

**CONTRACT SPECIFICATIONS**

**LIBERTY PLAZA PLANTING  
IMPROVEMENTS**

RFP # 24-30



Prepared for:  
**City of Ann Arbor**

Procurement Unit  
301 E. Huron Street  
Ann Arbor, MI 48104

**INSITE**  
design studio, inc.  
landscape architecture

Prepared By:  
InSite Design Studio, Inc.  
412 Longshore Dr.  
Ann Arbor, MI 48105

## STANDARD SPECIFICATIONS

All work under this contract shall be performed in accordance with the Ann Arbor Public Services Department 2024 Standard Specifications in effect at the date of availability of the contract documents stipulated in the Bid. All work under this Contract which is not included in these Standard Specifications, or which is performed using modifications to these Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these contract documents.

Standard Specifications are available online:

<https://www.a2gov.org/departments/engineering/pages/engineering-and-contractor-resources.aspx>

## SECTION 129300 SITE FURNISHINGS

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. Scope: the Contractor shall furnish all labor, materials, equipment, transportation, services and necessary appurtenant work required to complete the work shown on the Plans and/or specified herein.
- B. Extent of work shall include but not be limited to:
  - 1. Bicycle hoops
  - 2. Leaning rails

#### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and Division 1 Specification sections, which are hereby made part of this section.
- B. Related Sections:
  - 1. Article 10: Construction Specifications (Ann Arbor Public Services Standard Specifications 2024)

#### 1.03 REFERENCE SPECIFICATION

- A. Materials and Work covered under this Section shall be in accordance with Ann Arbor Public Services Department 2024 Standard Specifications unless otherwise indicated. All work under this Contract which is not included in the Ann Arbor Public Services Department 2024 Standard Specifications, or which is performed using modifications to those Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these contract documents. If a conflict exists between specifications, the more rigorous shall govern.

#### 1.05 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

### PART 2 - PRODUCTS

#### 2.01 BICYCLE HOOPS

- A. Manufactured by DuMor Site Furnishings
- B. Model: 291-00HG/S-2
- C. Mount: Surface
- D. Finish: Hot Galvanized
- E. Install per manufacturer's instructions.

#### 2.02 LEANING RAILS

- A. Manufactured by Landscape Forms (800) 521-2546; landscapeforms.com
- B. Product Description: Jessie Leaning Rail with rail top; Basic unit and one unit expansion; embedded; backrest
- C. Color: powdercoated Matte Black

### PART 3 - EXECUTION

#### 3.1 BICYCLE HOOP INSTALLATION

- A. Bicycle hoops shall be installed "Surface Mount" as recommended by manufacturer and as indicated in the drawings and specifications.

#### 3.2 LEANING RAIL INSTALLATION

- A. Leaning Rail shall be installed per manufactures standards and specifications for ‘One Basic Unit with One Expansion Unit, Embedded Installation.’
- B. Footing depth 42” per drawing detail.

**END OF SECTION**

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## **CSI SPECIFICATION**

### Bike Rack



DuMor Inc.  
P.O. Box 142  
Mifflintown, PA 17059  
800-598-4018 | DuMor.com

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DIVISION 32 30 00 SITE IMPROVEMENTS  
SECTION 32 33 00 SITE FURNISHINGS  
SECTION 32 33 13 BIKE RACKS

## **SECTION-1 – GENERAL**

### **1.1 SUMMARY**

**A. This section includes the following:**

1. Bike Rack (Model 291)

### **1.2 QUALITY ASSURANCE**

**A. Installer Qualification:** An experienced installer who has completed installation of site furnishings and whose work has resulted in construction with a record of successful in-service performance.

**B. Manufacturer Qualifications:** Experienced site furniture manufacturer since 1984.

### **1.3 SUBMITTALS**

**A. Product Data:** Include physical characteristics such as shape, dimensions and finish for each bench.

**B. Shop Drawings:** Provide installation details for each product.

**C. Samples for Verification:** For the following product, show the color of the powder coat finish.

**D. Maintenance Data:** For each product.

1. Provide recommended methods for repairing damage and abrasions to the powder coat finish.

### **1.4 DELIVERY, STORAGE, AND HANDLING**

**A.** Store products in original undamaged packaging in a dry location until ready for installation.

**B.** Handle powder coated products with care to prevent any damage to the finish.

### **1.5 WARRANTY**

**A.** All products manufactured by DuMor, Inc., are warranted against defect in materials and/or workmanship and in accordance with our published specifications. DuMor, Inc. further warrants our products as follows:

1. Limited twenty-year warranty against structural failure of all steel bench frames or complete steel bench assemblies, table frames, litter receptacle frames, steel planters and all cast iron and aluminum bench supports.
2. Limited five-year warranty against structural failure of wood slats.
3. Limited ten-year warranty against structural failure of recycled plastic. It is further warranted not to degrade, split, crack or splinter during this period.
4. Limited three-year warranty on structural failure of all bike racks.
5. Limited one-year warranty on any item not specifically discussed above.

## **SECTION-2 - PRODUCTS**

### **2.1 ACCEPTABLE MANUFACTURERS**

**A.** Provide products from the following manufacturer:

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## **CSI SPECIFICATION**

### Bike Rack



DuMor Inc.  
P.O. Box 142  
Mifflintown, PA 17059  
800-598-4018 | DuMor.com

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1. DuMor Inc.  
138 Industrial Circle  
Mifflintown, PA 17059  
Phone: 800-598-4018  
Fax: 717-436-9839  
Email: sales@dumor.com  
Website: www.dumor.com

### **2.2 BIKE RACK - DuMor Model 291 Series**

#### **A. Materials:**

##### **1. Rack Assembly:**

- a. Rack assembly shall be manufactured from 2" x 2" x 11 gauge ASTM A513 steel tubing and 3/8" thick ASTM A36 steel plate.

##### **2. Anchoring:**

- a. Stainless steel expansion anchors (1/2" x 3 3/4") provided.

#### **B. Dimensions**

1. Overall: 30" long x 6" deep x 36" high

#### **C. Finish:**

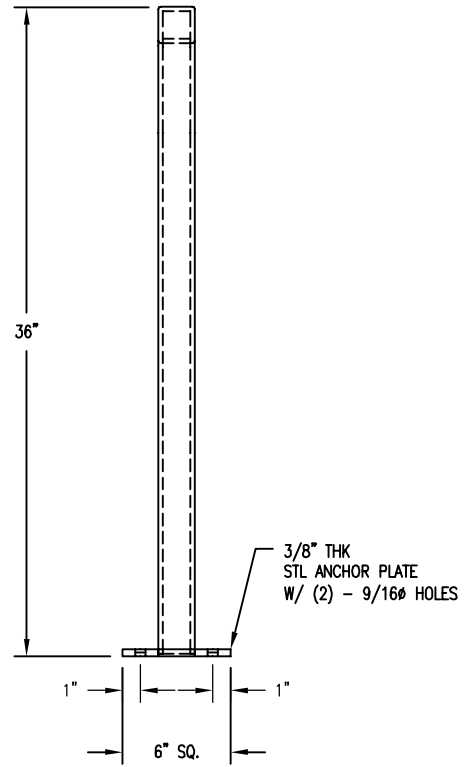
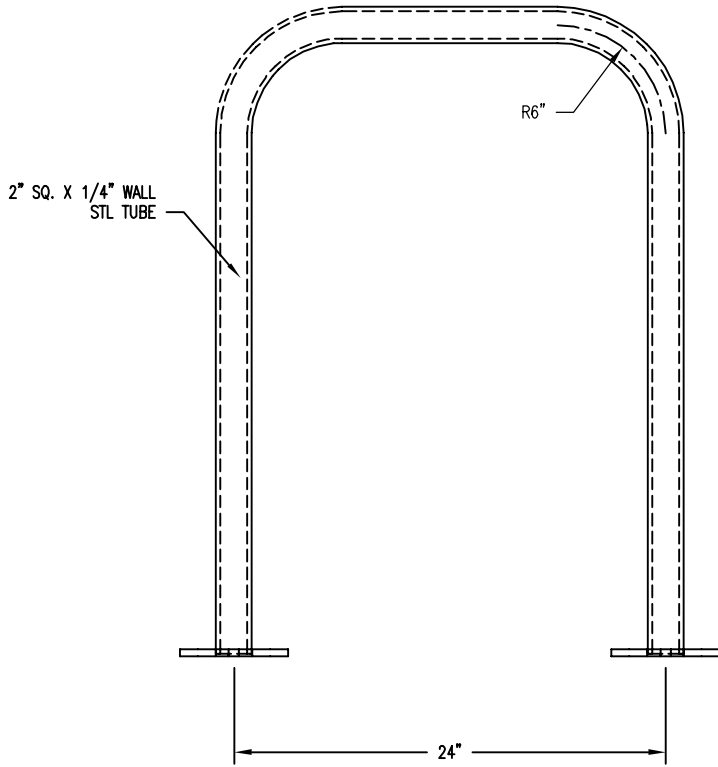
##### **1. Powder Coating**

- a. All parts are processed through an 8-stage iron phosphorous wash system.
- b. Parts are coated with a zinc-rich epoxy primer to an AVERAGE of 4-5 mils.
- c. Parts are then finished with a top coat of TGIC-polyester powder to an AVERAGE of 4-5 mils.
- d. Powder is cured at the powder manufacturers specifications using combination of infrared and convection heat for approximately 20 minutes.
- e. Finished parts shall comply with the following American Standard Test Method (ASTM) for coating and coating method: ASTM-D-523, ASTM-D-3363, ASTM-D-1737, ASTM-D-3359, ASTM-D-2794, ASTM-B-117 and ASTM-D-3451.

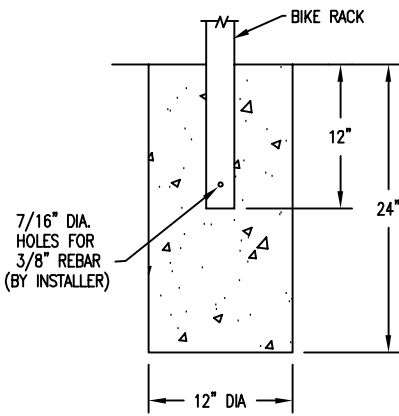
## **SECTION-3 – EXECUTION**

### **3.1 INSTALLATION**

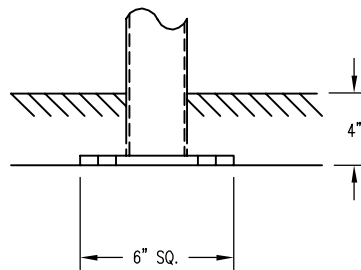
- A. Handle and install bike racks according to manufacturer's recommendations and installation instructions.
- B. Some assembly required.



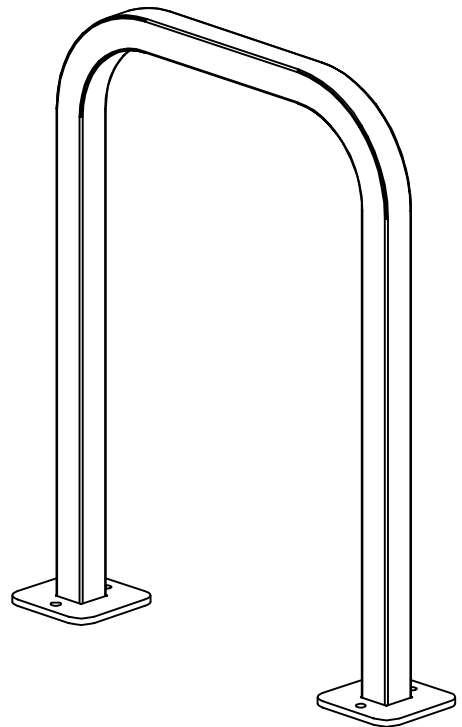
□ S-2 SURFACE MOUNT



□ S-1 EMBEDMENT



□ S-4 SUB FLOOR



NOTE:

- 1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
- 2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED FOR OPTIONS S-2 & S-4.

