



CITY OF ANN ARBOR ENGINEERING

2018 MISC UTILITY PROJECTS

BID No. 4524, FILE No. 2017033

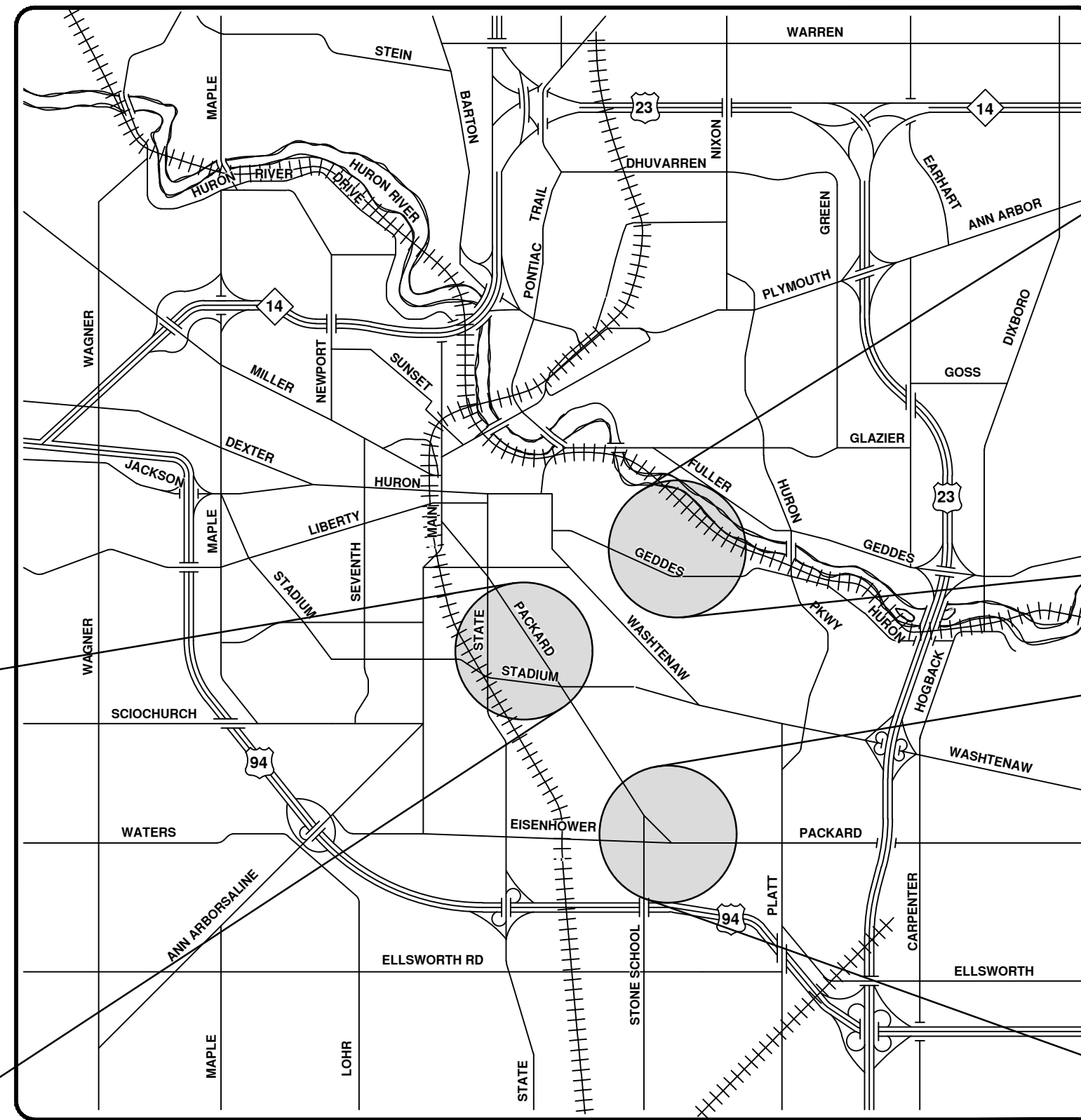
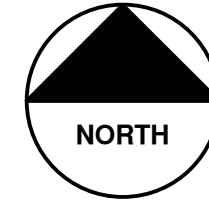
NOTES

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.

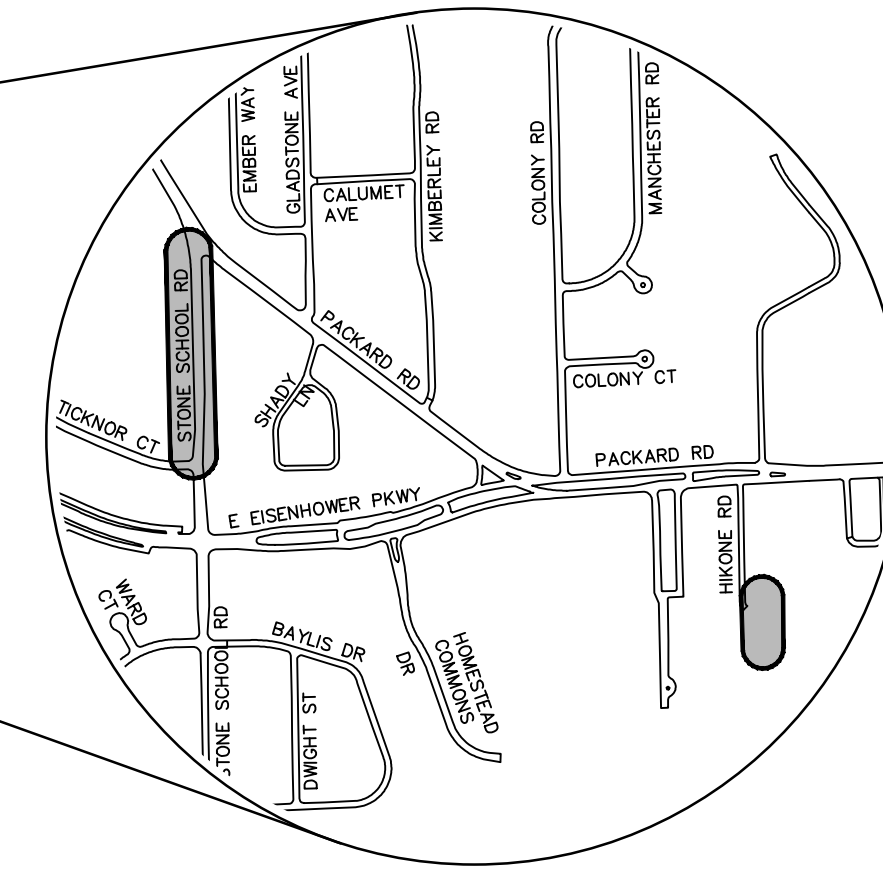
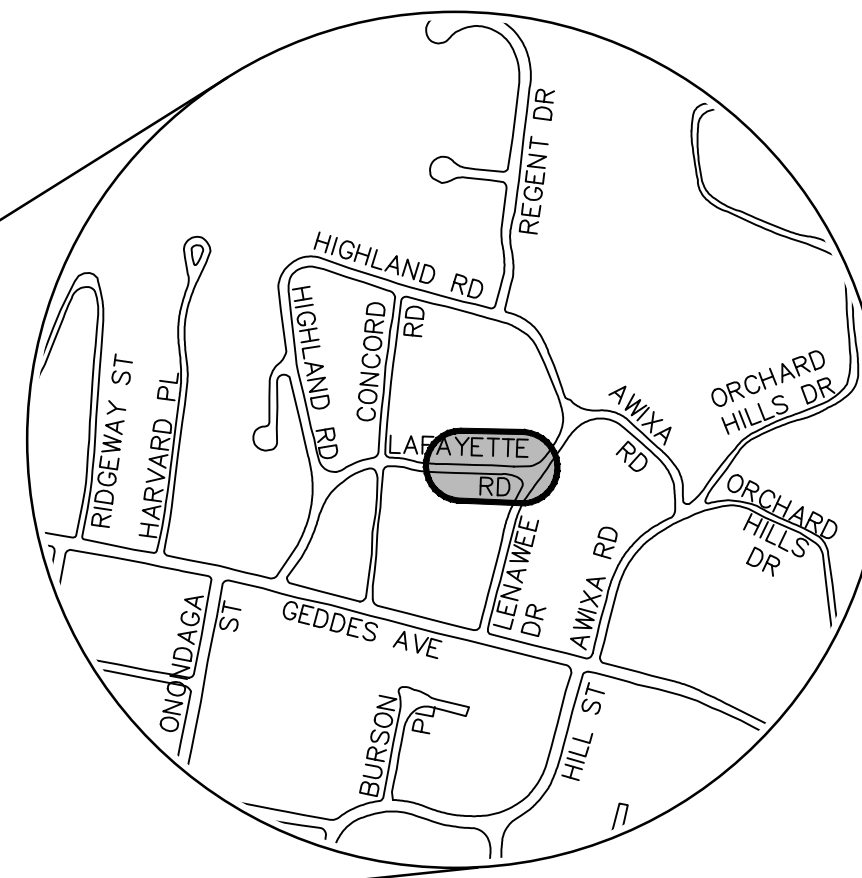
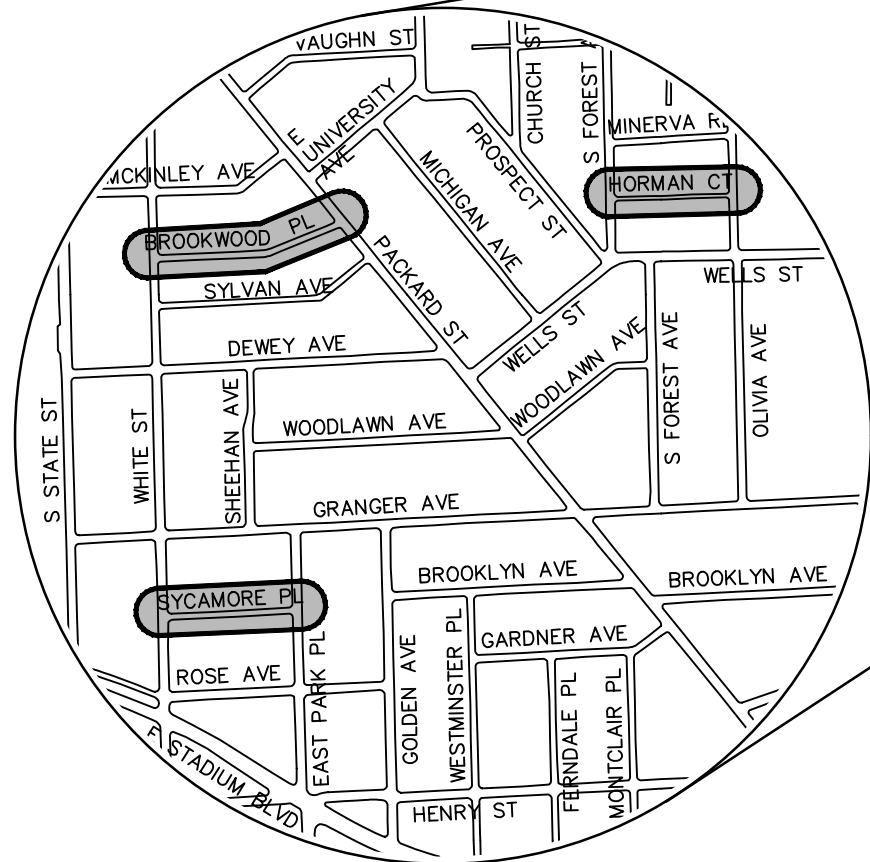
THE UNDERGROUND LOCATIONS SHOWN FOR NATURAL GAS, TELEPHONE, ELECTRICAL POWER, CABLE TV AND FIBER OPTIC LINES ARE APPROXIMATE. THE CITY OF ANN ARBOR ASSUMES NO RESPONSIBILITY FOR THEIR ACCURATE REPRESENTATION IN THIS DRAWING. MISS DIG MUST BE CONTACTED PRIOR TO CONSTRUCTION TO LOCATE THESE UTILITIES.

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.

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VICINITY MAP



PREPARED UNDER THE SUPERVISION OF

[Signature]
BRIAN SLIZEWSKI, P.E. - MI LICENSE No. 35654
PROJECT MANAGER

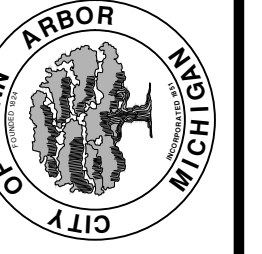


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DATE



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CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-0647
www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
PROJECT DESCRIPTION AND LIMITS
SCALE
DRAWING No. 2017033-1

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

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, CITY ORDINANCE CHAPTER 63, 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, WITHIN FOUR (4) HOURS OF BEING SO ORDERED.
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 PALLIATIVE 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, IF PROVIDED, 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 = \$xxx,xxx

ESTIMATE OF EXCAVATION AND FILL FROM EXISTING TO FINAL GRADE:
 • EXCAVATION = XXX CY, FILL = XXX CY

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

STONE SCHOOL ROAD

- BnB – BOYER LOAM, 0 TO 6 PERCENT SLOPES – THIS SOIL IS ON BROAD UPLANDS, AND ON OUTWASH PLAINS, KAMES, VALLEY TRAINS, TERRACES, AND MORAINES. SLOPES ARE UNIFORM IN THE UPLANDS AND ARE SHORT AND COMPLEX IN OTHER AREAS.

LAFAYETTE ROAD

- MmC – MIAMI LOAM, 6 TO 12 PERCENT SLOPES – THIS SOIL IS IN BROAD AREAS AND ALONG STREAMS AND DRAINAGEWAYS OF TILL PLAINS AND MORAINES. SLOPES IN THE BROAD AREAS ARE SHORT AND COMPLEX.
- MmD – MIAMI LOAM, 12 TO 18 PERCENT SLOPES – THIS SOIL IS IN BROAD AREAS AND ALONG STREAMS AND DRAINAGEWAYS OF TILL PLAINS AND MORAINES. SLOPES IN THE BROAD AREAS ARE SHORT AND COMPLEX.

BROOKWOOD PLACE, SYCAMORE PLACE, HORMAN COURT

- FoA – FOX SANDY LOAM, 0 TO 2 PERCENT SLOPES – THIS SOIL IS IN BROAD UPLAND AREAS OF OUTWASH PLAINS, KAMES, VALLEY TRAINS, TERRACES, AND MORAINES.

PACKARD ROAD

- WaA – WASEPI SANDY LOAM, 0 TO 4 PERCENT SLOPES – THIS SOIL IS IN DEPRESSIONAL AREAS, ON BROAD LOW-LYING AREAS, AND ALONG DRAINAGEWAYS OF OUTWASH PLAINS, VALLEY TRAINS, AND LAKE PLAINS.

IMPERVIOUS PROJECT AREA	
PRIOR TO CONSTRUCTION = x.xx ACRES	POST CONSTRUCTION = x.xx ACRES
AREA OF PROPOSED DISTURBANCE = x.xx ACRES	

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
* NO COST TO CONTRACTOR	

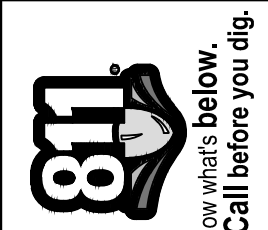
PERMITS REQUIRED TO BE OBTAINED BY THE CITY OF ANN ARBOR PRIOR TO THE BEGINNING OF CONSTRUCTION.

PERMIT	ISSUING AUTHORITY
M.D.E.Q. WATER MAIN CONSTRUCTION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
M.D.E.Q. SANITARY SEWER CONSTRUCTION PERMIT	MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

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 SIGNALS STREET LIGHTS		(734) 794-6361
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	CLAY COMBEE (734) 397-4112
CABLE	COMCAST 27800 FRANKLIN ROAD SOUTHFIELD, MI 48034	RON SUTHERLAND (313) 999-8300
PHONE	AT&T 550 S. MAPLE ROAD ANN ARBOR, MI 48103	(734) 996-2135
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016

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Know what's below. Call before you dig.

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CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48108-0867
www.aagov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
 2018 MISC UTILITY PROJECTS
 STANDARD NOTES
 SHEET No. 2 OF 29

HORMAN COURT BENCHMARKS		
BM #	ELEV	DESCRIPTION
1	857.070	RR SPIKE N.E. SIDE OF L.P. AT CORNER OF OLIVIA AND MINERVA
3	854.830	RR SPIKE E. SIDE OF P.P. W. SIDE OF S. FOREST AVE. AT INTERSECTION OF MINERVA AND FOREST
4	854.740	RR SPIKE W. SIDE OF L.P. AT HSE # 1115 E. SIDE OF FOREST AVE.
5	855.160	TOP OF FIRE HYDRANT ON EAST SIDE OF FOREST AVE BETWEEN HSE # 1031 AND 1027.
6	853.250	RR SPIKE ON E. SIDE OF L.P. ON W. SIDE OF S. FOREST AVE. AT INTERSECTION OF S. FOREST AND ROOSEVELT
7	857.700	RR SPIKE ON E. SIDE OF P.P. ON W. SIDE OF FOREST AVE. AT HSE # 1142 S. PROP. LINE
8	856.840	RR SPIKE ON E. SIDE OF P.P. ON W. SIDE OF FOREST AVE. AT INTERSECTION OF S. FOREST AND WELLS ST.
9	852.150	RR SPIKE ON N. SIDE OF P.P. AT S.W. CORNER OF INTERSECTION OF OLIVIA AVE. AND WELLS ST.
11	853.830	N. RIM OF SEWER M.H. ON CENTERLINE OF HORMAN CT. @ HSE NO. 1303 / 1304 BK 1121 P 6
12	855.286	RR SPIKE ON S. SIDE OF L.P. ON N. SIDE OF HORMAN CT. BETWEEN HSE NO. 1301 / 1303

BROOKWOOD PLACE BENCHMARKS		
BM #	ELEV	DESCRIPTION
1	830.870	RR SPIKE ON N.W. SIDE OF P.P. AT S.E. CORNER OF BROOKWOOD PL. AND WHITE ST. BK 1121 P 10
2	832.960	MAG NAIL ON N. SIDE OF P.P. ON S. SIDE OF BROOKWOOD PL. BETWEEN HSE. #828 AND #822
3	836.630	RR SPIKE ON N'LY SIDE OF P.P. ON THE S. SIDE OF BROOKWOOD PL. AT HSE # 848
4	838.910	RR SPIKE ON E. SIDE OF L.P. AT THE N.W. CORNER OF PACKARD ST. AND BROOKWOOD PL.

STONE SCHOOL ROAD BENCHMARKS		
BM #	ELEV	DESCRIPTION
1	847.482	TOP WEST SIDE OF CONC. BASE FOR PEDESTRIAN POLE AT SE CORNER OF PACKARD AND STONE SCHOOL ROAD.
2	844.702	FOUND BOAT SPIKE IN WEST SIDE OF UTILITY POLE ON EAST SIDE OF STONE SCHOOL ROAD AT SOUTH DRIVE FOR HOUSE NO. 2861.
3	837.912	SET RR SPIKE IN EAST SIDE OF UTILITY POLE ON WEST SIDE OF STONE SCHOOL ROAD, ACROSS THE STREET FROM HOUSE NO. 2907.
4	828.445	SET RR SPIKE IN EAST SIDE OF UTILITY POLE AT NORTH WEST CORNER OF TICKNOR CT. AND STONE SCHOOL ROAD.

LAFAYETTE ROAD BENCHMARKS		
BM #	ELEV	DESCRIPTION
3	916.395	SET R.R. SPIKE IN SOUTHERLY SIDE OF LIGHT POLE AT THE NORTHWEST CORNER OF LAFAYETTE AND CONCORD.
5	890.913	SET R.R. SPIKE IN SOUTHERLY SIDE OF LIGHT POLE AT NORTHWEST CORNER OF LENAWEA AND LAFAYETTE.

SYCAMORE PLACE BENCHMARKS		
BM #	ELEV	DESCRIPTION
1	837.390	R.R. SPIKE IN SOUTHWEST SIDE OF POWER POLE AT THE NORTHEAST CORNER OF WHITE AND SYCAMORE PLACE.
2	833.210	R.R. SPIKE IN THE SOUTHEAST SIDE OF LIGHT POLE AT THE NORTHWEST CORNER OF SYCAMORE PLACE AND EAST PARK PLACE.
4	836.529	SET R.R. SPIKE IN SOUTH SIDE OF POWER POLE ON THE NORTH SIDE OF SYCAMORE PLACE. POLE IS NEAR THE WEST PROPERTY LINE FOR HOUSE #803.

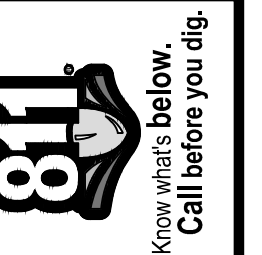
PACKARD ROAD BENCHMARKS		
BM #	ELEV	DESCRIPTION
1	815.964	SET RR SPIKE IN THE E SIDE OF THE LIGHT POLE THAT IS IN THE MIDDLE OF THE WEST SIDE OF THE NORTH PARKING LOT.
2	810.004	SET RR SPIKE IN THE NE SIDE OF THE LIGHT POLE THAT IS IN THE WEST HALF OF THE SOUTH SIDE OF THE SOUTH PARKING LOT.

EXISTING LEGEND

	FIRE HYDRANT		WATER MAIN
	GATE VALVE IN BOX		WATER MAIN ABANDONED
	GATE VALVE IN WELL		STORM SEWER
	STOP BOX		STORM SEWER ABANDONED
	WATER VAULT		SANITARY SEWER
	WELL		SANITARY SEWER ABANDONED
	CATCH BASIN (SQ)		GAS MAIN
	CATCH BASIN (RD)		GAS MAIN (DEAD)
	STORM MANHOLE		ELECTRICAL OVER HEAD
	NON-CURB CATCH BASIN (SQ)		ELECTRICAL UNDER GROUND
	END SECTION		ELECTRICAL DUCT BANK
	SANITARY MANHOLE		TELEPHONE OVER HEAD
	CLEAN-OUT		TELEPHONE UNDER GROUND
	POST		TELEPHONE DUCT BANK
	PEDESTRIAN SIGNAL		CABLE TV OVER HEAD
	SIGN		CABLE TV UNDER GROUND
	HAND HOLE		FIBER OPTIC
	ORNAMENTAL LIGHT		FIBER OPTIC DUCT BANK
	FLOOD LIGHT		BOUNDARY
	UNKNOWN MANHOLE		BUILDING
	TELEPHONE MANHOLE		CENTERLINE OF DITCH
	TELEPHONE RISER		CENTERLINE/CROWN OF ROAD
	GAS VALVE		CONTOUR MAJOR
	GAS VENT		CONTOUR MINOR
	GAS BOX		EDGE OF WATER
	ELECTRICAL RISER		FLOODPLAIN
	TRANSFORMER		FENCE
	UTILITY POLE		GRAVEL
	LAMP POLE		GUARDRAIL
	GUY ANCHOR		STONE WALL
	GUY POLE		R.O.W.
	MONITORING WELL		TREELINE
	MAILBOX		WETLAND
	SOIL BORING		EDGE OF BRUSH
	TRAVERSE POINT		HEDGE
	BENCH MARK		TREE (DECIDUOUS)
	IRON PIPE		TREE (CONIFEROUS)
	MON BOX		TREE TO BE REMOVED (DECIDUOUS)
			TREE TO BE REMOVED (CONIFEROUS)
			SHRUB (DECIDUOUS)
			STUMP
			TREE TO REMAIN & PROTECT (DECIDUOUS) CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREST HEIGHT (INCHES) X 10
			TREE TO REMAIN & PROTECT (CONIFEROUS) CRITICAL ROOT ZONE (C.R.Z.) = DIAMETER BREST HEIGHT (INCHES) X 10

PROPOSED LEGEND

	HYDRANT (PLAN)		WATER MAIN
	WATER GATE WELL		STORM SEWER
	REDUCER		SANITARY SEWER
	WATER GATE VALVE		FIBER OPTIC
	WATER STOP BOX		ELECTRICAL
	WATER VAULT		CENTERLINE OF DITCH
	INLET		CENTERLINE OF ROAD
	DOUBLE INLET		FENCE
	INLET JUNCTION CHAMBER		GRAVEL
	ROUND CATCH BASIN		SILT FENCE
	STORM MANHOLE		PROTECTIVE FENCE
	DRAIN ARROW		GUARDRAIL
	FLARED END SECTION		LOT/UNIT
	SANITARY MANHOLE		CURB
	CLEAN-OUT		TEMPORARY GRADING PERMIT
	BARREL		CONTOUR MAJOR
	SIGN		CONTOUR MINOR
	PUSH BUTTON		WATER EASMENT
	HAND HOLE		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

