parcel.
 - a. Mandatory
 - b. Documentation Requirement: Provide specifications and contractor submittals listing building materials used, source of such materials, and calculations demonstrating compliance with this standard.
- 2. Specify that a minimum of 50% of the regionally-manufactured building materials used must be extracted, harvested, or recovered within a radius of 500 miles from the Parcel.
 - a. Optional
 - b. Documentation Requirement: Provide specifications and contractor submittals listing building materials used, source of such materials, and calculations demonstrating compliance with this standard.

G. Rapidly Renewable Materials

Specify that at least 5% of the total building materials must be from rapidly renewable sources.

- a. Optional
- b. Documentation Requirement: Provide available documentation from manufacturer regarding rapidly renewable material content/source of products, and provide calculations demonstrating that 5% of building materials are rapidly renewable.

H. Certified Wood

- 1. To the extent that the cost of such wood-based materials exceeds 5% of the total cost of the building, at least 50% of wood-based materials must be certified in accordance with the Forestry Stewardship Council guidelines for wood building components, including, but not limited to, structural framing and general dimensional framing, flooring, finishes, furnishings, and non-rented temporary construction applications such as bracing, concrete form work, and pedestrian barriers.
 - a. Mandatory
 - b. Documentation Requirement: Provide wood certification information from manufacturer, and calculations demonstrating compliance with this standard.

VII. Indoor Environmental Quality

A. Minimum IAO Performance

- 1. Meet the minimum requirements of voluntary consensus standard ASHRAE 62-1999, Ventilation for Acceptable Indoor Air Quality and approved addenda.
 - Mandatory
 - b. Documentation Requirement: Provide approval from qualified reviewer demonstrating compliance with this standard.

B. Environmental Tobacco Smoke Control

Prohibit smoking in the building altogether, or limit smoking to a designated smoking room designed to effectively contain, capture, and remove all Environmental Tobacco Smoke (ETS) from the building (which may be accomplished by, at a minimum, direct exhaust from the smoking room to the outdoors with no recirculation of air containing ETS).

a. Mandatory

b. Documentation Requirement: Provide letter from owner verifying building policy prohibiting smoking, or, if a smoking room is designated, provide plans for ventilation demonstrating compliance with this standard.

C. Carbon Dioxide (CO2) Monitoring

- 1. Install a permanent CO2 monitoring system with feedback on space ventilation performance in a form that affords operational adjustments. Specify initial operational set point parameters to maintain indoor CO2 levels no higher than outdoor levels by more than 530 ppm.
 - a. Optional
 - b. Documentation Requirement: Provide drawings and specifications of CO2 monitoring system, and narrative describing initial operation set point parameters.

D. <u>Increase Ventilation Effectiveness</u>

- 1. For mechanically ventilated buildings, design ventilation systems that result in air change effectiveness of at least 0.9 based on ASHRAE 129-1997. For naturally ventilated spaces, demonstrate a distribution and laminar flow pattern that involves at least 90% of the room or zone area in the direction of air flow for at least 95% of the hours of occupancy.
 - a. Mandatory
 - b. Documentation Requirement: For mechanically ventilated space, provide report summarizing test results, calculations, and design narrative. For naturally ventilated space, provide airflow simulation results including inlets, outlets & flow patterns demonstrating compliance with this standard.

E. Construction IAQ Management Plan

- During construction, (i) meet or exceed the minimum requirements of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guideline for Occupied Buildings under Construction, 1995, (ii) protect stored on-site or installed absorptive materials from moisture damage, and (iii) replace air filtration media immediately prior to occupancy. Filtration media must have a Minimum Efficiency Reporting Value (MERV) of 13, as determined by ASHRAE 52.2-1999.
 - a. Mandatory
 - b. Documentation Requirement: Provide copy of construction IAQ

management plan with explanation regarding SMACNA guidelines compliance, provide photographs or narratives of construction measures to protection absorptive materials, and provide information regarding MERV and replacement of filtration media.

- 2. Institute a plan to conduct a minimum 2-week building flushout with new filtration media at 100% outside air after construction ends and prior to occupancy, or conduct a baseline indoor air quality testing procedure consistent with current EPA Protocol for Environmental Requirements, Baseline IAQ and Materials, Research Triangle Park Campus, Section 01445.
 - a. Optional
 - b. Documentation Requirement: Provide copy of plan, including letter from qualified reviewer describing building flushout procedures and schedules, with reasonable documentation demonstrating conformance with testing procedures and requirements as described in the referenced standard.

F. Low-Emitting Materials

- 1. Use only adhesives that meet or exceed the VOC limits of South Coast Air Quality Management District Rule #1168. All sealants used as a filler must meet or exceed Bay Area Air Resources Board Regulation 8, Rule 51.
 - a. Mandatory
 - b. Documentation Requirement: Provide a Material Safety Data Sheet (MSDS) for each adhesive and sealant used in the building, showing VOC limits.
- 2. Use only paints and coatings that meet or exceed the Green Seal Certification specifications with regard to low or no VOC.
 - a. Mandatory
 - b. Documentation Requirement: Provide Material Safety Data Sheets (MSDS) for each paint and coating used in the building showing VOC limits, and provide Green Seal Certification specifications, with a comparison of VOC content.
- 3. Use only carpet systems that meet or exceed the Carpet and Rug Institute Green Label Indoor Air Quality Test Program.
 - a. Mandatory
 - b. Documentation Requirement: Provide information regarding each carpet

demonstrating compliance with this standard.

- 4. Use composite wood and agrifiber products that contain no added ureaformaldehyde resins.
 - a. Mandatory
 - b. Documentation Requirement: Provide information regarding each composite wood or agrifiber products used in the building, highlighting urea-formaldehyde resin limits.

G. <u>Indoor Chemical and Pollutant Source Control</u>

- 1. Design to minimize cross-contamination of regularly occupied areas by chemical pollutants, including by employing permanent entryway systems (such as grills and grates) to prevent dirt, particulates, etc. from entering the building at all high volume entryways.
 - a. Mandatory
 - b. Documentation Requirement: Provide drawings and narratives describing entryway systems, and effect on preventing particulate entry.

H. Controllability of Systems

- 1. [intentionally omitted]
- 2. Provide controls for each individual airflow, temperature, and lighting for 50% of the non-perimeter, regularly occupied areas.
 - a. Optional
 - b. Documentation Requirement: Provide drawings showing controls, and calculations.

I. Thermal Comfort

- 1. Comply with ASHRAE 55-1992, Addenda 1995, for thermal comfort standards including humidity control within established ranges per climate zone.
 - a. Mandatory
 - b. Documentation Requirement: Provide letter from qualified reviewer confirming compliance with standard.
- 2. Install a permanent temperature and humidity monitoring system configured to

provide operators control over thermal comfort performance and effectiveness of humidification and/or dehumidification systems in the building.

- a. Optional
- b. Documentation Requirement: Provide drawings and specifications showing installed system, and a narrative describing operator control.

J. Daylight and Views

- 1. Achieve a minimum Daylight Factor of 2% (excluding direct sunlight penetration) in 75% of all space occupied for critical visual tasks, excluding copy rooms, storage areas, mechanical, laundry, and other low occupancy support areas, and also excluding spaces where tasks would be hindered by use of daylight or where accomplishing specific tasks within a space would be enhanced by direct penetration of sunlight.
 - a. Mandatory
 - b. Documentation Requirement: Provide drawings with narrative highlighting critical visual task areas, calculations demonstrating minimum Daylight Factor of 2% in these areas.
- 2. Direct the line of sight to vision glazing from 90% of all regularly occupied spaces, not including copy rooms, storage areas, mechanical, laundry, and other low occupancy support areas.
 - a. Optional
 - b. Documentation Requirement: Provide drawings with narrative demonstrating compliance with this standard.

Part Three. Innovation and Design Process. Following are additional design and performance requirements for all of the Parcels that will also serve to conserve water, improve the quality of stormwater runoff, protect the aquifer, and preserve the natural landscape.

1. With the exception of any rainwater harvesting, for any underground storage tank system located on any Parcel, tertiary containment must be provided, unless otherwise provided by the City, which tertiary barrier must consist of an artificially constructed material that is sufficiently thick and impermeable to direct a release to a monitoring point and permit its detection. All such underground storage tank systems must include a monitoring and detection system able to detect a release, which monitoring and detection system must be located between the walls of the double walled tan and the piping sump.

