

ADDENDUM #1

IFB No. 24-63-PLAN Charlotte Forten Park Shade, 289 Derby Street Salem, MA

Date: May 24, 2024

The three items included in Addendum #1 are to be as follows:

- 1) This addendum adds to the project scope the relocation of the existing musical Tembo Pipes, as shown on Sheet L1.0, L2.0, and on Detail 5 on Sheet L4.0. This addendum item does not affect the specification set.
- 2) This addendum adds to the project scope Add Alternate #1, which includes: the addition of down lights; electrical lines and conduits; an electrical connection made between the electrical cabinet on site and the shade sail structure; and all associated scope, as shown on Sheets L2.0, Sheet L2.1, and in Detail 6 on Sheet L4.0. Sheet L2.1, specification section 01 23 00 Alternates, specification section 25 56 00 Site Lighting, and specification section 33 70 00 Electrical Utilities, are added to IFB No. 24-63 as part of Addendum 1.
- 3) The deadline for responses is extended to Monday, June 3, 2024 at 11am.

End of Addendum #1.

**SECTION 01 23 00
ALTERNATES**

PART 1 - GENERAL

1.1 INSTRUCTIONS AND PROVISIONS

- A. Each Bidder shall be held fully responsible for examining the scope of the alternates generally defined herein and for recognizing any modifications to the Work caused by any alternate whether or not the particular trade Section is mentioned therein.
- B. All sections of the Work that are affected by the alternates will be considered Work to be performed by the General Contractor.
- C. General Bidders shall enter a single amount in the appropriate space provided in the Form for Bid, which total amount shall consist of the amount for all work to be performed by the General Contractor.
- D. The Work of the various Subcontractors and trades to be performed under alternates shall be in strict accordance with the requirements of the particular trade Section of the Specifications.

1.2 ALTERNATE # 1: Addition of SHADE STRUCTURE LIGHTING

- A. Work:
 - 1. ADD - perform all work necessary to furnish and install 8 (eight) Light Fixtures and wiring for integrated lighting in the shade structure per drawings on sheets L2.1 and L4.0 (Detail 6).
 - 2. Refer to the following Specification sections for the work of Alternate # 1:
 - a. Section 26 56 00 Site Lighting
 - b. Section 33 70 00 Electric Utilities

- END OF SECTION 01 23 00 -

ALTERNATES

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SECTION 26 56 00 SITE LIGHTING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.
- B. All references to products by manufacturer, trade name or performance Specifications bearing the connotation "or Approved Equal" shall be as determined by the Landscape Architect and the City, per MGL c. 30 s. 39M, part b, criteria 1.
 - 1. Proposed alternate manufacturers of items noted in this section should be submitted for consideration regarding conformance to the specifications at least one week prior to bid submission. Alternative manufacturers, if submitted later than one week prior to bid submission and found, in the judgment of the Landscape Architect and the City, not to be in substantial compliance with the specifications, shall not be considered as grounds for an amendment to the Contract Price due to price differences.

1.2 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to furnish, install, construct and perform all site improvements complete as shown on the Drawings and specified herein.
- B. To be included, but not limited to the following:
 - 1. Lighting on Shade Structure (ALTERNATE #1)
- C. The work of this Section is affected by Alternates; see 01 23 00.

1.3 REFERENCES

- A. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the City and coordinate all work under this Section therewith.
- B. The following related items are included under the Sections listed below:
 - 1. Section 03 30 00 – Cast-In-Place Concrete
 - 2. Section 10 73 00 – Shade Structures
 - 3. Section 31 00 00 – Earthwork
 - 4. Section 32 10 00 – Bases, Ballasts, and Paving
 - 5. Section 33 70 00 – Electric Utilities

1.4 SUBMITTALS

- A. Shop Drawings and Samples
 - 1. Provide complete Shop Drawings, photometric studies, and/or samples and catalog cuts for all items called for on the Drawings and as specified and in accordance with applicable requirements under Division 1.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original unopened and undamaged packages with labels legible and intact.
- B. Store materials in unopened packages in a manner to prevent damage from the environment and construction operations.
- C. Handle in accordance with manufacturer's instructions.
- D. The Contractor shall be solely responsible for all materials stored on the site once delivered. Any materials left unsecured at the job site shall be solely at the contractor's own risk.

1.6 DEFINITIONS

- A. The following items are included herein and shall mean:
 - 1. S.S.H.B. - Standard Specifications for Highway and Bridges, the Commonwealth of Massachusetts, Department of Public Works, latest edition.
 - 2. A.S.T.M. - American Society for Testing and Materials. The following standard specifications are applicable to the associated items as listed.
 - a. A36...Steel
 - b. A153...Zinc Coating (hot-dip) on hardware
 - c. A307...Carbon Steel bolts 66000 psi tensile
 - 3. CPSC - Consumer Product Safety Council.
 - 4. ADA - Americans with Disabilities Act and its current regulations.
 - 5. AWS: American Welding Society
 - 6. SSPS: Steel Structures Painting Council

1.7 MAINTENANCE KIT

- A. At the completion of construction, the Contractor shall provide to the City Department of Public Works, Parks Maintenance Division, a Maintenance Kit containing all touch-up paint, maintenance instructions, spare parts, and other maintenance materials provided by the manufacturers of all improvements.
- B. The Maintenance Kit shall be delivered in a single container clearly labeled with the Park Name, and each item shall be identified as to the source.

PART 2 - PRODUCT

2.1 CONCRETE FOOTINGS

- A. Cast-in-place concrete for footings shall conform to all specifications in 03 30 00: Cast-in-Place Concrete.
 - 1. Precast footings meeting the minimum specifications listed in 03 30 00 and on the Drawings may be allowed in lieu of poured-in-place with the Landscape Architect's permission; provide manufacturer's cut sheets on precast footings for approval.
- B. Foundations for lights shall be as shown on Contract Drawings, including reinforcement as recommended by a Structural Engineer and including the number,

type and location of anchor bolts as required by lighting Manufacturer. Foundations shall be made of minimum 5,000 psi concrete (at 28 days). Foundations shall have 2-1" PVC conduits for lighting circuits, 180 degrees apart. Foundations to be installed with the top of the concrete 2" above the final grade. Foundation shall extend at least to frost depth, with size as noted on the drawings.

- C. Conduits to be flush with top of concrete to not interfere with anchor bolts or bases.

2.2 LIGHTING ON SHADE STRUCTURE (ALTERNATE #1)

- A. Luminaire to be DE-LED-TR-X98-WFL-(COLOR)-12-A by BK Lighting, 40429 Brickyard Drive, Madera, CA 93636, Telephone: 559.438.5800, or Approved Equal.
1. Electrical
 - a. Wattage: 13W LED
 - b. Wiring: 3 Wire, 18GA, 125C, 300V, rated and certified to UL3265.
 2. Physical
 - a. Materials: Furnished in copper-free aluminum (6061-T6).
 - b. Body: Unibody design with enclosed, water-proof wireway and integral heat sink is fully machined from solid billet.
 - c. Knuckle: 360HD Mounting System features a mechanical taperlock, allowing full 180° vertical adjustment without the use of aim-limiting serrated teeth. High temperature, silicone 'O' Ring provides water-tight seal and compressive resistance to maintain fixture position. Design withstands 73 lbs. static load prior to movement for optical alignment with a 1/2" pipe thread for mounting. Biaxial source control additionally provides 360° horizontal rotation in addition to vertical adjustment. Aim & Lock technology allows precision adjustment without the redundant tightening and loosening of knuckle screw. 360HD hardware is stainless steel with black oxide treatment for additional corrosion resistance.
 - d. Cap: Fully machined and accommodates two (2) lens or louver media.
 - e. Lens: Shock-resistant, tempered glass lens is factory adhered to fixture cap and provides hermetically sealed optical compartment.
 - f. LED: Integrated solid state system and modular design with electrical disconnects allow for easy field upgrade and maintenance. LM-80 certified. Minimum 50,000 hour rated life at 70% of initial lumens (L70). LED technology provides long life, significant energy reduction and exceptional thermal management.
 - g. Color Management: Corrected cold phosphor technology delivers natural white light with long term phosphor maintenance over product life. Exact color point conformity exceeds ANSI C78.377 standard. Provides uniform beam with no color variation over angle. Module exceeds 80 CRI (RA>80, R9>16).
 - h. Optics: Interchangeable OPTIKIT modules permit optical field changes. Color-code: Narrow Spot (NSP) = red; Spot (SP) = green; Medium Flood (MFL) = yellow; Wide Flood (WFL) = blue

- i. Hardware: Tamper-resistant, stainless steel hardware. 360HD hardware is black oxide treated for additional corrosion resistance.
 - j. Finish: StarGuard, our 15-stage chromate-free process cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating and is RoHS compliant.
 - k. Warranty: 5-year limited warranty
 - l. Certification & Listings: ITL tested to IESNA LM-79. UL Listed. Certified to CAN/CSA/ANSI Standards. RoHS compliant. Suitable for indoor or outdoor use, in wet locations, and for installation within 4' of the ground. IP66 Rated. Made in the USA with sustainable processes.
- B. Provide Manufacturer's cut sheets and color samples for approval.