PARTS LIST FOR S-2

NOTES:

1.) MOUNT AND ANCHOR AS SPECIFIED.

TOOLS REQ'D

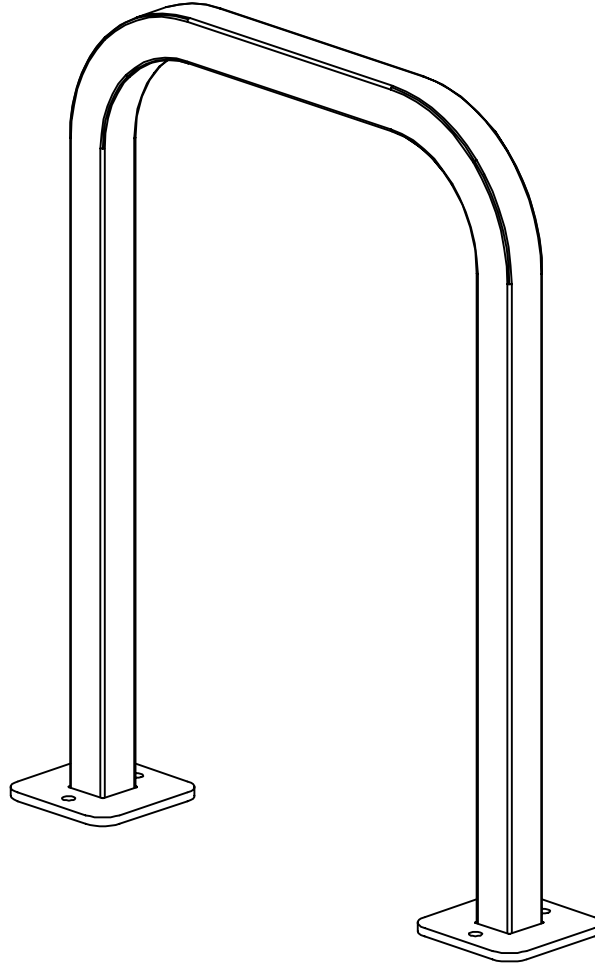
3/4" WRENCH  
1/2" MASONRY DRILL BIT  
DRILL

ITEM	QTY	PART NO	DESCRIPTION
1	1	0-291-00-01/S-2	36" LOOP BIKE RACK, 30" WIDE, PLATES

KITS PROVIDED FOR S-2

ITEM	QTY	PART NO	DESCRIPTION
2	1	K-ANCO860-4	1/2" X 3 3/4" SS ANCHOR KIT (4PC)

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7800 E. Michigan Ave.  
 Kalamazoo, Michigan 49048  
 Phone: (800) 521-2546  
 Fax: (269) 381-3455  
 www.landscapeforms.com  
 specify@landscapeforms.com

**Jessie Rail  
 Product Guide Specification**

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, as described in *The Project Resource Manual—CSI Manual of Practice, Fifth Edition*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all “Specifier Notes” after editing this section.

Section numbers are from *MasterFormat 2010 Edition*.

**SECTION 12 93 00 Site Furnishings    RAIL SYSTEM**  
**SECTION 05 52 00 Metal Railings    RAIL SYSTEM**

Specifier Notes: This section covers Landscape Forms, Inc. “Jessie” rail system. Consult Landscape Forms, Inc. for assistance in editing this section for the specific application.

**PART 1    GENERAL**

**1.1    SECTION INCLUDES**

A.    Rail System.

**1.2    REFERENCES**

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

A.    ASTM Testing Standards:

1.    ASTM B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
2.    ASTM D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
3.    ASTM D 523 – Standard Test Method for Specular Gloss.
4.    ASTM D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
5.    ASTM D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
6.    ASTM D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
7.    ASTM D 3363 – Standard Test Method for Film Hardness by Pencil Test.
8.    ASTM G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

B.    ISO Testing Standards:

1. ISO 1520 – Paints and Varnishes – Cupping Test.
2. ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

### 1.3 **SUBMITTALS**

- A. **Product Data**: Submit manufacturer's product data, storage and handling requirements and recommendations, installation methods and available colors, styles, patterns and textures.
- B. **Shop Drawings**: Submit manufacturer's shop drawings, including plans and elevations, indicating overall dimensions.
- C. **Samples**: Submit manufacturer's samples of materials, finishes, and colors.
- D. **Warranty**: Manufacturer's standard warranty.

### 1.4 **QUALITY ASSURANCE**

- A. **Manufacturer's Qualifications**: Manufacturer regularly engaged in manufacture of site furnishings since 1969.
- B. **Product Support**: Products are supported with complete engineering drawings and design patents.
- C. **Base Worth**: An installed base of products worth in excess of one hundred million dollars.
- D. **Assets**: Excess of twenty million dollars in assets.
- E. **Production**: Orders are filled within a 40-day schedule.
- F. **Facility Operator**: Welders and machine operators are certified.

### 1.5 **DELIVERY, STORAGE, AND HANDLING**

- A. **Delivery**: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. **Storage**: Store materials in clean, dry area in accordance with manufacturer's instructions. Keep materials in manufacturer's original, unopened containers and packaging until installation.
- C. **Handling**: Protect materials and finish during handling and installation to prevent damage.

### 1.6 **WARRANTY**

- A. **Warranty Information**:
  - Products will be free from defects in material and/or workmanship for a period of three years from the date of invoice.
  - The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.
  - Landscape Forms, Inc. shall, at its option, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized Landscape Forms service representative.
  - Purchasers should be aware that normal use of these high quality products can result in superficial damage affecting the finish. Scratches, nicks, and dents are to be considered normal wear and tear, and are not the responsibility of the manufacturer.

## **PART 2 PRODUCTS**

### 2.1 **MANUFACTURER**

- A. Landscape Forms, Inc., 7800 E. Michigan Ave, Kalamazoo, Michigan 49048.  
Phone: (800) 521-2546. Fax (269) 381-3455. Website [www.landscapeforms.com](http://www.landscapeforms.com)  
E-mail: [specify@landscapeforms.com](mailto:specify@landscapeforms.com)

### 2.2 **BENCHES**

- A. **"Jessie" Rail System**

Specifier Notes: Specify quantity of each style. Each run must consist of at least one Basic Unit. Each expansion unit adds length in 48" increments.

1. **Style**:
  - a. Basic unit - 106" length: Quantity: \_\_\_\_\_

b. Expansion unit - 48" length: Quantity: \_\_\_\_\_

Specifier Notes: Choose one from each of the selections below.

2. Top of rail:
  - a. Rail top
  - b. Bar top
3. Infill option:
  - a. Open, no infill
  - b. Backrest
  - c. Mesh Infill
4. Mounting:
  - a. Surface Mount
  - b. Embedded

### 2.3 **MATERIALS**

- A. Support post: Carbon steel plate, 5/8" thick. Top mounting plate is 1/4" thick carbon steel sheet, welded to support post.
- B. Splice lock: Type 319 or 356 ASTM B 26 aluminum casting.
- C. Hardware: Carbon steel Magni-coated screws.

Specifier Notes: Delete if not required.

- D. Rail top: Constructed of 6061 aluminum extrusion. Intermediate sections and end caps are 1" x 3".
- E. Bar top: Constructed of 6061 aluminum extrusion. Intermediate sections and end caps are 1" x 12".
- F. Surface Mount Plate: 3/8" thick carbon steel plate, welded to support post
- G. Cover plate: Type 319 or 356 ASTM B 26 aluminum casting. Cover plate consists of two halves, bolted together with carbon steel Magni-coated screws.
- H. Backrest infill: Aluminum 6061-T6 flat bar, 4-1/2" wide x 1/2" thick
- I. Mesh infill: Panel is formed of 3/4" #13F expanded steel, welded to a 5/8" x 7/16" carbon steel frame.

### 2.4 **ACCESSORIES**

Specifier Notes: Specify anchor bolts for surface-mounted rails. Delete for embedded mounting.

- A. Anchor Bolts: Corrosion resistant recommended, not provided by the manufacturer.

### 2.5 **RECYCLED CONTENT** all units are 100% recyclable

	Post-Consumer Content	Pre-Consumer Content
Bar Top Basic unit Surf Mt Open	43%	38%
Bar Top Basic unit Surf Mt Mesh Infill	47%	36%
Bar Top Basic unit Surf Mt Backrest	45%	37%
Rail Top Basic unit Embed Open	52%	35%
Rail Top Basic unit Embed Mesh Infill	55%	34%
Rail Top Basic unit Embed Backrest	54%	34%

### 2.6 **FABRICATION**

- A. Assembly: Shop assembled rails.

## 2.7 FINISHES

- A. Finish on Metal: Landscape Forms, Inc. "Pangard II".
1. Primer: Rust inhibitor
  2. Topcoat: Thermosetting TGIC polyester powder coat. UV, chip, and flake resistant.
  3. Test Results: "Pangard II".
    - a. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
    - b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
    - c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
    - d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
    - e. Erichsen Cupping, ISO 1520: 8 mm.
    - f. Impression Hardness, Buchholz, ISO 2815: 95.
    - g. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
    - h. Pencil Hardness, ASTM D 3363: 2H minimum.
    - i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max. undercutting 1 mm.
    - j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max. blisters 1 mm.

Specifier Notes: Specify color of metal. Consult Landscape Forms, Inc. for selection of standard colors and availability of custom colors.

4. Support Color: \_\_\_\_\_ .
5. Top Color: \_\_\_\_\_ .

Specifier Notes: Delete if not required.

6. Backrest Color (if different from top color): \_\_\_\_\_ .
7. Mesh Infill Color (if different from support color): \_\_\_\_\_ .

## **PART 3 EXECUTION**

### 3.1 **EXAMINATION**

- A. Site Examinations: Examine areas to receive rails.
1. Verify that substrates are stable and capable of supporting the weight of items covered under this section.
  2. Verify that substrates have been adequately prepared to securely anchor those items that will be surface mounted.
  3. Notify Architect of conditions that would adversely affect installation or subsequent use.
  4. Do not begin installation until unacceptable conditions are corrected.

### 3.2 **INSTALLATION**

- A. Install rails in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Install rails level.