- a. Mandatory
- b. Documentation Requirement: Drawings and specifications indicating tertiary containment and the required monitoring system.
- 2. Unless the City fails to provide water service to a Parcel, no additional water wells will be drilled or developed on the Parcels (with the exception of the Parcel for which no City service is available).
 - a. Mandatory
 - b. Documentation Requirement: If necessary, documentation of the City's failure to provide water service.
- 3. Expand land use compatibility buffer areas beyond the requirements of applicable City zoning ordinances.
 - a. Optional
 - b. Documentation Requirement: Provide narrative regarding required and achieved buffer areas, including calculations.
- 4. All plantings will be from plants listed on Appendices A and B, and no plantings will be from the plant species shown on Appendix C. The ratio of plantings from Appendices A and B will be 70/30.
 - a. Mandatory
 - b. Documentation Requirement: Maintain list of species planted that can be checked against Appendix C for compliance with this standard.

Common Name	Genus / Species	Family	
I. Highly recommended - co	mmercially available		
2. Recommended - available		- 	J.,
3. Recommended - may not		 	1
Afinador	Mortonia greggii	Celastraceae	1
Agarita	Mahonia trifoliolata (Berberis trifoliolata)	Berberidaceae	
Nabama Lipfem	Cheilanthes alabamensis	Pteridaceae	13
American Beautyberry	Callicarpa americana	Verbenaceae	1
American Brooklime	Veronica americana	Scrophulariaceae	
American Elm	Ulmus americana	Ulmaceae	4
American Sycamore	Platanus occidentalis	Platanaceae	
American Water-willow	Justicia americana	Acanthaceae	
Annual Pennyroyal	Hedeoma acinoides	Lamiaceae	
Antelope-horns	Asclepias asperula ssp. capricomu	Asclepiadaceae	
Aperajo Muhly	Muhlenbergia utilis	Poaceae	
Arizona ash	Fraxinus velutina	Oleaceae	Ľ
Arizona Walnut	Juglans major	Jugiandaceae	
Ashe Juniper	Juniperus ashei	Cupressaceae	\perp :
Autumn Sage	Salvia greggii	Lamiaceae	<u> </u>
Baby Blue-eyes	Nemophila phacelioides	Hydrophyllaceae	
Bald Cypress	Taxodium distictium	Cupressaceae	I
Balsam Gourd	Ibervillea lindheimeri	Cucurbitaceae:	
Bandana-of-the-Everglades	Canna flaccida	Liliaceae	
Barbados Cherry	Malpighia glabra	Malpighiaceae	+
Barbara's Buttons	Marshallia caespitosa	Asteraceae	14
Barreta	Helletta parvifolia	Rutaceae	
Basket Flower	Centaurea americana	Asteraceae	
Beaked Spikerush	Eleocharis rostellata	Cyperaceae	I
Bearded Swallow-wort	Cynanchum barbigerum	Asclepiadaceae	-
Bee Brush	Aloysia gratissima	Verbenaceae	13
Beggar's Tick	Torilis arvensis	Apiaceae	-
Bermuda Blue-eyed Grass	Sisyrinchium angustifolium	Iridaceae	
Rig Bluestem	Andropogon gerardii	Poaceae	13
Big Love Nolina	Nolina bigelovii	Liliaceae	13
Big Red Sage	Salvia penstemonoides	Lamiaceae	2 2 3
Sigtooth Maple	Acer grandidentatum	Aceraceae	13
Bindweed	Convolvulus equitans	Convolvulaceae	2
Black Bog-rush	Schoenus nigricans	Сурегасезе	13
Slack Cherry	Prunus serotina	Rosaceae	13
Black Dalea	Dalea frutescens	Fabaceae	1 2
Black Willow	Salix nigra	Salicaceae	13
Rack-eyed Susan	Rudbeckia hirta	Asteraceae	13
Blackfoot Daisy	Melampodium leucanthum	Asteraceae	3
Bladderwort	Utricularia gibba	Lentibulariaceae	3
Stanco Crabappie	Malus ioensis var. texana	Rosaceae	[2
Blue Curts	Phacelia congesta	Hydrophyllaceae	3
live Funnel-lily	Androstephium caeruleum	Liliaceae	3
Slue Gilia, Prick-leaf Gilia	Gita rigidula ssp. rigidula	Polemoniaceae	2
llue grama	Bouteloua gracilus	Poaceae	1
	Conoclinium coelestinum (Eupatorium	1	Ι.
lue Mistflower	coelestinum)	Asteraceae	1.1
lue Morning Glory	Ipomoea lindheimeri	Convolvulaceae	2
tue Mud Plantain	Heteranthera limosa	Pontederiaceae	2
lue shrub Sage	Salvia ballotiflora	Lamiaceae	1-2
lue Threeawn	Aristide purpurea var. nealleyi	Poaceae	
	Eustoma exaltatum ssp. russellianum (E.		1_
luebell	grandiflorum)	Gentianaceae	3
luebonnet	Lupinus texensis	Fabaceae	3
luets	Hedyotts nigricans	Rubiaceae	3
lunt-lobe Cliff Fern	Woodsia obiusa	Dryopteridaceae	7
ois d'Arc, Osage Orange	Maclura pomifera	Moraceae	3
lox Elder	Acer negundo	Aceraceae	7
ranched Dicliptera	Dicliptera brachiata	Acanthaceae	1
irazilwood	Condella hookeri	Rhamnaceae	3
	Gutiefrezia sarothrae (Xanthocephalum	1. M. S. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	3
room Snakeweed	salollulo)		

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Common Name	Genus / Species	Family	$oldsymbol{\mathbb{I}}$
	Amphiachyris dracunculoides		T
Broomweed	(Xanthocephalum dracunculoides)	Asteraceae	┙
Buffalograss	Buchloe dactyloides	Poaceae	I
	Ophioglossum crotalophoroides	Ophioglossaceae	
Bull Muhty	Muhlenbergia emersleyi	Poaceae	1
Bunch-grass	Nolina texana	Lifiaceae	
Bundleflower	Desmanthus illinoensis	Fabaceae	Ι
Bur oak	Quercus macrocarpa	Fagaceae	1
Bush Croton	Croton fruticulosus	Euphorblaceae	\perp
Bush Sunflower	Simsia calva	Asteraceae	1
Bushy Bluestem	Andropogon glomeratus	Poaceae	1
Bushy Skullcap	Sculellaria wrightii	Lamiaceae	Ι
Butterfly Weed	Asclepias tuberosa	Asclepiadaceae	Ι
	Packera tampicana (Senecio		Т
Butterweed	Imparipinnatus)	Asteraceae	L
Buttonbush_	Cephalanthus occidentalis	Rubiaceae	Ι
California Loosestrife	Lythrum californicum	Lythraceae	Τ
Camphor Weed	Heterotheca subaxillaris (H. lattfolia)	Asteraceae	Т
Canada Wild Rye	Elymus canadensis	Poaceae	ŀ
	Muhlenbergia x Involuta (hybrid in		Τ
Canyon Muhty	nature)	Poaceae	1
Cardinal Feather	Acalypha radians	Euphorbiaceae	T
Cardinal Flower	Lobelia cardinalis	Campanulaceae	T
Carolina Basswood	Tilia americana var. caroliniana	Tiliaceae	Τ
	Frangula caroliniana (Rhamnus	1	Т
Carolina Buckthom	caroliniana)	Rhamnaceae	1
Carolina Jessamine	Gelsemium sempervirens	Loganiaceae	7
Carolina Joint-fail	Coelorachis cylindrica	Poaceae	T
Carolina Modiola	Modiola caroliniana	Malvaceae	1
Carolina Silverbell	Halesia carolina	Styracaceae	T
Carolina Snailseed	Cocculus carolinus	Menispermaceae	Τ
Carolina Wolfberry	Lycium carolinianum var. quadrifidum	Solanaceae	Τ
Catclaw	Acacia greggii var. wrightii (A. wrightii)	Fabaceae	Τ
	Mimosa aculeaticarpa var. biuncifera (M.		Ţ
Cat-claw Mimosa	biuncifera)	Fabaceae	L
edar Elm	Ulmus crassifolia	Ulmaceae	Τ
Cedar Sage	Salvia roemeriana	Lamiaceae	Т
edar Sedge	Carex planostachys	Сурегасеае	Т
Chatterbox Orchid	Epipactis gigantea	Orchidaceae	Τ
herokee Sedge	Carex cherokeensis	Cyperaceae	1
hile Pepper	Capsicum annuum	Solanaceae	Γ
hile Piquin	Capsicum annuum var. glabriusculum	Solanaceae	Г
hinkapin	Quercus muehlenbergii	Fagaceae	
Chintul	Cyperus articulatus	Cyperaceae	t
hisme	Portulaca pilosa	Portulacaceae	1
hocolate Daisy	Berlandiera lyrata	Asteraceae	╁
lammyweed	Polanisia dodecandra	Capparaceae	Т
Japweed ·	Ephedra antisyphilitica	Ephedraceae	
Juster Beak-rush	Rhynchospora glomerata	Cyperaceae	
oastal Water-hyssop	Bacopa monnieri	Scrophulariaceae	
ommon Soweeks Grass	Vulpia octoflora	Poaceae	
ommon Water Nymph, Najas		Najadaceae	1
Common series is substituted as	Dalea compacta var. pubescens	1. amidragement	╌
compact Prairie Clover	(Petalosiemon pulcherrimus)	Fabaceae	,
compassplant	Stiphium lanciniatum	Asteraceae	1
Copper Lily	Habranthus tubispathus (H. texensis)	Liliaceae	
oral Bean	Erythrina herbacea	Fabaceae	-
		Caprifoliaceae	H
oral Berry	Symphoricarpos orbiculatus		-
oral Honeysuckle	Lonicera sempervirens	Caprifoliaceae	
low-lich Vine	Cissus trifoliata (C. Incisa)	Vitaceae	
owpen daisy	Verbesina encelloides	Asteraceae	
reek Plum	Prunus rivularis	Rosaceae	
reek Sedge	Carex amphibola	Cyperaceae	
reek Sedge		Cyperaceae:	, 2 , 4
rossyme			