PART 3 - EXECUTION

3.1 LIGHTING ON SHADE STRUCTURE (ALTERNATE #1)

- A. All electrical work shall comply with all applicable codes and regulations and shall be reviewed by the City Department of Public Works.
- B. Install all lighting, mounting plates, remote power supply, and conduits and wiring per Manufacturer's directions and in accordance with all applicable state, local, and environmental regulations and codes.
- C. Light fixtures to be installed on the cover plates provided by shade sail manufacturer. Mount using locking nut provided on threaded coupler through 7/8" dia. hole centered on mounting plate. Provide Manufacturer's cut sheets for approval.
- D. Installation to be by a licensed Electrician, in compliance with applicable Codes.
- E. Contractor to touch up any scratches and all mars to surfaces and finishes.

3.2 OTHER INFORMATION

- A. See also 33 70 00, Electric Utilities, for related information including wiring, panel, conduit, and other requirements and codes.

END OF SECTION

SECTION 33 70 00 ELECTRICAL UTILITIES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. The conditions and general requirements of the Contract, Division 0 and applicable parts of Division 1, apply to the work under this Section.
- B. All references to products by manufacturer, trade name or performance Specifications bearing the connotation "or Approved Equal" shall be as determined by the Landscape Architect and the City, per MGL c. 30 s. 39M, part b, criteria 1.
- C. The general conditions and drawings issued for this project shall be considered as part of the Electrical Specifications.
- D. The term "This Contractor" as used under this section shall mean the Electrical Contractor, but shall not absolve the General Contractor of the responsibility for ensuring the proper completion of all work specified herein.

1.2 WORK INCLUDED

- A. Provide all labor, equipment, implements and materials required to furnish, install, construct and perform all site improvements complete as shown on the Drawings and specified herein.
- B. The Contractor shall pay for all costs and fees related to connecting the utilities and shall file all applications, details, and drawings required by the applicable authority.
- C. To be included, but not limited to the following:
 - 1. Running of new electrical service from existing electrical cabinet
 - 2. Conduits, sleeves, raceways, handholes, wiring, and connections as needed to install all lighting elements noted on the Drawings;

1.3 REFERENCES

- A. Examine all other Sections of the Specifications and all Drawings for the relationship of the work under this Section and the work of other trades. Cooperate with all trades and all departments of the City and coordinate all work under this Section.
- B. The following related items are included under the Sections listed below:
 - 1. Section 02 41 00 – Demolition and Site Preparation;
 - 2. Section 26 56 00 – Site Lighting;
 - 3. Section 31 00 00 – Earthwork;
 - 4. Section 32 10 00 – Bases, Ballasts, Paving, and Edging.

1.4 SUBMITTALS

- A. Shop Drawings and Samples
 - 1. Provide complete Shop Drawings and/or samples and catalog cuts for all items called for on the Drawings and as specified and in accordance with applicable requirements under Division 1.
 - 2. Submit Shop Drawings and product data within thirty (30) days after award of the Contract. Check, stamp, and mark with project name all submittals before

transmitting to Landscape Architect. Indicate all proposed deviations from Contract Documents.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original unopened and undamaged packages with labels legible and intact.
- B. Store materials in unopened packages in a manner to prevent damage from the environment and construction operations.
- C. Handle in accordance with manufacturer's instructions.
- D. The Contractor shall be solely responsible for all materials stored on the site once delivered. Any materials left unsecured at the job site shall be solely at the contractor's own risk.

1.6 REFERENCE STANDARDS AND SPECIFICATIONS

- A. Perform work strictly as required by rules, regulations, standards, codes, ordinances, and laws of local, state, and federal government, and other authorities that have lawful jurisdiction.
- B. All materials and installations for Electrical components shall be in accordance with the latest edition of the Massachusetts Electrical Code, OSHA codes, National Electrical Codes, and NFPA, and all applicable local codes and ordinances. Materials and equipment shall be listed by Underwriters Laboratories (UL). Special Attention shall be paid to the latest edition of the following standards:
 - 1. City Department of Public Works Regulations and Standards
 - 2. American Association of State Highway and Transportation Officials AASHTO: Standard Specifications for Highway Bridges SSHB
 - 3. American National Standards Institute ANSI
 - 4. American Society for Testing & Materials ASTM
 - 5. American Water Works Association AWWA
 - 6. Commonwealth of Massachusetts Highway Department MHD
 - a. Standard Specifications for Highways and Bridges SSHB
 - 7. National Fire Protection Association NFPA
 - 8. Occupational Safety & Health Administration OSHA
 - 9. Underwriter's Laboratories, Inc. UL
- C. The above listed codes and standards are referenced to establish minimum requirements; wherever this Section requires higher grades of materials and workmanship than required by the listed codes and standards, this Section shall apply. In the event a conflict occurs between the above listed codes and standards and this Section, the more stringent requirement shall govern.

1.7 MAINTENANCE KIT

- A. At the completion of construction, the Contractor shall provide to the City Department of Public Works, Parks Maintenance Division, a Maintenance Kit containing all touch-up paint, maintenance instructions, spare parts, and other maintenance materials provided by the manufacturers of all improvements.

- B. The Maintenance Kit shall be delivered in a single container clearly labeled with the Park Name, and each item shall be identified as to the source.

1.8 PERMITS AND FEES

- A. This Contractor shall give all necessary notices, obtain all necessary permits and licenses, file necessary plans and pay all fees and any back charges for permits and inspections. Permit fees are the responsibility of the Contractor as part of his bid, as is all coordination with the local utilities. Contractor is also responsible for obtaining any site specific utility requirements for this project prior to the start of construction and notifying local utilities for all inspections prior to backfilling, etc.

PART 2 - PRODUCTS

2.1 ELECTRICAL SYSTEM: GENERAL

- A. Materials and products furnished shall be designed for the intended use, shall meet all requirements of the latest edition of the National Electric Code (NEC), and all local codes.
- B. Materials shall be manufactured in accordance with the standards indicated in this Section, and typical industry standards and codes for the products specified. Materials and equipment shall be Underwriter's Laboratory (UL) listed, and ASME and AGA approved, for the intended service.
- C. The materials used shall be new, unused, and of the best quality for the intended use. All equipment shall have the manufacturer's name, address, model or type designation, serial number and all applicable ratings clearly marked thereon in a location which can be readily observed after installation. The required information should be marked on durable nameplates that are permanently fastened to the equipment.
- D. Electrical equipment shall at all times during construction be adequately protected against mechanical injury or damage by water. Electrical equipment shall not be stored outside exposed to the elements. If any equipment or apparatus is damaged, such damage shall be repaired at no additional cost, or replaced at no additional cost as directed by the Landscape Architect.

2.2 EMBEDMENT MATERIALS AND DUCT BANKS

- A. Backfill containing large rock, paving materials, cinders, large or sharply corrosive material shall not be placed in an excavation where materials may:
 - 1. Damage raceways, cables, or other substructures;
 - 2. Prevent adequate compaction of fill; or
 - 3. Contribute to corrosion of raceways, cables, or other substructures.
- B. Where necessary to prevent physical damage to the raceway or cable, protection shall be provided in the form of granular or selected material, suitable running boards, suitable sleeves, or other approved means.
 - 1. Provide concrete encasement around sleeves, running boards, etc. under all paved areas, with 3" minimum cover on all sides of all sleeves.
 - 2. Provide sleeves and encasements under paved areas for current and/or future use where so indicated on the Drawings, including the Landscape plans. Spare (unused) raceways shall include pull lines.

3. Raceways in duct banks shall be separated by 7.5" minimum on center.
- C. Crushed stone fill shall consist of clean, crushed stone conforming to that specified in Section 31 00 00, EARTHWORK.
- D. Sand fill for service lines shall be clean washed sand.

2.3 RACEWAYS

- A. Rigid Metallic Conduit: UL6 and ANSI C80.1.
- B. Flexible Metallic Conduit: UL1. Liquidtight flexible metal conduit shall be used in wet locations.
- C. Polyvinyl Chloride (PVC) Conduit, electrical, gray, Schedule 40 or Schedule 80 as specified, meeting the requirements of UL 651 and NEMA TC-2. If concrete encasement is required, a minimum of 3,000 PSI concrete shall be used. All conduits placed under paving, and subject to vehicular traffic, shall be concrete-encased Schedule 40 or Schedule 80 as directed.
- D. Minimum size of conduit shall be 3/4". Unless indicated on Drawings, conduit sizes can be sized in accordance with National Electric Code (NEC). Conduit bends shall not have kinks or flats, and shall not be less than standard radii.
- E. Rigid Galvanized Steel (RGS) conduit shall be used for all power, control signal, and instrumentation wiring, except where noted. Conduit shall be fully threaded at both ends and each length shall be furnished with one threaded coupling. All 90 degree conduit sweeps shall be RGS for all entry and exit into concrete pads and at riser poles, with ground bushings connected to new grounding with minimum No. 4 AWG ground wire for conduit grounding bushings.
- F. Conduits shall be made electrically continuous at coupling and connections to boxes and cabinets by means of joining fasteners or copper bond wires. Conduit shall be connected to grounded structural steel or the ground network. After assembly all conduit locknuts, all EMT coupling fittings, and all bond wire screws shall be set up tight before installation of wiring. Insulated metallic bushings shall be used on all conduits entering panel cabinets, pull-boxes, and wiring gutters, except on branch lighting circuits.
- G. Expansion fittings shall be provided on all conduits as required by the 2008 National Electrical Code, and as required by local and state codes. This includes, but is not limited to, vertical conduit risers coming from below-grade.