### 3.3 **ADJUSTING**

- A. Finish Damage: Repair minor damages to finish in accordance with manufacturer's instructions and as approved by Architect.
- B. Component Damage: Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

### 3.4 **CLEANING**

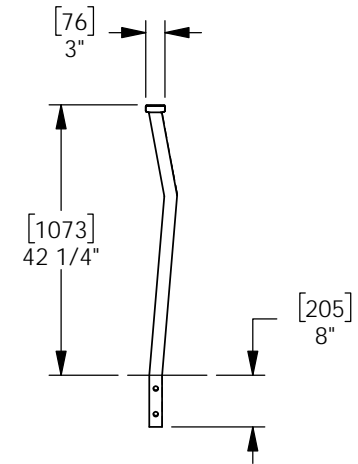
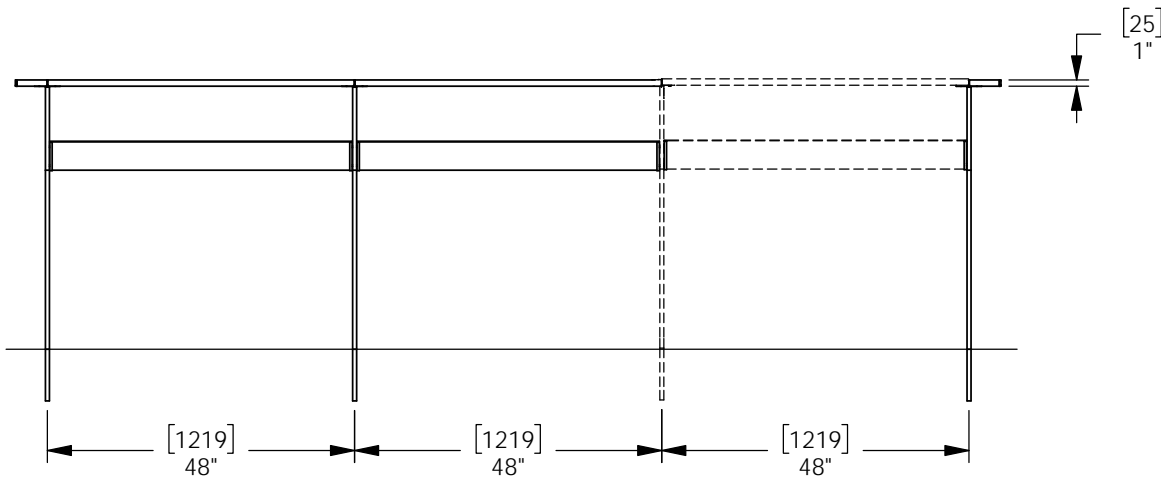
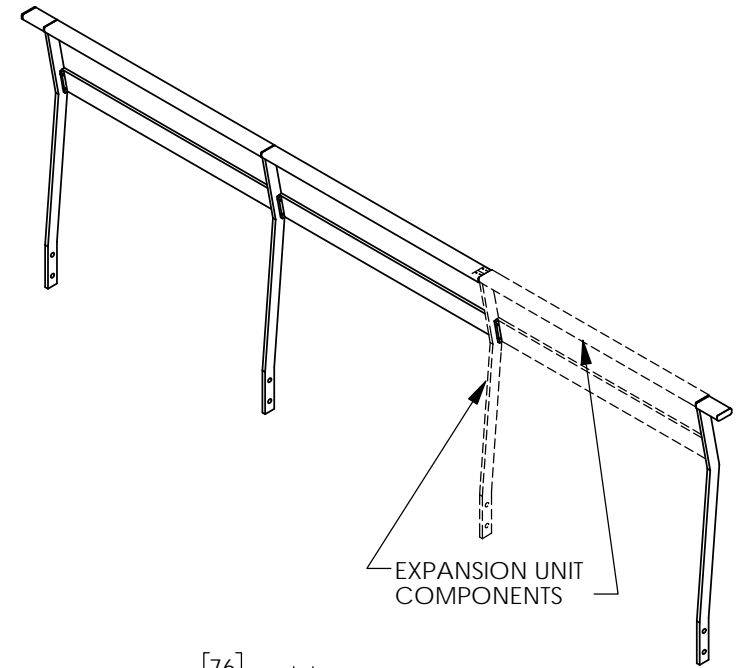
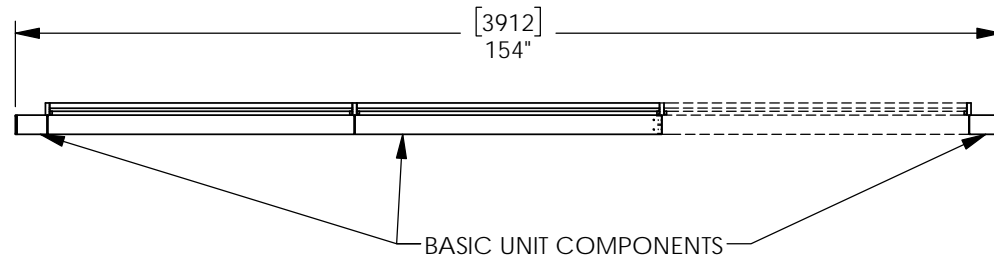
- A. Clean rails promptly after installation in accordance with manufacturer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

**3.5 PROTECTION**

- A. Protect installed rails to ensure that, except for normal weathering, rails will be without damage or deterioration at time of Substantial Completion.

**END OF SECTION**

SHOWN: ONE BASIC UNIT WITH ONE EXPANSION UNIT.



## SECTION 311000 SITE PREPARATION

### **PART 1 - GENERAL**

#### **1.01 SUMMARY**

- A. Scope: Prepare site as shown on the drawings and as specified herein.
- B. Extent of work shall include but not be limited to:
  - 1. Protection of persons and property
  - 2. Salvaging of existing elements to remain
  - 3. Protection of existing vegetation
  - 4. Utility Service
  - 5. Clearing and grubbing of existing vegetation.
  - 6. Stripping and stockpiling of topsoil
  - 7. Demolition, Removal & Disposal of above and below grade improvements
  - 8. Erosion Control

#### **1.02 RELATED DOCUMENTS**

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and Division 1 Specification sections, which are hereby made part of this section.
- B. Related Sections:
  - 1. Article 10: Construction Specifications (Ann Arbor Public Services Standard Specifications 2024)
  - 2. 329310 Planting
  - 3. 329320 Plant Maintenance and Guarantee

#### **1.03 PERMITS**

- A. The CONTRACTOR shall secure necessary permits.

#### **1.04 REFERENCE SPECIFICATION**

- A. Materials and Work covered under this Section shall be in accordance with Ann Arbor Public Services Department 2024 Standard Specifications unless otherwise indicated. All work under this Contract which is not included in the Ann Arbor Public Services Department 2024 Standard Specifications, or which is performed using modifications to those Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these contract documents. If a conflict exists between specifications, the more rigorous shall govern.

#### **1.05 QUALITY ASSURANCE**

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

#### **1.06 REGULATORY REQUIREMENTS**

- A. Conform to applicable county and state law for disposal of debris at locations outside of Owner's property.
- B. Coordinate clearing work with existing underground utilities

### **PART 2 - PRODUCTS**

- A. Products covered under this Section shall be in accordance with Ann Arbor Public Services Department 2024 Standard Specifications unless otherwise indicated.

## **PART 3 - EXECUTION**

### **3.01 PROTECTION OF PERSONS AND PROPERTY**

- A. Construction Fence shall be installed as indicated on the plans and in addition any area where the CONTRACTOR feels it is necessary to protect vegetation, structures, private properties, or secure construction and hazardous areas. Additional fence beyond what is indicated on the plans shall be done at the CONTRACTOR'S expense.
- B. Construction fence shall be installed per Ann Arbor Public Services Department 2024 Standard Specifications.
- C. Protect structures, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by all construction operations.
- D. Use means necessary to protect persons and property as required by local and state governing authorities including traffic warning devices when working in right-of-way.
- E. Maintain access to the site at all times. Protect Benchmarks from damage or displacement. Locate, identify and protect utilities that remain from damage. Protect trees, plant growth and features designated to remain as final landscaping.

### **3.02 PROTECTION OF EXISTING VEGETATION**

- A. Prior to commencing work arrange an on-site meeting with the CONSULTANT to review limits of project, and subsequent, tree/vegetation protection or removal.
- B. Trees not indicated to be removed or transplanted with or without tree protection should not be injured or defaced in any way. Any damage shall be replaced or repaired by a skilled tree surgeon approved by the CONSULTANT at no expense to the OWNER. Installation of construction fence shall serve as tree protection and shall not damage bark or root structure of tree.
- C. Storage of materials, parking vehicles, excess foot traffic, or stockpiling inside the drip line of trees to remain shall not be permitted.
- D. Owner shall be justly compensated for any damage to existing trees, whether repairable or not, at the rate of \$50.00 per inch of cross-section diameter 12" above grade (ex: 10" dia x \$50 = \$500).

### **3.03 UTILITY SERVICES**

- A. Protect existing utilities indicated or made known.
- B. Coordinate with utility companies and agencies as required, arrange necessary shut off and obtain written approval before interrupting existing utilities.
- C. Provide necessary bypass connections to maintain service to occupied areas or adjacent properties.
- D. The CONTRACTOR shall maintain sedimentation and erosion controls as indicated on plans. The CONTRACTOR shall remove silt from the bottom of any catch basins and traps, and establish finished grade prior to the installation of the permanent seed cover. The Contractor shall remove any temporary mud tracking stone in future landscape areas prior to the establishment of final grade.

### **3.05 CLEARING AND GRUBBING**

- A. As specified on the plans, the CONTRACTOR shall review all tree removals with the CONSULTANT prior to any operations.
- B. Completely remove all trees, herbaceous vegetation, woody shrubs and stumps from areas as noted on the drawings and as directed by the CONSULTANT. Remove without injury to trees to remain. Do any additional cutting or trimming only as necessary and as directed by the CONSULTANT in accordance with standard horticultural practice.
- C. Stumps shall be completely removed. The stump hole or other holes from which obstructions have been removed shall be backfilled to the adjacent grade in accordance with Ann Arbor Public Services Department 2024 Standard Specifications



### **3.07 DEMOLITION**

- A.** Remove and Dispose: completely remove and properly dispose of off-site all items referenced on the plans and miscellaneous debris except salvageable material indicated on the plans or by the OWNER. Backfill in accordance with the Ann Arbor Public Services Department 2024 Standard Specifications.
- B.** Any damage to adjacent pavement, pavement base, sub base, or utility structures caused as a result of the removal of the bituminous, unit pavement, or concrete surface is the complete responsibility of the CONTRACTOR and shall be corrected by the CONTRACTOR at his/her expense.
- C.** Remove and Salvage: carefully remove, clean and salvage items referenced on the plans. Items shall be delivered and stored, as directed by the OWNER and CONSULTANT. Items to be salvaged will remain the property of the OWNER.
- D.** Dispose of all materials from the site in a legal manner.
- E.** Do not store or permit debris to accumulate on the job site.

**END OF SECTION**

## SECTION 329310 PLANTING

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. Provide Planting where shown on drawings as specified herein, and as needed for a complete and proper installation.
- B. Work shall include:
  - 1. Tree and shrub planting
  - 2. Ornamental grass, perennial, bulb and groundcover planting
  - 3. Soil amendments and Mulch application

#### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and Division 1 Specification sections, which are hereby made part of this section.
- B. Related Sections:
  - 1. 311000 Site Preparation
  - 2. 329320 Plant Maintenance and Guarantee Period

#### 1.03 REFERENCE SPECIFICATIONS

- A. **AOSA** -Association of Official Seed Analysis:
- B. Rules for testing Seeds, Journal of Seed Technology, 1991 Edition
- C. **TAPPI**-Technical Association of the Pulp and Paper Industry
- D. **AOAC** - Official Methods of Analysis, Association of Official Analytical Chemists.
- E. Materials and Work covered under this Section shall be in accordance with Ann Arbor Public Services Department 2024 Standard Specifications unless otherwise indicated. All work under this Contract which is not included in the Ann Arbor Public Services Department 2024 Standard Specifications, or which is performed using modifications to those Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these contract documents. If a conflict exists between specifications, the more rigorous shall govern.

#### 1.04 QUALITY ASSURANCE

- A. CONTRACTOR shall provide CONSULTANT with a list specifying sources of plant material.
- B. Inspection: The CONSULTANT may inspect plants at place of growth or on site prior to planting. Rejected material shall be immediately removed from site. Material damaged during planting may be rejected after planting. Material approved at place of growth, but damaged during transportation may also be rejected.
- C. Installation of plants shall be carried out by Contractors and their employees who are thoroughly experienced and skilled in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of the work of this section. The CONTRACTOR shall have a minimum of five (5) years documented experience in comparable work.

