ADDENDUM No. 1

RFP No. 22-15

Stadium / Washtenaw Area Utility Improvements

Due: March 14, 2022 at 10 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 fifty-two (52) pages.**

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
I/Pages 15-18	Remove: RFP No. 22-15 Document: Section 1 – Schedule of Prices, Page 15-18 Replace: Section 1 – Schedule of Prices, Addendum No.1 Pages BF-1 to BF- 4 (Attached)

Comment: The intent with this change is to update the bid pages BF-1 to BF-4 with new item numbers/quantities based on questions/clarifications requested below. These changes have been bolded on the bid pages.

II, Published Plan Set	Published Plan Set (Attached)

Comment: The intent with this revision is to update the quantities and/or provide more information such as cross sections based on questions/clarifications requested below.

Detailed Specifications	Detailed Specification title for "**Item #211A** - REMOVE CONCRETE SIDEWALK, RAMP AND DRIVES – ANY THICKNESS, MODIFIED" title is updated to " **ITEM #212** - REMOVE CONCRETE SIDEWALK, RAMP AND DRIVES – ANY THICKNESS, MODIFIED" Only Item # has changed, Detailed Specification stays the same. Remove: Detailed Specifications 212, 213 Replace: Detailed Spec for Machine Grading, DS 230, by the SY (Attached) Add: Detailed Spec for Item #233 21AA Aggregate Base Course – C.I.P (Attached) Remove: Detailed Spec Item # 286 Underground Sprinkling Systems Restore, by **Dollars** Replace: Revised Spec Item 286, by **Lump Sum** (Attached) Detailed Specification title for "**Item #315** – 6-Inch Wrapped Underdrain" is updated to "**ITEM #295** – 6-Inch Wrapped Underdrain". Only Item # has changed, Detailed Specification stays the same. (Attached)

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:	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 1:	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 2:	What individuals will make up the Selection Committee as identified in the RFP?
Answer 2:	The selection committee will be comprised of City Public Services staff.
Question 3:	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 3: 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.

Question 4: Item number 280 “Audible Message Device” you have a 0 in the quantity, is this supposed to be 1?

Answer 4: See updated Bid Tab, should be one (1).

Question 5: Item number 290 “Underground Sprinkling Systems, Restore” you have 1 dollar for the quantity, is this correct? Does it seem like it should be higher?

Answer 5: See updated Bid Tab, Item should be 286 not 290 and changed Units to LS.

Question 6: Items number 442 and 441 (8” and 12” Gate Valve In Box) have 0 quantity listed.

Answer 6: See updated Bid Tab, one (1) of each.

Question 7: For item number 800, Tree Planting, do you have spec for this item?

Answer 7: City of Ann Arbor Spec – Division VIII and the pay item(s) should start at 810, not 800. Added items 810, 811, and 812 for large, medium and small trees(http://www.a2gov.org/departments/engineering/Pages/Engineering-and-Contractor-Resources.aspx). See updated Bid Tab.

Question 8: You have a listing of trees on page 33 where you state you want 26 large shade trees. Are we supposed to pick from the list that is given on page 33?

Answer 8: Yes, pick a mix of the trees from the list. 26 large/6 species; 4 of each large tree species PLUS one extra for two of the listed species (contractor’s choice). Forestry has asked that we not cluster too many of the same tree within the project area.

Question 9: For item 230 “machine grading, modified”, you have this listed on a SY basis. Will this be measured from ROW to ROW, EOM to EOM, or just the general area that we have done grading?

Answer 9: We are going to remove DS’s 212, 213 and cover the general project area with the Detailed Spec for machine grading, DS 230, by the SY. Item 230 (Machine Grading) Total Estimated Quantity is 9,277 SY. Note: HMA pavement removed on Winchell/Brockman/Frieze = 4,539 SYD; Service Drive = 2,991 SYD; Total HMA pavement removed is 7,530 SYD.

Question 10: Is the intent for grading Frieze/Winchell/Brockman to regrade the roads? You have cross sections for the sidewalks that are to be installed but there are no grading plans for the road itself?

Answer 10: The project, other than the utility and sidewalk construction, is primarily a resurfacing project. The intent is to resurface the remaining areas of the streets that are not disturbed by sidewalk grading, watermain, water tie-ins or storm sewer construction. See revised plan set including proposed cross sections.

Question 11: On page 34 in the plans, you show a bunch of tie-ins in Winchell Dr. with associated removals. However, in the removal plans, you show removing the entire street. Are you just wanting us to do these tie-ins when we do the storm on Winchell Dr? The only area that is not within the road removal area is in the bottom right of sheet 34.

Answer 11: The water transfers and storm work may be done at the same time. The tie-ins and storm trenches are to be restored full depth per the section and then resurface the remaining pavement.

Question 12: Regarding Frieze/Winchell/Brockman, are you wanting this work in this area to be done part-width?

Answer 12: The project area is to be closed to through traffic.

Question 13: Is there specific sizes of line stops that will need to be quoted for items 226 and 227?

Answer 13: Item number 226, Smaller than 8 = 3 (6-inch)
Item number 227, 8-inch or 12-inch = 4 (2 each size)

Question 14: HMA removal quantity on the bid form does not match what is on the plans.

Answer 14: This quantity was revised. This will fall under pay item, Machine Grading, DS 230, by the SY. Item 230 (Machine Grading) Total Estimated Quantity is 9,277 SY. Note: HMA pavement removed on Winchell/Brockman/Frieze = 4,539 SYD; Service Drive = 2,991 SYD; Total HMA pavement removed is 7,530 SYD.

Question 15: Cold milling the driveway on Winchell, it is not possible to mill that small of a driveway. Can this be moved to HMA removal?

Answer 15: It can be added to Item #230 Machine Grading pay item.

Question 16: Sanitary removal item 220, is this incidental to the storm and water installation? Same with line items 353 and 354.

Answer 16: Yes, it is incidental but separate pay item will still be used. See updated bid list, Item #220 Sanitary removal and replace is for removal and replacement. Items #353 and #354 have been deleted from bid list.

Question 17: I don't see a construction key listing for the following items that you have identified on the drawings: DSA, DSC-Q, MBA, DSC-R. Can these be added to the key?

Answer 17: Yes.

Question 17: I don't see a construction key listing for the following items that you have identified on the drawings: DSA, DSC-Q, MBA, DSC-R. Can these be added to the key?

Answer 17: Yes.

Question 18: Please provide: Sign In Sheet to pre-bid meeting, Planholders List, Estimated Value.

Answer 18: This was a virtual pre-proposal meeting, no sign in sheet was recorded. MacKenzie and Fonson Company were in attendance. Engineer's estimate is approximately $1.5 Million and an unofficial planholders list is available on MITN/BidNet.

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

DETAILED SPECIFICATION
FOR
ITEM #230 – MACHINE GRADING, MODIFIED

DESCRIPTION

This work shall consist of constructing earth grades by excavating, cutting, filling, trimming, and grading; general restoration, and sign removals in accordance with the Detailed Specifications elsewhere herein; and maintaining the work in a finished condition until such time that it is accepted by the Engineer. This work shall be done as shown on the Plans, as detailed in the Specifications, and as directed by the Engineer, and in accordance with Section 205 of the 2012 edition of the MDOT Standard Specification for Construction, except as specified herein.

CONSTRUCTION METHOD

The Contractor shall construct earth grades as required to develop the typical and/or detailed cross-section(s) as shown on the Plans, as detailed in the Specifications, and as directed by the Engineer. This shall include, but not be limited to, the excavation of concrete and HMA pavement, soil, rocks of any size, stumps, logs, and bricks; the removal and proper disposal off-site of surplus excavated material; the scarifying, plowing, disking, moving and shaping of earth; the trimming, grading, compaction and proof-rolling of the prepared subgrade; the importing, furnishing, placement and compaction of embankment and/or fill materials; the full depth saw-cutting of pavement at the removal limits; the grading of sideslopes; general restoration in accordance with the Detailed Specifications elsewhere herein and the general items of the work as specified herein. Road subbase and base materials shall be paid for separately.

The Contractor shall remove, add to, re-shape, re-grade, and re-compact the existing roadbed materials, and shall construct the roadway to the cross-section(s) as indicated on the Plans, as detailed in the Specifications, and as directed by the Engineer. The Contractor shall use blade graders, maintainers, vibratory rollers, and/or other equipment as necessary, and as detailed in the Specifications and as directed by the Engineer, for this work. Use of each specific piece of equipment is subject to the approval of the Engineer.

The Contractor shall remove, salvage, deliver to any location within the City limits, and neatly stack/stockpile all bricks, if present, as directed by the Engineer.

The Contractor shall remove other surface features, including signs, located within the grading limits and not otherwise identified, as directed by the Engineer. Signs shall be salvaged and provided to City as directed by the Engineer.

The Contractor shall move excavated and/or imported materials longitudinally and/or transversely where necessary, and as directed by Engineer.

The Contractor shall keep the work well graded and drained at all times.

The Contractor shall not use rubber-tired equipment on the subgrade, when its use causes or may cause, in the opinion of the Engineer, damage to the subgrade. The Contractor shall conduct its operation(s), and provide all necessary equipment, to insure the satisfactory completion of the work without damaging the subgrade. This includes the transporting, stockpiling, rehandling, and movement of materials over additional distances, in lieu of driving on an unprotected, or partially unprotected, subgrade.

The Contractor is solely responsible for the maintenance and protection of the subgrade. Further, any damage to the subgrade which, in the opinion of the Engineer, is caused as a result of the Contractor's operation(s), or its subcontractors' or suppliers' operation(s), shall be repaired by the Contractor at the Contractor's expense. This includes any additional earthwork and/or maintenance materials as directed by the Engineer, for the purposes of the Contractor's maintenance and protection of the subgrade. The Contractor shall not be entitled to any additional compensation for the implementation of these procedures.

The Contractor shall perform all rough and/or finish grading and compaction to the grades shown on the Plans, as detailed in the Specifications, and as directed by the Engineer.

The Contractor shall proofroll all graded and compacted surfaces in the presence of the Engineer as detailed in the Specifications. The Engineer will monitor the proofrolling operation to locate deleterious and/or uncompacted materials, and will direct undercuts as necessary.

At various times throughout the work, the Engineer may direct the Contractor to use smaller and/or lighter equipment, and to defer certain work tasks, in order to protect the grade and/or adjacent areas. The Contractor shall not be entitled to any additional compensation for the use of smaller equipment, lighter equipment, or work task deferral.

The Contractor shall take any and all steps necessary to avoid interruption in the mail delivery, and solid waste, recycling, and compostable pick-up within the project limits. This shall include the temporary relocation of mailboxes, where required by the Engineer, as well as moving of all solid waste/recycling/compost containers to the nearest cross street.The Contractor shall coordinate with the City Forester prior to the removal of any tree roots 2 inches or larger in size.

Butt joints are included in the pay item “Machine Grading”.

Topsoil, seeding and mulch shall be paid for as part of the item “Clean-Up & Restoration, Special”.

MEASUREMENT AND PAYMENT

Measurement for payment for the item “Machine Grading” shall be the computed in square yard quantity of excavated material (pavement, soil, rock, brick, etc.) from the top of existing grade down to the bottom of the excavation. Embankment, fill, subgrade protection/maintenance, drainage maintenance, topsoil, seeding, and restoration quantities will not be paid for separately, and are included in this item of work.

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

PAY ITEM	**PAY UNIT**
Machine Grading, Modified	Square Yard

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

DETAILED SPECIFICATION

FOR
ITEM #232 –SAND SUBBASE COURSE, CLASS II – C.I.P.
ITEM #233 –21AA AGGREGATE BASE COURSE – C.I.P.
ITEM #234 – 21AA LIMESTONE – C.I.P.
1 of 2

DESCRIPTION

This work shall consist of constructing an aggregate subbase or base course on an existing aggregate surface, or on a prepared subgrade in accordance with Sections 301, 302 and 307 of the 2012 edition of the MDOT Standard Specifications for Construction, except as specified herein.

MATERIAL

The materials used for this work shall be MDOT 21AA, 23A and Class II granular material meeting the requirements of the City of Ann Arbor Standard Specifications.

CONSTRUCTION METHOD

Sand or aggregate courses shall not be placed if, in the opinion of the Engineer, there are any indications that they may become frozen before their specified densities are obtained.

Sand or aggregate courses shall not be placed on a frozen base, subbase or subgrade.

The Contractor shall not use rubber-tired equipment on the grade, when its use causes, or may cause, in the opinion of the Engineer, damage to the grade. The Contractor shall conduct his/her operation(s), and provide all necessary equipment, to insure the satisfactory completion of the work without damaging the grade. This includes the transporting, stockpiling, rehandling, and movement of materials over additional distances, in lieu of driving on an unprotected, or partially unprotected, grade.

The Contractor is solely responsible for the maintenance and protection of the grade. Further, any damage to the grade which, in the opinion of the Engineer, is caused as a result of the Contractor's operation(s), or his/her subcontractors' or suppliers' operation(s), shall be repaired by the Contractor at the Contractor's expense. This includes any additional earthwork and/or maintenance materials as directed by the Engineer, for the purposes of the Contractor's maintenance and protection of the grade.

The Contractor shall shape the base, subbase and subgrade to the elevations, crowns, and grades as specified on the Plans and as directed by the Engineer. This may include regrading the subbase to provide different crown grades than those existing prior to the construction.

The Contractor shall remove, add to, re-shape, re-grade, and re-compact the existing roadbed materials, and shall construct the roadway to the cross-section(s) as indicated on the Plans, as detailed in the Specifications, and as directed by the Engineer. The Contractor shall use blade graders, maintainers, vibratory rollers, and/or other equipment as necessary, and as directed by the Engineer, for this work. Use of each specific piece of equipment is subject to the approval of the Engineer.

The Contractor shall maintain the base, subbase and subgrade in a smooth, well drained condition at all times.

Sand and aggregate courses shall be placed in uniform layers such that when compacted, they have the thicknesses shown on the Plans, or as directed by the Engineer. The loose measure of any layer shall not be more than 9-inches or less than 4-inches.

Sand subbase and aggregate surface courses shall be compacted to not less than 95% of their respective maximum unit weights, as determined by the AASHTO T-180 test.

DETAILED SPECIFICATION
FOR
ITEM #232 –SAND SUBBASE COURSE, CLASS II – C.I.P.
ITEM #233 –21AA AGGREGATE BASE COURSE – C.I.P.
ITEM #233 – 21AA LIMESTONE – C.I.P.
2 of 2

Aggregate base courses shall be compacted to not less than 98% of their respective maximum unit weights, as determined by the AASHTO T-180 test.

All granular materials shall be deposited from trucks or through a spreader in a manner that will minimize segregation of material.

Manholes, valve boxes, inlet structures and curbs shall be protected from damage. Manholes & inlet structures shall be continuously cleaned of construction debris and properly covered at all times during the construction. Upon completion of each day's work, manholes, water valve boxes, inlets and catch basins shall be thoroughly cleaned of all extraneous material.

At various times throughout the work, the Engineer may direct the Contractor to use smaller and/or lighter equipment, and to defer certain work tasks, in order to protect the grade and/or adjacent areas. The Contractor shall not be entitled to any additional compensation for the use of smaller equipment, lighter equipment, or work task deferral.

MEASUREMENT AND PAYMENT

Where granular materials are used as base, as subbase, or as fill for excavations in Machine Grading areas, items of work "21AA Aggregate Base Course - C.I.P." and "Sand Subbase Course, CL II - C.I.P." shall be measured and paid accordingly.

Where granular materials are used as fill for undercuts at locations other than Machine Grading areas, item of work shall be paid in accordance with "21AA Limestone - C.I.P".

The completed work as measured for these items of work will be paid for at the Contract Unit Prices for the following Contract (Pay) Items:

PAY ITEM	PAY UNIT
Sand Subbase Course, Class II - C.I.P.	Cubic Yard
21AA Aggregate Base Course - C.I.P.	Ton
21AA Limestone - C.I.P.	Cubic Yard

The unit prices for these items of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

DETAILED SPECIFICATION
FOR
ITEM #286 – UNDERGROUND SPRINKLING SYSTEMS, RESTORE

DESCRIPTION

Restore existing privately owned underground sprinkling systems within the project site as described herein. This work shall be paid with an allowance for the actual work required to restore and modify existing privately owned underground sprinkling systems. The Contractor shall take care to avoid disturbance of existing underground sprinkling systems within the project site. These typically will be encountered in the parkway adjacent to the roadway.

MATERIALS

Materials used to restore or modify existing underground sprinkling systems shall be of the same brand, model and specifications as the removed or damaged portion(s) of the sprinkling system and shall be compatible with the rest of the system.

CONSTRUCTION METHOD

The Contractor shall take precautions to prevent or minimize damage and disruption to private lawn sprinkling systems, including, but not limited to, completing visual inspections of the project site to determine areas in which lawn sprinkling equipment exists. This work of inspection shall be considered incidental to the disturbing work in the project area.

The Contractor shall repair or replace all lawn sprinkling systems disturbed by his/her operations and shall contact and coordinate any necessary work with the appropriate owners of such sprinkling systems. The Contractor shall obtain written permission from property owners prior to completing any work outside the R.O.W. on private property and shall provide copies of these documents to the Engineer for the project file.

The Contractor shall employ an underground sprinkling specialist to make necessary repairs or modifications to the affected underground sprinkling systems. During construction activities, the disturbed portions of the system shall be isolated and/or removed in such a way that the undisturbed portions of the system remain operational until the entire system is completely restored. The existing underground sprinkling systems shall be restored or modified so that spray from the sprinkler heads does not spray over sidewalks or into driving lanes of the road.

MEASUREMENT AND PAYMENT

The completed work shall be paid for at the contract by Lump Sum which shall include all materials, equipment and labor required to complete this work.

Pay Item	**Pay Unit**
Underground Sprinkling Systems, Restore	Lump Sum

Payment for Underground Sprinkling Systems, Restore will be paid for as an allowance after all disturbed sprinkling systems have been repaired and/or replaced, whichever occurs later. The Contractor shall supply the Engineer with actual invoices from the underground sprinkling specialist for this work effort and may add up to 5% markup. The Contractor waives all claim for damages or delay which he/she may suffer by reason of the presence of lawn sprinkling equipment within the project site and understands that no extra compensation will be paid to him/her due to any lawn sprinkling equipment encountered.

DETAILED SPECIFICATION
FOR
ITEM #295 - 6-INCH WRAPPED UNDERDRAIN
1 of 2

DESCRIPTION

This work shall consist of furnishing and installing 6-inch diameter geotextile-wrapped, perforated or slotted underdrain pipe, using MDOT 2NS and MDOT 21AA, as directed by the Engineer, for all backfill material.

MATERIALS

The materials shall meet the requirements referenced in Section 404 of the 2012 edition of the MDOT Standard Specifications, except as specified herein.

The Geotextile Filter Fabric for encasing the underdrain pipe shall be an approved material such as nylon, polypropylene, fiberglass, or polyester, and shall be either woven, heat bonded, knitted, or of continuous fibers. The geotextile shall completely cover and be secured to the pipe. In an un-stretched condition, knitted polyester fabrics shall weigh at least 3.0 ounces per square yard, and all other geotextiles shall weigh at least 3.5 ounces per square yard. The fabric shall be strong and tough and have a porosity such that the fabric will retain soil particles larger than 0.106 mm (no. 140 sieve) and shall pass aggregate particles finer than 0.025 mm. Geotextiles shall be stored and handled carefully and in accordance with the both the manufacturer's recommendations and the Engineer's direction, and shall not be exposed to heat or direct sunlight. Torn or punctured geotextiles shall not be used.

CONSTRUCTION METHODS

Geotextile wrapped underdrain shall be installed as shown on the Plans or as directed by the Engineer, and in accordance with Section 404 of the 2012 edition of the MDOT Standard Specifications, except as specified herein.

The installation of underdrain shall precede all other construction activities including but not limited to pavement milling, pavement pulverization, pavement removal, pavement patching, and curb repair.

The Contractor shall excavate, cut, remove stumps, remove brush, remove pavement, grade, and trim as needed and as directed, and shall import, furnish, fill, place, grade, and compact MDOT 2NS fine aggregate, Class II granular, and 21AA coarse aggregate materials as needed to construct underdrain as specified on the Plans, and as directed by the Engineer.

HMA pavement shall be cut full-depth, vertically straight, and horizontally straight, to the specified width by means of saw, jackhammer or other cutting method(s) approved by the Engineer. The use of backhoe mounted wheel-type pavement cutters may not be used on this project.

The trench shall be constructed to have a minimum width of 18-inches, and shall be typically excavated to a depth of between 36 and 54 inches, or to the depth specified in the Plans or directed by the Engineer.

The underdrain shall be installed at the line, grade, and depth specified on the Plans or as directed by the Engineer. The minimum percent grade shall be 0.5%, and the minimum cover from top-of-pipe to finished top-of-pavement grade shall be 2-feet. The Contractor shall maintain line and grade by means of a laser. The Engineer will not provide line, grade or staking.

Upgrade ends of the pipe shall be closed with suitable plugs to prevent entrance of trench backfill material. All couplings, tees, plugs, and other fittings shall be manufactured and installed so as to prevent any infiltration of trench backfill material.

DETAILED SPECIFICATION
FOR
ITEM #295 - 6-INCH WRAPPED UNDERDRAIN
2 of 2

The Contractor shall tap at least one end of the underdrain into a storm sewer structure, as directed by the Engineer.

During the construction of underdrain runs, the Engineer may direct the Contractor to terminate or modify underdrain construction due to conflicts with buried obstructions or if the minimum 2-foot cover cannot be maintained. There will be no adjustment to the Contract Unit Price due to changes in quantity.

The first lift (bedding) of backfill shall be MDOT 2NS material to a maximum thickness of 3-inches. Subsequent lifts shall be MDOT 2NS material to a maximum thickness of 12 inches. The final lift of backfill shall consist of a layer of MDOT 21AA crushed limestone, and shall extend a minimum of 8 inches below the bottom of the adjacent pavement elevation.
When compacted, the top of this final lift shall be at the same elevation as the adjacent pavement. All materials shall be compacted as specified in the City Standard Specifications.

The Contractor shall place MDOT HMA mixtures (as specified elsewhere herein), in the locations and to the elevations as directed by the Engineer. HMA pavement shall be placed with a maximum lift thickness of 2 inches, and each lift shall be compacted to between 92 to 96 percent (or as determined acceptable by the engineer) of the theoretical maximum density, as listed on the approved Job Mix Formula. The Contractor shall be paid for the HMA patching materials separately, at the Contract Unit Price for Contract Pay Item, "HMA Patching."

Removed or excavated materials which are not incorporated into the work shall become the property of the Contractor and shall be immediately removed and properly disposed of off-site. Removed or excavated materials may not be stockpiled overnight on, or adjacent to, the site.

All structures, inlets and manholes shall be maintained free of accumulations of silt, debris, and other foreign matter throughout construction, until the time of final acceptance.

MEASUREMENT AND PAYMENT

Connecting (tapping) underdrain(s) into drainage structure(s) will not be paid for separately, but shall be included in the bid price for this item of work.
Pavement removal to construct underdrain will not be paid for separately, but shall be included in the bid price for this item of work. Backfilling of the excavation to the top of the adjacent pavement will not be paid for separately, but shall be included in the bid price for this item of work.
Underdrain will be measured in-place by length in lineal feet.

The completed work as measured for this item of work will be paid for at the Contract Unit Price for the following Contract (Pay) Item:

PAY ITEM	**PAY UNIT**
6-Inch Wrapped Underdrain	Lineal Foot

The unit price for this item of work shall include all labor, material, and equipment costs to perform all the work specified in the Standard Specifications and as modified by this Detailed Specification.

Description	Item	Unit	Estimated Quantity		Unit Price	Total Price
Protective Fencing	130	FT	215			
Tree Removal, 8" or Larger	135	EA	8			
Exploratory Excavation (0-10' deep)	140	EA	6			
Project Supervision, Max $40,000.00	201	LS	1			
General Conditions, Max. $60,000.00	202	LS	1			
Digital Audio Visual Coverage	203	LS	1			
Minor Traffic Devices, Max $50,000.00	204	LS	1			
Clean-Up & Restoration, Special, Max $15,000	205	LS	1			
"No Parking" Signs	206	EA	50			
Certified Payroll Compliance and Reporting	207	LS	1			
Allowance for Unforeseen Site Conditions	208	DLR	50000			
Remove Concrete Curb or Curb and Gutter - Any Type	211	FT	1388			
Remove Concrete Sidewalk and Drive - Any Thickness	212	SFT	2946			
Sidewalk Ramp Grading	215	EA	11			
Sewer, Any Size or Depth, Remove	216	FT	238			
Drainage Structure, Any Size or Depth, Remove	217	EA	9			
Additional Depth Structure Adjust/Repair	218	FT	20			
Remove and Replace Sanitary Sewer Lead	220	FT	20			
Water Main Pipe Abandonment, Modified	221	LS	1			
Abandon Gate Well	223	EA	2			
Temporary Water Main Line Stop, Additional Rental Day	225	EA	2			
Temporary Water Main Line Stop, Less than 8 inch	226	EA	**3**			
Temporary 8 inch or 12 inch Water Main Line Stop	227	EA	**4**			
TOTAL THIS PAGE (BF-1) (Also to be entered on BF-4)					$	-

Description	Item	Unit	Estimated Quantity		Unit Price	Total Price
Machine Grading, Modified	**230**	SYD	**9278**			
Subgrade Undercutting - Type II	231	CYD	20			
Sand Subbase Course, Class II - C.I.P.	232	CYD	120			
21AA Aggregate Base Course - C.I.P	**233**	**TON**	**1510**			
21AA Limestone, C.I.P.	234	CYD	20			
HMA Pavement Leveling/Top – LVSP	241	TON	**1600**			
HMA Approach	242	TON	97			
HMA Hand Patching	243	TON	20			
Concrete Curb or Curb and Gutter - All Types	246	FT	1214			
4 Inch Concrete Sidewalk	247	SFT	5069			
6 Inch Concrete Sidewalk Ramp	248	SFT	1165			
6 Inch Concrete Drive or Sidewalk - High Early	249	SFT	569			
Integral Sidewalk Retaining Wall, 6 inch to 18 inch	250	SFT	**100**			
Integral Sidewalk Retaining Wall, 19 inch to 36 inch	251	SFT	**50**			
Driveway Opening, Conc, Detail M - High Early	252	FT	240			
Detectable Warning, Cast In Place	253	SFT	110			
Pavt Mrkg, Ovly Cold Plastic, 12 inch, Crosswalk	254	FT	608			
Pavt Mrkg, Ovly Cold Plastic, 24 inch, Stop Bar	255	FT	59			
Pavt Mrkg Cover, Type R, Black	264	FT	1100			
Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, White, Temp	265	FT	4833			
Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	266	FT	8400			
Pavt Mrkg, Wet Reflective, Type R, Tape, 24 inch Stop Bar	268	FT	40			
Lighted Arrow Board, Furnish and Operate	269	EA	5			
Sign, Portable Changeable Message, Furnish and Operate	270	EA	2			
Plastic Drum - Lighted, Furnish and Operate	271	EA	256			
Barricade Type III - Lighted, Furnish and Operate	272	EA	35			
Temporary Sign, Type B, Furnish and Operate	273	SFT	789			
Temporary Sign, Type B, Furnish and Operate, Special	274	SFT	6			
TOTAL THIS PAGE (BF-2) (Also to be entered on BF-4)					$	-

Description	Item	Unit	Estimated Quantity		Unit Price	Total Price
Channelizing Device, 42 Inch, Furnish and Operate	275	EA	20			
Pedestrian Type II Barricade, Temp	276	EA	20			
Sign Cover	277	EA	8			
Temporary Pedestrian Ramp	278	EA	2			
Temporary Pedestrian Mat	279	EA	2			
Audible Message Device	280	EA	**1**			
Fertilizer, Chemical Nutrient, Cl A	281	LBS	32			
Mulch Blanket, High Velocity	282	SYD	677			
Seeding, Mixture THM	283	LBS	32			
Topsoil Surface, Furn, 4 inch	285	SYD	677			
Underground Sprinkling Systems, Restore	286	**LS**	1			
Adjust Structure Cover	291	EA	32			
Adjust Monument Box or Gate Valve Box	292	EA	8			
Dr Structure Covers	293	LBS	13970			
Sacrificial Anode, 17 LB	294	EA	4			
6-Inch Wrapped Underdrain	**295**	FT	1000			
12" CL IV RCP Storm Sewer Pipe, Trench Detail I	320	FT	266			
Sewer Tap, 12 inch	326	EA	2			
Sewer Tap, 24 inch	327	EA	4			
Dr Inlet Structure, 24 inch dia	340	EA	12			
Dr Inlet Junction Structure, 36 inch dia	341	EA	1			
Dr Inlet Junction Structure, 48 inch dia	341	EA	3			
Dr Structure, Adj, Add Depth	347	FT	10			
6 inch Class 50 DIP w/polywrap, Trench Detail I	400	FT	**10**			
8 inch Class 50 DIP w/polywrap, Trench Detail I	401	FT	1118			
TOTAL THIS PAGE (BF-3) (Also to be entered on BF-4)					$	-

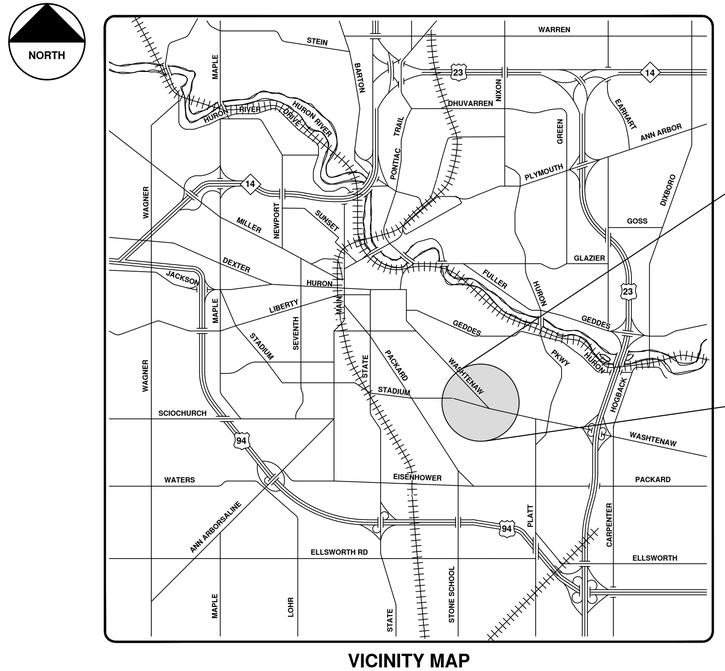
Description	Item	Unit	Estimated Quantity		Unit Price	Total Price
12 inch Class 50 DIP w/polywrap, Trench Detail I	404	FT	477			
8" 22.5° Bend	411	EA	1			
8" 45° Bend	412	EA	7			
8" 90° Bend	413	EA	1			
8" x 6" Reducer	414	EA	5			
12" 22.5° Bend	416	EA	1			
12" x 12" x 12" Tee	418	EA	1			
8" x 8" x 8" Tee	419	EA	2			
12" x 12" x 6" Tee	435	EA	1			
12" x 12" x 8" Tee	422	EA	2			
Fire Hydrant Assembly	440	EA	3			
8" Gate Valve-in-Box	442	EA	**1**			
12" Gate Valve-in Box	441	EA	**1**			
6" Gate Valve-in Well	442	EA	1			
8" Gate Valve-in Well	443	EA	1			
12" Gate Valve-in Well	444	EA	1			
12" x 12" x 8" Tapping Sleeve Valve-in Well	446	EA	1			
Excavate & Backfill for Water Service Tap and Lead	460	FT	331			
Erosion Control, Inlet Protection	702	EA	21			
Erosion Control, Silt Fence	703	FT	250			
Planting, Tree (Large Shade)	**810**	EA	26			
Planting, Tree (Medium)	**811**	EA	6			
Planting, Tree (Small)	**812**	EA	6			
TOTAL THIS PAGE (BF-4) (Also to be entered below)					$	-
TOTAL FROM PAGE BF-1					$	-
TOTAL FROM PAGE BF-2					$	-
TOTAL FROM PAGE BF-3					$	-
TOTAL FROM PAGE BF-4					$	-
TOTAL BASE BID					**$**	**-**

CITY OF ANN ARBOR
ENGINEERING

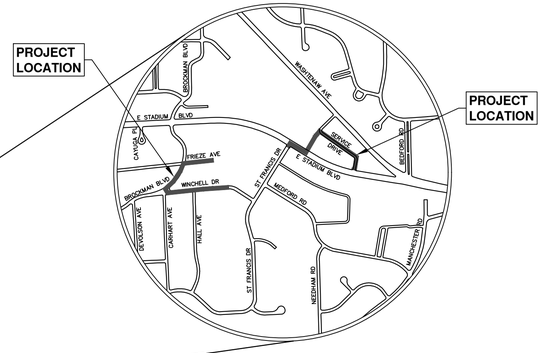
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

RFP 22-15 FILE No. 2021011

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	STANDARD NOTES
3	LEGEND
4	WATER MAIN DETAILS
5	STORM SEWER AND TRENCH DETAILS
6	MISC DETAILS
7 - 10	ALTERNATIVE PEDESTRIAN ROUTE DETAILS
11 - 16	E STADIUM BLVD TRAFFIC CONTROL PH I & PH II
17	E STADIUMD BLVD WATER MAIN ABANDONMENTS
18	STADIUM SERVICE DR REMOVALS
19 - 21	STADIUM SERVICE DR WATER MAIN PLAN & PROFILE
22 - 24	STADIUM SERVICE DR PROPOSED GRADING PLAN
25	BROCKMAN WINCHELL FRIEZE TRAFFIC CONTROL
26 - 27	BROCKMAN WINCHELL FRIEZE REMOVALS
28	FRIEZE AVE WATER MAIN PLAN AND PROFILE
29 - 31	BROCKMAN WINCHELL FRIEZE STORM SEWER
32 - 33	FRIEZE AVE SIDEWALK AND CURB
34	WINCHELL DR WATER MAIN ABANDONMENT
35	WINCHELL DR SIDEWALK AND CURB
36 - 37	BROCKMAN BLVD SIDEWALK AND CURB



VICINITY MAP



NOTES:

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174 OF 2013, THE CONTRACTOR SHALL CALL 811 OR 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE 1994 EDITION OF THE CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS, ITS DETAILS, WHICH ARE INCLUDED BY REFERENCE, AND THIS PROJECT'S CONTRACT DOCUMENTS. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3-3-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
00	FINAL REVIEW	1-12-22	CC,DF	FC

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734.794.6410
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE

DRAWING No. 2021011-1

SHEET No. 1 OF 37

PREPARED UNDER THE SUPERVISION OF

CHRISTOPHER CARSON, P.E. - MI LICENSE No. 47156
PROJECT MANAGER

2/10/2022
DATE

STATE OF MICHIGAN
CHRISTOPHER CARSON
ENGINEER
No. 47156
LICENSED PROFESSIONAL ENGINEER

CONSTRUCTION NOTES:

1. Driveways and entrances to buildings, real property, and the like shall not be blocked except for short durations and only when approved by the Engineer. Vehicular and pedestrian access shall be maintained at all times. It shall be the Contractor's responsibility to coordinate all necessary driveway closures with the property owner(s) and resident(s) in the areas of construction.

