

COMMUNITY ANALYSIS:	
1.	THE PROPOSED DEVELOPMENT IS NOT EXPECTED TO SIGNIFICANTLY IMPACT LOCAL SCHOOLS.
2.	THE SURROUNDING USES CONSIST OF ST. PAUL MISSIONARY BAPTIST CHURCH (NORTH), CITY STREET/PLATT (EAST), THE SWIFT RUN DRAINAUTIC DISTRICT (WEST), AND A VACANT LOT (SOUTH). THESE USES ARE NOT EXPECTED TO BE NEGATIVELY IMPACTED BY THIS DEVELOPMENT.
3.	THE SITE WILL BE IMPACTED FROM THE SURROUNDING USES BY LANDSCAPING AND EXISTING MITIGATION IMPACTS ON THE RESIDENTIAL USES.
4.	THE SITE IS CURRENTLY VACANT, CONSISTING OF PERIMETER TREES, GRASS AND SCRUB BRUSH. A MAJORITY OF THE SITE IS VOID OF NATURAL FEATURES. EIGHT LANDMARK TREES EXIST ON THE SITE, OF WHICH THREE WILL BE REMOVED AND REPLACED PER MITIGATION REQUIREMENTS. THE SITE WILL NOT CAUSE ANY ADVERSE IMPACTS TO AIR AND WATER QUALITY.
5.	THE ARE NO KNOWN HISTORIC SITES ON THE SITE.
6.	THE PROPOSED DEVELOPMENT IS NOT EXPECTED TO SIGNIFICANTLY IMPACT LOCAL TRAFFIC. USING ITS TRIP GENERATION METHODS, THE AVERAGE VEHICLE TRIP GENERATION PER DWELLING UNIT IS CALCULATED AS 0.51 FOR MULTIFAMILY HOUSING (LOW-RISE) AND 0.40 FOR MULTIFAMILY HOUSING (MID-RISE). THE DEVELOPMENT MAY BE ALL OF EITHER OF THESE USES OR A MIXTURE OF THE TWO; HOWEVER, SINCE A TRANSPORTATION IMPACT ANALYSIS IS REQUIRED ONLY IF A PROPOSED DEVELOPMENT WILL GENERATE THREE PEAK HOUR TRIPS PER DWELLING UNIT ONE IS NOT REQUIRED FOR THIS PROJECT.
7.	ALL SIDEWALKS ARE TO BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND AND MAINTAINED AND ADDED TO THE SAME, PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE. ALL EXISTING SIDEWALK IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH CITY STANDARDS.

PRELIMINARY SITE PLANS

PLATT ROAD TOWNHOMES

3680, 3696, 3746, 3788 PLATT ROAD
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

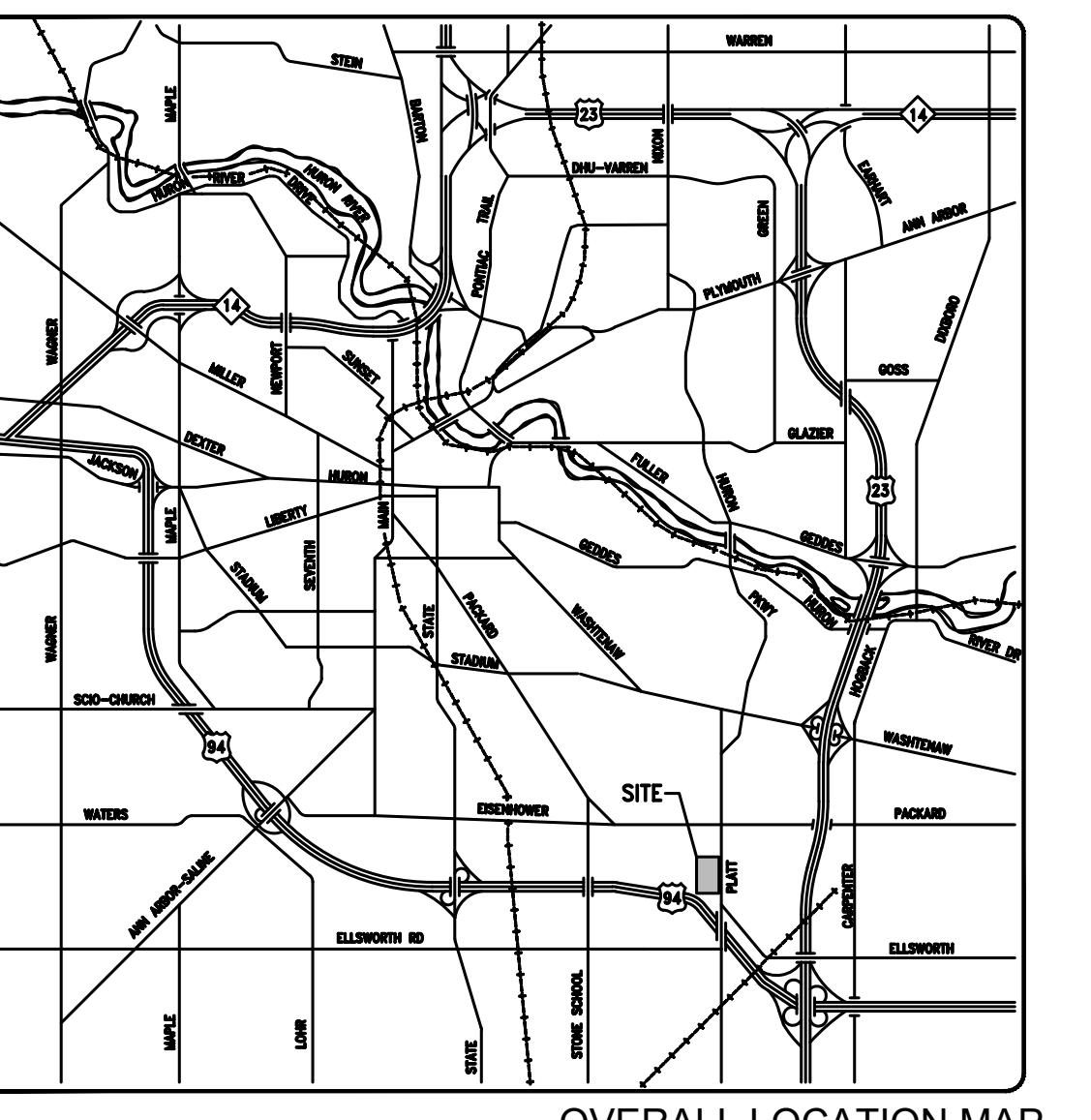
SITE ANALYSIS:	
1.	THE SITE IS CURRENTLY VACANT.
2.	SITE CONDITIONS: SOIL TYPES ON SITE ARE CONOVER LOAM AND MANNI LOAM PER THE WASHTENAW COUNTY SOIL SURVEY. GEOTECHNICAL INVESTIGATION PERFORMED IN 2004 REVEALED PRIMARILY CLAY AND SILTY CLAY, BELOW THE OVERTYING TOPSOIL, WITH ISOLATED AREAS OF SAND LAYERS. INFILTRATION TESTING PERFORMED IN 2015 REVEALED SIMILAR RESULTS, WITH NO INDICATION OF SOIL SUITABILITY FOR STORM WATER INFILTRATION.
2.2.	SITE VEGETATION CONSISTS PRIMARILY OF SCRUB BRUSH AND GRASSES OVER THE MAJORITY OF THE SITE, WITH TREES LOCATED AROUND THE PERIMETER, INCLUDING A STAND OF MATURE SPRUCE AND PINE TREES ALONG THE WEST BOUNDARY OF THE SITE. REFER TO SHEETS P-2 AND P-2.1, "TOPOGRAPHIC SURVEY" FOR SITE TOPOGRAPHY.
3.	SITE NATURAL FEATURES THERE IS NO KNOWN ENDANGERED SPECIES HABITAT ON SITE.
3.2.	THE 100-YEAR FLOOD PLAIN ASSOCIATED WITH THE SWIFT RUN DRAIN PARTIALLY ENROACHES ON THE WEST EDGE OF THE PROPERTY.
3.3.	EIGHT LANDMARK TREES EXIST ON THE SITE. REFER TO SHEETS L-1, L-2 AND L-3 FOR MORE INFORMATION.
3.4.	NO STEEP SLOPES EXIST ON THE SITE.
3.5.	THERE ARE NO WATERCOURSES ON THE PROPERTY.
3.6.	THERE ARE THREE DISTINCT WETLANDS ON THE PROPERTY. ONE IN THE CENTER OF THE SITE, ONE ON THE NORTHERN BOUNDARY OF THE SITE, AND ONE ALONG THE WEST EDGE OF THE SITE, CORRESPONDING TO THE SWIFT RUN DRAIN FLOODPLAIN.
3.7.	THERE ARE NO WOODLANDS ON THE PROPERTY.
4.	SITE NATURAL FEATURES ALTERNATIVES ANALYSIS AN INITIAL MORE DENSE CONCEPT INCLUDED 55 UNITS, 12 MORE THAN THE CURRENT DESIGN. THIS CONCEPT WOULD HAVE REQUIRED AN EXPANSION OF THE LIMITS OF GRADING FOR THE SITE, MORE TREE REMOVAL AND MITIGATION FOR IMPACTS TO THE FLOODPLAIN. ADDITIONALLY, THE INITIAL CONCEPT DID NOT INCLUDE THE ADDITIONAL TEN FOOT BUFFER ABOVE AND BEYOND THE 25 FOOT WETLAND BUFFER, AS IS CURRENTLY DESIGNED.
5.	THERE ARE NO EXISTING STRUCTURES ON THE SITE.
6.	THE SITE WILL BE ACCESSED VIA A PROPOSED DRIVEWAY ON PLATT ROAD. THE SITE SIDEWALKS WILL CONNECT TO THE EXISTING WALKWAY ON PLATT ROAD AND WILL CONNECT TO ALL LOTS. ALL SIDEWALKS PROPOSED SHALL MEET ALL REQUIREMENTS AS SET FORTH IN THE ADA STANDARDS FOR ACCESSIBLE DESIGN.
7.	PUBLIC UTILITIES PUBLIC WATER MAIN WILL BE EXTENDED THROUGH THE SITE, CONNECTING TO THE EXISTING MAIN WITHIN PLATT ROAD AT TWO SEPARATE LOCATIONS TO CREATE A LOOP. 40' WIDE WATER MAIN EASEMENTS WILL BE PROVIDED ON SITE.
7.2.	PUBLIC SANITARY SEWER WILL CONNECT TO THE EXISTING SANITARY SEWER ON PLATT ROAD.
8.	THE SITE CURRENTLY DRAINS UN-DETTAINED VIA SHEET FLOW TO THE PLATT ROAD RIGHT-OF-WAY STORM SEWER SYSTEM AND TO THE SWIFT RUN DRAIN. THE PROPOSED DEVELOPMENT INCLUDES TWO NEW DETENTION BASINS WITH A MECHANICAL SEDIMENT REMOVAL STRUCTURE. A NEW ON-SITE ENCLOSED STORM SEWER SYSTEM DESIGNED PER THE WASHTENAW COUNTY WATER RESOURCES COMMISSION STANDARDS IS ALSO INCLUDED. THE DEVELOPMENT WILL ASSESS AND CAPTURE STORM WATER RUNOFF FROM EXISTING AND PROPOSED DRAINAGE AREAS. THE DETENTION BASINS WILL DISCHARGE TO THE EXISTING STORM SEWER SYSTEM IN THE PLATT ROAD RIGHT-OF-WAY AND THE SWIFT RUN DRAIN AT A LOWER PEAK FLOW RATE THAN CURRENTLY EXISTS.
9.	SITE LIGHTING WILL BE PROVIDED BY BUILDING MOUNTED LIGHTS ON EACH UNIT.
THE CONSTRUCTION COVERED BY THESE PLANS SHALL BE IN COMPLETE CONFORMANCE WITH THE CITY OF ANN ARBOR STANDARDS.	
DEVELOPMENT PROGRAM	
THE PROPOSED PROJECT IS LOCATED ON ONE PARCEL OF CURRENTLY VACANT LAND ZONED R3, TOWNHOUSE DWELLING. THE DEVELOPMENT WILL CONSIST OF 43 THREE-STORY TOWNHOUSE BUILDINGS RANGING IN FLOOR AREAS. EACH UNIT WILL HAVE A PRIVATE GARAGE AND ENTRANCE.	
THE DEVELOPMENT WILL BE ACCESSED VIA TWO DRIVE OPENINGS FROM PLATT ROAD AND INCLUDES 43 PRIVATE GARAGE SPACES (PROVIDING 43 CLASS 'A' BIKE PARKING SPACES).	
IN ALL, THE PROPOSED DEVELOPMENT CONSISTS OF 43 TOWNHOUSE UNITS.	
SITE DENSITY WILL BE 5.28 UNITS/ACRE (43 UNITS/8.14 ACRES).	
PROBABLE SITE CONSTRUCTION COST = \$5,750,000	

COMPARISON CHART OF REQUIREMENTS AND PROPOSED CONDITIONS:

1. ZONING CLASSIFICATION: R3 - TOWNHOUSE DWELLING	REQUIRED: ADJACENT ZONING: NORTH - RIC, SOUTH - RIC, EAST - R3, WEST - PL	PROPOSED: 8.14 ACRES (354,512 SQ.FT.) NET AND GROSS
2. LOT AREA:	REQUIRED: 10 DU/ACRE	PROPOSED: 4,300 SF PER D.U.
3. TOTAL AREA OF ALL FLOORS:	REQUIRED: 4,300 SF MIN.	PROPOSED: 120 FT. MIN.
4. OPEN SPACE:	REQUIRED: 5.146 SF PER D.U.	PROPOSED: 65% OF LOT AREA
5. SETBACK:	REQUIRED: 15' MIN./40' MAX.	PROPOSED: 16.6' MIN./40' MAX.
6. HEIGHTS AND STORIES:	REQUIRED: 35' MAX.	PROPOSED: 31'-9", 31"-11" MIDPT. OF ROOF
7. OFF-STREET VEHICLE PARKING:	REQUIRED: 2 PER D.U.	PROPOSED: 2 PER D.U.
8. BICYCLE PARKING:	1 PER 5 D.U.	1 PER D.U.

