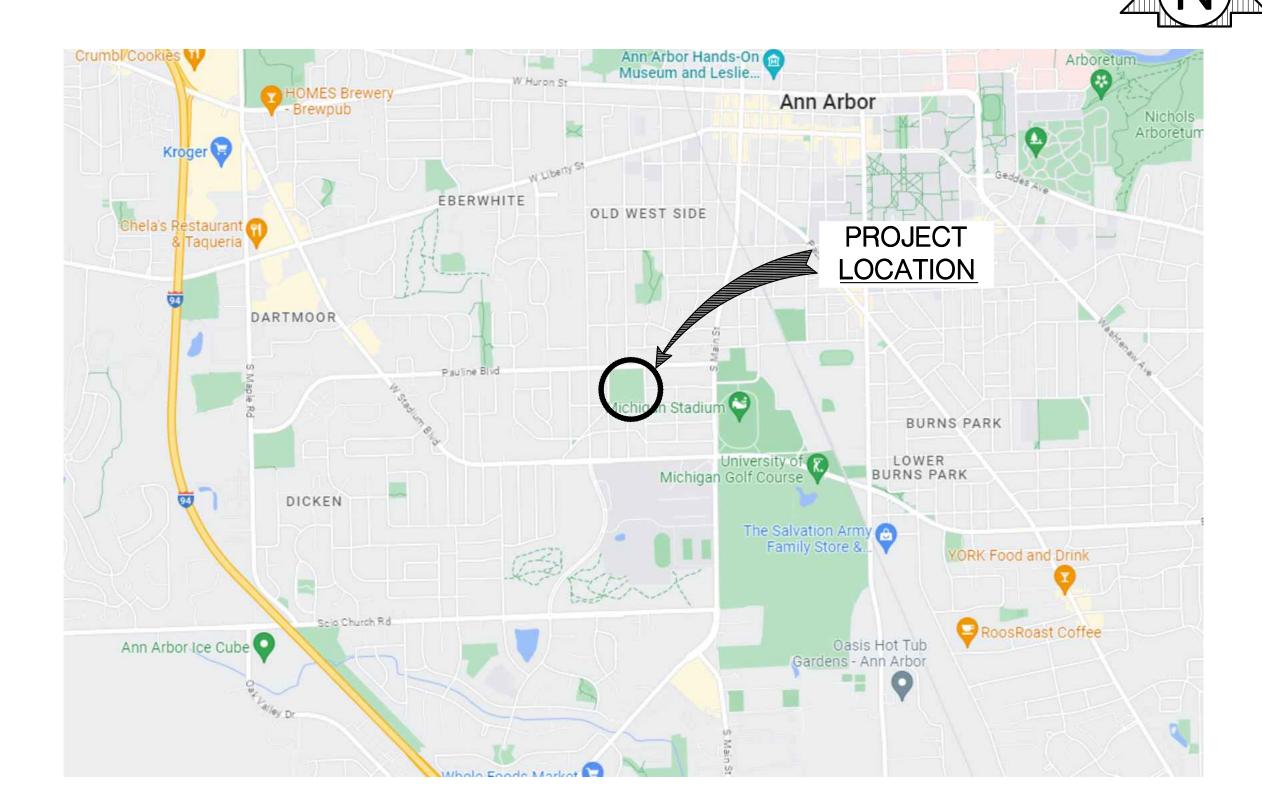
CONSTRUCTION DRAWINGS FOR

ANN ARBOR PARKS & RECREATION ALLMENDINGER PARK IMPROVEMENTS

SECTION 32 T2S-R6E CITY OF ANN ARBOR WASHTENAW COUNTY, MICHIGAN

UTILITIES AND MUNICIPALITIES

NAME OF OWNER	<u>CONTACT</u>	TYPE OF UTILITY
ANN ARBOR CITY 301 E. HURON ST ANN ARBOR, MI 48104	ANDY GOSSIAUX AGOSSIAUX@A2GOV.ORG	LAND USE
AT&T 54 N. MILL ST., 4TH FLOOR PONTIAC, MI 48342	YURI STOUDEMIRE (248) 454-4364 YS1951@ATT.COM	TELEPHONE
COMCAST 25626 TELEGRAPH RD. SOUTHFIELD, MI 48033	BRITTNEY HANSON CCCUTILITYREQUESTS@TEAMSIGMA.COM	CABLE TV
COMCAST 25626 TELEGRAPH RD. SOUTHFIELD, MI 48033	BRITTNEY HANSON CCCUTILITYREQUESTS@TEAMSIGMA.COM	FIBER OPTICS
DTE ENERGY 982 BROADWAY ST. ANN ARBOR, MI 48105	SARA KIPP SARA.FORCE@DTEENERGY.COM	ELECTRIC
DTE ENERGY 982 BROADWAY ST. ANN ARBOR, MI 48105	KURT WEITZMANN DET_MAPPINGTEAM@DTEENERGY.COM SEMI_GASDESIGN@DTEENERGY.COM	GAS



SHEET INDEX

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VICINITY MAP NOT TO SCALE

OWNER INFORMATION

ANN ARBOR PARKS & RECREATION HILLARY HANZEL, PARK PLANNER AND LANDSCAPE ARCHITECT 301 E. HURON ST. ANN ARBOR, MICHIGAN 48104 PHONE: (734) 794-6230 EXT. 42548 EMAIL: HHANZEL@A2GOV.ORG

SITE LOCATION

ALLMENDINGER PARK 655 PAULINE BLVD ANN ARBOR, MICHIGAN 48103



LEGAL DESCRIPTION

PARCEL NUMBER 09-09-32-228-001 LEGAL DESCRIPTION: LOTS 147 THRU 154 INCL OAK CREST SUB

GENERAL NOTES

FOR ALL CONSTRUCTION ACTIVITY THAT DISTURBS 5 ACRES OR MORE OF LAND, THE OWNER OF THE PROPERTY SHALL OBTAIN AN NPDES STORM WATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES FROM THE EGLE AS REQUIRED UNDER P.A. 245. THE NOTICE OF COVERAGE APPLICATION SHALL BE SUBMITTED THROUGH THE EGLE MIWATERS WEB SITE. THE DISTURBED AREA FOR THIS PROJECT IS APPROXIMATELY 0.9 ACRES. A NPDES PERMIT IS NOT REQUIRED FOR THIS PROJECT.

NAME OF AND DISTANCE TO NEAREST LAKE, STREAM OR DRAIN: THE PROJECT IS LOCATED APPROXIMATELY 2,650 FT WEST OF ALLEN CREEK DRAIN.



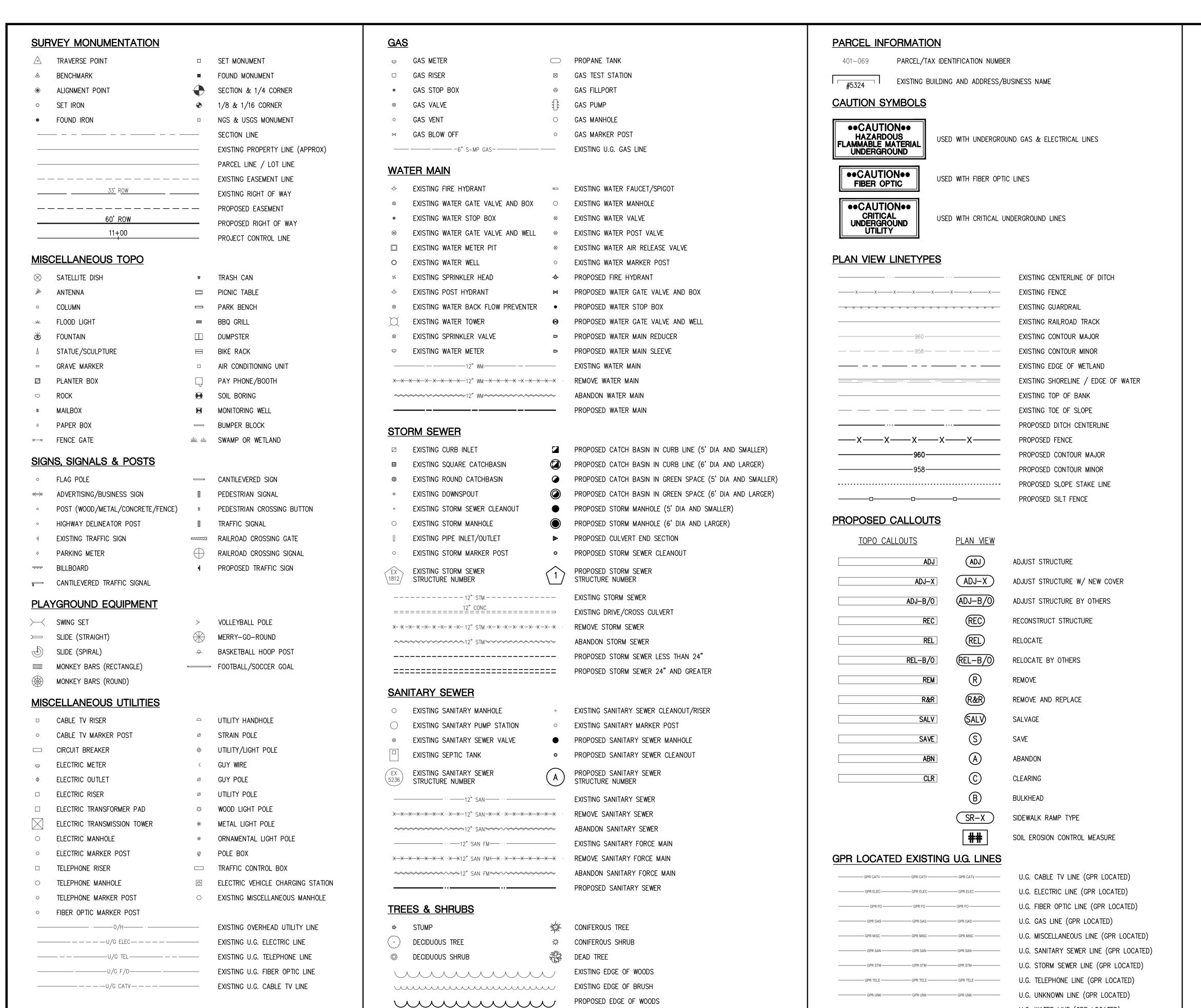
Know what's **below**. Call before you dig.

PLAN SUBMITTALS AND CHANGES BIDDING DOCUMENTS REV: DATE DESCRIPTION 11-8-24 ISSUED FOR BIDS JOB No: 2300369

& RECREATION IMPROVEMENTS

ANN ARBOR PARKS ALLMENDINGER PARK

of **10**



PROPOSED EDGE OF BRUSH

PAVEMENT IDENTIFICATION

---- EXISTING EDGE OF GRAVEL EXISTING CURB AND GUTTER PROPOSED FLOW CURB AND GUTTER PROPOSED SPILL CURB AND GUTTER

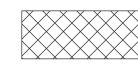
EXISTING HATCHING LEGEND

EXISTING GRAVEL

EXISTING PAVEMENT

EXISTING PLAYGROUND

REMOVAL HATCHING LEGEND



REMOVE PAVEMENT

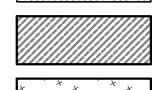
PROPOSED HATCHING LEGEND



PROPOSED HMA PAVEMENT



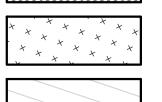
PROPOSED CONCRETE SIDEWALK



U.G. WATER LINE (GPR LOCATED)

FUTURE PLAYGROUND

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



PROPOSED RAIN GARDEN BANK

PROPOSED RAIN GARDEN BOTTOM

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& RECREATION IMPROVEMENTS

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ARKS PARK ANN ARBOR PALLMENDINGER

PLAN SUBMITTALS AND CHANGES BIDDING DOCUMENTS REV: DATE DESCRIPTION 11-8-24 ISSUED FOR BIDS SHT# 2 OF 10 JOB No: 2300369

GENERAL CONSTRUCTION NOTES

EMERGENCY CONTACTS

BEFORE BEGINNING WORK ON THE PROJECT, THE CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER WITH THE NAMES AND TELEPHONE NUMBERS OF EMERGENCY CONTACTS. AT LEAST ONE PERSON REPRESENTING THE CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO EMERGENCIES THROUGHOUT THE LIFE OF THE PROJECT, 24 HOURS A DAY, 7 DAYS A WEEK.