2. The location and depth of all existing utilities and service leads are to be field verified by the Contractor prior to construction.

3. Location and depth of utilities as depicted on the plans is approximate and shown according to the best information available. It is the Contractor's responsibility to excavate ahead and adjust depth of conflict utilities accordingly. Any damage to utilities is the Contractor's responsibility to avoid and/or repair as necessary.

4. The Contractor is to take special care to protect the existing water main and be responsible for maintaining consistent water service.

5. During non-working hours no trench shall remain open; any open trench shall be properly secured with protective fencing. This work shall be included in the item of work "General Conditions".

6. Trenches for new water services shall be excavated to MIOSHA and City of Ann Arbor Public Works requirements.

7. City of Ann Arbor Public Works will install the corporation and copper service lead(s) to transfer the connection(s). If an existing water service is found to be failing or is not copper, the lead will be replaced to the curb box by Public Works.

8. For the installation of corporations, or any other related activities, the Contractor shall not receive additional compensation for delays due to the scheduling of or coordination with the City of Ann Arbor Public Works.

9. The Contractor shall backfill trenches in accordance with Trench Detail specified on plans. This work shall be included in the item of work "Excavate and Backfill for Water Service Tap and Lead". All concrete removals and replacements required for this work will be paid for separately.

10. All ductile iron pipe and fittings shall be polyethylene wrapped per ANSI/AWWA C105/A21.5.

11. Cor-blu bolts to be used at all mechanical water main joints at hydrants and Megalug fittings.

12. The Contractor shall construct, flush, and bacteriologically test the water main per Detailed Specification "Water Main Installation and Testing" and as approved by the Engineer. All chlorinated water shall be discharged directly into an approved sanitary sewer. The Contractor shall supply all necessary hoses, fittings and the like to accomplish this work.

13. Water main fittings, other than those specifically listed as separate pay items, which are required to complete the work, such as blow-off assemblies, concrete thrust blocks, solid sleeves and mechanical plugs, shall not be paid for separately, but shall be included in the pipe pay items.

14. "No Parking" signs shall be installed by the Contractor at locations as approved or directed by the Engineer. All signs shall be installed in accordance with the detailed specifications.

15. Postal delivery and refuse pickup service shall be maintained at all times by the Contractor.

16. All fittings, hydrants, valves and castings removed during construction are the property of the City of Ann Arbor. The Contractor within 48 hours shall deliver to City of Ann Arbor Public Works Facility at the W.R. Wheeler Service Center located at 4251 Stone School Road.

17. Where street curbs are undermined due to construction activities, they shall be removed and replaced as directed by the Engineer.

18. The Contractor shall be responsible for the continuous maintenance of the temporary road surface and soil erosion control measures within the construction area until the full completion of the project. This work shall be included in the item of work "General Conditions".

19. All curb, sidewalk, driveway approach removals shall be approved by Engineer before the work is done.

20. Sawed sewer pipe connections shall be coupled with a Fernco flexible coupling and a stainless steel shear ring.

21. The location of material stock piles and on-site staging areas to be approved by the Engineer.

22. For mainline paving, the width of the mat for each pass of the paver shall be not less than 10.5' or greater than 15', as directed by the Engineer. The Engineer will direct the layout of the longitudinal joints during construction.

23. All structures shall receive new castings as directed by the Engineer, as specified on the standard casting schedule. The existing castings are the property of the City of Ann Arbor. The Contractor shall deliver to City of Ann Arbor Public Works Facility at the W.R. Wheeler Service Center located at 4251 Stone School Road.

24. Payment for drainage structure sumps, where specified, shall be included in the payment for the various drainage structure sizes and or types.

25. Where sewer pipes of different sizes or materials are joined, Fernco flexible couplings with stainless steel shear rings shall be used. The Contractor's purchase price for these devices, including shipping, shall be paid as an extra. Prior to payment for this item, the Contractor shall submit receipts for the Engineer's review and approval. All other costs associated with the installation of these devices shall be included in the payment for the sewer.

26. Where sewer and water main are to be removed & replaced or added, all pipe shall be installed using Trench Detail detailed in the specifications or shown on Plans. Backfill for sewer and water construction shall be MDOT Granular Material, Class II, Modified.

27. Existing street name, guide, and regulatory signs, and mailboxes which conflict with the proposed construction shall be removed prior to construction, stored in a manner which will prevent damage, and re-set in locations as directed by the Engineer. This work will not be paid for separately, but shall be included in "Machine Grading, Modified"

28. In areas where edge drain cannot be installed in accordance with City of Ann Arbor Detail SD-TD-11, the edge drain shall be installed at the depth as indicated on the plans, or as directed by Engineer. In no case shall the edge drain be installed at a grade less than 0.50% or at a depth of less than 2' below top of proposed pavement.

GENERAL
NOTIFY THE CITY OF ANN ARBOR SOIL EROSION CONTROL OFFICE 48 HOURS PRIOR TO BEGINNING WORK ON THE PROJECT. PHONE: 734-794-6265.

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER AT ALL TIMES DURING CONSTRUCTION. ANY MODIFICATIONS OR ADDITIONS TO THE SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.
2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF THE CITY OF ANN ARBOR, CHAPTER 55 ANN ARBOR UNIFIED DEVELOPMENT CODE, CITY OF ANN ARBOR STANDARDS DIVISION VII, THE LAWS OF THE STATE OF MICHIGAN, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. DAILY, OR AFTER ANY STORM EVENT, INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE MADE BY THE CONTRACTOR. PERIODIC INSPECTIONS MAY BE MADE BY THE ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHOUT DELAY, AND WITHOUT ADDITIONAL COST TO THE CITY OF ANN ARBOR.
4. EROSION AND SEDIMENTATION FROM WORK ON THE SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, ROADWAYS OR WATERWAYS.
5. ALL MUD/SOIL TRACKED ONTO ROADWAYS FROM THE SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. IF SO ORDERED, THE CONTRACTOR SHALL PROVIDE AND OPERATE A VACUUM-TYPE STREET SWEEPER, AT NO ADDITIONAL COST TO THE CITY OF ANN ARBOR.
6. RESTORATION OF ALL DISTURBED AREAS, INCLUDING PLACEMENT OF TOPSOIL, SEED, FERTILIZER AND MULCH AND/OR SOD SHALL BE PERFORMED WITHIN FIVE (5) DAYS OF THE COMPLETION OF FINAL GRADE.
7. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING OPERATIONS.
8. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
9. PROPER DUST CONTROL SHALL BE MAINTAINED DURING CONSTRUCTION BY USE OF WATER TRUCKS AND/OR DUST PALLATIVE AS REQUIRED.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND REMOVAL OF SOME MEASURES UPON AUTHORIZED COMPLETION OF THE PROJECT. FINAL COMPLETION OF PROJECT WILL NOT BE AUTHORIZED UNTIL ALL SITE WORK AND UTILITY CONSTRUCTION IS COMPLETE AND ALL SOILS ARE STABILIZED.
11. THE CONTRACTOR SHALL NOT GRADE INTO ADJACENT PROPERTIES. SILT AND PROTECTIVE FENCE SHALL BE INSTALLED AND MAINTAINED TO PREVENT GRADING, EROSION AND SEDIMENTATION INTO THE ADJACENT PROPERTIES.
12. TREE PROTECTION FENCING MUST REMAIN INTACT UNTIL RESTORATION OF THE SITE IS COMPLETE.

SEQUENCE OF EROSION CONTROL MEASURES:

1. THE CONTRACTOR IS TO SUBMIT TO THE ENGINEER, A SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION CONTROL MEASURES FOR REVIEW, COMMENT AND APPROVAL. THIS SCHEDULE IS TO INCLUDE INSPECTION AND REPAIR OF ALL TEMPORARY EROSION CONTROL MEASURES DAILY AND WITHIN 24 HOURS OF A STORM EVENT.

SAMPLE SOIL EROSION AND SEDIMENTATION CONTROL INSTALLATION MINIMUM REQUIREMENTS:

1.1. INSTALL SILT FENCE, TREE PROTECTION FENCING, MUD MATS, INLET FILTERS ON EXISTING DRAINAGE FEATURES, AND ALL OTHER TEMPORARY SOIL EROSION CONTROLS, PRIOR TO ANY CLEARING OR EARTH MOVING OPERATION.

1.2. STRIP AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE AS REQUIRED.

1.3. INSTALL WATER MAINS, STORM AND SANITARY SEWERS, AND OTHER ENCLOSED DRAINAGE FEATURES. NEW INLET FILTERS SHALL BE INSTALLED IMMEDIATELY FOLLOWING INSTALLATION OF NEW DRAINAGE INLETS.

1.4. PERFORM MACHINE GRADING OPERATIONS AND CONSTRUCT PAVEMENTS (MAINLINE, SIDEWALKS, DRIVES, ETC.).

1.5. CONTINUALLY MAINTAIN EROSION AND SEDIMENTATION CONTROL MEASURES, AS REQUIRED TO ALLOW DRAINAGE AND SEDIMENT REMOVAL. REMOVE ANY ACCUMULATED SEDIMENT IMMEDIATELY.

1.6. COMPLETE ALL FINE GRADING.

1.7. TEMPORARY SEED AND INSTALL EROSION CONTROL BLANKET IN ALL DISTURBED AREAS.

1.8. REFER TO LANDSCAPE PLANTING PLANS FOR PERMANENT SITE STABILIZATION.

1.9. CLEAN OUT STORM SEWER SYSTEMS.

1.10. REMEDY ANY NOTED DEFECTS TO THE SATISFACTION OF THE CITY OF ANN ARBOR'S SOIL EROSION AND SEDIMENTATION CONTROL OFFICIAL.

1.11. ALL TEMP. SOIL EROSION CONTROL MEASURES MUST BE REMOVED, WITH ENGINEERS APPROVAL, PRIOR TO FINAL INSPECTION

NOTE: THIS SEQUENCE IS FOR INFORMATION ONLY. IT IS INTENDED TO SHOW THE SEQUENCE OF CONSTRUCTION WITH RESPECT TO THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THEIR OWN DETAILED CONSTRUCTION SEQUENCE AND SCHEDULE TO THE ENGINEER FOR REVIEW, COMMENT, AND APPROVAL.

TEMPORARY SEEDING:

1. SEED IN ACCORDANCE WITH PROJECT DRAWINGS AND SPECIFICATIONS.
2. ANY DISTURBED AREA NOT PAVED, SEEDED, MULCHED, SODDED OR BUILT UPON BY NOVEMBER 15TH OR JUNE 30TH IS TO BE TEMPORARILY STABILIZED PER SPECIFICATIONS.

THE ESTIMATED COST OF SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, TOPSOIL, SEEDING, AND MULCH = $35,000

ON SITE SOILS PER THE USDA SOIL SURVEY OF WASHTENAW COUNTY, MICHIGAN:

BROCKMAN BLVD., WINCHELL DR., FRIEZE AVE.

- WawabC – WAWASEE LOAM, 6 TO 12 PERCENT SLOPES.

EAST STADIUM BLVD., STADIUM SERVICE DR.

- WawabB – WAWASEE LOAM, 2 TO 6 PERCENT SLOPES
- WawabC – WAWASEE LOAM, 6 TO 12 PERCENT SLOPES.

PERMITS REQUIRED TO BE OBTAINED BY THE CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
LANE CLOSURE PERMIT*	CITY OF ANN ARBOR ENGINEERING
"NO PARKING" SIGNS PERMIT*	CITY OF ANN ARBOR ENGINEERING
GRADING/SOIL EROSION & SEDIMENTATION CONTROL PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
RIGHT-OF-WAY PERMIT*	CITY OF ANN ARBOR CUSTOMER SERVICE
M.D.O.T. RIGHT-OF-WAY PERMIT*	MICHIGAN DEPARTMENT OF TRANSPORTATION
* NO COST TO CONTRACTOR	

PERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
EGLE WATER MAIN CONSTRUCTION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

CONTACT INFORMATION

PUBLIC UTILITIES	OWNER	CONTACT
WATER		
SANITARY		
STORM	CITY OF ANN ARBOR PUBLIC WORKS W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108	(734) 794-6350
FORESTRY		
SIGNS		MARK MORENO
SIGNALS		(734) 794-6361
STREET LIGHTS		
PRIVATE UTILITIES	**OWNER**	**CONTACT**
GAS	DTE ENERGY 3150 E. MICHIGAN AVE, YPSILANTI TOWNSHIP, MI 48198	ROBERT CZAPIEWSKI (734) 544-7818
ELECTRIC	DTE ENERGY WESTERN WAYNE SERVICE CENTER 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	ANTHONY IGNASIAK (734) 397-4447
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SOUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	MARC GOODELL (313) 405-0574
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016
FIBER OPTIC	WINDSTREAM 1295 S LINDEN ROAD, SUITE B FLINT, MI 48532	GREG SERICH (810) 244-3500
STREET LIGHTING	DTE ENERGY 8001 HAGGERTY ROAD BELLEVILLE, MI 48111	LANCE ALLEY (734) 397-4188

WINCHELL, BROCKMAN, FRIEZE BENCHMARKS

BM #	ELEV	DESCRIPTION
1	897.30	PK NAIL IN NORTH SIDE OF POWER POLE NEAR EAST PROPERTY LINE OF HOUSE#2001
2	894.42	PK NAIL IN NORTH SIDE OF POWER POLE SW CORNER OF WINCHELL & HALL
3	884.20	WEST FLANGE BOLT ON HYDRANT SW COR. WINCHELL & CARHART
4	890.97	PK NAIL IN SOUTH SIDE OF POWER POLE NW CORNER OF FRIEZE & BROCKMAN
5	894.95	PK NAIL IN NORTH SIDE OF POWER POLE, ON EAST PROPERTY LINE OF HOUSE #2114

STADIUM SERVICE DRIVE BENCHMARKS

BM #	ELEV	DESCRIPTION
1	867.20	NORTH EAST CORNER BOLT ON ORNAMENTAL LIGHT POLE, IN FRONT OF KINGS KEYBOARD HOUSE
2	876.89	PK NAIL IN SOUTH SIDE OF POWER POLE, SOUTH OF BLDG #2305 IN FRONT OF FARMERS INSURANCE SUITE
3	879.59	PK NAIL IN SOUTH SIDE OF POWER POLE, SW OF BLDG #2320

Know what's below. Call before you dig. 811

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1-12-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

CITY OF ANN ARBOR
PUBLIC SERVICES
301 E. HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734-794-6410
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

STANDARD NOTES

SCALE : NTS

DRAWING No. 2021011-2

SHEET No. 2 OF 37

EXISTING LEGEND

- FIRE HYDRANT
- GATE VALVE IN BOX
- GATE VALVE IN WELL
- STOP BOX
- WATER VAULT
- WELL
- CATCH BASIN (SQ)
- CATCH BASIN (RD)
- STORM MANHOLE
- NON-CURB CATCH BASIN (SQ)
- END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- POST
- PEDESTRIAN SIGNAL
- SIGN
- HAND HOLE
- ORNAMENTAL LIGHT
- FLOOD LIGHT
- UNKNOWN MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE RISER
- GAS VALVE
- GAS VENT
- GAS BOX
- ELECTRICAL RISER
- TRANSFORMER
- UTILITY POLE
- LAMP POLE
- GUY ANCHOR
- GUY POLE
- MONITORING WELL
- MAILBOX
- SOIL BORING
- TRAVERSE POINT
- BENCH MARK
- IRON PIPE
- MON BOX

- WATER MAIN
- WATER MAIN ABANDONED
- STORM SEWER
- STORM SEWER ABANDONED
- SANITARY SEWER
- SANITARY SEWER ABANDONED
- GAS MAIN
- GAS MAIN (DEAD)
- ELECTRICAL OVER HEAD
- ELECTRICAL UNDER GROUND
- ELECTRICAL DUCT BANK
- TELEPHONE OVER HEAD
- TELEPHONE UNDER GROUND
- TELEPHONE DUCT BANK
- CABLE TV OVER HEAD
- CABLE TV UNDER GROUND
- FIBER OPTIC
- FIBER OPTIC DUCT BANK
- BOUNDARY
- BUILDING
- CENTERLINE OF DITCH
- CENTERLINE/CROWN OF ROAD
- CONTOUR MAJOR
- CONTOUR MINOR
- EDGE OF WATER
- FLOODPLAIN
- FENCE
- GRAVEL
- GUARDRAIL
- STONE WALL
- R.O.W.
- TREELINE
- WETLAND
- EDGE OF BRUSH
- HEDGE
- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- SHRUB (DECIDUOUS)
- STUMP
- TREE TO REMAIN & PROTECT (DECIDUOUS)
  CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10
- TREE TO REMAIN & PROTECT (CONIFEROUS)
  CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREAST HEIGHT (INCHES) X 10

PROPOSED LEGEND

- HYDRANT (PLAN)
- WATER GATE WELL
- REDUCER
- WATER GATE VALVE
- WATER STOP BOX
- WATER VAULT
- INLET
- DOUBLE INLET
- INLET JUNCTION CHAMBER
- ROUND CATCH BASIN
- STORM MANHOLE
- DRAIN ARROW
- FLARED END SECTION
- SANITARY MANHOLE
- CLEAN-OUT
- BARREL
- SIGN
- PUSH BUTTON
- HAND HOLE

- WATER MAIN
- STORM SEWER
- SANITARY SEWER
- FIBER OPTIC
- ELECTRICAL
- CENTERLINE OF DITCH
- CENTERLINE OF ROAD
- FENCE
- GRAVEL
- SILT FENCE
- PROTECTIVE FENCE
- GUARDRAIL
- LOT/UNIT
- CURB
- TEMPORARY GRADING PERMIT
- CONTOUR MAJOR
- CONTOUR MINOR
- WATER EASMENT
- STORM EASEMENT
- SANITARY EASEMENT
- R.O.W.
- LIMITS OF CONSTRUCTION
- LIMIT OF GRADING
- STONE WALL
- DETECTABLE WARNING
- ASPHALT
- CONCRETE
- SIDEWALK
- TREE (DECIDUOUS)
- TREE (CONIFEROUS)
- TREE TO BE REMOVED (DECIDUOUS)
- TREE TO BE REMOVED (CONIFEROUS)
- STUMP TO BE REMOVED

Know what's below. Call before you dig. 811

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3-3-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
00	FINAL REVIEW	1-12-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

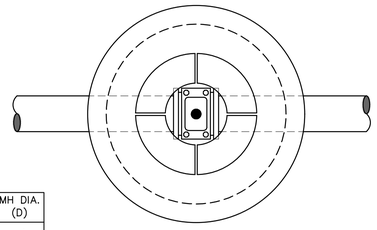
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

LEGEND

SCALE : NTS

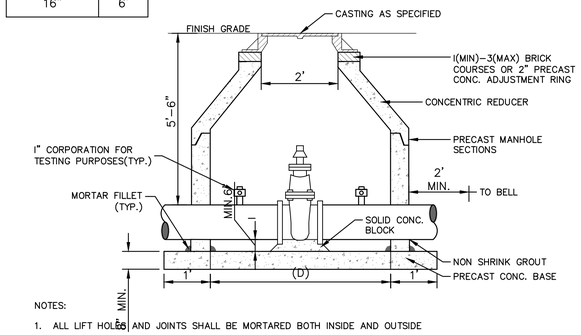
DRAWING No. 2021011-3

SHEET No.
3 OF 37



TOP VIEW

PIPE SIZE	MH DIA. (D)
12" OR LESS	5'
16"	6'



NOTES:

1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE
2. ALL JOINTS SHALL BE MADE WATER TIGHT WITH RUBBER GASKET JOINTS
3. NO STEPS ARE PERMITTED
4. MANHOLE SECTIONS SHALL MEET ASTM C-478

GATE WELL FOR MAIN 16" & SMALLER SD-W-3

MINIMUM STANDARDS

THE MDOT GRADE P1 OR P-NC CONCRETE AT THE FITTING FACE SHALL EXTEND TO WITHIN 2 INCHES OF THE BELL AND SHALL EXTEND FROM THE FITTING FACE A MINIMUM OF 2 FEET TO THE UNDISTURBED SOLID GROUND.

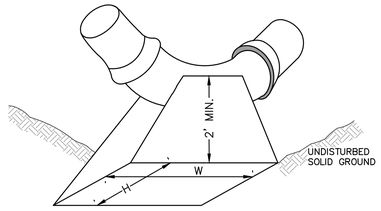
THE DIMENSIONS OF THE THRUST BLOCK AT THE FACE OF THE UNDISTURBED SOLID GROUND SHALL BE AS SHOWN IN THE TABLE BELOW.

IF THERE ISN'T SUFFICIENT SPACE FOR THE INSTALLATION OF THE THRUST BLOCK WITHOUT INTERFERENCE WITH OTHER SERVICES, ANOTHER ARRANGEMENT SATISFACTORY TO THE ENGINEER SHALL BE USED.

FITTINGS I.D.	PLUG TEE CROSS		BENDS								HYDRANT	
			90°		45°		22½°		11¼°			
INCHES	W	H	W	H	W	H	W	H	W	H	W	H
4	1.0	1.0	1.0	1.0	1.0	1.0						
6	2.0	1.5	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	2.0	1.5
8	2.5	2.0	3.5	2.0	2.0	2.0	2.0	1.0	1.0	1.0	2.5	2.0
12	3.5	3.0	5.5	3.0	3.5	2.5	2.0	2.0	2.0	1.0		
16	6.0	3.5	6.0	4.0	5.0	3.0	3.5	2.5	2.0	2.0		

FOR FITTING SIZES LARGER THAN 16", THRUST BLOCK DIMENSIONS SHALL BE AS SPECIFIED BY ENGINEER.

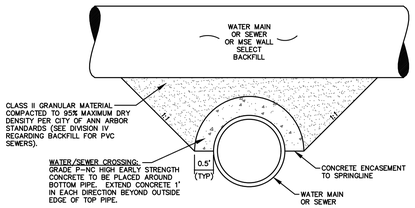
W = WIDTH IN FEET
H = HEIGHT IN FEET



NOTE:

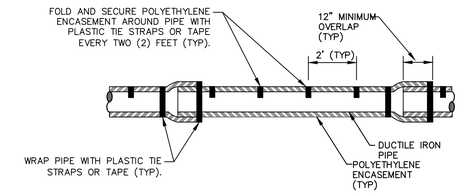
THESE ARE MINIMUM STANDARDS. WHERE SOIL CONDITIONS DICTATE, ADJUSTMENTS IN SIZE SHALL BE MADE AS DIRECTED BY THE PUBLIC SERVICES AREA ADMINISTRATOR.

THRUST BLOCK SD-W-2



APPLIES TO: WATER AND/OR SEWER CROSSINGS WITH LESS THAN 1.5' OF VERTICAL CLEARANCE

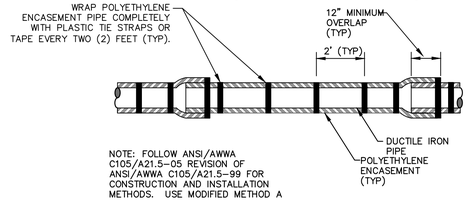
CONCRETE UTILITY SADDLE



NOTE: FOLLOW ANSI/AWWA C105/A21.5-05 REVISION OF ANSI/AWWA C105/A21.5-99 FOR CONSTRUCTION AND INSTALLATION METHODS. USE MODIFIED METHOD A

APPLIES TO: POLYETHYLENE WRAPPED D.I. WATERMAIN
SEE PLANS FOR LOCATIONS

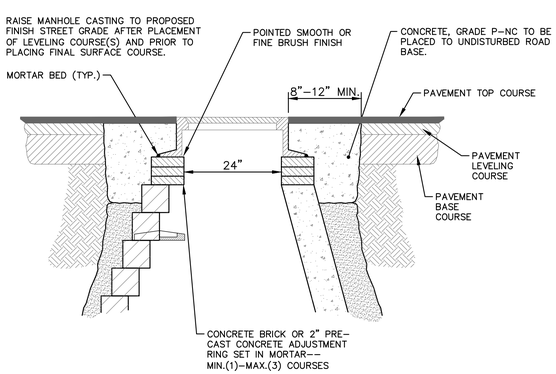
POLYETHYLENE ENCASEMENT (DRY INSTALLATION)



NOTE: FOLLOW ANSI/AWWA C105/A21.5-05 REVISION OF ANSI/AWWA C105/A21.5-99 FOR CONSTRUCTION AND INSTALLATION METHODS. USE MODIFIED METHOD A

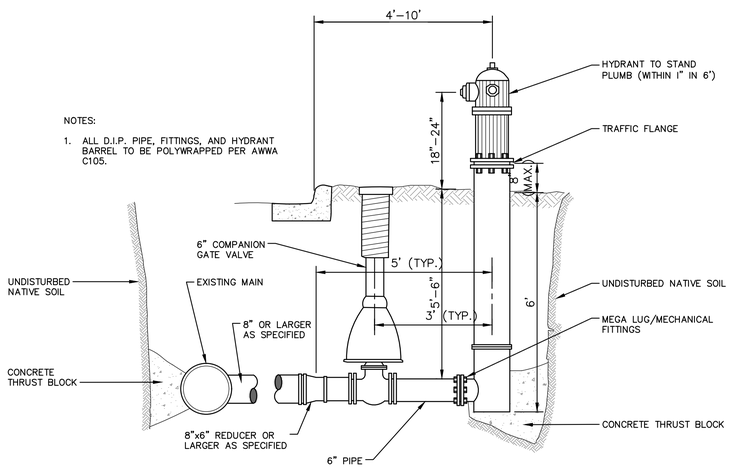
APPLIES TO: POLYETHYLENE WRAPPED D.I. WATERMAIN
SEE PLANS FOR LOCATIONS

POLYETHYLENE ENCASEMENT (WET INSTALLATION)

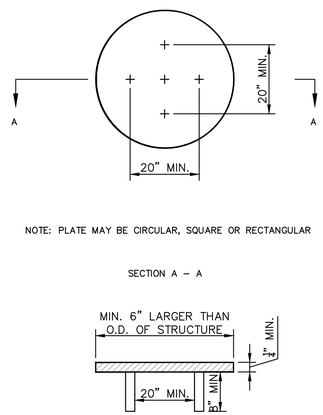


NOTE:
IF MANHOLE WILL BE PLACED IN GRAVEL ROAD, CASTING TO BE SET 6" TO 8" BELOW ROADWAY GRADE. ALL CONSTRUCTION METHODS SHALL REMAIN AS SHOWN ABOVE.

MANHOLE CASTING ADJUSTMENT SD-GU-6

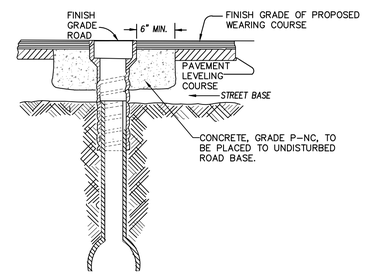


FIRE HYDRANT ASSEMBLY



1/4" MIN. THICKNESS AND SUFFICIENT TO CARRY THE CONSTRUCTION LOAD.

STRUCTURE PLATE SD-GU-8



NOTE: RAISE CASTING TO PROPOSED FINISH STREET GRADE AFTER PLACEMENT OF LEVELING COURSE(S) AND PRIOR TO PLACING FINAL SURFACE COURSE

WATER VALVE BOX ADJUSTMENT

Know what's below. Call before you dig. 811

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

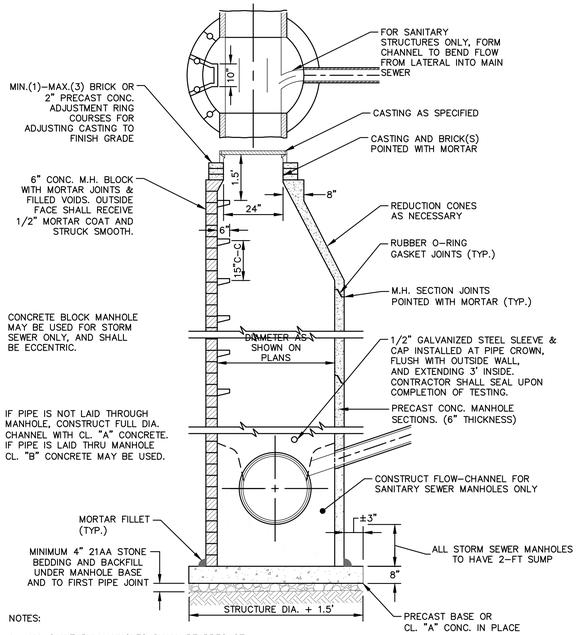
WATER MAIN DETAILS

SCALE : N.T.S.

DRAWING No. 2021011-4

SHEET No. 4 OF 37

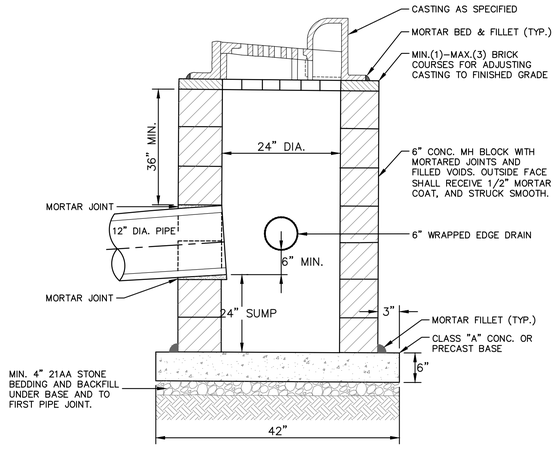
R:\2021011 Frieze\Plan Production\20210111Det2.dwg Dwg Created: 23-Feb-22 - _a2 standard bw.stb - Plot Date: 3-Mar-22



NOTES:

1. ALL SANITARY MANHOLES SHALL BE PRECAST CONCRETE.
2. ALL MANHOLES MUST HAVE ECCENTRIC CONES – BOTH STORM AND SANITARY
3. ALL SANITARY SEWER OPENINGS SHALL BE PRECAST WITH RUBBER BOOT CONNECTIONS.
4. 2' SUMP REQUIRED ON ALL DRAINAGE STRUCTURES.

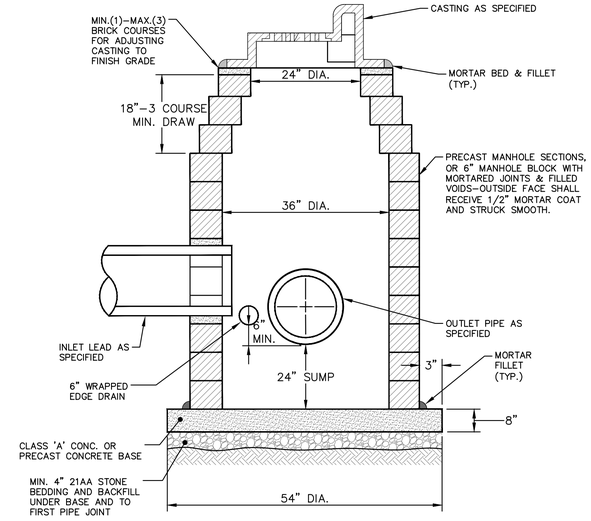
STANDARD MANHOLE (TYPE I)



NOTES:

1. MAY BE USED WITH ONLY SINGLE OUTLET PIPE, AND NO INLET PIPE
2. FRONT EDGE OF INLET CASTING SHALL BE FLUSH WITH FRONT EDGE OF GUTTER (EDGE–OF–METAL)

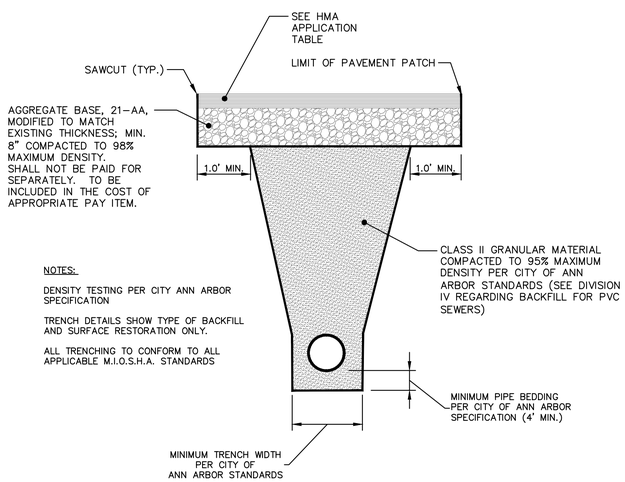
SINGLE INLET STRUCTURE SD-S-10



NOTES:

1. SHALL BE USED IF SINGLE OUTLET PIPE AND SINGLE INLET PIPE.
2. FRONT EDGE OF INLET CASTING SHALL BE FLUSH WITH FRONT EDGE OF GUTTER (EDGE–OF–METAL)

INLET-JUNCTION CHAMBER SD-S-9



NOTES:

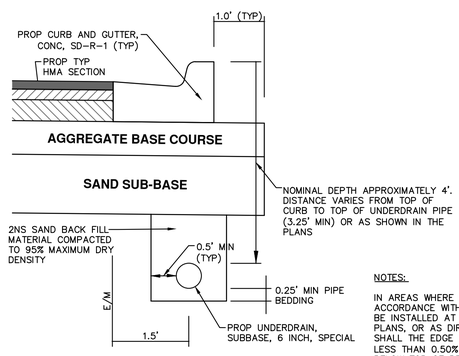
DENSITY TESTING PER CITY ANN ARBOR SPECIFICATION

TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY.

ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS

UTILITY TRENCH-TYPE I SD-TD-1 (MODIFIED)

(UNDER HMA PAVEMENT)



BASED ON CITY OF ANN ARBOR STANDARD SD–TD–10
APPLIES TO: HMA PAVEMENT

NOTES:

IN AREAS WHERE EDGE DRAIN CANNOT BE INSTALLED IN ACCORDANCE WITH THE DETAIL, THE EDGE DRAIN SHALL BE INSTALLED AT THE DEPTH AS INDICATED ON THE PLANS, OR AS DIRECTED BY ENGINEER. IN NO CASE SHALL THE EDGE DRAIN BE INSTALLED AT A GRADE LESS THAN 0.50% OR AT A DEPTH OF LESS THAN 2' BELOW TOP OF PROPOSED PAVEMENT.