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Common Name	Genus / Species	Family	T
Crow Poison .	Nothoscordum bivalve	Liliaceae	\top
Out-leaf Evening Princose	Cenothera laciniata	Onagraceae	+
Cut-leaf Gilia	Gilia incisa	Polemoniaceae	十
Jutleaf Penstemon	Penstemon baccharifolius	Scrophulariaceae	+
)amianita	Chrysactinia mexicana	Asteraceae	†
Davis Mountain Sage	Salvia reptans	Lamiaceae	+
Day Flower	Commelina erecta: var. erecta	Commelinaceae	╁
Dayflower	Commelina erecta	Commelinaceae	+
Death Camas	Zigadenus nuttallii	Liliaceae	$^{+}$
Deer Muhiv	Muhlenbergia rigens	Poaceae	+
Desert willow	Chilopsis linearis		+
Desert Yaupon	Schaefferla cuneifolia	Bignoniaceae	
		Celastraceae	1
evil's Shoestring	Notina lindheimeriana	Liliaceae	╄
isc Water-hyssop	Bacopa rotundifolia	Scrophulariaceae	L
Downy Thornapple	Datura inoxia	Solanaceae	Γ
rummond Phiox	Phlox drummondii	Polemoniaceae	L
rummond's Skullcap	Scutellaria drummondii	Lamiaceae	Τ
rummond's Wild Petunia	Ruellia drummondiana	Acanthaceae	
rummond's Wood-Sorrei	Oxalis drummondii	Oxalidaceae	Ι
utchman's Breeches	Thamnosma texana	Rutaceae	T
warf Palmetto	Sabal minor	Arecaceae	1
astern Cottonwood	Populus deltoides	Salicaceae	77
astem Gamagrass	Tripsacum dactyloides	Poaceae	1
	Sembucus nigra ssp. canadensis (S.	T	+
derberry	canadensis)	Caprifoliaceae	
dward's Spiderwort	Tradescantia edwardsiana	Commelinaceae	1
bowbush	Forestiera pubescens	Oleaceae	†
mory Sedge	Carex emoryi	Cyperaceae	+
			╁
ngelmann's Sage	Salvia engelmannii	Lamiaceae	
nglemann's Daisy	Engelmannia peristenia (E. pinnatifida)	Asteraceae	F
rect Bouchetia	Bouchetia erecta	Solanaceae	
ryngo	Eryngium leavenworthill	Apiaceae .	
scarpment Live Oak	Quercus fusiformis	Fagaceae	
scobilla	Buddleja scorioides	Buddlejaceae	
vergreen Surnac	Rhus virens	Anacardiaceae	
ve's Necklace	Sophora affinis	Fabaceae	
	Symphyotrichum oblongifolium (Aster		Į
all Aster	oblongifolius)	Asteraceae	La
all Gumweed	Grindelia lanceolata	Asteraceae	13
alse Aloe	Manfreda virginica (Polianthes virginica)	Agavaceae	2
	Tinantia anomala (Commelinantia	 	t
alse Day-flower	anomala)	Commelinaceae	3
alse Dragon-head	Physostegia angustifolia	Lamiaceae	1 3
and progentions	Onosmodium malle ssa, beigriense (O.		宀
alse Gromwell	bejariense)	Boraginaceae] 3
alse Indigo	Amorpha fruticosa	Fabaceae	1 3
			1
alse Nightshade	Chamaesaracha coniodes	Soianaceae	
alse Willow	Baccharls neglects	Asteraceae	
iddlewood	Citharexylum berlandieri	Verbenaceae.	3
	Anisacanthus quadrifidus var. wrightii (A.		1
ame Acanthus	wrightii)	Acanthaceae	_1
ame-flower	Talinum aurantiacum	Portufacaceae	2
lame-leaf Sumac	Rhus lanceolata	Anacardiaceae	1
echa de Agua	Sagittaria longiloba	Alismataceae	3
	Oenothera macrocarpa ssp. macrocarpa		Γ~
uttermill	(O. missouriensis)	Onagraceae	3
our Nerve Daisy, Bitterweed		Asteraceae	3
I TOTAL DE COMO TI DINION TI COL	Tetraneuris scaposa var. scaposa	 	⊢∸
our Nerve Daisy, Bitterweed		Asteraceae	2
our rerea Dasy, Diustweed	Gardaman ashasi		2
oxglove, Prairie Beard-tongue	CHISIONIKI COORGA	Scrophulariaceae	
ragrant Sedge	Cyperus odoratus	Cyperaceae	3
ragrant Sumac	Rhus aromatica	Anacardiaceae	1
	Garex frankii	(Cyperaceae	-3
rank's Sedge			
ringed Bluestar	Ansonia eBata Languaman ancistan	Apocynaceae	, J