UNDERGROUND UTILITY IDENTIFICATION AND LOCATION

THE CONTRACTOR SHALL CALL MISS DIG (1-800-482-7171) A MINIMUM OF THREE WORK DAYS IN ADVANCE OF BEGINNING EXCAVATION. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND NOTIFY UTILITY AGENCIES WITHIN THE PROJECT AREA WHICH DO NOT PARTICIPATE IN THE MISS DIG NOTIFICATION PROGRAM.

PUBLIC UTILITIES

EXISTING UTILITIES ARE SHOWN BASED UPON RECORDS AND LOCATIONS PROVIDED BY UTILITY AGENCIES. THE INFORMATION SHOWN IS CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. UNLESS THE PLANS SPECIFICALLY SHOW THAT EXISTING UTILITIES ARE TO BE MOVED, THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN EXISTING UTILITIES.

VERIFICATION OF UNDERGROUND UTILITIES

THE CONTRACTOR SHALL EXCAVATE AND LOCATE ALL EXISTING UTILITIES IN THE PROJECT AREA IN ADVANCE OF CONSTRUCTION TO VERIFY THEIR ACTUAL LOCATION. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL MAKE SUCH CHANGES TO GRADE AND ALIGNMENT OF PROPOSED WORK AS DIRECTED BY THE ENGINEER TO AVOID CONFLICTS, AT NO INCREASE IN COST TO THE OWNER.

UTILITY SERVICE

UNLESS SPECIFICALLY PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS, ALL EXISTING UTILITIES ARE TO REMAIN IN SERVICE DURING THE PROJECT.

MAILBOXES

MAILBOXES LOCATED WITHIN THE LIMITS OF EXCAVATION, GRADING, OR CONSTRUCTION SHALL BE REMOVED AND PROTECTED FROM DAMAGE BY THE CONTRACTOR. TEMPORARY MAILBOXES SHALL BE PROVIDED AND MAINTAINED DURING THE PROJECT. UPON COMPLETION OF GRADING OR CONSTRUCTION ACTIVITIES, THE ORIGINAL MAILBOX SHALL BE REINSTALLED.

MAILBOXES (AND/OR SUPPORTS) WHICH ARE DAMAGED AS A RESULT OF THE PROJECT SHALL BE REPLACED BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE. MAILBOXES SHALL BE REPLACED IN ACCORDANCE WITH THE STANDARDS OF THE U.S. POSTAL SERVICE AND THE REGULATIONS OF THE AGENCY HAVING JURISDICTION OVER THE ROADS AND STREETS IN THE PROJECT AREA.

PRIVATE IRRIGATION SYSTEMS

WHERE IRRIGATION SYSTEMS WITHIN THE PUBLIC RIGHT-OF-WAY WILL INTERFERE WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS THAT IT IS THEIR RESPONSIBILITY TO REMOVE AND PROTECT THEIR IRRIGATION SYSTEM. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF THE NOTIFICATION.

WHERE THE OWNER HAS NOT REMOVED THEIR PRIVATE IRRIGATION SYSTEM, THE CONTRACTOR SHALL CUT AND PLUG THOSE SECTIONS OF PIPING WHICH INTERFERE WITH CONSTRUCTION. SPRINKLER HEADS, VALVES, AND PIPING WHICH INTERFERES WITH THE CONTRACTOR'S WORK, SHALL BE REMOVED AND STOCKPILED ON THE OWNER'S PROPERTY.

SOIL BORINGS / PAVEMENT CORES

IF PROVIDED ON THE PLANS OR IN THE CONTRACT DOCUMENTS, LOGS OF SOIL BORINGS OR PAVEMENT CORES REPRESENT THE SUBSURFACE CONDITIONS ENCOUNTERED AT SPECIFIC POINTS. THE INFORMATION IS PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY.

MAINTAINING TRAFFIC

LOCAL AND EMERGENCY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITHIN THE PROJECT AREA.

WHEN EXCAVATION, FRESH CONCRETE, OR OTHER CONSTRUCTION WORK WILL RESULT IN THE CLOSURE OF A STREET OR DRIVEWAY FOR A PERIOD OF TIME, THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL AFFECTED RESIDENTS AND BUSINESSES IN ADVANCE.

THE CONTRACTOR SHALL NOTIFY EMERGENCY RESPONSE AGENCIES IN ADVANCE OF ROAD CLOSURES OR THE ESTABLISHMENT OF DETOURS.

TRAFFIC SIGNS

TRAFFIC SIGNS WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED AND REPLACED BY THE AGENCY HAVING JURISDICTION OVER THE STREETS OR ROADS IN THE PROJECT AREA. THE CONTRACTOR IS RESPONSIBLE TO CONTACT THE AGENCY TO ARRANGE FOR REMOVAL OF THE SIGN AND IS RESPONSIBLE TO PAY ANY FEES ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE SIGNS.

SCHEDULE

THE CONTRACTOR SHALL COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP WORK ON THE PROJECT ONCE BEGUN.

ALIGNMENT

ALIGNMENT AND GRADES FOR CURB AND GUTTER (INCLUDING THROUGH RAMPS AND DRIVEWAY OPENINGS) SHOWN ON THE PLANS ARE FOR THE TOP, BACK OF CURB, UNLESS SPECIFICALLY SHOWN OTHERWISE ON

THE HORIZONTAL ALIGNMENT SHOWN ON THE DRAWINGS FOR DRAINAGE STRUCTURES LOCATED IN THE CURB LINE IS TO THE CENTER OF THE CASTING.

THE HORIZONTAL ALIGNMENT SHOWN ON THE DRAWINGS FOR DRAINAGE STRUCTURES WHICH ARE NOT IN THE CURB LINE AND FOR MANHOLES IS TO THE CENTER OF THE STRUCTURE.

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR MANHOLE CASTINGS, THE ELEVATION PROVIDED IS FOR THE TOP OF THE CASTING.

WHERE RIM ELEVATIONS ARE PROVIDED FOR INLET TYPE CASTINGS, THE ELEVATIONS ARE PROVIDED AS

 CURB INLETS – THE ELEVATION OF THE TOP OF CURB ALL OTHER INLETS — THE ELEVATION OF THE FLOW LINE

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR INLETS OR MANHOLE CASTINGS. THE ELEVATIONS PROVIDED ARE CONSIDERED PRELIMINARY. THE CONTRACTOR SHALL MAKE THE FINAL ADJUSTMENT FOLLOWING THE ESTABLISHMENT OF ACTUAL GRADING AND PAVEMENT ELEVATIONS.

CONSTRUCTION STAKING

WHEN CONSTRUCTION STAKING IS TO BE PROVIDED BY THE ENGINEER OR OWNER, THE CONTRACTOR SHALL REQUEST STAKING AT LEAST THREE WORKING DAYS IN ADVANCE.

WHEN CONSTRUCTION STAKING IS TO BE PROVIDED BY THE ENGINEER OR OWNER, STAKING WILL BE PROVIDED ONE TIME. THE CONTRACTOR SHALL PROTECT AND PRESERVE SURVEY CONTROL AND STAKING. RE-STAKING WILL BE AT THE CONTRACTOR'S EXPENSE.

SURVEY CORNERS, BENCHMARKS, AND CONTROL POINTS

THE CONTRACTOR SHALL PRESERVE ALL GOVERNMENT CORNERS, PROPERTY CORNERS, BENCHMARKS, SURVEY CONTROL POINTS AND OTHER SURVEY POINTS WITHIN THE PROJECT AREA. WHERE CORNERS, BENCHMARKS, OR SURVEY POINTS ARE ENCOUNTERED WHICH WILL BE DISTURBED BY THE CONTRACTOR'S ACTIVITIES; A LICENSED SURVEYOR SHALL WITNESS THE POINT BEFORE DISTURBANCE AND SHALL RE-SET THE POINT FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PAY THE SURVEYOR TO WITNESS AND TO RE-SET THE POINTS.

PROTECTION OF TREES, SHRUBS, AND LANDSCAPING

ALL TREES, SHRUBS, AND LANDSCAPING WITHIN THE CONSTRUCTION AREA WHICH ARE NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED TREES, SHRUBS, AND LANDSCAPING SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION SIGNING AND BARRICADING

THE CONTRACTOR SHALL PROTECT HAZARDOUS AREAS WITH BARRICADES. BARRICADES LEFT IN PLACE AFTER SUNSET SHALL BE LIGHTED.

THE CONTRACTOR SHALL PROVIDE SUITABLE SANDBAGS OR OTHER SUITABLE MEASURES FOR ANCHORING OF TEMPORARY SIGNS AND BARRICADES, TO PREVENT THEIR TIPPING OR DISPLACEMENT BY WIND OR AIR FLOW FROM VEHICLES.

THE CONTRACTOR SHALL PROVIDE SIGNING, BARRICADES, TRAFFIC REGULATORS, CONES, AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER STREETS OR ROADS IN THE PROJECT AREA, THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL COVER OR REMOVE TEMPORARY SIGNS DURING PERIODS WHEN THEY ARE NOT APPROPRIATE.

TURF ESTABLISHMENT

ALL DISTURBED AREAS WHICH ARE NOT TO BE SURFACED WITH PAVEMENT, AGGREGATE OR OTHER APPROVED SURFACES SHALL BE ESTABLISHED WITH TURF.

TURF AREAS SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE.

DISTURBED AREAS SHALL BE SURFACED WITH THREE INCHES OF SCREENED TOPSOIL.

THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH TURF WHICH IS SUBSTANTIALLY FREE OF BARE SPOTS AND FREE OF WEEDS. THE GROUND SURFACE IN TURF AREAS SHALL BE SMOOTH AND PROVIDE A NATURAL TRANSITION TO ADJACENT, UNDISTURBED AREAS.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE WATERING, WEEDING, RESEEDING, AND REWORKING AS NECESSARY TO ESTABLISH TURF AREAS TO THE REQUIRED STANDARD.

ADA COMPLIANCE

ALL PROPOSED CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AND APPLICABLE GUIDELINES OR STANDARDS. WHERE EXISTING CONDITIONS AND/OR THE REQUIREMENTS OF THE PLANS WILL RESULT IN FINISHED CONDITIONS THAT DO NOT MEET THE ADA REQUIREMENTS, GUIDELINES, OR STANDARDS; THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REMOVE AND REPLACE WORK DETERMINED TO BE NOT IN ACCORDANCE WITH APPLICABLE REQUIREMENTS, GUIDELINES, OR STANDARDS.

EARTHWORK QUANTITIES, IF PROVIDED, ARE FOR THE CONTRACTOR'S INFORMATION. THE QUANTITIES WERE DEVELOPED USING THE AVERAGE END AREA METHOD. ASSUMPTIONS REGARDING TOPSOIL AND SHRINKAGE ARE STATED WITH THE ESTIMATES OF EXCAVATION AND FILL.

THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF THE EARTHWORK QUANTITIES. AND BASE THEIR BID ON THEIR DETERMINATION OF THE QUANTITIES OF WORK REQUIRED.

IF ADDITIONAL FILL MATERIAL MUST BE PROVIDED TO ATTAIN THE FINISH GRADES SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROVIDE THE REQUIRED FILL MATERIAL, UNLESS A SPECIFIC BORROW AREA IS IDENTIFIED ON THE PLANS.

EXCESS SOILS RESULTING FROM EXCAVATION AND EARTHWORK SHALL BECOME THE CONTRACTOR'S PROPERTY AND DISPOSED OF PROPERLY. UNLESS AN AREA(S) HAS BEEN DESIGNATED FOR STOCKPILING OR "BLENDING IN" THE EXCESS MATERIAL WITHIN THE PROJECT LIMITS.