#### 1.05 DELIVERY, STORAGE AND HANDLING

- A. Plant material delivery shall be the same day as planting. No plants shall be stored at the site without permission of the CONSULTANT. Plants shall be carefully loaded and unloaded so as not to damage branching or root mass. Dropping of material will not be allowed. Plants in full leaf shall be thoroughly wetted down and completely covered with a wet tarp during transportation.
- B. All plant roots must be kept in a moist condition.

- C. Digging and Handling Plant Material: Digging shall be during the dormant season, preferably between 1 October and 1 May. Plant material which is poorly packed, or which arrives with the roots in a dry condition, as a result of improper packing, delay in transit, or from any other cause, will not be accepted. Stock shall be handled in such a manner that the roots shall remain intact, the branches unbroken, and the bark intact and not loosened from the wood. Stock shall be protected from drying and from temperatures below 50°F and in excess of 90°F prior to planting.

#### 1.06 SUBMITTALS

- A. The CONTRACTOR shall submit to the CONSULTANT sources for all plant material 30 (thirty) days after contract award

### PART 2 - PRODUCTS

#### 2.01 PLANTS

- A. Material shall be of the size, genus, species, variety and any other special designation as shown and scheduled for on the drawings, on the attached Proposal Form or in these Specifications. No substitution of species, variety or size shall be accepted without written approval from the CONSULTANT and OWNER. Plant material shall be nursery grown, under climatic conditions similar to those in the locality of the project.
- B. Quality: Plants shall comply with the recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock." Plants shall be healthy, vigorous stock, grown in a recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs, larvae and defects such as knots, sunscald, injuries, abrasions, or disfigurement.
  - 1. Plants balled with plastic burlap will not be accepted.
- C. Labeling: All plants shall be labeled with securely-attached waterproof tab bearing legible designation of botanical and common name.
- D. Formal arrangements if/where shown on planting plan shall have trees selected for uniform height and spread.

#### 2.02 TOPSOIL

- A. Imported topsoil shall be friable sandy loam capable of supporting optimal plant growth and development. It shall be free of clay lumps, subsoil, invasive weeds and seeds, stones, sticks and other extraneous materials.
- B. Analysis of imported topsoil shall be done at the CONTRACTOR'S expense and shall be submitted to OWNER/CONSULTANT for approval prior to use.

The **structural topsoil analysis** for **PLANTING BEDS** shall include the following and be within the listed parameters:

- 1. Clay content: **5-15%**
- 2. pH range: **6.5 - 8**
- 3. Organic matter content: **5-20%**

#### 2.03 FERTILIZER

- A. Fertilizer shall be slow release, at minimum 50% derived from a natural, organic source, 3-3-3 or approved substitution.

#### 2.04 COMPOST

- A. Compost shall be used only from City of Ann Arbor, available from City of Ann Arbor Materials Recovery Facility (734) 971-8600.

#### 2.05 AMENDED SOIL

- A. Amended soil shall be prepared on site by mixing four (4) parts topsoil, one (1) part compost and adding starter fertilizer for planting beds at the recommended rate.

## 2.07 PRE-PLANTING SUPPORT

- A. Material for support through transplanting shock shall be Bio-Plex Technical Transplant Concentrate and Plant Enhancer or approved substitution. This product is available through Bio-plex, Inc., 1.800.441.3573

## 2.08 WATER

- A. Source: Source: Irrigation will be available on site. Coordinate with irrigation contractor for system handoff. Irrigation maintenance, management, and scheduling shall be provided by the CONTRACTOR.
- B. Quality: Water supplied by the CONTRACTOR shall be free of substances harmful to plant growth.

## 2.09 MULCH

- A. Material around isolated trees and in planting bed areas shall be shredded hardwood bark free of weeds, soil, sticks or trash, and shall have a uniform appearance. A sample shall be approved by CONSULTANT prior to application.
  - 1. Colored or dyed mulch will not be accepted.

## 2.10 LOCATION STAKES

- A. Stakes for plant locations shall be 1" X 2" X 3', and supplied by the CONTRACTOR.

# PART 3 - EXECUTION

## 3.01 PLANTING SUPPORT

- A. If trees and/or shrubs are planted from May through August, or when there are drought conditions during September through April, the CONTRACTOR shall provide planting support to each balled and burlapped specimen with Bio-Plex Technical Transplant Concentrate and Plant Enhancer (per manufacturer's instructions on label) by means of:
  - 1. A foliar application (through spray) upon receipt of trees and shrubs
  - 2. A root application (through tree gators) upon planting of trees and shrubs

## 3.02 LAYOUT

- A. Locations of trees, shrubs, perennials and groundcover shall be established by the CONTRACTOR according to plans.
- B. Locations for trees and shrubs shall be identified with stakes. Different species shall be clearly labeled and marked with different color ribbon, paint or permanent marker on the stake.
- C. Perennials, ornamental grasses shall be laid out in their containers on top of the ground.
- D. Groundcover zones shall be laid out by paint.
- E. Review: The CONTRACTOR shall notify the CONSULTANT when staking and layout is completed and allow two working days for modifications and notice to proceed with planting.

## 3.03 TREE and SHRUB PLANTING

- A. Balled and/or container stock as per detail:
  - 1. Set plants plumb.
  - 2. **B&B STOCK:**
    - a. Remove all bindings and burlap from top one half of ball and remove from site.
    - b. Cut wires from top half of basket and remove from site.
    - c. Remove soil as necessary to expose the root flare prior to planting.

d. Root prune girdling roots.

**CONTAINER STOCK:**

- a. Remove all containers and packaging material before planting and remove from site.
- b. Scarify/ root prune girdling roots as necessary.
3. Backfill with amended soil. Water and foot compact at intervals. Do not damage root structure.
4. Mulch to a depth as shown on the details and soak the mulch with water. Thoroughly soak root ball with water.
5. Prune all dead wood at first live lateral bud in accordance with standard horticultural practices using sharp instruments cleaned frequently. If necessary, any additional pruning will be directed by the CONSULTANT. Do not prune terminal leader or branch tips. A plant's natural form shall not be compromised by any pruning activities. Promptly remove all pruned material from site.
6. STAKE all trees as follows:
  - a. Stakes shall be driven 6"-8" outside of the rootball.
  - b. Loosely stake tree to allow for trunk flexing.
  - c. Attach support straps around tree trunk just below first branch of tree (2 per tree on opposite sides of the tree).
  - d. Remove all tree support after one year.
7. Remove all nursery applied tree wrap, tape or string from trunk and crown. Remove any tags or labels and remove from site.

**3.04 ORNAMENTAL GRASSES, PERENNIAL and GROUNDCOVER PLANTING**

**A. Container stock as per detail:**

1. Remove all containers and packaging material before planting and remove from site.
2. Set plants plumb.
3. Scarify/ root prune girdling roots as necessary.
3. Backfill with amended soil. Do not damage root structure.
4. Mulch to a depth as shown on the details and soak the mulch with water. Thoroughly soak root matter with water.

**END OF SECTION**

## SECTION 329320 PLANT MAINTENANCE and GUARANTEE PERIOD

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. The CONTRACTOR shall furnish all labor, materials, equipment, transportation, services and necessary appurtenant work as required to complete the work as shown on the Plans and/or as specified herein.
- B. Extent of work shall include but not be limited to:
  - 1. Weed Control
  - 2. Disease and insect control
  - 3. Pruning
  - 4. Fertilizer Application
  - 5. Mulching
  - 6. Removal of plant support and tags (if any)
  - 7. Watering/ Irrigation
  - 8. Maintenance & Guarantee of Plant Material (for 1 period)

#### 1.02 RELATED DOCUMENTS

- A. Attention is directed to Bidding and Contracting requirements, drawings and general provisions of the Contract, including General Conditions and Division 1 Specification sections, which are hereby made part of this section.
- B. Related Sections:
  - 1. 311000 Site Preparation
  - 2. 329310 Planting

#### 1.03 REFERENCE SPECIFICATION

- A. Materials and Work covered under this Section shall be in accordance with Ann Arbor Public Services Department 2024 Standard Specifications unless otherwise indicated. All work under this Contract which is not included in the Ann Arbor Public Services Department 2024 Standard Specifications, or which is performed using modifications to those Standard Specifications, shall be performed in accordance with the Detailed Specifications included in these contract documents. If a conflict exists between specifications, the more rigorous shall govern.

#### 1.04 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

#### 1.05 DEFINITIONS

- A. Definition of Period for all shrubs, herbaceous perennials, grasses, groundcovers, vines, and bulbs: The Maintenance and Guarantee Period begins upon notice of substantial completion and continues until the end of the first growing season. The growing season is defined as the beginning of March through mid- November. If planting is not completed prior to the end of June, the Maintenance and Guarantee Period includes the remainder of that growing season plus the next growing season.
- B. Definition of Period for ornamental, canopy and evergreen trees: The Maintenance and Guarantee Period begins upon notice of substantial completion and continues through the end of the second growing season. The growing season is defined as the beginning of March through mid- November. If planting is not completed prior to the end of June, the Maintenance and

Guarantee Period includes the remainder of that growing season plus the next two growing seasons.

#### **1.06 SCHEDULE**

- A. Schedule: A minimum of one visit is required for each of the following time periods during the Maintenance and Guarantee period. During each visit, CONTRACTOR shall complete all necessary tasks to comply with the requirements outlined in these specifications.
  - 1. 1 March to 15 March
  - 2. 1 May to 15 May
  - 3. 1 June to 15 June
  - 4. 1 July to 15 July
  - 5. 1 August to 15 August
  - 6. 1 September to 15 September
  - 7. 1 November to 15 November
- B. Verification of visits, in the form of reports and certified payroll covering visits, shall be provided to the OWNER.

#### **1.07 DELIVERY, STORAGE AND HANDLING**

- A. Packaged materials shall be delivered in original containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and storage.

### **PART 2 - PRODUCTS**

#### **2.01 PESTICIDES & HERBICIDES**

- A. Materials shall comply with Local, State and Federal regulations.
- B. Common IPM (Integrative Pest Management) practices shall be followed. Pesticides and herbicides shall be used as a last resort.

#### **2.02 FERTILIZER**

- A. Materials shall conform to the standards of the Association of Agricultural Chemists and shall comply with State and Federal regulations.
- B. Fertilizer for woody plants shall be an organic, slow release with a ratio of 3-1-2 or 3-1-1 or approved substitution.
- C. Starter fertilizer for perennial plants shall be an organic, slow release with a ratio of 3-3-3 or 3-1-1 or approved substitution. Apply prior to planting.

#### **2.03 WATER**

- A. Source: Irrigation will be available on site. Coordinate with irrigation contractor for system handoff. Irrigation maintenance, management, and scheduling shall be provided by the CONTRACTOR.
- B. Quality: Water supplied by the CONTRACTOR shall be free of substances harmful to plant growth.

#### **2.04 MULCH**

- A. Material shall be shredded hardwood bark free of weeds, soil, sticks or trash, of a uniform appearance.
  - 1. Colored or dyed mulch will not be accepted.

### **PART 3 - EXECUTION**

#### **3.01 DISEASE and INSECT CONTROL**

- A. Monitoring for diseases and insects shall be the responsibility of the CONTRACTOR. The CONTRACTOR shall monitor all plants at all times for disease and insect problems.
- B. Treatment shall take place in accordance with common IPM practices.

- C. Pesticides shall only be used when and where necessary as approved by the OWNER. An application for pesticide use must be submitted and approved by The City of Ann Arbor Parks and Recreation Services Deputy Manager prior to treatment.
- D. Manufacturer's directions and precautions must be followed literally. Applicators shall be licensed by the State of Michigan. Applicators shall be knowledgeable in the application of pesticides and appropriate equipment used. Excess pesticides shall be properly removed from the site.