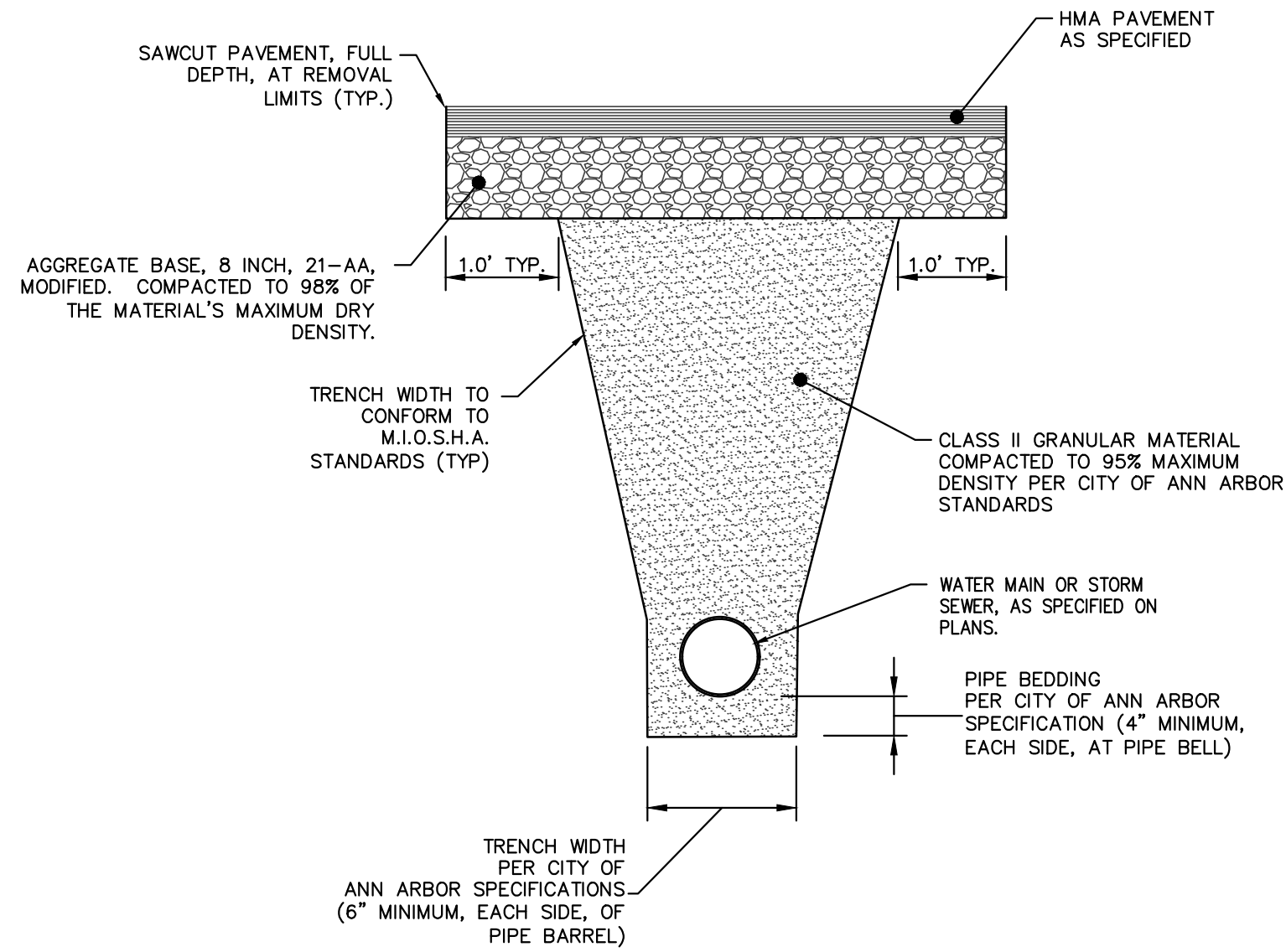


NO.	DATE	BY	CHECKED

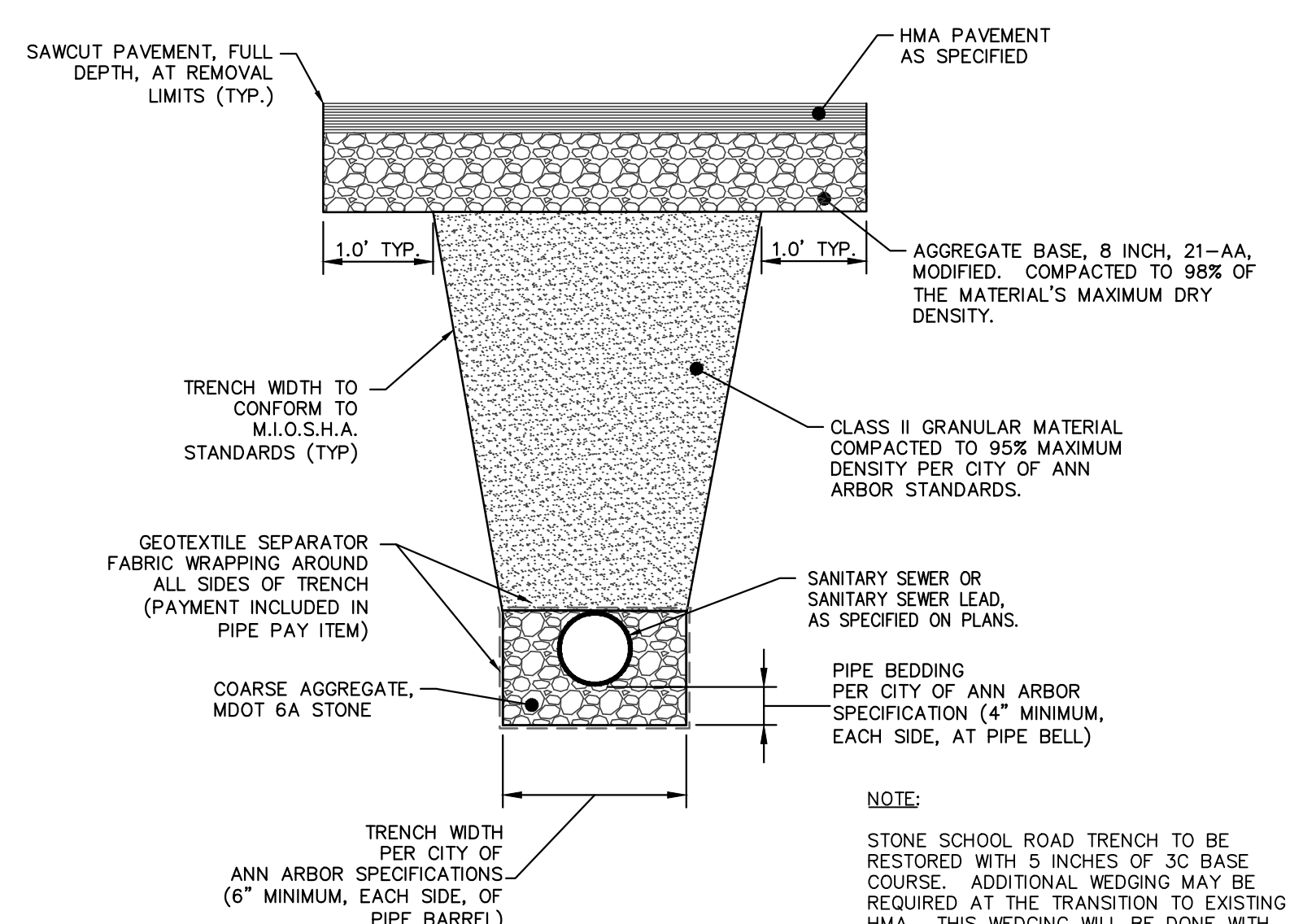
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2018 MISC UTILITY PROJECTS

CITY OF ANN ARBOR - ENGINEERING
LEGEND
SCALE: NTS
DRAWING No. 2017033-3

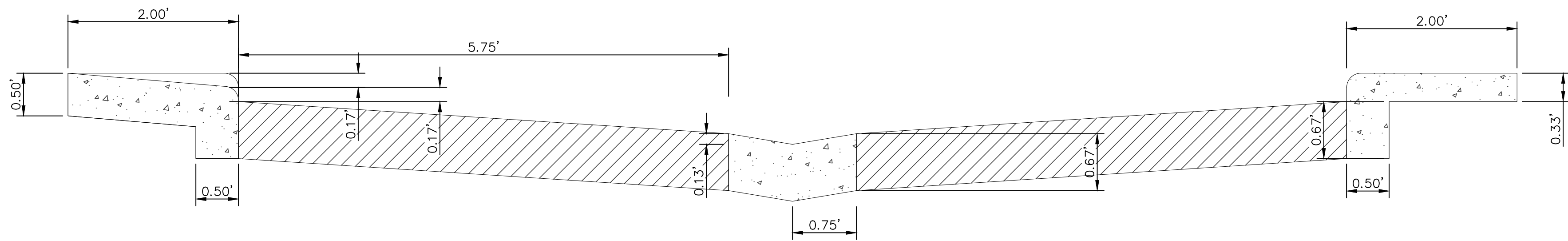


**TRENCH DETAIL - TYPE I,
SD-TD-1, MODIFIED**

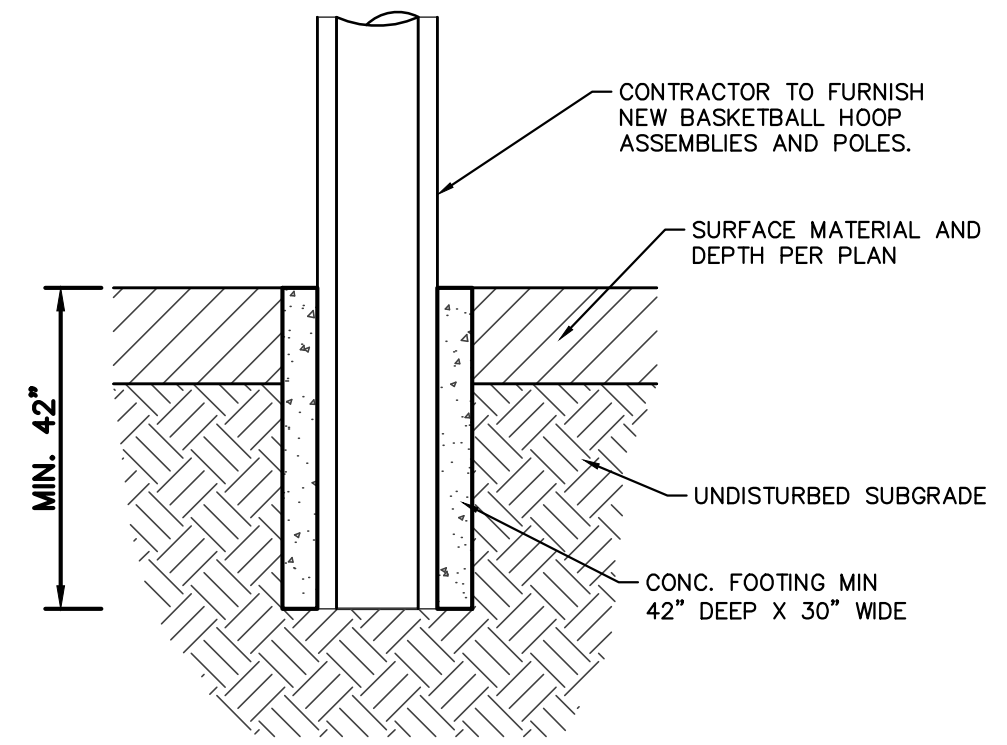


**TRENCH DETAIL - TYPE II,
SD-TD-1, MODIFIED**

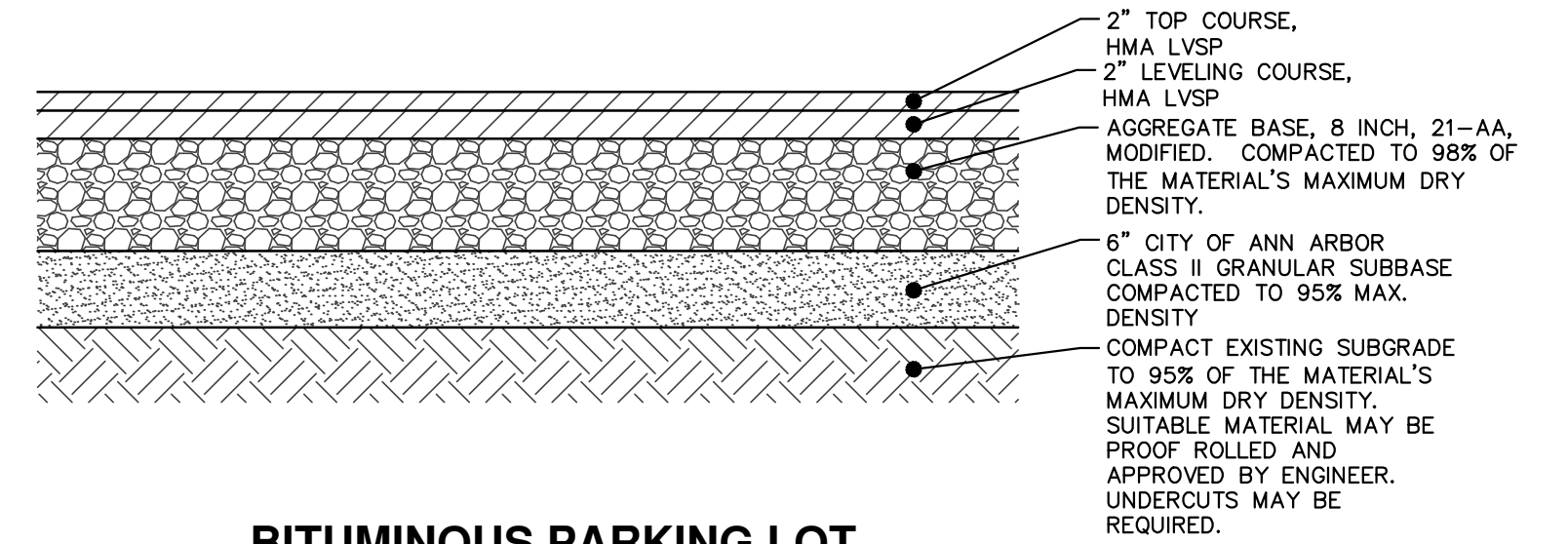
NOTE:
STONE SCHOOL ROAD TRENCH TO BE RESTORED WITH 5 INCHES OF 3C BASE COURSE. ADDITIONAL WEDGING MAY BE REQUIRED AT THE TRANSITION TO EXISTING HMA. THIS WEDGING WILL BE DONE WITH, AND PAID FOR AS, HMA MIX 3C.



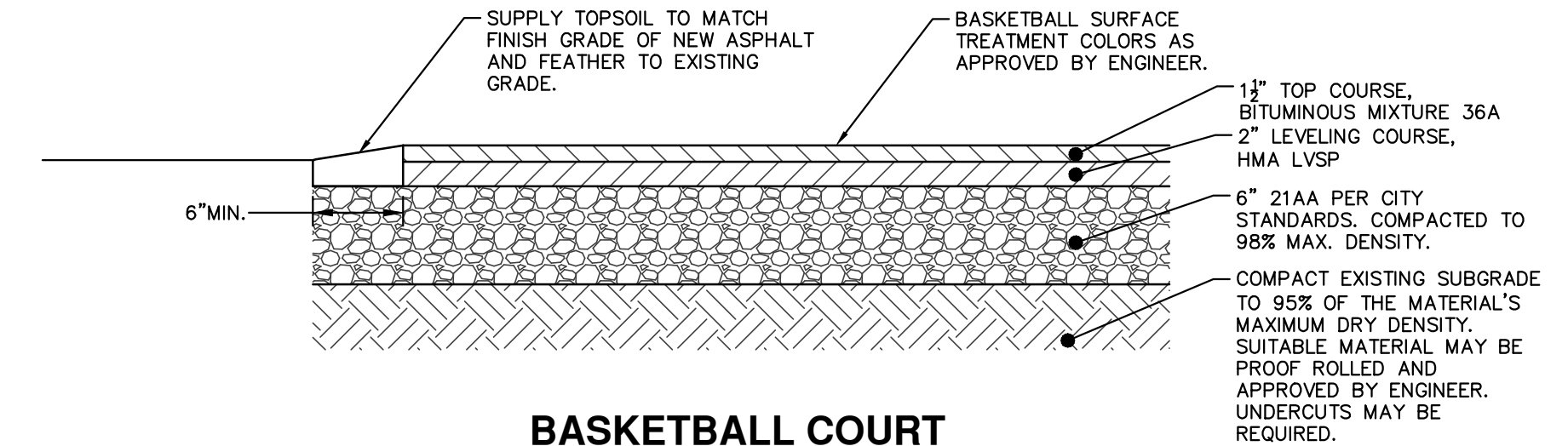
**HORMAN COURT
EXISTING CROSS-SECTION**



**BASKETBALL HOOP POLE
FOUNDATION DETAIL**



**BITUMINOUS PARKING LOT
PAVEMENT DETAIL**



**BASKETBALL COURT
PAVEMENT DETAIL**

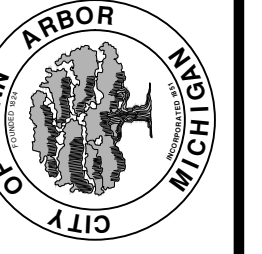
STONE SCHOOL ROAD - HMA APPLICATION ESTIMATE					
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
3C	275 LB/SYD	5"	-	PG 58-22	BASE COURSE, TWO LIFTS
Bond Coat SS-1h	0.10 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM
PACKARD ROAD - HMA APPLICATION ESTIMATE					
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
5 E3	165 LB/SYD	1.5	260	PG 64-28	TOP COURSE
4 E3	220 LB/SYD	2.0	-	PG 64-28	LEVELING COURSE
3C	330 LB/SYD	3.0	-	PG-58-22	BASE COURSE
Bond Coat SS-1h	0.05 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM
BROOKWOOD, HIKONE PARKING AREA, SYCAMORE, LAFAYETTE/LENAWEE, HORMAN/FOREST - HMA APPLICATION ESTIMATE					
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
LVSP	660 LB/SYD	4.0	260 (TOP)	PG 58-28	TWO LIFTS
Bond Coat SS-1h	0.10 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM
BASKETBALL COURT - HMA APPLICATION ESTIMATE					
HMA MIX	RATE OF APPLICATION	THICKNESS (INCHES)	AWI (MIN.)	BINDER	LOCATION/NOTES
36A	165 LB/SYD	1.5	-	PG 58-28	TOP COURSE
LVSP	220 LB/SYD	2.0	-	PG 58-28	BASE COURSE
Bond Coat SS-1h	0.10 GAL/SYD	-	-	-	INCLUDE IN COST OF HMA ITEM

R:\20170333_Horman Ct San and Wtr\Plan Production\20170333Det.dwg Dwg Created: 6-Mar-18 - 10:42 standard bw.stb - Plot Date: 6-Mar-18



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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
2018 MISC UTILITY PROJECTS
TYPICAL SECTIONS AND TRENCH DETAILS

SCALE: NTS
DRAWING No. 2017033-4

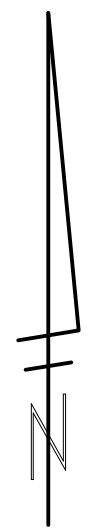
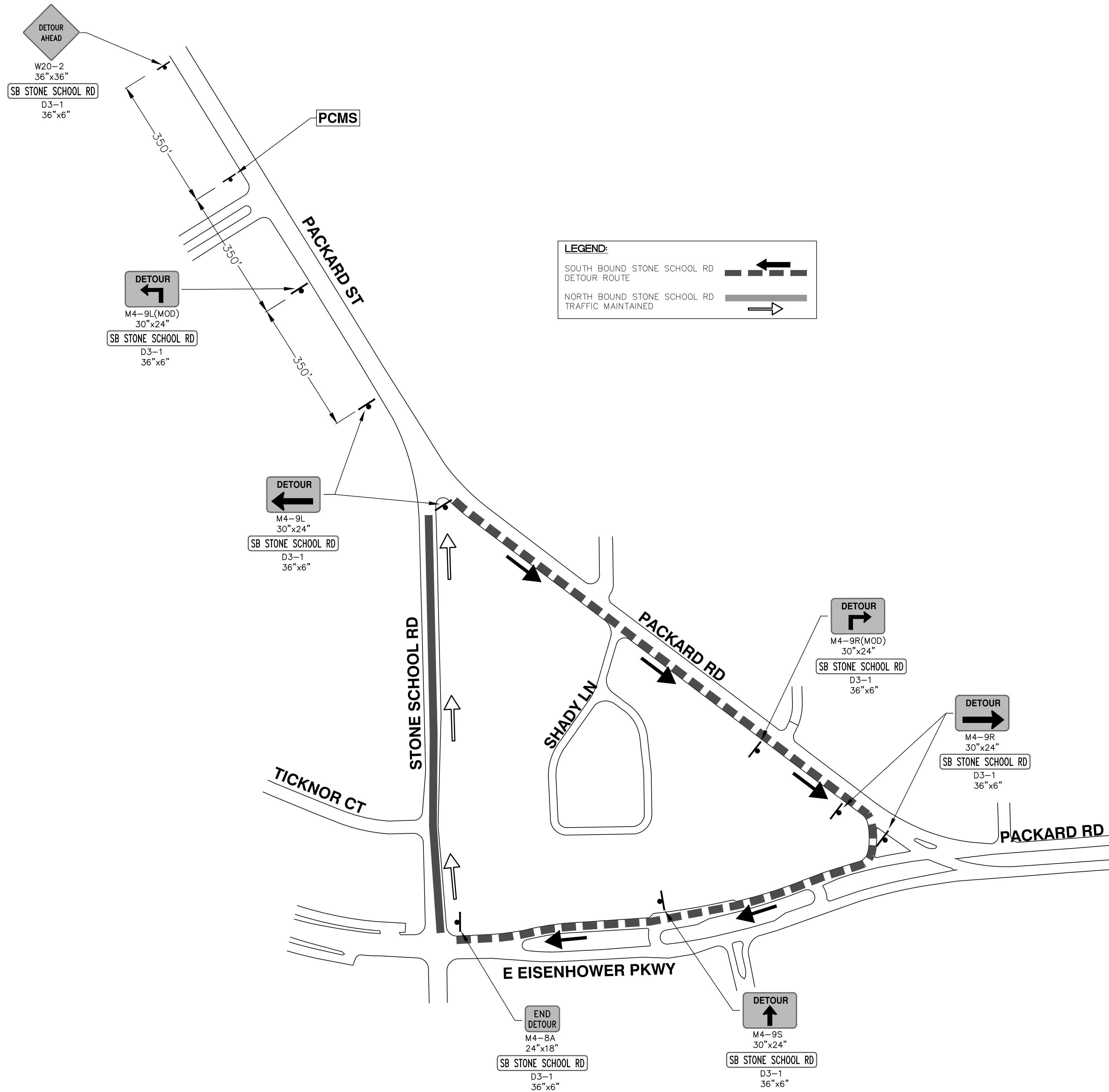
DETOUR CONSTRUCTION NOTES:

1. DEPENDING ON THE DETOUR ROUTE THAT IS PUT IN PLACE, CONFLICTING SIGNS MAY BE PRESENT. PRIOR TO THE ORDERING OR PLACEMENT OF ANY SIGNS, MEET WITH THE ENGINEER TO VERIFY THE EXACT NUMBER AND LOCATION OF THE SIGNS TO BE PLACED. THE ENGINEER AND THE CONTRACTOR SHALL WORK TOGETHER TO ELIMINATE ALL CONFLICTS.
2. THE CITY RESERVES THE RIGHT TO ORDER ADDITIONAL SIGNS AND PLACE THEM INTO SERVICE IN ORDER TO SAFELY MAINTAIN TRAFFIC. ADJUSTMENTS IN THE UNIT PRICE FOR THESE ITEMS OF WORK SHALL NOT BE ALLOWED FOR THESE OCCURRENCES.
3. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CITY OF ANN ARBOR'S SIGNS AND SIGNALS UNIT DURING THE COURSE OF THE DETOUR ROUTE ESTABLISHMENT TO EFFECTIVELY AND SAFELY MAINTAIN TRAFFIC. DO NOT ERECT ANY SIGNS UNTIL ITS LOCATION AND PROPOSED DATE OF INSTALLATION IS APPROVED BY THE ENGINEER.
4. THE DETOUR IS TO BE IN PLACE DURING STONE SCHOOL ROAD SANITARY PROJECT. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR SOUTH BOUND STONE SCHOOL ROAD TRAFFIC. SEE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR DETAILS ON CONSTRUCTION STAGING, SEQUENCING, CLOSURE AND DETOUR LIMITATIONS, AND OTHER DETAILS.
5. REFERENCE THE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR ADDITIONAL PROJECT REQUIREMENTS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO THE SECTION OF SAME SPECIAL PROVISION REGARDING COORDINATION WITH THE CITY SIGNS AND SIGNALS UNIT FOR MODIFICATIONS TO TRAFFIC SIGNALS FOR THE DETOUR.
6. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN SIGNS AS SHOWN ON THE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER.
7. CONSTRUCTION WARNING SIGNS SHALL HAVE AN ORANGE, HIGH-INTENSITY, REFLECTORIZED BACKGROUND.
8. SIGNS SHALL CONFORM TO THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
9. THE CONTRACTOR SHALL DRIVE ALL SIGNS INTO EXPOSED GROUND OR INSERT INTO A BORED HOLE IN PAVEMENT AS NECESSARY TO PERMANENTLY SECURE. ALL HOLES IN PAVEMENT SHALL BE FILLED WITH ENGINEER-APPROVED MORTAR WHEN THE SIGN IS REMOVED AND NO LONGER NEEDED. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "SIGN, TYPE B, TEMP, PRISMATIC, FURN" OR "SIGN, TYPE B, TEMP, PRISMATIC, FURN, SPECIAL".
10. ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TWO (2) TYPE A FLASHING LIGHTS AND ONE (1) DAY-GLOW ORANGE FLAG.
11. CITY TO BE NOTIFIED A MINIMUM OF 7 DAYS PRIOR TO IMPLEMENTING SB STONE SCHOOL ROAD DETOUR.

PCMS MESSAGE PHASING	
PRIOR TO CONSTRUCTION	DURING CONSTRUCTION
STONE SCHOOL ROAD CONSTRUCTION	SB STONE SCHOOL CLSD AT PACKARD
MONTH DATE *	FOLLOW POSTED DETOUR

NOTE: PCMS LOCATIONS AND MESSAGES WILL BE AS DIRECTED BY THE ENGINEER. TO BE PLACED ONE WEEK PRIOR TO CONSTRUCTION.

*THE CONTRACTOR SHALL PLACE THE APPROPRIATE DATE AS APPROVED BY THE ENGINEER.