2.4 WIRE AND CABLE

- A. Unless otherwise noted, conductors for power, lighting, and grounding above grade shall be No. 12 through No. 4 AWG, sized according to the required loading, NEC type THWN/THHN, meeting the requirements of UL 83. Conductors for power and lighting shall be no smaller than No. 12 AWG.
- B. Conductors for power, lighting, grounding, and control below grade (and in wet locations) shall be NEC type XHHW (or XHHW-2), meeting the requirements of NEMA WC7 and ICEA S-66-524, meeting the requirements of UL 83 and sized appropriately for intended loads (no smaller than No. 12 AWG).
- C. All conductors shall be annealed copper, 98% conductivity, Class B stranded, except conductors used for power and lighting circuits No. 10 AWG and smaller which may be solid. All conductors should be rated for 600 volts or less, with a thermal rating of 90° C.

- D. The outside covering of all wiring for power, lighting, grounding, and control uses shall be color coded to identify polarity as follows:

	208Y/120 V. 3 Phase	240D/120 V 3 Phase	480Y/277 V 3 Phase
Phase A	Black	Black	Brown
Phase B	Red	Red	Orange
Phase C	Blue	Orange	Yellow
Neutral	White	White	Gray
Ground	Green	Green	Green

2.5 WIRE AND CABLE CONNECTORS AND DEVICES

- A. Wire and cable connectors and devices shall meet the requirements of UL 486. Connectors, including miscellaneous nuts, bolts, and washers shall be silicon bronze. Ferrous materials shall not be used. All connectors below grade shall be water-proof secondary type, gel-filled, bolted submersible connectors (gel-port style). No “wire-nuts” are allowed to be used below grade.

2.6 WIRING DEVICES

- A. Wiring Devices: NEMA WD 1.
- B. Wiring devices shall be specification grade, 20 ampere, ivory with Type 302 stainless steel plates. Ground fault current interrupting (GFCI) devices shall be provided where specified and/or required by applicable codes.

2.7 WARNING TAPE

- A. Warning tape shall be six (6) inches wide, polyethylene not less than 3.5 mil thick with a minimum strength of 1,500 psi. Install 8 inches below final grade. Tape shall be red for electric conduit. Tape shall have black lettering on two lines as indicated below:

CAUTION CAUTION CAUTION

BURIED ELECTRIC LINE BELOW

2.8 WIRING:

- A. All exposed wiring shall be in electric metallic tubing. All concealed wiring shall be in accordance with local codes.
- B. All branch circuit conductors shall be copper, minimum #12 AWG size, THHN or THWH as required, 600V rated.
- C. All feeder conductors shall be copper, AWG size as noted, XHHW insulation, 600V rated.

2.9 ELECTRIC HANDHOLES

- A. Electric Handholes are to be strong, lightweight, and non-conductive, and provided in the dimensions as shown on the Contract Drawings if indicated, or as required by codes and standards if not indicated. Electric Handholes shall be Ultraviolet (UV) resistant, along with being unaffected by moisture, freezing temperatures, soil, and sub-soil chemicals. Electric Handholes to be polymer concrete composite, as approved by Landscape Architect.
- B. Handholes shall be provided with skid-resistant surface covers, with an “Electric” logo. Handholes and Covers shall be design for street-rated, heavy duty applications,

meeting the requirements of either: AASHTO HS-20 or ANSI/SCTE 77-2002 Tier 15 loading, with a minimum design load of 15,000 lbs for both the handhole box and cover. Covers shall include recessed stainless steel captive bolts of a penta-head design. The nuts for the bolts shall be self-centering and corrosion resistant. Handholes shall meet the requirements of the latest edition of the National Electric Code with regards to structural integrity, installation methods, grounding of the cover and metallic parts, etc. Handholes shall be UL listed for the intended use.

- C. Color of handholes and covers to be green in grass areas and to coordinate with pavement in sidewalk areas, as approved by Landscape Architect. Handholes to be installed flush with final grade. A layer of 6-inches of crushed rock shall be installed below and in the bottom of each handhole to assist with drainage, and this compacted gravel base material shall extend out beyond the sidewalls of the handhole. Conduits shall sweep up and be at least 4-inches above top of stone.
- D. Handhole size to be 13"W x 24"L x 18"D minimum for this project; if larger handholes are required due to the quantity of wiring in a given location, consult with Landscape Architect before finalizing plans.

PART 3 - EXECUTION

3.1 MATERIALS AND WORKMANSHIP

- A. Work shall be executed in a workmanlike manner and shall present a neat, rectilinear and mechanical appearance when completed. Do not run raceway, pipe, or service exposed unless shown exposed on Drawings.
- B. Material and equipment shall be new and installed according to manufacturer's recommended best practice so that complete installation shall operate safely and efficiently.

3.2 CONTINUITY OF SERVICES

- A. Do not interrupt existing services without Owner's, Utilities', and Landscape Architect's approvals.

3.3 ELECTRICAL SERVICES: GENERAL

- A. This Section covers the requirements for installation of materials, proper workmanship, testing, cleaning, grounding, and work methods to be followed by the Contractor. This Section also includes specific instructions to be used in conjunction with the contract Drawings. Any discrepancies noted between the specification, Drawings, and actual installation shall be reported immediately to the Owner, Engineer, and Architect. Failure on the part of the Contractor to report discrepancies immediately will be considered negligent and Contractor will be responsible for correcting actions at no cost to Owner.
- B. Contractor is responsible for coordinating work with other trades, Owner, and Architect's schedule. Work will be coordinated such that systems can be properly located, and conflicts and delays are avoided. Contractor shall consider commencement of work acceptance of existing conditions.

3.4 ELECTRICAL SYSTEM TESTING, INSPECTION AND CLEANING

- A. Test wiring and connections for continuity and grounds before fixtures are connected; demonstrate insulation resistance by megger test as required at not less than 500 volts. Insulation resistance between conductors and grounds for secondary

distribution systems shall meet National Electrical Code (NEC) and interNational Electrical Testing Association (NETA) requirements.

- B. Verify and correct as necessary: voltages, tap settings, trip settings and phasing on equipment from secondary distribution system to point of use. Test secondary voltages at transformers, bus in panel boards, and at other locations on distribution systems as necessary. Test secondary voltages under no-load and full-load conditions.
- C. Test lighting fixtures with specified lamps in place for 100 hours. Replace lamps that fail within 90 days after acceptance by Owner at no extra cost to Owner (no exceptions).
- D. Provide necessary testing equipment and testing services.
- E. Failures or defects in workmanship or materials revealed by tests or inspection shall be corrected promptly and retested. Replace defective material.
- F. Clean panels and other equipment. Panel board interiors shall be cleaned and vacuumed.
- G. Equipment with damage to painted finish shall be repaired to Owner's and Landscape Architect's satisfaction. After completion of project, clean exterior surfaces of electrical equipment.

3.5 WIRING METHODS

- A. Install wire and cables in approved raceways as specified and as approved by authorities that have jurisdiction.
- B. Follow home run circuit numbers and/or notes as shown on the Drawings to connect circuits to panel boards. Where home run circuit numbers are not shown on Drawings, divide similar types of connected loads among phase buses so that currents are approximately equal in normal usage.
- C. Run concealed conduit in as direct lines as possible with a minimum number of bends of longest possible radius. Run exposed conduit parallel to or at right angles to paving/curbing lines. Bends shall be free from dents or flattening. The exact locations and routing of conduit shall be determined by the Contractor subject to the approval of the Owner and Landscape Architect.
- D. Polarity of all electrical connections shall be observed in order to preserve phase relationship in all feeders and equipment.
- E. Splices shall be made in neat, workmanlike manner using approved mechanical connectors. After splicing, insulation equal to that on the spliced wires shall be applied at each splice. Splices are permitted only in junction boxes, outlet boxes, or other permanently accessible locations. Splices installed in electric handholes shall be weather and waterproof, pre-molded polymer splices. Hand taping of splices below-grade is not acceptable.

3.6 GROUNDING

- A. Bond and ground equipment and systems connected under this Section, and all Fountain Equipment (see 13 12 00) in accordance with standards of the NEC and other applicable regulations and codes.
- B. Conduit system shall be electrically continuous throughout, grounded at service entrance. Equipment frames, enclosures, boxes, etc. shall be grounded by use of green-jacketed (or bare copper) ground, sized as per Table 250-95 of the NEC.

- C. Green bonding jumper shall be installed in flexible conduits.
- D. Copper fittings for ground connections shall conform to the requirements of ASTM B 30. All bolts, u-bolts, cap screws, nuts, and lock washers for copper fitting shall be of approved corrosion-resisting material. Compression connectors required for all below-grade grounding connections. Exothermic (cad-weld) connectors are also acceptable for use below grade. The use of bolted grounding and ground rod connectors below grade is not acceptable.

Ground Rods shall be 5/8" diameter and 8' in length, copperweld as required by applicable codes (NEC, NESC). Bonding connections to ground rods shall be permanent, welded or crimped, with copper connectors. All wire used for grounding shall be no smaller than #4 AWG copper, stranded conductor. Contractor shall bond all meter enclosure cabinets, meter sockets, safety disconnects, conduit grounding bushes, etc.

3.7 INSTALLATION OF LIGHTING FIXTURES

- A. Verify construction of light pole foundations is suitable, and provide fixtures, poles, hardware, and other accessories suitable for construction encountered.
- B. Install Lighting System, as specified elsewhere in this Specification. Ground pole steel/aluminum to power system grounding conductor at each pole location, per NEC.
- C. Coordinate installation of fixtures with installation of surrounding materials and landscaping (if applicable). Investigate lighting fixture locations and foundation supports to ensure that no interference exists between lighting fixtures, supports, and other equipment including that provided by other trades. Report any possible interferences to the Landscape Architect.