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Common Name	Genus / Species	Family	
Frostweed	Verbesina virginica	Asteraceae	$oldsymbol{ol}}}}}}}}}}}$
Garden Tornato	Solanum lycopersicum var. cerasiforme	Solanaceae	Τ.
Gayfeather	Liatris mucronata	Asteraceae	
Giant Blue Sage	Salvia azurea	Lamiaceae	1
	Schoenoplectus californicus (Scirpus		T
Giant Bulrush	californicus)	Cyperaceae	13
Giant Coneflower	Rudbeckia maxima	Asteraceae	77
Giant Ragweed	Ambrosia tritida var. texana	Asteraceae	
Giant Spiderwort	Tradescantia.gigantea	Commelinaceae	1
Golden Dalea	Dalea aurea	Fabaceae	
Golden Groundsel	Packera obovata (Senecio obovatus)	Asteraceae	1
Golden Wave	Coreopsis tinctoria	Asteraceae	1
Goldenball Leadtree	Leucaena retusa	Fabaceae	1.
Golden-Eye Phlox	Phlox roemeriana	Polemoniaceae	٦.
Grass Leaf Rush	Juncus marginatus	Juncaceae .	
Gray Golden Aster	Heterotheca canescens	Asteraceae	1:
Gray Vervain	Verbena canescens	Verbenaceae	
Great Leadtree	Leucaena pulverulenta	Fabaceae	1:
Green ash	Fraxinus pennsylvanica	Oleaceae	+
Green Dragon	Arisaema dracontium	Araceae	1:
Green Hawithorn	Crataegus viridis	Rosaceae	13
Green Lily	Schoenocaulon texanum	Liliaceae	13
Green Milkweed	Asclepias viridis	Asclepiadaceae	13
Greenthread ·	Thelesperma filifolium	Asteraceae	13
Greenthread	Thelesperma filifolium var. filifolium	Asteraceae	13
Gregg Dalea	Dalea greggii	Fabaceae	1 2
Gregg's Hawthorn	Crataegus greggiana	Rosaceae	1 3
Ground Plum	Astragalus crassicarpus	Fabaceae	13
Gulf Muhly	Muhlenbergia capillaris	Poaceae	1 2
Gulf-coast Penstemon	Penstemon tenuis	Scrophulariaceae	1 2
	Skleroxylon lanuginosum ssp.		
Gum Elastic	lanuginosum (Bumelia lanuginosa)	Sapotaceae	2
Hairy Grama	Bouteloua hirsuta	Poaceae	7 3
	Boutelous hirsuta var. pectinata (B.	1	\vdash
Hairy Grama	pectinala)	Poacese	3
Hairy Hydrolea	Hydrolea ovata	Hydrophyllaceae	3
Hairy Tridens	Erioneuron pilosum	Poaceae	3
Hairy Waterclover	Marsilea vestita	Marsileaceae	2
Hairy-fruit Chervil	Chaerophyllum tainturieri var. tainturieri	Aptaceae	3
Heart-leaf Four-O'clock	Mirabilis nyctaginea	Nyctaginaceae	3
Heart-leaf Skuttcap	Scutellaria ovata ssp. bracteata	Lamiaceae	2
	Symphyotrichum ericoides var. ericoides	l	Τ
Heath Aster	(Aster ericoides)	Asteraceae	2
	Thelocactus setispinus (Ferocactus]	Γ
Hedgehog Cactus	setispinus)	Cactaceae	3
Herbertia	Herbertia lahue ssp. caerula	Indaceae	3
lierba de Zizotes	Asclepias cenotheroides	Asclepiadaceae	3
Hilly Sandwort	Arenaria benthamii	Caryophyllaceae	3
Hoary Yucca	Yuoca schottii	Agavaceae	3
looded Blue Violet	Viola sororia	Violaceae	3
Hop Tree	Ptelea trifoliata	Rutaceae	3
Hop-hombeam Copperleaf	Acalypha ostryifolia	Euphorbiaceae	3
Horned Beakrush	Rhynchospora comiculata	Cyperaceae	3
Horse-crippler	Echinocactus texensis	Cactaceae	2
lorsemint	Monarda citriodora	Lamiaceae	2
lorsetail	Equisetum laevigatum	Equisetaceae	3
lorsetail, Scouring Rush	Equisetum hyemale	Equisetaceae	3
ludson Flax	Linum hudsonloides	Linaceae	3
lulsache	Acecia famesiana	Fabaceae	3
	Ambiyolepis setigera (Helenium		
łuisache Dalsy	setigerum)	Asteraceae	3
ndian Apple; Angel Trumpet		Solanaceae	2
ndian Blanket	Gailardia pulchella	Asteraceae	2
	Abullion hitticosum	a analysis and the second	3
CHAR MARCH		A 10 10 10 10 10 10 10 10 10 10 10 10 10	

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Common Name	Genus / Species	Family	ſ
Indian Paintbrush	Castilleja indivisa	Scrophulariaceae	T
Indian plantain	Amoglossum plantagineum	Asteraceae	t
Indigo Spires Salvia	Salvia 'Indigo Spires'	Lamiaceae	†
nland Sea Oats	Chasmanthium latifolium	Poaceae	t
	Cladium mariscus ssp. jamaicense (C.		t
lamaica Sawgrass	iamaicense)	Cyperaceae	ŀ
(EYCODE		472-11-14-	t
(notty Pondweed	Potamogeton nodosus	Potamogetonaceae	1
ace Cactus	Echinocereus reichenbachii	Cactaceae	t
acey oak	Quercus laceyi (Q. glaucoides)	Fagaceae	t
ady Bird's Centaury	Centaurum texense	Gentianaceae	t
ady's Tresses	Spiranthes cernua	Orchidaceae	t
ance-leaf Burhead	Echinodorus cordifolius	Alismataceae	۲
ance-leaved Coreopsis	Coreopsis lanceolata	Asteraceae	ŀ
arge Buttercup	Ranunculus macranthus		╀
		Ranunculaceae	1
azy Daisy	Apanostephus riddellii	Asteraceae	┞
east Daisy	Chaetopappa asteroides	Asteraceae	L
eather Stem	Jatropha dioica	Euphorbiaceae	L
imerock Brookweed	Samolus ebracleatus ssp. cuneatus	Primulaceae	L
imestone gaura	Gaura calcicola	Onagraceae	L
immoncillo	Hedeoma drummondii	Lamiaceae	Ĺ
Indheimer Muhly	Muhlenbergia findheimeri	Poaceae	Γ
indheimer Silktassel	Garrya ovata ssp. lindheimeri	Comaceae	Г
indheimer's Indigo	Indigofera lindheimeriana	Fabaceae	Γ
	Senna lindheimeriana (Cassia	,	r
indheimer's Senna	lindheimeriana)	Fabaceae	
ittle Barley	Hordeum pusillum	Poaceae	۲
ittle 8luestern	Schizachyrium scoparium	Poaceae	┝
ittle Nipple Cactus	Mammillaria heyderi var. heyderi	Cactaceae	۲
izard Tail	Saururus cernuus	Saururaceae	۲
ongspike Silver Bluestern	Bothriochica longipaniculata	Poaceae	-
	Lesquerella densifiora	Brassicaceae	-
ow Bladderpod ow Verbena	Glandularia pumila (Verbena pumila)	Verbenaceae	_
ow Wild Mercury	Argythamaia humilis var. humilis	Euphorblaceae	_
			-
ow Wild Petunia	Ruellia humilis	Acanthaceae	_
yre-leat Sage.	Selvia lyrata	Lamiaceae	_
laidenhair Fern	Adiantum capillus-veneris	Pteridaceae	
Aalta Star-thistie	Centaurea melitensis	Asteraceae	
Aarble-Seed	Onosmodium helleri	Boraginaceae	
Aarsh Flat Sedge	Cyperus pseudovegetus	Cyperaceae	
	Pluchea odorata var. odorata (P.	1	
Marsh Fleabane	purpurascens)	Asteraceae	
tarsh Obedient-plant	Physostegia intermedia	Lamiaceae	
larsh-elder	íva annua	Compositae	_
Aaximilian Sunflower	Helianthus maximiliani	Asteraceae	
Aeadow Sedge	Carex perdentata	Cyperaceae	
lealy Blue Sage	Salvia farinacea	Lamiaceae	_
Aesquite	Prosopis glandulosa	Fabaceae	_
Aexican Buckeye	Ungnadia speciosa	Sapindaceae	-
			-
Aexican Feathergrass	Nassella tenuissima	Poaceae	-
Nextican Flowering Fem	Anemia mexicana	Anemiaceae	
fexican Hat	Ratibida columnifera (R. columnaris)	Asteraceae	-
lexican Plum	Prunus mexicana	Rosaceae	_
fexican redbud	Cercis canadensis var. mexicana	Fabaceae	1
filkvine	Malelea reticulata	Asclepiadaceae	
	Oenothera macrocarpa ssp. incana (O.	-T	
lissoud Primrose	missouriensis ssp. incana)	Onagraceae	3
Aissouri Violet	Viola missouriensis	Violaceae	7
lock Orange	Philadelphus ernestii	Saxifragaceae	7
fountain Pink	Centaurium beyrichil	Gentianaceae	7
Aountain Sage	Salvia regia	Lamlaceae	-
Aouse Ears	Bernardia myricifolia		
Austang Grape	Vitis mustangensis		2
	Echinacea angustifolia		