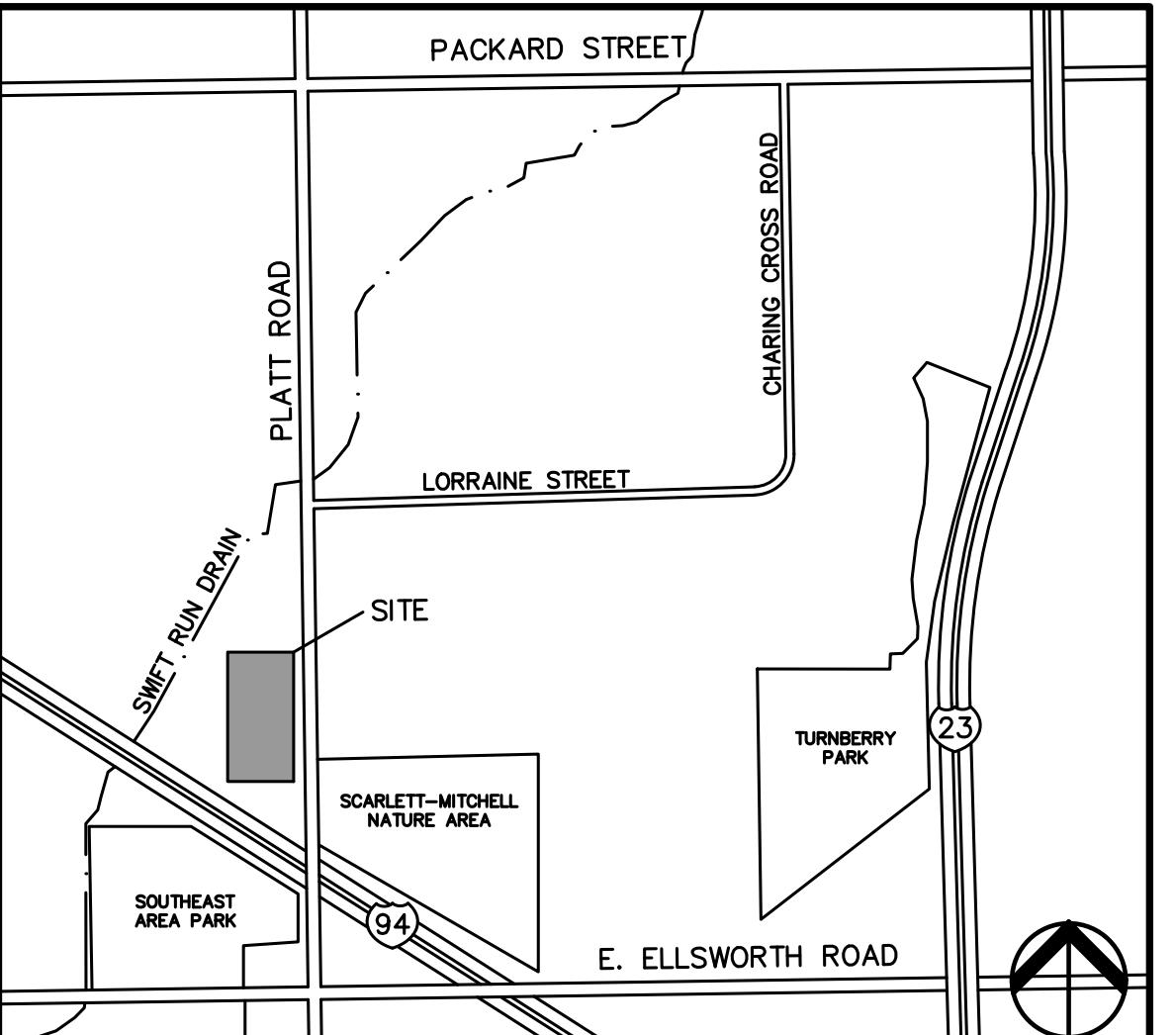
SITE SOILS INFORMATION:
ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY FOR WASHTENAW COUNTY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES:
• NgB - NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES
• Pe - PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES

LEGAL DESCRIPTION:
(LEGAL DESCRIPTION PER WASHTENAW COUNTY)
3680 PLATT ROAD
COM AT TH E 1/4 POST OF SEC TH S 42 RDS IN THE E LINE OF SEC FOR A PL OF BEG TH W 80 RDS TH S 15 RDS IN W LINE OF E 1/2 OF SE 1/4 TH E 80 RDS TH N 15 RDS IN THE E LINE OF SEC TO THE PL OF BEG EXCEPT THAT PORTION TAKEN BY COUNTY DRAIN COMM BEING A PART OF E 1/2 OF SE 1/4 SEC 10 T3S R6E
3696 PLATT ROAD
PRT SE 1/4 SEC 10, T3S, R6E, COM E 1/4 COR OF SEC 10, TH S 1 DEG W 941.50 FT FOR POB, TH CONT S 1 DEG W 165 FT, TH N 89 DEG 57 MIN W 470.65 FT, TH N 12 DEG 23 MIN 30 SEC E 168.88 FT, TH S 89 DEG 57 MIN E 470 FT M/L TH S 1 DEG 00 MIN W TO POB, EXC E 33 FT FOR ROW
3746 PLATT ROAD
SEC 10, TH 1 DEG 00 MIN W 1338.58 FT FOR POB, TH S 89 DEG 59 MIN 30 SEC W 470.65 FT, TH N 1 DEG 00 MIN E 232.56 FT, TH S 89 DEG 57 MIN E 470 FT M/L TH S 1 DEG 00 MIN W TO POB, EXC E 33 FT
3788 PLATT ROAD
THE N 112 FT OF THE SE 1/4 OF THE SE 1/4 LYING NEARLY OF I-94 ROW IN SEC 10, T3S, R6E, SUBJECT TO THE ROW IN PLATT ROAD AND EASEMENTS AND ROW RECORDED



OVERALL LOCATION MAP

NO SCALE



DETAILED LOCATION MAP

NO SCALE

PERMIT / APPROVAL SUMMARY		
DATE SUBMITTED	DATE APPROVED	PERMIT / APPROVAL

INDEX OF DRAWINGS	
NUMBER	TITLE
P-0.0	COVER
P-1.0	OVERALL TOPOGRAPHIC SURVEY
P-1.1	NORTH TOPOGRAPHIC SURVEY
P-1.2	SOUTH TOPOGRAPHIC SURVEY
P-1.3	TREE INVENTORY
P-1.4	ALTA/ASCM LAND TITLE SURVEY
P-2.0	NATURAL FEATURES PLAN
P-2.1	NATURAL FEATURES OVERLAY PLAN
P-2.2	NATURAL FEATURES ALTERNATIVES ANALYSIS
P-2.3	DEMOLITION PLAN
P-3.0	OVERALL DIMENSIONAL LAYOUT PLAN
P-3.1	TURNING MOVEMENTS
P-3.2	SIGHT DISTANCE TRIANGLES
P-3.3	ADDRESSING PLAN
P-4.0	GRADING PLAN
P-4.1	ROAD PROFILES
P-5.0	SOIL EROSION CONTROL PLAN
P-6.0	UTILITY PLAN
P-6.1	FIRE PROTECTION PLAN
P-7.0	STORM WATER MANAGEMENT PLAN
P-7.1	STORM WATER MANAGEMENT DRAINAGE AREAS
P-7.2	STORM WATER MANAGEMENT CALCULATIONS
P-7.3	WCWRC WORKSHEETS - NORTH BASIN
P-7.4	WCWRC WORKSHEETS - SOUTH BASIN
P-8.0	NOTES AND DETAILS
L-1	TREE PRESERVATION & REMOVAL PLAN
L-2	TREE INVENTORY
L-3	LANDSCAPE PLAN
A1	TYPICAL UNIT A PLANS
A2	EXTERIOR ELEVATIONS
A3	SAMPLE CLUSTER
PM-1	PHOTOMETRIC PLAN
PM-2	PHOTOMETRIC PLAN

REVISIONS	
DESCRIPTION	DATE
SITE PLAN SUBMITTAL	1/13/2022
WASHTENAW COUNTY WATER RESOURCE COMMISSION REVIEW	1/13/2022
WCWRC/CITY OF ANN ARBOR RESUBMITTAL	4/7/2022

DESIGN TEAM

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P
E
A
GROUP

TREE INVENTORY

TREE TABLE		
#	DESC.	ELEV.
3039	10" WALNUT	827.90
3101	24" MAPLE	826.73
3102	14" 22" ELM	824.14
3103	17" BOXELDER	820.73
3104	16" WILLOW	819.66
3105	7" ELM	819.19
3106	7" 13" MAPLE	820.77
3107	6" MAPLE	820.41
3108	9" MAPLE	820.76
3109	6" MAPLE	821.14
3110	6" ELM	822.85
3111	10" WALNUT	823.49
3112	7" WALNUT	822.82
3113	11" MAPLE	822.42
3114	20" WILLOW	819.44
3115	7" CHERRY	820.11
3116	7" CHERRY	821.09
3117	8" CHERRY	821.70
3118	18" MAPLE	821.09
3119	6" 9" APPLE	820.64
3120	12" WILLOW	819.18
3121	10" 16" WILLOW	819.20
3122	6" APPLE	821.04
3123	14" ELM	819.90
3124	10" MAPLE	822.18
3125	6" MAPLE	821.63
3126	14" MAPLE	821.62
3127	6" CHERRY	822.48
3128	6" WALNUT	822.52
3129	6" WALNUT	822.61
3130	11" 16" ELM	827.63
3131	14" ELM	828.05
3132	18" ELM	827.12
3133	20" HICKORY	826.94
3134	9" 10" POPLAR	826.78
3135	12" POPLAR	826.78
3136	10" APPLE	826.75
3137	10" APPLE	827.14
3138	6" 7" APPLE	826.91
3140	6" 6" 7" 7" MAPLE	828.57
3141	7" WALNUT	829.02
3142	7" WALNUT	829.08
3143	10" 11" APPLE	828.30
3144	16" ELM	828.03
3145	6" 8" ELM	829.26
3146	18" 18" ELM	829.03
3147	12" MAPLE	829.48
3148	14" PINE	828.92
3149	18" OAK	827.56
3150	13" HICKORY	829.52
3151	11" ELM	829.52
3152	16" WALNUT	829.47
3153	16" MAPLE	829.30
3154	6" WALNUT	828.96
3155	9" WALNUT	828.72
3156	6" WALNUT	828.98
3157	10" WALNUT	829.34
3158	6" 6" 7" 10" ELM	829.61
3159	7" ELM	828.98
3160	13" ELM	828.81
3161	6" ELM	828.82
3162	9" 9" 10" 11" CHERRY	829.11
3163	6" WALNUT	828.95
3164	8" WALNUT	829.96
3165	6" ELM	829.59

TREE TABLE		
#	DESC.	ELEV.
3166	9" ELM	829.80
3167	16" CHERRY	828.92
3168	8" CHERRY	824.38
3169	7" CHERRY	825.03
3170	15" WALNUT	826.12
3171	6" 6" CHERRY	825.83
3172	6" 6" CHERRY	826.49
3173	10" CHERRY	825.77
3174	6" 7" CHERRY	827.06
3175	6" CHERRY	826.65
3176	6" 12" CHERRY	825.60
3177	6" APPLE	824.17
3178	8" ELM	828.98
3179	11" BOXELDER	828.76
3180	6" CHERRY	822.12
3181	6" CHERRY	822.41
3182	7" CHERRY	822.10
3183	7" BOXELDER	822.08
3184	7" 7" CHERRY	821.99
3185	8" CHERRY	822.84
3186	8" CHERRY	822.91
3187	6" 6" 7" CHERRY	824.47
3188	6" ELM	826.02
3189	7" CHERRY	823.70
3190	6" 7" 7" CHERRY	823.58
3191	9" 9" APPLE	822.91
3192	6" 6" 7" 7" CHERRY	823.56
3193	7" BOXELDER	823.63
3194	6" 6" CHERRY	822.51
3195	9" CHERRY	822.28
3196	11" 11" MAPLE	821.85
3197	7" MULBERRY	823.41
3198	9" 11" CHERRY	822.50
3199	6" CHERRY	822.23
3200	6" CHERRY	820.33
3201	6" ELM	820.88
3202	6" 7" WILLOW	819.04
3203	10" 12" 16" 19" WILLOW	819.82
3204	9" CHERRY	820.62
3205	13" 13" APPLE	825.13
3206	8" ELM	825.66
3207	8" 14" ELM	825.75
3208	9" 10" 12" ELM	825.86
3209	11" 13" ELM	826.39
3210	13" CHERRY	828.46
3211	9" POPLAR	831.85
3212	7" CHERRY	830.66
3213	6" 9" 11" 11" CHERRY	831.37
3214	6" 7" 7" CHERRY	831.21
3215	7" APPLE	831.31
3216	6" CHERRY	830.03
3217	10" HAWTHORNE	829.49
3218	6" 6" CHERRY	831.31
3219	6" MAPLE	829.04
3220	8" HAWTHORNE	826.95
3221	15" HAWTHORNE	826.05
3222	8" HAWTHORNE	826.22
3223	7" APPLE	825.99
3224	7" OAK	825.97
3225	6" 8" APPLE	824.51
3226	8" ELM	826.20
3227	7" CHERRY	820.87
3228	7" CHERRY	821.05
3229	6" CHERRY	821.20
3230	9" CHERRY	821.83

TREE TABLE		
#	DESC.	ELEV.
3231	9" ELM	823.05
3232	7" WALNUT	828.06
3233	13" BOXELDER	823.16
3234	10" BOXELDER	823.64
3235	6" MAPLE	823.89
3236	18" MAPLE	831.90
3237	9" HICKORY	832.19
3238	11" 11" CHERRY	828.99
3239	14" PINE	830.86
3240	9" CHERRY	826.78
3241	12" PINE	832.41
3242	7" HICKORY	832.35
3243	6" 6" APPLE	832.74
3244	10" WALNUT	833.44
3245	8" 9" APPLE	832.72
3246	6" 7" APPLE	832.56
3247	6" 6" 6" 6" PINE	832.24
3248	10" CHERRY	831.38
3249	16" CHERRY	829.58
3250	13" CHERRY	828.61
3251	9" 9" CHERRY	827.66
3252	13" BOXELDER	825.77
3253	6" CHERRY	826.38
3254	14" BOXELDER	827.07
3255	10" BOXELDER	828.10
3256	9" BOXELDER	828.58
3257	12" BOXELDER	834.99
3258	9" CHERRY	835.40
3259	7" BOXELDER	835.38
3260	8" WALNUT	834.93
3261	6" 6" APPLE	833.28
3262	6" CHERRY	832.56
3263	6" 7" CHERRY	832.38
3264	6" CHERRY	831.45
3265	9" BOXELDER	834.65
3266	6" BOXELDER	834.66
3267	7" CHERRY	834.47
3268	8" CHERRY	834.48
3269	9" CHERRY	834.53
3270	7" CHERRY	834.14
3271	6" 11" BOXELDER	833.77
3272	10" CHERRY	833.69
3273	7" CHERRY	829.57
3274	7" CHERRY	829.08
3275	6" CHERRY	829.06
3276	6" CHERRY	828.76
3277	7" CHERRY	828.13
3278	7" CHERRY	827.42
3279	6" CHERRY	826.63
3280	9" 15" BOXELDER	825.52
3281	7" CHERRY	827.04
3282	7" CHERRY	827.75
3283	20" 20" BOXELDER	832.75
3284	17" WALNUT	832.63
3285	10" MULBERRY	832.42
3286	8" WALNUT	826.71
3287	7" WALNUT	825.45
3288	10" WALNUT	835.39
3289	11" ELM	836.16
3290	6" ELM	836.01
3291	6" ELM	834.52
3292	8" ELM	835.69
3293	9" BOXELDER	835.26
3294	13" BOXELDER	835.29
3295	12" ELM	835.41



0 20 40 80
SCALE: 1" = 40'



CAUTION!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE NOT IMPRECISE OR IMPRECISE AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE DRAFTER IS NOT RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO EXCAVATION. THE DRAFTER IS NOT RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO EXCAVATION.