3.8 INSTALLATION OF ELECTRICAL EQUIPMENT

- A. Contractor to Furnish and Install the indicated major electrical components, and all necessary minor and expected accessories.
- B. Contractor to meet with local wiring inspector prior to the start of any work and obtain any local site requirements and restrictions, which must be followed. Contractor shall also meet with local utility, any other City officials, as directed by Owner and wire inspector, prior to the start of work, or ordering of materials. Failure to meet with the local officials and utility prior to ordering materials and start of construction will be considered negligent and all necessary corrections resulting from this failure will be at no cost to Owner.
- C. Provide, furnish and install all products and work outlined in Paragraph 1.02.G of this Specification Section.
- D. Provide all grounding of electrical installations and lighting. Grounding to be installed per installation details and National Electrical Code.
- E. Balance the lighting, receptacle and electrical load evenly on all circuits and on all phases of each circuit.
- F. Provide new handhole and conduit system for lighting and electrical work, in location as shown on Contract Drawings or as directed in the field by the Landscape Architect and Owner.
- G. Install all equipment in locations as shown on Contract Drawings. All deviations must be approved, in advance by Owner, Architect and Engineer.
- H. Install all equipment per manufacturer's instructions.

- I. Contractor shall review initial programming of Astronomical Time Switch on site with Department of Public Works staff, and shall provide all manuals and instructions as part of the Contract Closeout Documents. Unless otherwise directed, clock shall be programmed for on-at-dusk, off-at-10PM operation.

3.9 EMBEDMENT MATERIALS AND DUCT BANKS

- A. Minimum cover on all ductbanks shall be as follows:
 1. 12” under any building or structure with a 4” minimum slab.
 2. 18” under pedestrian areas;
 3. 24” under all areas subject or potentially subject to vehicular traffic (including all park pathways and plaza areas).

3.10 GUARANTEES

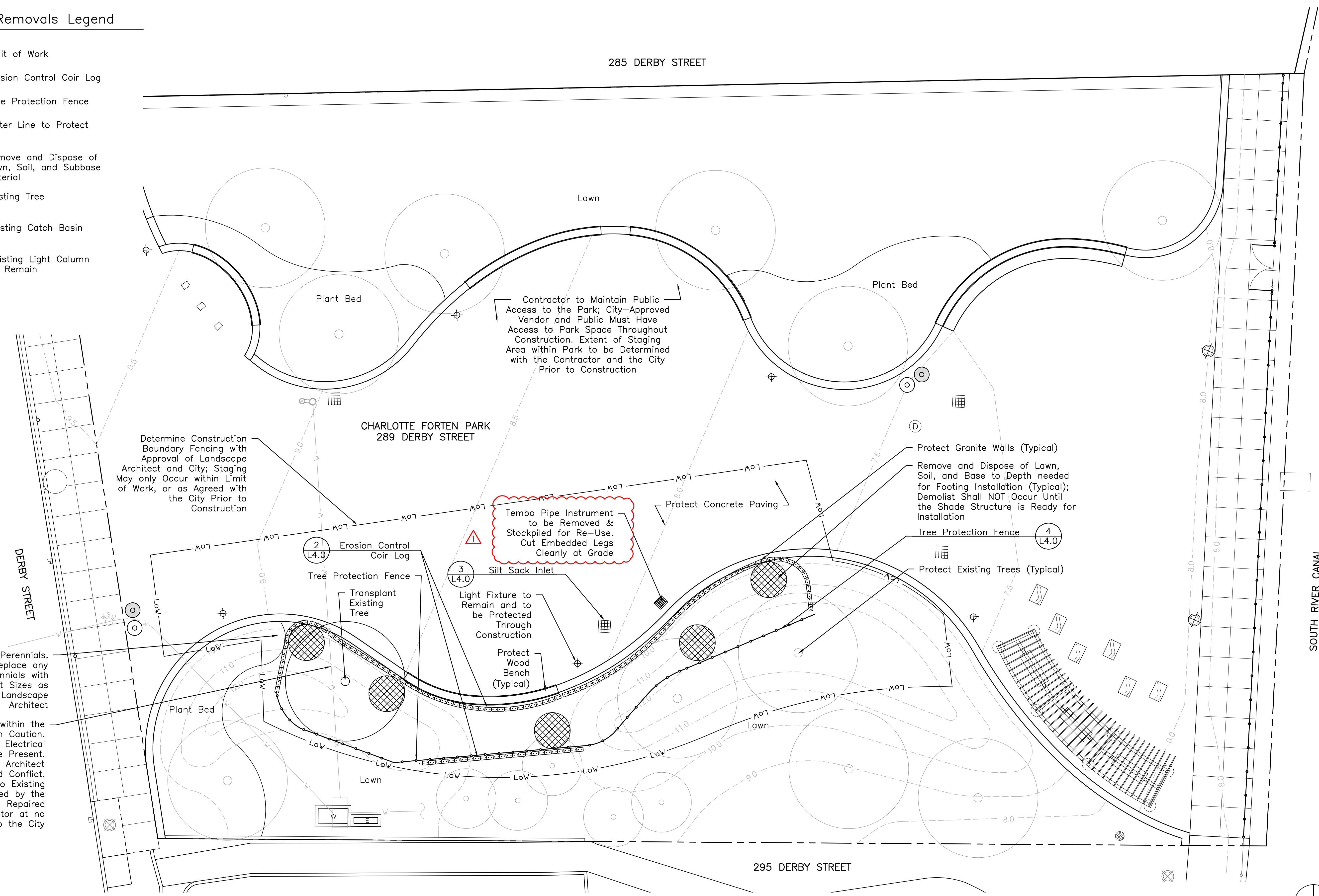
- A. Guarantee all work in writing for one year from date of final acceptance. Repair or replace all defective materials or installation at no cost to the Owner. Correct, to the satisfaction of the Landscape Architect and Owner, all damage to finishes or other materials caused in making the necessary repairs and replacements under this guarantee at no cost to the Owner.
- B. Submit guarantee to Landscape Architect before submitting for final payment.

END OF SECTION

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Demolition & Removals Legend

- LoW — Limit of Work
- ⊠ Erosion Control Coir Log
- Tree Protection Fence
- v— Water Line to Protect
- ▨ Remove and Dispose of Lawn, Soil, and Subbase Material
- Existing Tree
- ⊠ Existing Catch Basin
- ⊕ Existing Light Column to Remain



DEMOLITION AND CONSTRUCTION ACCESS NOTES

1. The Contractor shall verify location of and protect all utilities, drainage, and sub-drainage structures prior to starting construction. Call DIG-SAFE (1-888-DIG-SAFE). ALL EXISTING UTILITY LINES MAY NOT BE SHOWN ON SURVEY; DIG-SAFE IS REQUIRED.
2. Contractor to install erosion control measures as needed to prevent soil and related items from flowing off site or onto pavements to be protected and to protect all items to remain. Contractor to clean and repair all damage that results from inadequate erosion control measures, to the satisfaction of the Landscape Architect and Owner's Representative.
3. Contractor shall complete all demolition and removals required to complete the intent of the proposed design.
4. Protect from damage all trees, curbs, walls, furnishings, paving, and any other site feature that is not designated for removal.
5. Any damaged item not scheduled for removal shall be restored by the Contractor at no charge to owner.

6. Temporary fencing with construction signage shall be installed around the perimeter of the construction area to keep it secure. See Specifications section 01 56 00. The Temporary Fencing shall be the minimum necessary to enclose the work and staging unless otherwise directed in the Field. All public pathways and Pedestrian Routes into the Park shall remain open.
7. The Contractor shall, at the pre-construction meeting, discuss the proposed staging of work and construction access plan with the Landscape Architect and the Owner to confirm understanding of and compliance with the project & adjacent property access requirements. The Contractor shall then submit a written or diagrammatic access plan for approval by the landscape Architect and Owner's Representative.
8. See Specification Sections 01 14 00, Work Access, Staging and Coordination Restrictions.

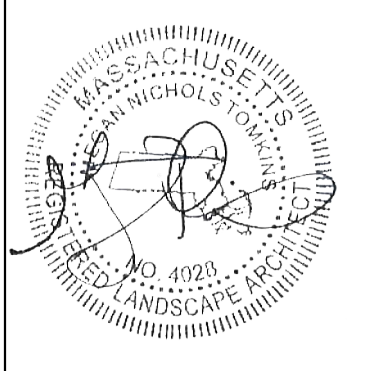
GENERAL NOTE: EXISTING CONDITIONS BASE

1. This existing conditions drawing is base on the lands survey produced by Griffin Engineering on July 3, 2017; as well as the 289 Derby Street Park (now known as Charlotte Forten Park) As Built drawings, dated December 17 2019, compiled by CBA Landscape Architects LLC.