FOR PAVEMENT BASE AND SUBBASE THICKNESS, SEE TYPICAL PAVEMENT CROSS–SECTION(S)

TRENCH DETAILS SHOW TYPE OF BACKFILL AND SURFACE RESTORATION ONLY

ALL TRENCHING TO CONFORM TO ALL APPLICABLE M.I.O.S.H.A. STANDARDS

TRENCH DETAIL FOR UNDER DRAIN

(UNDER HMA PAVEMENT)

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

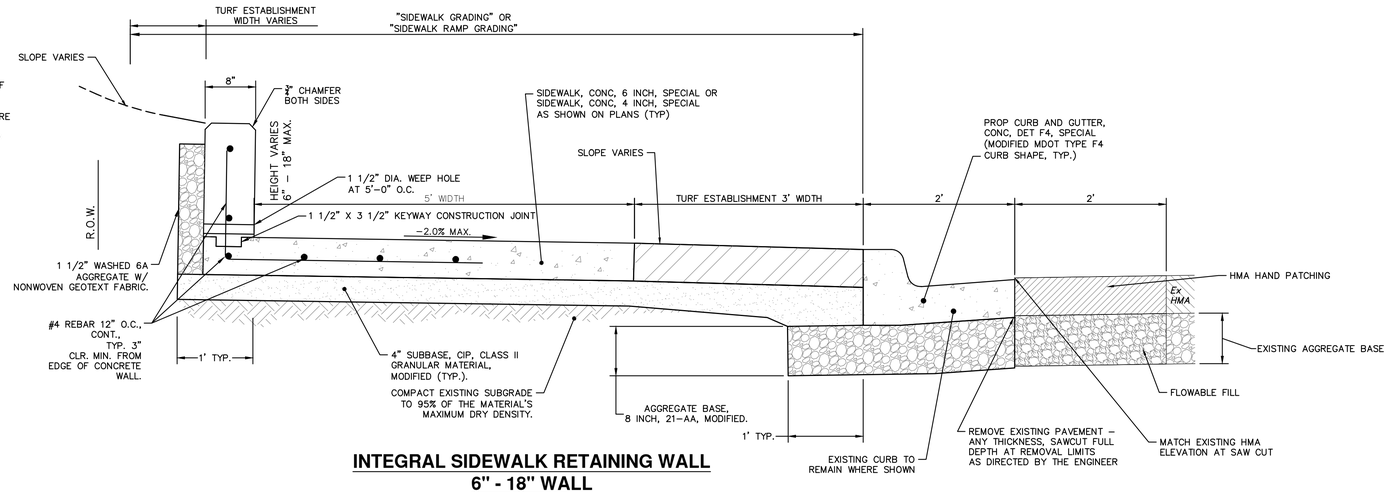
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

STORM SEWER AND TRENCH DETAILS

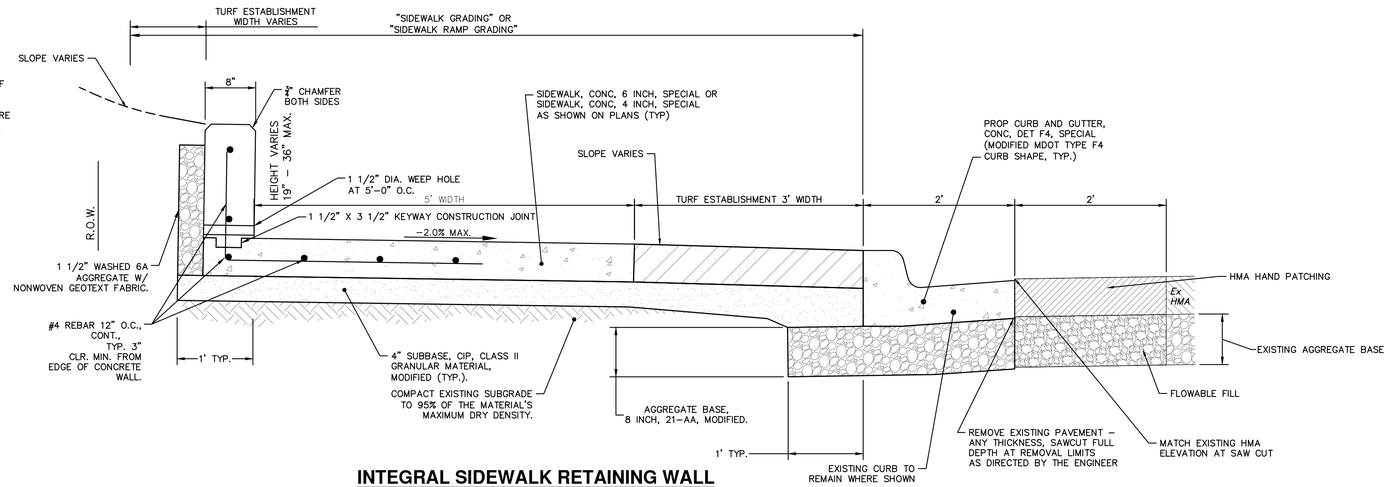
SCALE: N.T.S.

DRAWING No. 2021011-5

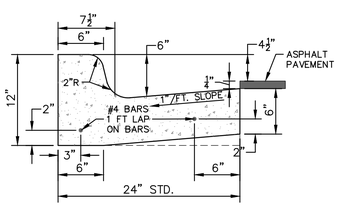
SHEET No. 5 OF 37



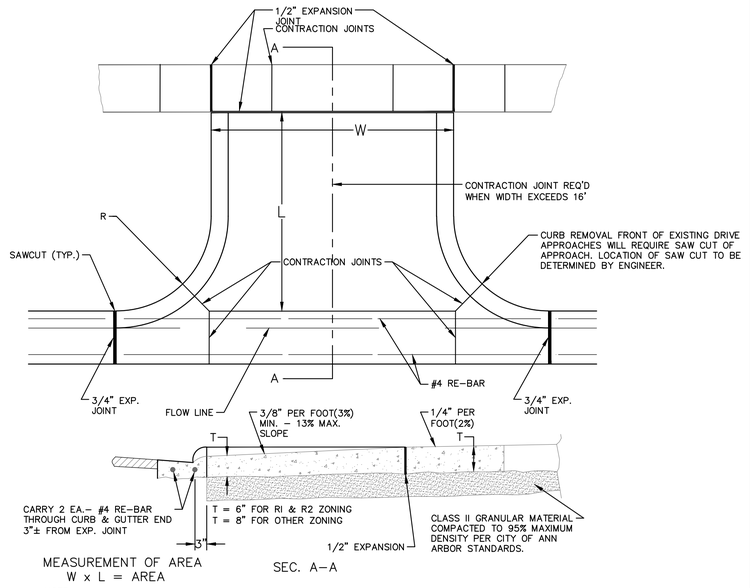
INTEGRAL SIDEWALK RETAINING WALL
6" - 18" WALL
NOT TO SCALE



INTEGRAL SIDEWALK RETAINING WALL
19" - 36" WALL
NOT TO SCALE



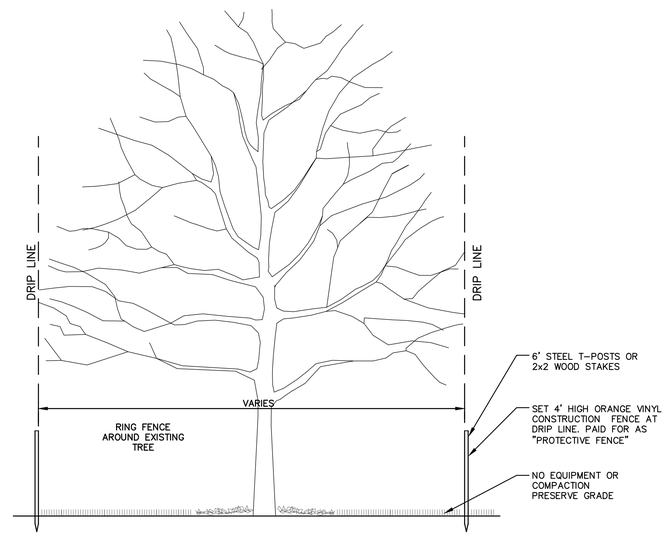
CURB AND GUTTER, CONC, DET F4, SPECIAL
NO SCALE



NOTE:

1. DRIVE APPROACH TO BE CLASS 'A' CONCRETE.
2. R(RADIUS) AND W(DRIVE WIDTH) AS REQUIRED FOR ZONING BY CITY CODE
3. IF GUTTER IS OVERLAYED, GUTTER OF THE APPROACH SHALL BE AT SAME ELEVATION AS EXISTING GUTTER AND ASPHALT WEDGE SHALL BE PLACED IN THE APPROACH.

TYPE 'M' DRIVE APPROACH SD-R-6



TREE PROTECTION DETAIL

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02	ADDENDUM #1	3–3–22	CC,DF	FC
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

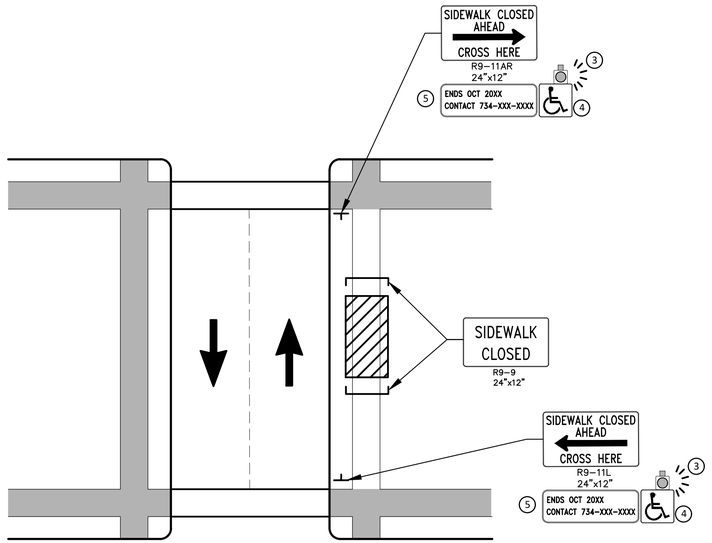
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

MISC. DETAILS

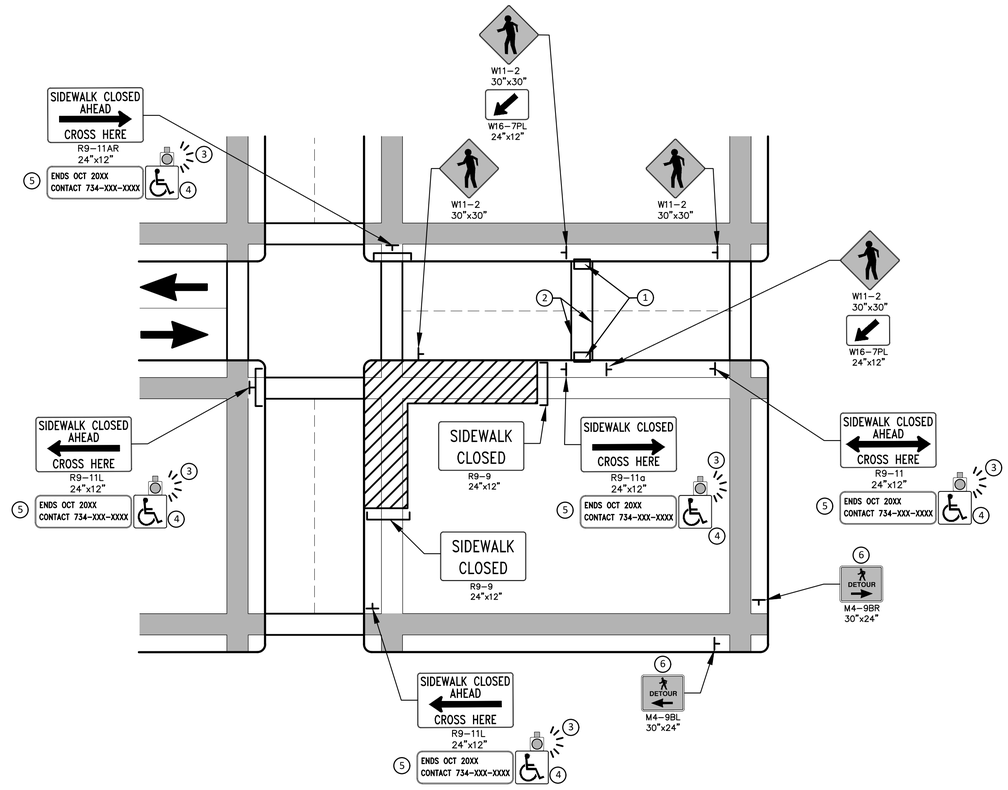
SCALE : N.T.S.

DRAWING No. 2021011-6

SHEET No. 6 OF 37



PEDESTRIAN DETOUR USING OPPOSITE SIDE OF STREET



OTHER SIDE OF STREET DETOUR OR DETOUR WITH TRAILBLAZING SIGNS
(FOR CORNER SIDEWALK CLOSURE WITH OPTIONAL TEMPORARY CROSSWALK)

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, THE CONTRACTOR SHALL PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE AN ALTERNATE PEDESTRIAN ROUTE (APR) AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR. COMPACTED GRAVEL, AGGREGATE, OR SLAG MATERIALS ARE NOT ALLOWED. PROVIDE A FIRM, STABLE, AND SLIP RESISTANT TEMPORARY WALKWAY SURFACE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND.

THE PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS SHALL BE COVERED OR DEACTIVATED BY THE CITY OF ANN ARBOR. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE THIS WORK WITH THE ENGINEER A MINIMUM OF 72 HOURS (NOT INCLUDING WEEKENDS & HOLIDAYS) PRIOR TO THE BEGINNING OF WORK THAT REQUIRES A SIDEWALK CLOSURE.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

WHEN THE ENGINEER DETERMINES THAT THE CONTRACTOR'S OPERATIONS OR PLACEMENT OF TRAFFIC CONTROL DEVICES HAS CAUSED A SITUATION THAT THE VISIBILITY OF IS REDUCED ENOUGH TO CREATE A HAZARD, THE TRAFFIC CONTROL DEVICES SHALL BE DELINEATED WITH FLAGS OR OTHER ENGINEER-APPROVED DEVICES AT NO ADDITIONAL COST TO THE PROJECT.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

1. PROVIDE THE APR ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE UTILIZING BYPASSES.
2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME SIDE APR, PROVIDE A DETOUR ON THE OTHER SIDE OF THE STREET.
3. WHERE IT IS NOT FEASIBLE TO PROVIDE AN APR ON THE OTHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS AS SHOWN ON THE PROJECT PLANS.

SPECIFIC NOTES

(1) TEMPORARY CURB RAMPS WITH DETECTABLE WARNINGS.

(2) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(3) AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE SHALL BE PROVIDED FOR SIGHT-IMPAIRED PEDESTRIANS.

(4) THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHOULD BE DISPLAYED WHEN ANY WALKWAY THROUGH A WORK ZONE HAS BEEN DETERMINED TO BE TPAR COMPLIANT. THE SYMBOL OF ACCESSIBILITY SHALL NOT BE DISPLAYED IF PERSONS WITH DISABILITIES SHOULD NOT USE THE PRIMARY TEMPORARY PEDESTRIAN DETOUR. THE REASON FOR THE NON-COMPLIANCE SHALL BE POSTED AND AN ALTERNATE ROUTE SHALL BE POSTED WHEN THE PRIMARY TEMPORARY PEDESTRIAN DETOUR IS NON-COMPLIANT TO TPAR STANDARDS.

(5) TYPICAL SIGN MESSAGE FOR A TEMPORARY PEDESTRIAN DETOUR SHALL INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24 / 7 QUESTIONS OR REPORTING HAZARDS.

(6) PEDESTRIAN DETOUR TRAILBLAZING SIGNS SHALL BE USED IF THE PEDESTRIAN DETOUR IS IN A LOCATION OTHER THAN ACROSS THE STREET FROM THE SIDEWALK CLOSURE.

PEDESTRIAN TEMPORARY TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN THROUGH MOVEMENTS FROM ONE END OF THE CONSTRUCTION AREA TO THE OTHER, ON AT LEAST ONE SIDE OF THE STREET DURING CONSTRUCTION. ANY SIDEWALK CLOSURES SHALL MEET THE REQUIREMENTS OF THE MMUTCD, PART 6.
2. PEDESTRIAN ACCESS SHALL BE PROVIDED TO ALL ADJACENT PROPERTIES, BUILDINGS, RESIDENCES AND COMMERCIAL PROPERTIES AT ALL TIMES. THIS MAY INCLUDE TEMPORARY WALKWAYS SPANNING THE CONSTRUCTION AREA.
3. IF SIDEWALKS ARE CLOSED, A TEMPORARY PEDESTRIAN ACCESS ROUTE (TPAR) SHALL BE PROVIDED ON THE SAME SIDE OF THE ROAD AS THE CLOSED SIDEWALK, IF POSSIBLE. SIGNS AND BARRICADES SHALL BE USED TO PROVIDE ADVANCE NOTICE OF THE CLOSURE AND THE ROUTE OF ANY PEDESTRIAN DETOURS. THE TPAR SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4 FEET. IF THE TPAR IS LESS THAN 5 FEET IN WIDTH, A 5 FOOT BY 5 FOOT PASSING SPACE SHALL BE PROVIDED AT LEAST EVERY 200 FEET. THE SURFACE OF THE TPAR SHALL BE SMOOTH AND CONTINUOUS FOR THE LENGTH OF THE TPAR. THE TPAR SHALL MAINTAIN THE SAME LEVEL OF ACCESSIBILITY AND DETECTABILITY AS THE FACILITY THAT IS BEING CLOSED. THE TPAR SHALL NOT LEAD PEDESTRIANS INTO CONFLICTS WITH VEHICLES, EQUIPMENT, OR CONSTRUCTION OPERATIONS.
4. IF THE TPAR IS ADJACENT TO MOVING TRAFFIC, CONSTRUCTION OPERATIONS/EQUIPMENT, OR DROP-OFFS, THEN CRASH WORTHY CHANNELIZING DEVICES THAT MEET THE REQUIREMENTS OF NCHRP 350 AND THE MMUTCD SHALL BE USED.
5. THE CONTRACTOR SHALL NOT STORE OR PLACE ANY CONSTRUCTION MATERIALS, EQUIPMENT OR SIGNS IN THE PEDESTRIAN PATH OF TRAVEL.
6. THE CONTRACTOR'S OPERATIONS SHALL NOT OCCUPY SIDEWALKS EXCEPT WHERE PROPER PROTECTION AND A TPAR HAVE BEEN PROVIDED.
7. WHEN DIRECTED BY THE ENGINEER, OR STATED ON THE PLANS, THE CONTRACTOR SHALL PROVIDE A TEMPORARY PEDESTRIAN TRAFFIC CONTROL PLAN FOR REVIEW AND WRITTEN APPROVAL BY THE ENGINEER A MINIMUM OF THREE WEEKS BEFORE SUCH PLAN IS IMPLEMENTED. THIS PLAN SHALL DETAIL THE CONSTRUCTION PHASING AND SCHEDULE AND THE SPECIFIC METHODS OF MAINTAINING SAFE PEDESTRIAN ACCESS THROUGHOUT THE CONSTRUCTION AREA. THIS PLAN SHALL PROVIDE THE LOCATION AND DETAILS OF TEMPORARY CONSTRUCTION SIGNING, MARKINGS, BARRICADES, CHANNELIZING DEVICES, TPARS AND METHODS TO MAINTAIN ACCESS TO ADJACENT PROPERTIES, BUSINESSES, RESIDENCES, ETC. NO WORK SHALL BE ALLOWED TO BEGIN UNTIL THIS PLAN IS APPROVED BY THE ENGINEER IN WRITING.

LEGEND

- SIGN
- EXISTING PEDESTRIAN SURFACE
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- BARRIER
- SIDEWALK BARRICADE
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DEVICE

811 Know what's **below.** **Call before you dig.**

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00	FINAL REVIEW	1-12-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

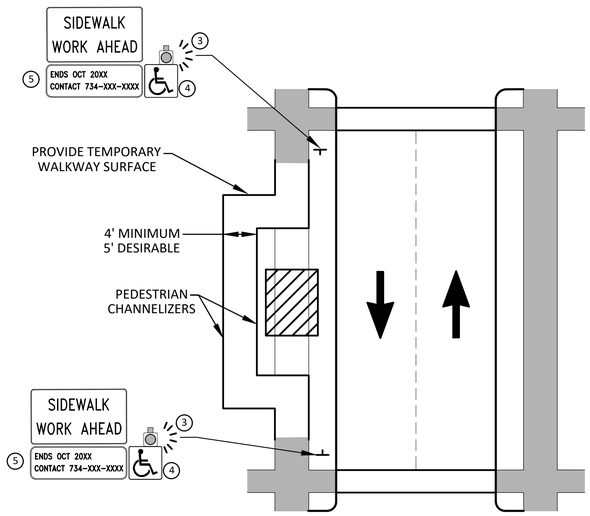
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

ALTERNATE PEDESTRIAN ROUTE (APR) DETOUR

SCALE : **N.T.S.**

DRAWING No. **2021011-7**

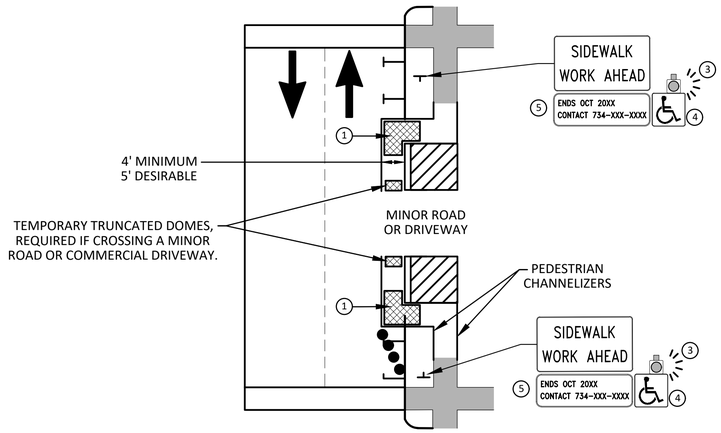
SHEET No. **7 OF 37**



BYPASS ON ADJACENT AVAILABLE
RIGHT OF WAY

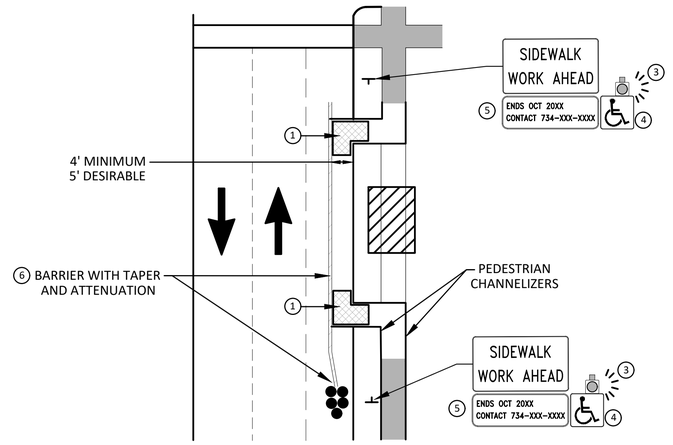
BYPASS TYPE A

NOTE: MAY ONLY BE USED ON ROADWAY WITH POSTED
SPEED OF 45 MPH OR LESS.



SIDEWALK BYPASS USING PARKING OR
SHOULDER ON LOW SPEED ROADWAY

BYPASS TYPE B



SIDEWALK BYPASS USING
SHOULDER OR PARKING LANE ON
HIGH SPEED ROADWAY

BYPASS TYPE C

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, THE CONTRACTOR SHALL PROVIDE DETECTABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE AN ALTERNATE PEDESTRIAN ROUTE (APR) AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

PROVIDE A SMOOTH, CONTINUOUS, HARD SURFACE THROUGH THE LENGTH OF THE APR. COMPACTED GRAVEL, AGGREGATE, OR SLAG MATERIALS ARE NOT ALLOWED. PROVIDE A FIRM, STABLE, AND SLIP RESISTANT TEMPORARY WALKWAY SURFACE TO COVER SHORT SEGMENTS OF ROUGH, SOFT, OR UNEVEN GROUND.

THE PEDESTRIAN TRAFFIC SIGNALS CONTROLLING CLOSED CROSSWALKS SHALL BE COVERED OR DEACTIVATED BY THE CITY OF ANN ARBOR. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE THIS WORK WITH THE ENGINEER A MINIMUM OF 72 HOURS (NOT INCLUDING WEEKENDS & HOLIDAYS) PRIOR TO THE BEGINNING OF WORK THAT REQUIRES A SIDEWALK CLOSURE.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

WHEN THE ENGINEER DETERMINES THAT THE CONTRACTOR'S OPERATIONS OR PLACEMENT OF TRAFFIC CONTROL DEVICES HAS CAUSED A SITUATION THAT THE VISIBILITY OF A TRAFFIC CONTROL DEVICE IS REDUCED ENOUGH TO CREATE A HAZARD, THE TRAFFIC CONTROL DEVICES SHALL BE DELINEATED WITH FLAGS OR OTHER ENGINEER-APPROVED DEVICES AT NO ADDITIONAL COST TO THE PROJECT.

MINIMIZE DISRUPTION TO PEDESTRIANS TO THE MAXIMUM EXTENT FEASIBLE BY PROVIDING AN APR IN THE FOLLOWING ORDER OF PREFERENCE:

1. PROVIDE THE APR ON THE SAME SIDE OF THE STREET AS THE DISRUPTED ROUTE UTILIZING BYPASSES.
2. WHERE IT IS NOT FEASIBLE TO PROVIDE A SAME SIDE APR, PROVIDE A DETOUR ON THE OTHER SIDE OF THE STREET.
3. WHERE IT IS NOT FEASIBLE TO PROVIDE AN APR ON THE OTHER SIDE OF THE ROADWAY, PROVIDE AN APR DETOUR WITH TRAILBLAZING SIGNS AS SHOWN ON THE PROJECT PLANS.

SPECIFIC NOTES

(1) TEMPORARY CURB RAMPS WITH DETECTABLE WARNINGS.

(2) 5 DEVICE TAPER 25 FEET LONG, RECOMMENDED WHEN THE CLOSED AREA WAS USED AS AN INTERMITTENT TRAFFIC LANE OR BYPASS LANE. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(3) AN APPROVED AUDIBLE MESSAGE DEVICE OR TACTILE MESSAGE SHOULD BE PROVIDED FOR SIGHT-IMPAIRED PEDESTRIANS.

(4) THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE DISPLAYED WHEN ANY WALKWAY THROUGH A WORK ZONE HAS BEEN DETERMINED TO BE TPAR COMPLIANT. THE SYMBOL OF ACCESSIBILITY SHALL NOT BE DISPLAYED IF PERSONS WITH DISABILITIES SHOULD NOT USE THE PRIMARY TEMPORARY PEDESTRIAN DETOUR. THE REASON FOR THE NON-COMPLIANCE SHALL BE POSTED AND AN ALTERNATE ROUTE SHALL BE POSTED WHEN THE PRIMARY TEMPORARY PEDESTRIAN DETOUR IS NON-COMPLIANT TO TPAR STANDARDS.

(5) TYPICAL SIGN MESSAGE FOR A TEMPORARY PEDESTRIAN DETOUR SHALL INCLUDE INFORMATION SUCH AS THE DURATION OF THE WALKWAY RESTRICTIONS (BEGINNING AND/OR END DATES) AND A PROJECT CONTACT NUMBER FOR 24 / 7 QUESTIONS OR REPORTING HAZARDS.

(6) SEE MMUTCD FOR GUIDANCE ON PLACEMENT AND USAGE OF BARRIER.

LEGEND

- SIGN
- EXISTING PEDESTRIAN SURFACE
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- BARRIER
- SIDEWALK BARRICADE
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL DEVICE

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3-3-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
00	FINAL REVIEW	1-12-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

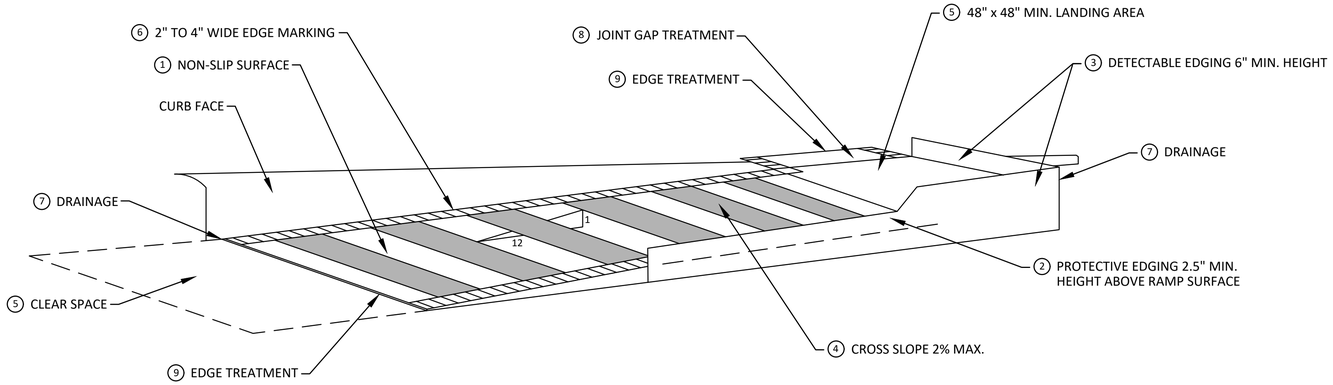
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

ALTERNATE PEDESTRIAN ROUTE (APR) BYPASS

SCALE : N.T.S.

DRAWING No. 2021011-8

SHEET No. 8 OF 37

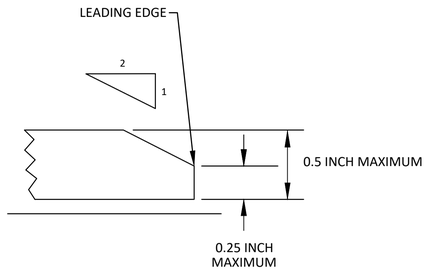


TEMPORARY CURB RAMP
PARALLEL TO CURB

SPECIFIC NOTES

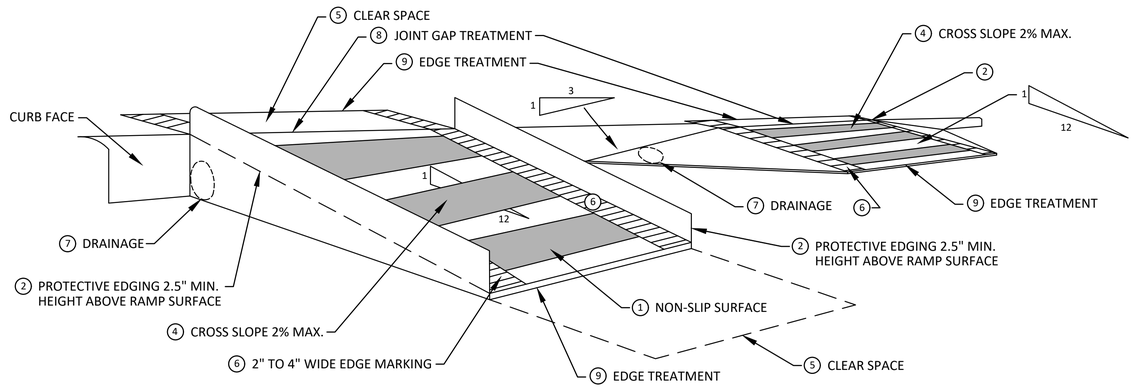
1. CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
2. PROTECTIVE EDGING WITH A 2.5" MIN. HEIGHT ABOVE THE RAMP SHALL BE PLACED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3. PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
3. DETECTABLE EDGING ANYTIME A HANDRAIL IS REQUIRED, AND ANYTIME THE PATH CHANGES DIRECTION. THIS INCLUDES A TURN ONTO THE RAMP FROM THE PATH. DETECTABLE EDGING MUST BEGIN A MAXIMUM OF 2.5" ABOVE THE RAMP SURFACE, AND EXTEND AT LEAST 6" ABOVE THE RAMP SURFACE. CONTRASTING COLOR SHALL BE PLACED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. CURB RAMPS AND LANDINGS SHALL HAVE A 2% MAX. CROSS SLOPE.
5. CLEAR SPACE OF 48" x 48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
6. THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR, 2" TO 4" WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL NOT BE IMPEDED.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHOULD BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2" HEIGHT.

SHOWN WITH PROTECTIVE EDGE



9 EDGE TREATMENT

SHOWN WITH SIDE APRON



TEMPORARY CURB RAMP
PERPENDICULAR TO CURB

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02	ADDENDUM #1	3-3-22	CC,DF	FC
01	QUT FOR BID	2-10-22	CC,DF	FC
00	FINAL REVIEW	1-12-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

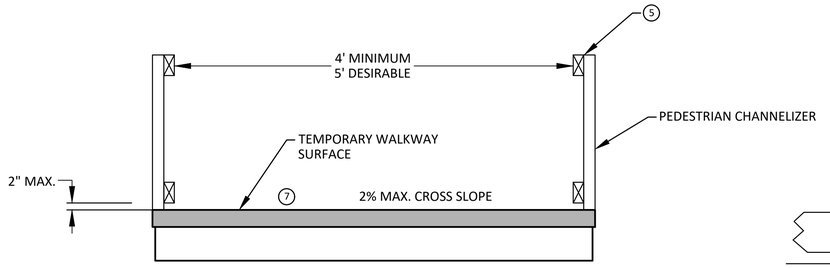
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

TPAR RAMPS

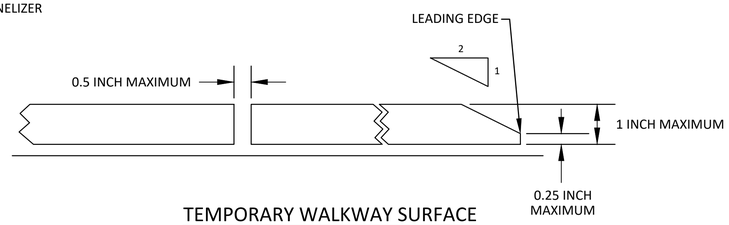
SCALE : N.T.S.