BACKFILL AND EMBANKMENT

BACKFILL OF AN EXCAVATION UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE, SHALL BE SAND, MEETING THE REQUIREMENTS OF GRANULAR MATERIAL CLASS III AS DESCRIBED IN THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE SAND BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

BACKFILL OF AN EXCAVATION WHICH IS NOT UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE MAY BE SUITABLE EXCAVATED MATERIAL OR OTHER SOIL. WHICH IS FREE OF ORGANIC MATTER. STONES AND ROCKS. ROOTS. BROKEN CONCRETE, FROZEN MATERIAL, OR DEBRIS. THE BACKFILL SHALL BE COMPACTED TO AT LEAST 90% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL INDICATE THE SOURCE OF SAND USED FOR BACKFILL TO THE ENGINEER, AND PROVIDE THE ENGINEER WITH THE RESULTS OF A GRADATION TEST PERFORMED ON A SAMPLE OF THE SAND. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN ADVANCE OF USING SAND FROM OTHER SOURCES.

EMBANKMENT USED TO BUILD THE SUBGRADE TO REQUIRED ELEVATION SHALL BE SUITABLE SOIL EXCAVATED FROM THE PROJECT SITE, OR FURNISHED BY THE CONTRACTOR FROM OTHER SOURCES. SUITABLE SOIL IS FREE FROM ORGANIC MATTER, ROCKS AND STONES, FROZEN MATERIAL, BROKEN CONCRETE, AND DEBRIS.

EMBANKMENT CONSTRUCTED OF GRANULAR SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

EMBANKMENT CONSTRUCTED OF COHESIVE SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

DENSITY TESTING

THE MAXIMUM UNIT WEIGHT OF SAND AND OTHER GRANULAR SOILS WILL BE DETERMINED BY THE ONE POINT CONE TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

THE MAXIMUM UNIT WEIGHT OF COHESIVE SOILS WILL BE DETERMINED BY THE ONE POINT PROCTOR TEST. AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

WORK HOURS

UNLESS PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS OR LIMITED BY LOCAL ORDINANCE, THE CONTRACTOR SHALL WORK WITHIN OF THE FOLLOWING TIMES, UNLESS OTHERWISE APPROVED BY THE OWNER: MONDAY THROUGH FRIDAY 7 A.M. TO 8 P.M. 8 A.M. TO 6 P.M.

THE CONTRACTOR SHALL NOT WORK ON SUNDAYS OR HOLIDAYS, UNLESS OTHERWISE APPROVED BY THE

DRAINAGE

THE CONTRACTOR SHALL MAINTAIN DRAINAGE OF THE PROJECT AREA AND ADJACENT AREAS. WHERE EXISTING DRAINAGE FACILITIES ARE DISTURBED OR BLOCKED BY CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY PROVISIONS FOR DRAINAGE.

WHERE CONSTRUCTION HAS DISTURBED EXISTING DITCHES, SWALES, OR OTHER DRAINAGE FACILITIES; THE CONTRACTOR SHALL RESTORE THEM TO THEIR GRADES AND DIMENSIONS WHICH EXISTED PRIOR TO THE BEGINNING OF CONSTRUCTION, UNLESS DIRECTED OTHERWISE.

DRAINAGE SHALL NOT BE REROUTED ONTO ADJACENT PROPERTIES NOR ALLOWED TO DRAIN ONTO ADJACENT PROPERTIES AT AN INCREASED RATE. AS A RESULT OF THE CONTRACTOR'S WORK.

DRIVEWAY CONSTRUCTION

DRIVEWAY SLOPES SHALL NOT EXCEED 10%, EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE ON THE PLANS OR DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE PROPERTY OWNERS WITH SUITABLE NOTICE BEFORE REMOVING AND REPLACING AN EXISTING DRIVEWAY.

SIDEWALK CONSTRUCTION

SIDEWALKS SHALL BE CONSTRUCTED TO PROVIDE POSITIVE DRAINAGE OF THE SIDEWALK AND ADJACENT

EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SURFACES, SIDEWALK SHALL BE CONSTRUCTED WITH A CROSS SLOPE SLOPED TOWARD THE STREET.

SIDEWALK CROSS SLOPES SHALL NOT EXCEED 2%.

IN TURF AREAS, THE SURFACE OF THE SIDEWALK SHALL BE ABOUT 1/4 INCH HIGHER THAN THE ADJACENT GROUND SURFACES, EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS, OR PAVEMENTS.

SIDEWALK SHALL BE CONSTRUCTED ON A SAND BASE, COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN SIDEWALK FORMS HAVE BEEN SET AND THE SAND BASE PREPARED. CONCRETE SHALL NOT BE PLACED UNTIL THE ENGINEER HAS OBSERVED THE FORMS. CONCRETE DELIVERY SHALL BE SCHEDULED TO ALLOW SUFFICIENT TIME FOR ADJUSTMENT OF THE FORMS, IN THE EVENT THAT ADJUSTMENT IS NECESSARY.

THE CONTRACTOR SHALL PROTECT FRESH CONCRETE FROM DAMAGE BY THE WEATHER. TRAFFIC. OR VANDALISM. DAMAGED CONCRETE SHALL BE REPLACED BY THE CONTRACTOR'S EXPENSE.

STORM SEWER CONSTRUCTION NOTES

DRAINAGE STRUCTURES SHALL BE CONSTRUCTED FROM PRECAST CONCRETE MANHOLE SECTIONS, MEETING ASTM C478.

SUMPS IN DRAINAGE STRUCTURES AND PIPELINES SHALL BE FREE OF SEDIMENT AND DEBRIS AT THE TIME OF ACCEPTANCE BY THE OWNER.

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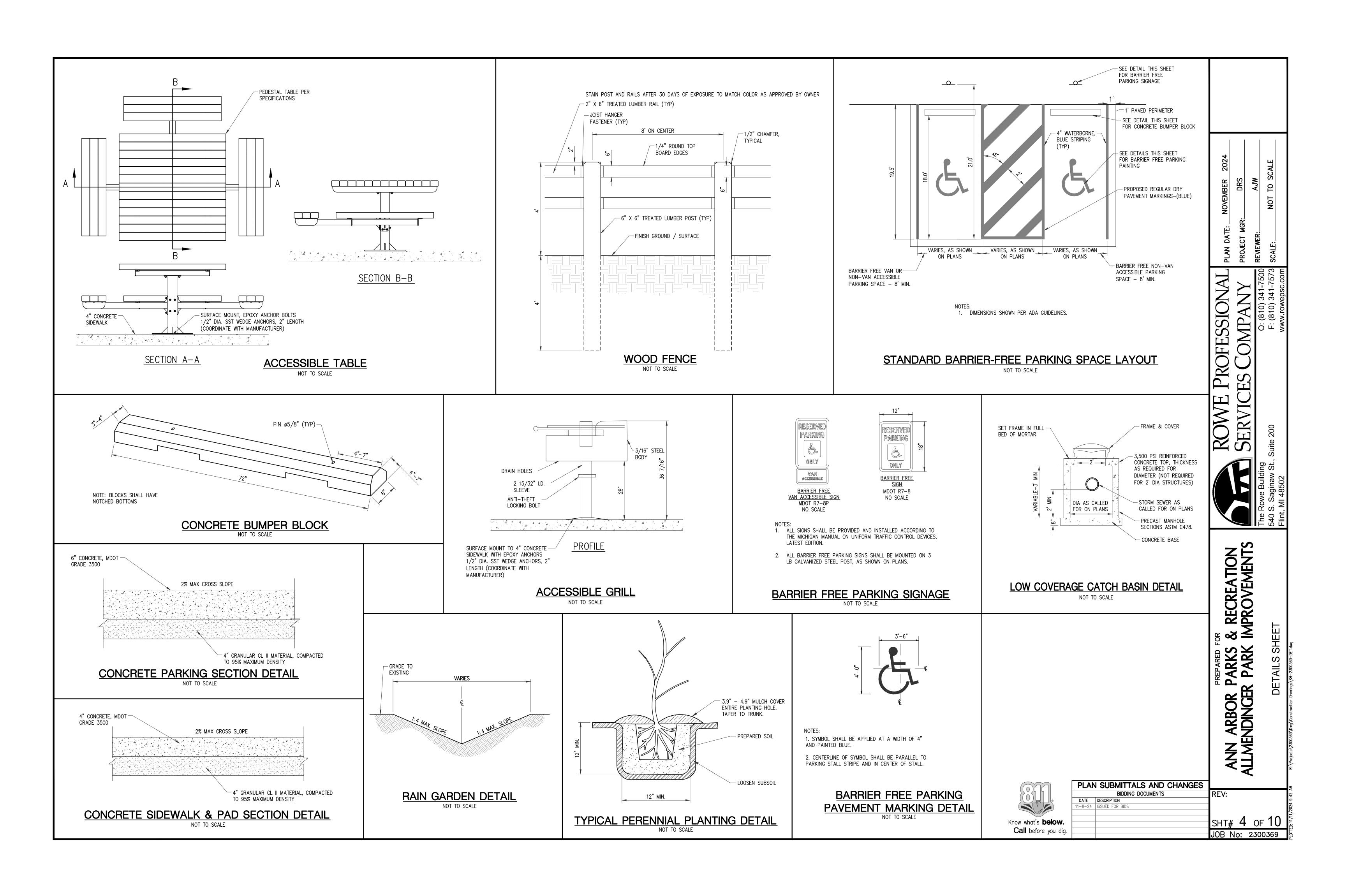
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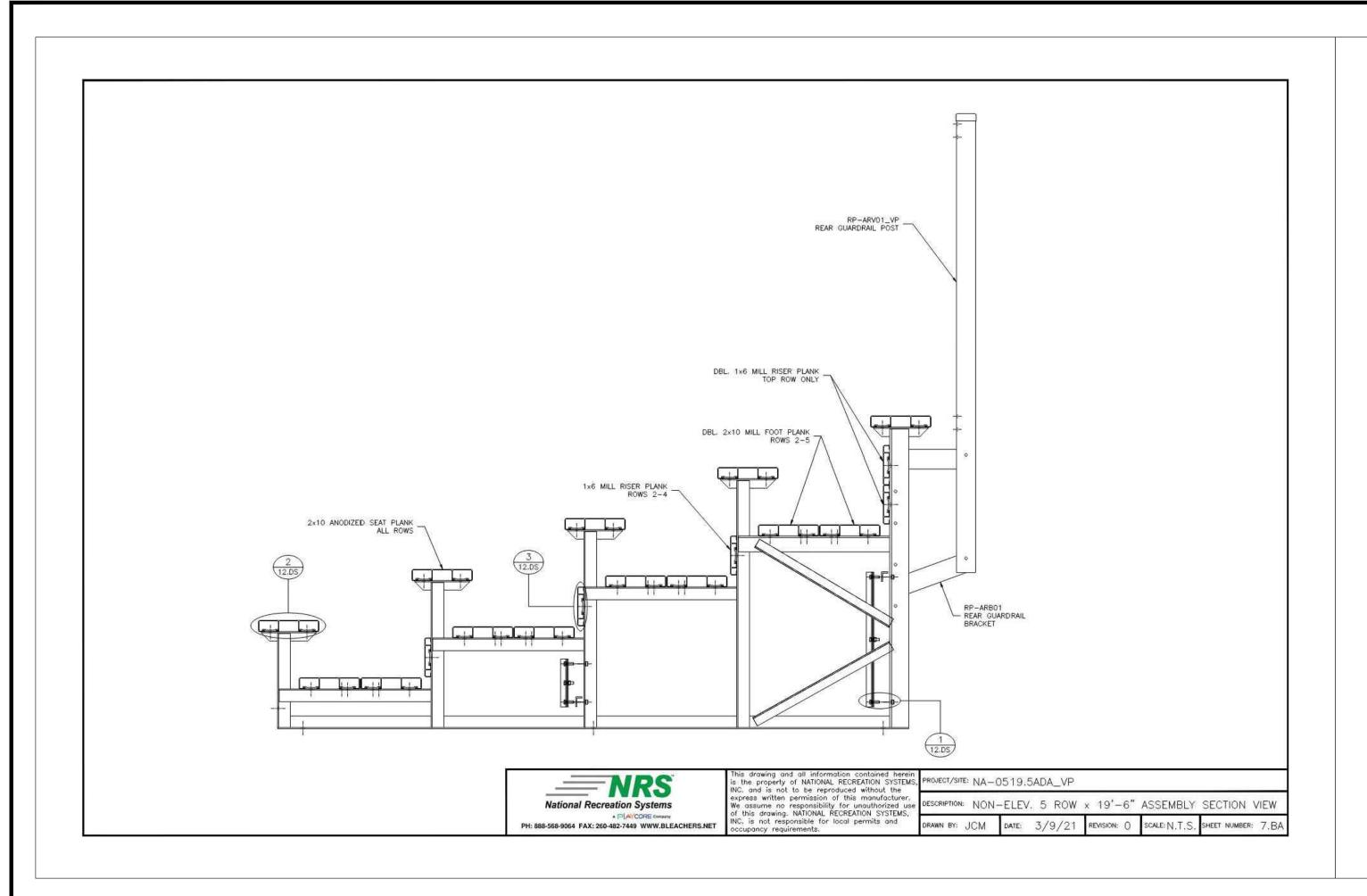
CREATION SOVEMENTS

