ADDENDUM No. 1

RFP No. 22-19

South State Street Reconstruction

Due: March 24, 2022 by 10:00 a.m. (local time)

The information contained herein shall take precedence over the original documents and all previous addenda (if any), and is appended thereto. **This Addendum includes 21 attached pages, and plan sheets as noted below.**

The Proposer is to acknowledge receipt of this Addendum No. 1, including all attachments in its Proposal by so indicating in the proposal that the addendum has been received. Proposals submitted without acknowledgement of receipt of this addendum may be considered non-conforming.

The following forms provided within the RFP Document should be included in submitted proposal:

- **Attachment D - Prevailing Wage Declaration of Compliance**
- **Attachment E - Living Wage Declaration of Compliance**
- **Attachment G - Vendor Conflict of Interest Disclosure Form**
- **Attachment H - Non-Discrimination Declaration of Compliance**

Proposals that fail to provide these completed forms listed above upon proposal opening may be rejected as non-responsive and may not be considered for award.

I. CORRECTIONS/ADDITIONS/DELETIONS

Changes to the RFP documents which are outlined below are referenced to a page or Section in which they appear conspicuously. Offerors are to take note in its review of the documents and include these changes as they may affect work or details in other areas not specifically referenced here.

Section/Page(s)	Change
Page 12 Section III.C.4	Remove the following as provided in RFP No. 22-19 Document: Documentation of how the bidder assesses the skills and qualifications of any employees who do not have master or journeyperson certification or status, or are not participants in a Registered Apprenticeship Program.

Comment: The intent with this change is to simply remove the 4th criteria for Section III.C – Workforce Development that was erroneously included in the originally published RFP Document.

Pages 1-6 + Plans	The project is adding an APS system, as outlined on the attached drawings (C5.2, C5.3, C5.4, C8.1, C8.4, C8.5, C8.7, C8.8, and C8.9), detailed specifications, and Bid Form. The change has resulted in minor modifications to the C-5 series of drawings that are include with this addendum. The C-5 series also includes changes to the bikeway along North University.

Pages 7-14 + Plans	This project is adding irrigation facilities, as outlined on the attached drawings (C11.1, C11.2, and C12.1), detailed specifications, and Bid Form.
Plans Only	The water main plans have been amended as outlined on the attached drawings, C6.2, C6.3, and C6.9.
Page 15 + Plans	The contractor is to furnish the Regulatory Street Signage to the City of Ann Arbor, as outlined on the attached drawings (C10.1, C10.2, C10.3, and C10.4), detailed specifications, and Bid Form. The City of Ann Arbor will install the signs with their own forces.
Pages 16-18 +Plans	The material for pavement symbols has been changed from "OVLY, COLD PLASTIC" to "POLYUREA" for the following pay items- Item 259-03: Pavt Mrkg, Polyurea, Bike Arrow and Yield Sym. Item 259-04: Pavt Mrkg, Polyurea, Special Sym. Item 259-05: Pavt Mrkg, Polyurea, Bike Sym. Item 259-06: Pavt Mrkg, Polyurea, Sharrow Sym. This change is reflected on the attached plans (C10.1, C10.2, C10.3, and C10.4), detailed specifications, and Bid Form.
Pages 19-21	The Bid Form has been amended to reflect the modifications of this Addendum No. 1

II. QUESTIONS AND ANSWERS

The following Questions have been received by the City. Responses are being provided in accordance with the terms of the RFP. Respondents are directed to take note in its review of the documents of the following questions and City responses as they affect work or details in other areas not specifically referenced here.

Question 1: Can you direct me to where to find the difference between Concrete Pavement-8" Type 1 & Concrete Pavement-8" Type 2?

Answer 1: The difference between the two road pavement types is the scoring of the concrete surface. Concrete Pavement-8" Type 2 includes additional jointing, per Detail 5 Decorative Joint, on Drawing C9.1

Question 2: Do the two types of pavement referenced above have a different surface finish?

Answer 2: Both roadway pavement types are to have a broomed finish. For Concrete Pavement-8" Type 1 the direction of the broom finish is to be parallel to the center line of the roadway; for Concrete Pavement-8" Type 2 the broom finish is to be perpendicular to the center line of the roadway.

Question 3: Do you have an engineer's estimate for the project?

Answer 3: The engineer's estimate for this project, as amended by this Addendum No. 1 is $6,000,000.00.

Question 4: What is the anticipated start of construction date and when would be the earliest the project could be started?

Answer 4: As noted in the Progress Clause of the Detailed Specifications, "The Contract Award is expected on May 17th, 2022. In no case shall any work be commenced prior to receipt of formal notice to proceed by the City of Ann Arbor." Work may

commence after the contract is fully executed, preconstruction meeting is conducted, and notice to proceed has been issued.

Question 5: Can you please define pay item ID 268-06 – Handhole Assembly, Remove for Replacement, Any Size? There are 47 each listed on the bid form, and no reference to the item in the plans or the specifications

Answer 5: *The pay item 268-06 – Handhole Assembly, Remove for Replacement, Any Size includes the removal of all handholes for the project, as noted on the plans or as directed by the Engineer.*

Question 6: Please confirm who is to provide poles and fixtures for this project. Are they owner furnished, or contractor furnished?

Answer 6: *The contractor is to furnish all light poles and fixtures for this project.*

Question 7: The manufacturer of the poles for the XL1 and XL2 is not listed, but there is a detail for Spring City poles on page E2.1. Are those the poles being provided for those designation?

Answer 7: *The lighting poles for XL1 and XL2 are to be the Spring City Poles as detailed on drawing E2.1, and are to be furnished by the Contractor.*

Question 8: Please provide the scoring guidelines and procedures the Selection Committee has been instructed to use for scoring Section A-E of the new RFP system.

Answer 8: *The five scoring sections listed in Section III of the RFP shall be equal weighted (20 points each) and shall be evaluated based on the materials submitted with the respondent's proposal.*

Question 9: What individuals will make up the Selection Committee as identified in the RFP?

Answer 9: *The selection committee will be comprised of City Public Services staff.*

Question 10: Is the scoring system / point allocation be "graded on a curve" based on the responsive bids received for the specific RFP, or will the scoring methodology remain consistent from RFP to RFP?

Answer 10: *Scoring will be performed on a project-by-project basis relative to the other proposals received. The five sections and the corresponding equal point distributions are established by ordinance and will be the same for all projects.*

Offerors are responsible for any conclusions that they may draw from the information contained in the Addendum.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
ACCESSIBLE PEDESTRIAN SIGNAL SYSTEM

SIG:EMS 1 of 6 APPR:HLO:NJB:05-01-20
FHWA:APPR:05-06-20

a. Description. This work consists of either furnishing and installing an accessible pedestrian signal system and push button station(s), or removing a system and station(s) at locations as shown on the plans.

The following terminology is used in this special provision.

1. Accessible pedestrian signal system, or system hereafter, refers to central control unit (CCU) and multiple push button stations.

2. CCU, refers to the unit installed in an existing traffic signal controller cabinet, frame, and all required mounting hardware and the configurator. The CCU is the power supply and signaling interface, between the intersection traffic signal controller and the push button stations. Configurator refers to a handheld, password secure, infrared device capable of setting and resetting all push button stations on the intersection from a single push button station (global updating). Each CCU will control multiple push button stations. A complete system includes one CCU.

3. Push button station (PBS), refers to a Public Rights of Way Accessibility Guidelines (PROWAG) compliant push button station including signs when specified, installed at crosswalk termini, and all required mounting hardware. A system can include 2 to 12 PBS (maximum of 3 per phase).

b. Materials. Provide a Polara Navigator system including CCU and PBS, or approved equal, meeting the requirements of this subsection. Provide all hardware and other appurtenant materials in accordance with sections 918 and 921 of the Standard Specifications for Construction and this special provision.

1. The system must:

A. Provide various audible features including but not limited to locator tones. All locator tones must emanate from push button stations and be synchronized;

B. Have multiple language capability, selectable by user, and able to play an emergency preemption message;

C. Be able to self-test and report any faults to the traffic controller;

D. Provide the following audible feature, each with a minimum and maximum volume independently settable using the configurator:

(1) One locating tone;

(2) Five walk sound choices (field selectable);

(3) Three pedestrian - clearance sound choices (field selectable) one of which must be an audible countdown;

(4) Direction of travel (as standard feature with extended push); and

(5) Information message (custom feature with extended push).

E. Automatically adjust audible features to ambient noise levels over a 60 decibel (dB) range; and

F. Mute sounds on all crosswalks except the activated crosswalk (selectable feature).

2. The CCU must meet the following requirements:

A. Be compatible with solid-state pre-timed or actuated traffic signal control equipment and cabinet environments;

B. Be capable of controlling up to and including 12 PBSs and controlling up to and including 4 pedestrian phases;

C. Receive timing from the walk and don't walk signals;

D. Have additional advanced configurations available by using general purpose inputs and outputs;

E. Ensure full optical isolation of all inputs and outputs and include transient voltage protection as follows:

(1) General Purpose Inputs. 10 to 36 Volts (V) Alternating Current/Direct Current (AC/DC) peak with a 10 milli Ampere (mA) maximum.

(2) General Purpose Outputs and Pedestrian Outputs. 36V AC/DC peak, 0.3 Ampere (A) solid state fused contact closure.

(3) Fault Output. Normally open and closed relay contacts, 125V AC/DC, 1A maximum.

(4) Pedestrian Hand/Walking Person (Walk/Don't Walk) Inputs. 80-150V AC/DC, 5mA maximum.

(5) A, B, C, D PBS Power Outputs. Nominal 22V DC, short circuit protected, auto recovering.

(6) Environment Operation and Storage Range. -30 degrees Fahrenheit (F) to 165 degrees F (-35 degrees Celsius (C) to 74 degrees C), 0 to 100 percent Humidity, Non-condensing.

(7) Line Power. 25 Watt (W) to 75W typical, 120W peak with 8 PBSs.

F. Include a 50-pin connector and cable that plugs into the CCU for termination to the traffic signal controller terminal facilities. Ensure the connector is a Positronic MD50F20Z0X or equivalent, provided with 20-24 gauge wire, which complies with the requirements of *UL 1061*.

3. The PBS must meet the following requirements:

A. Design each PBS in accordance with the following:

(1) Produce sounds emanating from the back of the unit via an 8 ohms 15W, weather-proof speaker protected by a vandal resistant screen;

(2) Require only two wires coming from the traffic control cabinet for each phase/crosswalk;

(3) Include push buttons which are audibly locatable and equipped with tactile arrows pointing in the same direction as the associated crosswalk;

(4) PROWAG compliant, cast aluminum, nickel plated, powder coated with raised tactile arrow on button;

(5) Include solid-state switch rated to 20 million activations (minimum); and

(6) Include a two inch button with a tactile raised directional arrow on the button that can be changed to one of four directions to coincide with the direction of travel of the associated crosswalk.

B. The PBS must include the following standard features:

(1) The arrow/button must vibrate during the walk period, following a button push;

(2) Confirm a button push via a “vibratactile” bounce and a red light emitting diode (LED), clearly visible in direct sunlight, which latches ON when the button is pushed;

(3) Indicate the direction of travel with extended button push;

(4) Transmit a standard locating tone, custom sound, or verbal countdown during pedestrian clearance;

(5) Ensure sounds automatically adjust to ambient over 60 dB range;

(6) Allow sounds to have minimum and maximum volume set independently;

(7) Synchronize all sounds;

(8) Extended button push can turn on, boost volumes, and/or mute all sounds except those on activated crosswalk; and

(9) Include message to clear the intersection when preemption is activated.

C. Ensure the PBS is capable of custom message and sound options for the following features:

(1) Custom locating tone;

(2) Custom clearance sound;

(3) Custom walk sounds/message;

(4) Informational message;

(5) Multiple languages (up to three, selected by user); and

(6) Street name in Braille on the sign.

D. Ensure the PBS is fabricated in accordance with the following:

(1) Available in three standard colors: Black, Green, and Yellow. The default color is yellow unless specified otherwise;

(2) Have an operational temperature range of -40 degrees F to 165 degrees F (-40 degrees C to 60 degrees C);

(3) Ensure the housing material is cast aluminum;

(4) Chemically filmed and powder coated;

(5) Face plate constructed of powder coated aluminum with ink marking; and

(6) Have pre-drilled mounting holes to hold a 9 inch by 12 inch, R10-3b, 3d, or 3e pedestrian sign.

E. PBS LED display operational requirements:

(1) Light when the button is pushed and remain lit until the next walk phase.

(2) Luminous intensity greater than 1200 maximum continuous discharge (mcd), sunlight visible, ultra bright red, with a 160 degree viewing angle.

F. PBS audio operational requirements:

(1) Audio amplifier power output of 10W Root Mean Square (RMS) into 8 ohms.

(2) Volume control automatic adjustment range of 28dB (maximum).

(3) Microphone ambient noise frequency range of approximately 170 Hertz (Hz) to 2.3 Kilo Hertz (kHz).

(4) Button tone provides a brief “tick” to confirm each button push.

(5) Audible locating tone operates during the pedestrian-clearance and don't walk interval at an 880Hz plus harmonic, 0.1 second duration, 1 second interval.

(6) Audible "chirp" operates only during walk intervals at 2700Hz to 1700Hz, 0.2 second duration, 1 second interval.

(7) Audible "cuckoo" operates only during walk intervals at 1250Hz to 1000Hz, 0.6 second duration, 1.8 second interval.

4. Ensure the configurator meets the following requirements:

A. Be a handheld, password protected, remote that configures the CCU or an individual PBS;

B. Communicate via infrared technology with the CCU and the PBS with an interactive operation to select various configuration options at the intersection(s), by standing adjacent to either the CCU or a PBS;

C. Feature a liquid crystal display (LCD) display, with two 16-character lines, with backlight and adjustable contrast;

D. Be powered by four AA 1.5V cell batteries, include a low battery warning, and have an auto or manual shut-off switch; and

E. Have an operating temperature range of 32 degrees F to 122 degrees F (0 degrees C to 50 degrees C).

5. Warranty. Provide a manufacturer's warranty, transferable to the MDOT, that the supplied materials will be free from all defects in materials and workmanship for a 2-year period from the date of shipment. Furnish the warranty and other applicable documents from the manufacturer, and a copy of the invoice showing date of shipment, to the Engineer at the time of delivery.

c. Construction. Complete this work in accordance with sections 819 and 820 of the Standard Specifications for Construction, typical signal construction details, and this special provision.

1. Furnish and Install. Furnish and install a system at an intersection as shown on the plans and in accordance with the *MMUTCD*. Ensure that the arrow on the PBS button(s) point in the direction of pedestrian travel for the associated crosswalk.

2. Remove. Remove an accessible pedestrian signal system or a push button station and store, as directed by the Engineer, or dispose of all removed materials.

A. Where removal of an accessible pedestrian signal system is specified on the plans, remove the CCU, hardware, cable, connectors, and other appurtenant material required to complete the work.

B. Where removal of a PBS is specified on the plans, remove the PBS, sign, associated assembly, hardware, cable, connectors, and other appurtenant material required to complete the work.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

Pay Item	Pay Unit
Pedestrian Signal System, Accessible	Each
Push Button Station	Each
Push Button Station and Sign	Each
Pedestrian Signal System, Accessible, Rem	Each
Push Button Station, Rem	Each

1. **Pedestrian Signal System, Accessible** includes installing the accessible pedestrian signal system at an intersection, including a CCU, configurator, hardware, fittings, conduit(s), wiring, grounding and ground rod(s), and all appurtenant material required to complete the work.

2. **Push Button Station** and **Push Button Station and Sign** includes installing the push button station, sign (when specified), associated assembly, brackets, hardwire, fittings, conduit(s), cable to controller, wiring, grounding, ground rod(s), and all other appurtenant material required to complete the work.

3. **Pedestrian Signal System, Accessible, Rem**, includes removing an accessible pedestrian signal system at an intersection including a CCU, configurator, hardware, fittings, hardware, cable, connectors, conduit(s), grounding, and other material required to complete the work. **Pedestrian Signal System, Accessible, Rem** also includes storage or disposal of removed material.

4. **Push Button Station, Rem**, includes removing a push button station, sign, associated assembly, brackets, hardware, fittings, cable, connectors, conduit(s), ground, and other material required to complete the work. **Push Button Station, Rem** also includes storage or disposal of removed material.

A. DESCRIPTION

Furnish, Install, and Test: Irrigation system using the backflow preventor, quick coupling valves, piping, fittings, etc., of sizes and types as shown and as specified. All work shall conform to the building codes of the City of Ann Arbor.

The irrigation system shall be constructed to grades and conform to areas and locations as shown. Layout shown is essentially diagrammatic and may require adjustment to meet site constraints. Layout of system shown shall be exceeded only with the permission of the Engineer.

Unless otherwise specified or indicated, the construction of the irrigation system shall include furnishing, installing and testing of all mains backflow preventors, laterals, risers and fittings, control valves, and other necessary specialties, the removal and restoration of existing improvements, excavating and backfill, and all other work in accordance with the Contract Documents as required for a complete system.

1. References.

American Society of Mechanical Engineers (ASME)

A. B16.1 - Cast Iron Pipe Flanges and Flanged Fittings.

American Society for Testing and Materials (ASTM)

A. D1557 - Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

B. D1784 - Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.

C. D1785 - Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.

D. D2241 - Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR-Series).

E. D2466 - Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.

F. D2467 - Specification for Socket-Type Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.

G. D2564 - Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.

H. D2672 - Specification for IPS PVC Pipe Using Solvent Cement.

I. D3139 - Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.

Samples

A. Submit 12 Samples of each shape and color of paver for approval showing extreme range of color and texture.

Michigan Department of Transportation (MDOT)

A. Standard Specifications for Construction 2003.

National Fire Protection Association (NFPA)

A. 70 - National Electrical Code.Test Reports

2. Submittals.:

Shop Drawings and Equipment Product Information: Submit product information on all sprinklers, controllers, moisture sensors, hydrometers, enclosures, nozzles, swing joints, quick coupling valves, isolation valves, sleeving, control valves, wire conduit, PVC and polyethylene pipe, all pipe fittings, backflow preventer, copper pipe and fittings, wire, two-wire cable, decoders, surge arrestors, rain sensors, grounding rod, grounding plate, wire connectors, solvent and primer for PVC pipe, stainless steel clamps, and valve boxes to be used on the project.

Record Drawings and Instructions: Furnish record drawings showing actual location of all valves, drains, pipe, wiring and controls to scale with dimensions. In addition, submit two bound copies of an owner's manual, each containing operational sheets and parts lists covering all system components.

B. MATERIALS.

1. Pipe, Sleeving, and Fittings:

Pipe sizes and type shall conform to those shown on the drawings. No substitutions of smaller pipe sizes will be permitted, but substitutions of larger size may be approved. All pipe damaged or rejected because of defects shall be removed from the site at the time of said rejection.

Provide PVC pipe continuously and permanently marked with manufacturer's name or trademark, size schedule and type of pipe working pressure at 73 degrees F. and National Sanitation Foundation (NSF) approval.

Saddle and cross fittings are not permitted. Use male adapters for plastic to metal connections. Hand-tighten male adapters plus one turn with a strap wrench.

Refer to plans for PVC mainline and sleeving size and pipe type.

PVC pipe fittings shall be solvent weld, schedule 80 PVC.

All above grade pipe shall be hard copper. Fittings shall be cast brass or wrought copper.

2. Quick Coupling Valves:

Quick coupler valves shall be as noted in the irrigation legend.

Quick couplers shall have one piece body and stabilizer and 36” re-rod to stabilize quick coupler and prevent movement during quick coupler activation.

Furnish to the City, four (4) valve keys with hose swivels.

Prior to initiating work, obtain Owner approval of all valve locations to prevent conflicts with plant material and planting bed cultivation methods.

3. Valve Boxes:

Valve access boxes shall be manufactured by Carson, Pentek, NDS, or Rainbird and be of locking type including locking bolt.

Valve Access Boxes to be tapered enclosure of rigid plastic material comprised of fibrous components chemically inert and unaffected by moisture corrosion and temperature changes.

Valve box sizes shall be as indicated in the irrigation details for the specific valve.

Provide locking lid of same material black in color.

Provide and install bolt on all boxes to facilitate locking the valve box lid.

Boxes to be of minimum size required to permit access to the valve. Side walls to extend at least 2" below the bottom of valve body; use extension as necessary.

Valve access boxes shall have rot proof landscape filter fabric liner 3/4” washed crushed stone sump.

4. Accessories:

Drainage fill: 3/4" crushed stone to 6” below bottom of box..

Fill shall be clean soil free of stones larger than 2" diameter, foreign matter, organic material and debris.

Provide imported fill material as required to complete the work. Obtain rights and pay all costs for imported materials.

Suitable excavated materials removed to accommodate the irrigation system work may be used as fill material subject to the Owner's review and acceptance.

5. Backflow Prevention Device:

Provide and install the backflow prevention device as noted on plans, including the device enclosure and all accessories and piping.

PART 2 - CONSTRUCTION.

1. Quality Assurance

A competent superintendent satisfactory to the Engineer, with authority to act in all matters pertaining to the Work, shall be present on the project site during all installation.

2. Job Conditions

Submission of a proposal shall be considered evidence that the site, Drawings and Specifications have been examined and accepted.

Report to the Engineer any deviations between Drawings, Specifications and the site. Failure to do so prior to the installation of equipment and which results in the replacement or relocation of equipment shall be at the Contractor's expense.

The exact location of existing utilities, structures and underground utilities are not indicated; their locations shall be field verified prior to starting work, and installation of work shall proceed so as to prevent interruption of service or damage to them. Protect existing structures and utility services, and replace at Contractor's cost if damaged. Where conflicts occur, notify Engineer of relocations required to complete the Work.

3. Acceptance

Installation will be accepted only when the Contract is completed to the satisfaction of the Engineer.

Prior to requesting inspections, adjust sprinkler heads, and automatic equipment to provide optimum performance. Submit accurate record drawings and operating instructions to the Engineer as a condition of final payment.

After completion, testing and Provisional Acceptance of the system, instruct the Engineer's personnel in the operation and maintenance of the system.

Inspections for Acceptance of Work

Inspections for acceptance of the Work will occur at the time of Contract Substantial and Final Completion. Note that Substantial Completion constitutes start of the warranty period for the portion of the Work accepted, unless otherwise specified.

1. Examination

Examine final grades and installation conditions. Do not start irrigation system work until unsatisfactory conditions are corrected.

The contractor shall energize all existing irrigation systems on the site prior to initiating any work. Contractor shall inventory all defects in the existing systems. Any defects found which will not be replaced with new irrigation shall be noted and brought to the attention of the Owner's representative.

2. Preparation:

Coordinate all work with building trades a, electricians, landscapers, paving contractors and all other contractors on the site.

Have all utilities accurately marked by the utility provider and Owner prior to initiating any work.

Layout and stake the location of each pipe and two-wire cable runs, sleeve locations, and all sprinkler heads and sprinkler valves. Obtain Landscape Architect's acceptance of layout prior to excavating, unless specifically waived by the Architect.

3. Excavating and Backfilling:

Excavating shall be considered unclassified and shall include all materials encountered, except materials that cannot be excavated by normal mechanical means. Excavate trenches of sufficient depth and width to permit proper handling and installation of pipe and fittings. Excavate to depths required to provide 2" depth of earth fill or sand bedding for piping when rock or other unsuitable bearing material is encountered.

Install sleeves for irrigation piping installed beneath paving. Minimum depth of bury for sleeves beneath roadways and drives to be 24" and 24" beneath walks.

Extend ends of all sleeves 12" beyond back of curbs or walk edges.

Fill to match adjacent grade elevation with approved earth fill material. Place and compact fill in layers not greater than 8" depth.

Provide approved fine-grained earth fill or sand to point 4" above the top of pipe, where soil conditions are rocky or otherwise objectionable.

Fill to within 6" of final grade with approved excavated or borrow fill materials free of lumps or rocks larger than 2" in any dimension.

The top 6” of backfill shall be topsoil, free of rocks, subsoil or trash. Any special soil mixture shall be replaced to the original condition it was prior to irrigation installation.

Except as indicated, install irrigation mainline with a minimum cover of 24” based on finished grades. Install irrigation laterals with a minimum cover of 12" based on finished grades.

Excavate trenches and install piping and backfill during the same working day. Do not leave open trenches or partially filled trenches open overnight.

4. Plastic Underground Pipe:

Install all plastic pipe in accordance with manufacturer's installation instructions as ASTM D- 2274. Provide for thermal expansion and contraction

Saw cut plastic pipe. Use a square-in-sawing vice, to ensure a square cut. Remove burrs and shavings at cut ends prior to installation.