DRAWING No. 2021011-9

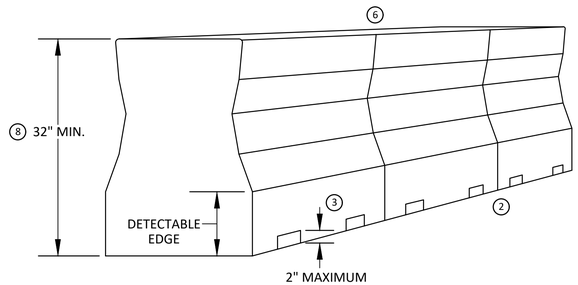
SHEET No. 9 OF 37



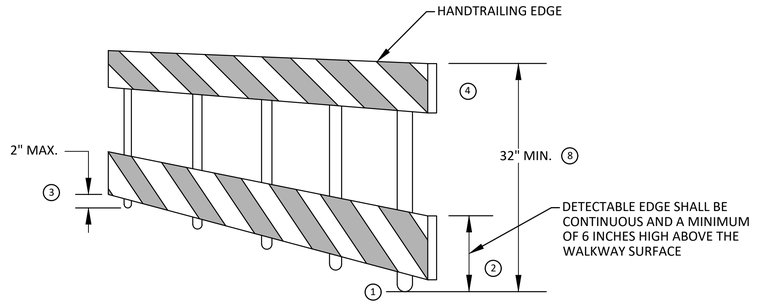
TEMPORARY PEDESTRIAN ACCESS



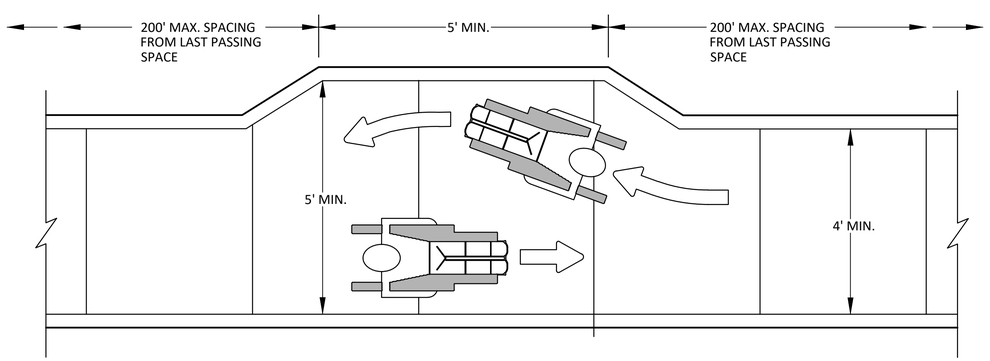
TEMPORARY WALKWAY SURFACE



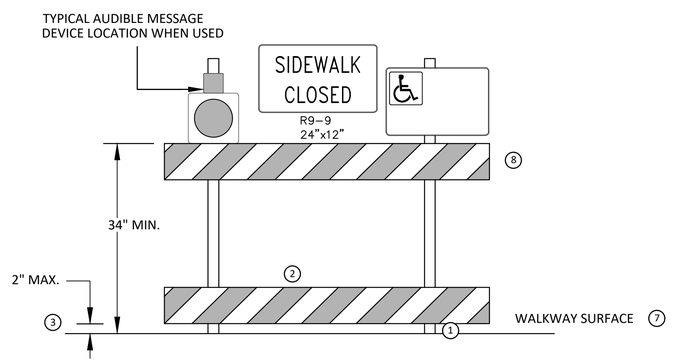
PEDESTRIAN CHANNELIZER USING A BARRIER
(MINIMUM REQUIREMENTS)



PEDESTRIAN CHANNELIZER
(MINIMUM REQUIREMENTS)



NARROW TEMPORARY PEDESTRIAN ACCESS ROUTE PASSING DETAIL



SIDEWALK BARRICADE

GENERAL NOTES

RAILINGS OR OTHER OBJECTS MAY PROTRUDE A MAXIMUM OF 4 INCHES INTO THE WALKWAY CLEAR SPACE WHEN LOCATED A MINIMUM OF 27 INCHES ABOVE THE WALKWAY SURFACE.

ANY PEDESTRIAN DEVICES USED TO PROVIDE POSITIVE PROTECTION FOR PEDESTRIANS OR WORKERS SHALL MEET NCHRP 350 CRASHWORTHY REQUIREMENTS APPROPRIATE FOR THE BARRIER'S APPLICATION.

BARRICADES SHALL BE PLACED CONTINUOUSLY ACROSS THE ENTIRE WIDTH OF THE WALKWAY SURFACE BEING CLOSED.

SPECIFIC NOTES

1. ANY TRIPPING HAZARD IN THE WALKWAY NEEDS A DETECTABLE EDGE. BALLAST SHALL BE LOCATED BEHIND OR INTERNAL TO THE DEVICE. ANY SUPPORT ON THE FRONT OF THE DEVICE SHALL NOT EXTEND INTO THE 48 INCH MINIMUM WALKWAY CLEAR SPACE AND SHALL NOT EXCEED 0.5 INCHES IN HEIGHT ABOVE THE WALKWAY SURFACE.
2. DETECTABLE EDGES SHALL BE CONTINUOUS AND A MINIMUM OF 6 INCHES IN HEIGHT ABOVE WALKWAY SURFACE AND HAVE COLOR MARKINGS CONTRASTING WITH THE WALKWAY SURFACE.
3. DEVICES SHALL NOT BLOCK WATER DRAINAGE FROM THE WALKWAY. A GAP HEIGHT OR OPENING FROM THE WALKWAY SURFACE UP TO A MAXIMUM OF 2 INCHES IS ALLOWED FOR DRAINAGE PURPOSES.
4. PROVIDE A HANDRAIL ON BOTH SIDES OF THE RAMP IF THE RAMP IS NOT EXPOSED TO VEHICLE TRAFFIC AND HAS A TOTAL RISE GREATER THAN 6 INCHES, AND A LENGTH GREATER THAN 72 INCHES.
   - ENSURE THE HANDRAIL IS 1.25 AND 1.5 INCHES WIDE AND CONFIGURED TO BE A "GRASPABLE" CROSS-SECTION.

   WHEN THE RAMP IS EXPOSED TO TRAFFIC, IN LIEU OF HANDRAILS, USE A PROTECTIVE EDGE 2.5 INCHES MINIMUM HEIGHT ABOVE THE RAMP SURFACE OR 1:10 FLARE ON BOTH SIDES OF THE RAMP.
5. ALL DEVICES SHALL BE FREE OF SHARP OR ROUGH EDGES, AND FASTENERS (BOLTS) SHALL BE ROUNDED TO PREVENT HARM TO HANDS, ARMS OR CLOTHING OF PEDESTRIANS.
6. ALL DEVICES USED TO CHANNELIZE PEDESTRIAN FLOW SHOULD INTERLOCK SUCH THAT GAPS DO NOT ALLOW PEDESTRIANS TO STRAY FROM THE INTENDED CHANNELIZED PATH.
7. A WALKWAY SURFACE SHALL BE FIRM, STABLE, AND SLIP RESISTANT. COMPACTED GRAVEL, AGGREGATE, OR SLAG MATERIALS ARE NOT ALLOWED.
8. LONGITUDINAL CHANNELIZING DEVICES FOR PEDESTRIANS SHALL BE 32 INCHES IN HEIGHT OR GREATER.

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1-12-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

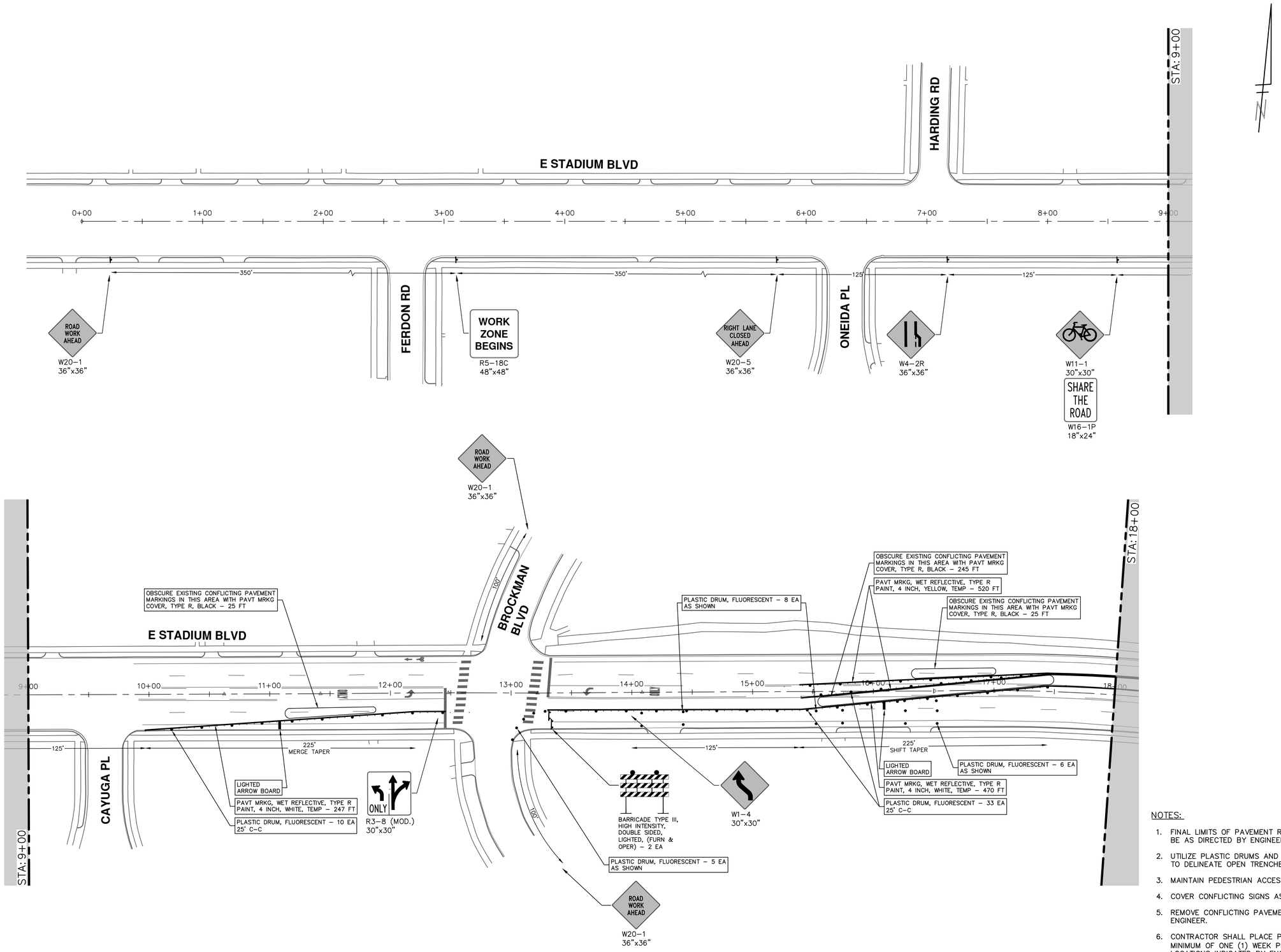
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

TPAR WALKWAY DEVICES

SCALE: N.T.S.

DRAWING No. 2021011-10

SHEET No. 10 OF 37



NOTES:

1. FINAL LIMITS OF PAVEMENT REMOVAL FOR UTILITY INSTALLATION WILL BE AS DIRECTED BY ENGINEER.
2. UTILIZE PLASTIC DRUMS AND PROTECTIVE FENCING WITHIN WORK ZONE TO DELINEATE OPEN TRENCHES AS DIRECTED BY ENGINEER.
3. MAINTAIN PEDESTRIAN ACCESS DURING CONSTRUCTION.
4. COVER CONFLICTING SIGNS AS NEEDED OR AS DIRECTED BY ENGINEER.
5. REMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
6. CONTRACTOR SHALL PLACE PORTABLE, CHANGEABLE MESSAGE SIGNS A MINIMUM OF ONE (1) WEEK PRIOR TO THE START OF CONSTRUCTION IN LOCATIONS INDICATED BY ENGINEER. MESSAGE TO BE PROVIDED BY THE ENGINEER.

811 Know what's **below.** **Call before you dig.**

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3–3–22	CC,DF	FC
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00	FINAL REVIEW	1–12–22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

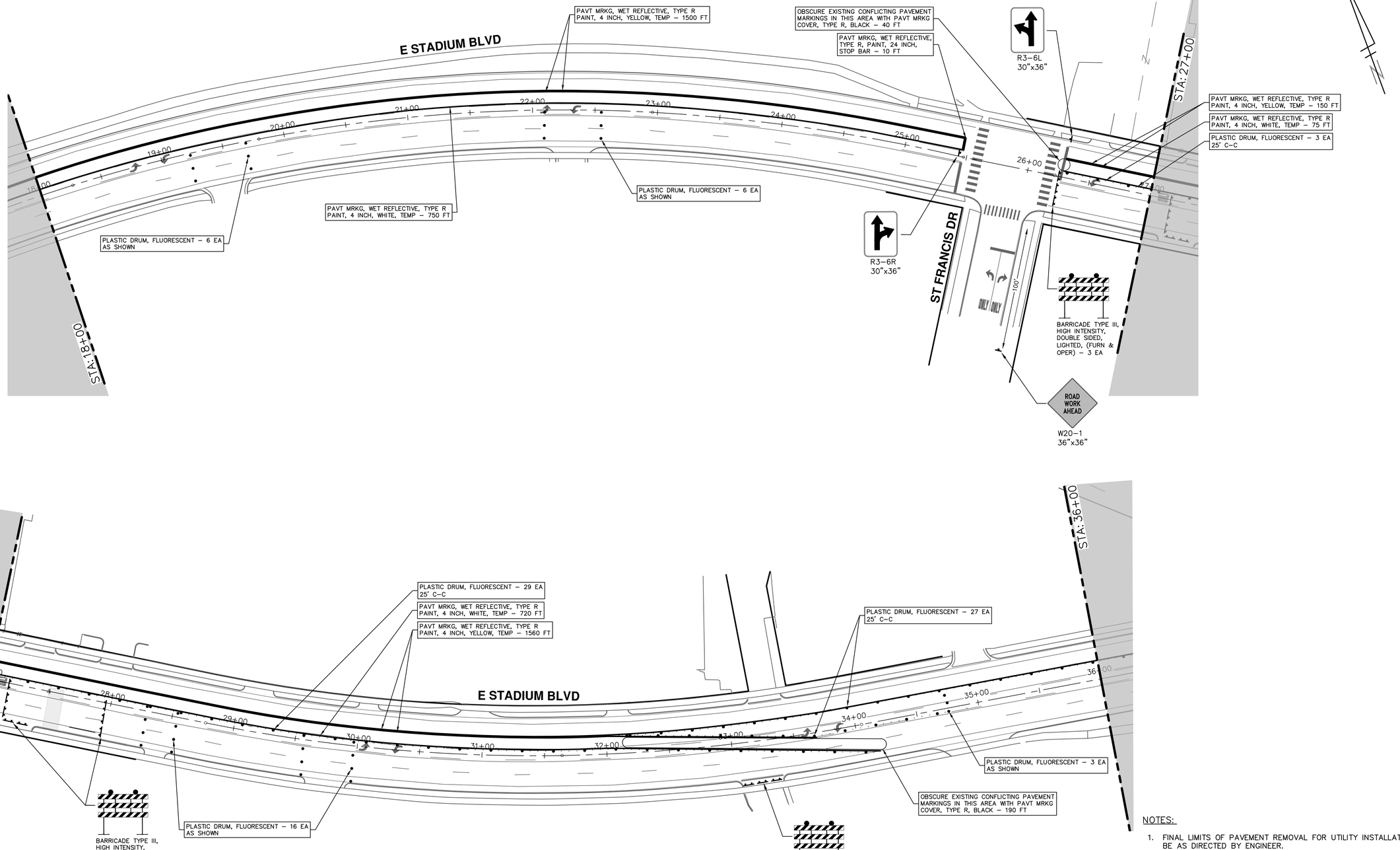
E STADIUM BLVD TRAFFIC CONTROL PH I

STA. 0+00 - STA. 18+00

SCALE : 1" = 40'

DRAWING No. 2021011-11

SHEET No. 11 OF 37



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02	ADDENDUM #1	3-3-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
00	FINAL REVIEW	1-12-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

E STADIUM BLVD TRAFFIC CONTROL PH I

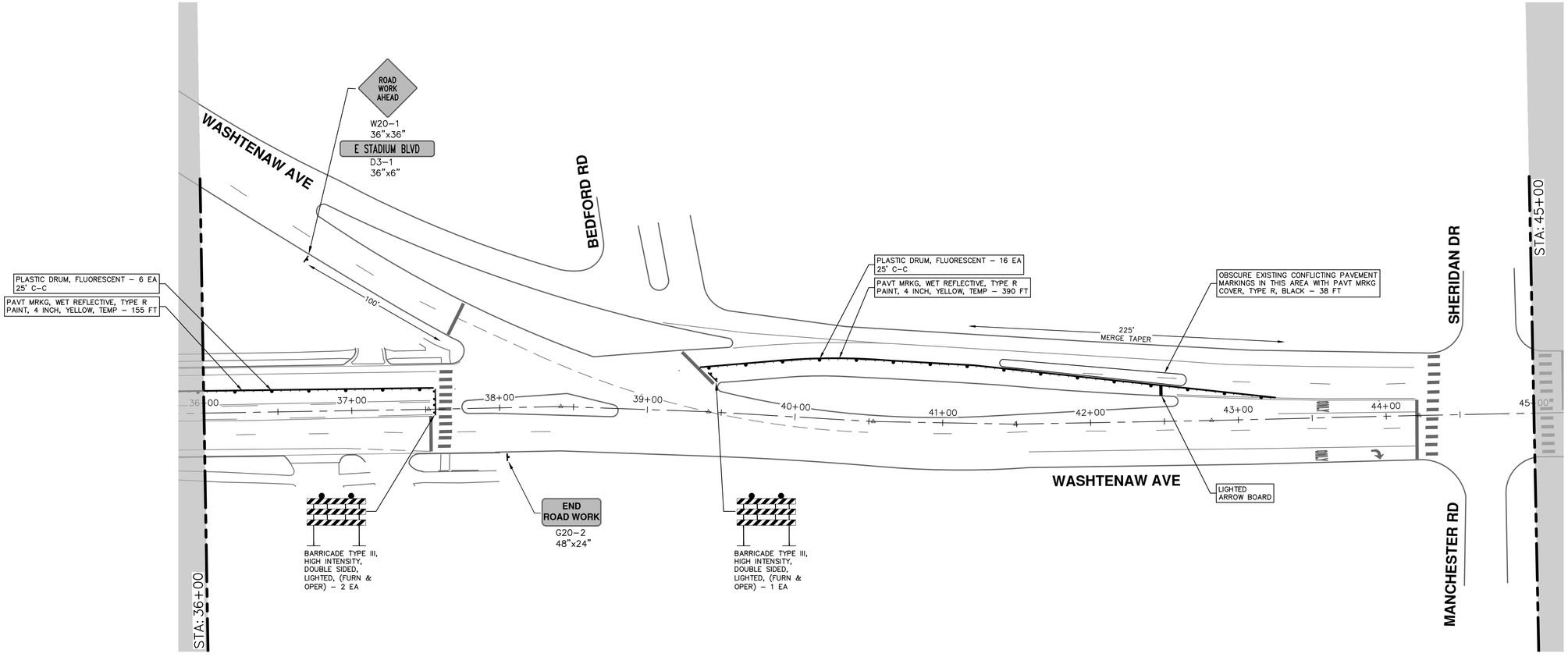
STA. 18+00 - STA. 36+00

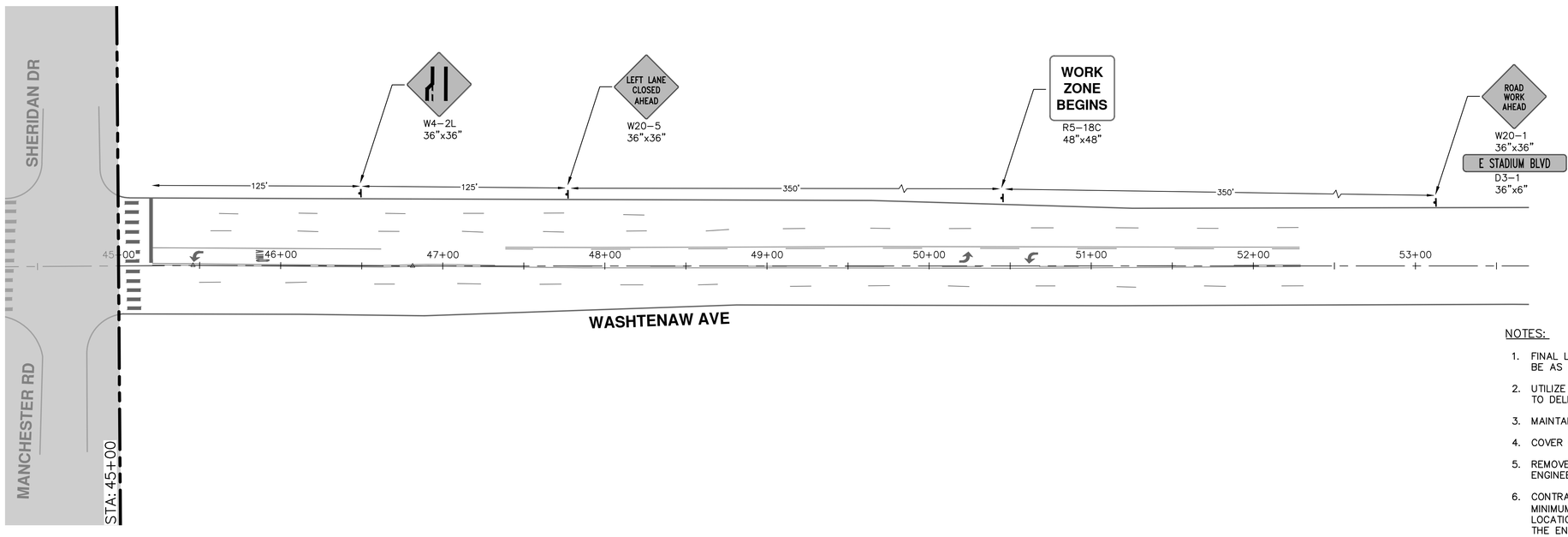
SCALE : 1" = 40'

DRAWING No. 2021011-12

SHEET No. 12 OF 37

R:\2021011 StadiumWasht Area Util Impr\Plan Production\2021011Mtrf.dwg Dwg Created: 1-Feb-22 – _a2 standard bw.stb – Plot Date: 3-Mar-22





NOTES:

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1-12-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

E STADIUM BLVD TRAFFIC CONTROL PH I

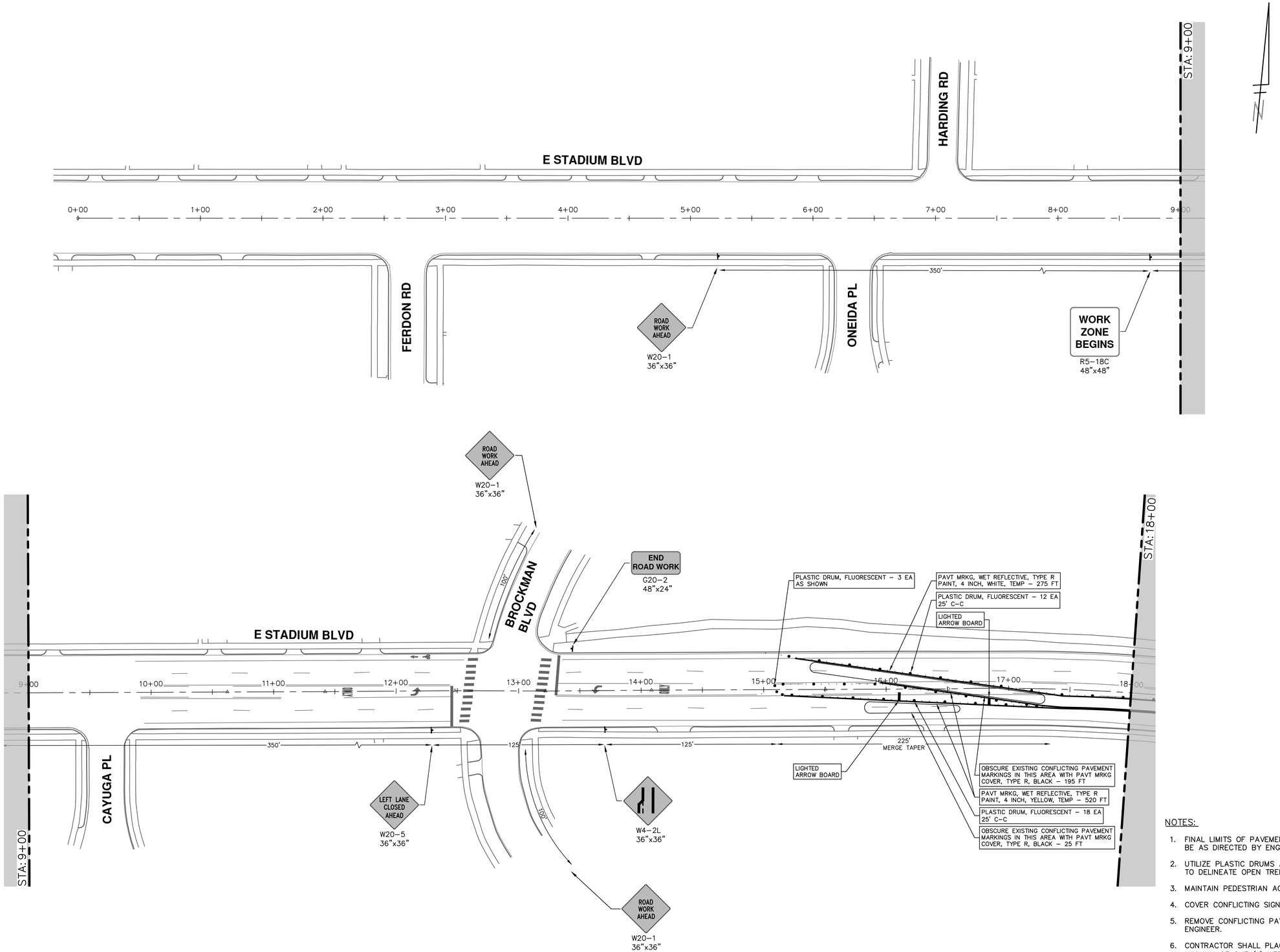
STA. 36+00 - STA. 53+00

SCALE : 1" = 40'

DRAWING No. 2021011-13

SHEET No. 13 OF 37

R:\2021011 StadiumWasht Area Util Impr\Plan Production\2021011Mtrf.dwg Dwg Created: 1-Feb-22 - _a2 standard bw.stb - Plot Date: 3-Mar-22



NOTES:

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

E STADIUM BLVD TRAFFIC CONTROL PH II

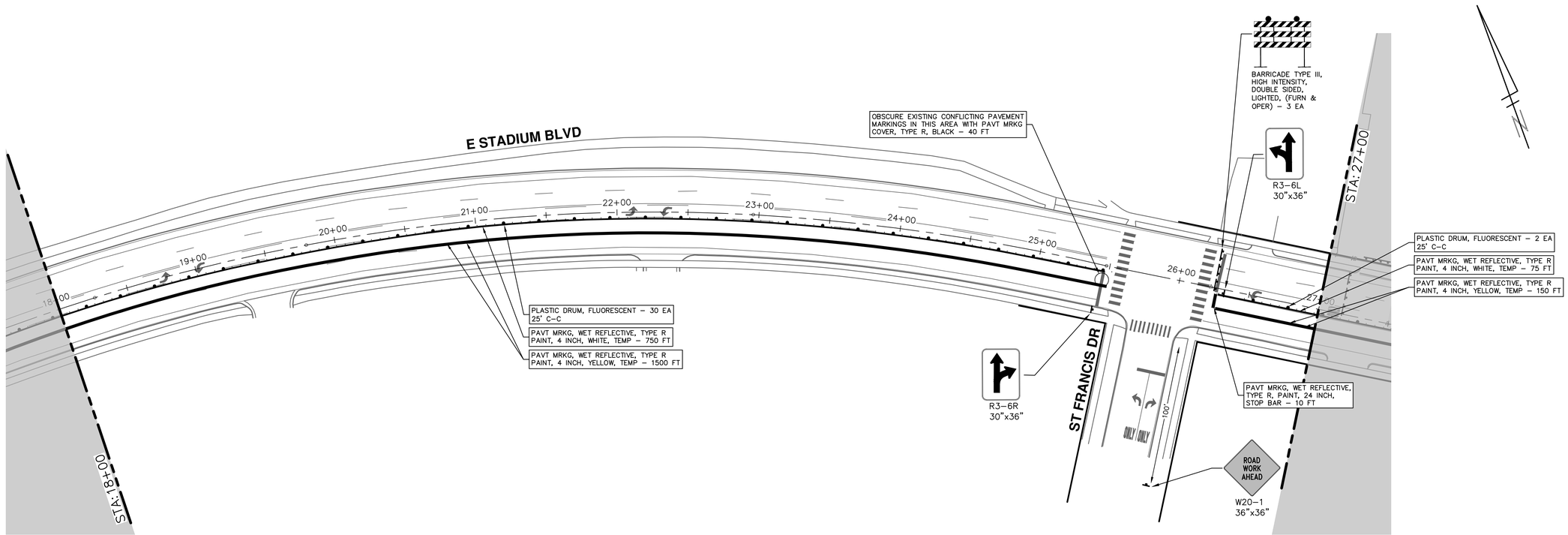
STA. 0+00 - STA. 18+00

SCALE: 1" = 40'

DRAWING No. 2021011-14

SHEET No. 14 OF 37

R:\2021011 StadiumWasht Area Util Impr\Plan Production\2021011Mtrf2.dwg Dwg Created: 3-Feb-22 - _a2 standard bw.stb - Plot Date: 3-Mar-22



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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

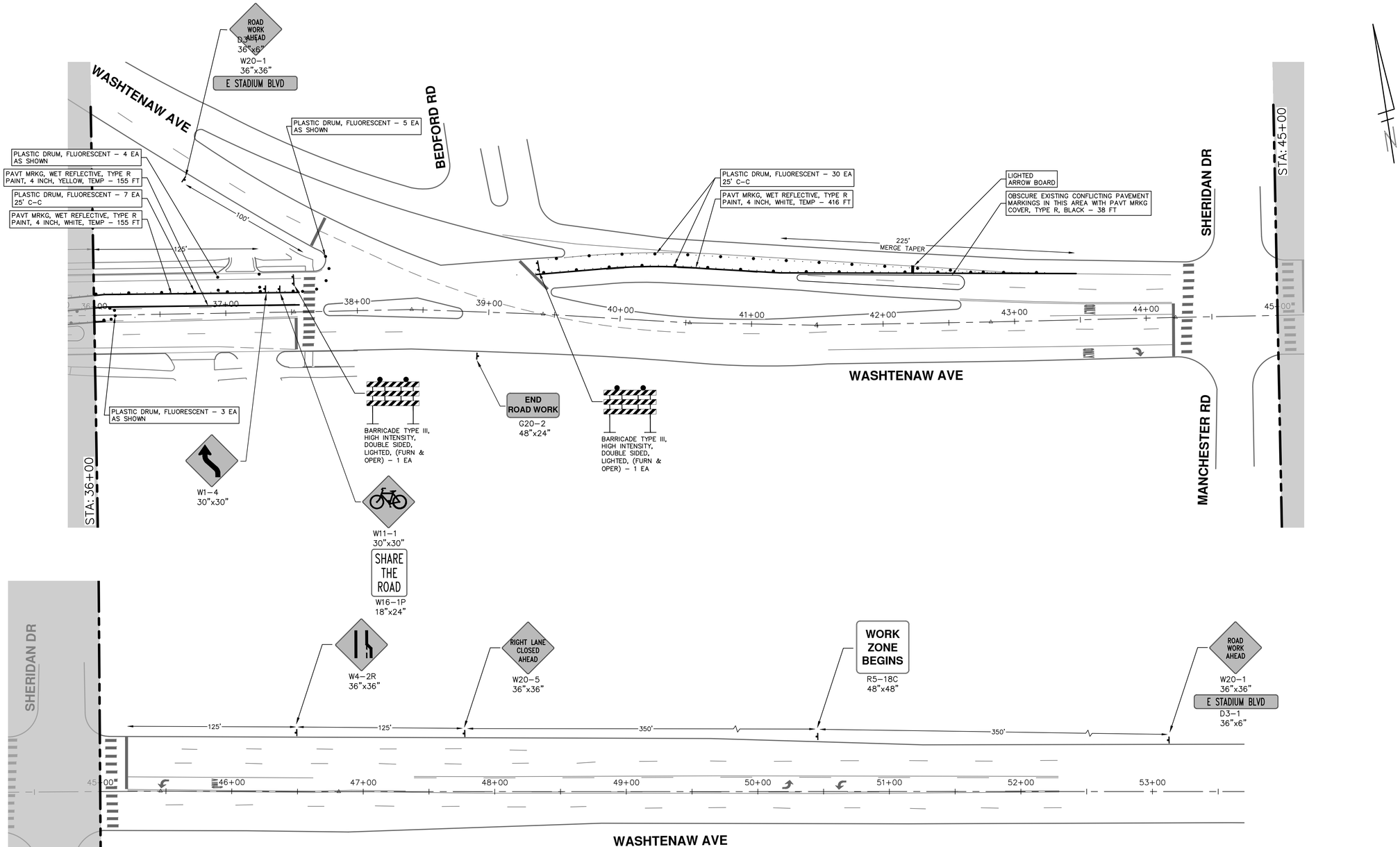
E STADIUM BLVD TRAFFIC CONTROL PH II

STA. 18+00 - STA. 36+00

SCALE : 1" = 40'

DRAWING No. 2021011-15

SHEET No. 15 OF 37



NOTES:

1. FINAL LIMITS OF PAVEMENT REMOVAL FOR UTILITY INSTALLATION WILL BE AS DIRECTED BY ENGINEER.
2. UTILIZE PLASTIC DRUMS AND PROTECTIVE FENCING WITHIN WORK ZONE TO DELINEATE OPEN TRENCHES AS DIRECTED BY ENGINEER.
3. MAINTAIN PEDESTRIAN ACCESS DURING CONSTRUCTION.
4. COVER CONFLICTING SIGNS AS NEEDED OR AS DIRECTED BY ENGINEER.
5. REMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
6. CONTRACTOR SHALL PLACE PORTABLE, CHANGEABLE MESSAGE SIGNS A MINIMUM OF ONE (1) WEEK PRIOR TO THE START OF CONSTRUCTION IN LOCATIONS INDICATED BY ENGINEER. MESSAGE TO BE PROVIDED BY THE ENGINEER.