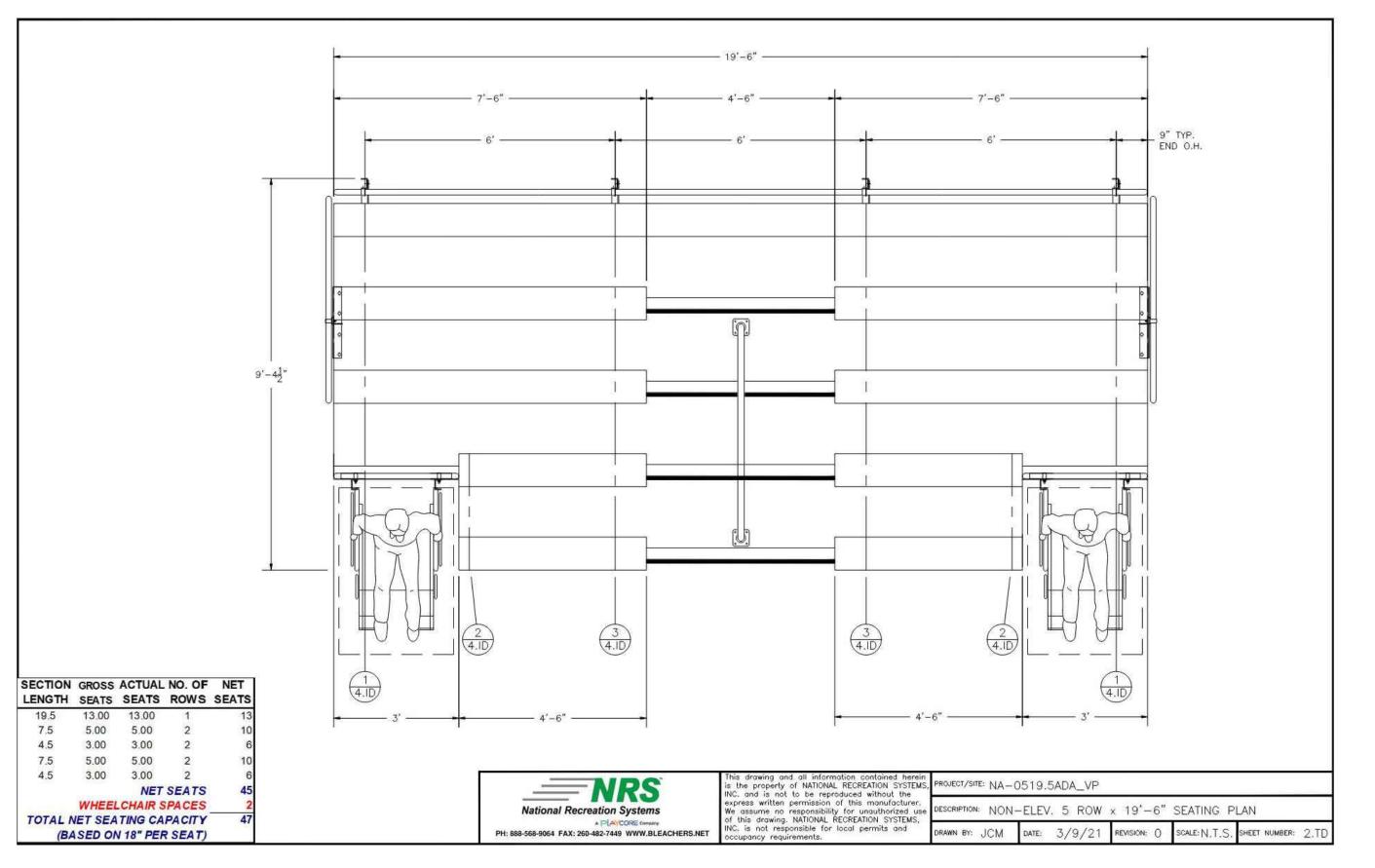
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Know what's **below.** Call before you dig

PLAN	SUBMITTALS AND CHANGES	
	BIDDING DOCUMENTS	REV:
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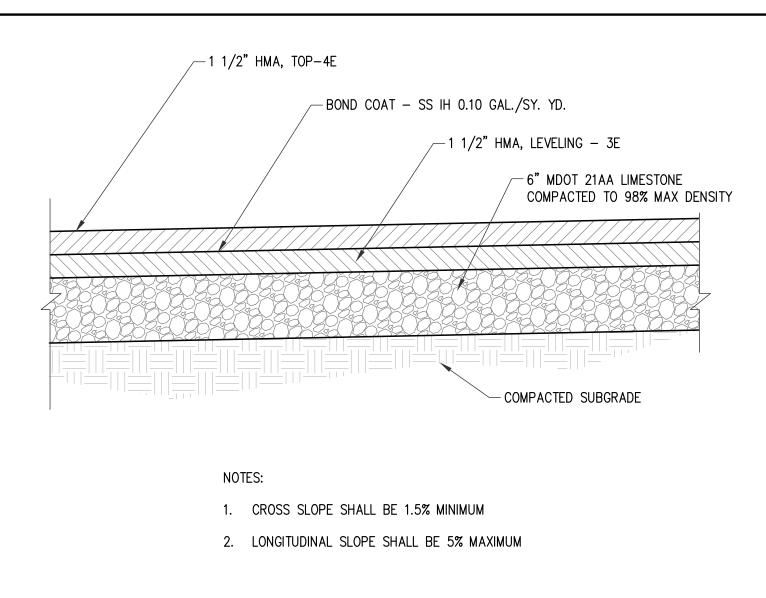


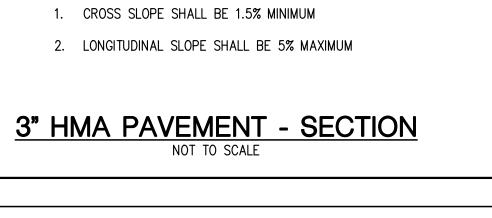


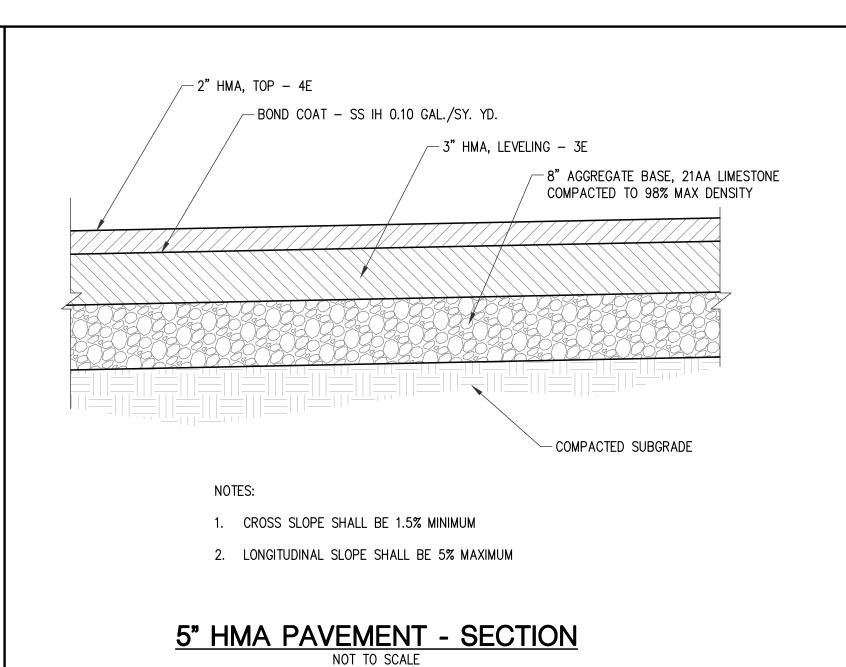


ACCESSIBLE BLEACHERS NOT TO SCALE

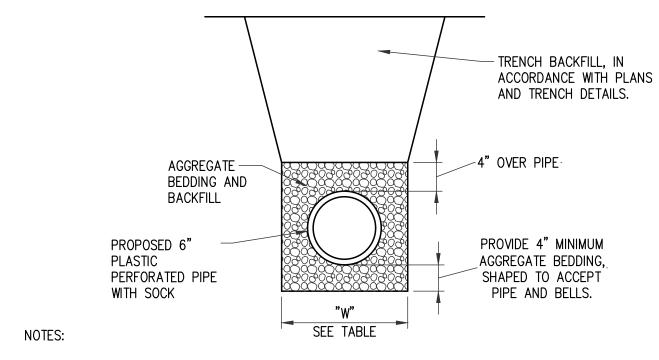
1. BLEACHERS TO BE DELIVERED TO SITE FOR CONTRACTOR TO INSTALL. 2. TO BE INSTALLED WITH EPOXY ANCHOR BOLTS PER MFG RECOMMENDATIONS.







HMA APPLICATION CHART							
HMA PAVEMENT	THICKNESS (SEE DETAIL THIS SHEET)	PERFORMANCE GRADE	REMARKS				
HMA, LVSP (TOP - 4EL)	1.50" - 2.00"	58-28	TOP COURSE (AWI=220 MIN.)				
HMA, LVSP (LEVELING - 3EL)	1.50" - 3.00"	58-28	LEVELING COURSE				



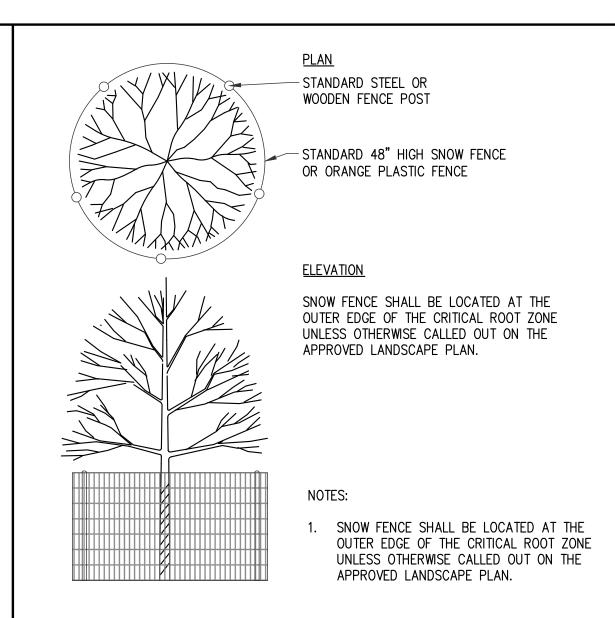
- 1. AGGREGATE SHALL BE MDOT, SERIES 34R
- 2. SUFFICIENT TRENCH WIDTH SHALL BE PROVIDED TO ALLOW FREE WORKING SPACE AND TO PERMIT COMPACTING THE BACKFILL AROUND THE PIPE.