R: \2017033 Stone School Sanitary\Plan Production\2017033Mtrf.dwg Dwg Created: 2-Mar-18 - a2 standard bw.stb - Plot Date: 6-Mar-18

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2018 MISC UTILITY PROJECTS

STONE SCHOOL ROAD

DETOUR PLAN

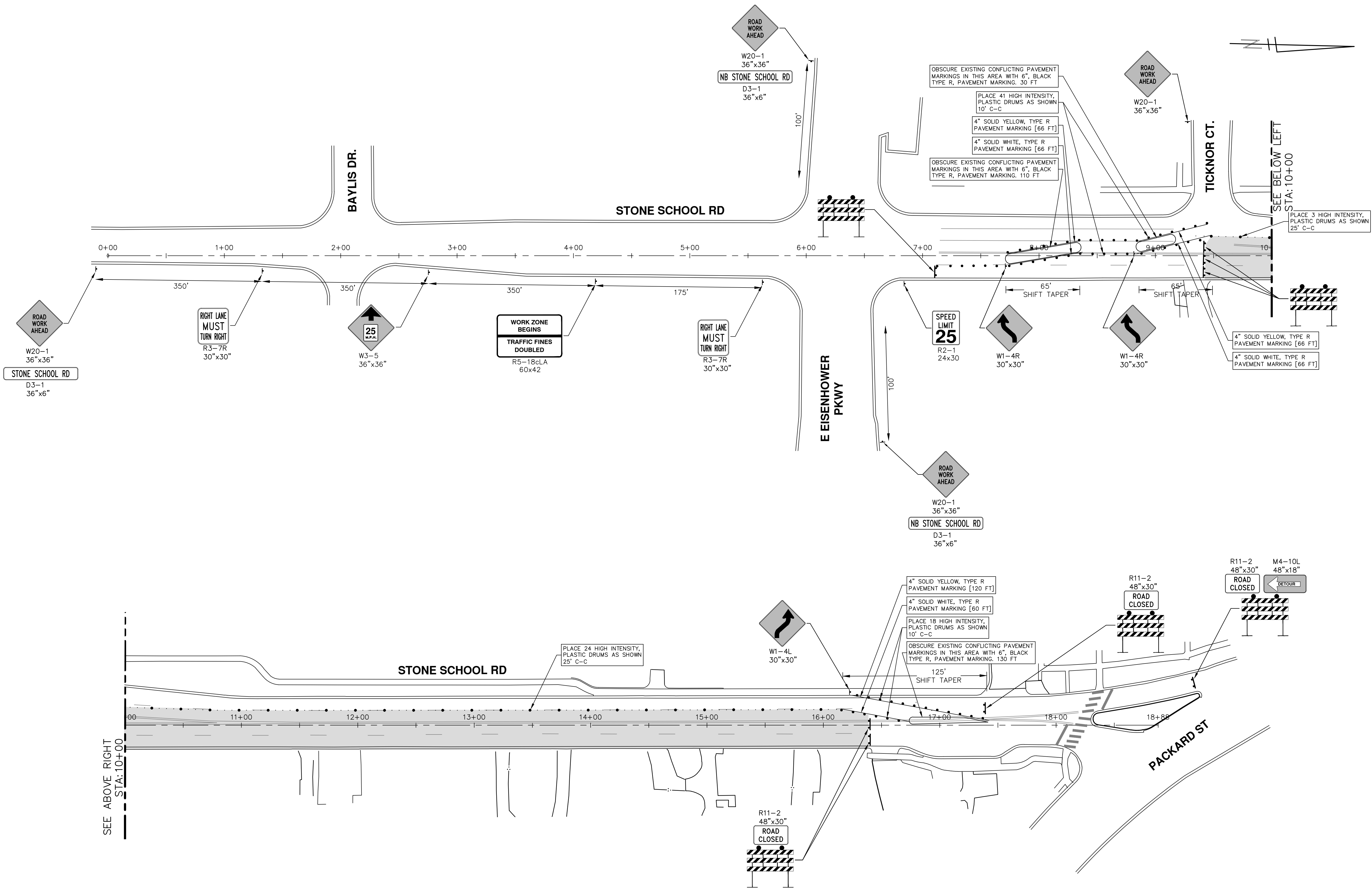
SHEET No. **5 OF 29**

SCALE: 1" = 150'

DRAWING No. **2017033-5**

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R:\20170333 Stone School SanitaryPlan Production\20170333Mtrfr1.dwg Dwg Created: 2-Mar-18 --_a2_standard_bw.stb -- Plot Date: 6-Mar-18



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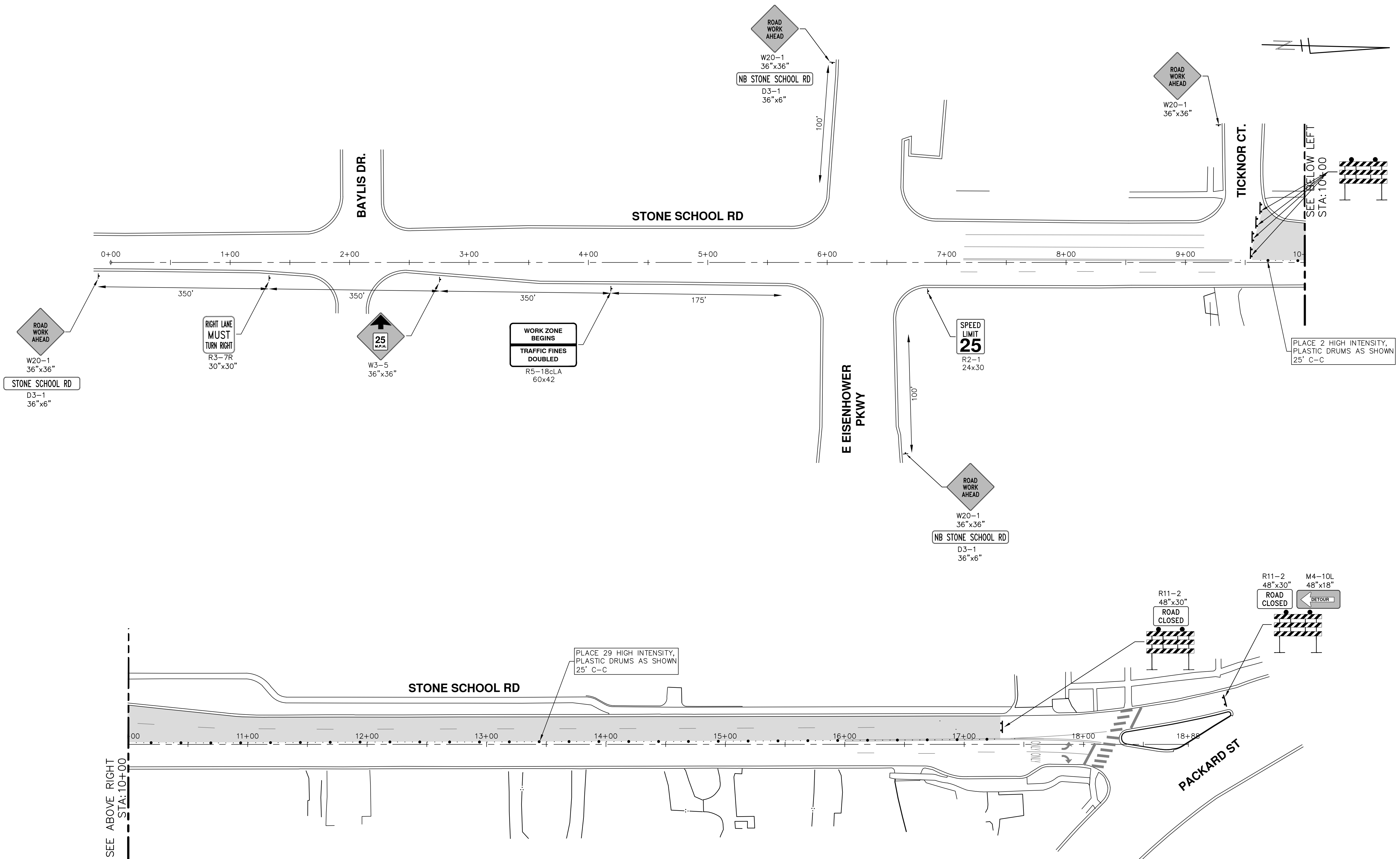
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
 2018 MISC UTILITY PROJECTS
 STONE SCHOOL ROAD
 TRAFFIC CONTROL - STAGE 1

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 WWW.A2GOV.GOV

CITY OF ANN ARBOR MICHIGAN

SCALE PLAN: 1" = 40'
 DRAWING No. 2017033-6
 SHEET No. 6 OF 29

R:\2017033 Stone School SanitaryPlan Production\2017033Mtrf2.dwg Dwg Created: 2-Mar-18 -- a2_standard bw.stb -- Plot Date: 6-Mar-18



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REV.	DESCRIPTION	DATE	BY	CHECKED
00	COPY TO NEXT LINE AND EDIT THE TEXT			

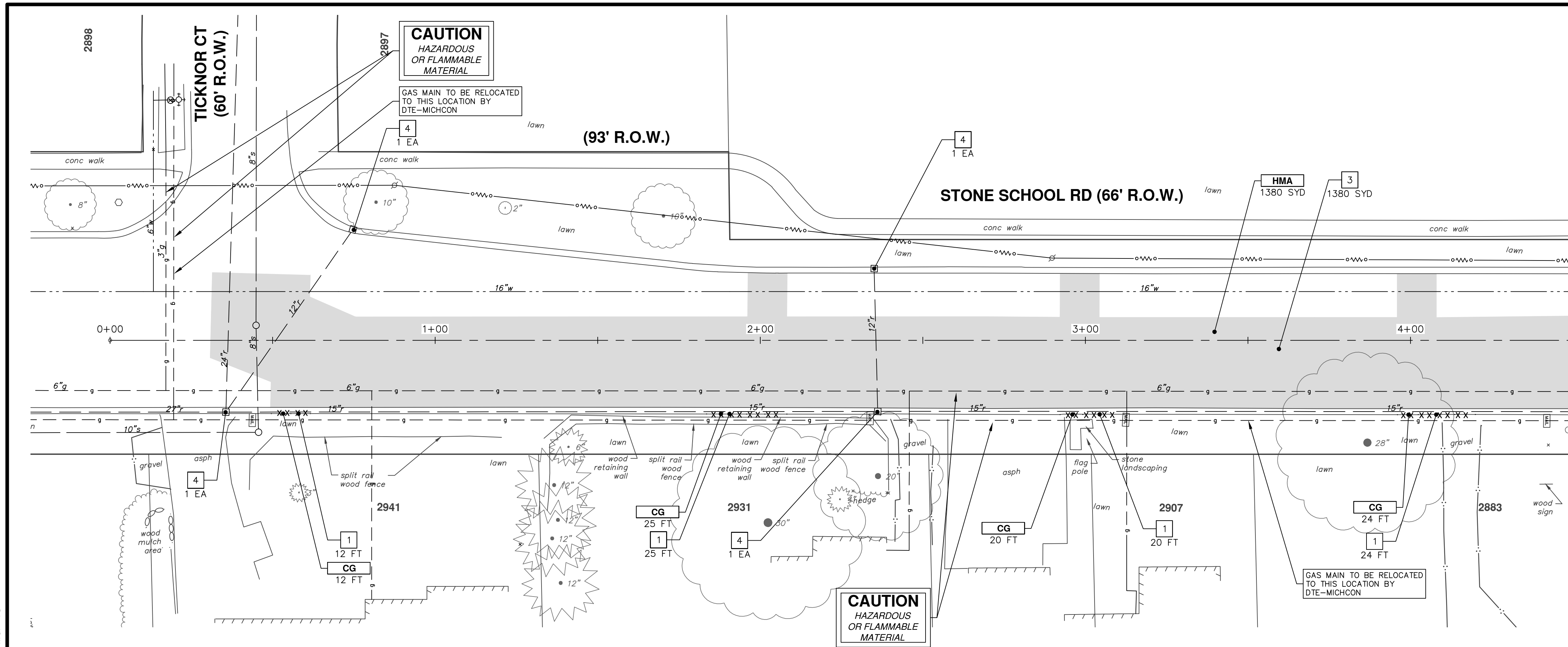
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
2018 MISC UTILITY PROJECTS
STONE SCHOOL ROAD
TRAFFIC CONTROL - STAGE 2

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ANN ARBOR: 734-794-4410
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CITY OF ANN ARBOR MICHIGAN

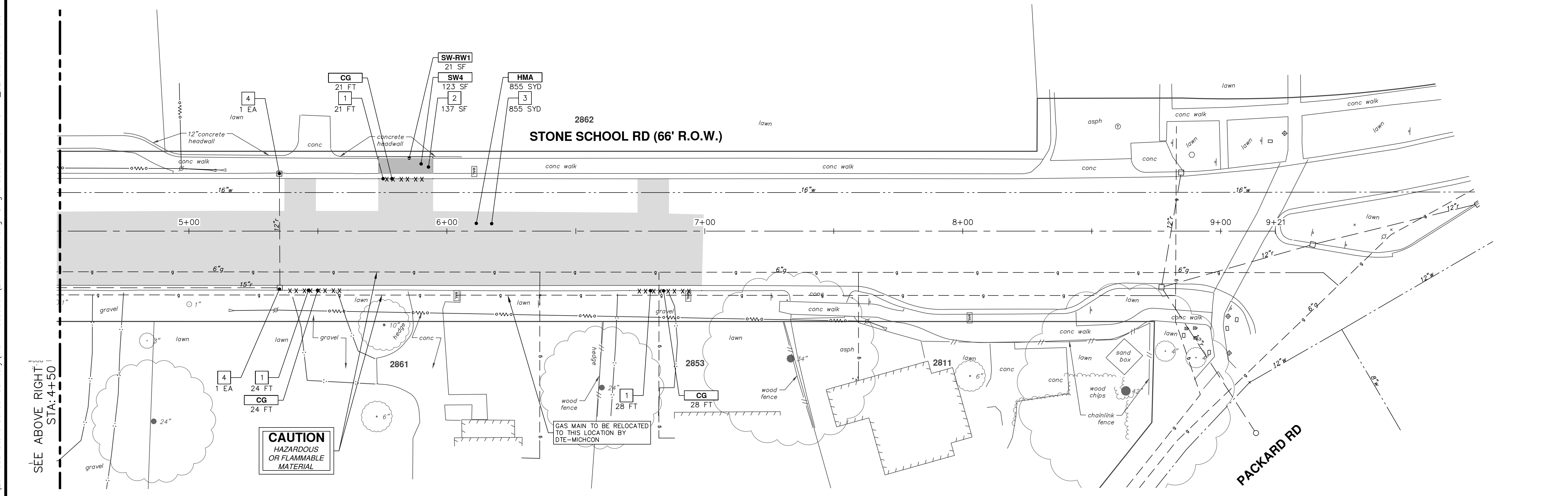
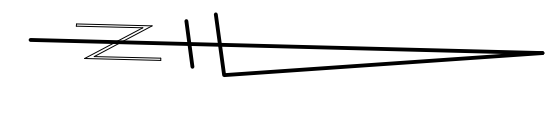
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
SCALE PLAN: 1" = 40'
DRAWING No. 2017033-7
SHEET No. 7 OF 29

R: \20170333 Stone School Sanitary Plan Production\20170333Rem.dwg Dwg Created: 2-Mar-18 - _a2_standard bw.stb - Plot Date: 6-Mar-18




SEE BELOW LEFT
STA: 4+50

CONSTRUCTION KEY		REMOVAL KEY	
KEY	DESCRIPTION	KEY	DESCRIPTION
HMA	SURFACE AREA FOR HMA	1	REMOVE CONCRETE CURB OR CURB & GUTTER, ANY TYPE
CG	CONCRETE CURB OR CURB & GUTTER, ANY TYPE	2	REMOVE CONCRETE SIDEWALK, RAMP AND DRIVES, ANY THICKNESS
CG-HE	CONCRETE CURB OR CURB & GUTTER, ANY TYPE- HIGH EARLY	3	PAVT, REM *
SW4	4" CONCRETE SIDEWALK	4	INLET FILTER
SW6	6" CONCRETE SIDEWALK	5	PROTECTIVE FENCING
SW6-HE	6" CONCRETE SIDEWALK - HIGH EARLY	6	TREE REMOVAL, 8" AND LARGER
SWR6	6" CONCRETE RAMP	*SAWCUT FULL DEPTH AT REMOVAL LIMITS	
SWR6-HE	6" CONCRETE RAMP, DRIVE APPROACH- HIGH EARLY		
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6" TO 18"		
DOM	CONCRETE TYPE M DRIVE OPENING- HIGH EARLY		
DWS	DETECTABLE WARNING, CAST IN PLACE		
ASC	ADJUST STRUCTURE COVER		
AB	ADJUST MONUMENT BOX OR GATE VALVE BOX		



SEE ABOVE RIGHT
STA: 4+50



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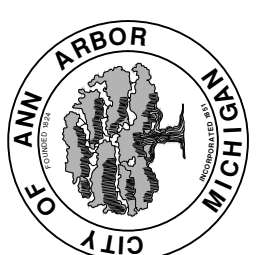
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2018 MISC UTILITY PROJECTS

REMOVALS

STONE SCHOOL ROAD

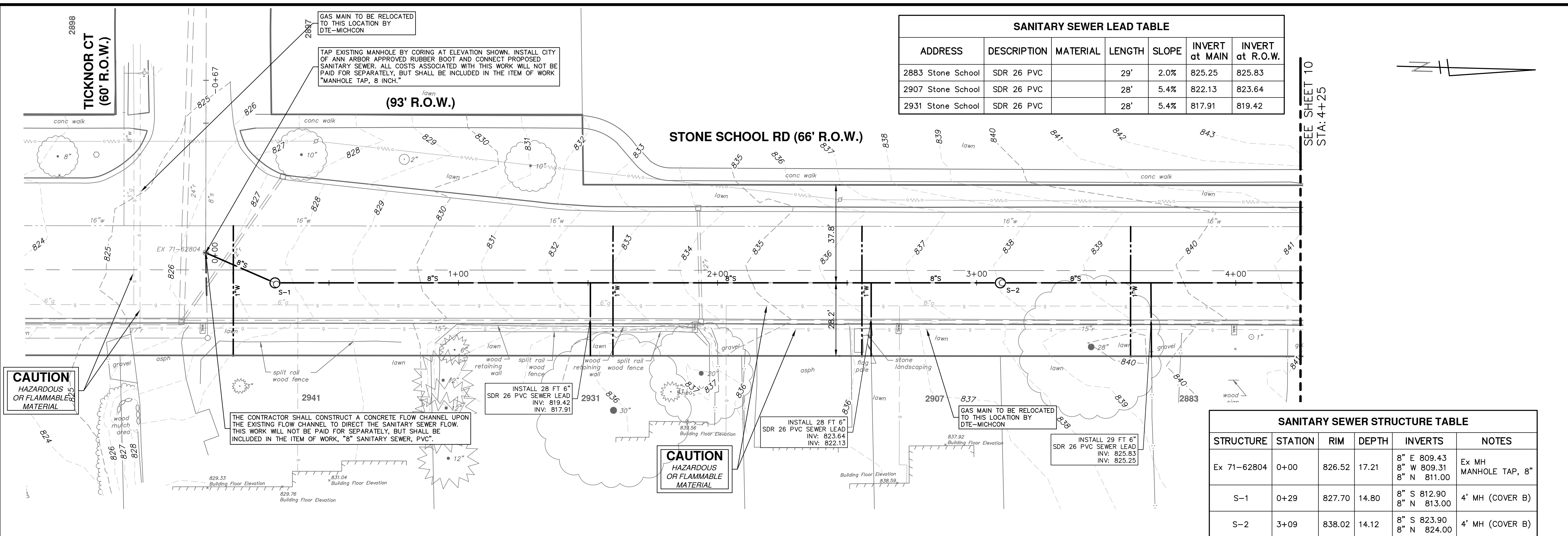


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SCALE PLAN: 1" = 20'

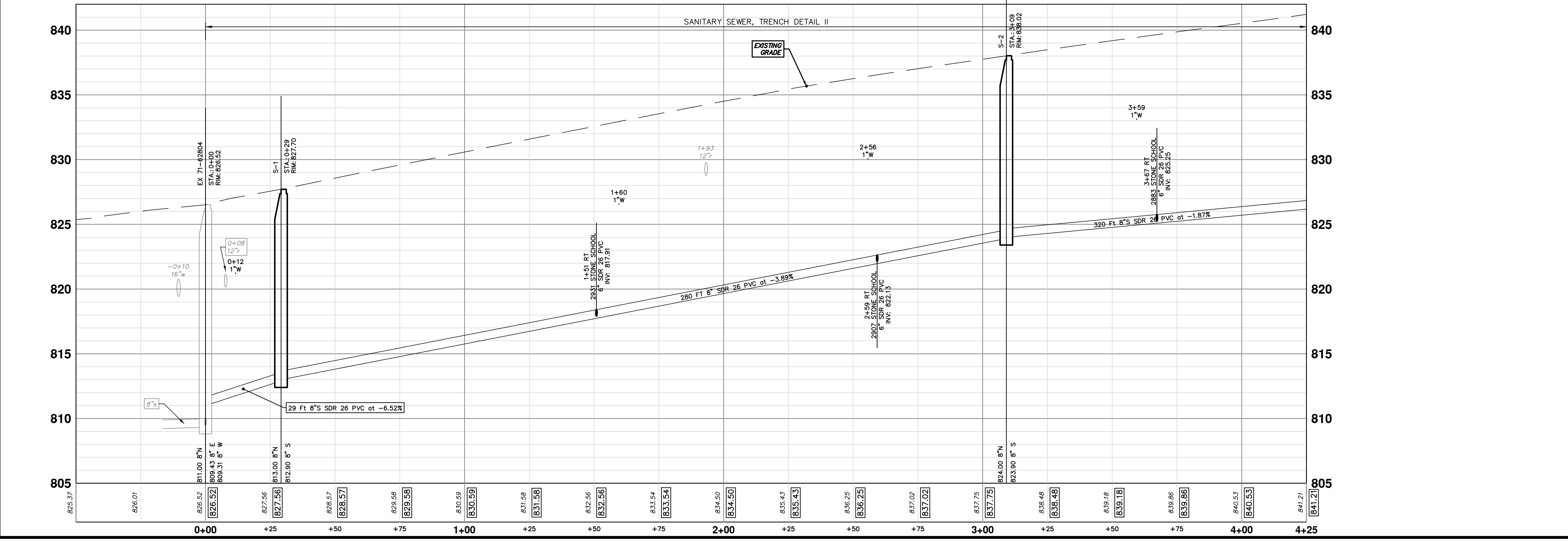
DRAWING No. 2017033-8


SHEET No. 8 OF 29



SANITARY SEWER LEAD TABLE						
ADDRESS	DESCRIPTION	MATERIAL	LENGTH	SLOPE	INVERT at MAIN	INVERT at R.O.W.
2883 Stone School	SDR 26 PVC		29'	2.0%	825.25	825.83
2907 Stone School	SDR 26 PVC		28'	5.4%	822.13	823.64
2931 Stone School	SDR 26 PVC		28'	5.4%	817.91	819.42

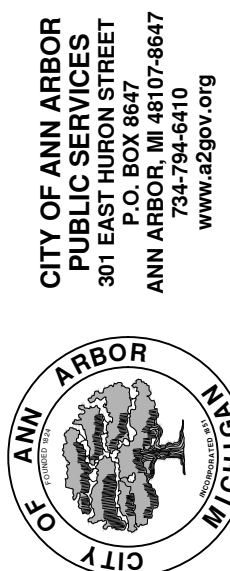
SANITARY SEWER STRUCTURE TABLE						
STRUCTURE	STATION	RIM	DEPTH	INVERTS	NOTES	
Ex 71-62804	0+00	826.52	17.21	8" E 809.43 8" W 809.31 8" N 811.00	Ex MH MANHOLE TAP, 8"	
S-1	0+29	827.70	14.80	8" S 812.90 8" N 813.00	4' MH (COVER B)	
S-2	3+09	838.02	14.12	8" S 823.90 8" N 824.00	4' MH (COVER B)	





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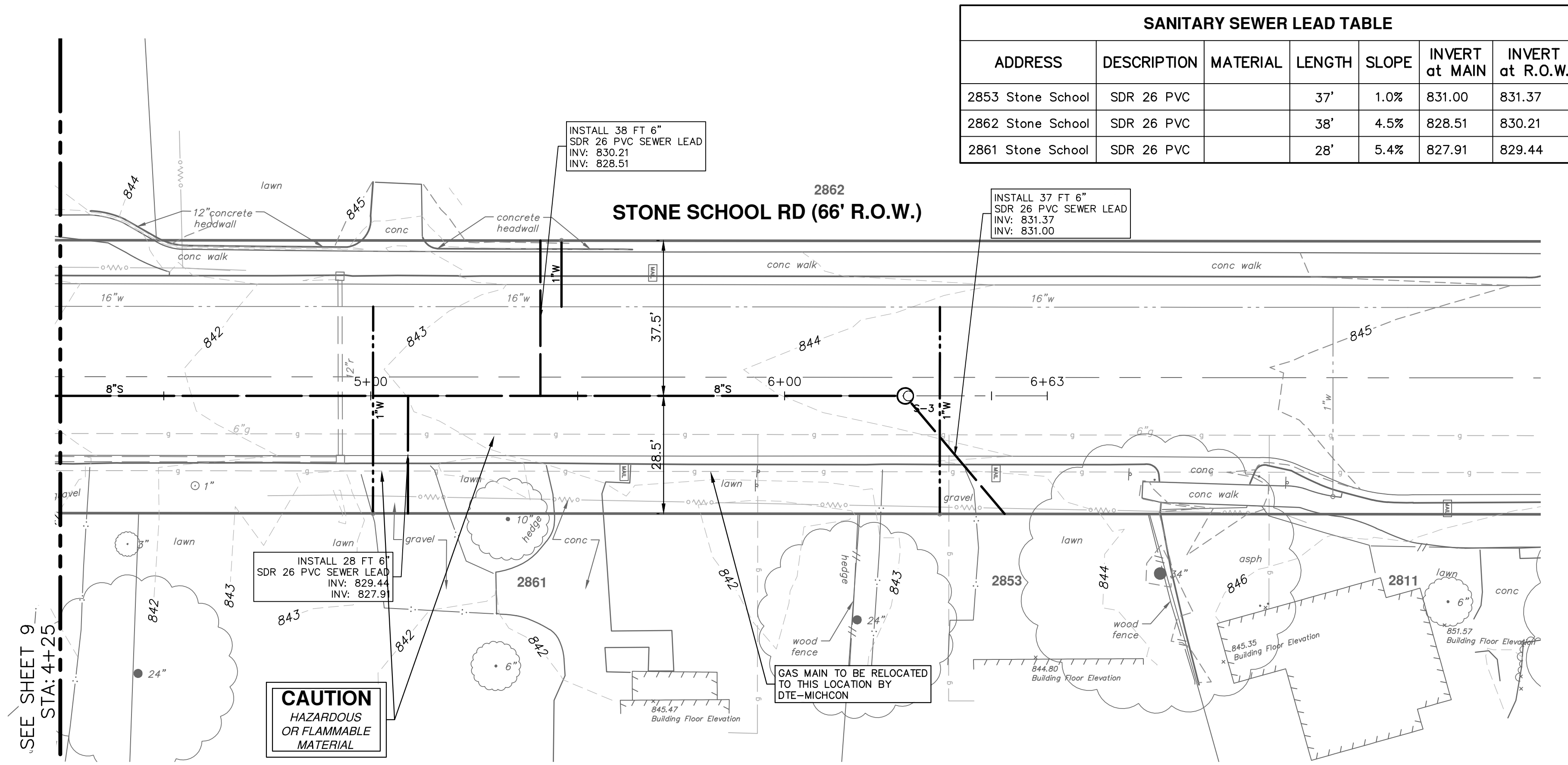
STONE SCHOOL ROAD