811 Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3-3-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
00	FINAL REVIEW	1-12-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

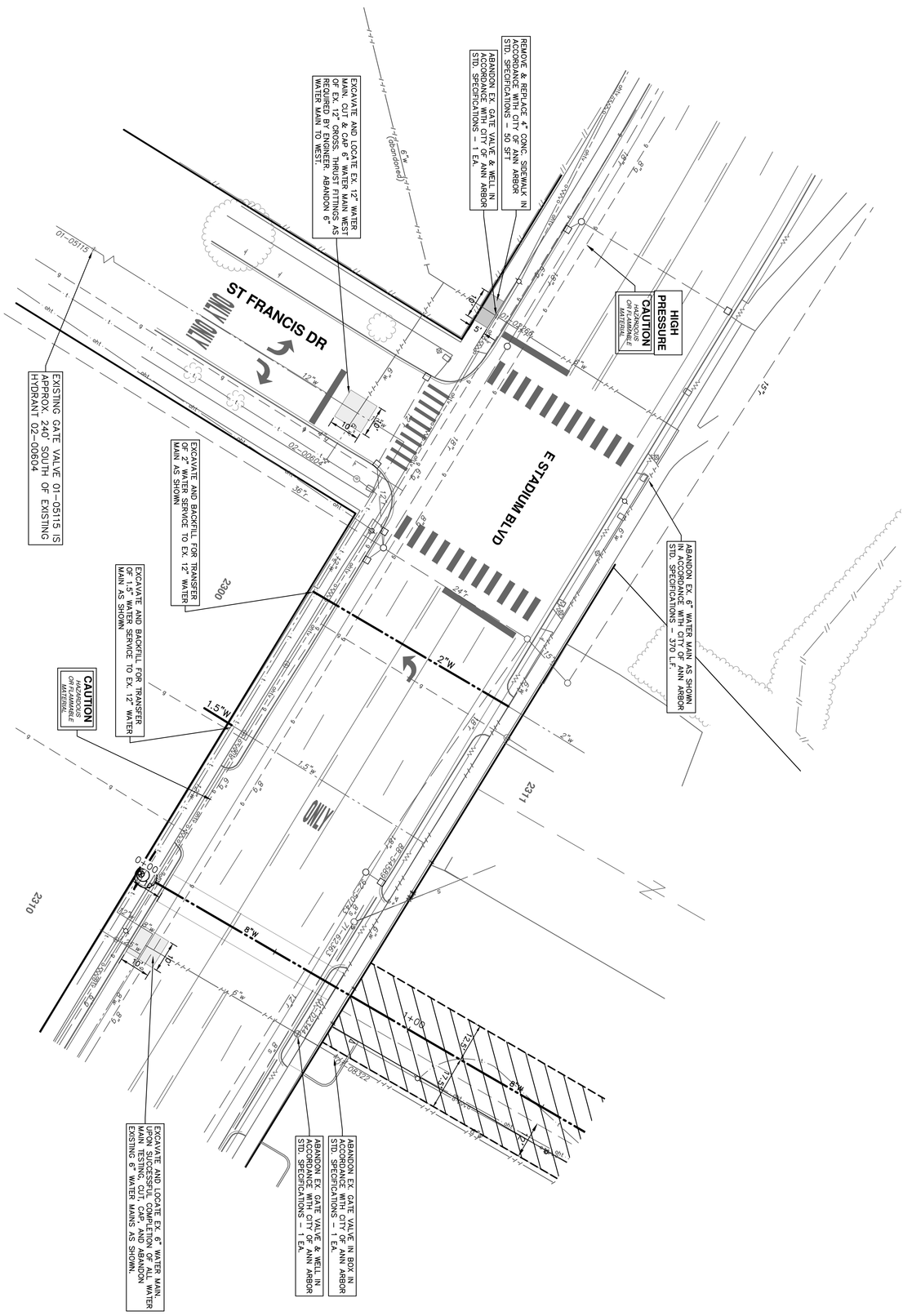
E STADIUM BLVD TRAFFIC CONTROL PH II

STA. 36+00 - STA. 53+00

SCALE: 1" = 40'

DRAWING No. 2021011-16

SHEET No. 16 OF 37



02	ADDENDUM #1	3-3-22	CC,DF	FC	
01	OUT FOR BID	2-10-22	CC,DF	FC	
00	FINAL REVIEW	1-12-22	CC,DF	FC	
REV.	DESCRIPTION	DATE	DRAWN	CHECKED	

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Know what's **below.** **Call** before you dig.

SHEET No. 17 OF 37

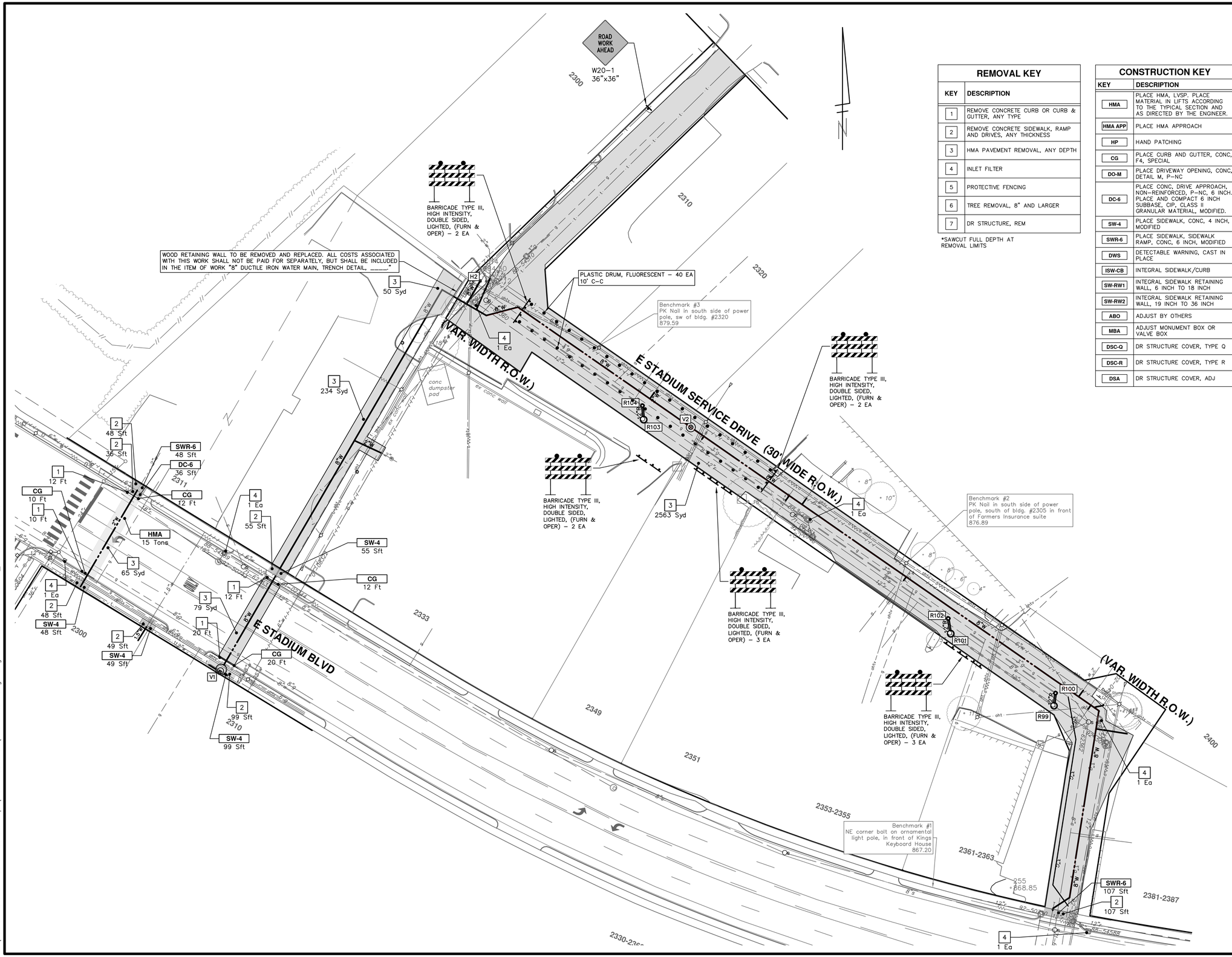
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE **PLAN: 1" = 20'**

DRAWING No. **2021011-17**

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

WATER MAIN ABANDONMENTS



REMOVAL KEY

KEY	DESCRIPTION
1	REMOVE CONCRETE CURB OR CURB & GUTTER, ANY TYPE
2	REMOVE CONCRETE SIDEWALK, RAMP AND DRIVES, ANY THICKNESS
3	HMA PAVEMENT REMOVAL, ANY DEPTH
4	INLET FILTER
5	PROTECTIVE FENCING
6	TREE REMOVAL, 8" AND LARGER
7	DR STRUCTURE, REM

*SAWCUT FULL DEPTH AT REMOVAL LIMITS

CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	PLACE HMA APPROACH
HP	HAND PATCHING
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P-NC
DC-6	PLACE CONC, DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED
DWS	DETECTABLE WARNING, CAST IN PLACE
ISW-CB	INTEGRAL SIDEWALK/CURB
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6 INCH TO 18 INCH
SW-RW2	INTEGRAL SIDEWALK RETAINING WALL, 19 INCH TO 36 INCH
ABO	ADJUST BY OTHERS
MBA	ADJUST MONUMENT BOX OR VALVE BOX
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-R	DR STRUCTURE COVER, TYPE R
DSA	DR STRUCTURE COVER, ADJ

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1-12-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

STADIUM SERVICE DR

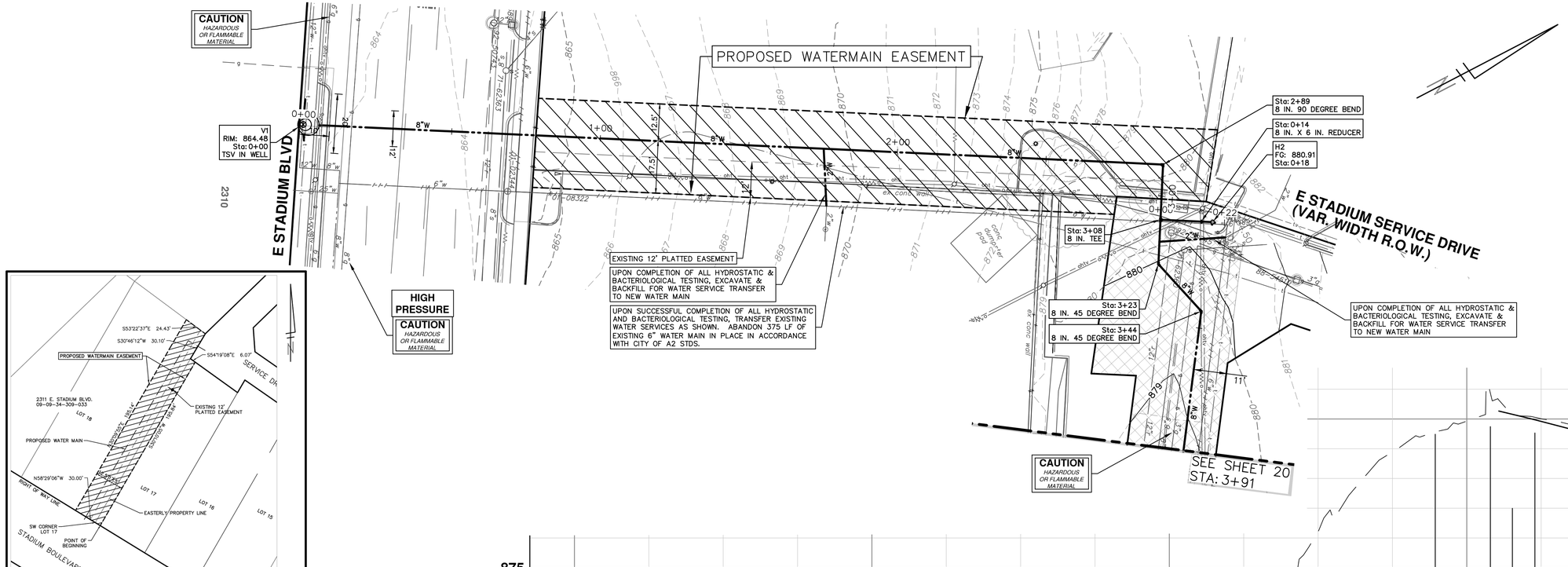
REMOVALS

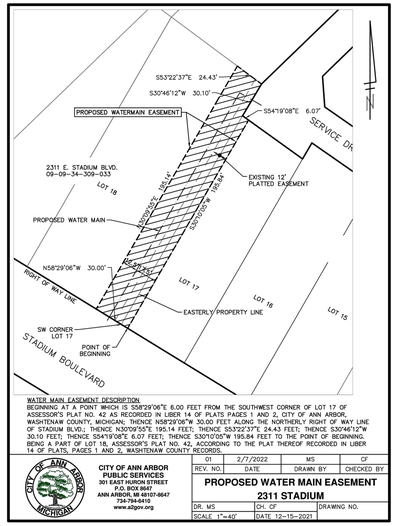
SCALE PLAN: 1" = 30'

DRAWING No. 2021011-18

SHEET No. 18 OF 37

R:\2021011 StadiumWasht Area Util Impr\Plan Production\2021011Rem.dwg Dwg Created: 1-Mar-22 – _a2 standard bw.stb – Plot Date: 3-Mar-22





WATER MAIN EASEMENT DESCRIPTION

BEGINNING AT A POINT WHICH IS S58°29'06"E 6.00 FEET FROM THE SOUTHWEST CORNER OF LOT 17 OF ASSESSOR'S PLAT NO. 42 AS RECORDED IN LIBER 14 OF PLATS PAGES 1 AND 2, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN; THENCE N58°29'06"W 30.00 FEET ALONG THE NORTHERLY RIGHT OF WAY LINE OF STADIUM BLVD.; THENCE N30°09'55"E 195.14 FEET; THENCE S53°22'37"E 24.43 FEET; THENCE S30°46'12"W 30.10 FEET; THENCE S54°19'08"E 6.07 FEET; THENCE S30°10'05"W 195.84 FEET TO THE POINT OF BEGINNING. BEING A PART OF LOT 18, ASSESSOR'S PLAT NO. 42, ACCORDING TO THE PLAT THEREOF RECORDED IN LIBER 14 OF PLATS, PAGES 1 AND 2, WASHTENAW COUNTY RECORDS.

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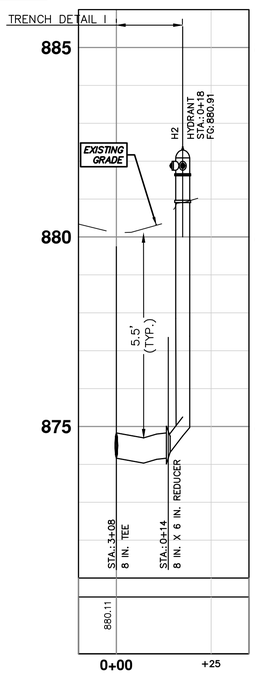
01	2/7/2022	MS	CF
REV. NO.	DATE	DRAWN BY	CHECKED BY

PROPOSED WATER MAIN EASEMENT
2311 STADIUM

DR. MS	CH. CF	DRAWING NO.
SCALE 1"=40'	DATE 12-15-2021	



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01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

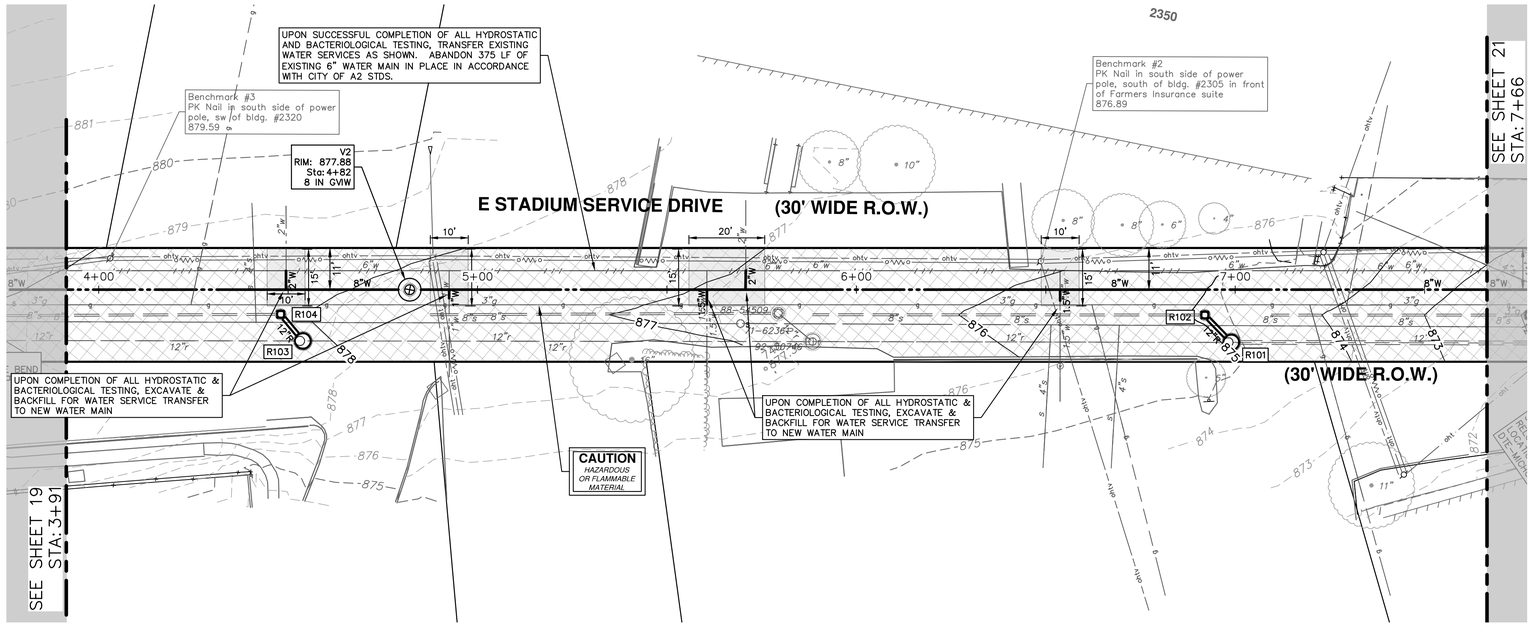
STADIUM SERVICE DR WATER MAIN PLAN AND PROFILE

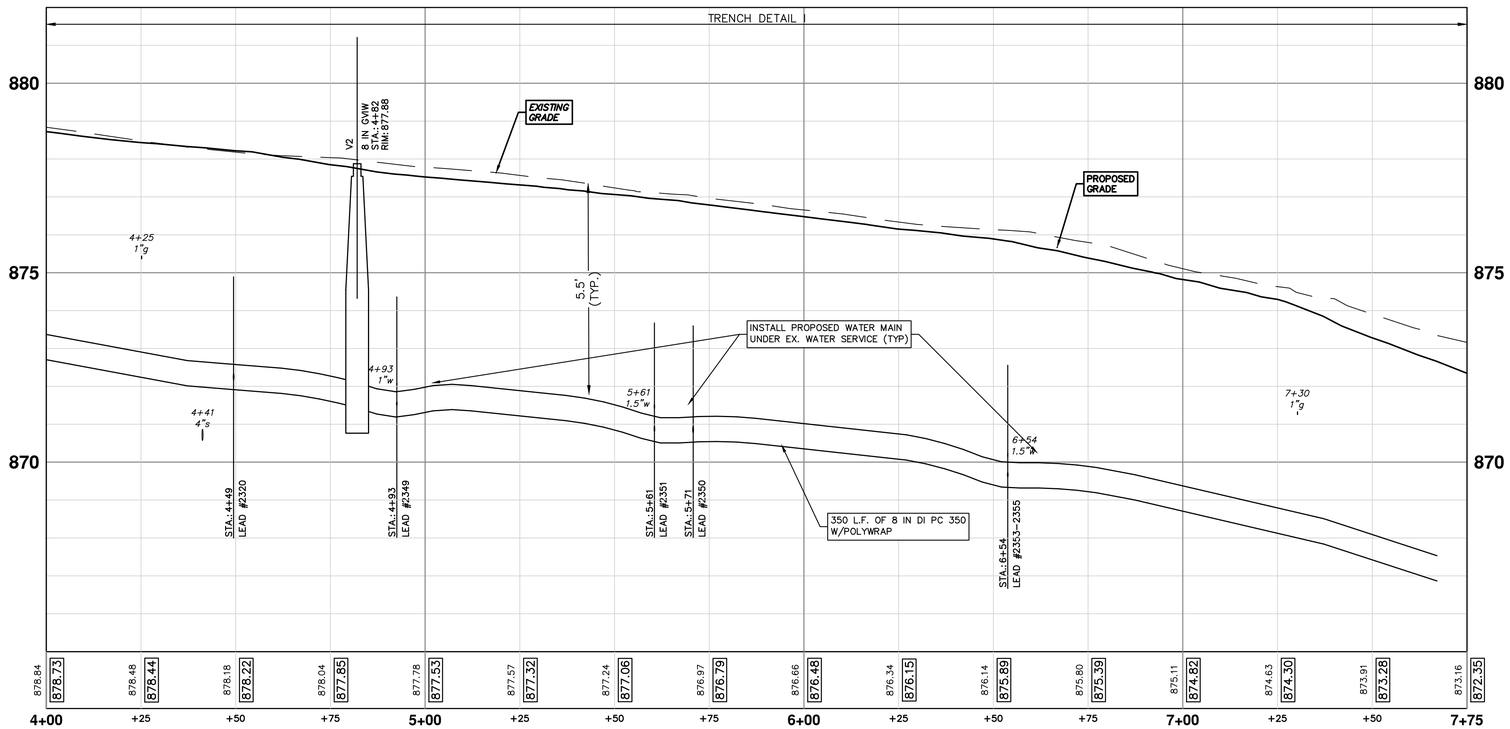
STA. 0+00 - STA. 4+00

SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. **2021011-19**

SHEET No. **19 OF 37**





REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1-12-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

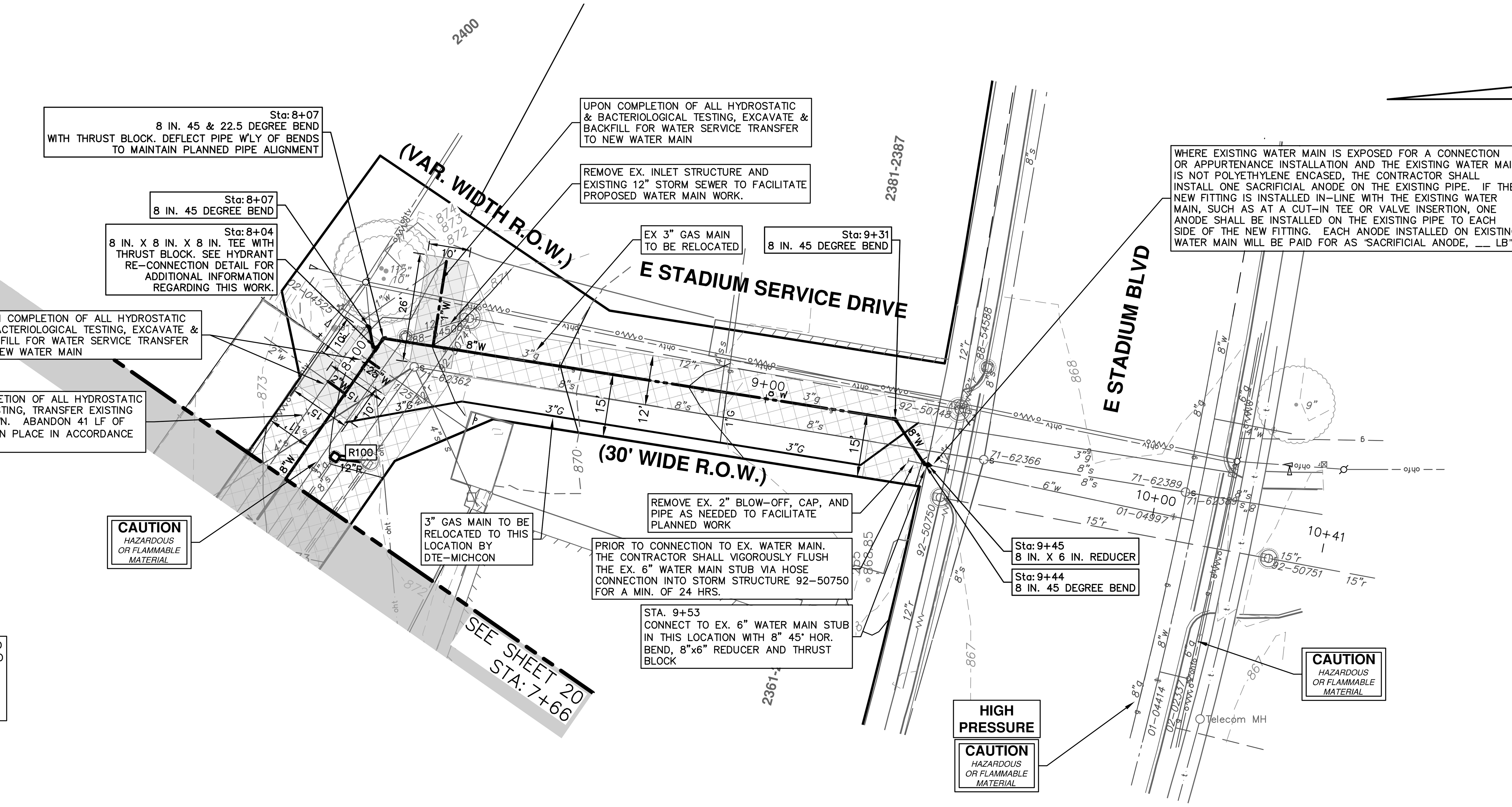
STADIUM SERVICE DR WATER MAIN PLAN AND PROFILE

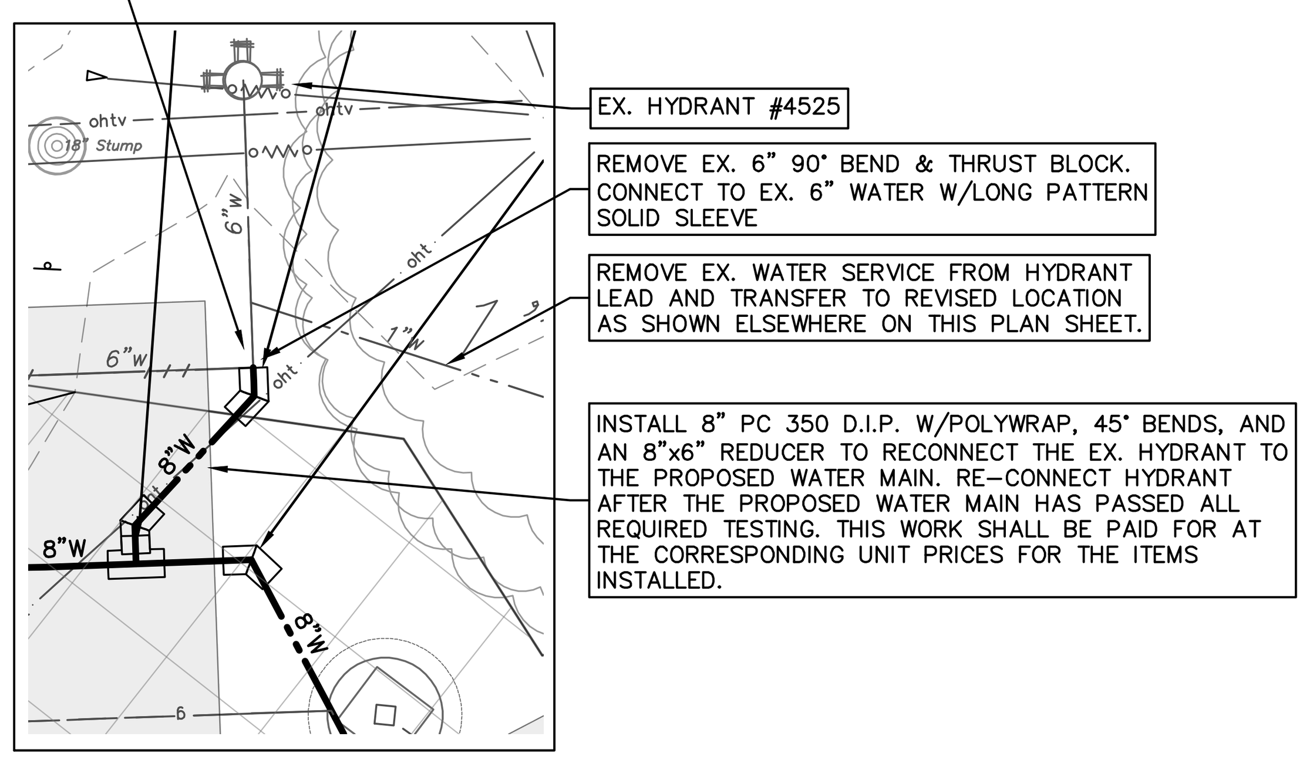
STA. 4+00 - STA. 7+75

SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

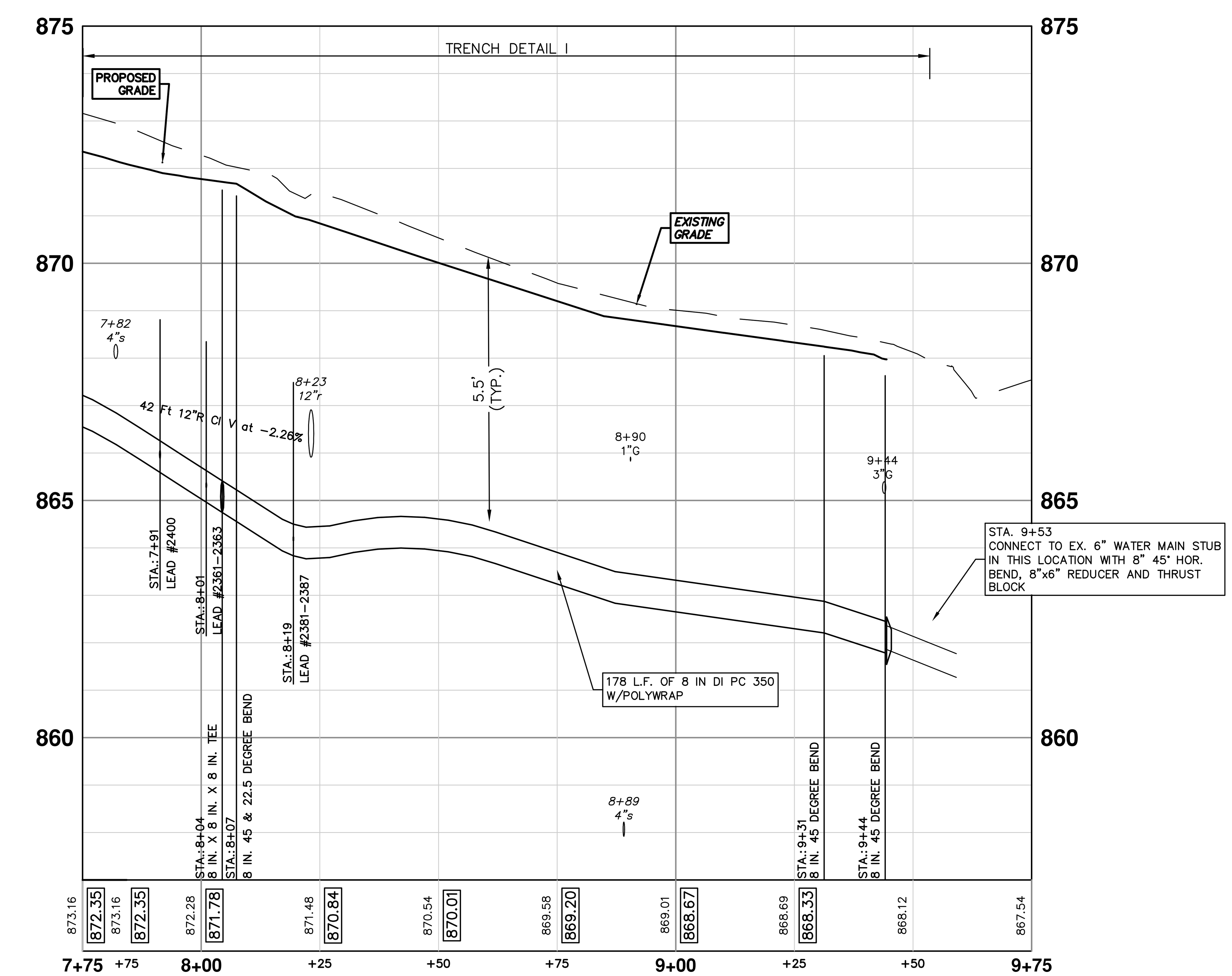
DRAWING No. 2021011-20

SHEET No. 20 OF 37





HYDRANT RE-CONNECTION DETAIL



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

STADIUM SERVICE DR WATER MAIN PLAN AND PROFILE

STA. 7+75 - STA. 9+53

SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-21

SHEET No. 21 OF 37

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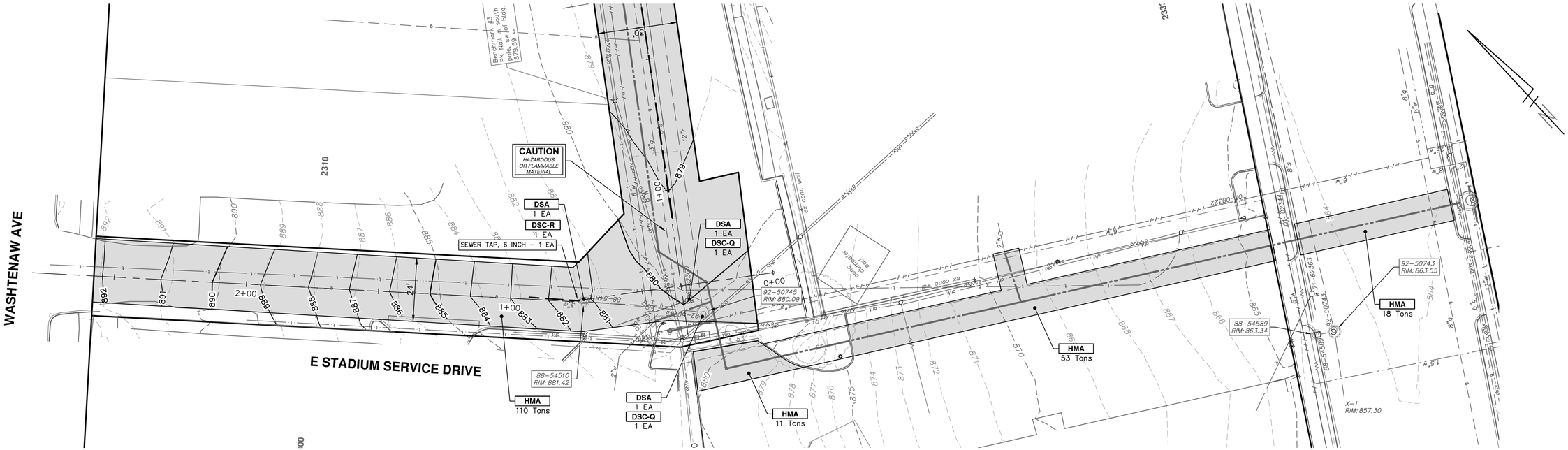
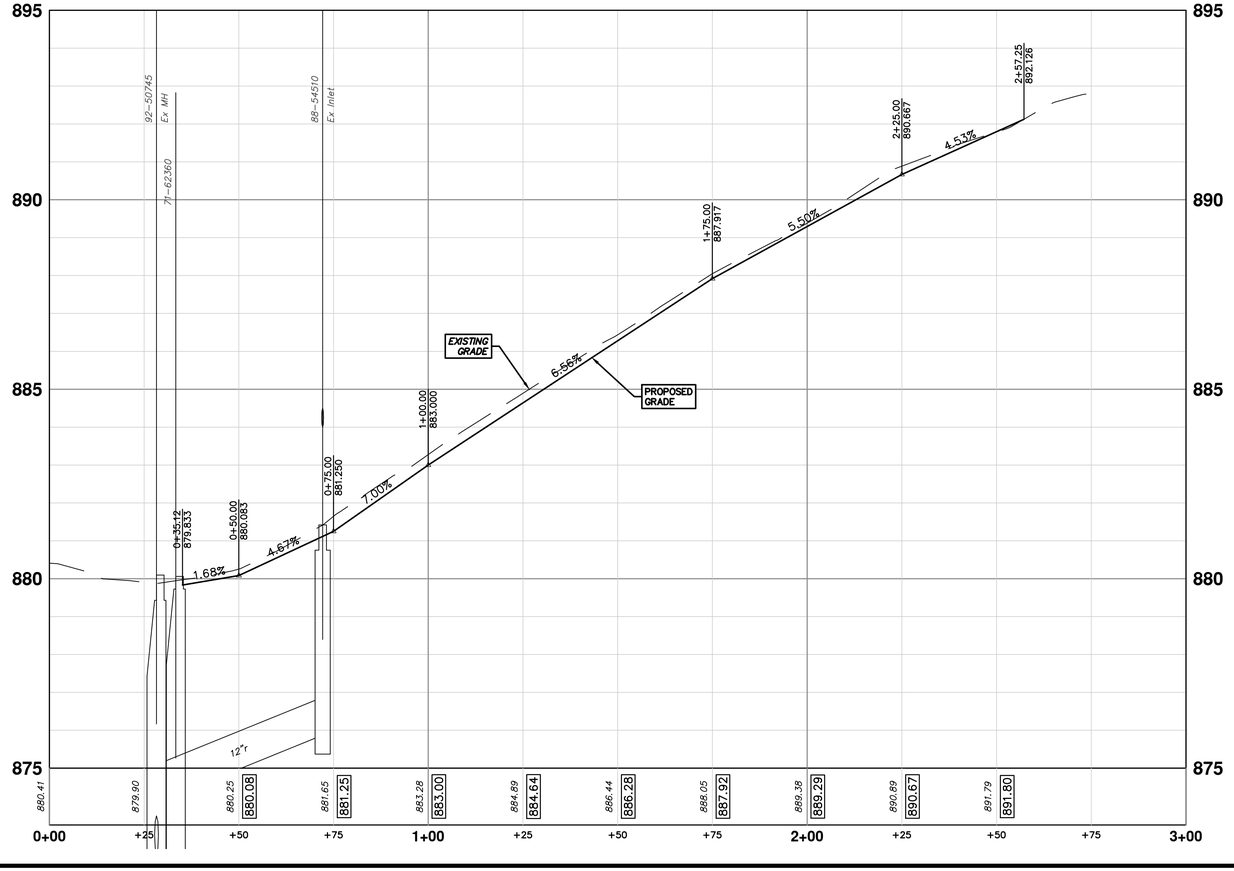
REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3-3-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
00	FINAL REVIEW	1-12-22	CC,DF	FC