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	Galphimia angustifolia (Thryallis	·	- [
Narrow-leaf Goldshower	angustifolia)	Malpighiaceae	
larrow-leaf Sumpweed	Iva angustifolia	Compositae	L
larrow-leaf Water Primrose	Ludwigia octovalvis	Onagraceae	1
lavaho Tea	Thelesperma simplicifolium	Asteraceae	1
lerve Ray	Tetragonotheca texana	Asteraceae	Т
letteaf Hackberry	Celtis laevigata var. reticulata	Ulmaceae	Т
lipple Cactus	Coryphantha sulcata	Cactaceae	7
lipple Cactus	Coryphantha sulcata var. sulcata	Cactaceae	T
logalito	Juglans microcarpa	Juglandaceae	+
Dakwoods Ponyfoot	Dichondra recurvata	Convolvulaceae	1
Old Plainsman	Hymenopappus artemislaefolius	Asteraceae	1
Oldfield Threeawn	Aristida oligantha	Poaceae	+
<u> </u>	Acmella oppositifolia var. repens	1. 555545	+
Opposite leaf Spotflower	(Spilanthes americana)	Asteraceae	-
Orchid Tree	Bauhinia lunarioides	Fabaceae	╅
Ovate-leaf Cliffbrake	Peliaea ovata	Pteridaceae	+
Palm-leaf Mistflower	<u> </u>		-}-
Park's Nailwort	Conoclinium greggii (Eupatorium greggii)		┩~
arks Naiwort	Paronychia virginica	Caryophyllaceae	
	Thymophylla pentachaeta var.	}	1
Parraiena, Dyssodia	pentachaeta	Asteraceae	4
•	Chamaecrista fasciculata var. fasciculata		1
Partridge Pèa	(Cassia fasciculata)	Fabaceae	L
Passion Flower	Passiflora affinis	Passifloraceae	1
Peach Bush	Prunus texana	Rosaceae	Ι
Pecan	Carya Illinoenensis	Juglandaceae	Г
ecan	Carya illinoiensis		T
encil Cactus	Opuntia leptocaulis	Cactaceae	Τ
ennsylvania Pelitory	Parletaria pensylvanica	Urticaceae	T
ennywort	Hydrocotyle umbellata	Apiaceae	T
ennywort-	Hydrocotyle verticillata var. verticillata	Aplaceae	十
eppervine	Ampelopsis arborea	Vitaceae	Τ
ckerelweed	Pontederia cordata	Pontederiaceae	┢
igeon Berry	Rivina humilis	Phytolaccaceae	+
Pincushion Daisy	Gaillardia suavis	Asteraceae	1
ine Muhly	Muhlenbergia dubia	Poaceae	†-
rink Evening Primrose	Oenothera speciosa	Onagraceae	╁
ink Mimosa	Mimosa borealis	Fahaceae	1
	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1		
itcher Sage	Saivia azurea var. grandiflora	Lamiaceae	L
lains Prickly Pear	Opuntia macrorhiza	Cactaceae	Ļ
lains lovegrass	Eragrostis intermedia	Poaceae	L
lateau Gerardia	Agalinis edwardsiana	Scrophulariaceae	L
lateau Goldeneye	Viguiera dentata	Asteraceae	L
ointed Phlox	Phiox cuspidata	Polemoniaceae	1
-	Toxicodendron radicans (Rhus		}_
Poison Ivy	toxicodendron)	Anacardiaceae	1:
okeweed	Phytolecca americana	Phytotaccaceae	T
onyfact .	Dichondra carolinensis	Convolvulaceae	T
ossum Haw	tlex decidua	Aquifoliaceae	卜
ost oak	Quercus stellata	Fagaceae	
USE VAIN	Angyrochosma dealbata (Notholaena	·	
owder Cloakfern	dealbata, Pellasa dealbata)	Pteridaceae	:
	Thalia dealbata	Marantaceae	
owdery Thalia			
rairie Agalinis	Agalinis heterophylia	Scrophulariaceae	
raine Brazosmint	Warnockia scutellaroides	Lamiaceae	
rairie Buttercup	Ranunculus fascicularis	Ranunculaceae	
rairie Celestials	Nemastylis geminiflora	Indaceae	
rairie Fleabane	Erigeron modestus	Asteraceae	Ŀ
rairie Goldenrod	Solidago nemoralis	Asteraceae	Ľ
rairie Larkspur	Delphinium carolinianum ssp. virescens	Ranunculaceae	[
rairle Paintbrush	Castileja purpurea	Scrophulariaceae	T
	Castilleit purpurea var. Indheimen	Scrophulariaceae	
Yakne Pakritorush			
rairie Paintbrush rairie Phiox	Philox pilosa	Polemoniaceae	.2

- K = KEYCODE

 1 = Highly recommended commercially available
 2 = Recommended available through specially outlets
 3 = Recommended may not be readily available

Common Name	Genus / Species	Family	1
	Glandularia bipinnatifida var. bipinnatifida		ł
Prairie Verbena	(Verbena bipinnatifida)	Verbenaceae	1
Prairie-tea	Crolon monanthogynus	Euphorbiaceae	ļ
	Ipomoea cordatotriloba var. cordatotriloba		Ţ
Purple Bindweed	(I. trichocarpa)	Convolvulaceae	1
Purple Cliffbrake	Решава этгоригригва	Pteridaceae	1
Purple Coneflower	Echinacea purpurea	Asteraceae	1
Purple Leatherflower	Clematis pitcheri	Ranunculaceae	
Purple Milkweed Vine	Matelea biflora .	Asclepiadaceae	Ι
Purple Milkwort	Polygala lindheimeri	Polygalaceae	Ţ
Purple Plains Lovegrass .	Eragrostis spectabilis	Poaceae	J
Purple prickly pear	Opuntia macrocentra	Cactaceae	1
urple Sage, Cenizo	Leucophyllum frutescens	Scrophutariaceae	1
Purple Threeawn	Aristida purpurea var. purpurea	Poaceae	1
Purple Top	Tridens flavus	Poaceae	1
Pyramid Bush	Melochia tomentosa	Steruliaceae	Ι
Queen's Delight	Stillingia texana	Euphorbiaceae	1
Rabbit Tobacco	Evax prolifera	Asteraceae	Ι
tain Lily	Cooperia drummondil	Amaryffidaceae	Γ
Rain Lily	Cooperia pedunculata	Lillaceae	T
Rattanvine	Berchemia scandens	Rhamnaceae	Ţ
Red Buckeye	Aesculus pavia	Hippocastanaceae	Ţ
Red Buckeye	Aesculus pavia var. pavia	Hippocastanaceae	T
ted Columbine	Aquilegia canadensis	Ranunculaceae	T
led Grama	Bouteloua trifida	Poaceae	Ť
Red Yucca	Hesperatoe parviflora	Agavaceae	t
Redbud	Cercis canadensis	Fabaceae	t
Redbud	Menodora heterophylla	Oleaceae	t
Redroot	Ceanothus herbaceus	Rhamnaceae	t
Reflexed Sedge	Carex retroflexa	Сурегасеае	t
esinbush, Skeleton leaf Goldeneye		Asteraceae	t
tesin-dot Skulicap	Scutellaria resinosa	Lamiaceae	t
lock Flax	Linum rupestre	Linaceae	t
lock-cress	Arabis petiolaris	Brassicaceae	t
loemer's Indigo	Amorpha roemeriana	Fabaceae	r
lose Mallow, Rock Rose	Pavonia lasiopetala	Malvaceae	╌
loughleaf Dogwood	Cornus drummondii	Comaceae	H
loundhead Rush	Juncus validus	Juncaceae	H
tunyon's water-willow	Justicia runyonii	Acanthaceae	H
acaton	Sporobolus wrightil	Poaceae	ŀ
iacatori ialt Marsh-mallow	Kosteletzkya virginica	Matvaceae	H
	Symphyotrichum divaricalum		ŀ
altmarsh Aster	Eleocharis montevidensis	Asteraceae	H
and Spikerush		Сурегасеае	H
aw Greenbriar	Smilax bona-nox	Smilacaceae	L
carlet Leatherflower	Clematis texensis	Ranunculaceae	ŀ
carlet Pea	Indigofera miniata	Fabaceae	Ļ
carlet Penstemon	Penstemon triflorus	Scrophulariaceae	L
carlet Pimpernel		Primulaceae	
carlet Rose Mallow		Malvaceae	
carlet Spiderling		Nyctaginaceae	L
carlet-fruit Passion Flower		Passifloraceae	
crambled Eggs		Fumariaceae	
	Pediomelum latestipulatum var.		
curtpea	appressum	Fabaceae	L
•	Pediomelum latestipulatum var.	1	
curfpea		Fabaceae	
cythe-fruit Arrowhead	Sagittaria lancifolia	Alismataceae	
eep Muhly		Poaceae	
elf Heal		Lamiaceae	
	Mimosa roemeriana (Shrankia		_
ensitive Briar	- ·	Fabaceae	:
even-leaf Creeper		Vitaceae	-
hadscale			
	as now according to the contract of the contra	the first and the first first from the property of the second proper	
	Ambrosia artemistifolia		5