SANITARY SEWER STA. 0+67 - STA. 5+00

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

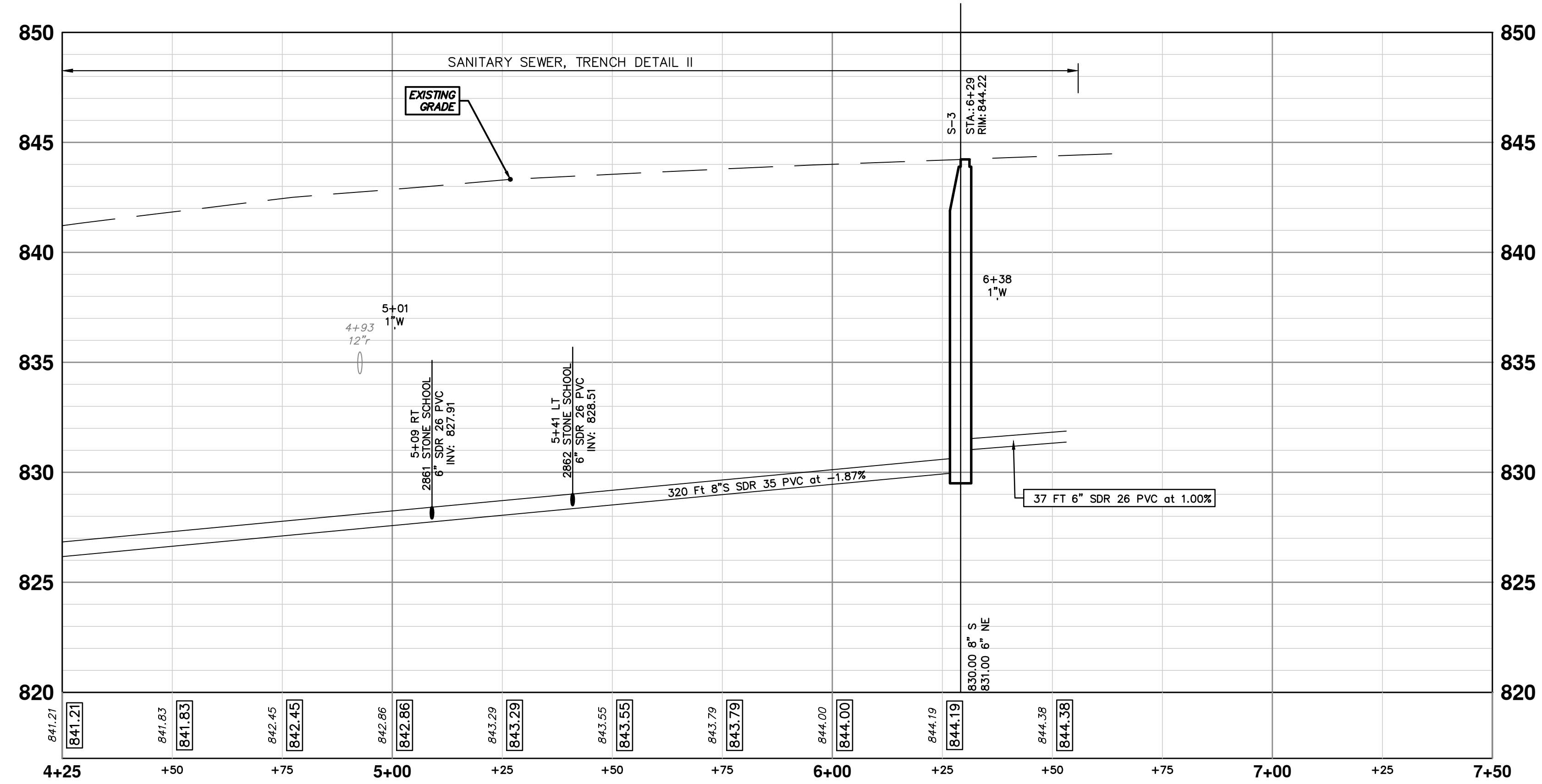
DRAWING NO. **2017033-9**

SHEET No. **9 OF 29**



SANITARY SEWER LEAD TABLE						
ADDRESS	DESCRIPTION	MATERIAL	LENGTH	SLOPE	INVERT at MAIN	INVERT at R.O.W.
2853 Stone School	SDR 26 PVC		37'	1.0%	831.00	831.37
2862 Stone School	SDR 26 PVC		38'	4.5%	828.51	830.21
2861 Stone School	SDR 26 PVC		28'	5.4%	827.91	829.44

SANITARY SEWER STRUCTURE TABLE					
STRUCTURE	STATION	RIM	DEPTH	INVERTS	NOTES
S-3	6+29	844.22	14.22	8" S 830.00 6" NE 831.00	4' MH (COVER B)



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2018 MISC UTILITY PROJECTS

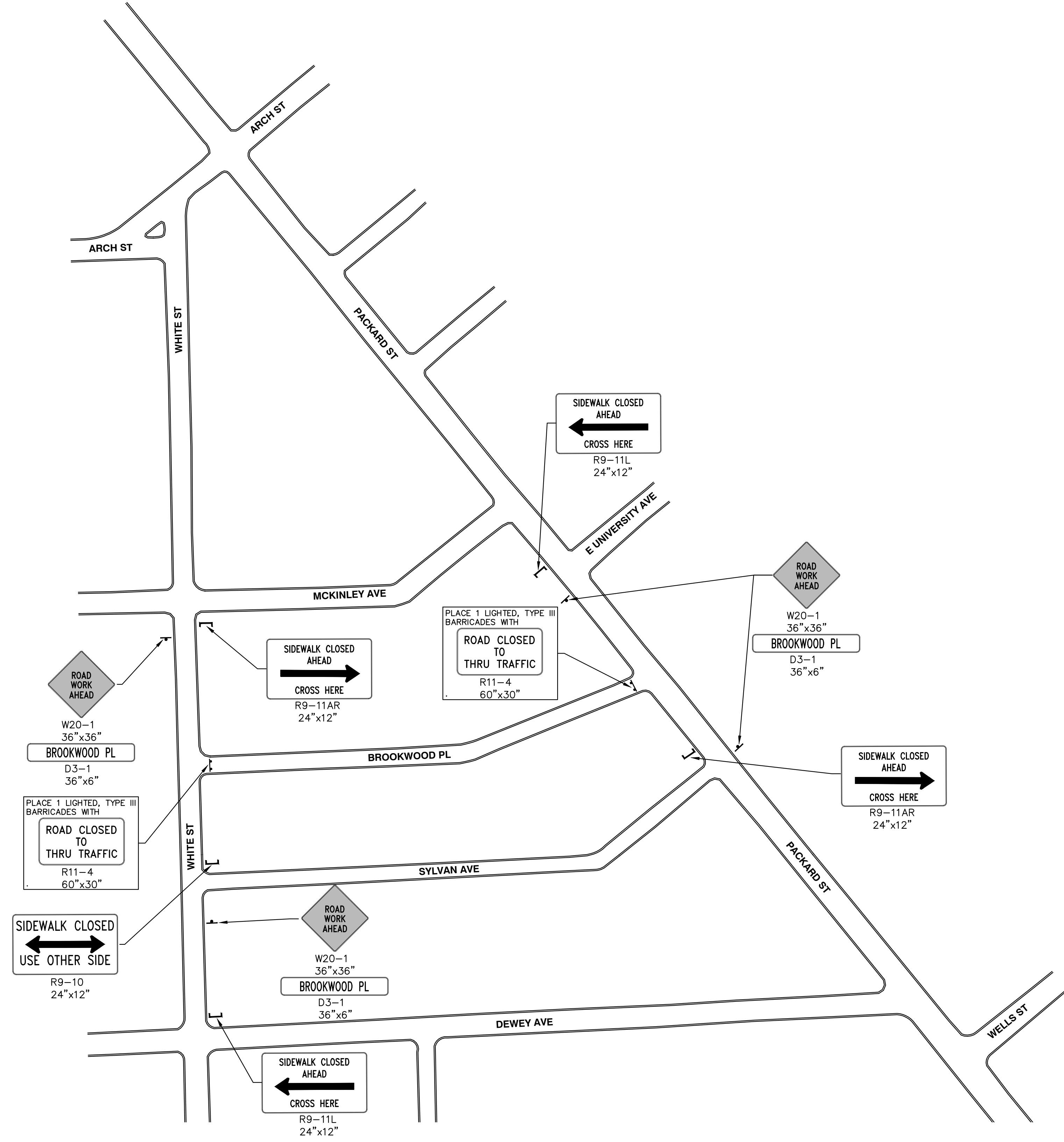
STONE SCHOOL ROAD

SANITARY SEWER STA. 5+00 TO STA. 6+96

SHEET No. **10 OF 29**

SCALE PLAN: 1" = 20' PROFILE: 1" = 4'

DRAWING No. **2017033-10**



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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
2018 MISC UTILITY PROJECTS
BROOKWOOD PLACE
TRAFFIC CONTROL - STAGE 1

SCALE PLAN: 1" = 100'
DRAWING No. 2017033-11

REV.	DESCRIPTION	DATE	BY	CHECKED
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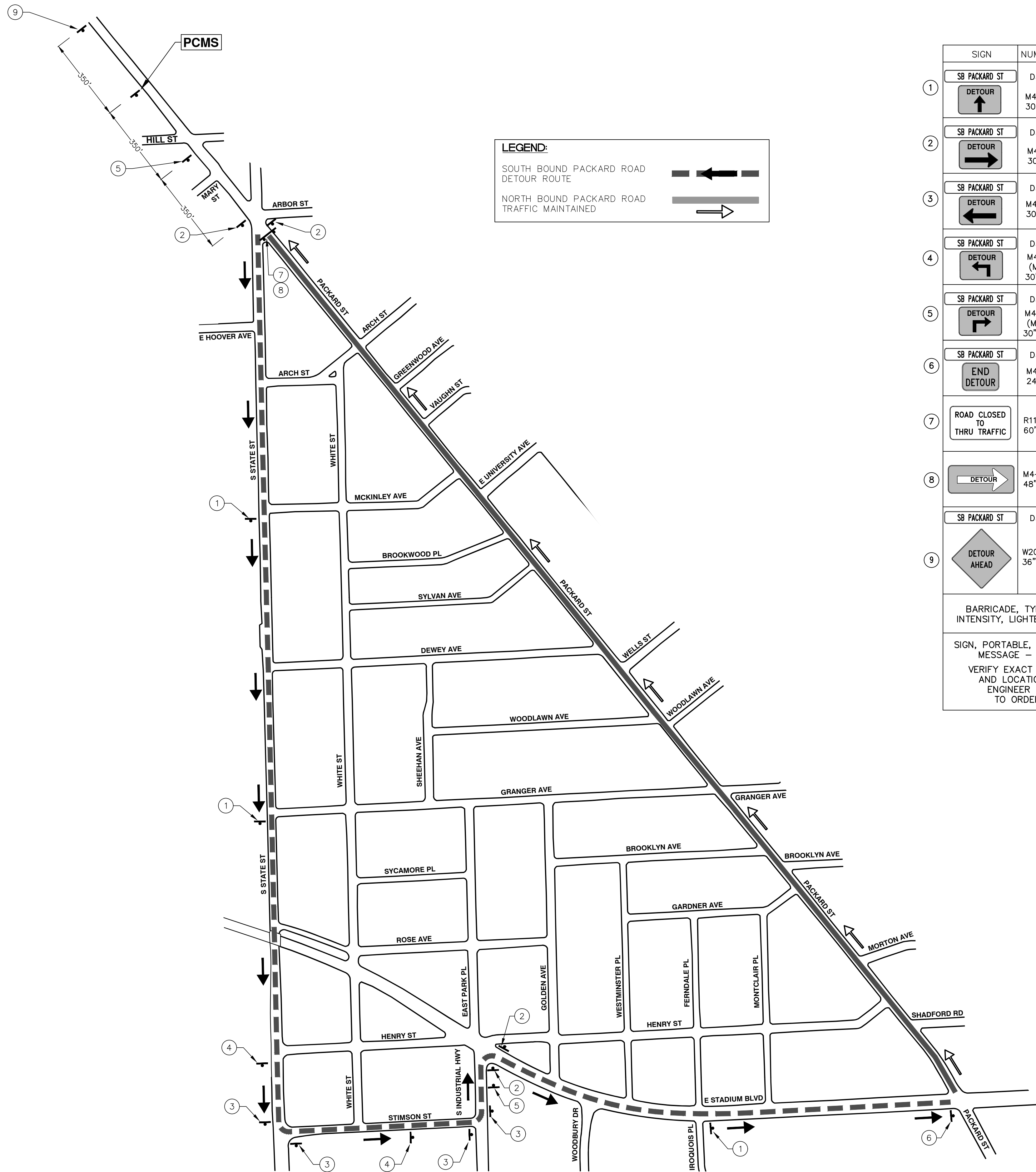
DETOUR CONSTRUCTION NOTES:

1. DEPENDING ON THE DETOUR ROUTE THAT IS PUT IN PLACE, CONFLICTING SIGNS MAY BE PRESENT. PRIOR TO THE ORDERING OR PLACEMENT OF ANY SIGNS, MEET WITH THE ENGINEER TO VERIFY THE EXACT NUMBER AND LOCATION OF THE SIGNS TO BE PLACED. THE ENGINEER AND THE CONTRACTOR SHALL WORK TOGETHER TO ELIMINATE ALL CONFLICTS.
2. THE CITY RESERVES THE RIGHT TO ORDER ADDITIONAL SIGNS AND PLACE THEM INTO SERVICE IN ORDER TO SAFELY MAINTAIN TRAFFIC. ADJUSTMENTS IN THE UNIT PRICE FOR THESE ITEMS OF WORK SHALL NOT BE ALLOWED FOR THESE OCCURRENCES.
3. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THOSE OF THE CITY OF ANN ARBOR'S SIGNS AND SIGNALS UNIT DURING THE COURSE OF THE DETOUR ROUTE ESTABLISHMENT TO EFFECTIVELY AND SAFELY MAINTAIN TRAFFIC. DO NOT ERECT ANY SIGNS UNTIL ITS LOCATION AND PROPOSED DATE OF INSTALLATION IS APPROVED BY THE ENGINEER.
4. THE DETOUR IS TO BE IN PLACE DURING BROOKWOOD PLACE WATER MAIN TIE-IN AT PACKARD ST. AS DIRECTED BY THE ENGINEER, THE CONTRACTOR WILL CLOSE AND DETOUR SOUTH BOUND PACKARD STREET TRAFFIC. SEE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR DETAILS ON CONSTRUCTION STAGING, SEQUENCING, CLOSURE AND DETOUR LIMITATIONS, AND OTHER DETAILS.
5. REFERENCE THE "SPECIAL PROVISION FOR MAINTAINING TRAFFIC AND CONSTRUCTION SEQUENCING" FOR ADDITIONAL PROJECT REQUIREMENTS. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY DIRECTED TO THE SECTION OF SAME SPECIAL PROVISION REGARDING COORDINATION WITH THE CITY SIGNS AND SIGNALS UNIT FOR MODIFICATIONS TO TRAFFIC SIGNALS FOR THE DETOUR.
6. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN SIGNS AS SHOWN ON THE PLANS OR OTHERWISE DIRECTED BY THE ENGINEER.
7. CONSTRUCTION WARNING SIGNS SHALL HAVE AN ORANGE, HIGH-INTENSITY, REFLECTORIZED BACKGROUND.
8. SIGNS SHALL CONFORM TO THE 2011 MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
9. THE CONTRACTOR SHALL DRIVE ALL SIGNS INTO EXPOSED GROUND OR INSERT INTO A BORED HOLE IN PAVEMENT AS NECESSARY TO PERMANENTLY SECURE. ALL HOLES IN PAVEMENT SHALL BE FILLED WITH ENGINEER-APPROVED MORTAR WHEN THE SIGN IS REMOVED AND NO LONGER NEEDED. COSTS FOR THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "SIGN, TYPE B, TEMP, PRISMATIC, FURN" OR "SIGN, TYPE B, TEMP, PRISMATIC, FURN, SPECIAL".
10. ADVANCE WARNING SIGNS SHALL BE PROVIDED WITH TWO (2) TYPE A FLASHING LIGHTS AND ONE (1) DAY-GLOW ORANGE FLAG.
11. CITY TO BE NOTIFIED A MINIMUM OF 7 DAYS PRIOR TO IMPLEMENTING SOUTH BOUND PACKARD STREET DETOUR. MESSAGE BOARDS TO BE PLACED 7 DAYS PRIOR TO IMPLEMENTATION OF DETOUR.

PCMS MESSAGE PHASING	
PRIOR TO CONSTRUCTION	DURING CONSTRUCTION
PACKARD STREET CONSTRUCTION	SB PACKARD STREET CLSD AT STATE
MONTH DATE *	FOLLOW POSTED DETOUR

NOTE: PCMS LOCATIONS AND MESSAGES WILL BE AS DIRECTED BY THE ENGINEER. TO BE PLACED ONE WEEK PRIOR TO CONSTRUCTION.

*THE CONTRACTOR SHALL PLACE THE APPROPRIATE DATE AS APPROVED BY THE ENGINEER.

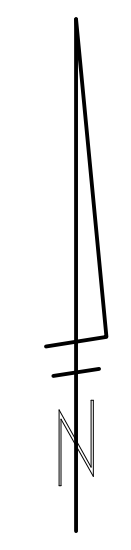


LEGEND:

SOUTH BOUND PACKARD ROAD
DETOUR ROUTE

NORTH BOUND PACKARD ROAD
TRAFFIC MAINTAINED

SIGN	NUMBER	QUANTITY
SB PACKARD ST DETOUR	D3-1 M4-9S 30"x24"	5
SB PACKARD ST DETOUR	D3-1 M4-9R 30"x24"	2
SB PACKARD ST DETOUR	D3-1 M4-9L 30"x24"	6
SB PACKARD ST DETOUR	D3-1 M4-9L (MOD) 30"x24"	3
SB PACKARD ST DETOUR	D3-1 M4-9R (MOD) 30"x24"	1
SB PACKARD ST END DETOUR	D3-1 M4-8A 24"x18"	1
ROAD CLOSED TO THRU TRAFFIC	R11-4 60"x30"	1
DETOUR	M4-10R 48"x18"	1
SB PACKARD ST	D3-1	1
DETOUR AHEAD	W20-2 36"x36"	4
BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED - 1 EACH		
SIGN, PORTABLE, CHANGEABLE MESSAGE - 1 EACH		
VERIFY EXACT QUANTITY AND LOCATION WITH ENGINEER PRIOR TO ORDERING		



R:\2017033 Brookwood Pl Water Main\Plan Production\2017033Dtr.dwg Dwg Created: 2-Mar-18 - _a2 standard bw.stb - Plot Date: 6-Mar-18

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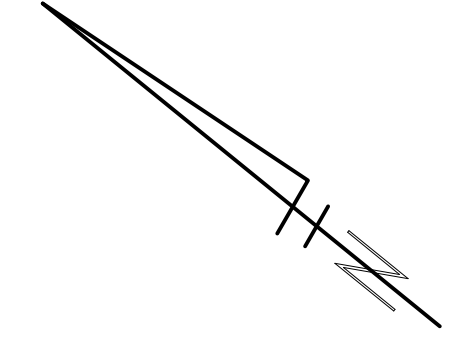
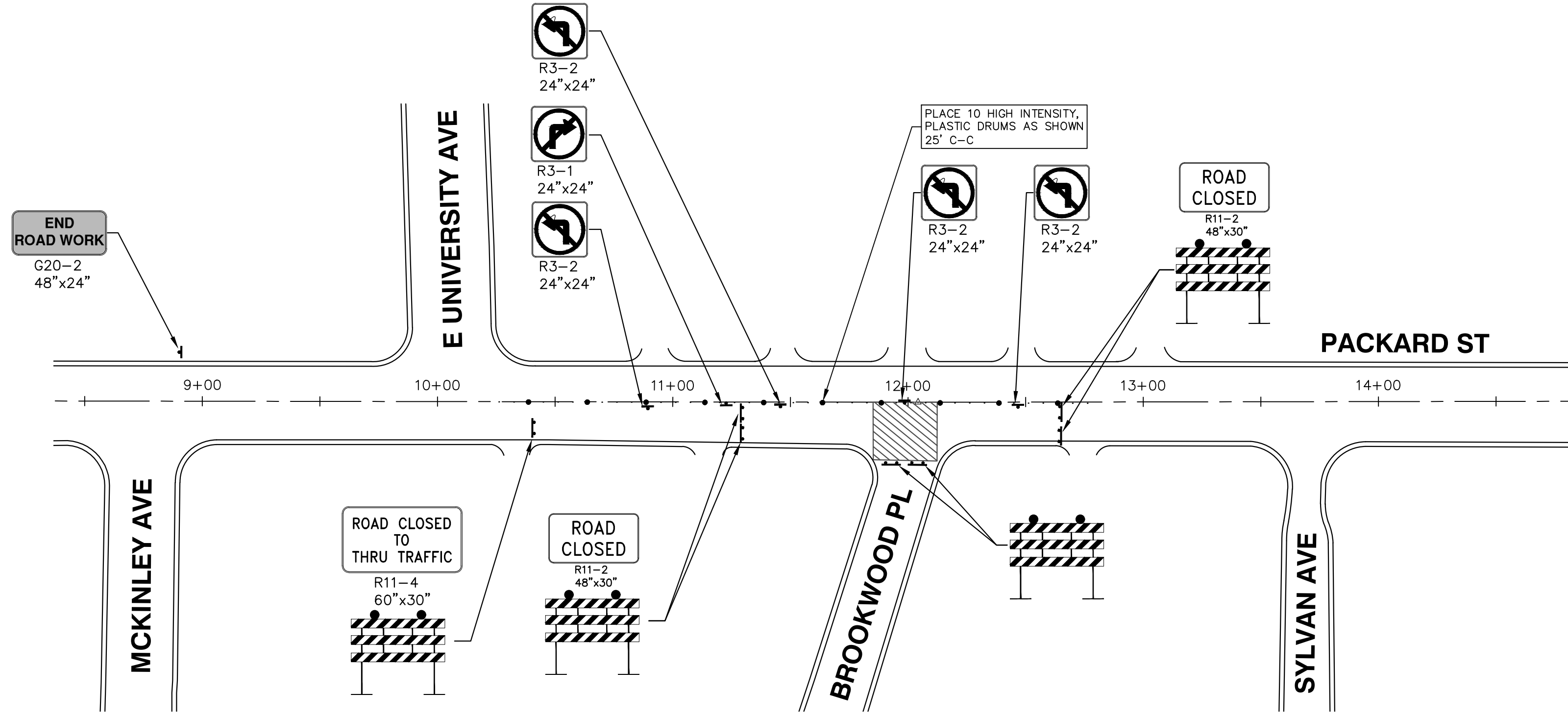
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PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-3647
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
2018 MISC UTILITY PROJECTS
BROOKWOOD PLACE
DETOUR PLAN

SCALE PLAN: 1" = 250'
DRAWING No.
2017033-12

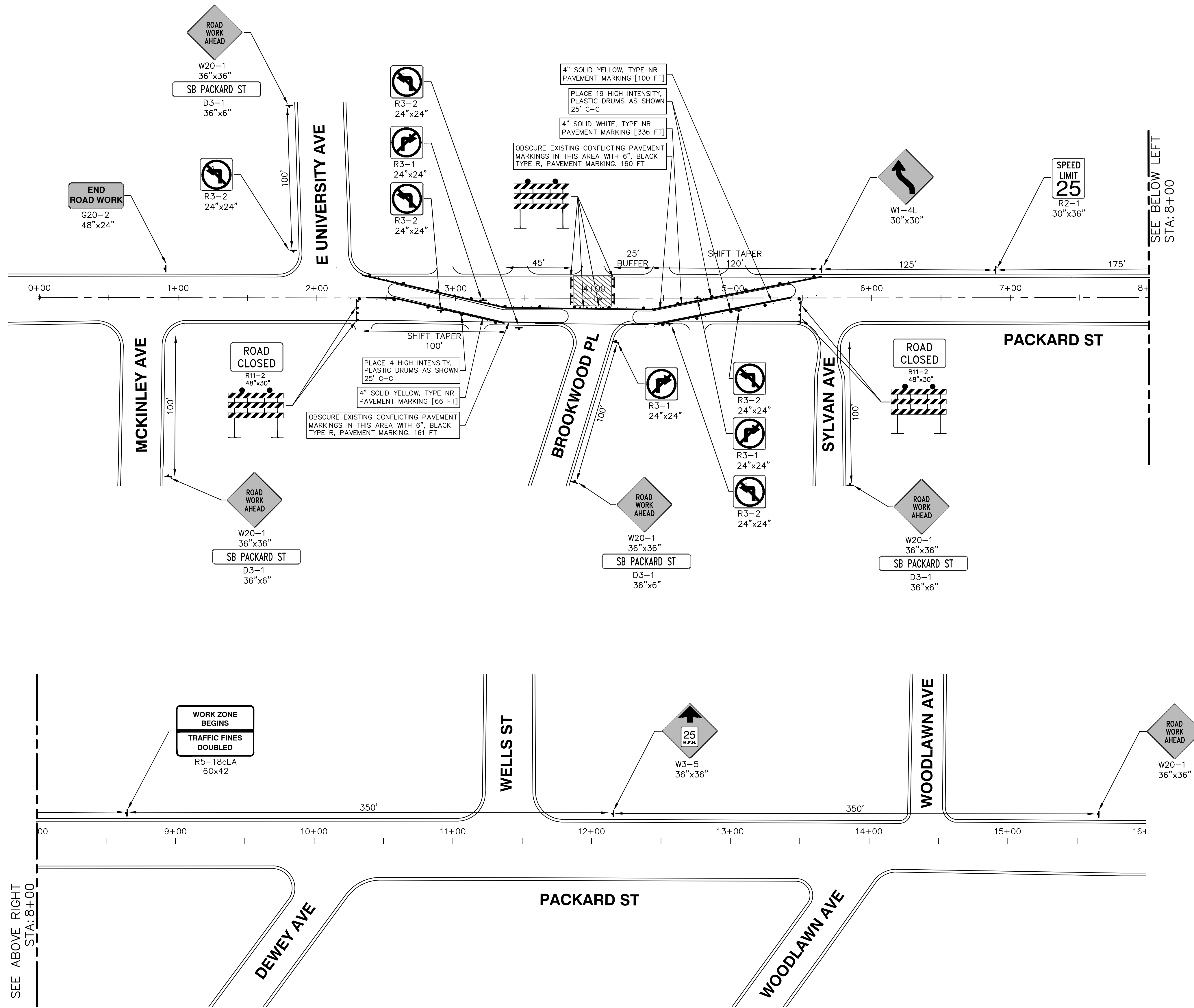
SHEET No.