LEGEND

IRON FOUND	IRON SET	BRASS PLUG SET	MONUMENT FOUND	SEC. CORNER FOUND
IRON CAP SET	IRON CAP	MONUMENT SET	MONUMENT	RECORDED
NAIL FOUND	NAIL SET	NAIL CAP SET	NAIL CAP	MEASURED
NAIL CAP	NAIL	NAIL	NAIL	CALCULATED
EXISTING				
OH-ELEC-W/	ELEC. PHONE CABLE TO A LINE, POLE & GUY WIRE			
UG-CATV	UNDERGROUND CABLE TO CATV PEDESTAL			
UG-PHONE	TELEPHONE UG. CABLE, PRESSED MANHOLE			
UG-ELEC	ELECTRIC UG. CABLE, MANHOLE, METER & HOLE			
GAS MAN.	GAS MAN. VALVE & GAS LINE MARKER			
WATERMAN HYD.	WATERMAN HYD. GATE VALVE, TAPPING SLEEVE & VALVE			
SANITARY SEWER	SANITARY SEWER, CLEANOUT & MANHOLE			
STORM SEWER	STORM SEWER, CLEANOUT & MANHOLE			
COMBINED SEWER	COMBINED SEWER & MANHOLE			
SQUARE, ROUND & BEEHIVE	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN			
POST INDICATOR	POST INDICATOR VALVE			
SPOT ELEVATION	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF			
CONTOUR LINE	UNIDENTIFIED STRUCTURE			
FENCE	POST INDICATOR			
GUARD RAIL	SPOT ELEVATION			
STREET LIGHT	CONTOUR LINE			
SIGN	FENCE			
CONCRETE	GUARD RAIL			
ASPH.	STREET LIGHT			
GRAVEL	SIGN			
GRAVEL SHOULDER	CONCRETE			
WETLAND	ASPH.			

REFERENCE DRAWINGS

WATER MAIN	XXXXXXXXXXXX
SANITARY SEWER	XXXXXXXXXXXX
STORM SEWER	XXXXXXXXXXXX
COMBINED SEWER	XXXXXXXXXXXX
ELECTRIC	XXXXXXXXXXXX
TELEPHONE	XXXXXXXXXXXX
GAS	XXXXXXXXXXXX
PETROLEUM	XXXXXXXXXXXX
CATV	XXXXXXXXXXXX
FLOOD PLAIN	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX

BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2
RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE COOP DRILL. ELEVATION: 827.23 NAVD88 DATUM

BM #3
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM

TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:
TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.

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FLOODPLAIN NOTE:
BY GRAPHICAL PLOTTING, THE PORTION OF THE SITE TO BE DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.

CLIENT
TROWBRIDGE COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

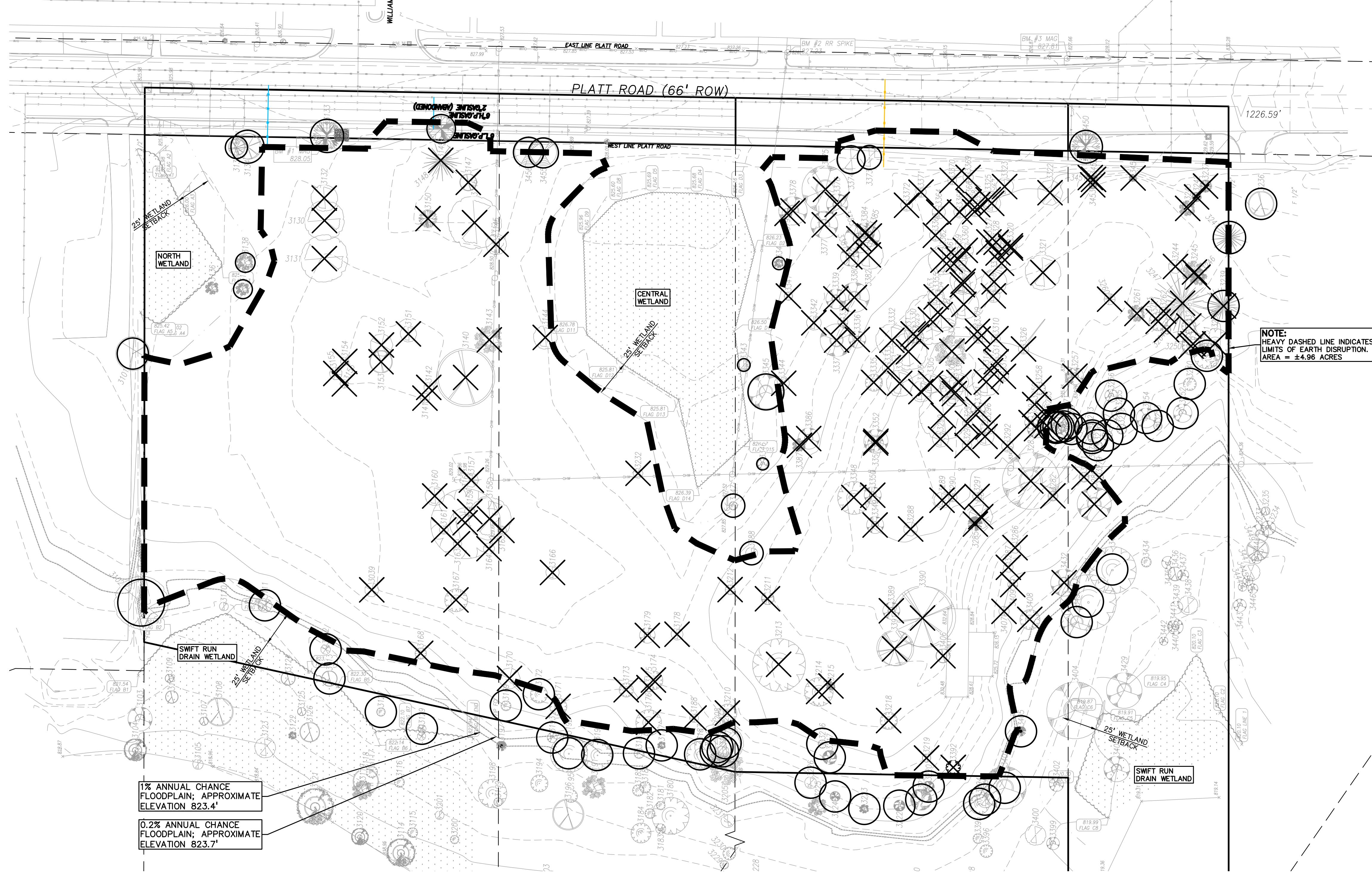
REVISIONS
OWNER REVIEW 9/18/2020
CONCEPT REVIEW MEETING 1/13/2021
SPA/WCWRC REVIEW 1/13/2022
SPA/WCWRC RESUBMITTAL 4/7/2022

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE
NATURAL FEATURES PLAN

PEA JOB NO. 2020-0151
P.M. JC
DN. JW
DES. JW
DRAWING NUMBER:

P-2.0





0 20 40 80
SCALE: 1" = 40'

LEGEND

● IRON FOUND	● BRASS PLUS SET	● SEC. CORNER FOUND
○ IRON SET	○ BRASS SET	○ MONUMENT FOUND
● NAIL FOUND	● MONUMENT SET	● MONUMENT
○ NAIL SET	○ NAIL & CAP SET	○ NAIL & CAP
EXISTING		
—OH-ELEC-WIRE	—ELEC PHONE CABLE TO O/LINE, POLE & GUY WIRE	
—UG-CATV	—UG-CATV	
—UG-PHONE	—UG-PHONE	
—UG-ELEC	—UG-ELEC	
—UG-CABLE	—UG-CABLE, PRESSED MANHOLE	
—GAS	—GAS	
—GAS LINE MARKER	—GAS LINE MARKER	
—SANITARY SEWER	—SANITARY SEWER, CLEANOUT & MANHOLE	
—COMBINED SEWER	—COMBINED SEWER & MANHOLE	
—SQUARE, ROUND & BEEHIVE	—SQUARE, ROUND & BEEHIVE, CATCH BASIN, YARD DRAIN	
—MANHOLE	—MANHOLE	
—POST INDICATOR VALVE	—POST INDICATOR VALVE	
—WATER VALVE	—WATER VALVE, BOX/HYDRANT, VALVE BOX, SERVICE SHUTOFF	
—BOX/HYDRANT	—BOX/HYDRANT	
—TRANSFORMER	—TRANSFORMER, IRRIGATION CONTROL VALVE	
—UNIDENTIFIED STRUCTURE	—UNIDENTIFIED STRUCTURE	
—SPOT ELEVATION	—SPOT ELEVATION	
—CONTOUR LINE	—CONTOUR LINE	
—FENCE	—FENCE	
—GUARD RAIL	—GUARD RAIL	
—STREET LIGHT	—STREET LIGHT	
—SIGN	—SIGN	
—CONCRETE	—CONCRETE	
—ASPH.	—ASPHALT	
—GRAVEL	—GRAVEL	
—GRAVEL SHOULDER	—GRAVEL SHOULDER	
—WETLAND	—WETLAND	
PROPOSED		

REFERENCE DRAWINGS

WATER MAIN	XXXXXXXXXXXX
SANITARY SEWER	XXXXXXXXXXXX
STORM SEWER	XXXXXXXXXXXX
COMBINED SEWER	XXXXXXXXXXXX
ELECTRIC	XXXXXXXXXXXX
TELEPHONE	XXXXXXXXXXXX
GAS	XXXXXXXXXXXX
PETROLEUM	XXXXXXXXXXXX
CATV	XXXXXXXXXXXX
FLOOD PLAIN	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX

BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2
RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE COOP DRILL. ELEVATION: 827.23 NAVD88 DATUM

BM #3
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM

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CAUTION!
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CLIENT
TROWBRIDGE COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD
TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS
OWNER REVIEW 9/18/2020
CONCEPT REVIEW MEETING 1/13/2021
SPA/WCWRC REVIEW 1/13/2022
SPA/WCWRC RESUBMITTAL 4/7/2022

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE
NATURAL
FEATURES
OVERLAY PLAN

PEA JOB NO. 2020-0151
P.M. JC
DN. JW
DES. JW
DRAWING NUMBER:
P-2.1



CAUTION!

THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS MAP ARE NOT NECESSARILY EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE MAP IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TO BE USED FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PROVIDED BY THE APPROPRIATE UTILITIES FOR PLANNING PURPOSES.

LEGEND

● IRON FOUND	● BRASS PLUG SET	● SEC. CORNER FOUND
● IRON SET	● MONUMENT FOUND	● MONUMENT SET
● NAIL FOUND	● NAIL CAP SET	● NAIL CAP SET
● NAIL	●	●
●	●	●
EXISTING		
-OH-ELEC-W-C	ELEC. PHONE GROOVE CABLE TO OH LINE, POLE & GUY WIRE	
-UG-CATV	UNDERGROUND CABLE-TV, CABLE PEDESTAL	
UG-PHONE	TELEPHONE UG. CABLE, PULLER MANHOLE	
UG-ELEC-C	ELECTRIC UG. CABLE, MANHOLE, METER & HANHOLE	
GAS MAIN	GAS MAIN, VALVE & GAS LINE MARKER	
SANITARY SEWER	SANITARY SEWER, CLEANOUT & MANHOLE	
STORM SEWER	STORM SEWER, CLEANOUT & MANHOLE	
COMBINED SEWER & MANHOLE	COMBINED SEWER & MANHOLE	
SQUARE, ROUND & BEEHIVE	CATCH BASIN, YARD DRAIN	
POST INDICATOR VALVE	POST INDICATOR VALVE	
WATER VALVE BOX/HYDRANT	WATER VALVE BOX/HYDRANT, VALVE BOX, SERVICE SHUTOFF	
MALBOX	MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	
TRANSFORMER	TRANSFORMER	
SPOT ELEVATION	SPOT ELEVATION	
CONTOUR LINE	CONTOUR LINE	
FENCE	FENCE	
GUARD RAIL	GUARD RAIL	
STREET LIGHT	STREET LIGHT	
SIGN	SIGN	
CONCRETE	CONCRETE	
ASPH.	ASPHALT	
GRAVEL	GRAVEL	
GRAVEL SHOULDER	GRAVEL SHOULDER	
WETLAND	WETLAND	

REFERENCE DRAWINGS

WATER MAIN	XXXXXXXXXXXX
SANITARY SEWER	XXXXXXXXXXXX
STORM SEWER	XXXXXXXXXXXX
COMBINED SEWER	XXXXXXXXXXXX
ELECTRIC	XXXXXXXXXXXX
TELEPHONE	XXXXXXXXXXXX
GAS	XXXXXXXXXXXX
PETROLEUM	XXXXXXXXXXXX
CATV	XXXXXXXXXXXX
FLOOD PLAIN	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX

BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

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RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE COOP. DR. ELEVATION: 827.23 NAVD88 DATUM

BM #3
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM

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CLIENT
TROWBRIDGE COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS
OWNER REVIEW 9/18/2020
CONCEPT REVIEW MEETING 1/13/2021
SPA/WCWRC REVIEW 1/13/2022
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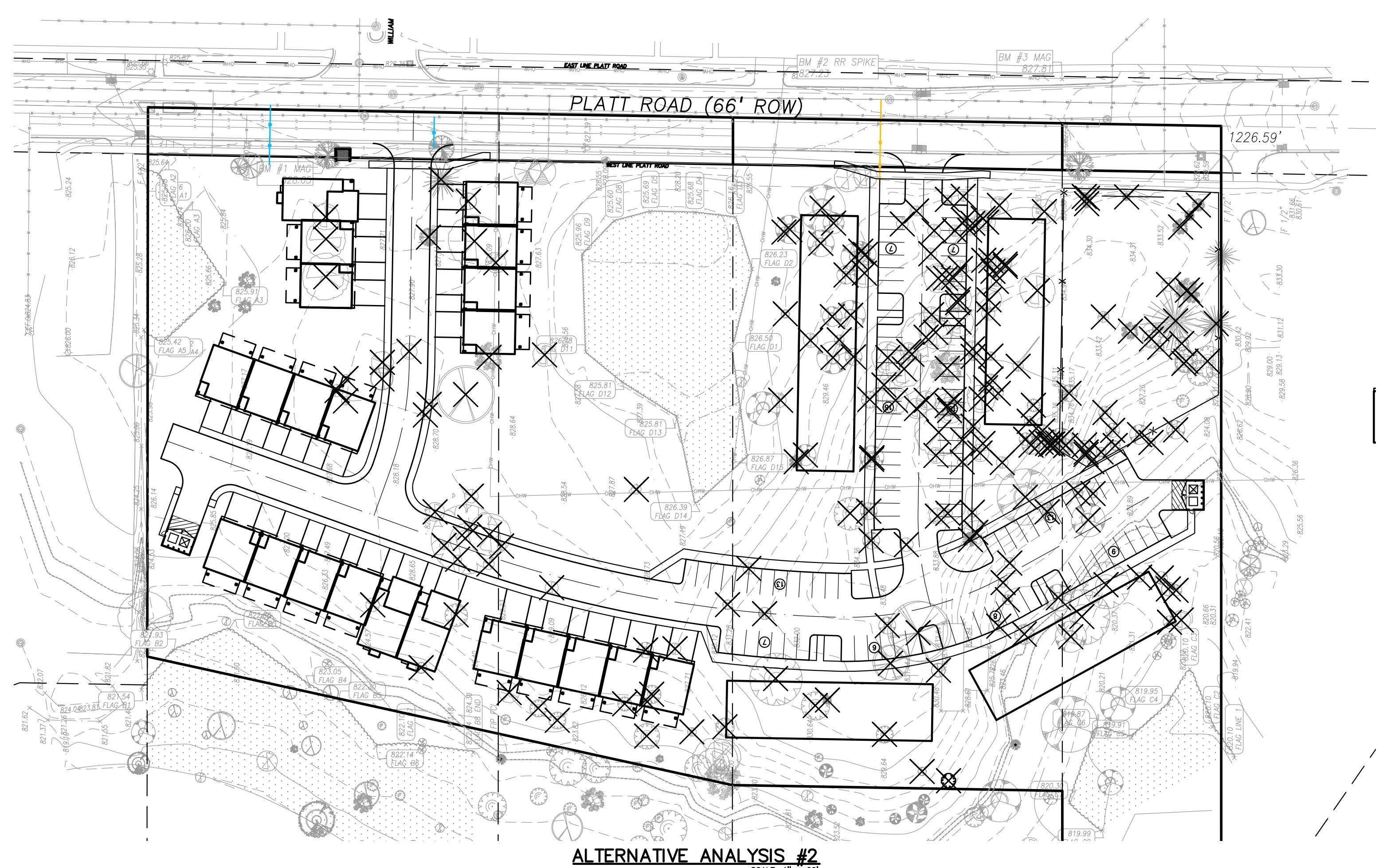
ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE
NATURAL FEATURES ALTERNATIVES ANALYSIS

PEA JOB NO. 2020-0151
P.M. JC
DN. JW
DES. JW
DRAWING NUMBER: P-2.2



ALTERNATIVE ANALYSIS #1
THIS OPTION INCLUDES EIGHT ADDITIONAL TOWNHOME UNITS FOR A TOTAL OF 51; HOWEVER, THE FOOTPRINT OF SEVERAL UNITS ARE WITHIN THE LIMITS OF THE FLOODPLAIN ASSOCIATED WITH THE SWIFT RUN DRAIN. ADDITIONALLY, IN ORDER TO GRADE THE SITE WITH MAINTAINABLE SLOPES, EARTH DISTURBANCE WITHIN THE WETLAND SETBACK WOULD BE REQUIRED. 215 TREES WOULD NEED TO BE REMOVED (187 TREES REMOVED IN THE PREFERRED OPTION). THE INTRODUCTION OF THE APARTMENT UNITS WOULD ALSO REQUIRE THE SITE TO BE REZONED FROM R3 TO R4B. FOR THESE REASONS, THIS OPTION WAS REJECTED.