NOTES:

3. THE FOLLOWING ARE MINIMUM TRENCH WIDTHS:

I.D. PIPE SIZE (INCHES)	18 OR SMALLER		21	24	30	36	42	48	54
"W" TRENCH WIDTH (FEET)	3.0		3.5	4.0	5.0	6.0	7.0	8.0	9.5
I.D. PIPE SIZE (INCHES)	60	66	72	78	84	90	96	102	108
"W" TRENCH WIDTH (FEET)	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0

FLEXIBLE GRAVITY PIPE AGGREGATE BEDDING DETAIL NOT TO SCALE



TREE PROTECTION NOT TO SCALE



PLAN SUBMITTALS AND CHANGES				
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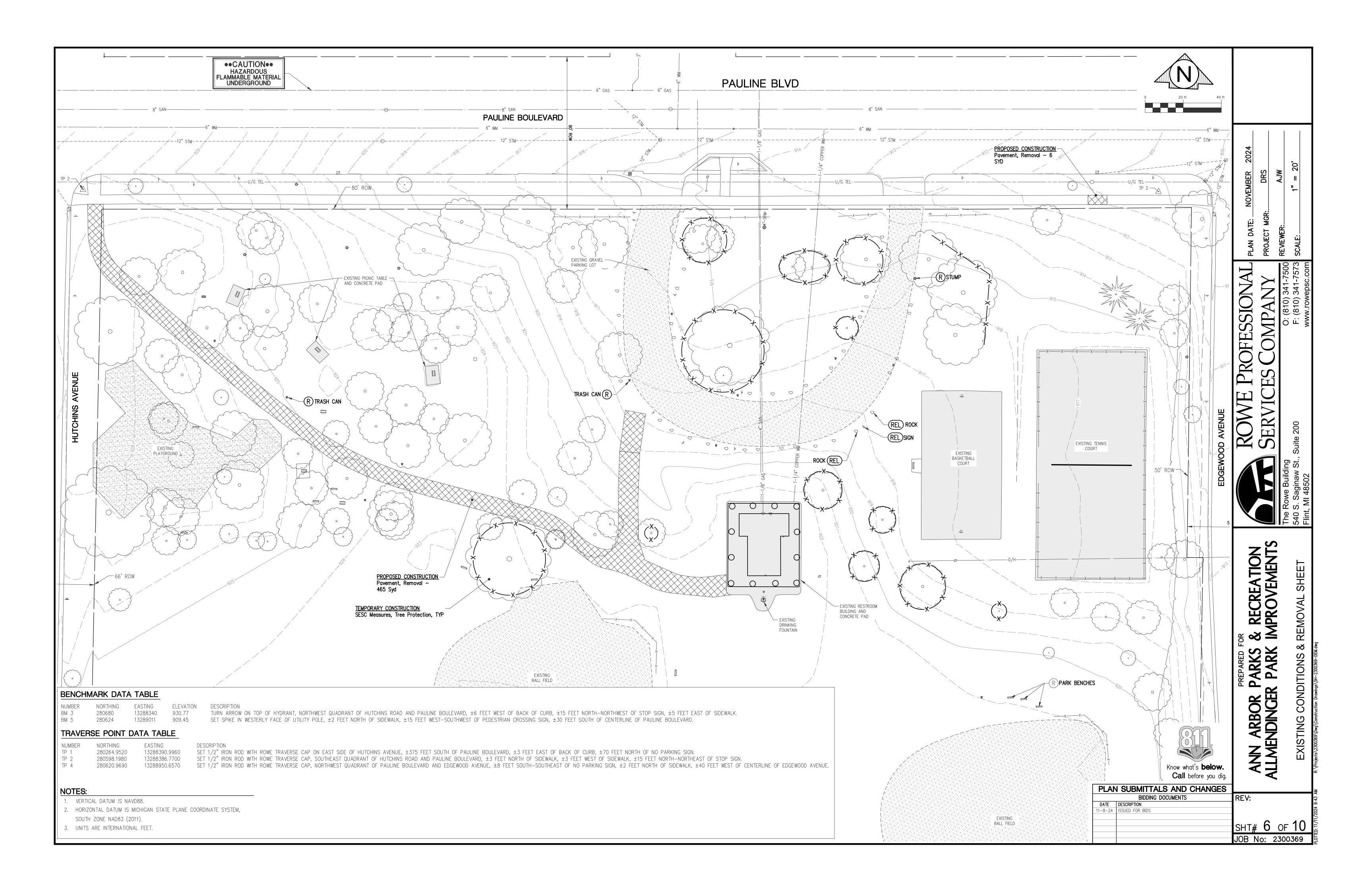
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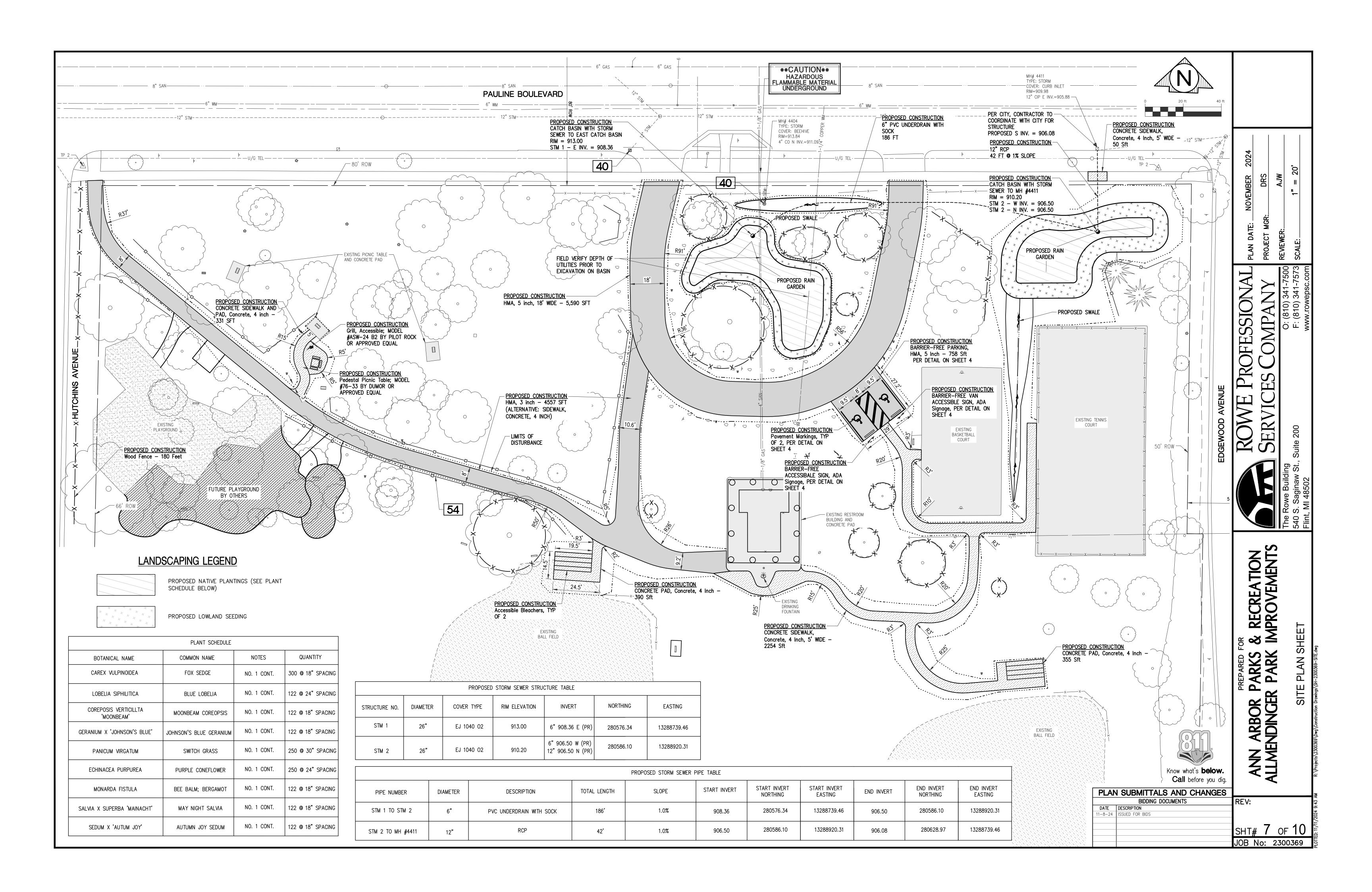
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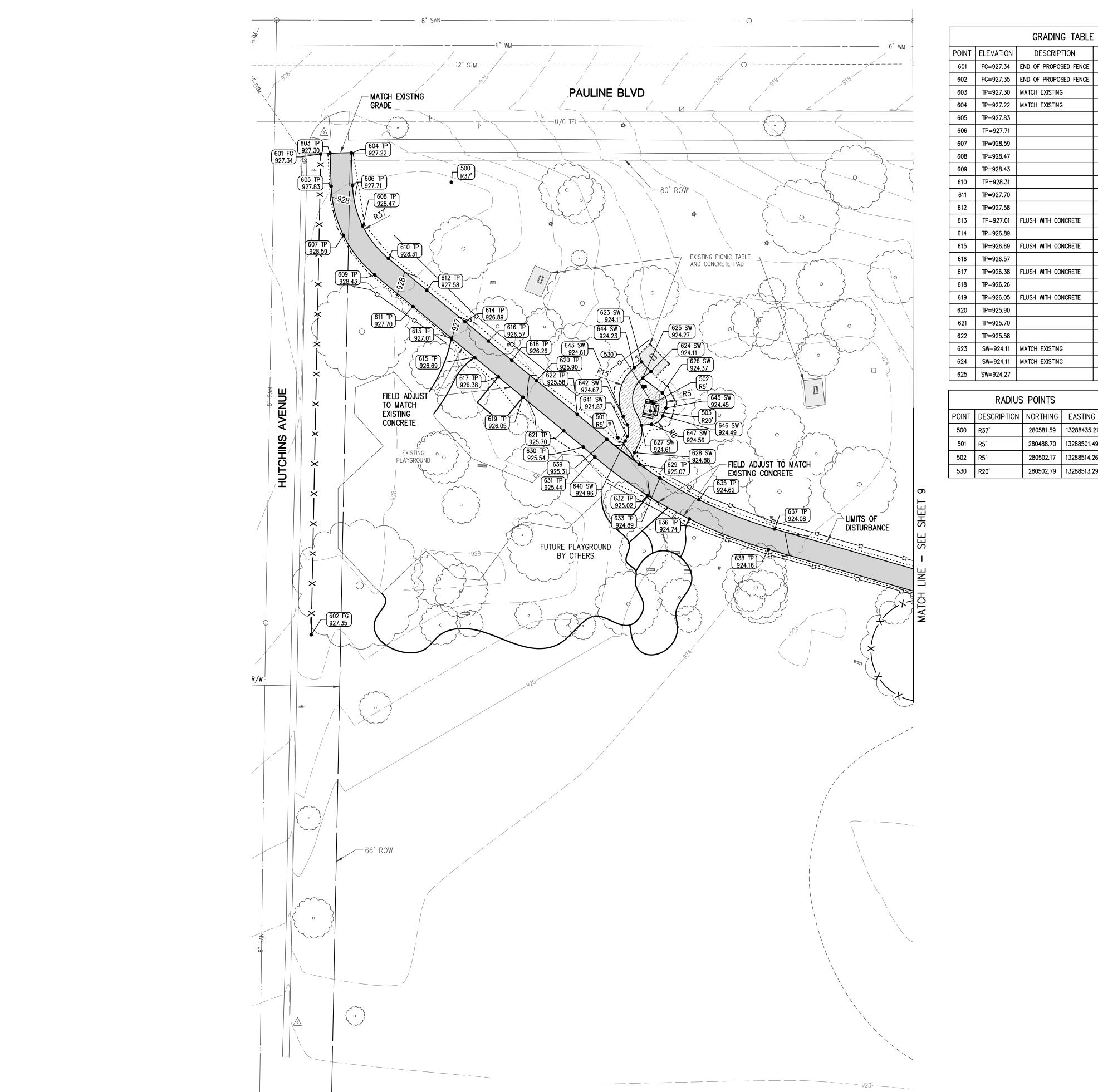
& RECREATION IMPROVEMENTS