12 OF 29



<p>CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING</p> <p>2018 MISC UTILITY PROJECTS</p> <p>BROOKWOOD PLACE</p> <p>TRAFFIC CONTROL - STAGE 2, PHASE 1</p>		<p>811</p> <p>Know what's below. Call before you dig.</p>										
<p>CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET ANN ARBOR, MI 48106-6647 www.a2gov.org</p>	<p>ANN ARBOR MICHIGAN</p>	<table border="1"> <tr> <th>REV.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> <th>CHECKED</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	REV.	DESCRIPTION	DATE	BY	CHECKED					
REV.	DESCRIPTION	DATE	BY	CHECKED								
<p>SHEET No.</p> <p>13 OF 29</p>	<p>SCALE PLAN: 1" = 40'</p> <p>DRAWING No.</p> <p>2017033-13</p>	<p>GO COPY TO NEXT LINE AND EDIT THE TEXT</p>										

R:\2017033 Brookwood Pl Water Main\Plan Production\2017033Mtrf2.dwg Dwg Created: 2-Mar-18 - _a2 standard bw.stb - Plot Date: 6-Mar-18



SEE ABOVE RIGHT
STA: 8+00

SEE BELOW LEFT
STA: 8+00

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2018 MISC UTILITY PROJECTS

BROOKWOOD PLACE

TRAFFIC CONTROL - STAGE 2, PHASE 2

811
Know what's below.
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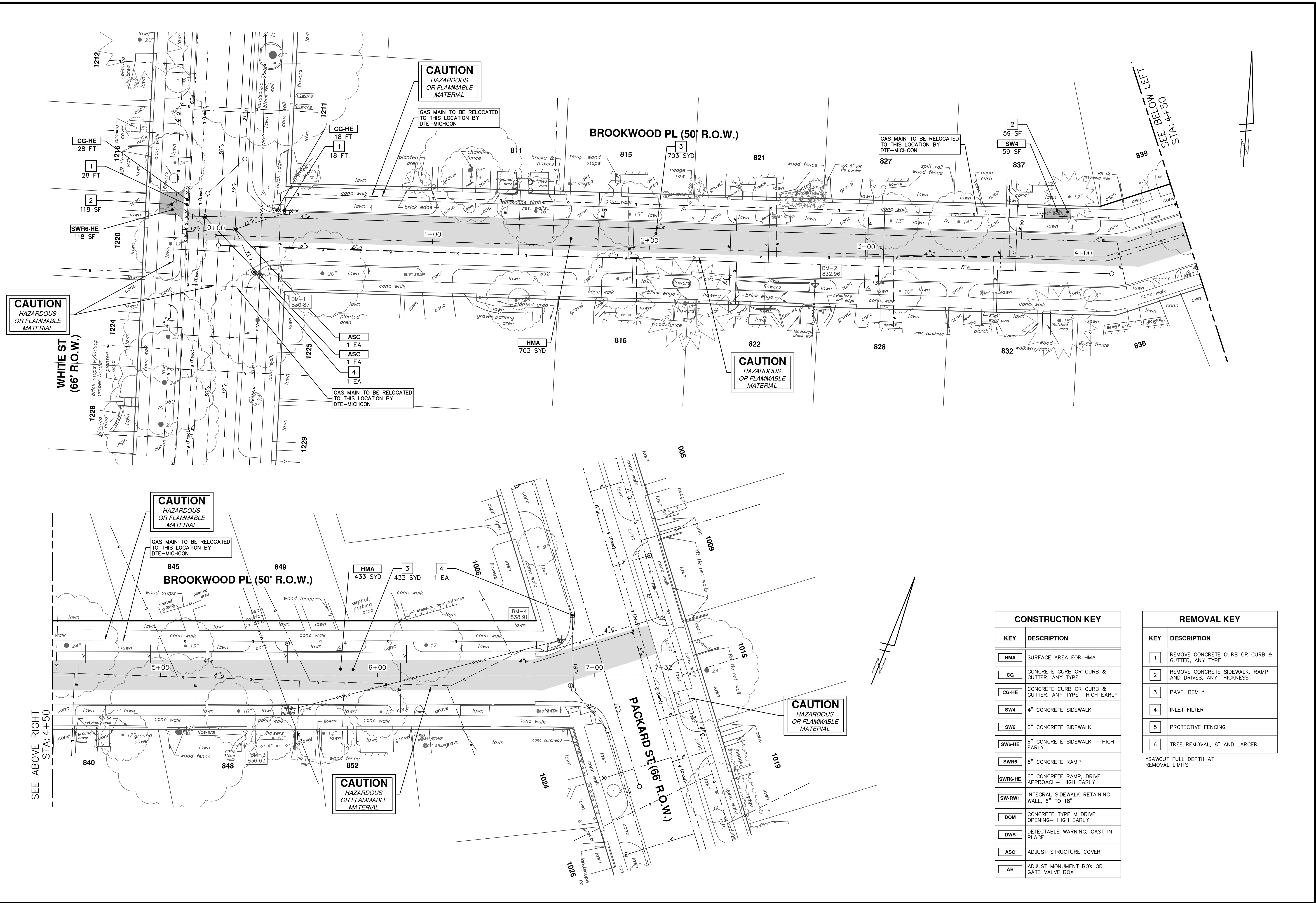
ANN ARBOR
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-8647
ANN ARBOR 734-794-4410
www.a2gov.org

SCALE: 1" = 40'

DRAWING No. 2017033-14

SHEET No. 14 OF 29

REV.	DESCRIPTION	DATE	BY	CHECKED
00	COPY TO NEXT LINE AND EDIT THE TEXT			



CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	SURFACE AREA FOR HMA
CG	CONCRETE CURB OR CURB & GUTTER, ANY TYPE
CG-HE	CONCRETE CURB OR CURB & GUTTER, ANY TYPE - HIGH EARLY
SW4	4" CONCRETE SIDEWALK
SW6	6" CONCRETE SIDEWALK
SW6-HE	6" CONCRETE SIDEWALK - HIGH EARLY
SWR6	6" CONCRETE RAMP
SWR6-HE	6" CONCRETE RAMP, DRIVE APPROACH - HIGH EARLY
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6" TO 18"
DOM	CONCRETE TYPE M DRIVE OPENING - HIGH EARLY
DWS	DETECTABLE WARNING, CAST IN PLACE
ASC	ADJUST STRUCTURE COVER
AB	ADJUST MONUMENT BOX OR GATE VALVE BOX

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

*SAWCUT FULL DEPTH AT REMOVAL LIMITS

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2018 MISC UTILITY PROJECTS

BROOKWOOD PLACE

REMOVALS

SCALE PLAN: 1" = 20'

DRAWING NO. 2017033-15

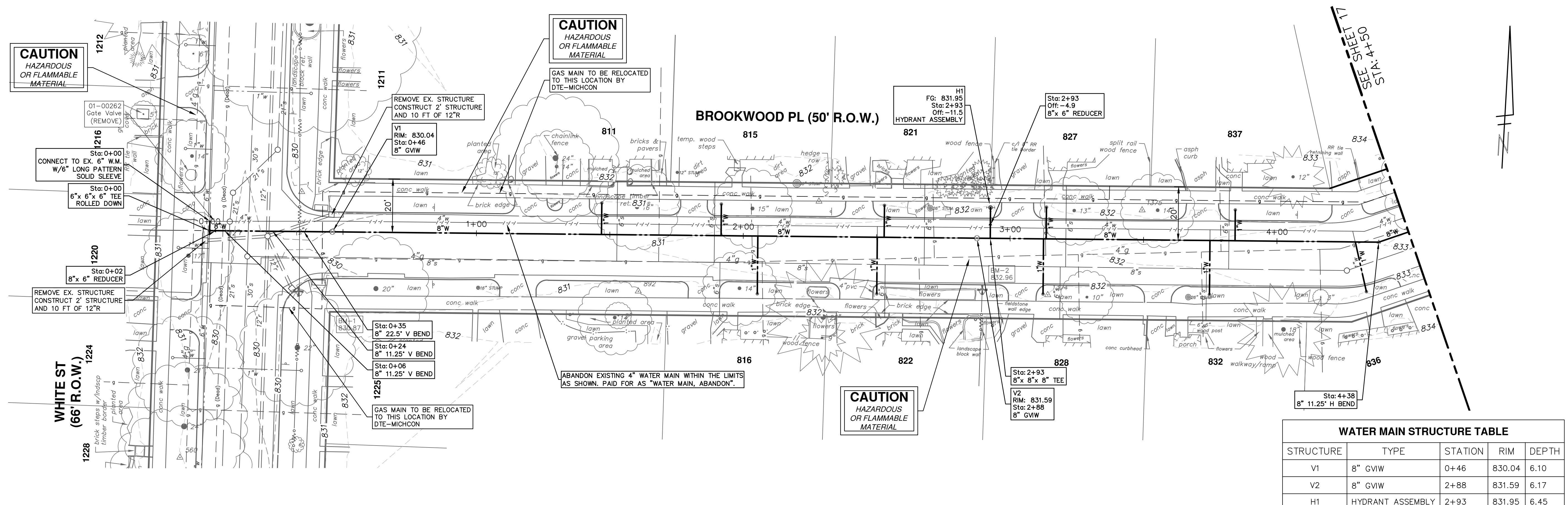
SHEET NO. 15 OF 29

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

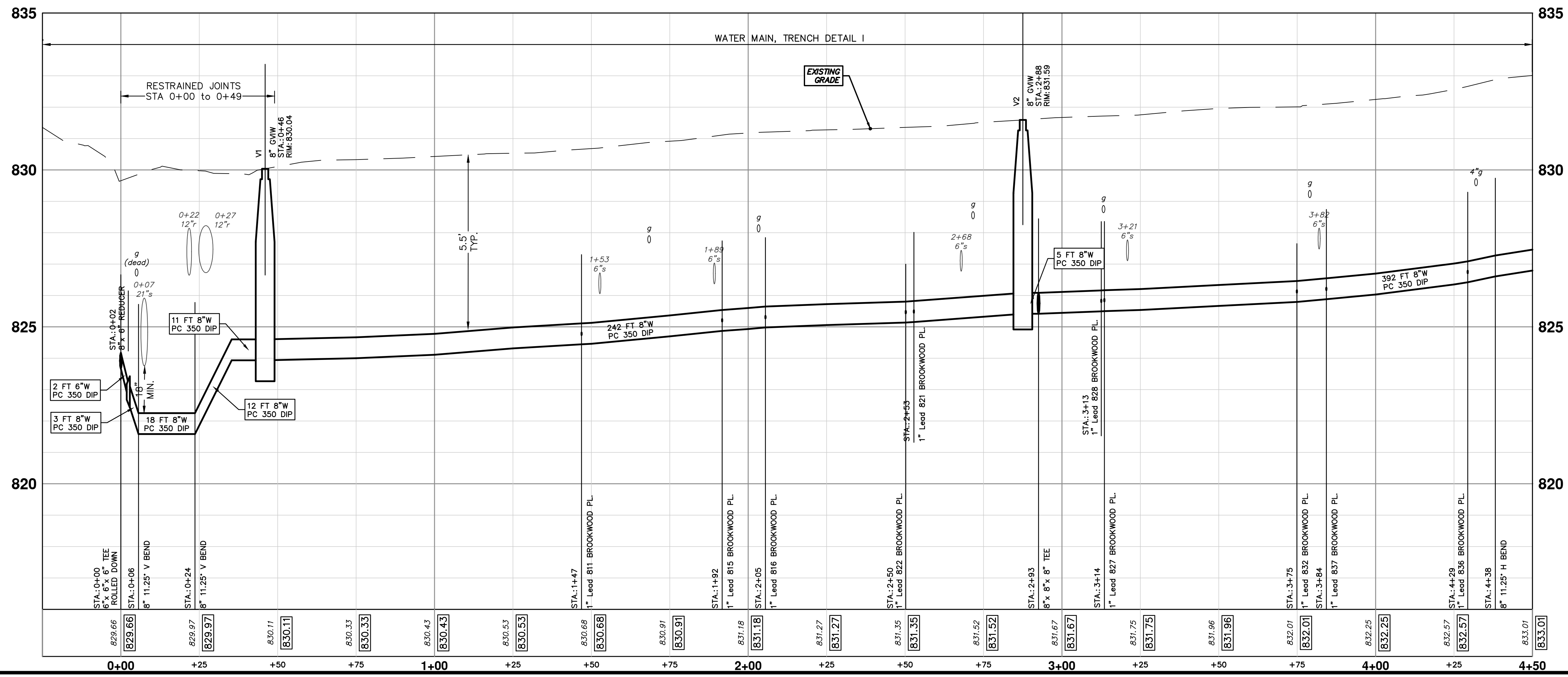
NO	DESCRIPTION	DATE	BY	CHECKED

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-0667
ANN ARBOR 734.754.4110
WWW.A2GOV.GOV

CITY OF ANN ARBOR MICHIGAN



WATER MAIN STRUCTURE TABLE				
STRUCTURE	TYPE	STATION	RIM	DEPTH
V1	8" GVIW	0+46	830.04	6.10
V2	8" GVIW	2+88	831.59	6.17
H1	HYDRANT ASSEMBLY	2+93	831.95	6.45



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2018 MISC UTILITY PROJECTS

BROOKWOOD PLACE

WATER MAIN STA. 0+00 TO STA. 4+50

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PUBLIC SERVICES
301 EAST HURON STREET
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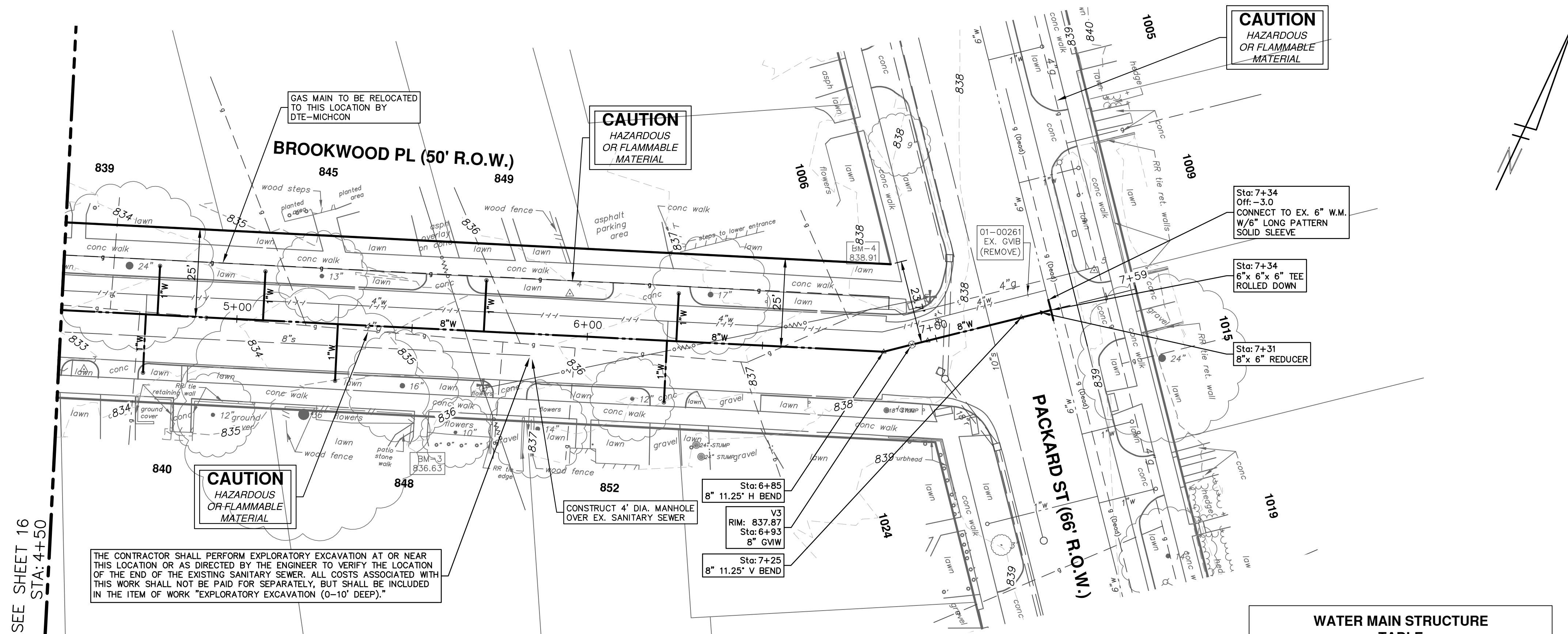
ANN ARBOR
MICHIGAN
CITY

SHEET No. 16 OF 29

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

DRAWING No. 2017033-16

NO.	DESCRIPTION	DATE	BY	CHECKED
00	COPY TO NEXT LINE AND EDIT THE TEXT			
01				
02				

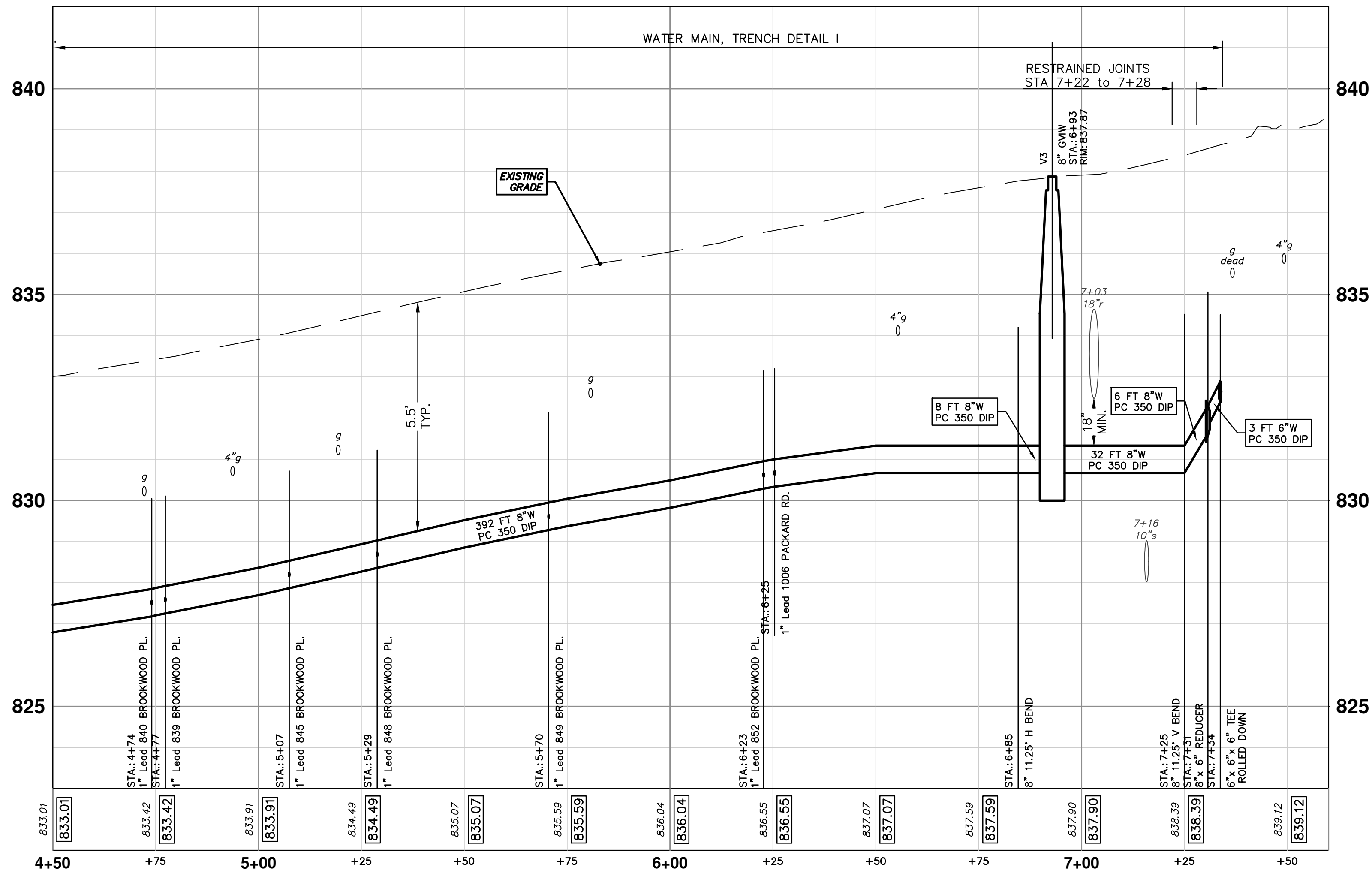


SEE SHEET 16
STA: 4+50

THE CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATION AT OR NEAR THIS LOCATION OR AS DIRECTED BY THE ENGINEER TO VERIFY THE LOCATION OF THE END OF THE EXISTING SANITARY SEWER. ALL COSTS ASSOCIATED WITH THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "EXPLORATORY EXCAVATION (0-10' DEEP)."

WATER MAIN STRUCTURE TABLE

STRUCTURE	TYPE	STATION	RIM	DEPTH
V3	8" GVW	6+93	837.87	7.20



811
Know what's below.
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PUBLIC SERVICES
301 EAST HURON STREET
PO BOX 86402 MI 48106-6647
ANN ARBOR MI 48106-6647
www.a3gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2018 MISC UTILITY PROJECTS

BROOKWOOD PLACE

WATER MAIN STA. 4+50 TO STA. 7+34

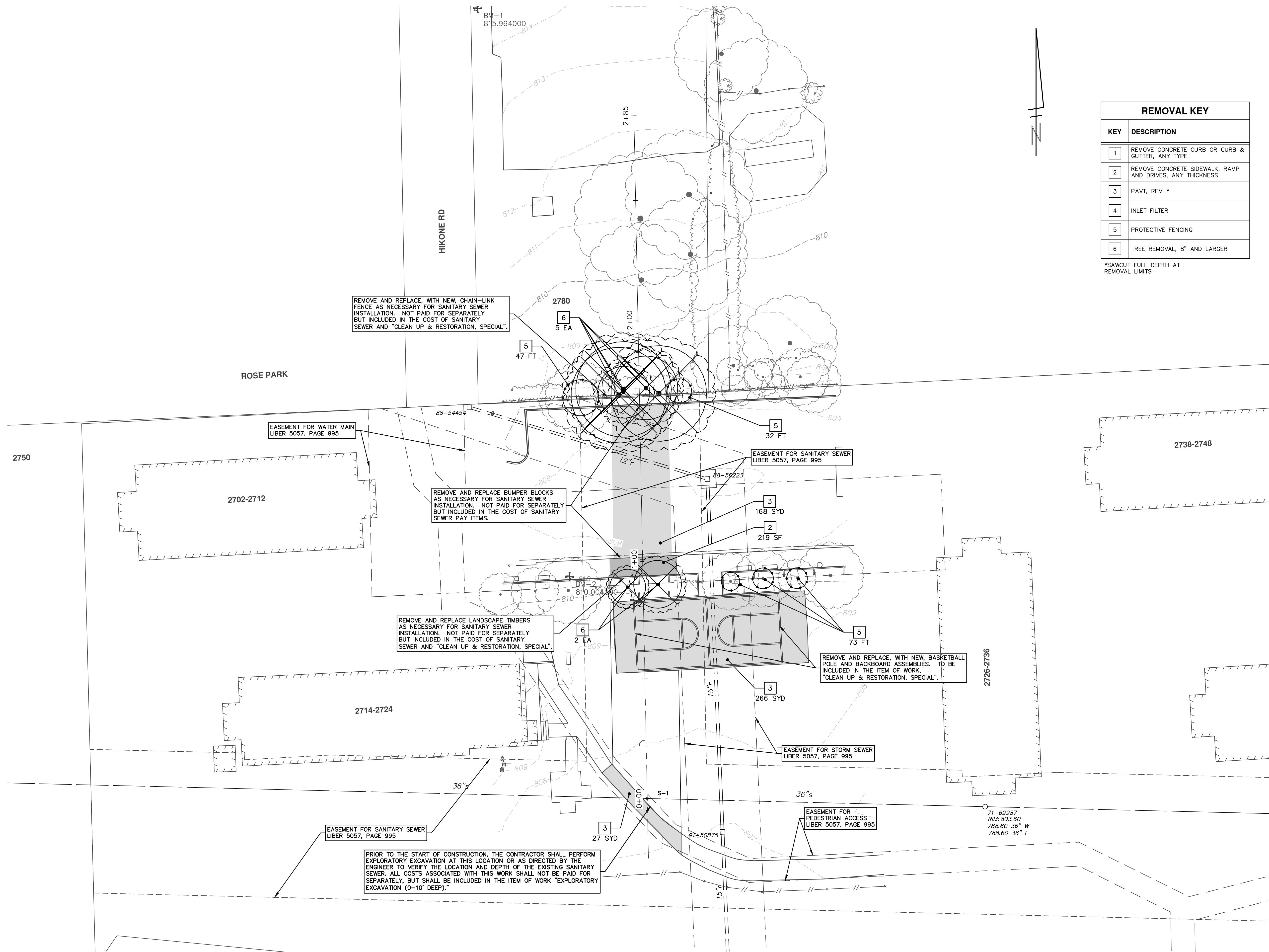
SHEET No. **17 OF 29**

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

DRAWING No. **2017033-17**

NO	REV.	DESCRIPTION	DATE	BY	CHECKED

R:\2017033 Packard San\Plan Production\2016035SAN.dwg Dwg Created: 6-Mar-18 - _a2 standard bw.stb - Plot Date: 6-Mar-18



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

*SAWCUT FULL DEPTH AT REMOVAL LIMITS

REMOVE AND REPLACE, WITH NEW, CHAIN-LINK FENCE AS NECESSARY FOR SANITARY SEWER INSTALLATION. NOT PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF SANITARY SEWER AND "CLEAN UP & RESTORATION, SPECIAL".

EASEMENT FOR WATER MAIN LIBER 5057, PAGE 995

REMOVE AND REPLACE BUMPER BLOCKS AS NECESSARY FOR SANITARY SEWER INSTALLATION. NOT PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF SANITARY SEWER PAY ITEMS.

REMOVE AND REPLACE LANDSCAPE TIMBERS AS NECESSARY FOR SANITARY SEWER INSTALLATION. NOT PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF SANITARY SEWER AND "CLEAN UP & RESTORATION, SPECIAL".

REMOVE AND REPLACE, WITH NEW, BASKETBALL POLE AND BACKBOARD ASSEMBLIES. TO BE INCLUDED IN THE ITEM OF WORK, "CLEAN UP & RESTORATION, SPECIAL".

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATION AT THIS LOCATION OR AS DIRECTED BY THE ENGINEER TO VERIFY THE LOCATION AND DEPTH OF THE EXISTING SANITARY SEWER. ALL COSTS ASSOCIATED WITH THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "EXPLORATORY EXCAVATION (0-10' DEEP)."