### 3.02 PRUNING

- A. Prune all dead wood at first live lateral bud in accordance with standard horticulture practices using sharp instruments cleaned frequently. Pruning shall enhance plant development and ornamental qualities. Do not prune terminal leader or branch tips. A plant's natural form shall not be compromised by any pruning activities.
- B. Additional pruning may be required at the request of the OWNER in order to decrease public liability factors.
- C. Remove immediately after pruning all dead, broken and diseased growth and other pruning debris from the site and dispose of in an environmentally sensitive manner.
- D. Plant material that is "topped" by the CONTRACTOR shall be replaced at the CONTRACTOR's expense.

### 3.03 MAINTENANCE FERTILIZER APPLICATION

- A. Application shall be according to manufacturer's directions.
- B. Woody Plants
  1. Maintenance Fertilizer application for woody plants shall occur in November of the Maintenance and Guarantee Period
  2. Topdress at a rate of 1 pound of nitrogen per 1,000 square feet.

### 3.04 WEEDING

- A. Frequency shall be every visit.
- B. Remove immediately after weeding all weeds and debris from the site and dispose of in an environmentally sensitive manner.
- B. Methods: Weeds shall be removed by hand. Before application of any herbicide the CONTRACTOR shall receive approval of the OWNER. A selective herbicide shall be applied according to manufacturer's directions.

### 3.05 ORNAMENTAL GRASS MAINTENANCE

- A. Timing: March maintenance visit.
- B. Cut all dead grass from previous season's growth to a height of two (2) to four (4) inches to promote new season's growth.
- C. Remove dead grass immediately after cutting all dead growth and other pruning debris from the site and dispose of in an environmentally sensitive manner.

### 3.06 MULCHING

- A. Monitoring: All mulch beds shall be reviewed in June and September for each Maintenance and Guarantee Period. Any beds that do not meet the following conditions shall be replenished.
  1. Depth shall be three (3) inches typical shredded hardwood bark for individual trees and shrub planting areas.
  2. Depth shall be two (2) inches typical shredded hardwood bark for perennial, ornamental grass and groundcover planting areas.
  3. Do not allow mulch to be deeper than three (3) inches.
  4. Keep mulch four (4) inches away from root collar of trees.



**3.07 REMOVAL of TREE SUPPORT and TAGS**

- A. Repair all damaged guys and stakes during First Maintenance and Guarantee Period
- B. Remove all stakes, guys, labels and support material at the end of the First Maintenance and Guarantee Period and remove from site.

**3.08 WATERING**

- A. Monitor all plants during site visits for water stress. Outside of initial plant establishment, irrigation watering should be kept to a maximum of one (1) inch total per week.
- B. Water as required to keep all plants in optimum condition (1 inch of total water per week, including rainfall).
- C. Irrigation maintenance, management, and scheduling shall be provided by the CONTRACTOR.

**3.10 GUARANTEE of MATERIAL**

- A. Responsibilities: The CONTRACTOR shall replace, at no cost to the OWNER, all dead vegetation during the Maintenance and Guarantee Period.
- B. Judgment of the plant's health will be the CONSULTANT'S or the OWNER'S.
- C. Planting methods shall be the same as specified herein and in the planting details unless directed by the CONSULTANT.
- D. Limits: Plants replaced during the Maintenance and Guarantee Periods are only under guarantee during those periods.

**END OF SECTION**

**NOTES**

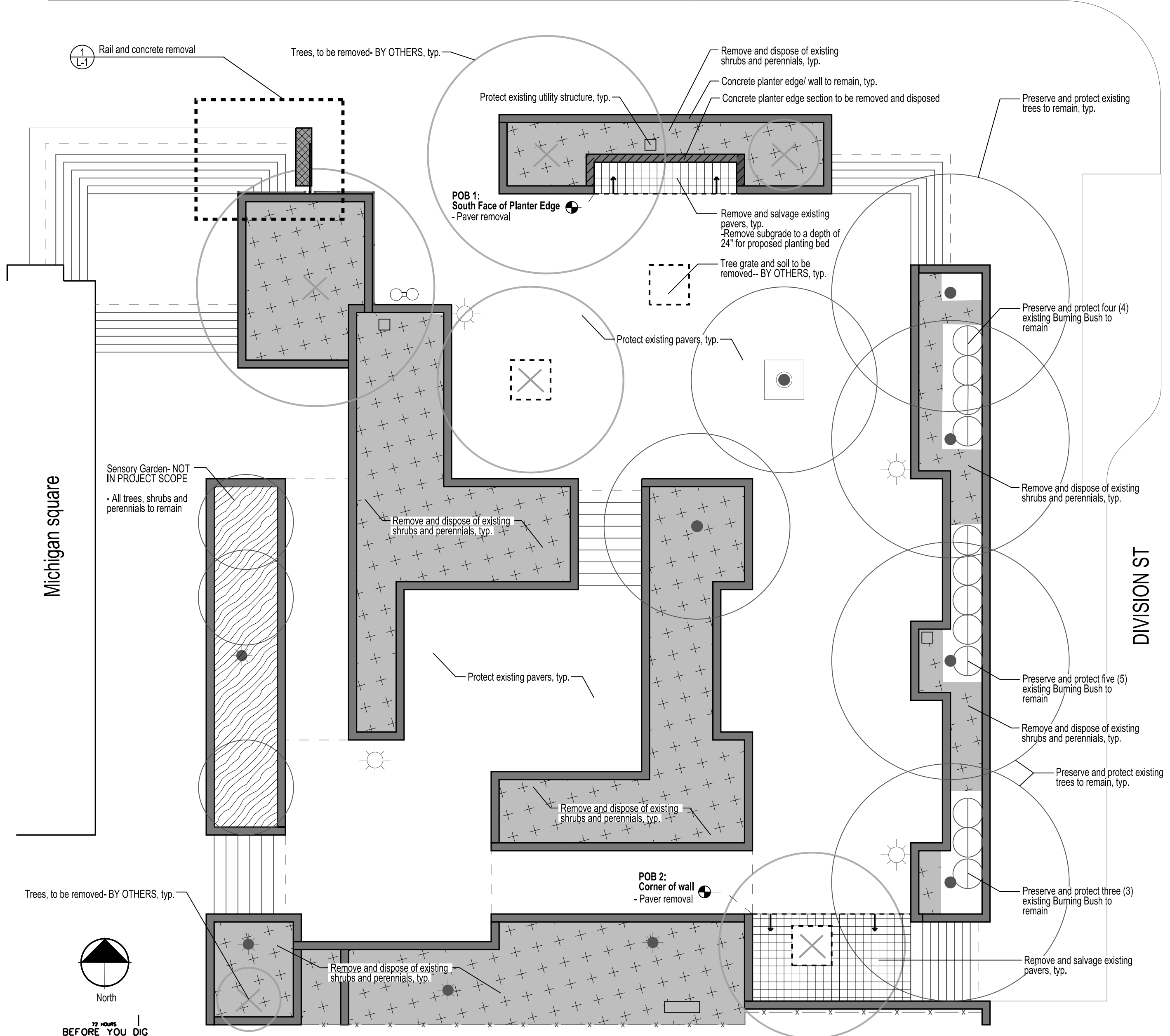
1. Utilities have not been surveyed and require location. Verify location of utilities before commencing work.
2. Plans are not based on a survey and may require field verification.
3. Any discrepancy between plans and site conditions must be brought to the attention of the landscape architect.
4. Shrubs and perennials to be removed only in areas shown on plan.
  - Existing Sensory Garden to outside of project scope; all shrubs, perennials, and trees in this bed to remain.
  - 12 Existing Burning Bush to remain along Division Street.
5. Protect existing trees and shrubs to remain- as shown on plan.
6. Amended soil to be four (4) parts topsoil mixed with one (1) part compost. Refer to specifications for soil requirements.

**LEGEND**

- Existing pole for string lights
- Existing light pole
- Existing sign
- Existing utility structure
- Existing drinking fountain
- Existing concrete wall planter edge
- Existing trees to remain
- Existing shrubs to remain
- Existing tree grate
- Existing fence
- Existing rail to remain
- Proposed paver removal
- Proposed concrete removal
- Proposed concrete planter edge removal
- Proposed tree grate removal- BY OTHERS
- Proposed rail removal
- Proposed tree removal- BY OTHERS
- Proposed bike hoop
- Proposed 6" concrete pavement
- Proposed unit pavers
- Amended soil
- Proposed concrete planter edge
- Proposed leaning rail
- Shrubs and Perennials to be removed and disposed
- Proposed planting bed

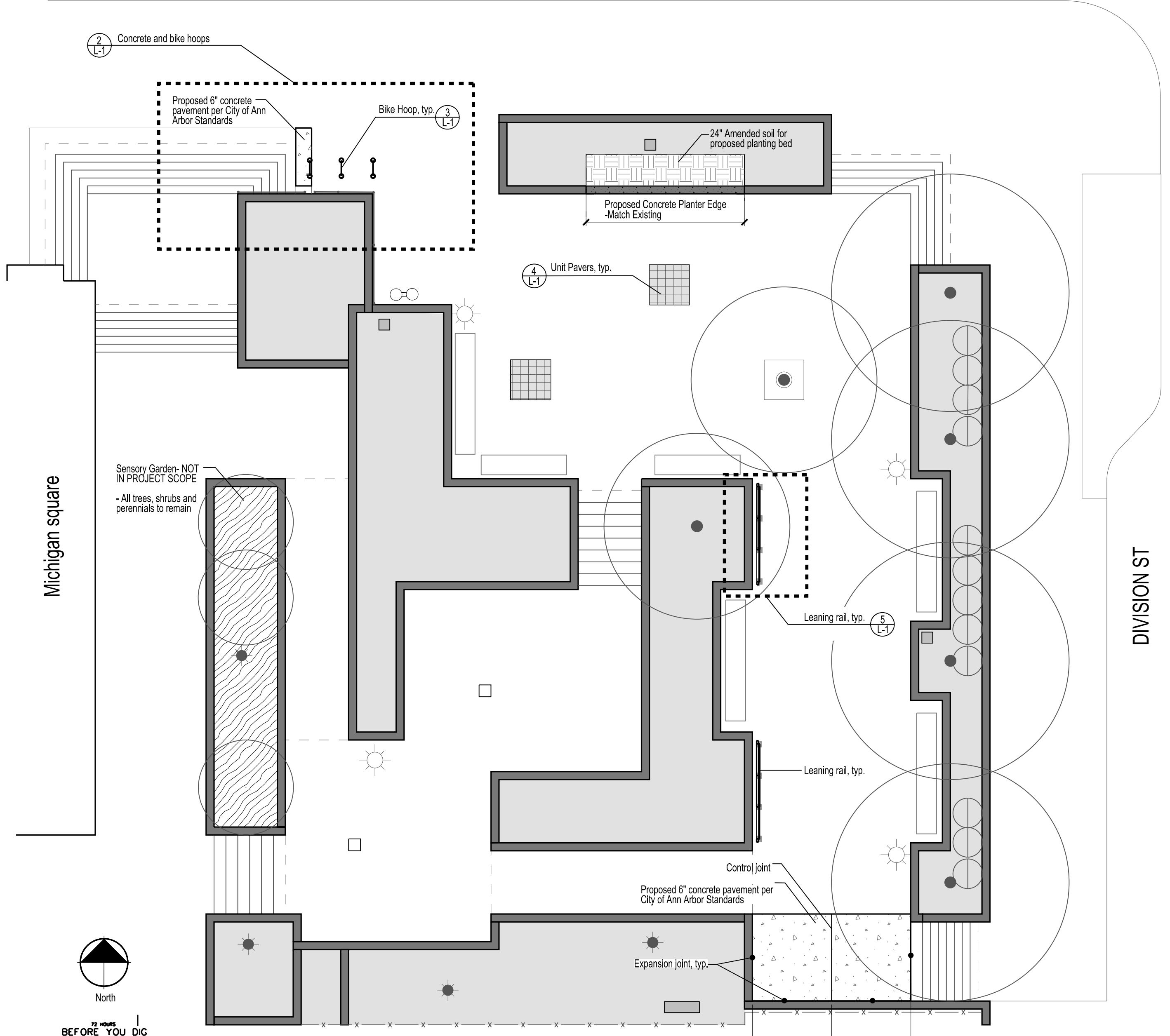
LIBERTY ST.