Make PVC plastic-to-plastic joints with solvent weld joints. Use only primer and solvent recommended by the pipe manufacturer. Install plastic fittings in accordance with pipe manufacturer's instructions and ASTM D-2855. Contractor shall make arrangements with pipe manufacturer for all necessary field assistance.

Allow joints to set at least 24 hours before pressure is applied to the system.

Maintain pipe interiors free of dirt and debris. Close open ends of pipe by capping, taping or other acceptable method when pipe installation is not in progress.

5. Valve Installation:

All quick coupler valves shall be enclosed in a valve box.

Valve box size shall be installed with 10” valve box for quick couplers. Add extensions as required to prevent soil settlement around the valve. Set box flush with finish grade and aligned with adjacent boxes and/or adjoining site-work and at right angles to walks and drives.

All valve boxes shall have locking bolt-down cover. Include locking bolt with all valve box installations.

Install filter fabric inside valve box and install valve boxes on a suitable base of gravel to provide a level foundation at proper grade and to provide drainage of the access box. Support box with block or notch box to protect pipe under box.

Provide all quick coupler valves with pre-fabricated three elbow swing joint, schedule 80 PVC.

Fittings and pre-fabricated swing joint manufacturers shall be Spears, Lasco, or Dura.

6. Flushing and Testing:

After all new quick couplers are in place and connected for a given section and all necessary division work has be completed, quick couplers shall be opened and a full head of water used to flush out the system.

Sprinkler mains shall be tested under normal water pressure for a period of 12 hours. If leaks occur, repair and repeat the test. Give Owner 24 hours notice prior to testing.

Testing of the system shall be performed after completion of each section or completion of the entire installation; and any necessary repairs shall be made, at the Contractor's expense, to put the system in good working order before final payment by the Owner.

Adjustment of the equipment will be done by the Contractor upon completion of installation to provide optimum performance. Minor adjustments during the guarantee period will be made by the Owner.

7. Clean Up:

Contractor shall keep the premises free from rubbish and debris at all times and shall arrange his material storage so as not to interfere with the Owner's operation of the job. Contractor shall remove and legally dispose of all unused material, rubbish and debris, including unsuitable excavated material from the site.

4. MEASUREMENT AND PAYMENT.

The plans show a conduit sleeve for the irigation piping, which shall be paid for separately as "3 Inch Schedule 80 PVC Electrical Conduit".

The meter pits and meters, water main taps, and piping to the meter pit associated with the Irrigation System will be provided and installed by the City of Ann Arbor.

Irrigation system shall be paid for at the contract unit price on a lump sum basis. Contract unit price shall consist of supplying and installing all irrigation components specified herein and shown on the drawings, including all submittals, permits, excavation and properly compacted backfill, and other work incidental to complete installation of a fully operational system. The pay quantity will be a lump sum based on acceptance of the completed installation.

The work as described will be paid for at the contract unit price or lump sum for the following contract items (pay items):

PAY ITEM	PAY UNIT

Irrigation System.....Lump Sum

Irrigation System shall include all work required to furnish, install, and test the irrigation system described in this special provision.

CITY OF ANN ARBOR
DETAILED SPECIFICATION
FOR
Item 257: Regulatory Signs

1 of 1 03/11/2022

a. Description. This work shall consist of fabricating and shipping Regulatory Signs to the City of Arbor.

b. Materials. The contractor will furnish “Regulatory Signs” to the Owner. Signs are to be fabricated in accordance with Section 919.02 Traffic Signs of the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction Standard Specifications and the 2011 Michigan Manual of Uniform Traffic Control Devices (MMUTCD).

The plans indicate the signs to be fabricated. The engineer will provide a detailed list of the signs to be fabricated prior to the contractor ordering the signs.

The Contractor will provide the name and a qualifications summary of the proposed fabricator for approval by the Engineer prior to ordering the work.

Signs are to be delivered to the City of Ann Arbor at a location designed by the Engineer in an undamaged condition.

c. Construction. Installation of the Regulatory Signs will be completed by the City of Ann Arbor.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price for the following pay item:

Pay Item	**Pay Unit**
Item 257: Regulatory Signs	Square Foot

DETAILED SPECIFICATION
FOR
ITEM #259-01 - PAVT MRKG, POLYUREA, 4 INCH, YELLOW
ITEM # 259-02 - PAVT MRKG, POLYUREA, 4 INCH, WHITE
ITEM #259-03 - PAVT MRKG, POLYUREA, BIKE ARROW AND YIELD SYM.
ITEM #259-04 - PAVT MRKG, POLYUREA, SPECIAL SYM.
ITEM #259-05 - PAVT MRKG, POLYUREA, BIKE SYM.
ITEM #259-06 - PAVT MRKG, POLYUREA, SHARROW SYM.
ITEM #259-07 - PAVT MRKG, POLYUREA, 12 INCH, STOP BAR OR CROSSWALK
ITEM #259-08 - PAVT MRKG, POLYUREA, 24 INCH, STOP BAR OR CROSSWALK
ITEM #259-09 - PAVT MRKG, ENDURABLEND, BIKE LANE GREEN
ITEM #259-10 - PAVT MRKG, ENDURABLEND, 18 INCH X 18 INCH BIKEWAY MARKS
ITEM #259-11 PAVT MRKG, SHARED PATH SPECIAL SYM.

DESCRIPTION

This work consists of furnishing and installing wet night retroreflective (WR) beads and/or elements, liquid applied pavement marking materials, and Endurablend Polymer Cement Surfacing bike lane pavement markings.

All work shall be consistent with the City of Ann Arbor Standard Specifications and the 2020 MDOT Standard Specifications for Construction, except as specified herein.

MATERIALS

Wet Night Retroreflective Beads and/or Elements. Select WR beads and/or elements from one of the following Manufacturers or a Department approved alternative that meets the requirements in Table 1:

3M Corporation
Potter's Industries
Swarco
Flex-o-Lite

Table 1: WR Markings

Average Initial Retroreflectivity at 30 meter geometry in mcd/lux/m^2		
Test Method	Colo	
	White r	Yellow
Dry (ASTM E 1710)	700	500
Wet Recovery (ASTM E 2177)	250	200

Ship the material to the job site in sturdy containers marked in accordance with subsection 920.01.A of the Standard Specifications for Construction.

Submit to the Engineer prior to the start of work:

a. The Manufacturer's recommended application rate of the beads/elements and the liquid

applied pavement marking binder to be used on the project. If the Manufacturer's recommended application rate differs from the specified rate in Table 811-1 of the Standard Specifications for Construction, the Manufacturer's recommended rate supersedes the table values.

b. Certification from the Manufacturer that when applied according to their application recommendations the beads and/or elements meet the requirements shown in Table 1 above.

Binder. Provide a liquid pavement marking product of the binder type specified in the contract documents from section 811 of the Qualified Products List or as specified by special provision, or use an alternative binder as approved by the Engineer.

The Endurablend bike lane pavement marking material must be comprised with green pigment and anti-skid abilities. The polymer cement surfacing shall be manufactured by Pavement Surface Coatings of Hanover New Jersey, and no material substitutions will be allowed.

1. Pigmented Resin. Transpo Color-Safe Bike Lane Green must be used as the pigment or approved equal. The approved color pigmented resin shall comply with FHWA green color guidelines for bike lanes.

2. Anti-Skid Aggregate. Anti-skid aggregates shall be provided by the pavement marking supplier. Aggregate shall have a minimum Hardness of 7.0 per MohsScale.

CONSTRUCTION

Place the binder and beads and polymer surface coatings in accordance with the Manufacturers' recommendations and sections 811 and 920 of the Standard Specifications for Construction except as noted above.

Construction of bike lane pavement markings shall be in accordance with manufacturer application and installation procedures, MDOT 2020 Standard Specifications for Construction, and Engineer.

All pavement marking areas shall be laid out by the contractor and then reviewed by the Engineer. Marking layout shall be approved by the Engineer prior to placement of material.

Surface preparation shall include cleaning of the pavement surface using high pressure water, compressed air or sandblasting and shall conform to ASTM D4263. All surface damage shall be corrected by the Contractor at the Contractor's expense, as directed by the Engineer. Manufacturer recommended pavement and air temperatures must be followed.

All markings on concrete surfaces shall receive a base coat application and shall be included in the pay item. Marking layout, material mixing, base coat application, and pigmented coat application shall comply with the manufacturer's installation procedures.

The Contractor shall protect the pavement markings from damage and allow them to fully cure prior to allowing traffic to drive over markings. Any damage shall be corrected by the Contractor at the Contractor's expense.

MEASUREMENT AND PAYMENT

The completed work, as described, will be measured and paid for at contract unit prices using the following pay items:

PAY ITEM	PAY UNIT
Item 259-01: Pavt Mrkg, Polyurea, 4 inch, Yellow	Linear Foot
Item 259-02: Pavt Mrkg, Polyurea, 4 inch, White	Linear Foot
Item 259-03: Pavt Mrkg, Polyurea, Bike Arrow and Yield Sym.	Each
Item 259-04: Pavt Mrkg, Polyurea, Special Sym.	Each
Item 259-05: Pavt Mrkg, Polyurea, Bike Sym.	Each
Item 259-06: Pavt Mrkg, Polyurea, Sharrow Sym. .	Each
Item 259-07: Pavt Mrkg, Polyurea, 12 Inch, Stop Bar Or Crosswalk …	Linear Foot
Item 259-08: Pavt Mrkg, Polyurea, 24 Inch, Stop Bar Or Crosswalk …	Linear Foot
Item 259-09: Pavt Mrkg, Endurablend, Bike Lane Green	Square Foot
Item 259-10: Pavt Mrkg, Endurablend, 18 Inch X 18 Inch Bikeway Marks .	Linear Foot
Item 259-11: Pavt Mrkg, Shared Path Special Sym.	Each

The unit price for these items of work shall include all labor, material, and equipment costs to perform all the work.

E. Schedule of Pricing

Company: _____

Acknowledgement of Addendum No. 1 (initial)

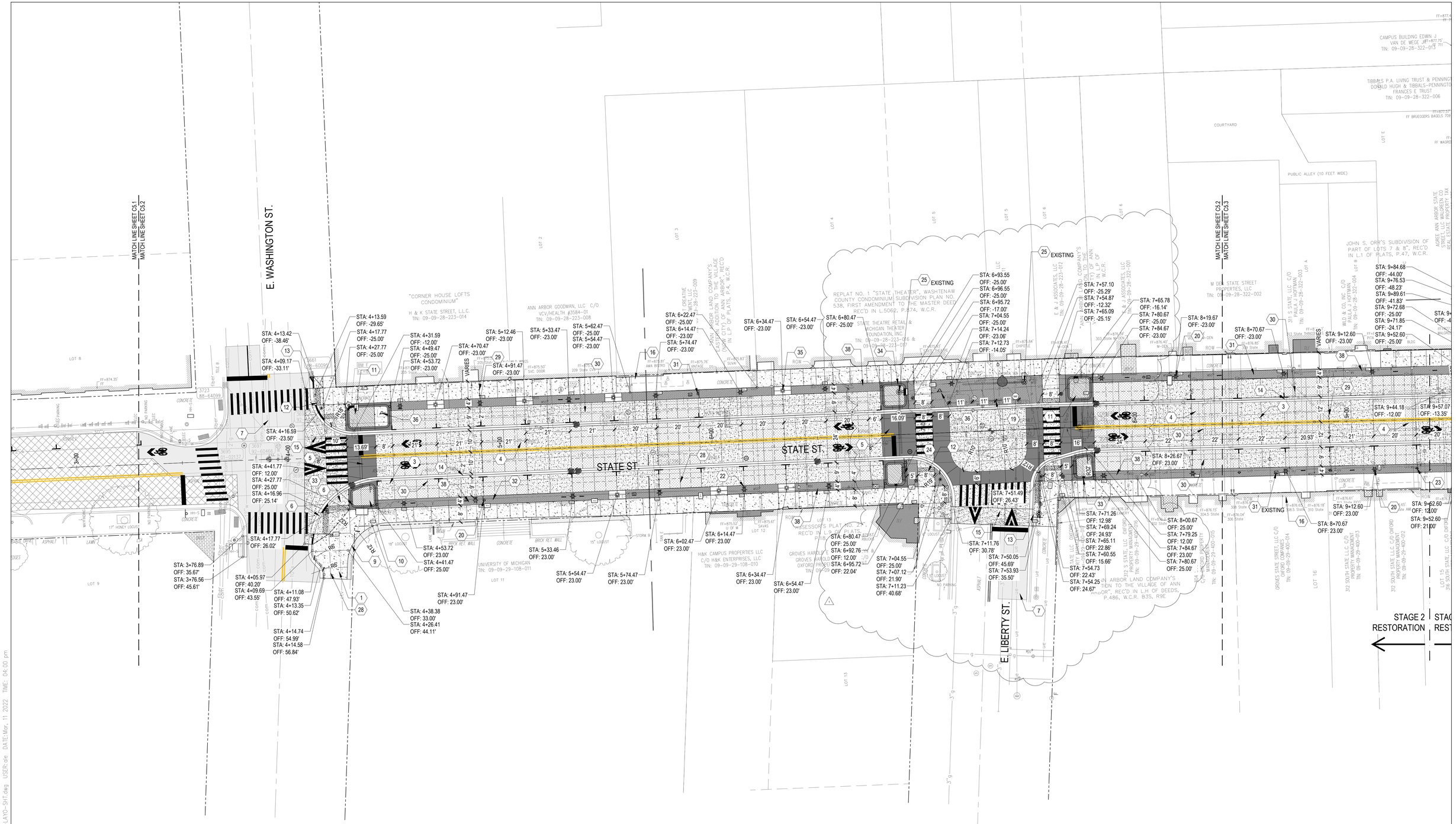
Date: _____

SOUTH STATE STREET RECONSTRUCTION

Pay Item #	Item Description	Original Contract Quantity	Unit	Addendum #1 Contract Quantity	Net Quantity Change	Unit Price	Total Price
130	Protective Fencing	280.00	LFT				
135	Tree Removal (8" And Larger Trees)	1.00	EA				
140	Exploratory Excavation, (0-10 ft. deep) (Trench Det 1, Modified)	20.00	EA				
201	Incentive, Interim Completion of Work, Stage __	1.00	ALLOW			$150,000.00	$150,000.00
210-01	Audio-Visual Recording	1.00	LSUM				
210-02	Certified Payroll Compliance And Reporting	1.00	LSUM				
210-03	General Conditions, Max $200,000	1.00	LSUM				
210-04	Project Supervision, Max $175,000	1.00	LSUM				
221-01	Minor Traffic Devices, Max $100,000	1.00	LSUM				
221-02	Traf Regulator Control	320.00	HOURLY				
221-03	Barricade, Type III, High Intensity, Double Sided Lighted, Furn & Oper	58.00	EA				
221-04	Plastic Drum, Fluorescent, Furn & Oper	220.00	EA				
221-05	Channelizing Device, 42 Inch, Fluorescent, Furn & Oper	80.00	EA				
221-06	Remove Pavement Striping	80.00	LFT				
221-07	Lighted Arrow, Type C, Furn & Oper	4.00	EA				
221-08	Sign, Portable, Changeable Message, Ntfcip-Compliant, Furn & Oper	4.00	EA				
221-09	Sign Cover	8.00	EA				
221-10	Sign, Type B, Temp, Prismatic, Furn & Oper	300.00	SFT				
221-11	Sign, Type B, Temp, Prismatic, Special, Furn & Oper	300.00	SFT				
221-20	No Parking Sign	16.00	EA				
221-31	Pedestrian Path, Temp	1,100.00	LFT				
221-32	Pedestrian Ramp, Temp	28.00	EA				
221-33	Pedestrian Type II Barricade, Temp	40.00	EA				
221-34	Pedestrian Type II Channelizer, Temp	2,420.00	LFT				
222-01	Curb And Gutter, Any Type Or Size, Rem	2,200.00	LFT				
222-02	Sidewalk And Drive, Any Type Or Thickness, Rem	2,361.00	SYD				
222-03	Pavement, Rem	6,112.00	SYD				
222-04	Brick Pavers, Rem, Sort And Salvage	127.00	SYD				
222-05	Trolley Track Removal	100.00	SYD				
223-01	Dr Structure, Any Size Or Depth, Rem	11.00	EA				
223-02	Sewer, Any Size Or Depth, Rem	393.00	LFT				
224-01	Parking Meter, Rem	21.00	EA				
224-02	Parking Meter, Install	10.00	EA				
227-01	Erosion Control, Inlet Filter	14.00	EA				
230-01	Geogrid	200.00	Syd				
230-02	Geotextile	858.0	Syd				
230-03	Stone Reservoir (Aggregate Storage Bed)	50.0	Cyd				
230-04	Infiltration Trench Type 1 (2-48 inch pipes)	182.0	LFT				
230-05	Infiltration Trench Type 2 (1-30 inch pipe)	195.0	LFT				
230-06	Check Valve	1.00	EA				
231	Precast Concrete Vault	5.00	EA				
240	Non Haz Contaminated Material Handling And Disposal, Lm	140.00	CYD				
250-02	Cold Milling Hma Surface, Modified	959.00	SYD				
250-03	Aggregate Base Course, 21AA, Modified	1,338.00	CYD				
250-04	Machine Grading, Modified	20.00	STA				
250-05	Subgrade Undercutting, Type II	1,175.00	CYD				
250-06	Sand Subbase Course, Class II - CIP	1,887.00	CYD				
251-01	Curb And Gutter, Conc, 24 Inch, Any Type	2,062.00	LFT				
251-02	Planter Curb	933.00	LFT	838.00	-95.00		
252-01	Concrete Sidewalk, 6 inch	14,151.00	SFT	14889.00	+738		
252-02	Concrete Sidewalk, 8 inch	7,583.00	SFT	7628.00	+45		
252-03	Road Concrete Pavement, 8 Inch, Type 1	20,290.00	SFT	20388.00	+98		
252-04	Road Concrete Pavement, 8 inch, Type 2	10,538.00	SFT				
252-05	Road Concrete Pavement, colored, 8 inch	3,940.00	SFT	4107.00	+167		
252-06	Sidewalk Ramp, 8 Inch	120.00	SFT				
253	Detectable Warning Surface, Modified	454.00	SFT	448.00	-6.00		
255-01	HMA, 3E1	109.00	TON				
255-02	HMA, 4E1	1,567.00	TON				
255-03	HMA, 5E1	288.00	TON				
255-04	Hand Patching, Modified	20.00	TON				
256	Sidewalk Unit Pavers	6,828.00	SFT	7237.00	+409		
257	Regulatory Signs	0.00	SFT	218.75	218.75		
259-01	Pavt Mrkg, Polyurea, 4 inch, Yellow	2,180.00	LFT				
259-02	Pavt Mrkg, Polyurea, 4 inch, White	1,500.00	LFT	1600	+100		
259-03	Pavt Mrkg, Polyurea, Bike Arrow and Yield Sym.	7.00	EA	7	0.00		
259-04	Pavt Mrkg, Polyurea, Special Sym.	10.00	EA	10	0.00		
259-05	Pavt Mrkg, Polyurea, Bike Sym.	4.00	EA	8	+4		
259-06	Pavt Mrkg, Polyurea, Sharrow Sym.	12.00	EA	12	0.00		
259-07	Pavt Mrkg, Polyurea, 12 Inch, Crosswalk	1,800.00	LFT				
259-08	Pavt Mrkg, Polyurea, 24 Inch, Stop Bar	200.00	LFT				
259-09	Pavt Mrkg, Endurablend, Bike Lane Green	1,165.00	SFT	1322	+157		
259-10	Pavt Mrkg, Endurablend, 18 Inch X 18 Inch Bikeway Marks	36.00	LFT				
259-11	Pavt Mrkg, Shared Path Special Sym.	3.00	EA				

260-01	Recessing Pavt Mrkg, Longitudinal	3,000.00	LFT				
260-02	Recessing Pavt Mrkg, Transverse	1,000.00	LFT				
261	Street Light, Remove	27.00	EA				
262-02	Electrical Wiring, 10 Gauge	11,535.00	LFT				
262-03	Electrical Wiring, 8 Gauge	7,350.00	LFT				
262-04	Electrical Wiring, 6 Gauge	7,350.00	LFT				
263-01	Electrical Cabinet	1.00	EA				
263-02	Electrical Cabinet Foundation	1.00	EA				
264-01	Luminaire Installation	41.00	EA				
264-02	Pole Installation, Single Head	27.00	EA				
264-03	Pole Installation, Double Head	7.00	EA				
265	Festoon Lighting	1.00	LSUM				
266	Pole Fit Up	1.00	EA				
267-02	2 Inch Schedule 80 PVC Electrical Conduit	215.00	LFT	360	+145		
267-03	3 Inch Schedule 80 PVC Electrical Conduit	3,912.50	LFT	4892.5	+980		
267-04	4 Inch Schedule 80 PVC Electrical Conduit	367.50	LFT				
268-02	Handhole Assembly, 17 inch x 30 inch	34.00	EA				
268-03	Handhole Assembly, 24 Inch X 36 Inch	20.00	EA				
268-04	Handhole Assembly, 30 inch x 48 inch	2.00	EA				
268-05	Handhole Assembly, 36 inch x 72 inch	1.00	EA				
268-06	Handhole Assembly, Remove for Replacement, Any Size	47.00	EA				
268-07	Handhole Adjust, All Sizes	10.00	EA				
270	Bike Hoops, Surface Mount	19.00	EA				
271	Bollard	19.00	EA				
272-01	Qwick Curb	30.00	LFT	130	+100		
272-02	Bikeway Post	22.00	EA	0	-22.00		
272-03	Bikeway Bollard, Re-use	19.00	EA				
273	Urban Bench	13.00	EA	11	-2.00		
278	Irrigation System	0.00	LSUM	1	+1		
279-1	Line Stop, Additional Rental Day	8.00	EA				
279-6	Line Stop, Ductile Iron Pipe, 6 inch	3.00	EA				
279-8	Line Stop, Ductile Iron Pipe, 8 inch	1.00	EA				
279-10	Line Stop, Ductile Iron Pipe, 10 inch	1.00	EA				
279-12	Line Stop, Ductile Iron Pipe, 12 inch	4.00	EA				
280	Planting Soil	108.00	CYD				
281	Landscape Maintenance	24.00	Month				
282-01	Tree Grate	7.00	EA				
282-02	Tree Guard, Special	7.00	EA				
283	Riprap, Fieldstone	1.00	CYD				
284-17	Sacrificial Anode, 17 lb	6.00	EA				
284-32	Sacrificial Anode, 32 lb	3.00	EA				
285-4	CL-50, D.I. Water Main, w/Poly Wrap, 4 inch, Tr Det I, Mod	235.00	LFT				
285-6	CL-50, D.I. Water Main, w/Poly Wrap, 6 inch, Tr Det I, Mod	115.00	LFT				
285-8	CL-50, D.I. Water Main, w/Poly Wrap, 8 inch, Tr Det I, Mod	40.00	LFT				
285-10	CL-50, D.I. Water Main, w/Poly Wrap, 10 inch, Tr Det I, Mod	10.00	LFT				
285-12	CL-50, D.I Water Main, w/Poly Wrap, 12 inch, Tr Det I, Mod	1,325.00	LFT				
286-22.5-12	22.5 deg Bend, 12 inch	1.00	EA				
286-45-4	45 deg Bend, 4 Inch	32.00	EA				
286-45-6	45 deg Bend, 6 Inch	6.00	EA				
286-45-8	45 deg Bend, 8 Inch	4.00	EA				
286-45-12	45 deg Bend, 12 inch	40.00	EA				
286-90-6	90 deg Bend, 6 inch	5.00	EA				
286-90-8	90 deg Bend, 8 inch	1.00	EA				
286-90-12	90 deg Bend, 12 inch	6.00	EA				
287-8x6	Reducer, 8 inch x 6 inch	1.00	EA				
287-12x6	Reducer, 12 inch x 6 inch	2.00	EA				
287-12 x 8	Reducer, 12 inch x 8 inch	1.00	EA				
287-12 x 10	Reducer, 12 inch x 10 inch	2.00	EA				
288-C-12-12	Cross, 12 inch x 12 inch	1.00	EA				
288-T-12-12-4	Tee, 12 inch x 12 inch x 4 inch	7.00	EA				
288-T-12-12-6	Tee, 12 inch x 12 inch x 6 inch	4.00	EA				
288-T-12-12-8	Tee, 12 inch x 12 inch x 8 inch	1.00	EA				
288-T-12-12-12	Tee, 12 inch x 12 inch x 12 inch	5.00	EA				
289	Fire Hydrant Assy, w/Extensions, Complete	3.00	EA				
290-4	Gate Valve-in-Box, 4 inch	7.00	EA				
290-6	Gate Valve-in-Box, 6 inch	3.00	EA				
290-12	Gate Valve-in-Box, 12 inch	6.00	EA				
291-06	Gate Valve-in-Well, 6 inch	1.00	EA				
291-12	Gate Valve-in-Well, 12 inch	6.00	EA	7	+1		
293	Excavate & Backfill for Water Service Tap and Lead	500.00	LFT				
294	Water Main Pipe Abandonment	250.00	LFT				
295	Water Main, Abandon w/Flowable Fill	1,500.00	LFT				
296-01	Gate Valve-in-Box, Abandon	14.00	EA				
296-02	Gate Valve-in-Box, Remove	1.00	EA				
297-01	Gate Valve-in-Well, Abandon	6.00	EA				
297-02	Gate Valve-in-Well, Remove	1.00	EA				
298	Fire Hydrant, Rem	3.00	EA				
315	Perforated HDPE Pipe, 30 inch	191.00	LFT				
316	Perforated HDPE Pipe, 48 inch	220.00	LFT				
320	RCP, Sewer, C76, CL-IV, 12 inch, Tr Det I	479.00	LFT				
321	RCP, Sewer, C76, CL-IV, 15 inch, Tr Det I	313.00	LFT				
322	RCP, Sewer, C76, CL-IV, 18 inch, Tr Det I	96.00	LFT				
360	Type I Manhole (4 ft. Dia.) (0-10 ft. Deep)	7.00	EA				
364	Type III Manhole (4 ft. Dia.)	1.00	EA				
366	Inlet Junction Chamber	3.00	EA				
367	Single inlet Structure	11.00	EA				
368	Double Inlet Structure	5.00	EA				