ALTERNATIVE ANALYSIS #2
THIS OPTION INCLUDES 22 TOWNHOME UNITS AND 68 APARTMENT UNITS; HOWEVER, THE FOOTPRINT OF SEVERAL UNITS ARE WITHIN THE LIMITS OF THE FLOODPLAIN ASSOCIATED WITH THE SWIFT RUN DRAIN. ADDITIONALLY, IN ORDER TO GRADE THE SITE WITH MAINTAINABLE SLOPES, EARTH DISTURBANCE WITHIN THE WETLAND SETBACK WOULD BE REQUIRED. 215 TREES WOULD NEED TO BE REMOVED (187 TREES REMOVED IN THE PREFERRED OPTION). THE INTRODUCTION OF THE APARTMENT UNITS WOULD ALSO REQUIRE THE SITE TO BE REZONED FROM R3 TO R4B. FOR THESE REASONS, THIS OPTION WAS REJECTED.



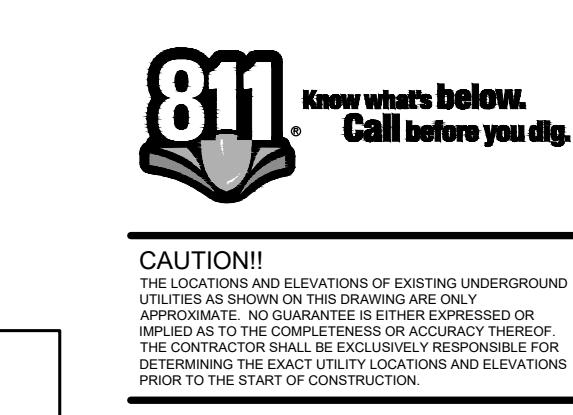
0 20 40 80
SCALE: 1" = 40'

LEGEND

IRON FOUND	IRON SET	BRASS PLUG SET	MONUMENT FOUND
SEC. CORNER FOUND	SEC. MONUMENT FOUND	R RECORDED	M MEASURED
PROPOSED		C CALCULATED	
EXISTING			
-OH-ELEC-W/POLE	ELEC. PHONE CABLE TO A LINE, POLE & GUY WIRE		
-UG-CATV	UNDERGROUND CABLE-TV, CABLE PEDESTAL		
UG-PHONE	TELEPHONE UG. CABLE, PEDESTAL		
UG-ELEC	ELECTRIC UG. CABLE, MANHOLE		
GAS LINE	GAS LINE, VALVE & GAS LINE MARKER		
SANITARY SEWER	SANITARY SEWER, CLEANOUT & MANHOLE		
STORM SEWER	STORM SEWER, CLEANOUT & MANHOLE		
COMBINED SEWER & MANHOLE	COMBINED SEWER & MANHOLE		
SQUARE, ROUND & BEEHIVE	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN		
POST INDICATOR VALVE	POST INDICATOR VALVE		
WATER VALVE BOX/HYDRANT	WATER VALVE BOX/HYDRANT, VALVE BOX, SERVICE SHUTOFF		
MAILBOX	MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE		
UNIDENTIFIED STRUCTURE	UNIDENTIFIED STRUCTURE		
SPOT ELEVATION	SPOT ELEVATION		
CONTOUR LINE	CONTOUR LINE		
FENCE	FENCE		
GUARD RAIL	GUARD RAIL		
STREET LIGHT	STREET LIGHT		
SIGN	SIGN		
CONCRETE	CONCRETE		
ASPHALT	ASPHALT		
GRAVEL	GRAVEL		
GRAVEL SHOULDER	GRAVEL SHOULDER		
WETLAND	WETLAND		

REFERENCE DRAWINGS

WATER MAIN	XXXXXXXXXX
SANITARY SEWER	XXXXXXXXXX
STORM SEWER	XXXXXXXXXX
COMBINED SEWER	XXXXXXXXXX
ELECTRIC	XXXXXXXXXX
TELEPHONE	XXXXXXXXXX
GAS	XXXXXXXXXX
PETROLEUM	XXXXXXXXXX
CATV	XXXXXXXXXX
FLOOD PLAIN	XXXXXXXXXX
OTHER	XXXXXXXXXX
OTHER	XXXXXXXXXX



CAUTION!
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BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

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BM #3
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM

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DEMOLITION LEGEND:

ITEM TO BE PROTECTED	○
CURB/FENCE REMOVAL	
CONCRETE PAVEMENT AND SIDEWALK REMOVAL	
UTILITY REMOVAL	
ASPHALT REMOVAL	
TREE REMOVAL	
TREE PROTECTION	○

PROJECT TITLE
PLATT ROAD
TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS
OWNER REVIEW 9/18/2020
CONCEPT REVIEW MEETING 1/13/2021
SPA/WCWR Review 1/13/2022
SPA/WCWR RESUBMITTAL 4/7/2022

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020
DRAWING TITLE
DEMOLITION
PLAN

PEA JOB NO. 2020-0151
P.M. JC
DN. JW
DES. JW
DRAWING NUMBER:

P-2.3



0 20 40 80
SCALE: 1" = 40'



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LEGEND

IRON FOUND	IRON SET	BRASS PLUG SET	MONUMENT FOUND	SEC. CORNER FOUND
IRON PLATE	IRON CAP	MONUMENT PLATE	MONUMENT CAP	MONUMENT PLATE & CAP
IRON NAIL	IRON CAP	MONUMENT NAIL	MONUMENT CAP	MONUMENT NAIL & CAP
IRON PLATE	IRON CAP	MONUMENT PLATE	MONUMENT CAP	MONUMENT PLATE & CAP
IRON PLATE	IRON CAP	MONUMENT PLATE	MONUMENT CAP	MONUMENT PLATE & CAP

PROPOSED

OH-ELEC-W/POLE	ELEC. PHONE GROUNDBREAKER	UG-CATV	UNDERGROUND CABLE-TV, CABLE PEDESTAL
UG-CATV	UG-CATV	UG-CATV	UG-CATV
UG-PHONE	UG-PHONE	UG-PHONE	UG-PHONE
UG-ELEC	UG-ELEC	UG-ELEC	UG-ELEC
UG-ELEC	UG-ELEC	UG-ELEC	UG-ELEC
GAS MAIN	GAS MAIN	GAS MAIN	GAS MAIN
WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE	WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE	WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE	WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
SANITARY SEWER, CLEANOUT & MANHOLE			
STORM SEWER, CLEANOUT & MANHOLE			
COMBINED SEWER & MANHOLE			
SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
POST INDICATOR VALVE	POST INDICATOR VALVE	POST INDICATOR VALVE	POST INDICATOR VALVE
WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF			
UNIDENTIFIED STRUCTURE	UNIDENTIFIED STRUCTURE	UNIDENTIFIED STRUCTURE	UNIDENTIFIED STRUCTURE
SPOT ELEVATION	SPOT ELEVATION	SPOT ELEVATION	SPOT ELEVATION
CONTOUR LINE	CONTOUR LINE	CONTOUR LINE	CONTOUR LINE
FENCE	FENCE	FENCE	FENCE
GUARD RAIL	GUARD RAIL	GUARD RAIL	GUARD RAIL
STREET LIGHT	STREET LIGHT	STREET LIGHT	STREET LIGHT
SIGN	SIGN	SIGN	SIGN
CONCRETE	CONCRETE	CONCRETE	CONCRETE
ASPH.	ASPH.	ASPH.	ASPH.
GRAVEL	GRAVEL	GRAVEL	GRAVEL
GRAVEL SHOULDER	GRAVEL SHOULDER	GRAVEL SHOULDER	GRAVEL SHOULDER
WETLAND	WETLAND	WETLAND	WETLAND

REFERENCE DRAWINGS

WATER MAIN	XXXXXX
SANITARY SEWER	XXXXXX
COMBINED SEWER	XXXXXX
ELECTRIC	XXXXXX
TELEPHONE	XXXXXX
GAS	XXXXXX
PETROLEUM	XXXXXX
CATV	XXXXXX
FLOOD PLAIN	XXXXXX
OTHER	XXXXXX
OTHER	XXXXXX

BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

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MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM

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ACTIVE OPEN SPACE (228,171 SF)	230,871/43 DU = 5,369 SF/DU
OPEN SPACE (5.87 AC)	5.87/8.14 = 72%

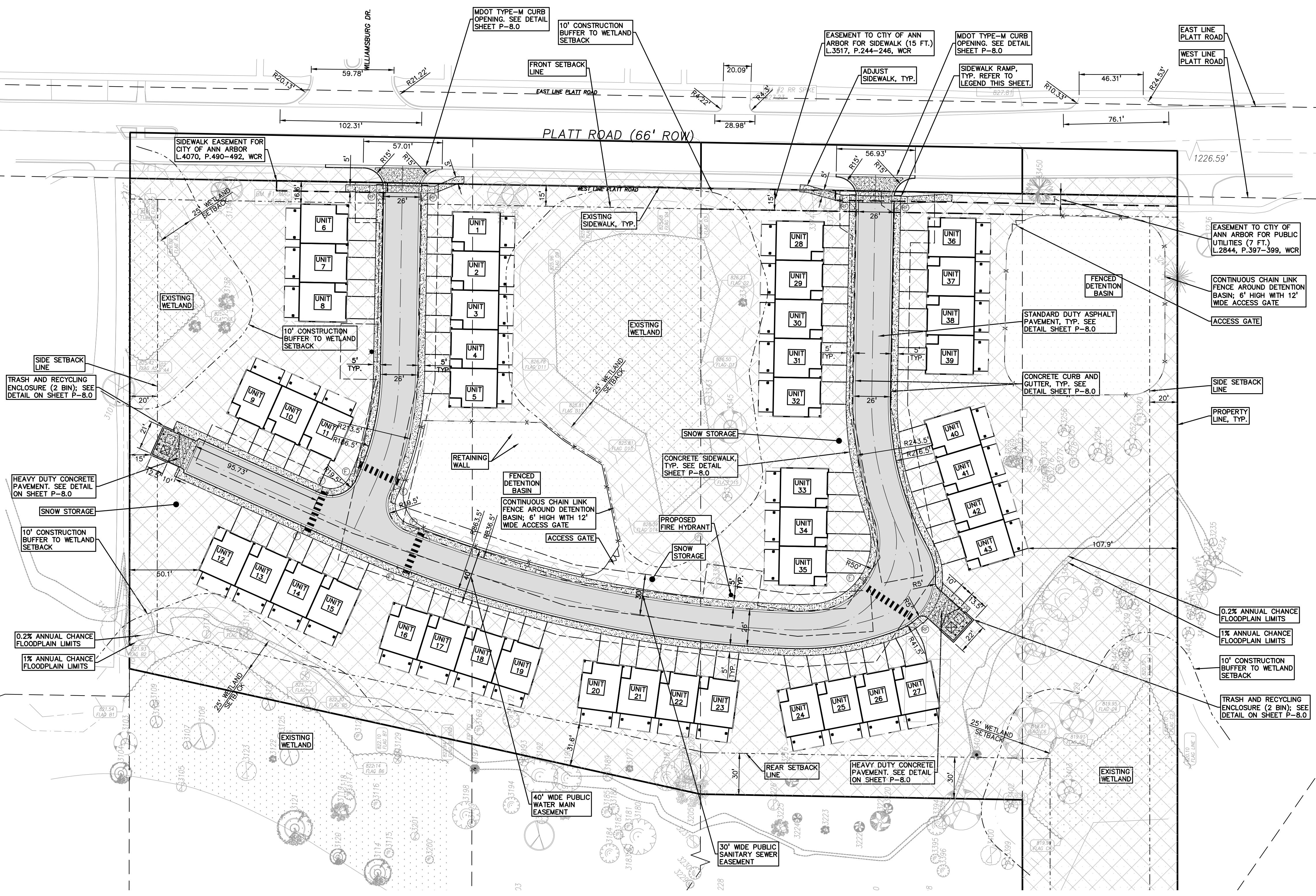
SIDEWALK RAMP 'TYPE F'
SIDEWALK RAMP 'TYPE RF'
REFER TO LATEST MDOT R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

REVISIONS
OWNER REVIEW
9/18/2020
CONCEPT REVIEW MEETING
1/13/2021
SPA/WCWRC REVIEW
1/13/2022
SPA/WCWRC RESUBMITTAL
4/7/2022

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE:
**OVERALL
DIMENSIONAL
LAYOUT PLAN**

PEA JOB NO. 2020-0151
P.M. JC
DN. JW
DES. JW
DRAWING NUMBER:
P-3.0





0 25 50 100
SCALE: 1" = 50'