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Common Name	Genus / Species	Family	J
Showy Menodora	Menodora longiflora	Oleaceae	
Shrub Amyris	Amyris madrensis	Rutaceae	1
· · · · · · · · · · · · · · · · · · ·	Ageratina havanensis (Eupatorium		1
Shrubby Boneset	havanense)	Asteraceae	1
Sida	Sida abutifolia	Malvaceae	1
Sideoats Grama	Boutelous curtipenduls	Poaceae	1
Siler's Tube-rose	Manfreda sileri	Agavaceae	1
Sitver Bladderpod	Lesquerella argyraea	Brassicaceae	7
Silver Bluestern	Bothriochloa laguroides ssp. Torreyana	Poaceae	7
ilver Bush Dalea	Dalea bicolor var. argyrea	Fabaceae	7
Silver Ponytoot	Dichondra argentea	Convolvulaceae	7
Silver-leaf Nightshade	Solanum elaeagnifolium	Solanaceae	7
Silverpuff	Chaptalia nutans	Asteraceae	+
Silverpuff	Chaptalia texana	Asteraceae	7
Skeleton-plant	Lygodesmia texana	Asteraceae	7
Slender Rosinweed	Siphium gracile	Asteraceae	7
	Tetraneuris linearifolia var. linearifolia		†
Slender-leaf Sitterweed	(Hymenoxys linearifolia)	Asteraceae	-
Senderleaf Sage	Salvia leptophylla	Lamiaceae	†
Sender-lobe Passion Flower	Passifiora tenuiloba	Passifloraceae	+
ilim Tridens	Tridens muticus	Poaceae	†
mail Bluebell	Eustoma exaltatum	Gentianaceae	+
mall Palafoxia	Palafoxia callosa	Asteraceae	+
moketree	Cotinus obovatus	Anacardiaceae	╁
mooth Beggartick	Bidens laevis	Asteraceae	+
mooth Leaf Grape	Vitis cinerea var. helleri (berlandleri)	Vitaceae	╁
moom Lear Grape inake Herb		_ 	╁
uake nero	Dyschoriste linearis	Acanthaceae	╄
4	Maurandella antiminiflora (Maurandya	0	ſ
napdragon Vine	antirrhinittora)	Scrophulariaceae	╄
now-on-the-mountain	Euphorbia marginata	Euphorbiaceae	
oapbeny	Sapindus saponaria var. drummondii	Sapindaceae	T
oft Rush	Juncus effusus var. solutus	Juncaceae	
outhern Black-haw	Vibumum rufidulum	Caprifoliaceae	T
outhern Blue-flag	Iris virginica var. strevei	Iridaceae	
outhern Dewberry	Rubus trivialis .	Rosaceae	
outhern Shield Fern	Thelyplens kunthii	Thelypteridaceae	
panish Dagger	Yucca treculeana	Agavaceae	
panish Needles	Bidens frondosa	Asteraceae	Ľ
pice Bush	Lindera benzoin	Lauraeceae	Ľ
pice-lity	Manfreda maculosa	Agavaceae	
pider Antelope Horns	Asclepias asperula	Asclepiadaceae	Ŀ
pider Lity	Hymenocallis lirlosme .	Liliaceae	
preading Scaleseed	Spermolepis inermis	Aplaceae	
oring Lionsheart	Physostegia pulchella	Lamiaceae	
quare-bud Primrose, Sundrops	Calylophus berlandieri	Onagraceae	Π
	Calylophus berlandieri ssp. pinifolius (C.		Г
quare-bud Primrose, Sundrops		Onagraceae	Ŀ
quarestem Spikerush	Eleochaits quadrangulata	Cyperaceae	
tanding Cypress	Loomopsis rubra	Convolvulaceae	1 :
landing Winecup	Callirhos pedata	Malvaceae	
lemiess Evening Primrose	Oenothera trifota	Onagräceae	1
lick-leaf	Mentzella oligosperma	Laosaceae	
licky Mouse-ear Chickweed		Caryophyllaceae	
tork's Bill Geranium	Erodium texanum	Geraniaceae	H
raggler Daisy, Horselterb	Calyptocarpus vialis	Asteracese	h
ugar Hackberry	Celtis laevigata	Ulmaceae	
	Ehretia anacua		
ugarbeny Anacua		Boraginaceae	
wamp Milkweed	Asclepias incamats	Asclepiadaceae	3
wan Flower	Aristolochia erecta (A. longiflora)	Aristolochiaceae	[3
weet Mountain Grape	Vitis monticola	Vitaceae	[3
witchgrass	Panicum virgatum	Poaceae	3
	Sisyrinchium chilense (S. ensigerum)	Iridaceae	3
rcamore leaf Snowbell	Styrax platagilolius	Styracaceae	2
Appropriate Company of the Company o	Sparopolis compositis an compositis	IDANG GEORGE	7
Uropseed :			

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Common Name	Genus / Species	Family	T
all Poppymallow	Callirhoe lelocarpa	Malvaceae	†
all Rosinweed	Silphium simpsonii	Asteraceae	t
exas Almond	Prunus minutiflora	Rosaceae	†
exas ash	Fraxinus texensis	Oleaceae	†
	Symphyotrichum drummondii var.		╁
exas Aster	texanum (Aster texanus)	Asteraceae	1
exas Barberry	Mahonia swaseyi (Berberis swaseyi)	Berberidaceae	t
exas Betony	Stachys coccinea	Lamiaceae	t
exas Buckeye	Aesculus glabra var. arguta (A. arguta)	Hippocastanaceae	╅
exas Bush-clover	Lespedeza texana	Fabaceae	+
exas Cupgrass	Eriochioa sericea	Poaceae	十
exas Dandelion	Pyrrhopappus paucifiorus	Asteraceae	✝
exas Frogfruit	Phyla nodiflora (Phyla incisa)	Verbenaceae	╁
exas Grama	Bouteloua rigideseta	Poaceae	t
Orac Otaria	Berlandiera betonicifolia (B. texana, B	Ti Sussess	╁
exas greeneyes	texana var. belonicifolia)	Asteraceae	ļ
exas Kidneywood	Eysenhardtia texana	Fabaceae	1
exas Lantana	Lantana urticoides (L. homida)	Verbenaceae	╁
exas Madrone	Arbutus xalapensis	Ericaceae	╁╌
exas Milkweed	Asclepias lexana	Asclepladaceae	+
exas Mock Orange	Philadelphus texensis	Saxifragaceae	┢
exas Mountain Laurel	Sophora secundifiora	Fabaceae	╁
exas Mulberry	Morus microphylla	Moraceae	╁
exas Mulberry exas Oak			1
	Quercus buckleyi Diospyros texana	Fagaceae Ebenaceae	╀
exas Persimmon			1
exas Pistaclo	Pistacia mexicana Opuntia engelmannii var. lindheimeri (O.	Anacardiaceae	Ļ
laura Delata Garas			1
exas Prickly Pear	(Indhelmen)	Cactaceae	L
exas Redbud	Cercis canadensis var. texensis	Fabaceae	L
exas Sabal Palm	Sabal mexicana · ·	Arecaceae	F
exas Sage	Salvia texana	Lamlaceae	
exas Sedge	Carex lexensis	Cyperaceae	L
exas Snakewood	Colubrina texensis	Rhamnaceae	
·····	Styrax platanifolius ssp. texanus (S.	0	
exas Snowbell	(texana)	Styracaceae	_
exas Sotol	Dasylirion texanum	Liliaceae	
	Nassella leucotricha (Stipa leucotricha)	Poaceae	_
exas Star Hibiscus	Hibiscus coccineus	Malvaceae	
exas Thistle	Cirsium texanum	Asteraceae	
exas Vervain	Verbena halei	Verbenaceae	F 1
exas Wisteria	Wisteria frutescens	Fabaceae	L
exas Yellow Star	Lindheimera texana	Asteraceae	L
exas red oak	Quercus texana	Fagaceae	
hom-crested Agave	Agave lophantha	Agavaceae	
hreadleaf Pondweed	Potamogeton diversifolius	Potamogetonaceae	_
hree flower Melic	Melica nitens	Poaceae	
hree-seeded Mercury	Acelypha phleoides (A. lindheimen)	Euphorbiaceae	
oothache Tree	Zanthoxylum hirsutum	Rutaceae	
racy Hawthorn	Crataegus tracyl	Rosaceae	
railing Ratany	Krameria lanceolata	Krameriaceae	_
rans-Pecos Cliffbrake	Pellaea ternifolia	Pteridaiceae	
ropical Sage	Salvia coccinea	Lamiaceae	
rumpet Creeper	Campsis radicans	Bignoniaceae	- 2
	Hiblscus martianus (H. cardiophyllus)	Matvaceae	-
ulipan del Monte		Malvaceae	_
ulipan del Monte	Malyaviscus arboreus	,	_
ufipan del Monte unk's Cap			-
ulipan del Monte unk's Cap unk's Cap	Malyaviscus arboreus var. drummondil	Malvaceae	
ulipan del Monte unk's Cap unk's Cap umsole	Malvaviscus arboreus var. drummondii Haliotropium indicum	Malvaceae Boraginaceae	- ;
ulipan del Monte urk's Cap urk's Cap urnsole wisted-leaf Yucca	Malvaviscus arboreus var. drummondii Heliotropium indicum Yuoca rupicola	Mafvaceae Boraginaceae Agavaceae	
ulipan del Monte urk's Cap urk's Cap urnsole wisted-leaf Yucca wo-flowered Anemone	Malyaviscus arboreus var. drummondii Heliotropium indicum Yucca rupicola Anemone edwardsiana	Malvaceae Boraginaceae Agavaceae Ranunculaceae	
ulipan del Monte unk's Cap unk's Cap umsole wisted-leaf Yucca wo-flowered Anemone wo-leaved Senna	Malyaviscus arboreus var. drummondii Heliotropium indicum Yucca rupicola Anemone edwardsiana Senna roemedana (Cassia roemedana)	Malivaceae Boraginaceae Agavaceae Ranunculaceae Fabaceae	100
ulipan del Monte urk's Cap urk's Cap urnsole wisted-leaf Yucca wo-flowered Anemone	Malyaviscus arboreus var. drummondii Heliotropium indicum Yucca rupicola Anemone edwardsiana Senna roemeriana (Cassia roemeriana) Fuirena simplex	Malvaceae Boraginaceae Agavaceae Ranunculaceae	100
ulipan del Monte unk's Cap unk's Cap unsole wisted-leaf Yucca wo-flowered Anemone wo-leaved Senna mbrellagrass	Malyaviscus arboreus var. drummondii Heliotropium indicum Yucca rupicola Anemone edwardsiana Senna roemediana (Cussia roemediana) Fultena simplex Echinodorus berierol (Echinodorus	Malvaceae Boraginaceae Agavaceae Ranunculaceae Fabaceae Cyperaceae	S lead not en land confession
ulipan del Monte unt's Cap unt's Cap unsole wisted leaf Yucca wo-flowered Anemone wo-leaved Senna mbrellagrass	Malyaviscus arboreus var. drummondii Heliotropium indicum Yucca rupicola Anemone edwardsiana Senna roemeriana (Cassia roemeriana) Fuirena simplex	Malvaceae Boraginaceae Agavaceae Ranunculaceae Fabaceae Cyperaceae	100 100 100 100