391	Pipe Undercut & Refill	100.00	Cyd				
516	6" Wrapped Edge Drain	1,387.00	LFT				
563-1	Dr Structure Cover Barrier Curb Inlet	1,230.00	LBS				
563-2	Dr Structure Cover Valley Curb Inlet	7,500.00	LBS				
563-3	Structure Covers	4,800.00	LBS				
564	Reconstruct Structure	2.00	EA				
566	Adjust Structure Cover	31.00	EA				
567	Adjust Monument Box or Gate Valve Box	53.00	EA				
630-20	Street Light Foundation, 20 Inch Dia.	27.00	EA				
630-24	Street Light Foundation, 24 Inch Dia	7.00	EA				
703	Silt Fence	378.00	FT				
810	Cercis canadensis	3.00	EA				
811	Ginkgo biloba 'Autumn Gold'	7.00	EA				
812	Sophora japonica ' Princeton Upright'	7.00	EA				
813	Gleditsia triacanthos 'Skyline'	5.00	EA				
820	Asclepias incarnata	24.00	EA				
821	Lobelia cardinalis	35.00	EA				
822	Lupinus perennis	322.00	EA				
823	Phlox paniculata	118.00	EA				
824	Rudbeckia Fulgida	92.00	EA				
825	Panicum virgatum 'Shenandoah'	131.00	EA				
826	Pennisetum alopecuroides	89.00	EA				
827	Solidago rugosa	44.00	EA				
881	Sod	353.00	SFT				
8100403	Sign, Type III, Rem	1.00	EA				
8187001	Recable, TS	200.00	LFT				
8200020	Case Sign, Rem	1.00	EA				
8200100	Pedestal, Alum	3.00	EA	16	+13		
8200105	Pedestal, Fdn	3.00	EA	16	+13		
8200106	Pedestal Fdn, Rem	2.00	EA	3	+1		
8200110	Pedestal, Rem	10.00	EA	3	+1		
8200122	Pushbutton, Rem	0.00	EA	5	+5		
200177	TS, Mast Arm Mtd, Rem	2.00	EA				
8200180	TS, Pedestrian, Bracket Arm Mtd, Rem	9.00	EA				
8200181	TS, Pedestrian, Pedestal Mtd, Rem	7.00	EA				
8200251	TS, One Way Mast Arm Mtd, Salv	1.00	EA				
8200336	TS, Pedestrian, One Way Bracket Arm Mtd (LED), Countdown	3.00	EA	1	-2		
8200339	TS, Pedestrian, Two Way Bracket Arm Mtd (LED), Countdown	5.00	EA	2	-3		
8200345	TS, Pedestrian, One Way Pedestal Mtd (LED), Countdown	3.00	EA	17	+14		
8200347	TS, Pedestrian, Two Way Pedestal Mtd (LED), Countdown	5.00	EA	2	-3		
8200425	Wireless Vehicle Sensor Node	7.00	EA				
8200426	Wireless Vehicle Sensor Node, Rem	10.00	EA				
8200458	TS Face, Bag	12.00	EA				
8200459	TS Face, Bag, Rem	12.00	EA				
8207050	Pedestrian Signal System, Accessible	0.00	EA	3	+3		
207050	Pushbutton Station and Sign	0.00	EA	18	+18		
ESTIMATED TOTAL							



LEGEND

1	CONCRETE SIDEWALK, 6 INCH, TYP. (1 C9.1)	9	LAWN, TYP.	17	APS POLE, SEE C.8 SERIES TYP.	24	URBAN BENCH, TYP. (1 C9.2)
2	CONCRETE SIDEWALK, 8 INCH, TYP.	10	PLANTER BED, TYP. (8 C9.3)	18	RE-USED FLEXIBLE BOLLARD, TYP.	25	TRAFFIC SIGNAL POLE,TYP.
3	ROAD CONCRETE PAVEMENT, 8 INCH, TYPE 1,TYP.	11	RAIN GARDEN,TYP. (7 C9.3)	18	BOLLARD,TYP. (4 C9.4)	26	BIKEWAY CURB,TYP (1 C9.3)
4	ROAD CONCRETE PAVEMENT, 8 INCH, TYPE 2,TYP. (2 C9.1)	12	DETECTABLE WARNING SURFACE, MODIFIED,TYP. (1 C9.2)	20	LIGHT POLE, TYP.	27	RIGHT OF WAY, TYP.
5	ROAD CONCRETE PAVEMENT, COLORED, 8 INCH., TYP.	13	STANDARD CURB AND GUTTER, TYP. (9 C9.1)	21	FESTOON LIGHT POLE,TYP. (2 E2.1)	28	CONTRACTION JOINT, TYP. (8 C9.1)
6	SIDEWALK RAMP, 8 INCH, TYP. (1 C9.2)	14	VALLEY GUTTER, TYP. (4 C9.1)	22	NEW SIGNAGE, TYP. (1 E2.1)	29	EXPANSION JOINT,TYP. (6 C9.1)
7	HMA PAVEMENT, FULL DEPTH RECONSTRUCTION, TYP. (10 C9.1)	15	RAMP, TYP.	23	PARKING METER POST, TYP.	30	DECORATIVE JOINT, TYP. (5 C9.1)
8	1 LIFT MILL & FILL, TYP.	16	EXISTING VAULT, TYP.			38	PAVERS, TYP. (3 C9.1)

31	PARKING PAY MACHINE, TYP.						
32	BIKE HOOP, TYP. (6 C9.3)						
33	PLANTER CURB,TYP. (14 C9.1)						
34	PLANTER CURB CUT,TYP.						
35	TREE GRATE & TREE GUARD, TYP (1 C9.4)						
36	FIRE HYDRANT, TYP.						
37	PEDESTRIAN SIGNAL, SEE C.8 SERIES TYP.						

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
SEE ABOVE		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		

STATE ST STREETSCAPE - CITY OF ANN ARBOR

STREETSCAPE LAYOUT AND MATERIALS PLAN 2

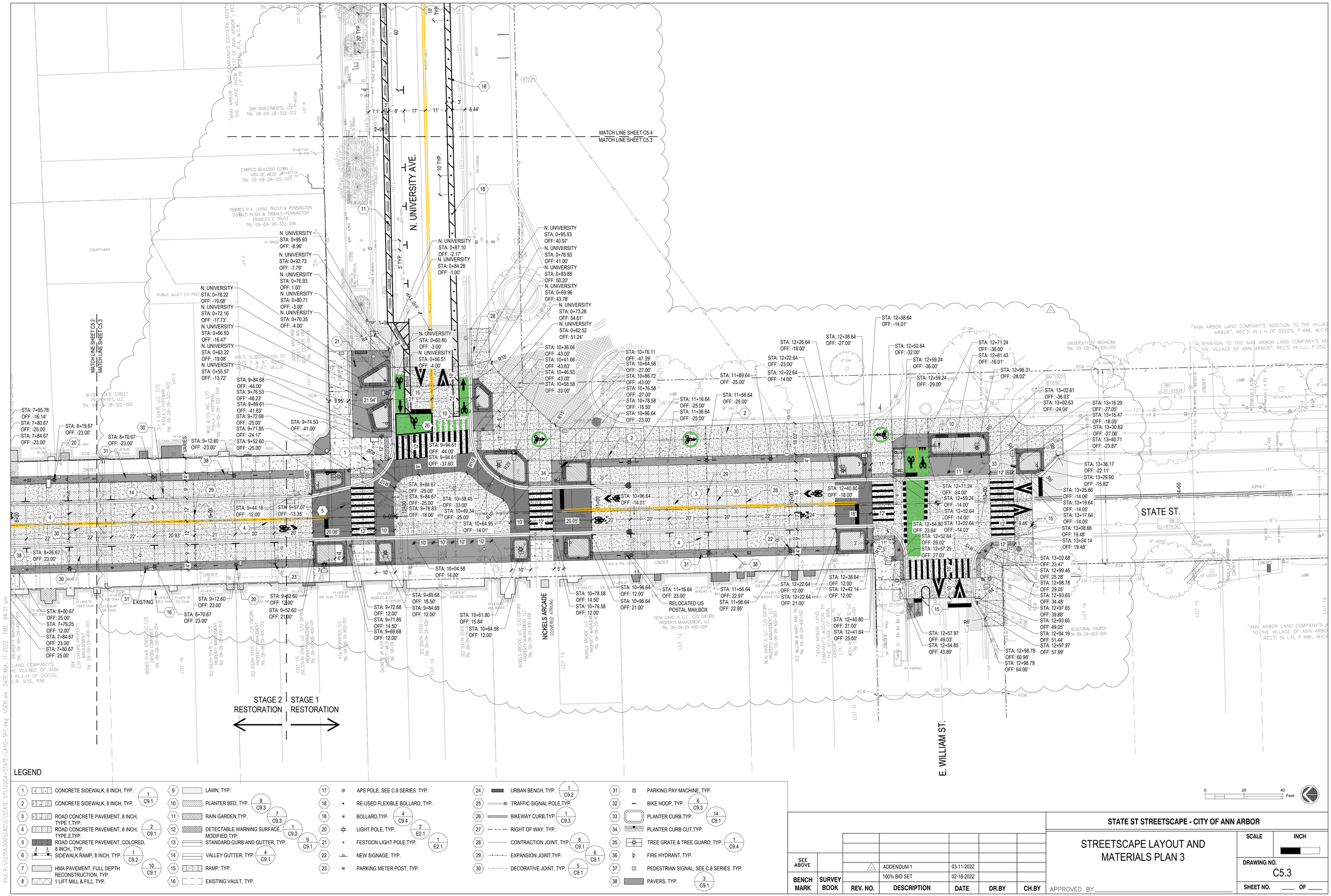
SCALE: INCH

DRAWING NO. C5.2

SHEET NO. ____ OF ____

APPROVED BY _____

FILE:P:\12354.000\CAD\CA\STATE ST\12354-STATE-LAYO-SHT.dwg USER:ale DATE:Mar, 11 2022 TIME: 04:00 pm



BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
SEE ABOVE		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		

STATE ST STREETSCAPE - CITY OF ANN ARBOR

STREETSCAPE LAYOUT AND MATERIALS PLAN 3

APPROVED BY _____

SCALE: INCH

DRAWING NO. C5.3

SHEET NO. ____ OF ____

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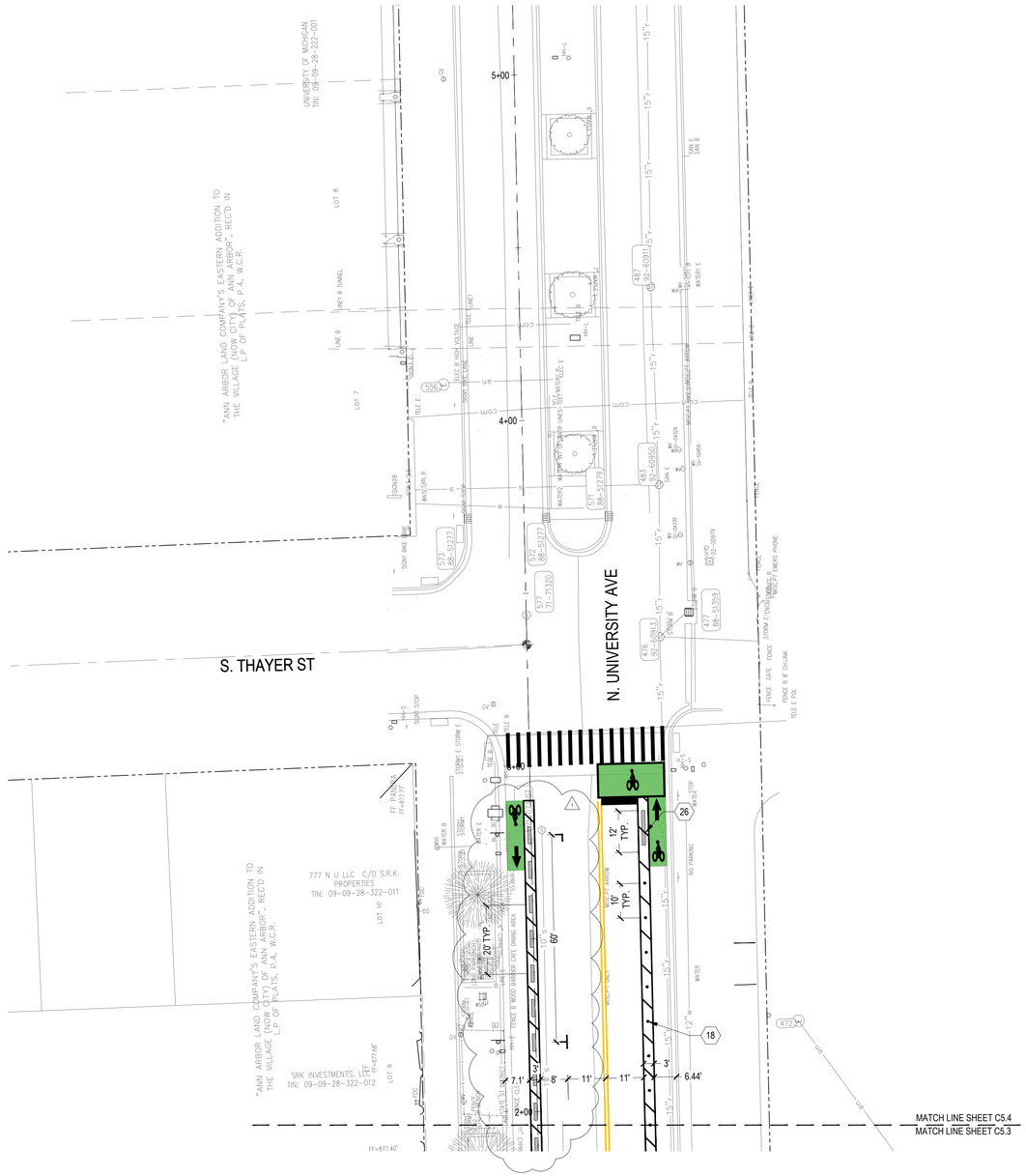


LEGEND

1	CONCRETE SIDEWALK, 6 INCH, TYP. (1 C9.1)	9	LAWN, TYP.	17	APS POLE, SEE C.8 SERIES TYP.	24	URBAN BENCH, TYP. (1 C9.2)
2	CONCRETE SIDEWALK, 8 INCH, TYP.	10	PLANTER BED, TYP. (8 C9.3)	18	RE-USED FLEXIBLE BOLLARD, TYP.	25	TRAFFIC SIGNAL POLE,TYP.
3	ROAD CONCRETE PAVEMENT, 8 INCH, TYPE 1,TYP.	11	RAIN GARDEN,TYP. (7 C9.3)	18	BOLLARD,TYP. (4 C9.4)	26	BIKEWAY CURB,TYP. (1 C9.3)
4	ROAD CONCRETE PAVEMENT, 8 INCH, TYPE 2,TYP. (2 C9.1)	12	DETECTABLE WARNING SURFACE, MODIFIED,TYP. (1 C9.2)	20	LIGHT POLE, TYP. (2 E2.1)	27	RIGHT OF WAY, TYP.
5	ROAD CONCRETE PAVEMENT, COLORED, 8 INCH,, TYP.	13	STANDARD CURB AND GUTTER, TYP. (9 C9.1)	21	FESTOON LIGHT POLE,TYP. (1 E2.1)	28	CONTRACTION JOINT, TYP. (8 C9.1)
6	SIDEWALK RAMP, 8 INCH, TYP. (1 C9.2)	14	VALLEY GUTTER, TYP. (4 C9.1)	22	NEW SIGNAGE, TYP.	29	EXPANSION JOINT,TYP. (6 C9.1)
7	HMA PAVEMENT, FULL DEPTH RECONSTRUCTION, TYP. (10 C9.1)	15	RAMP, TYP.	23	PARKING METER POST, TYP.	30	DECORATIVE JOINT, TYP. (5 C9.1)
8	1 LIFT MILL & FILL, TYP.	16	EXISTING VAULT, TYP.				

31	PARKING PAY MACHINE, TYP.	35	TREE GRATE & TREE GUARD, TYP. (1 C9.4)				
32	BIKE HOOP, TYP. (6 C9.3)	36	FIRE HYDRANT, TYP.				
33	PLANTER CURB,TYP. (14 C9.1)	37	PEDESTRIAN SIGNAL, SEE C.8 SERIES TYP.				
34	PLANTER CURB CUT,TYP.	38	PAVERS, TYP. (3 C9.1)				

0 20 40 Feet

STATE ST STREETSCAPE - CITY OF ANN ARBOR

STREETSCAPE LAYOUT AND MATERIALS PLAN 4

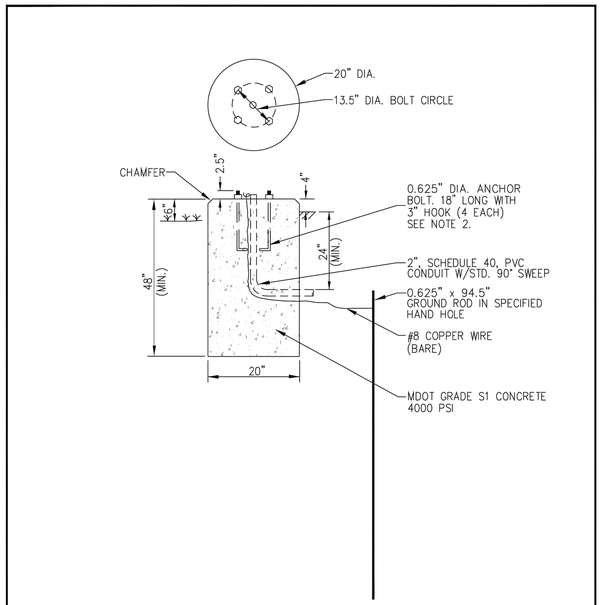
SCALE: INCH

DRAWING NO. C5.4

SHEET NO. ____ OF ____

APPROVED BY _____

SEE ABOVE		REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		
BENCH MARK	SURVEY BOOK					



NOTES:

1. THE CITY WILL INSPECT THE AUGERED HOLE AND THE ANCHOR BOLT BUILD-UP AND PROVIDE WRITTEN APPROVAL PRIOR TO THE PLACEMENT OF CONCRETE
2. CONTRACTOR WILL PROVIDE NECESSARY CONDUIT FOR ENTRY. THIS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE POLE BASE.

REVISIONS	REV. NO.	DR.BY	CH. BY	DATE
ADDED CLARIFYING DETAILS	3	DPF	MGN	11/06
UPDATED PER MDOT STANDARDS	2	DPF	MGN	10/05
	1	PJM	HP	10/02

PUBLIC SERVICES DEPARTMENT
CITY OF ANN ARBOR

PEDESTRIAN SIGNAL POLE FOUNDATION DETAIL

DR. BY DPF	CH. BY HP	DRAWING NO.	
SCALE N.T.S.	DATE 3-31-00	SD-SL-3	
		SHEET NO. ____ OF ____	

TRAFFIC SIGNAL EQUIPMENT SYMBOLS

- 12" L.E.D. VEHICLE TRAFFIC SIGNAL (ONE WAY)
- 12" L.E.D. VEHICLE TRAFFIC SIGNAL (TWO WAY: BACK TO BACK)
- 12" L.E.D. VEHICLE TRAFFIC SIGNAL (THREE WAY)
- 12" L.E.D. VEHICLE TRAFFIC SIGNAL (FOUR WAY)
- 12" L.E.D. PEDESTRIAN TRAFFIC SIGNAL (ONE WAY)
- 12" L.E.D. PEDESTRIAN TRAFFIC SIGNAL (TWO WAY: AT ANGLE TO EACH OTHER)
- PEDESTRIAN PUSHBUTTON
- 30 INCH ROUND PRECAST TRAFFIC SIGNAL HANDHOLE
- 36 INCH ROUND PRECAST TRAFFIC SIGNAL HANDHOLE
- ALUMINUM PEDESTRIAN PEDESTAL
- ANCHOR BASE STEEL STRAIN POLE (POLE LENGTH & FOUNDATION SIZE AS CALLED OUT)
- MAST ARM STANDARD AND FOUNDATION (POLE LENGTH & FOUNDATION SIZE AS CALLED OUT)
- BASE MOUNTED TRAFFIC CONTROLLER
- POLE MOUNTED TRAFFIC CONROLLER
- CASE SIGN (1 WAY OR 2 WAY)
- CASE SIGN (3 WAY OR 4 WAY)
- COILED UP WIRE (FOR CONNECTION BY OTHERS)
- STAINLESS STEEL SERVICE DISCONNECT
- METERED ELECTRIC SERVICE
- ELECTRIC GROUND
- TS# SIGNAL HEAD
- CS# ILLUMINATED CASE SIGN
- PROPOSED/SALVAGED WIRELESS VEHICLE SENSOR NODE
- EXISTING/REMOVED WIRELESS VEHICLE SENSOR NODE
- SPP RADIO

GENERAL NOTES

SIGNALS

MAINTAINING AGENCY CONTACT INFORMATION
• CITY OF ANN ARBOR: (734) 794-6361

NOTIFICATIONS TO MAINTAINING AGENCIES
CONTACT THE CITY OF ANN ARBOR SEVEN WORKING DAYS PRIOR TO START OF CONSTRUCTION AND SEVEN WORKING DAYS PRIOR TO SIGNAL ACTIVATION.

FACILITIES NOT ON PLANS
EXISTING O.H. & T.S. FACILITIES ARE NOT NECESSARILY SHOWN ON PLANS.

UNDERGROUND UTILITY SEPARATION
A MINIMUM CLEARANCE OF 3'-6" HORIZONTAL & 1'-0" VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED FACILITIES & EXISTING U.G. WATER FACILITIES.

SIGNAL EQUIPMENT DISPOSAL
DISPOSAL OF ALL TRAFFIC SIGNAL EQUIPMENT IS INCLUDED IN THE REMOVAL PAY ITEMS AND SHALL ALSO INCLUDE THE FOLLOWING:
• NOTIFICATION TO THE CITY OF ANN ARBOR THAT TRAFFIC SIGNAL EQUIPMENT IS BEING REMOVED.
• TEMPORARY STORAGE OF EQUIPMENT IN A DUMPSTER ON SITE (OR AS DIRECTED BY THE ENGINEER) ALLOWING THE CITY OF ANN ARBOR 48 HOURS TO SALVAGE ANY EQUIPMENT.
• PROPER DISPOSAL OF ANY EQUIPMENT CONTAINING ENVIRONMENTALLY SENSITIVE MATERIALS (MERCURY RELAY SWITCHES FOR EXAMPLE)
• DISABLING OR DESTRUCTION OF ALL REMAINING EQUIPMENT TO THE SATISFACTION OF THE ENGINEER SUCH THAT IT CANNOT BE REUSED OR RESOLD.
• PROPER DISPOSAL OF ALL REMAINING EQUIPMENT.

PLAN DEVIATIONS DURING CONSTRUCTION
NO CHANGES FROM PLANS IN LOCATION OF SUPPORTING STRUCTURES SIGNAL HEAD PLACEMENT OR TRAFFIC SIGNAL EQUIPMENT WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE CITY OF ANN ARBOR.