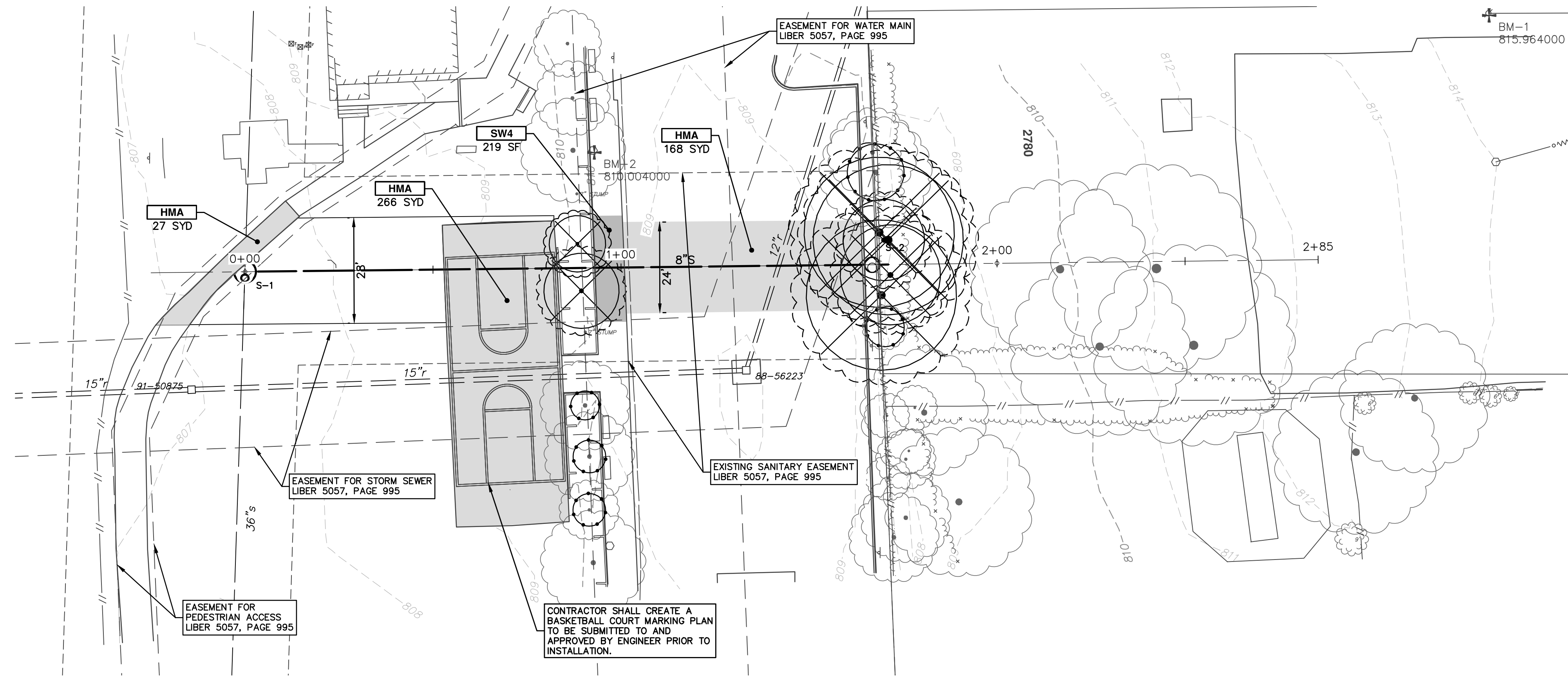
CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR, MI 48106-3667
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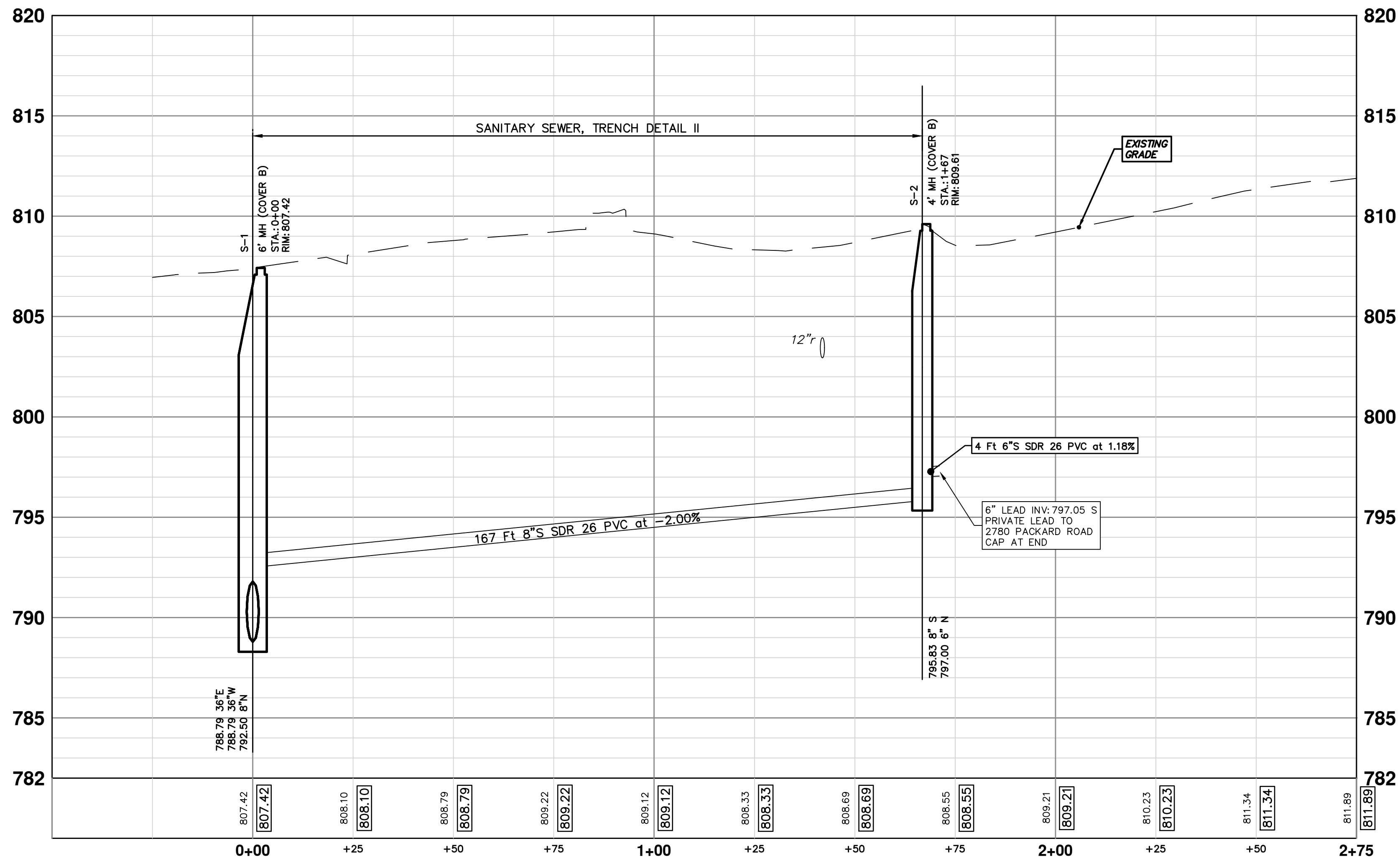
PROJECT MANAGEMENT - PUBLIC SERVICES - CITY OF ANN ARBOR
2018 MISC UTILITY PROJECTS
PACKARD ROAD
REMOVALS

SCALE PLAN: 1" = 20'
DRAWING No. 2017033-18


NO	DATE	DESCRIPTION	BY	CHECKED




CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	SURFACE AREA FOR HMA
CG	CONCRETE CURB OR CURB & GUTTER, ANY TYPE
CG-HE	CONCRETE CURB OR CURB & GUTTER, ANY TYPE- HIGH EARLY
SW4	4" CONCRETE SIDEWALK
SW6	6" CONCRETE SIDEWALK
SW6-HE	6" CONCRETE SIDEWALK - HIGH EARLY
SWR6	6" CONCRETE RAMP
SWR6-HE	6" CONCRETE RAMP, DRIVE APPROACH- HIGH EARLY
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6" TO 18"
DOM	CONCRETE TYPE M DRIVE OPENING- HIGH EARLY
DWS	DETECTABLE WARNING, CAST IN PLACE
ASC	ADJUST STRUCTURE COVER
AB	ADJUST MONUMENT BOX OR GATE VALVE BOX



SANITARY SEWER STRUCTURE TABLE						
STRUCTURE	STATION	RIM	DEPTH	TYPE	INVERTS	NOTES
S-1	0+00	807.42	18.63	6' MH	36" E 788.79 36" W 788.79 8" N 792.50	6' MH (Cover B)
S-2	1+67	809.61	13.78	4' MH	8" S 795.83 6" N 797.00	4' MH (Cover B)



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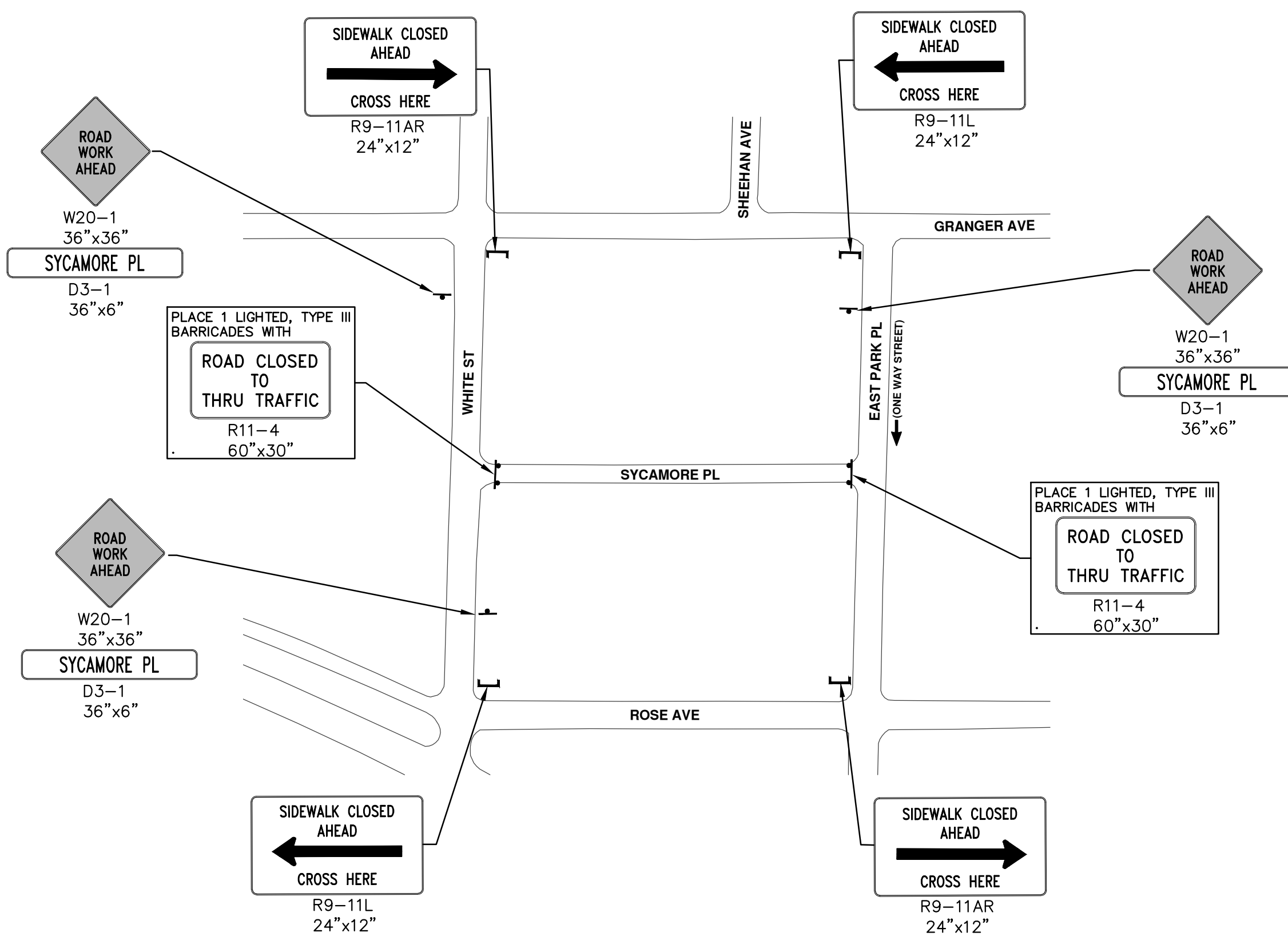
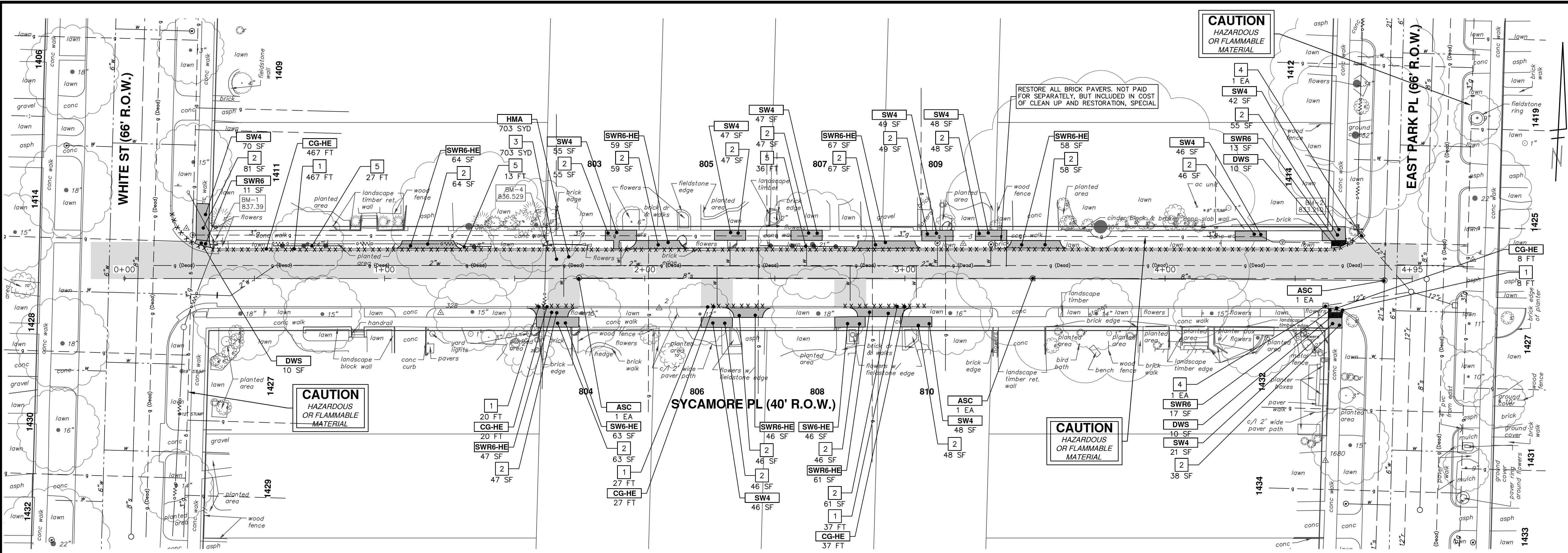
PROJECT MANAGEMENT - CITY OF ANN ARBOR
2018 MISC UTILITY PROJECTS
PACKARD ROAD
SANITARY SEWER PLAN & PROFILE

SCALE PLAN: 1" = 20'
PROFILE: 1" = 4'

DRAWING No. 2017033-19

SHEET No. 19 OF 29

NO.	DESCRIPTION	DATE	BY	CHECKED



CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	SURFACE AREA FOR HMA
CG	CONCRETE CURB OR CURB & GUTTER, ANY TYPE
CG-HE	CONCRETE CURB OR CURB & GUTTER, ANY TYPE- HIGH EARLY
SW4	4" CONCRETE SIDEWALK
SW6	6" CONCRETE SIDEWALK
SW6-HE	6" CONCRETE SIDEWALK - HIGH EARLY
SWR6	6" CONCRETE RAMP
SWR6-HE	6" CONCRETE RAMP, DRIVE APPROACH- HIGH EARLY
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6" TO 18"
DOM	CONCRETE TYPE M DRIVE OPENING- HIGH EARLY
DWS	DETECTABLE WARNING, CAST IN PLACE
ASC	ADJUST STRUCTURE COVER
AB	ADJUST MONUMENT BOX OR GATE VALVE BOX

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

*SAWCUT FULL DEPTH AT REMOVAL LIMITS

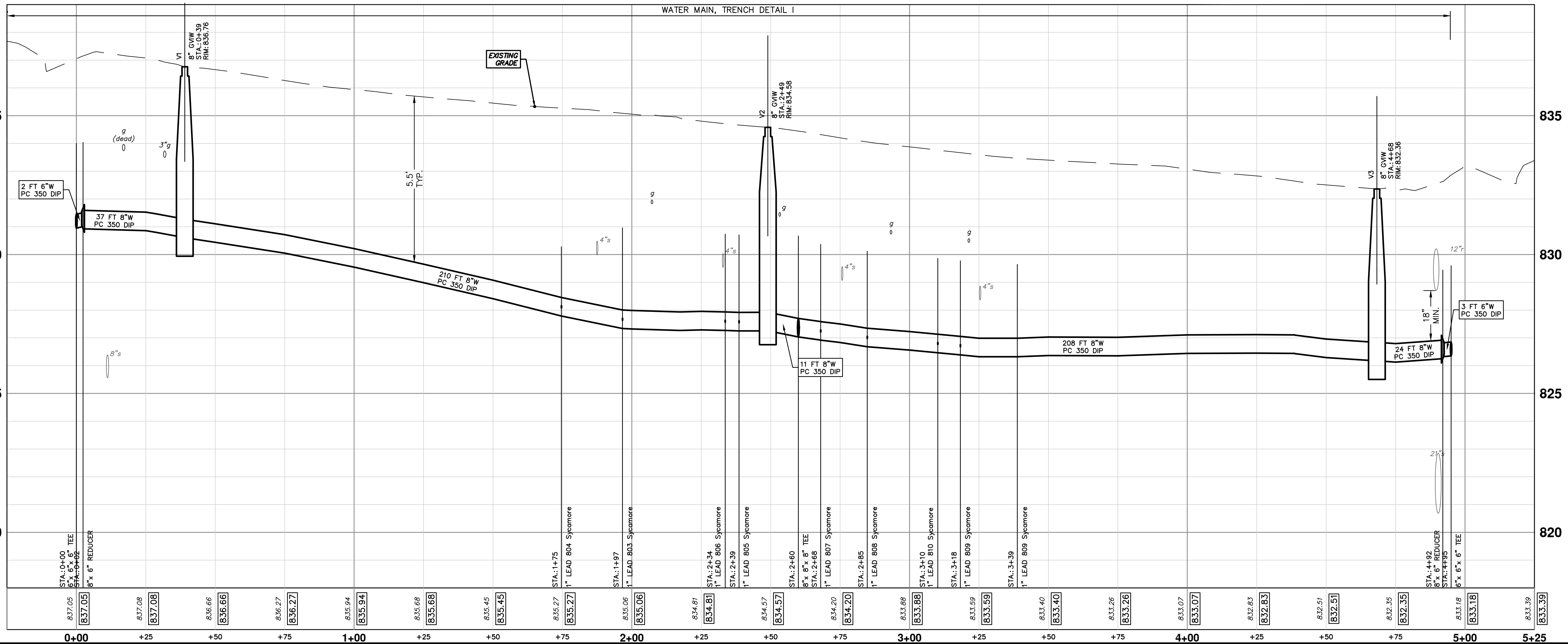
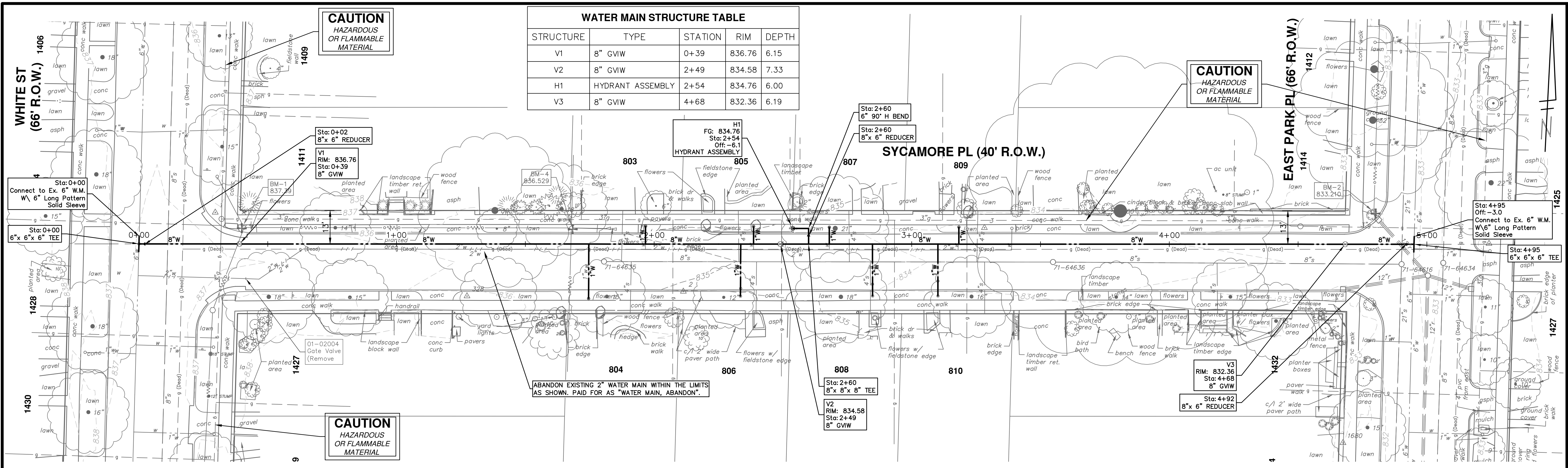
811
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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
2018 MISC UTILITY PROJECTS
SYCAMORE PLACE
REMOVALS AND TRAFFIC CONTROL

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
PO BOX 86400-8647
ANN ARBOR MI 48108-8640
www.aagov.org

SCALE PLAN: 1" = 20'
DRAWING NO. 2017033-20
SHEET NO. 20 OF 29

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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
2018 MISC UTILITY PROJECTS
SYCAMORE PLACE

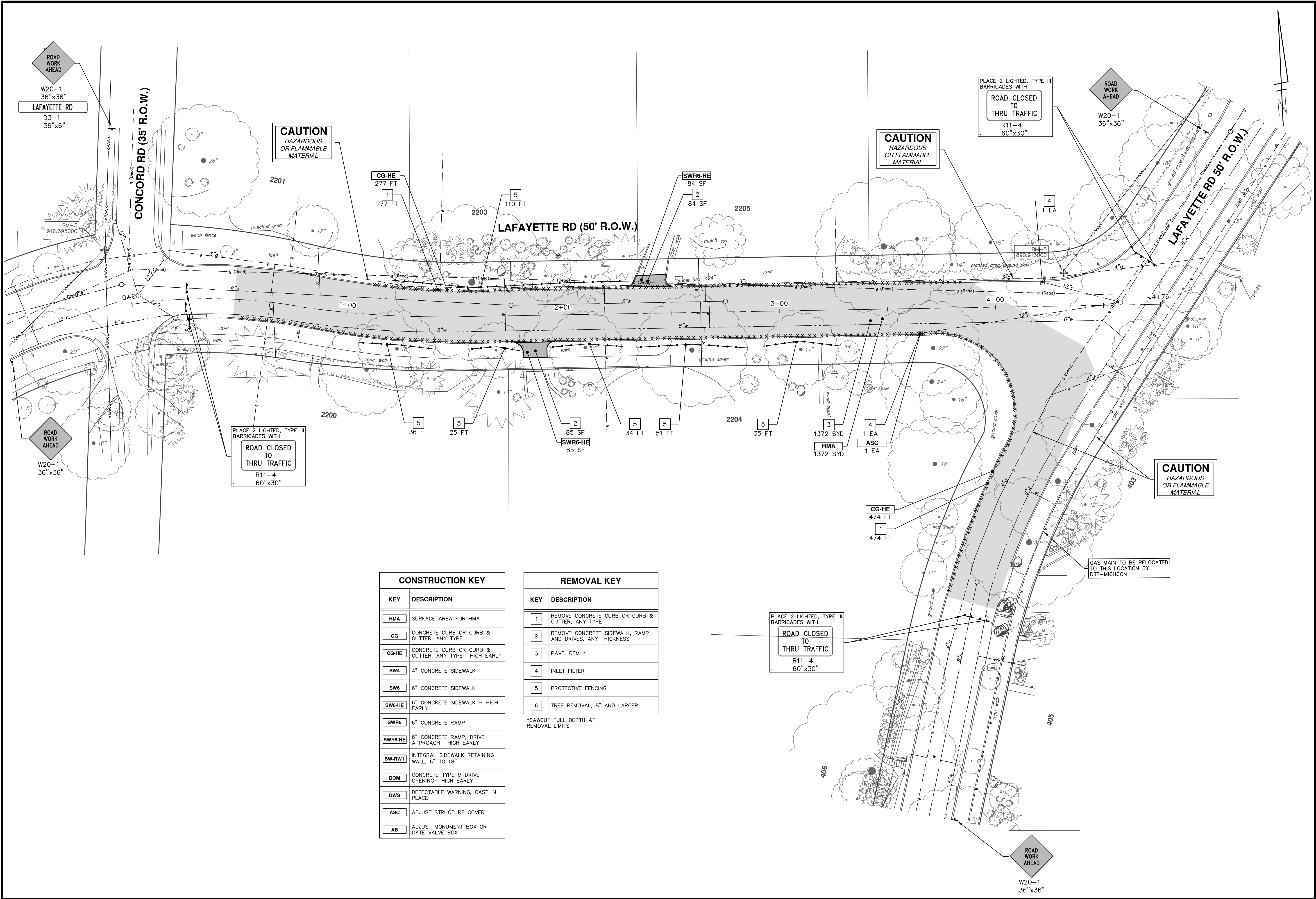
WATER MAIN PLAN AND PROFILE

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

DRAWING NO. **2017033-21**

21 OF 29

R:\20170333 Lafayette-Lenawee Son\Plan Production\20170333Rem.dwg Dwg Created: 5-Mar-18 _a2 standard bw.stb - Plot Date: 6-Mar-18



CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	SURFACE AREA FOR HMA
CG	CONCRETE CURB OR CURB & GUTTER, ANY TYPE
CG-HE	CONCRETE CURB OR CURB & GUTTER, ANY TYPE- HIGH EARLY
SW4	4" CONCRETE SIDEWALK
SW6	6" CONCRETE SIDEWALK
SW6-HE	6" CONCRETE SIDEWALK - HIGH EARLY
SWR6	6" CONCRETE RAMP
SWR6-HE	6" CONCRETE RAMP, DRIVE APPROACH- HIGH EARLY
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6" TO 18"
DOM	CONCRETE TYPE M DRIVE OPENING- HIGH EARLY
DWS	DETECTABLE WARNING, CAST IN PLACE
ASC	ADJUST STRUCTURE COVER
AB	ADJUST MONUMENT BOX OR GATE VALVE BOX

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

*SAWCUT FULL DEPTH AT REMOVAL LIMITS

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Know what's below.
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DATE: _____
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ANN ARBOR, MI 48106-8647
www.a2gov.org