LIBERTY ST.



**DEMOLITION PLAN**

1" = 10'-0"



**LAYOUT PLAN**

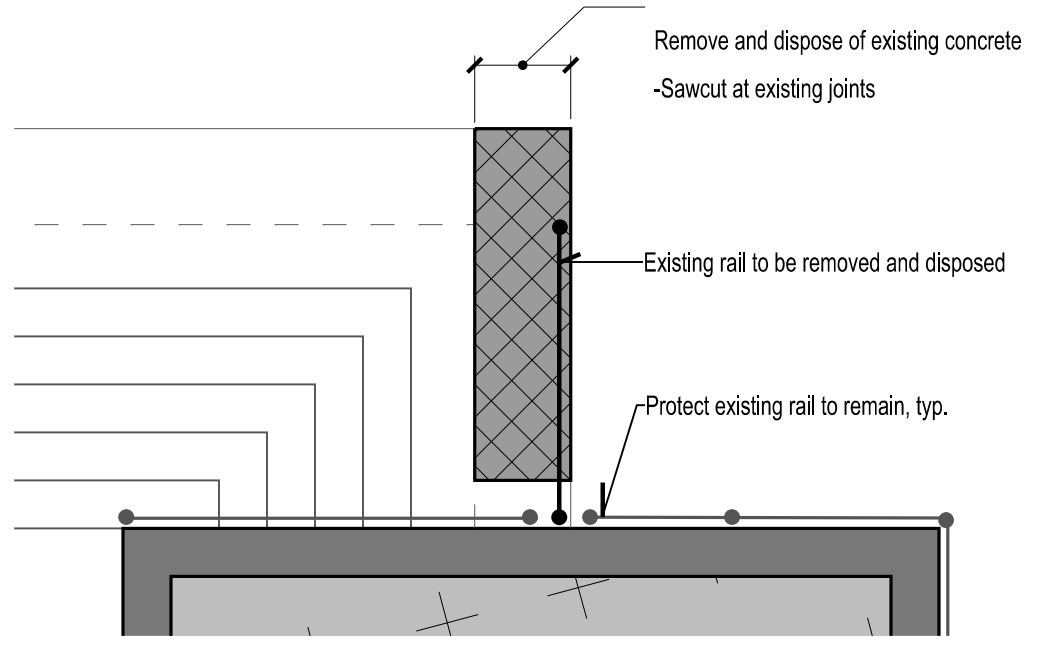
1" = 10'-0"

BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
TOLLS FREE

CONTRACTOR is responsible to field verify location of all underground utilities prior to any work.

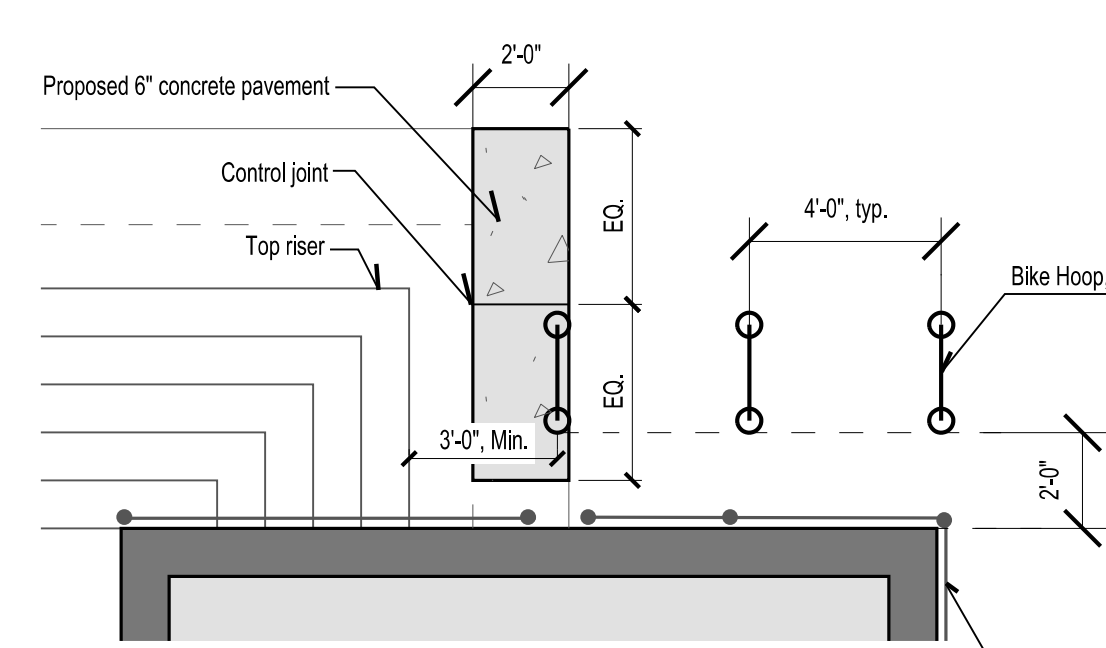
BEFORE YOU DIG  
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CONTRACTOR is responsible to field verify location of all underground utilities prior to any work.



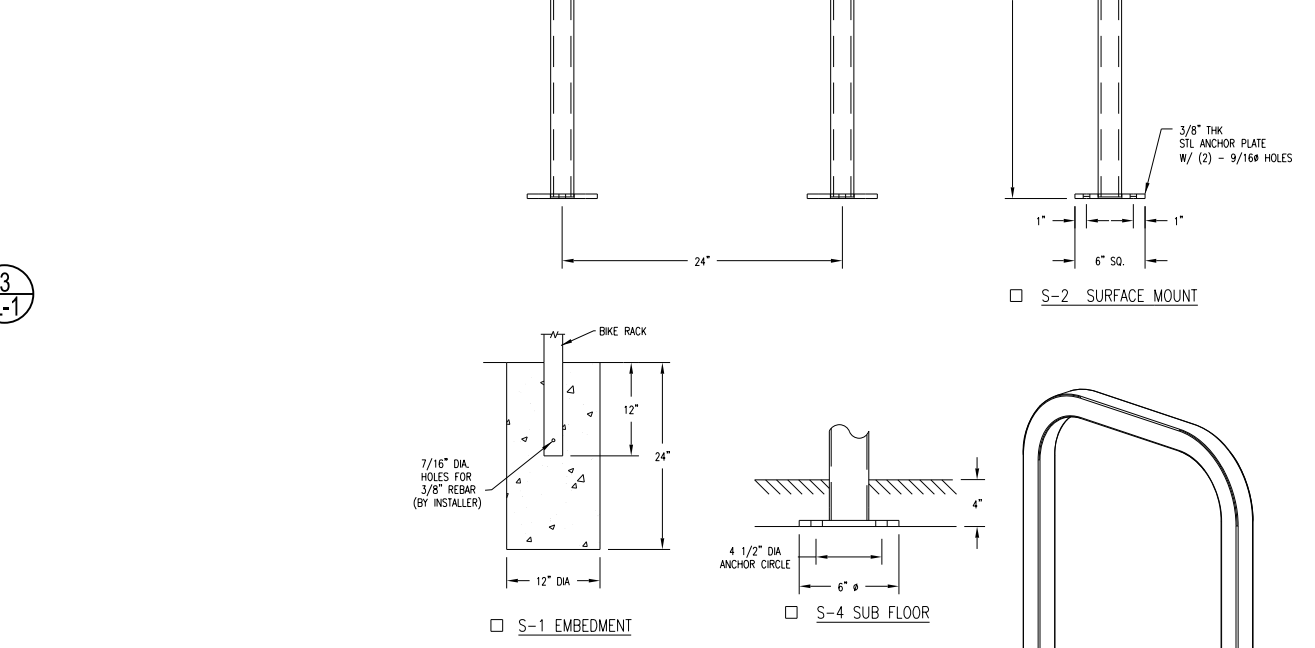
- NOTES:
1. Remove existing rail, pavement, and footings to depth required for proposed concrete pavement and base.

**1 Rail and Concrete Removal**  
1/4" = 1'-0"



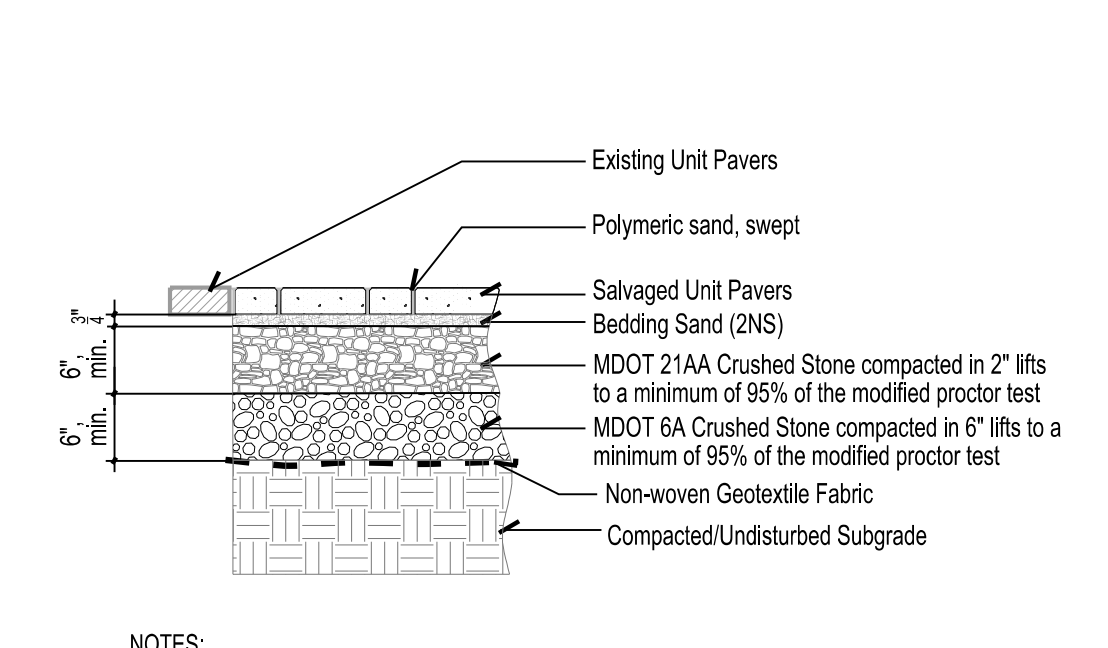
- NOTES:
1. Install proposed 6" concrete pavement per City of Ann Arbor Standards.
  2. Recompact and fill aggregate base as necessary under proposed 6" concrete areas.