CAUTION!
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LEGEND

● IRON FOUND	○ IRON SET	■ BRASS PLUG SET	● MONUMENT FOUND	○ MONUMENT SET
○ SEC. CORNER FOUND	○ SEC. CORNER SET			
EXISTING				
○ OH-ELEC-W/O	○ UG-CATV	○ UG-PHONE	○ UG-ELEC	○ UG-ELEC
UNDERGROUND CABLE-TV, GUY WIRE	UNDERGROUND CABLE-TV, GUY PEDESTAL	UNDERGROUND CABLE-TV, GUY PEDESTAL	UNDERGROUND CABLE, METER & HANHOLE	UNDERGROUND CABLE, METER & HANHOLE
○ GAS	○ STORM SEWER	○ SANITARY SEWER	○ GAS MAIN	○ GAS MAIN
○ WATER	○ CLEANOUT	○ CLEANOUT	VALVE & GAS LINE MARKER	VALVE & GAS LINE MARKER
○ STORM SEWER	○ STORM SEWER	○ SANITARY SEWER	○ WATER VALVE	○ WATER VALVE
○ COMBINED SEWER & MANHOLE	○ CLEANOUT & MANHOLE	○ CLEANOUT & MANHOLE	BOX/HYDRANT	BOX/HYDRANT
○ POST INDICATOR VALVE	○ SERVICE SHUTOFF	○ SERVICE SHUTOFF	VALVE BOX	VALVE BOX
○ UNIDENTIFIED STRUCTURE	○ STORM SEWER	○ SANITARY SEWER	○ SERVICE SHUTOFF	○ SERVICE SHUTOFF
○ SPOT ELEVATION	○ CONTOUR LINE	○ GUARD RAIL	○ IRRIGATION CONTROL VALVE	○ IRRIGATION CONTROL VALVE
○ CONTOUR LINE	○ FENCE	○ STREET LIGHT	○ SIGN	○ SIGN
○ FENCE	○ GUARD RAIL	○ STREET LIGHT	○ SIGN	○ SIGN
○ GUARD RAIL	○ STREET LIGHT	○ SIGN	○ SIGN	○ SIGN
○ STREET LIGHT	○ SIGN	○ SIGN	○ SIGN	○ SIGN
○ SIGN	○ SIGN	○ SIGN	○ SIGN	○ SIGN
CONCRETE	ASPHALT	GRAVEL	GRAVEL SHOULDER	WETLAND
CONCRETE	ASPHALT	GRAVEL	GRAVEL SHOULDER	WETLAND
STD. HEAVY ROW DUTY ONLY	STD. HEAVY DEEP DUTY ONLY	STD. HEAVY DEEP DUTY STRENGTH	STD. HEAVY DEEP DUTY STRENGTH	STD. HEAVY DEEP DUTY STRENGTH

REFERENCE DRAWINGS

WATER MAIN	XXXXXXXXXXXX
SANITARY SEWER	XXXXXXXXXXXX
STORM SEWER	XXXXXXXXXXXX
COMBINED SEWER	XXXXXXXXXXXX
ELectric	XXXXXXXXXXXX
TELEPHONE	XXXXXXXXXXXX
GAS	XXXXXXXXXXXX
PETROLEUM	XXXXXXXXXXXX
CATV	XXXXXXXXXXXX
FLOOD PLAIN	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX

BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED AS TO THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2
RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE COOP DRILL. ELEVATION: 827.81 NAVD88 DATUM

BM #3
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM

TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:
TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.

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FLOODPLAIN NOTE:
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CLIENT
TROWBRIDGE COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHENIAN COUNTY, MICHIGAN

REVISIONS	
OWNER REVIEW	9/18/2020
CONCEPT REVIEW MEETING	1/13/2021
SPA/WCWR Review	1/13/2022
SPA/WCWR Resubmittal	4/7/2022

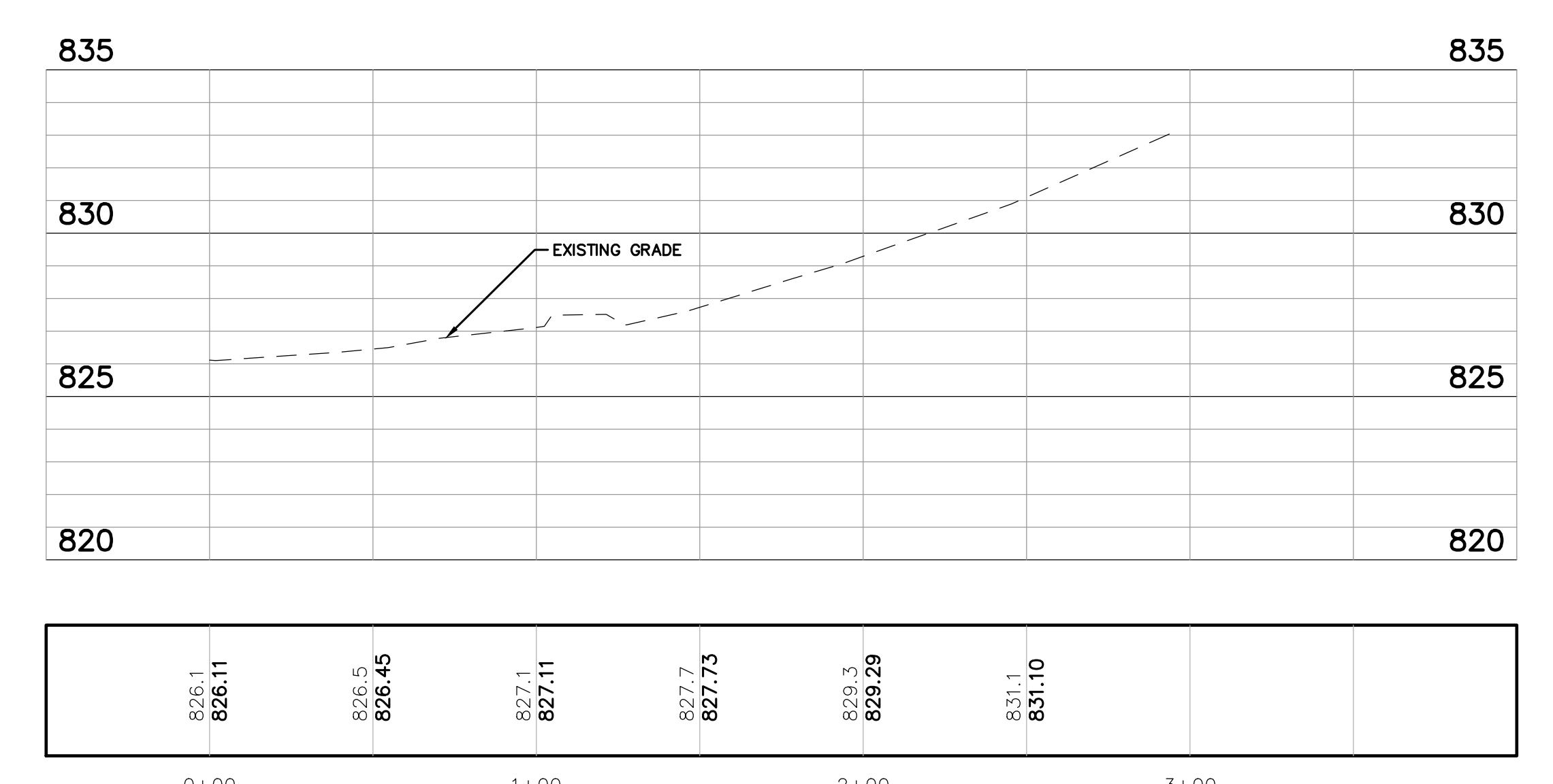
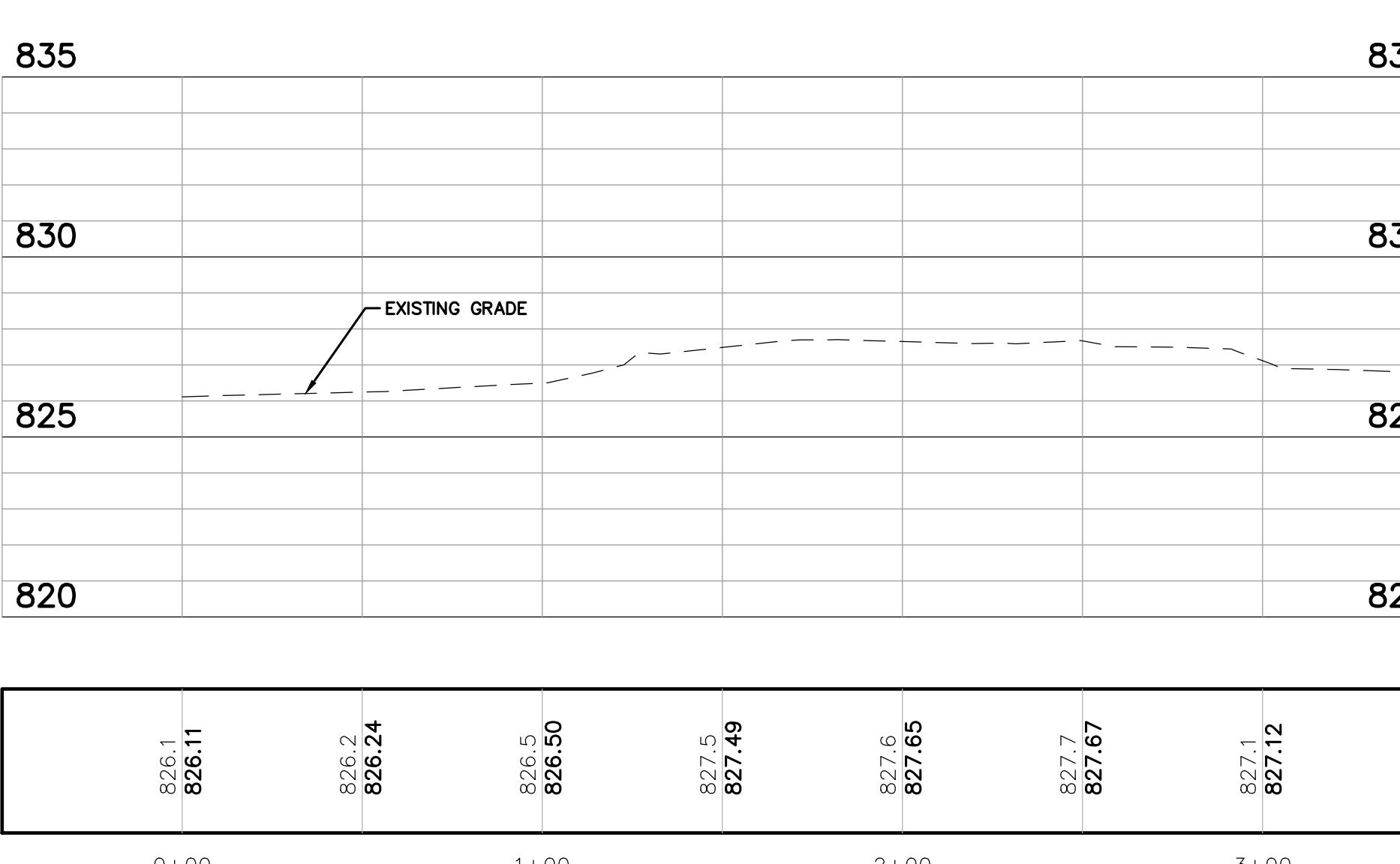
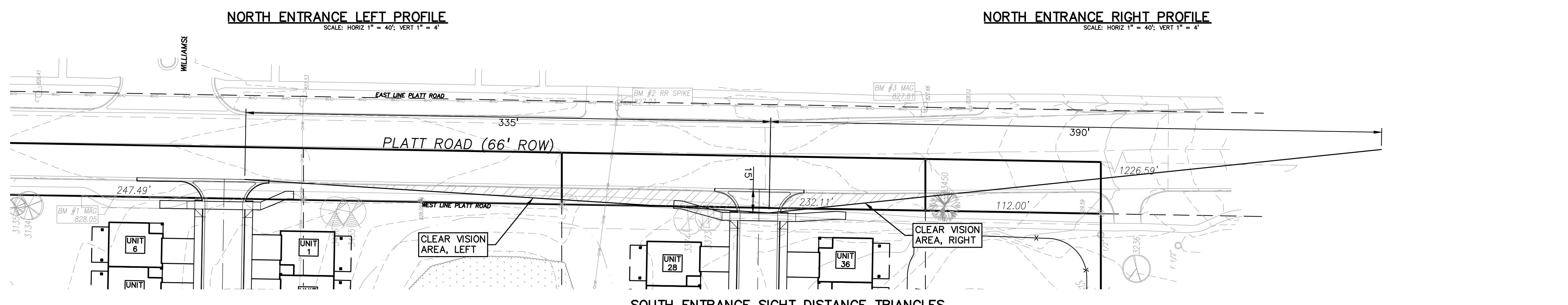
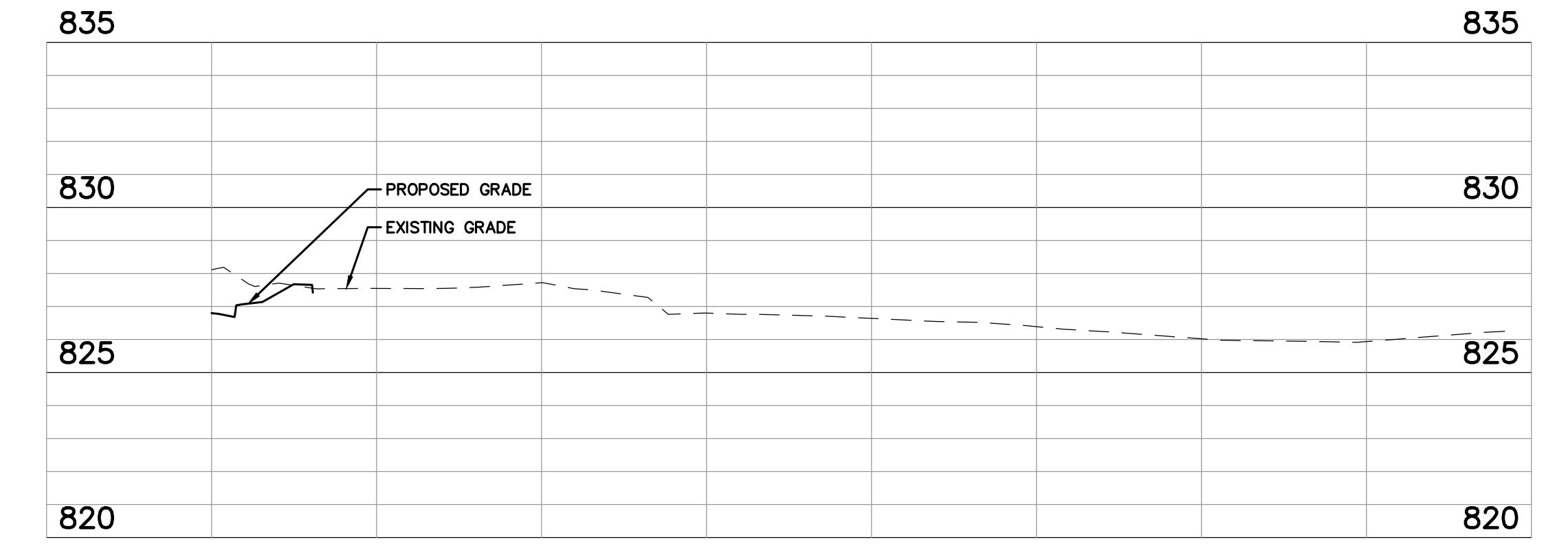
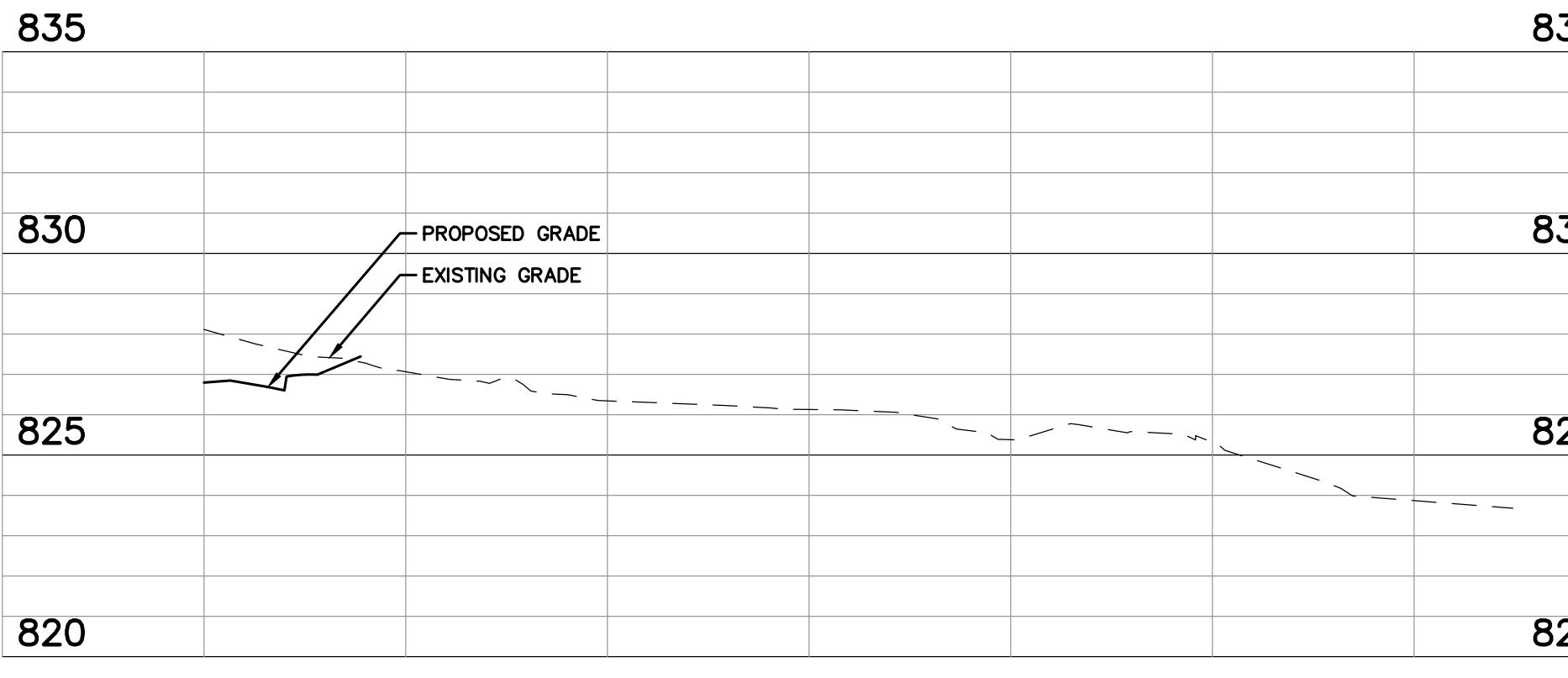
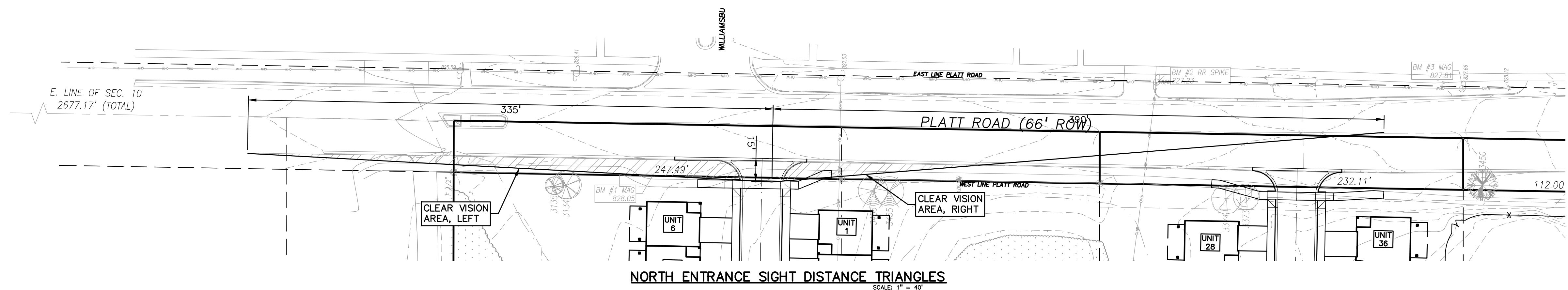
Table 4 – Sight Distance to Left (Based on AASHTO Intersection Control Case B2)