INNERDUCT
CONTRACTOR MUST INSTALL A CONTINUOUS FLEXIBLE NON-METALLIC TUBING (INNERDUCT) FOR LOW VOLTAGE COMMUNICATION TYPE CABLE FROM THE DEVICE TO THE CONTROLLER CABINET. INNERDUCT IS NOT REQUIRED IF COMMUNICATION CABLE IS 600V RATED.

MDOT SIGNAL STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR IN THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARDS GIVEN BELOW, OPPOSITE EACH ITEM, UNLESS OTHERWISE INDICATED.

*SIG-230-A	COLOR CODE WIRING/EQUIPMENT GROUNDING
*SIG-250-A	CONDUIT (DIRECT BURIAL/ENCASED)
*SIG-330-A	PEDESTAL MOUNTED SIGNAL DISPLAYS
*SIG-331-A	PEDESTAL MOUNTING FOR SIGNALS
*SIG-340-A	POLE MOUNTED SIGNAL DISPLAYS
~~*SIG-341-A~~	~~POLE MOUNTING DETAILS FOR SIGNALS~~
*SIG-400-A	PEDESTRIAN PUSHBUTTON DETAILS
*SIG-420-A	WIRELESS VEHICLE DETECTION SYSTEM

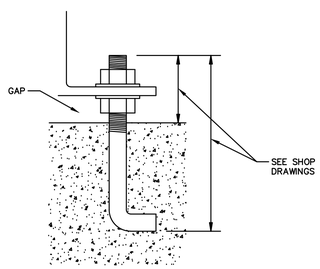
1

*MDOT SPECIAL DETAILS – LOCATED IN PROPOSAL

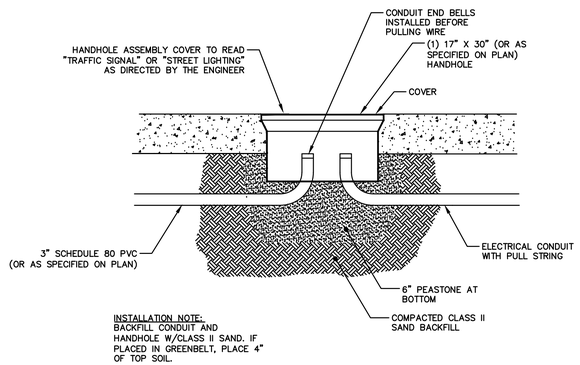
MISCELLANEOUS QUANTITIES

THE LISTED ITEMS SHALL APPLY TO ALL LOCATIONS DIRECTED BY THE ENGINEER. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN SHEETS.

ITEM	QUANTITIES
Recable, TS	200 Ft
3 inch Schedule 80 PVC Electrical Conduit	200 Lft
TS Face, Bag	12 Ea
TS Face, Bag, Rem	12 Ea



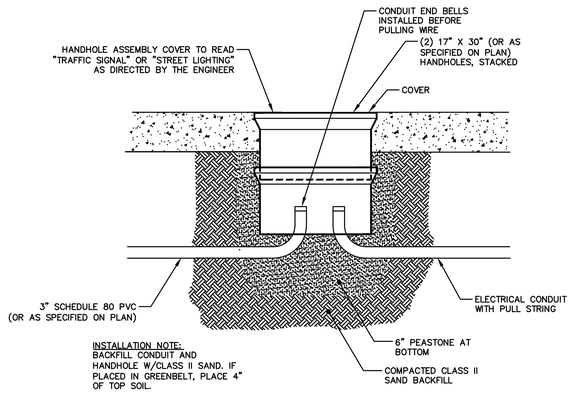
ANCHOR BOLT PROJECTION DETAIL



INSTALLATION NOTE:
BACKFILL CONDUIT AND HANDHOLE W/CLASS II SAND. IF PLACED IN GREENBELT, PLACE 4" OF TOP SOIL.

SINGLE STACK HANDHOLE DETAIL

(QUAZITE BRAND FOR ALL HANDHOLES)



INSTALLATION NOTE:
BACKFILL CONDUIT AND HANDHOLE W/CLASS II SAND. IF PLACED IN GREENBELT, PLACE 4" OF TOP SOIL.

DOUBLE STACK HANDHOLE DETAIL

(QUAZITE BRAND FOR ALL HANDHOLES)

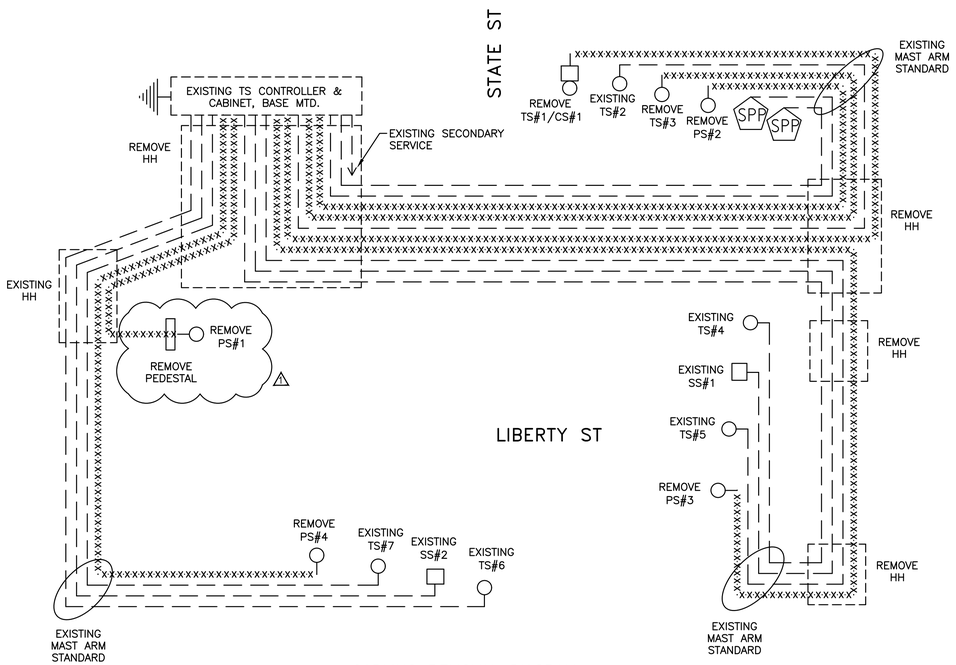
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
SEE ABOVE		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		

STATE ST STREETSCAPE - CITY OF ANN ARBOR

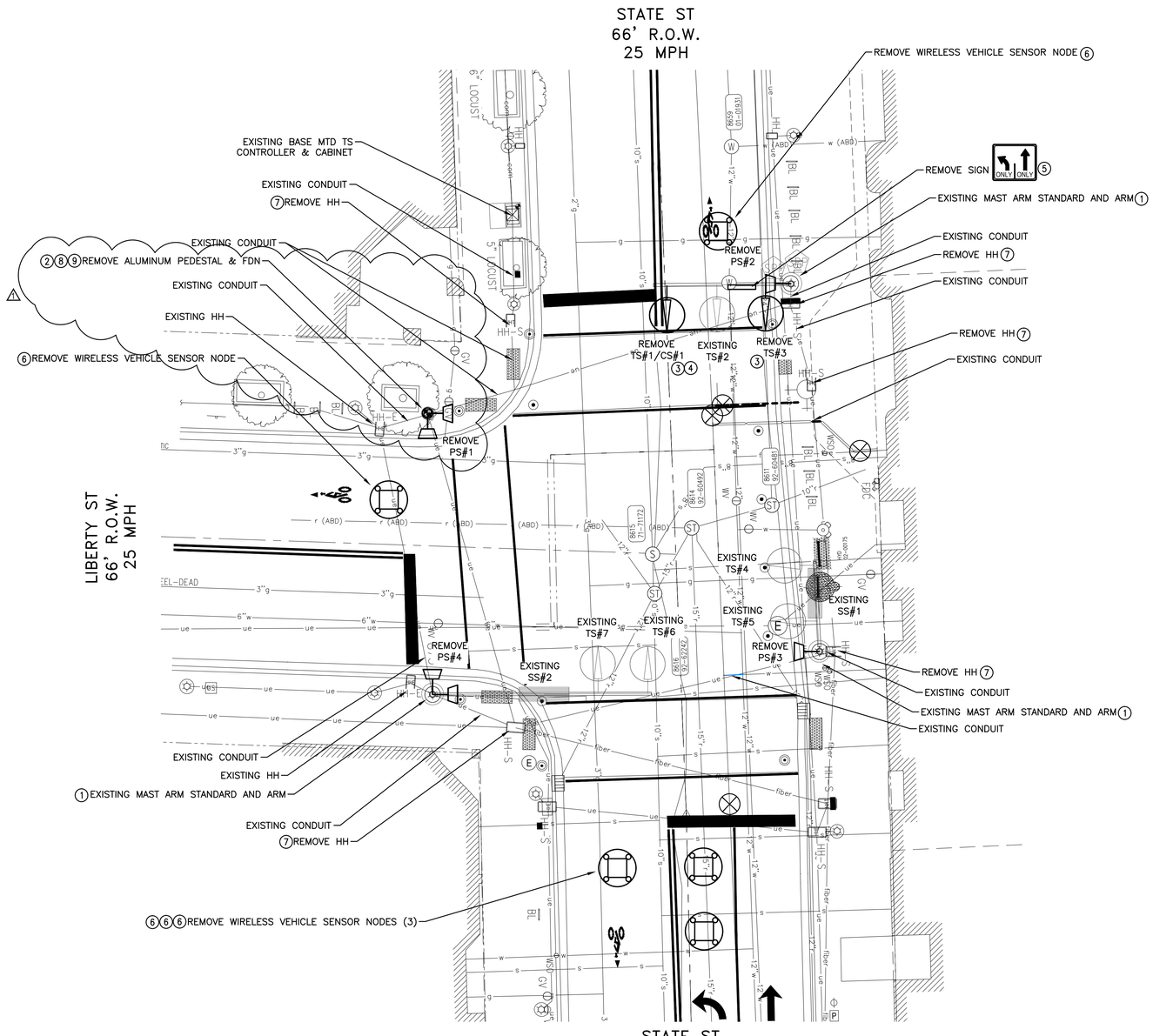
TRAFFIC SIGNAL DETAILS
LEGEND & NOTES

APPROVED BY _____

SCALE	INCH
DRAWING NO.	C8.1
SHEET NO.	____ OF ____



CABLING REMOVAL DIAGRAM
NOT TO SCALE



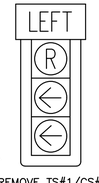
INTERSECTION SPECIFIC NOTES

UNWIRING OF THE TRAFFIC & PEDESTRIAN SIGNAL HEADS SHALL BE INCLUDED IN THE PAY ITEMS "TS, PEDESTRIAN, BRACKET ARM MTD, REM" & "TS, PEDESTRIAN, PEDESTAL MTD, REM" & "TS, MAST ARM MTD, REM" AND WILL NOT BE PAID FOR SEPARATELY.

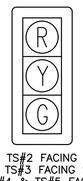
HANDHOLES SHALL BE REMOVED AND REPLACED WHERE DIRECTED BY THE ENGINEER. RETAIN EXISTING HANDHOLES WHERE FEASIBLE OR AS DIRECTED BY THE ENGINEER.

LIST OF MATERIAL - REMOVAL

NO.	ITEM	QUANTITIES
(1)	TS, Pedestrian, Bracket Arm Mtd, Rem	3 Ea
(2)	TS, Pedestrian, Pedestal Mtd, Rem	1 Ea
(3)	TS, Mast Arm Mtd, Rem	2 Ea
(4)	Case Sign, Rem	1 Ea
(5)	Sign, Type III, Rem	1 Ea
(6)	Wireless Vehicle Sensor Node, Rem	5 Ea
(7)	Hh, Rem	5 Ea
(8)	Pedestal, Rem	1 Ea
(9)	Pedestal Fdn, Rem	1 Ea



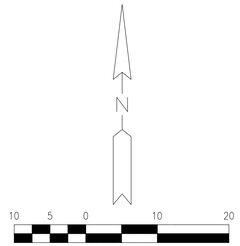
REMOVE TS#1/CS#1
FACING SOUTH



EXISTING TS#2 FACING SOUTH
REMOVE TS#3 FACING SOUTH
EXISTING TS#4 & TS#5 FACING WEST
EXISTING TS#6 & TS#7 FACING NORTH

EXISTING SS#1
ILLUMINATED STREET NAME SIGN
S. State
FACING WEST

EXISTING SS#2
ILLUMINATED STREET NAME SIGN
E. Liberty
FACING NORTH & SOUTH



STAGE 2

SEE ABOVE		REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		
BENCH MARK	SURVEY BOOK					

STATE ST STREETSCAPE - CITY OF ANN ARBOR

TRAFFIC SIGNAL REMOVAL SHEET
STATE ST @ LIBERTY ST

APPROVED BY _____

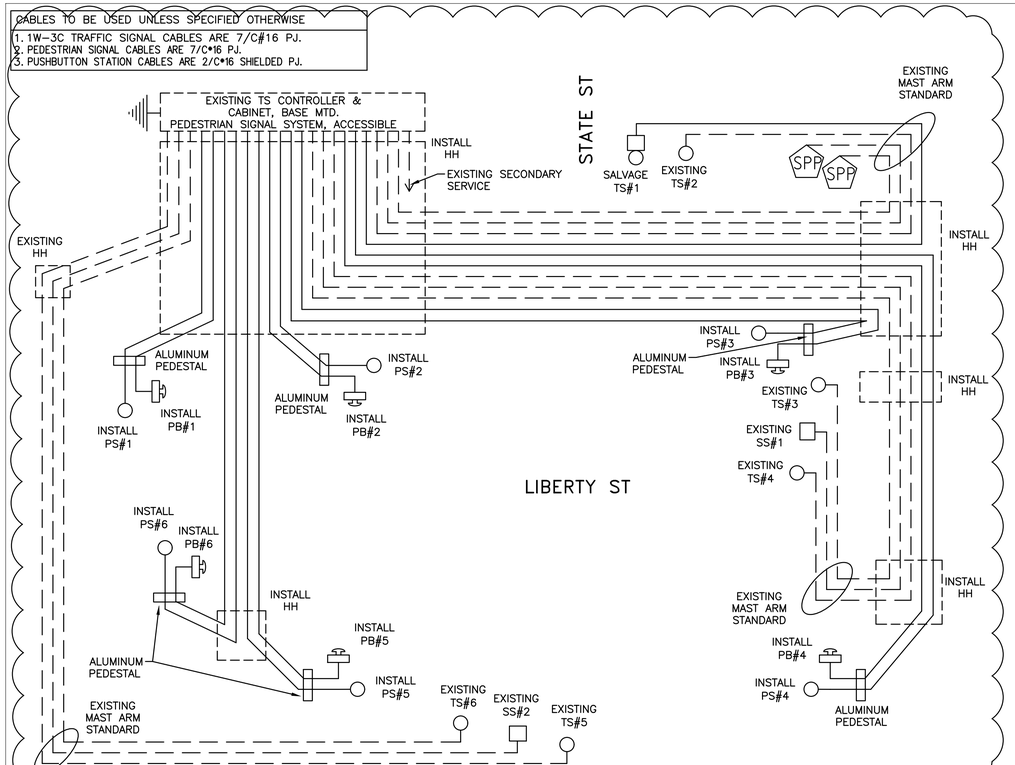
SCALE: INCH

DRAWING NO. C8.4

SHEET NO. ____ OF ____

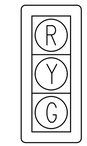
CABLES TO BE USED UNLESS SPECIFIED OTHERWISE

1. 1W–3C TRAFFIC SIGNAL CABLES ARE 7/C#16 PJ.
2. PEDESTRIAN SIGNAL CABLES ARE 7/C*16 PJ.
3. PUSHBUTTON STATION CABLES ARE 2/C*16 SHIELDED PJ.

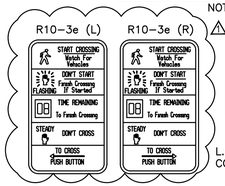


CABLING INSTALLATION DIAGRAM

NOT TO SCALE

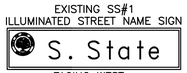


SALVAGE TS#1 FACING SOUTH
EXISTING TS#2 FACING SOUTH
EXISTING TS#3 & TS#4 FACING WEST
EXISTING TS#5 & TS#6 FACING NORTH



L.E.D. PEDESTRIAN COUNTDOWN HEAD

EXISTING SS#1
ILLUMINATED STREET NAME SIGN



FACING WEST

EXISTING SS#2
ILLUMINATED STREET NAME SIGN

FACING NORTH & SOUTH

INTERSECTION SPECIFIC NOTES

WIRING OF THE TRAFFIC & COUNTDOWN PEDESTRIAN SIGNALS SHALL BE INCLUDED IN THE PAY ITEMS "TS, PEDESTRIAN, ONE WAY PEDESTAL MTD (LED) COUNTDOWN" & "TS, ONE WAY MAST ARM MTD, SALV" AND WILL NOT BE PAID FOR SEPARATELY.

APS EQUIPMENT SHALL BE THE POLARA INS INAVIGATOR 2-WIRE APS ASSEMBLY. CONTRACTOR SHALL DELIVER THE PEDESTRIAN SIGNAL SYSTEM, ACCESSIBLE TO THE ANN ARBOR SIGNAL SHOP.

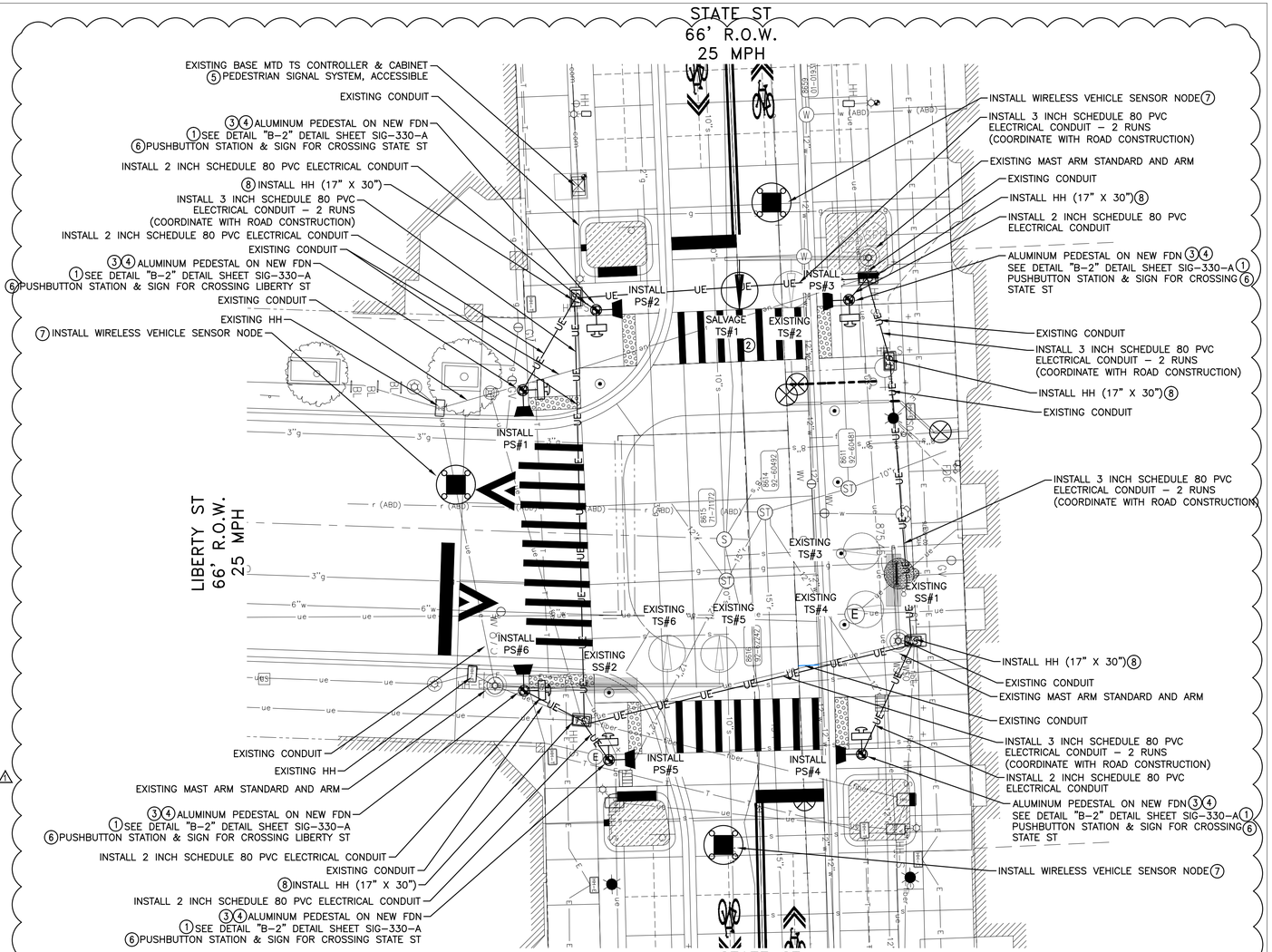
INSTALLATION OF POLES/PEDESTALS WITH PUSHBUTTONS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE NEW SIDEWALK RAMPS AND CROSSWALK PAVEMENT MARKINGS. LOCATIONS SHALL MEET CURRENT ADA REQUIREMENTS AND CRITERIA.

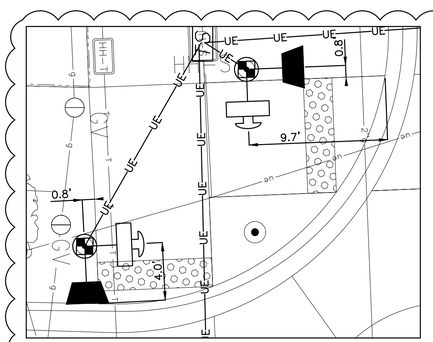
WHERE PRACTICAL AND AS DIRECTED BY THE CITY SIGNAL DEPARTMENT, THE CONTRACTOR SHALL CONNECT PROPOSED HANDHOLES (SHOWN ON PLAN) WITH PROPOSED LIGHTING/ITS HANDHOLES WITH CONDUIT, DB. 1-3" (A MISCELLANEOUS QUANTITY HAS BEEN PROVIDED FOR THIS WORK). PRIOR TO WORK CONTRACTOR TO MEET WITH CITY TO GO OVER ANY ADDITIONAL HANDHOLE UP-SIZING OR CONNECTIONS AT EACH INTERSECTION.

HANDHOLE REPLACMENTS AND SPARE 2-3 INCH CONDUIT SHALL BE INSTALLED WHERE DIRECTED BY THE ENGINEER. RETAIN EXISTING HANDHOLES WHERE FEASIBLE OR AS DIRECTED BY THE ENGINEER. ELEVATIONS TO BE COORDINATED WITH THE PROPOSED SURFACE ELEVATION AT TIME OF INSTALLATION.

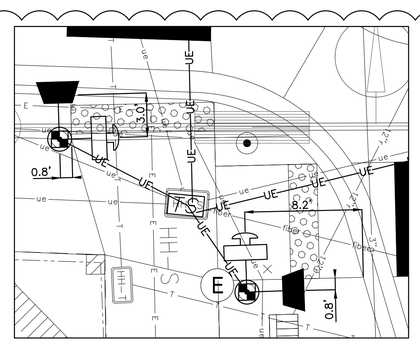
LIST OF MATERIAL CONSTRUCTION

NO.	ITEM	QUANTITIES
(1)	TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	6 Ea
(2)	TS, One Way Mast Arm Mtd, Salv	1 Ea
(3)	Pedestal, Alum	6 Ea
(4)	Pedestal, Fdn	6 Ea
(5)	Pedestrian Signal System, Accessible	1 Ea
(6)	Pushbutton Station and Sign	6 Ea
(7)	Wireless Vehicle Sensor Node	3 Ea
(8)	Handhole Assembly, 17 inch x 30 inch	5 Ea
◯	2 inch Schedule 80 PVC Electrical Conduit	65 Lft
◯	3 inch Schedule 80 PVC Electrical Conduit	440 Lft

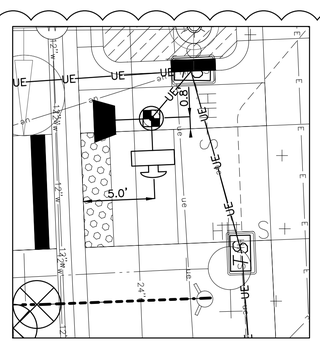




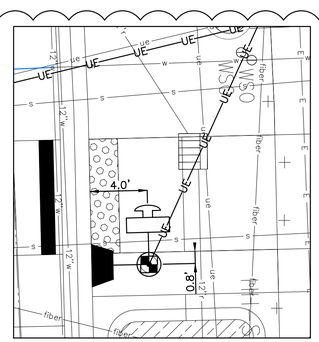
NW QUAD



SW QUAD



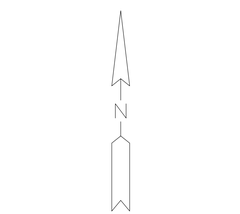
NE QUAD



SE QUAD

SIDEWALK GRADES:

FOR SIDEWALK AND ADA GRADING INFORMATION SEE ROADWAY DESIGN PLANS.