**2 Concrete Pavement and Bike Hoops**  
1/4" = 1'-0"



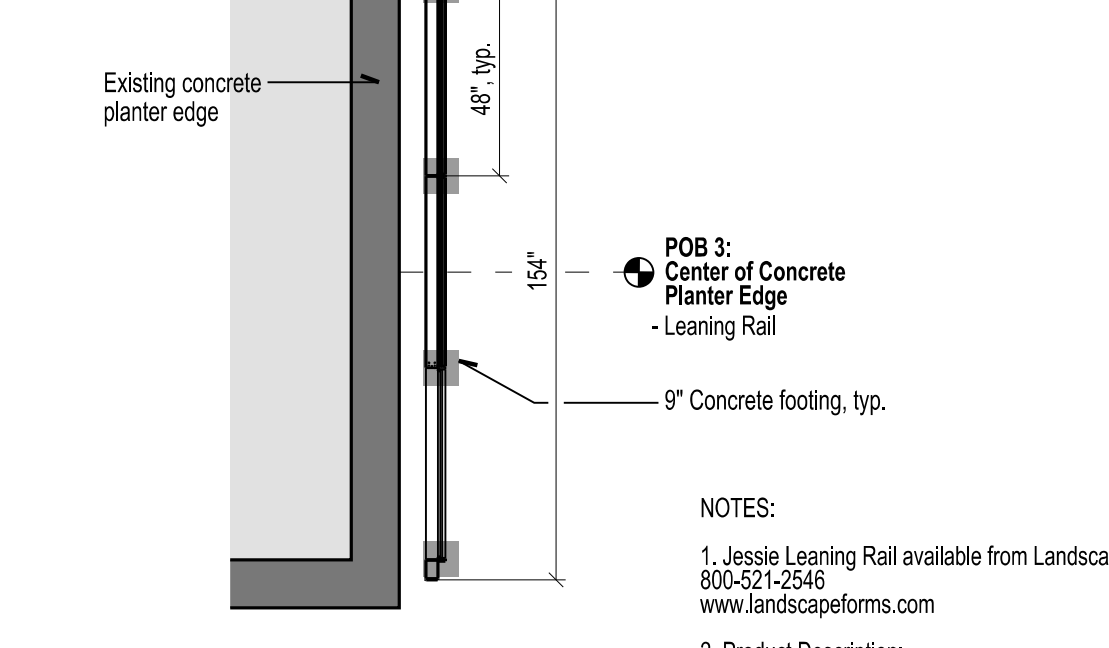
- NOTES:
1. Bike Rack Manufacturer: DuMor Site Furnishings
  2. Model: Z91-00HG-S-2
  3. Mount Surface: Finish: Hot Galvanized
  4. All Site members coated w/ zinc rich epoxy then finished w/ polyester powder coating.
  5. 1/2" x 3/4" expansion anchor bolts provided for options S-2 and S-4.

**3 Bike Hoop**  
NO SCALE



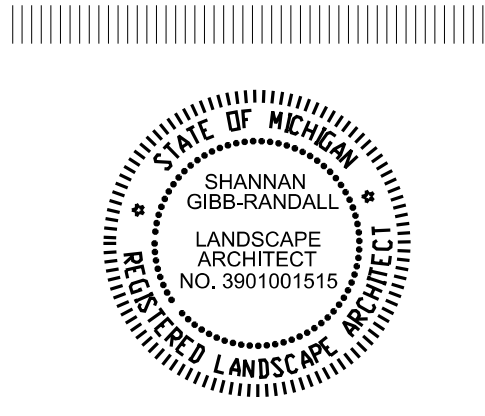
- NOTES:
1. Re-use salvaged pavers.
  2. Pavers shall be laid to match the existing pattern.
  3. Install unit pavers per City of Ann Arbor Standards for "Brick Unit Paving."
  4. Unit paver replacement area may vary; verify area after demo of tree grate and tree removal.

**4 Unit Pavers**  
NO SCALE



- NOTES:
1. Jessie Leaning Rail available from Landscape Forms 800-521-2546 www.Landscapeforms.com
  2. Product Description: Jessie Leaning Rail - Rail Top - Basic Unit and One Expansion Unit - Backrest - Powdercoated Matte Black
  3. Install 9" Concrete footing to depth of 42" below finish grade.

**5 Leaning Rail, typ.**  
NO SCALE



Project:  
**City of Ann Arbor Parks and Recreation**  
**LIBERTY PLAZA PLANTING**  
**IMPROVEMENTS**  
RFP # 24-30

Date: 04/05/2024  
Issued for: RFP

Scale: As Shown  
Drawn by: SMN

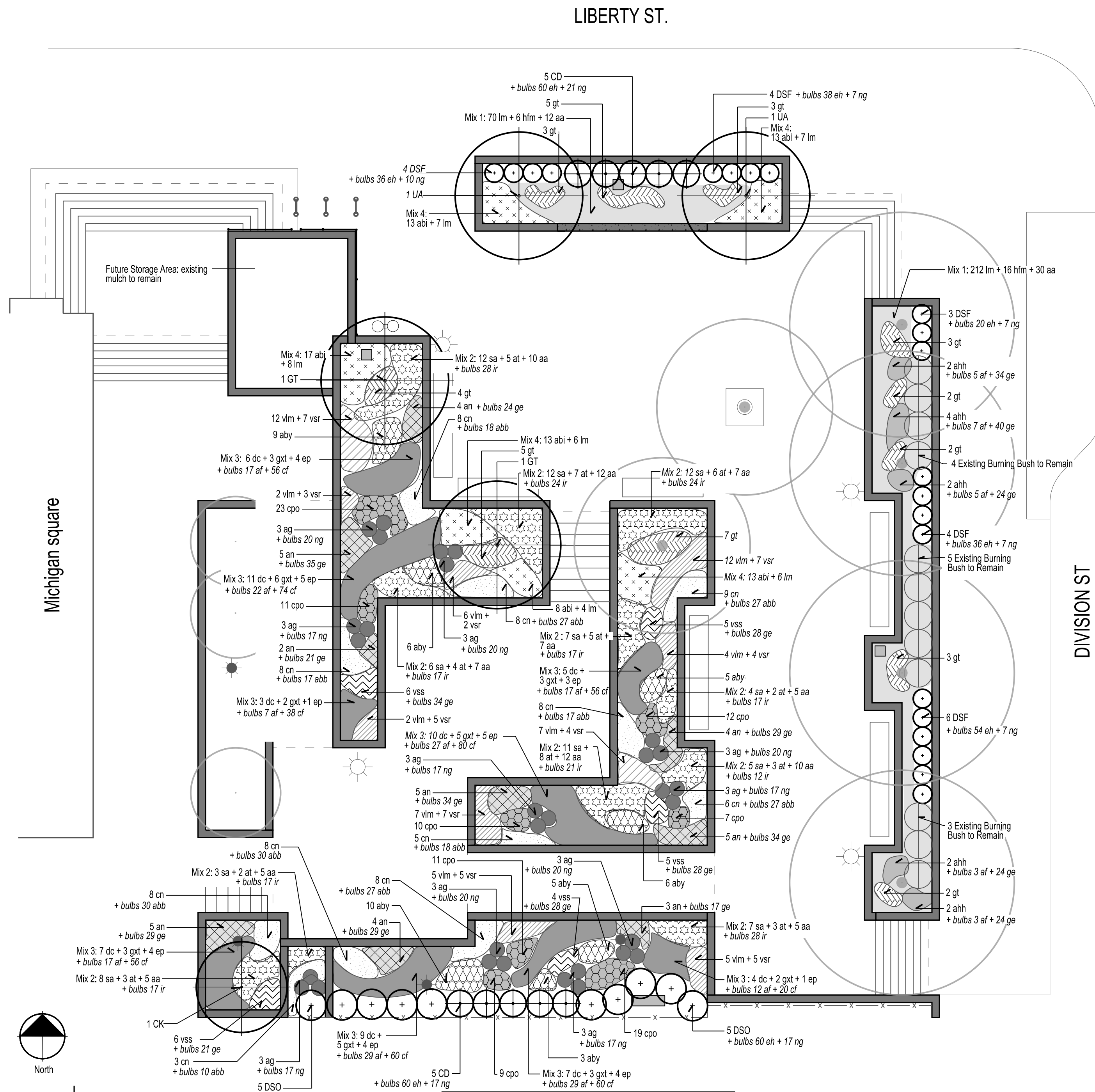
Title:  
**DEMOLITION AND**  
**LAYOUT PLAN**

Sheet:

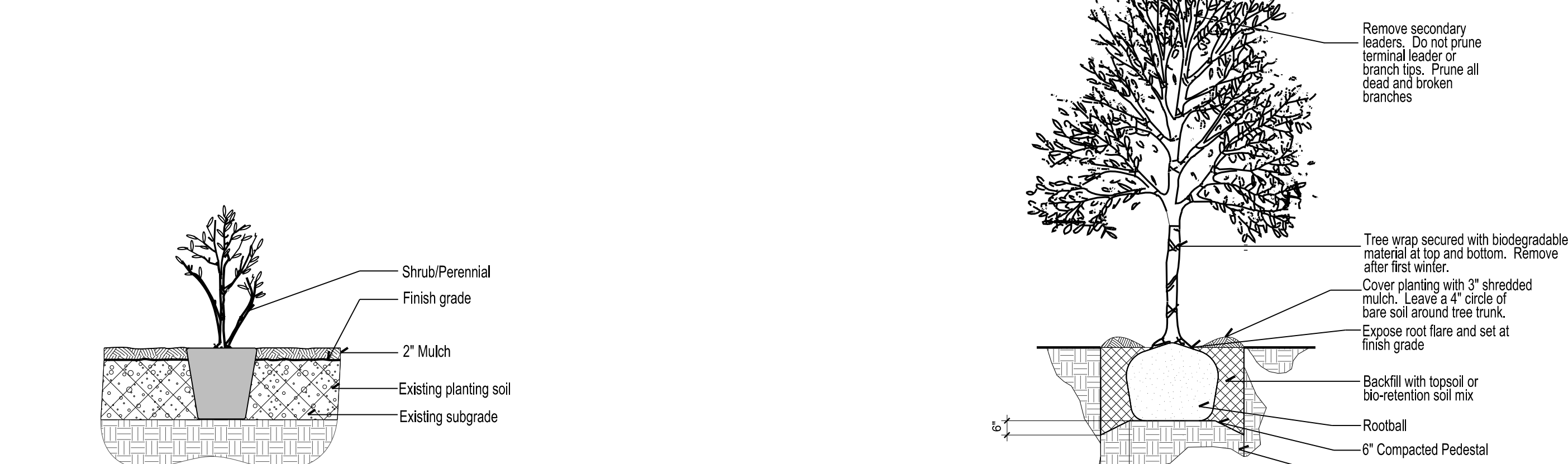
**L-1**

PLANTING PLAN

Scale: 1" = 10'-0"



CONTRACTOR is responsible to field verify location of all underground utilities prior to any work.