CBA Landscape Architects LLC
 24 THORNDIKE STREET | CAMBRIDGE MA 02141
 phone 617.945.9760 | www.cbaland.com | cba@cbaland.com
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CHARLOTTE FORTEN PARK SHADE
 289 Derby Street, Salem, MA
 EXISTING CONDITIONS AND DEMOLITION PLAN

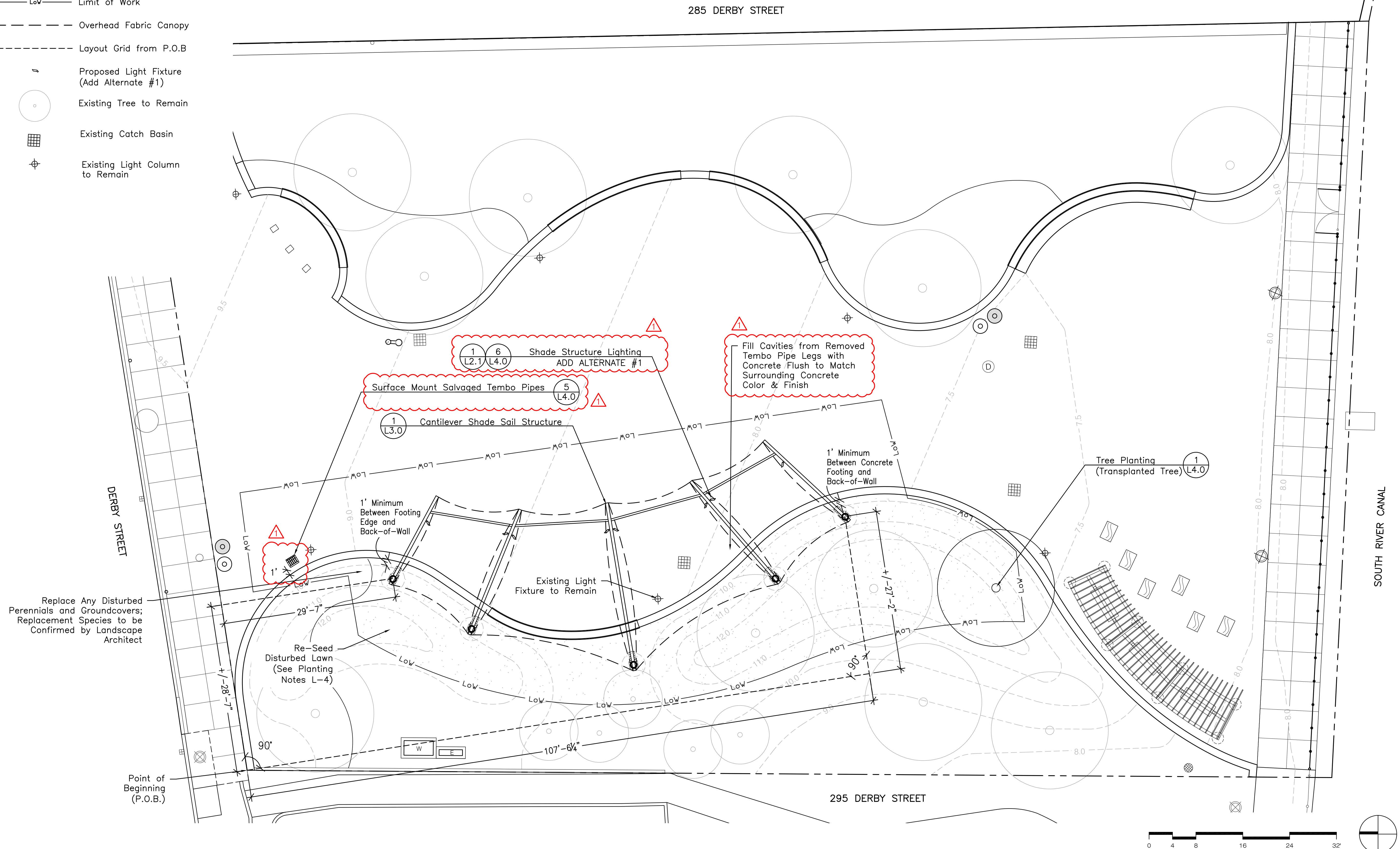
DATE: 05-24-2024
 SCALE: 1/8" = 1' - 0"
 FILE: Charlotte Forten Shade_demo.dwg
 DWN BY: AF/MT
 CKD BY: MT
 PROJ. #: 2309



L1.0

Materials & Layout Legend

- LoW — Limit of Work
- - - - Overhead Fabric Canopy
- - - - Layout Grid from P.O.B
- Proposed Light Fixture (Add Alternate #1)
- Existing Tree to Remain
- ▣ Existing Catch Basin
- ⊕ Existing Light Column to Remain



MATERIALS NOTES

1. For Planting / Lawn Notes See Sheet L-4
2. The Contractor shall verify locations of and protect all utilities, drainage, and sub-drainage structures prior to commencing work. Call DIG-SAFE. All utility lines and subsurface drainage to be coordinated with footings for site features. The Contractor will take sole responsibility for the cost incurred due to damage and replacement of all utilities damaged on the site.
3. Contractor shall verify all dimensions and elevations on the ground and report any discrepancies to the Landscape Architect prior to commencing construction.
4. All utility and drain lines to be coordinated with footings for site features.
5. Repair any new damage to existing site features to remain and any disruption beyond the limit of work.

LAYOUT NOTES

1. The Landscape Contractor shall verify location of and protect all utilities, drainage, and sub-drainage structures. Call DIG-SAFE. All utility lines and subsurface drainage to be coordinated with footings for site features.
2. An AutoCAD file will be provided to the Contractor for the use in GPS based layout of features at the Contractor's request. Some areas are to be laid out in the field.
3. Landscape Contractor shall verify all dimensions and elevations on the ground **PRIOR TO COMMENCEMENT OF CONSTRUCTION**, and shall immediately report any discrepancies to the Landscape Architect for clarification and resolution prior to commencement.
4. Landscape Contractor shall stake layout of plan on the site for approval of Landscape Architect before commencement of construction.

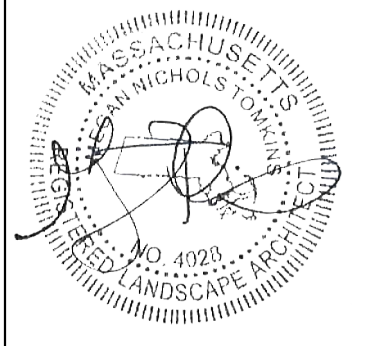
6. All layout shall be by the dimensions noted, or via AutoCAD/GPS; do not scale directly from the plan. If clarification regarding a dimension or layout order is required, the Contractor shall contact the Landscape Architect.
7. Dimensions marked with "±" and/or "(Confirm)" are intended for confirmation of conformance to the expected conditions and (where applicable) that acceptable slopes and clearances are provided. Once layout has been established using other dimensions, the Contractor shall verify these dimensions (to within a tolerance of 1/2") and report any discrepancy to the Landscape Architect for acceptance or instruction regarding adjustment. These dimensions should not be used to lay out elements.
8. Where not otherwise indicated, all dimensions are to the faces of curbs and walls and to the centerlines of items shown. Dimensions are measured perpendicular to guidelines, centerlines, and features unless otherwise indicated.
9. Coordinate conduit and pipe locations with layout of all features.



CBA | Landscape Architects LLC
 24 THORNDIKE STREET | CAMBRIDGE MA 02141
 phone 617.945.9760 | www.cbaland.com | cba@cbalands.com
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CHARLOTTE FORTEN PARK SHADE
 289 Derby Street, Salem, MA
MATERIALS AND LAYOUT PLAN

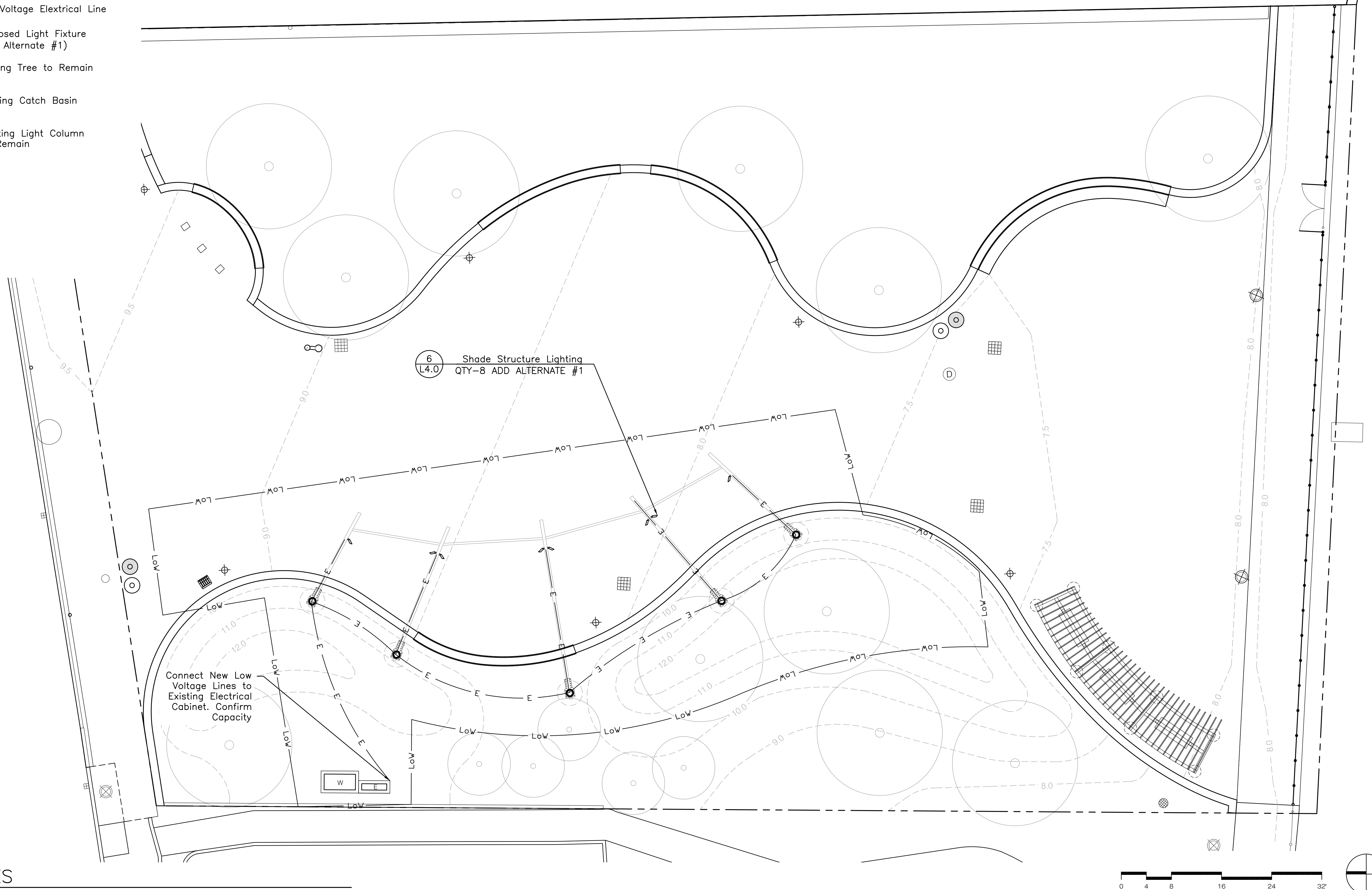
DATE: 05-24-2024
 SCALE: 1/8" = 1'-0"
 FILE: Charlotte Forten Shade_mats.dwg
 DWN BY: AF/MT
 CKD BY: MT
 PROJ. #: 2309