ARKS PARK

SHT# 5 OF 10 IOB No: 2300369







GRADING TABLE							
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING			
601	FG=927.34	END OF PROPOSED FENCE	280590.12	13288385.94			
602	FG=927.35	END OF PROPOSED FENCE	280410.16	13288389.98			
603	TP=927.30	MATCH EXISTING	280590.54	13288389.41			
604	TP=927.22	MATCH EXISTING	280590.95	13288397.40			
605	TP=927.83		280578.23	13288390.33			
606	TP=927.71		280578.82	13288398.31			
607	TP=928.59		280560.06	13288395.69			
608	TP=928.47		280563.89	13288402.72			
609	TP=928.43		280545.71	13288408.05			
610	TP=928.31		280552.09	13288412.88			
611	TP=927.70		280534.49	13288422.88			
612	TP=927.58		280540.88	13288427.71			
613	TP=927.01	FLUSH WITH CONCRETE	280523.27	13288437.70			
614	TP=926.89		280529.65	13288442.53			
615	TP=926.69	FLUSH WITH CONCRETE	280516.47	13288446.69			
616	TP=926.57		280522.85	13288451.51			
617	TP=926.38	FLUSH WITH CONCRETE	280509.55	13288455.83			
618	TP=926.26		280515.94	13288460.64			
619	TP=926.05	FLUSH WITH CONCRETE	280502.35	13288465.34			
620	TP=925.90		280508.73	13288470.17			
621	TP=925.70		280490.39	13288481.15			
622	TP=925.58		280496.77	13288485.97			
623	SW=924.11	MATCH EXISTING	280517.40	13288509.15			
624	SW=924.11	MATCH EXISTING	280514.01	13288512.82			
625	SW=924.27		280511.36	13288509.81			

280581.59 | 13288435.21 |

280488.70 | 13288501.49

280502.17 | 13288514.26

280502.79 | 13288513.29

RADIUS POINTS

		GRADING TABLE							
;	POINT	ELEVATION	DESCRIPTION	NORTHING	EASTII				
4	626	SW=924.37		280506.10	13288517				
В	627	SW=924.61		280493.73	13288510				
1	628	SW=924.88		280483.33	13288507				
0	629	TP=925.07	FLUSH WITH PAVEMENT	280479.05	13288509				
3	630	TP=925.54		280484.66	13288488				
1	631	TP=925.44		280481.09	13288493				
9	632	TP=925.02	FLUSH WITH CONCRETE	280467.50	13288513				
2	633	TP=924.89		280474.27	13288517				
5	635	TP=924.62		280466.76	13288532				
3	636	TP=924.74	FLUSH WITH CONCRETE	280459.46	13288529				
В	637	TP=924.08		280457.02	13288561				
1	638	TP=924.16		280449.24	13288559				
0	639	=925.31	FLUSH WITH PAVEMENT	280487.91	13288497				
3	640	SW=924.96		280487.55	13288504				
9	641	SW=924.87		280489.35	1328850				
1	642	SW=924.67		280493.64	13288504				
3	643	SW=924.61		280496.69	13288500				
4	644	SW=924.23		280515.15	1328850€				
4	645	SW=924.45		280500.55	13288518				
7	646	SW=924.49		280497.55	13288517				
5	647	SW=924.56		280494.24	13288513				
7									

627	SW=924.61		280493.73	13288510
628	SW=924.88		280483.33	13288507
629	TP=925.07	FLUSH WITH PAVEMENT	280479.05	13288509
630	TP=925.54		280484.66	13288488
631	TP=925.44		280481.09	13288493
632	TP=925.02	FLUSH WITH CONCRETE	280467.50	13288513
633	TP=924.89		280474.27	13288517
635	TP=924.62		280466.76	13288532
636	TP=924.74	FLUSH WITH CONCRETE	280459.46	13288529
637	TP=924.08		280457.02	13288561
638	TP=924.16		280449.24	13288559
639	=925.31	FLUSH WITH PAVEMENT	280487.91	13288497
640	SW=924.96		280487.55	13288504
641	SW=924.87		280489.35	1328850
642	SW=924.67		280493.64	13288504
643	SW=924.61		280496.69	13288500
644	SW=924.23		280515.15	1328850€
645	SW=924.45		280500.55	13288518
646	SW=924.49		280497.55	13288517
	I			ı

GRADING LEGEND

CB = CATCH BASIN

TP = TOP OF PAVEMENT ELEVATION

SW = TOP OF SIDEWALK ELEVATION TC = TOP OF CONCRETE EDGING

FG = FINISH GROUND ELEVATION

DT = DITCH OR SWALE INVERT ELEVATION

ME = MATCH EXISTING ELEVATION PROPOSED SURFACE WATER FLOW PROPOSED SIDEWALK LANDING PAD





PLAN SUBMITTALS AND CHANGES
BIDDING DOCUMENTS DATE DESCRIPTION

11-8-24 ISSUED FOR BIDS

REV:

JOB No: 2300369

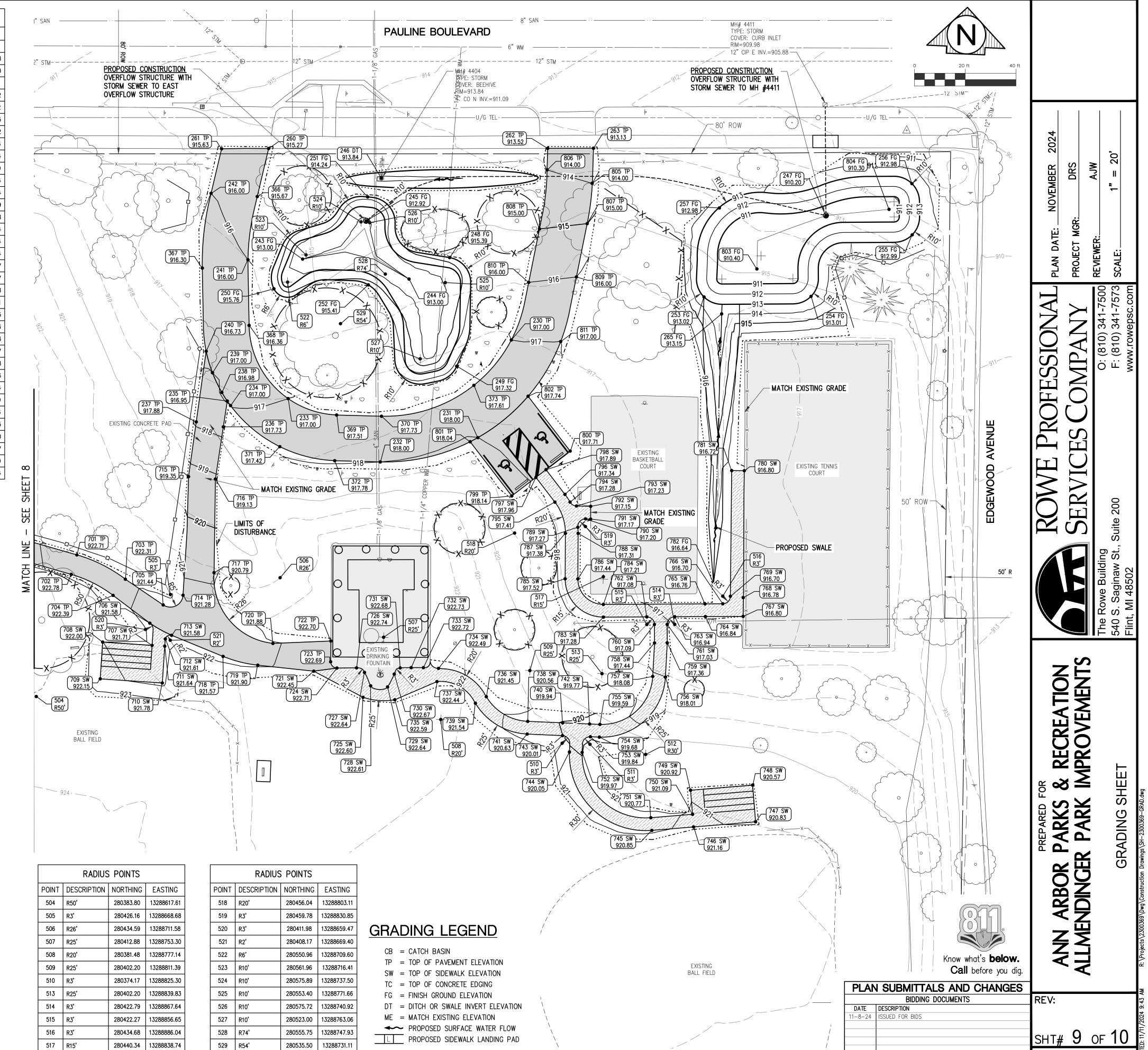
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POINT	ELEVATION	DESCRIPTION	NORTHING	EASTIN
230	TP=917.00		280531.93	13288798.
231	TP=918.00		280492.95	13288787.
232	TP=918.00		280481.77	13288749
233	TP=917.00		280505.16	13288711.
234	TP=917.00		280501.45	13288689
235	TP=916.95		280503.19	13288687
236	TP=917.73	MATCH EXISTING	280492.97	13288686
237	TP=917.88	MATCH EXISTING	280494.47	13288675
238	TP=916.98		280506.50	13288685
239	TP=917.00		280514.06	13288681
240	TP=916.73		280522.42	13288678
241	TP=916.00		280559.10	13288693
242	TP=916.00		280584.60	13288678
243	FG=913.00		280560.27	13288715
244	FG=913.00		280554.19	13288757
245	FG=912.92		280576.34	13288739
246	DT=913.84	MANHOLE	280593.41	13288744
247	FG=910.20		280586.10	13288920
248	FG=915.39		280563.31	13288772
249	FG=917.32		280520.71	13288777
250	FG=915.76		280548.11	13288704
251	FG=914.24		280585.79	13288739
252	FG=915.41		280551.23	13288741
253	FG=913.02		280552.03	13288873
254	FG=913.01		280554.06	13288915
255	FG=912.99		280579.96	13288954
256	FG=912.98		280600.08	13288953
257	FG=912.98		280587.30	13288878
260	TP=915.27		280603.18	13288699
261	TP=915.63		280602.31	13288681.
262	TP=913.52		280607.91	13288809
263	TP=913.13		280608.70	13288827
265	FG=913.15		280545.69	13288880
366	TP=915.67		280584.10	13288696
367	TP=916.30		280555.06	13288675
368	TP=916.36		280533.31	13288695

		GRADING TABLE		
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
732	SW=922.73	MATCH EXISTING	280401.38	13288764.64
733	SW=922.72		280401.59	13288769.45
734	SW=922.49		280401.55	13288775.41
735	SW=922.59		280388.48	13288758.73
736	SW=921.45		280391.21	13288794.68
737	SW=922.44		280396.34	13288775.04
738	SW=920.56		280382.20	13288811.39
739	SW=921.54		280388.47	13288790.50
740	SW=919.94		280382.20	13288825.16
741	SW=920.63		280377.20	13288811.39
742	SW=919.77		280382.20	13288835.78
743	SW=920.01		280377.17	13288825.31
744	SW=920.05		280370.86	13288828.33
745	SW=920.85		280341.38	13288862.05
746	SW=921.16	FLUSH WITH BLEACHER CONCRETE PAD	280343.43	13288878.4
747	SW=920.83	BLEACHER CONCRETE PAD	280346.47	13288902.72
748	SW=920.57	BLEACHER CONCRETE PAD	280360.86	13288900.92
749	SW=920.92	BLEACHER CONCRETE PAD	280357.82	13288876.61
750	SW=921.09	FLUSH WITH BLEACHER CONCRETE PAD	280348.39	13288877.79
751	SW=920.77		280346.35	13288861.43
752	SW=919.97		280370.91	13288833.33
753	SW=919.84		280377.20	13288836.29
754	SW=919.68		280377.20	13288839.83
755	SW=919.59		280382.20	13288839.83
756	SW=918.01		280401.89	13288864.83
757	SW=918.08		280401.95	13288859.83
758	SW=917.44		280415.15	13288859.99
759	SW=917.36		280415.39	13288864.99
760	SW=917.09		280422.41	13288859.65
761	SW=917.03		280422.65	13288864.64
762	SW=917.08		280425.27	13288856.5
763	SW=916.94		280425.79	13288867.49
764	SW=916.84		280426.36	13288879.55
765	SW=916.76		280431.35	13288879.19
766	SW=916.70		280431.69	13288886.18
767	SW=916.80		280427.07	13288894.39