STAGE 2

SEE ABOVE						
		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY

STATE ST STREETSCAPE - CITY OF ANN ARBOR

TRAFFIC SIGNAL CONSTRUCTION SHEET
STATE ST @ LIBERTY ST

APPROVED BY _____

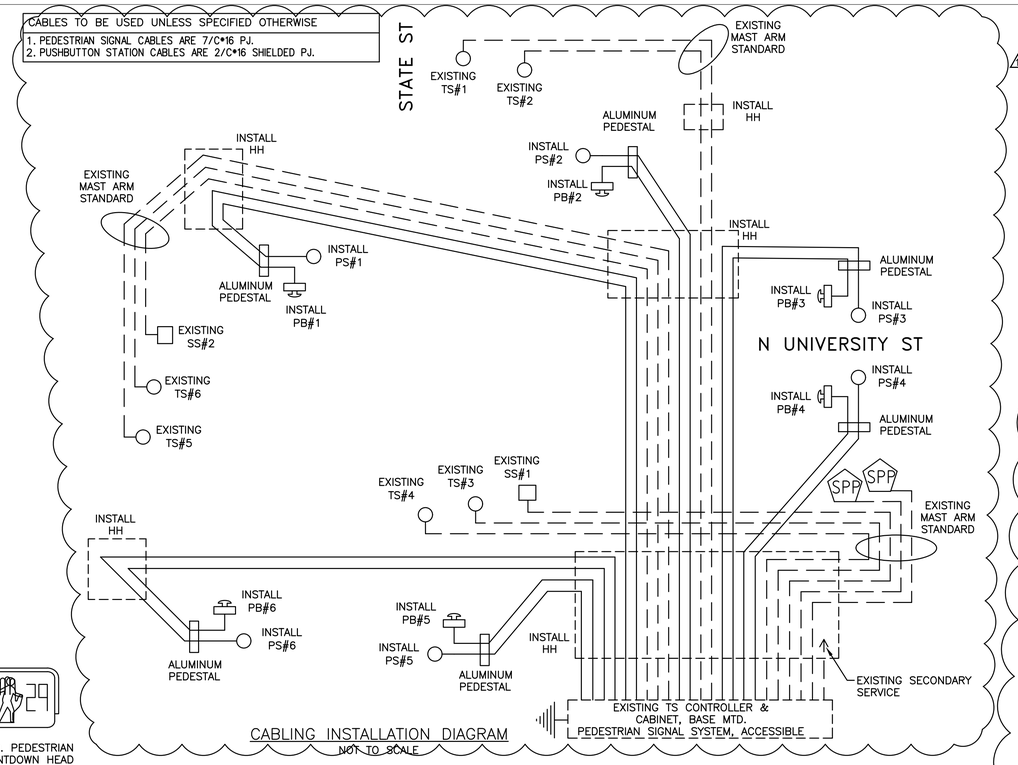
SCALE: INCH

DRAWING NO. C8.5

SHEET NO. ____ OF ____

FILE:C:\pw_work\2\d1034457\CTS-PLTS-TrafficSignals-StateStreet.dwg USER:JCARUSO DATE:Mar, 09 2022 TIME: 11:30 am

CABLES TO BE USED UNLESS SPECIFIED OTHERWISE
1. PEDESTRIAN SIGNAL CABLES ARE 7/C*16 PJ.
2. PUSHBUTTON STATION CABLES ARE 2/C*16 SHIELDED PJ.



CABLING INSTALLATION DIAGRAM
NOT TO SCALE

L.E.D. PEDESTRIAN COUNTDOWN HEAD

EXISTING TS#1 & TS#2 FACING SOUTH
EXISTING TS#3 & TS#4 FACING NORTH
EXISTING TS#5 & TS#6 FACING EAST

EXISTING SS#1
ILLUMINATED STREET NAME SIGN
S. State
FACING EAST

EXISTING SS#2
ILLUMINATED STREET NAME SIGN
N. University
FACING NORTH & SOUTH

INTERSECTION SPECIFIC NOTES

WIRING OF THE COUNTDOWN PEDESTRIAN SIGNALS SHALL BE INCLUDED IN THE PAY ITEMS "TS, PEDESTRIAN, ONE WAY BRACKET ARM MTD (LED) COUNTDOWN" AND WILL NOT BE PAID FOR SEPARATELY.

APS EQUIPMENT SHALL BE THE POLARA INS INAVIGATOR 2-WIRE APS ASSEMBLY. CONTRACTOR SHALL DELIVER THE PEDESTRIAN SIGNAL SYSTEM, ACCESSIBLE TO THE ANN ARBOR SIGNAL SHOP.

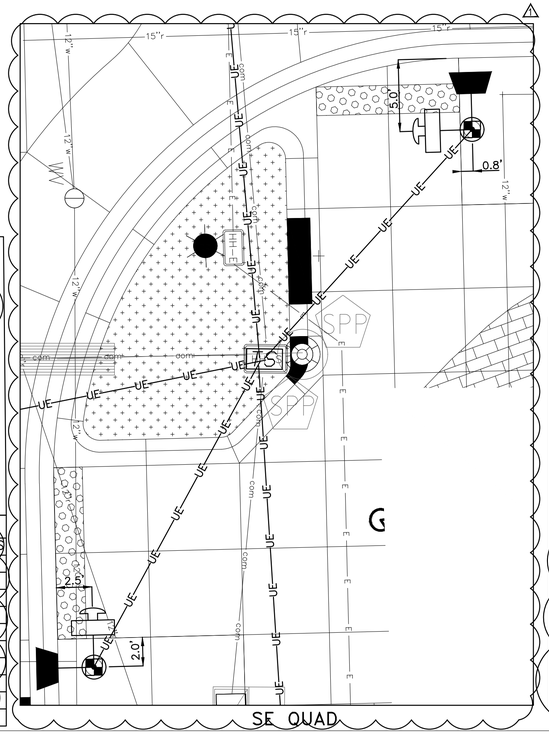
INSTALLATION OF POLES/PEDESTALS WITH PUSHBUTTONS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE NEW SIDEWALK RAMPS AND CROSSWALK PAVEMENT MARKINGS. LOCATIONS SHALL MEET CURRENT ADA REQUIREMENTS AND CRITERIA.

WHERE PRACTICAL AND AS DIRECTED BY THE CITY SIGNAL DEPARTMENT, THE CONTRACTOR SHALL CONNECT PROPOSED HANDHOLES (SHOWN ON PLAN) WITH PROPOSED LIGHTING/ITS HANDHOLES WITH CONDUIT, DB. 1-3" (A MISCELLANEOUS QUANTITY HAS BEEN PROVIDED FOR THIS WORK). PRIOR TO WORK CONTRACTOR TO MEET WITH CITY TO GO OVER ANY ADDITIONAL HANDHOLE UP-SIZING OR CONNECTIONS AT EACH INTERSECTION.

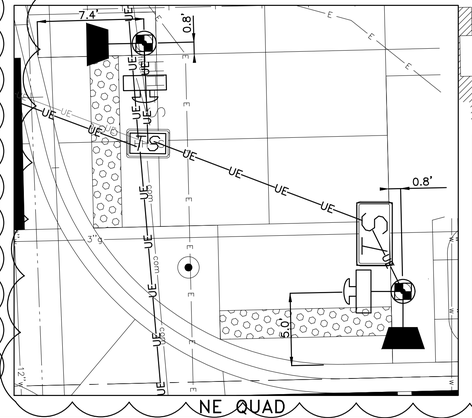
HANDHOLE REPLACMENTS AND SPARE 2-3 INCH CONDUIT SHALL BE INSTALLED WHERE DIRECTED BY THE ENGINEER. RETAIN EXISTING HANDHOLES WHERE FEASIBLE OR AS DIRECTED BY THE ENGINEER. ELEVATIONS TO BE COORDINATED WITH THE PROPOSED SURFACE ELEVATION AT TIME OF INSTALLATION.

LIST OF MATERIAL - CONSTRUCTION

NO.	ITEM	QUANTITIES
(1)	TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	6 Ea
(2)	Pedestrian Signal System, Accessible	1 Ea
(3)	Pushbutton Station and Sign	6 Ea
(4)	Pedestal, Alum	6 Ea
(5)	Pedestal, Fdn	6 Ea
(6)	Wireless Vehicle Sensor Node	2 Ea
(7)	Handhole Assembly, 17 inch x 30 inch	6 Ea
(8)	Handhole Assembly, 30 inch x 48 inch	1 Ea
◯	2 inch Schedule 80 PVC Electrical Conduit	100 Lft
◯	3 inch Schedule 80 PVC Electrical Conduit	510 Lft



SE QUAD



NE QUAD

NW QUAD

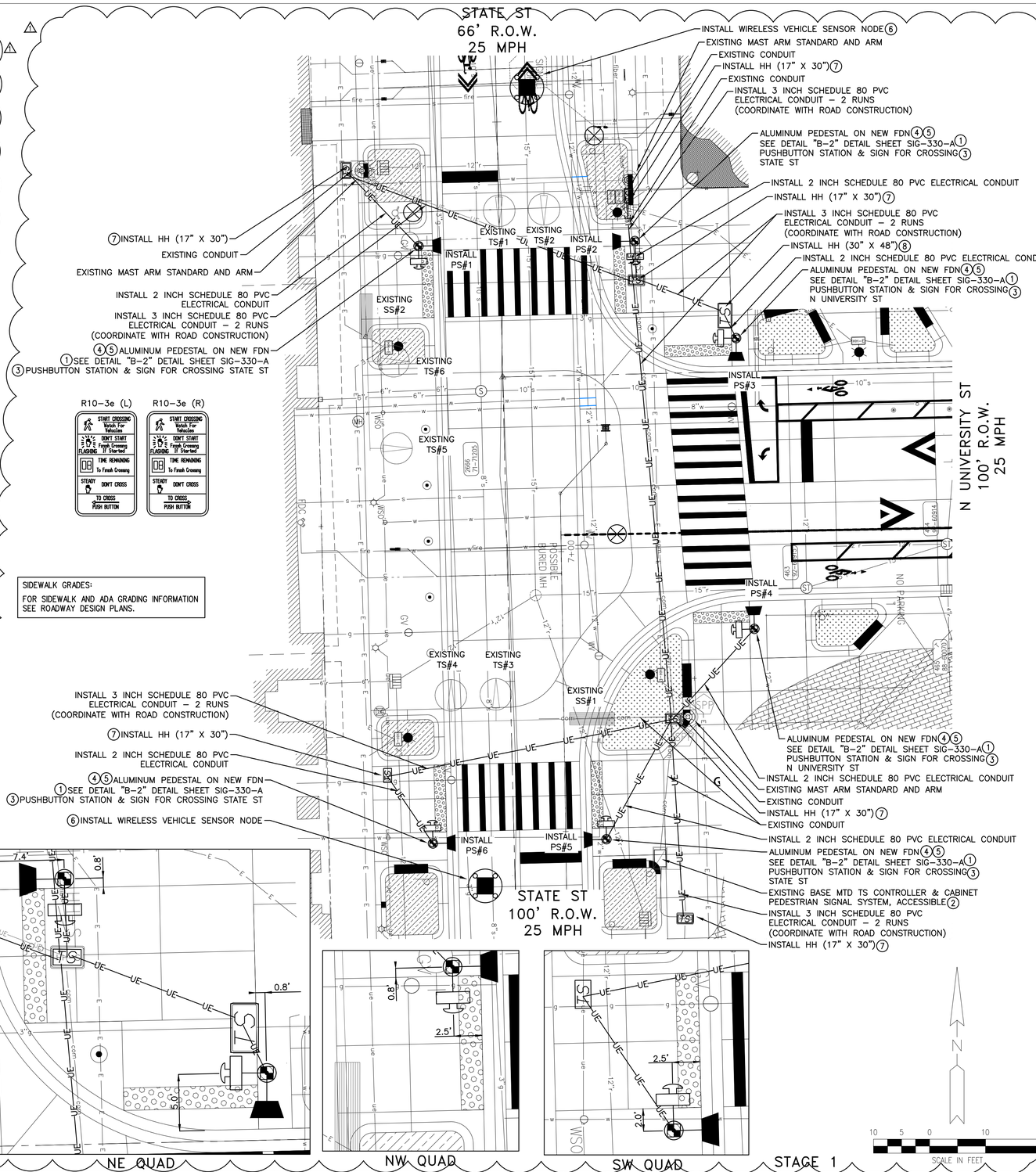
SW QUAD

R10-3e (L)

R10-3e (R)

SIDEWALK GRADES:

FOR SIDEWALK AND ADA GRADING INFORMATION SEE ROADWAY DESIGN PLANS.



STAGE 1

SEE ABOVE							
		1	ADDENDUM 1	03-11-2022			
			100% BID SET	02-18-2022			
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY	

STATE ST STREETSCAPE - CITY OF ANN ARBOR

TRAFFIC SIGNAL CONSTRUCTION SHEET
STATE ST @ N UNIVERSITY ST

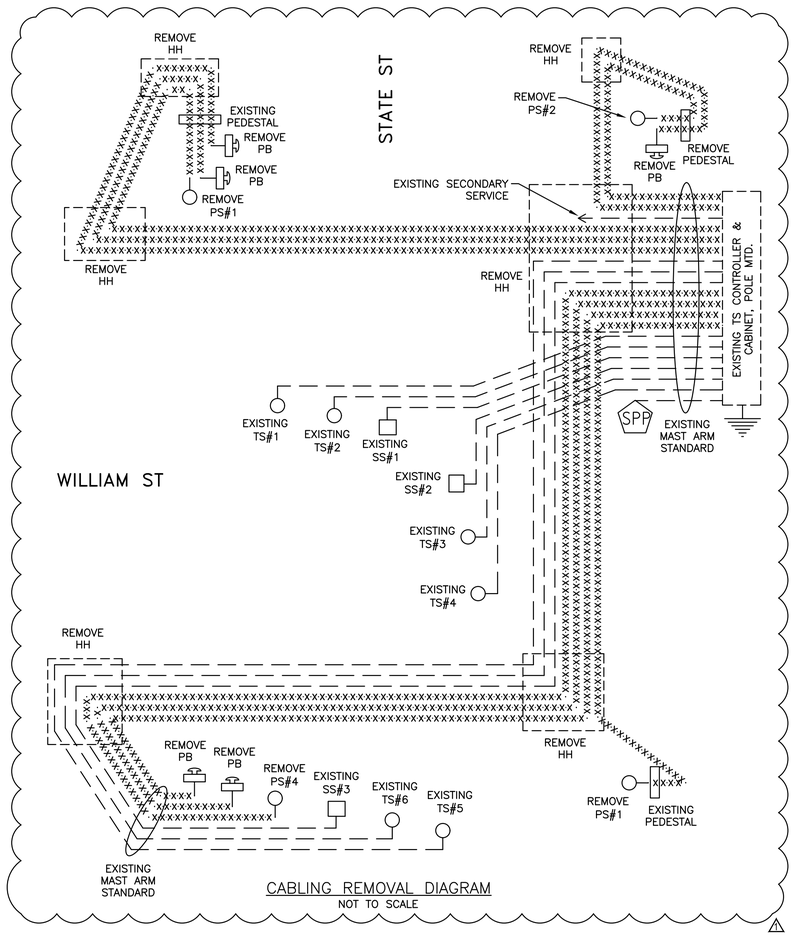
APPROVED BY _____

SCALE: INCH

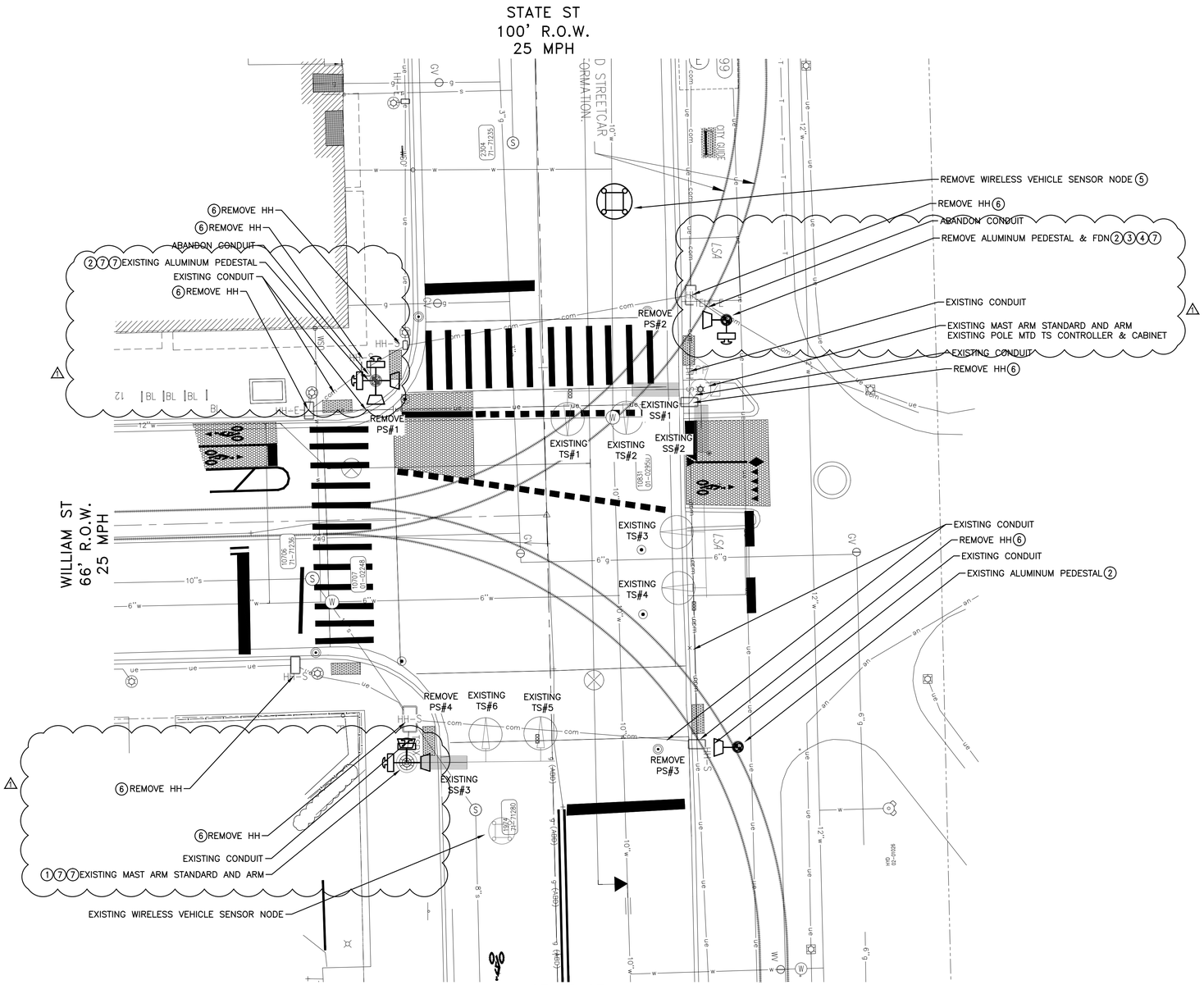
DRAWING NO. C8.7

SHEET NO. ____ OF ____

FILE: C:\pw_work2\dt0344457\CTS-PLTS-TrafficSignals-StateStreet.dwg USER: JCARUSO DATE: Mar, 09 2022 TIME: 11:31 am



CABLING REMOVAL DIAGRAM
NOT TO SCALE



STAGE 1

SCALE IN FEET 10 5 0 10 20

INTERSECTION SPECIFIC NOTES

UNWIRING OF THE PEDESTRIAN SIGNAL HEADS SHALL BE INCLUDED IN THE PAY ITEMS "TS, PEDESTRIAN, BRACKET ARM MTD, REM" & "TS, PEDESTRIAN, PEDESTAL MTD, REM" AND WILL NOT BE PAID FOR SEPARATELY.

HANDHOLES SHALL BE REMOVED AND REPLACED WHERE DIRECTED BY THE ENGINEER. RETAIN EXISTING HANDHOLES WHERE FEASIBLE OR AS DIRECTED BY THE ENGINEER.

LIST OF MATERIAL - REMOVAL

NO.	ITEM	QUANTITIES
1	TS, Pedestrian, Bracket Arm Mtd, Rem	1 Ea
2	TS, Pedestrian, Pedestal Mtd, Rem	3 Ea
3	Pedestal, Rem	1 Ea
4	Pedestal Fdn, Rem	1 Ea
5	Wireless Vehicle Sensor Node, Rem	1 Ea
6	Hh, Rem	8 Ea
7	Pushbutton, Rem	5 Ea

R Y G

EXISTING TS#1 & TS#2 FACING SOUTH
EXISTING TS#3 & TS#4 FACING WEST
EXISTING TS#5 & TS#6 FACING NORTH

EXISTING SS#1 & SS#3 ILLUMINATED STREET NAME SIGN
E.William
FACING NORTH & SOUTH

EXISTING SS#2 ILLUMINATED STREET NAME SIGN
S. State
FACING WEST

SEE ABOVE						
		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY

STATE ST STREETSCAPE - CITY OF ANN ARBOR

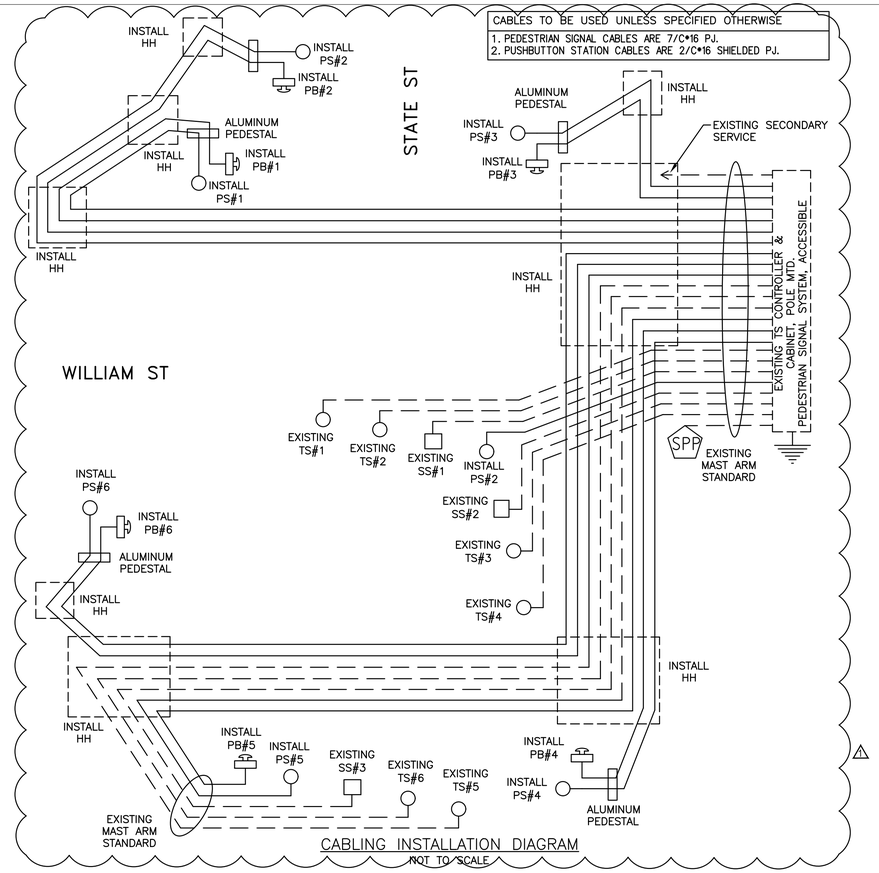
TRAFFIC SIGNAL REMOVAL SHEET
STATE ST @ WILLIAM ST