Speed Limit	Distance (a) Feet
25	240
30	290
35	335
40	385
45	430
50	480
55	530

Table 5 – Sight Distance to Right (Based on AASHTO Intersection Control Case B2)

Speed Limit	Distance (b) Feet
25	280
30	335
35	390
40	445
45	500
50	555
55	610

PEA JOB NO. 2020-0151
P.M. JC
D.N. JW
DES. JW
DRAWING NUMBER:





0 20 40 80
SCALE: 1" = 40'

LEGEND

IRON FOUND	IRON SET	BRASS PLUG SET	MONUMENT FOUND	SEC. CORNER FOUND
IRON CAP	IRON CAP SET	MONUMENT CAP	MONUMENT CAP SET	
MONUMENT				R RECORDED
				M MEASURED
				C CALCULATED
EXISTING				
OH-ELEC	W-ELEC	UG-CATV	UG-CATV	ELEC. PHONE GROUNDED TO GUY WIRE
UG-ELEC	UG-ELEC	UG-CATV	UG-CATV	UNDERGROUND CABLE TV, GUY PEDESTAL
UG-PHONE	UG-PHONE	UG-CATV	UG-CATV	TELEPHONE UG. CABLE, PEDESTAL
UG-ELEC	UG-ELEC	UG-CATV	UG-CATV	ELECTRIC UG. CABLE, METER & MANHOLE
		UG-CATV	UG-CATV	GAS MAIN, VALVE & GAS LINE MARKER
		UG-CATV	UG-CATV	WATERMAN, HYD. GATE VALVE, TAPPING SLEEVE & VALVE
		UG-CATV	UG-CATV	SANITARY SEWER, CLEANOUT & MANHOLE
		UG-CATV	UG-CATV	STORM SEWER, CLEANOUT & MANHOLE
		UG-CATV	UG-CATV	COMBINED SEWER & MANHOLE
		UG-CATV	UG-CATV	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
		UG-CATV	UG-CATV	POST INDICATOR VALVE
		UG-CATV	UG-CATV	WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
		UG-CATV	UG-CATV	MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
		UG-CATV	UG-CATV	UNIDENTIFIED STRUCTURE
		UG-CATV	UG-CATV	SPOT ELEVATION
		UG-CATV	UG-CATV	CONTOUR LINE
		UG-CATV	UG-CATV	FENCE
		UG-CATV	UG-CATV	GUARD RAIL
		UG-CATV	UG-CATV	STREET LIGHT
		UG-CATV	UG-CATV	SIGN
		CONCRETE	CONCRETE	
		ASPHALT	ASPHALT	
		GRAVEL	GRAVEL	
		GRAVEL	GRAVEL	GRAVEL SHOULDER
		WETLAND	WETLAND	
PROPOSED				

REFERENCE DRAWINGS

WATER MAIN	XXXXXXXXXXXX
SANITARY SEWER	XXXXXXXXXXXX
STORM SEWER	XXXXXXXXXXXX
COMBINED SEWER	XXXXXXXXXXXX
ELECTRIC	XXXXXXXXXXXX
TELEPHONE	XXXXXXXXXXXX
GAS	XXXXXXXXXXXX
PETROLEUM	XXXXXXXXXXXX
CATV	XXXXXXXXXXXX
FLOOD PLAIN	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX
OTHER	XXXXXXXXXXXX

BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY
APPROXIMATE ELEVATION: 826.05 NAVD88 DATUM

BM #2
RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE
EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE
COPPER DRUM
ELEVATION: 827.23 NAVD88 DATUM

BM #3
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST
R.O.W. LINE OF PLATT RD
ELEVATION: 827.81 NAVD88 DATUM

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OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE
RATE MAP NUMBER 26161C0402 DATED APRIL 3, 2012.

STREET UNIT	ADDRESS
1	3700
2	3702
3	3704
4	3706
5	3708
6	3711
7	3713
8	3715
9	3719
10	3721
11	3723
12	3726
13	3728
14	3730
15	3732
16	3736
17	3738
18	3740
19	3742
20	3746
21	3748
22	3750
23	3752
24	3756
25	3758
26	3760
27	3762
28	3765
29	3767
30	3769
31	3771
32	3773
33	3777
34	3779
35	3781
36	3784
37	3786
38	3788
39	3790
40	3794
41	3796
42	3798
43	3800

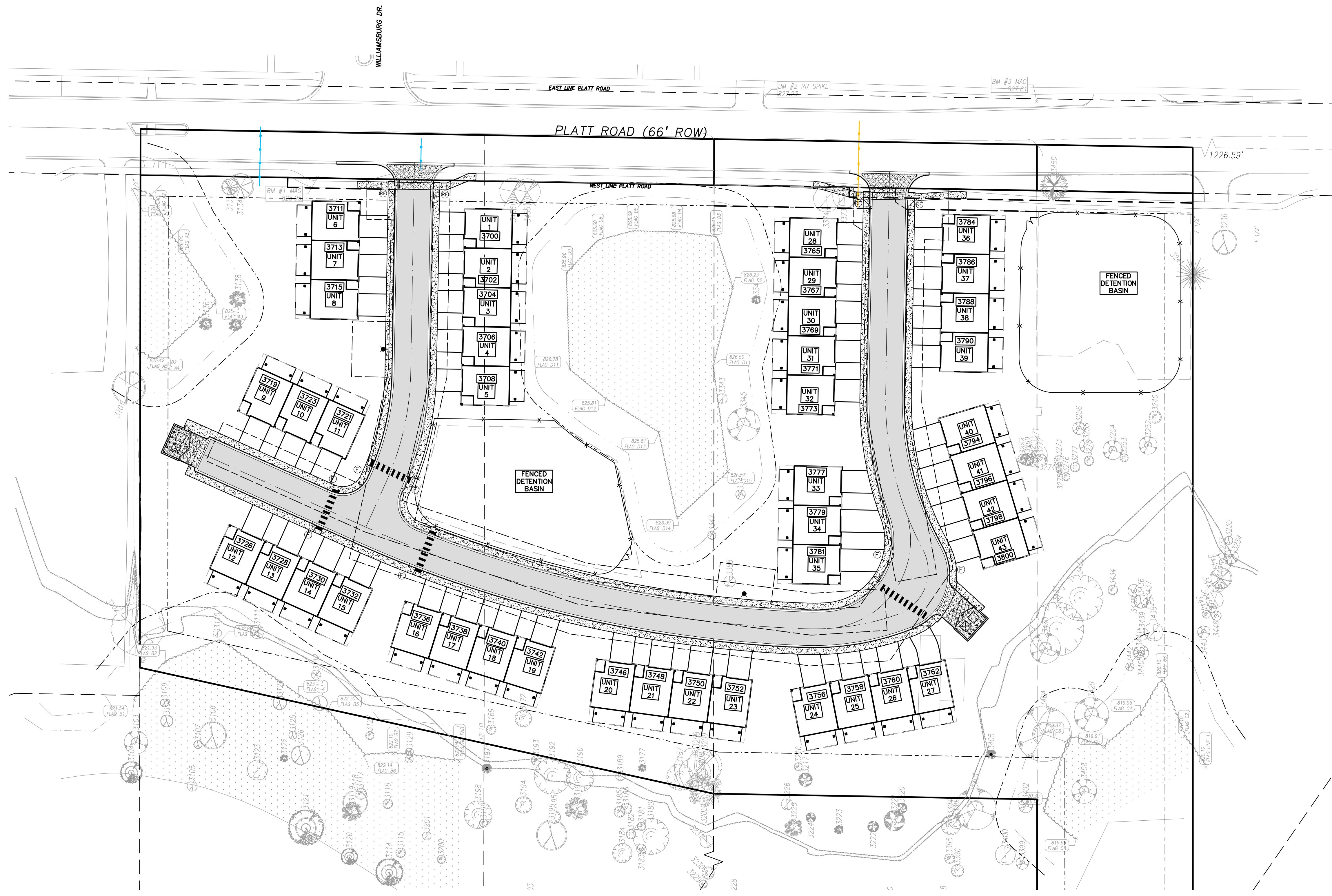
PROJECT TITLE
**PLATT ROAD
TOWNHOMES**
PLATT ROAD
ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS
OWNER REVIEW 9/18/2020
CONCEPT REVIEW MEETING 1/13/2021
SPA/WCWR REVIEW 1/13/2022
SPA/WCWR RESUBMITTAL 4/7/2022

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE
**ADDRESSING
PLAN**

PEA JOB NO. 2020-0151
P.M. JC
DN. JW
DES. JW
DRAWING NUMBER: P-3.3





NORTH

0 20 40 80
SCALE: 1" = 40'



CAUTION!
 THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE APPROXIMATE AND ARE NOT TO THE COMPLETENESS OR ACCURACY THEREOF. THE EXACT LOCATION AND ELEVATION OF THESE UTILITIES IS THE RESPONSIBILITY OF THE UTILITY PROVIDER FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO ANY EXCAVATION ACTIVITY.

LEGEND

IRON FOUND	IRON SET	BRASS PLUG SET	MONUMENT FOUND	SEC. CORNER FOUND
IRON PLATE	IRON CAP	MONUMENT PLATE	MONUMENT CAP	MONUMENT PLATE
IRON PLATE	IRON CAP	MONUMENT PLATE	MONUMENT CAP	MONUMENT PLATE
IRON PLATE	IRON CAP	MONUMENT PLATE	MONUMENT CAP	MONUMENT PLATE
IRON PLATE	IRON CAP	MONUMENT PLATE	MONUMENT CAP	MONUMENT PLATE

STD. HEAVY ROW
DUTY DUTY ONLY

STD. HEAVY DEEP
DUTY DUTY STRENGTH

STD. HEAVY DEEP
DUTY DUTY STRENGTH

WETLAND

REFERENCE DRAWINGS

WATER MAIN	XXXXXX
SANITARY SEWER	XXXXXX
STORM SEWER	XXXXXX
COMBINED SEWER	XXXXXX
ELectRIC	XXXXXX
TELEPHONE	XXXXXX
TELEGRAPH	XXXXXX
GAS	XXXXXX
PETROLEUM	XXXXXX
CATV	XXXXXX
FLOOD PLAIN	XXXXXX
OTHER	XXXXXX
OTHER	XXXXXX

BENCHMARKS

BM #1
 MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM

BM #2
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BM #3
 MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM

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SYMBOLS: GRADING

PROPOSED SPOT ELEVATION: TYPICALLY TOP OF PAVEMENT IN PAVED AREAS, GUTTER GRADE IN CURB LINES. **622.50**

PROPOSED CONTOUR LINE

922 —

ABBREVIATIONS:

T/C = TOP OF CURB
 G = GUTTER GRADE
 T/P = TOP OF PAVEMENT
 T/S = TOP OF SIDEWALK
 T/W = TOP OF WALL
 B/W = BOTTOM OF WALL
 F.G. = FINISH GRADE
 RIM = RIM ELEVATION

RETAINING WALL NOTE:
 TOP OF WALL (T/W) AND BOTTOM OF WALL (B/W) GRADES ARE THE FINISH GRADE AT THE TOP AND BOTTOM OF THE RETAINING WALL, NOT THE ACTUAL TOP AND BOTTOM OF THE WALL STRUCTURE.