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Common Name	Genus / Species	Family	_)
Velvet-leaf Mallow	Allowissadula holosericea	Malvaceae	-
Venus' Looking Glass	Triodanis perfoliata	Campanulaceae	7
Vine Mesquite	Panicum obtusum	Poaceae	1
	Dalea purpurea var. purpurea		1
Violet Prairie Clover	(Petalostemon purpureus)	Fabaceae	ł
Violet Wood-Sorrel	Oxalis violacea	Oxalidaceae	7
Virginia Blueflag	Iris virginica	Iridaceae	7
Virginia Creeper	Parthenocissus quinquefolia	Vitaceae	7
Wand Butterfly-bush	Buddleja racemosa	Buddlejaceae	7
Water Celery, Eelgrass	Vallisneria americana	Hydrocharitaceae	+
Water Clover	Marsilea macropoda	Marsileaceae	+
valer cloves	Samolus valerandi ssp. parviflorus (S.	Indi sireaceae	+
Motos Cissoneral	parviflorus)	Dimulaces	1
Water Pimpernel		Primulaceae	4
Nater Stargrass	Heteranthera dubla (H. liebmannii)	Pontederiaceae	4
Water-primrose	Ludwigia peploides	Onagraceae	4
Vax Myrtle	Morella cerifera (Myrica cerifera)	Myricaceae	1
Western Ironweed	Vemonia bakiwinii	Asteraceae	1
Nestern Ragweed	Ambrosia psilostachya	Asteraceae	1
Vestem Spiderwort	Tradescantia occidentalis	Commetinaceae	1
Vestern Venus' Looking Glass	Triodanis coloradoensis	Campanulaceae	Ŧ
Vestern Wild Petunia	Ruellia occidentalis	Acanthaceae	T
Vheeler's Sotol	Dasylirion wheeled	Liflaceae	†
Vhite Avens	Geum canadense	Rosaceae	t
Vhite Boneset	Eupatorium serotinum	Asteraceae	✝
Vhite Evolvulus	Evolvulus sericeus	Convolvulaceae	+
			╁
Vhite Gaura	Gaura lindheimeri	Onagraceae	1
Vhite Heliotrope	Heliotropium tenellum	Boraginaceae	4
Vhite Honeysuckle	Lonicera albiflora	Caprifoliaceae	1
Vhite Milkwort	Polygala alba	Polygalaceae	Ļ
	Dalea candida var. candida		ł
Vhite Prairie Clover	(Petalostemon candidus)	Fabaceae	L
	Dalea multiflora (Petalostemon	1	1
Vhite Prairie Clover	multiflorus)	Fabaceae	L
Vhite Prickly poppy	Argemone albiflora ssp. texana	Papaveraceae	7
Vhite Rock Lettuce	Pinaropappus roseus	Asteraceae	T
Vhite Shin Oak	Quercus sinuata var. breviloba	Fagaceae	T
Vhite Snakeroot	Ageratina altissima var. altissima	Asteraceae	t
	Rhynchospora colorata (Dichromena	_ 	t
White Topped Sedge, Star Sedge		Cyperaceae	ļ
Vhite Tridens, White Top	Tridens albescens	Poaceae	-
			╁
Vhite Water Lity	Nymphaea odorata	Nymphaeaceae	
Vhite-flowered Rosin-weed	Silphium albiflorum	Asteraceae	L
Vhitlowgrass	Draba cuneifolia	Brassicaceae	L
Vhitlow-wort	Paronychia virginica var. scoparia	Caryophyllaceae	L
Vild Bergamot	Monarda fistulosa	Lamiaceae	L
Vild Chervil .	Cryptotaenia canadensis .	Apiaceae	
fild Gartic, Drummond's Onion	Allium drummondii	Lillaceae	Γ
Vild Geranium	Geranium carolinianum	Geraniaceae	r
Vild Hyacinth	Camassia scilloides	Liliaceae	r
Ald Onlon	Allium canadense	Lillaceae	r
riid Petunia	Ruellis nudiflora	Acanthaceae	r
	Euphorbia cyathophora	Euphorbiaceae	-
	Anemome berlandieri (Anemone	Labiratoraco	H
	Midrinita natatimes (unestrono	Ophimal dance .	١.
	fictions fields)		
findflower	heterophylla)	Ranuncidaceae	
findflower findmill Fingergrass	Chloris verticillata	Poaceae	
Vindflower Vindmill Fingergrass Vinecup	Chloris verticillata Callirhoe involucrata	Poaceae Malvaceae	
Vindflower Vindmill Fingergrass Vinecup Vinecup	Chloris verticiliata Callirhoe involucrata Callirhoe involucrata var. lineariloba	Poaceae Malvaceae Malvaceae	_
Vindflower Vindmill Fingergrass Vinecup Vinecup Vinged Elm	Chloris verticiliata Callirhoe involucrata Callirhoe involucrata var. lineariloba Ulmus alata	Poaceae Malvaceae Malvaceae Ulmaceae	
Vindflower Vindmill Fingergrass Vinecup Vinecup Vinged Elm	Chloris verticiliata Callirhoe involucrata Callirhoe involucrata var. lineariloba Ulmus alata	Poaceae Malvaceae Malvaceae	
Vindflower Vindmill Fingergrass Vinecup Vinecup Vinged Elm Vinkler's White Firewheel	Chloris verticiliata Callirhoe involucrata Callithoe involucrata var. lineariloba Ulmus alata Galijardia aestivalis var. winkleri	Poaceae Malvaceae Malvaceae Ulmaceae Asteraceae	
Vindflower Vindmill Fingergrass Vinecup Vinecup Vinged Elm Vinkler's White Firewheel Vinter Bentgrass	Chloris verticiliata Callimoe involucrata Callimoe involucrata var. lineariloba Ulmus alata Galliardia aestivalis var. winkleri Agrostis hyemalis	Poaceae Malvaceae Malvaceae Ulmaceae Asteraceae Poaceae	
Vindflower Vindmill Fingergrass Vinecup Vinecup Vinged Elm Vinkler's White Firewheel Vinter Bentgrass Vinter Hazel	Chloris verticiliata Callimoe involucrata Callimoe involucrata var. lineariloba Ulmus alata Galliardia aestivalis var. winkleri Agrostis hyemalis Hamamelis virginiana	Poaceae Malvaceae Malvaceae Ulmaceae Asteraceae Poaceae Hamamelidaceae	
Vindflower Vindmill Fingergrass Vinecup Vinecup Vinged Elm Vinkler's White Firewheel Vinter Bentgrass Vitch Hazel Vioth Bee-bush	Chloris verticiliata Callirhoe involucrata Callithoe involucrata var. lineariloba Ulmus alata Galilardia eestivalis var. winkleri Agrostis hyemalis Hamamelis virginiana Aloysia macrostachya	Poaceae Malvaceae Malvaceae Ulmaceae Asteraceae Poaceae Hamamelidaceae Verbenaceae	
Vindflower Vindmill Fingergrass Vinecup Vinecup Vinged Elm Vinkler's White Firewheel Vinter Bentgrass Vitch Hazel Voolty Bee-bush Voolty Butterfly-bush	Chloris verticiliata Callimoe involucrata Callimoe involucrata var. lineariloba Ulmus alata Galliardia aestivalis var. winkleri Agrostis hyemalis Hamamelis virginiana	Poaceae Malvaceae Malvaceae Ulmaceae Asteraceae Poaceae Hamamelidaceae Verbenaceae Buikileaeeae	