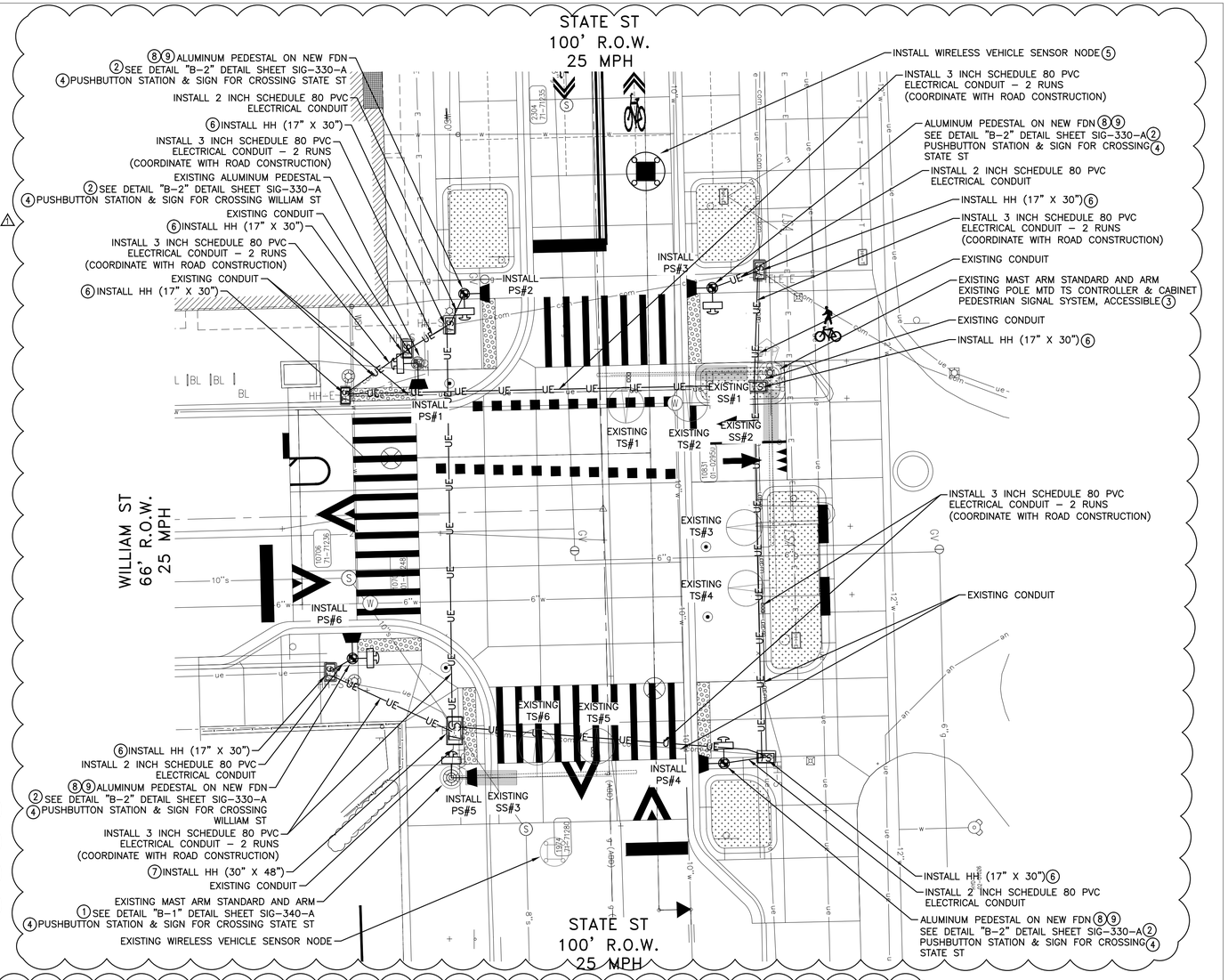
APPROVED BY _____

SCALE: INCH

DRAWING NO. C8.8

SHEET NO. ____ OF ____



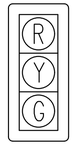


EXISTING SS#1 & SS#3 ILLUMINATED STREET NAME SIGN

FACING NORTH & SOUTH

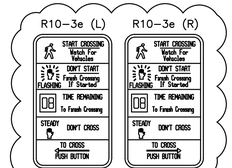
EXISTING SS#2 ILLUMINATED STREET NAME SIGN

FACING WEST



EXISTING TS#1 & TS#2 FACING SOUTH
EXISTING TS#3 & TS#4 FACING WEST
EXISTING TS#5 & TS#6 FACING NORTH

L.E.D. PEDESTRIAN COUNTDOWN HEAD



INTERSECTION SPECIFIC NOTES

WIRING OF THE COUNTDOWN PEDESTRIAN SIGNALS SHALL BE INCLUDED IN THE PAY ITEMS "TS, PEDESTRIAN, ONE WAY BRACKET ARM MTD (LED) COUNTDOWN" & "TS, PEDESTRIAN, ONE WAY PEDESTAL MTD (LED) COUNTDOWN" AND WILL NOT BE PAID FOR SEPARATELY.

APS EQUIPMENT SHALL BE THE POLARA INS INAVIGATOR 2-WIRE APS ASSEMBLY. CONTRACTOR SHALL DELIVER THE PEDESTRIAN SIGNAL SYSTEM, ACCESSIBLE TO THE ANN ARBOR SIGNAL SHOP.

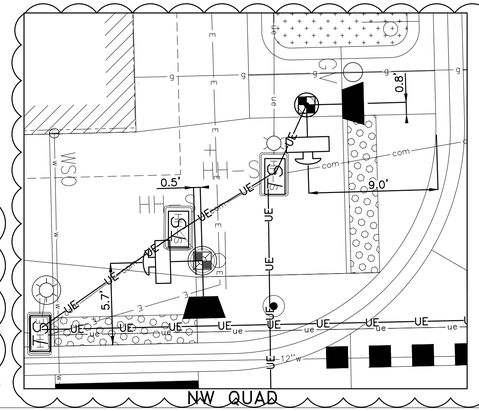
INSTALLATION OF POLES/PEDESTALS WITH PUSHBUTTONS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE NEW SIDEWALK RAMPS AND CROSSWALK PAVEMENT MARKINGS. LOCATIONS SHALL MEET CURRENT ADA REQUIREMENTS AND CRITERIA.

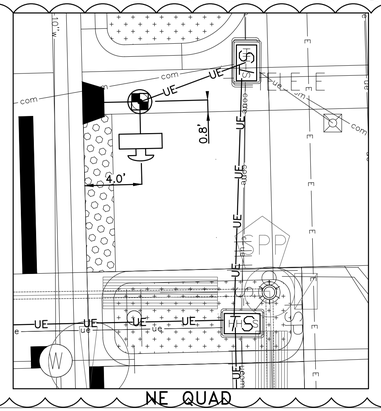
WHERE PRACTICAL AND AS DIRECTED BY THE CITY SIGNAL DEPARTMENT, THE CONTRACTOR SHALL CONNECT PROPOSED HANDHOLES (SHOWN ON PLAN) WITH PROPOSED LIGHTING/ITS HANDHOLES WITH CONDUIT, DB. 1-3" (A MISCELLANEOUS QUANTITY HAS BEEN PROVIDED FOR THIS WORK). PRIOR TO WORK CONTRACTOR TO MEET WITH CITY TO GO OVER ANY ADDITIONAL HANDHOLE UP-SIZING OR CONNECTIONS AT EACH INTERSECTION.

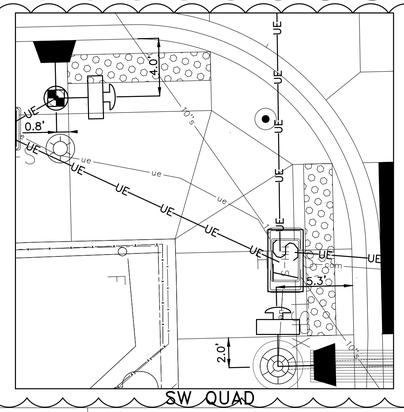
HANDHOLE REPLACMENTS AND SPARE 2-3 INCH CONDUIT SHALL BE INSTALLED WHERE DIRECTED BY THE ENGINEER. RETAIN EXISTING HANDHOLES WHERE FEASIBLE OR AS DIRECTED BY THE ENGINEER. ELEVATIONS TO BE COORDINATED WITH THE PROPOSED SURFACE ELEVATION AT TIME OF INSTALLATION.

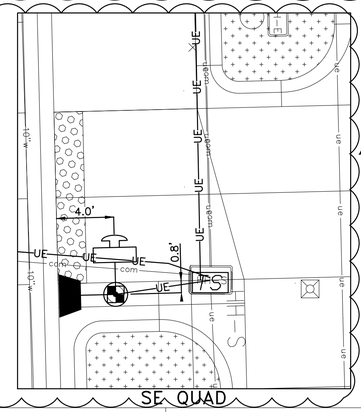
LIST OF MATERIAL - CONSTRUCTION

NO.	ITEM	QUANTITIES
(1)	TS, Pedestrian, One Way Bracket Arm Mtd (LED) Countdown	1 Ea
(2)	TS, Pedestrian, One Way Pedestal Mtd (LED) Countdown	5 Ea
(3)	Pedestrian Signal System, Accessible	1 Ea
(4)	Pushbutton Station and Sign	6 Ea
(5)	Wireless Vehicle Sensor Node	1 Ea
(6)	Handhole Assembly, 17 inch x 30 inch	7 Ea
(7)	Handhole Assembly, 30 inch x 48 inch	1 Ea
(8)	Pedestal, Alum	4 Ea
(9)	Pedestal, Fdn	4 Ea
◯	2 inch Schedule 80 PVC Electrical Conduit	25 Lft
◯	3 inch Schedule 80 PVC Electrical Conduit	580 Lft



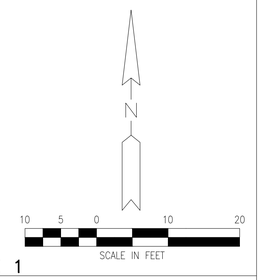






SIDEWALK GRADES:

FOR SIDEWALK AND ADA GRADING INFORMATION SEE ROADWAY DESIGN PLANS.



STAGE 1

SEE ABOVE		REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
BENCH MARK	SURVEY BOOK	1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		

STATE ST STREETSCAPE - CITY OF ANN ARBOR

TRAFFIC SIGNAL CONSTRUCTION SHEET
STATE ST @ WILLIAM ST

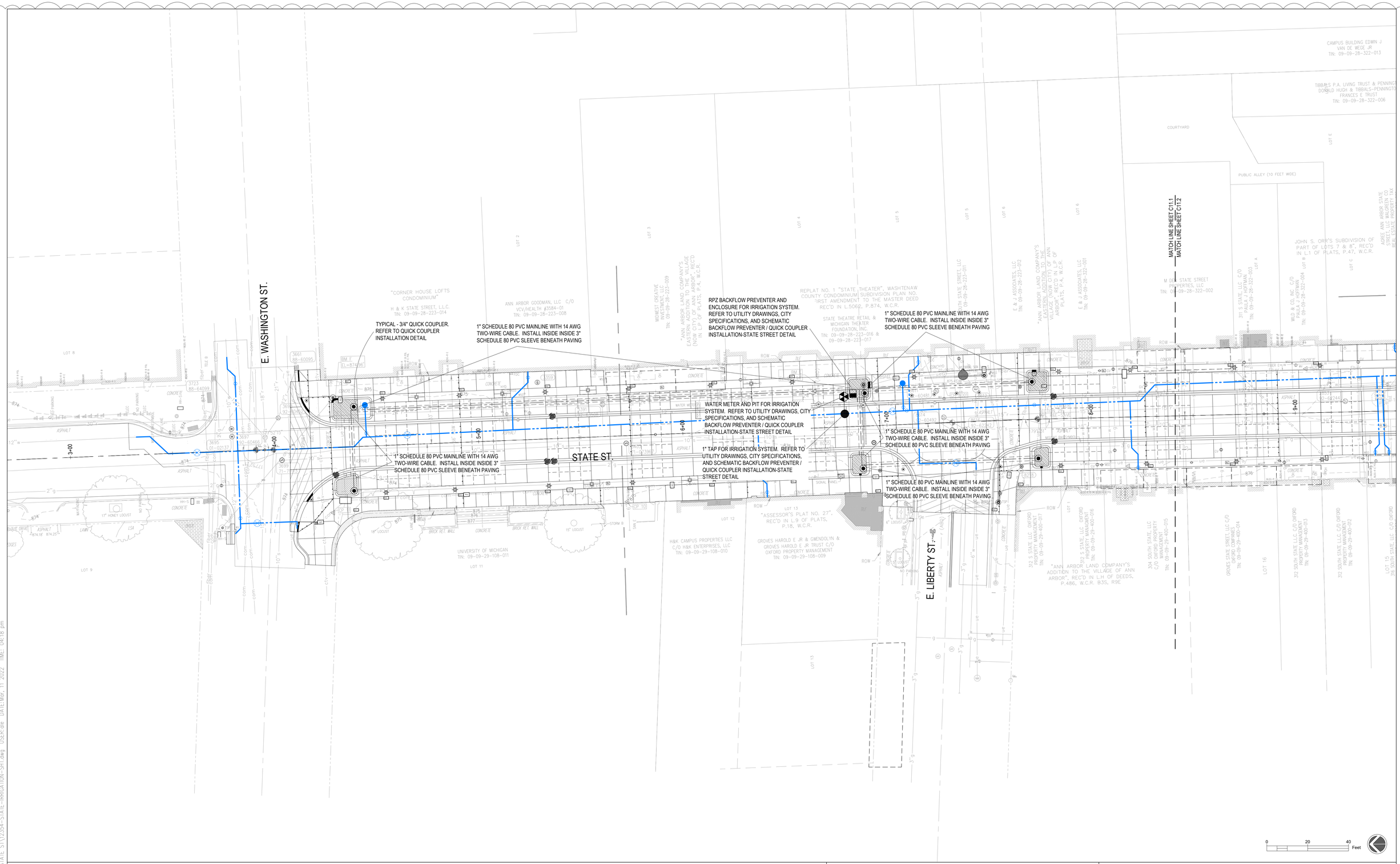
SCALE: INCH

DRAWING NO. C8.9

SHEET NO. ____ OF ____

APPROVED BY _____

FILE:C:\pw_work\2\d1034457\CTS-PLTS-TrafficSignals-StateStreet.dwg USER:JCARUSO DATE:Mar. 09 2022 TIME: 11:31 am



IRRIGATION LEGEND

KEY	EQUIPMENT	
●	1" Tap	Refer To Detail and City Specifications
☢	Meter Pit	Refer To Detail and City Specifications
◧	Backflow Preventer and Enclosure	Refer To Detail
◉	Quick Coupling Valve	Rainbird 3LRC w/Hose swivel and key

3" Schedule 40 PVC Sleeve, 24" Bury

Schedule 40 PVC Irrigation mainline with 14AWG two-wire cable

REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
1	ADDENDUM 1			
	100% BID SET	02-18-2022		

SEE ABOVE | BENCH MARK | SURVEY BOOK

STATE ST STREETSCAPE - CITY OF ANN ARBOR

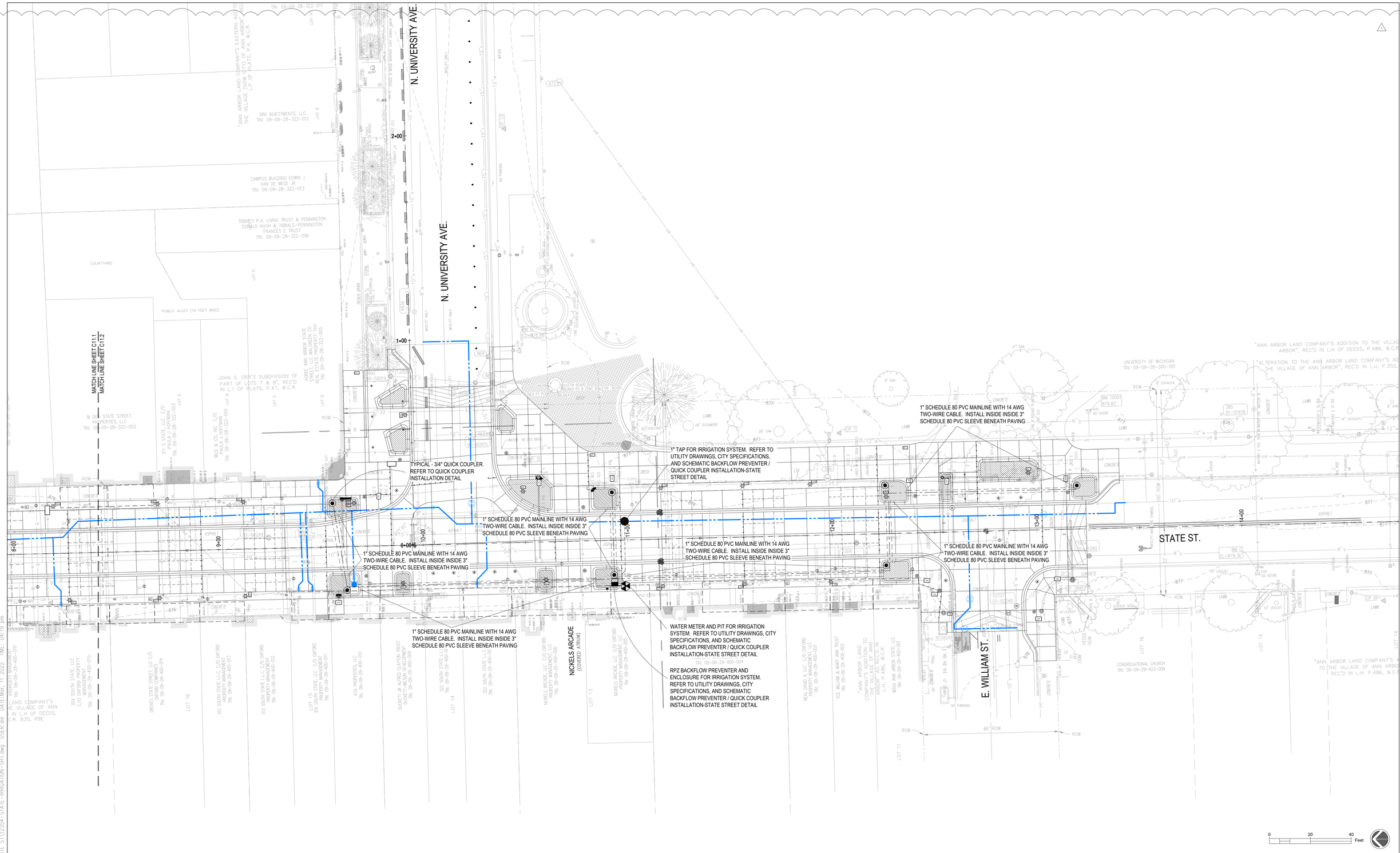
IRRIGATION PLAN 1

APPROVED BY

SCALE: INCH

DRAWING NO. C11.1

SHEET NO. ___ OF ___



IRRIGATION LEGEND

KEY	EQUIPMENT	
●	1" Tap	Refer To Detail and City Specifications
☢	Meter Pit	Refer To Detail and City Specifications
◧	Backflow Preventer and Enclosure	Refer To Detail
◉	Quick Coupling Valve	Rainbird 3LRC w/Hose swivel and key

3" Schedule 40 PVC Sleeve, 24" Bury

Schedule 40 PVC Irrigation mainline with 14AWG two-wire cable

REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
1	ADDENDUM 1	03-11-2022		
	100% BID SET	02-18-2022		

SEE ABOVE | BENCH MARK | SURVEY BOOK | APPROVED BY

STATE ST STREETSCAPE - CITY OF ANN ARBOR

IRRIGATION PLAN 2

SCALE: INCH

DRAWING NO. C11.2

SHEET NO. ____ OF ____

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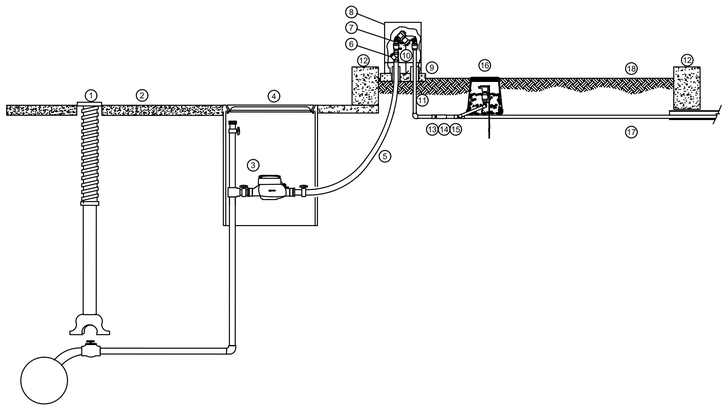
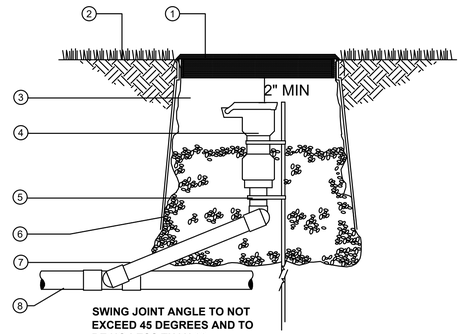


1. 1" TAP, SHUT OFF GATE, BOX AND CORPORATION STOP -- PER CITY SPECIFICATIONS
2. SIDEWALK GRADE
3. METER INSTALLATION WITH GATED CONNECTION AND HOSE THREADS FOR WINTERIZATION AIR COMPRESSOR ATTACHMENT PER CITY SPECIFICATIONS
4. EAST JORDAN IRON WORKS (800-626-4653) #32417301 RECTANGULAR SERIES METER BOX 17-5/8" X 30-1/2" X 18"BCF
5. 1" TYPE 'K' COPPER TO BACKFLOW PREVENTER LOCATION. INSTALL IN 3" SLEEVE THROUGH ENCLOSURE CONCRETE BASE
6. WYE STRAINER
7. FEBCO 825YA RPZ BACKFLOW PREVENTER
8. BACKFLOW PREVENTER ENCLOSURE - STRONG BOX SB-16SSW 18" HIGH 16" LONG, 10" WIDE. INSTALLED ON PED-16SSW RISER PEDESTAL 4" HIGH, 16" LONG, 8" DEEP.
9. ENTIRE ENCLOSURE PEDESTAL SHALL BE INSTALLED ON 6" THICK 20" X 12" SOLID CONCRETE BASE. TOP OF CONCRETE BASE SHALL BE SET 4" BELOW PLANTER GRADE AND 2" ABOVE GRADE.
10. 12"
11. 1" COPPER PIPE INSTALLED IN 3" SLEEVE THROUGH CONCRETE PEDESTAL BASE
12. PLANTER WALL
13. 1" TYPE 'M' SOLDER X 1" MPT TRANSITIONAL FITTING
14. 1" MPT X 1" SLIP PVC COUPLER
15. 1" SCHEDULE 80 PVC TO QUICK COUPLER
16. 3/4" QUICK COUPLER - SEE DETAIL
17. 1" SCHEDULE 80 PVC MAINLINE WITH 14 AWG TWO-WIRE CABLE TO NEXT QUICK COUPLER INSIDE 3" SLEEVE BENEATH PAVING BETWEEN PLANTERS
18. PLANTER GRADE

SCHEMATIC BACKFLOW PREVENTER / QUICK COUPLER INSTALLATION-STATE STREET

NTS



1. 10" ROUND VALVE BOX WITH LOCKING LID AND BOLT
2. FINISH GRADE
3. INTERIOR OF BOX TO BE FREE FROM SOIL AND DEBRIS
4. QUICK COUPLING VALVE
5. 36" LONG RE-ROD TO STABILIZE QUICK COUPLER. SECURE TO COUPLER WITH BAND AND SCREW WORM GEAR CLAMPS.
6. FILTER FABRIC WITH 3/4" CRUSHED STONE. FILL VALVE BOX WITH STONE TO 2" BELOW QUICK COUPLER TOP. PACK STONE IN 1" LIFTS
7. SCHEDULE 80 PRE-FABRICATED SWING JOINT WITH O-RING SEALS AND MINIMUM 12" LAY LENGTH, LASCO, SPEARS, OR DURA
8. MAINLINE PIPE.