L2.0

Lighting Legend

- LoW — Limit of Work
- E — Low Voltage Electrical Line
- ⊙ Proposed Light Fixture (Add Alternate #1)
- Existing Tree to Remain
- ▣ Existing Catch Basin
- ⊕ Existing Light Column to Remain



UTILITY NOTES

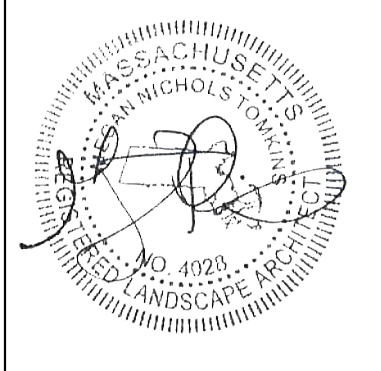
- GENERAL:
1. The Landscape Contractor shall protect all utilities prior to starting construction.
 2. All electrical work shall comply with local, state and federal codes and with all City of Salem standards. All services abandoned, discontinued, or terminated as part of the work shall be made safe according to the applicable codes. Structures abandoned as part of the work shall be removed and disposed of.
 3. Proposed conduit lines shown are schematic layouts only; adjust as needed to avoid footings, trees, and existing structures. Contractor shall submit proposed conduit layout and wiring diagrams for approval before beginning utility work, and shall submit as-built drawings showing installed line locations upon completion.
 4. New electrical connection to be from existing electrical cabinet, confirm voltage

ENTIRE SHEET L2.1 IS ADDED AS PART OF ADDENDUM 1, 05/24/2024

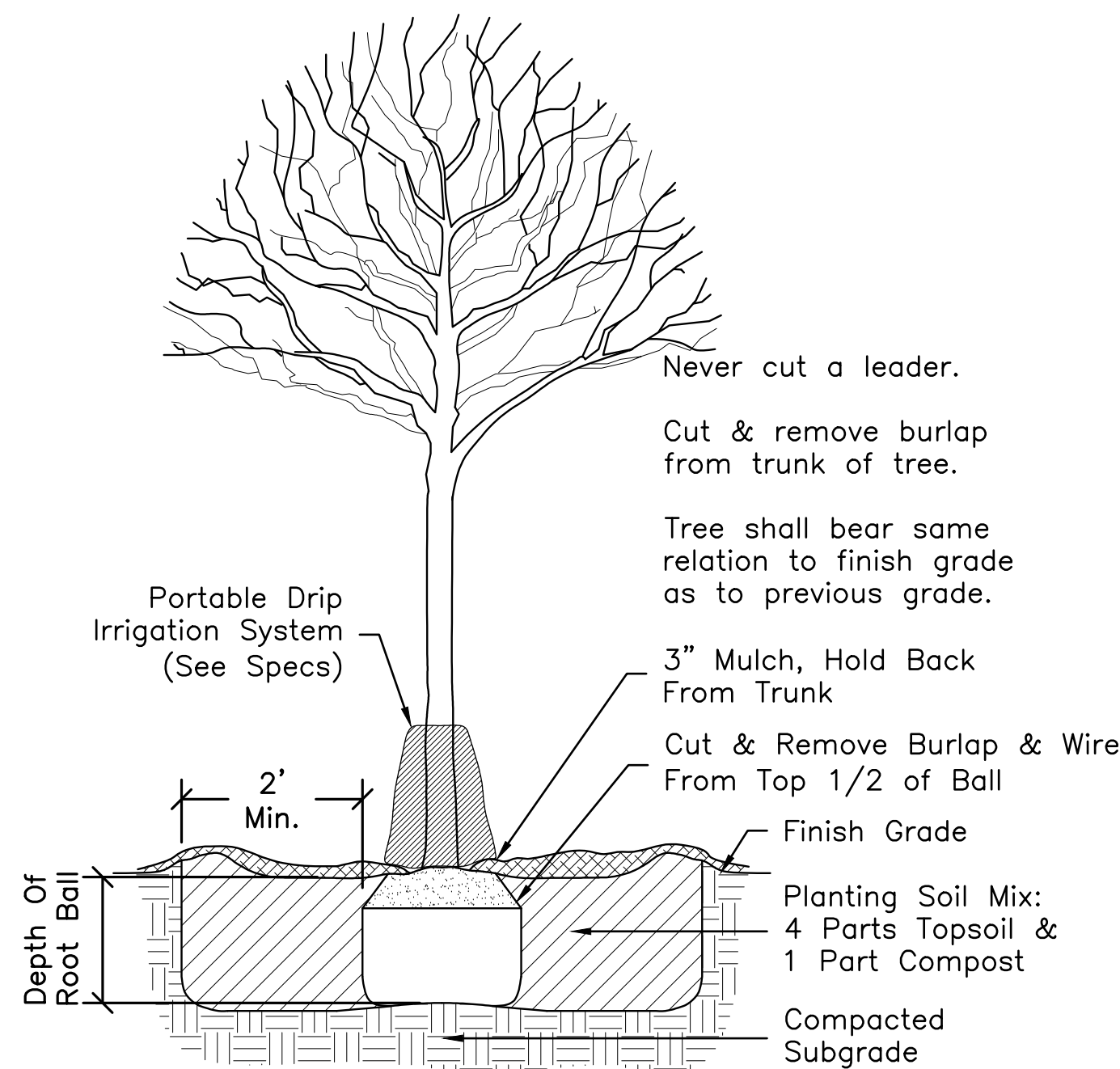
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 24 THORNDIKE STREET | CAMBRIDGE MA 02141
 phone 617.945.9760 | www.cbaland.com | cba@cbalands.com
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CHARLOTTE FORTEN PARK SHADE
 289 Derby Street, Salem, MA
 LIGHTING PLAN (ADD ALTERNATE #1)

DATE: 05-24-2024
 SCALE: 1/8" = 1'-0"
 FILE: Charlotte Forten Shade_mpls.dwg
 DWN BY: AF/MT
 CKD BY: MT
 PROJ. #: 2309