811 Know what's below. Call before you dig.

R:\2021011 StadiumWasht Area Util Impr\Plan Production\2021011Wtr.dwg Dwg Created: 7-Feb-22 -- _a2 standard bw.stb -- Plot Date: 3-Mar-22





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	PLACE HMA APPROACH
HP	HAND PATCHING
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SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED
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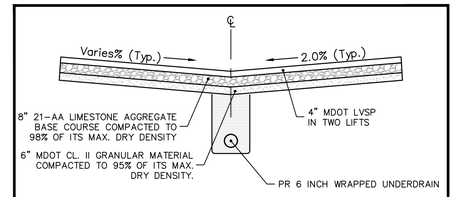
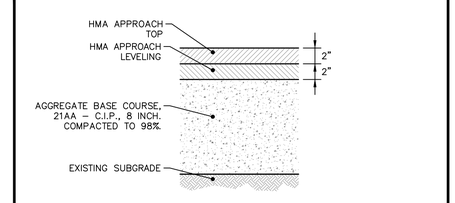
ABO	ADJUST BY OTHERS
MBA	ADJUST MONUMENT BOX OR VALVE BOX
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-R	DR STRUCTURE COVER, TYPE R
DSA	DR STRUCTURE COVER, ADJ



E. STADIUM SERVICE DRIVE TYPICAL SECTION



PARKING AREA SECTION
NOT TO SCALE

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1-12-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

STADIUM SERVICE DR PROPOSED GRADING PLAN

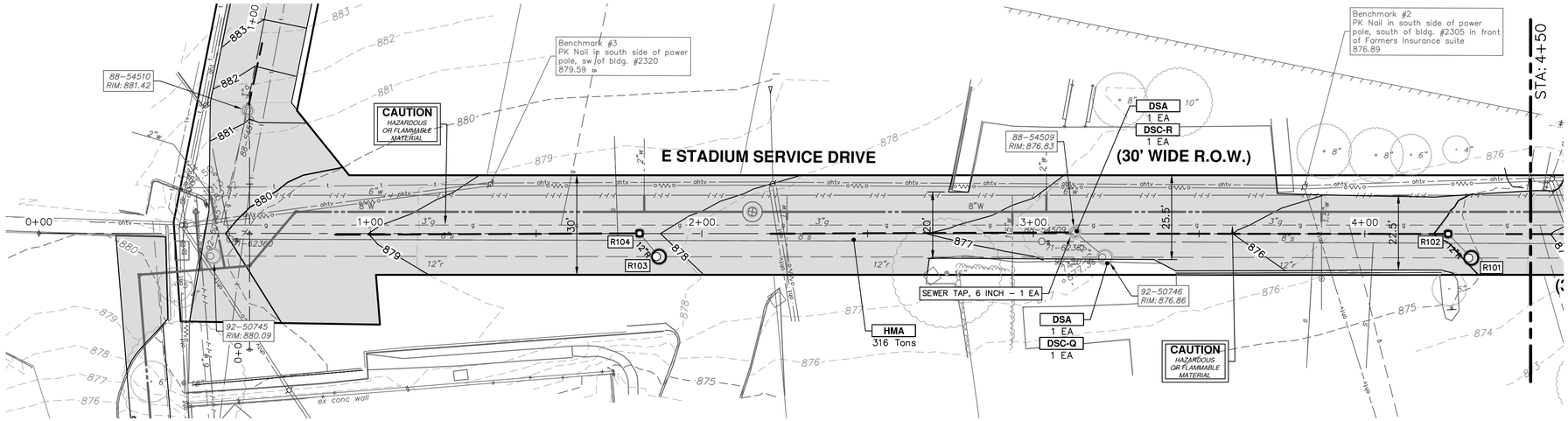
STA. 0+00 - STA. 3+00

SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-22

SHEET No. 22 OF 37

R:\2021011 StadiumWasht Area Util Impr\Plan Production\2021011PRd.dwg Dwg Created: 3-Mar-22 – _a2 standard bw.stb – Plot Date: 3-Mar-22

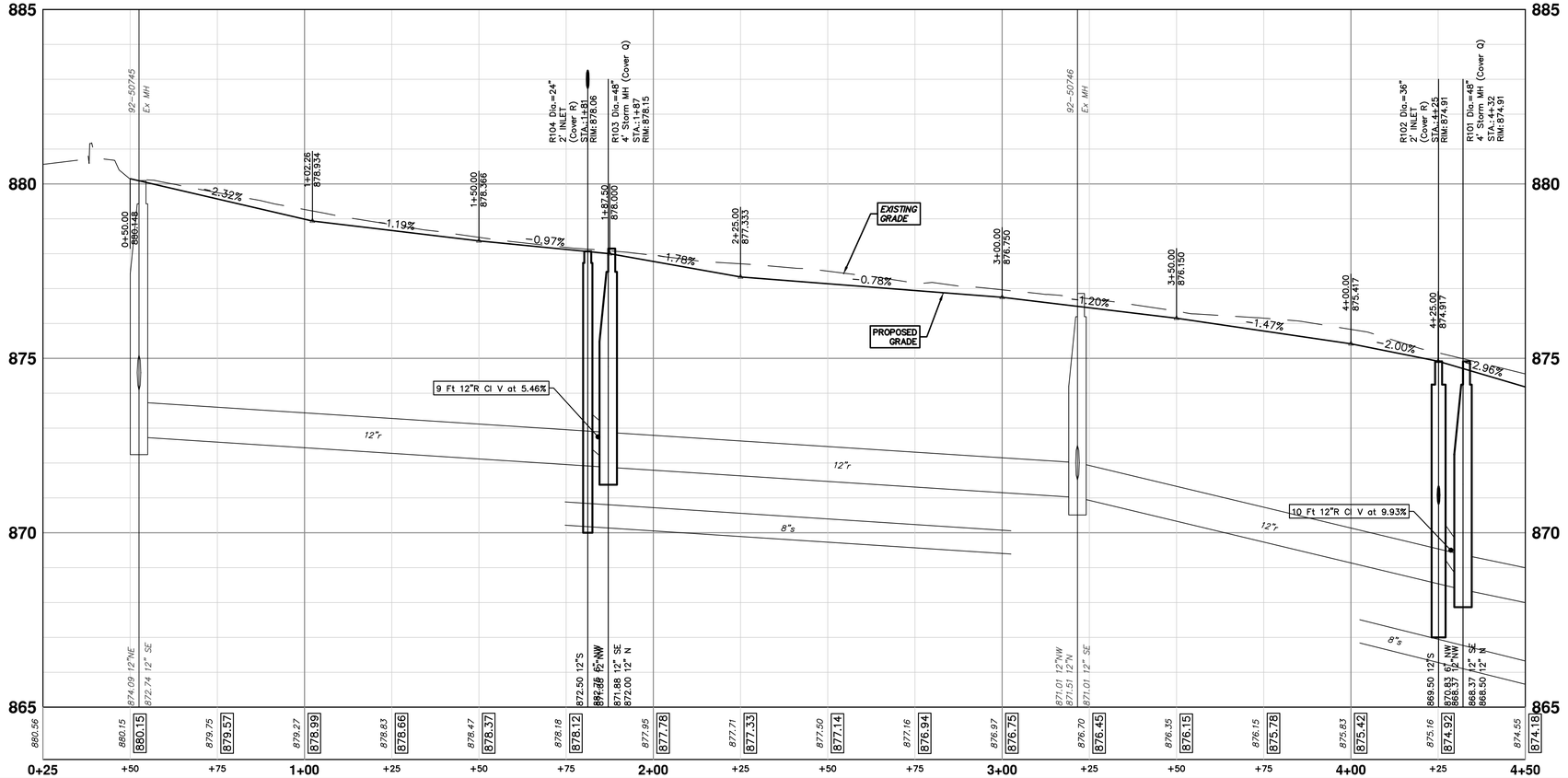


STORM SEWER STRUCTURE TABLE

STRUCTURE	UTILITY STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/ CONSTRUCTION
R101	4+32	12" SE 868.37 12" N 868.50 12" NW 868.37	874.91	6.55	48" Dia.	4' Storm MH (Cover Q)
R103	1+87	12" SE 871.88 12" N 872.00 12" NW 871.88	878.15	6.27	48" Dia.	4' Storm MH (Cover Q)

STORM STRUCTURE TABLE

STRUCTURE	TYPE	RIM	INVERTS	PIPE	SUMP
R102	2' INLET (Cover R)	874.91	12"S 869.50 6"NW 870.83	10 LF OF 12" @ 9.93% 104 LF OF 6" @ 1.57%	2'
R104	2' INLET (Cover R)	878.06	12"S 872.50 6"NW 882.75	9 LF OF 12" @ 5.46% 92 LF OF 6" @ 8.22%	2'



CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	PLACE HMA APPROACH
HP	HAND PATCHING
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P-NC
DC-6	PLACE CONC, DRIVE APPROACH, NON-REINFORCED, P-NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED
DWS	DETECTABLE WARNING, CAST IN PLACE
ISW-CB	INTEGRAL SIDEWALK/CURB
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6 INCH TO 18 INCH
SW-RW2	INTEGRAL SIDEWALK RETAINING WALL, 19 INCH TO 36 INCH
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MBA	ADJUST MONUMENT BOX OR VALVE BOX
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-R	DR STRUCTURE COVER, TYPE R
DSA	DR STRUCTURE COVER, ADJ

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
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01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

STADIUM SERVICE DR PROPOSED GRADING PLAN

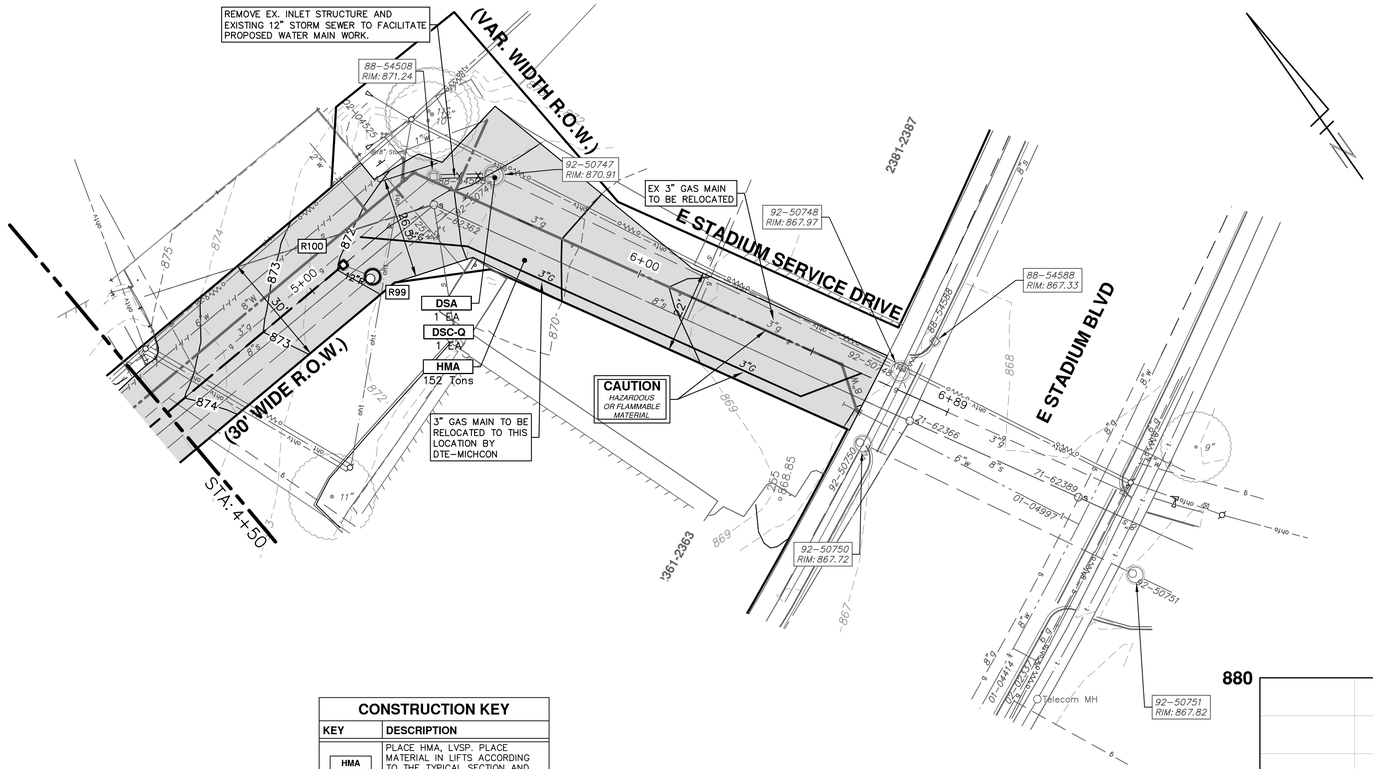
STA. 0+25 - STA. 4+50

SCALE PLAN: ######## PROFILE: 1" = 2'

DRAWING No. 2021011-23

SHEET No. 23 OF 37

R:\2021011 StadiumWash Area Util Impr\Plan Production\2021011PRd.dwg Dwg Created: 3-Mar-22 — _a2 standard bw.stb — Plot Date: 3-Mar-22



CONSTRUCTION KEY	
KEY	DESCRIPTION
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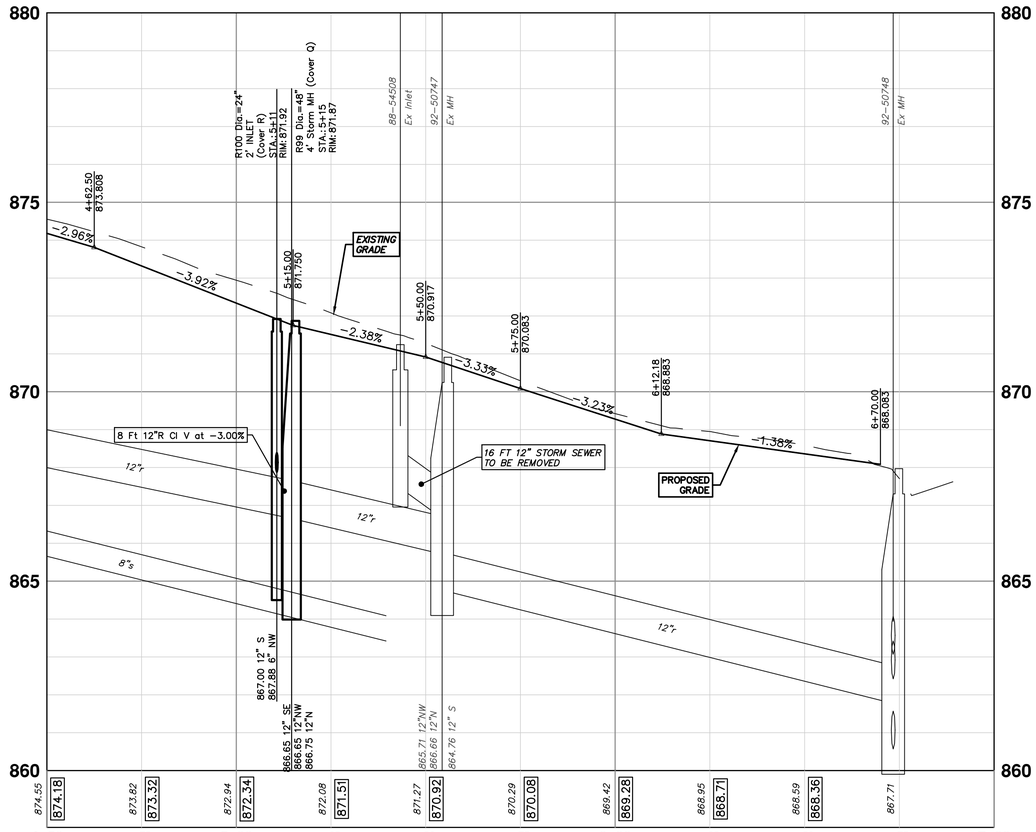
ABO	ADJUST BY OTHERS
MBA	ADJUST MONUMENT BOX OR VALVE BOX
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-R	DR STRUCTURE COVER, TYPE R
DSA	DR STRUCTURE COVER, ADJ

STORM SEWER STRUCTURE TABLE						
STRUCTURE	UTILITY STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/ CONSTRUCTION
92-50747	5+54	12" S 864.76 12" NW 865.71 12" N 866.66	870.91	6.15	60" Dia.	Ex MH
R99	5+15	12" SE 866.65 12" NW 866.65 12" N 866.75	871.87	7.22	48" Dia.	4' Storm MH (Cover Q)

STORM STRUCTURE TABLE					
STRUCTURE	TYPE	RIM	INVERTS	PIPE	SUMP
R100	2' INLET (Cover R)	871.92	12"S 867.00 6"NW 867.88	8 LF OF 12" @ 3.00% 68 LF OF 6" @ 3.64%	2'



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02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

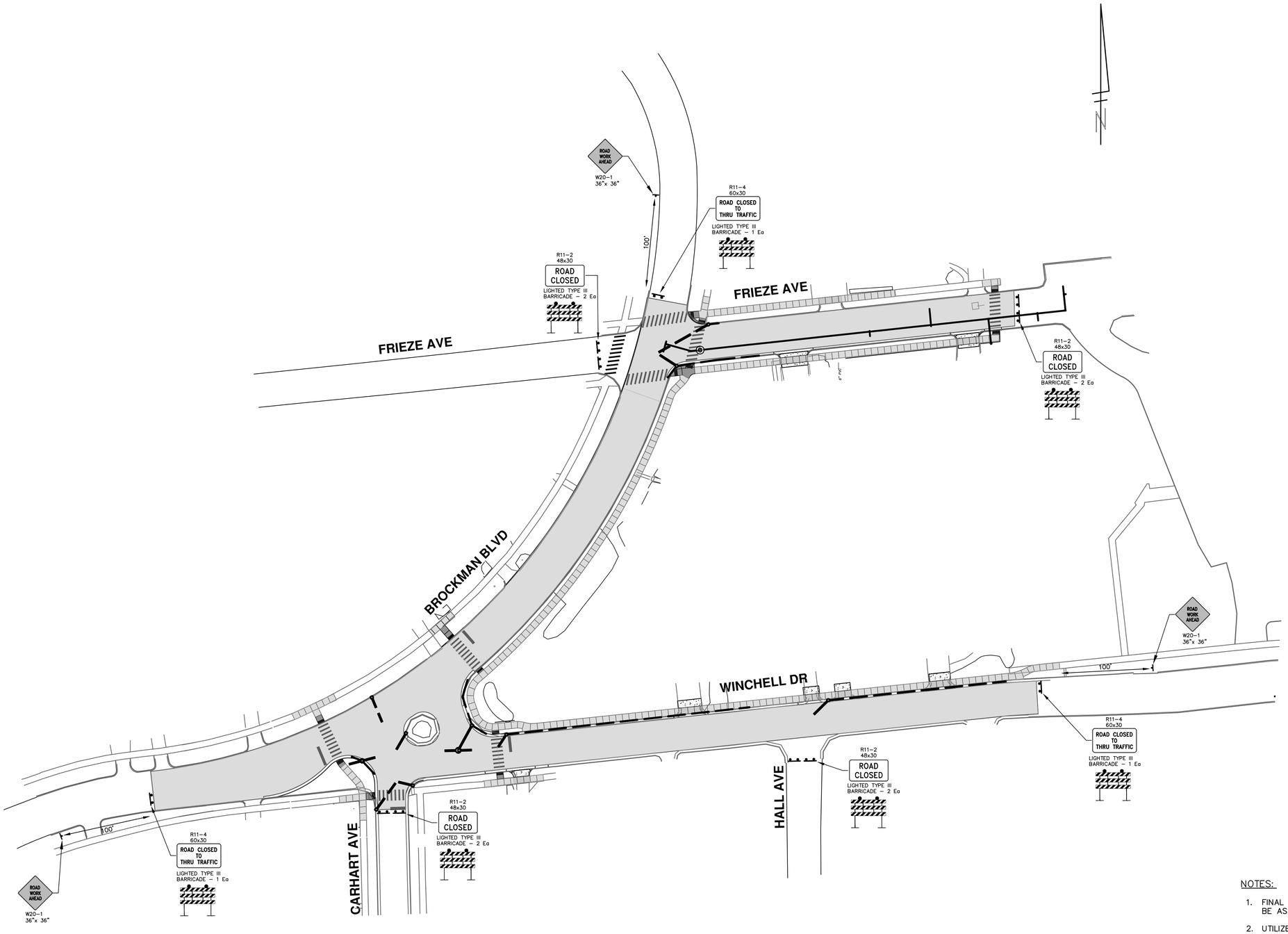
STADIUM SERVICE DR PROPOSED GRADING PLAN

STA. 4+50 - POE

SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-24

SHEET No. 24 OF 37



ADDITIONAL SIGNAGE FOR WATER MAIN TIE-IN AT STREET INTERSECTIONS

SIGN	NUMBER	QUANTITY
ROAD CLOSED	R11–2 48"x30"	3
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED – 7 EACH		

NOTES:

1. FINAL LIMITS OF PAVEMENT REMOVAL FOR UTILITY INSTALLATION WILL BE AS DIRECTED BY ENGINEER.
2. UTILIZE PLASTIC DRUMS AND PROTECTIVE FENCING WITHIN WORK ZONE TO DELINEATE OPEN TRENCHES AS DIRECTED BY ENGINEER.
3. MAINTAIN PEDESTRIAN ACCESS DURING CONSTRUCTION.
4. COVER CONFLICTING SIGNS AS NEEDED OR AS DIRECTED BY ENGINEER.
5. REMOVE CONFLICTING PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.
6. CONTRACTOR SHALL PLACE PORTABLE, CHANGEABLE MESSAGE SIGNS A MINIMUM OF ONE (1) WEEK PRIOR TO THE START OF CONSTRUCTION IN LOCATIONS INDICATED BY ENGINEER. MESSAGE TO BE PROVIDED BY THE ENGINEER.

811 Know what's **below.** **Call** before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3–3–22	CC,DF	FC
01	OUT FOR BID	2–10–22	CC,DF	FC
00	FINAL REVIEW	1–12–22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

BROCKMAN BLVD WINCHELL DR FRIEZE AVE

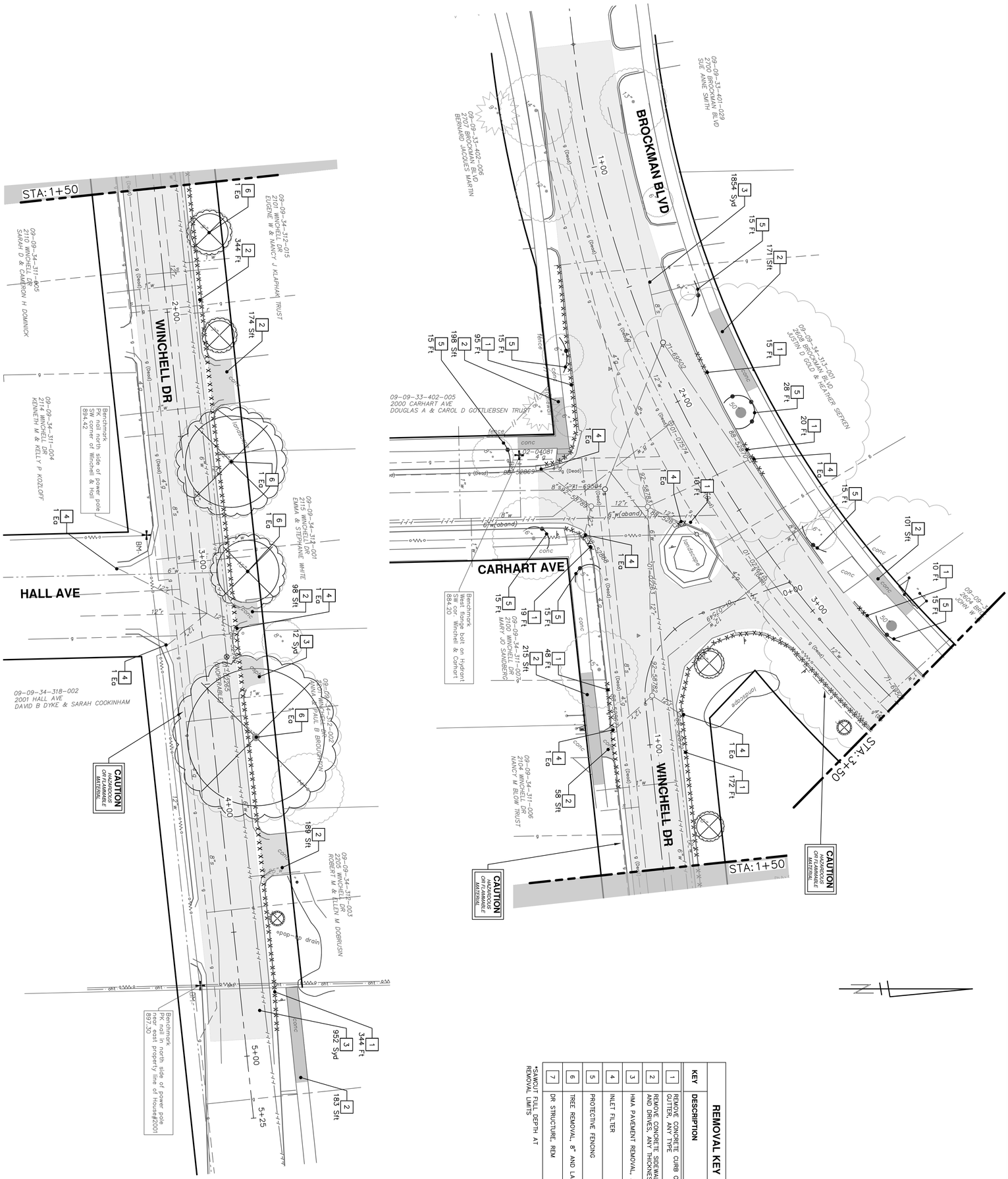
TRAFFIC CONTROL

SCALE **PLAN:** 1" = 150'

DRAWING No. **2021011-25**

SHEET No. **25 OF 37**

R:\2021011 Frieze\Plan Production\20210111Mtrf.dwg Dwg Created: 1-Feb-22 – _a2 standard bw.stb – Plot Date: 3-Mar-22



SHEET No. 26 OF 37

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE : 1" = 20'

DRAWING No. 2021011-26

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

WINCHELL BROCKMAN FRIEZE REMOVALS

BROCKMAN BLVD AND WINCHELL DR

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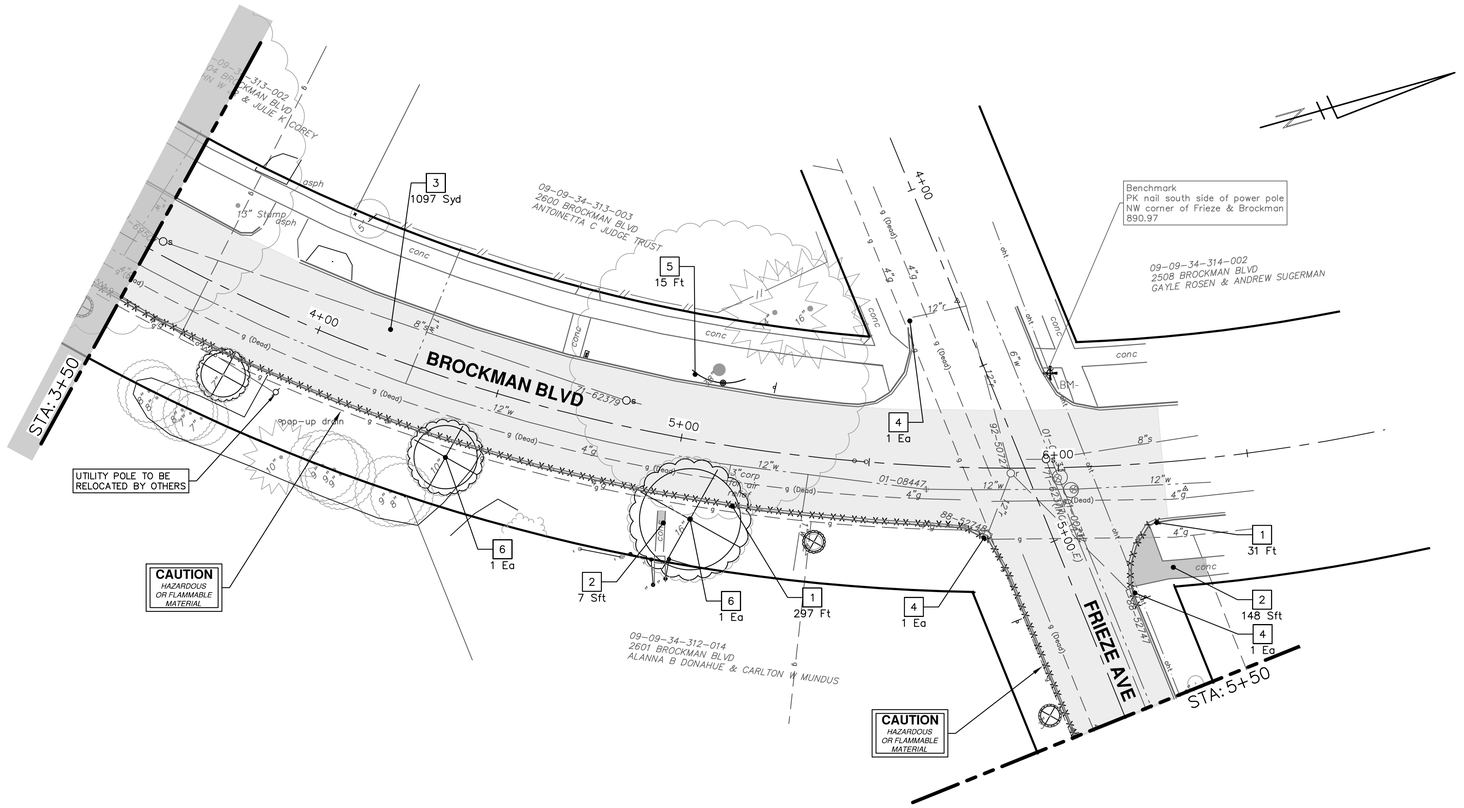
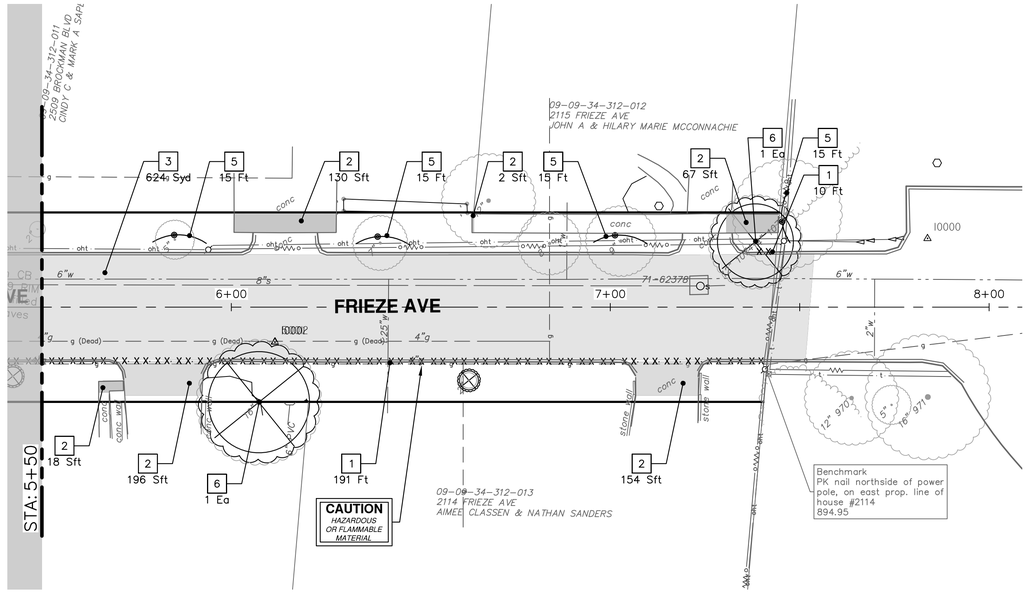
REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3-3-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
00	FINAL REVIEW	1-12-22	CC,DF	FC





REMOVAL KEY

KEY	DESCRIPTION
1	REMOVE CONCRETE CURB OR CURB & GUTTER, ANY TYPE
2	REMOVE CONCRETE SIDEWALK, RAMP AND DRIVES, ANY THICKNESS
3	HMA PAVEMENT REMOVAL, ANY DEPTH
4	INLET FILTER
5	PROTECTIVE FENCING
6	TREE REMOVAL, 8" AND LARGER
7	DR STRUCTURE, REM

*SAWCUT FULL DEPTH AT REMOVAL LIMITS

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3-3-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
00	FINAL REVIEW	1-12-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