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POINT	ELEVATION	DESCRIPTION	ON	NORTHING	EASTING
369	TP=917.51			280499.50	13288731.11
370	TP=917.73			280499.77	13288748.78
371	TP=917.42			280486.11	13288709.30
372	TP=917.78			280481.50	13288731.11
373	TP=917.61			280513.47	13288784.62
701	TP=922.71				13288631.22
702	TP=922.78				13288629.35
703	TP=922.31			280431.42	13288650.72
704	TP=922.39			280424.85	13288646.16
705	TP=921.44			280421.93	13288666.04
706	SW=921.58			280414.53	13288661.09
707	SW=921.71	FLUSH WITH BLEACHER (CONCRETE PAD	280405.83	13288662.34
708	SW=922.00	BLEACHER CONCRETE PA	D	280406.31	13288642.84
709	SW=922.15	BLEACHER CONCRETE PA	D	280391.82	13288642.49
710	SW=921.78	BLEACHER CONCRETE PA	D	280391.22	13288666.98
711	SW=921.64	FLUSH WITH BLEACHER (CONCRETE PAD	280405.71	13288667.34
712	SW=921.61			280408.58	13288667.44
713	SW=921.58			280410.12	13288669.84
714	TP=921.28		MATCH EXISTING		13288673.67
715	TP=919.35	MATCH EXISTING			13288673.87
716	TP=919.13	MATCH EXISTING		280472.31	13288684.48
717	TP=920.79			280435.47	13288685.51
718	TP=921.57			280402.68	13288690.45
719	TP=921.90			280399.80	13288704.26
720	TP=921.88			280408.62	13288709.83
721	SW=922.45			280398.38	13288726.37
722	TP=922.70	MATCH EXISTING		280410.53	13288732.58
723	TP=922.69	MATCH EXISTING		280402.35	13288732.86
724	SW=922.71	MATCH EXISTING		280399.98	13288735.44
725	SW=922.60			280388.91	13288746.19
726	SW=922.74	MATCH EXISTING		280400.39	13288743.16
727	SW=922.64	MATCH EXISTING		280398.74	13288746.35
728	SW=922.61	MATCH EXISTING		280393.55	13288749.00
729	SW=922.64	MATCH EXISTING		280393.40	13288755.67
730	SW=922.67	MATCH EXISTING		280398.58	13288758.10
731	SW=922.68	MATCH EXISTING		280401.10	13288760.34
		GRADING TABL	 E		
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING	
768	SW=916.78		280434.45	13288894.11	
760	CW_016 70		290474 77	1700000 04	

GRADING TABLE

/31	SW=922.68	MATCH EXISTING		280401.10	١,
		GRADING TABL	 E		
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING	
768	SW=916.78		280434.45	13288894.11	
769	SW=916.70		280434.77	13288889.04	
780	SW=916.80	MATCH EXISTING	280484.37	13288892.43	
781	SW=916.72		280484.22	13288887.47	
782	FG=916.64		280439.73	13288882.20	
783	SW=917.28		280424.46	13288839.45	
784	SW=917.21		280429.45	13288839.22	
785	SW=917.52		280438.89	13288823.75	
786	SW=917.44		280439.07	13288828.75	
787	SW=917.38		280456.78	13288823.09	
788	SW=917.31		280456.96	13288828.09	
789	SW=917.27		280459.38	13288827.88	
790	SW=917.20		280462.78	13288830.80	
791	SW=917.17	MATCH EXISTING	280462.82	13288832.79	
792	SW=917.15	MATCH EXISTING	280467.82	13288832.59	
793	SW=917.23		280467.72	13288826.98	
794	SW=917.28		280469.14	13288824.40	
795	SW=917.41		280468.88	13288818.44	
796	SW=917.34		280472.09	13288822.27	
797	SW=917.96	FLUSH WITH PAVEMENT	280478.28	13288810.57	
798	SW=917.89	FLUSH WITH PAVEMENT	280481.49	13288814.40	
799	TP=918.14		280470.58	13288801.37	
800	TP=917.71		280489.20	13288823.61	
801	TP=918.04	FLUSH WITH PAVEMENT	280491.21	13288784.10	
802	TP=917.74	FLUSH WITH PAVEMENT	280510.07	13288806.13	
803	FG=910.40		280563.94	13288894.04	
804	FG=910.30		280589.59	13288945.04	
805	TP=914.00		280594.89	13288827.79	
806	TP=914.00		280599.40	13288809.84	
807	TP=915.00		280578.95	13288826.51	
808	TP=915.00		280576.05	13288807.82	
809	TP=916.00		280557.78	13288823.16	
810	TP=916.00		280554.87	13288804.47	
811	TP=917.00		280532.12	13288818.04	