SOIL INVESTIGATION

PER THE US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE SOILS MAP FOR WASHTENAW COUNTY, SITE SOILS CONSIST OF:

Nab - NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES, HYDROLOGIC SOIL GROUP C/D

Pe - PEWAMO CLAY LOAM, 0 TO 2 PERCENT SLOPES, HYDROLOGIC SOIL GROUP C/D

ORIGINAL ISSUE DATE: SEPTEMBER, 2020

DRAWING TITLE: **GRADING PLAN**

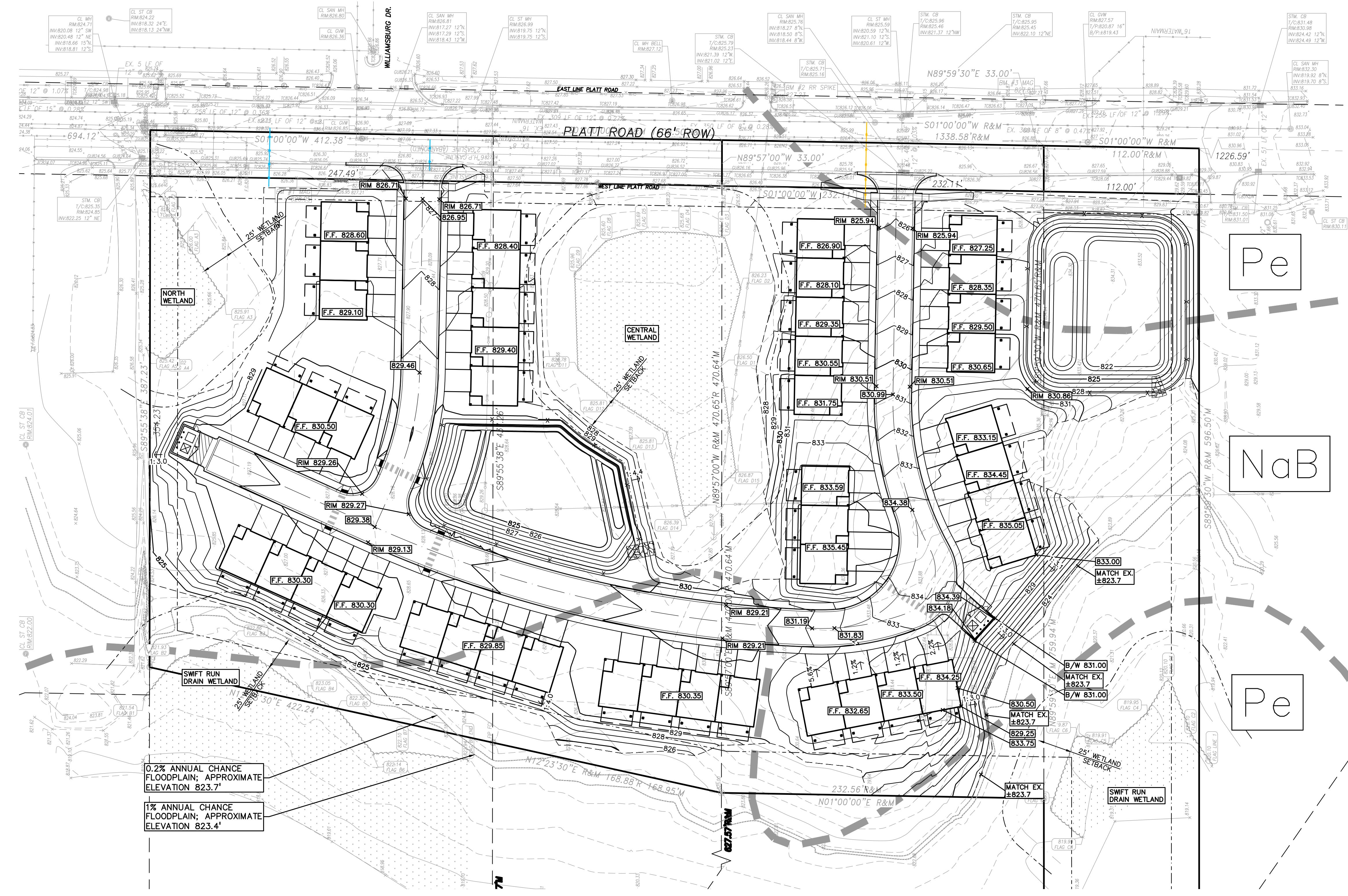
PEA JOB NO. 2020-0151

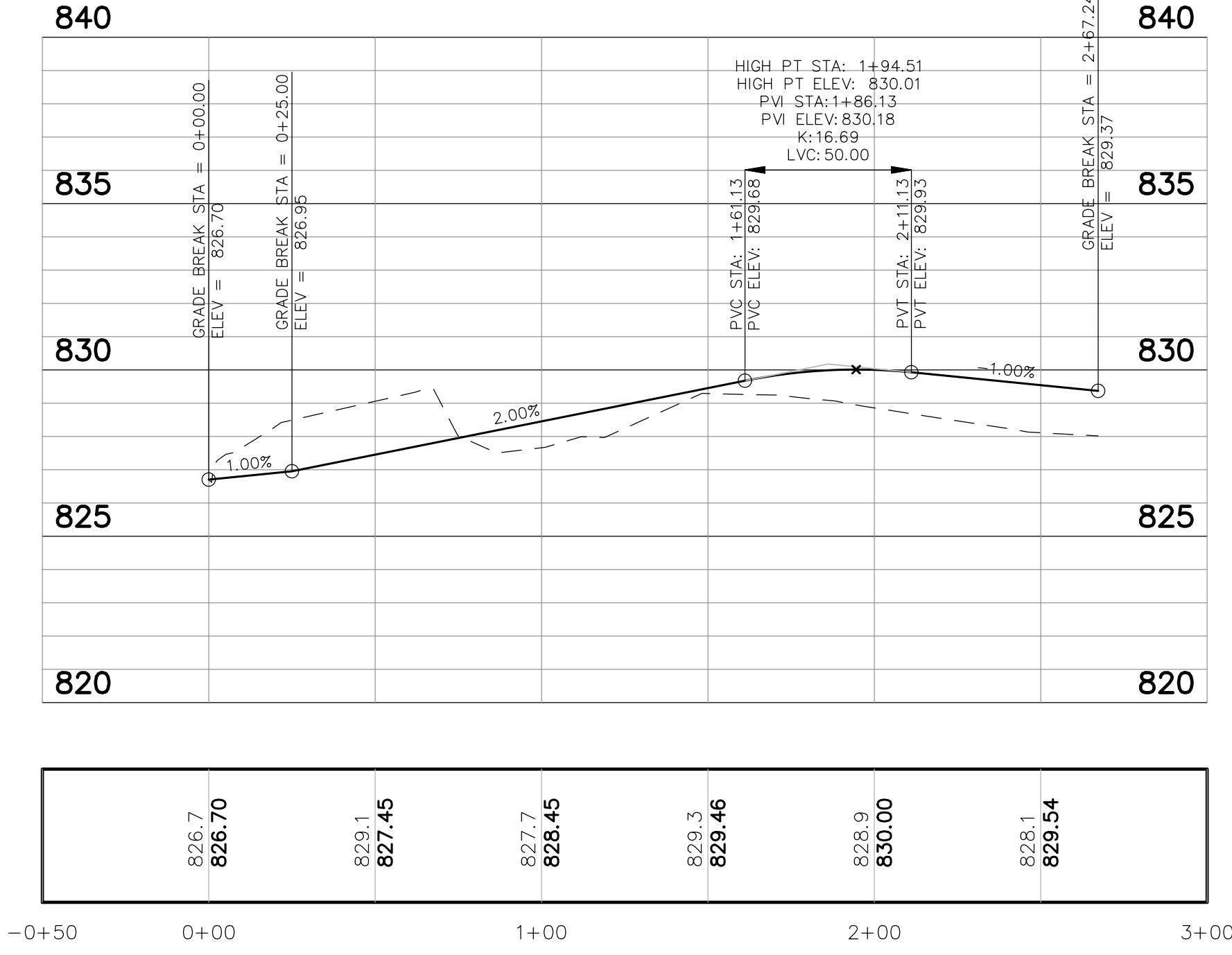
P.M. JC

DN. JW

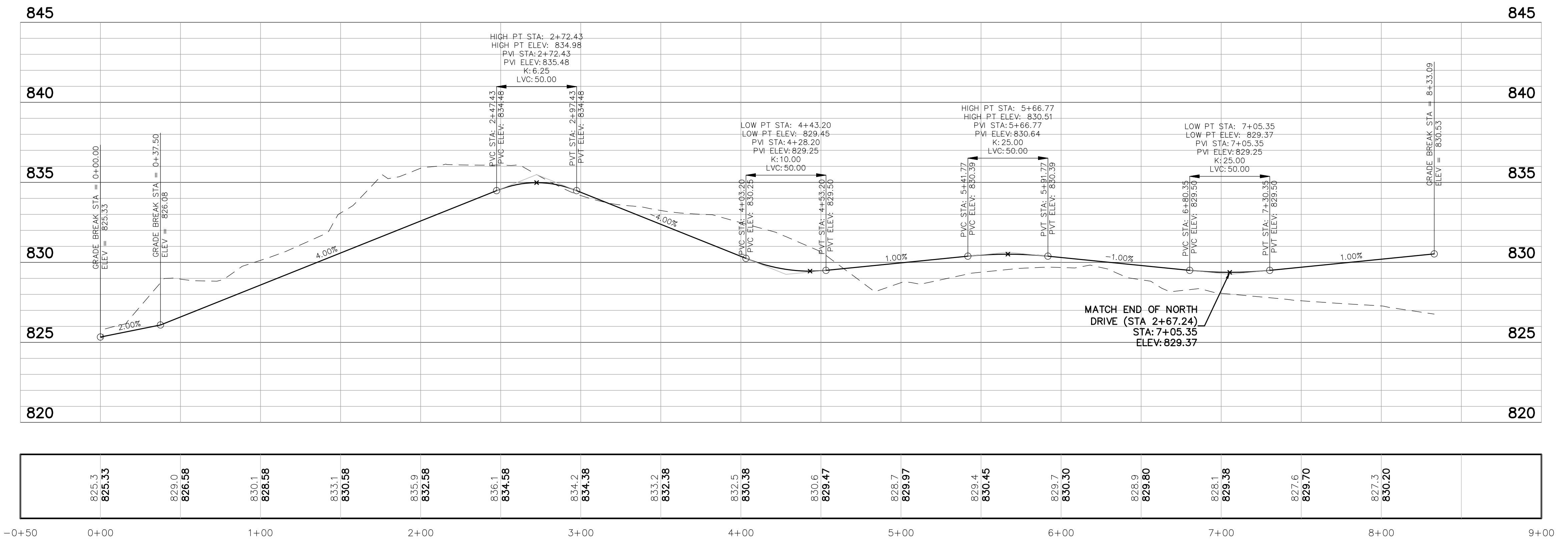
DES. JW

DRAWING NUMBER: **P-4.0**





NORTH DRIVE PROFILE



MAIN DRIVE PROFILE

LEGEND

BENCHMARKS

BM #1
MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY
LOCATED ON THE WEST R.O.W. LINE OF PLATT RD.
ELEVATION: 828.05 NAVD88 DATUM

BM #2
RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE
EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE
CONCRETE DRIVE ENTRANCE
ELEVATION: 827.23 NAVD88 DATUM

BM #3
MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST
R.O.W. LINE OF PLATT ROAD
ELEVATION: 827.81 NAVD88 DATUM

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PROJECT TITLE

PLATT ROAD TOWNHOMES

PLATT ROAD

REVISIONS

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE

ROAD

PROFILES

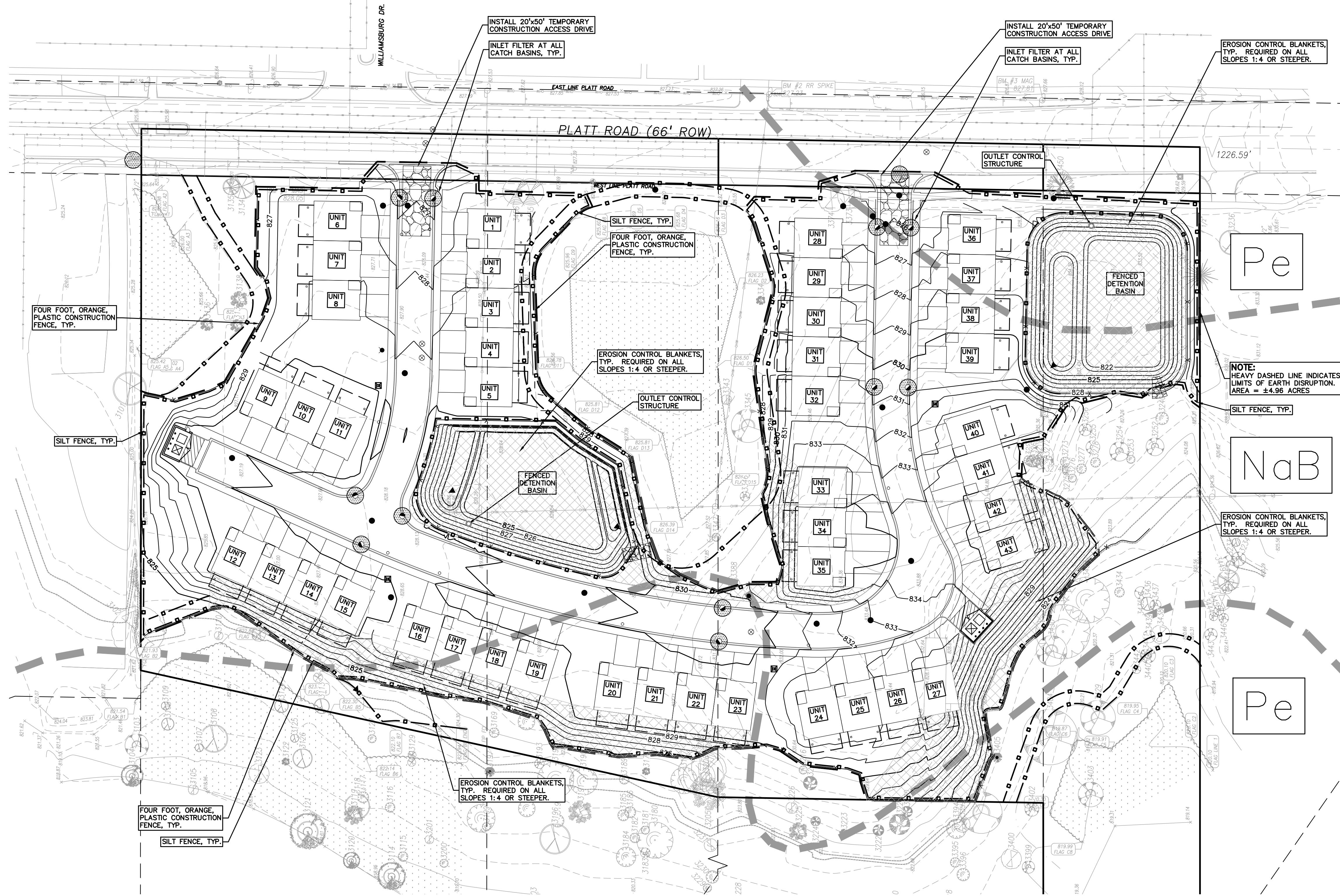
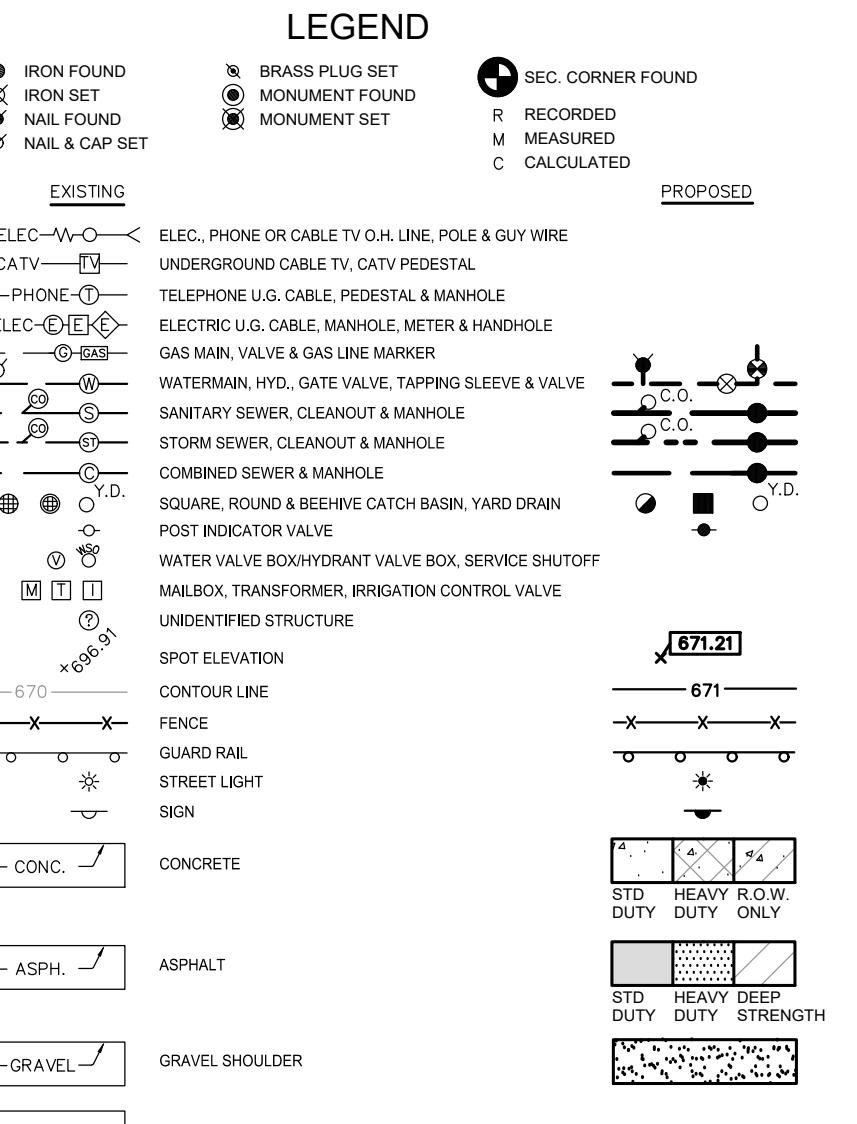
PEA JOB NO.	2020-0151
P.M.	JC
DN.	JW
DES.	JW
DRAWING NUMBER:	