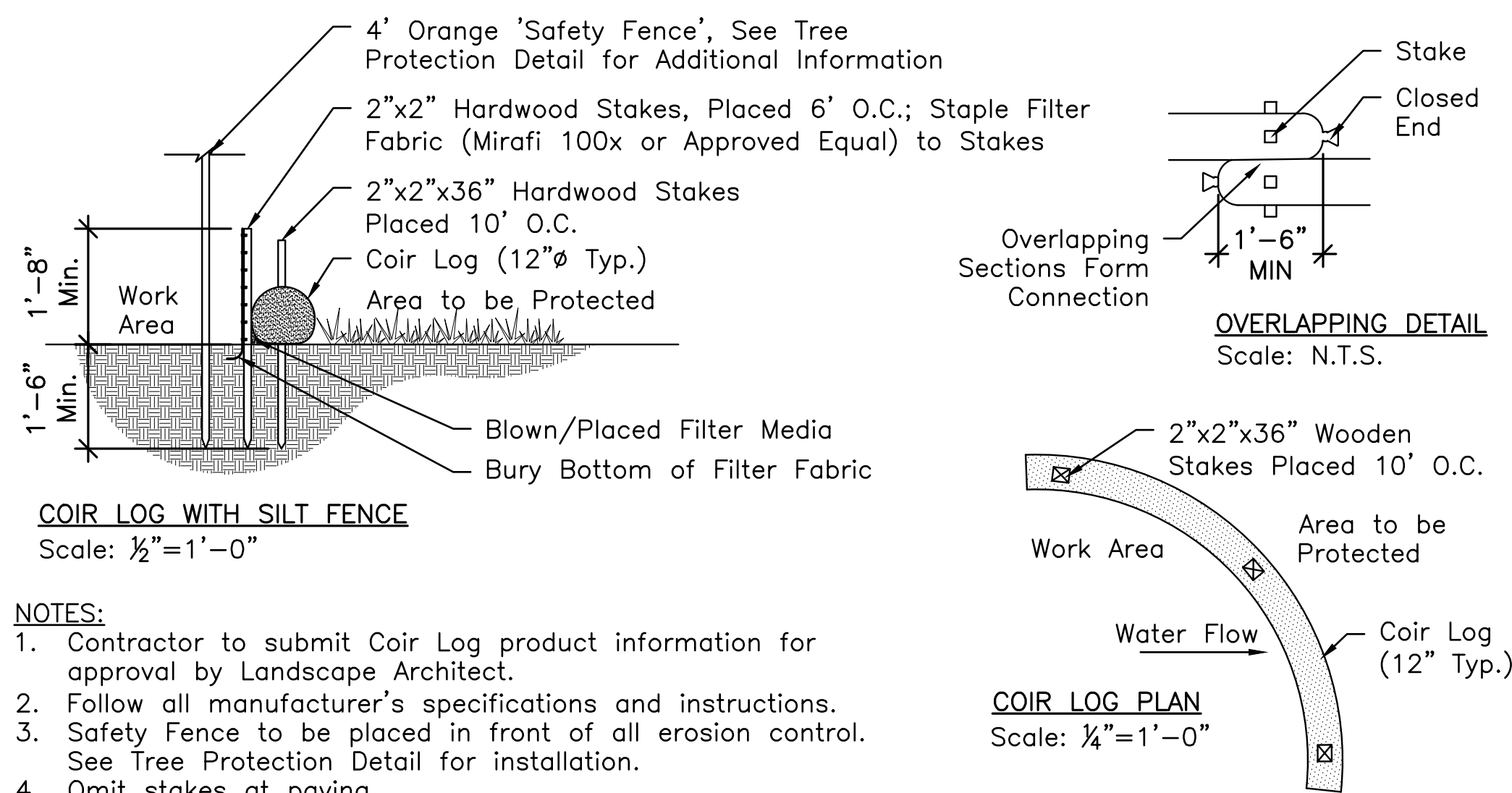


L2.1



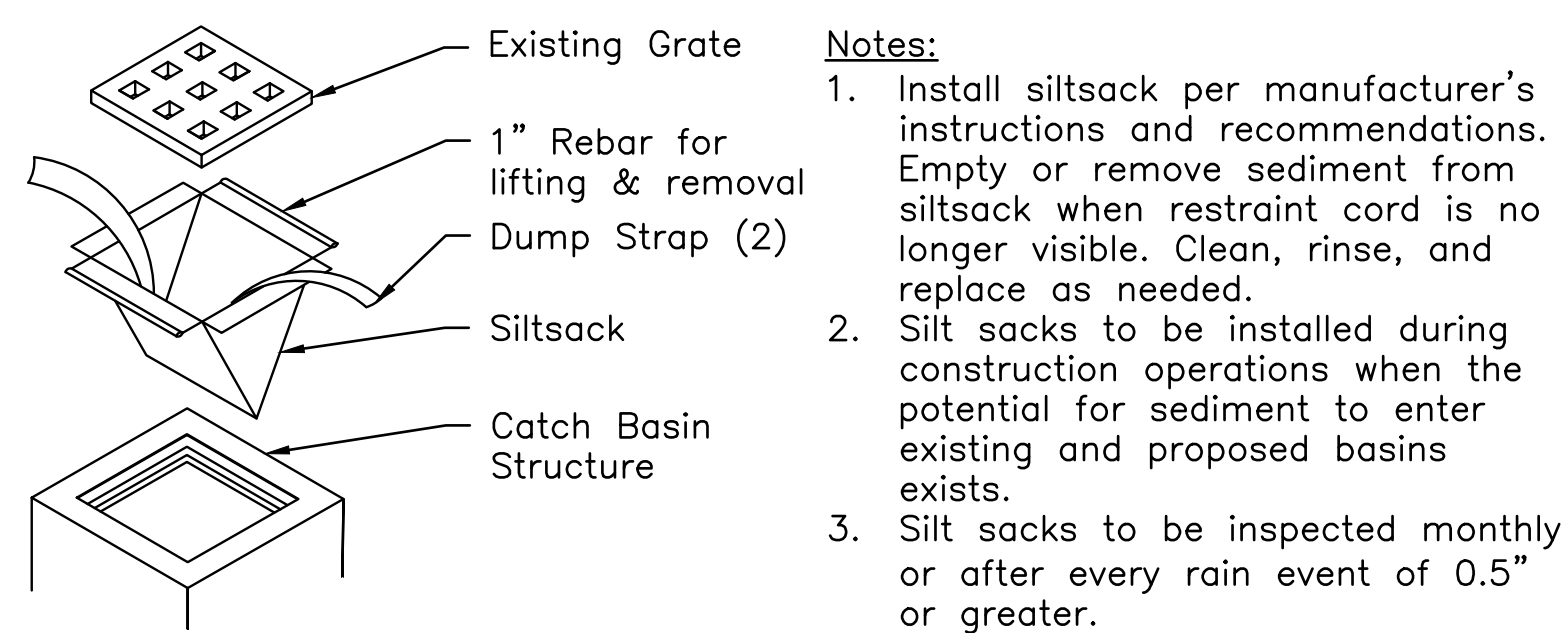
1 TREE PLANTING

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



2 EROSION CONTROL - COIR LOG

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

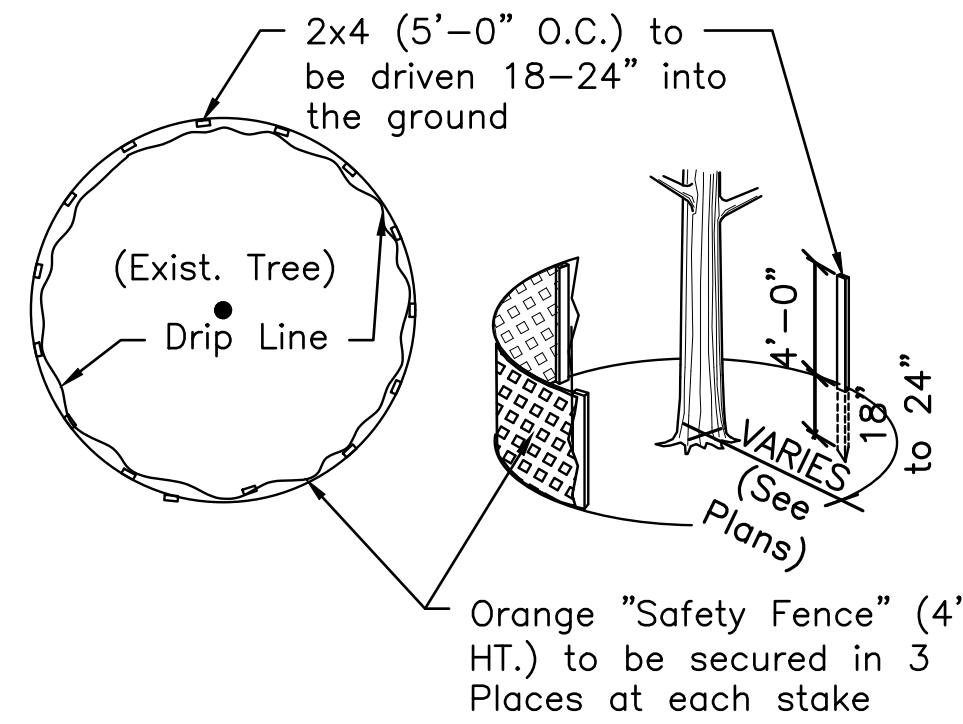


3 SILTSACK INLET

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

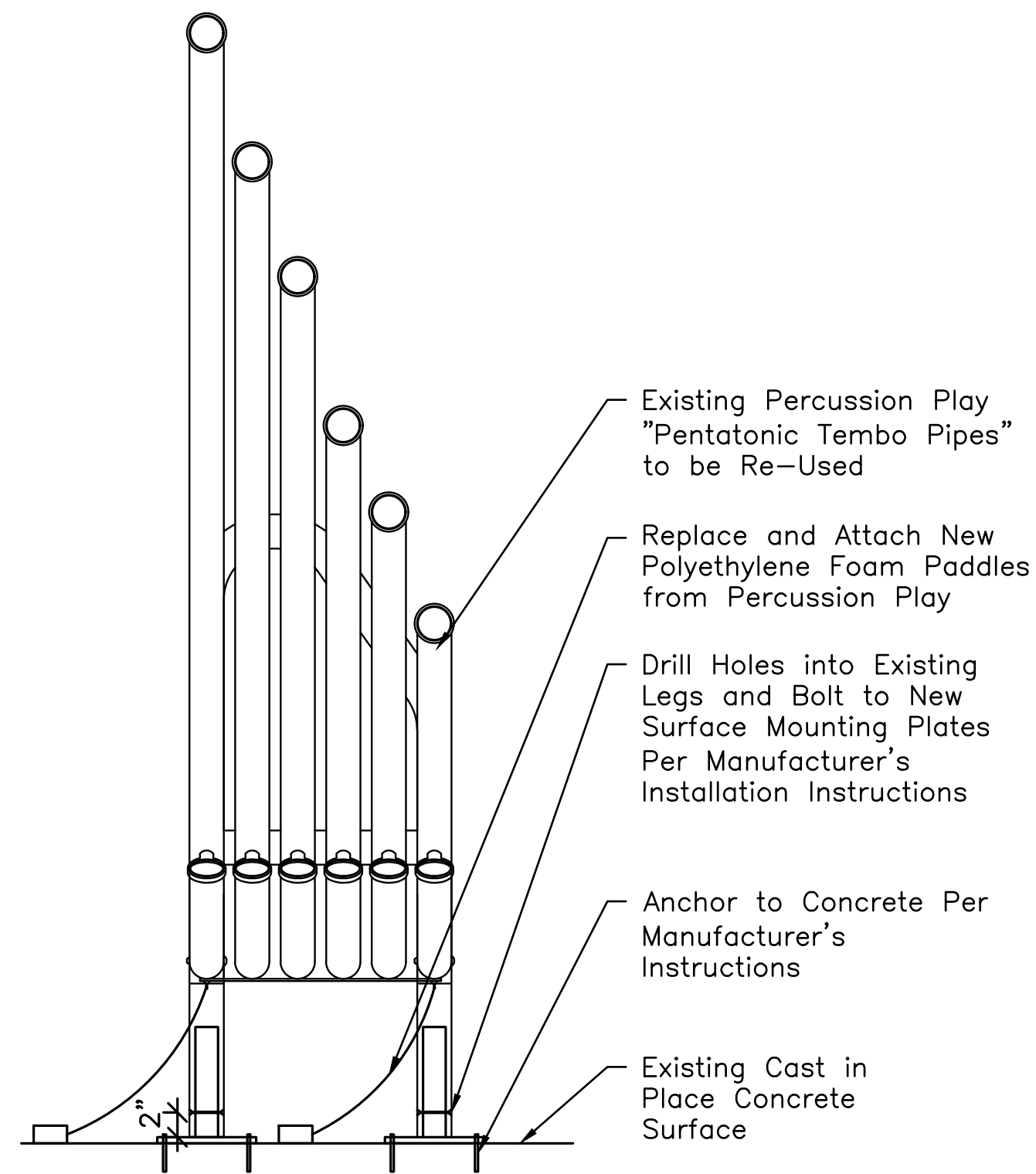
NOTES:

- Maintain fence protection in sound condition until project completion.
- Protective fence to run along dripline unless otherwise required to install improvements. Spray or stake layout of all proposed paving edges and site features within the dripline of existing trees before beginning any demolition work or remove existing material in order to determine the maximum extents of site fencing.
- Landscape Architect and Owner's Representative to approve fence placement in field before construction begins.
- Do not relocate approved fence without notifying Landscape Architect or Owner.



4 TREE PROTECTION

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

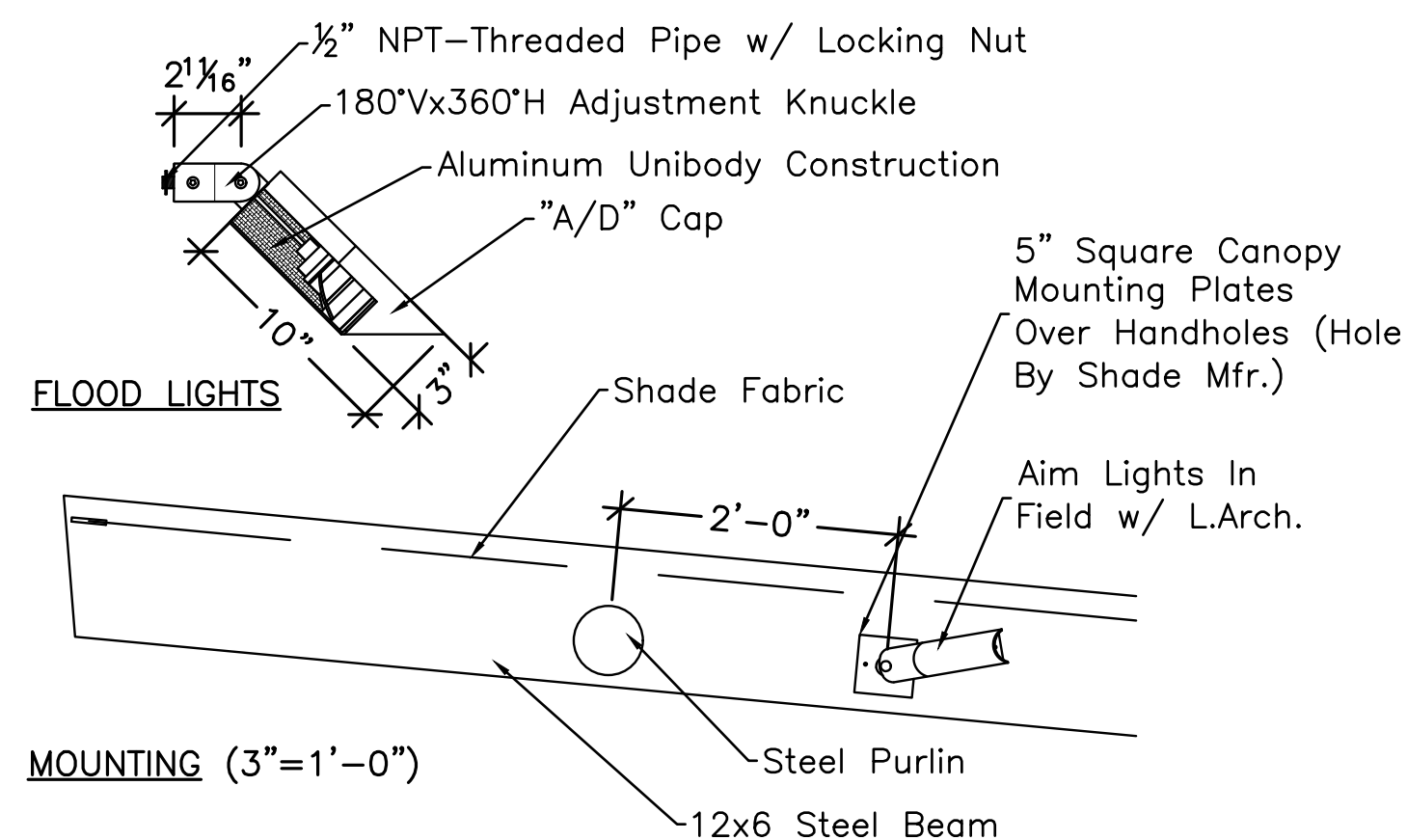


NOTES:

- Existing Tembo Pipes to be removed and protected for re-use. Cut the legs flush and re-install with new Surface-Mount Plates from Percussion Play.
- Installation to be completed in accordance with Manufacturer's Specifications.

5 SURFACE MOUNT SALVAGED TEMBO PIPES

Scale: 1" = 1'-0"

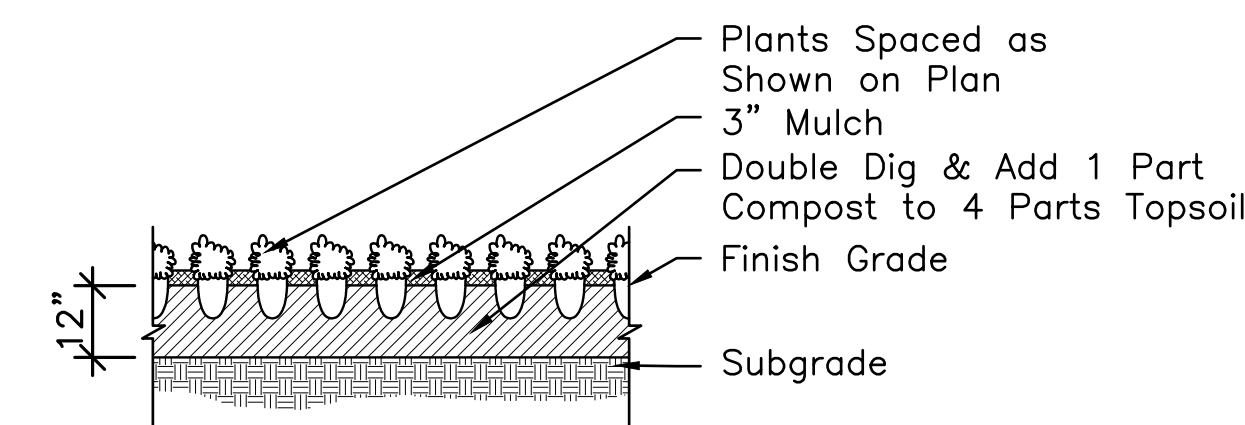


NOTES:

- Luminaires to be Denali Series Floodlights with "A/D" Cap by B-K Lighting, 40429 Brickyard Drive, Madera, CA 93636, Tel. 559.438.5800, or Approved Equal.
- Mounting shall be by I.P. threaded 1/2" connection into 3/8" Slip Hole. Slip Holes to be provided by shade canopy manufacturer.
- See Utility Plan for Light Quantity and Placement
- Installation to meet all State and Local codes & requirements, and City Standards.

6 SHADE STRUCTURE LIGHTING - ADD ALT. #1

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



7 PERENNIAL PLANTING

Scale: 3/8" = 1'-0"

GENERAL PLANTING NOTES

- Refer to Planting and Lawns Spec Section 32 90 00
- The Contractor shall protect all utilities prior to starting construction.
- The Contractor shall supply all plant materials in quantities sufficient to complete all planting shown on this drawing.
- All plants to be located on the site for approval of the Landscape Architect prior to installation.
- No trees are to be planted before the rough grades have been accepted by the Landscape Architect.
- All landscaped areas disturbed by construction inside/outside the Limit of Work are to be repaired by the Contractor at no additional cost to owner.
- The Contractor shall guarantee all new trees for two years following approved installation, and other plant materials for one year following approved installation.
- Any new plant materials to conform to guidelines established by the American Standard for Nursery Stock published by the American Assn. of Nurserymen.
- All new plant materials to be selected by the Landscape Architect at the nursery unless otherwise directed by the Landscape Architect.
- All plant beds to have a minimum 12" depth of topsoil; (protect existing tree roots).
- No substitution of plant materials shall be allowed without approval of Landscape Architect.