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City of Austin Grow Green List Only Sort by Common Name

Appendix A.

Common Name	Genus / Species	Family	K
	Hibiscus moscheutos ssp. lasiocarpos (H.		7
Wooly Rose-mallow	lasiocarpus)	Matvaceae	3
Wooly Stemodia	Stemodia lanata	Scrophulariaceae	3
Wright's False Mallow	Malvastrum aurantiacum	Malvaceae	3
Yaupon Holly	llex vomitoria	Aquifoliaceae	3
Yellow Bells, Yellow Trumpetbush	Tecoma stans	Bignoniaceae	3
Yellow Bitterweed	Helenium amarum	Asteraceae	1
Yellow Columbine	Aquilegia chrysantha var. hinkleyana	Ranunculaceae	1
Yellow Cow Lily	Nuphar lutea	Nymphaeaceae	2
Yellow Flax	Linum rigidum	Linaceae	3
Yellow Indian Grass	Sorgastrum nutans (S. avenaceum)	Poaceae	3
Yellow Lotus	Nelumbo lutea	Nelumbonaceae	3
Yellow Passion Flower	Passiflora lutea	Passifloraceae	3
Yellow Sedge	Cyperus ochraceus	Cyperaceae	3
Yellow Stone Crop	Sedum nuttatlianum	Crassulaceae	2
Yellow Wood Sorrel	Oxalis dillenii	Oxalidaceae	3
Zexmenia	Wedella texana (Zexmenia hispida)	Asteraceae	3
Ziozag Iris	Iris brevicaulis	Iridaceae	1.3

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 ** Recommended - available through specialty outlets

Genus / Species	Common Name
Abelia grandiflora	Glossy Abelia
Artemisia 'Powis Castle'	Artemisia
Asclepias currasavica	Butterfly Weed, Mexican (Tropical Milkwee
Aspidistra elatior	Cast fron Plant
B. frutescens or caulescens	Bultine
Berberis sp.	Barberry, Japanese
Buddleja Davidii	Butterfly Bush
Caesalpinia gilliesii	Poinclana, Bird of Paradise
Caesalpinia mexicana	Poinciana, Mexican Bird of Paradise
Caesalpinia pulcherrima	Poinciana, Red Bird of Paradise Pride of Barbados
Carex tumulicole	Sedge, Berkeley
Cassia corymbosa	Senna, Flowering
Cassia lindheimeriana	Senna, Lindheimer
Ceratostigma plumbaginoides	Leadwort Plumbago
Chitalpa tashkentensis	Chitaipa
Cuphea micropetala	Cigar Plant
Cupressus arizonica	Arizona Cypress
Cyrtomium falcatum	Fern, Holly
Dietes sp	Iris, Butterfly/Bicolor (African)
Ficus pumila	Fig Vine
Hamelia patens	Firebush
Hibiscus sp.	Hiblscus
llex comuta 'Burfordii'	(Holly, Burford
llex comuta 'Burfordii nana'	Holly, Dwarf Burford
llex comuta 'Rolunda nana'	Holly, Dwarf Chinese
lpomoea leptophylla	Bush Morning Glory
ris albicans	Ins. Bearded
lasminum mesnyi	Primrose Jasmine
lusticia brandegeana	Shrimp Ptant
Justicia spicigera	Mexican Honeysuckie
agerstroemia indica	Crape Myrtle
Lantana camara	Lantana, Shrub
antana montevidensis	Lantana, Trailing
antana x hybrida (many varieties)	Lantana
Lidope muscari	Liriope
Valpighia glabra	Barbados Cherry
Muhlenbergia dumosa	Bamboo Muhiy
Vandina sp.	Nandina (dwarf varieties)
Ophiopogon Japonicus	Aztec Grass
Origanum vulgare	Oregano
Pennisetum alopecuroides	Dwarf Fountain Grass
Perovaskia striciplifolia	Sage, Russian
Phlomis fruticosa	Jerusalem Sage
Yumbago auriculata	Plumbago
Poliomintha longiflora	Mexican Oregano
Prosopis glandulosa	Honey Mesquite
Prunus caroliniana	Cherry Laurel
Prunus serotina var. eximia	Escarpment Black
Punica granatum	Pomegranate
Punica virgatum	Switch Grass
Quercus manlandica	Oak, Blackjack
Quercus polymorpha	Oak, Monterey (Mexican White)
Quercus shumardii texana	Oak, Shumard
Quercus virginiana	Oak, Live (Southern)
themnus caroliniana	Carolina Buckthom
Rosa sp.	Rose, Belinda's Dream
Rousa spo.	Rose, Knock Out
Rosa sp.	Rose, Livin' Easy
	Rose, Marie Pavie
₹OS# Sp.	
70sa sp. 70sa sp.	Rose, Mutablis
(058 sp. (058 sp. (058 sp. (058 sp.	Rose, Mitabilis Rose, Nearly Wild

City of Austin Grow Green List Only Sort by Latin Name

Genus / Species	Common Name
Ruellia sp.	Ruellia
Salvia guaranitica	Sage, Majestic
Salvia leucantha	Sage, Mexican Bush
Santolina chamaecyparissus	Santolina (Lavender Cotton)
Sapindus Drummondii	Soapberry
Scutellaria suffrutescens	Pink Skutlcap
Secreasea pallida	Purple Heart
Stipa tenuissima	Mexican Feathergrass (Wiregrass)
Tagetes lemmonii	Copper Canyon Daisy
Tagetes lucida	Mexican Mint Marigold
Taxodium mucronatum	Cypress, Montezuma
Teucrium fruticans	Bush Germander
Trachelospermum asiaticum	Asian Jasmine
Ulmus parvifolia	Elm, Lacebark
Yucca pallida	Yucca, Paleieaf
Yucca recurvifolia	Yucca, Softleaf

City of Austin Grow Green List - Not Recommended* by Lady Bird Johnson Wildflower Center Appendix C Sort by Latin Name

Genus / Species	Common Name
Antigonon leptopus	Coral Vine
Cotoneaster sp.	Cotoneaster
Hedera helix .	English Ivy
Nandina domestica 'Gulf Stream'	Nandina, Gulf Stream
Nandina domestica 'Harbour Dwarf'	Nandina, Harbour Dwarf
Nandina domestica 'Moon Bay'	Nandina, Moon Bay
Nandina domestica 'nana'	Nandina, Nana
Nerium oleander	Oleander
Passiflora incamata	Passion Vine
Pistacia chinensis	Chinese Pistache
Spiraea sp.	Spirea
Vinca minor	Periwinkle, Littleleaf

BLDG. 2 PERMISSIBLE BLDG. AREA BLDG. AREA BLDG. 1
PERMISSIBLE
BLDG. AREA BLDG. 11 PERMISSIBLE BLDG. AREA A PLUC & BLDG.// DG. AREA BLDG B

Building Envelope Exhibit

Southwest Manketplace