DESCRIPTION: _____
REV: _____

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

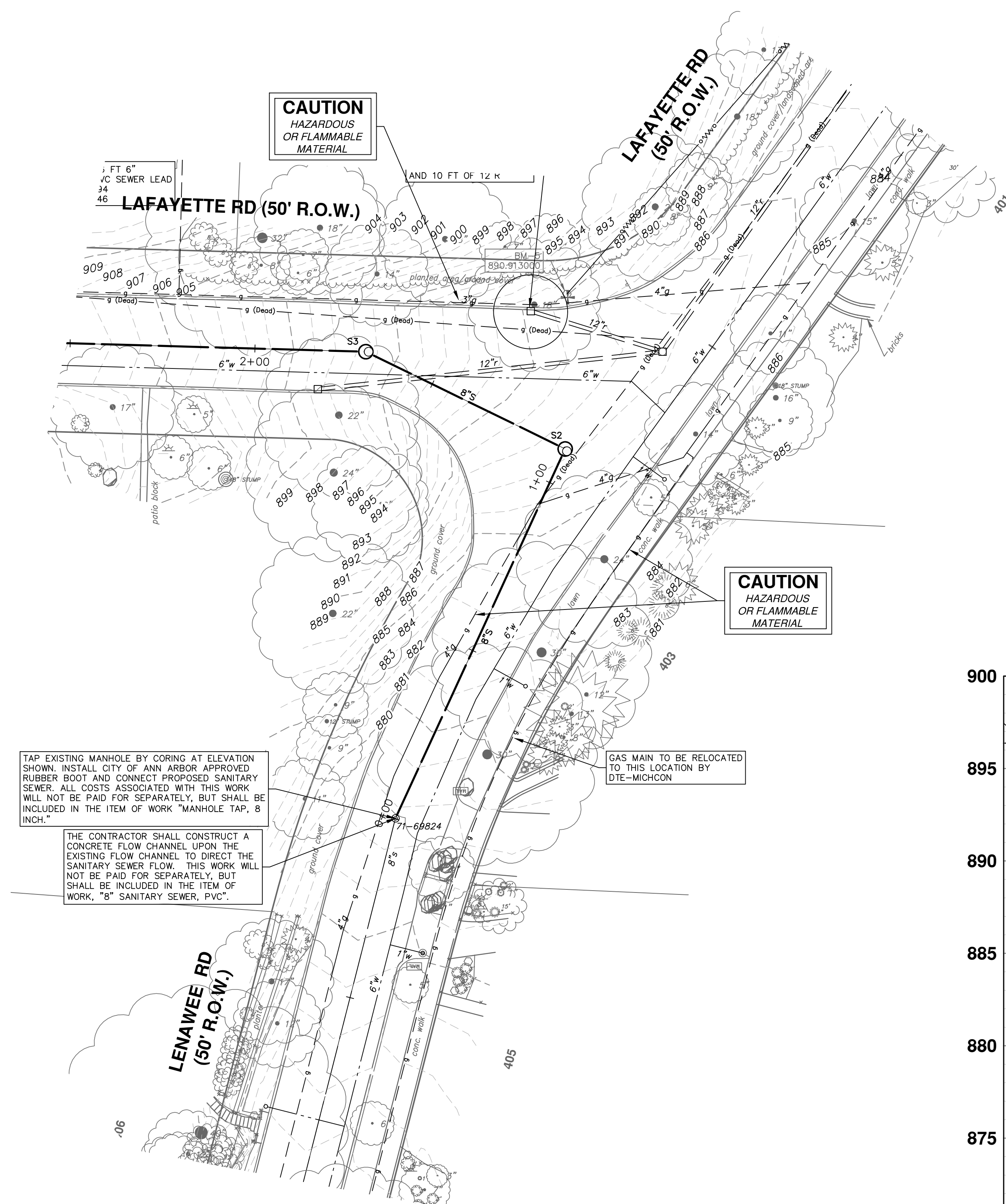
2018 MISC UTILITY PROJECTS
LAFAYETTE ROAD
REMOVALS AND TRAFFIC CONTROL

SCALE PLAN: 1" = 20'

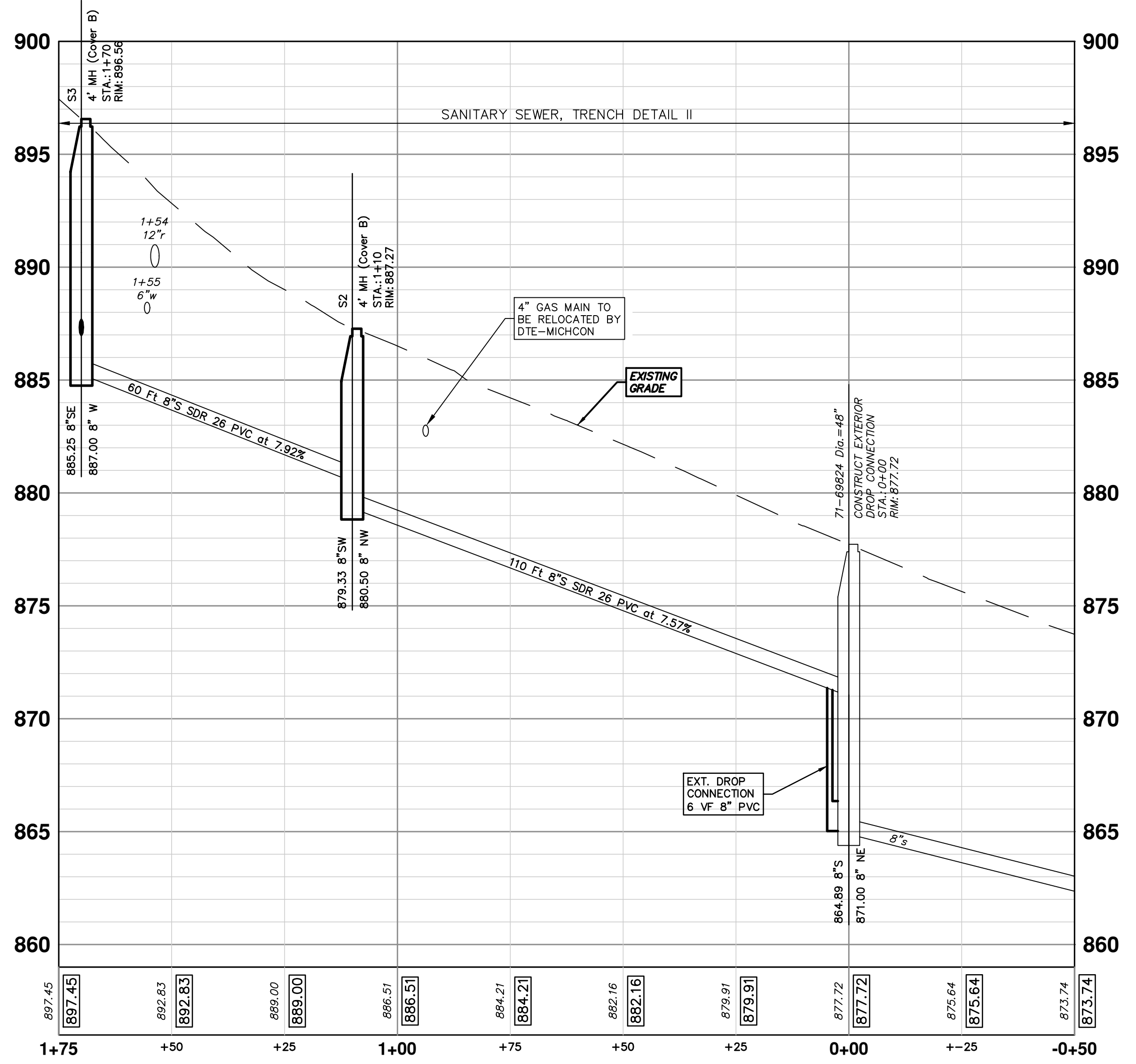
DRAWING No. **2017033-22**

SHEET No. _____

22 OF 29




SANITARY SEWER STRUCTURE TABLE					
STRUCTURE	STATION	RIM	DEPTH	INVERTS	NOTES
71-69824	0+00	877.72	12.83	8" NE 871.00 8" S 864.89	CONSTRUCT EXTERIOR DROP CONNECTION
S2	1+10	887.27	7.94	8" NW 880.50 8" SW 879.33	4' MH (Cover B)
S3	1+70	896.56	11.31	8" W 887.00 8" SE 885.25	4' MH (Cover B)



TAP EXISTING MANHOLE BY CORING AT ELEVATION SHOWN. INSTALL CITY OF ANN ARBOR APPROVED RUBBER BOOT AND CONNECT PROPOSED SANITARY SEWER. ALL COSTS ASSOCIATED WITH THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "MANHOLE TAP, 8 INCH."


THE CONTRACTOR SHALL CONSTRUCT A CONCRETE FLOW CHANNEL UPON THE EXISTING FLOW CHANNEL TO DIRECT THE SANITARY SEWER FLOW. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK, "8" SANITARY SEWER, PVC."

GAS MAIN TO BE RELOCATED TO THIS LOCATION BY DTE-MICHCON



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REV.	DESCRIPTION	DATE	DATE	BY	CHECKED
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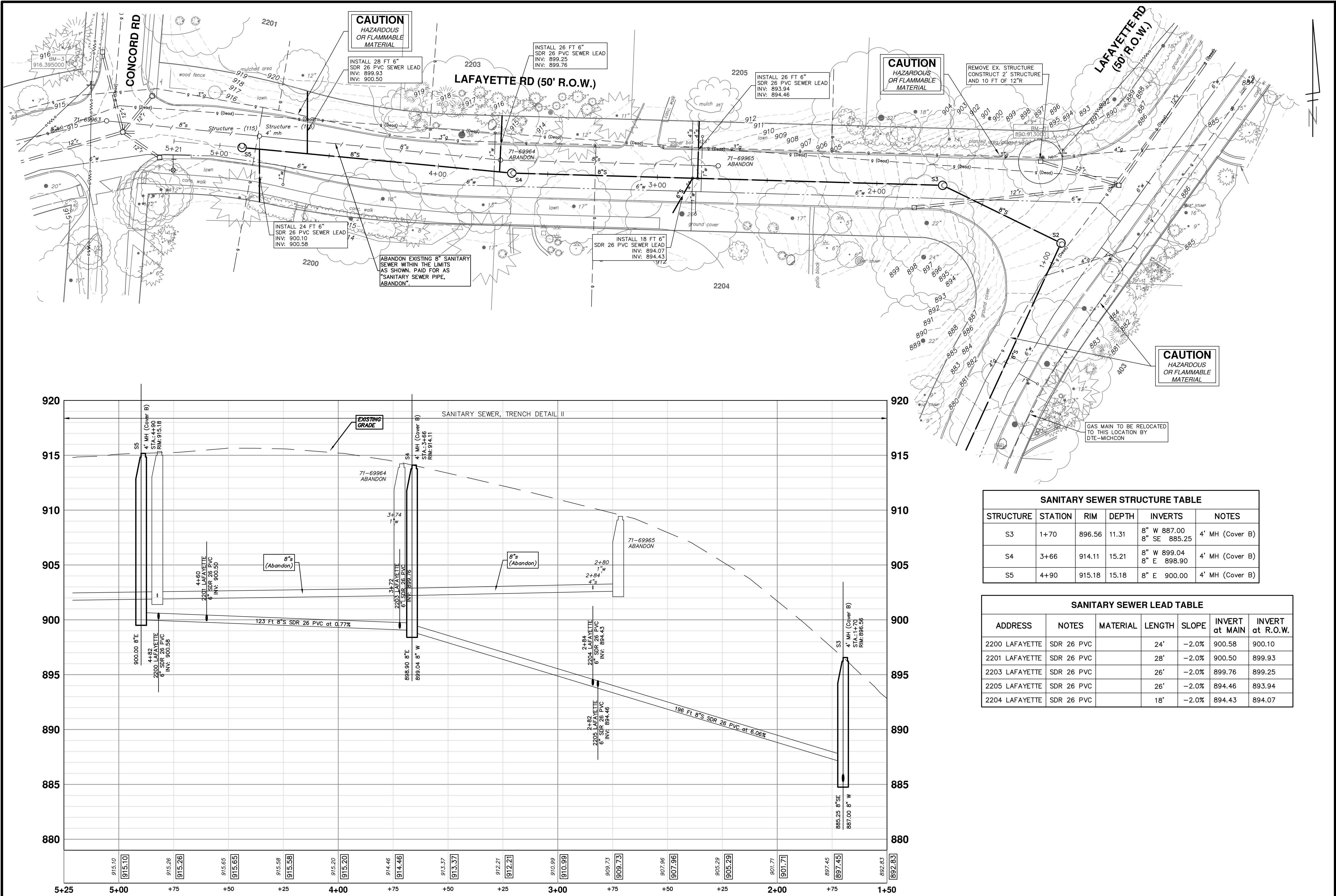
CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
2018 MISC UTILITY PROJECTS
 LAFAYETTE ROAD
 SANITARY SEWER 71-69824 TO S-3

SCALE PLAN: 1" = 20'
 PROFILE: 1" = 4'

DRAWING No.
2017033-23


SHEET No.
23 OF 29

R:\20170333 Lafayette-Lenawee San Plan Production\20170333Sswr.dwg Dwg Created: 6-Mar-18 - _02 standard bw.stb - Plot Date: 6-Mar-18




SANITARY SEWER STRUCTURE TABLE					
STRUCTURE	STATION	RIM	DEPTH	INVERTS	NOTES
S3	1+70	896.56	11.31	8" W 887.00 8" SE 885.25	4' MH (Cover B)
S4	3+66	914.11	15.21	8" W 899.04 8" E 898.90	4' MH (Cover B)
S5	4+90	915.18	15.18	8" E 900.00	4' MH (Cover B)

SANITARY SEWER LEAD TABLE						
ADDRESS	NOTES	MATERIAL	LENGTH	SLOPE	INVERT at MAIN	INVERT at R.O.W.
2200 LAFAYETTE	SDR 26 PVC		24'	-2.0%	900.58	900.10
2201 LAFAYETTE	SDR 26 PVC		28'	-2.0%	900.50	899.93
2203 LAFAYETTE	SDR 26 PVC		26'	-2.0%	899.76	899.25
2205 LAFAYETTE	SDR 26 PVC		26'	-2.0%	894.46	893.94
2204 LAFAYETTE	SDR 26 PVC		18'	-2.0%	894.43	894.07



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REV.	DESCRIPTION	DATE	BY	CHECKED
00	COPY TO NEXT LINE AND EDIT THE TEXT			

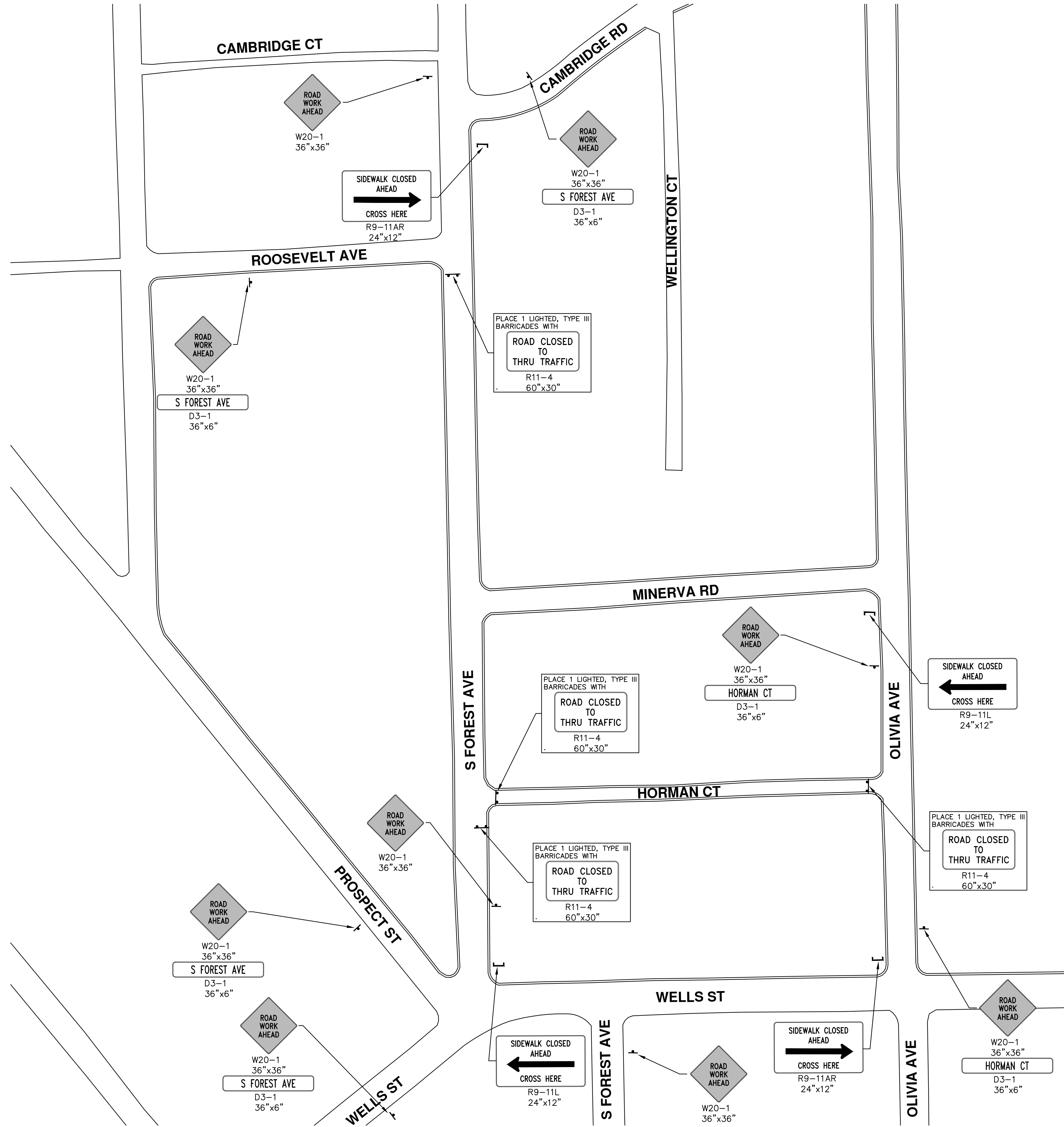


CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
2018 MISC UTILITY PROJECTS
 LAFAYETTE ROAD
 SANITARY SEWER S-3 TO S-5

SCALE PLAN: 1" = 20'
 PROFILE: 1" = 4'

DRAWING No.
2017033-24

SHEET No.
24 OF 29



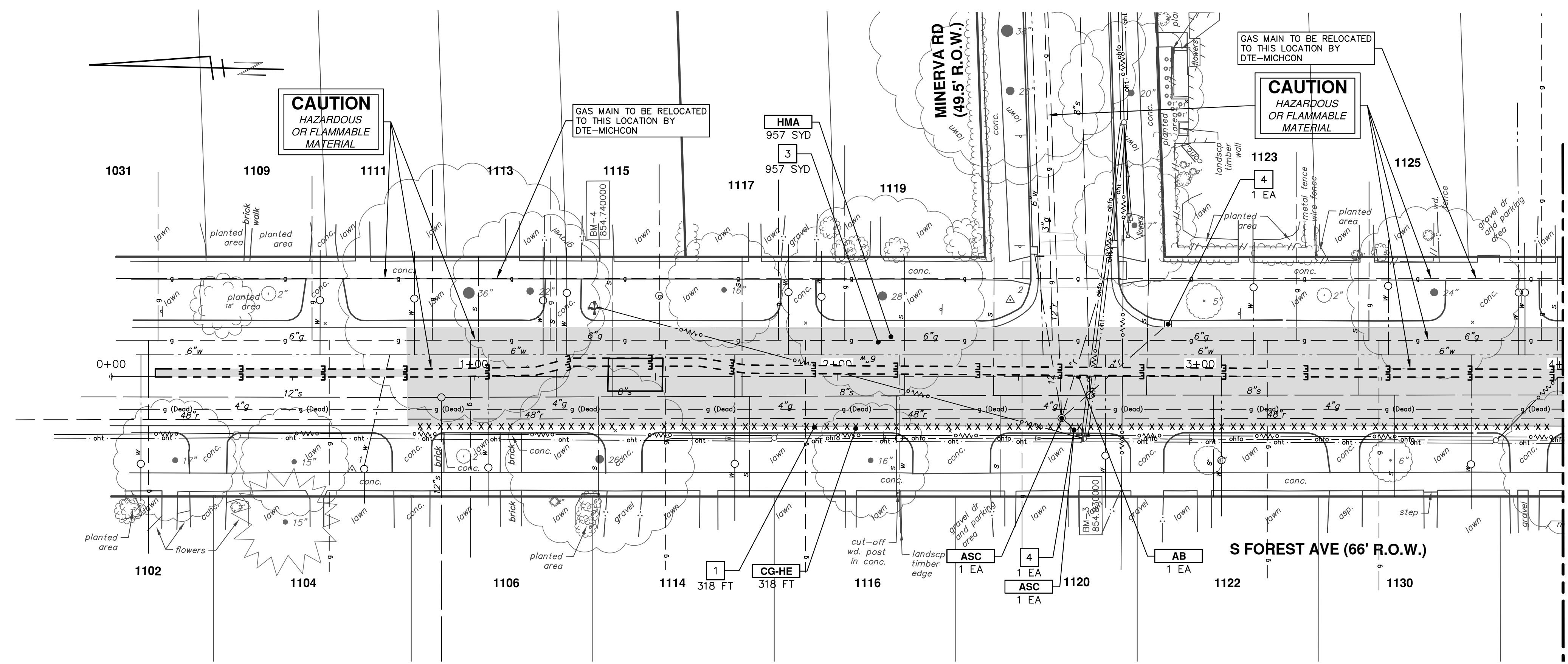
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PUBLIC SERVICES
301 EAST HURON STREET
ANN ARBOR MI 48106-8647
www.a2gov.org



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING
2018 MISC UTILITY PROJECTS
HORMAN COURT
TRAFFIC CONTROL

SCALE PLAN: 1" = 60'
DRAWING No. 2017033-25

REV.	DESCRIPTION	DATE	BY	CHECKED
00	COPY TO NEXT LINE AND EDIT THE TEXT			

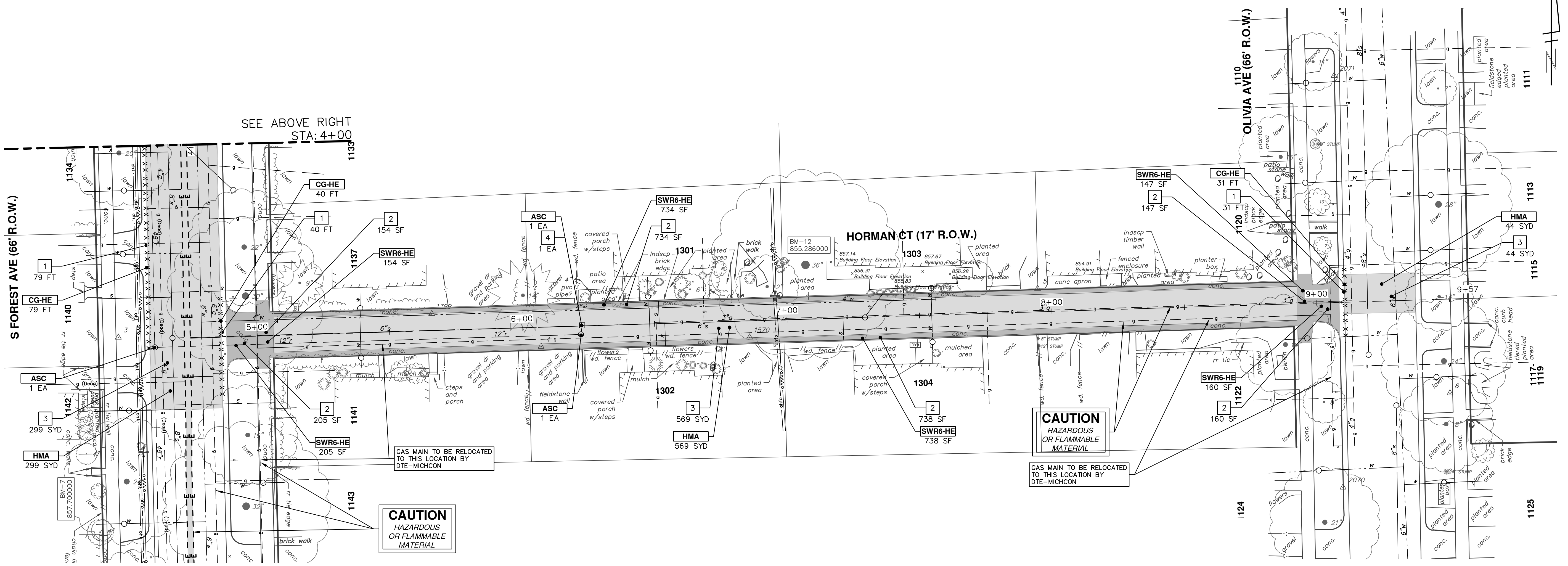


SEE BELOW LEFT
STA: 4+00

CONSTRUCTION KEY	
KEY	DESCRIPTION
HMA	SURFACE AREA FOR HMA
CG	CONCRETE CURB OR CURB & GUTTER, ANY TYPE
CG-HE	CONCRETE CURB OR CURB & GUTTER, ANY TYPE- HIGH EARLY
SW4	4" CONCRETE SIDEWALK
SW6	6" CONCRETE SIDEWALK
SW6-HE	6" CONCRETE SIDEWALK - HIGH EARLY
SWR6	6" CONCRETE RAMP
SWR6-HE	6" CONCRETE RAMP, DRIVE APPROACH- HIGH EARLY
SW-RW1	INTEGRAL SIDEWALK RETAINING WALL, 6" TO 18"
DOM	CONCRETE TYPE M DRIVE OPENING- HIGH EARLY
DWS	DETECTABLE WARNING, CAST IN PLACE
ASC	ADJUST STRUCTURE COVER
AB	ADJUST MONUMENT BOX OR GATE VALVE BOX

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

*SAWCUT FULL DEPTH AT REMOVAL LIMITS



SEE ABOVE RIGHT
STA: 4+00

CAUTION
HAZARDOUS
OR FLAMMABLE
MATERIAL

TAP EXISTING MANHOLE BY CORING AT ELEVATION SHOWN. INSTALL CITY OF ANN ARBOR APPROVED RUBBER BOOT AND CONNECT PROPOSED SANITARY SEWER. ALL COSTS ASSOCIATED WITH THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK "MANHOLE TAP, 8 INCH."