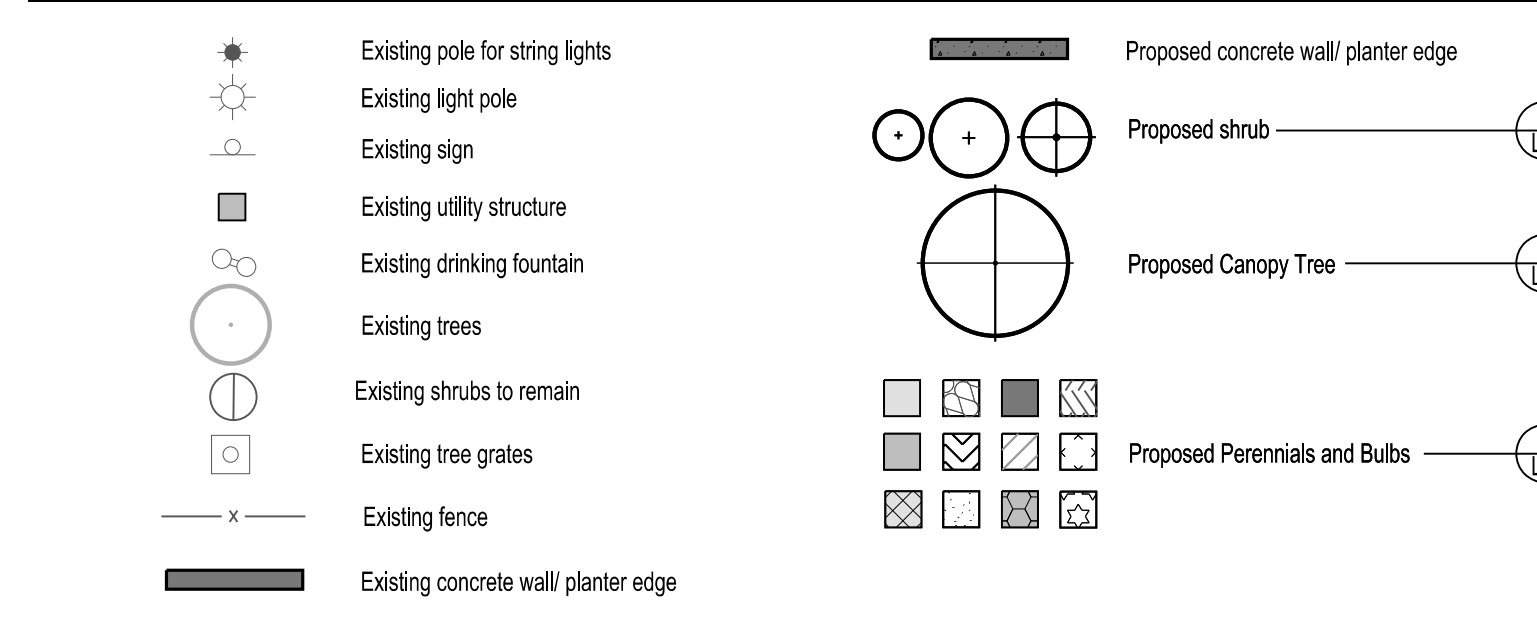


- NOTES:**
- See specifications for all material requirements.
  - Refer to Notes and Specifications for amended soil requirements.
  - Hole dug for container stock shall be large enough to gently work planting mix around all sides of plant.
  - Spacing per plan.
  - Remove container. Set stock at finish grade. Remove any binding or girdling roots.
  - Container system to be kept moist prior to, during, and after planting.
  - Topdress existing mulch as required to maintain 2" mulch depth.

1 Shrub & Perennial Planting NO SCALE

2 Tree Planting NO SCALE

LEGEND



PLANT SCHEDULE

TREES AND SHRUBS

Key	Qty	Botanical Name	Common Name	Size	Spacing	Notes
CK	1	<i>Cornus kousa</i> x. 'Venus'	Venus Dogwood	#5 cont.	as shown	
GT	2	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honey Locust	1 1/2" cal.	as shown	
UA	2	<i>Ulmus americana</i> 'Frontier'	Frontier American Elm	2" cal.	as shown	
CD	10	<i>Callicarpa dichotoma</i> 'Early Amethyst'	Early Amethyst Beauty Berry	#3 cont.	42" o.c.	
DSF	21	<i>Diervilla x. splendens</i> 'Kodiak Fresh'	Kodiak Fresh Dwarf Bush Honeysuckle	#2 cont.	30" o.c.	
DSO	10	<i>Diervilla x. splendens</i> 'Kodiak Orange'	Kodiak Orange Dwarf Bush Honeysuckle	#2 cont.	48" o.c.	Sub: Mountaineer 'Calico Orange'

PERENNIALS

Key	Qty	Botanical Name	Common Name	Size	Spacing	Notes
aby	44	<i>Agapanthus</i> 'Blue Yonder'	Blue Yonder African Lily	#1 cont.	18" o.c.	
abi	77	<i>Amsonia</i> x. <i>Blue Ice</i>	Blue Ice Amsonia	#1 cont.	15" o.c.	See also Perennial Mix 4 Planting Instructions
ag	30	<i>Andropogon gerardii</i> 'Blackhawks'	Blackhawks Big Bluestem	#2 cont.	24" o.c.	
ahh	12	<i>Anemone x. hybrida</i> 'Honorable Jobert'	Honorable Jobert Fall Anemone	#1 cont.	24" o.c.	
aa	127	<i>Aquilegia alpina</i>	Alpine Columbine	quart	*	*See Perennial Mix 1 & 2 Planting Instructions
at	48	<i>Asclepias tuberosa</i>	Butterfly Milkweed	#1 cont.	*	*See Perennial Mix 2 Planting Instructions
an	37	<i>Aster novae-angliae</i> 'Grape Crush'	Grape Crush New England Aster	#1 cont.	24" o.c.	
cn	79	<i>Calamintha nepeta</i> 'Montrose White'	Montrose White Catmint	#1 cont.	18" o.c.	
cp	102	<i>Crocosmia x. 'Prince of Orange'</i>	Prince of Orange African Lily	#1 cont.	12" o.c.	
dc	62	<i>Deschampsia cespitosa</i> 'Schottland'	Scotland Tufted Hair Grass	#1 cont.	*	*See Perennial Mix 3 Planting Instructions
ep	31	<i>Echinacea purpurea</i> 'White Swan'	White Swan Coneflower	#1 cont.	*	*See Perennial Mix 3 Planting Instructions
gxt	32	<i>Geum x. 'Totally Tangerine'</i>	Totally Tangerine Geum	#1 cont.	*	*See Perennial Mix 3 Planting Instructions
gt	37	<i>Gillenia trifoliata</i>	Bowman's Root	#1 cont.	24" o.c.	
hfm	22	<i>Helleborus x. Winter Magic</i> 'Snow Love'	Winter Magic Snow Love Lenten Rose	#1 cont.	*	*See Perennial Mix 1 Planting Instructions
lm	320	<i>Liriope muscari</i> 'Silvery Sunproof'	Silvery Sunproof Lily-turf	#1 cont.	*	*See Perennial Mix 1 & 4 Planting Instructions
sa	87	<i>Sesleria autumnalis</i>	Autumn Moorgrass	#1 cont.	*	*See Perennial Mix 2 Planting Instructions
vss	26	<i>Veronica x. 'Summer's Swan Song'</i>	Summer's Swan Song Ironweed	#1 cont.	18" o.c.	
vim	62	<i>Veronica longifolia</i> 'Marietta'	Marietta Veronica	#1 cont.	15" o.c.	Plant behind the border of Royal Candles Veronica
vsr	49	<i>Veronica spicata</i> 'Royal Candles'	Royal Candles Veronica	#1 cont.	15" o.c.	Plant at front borders of beds

PERENNIAL MIX 1

Key	Botanical Name	Common Name	Size	Spacing	Planting Instructions
hfm	<i>Helleborus x. Winter Magic</i> 'Snow Love'	Winter Magic Snow Love Lenten Rose	#1 cont.	18" o.c.	Stage first in groups of 3-5; surround with Liriope; Existing Burning Bush can be underplanted
lm	<i>Liriope muscari</i> 'Silvery Sunproof'	Silvery Sunproof Lily-turf	#1 cont.	12" o.c.	The Liriope is a matrix planting-- fill in around groups of Helleborus. Underplant existing Burning Bush
aa	<i>Aquilegia alpina</i>	Alpine Columbine	quart	12" o.c.	Scatter plantings between Liriope, in drifts of 2-5

PERENNIAL MIX 2

Key	Botanical Name	Common Name	Size	Spacing	Planting Instructions
at	<i>Asclepias tuberosa</i>	Butterfly Milkweed	#1 cont.	18" o.c.	Stage first in drifts of 1-3; surround with Sesleria
sa	<i>Sesleria autumnalis</i>	Autumn Moorgrass	#1 cont.	18" o.c.	The Sesleria is a matrix planting-- fill in around drifts of Asclepias
aa	<i>Aquilegia alpina</i>	Alpine Columbine	quart	9" o.c.	**Scatter plantings between Sesleria/ Asclepias, in drifts of 2-5

PERENNIAL MIX 3

Key	Botanical Name	Common Name	Size	Spacing	Planting Instructions
dc	<i>Deschampsia cespitosa</i> 'Schottland'	Scotland Tufted Hair Grass	#1 cont.	30" o.c.	The Deschampsia is a matrix planting- stage first throughout entire planting zone
gxt	<i>Geum x. 'Totally Tangerine'</i>	Totally Tangerine Geum	#1 cont.	15" o.c.	Plant in groups of 2-3; scattered between Deschampsia
ep	<i>Echinacea purpurea</i> 'White Swan'	White Swan Coneflower	#1 cont.	15" o.c.	Plant in groups of 1-3; scattered between Deschampsia

PERENNIAL MIX 4

Key	Botanical Name	Common Name	Size	Spacing	Planting Instructions
abi	<i>Amsonia x. Blue Ice</i>	Blue Ice Amsonia	#1 cont.	15" o.c.	Mix with Liriope
lm	<i>Liriope muscari</i> 'Silvery Sunproof'	Silvery Sunproof Lily-turf	#1 cont.	15" o.c.	Intersperse evenly within Amsonia

BULBS

Key	Qty	Botanical Name	Common Name	Size	Planting Instructions
af	200	<i>Allium x. 'Firmament'</i>	Firmament Ornamental Onion	bulb	Plant in groups of 3-7 within Anemone x. hybrida 'Honorable Jobert' and Deschampsia, 8" o.c.
abb	248	<i>Anemone blanda</i> 'Blue Shades'	Blue Shades Grecian Windflower	bulb	Plant in drifts of 7-10 within Calamintha; 4" o.c.
cf	500	<i>Chionodoxa forbesii</i> 'Blue Giant'	Blue Giant Glory of the Snow	bulb	Plant in drifts of 18-20 within Deschampsia; 4" o.c.
eh	424	<i>Eranthis hymalis</i>	Winter Aconite	bulb	Underplant new shrubs; plant in groups of 18-20, 4" o.c.
ge	537	<i>Galanthus elwesii</i>	Giant Snowdrop	bulb	Plant in groups of 7-10, within Aster, Veronica, and Anemone x. hybrida 'Honorable Jobert', 3" o.c.
ir	222	<i>Iris reticulata</i> 'Pixie'	Pixie Dwarf Iris	bulb	Plant in groups of 5-7 within Sesleria, 4" o.c.
ng	292	<i>Narcissus 'Geranium'</i>	Geranium Daffodil	bulb	Plant in groups of 7-10 within Andropogon and under new shrubs, 6" o.c.

NOTES

- Utilities have not been surveyed and require location. Verify location of utilities before commencing work.
- Plants are not based on a survey and may require field verification.
- Any discrepancy between plans and site conditions must be brought to the attention of the landscape architect.
- Shrubs and perennials to be removed only in areas shown on plan.
  - Existing Sensory Garden is outside of project scope: all shrubs, perennials, and trees in this bed to remain.
  - 12 Existing Burning Bush to remain along Division Street.
- Protect existing trees and shrubs to remain.
- Amended soil to be four (4) parts topsoil mixed with one (1) part compost. Refer to specifications for soil requirements.
- Landscape Architect to verify plant layout and placement prior to planting.
- No plant species, or varieties may be substituted without written approval from Landscape Architect.
- Contractor is responsible for watering, irrigation maintenance and lining through Plant Maintenance and Guarantee period. Coordinate irrigation system handoff with existing irrigation contractor.
- Pesticides shall only be used when and where necessary as approved by the OWNER. An application for pesticide use must be submitted and approved by the City of Ann Arbor Parks and Recreation Services Deputy Manager Prior to treatment.

INSITE

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Project:  
City of Ann Arbor Parks and Recreation  
**LIBERTY PLAZA PLANTING  
IMPROVEMENTS**  
RFP # 24-30

Date: 04/05/2024 Issued for: RFP

Scale: 1" = 10'-0"  
Drawn by: KR + SMN

Title:  
**PLANTING PLAN**

Sheet:

**L-2**

CONTRACTOR is responsible to field verify location of all underground utilities prior to any work.

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