WINCHELL BROCKMAN FRIEZE REMOVALS

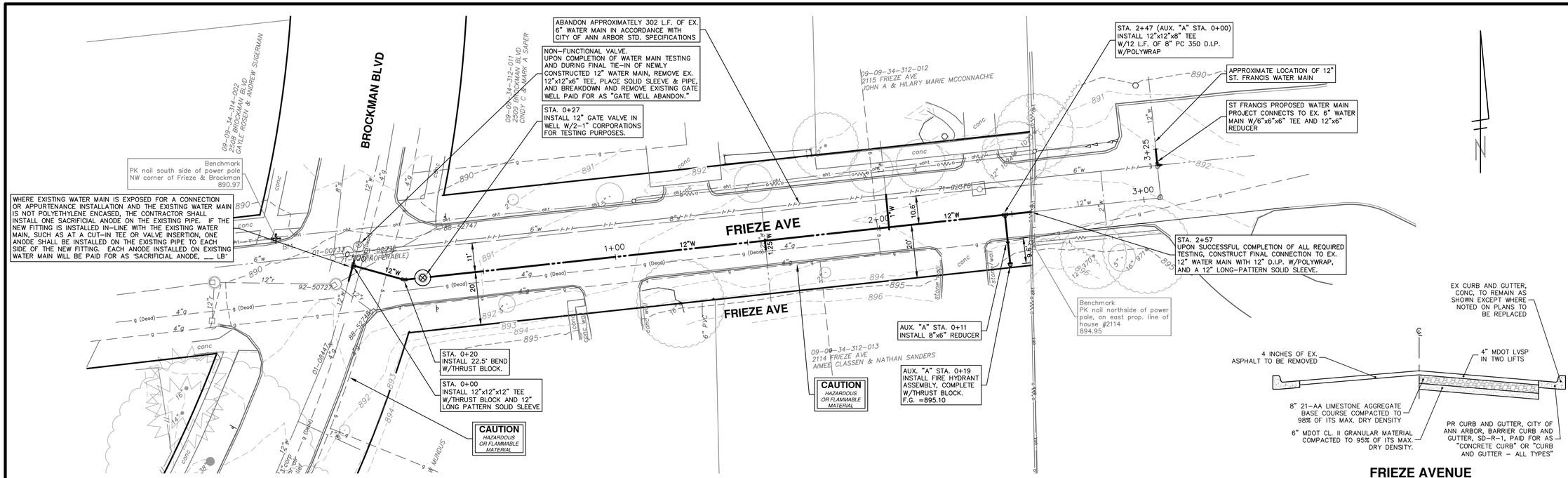
BROCKMAN BLVD AND FRIEZE AVE

SCALE : 1" = 20'

DRAWING No. 2021011-27

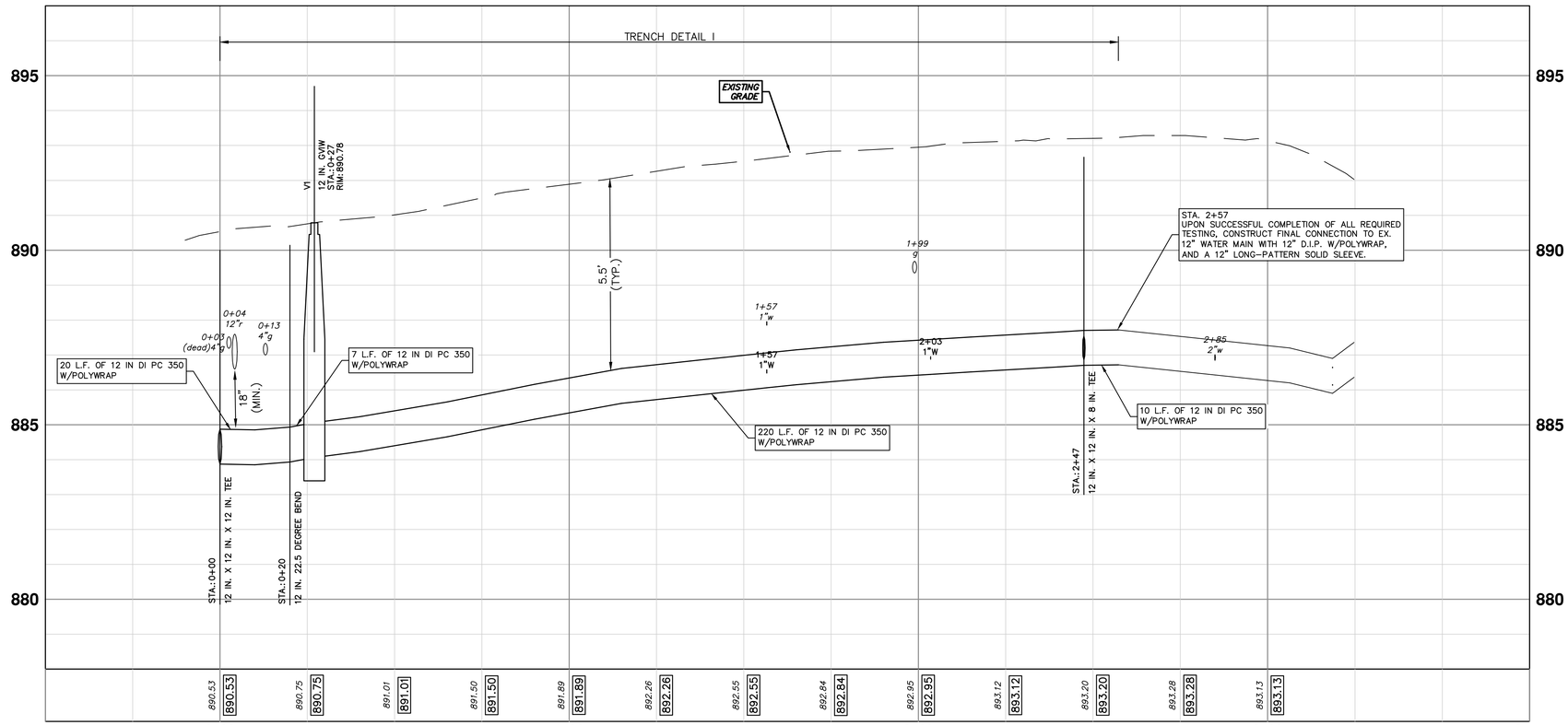
SHEET No. 27 OF 37

R:\2021011 Frieze\Plan Production\2021011Rem.dwg Dwg Created: 1-Mar-22 — _a2 standard bw.stb — Plot Date: 3-Mar-22



FRIEZE AVENUE PAVEMENT SECTION

N.T.S.



R:\2021011 Frieze\Plan Production\2021011Watr.dwg Dwg Created: 2-Mar-22 — _a2 standard bw.stb — Plot Date: 3-Mar-22

811 Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1-12-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

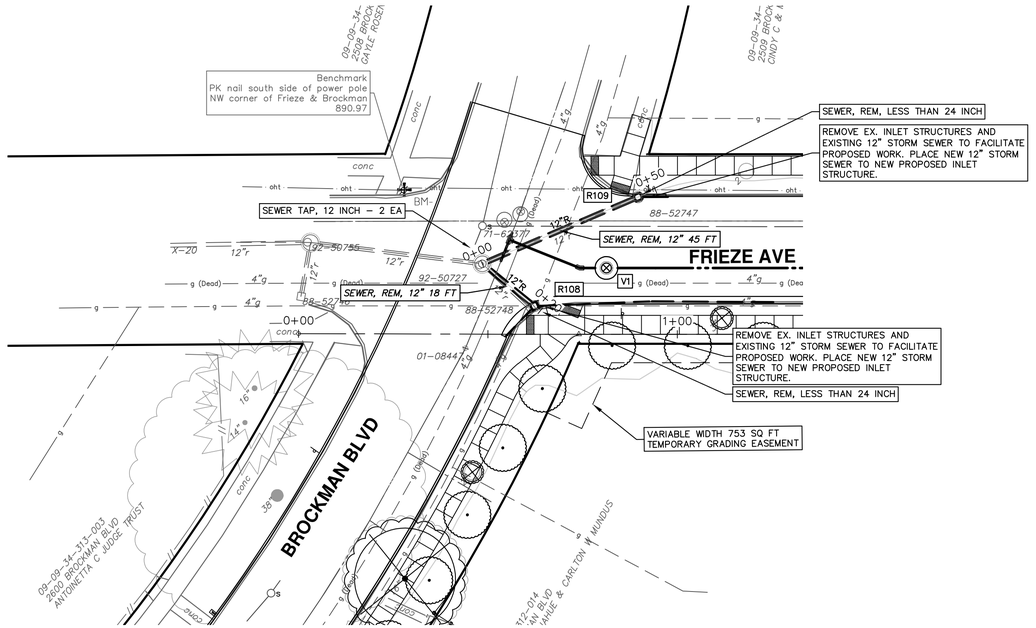
FRIEZE AVE WATER MAIN PLAN AND PROFILE

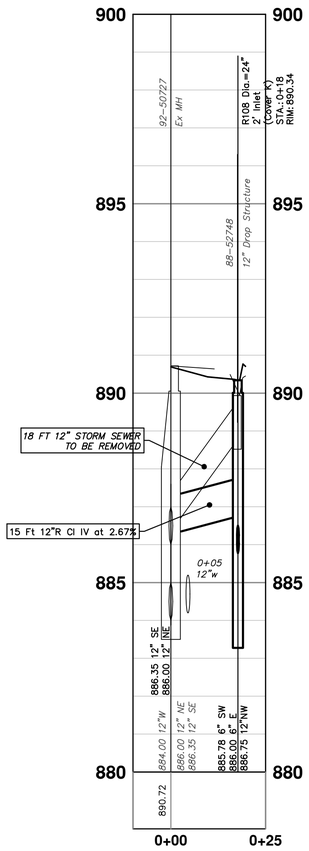
STA. 0+00 - STA. 2+84

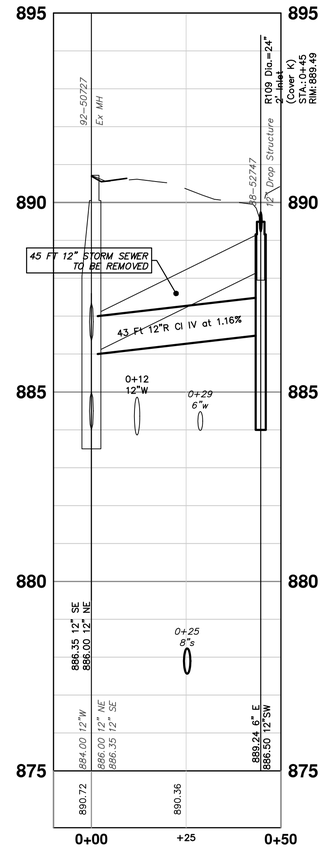
SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-28

SHEET No. 28 OF 37







EXISTING STORM SEWER STRUCTURE REMOVAL TABLE

STRUCTURE	DEPTH (Feet)	REMOVE
88–52747	1.29	12" Drop Structure
88–52748	1.17	12" Drop Structure

STORM SEWER STRUCTURE TABLE

STRUCTURE	UTILITY STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/ CONSTRUCTION
92–50727	0+00	12" NE 886.00 12" SE 886.35 12" W 884.00	890.72	6.72	48" Dia.	Ex MH
R108	0+18	6" SW 885.78 6" E 886.00 12" NW 886.75	890.34	6.56	24" Dia.	2' Inlet (Cover K)
R109	0+45	6" E 889.24 12" SW 886.50	889.49	4.99	24" Dia.	2' Inlet (Cover K)

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1–12–22	CC.DF	FC
01	OUT FOR BID	2–10–22	CC.DF	FC
02	ADDENDUM #1	3–3–22	CC.DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

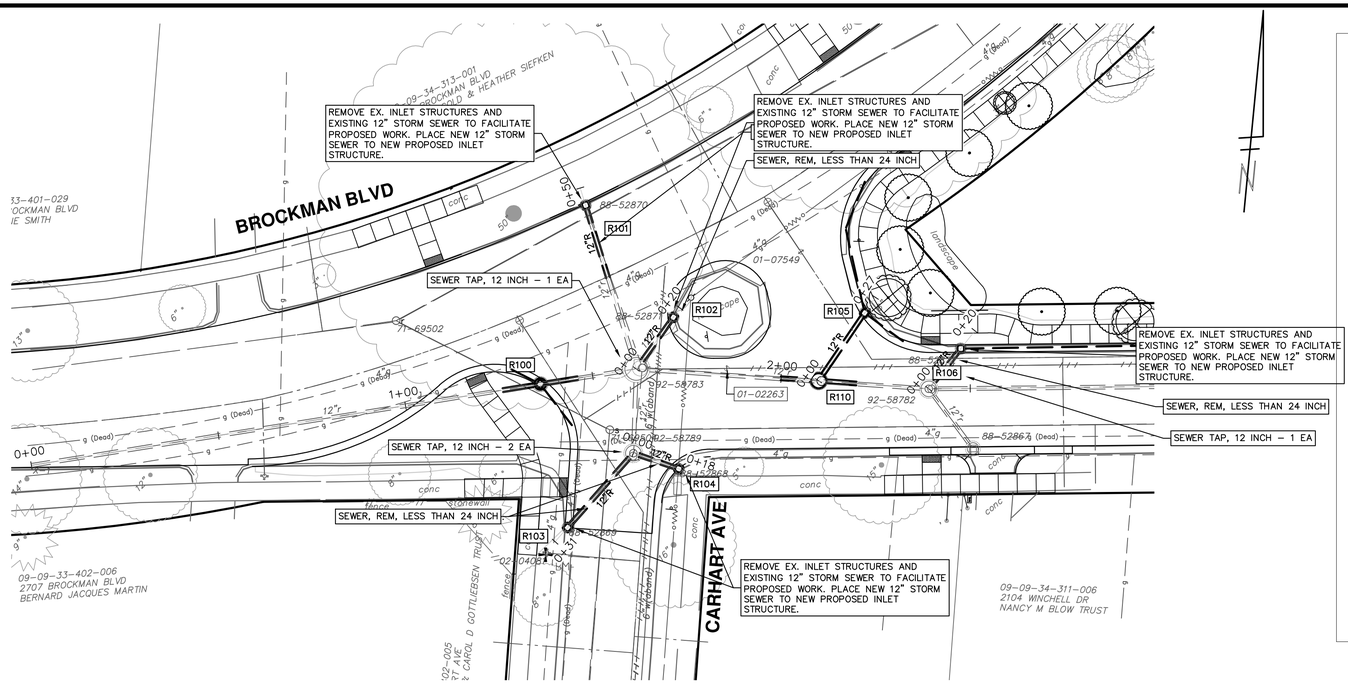
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS
WINCHELL BROCKMAN FRIEZE STORM SEWER
FRIEZE AVE

SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-29

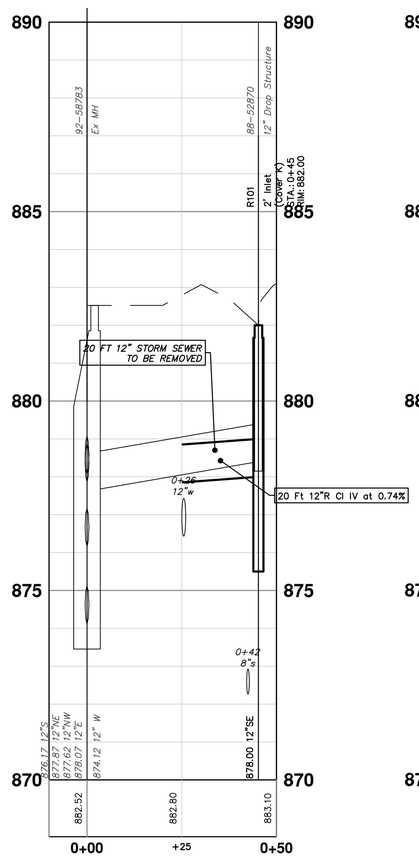
SHEET No. 29 OF 37

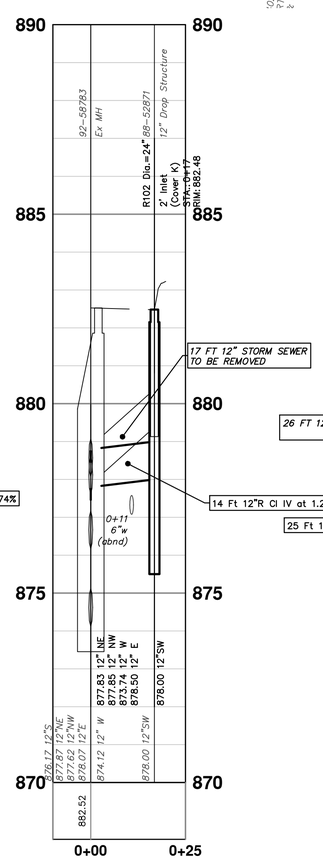
R:\2021011 Frieze\Plan Production\20210115trm.dwg Dwg Created: 3-Feb-22 — _a2 standard bw.stb — Plot Date: 3-Mar-22

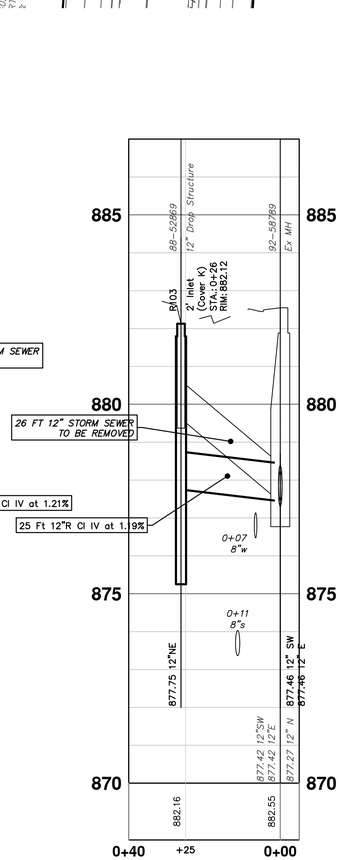


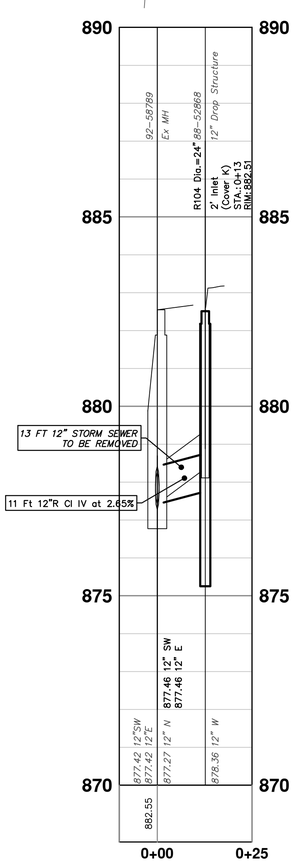
STORM SEWER STRUCTURE TABLE

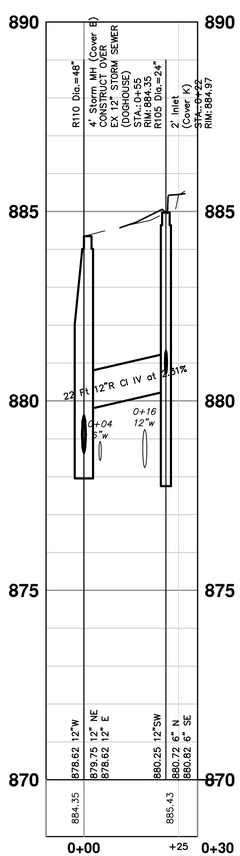
STRUCTURE	UTILITY STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION / CONSTRUCTION
R100	1+36	12" E 873.50 6" SE 877.81 6" W 877.66 12" W 873.50	881.79	10.29	36" Dia.	3' Inlet Junction (Cover K) 2' Inlet (Cover K) CONSTRUCT OVER EX 12" STORM SEWER (DOGHOUSE)
R101	0+45	12" SE 878.00	882.00	6.00	24" Dia.	2' Inlet (Cover K)
R102	0+17	12" SW 878.00	882.48	6.48	24" Dia.	2' Inlet (Cover K)
R103	0+26	12" NE 877.75	882.12	6.37	24" Dia.	2' Inlet (Cover K)
R104	0+13	12" W 877.75	882.51	6.76	24" Dia.	2' Inlet (Cover K)
R105	0+22	6" N 880.72 6" SE 880.82 12" SW 880.25	884.97	6.72	24" Dia.	2' Inlet (Cover K)
R106	0+14	6" E 885.23 12" SW 880.83	885.48	6.65	24" Dia.	2' Inlet (Cover K)
R110	0+55	12" NE 879.75 12" E 878.62 12" W 878.62	884.35	5.73	48" Dia.	4' Storm MH (Cover B) CONSTRUCT OVER EX 12" STORM SEWER (DOGHOUSE)

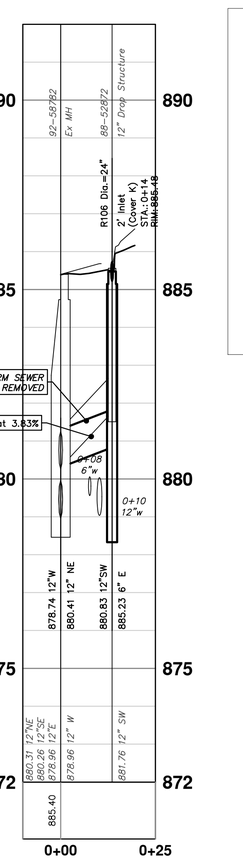












EXISTING STORM SEWER STRUCTURE REMOVAL TABLE

STRUCTURE	DEPTH (Feet)	REMOVE
88–52870	3.60	12" Drop Structure
88–52869	2.50	12" Drop Structure
88–52871	3.10	12" Drop Structure
88–52868	4.15	12" Drop Structure
88–52872	3.80	12" Drop Structure

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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1–12–22	CC.DF	FC
01	OUT FOR BID	2–10–22	CC.DF	FC
02	ADDENDUM #1	3–3–22	CC.DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

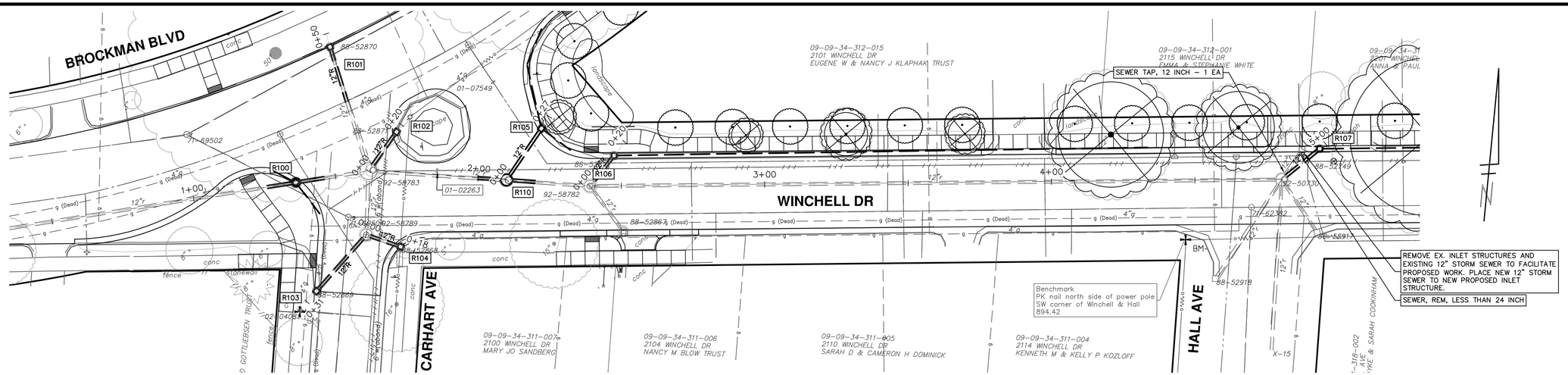
STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS
WINCHELL BROCKMAN FRIEZE STORM SEWER
BROCKMAN BLVD & WINCHELL DR

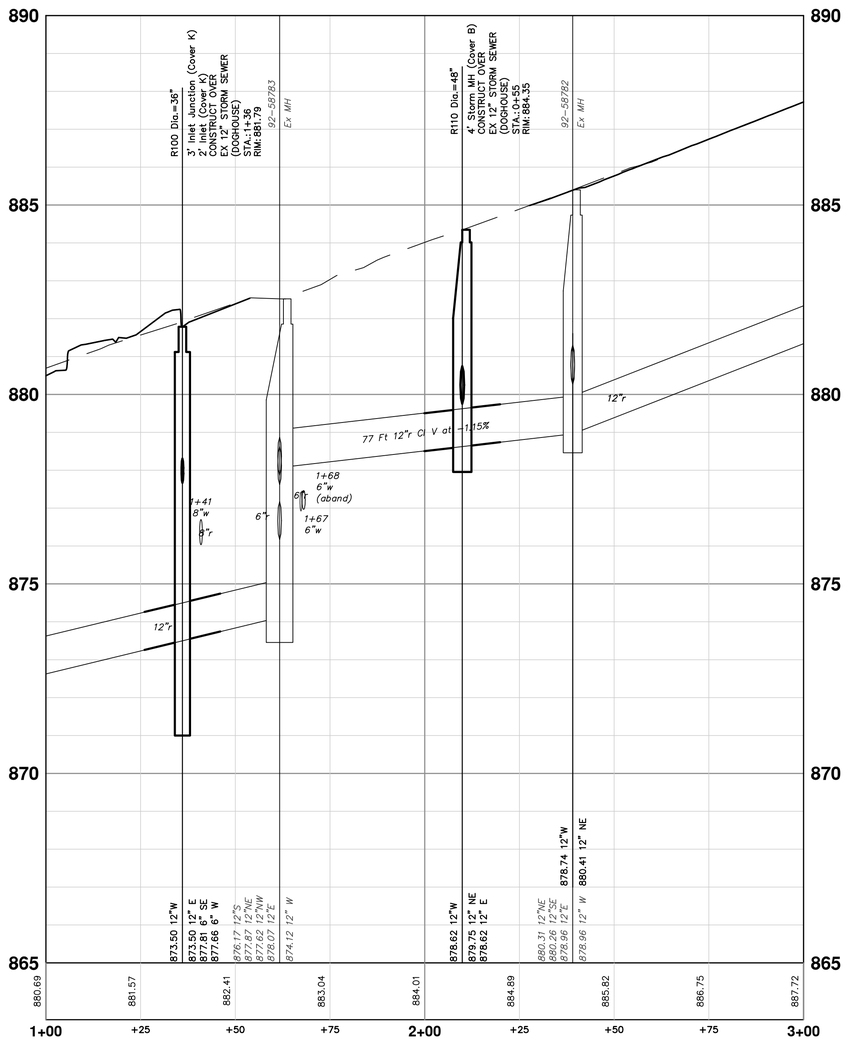
SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

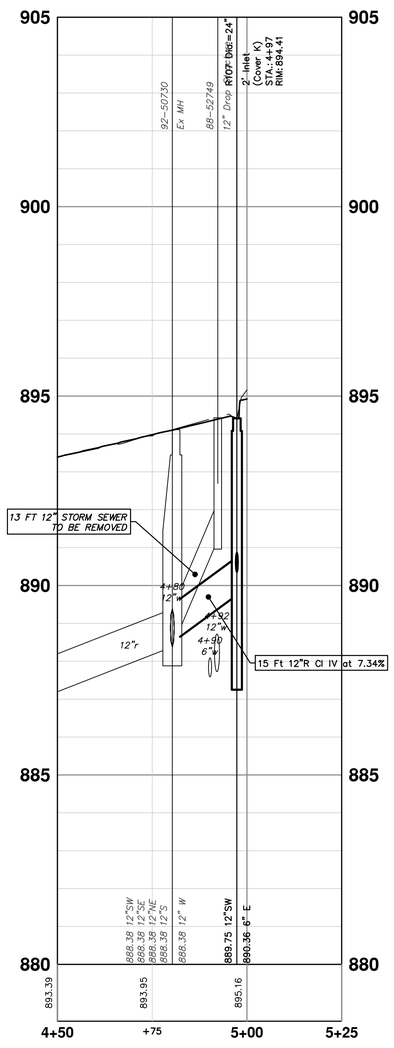
DRAWING No. 2021011-30

SHEET No. 30 OF 37

R:\2021011 Frieze\Plan Production\20210115trm.dwg Dwg Created: 3-Feb-22 — _a2 standard bw.stb — Plot Date: 3-Mar-22







EXISTING STORM SEWER STRUCTURE REMOVAL TABLE

STRUCTURE	DEPTH (Feet)	REMOVE
88-52749	3.22	12" Drop Structure

STORM SEWER STRUCTURE TABLE

STRUCTURE	UTILITY STATION	INVERT ELEVATION, SIZE & DIRECTION	TOP OF CASTING ELEVATION	DEPTH (Feet)	SIZE	APPLICATION/ CONSTRUCTION
R107	4+97	6" E 890.36 12" SW 889.75	894.41	6.66	24" Dia.	2' Inlet (Cover K)

811 Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	2-10-22	CC,DF	FC
01	OUT FOR BID	2-10-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

WINCHELL BROCKMAN FRIEZE STORM SEWER

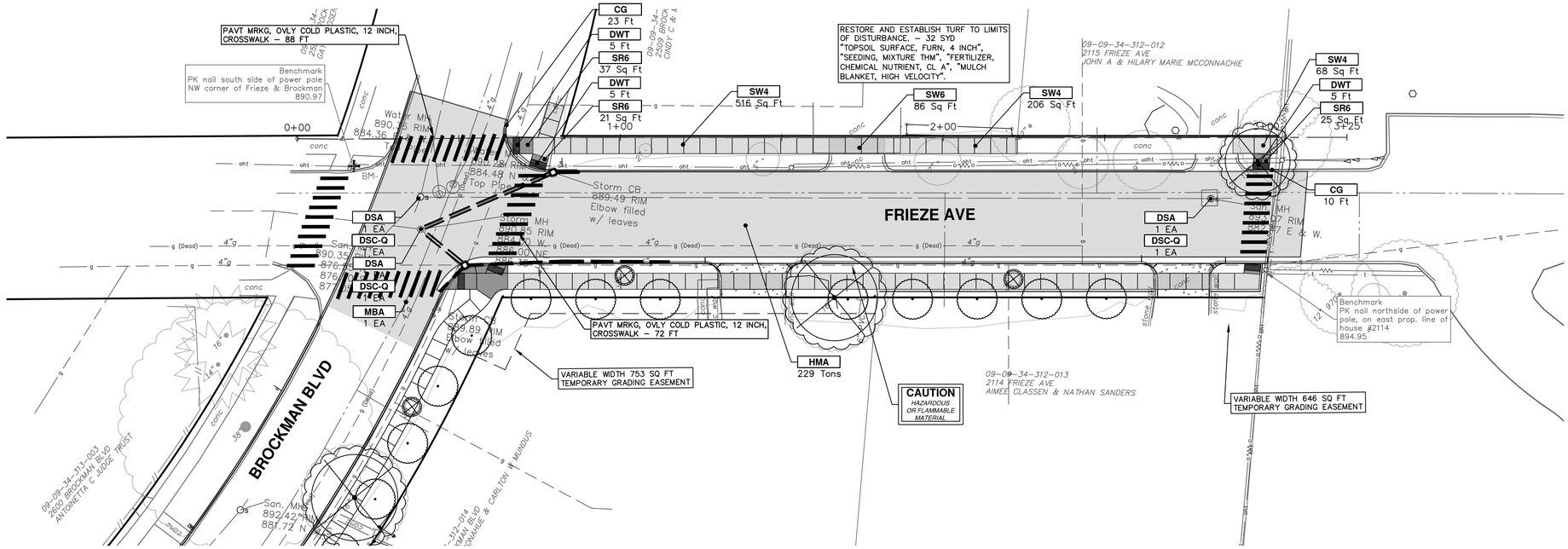
WINCHELL DR

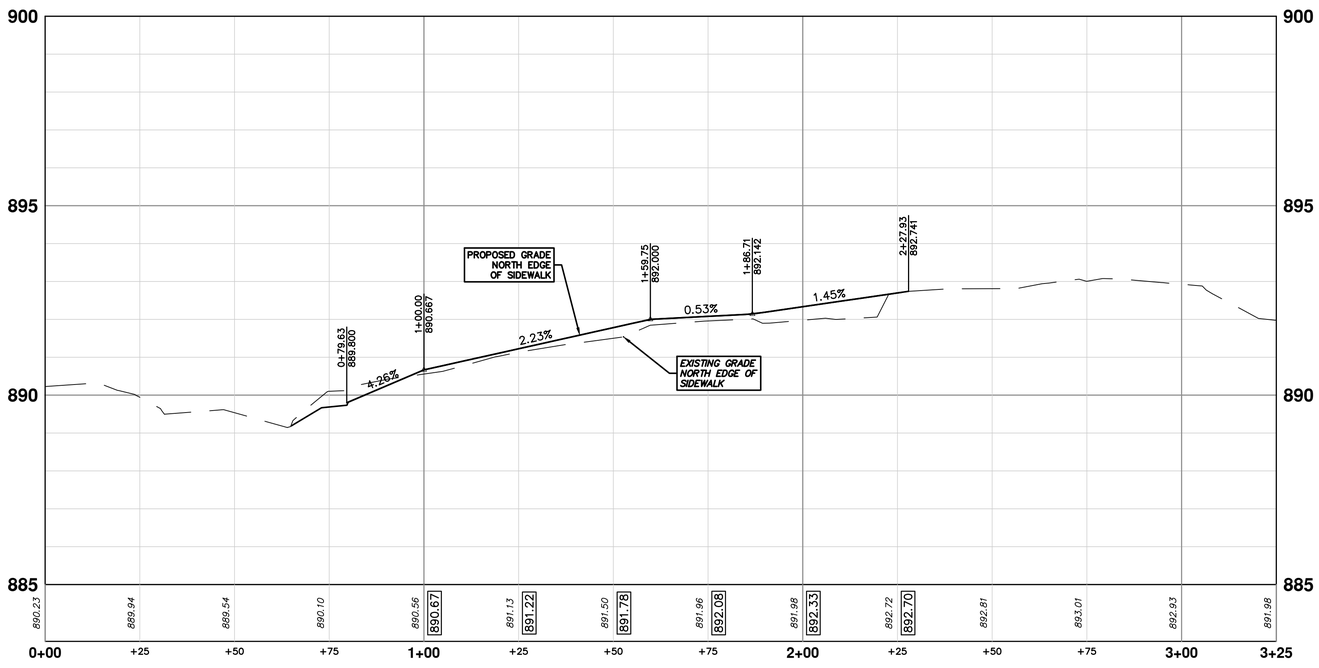
SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-31

SHEET No. 31 OF 37

R:\2021011 Frieze\Plan Production\2021011Strm.dwg Dwg Created: 3-Feb-22 — _a2 standard bw.stb — Plot Date: 3-Mar-22





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	PLACE HMA APPROACH
HP	HAND PATCHING
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P–NC
DC-6	PLACE CONC, DRIVE APPROACH, NON–REINFORCED, P–NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED
DWS	DETECTABLE WARNING, CAST IN PLACE
ISW-CB	INTEGRAL SIDEWALK/CURB
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6 INCH TO 18 INCH
SW-RW2	INTEGRAL SIDEWALK RETAINING WALL, 19 INCH TO 36 INCH
ABO	ADJUST BY OTHERS
MBA	ADJUST MONUMENT BOX OR VALVE BOX
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-R	DR STRUCTURE COVER, TYPE R
DSA	DR STRUCTURE COVER, ADJ

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3–3–22	CC,DF	FC
01	OUT FOR BID	2–10–22	CC,DF	FC
00	FINAL REVIEW	1–12–22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