GAS MAIN TO BE RELOCATED TO THIS LOCATION BY DTE-MICHCON

CAUTION
HAZARDOUS
OR FLAMMABLE
MATERIAL

161 FT 12" STORM SEWER (Remove)

GAS MAIN TO BE RELOCATED TO THIS LOCATION BY DTE-MICHCON

CAUTION
HAZARDOUS
OR FLAMMABLE
MATERIAL

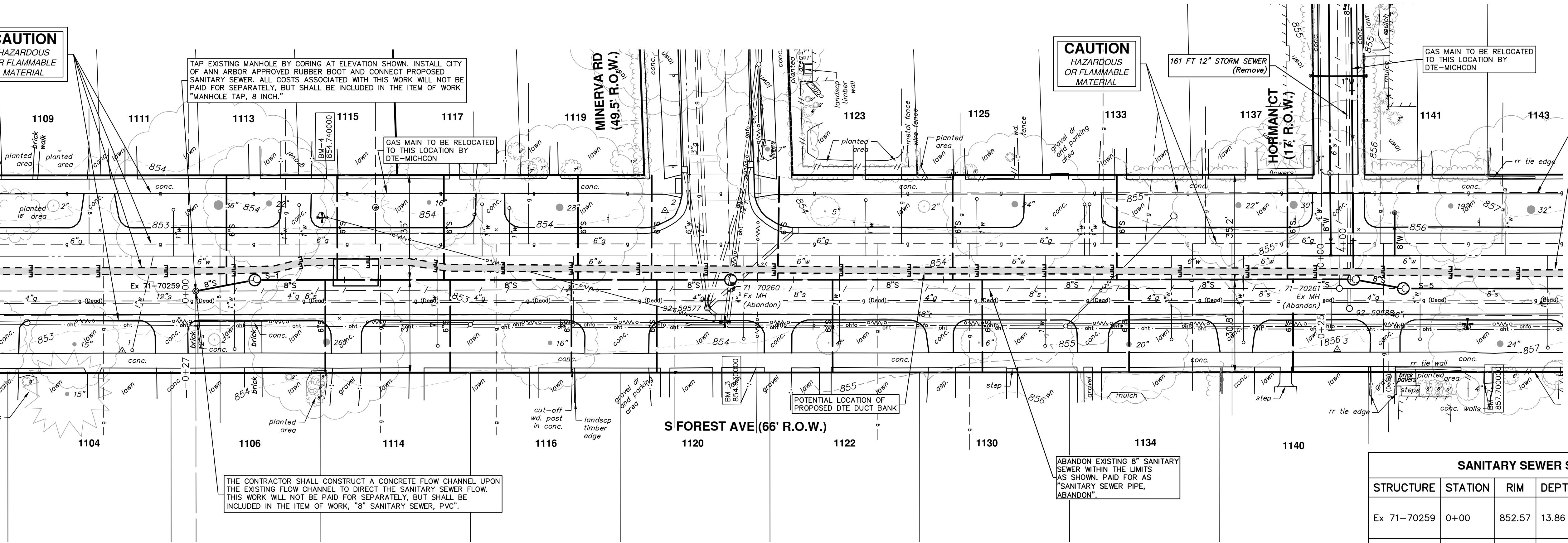
BYPASSING FLOW THE CONTRACTOR SHALL MAINTAIN FLOW IN EXISTING SEWERS AT ALL TIMES BY PUMPING, BYPASSING, OR FLUMING AS NECESSARY. DURING WET WEATHER EVENTS, THE FLOW IN THE SEWER WILL RISE RAPIDLY AND MAY BECOME SURCHARGED. THE CONTRACTOR SHALL MAINTAIN FLOW IN SUCH A MANNER AS THE EXISTING FLOW CAN BE ADEQUATELY TRANSPORTED INCLUDING FLOW WEATHER FLOW. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN TEMPORARY PUMPING FACILITIES TO SERVICE THE UPSTREAM AREA INCLUDING PIPING, TEMPORARY CHANNELS, PUMPS, SUMP, CONTROLS, TEMPORARY PLUGS, AND BULKHEADS.

CONTRACTOR SHALL PLAN HIS OPERATION SUCH THAT THERE WILL BE NO BACKUPS, LEAKS, OR DISCHARGES OF POLLUTANTS. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR ANY LEAKS, SPILLS, OR DISCHARGES OF EFFLUENT OR OTHER POLLUTANTS.

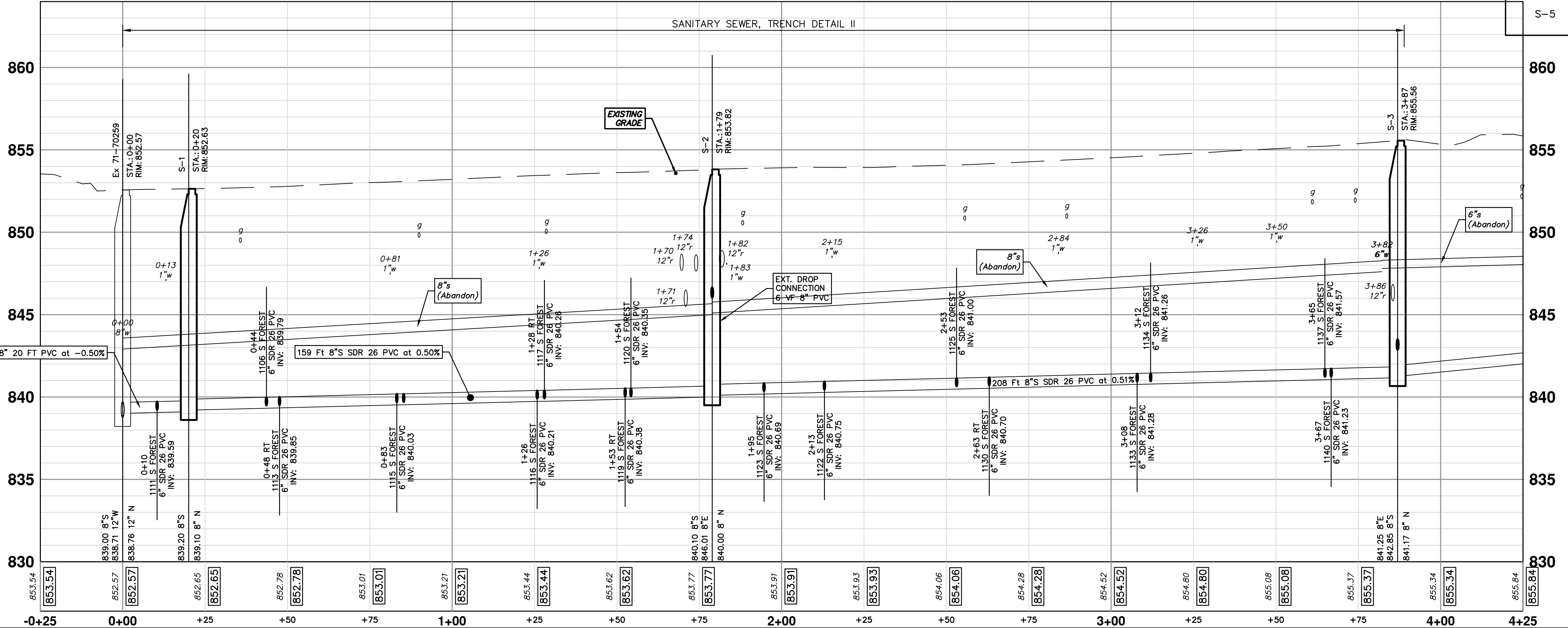
THE CONTRACTOR SHALL ALSO FURNISH AND HAVE AVAILABLE ON-SITE, REDUNDANT PUMPING FACILITIES IN CASE OF ANY FAILURE OF THE PUMPING SYSTEM INCLUDING PUMPS, PIPING, ELECTRICAL, CONNECTIONS, ETC. REDUNDANT PUMPING FACILITIES ALSO INCLUDE HAVING A BACKUP POWER GENERATOR IN CASE THE PRIMARY POWER SOURCE FAILS. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE LABOR FORCE TO OVERSEE THE BY-PASS PUMPING INCLUDING PROVIDING LABOR TO MAINTAIN 24 HOUR PER DAY OPERATION AND EMERGENCY BACKUP SERVICE. THE CONTRACTOR WILL NOT BE ALLOWED TO OBSTRUCT FLOWS IN ANY SEWER UNLESS THE PRIMARY AND REDUNDANT PUMPING AND BY-PASSING EQUIPMENT IS ON SITE AND IN AN OPERABLE CONDITION.

THE CONTRACTOR SHALL CONSTRUCT A CONCRETE FLOW CHANNEL UPON THE EXISTING FLOW CHANNEL TO DIRECT THE SANITARY SEWER FLOW. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM OF WORK, "8" SANITARY SEWER, PVC."

ABANDON EXISTING 8" SANITARY SEWER WITHIN THE LIMITS AS SHOWN. PAID FOR AS "SANITARY SEWER PIPE, ABANDON".



SANITARY SEWER STRUCTURE TABLE					
STRUCTURE	STATION	RIM	DEPTH	INVERTS	NOTES
Ex 71-70259	0+00	852.57	13.86	12" N 838.76 8" S 839.00 12" W 838.71	Ex MH MANHOLE TAP, 8"
S-1	0+20	852.63	13.53	8" N 839.10 8" S 839.20	4' MH (Cover B)
S-2	1+79	853.82	13.82	8" N 840.00 8" S 840.10 8" E 846.01	4' MH (Cover B) CONSTRUCT EXTERIOR DROP CONNECTION
S-3	3+87	855.56	14.39	8" N 841.17 8" S 841.25 8" S 842.85	4' MH (Cover B)
S-5	0+17	855.73	11.98	8" N 843.75 8" S 847.88	4' MH (Cover B) CONSTRUCT EXTERIOR DROP CONNECTION



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CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2018 MISC UTILITY PROJECTS

HORMAN COURT

FOREST AVE. SANITARY SEWER S-1 TO S-3

SCALE PLAN: 1" = 20'

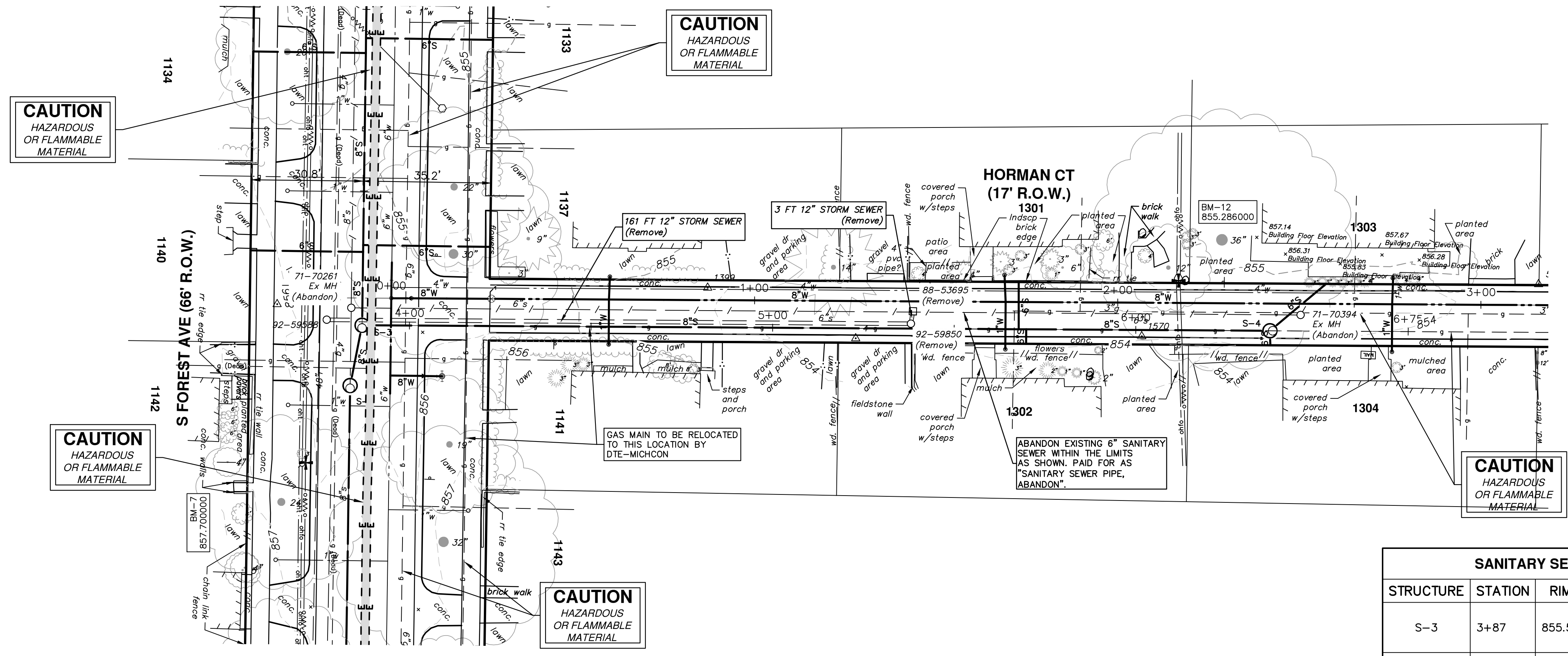
PROFILE: 1" = 4'

SHEET No.

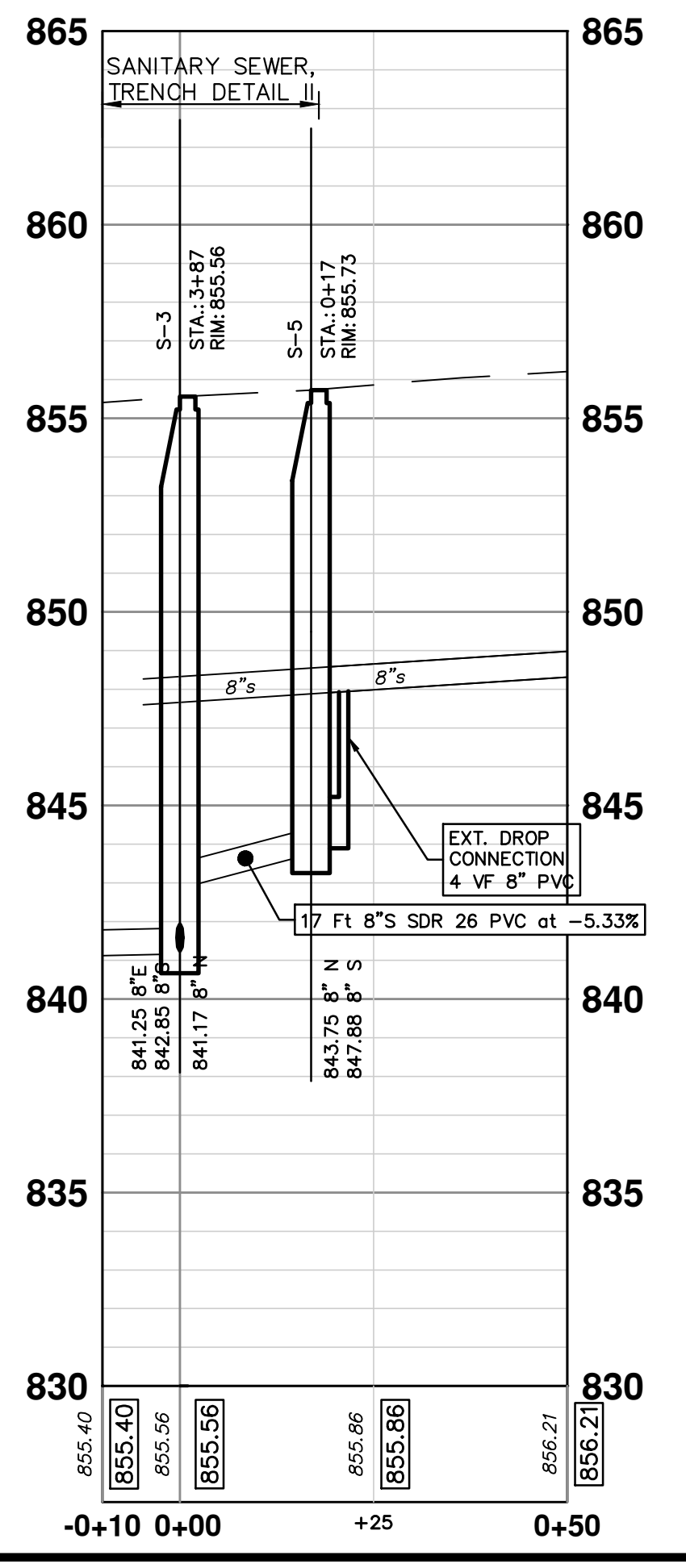
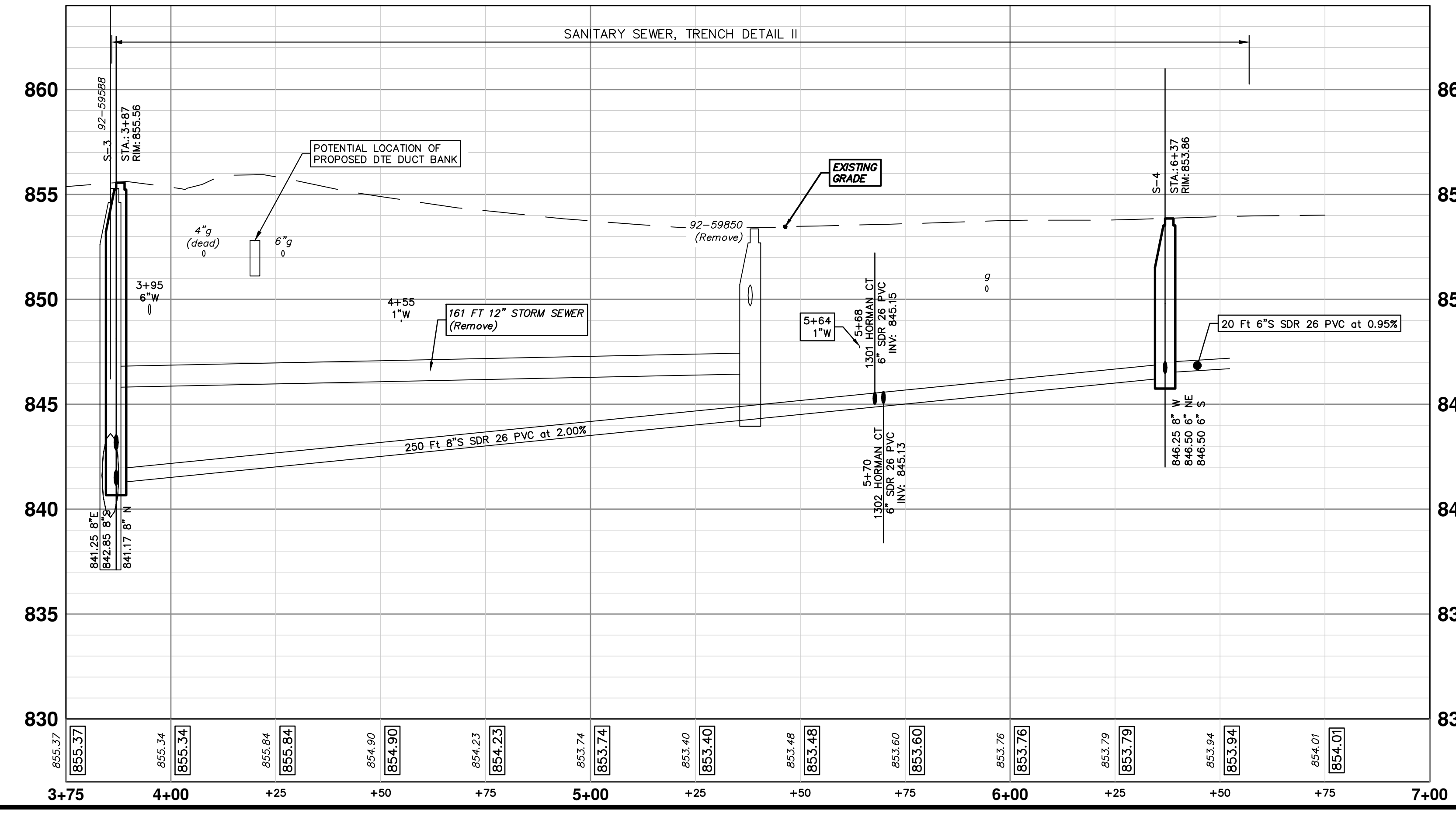
DRAWING No.

2017033-27

27 OF 29



SANITARY SEWER STRUCTURE TABLE					
STRUCTURE	STATION	RIM	DEPTH	INVERTS	NOTES
S-3	3+87	855.56	14.39	8" N 841.17 8" E 841.25 8" S 842.85	4' MH (Cover B)
S-4	6+37	853.86	7.61	8" W 846.25 6" NE 846.50 6" S 846.50	4' MH (Cover B)



CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2018 MISC UTILITY PROJECTS

HORMAN COURT

HORMAN CT, SANITARY SEWER S-3 TO S-4

811
Know what's below.
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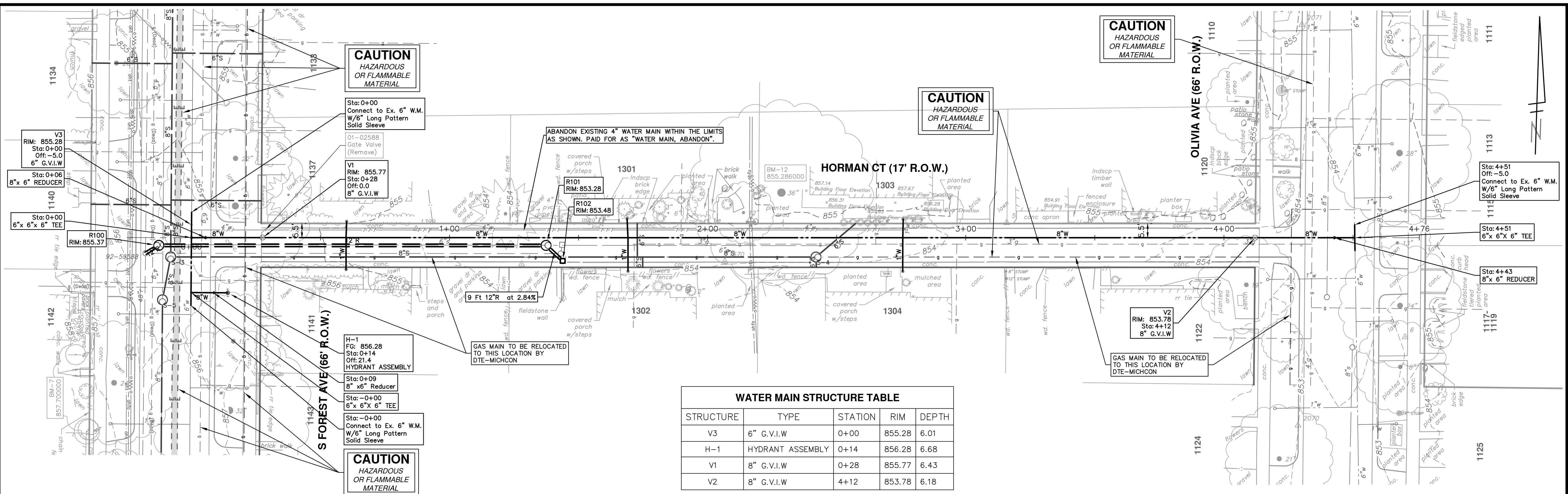
REV.	DESCRIPTION	DATE	DATE	BY	BY	CHECKED
00	COPY TO NEXT LINE AND EDIT THE TEXT					

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CITY OF ANN ARBOR
MICHIGAN

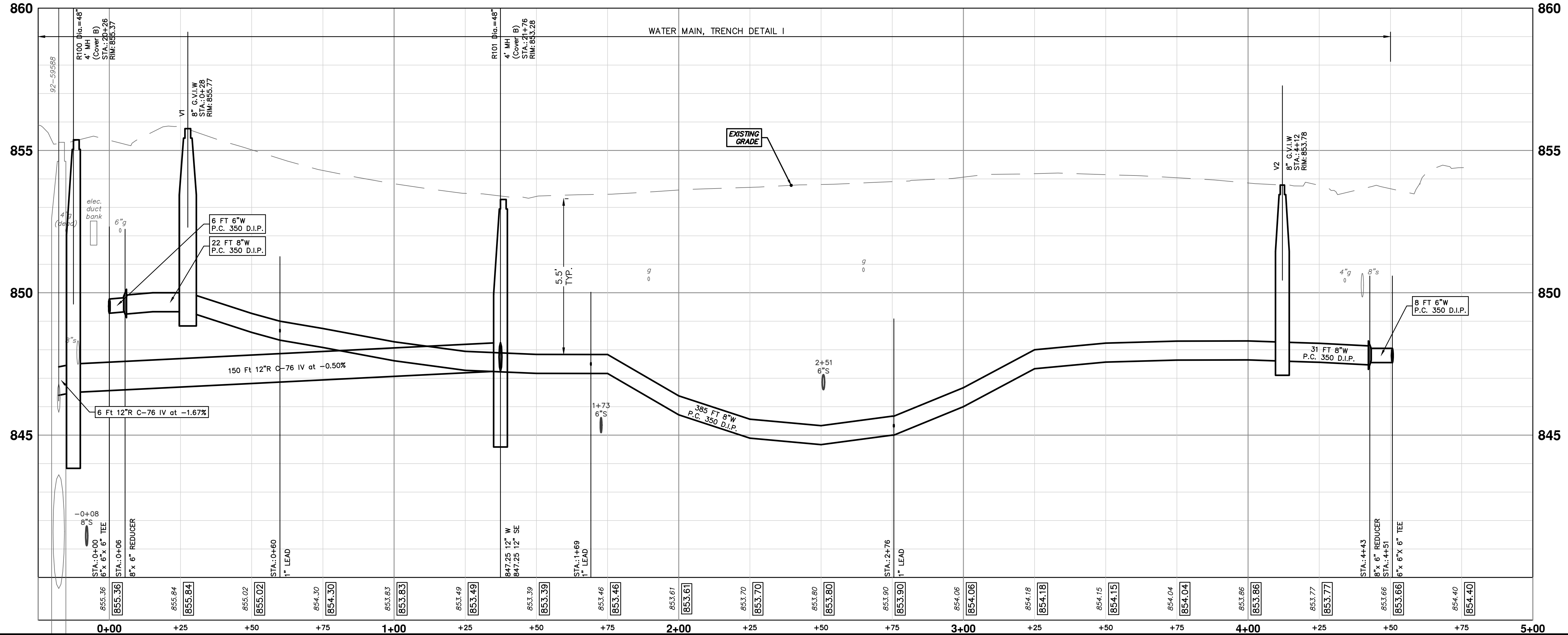
SHEET No. **28 OF 29**

DRAWING No. **2017033-28**



WATER MAIN STRUCTURE TABLE

STRUCTURE	TYPE	STATION	RIM	DEPTH
V3	6" G.V.I.W	0+00	855.28	6.01
H-1	HYDRANT ASSEMBLY	0+14	856.28	6.68
V1	8" G.V.I.W	0+28	855.77	6.43
V2	8" G.V.I.W	4+12	853.78	6.18



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

2018 MISC UTILITY PROJECTS

HORMAN COURT

WATER MAIN STA. 0+00 TO STA. 4+51

DRAWING NO. 2017033-29

SHEET NO. 29 OF 29

811
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