QUICK COUPLER INSTALLATION

NTS

REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
1	ADDENDUM 1	03-11-2022		
	100% BID SET	02-18-2022		

SEE ABOVE | BENCH MARK | SURVEY BOOK | APPROVED BY

STATE ST STREETSCAPE - CITY OF ANN ARBOR

IRRIGATION DETAILS

SCALE: INCH

DRAWING NO. C12.1

SHEET NO. ____ OF ____

TWO WEEKS PRIOR TO THE START OF CONSTRUCTION ON STATE ST. THE CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATION AT THE INTERSECTION OF WASHINGTON AND STATE ST AND THE NORTH CONNECTION POINT OR AS DIRECTED BY THE ENGINEER TO VERIFY THE LOCATION OF THE EXISTING WATER MAIN. ALL COSTS ASSOCIATED WITH THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "EXPLORATORY EXCAVATION (0–10' DEEP)"(TRENCH DETAIL 1)

PROPOSED 2023 INSTALLATION | **PROPOSED 2022 INSTALLATION**

STA:–0+00 CONNECT TO EXISTING 12" WATER MAIN W/ 12" – 45° BEND W/ THRUST BLOCK & 12" MJ SOLID SLEEVE

H7 SEE SHEET C6.9 FOR HYDRANT DETAILS

STA:1+10 12" – 45° BEND W/ THRUST BLOCK

GVW–2 STA:1+31 12" GATE VALVE IN WELL RIM:874.74

STA:0+12 12" – 45° BEND W/ THRUST BLOCK

GVW–1 STA:0+26 12" GATE VALVE IN WELL RIM:873.88

HAZARDOUS OR FLAMMABLE MATERIAL

STA:0+46 12" CROSS

SEE SHEET C6.4 FOR WASHINGTON CONNECTIONS

STA:1+11 12" X 6" TEE W/ THRUST BLOCK

STA:1+03 12" – 45° BEND W/ THRUST BLOCK

STA:1+83 12" X 4" TEE W/ THRUST BLOCK

SEE SHEET C6.5 FOR SERVICE DETAILS

EXISTING 12" WM TO BE ABANDONED

EXTEND AND RECONNECT WATER SERVICE IN KIND. CONTRACTOR SHALL EXCAVATE TRENCH. CITY SHALL INSTALL TAP AND LEAD (TYP ALL WEST SIDE SERVICES)

EXISTING UNDERGROUND BUILDING VAULTS (TYP)

NEW 1–INCH TAP FOR PROPOSED IRRIGATION SYSTEM (SEE IRRIGATION PLANS AND DETAILS). CONTRACTOR SHALL EXCAVATE TRENCH. CITY SHALL INSTALL TAP AND LEAD.

RECONNECT EXISTING WATER SERVICE. CONTRACTOR SHALL EXCAVATE TRENCH. CITY SHALL INSTALL TAP AND LEAD (TYP ALL EAST SIDE SERVICES)

SEE SHEET C6.5 FOR SERVICE DETAILS

IF WATER SERVICE IS FOUND TO BE 4" OR LARGER IT SHALL BE REPLACED TO THE RIGHT–OF–WAY LINE INCLUDING A NEW WATER SHUT OFF VALVE PER THE DIRECTION OF THE ENGINEER.

H6 SEE SHEET C6.9 FOR HYDRANT DETAILS

GVW–2A STA:3+69 12" GATE VALVE IN WELL RIM:875.66

STA:3+75 12" X 6" TEE W/ THRUST BLOCK

STA:3+78 12" X 4" TEE W/ THRUST BLOCK

STA:3+82 12" TEE W/ THRUST BLOCK

HAZARDOUS OR FLAMMABLE MATERIAL

GVB–3 STA:3+76 12" GATE VALVE IN BOX RIM: 875.69

SEE SHEET C6.5 FOR SERVICE DETAILS

SEE SHEET C6.6 FOR LIBERTY CONNECTION

TEMPORARY TIE–IN TO EXISTING WATER MAIN IN 2022. CONNECT TO EXISTING 12" WATER MAIN WITH 12"X12" TEE, 4 LF OF 12" DI CL 50 W/ POLYWRAP, 12" 90° BEND, AND 12" MJ SOLID SLEEVE. PROPOSED WATER MAIN TO CONTINUE NORTH IN 2023 AS A PART OF THIS CONTRACT.

STA:5+01 12" – 45° BEND W/ THRUST BLOCK

STA:4+91 12" – 45° BEND W/ THRUST BLOCK

STA:4+86 12" X 4" TEE W/ THRUST BLOCK

GVB–4 STA:4+39 12" GATE VALVE IN BOX RIM: 875.58

SEE SHEET C6.6 FOR SERVICE DETAILS

MATCH LINE SHEET C6.2
MATCH LINE SHEET C6.3

N

WATER MAIN STRUCTURE TABLE

STRUCTURE	TYPE	STATION	RIM	WELL DEPTH	T/P
GVW–1	12" GVIW	0+26	873.88	7.06	5.52
GVW–2	12" GVIW	1+31	874.74	8.55	7.01
GVW–2A	12" GVIW	3+69	875.66	7.83	6.29

1

WATER MAIN STRUCTURE TABLE

STRUCTURE	TYPE	STATION	RIM	T/P
GVB–3	12" GVIB	3+76	875.69	6.44
GVB–4	12" GVIB	4+39	875.58	7.00

Existing Water Services

Address	Station	Size
309 State	5+07	2
306 State	5+05	0.75
306 State	4+99	0.75
304 State	4+96	4
305 State	4+83	1.25
304 State	4+75	Unknown
302 State	4+62	1.25
235 State	4+18	1.5
233 State	3+99	4
231 State	3+80	2" Abandoned
220 State	3+10	Unknown
220 State	3+07	6
216 State	2+91	2
213 State	2+30	1
209 State	1+91	4
209 State	1+89	2
342 State	0+45 (E William)	Unknown

12" DI CL 50 W/POLYETHYLENE WRAP TRENCH DETAIL I

12" DI CL 50 W/POLYETHYLENE WRAP TRENCH DETAIL III

STA 0+00 CONNECT TO EX 12–INCH WATER MAIN AFTER NEW WATER MAIN HAS PASSED ALL HYDROSTATIC AND BACTERIOLOGICAL TESTING REQUIREMENTS.

STA 0+00 – STA 0+06 6 LF 12" W CL 50 DIP

STA 0+07 – STA 0+09 2 LF 12" W CL 50 DIP

STA 0+09 – STA 0+12 2 LF 12" W CL 50 DIP

STA 0+13 – STA 0+26 13 LF 12" W CL 50 DIP

STA 0+27 – STA 0+46 19 LF 12" W CL 50 DIP

STA 0+47 – STA 0+62 15 LF 12" W CL 50 DIP

STA 0+65 – STA 0+78 13 LF 12" W CL 50 DIP

STA 0+62 – STA 0+64 2 LF 12" W CL 50 DIP

STA 0+78 – STA 1+03 25 LF 12" W CL 50 DIP

STA 1+04 – STA 1+09 5 LF 12" W CL 50 DIP

STA 1+12 – STA 1+20 9 LF 12" W CL 50 DIP

STA 1+20 – STA 1+32 11 LF 12" W CL 50 DIP

STA 1+31 – STA 1+82 51 LF 12" W CL 50 DIP

STA 1+84 – STA 2+22 37 LF 12" W CL 50 DIP

STA 2+22 – STA 2+24 1 LF 12" W CL 50 DIP

STA 2+25 – STA 2+29 5 LF 12" W CL 50 DIP

STA 2+30 – STA 2+33 3 LF 12" W CL 50 DIP

STA 2+34 – STA 3+02 68 LF 12" W CL 50 DIP

STA 3+04 – STA 3+69 65 LF 12" W CL 50 DIP

STA 3+75 – STA 3+77 2 LF 12" W CL 50 DIP

STA 3+78 – STA 3+81 3 LF 12" W CL 50 DIP

STA 3+82 – STA 3+85 3 LF 12" W CL 50 DIP

STA 3+86 – STA 3+90 4 LF 12" W CL 50 DIP

STA 3+91 – STA 3+97 6 LF 12" W CL 50 DIP

STA 3+97 – STA 4+00 2 LF 12" W CL 50 DIP

STA 4+01 – STA 4+39 38 LF 12" W CL 50 DIP

STA 4+38 – STA 4+57 19 LF 12" W CL 50 DIP

STA 4+57 – STA 4+75 18 LF 12" W CL 50 DIP

STA 4+75 – STA 4+85 10 LF 12" W CL 50 DIP

STA 4+86 – STA 4+90 4 LF 12" W CL 50 DIP

STA 4+91 – STA 5+01 10 LF 12" W CL 50 DIP

STA 5+02 – STA 5+11 9 LF 12" W CL 50 DIP

RESTRAINED JOINT SYSTEMS SHALL BE UTILIZED ON ALL WATER MAIN. RESTRAINED JOINT GASKET SYSTEMS ARE TO BE USED. (FIELD–LOK 350 BY U.S. PIPE, FAST–GRIP BY AMERICAN DUCTILE IRON PIPE, OR APPROVED EQUAL).

CONTRACTOR SHALL TAKE CAUTION IN EXCAVATING AND INSTALLING LEAD IN PROXIMITY TO EXISTING UNDERGROUND BUILDING VAULTS. PROTECT EXISTING VAULT. CONNECT TO EXISTING WATER SERVICE OUTSIDE EXISTING VAULT WALL.

THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF ANN ARBOR FOR THE FULL REPLACEMENT OF WATER SERVICE LEADS AT APPROXIMATELY TEN LOCATIONS ON S. STATE STREET. REPLACEMENT OF THE LEADS TO BE PERFORMED BY THE CITY AND/OR ITS PLUMBING CONTRACTOR. THIS SHALL NOT BE PAID FOR SEPARATELY AND SHALL BE COVERED UNDER THE ITEM OF WORK EXCAVATE & BACKFILL FOR WATER SERVICE TAP AND LEAD.

WHERE EXISTING WATER MAIN IS EXPOSED FOR A CONNECTION OR APPURTENANCE INSTALLATION, THE CONTRACTOR SHALL INSTALL ONE SACRIFICIAL ANODE ON THE EXISTING PIPE. IF THE NEW FITTING IS INSTALLED IN–LINE WITH THE EXISTING MAIN, SUCH AS AT A CUT–IN TEE OR VALVE INSERTION, ONE ANODE SHALL BE INSTALLED ON THE EXISTING PIPE TO EACH SIDE OF THE NEW FITTING. EACH ANODE INSTALLED ON EXISTING WATER MAIN WILL BE PAID FOR AS "SACRIFICIAL ANODE, XX LB"

THE DEPTH AND SIZE OF ELECTRICAL, TELEPHONE AND FIBER OPTIC CONDUITS/DUCTS AND THE DEPTH OF GAS MAINS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY, SUPPORT AND PROTECT DURING CONSTRUCTION AND ADJUST WATER MAIN WHERE NECESSARY TO MAINTAIN 12–INCHES VERTICAL CLEARANCE FROM ALL UTILITIES (EXCEPT SANITARY AND STORM SEWER WHERE 18–INCHES IS REQUIRED). THIS WORK IS PAID FOR UNDER GENERAL CONDITIONS, MAX.

SEE ABOVE						
		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY

STATE ST STREETSCAPE - CITY OF ANN ARBOR

STATE STREET PROPOSED WATER MAIN
STA 0+00 TO STA 5+14.43

APPROVED BY _____

SCALE: INCH

DRAWING NO. C6.2

SHEET NO. ____ OF ____

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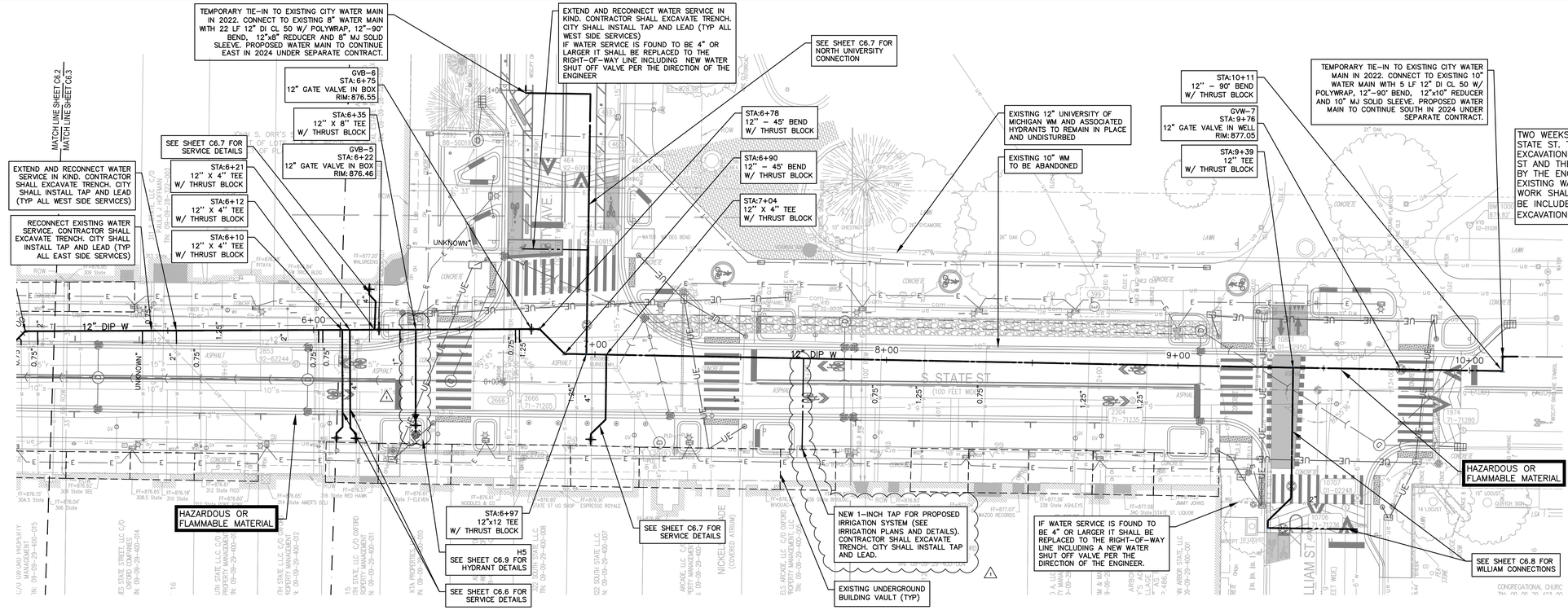


WATER MAIN STRUCTURE TABLE

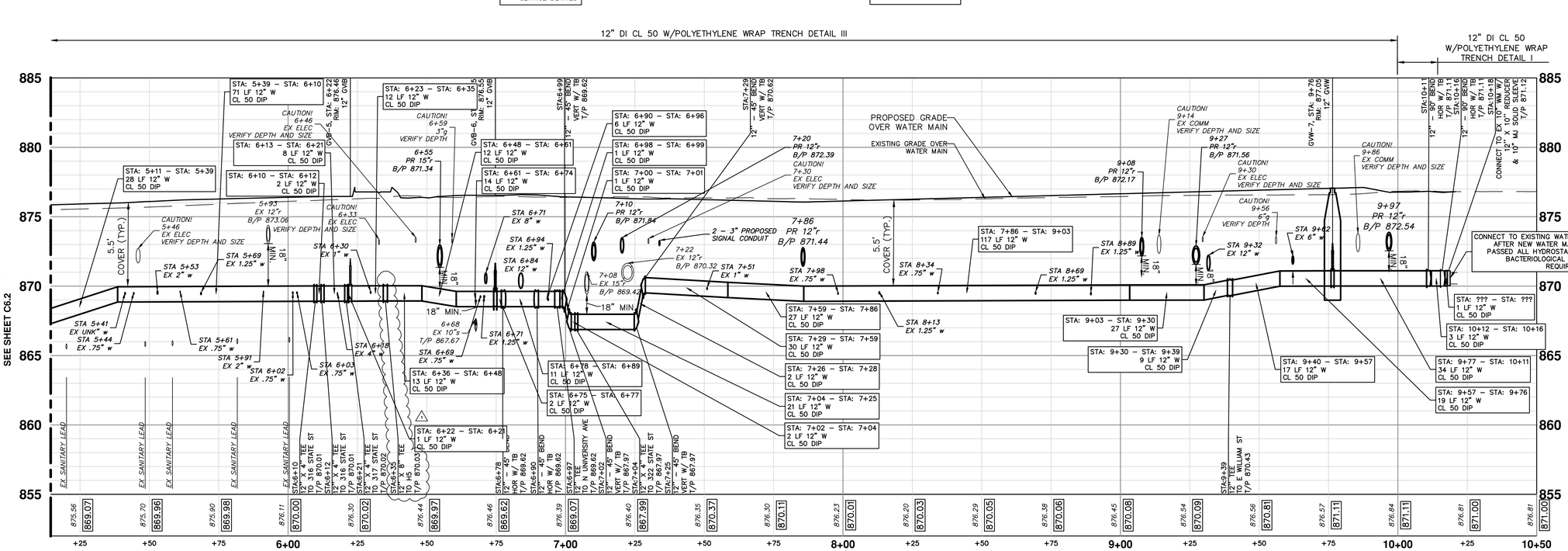
STRUCTURE	TYPE	STATION	RIM	T/P
GVB-5	4" GVIB	6+22	876.46	7.21
GVB-6	4" GVIB	6+75	876.55	7.67

WATER MAIN STRUCTURE TABLE

STRUCTURE	TYPE	STATION	RIM	T/P
GVW-7	12" GVIB	9+76	877.05	6.56

Existing Water Services

Address	Station	Size
340 State	8+89	1.25
338 State	8+69	1.25
336 State	8+34	0.75
332 State	8+13	1.25
332 State	7+98	0.75
326 State	7+51	1
324 State	7+05	4
324 State	6+94	1.25
322 State	6+71	1.25
320 State	6+69	0.75
318 State	6+30	1
317 State	6+18	4
316 State	6+03	0.75
314 State	6+02	0.75
317 State	5+91	2
315 State	5+69	1.25
312 State	5+61	0.75
310 State	5+53	2
311 State	5+44	0.75
308 State	5+41	Unknown
317 State	0+36 (North University)	Unknown



CONTRACTOR SHALL TAKE CAUTION IN EXCAVATING AND INSTALLING LEAD IN PROXIMITY TO EXISTING UNDERGROUND BUILDING VAULTS. PROTECT EXISTING VAULT. CONNECT TO EXISTING WATER SERVICE OUTSIDE EXISTING VAULT WALL.

RESTRAINED JOINT SYSTEMS SHALL BE UTILIZED ON ALL WATER MAIN. RESTRAINED JOINT GASKET SYSTEMS ARE TO BE USED. (FIELD-LOK 350 BY U.S. PIPE, FAST-GRIP BY AMERICAN DUCTILE IRON PIPE, OR APPROVED EQUAL).

THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF ANN ARBOR FOR THE FULL REPLACEMENT OF WATER SERVICE LEADS AT APPROXIMATELY TEN LOCATIONS ON S. STATE STREET. REPLACEMENT OF THE LEADS TO BE PERFORMED BY THE CITY AND/OR ITS PLUMBING CONTRACTOR. THIS SHALL NOT BE PAID FOR SEPARATELY AND SHALL BE COVERED UNDER THE ITEM OF WORK EXCAVATE & BACKFILL FOR WATER SERVICE TAP AND LEAD.

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THE DEPTH AND SIZE OF ELECTRICAL, TELEPHONE AND FIBER OPTIC CONDUITS/DUCTS AND THE DEPTH OF GAS MAINS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY, SUPPORT AND PROTECT DURING CONSTRUCTION AND ADJUST WATER MAIN WHERE NECESSARY TO MAINTAIN 12-INCHES VERTICAL CLEARANCE FROM ALL UTILITIES (EXCEPT SANITARY AND STORM SEWER WHERE 18-INCHES IS REQUIRED). THIS WORK IS PAID FOR UNDER GENERAL CONDITIONS, MAX.

BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
SEE ABOVE		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		

STATE ST STREETSCAPE - CITY OF ANN ARBOR

STATE STREET PROPOSED WATER MAIN
STA 5+14.43 - STA 10+19

APPROVED BY _____

SCALE: INCH

DRAWING NO. C6.3

SHEET NO. ____ OF ____

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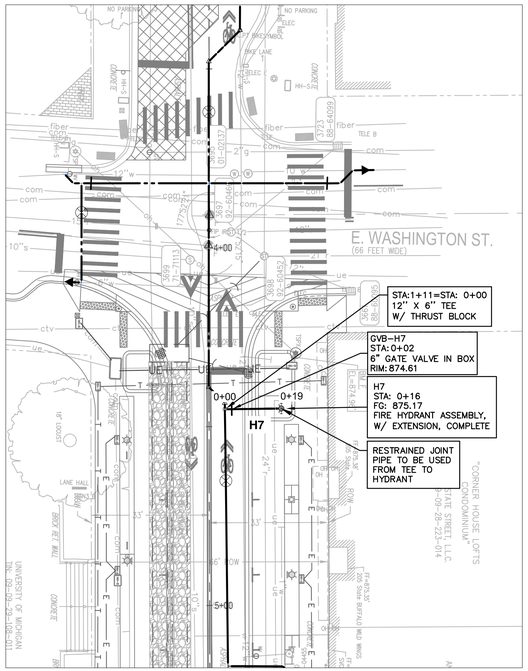
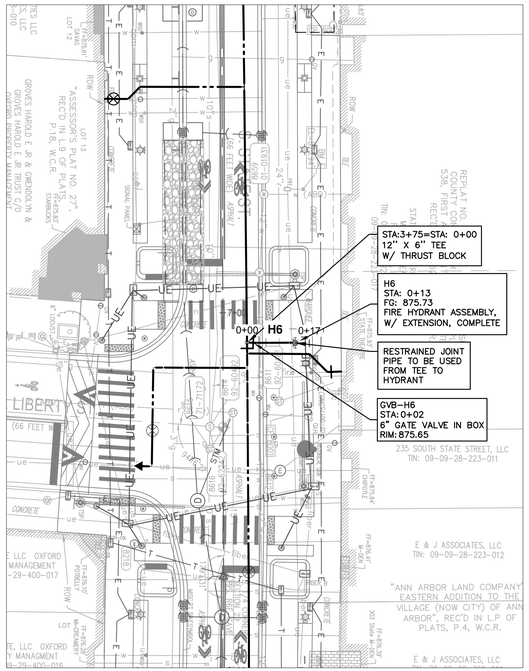
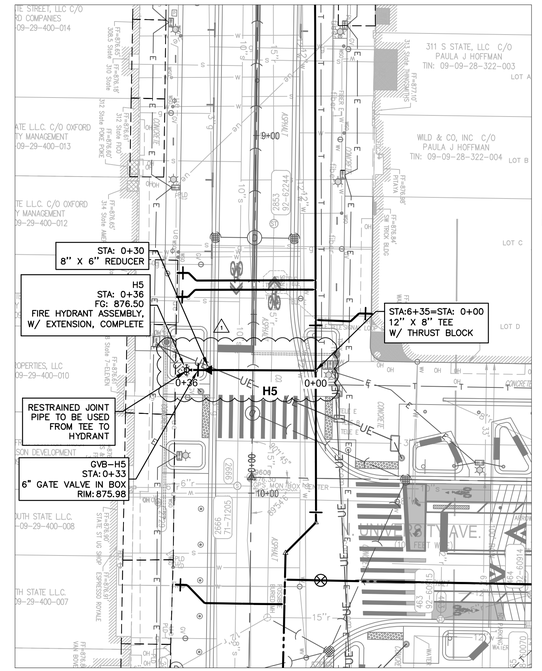


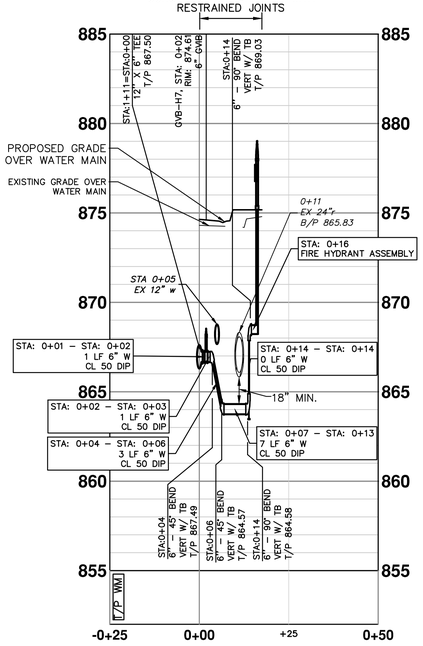
6" DI CL 50
W/POLYETHYLENE WRAP



6" DI CL 50
W/POLYETHYLENE WRAP



6" DI CL 50
W/POLYETHYLENE WRAP

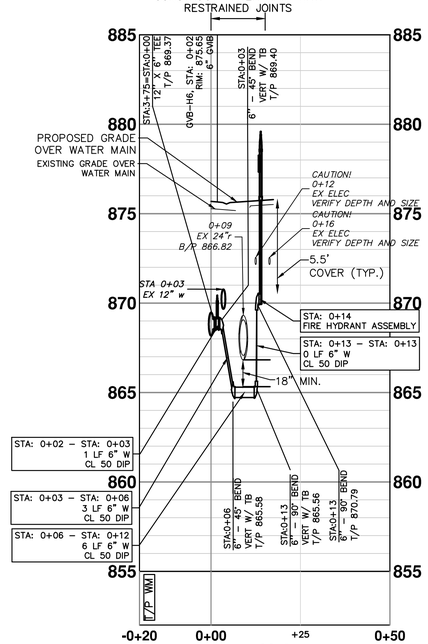


H-7

WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	FG	T/P
H5	HYD	0+36	876.50	5.50
H6	HYD	0+13	875.73	5.50
H7	HYD	0+16	875.17	5.50

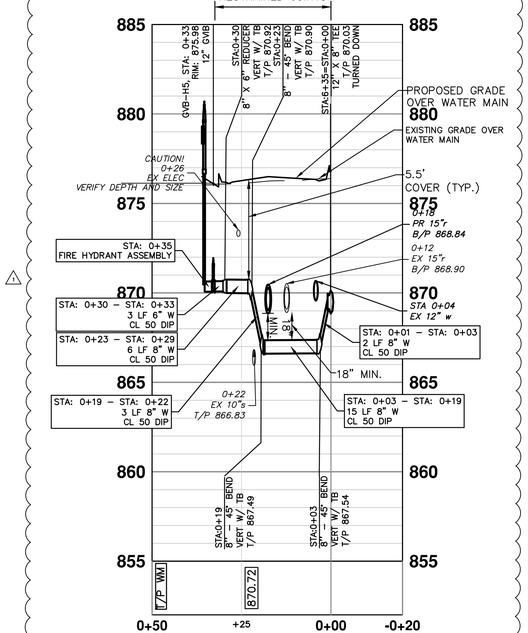
WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	T/P
GVB-H5	6" GVIB	0+33	875.98	6.10
GVB-H6	6" GVIB	0+02	875.65	6.59
GVB-H7	6" GVIB	0+02	874.61	7.44

6" DI CL 50
W/POLYETHYLENE WRAP
TRENCH DETAIL III
CONSTRUCT WATER MAIN WITH
RESTRAINED JOINTS



H-6

8" DI CL 50
W/POLYETHYLENE WRAP
TRENCH DETAIL III
CONSTRUCT WATER MAIN WITH
RESTRAINED JOINTS



H-5

RESTRAINED JOINT SYSTEMS SHALL BE UTILIZED ON ALL WATER MAIN. RESTRAINED JOINT GASKET SYSTEMS ARE TO BE USED. (FIELD-LOK 350 BY U.S. PIPE, FAST-GRIP BY AMERICAN DUCTILE IRON PIPE, OR APPROVED EQUAL).