JOB No: 2300369

MICHIGAN UNIFIED KEYING SYSTEM SOIL FROSION SEDIMENTATION CONTROL MEASURES

51	JIL E	ROSION			Лľ	VIE	_ \	11	A		U		ONIROL	IV		A;				D
*	NDICATES APPLICABILITY TO ONE OR MORE OF TH	OF A SPECIFIC CONTROL MEASURE IE SEVEN PROBLEM AREAS	SLOPES	STREAMS AND WATERWAYS	SURFACE DRAINAGEWAYS	ENCLOSED DRAINAGE (Inlet & Outfall Control)	LARGE FLAT SURFACE AREAS	BORROW AND STOCKPILE AREAS	ADJACENT PROPERTIES					SLOPES	STREAMS AND WATERWAYS	SURFACE DRAINAGEWAYS	ENCLOSED DRAINAGE (Inlet & Outfall Control)	Large Flat Surface areas	Borrow and Stockpile areas	ADJACENT PROPERTIES
KEY	DETAIL	CHARACTERISTICS	Α	В	C	D	Ε	F	G	KE,	Y	DETAIL	CHARACTERISTICS	Α	В	C	D	Ε	F	G
1	STRIPPING & STOCKPILING TOPSOIL	TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION. STOCKPILE SHOULD BE TEMPORARILY SEEDED.	*				*	*		28	3	DROP SPILLWAY	SLOWS VELOCITY OF FLOW, REDUCING EROSIVE CAPACITY		*	*				
2	SELECTIVE GRADING & SHAPING	WATER CAN BE DIVERTED TO MINIMIZE EROSION. FLATTER SLOPES EASE EROSION PROBLEMS.	*				*	*	*	29	9	PIPE DROP	REDUCES RUNOFF VELOCITY REMOVES SEDIMENT AND TURBIDITY CAN BE DESIGNED TO HANDLE LARGE VOLUMES OF FLOW			*				
3	GRUBBING OMITTED	SAVES COST OF GRUBBING, PROVIDES NEW SPROUTS, RETAINS EXISTING ROOT MAT SYSTEM, REDUCES WIND FALL AT NEW FOREST EDGE DISCOURAGES EQUIPMENT ENTRANCE	*				*		*	30		PIPE SPILLWAY	REMOVES SEDIMENT AND TURBIDITY FROM RUNOFF MAY BE PART OF PERMANENT EROSION CONTROL PLAN			*				
4	VEGETATIVE STABILIZATION	MAY UTILIZE A VARIETY OF PLANT MATERIAL STABILIZES SOIL SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF	*	*	*		*	*	*	3		ENERGY DISSIPATER	SLOWS RUNOFF VELOCITY TO NON-EROSIVE LEVEL PERMITS SEDIMENT COLLECTION FROM RUNOFF	*		*	*			
5	SEEDING	INEXPENSIVE AND VERY EFFECTIVE STABILIZES SOIL, THUS MINIMIZING EROSION PERMITS RUNOFF TO INFILTRATE SOIL, REDUCING RUNOFF VOLUME SHOULD INCLUDE PREPARED TOPSOIL BED	*		*		*	*	*	32	2	LEVEL SPREADER	CONVERTS COLLECTED CHANNEL OR PIPE FLOW BACK TO SHEET FLOW AVOIDS CHANNEL EASEMENTS AND CONSTRUCTION OFF PROJECT SITE SIMPLE TO CONSTRUCT			*				
6	SEEDING WITH MULCH AND/OR MATTING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAINAGEWAYS WITH LOW VELOCITY EASILY PLACED IN SMALL QUANTITIES BY INEXPERIENCED PERSONNEL SHOULD INCLUDE PREPARED TOPSOIL BED	*		*			*	*	33	3	SEDIMENTATION TRAP	MAY BE CONSTRUCTED OF A VARIETY OF MATERIALS TRAPS SEDIMENT AND REDUCES VELOCITY OF FLOW CAN BE CLEANED AND EXPANDED AS NEEDED		*	*				
7	HYDRO-SEEDING	EFFECTIVE ON LARGE AREAS MULCH TACKING AGENT USED TO PROVIDE IMMEDIATE PROTECTION UNTIL GRASS IS ROOTED SHOULD INCLUDE PREPARED TOPSOIL BED	*				*	*	*	34	4	SEDIMENT BASIN	TRAPS SEDIMENT RELEASES RUNOFF AT NON-EROSIVE RATES CONTROLS RUNOFF AT SYSTEM OUTLETS CAN BE VISUAL AMENITIES		*	*	*			
8	SODDING	PROVIDES IMMEDIATE PROTECTION CAN BE USED ON STEEP SLOPES WHERE SEED MAY BE DIFFICULT TO ESTABLISH EASY TO PLACE; MAY BE REPAIRED IF DAMAGED SHOULD INCLUDE PREPARED TOPSOIL BED	*		*		*	*	*	35	5	STORM SEWER	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION USE CATCH BASINS TO COLLECT SEDIMENT					*		*
9	VEGETATIVE BUFFER STRIP	SLOWS RUNOFF VELOCITY FILTERS SEDIMENT FROM RUNOFF REDUCES VOLUME OF RUNOFF ON SLOPES	*	*					*	36		CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET					*		*
10	MULCHING	USED ALONE TO PROTECT EXPOSED AREAS FOR SHORT PERIODS PROTECTS SOIL FROM IMPACT OF FALLING RAIN PRESERVES SOIL MOISTURE AND PROTECTS GERMINATING SEED FROM TEMPERATURE EXTREMES	*				*	*		37	7	SOD FILTER	INEXPENSIVE AND EASY TO CONSTRUCT PROVIDES IMMEDIATE PROTECTION PROTECTS AREAS AROUND INLETS FROM EROSION				*			
11	ROUGHENED SURFACE	REDUCES VELOCITY AND INCREASES INFILTRATION RATES COLLECTS SEDIMENT HOLDS WATER, SEED, AND MULCH BETTER THAN SMOOTH SURFACES	*				*			38	3		INEXPENSIVE AND EASY TO CONSTRUCT CAN BE LOCATED AS NECESSARY TO COLLECT SEDIMENT MAY BE USED IN CONJUNCTION WITH SNOW FENCE FOR ADDED STABILITY				*			*
12	COMPACTION	HELPS HOLD SOIL IN PLACE, MAKING EXPOSED AREAS LESS VULNERABLE TO EROSION	*				*			39	9	ROCK FILTER	CAN UTILIZE MATERIAL FOUND ON SITE EASY TO CONSTRUCT FILTERS SEDIMENT FROM RUNOFF				*			*
13	RIPRAP, RUBBLE, GABIONS	USED WHERE VEGETATION IS NOT EASILY ESTABLISHED EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS PERMITS RUNOFF TO INFILTRATE SOIL DISSIPATES ENERGY FLOW AT SYSTEM OUTLETS	*	*	*					40			EASY TO SHAPE COLLECTS SEDIMENT MAY BE CLEANED AND EXPANDED AS NEEDED				*			
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, THUS MINIMIZING EROSION PERMITS CONSTRUCTION TRAFFIC IN ADVERSE WEATHER MAY BE USED AS PART OF PERMANENT BASE CONSTRUCTION OF PAVED AREAS					*			4		STONE AND ROCK CROSSING	MAY BE ROCK OR CLEAN RUBBLE MINIMIZES STREAM TURBIDITY INEXPENSIVE MAY ALSO SERVE AS DITCH CHECK OR SEDIMENT TRAP		*					
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VOLUME AND VELOCITY IRREGULAR SURFACE WILL HELP SLOW VELOCITY	*				*			42	2	TEMPORARY CULVERT	ELIMINATES STREAM TURBULENCE AND TURBIDITY PROVIDES UNOBSTRUCTED PASSAGE FOR FISH AND OTHER WATER LIFE CAPACITY FOR NORMAL FLOW CAN BE PROVIDED WITH STORM WATER FLOWING OVER ROADWAY		*					
16	CURB & GUTTER	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE COLLECTS AND CONDUCTS RUNOFF TO ENCLOSED DRAINAGE SYSTEM OR PREPARED DRAINAGEWAY					*		*	43	3	The state of the s	EASY TO INSTALL AT INLET KEEPS CULVERT CLEAN AND FREE FLOWING MAY BE CONSTRUCTED OF LUMBER OR LOGS		*					*
17	BENCHES	REDUCES RUNOFF VELOCITY BY REDUCING EFFECTIVE SLOPE LENGTH COLLECTS SEDIMENT PROVIDES ACCESS TO SLOPES FOR SEEDING, MULCHING AND MAINTENANCE	*					*		44	anning a	CULVERT SEDIMENT TRAP	DEFLECTS CURRENTS AWAY FROM STREAMBANK AREAS		*					
18	DIVERSION BERM	DIVERTS WATER FROM VULNERABLE AREAS COLLECTS AND DIRECTS WATER TO PREPARED DRAINAGEWAYS MAY BE PLACED AS PART OF NORMAL CONSTRUCTION OPERATION	*					*	*	45	5	IP. STREAM CHANNEL CHANGE	NEW CHANNEL KEEPS NORMAL FLOWS AWAY FROM CONSTRUCTION REQUIRES STATE PERMIT		*					
19	DIVERSION DITCH	COLLECTS AND DIVERTS WATER TO REDUCE EROSION POTENTIAL MAY BE INCORPORATED IN PERMANENT PROJECT DRAINAGE SYSTEMS	*					*	*	46	6	SHEET PILINGS	PROTECTS ERODIBLE BANK AREAS FROM STREAM CURRENTS DURING CONSTRUCTION MINIMAL DISRUPTION WHEN REMOVED		*					
20	BERM & DITCH	DIVERTS WATER TO A PREPARED DRAINAGEWAY MAY BE USED AT INTERVALS ACROSS SLOPE FACE TO REDUCE EFFECTIVE SLOPE LENGTH	*					*	*	47	7	COFFERDAM	WORK CAN BE CONTINUED DURING MOST ANTICIPATED STREAM CONDITIONS CLEAR WATER CAN BE PUMPED DIRECTLY BACK INTO STREAM		*					
21	FILTER BERM	CONSTRUCTED OF GRAVEL OR STONE INTERCEPTS AND DIVERTS RUNOFF TO STABILIZED AREAS OR PREPARED DRAINAGE SYSTEMS SLOWS RUNOFF AND COLLECTS SEDIMENT	*	*					*	48	3	CONSTRUCTION DAM	PERMITS WORK TO CONTINUE DURING NORMAL STREAM STAGES CONTROLLED FLOODING CAN BE ACCOMPLISHED DURING PERIODS OF INACTIVITY		*					
22	BRUSH FILTER	USES SLASH AND LOGS FROM CLEARING OPERATIONS CAN BE COVERED AND SEEDED RATHER THAN REMOVED ELIMINATES NEED FOR BURNING OR REMOVAL OF MATERIAL FROM SITE							*	49	9	CHECK DAMS	REDUCES FLOW VELOCITY CATCHES SEDIMENT CAN BE CONSTRUCTED OF LOGS, STRAW, HAY ROCK, LUMBER, MASONRY, OR SAND BAGS		*	*				
23	BARE CHANNEL	LEAST EXPENSIVE FORM OF DRAINAGEWAY MAY BE USED ONLY WHERE GRADIENT IS VERY LOW AND WITH SOILS OF MINIMUM EROSION POTENTIAL			*					50		WEIR	CONTROLS SEDIMENTATION IN LARGE STREAMS CAUSES MINIMAL TURBIDITY		*	*				
24	GRASSED WATERWAY	MUCH MORE STABLE FORM OF DRAINAGEWAY THAN BARE CHANNEL GRASS TENDS TO SLOW RUNOFF AND FILTER OUT SEDIMENT USED WHERE BARE CHANNEL WOULD BE ERODED			*					5	1	RETAINING WALL	REDUCES GRADIENT WHERE SLOPES ARE EXTREMELY STEEP PERMITS RETENTION OF EXISTING VEGETATION, KEEPING SOIL STABLE IN CRITICAL AREAS MINIMIZES MAINTENANCE	*						*
25	SLOPE DRAIN (PIPE CHITE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	*							52		SEEPAGE CONTROL	PREVENTS PIPING AND SOIL SLIPPAGE ON CUT SLOPES	*						*
26	SLOPE DRAIN (SUBSUBEACE PIDE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED OR EXTENDED AS GRADING PROGRESSES	*							53	3	WINDBREAK	MINIMIZES WIND EROSION MAY BE SNOW FENCE					*		
27	SLOPE DRAIN (SUBSURFACE PIPE)	PREVENTS EROSION ON SLOPES WHEN RUNOFF CANNOT BE DIVERTED TO EDGE OF SLOPE AREA USUALLY PERMANENT CAN BE CONSTRUCTED AS GRADING PROGRESSES	*							54	4	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.			*				*



TYPE OF SEED
SPRING OATS/BARLEY OR
DOMESTIC RYEGRASS

PERMANE	NT S	EEI	<u>NIC</u>	<u>G (</u>	<u>GUI</u>	<u>DE</u>	_	
	APR	MAY	JUN	JUL	AUG	SEP	OCT]
IRRIGATED AND/OR MULCH								ZONE 1
WITHOUT IRRIGATION OR MULCH								ZONE
IRRIGATED AND/OR MULCHED								ZONE 2
WITHOUT IRRIGATION OR MULCH								ZUNE Z
IRRIGATED AND/OR MULCHED								ZONE 3
WITHOUT IRRIGATION OR MULCH						Ø		LONE 3

SOIL EROSION & SEDIMENTATION CONTROL

DEVELOPER/PROPERTY OWNER SHALL SUBMIT A DETAILED EROSION CONTROL PLAN AND OBTAIN A SOIL EROSION & SEDIMENTATION CONTROL PERMIT PRIOR TO ANY EARTH CHANGES. CONSTRUCTION OPERATION SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING BORROW AND FILL DISPOSAL AREAS WILL BE SELECTED AND APPROVED AT TIME OF PLAN REVIEW. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION. CLEANUP WILL BE DONE IN A MANNER TO ENSURE THAT EROSION CONTROL MEASURES ARE NOT

6. THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENTATION CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE DEVELOPER WITHIN 24 HOURS. TEMPORARY EROSION CONTROL MEASURES SHALL BE COMPLETELY REMOVED BY THE DEVELOPER UPON ESTABLISHMENT OF PERMANENT CONTROL MEASURES.

ALL TEMPORARY SOIL EROSION CONTROL MEASURES MUST BE REMOVED FROM ROAD RIGHT-OF-WAY AREAS PRIOR TO ACCEPTANCE OF STREETS FOR ROUTINE MAINTENANCE. VEGETATION MUST BE ACCEPTABLY ESTABLISHED PRIOR TO FINAL RELEASE OF THE CONSTRUCTION GUARANTEE BY THE DESIGNATED SOIL EROSION SEDIMENTATION CONTROL AGENT.

STREAM CROSSING NOTES

- 1. CONSTRUCTION OF STREAM CROSSINGS SHALL BE SUBJECT TO THE SPECIFICATIONS FOR PROTECTION OF NATURAL RESOURCES AT UTILITY CROSSINGS AS GIVEN IN THE ADMINISTRATIVE RULES FOR ACT 346 (RULES
- 2. A SILTÁTION BARRIER SHALL BE CONSTRUCTED IMMEDIATELY DOWNSTREAM OF THE CONSTRUCTION SITE PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. (SEE MICHIGAN UNIFIED KEYING SYSTEM FOR SPECIFIED BARRIER) THE SILTATION BARRIER SHALL BE MAINTAINED IN GOOD WORKING ORDER THROUGHOUT THE DURATION OF THE PROJECT.
- CHEMICALS OR ORGANIC MATTER WHICH IS BIODEGRADABLE. ALL FILL SHALL BE CONTAINED IN SUCH A MANNER SO AS NOT TO ERODE INTO ANY WATERCOURSE. 4. ALL RAW BANKS SHALL BE STABILIZED WITH RIPRAP TO THREE FEET ABOVE THE ORDINARY HIGH WATERMARK, THEN SEEDED, FERTILIZED AND MULCHED, OR SODDED TO PREVENT EROSION.

3. BACKFILL SHALL CONSIST OF INERT MATERIALS WHICH WILL NOT CAUSE SILTATION NOR CONTAIN SOLUBLE

5. UPON PROJECT COMPLETION THE EXCESS SPOILS SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED 6. SILTATION BARRIER MAY BE REMOVED UPON PLACEMENT OF PERMANENT EROSION CONTROL MEASURES.

RYE OR PERENNIAL RYE							
WHEAT							
ZONE	2						
TYPE-OF SEED	APR	MAY	JUN	JUL	AUG	SEP	01
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS							
SUDANGRASS							
RYE OR PERENNIAL RYE				/			
WHEAT				,		₽ H	
<u>Zone</u>	<u> </u>						
TYPE OF SEED	APR	MAY	JUN	JUL	AUG	SEP	0
SPRING OATS/BARLEY OR DOMESTIC RYEGRASS							
SUDANGRASS							
RYE OR PERENNIAL RYE							
WHEAT							

TEMPORARY SEEDING GUIDE

SOIL ERO OP	SION/SE ERATION					ITRO	L					
CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADE SEDIMENT CONTROL												
TEMP. CONTROL MEASURES												
STORM FACILITIES												
TEMP. CONSTRUCTION ROADS												
SITE CONSTRUCTION												
PERM. CONTROL MEASURES												
FINISH GRADING												

CONSTRUCTION SEQUENCE

4. PERMANENT MEASURES; FINAL GRADING, SEEDING AND MULCHING.

- EXCAVATION AND STOCKPILING OF SOIL.
 IMPLEMENTATION OF TEMPORARY EROSION CONTROL MEASURES; SELECTIVE GRADING, DIVERSIONS AS REQUIRED IN FIELD, PROTECTION OF STORM SEWER FACILITIES. 3. PERIODIC MAINTENANCE OF AFFECTED EROSION CONTROL MEASURES.
 - Know what's **below.** Call before you dig.

PLAN SUBMITTALS AND CHANGES										
BIDDING DOCUMENTS										
DESCRIPTION										
ISSUED FOR BIDS										

REV:

JOB No: 2300369

RECREATION MPROVEMENTS

ARKS PARK ARBOR P NDINGER