FRIEZE SIDEWALK AND CURB

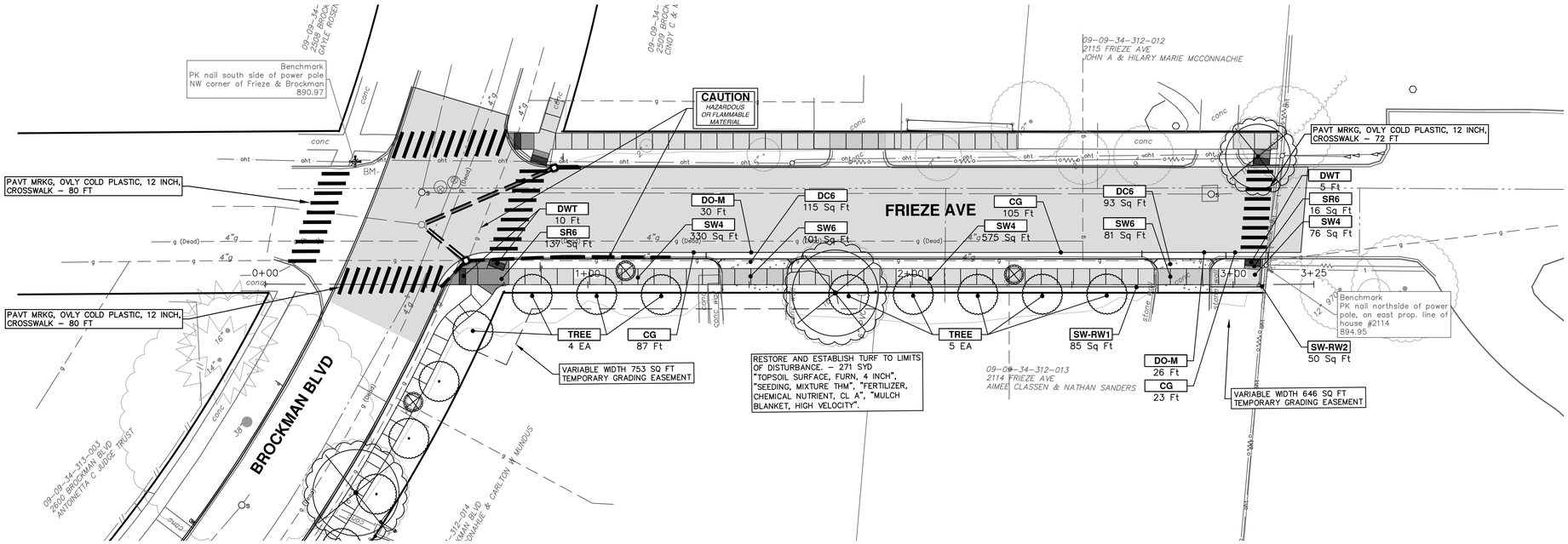
FRIEZE AVE SIDEWALK LEFT

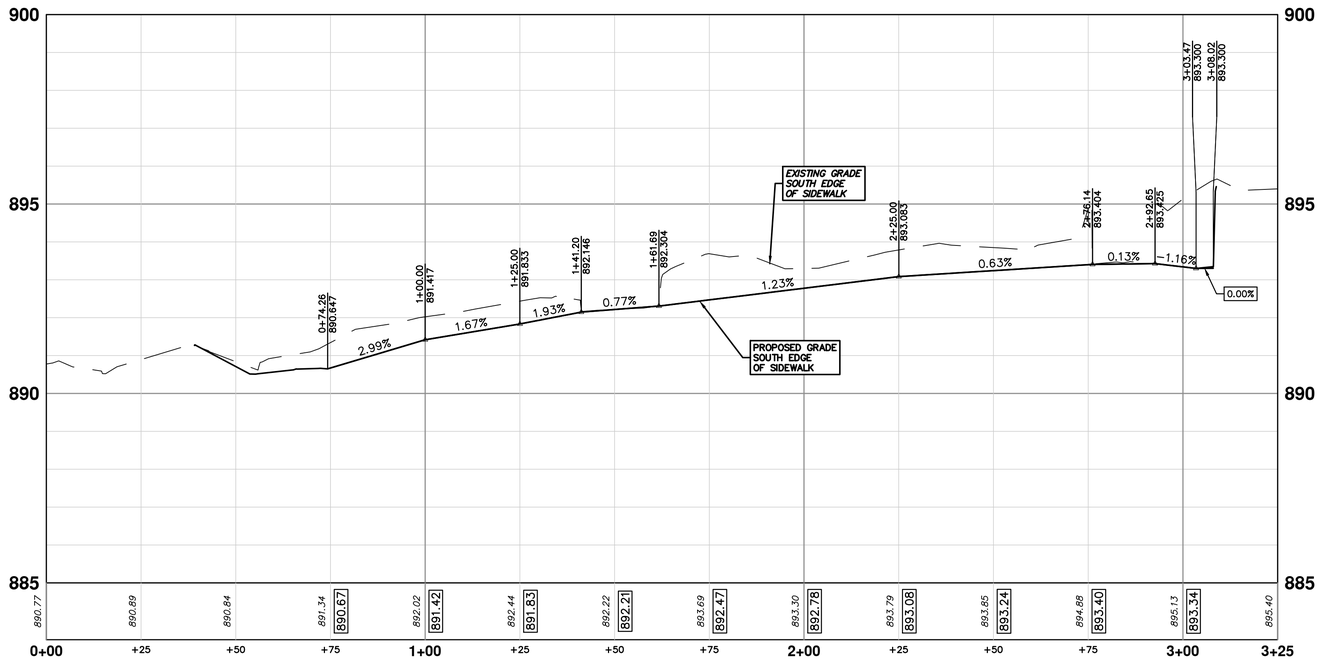
SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-32

SHEET No. 32 OF 37

R:\2021011 Frieze\Plan Production\2021011Prsw.dwg Dwg Created: 3-Mar-22 — _a2 standard bw.stb — Plot Date: 3-Mar-22





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	PLACE HMA APPROACH
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CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P–NC
DC-6	PLACE CONC, DRIVE APPROACH, NON–REINFORCED, P–NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED
DWS	DETECTABLE WARNING, CAST IN PLACE
ISW-CB	INTEGRAL SIDEWALK/CURB
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6 INCH TO 18 INCH
SW-RW2	INTEGRAL SIDEWALK RETAINING WALL, 19 INCH TO 36 INCH
ABO	ADJUST BY OTHERS
MBA	ADJUST MONUMENT BOX OR VALVE BOX
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-R	DR STRUCTURE COVER, TYPE R
DSA	DR STRUCTURE COVER, ADJ

TREES SHOWN SHALL BE PLANTED AS A MIX OF SPECIES WITH THE MAJORITY BEING LARGE SHADE TREES INTERMIXED WITH MEDIUM AND SMALL TREES. LARGE SHADE TREES TO BE 2.5 INCH DIAMETER AND THE SMALLER TREES SHALL BE PLANTED AS 2.5 INCH DIAMETER "TREE FORM".

TOTAL TREES SHOWN = 38
LARGE SHADE TREES (L) = 26

LATIN NAME (MATURE SIZE) – COMMON NAME:
- Gleditsia triacanthos inermis 'Skyline' (L) – Honeylocust
- Gymnocladus dioicus (L) – Kentucky coffeetree
- Liquidambar styraciflua (M) – Sweetgum
- Liriodendron tulipifera (L) – Tuliptree
- Nyssa sylvatica (M) – Blackgum
- Ostrya virginiana (M) – Ironwood
- Quercus rubra (L) – Red oak
- Quercus macrocarpa (L) – Bur oak
- Amelanchier canadensis, tree form (S) – Serviceberry
- Celtis occidentalis (L) – Hackberry
- Cercis canadensis (S) – Redbud
- Cornus florida (S) – flowering dogwood

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NO	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3–3–22	CC,DF	FC
01	OUT FOR BID	2–10–22	CC,DF	FC
00	FINAL REVIEW	1–12–22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS
FRIEZE SIDEWALK AND CURB

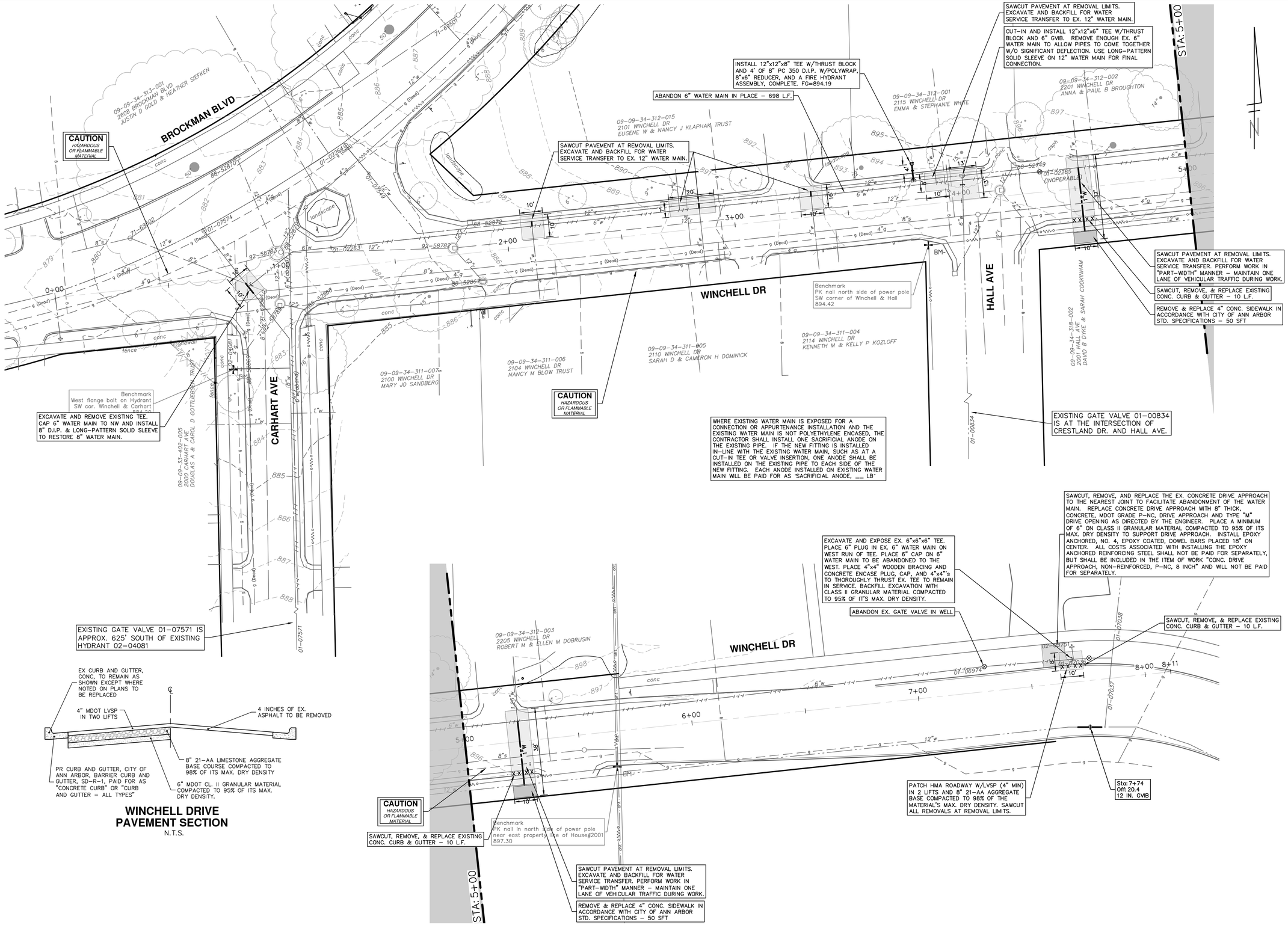
FRIEZE AVE SIDEWALK RIGHT

SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-33

SHEET No. 33 OF 37

R:\2021011 Frieze\Plan Production\2021011Prsw.dwg Dwg Created: 3–Mar–22 – _a2 standard bw.stb – Plot Date: 3–Mar–22



WINCHELL DRIVE PAVEMENT SECTION
N.T.S.

Know what's below. Call before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1–12–22	CC,DF	FC
01	OUT FOR BID	2–10–22	CC,DF	FC
02	ADDENDUM #1	3–3–22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

WINCHELL DR WATER MAIN ABANDONMENT

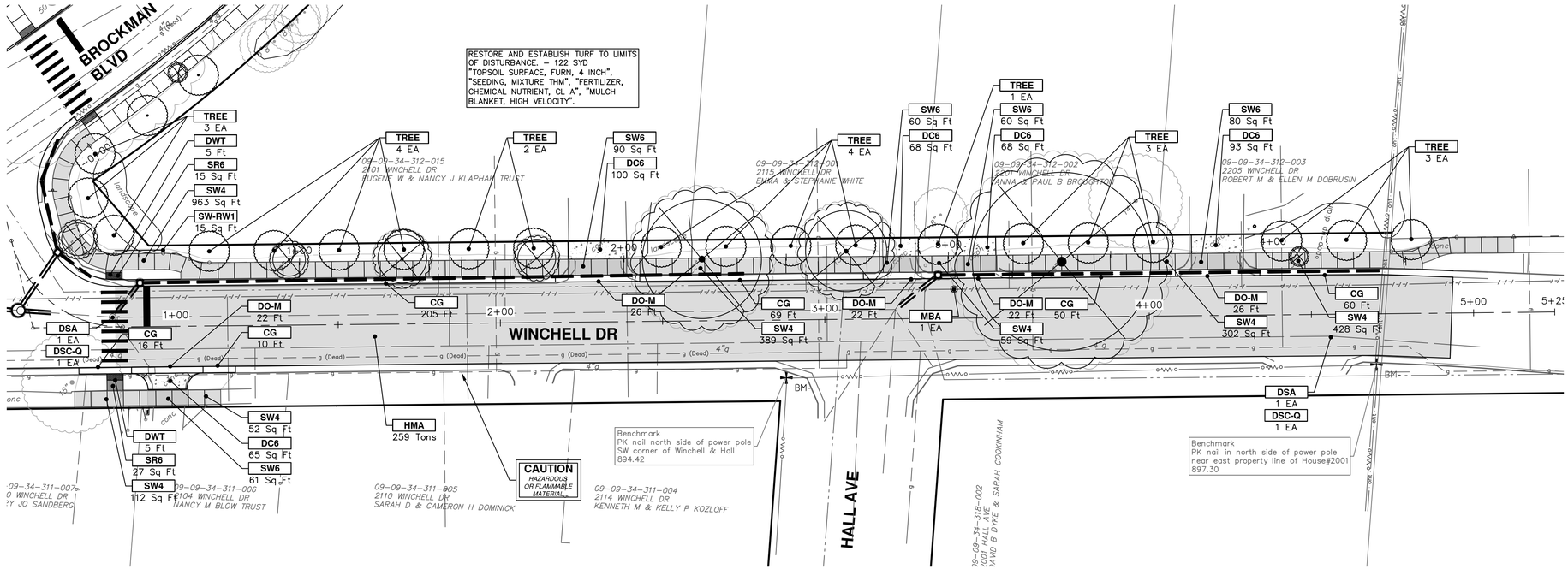
STA. 0+00 - STA. 8+00

SCALE : 1" = 20'

DRAWING No. 2021011-34

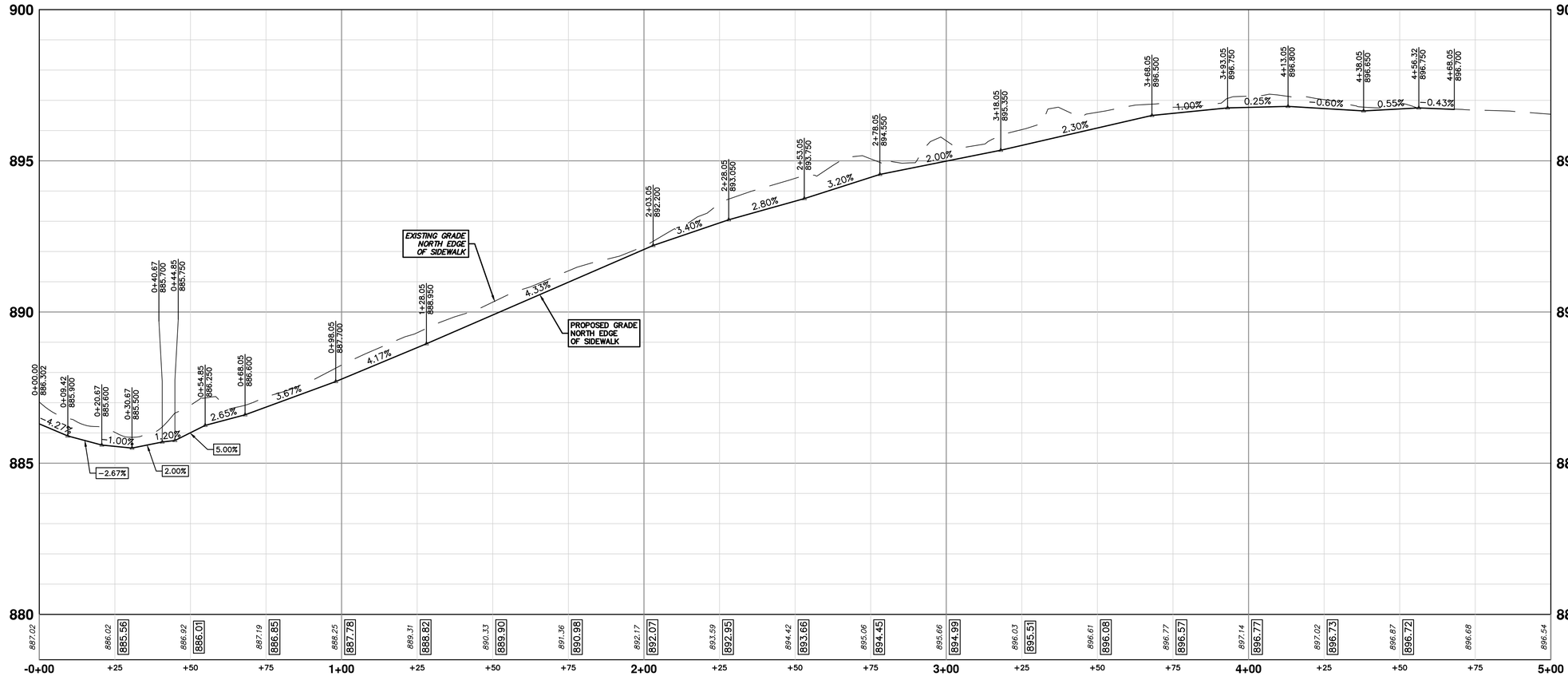
SHEET No. 34 OF 37

R:\2021011 Frieze\Plan Production\2021011Watr.dwg Dwg Created: 2-Mar-22 – _02 standard bw.stb – Plot Date: 3-Mar-22



CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	PLACE HMA APPROACH
HP	HAND PATCHING
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P–NC
DC-6	PLACE CONC, DRIVE APPROACH, NON–REINFORCED, P–NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED
DWS	DETECTABLE WARNING, CAST IN PLACE
ISW-CB	INTEGRAL SIDEWALK/CURB
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6 INCH TO 18 INCH
SW-RW2	INTEGRAL SIDEWALK RETAINING WALL, 19 INCH TO 36 INCH
ABO	ADJUST BY OTHERS
MBA	ADJUST MONUMENT BOX OR VALVE BOX
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-R	DR STRUCTURE COVER, TYPE R
DSA	DR STRUCTURE COVER, ADJ



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REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	2-10-22	CC,DF	FC
01	OUT FOR BID	1-12-22	CC,DF	FC
02	ADDENDUM #1	3-3-22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

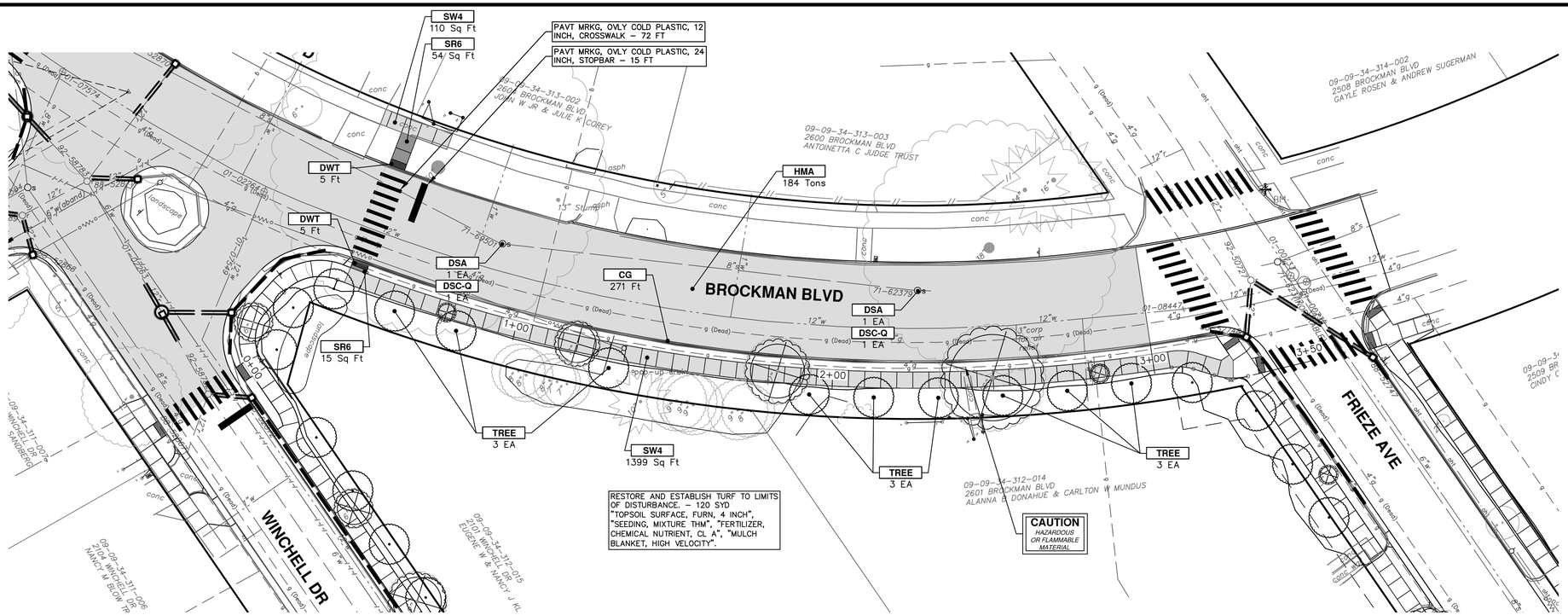
WINCHELL SIDEWALK AND CURB

WINCHELL DR SIDEWALK

SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

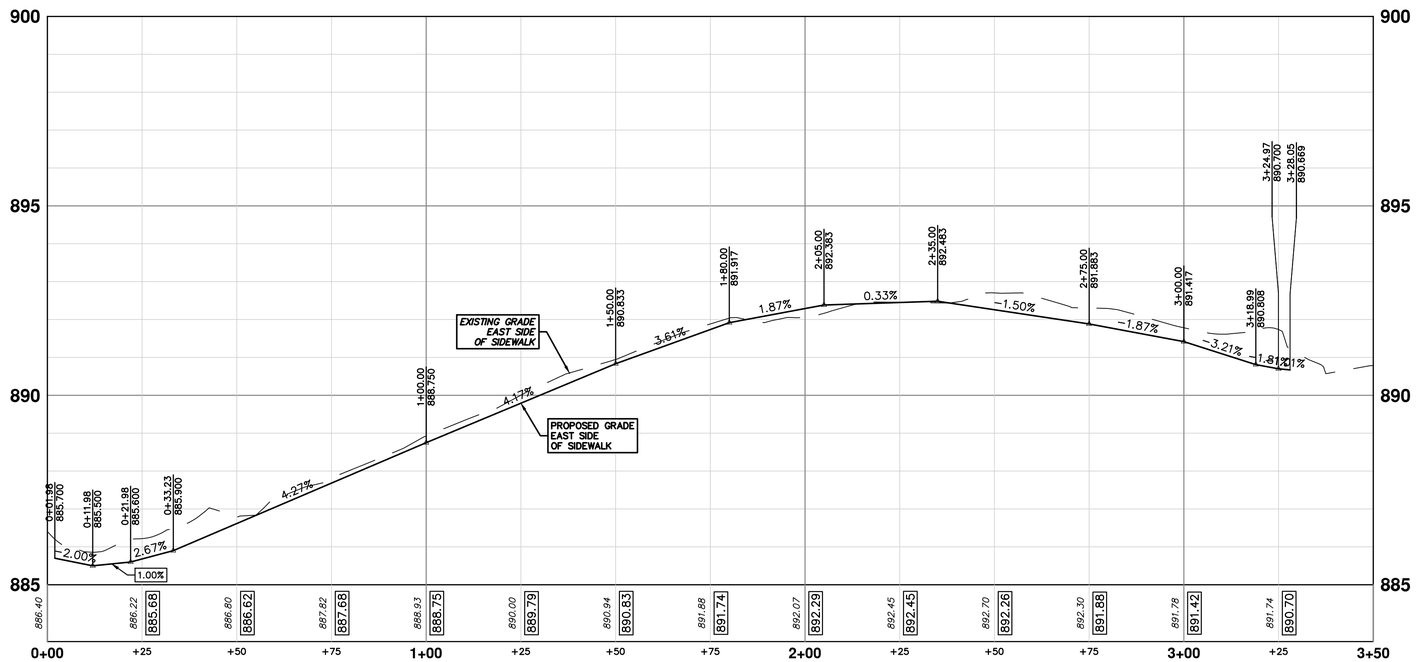
DRAWING No. 2021011-35

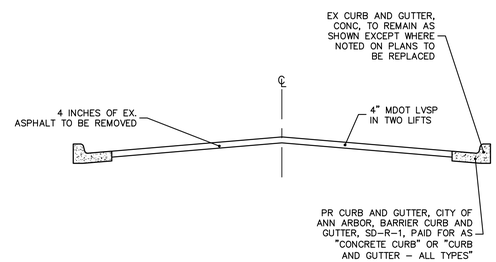
SHEET No. 35 OF 37



CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	PLACE HMA APPROACH
HP	HAND PATCHING
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P–NC
DC-6	PLACE CONC, DRIVE APPROACH, NON–REINFORCED, P–NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED
DWS	DETECTABLE WARNING, CAST IN PLACE
ISW-CB	INTEGRAL SIDEWALK/CURB
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6 INCH TO 18 INCH
SW-RW2	INTEGRAL SIDEWALK RETAINING WALL, 19 INCH TO 36 INCH
ABO	ADJUST BY OTHERS
MBA	ADJUST MONUMENT BOX OR VALVE BOX
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-R	DR STRUCTURE COVER, TYPE R
DSA	DR STRUCTURE COVER, ADJ





BROCKMAN BOULEVARD PAVEMENT SECTION

Know what's **below.** **Call** before you dig.

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
00	FINAL REVIEW	1–12–22	CC,DF	FC
01	OUT FOR BID	2–10–22	CC,DF	FC
02	ADDENDUM #1	3–3–22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

BROCKMAN SIDEWALK & CURB

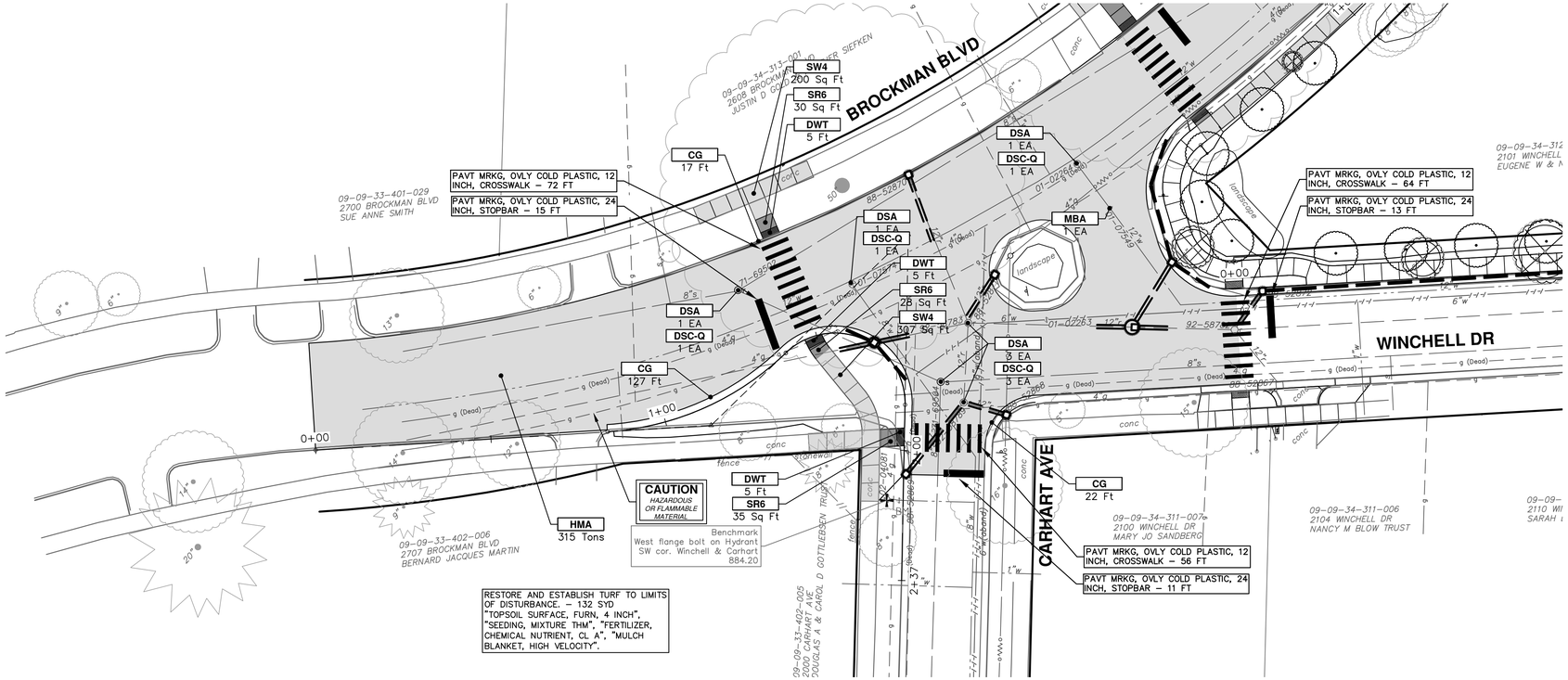
BROCKMAN BLVD SIDEWALK

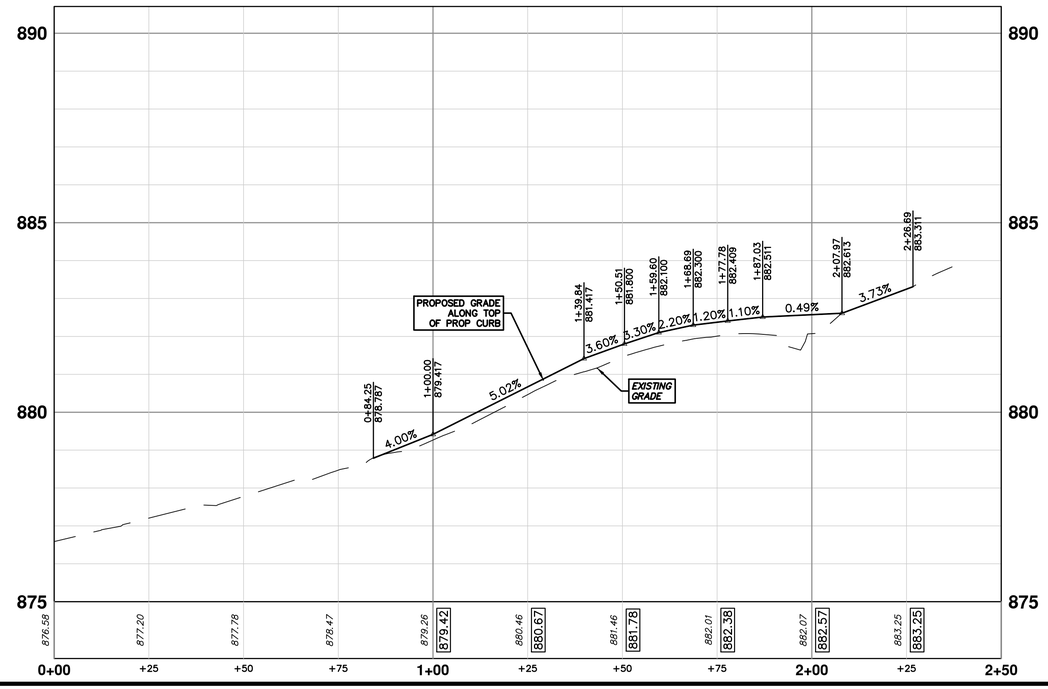
SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-36

SHEET No. 36 OF 37

R:\2021011 Frieze\Plan Production\2021011Prsw2.dwg Dwg Created: 3–Mar–22 – _a2 standard bw.stb – Plot Date: 3–Mar–22





CONSTRUCTION KEY

KEY	DESCRIPTION
HMA	PLACE HMA, LVSP. PLACE MATERIAL IN LIFTS ACCORDING TO THE TYPICAL SECTION AND AS DIRECTED BY THE ENGINEER.
HMA APP	PLACE HMA APPROACH
HP	HAND PATCHING
CG	PLACE CURB AND GUTTER, CONC, F4, SPECIAL
DO-M	PLACE DRIVEWAY OPENING, CONC, DETAIL M, P–NC
DC-6	PLACE CONC, DRIVE APPROACH, NON–REINFORCED, P–NC, 6 INCH. PLACE AND COMPACT 6 INCH SUBBASE, CIP, CLASS II GRANULAR MATERIAL, MODIFIED.
SW-4	PLACE SIDEWALK, CONC, 4 INCH, MODIFIED
SWR-6	PLACE SIDEWALK, SIDEWALK RAMP, CONC, 6 INCH, MODIFIED
DWS	DETECTABLE WARNING, CAST IN PLACE
ISW-CB	INTEGRAL SIDEWALK/CURB
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6 INCH TO 18 INCH
SW-RW2	INTEGRAL SIDEWALK RETAINING WALL, 19 INCH TO 36 INCH
ABO	ADJUST BY OTHERS
MBA	ADJUST MONUMENT BOX OR VALVE BOX
DSC-Q	DR STRUCTURE COVER, TYPE Q
DSC-R	DR STRUCTURE COVER, TYPE R
DSA	DR STRUCTURE COVER, ADJ

Know what's below. Call before you dig. 811

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
02	ADDENDUM #1	3–3–22	CC,DF	FC
01	OUT FOR BID	2–10–22	CC,DF	FC
00	FINAL REVIEW	1–12–22	CC,DF	FC

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

STADIUM/WASHTENAW AREA UTILITY IMPROVEMENTS

BROCKMAN SIDEWALK & CURB

BROCKMAN BLVD BUMPOUT

SCALE PLAN: 1" = 20' PROFILE: 1" = 2'

DRAWING No. 2021011-37

SHEET No. 37 OF 37

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