SEE ABOVE							
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY	
		1	ADDENDUM 1	03-07-2022			
			100% BID SET	02-18-2022			

STATE ST STREETSCAPE - CITY OF ANN ARBOR

HYDRANT LATERALS

APPROVED BY _____

SCALE: INCH

DRAWING NO. C6.9

SHEET NO. ____ OF ____

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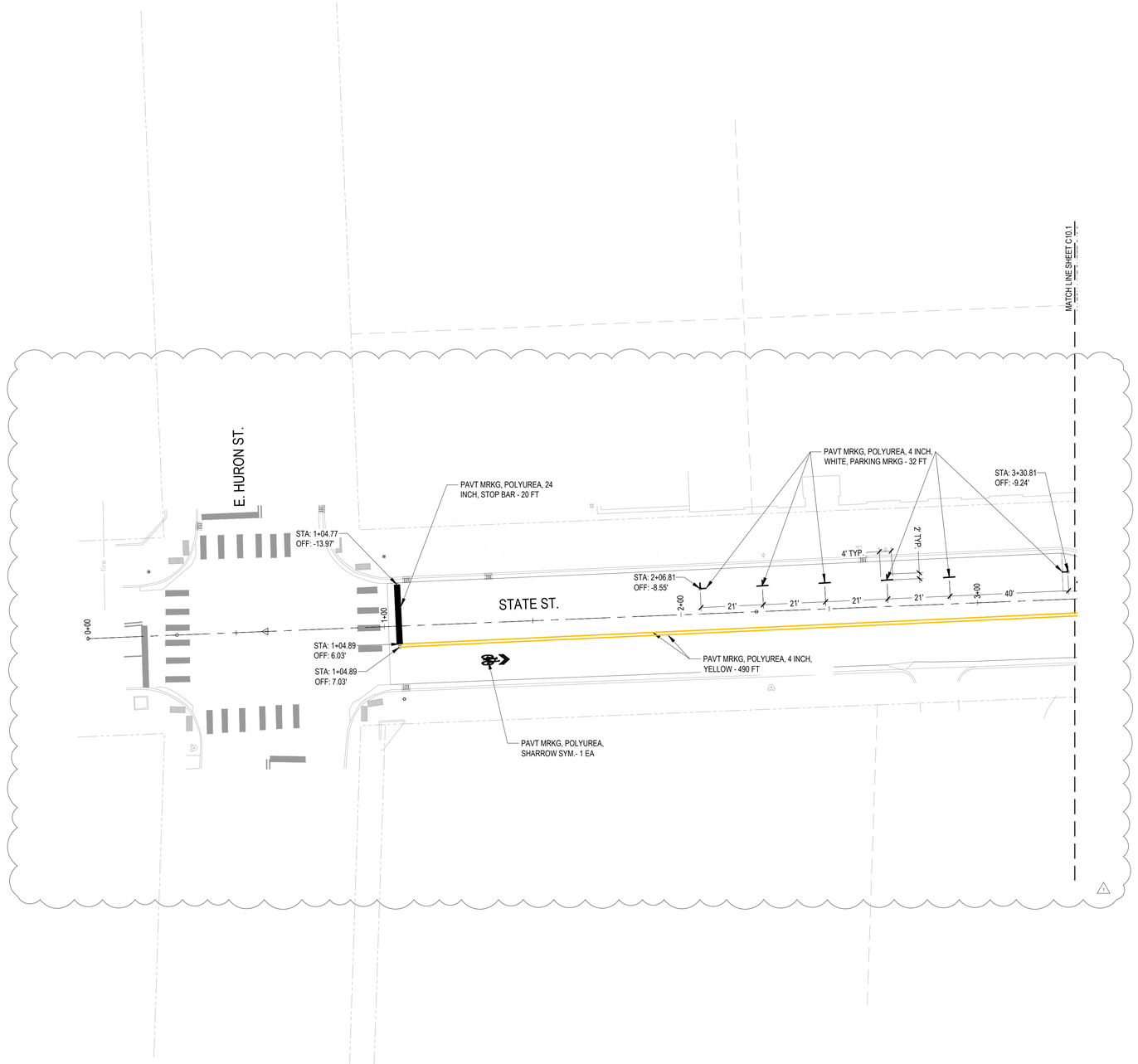


GENERAL NOTES:
1. SEE SHEET C9.2 FOR BIKEWAY PAVEMENT MARKING DETAILS.
2. ALL LONGITUDINAL, CROSS WALK, STOP BAR, AND ROADWAY PAVING SYMBOLS AND MARKINGS TO BE RECESSED. COORDINATE WITH ENGINEER.

1	SIGNAGE, TYP.	7	PAVT MRKG, POLYUREA, SHARROW SYM., TYP.
2	PAVT MRKG, POLYUREA, 4 INCH, YELLOW, TYP.	8	PAVT MRKG, POLYUREA, 12 INCH, CROSSWALK, TYP.
3	PAVT MRKG, POLYUREA, 4 INCH, WHITE,TYP.	9	PAVT MRKG, POLYUREA, 24 INCH, STOP BAR,TYP.
4	PAVT MRKG, POLYUREA, BIKE ARROW AND YIELD SYM.,TYP.	10	PAVT MRKG, ENDURABLEND, BIKE LANE GREEN,TYP.
5	PAVT MRKG, POLYUREA, SPECIAL SYM., TYP.	11	PAVT MRKG, POLYUREA, 18 INCH X 18 INCH BIKEWAY MARKS, TYP.
6	PAVT MRKG, POLYUREA, BIKE SYM., TYP.	12	PAVT MRKG, SHARED PATH SPECIAL SYM., TYP.

0 20 40 Feet

SEE ABOVE							
		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY

STATE ST STREETSCAPE - CITY OF ANN ARBOR

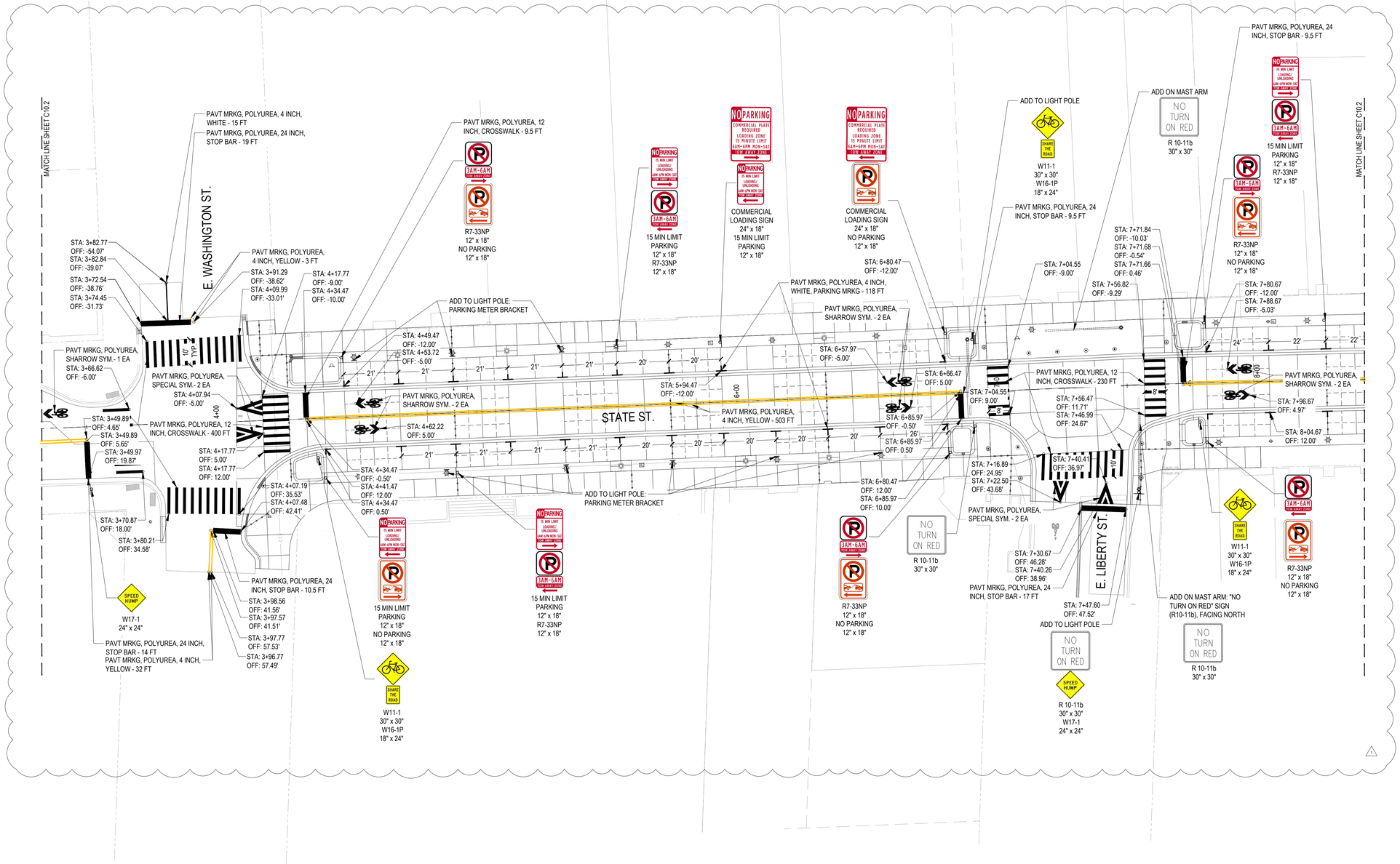
SIGNAGE AND PAVEMENT MARKING PLAN 1

APPROVED BY _____

SCALE: INCH

DRAWING NO. C10.1

SHEET NO. ____ OF ____



GENERAL NOTES:
1. SEE SHEET C9.2 FOR BIKEWAY PAVEMENT MARKING DETAILS.
2. ALL LONGITUDINAL, CROSS WALK, STOP BAR, AND ROADWAY PAVING SYMBOLS AND MARKINGS TO BE RECESSED. COORDINATE WITH ENGINEER.

1. SIGNAGE, TYP.
2. PAVT MRKG, POLYUREA, 4 INCH, YELLOW, TYP.
3. PAVT MRKG, POLYUREA, 4 INCH, WHITE, TYP.
4. PAVT MRKG, POLYUREA, BIKE ARROW AND YIELD SYM., TYP.
5. PAVT MRKG, POLYUREA, SPECIAL SYM., TYP.
6. PAVT MRKG, POLYUREA, BIKE SYM., TYP.
7. PAVT MRKG, POLYUREA, SHARROW SYM., TYP.
8. PAVT MRKG, POLYUREA, 12 INCH, CROSSWALK, TYP.
9. PAVT MRKG, POLYUREA, 24 INCH, STOP BAR,TYP.
10. PAVT MRKG, ENDURABLEND, BIKE LANE GREEN,TYP.
11. PAVT MRKG, POLYUREA, 18 INCH X 18 INCH BIKEWAY MARKS, TYP.
12. PAVT MRKG, SHARED PATH SPECIAL SYM., TYP.

0 20 40 Feet

SEE ABOVE		REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		
BENCH MARK	SURVEY BOOK					

STATE ST STREETSCAPE - CITY OF ANN ARBOR

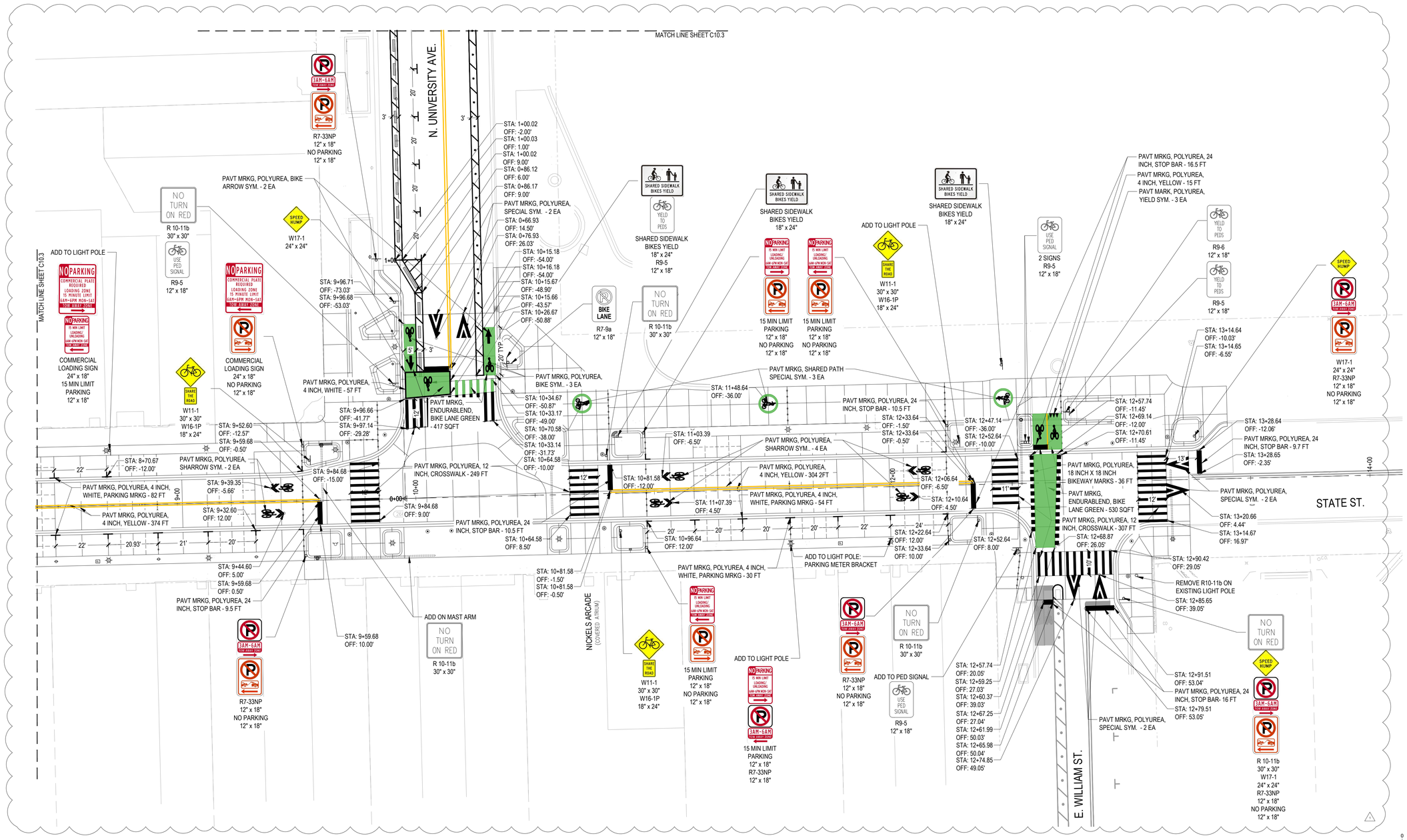
SIGNAGE AND PAVEMENT MARKING PLAN 2

APPROVED BY _____

SCALE: INCH

DRAWING NO. C10.2

SHEET NO. ____ OF ____



GENERAL NOTES:
1. SEE SHEET C9.2 FOR BIKEWAY PAVEMENT MARKING DETAILS.
2. ALL LONGITUDINAL, CROSS WALK, STOP BAR, AND ROADWAY PAVING SYMBOLS AND MARKINGS TO BE RECESSED. COORDINATE WITH ENGINEER.

1	SIGNAGE, TYP.	7	PAVT MRKG, POLYUREA, SHARROW SYM., TYP.
2	PAVT MRKG, POLYUREA, 4 INCH, YELLOW, TYP.	8	PAVT MRKG, POLYUREA, 12 INCH, CROSSWALK, TYP.
3	PAVT MRKG, POLYUREA, 4 INCH, WHITE,TYP.	9	PAVT MRKG, POLYUREA, 24 INCH, STOP BAR,TYP.
4	PAVT MRKG, POLYUREA, BIKE ARROW AND YIELD SYM.,TYP.	10	PAVT MRKG, ENDURABLEND, BIKE LANE GREEN,TYP.
5	PAVT MRKG, POLYUREA, SPECIAL SYM., TYP.	11	PAVT MRKG, POLYUREA, 18 INCH X 18 INCH BIKEWAY MARKS, TYP.
6	PAVT MRKG, POLYUREA, BIKE SYM., TYP.	12	PAVT MRKG, SHARED PATH SPECIAL SYM., TYP.

SEE ABOVE							
BENCH MARK	SURVEY BOOK	REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		

STATE ST STREETSCAPE - CITY OF ANN ARBOR

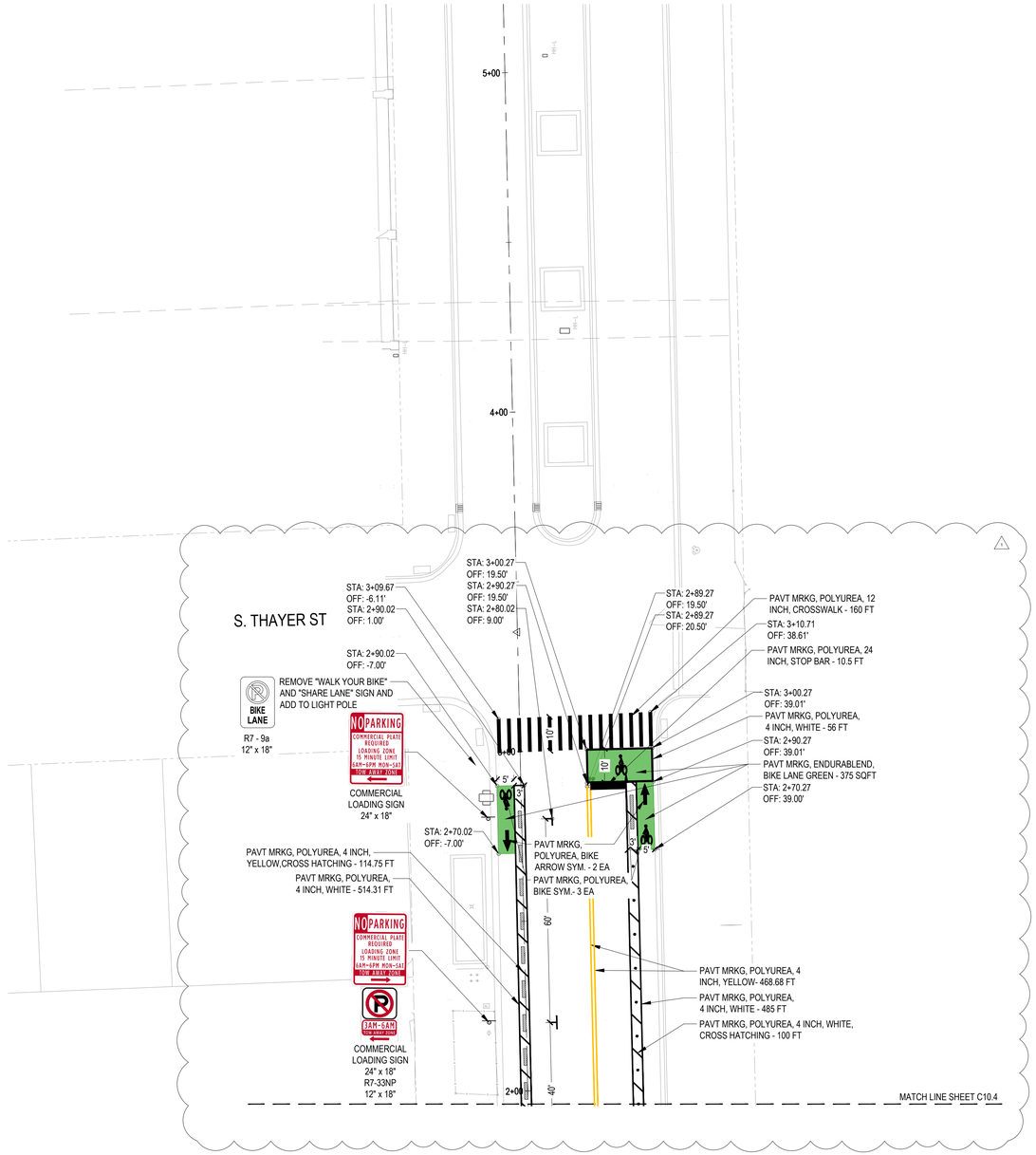
SIGNAGE AND PAVEMENT MARKING PLAN 3

APPROVED BY _____

SCALE: INCH

DRAWING NO. C10.3

SHEET NO. ____ OF ____



GENERAL NOTES:
1. SEE SHEET C9.2 FOR BIKEWAY PAVEMENT MARKING DETAILS.
2. ALL LONGITUDINAL, CROSS WALK, STOP BAR, AND ROADWAY PAVING SYMBOLS AND MARKINGS TO BE RECESSED. COORDINATE WITH ENGINEER.

1	SIGNAGE, TYP.	7	PAVT MRKG, POLYUREA, SHARROW SYM., TYP.
2	PAVT MRKG, POLYUREA, 4 INCH, YELLOW, TYP.	8	PAVT MRKG, POLYUREA, 12 INCH, CROSSWALK, TYP.
3	PAVT MRKG, POLYUREA, 4 INCH, WHITE,TYP.	9	PAVT MRKG, POLYUREA, 24 INCH, STOP BAR,TYP.
4	PAVT MRKG, POLYUREA, BIKE ARROW AND YIELD SYM.,TYP.	10	PAVT MRKG, ENDURABLEND, BIKE LANE GREEN,TYP.
5	PAVT MRKG, POLYUREA, SPECIAL SYM., TYP.	11	PAVT MRKG, POLYUREA, 18 INCH X 18 INCH BIKEWAY MARKS, TYP.
6	PAVT MRKG, POLYUREA, BIKE SYM., TYP.	12	PAVT MRKG, SHARED PATH SPECIAL SYM., TYP.

0 20 40 Feet

SEE ABOVE		REV. NO.	DESCRIPTION	DATE	DR.BY	CH.BY
		1	ADDENDUM 1	03-11-2022		
			100% BID SET	02-18-2022		
BENCH MARK	SURVEY BOOK					

STATE ST STREETSCAPE - CITY OF ANN ARBOR

SIGNAGE AND PAVEMENT MARKING PLAN 4

APPROVED BY _____

SCALE: INCH

DRAWING NO. C10.4

SHEET NO. ____ OF ____