P-4.1

EROSION CONTROL STANDARDS:	
1.	ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF THE JURISDICTIONAL AGENCY UNDER PART 91 OF ACT 451 OF 1994, AS AMENDED.
2.	DAILY INSPECTIONS SHALL BE MADE BY CONTRACTOR WHILE WORKING TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES. ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY. ALL SOIL EROSION CONTROL PROVISIONS SHALL BE PROPERLY MAINTAINED DURING CONSTRUCTION.
3.	EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, AND PONDS.
4.	CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED IN THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGE AREAS HAVE BEEN COMPLETED.
5.	STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
6.	SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
7.	DUST SHALL BE CONTROLLED BY WATERING OR BY OTHER APPROVED MEANS THROUGHOUT ALL CONSTRUCTION OPERATIONS.

SOIL EROSION MAINTENANCE SCHEDULE AND NOTES:	
8.	PERMANENT SOIL EROSION CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED, WHEN IT IS NOT POSSIBLE TO STABILIZE A DISTURBED AREA AFTER THE EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED WITHIN 5 CALENDAR DAYS. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
9.	THE CONTRACTOR SHALL PRESERVE NATURAL VEGETATION AS MUCH AS POSSIBLE.
10.	ANY WORK OUTSIDE OF THE LIMITS OF DISTURBANCE SHALL REQUIRE A SEPARATE GRADING PERMIT.
11.	FOLLOWING THE PLACEMENT OF 4" OF TOPSOIL AND HYDROSEED, STRAW MULCH BLANKET SHALL BE INSTALLED PERPENDICULAR ALONG THE PROPOSED SLOPES 1:6 OR STEEPER FROM TOP OF SLOPE TO TOE OF SLOPE, INCLUDING DITCH BOTTOMS, AND IT MUST BE PEGGED IN PLACE.
12.	ALL MUD/DIRT TRACKED ONTO EXISTING COUNTY/CITY ROADS FROM THIS SITE DUE TO CONSTRUCTION, SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
13.	TEMPORARY STABILIZATION OF THE ENTIRE SITE SHALL BE COMPLETED AND APPROVAL OBTAINED FROM THE CITY OF ANN ARBOR
14.	A WATER TRUCK SHALL BE AVAILABLE TO WATER DOWN THE SITE ON A DAILY BASIS AS REQUIRED TO MAINTAIN DUST CONTROL.
15.	TEMPORARY EROSION AND SEDIMENTATION CONTROLS ONCE ENTIRE SITE HAS BEEN PERMANENTLY STABILIZED AND THE CITY OF ANN ARBOR APPROVES THE FINAL GRADING

SEQUENCE OF CONSTRUCTION		
START DAY	END DAY	ACTIVITY
1	1	CITY OF ANN ARBOR SOIL EROSION AND SEDIMENTATION CONTROL PRE-GRADING MEETING
2	300	INSTALL TEMPORARY SOIL EROSION CONTROL MEASURES, SILT FENCES, INLET FILTERS, ETC. AS NECESSARY.
5	30	REMOVE ALL VEGETATION, TREES AND BRUSH FROM THE AREA OF PROPOSED IMPROVEMENT UNLESS MARKED TO REMAIN. STRIP AND STOCKPILE TOPSOIL. STOCKPILE SHALL BE GRADED AND SEED.
5	65	DEMOLISH ALL PAVEMENT, SIDEWALK, AND UTILITIES AS REQUIRED TO INSTALL THE PROPOSED WORK.
5	75	DISPOSE OF ALL EXCESS/UNSUITABLE MATERIALS OFF SITE IN A LEGAL MANNER. NO ON-SITE BURN OR BURY PITS ALLOWED.
30	90	ROUGH GRADE SITE. SEED AND MULCH BLANKETS MUST BE INSTALLED AS SHOWN WITHIN 5 DAYS OF FINAL GRADE. REPAIR AND/OR RE-INSTALL ANY TEMPORARY SOIL EROSION CONTROL MEASURES THAT WERE DAMAGED DURING GRADING OPERATIONS.
40	240	TEMPORARY SEEDING MUST BE PROVIDED IN AREAS NOT TO BE WORKED ON FOR 14 DAYS OR LONGER.
45	105	CONSTRUCT AND STABILIZE DETENTION FACILITIES
45	120	INSTALL SITE UTILITIES (STORM, SANITARY, WATER MAIN, ETC.) INSTALL INLET FILTERS AT NEW DRAINAGE STRUCTURES.
110	120	WATER MAIN FLUSHING
50	120	INSTALL PARKING LOTS, ACCESS DRIVES AND ISLES UP TO AGGREGATE BASE
120	300	CONSTRUCT PROPOSED BUILDINGS
150	175	FINE GRADE SITE AND PREPARE FOR SITE PAVING OPERATIONS.
175	205	INSTALL ALL PAVEMENT, SIDEWALKS, CURBING AS PROPOSED. IF PERMANENT LANDSCAPING IS NOT TO BE INSTALLED SOON AFTER PAVING IS COMPLETE, ALL AREAS WITHIN 20 FEET OF BACK OF CURB MUST BE TEMPORARILY SEADED. REPAIR INLET FILTERS, SILT FENCE AND ANY OTHER DAMAGED SOIL EROSION CONTROL MEASURES AS NECESSARY.
205	265	FINAL GRADE, REDISTRIBUTE STOCKPILED TOPSOIL, ESTABLISH VEGETATION AND INSTALL ALL PERMANENT LANDSCAPING IN ALL DISTURBED AREAS NOT BUILT.
265	270	CLEAN PAVEMENT AND REMOVE ALL TEMPORARY SOIL EROSION CONTROL MEASURES. RE-ESTABLISH VEGETATION AS REQUIRED.
300	300	REMOVE SEDIMENTATION CONTROLS ONCE ENTIRE SITE HAS BEEN PERMANENTLY STABILIZED AND THE CITY OF ANN ARBOR APPROVES THE FINAL GRADING



REFERENCE DRAWINGS

BENCHMARKS	
BM #1	MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY
	APPROXIMATE ELEVATION IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF.
BM #2	RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE
	CONTINUOUS DRIVEWAY. APPROXIMATE ELEVATION: 827.23 NAVD88 DATUM
BM #3	MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD.
	APPROXIMATE ELEVATION: 827.81 NAVD88 DATUM

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SYMBOLS: EROSION CONTROL

- SILT FENCE (REFER TO DETAIL ON SHEET P-8.0)
- FOUR FOOT, ORANGE, CONSTRUCTION FENCE
- STORM SEWER INLET FILTER (REFER TO DETAIL ON SHEET P-8.0)
- TEMPORARY CONSTRUCTION ACCESS DRIVE (REFER TO DETAIL ON SHEET P-8.0)
- EROSION CONTROL BLANKET (REFER TO DETAIL ON SHEET P-8.0)

SOIL INVESTIGATION

PER THE US DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE SOILS MAP FOR WASHINGTON COUNTY, SITE SOILS CONSIST OF:

NbB - NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES; HYDROLOGIC SOIL GROUP C/D

Pe - PEWAMON CLAY LOAM, 0 TO 2 PERCENT SLOPES; HYDROLOGIC SOIL GROUP C/D

EROSION CONTROL COST ESTIMATE (CONSTRUCTION)		
INSTALL SILT FENCE	2,817 LF.	\$1.60 \$4,508
INSTALL INLET FILTERS	16 EA.	\$120 \$1,920
INSTALL TEMPORARY ACCESS DRIVES	2 EA.	\$1,200 \$2,400
TEMPORARY SEEDING	±12,500 S.Y.	\$1.05 \$13,125
INSTALL TEMP. END SECTION SED. TRAP	5 EA.	\$120 \$600
INSTALL EROSION CONTROL BLANKET	5,528 S.Y.	\$5.00 \$27,640
EXPOSED SOIL PROTECTION FROM EROSION SHOULD CONSTRUCTION DISCONTINUE	±4,028 S.Y.	\$1.15 \$27,632
TOTAL		\$77,825

REVISIONS

OWNER REVIEW 9/18/2020

CONCEPT REVIEW MEETING 1/13/2021

SPA/CWCW REVIEW 1/13/2022

SPA/CWCW RESUBMITTAL 4/7/2022

ORIGINAL ISSUE DATE: SEPTEMBER, 2020

DRAWING TITLE: SOIL EROSION CONTROL PLAN

PEA JOB NO. 2020-0151

P.M. JC

DN. JW

DES. JW

DRAWING NUMBER: P-5.0



LEGEND

● IRON FOUND	○ IRON SET	■ MONUMENT FOUND	○ MONUMENT SET
○ BRASS PLUG SET	○ IRON PLUG SET	○ SEC. CORNER FOUND	○ SEC. CORNER SET
○ MONUMENT FOUND	○ MONUMENT SET	○ RECORDED	○ MEASURED
○ NAIL CAP SET	○ NAIL SET	○ C	○ C CALCULATED
EXISTING			
○ OH-ELEC- CABLE	○ UG-CABLE	○ UG-PHONE	○ UG-CABLE
○ UNDERGROUND CABLE-TV, CITY PEDESTAL	○ TELEPHONE CABLE, PEDESTAL	○ ELECTRIC UG-CABLE	○ ELECTRIC UG-CABLE
○ SANITARY SEWER, CLEANOUT & MANHOLE	○ STORM SEWER, CLEANOUT & MANHOLE	○ GAS MAIN, VALVE & GAS LINE MARKER	○ GAS MAIN, VALVE & GAS LINE MARKER
○ COMBINED SEWER & MANHOLE	○ COMBINED SEWER & MANHOLE	○ SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN	○ SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
○ POST INDICATOR VALVE	○ WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF	○ MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	○ MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
○ SPOT ELEVATION	○ CONTOUR LINE	○ FENCE	○ FENCE
○ CONTOUR LINE	○ GUARD RAIL	○ STREET LIGHT	○ STREET LIGHT
○ SIGN	○ *	○ *	○ *
PROPOSED			
○ C.D.	○ C.D.	○ Y.D.	○ Y.D.
○ WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF	○ MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE	○ POST INDICATOR VALVE	○ SPOT ELEVATION
○ UNIDENTIFIED STRUCTURE	○ CONTOUR LINE	○ FENCE	○ FENCE
○ 671.21	○ 671	○ *	○ *
○ 670	○ 670	○ *	○ *
○ CONCRETE	○ ASPHALT	○ GRAVEL	○ WETLAND
○ STD. HEAVY R.O.W. DUTY ONLY	○ STD. HEAVY DEEP DUTY ONLY	○ STD. HEAVY DEEP DUTY STRENGTH	○ STD. HEAVY DEEP DUTY STRENGTH

REFERENCE DRAWINGS

WATER MAIN	XXXXXXXXXX
SANITARY SEWER	XXXXXXXXXX
STORM SEWER	XXXXXXXXXX
COMBINED SEWER	XXXXXXXXXX
ELECTRIC	XXXXXXXXXX
TELEPHONE	XXXXXXXXXX
GAS	XXXXXXXXXX
PETROLEUM	XXXXXXXXXX
FLOOD PLAIN	XXXXXXXXXX
OTHER	XXXXXXXXXX
OTHER	XXXXXXXXXX



CAUTION!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE NOT IMPLIMENTED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO COMMENCING ANY WORK.

BENCHMARKS

BM #1	MAG NAIL IN THE WEST FACE OF TREE #3133; A 20" HICKORY LOCATED ON THE WEST R.O.W. LINE OF PLATT RD. ELEVATION: 828.05 NAVD88 DATUM
BM #2	RAILROAD SPIKE IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. JUST SOUTH OF A SINGLE COOP DRILL. ELEVATION: 827.81 NAVD88 DATUM
BM #3	MAG NAIL IN THE WEST FACE OF UTILITY POLE; ON THE EAST R.O.W. LINE OF PLATT RD. ELEVATION: 827.81 NAVD88 DATUM

TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:	
TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY REICHERT SURVEYING, INC.	
PEA GROUP WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.	

FLOODPLAIN NOTE:	
BY GRAPHICAL PLOTTING, THE PORTION OF THE SITE TO BE DEVELOPED IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 26161C0402E DATED APRIL 3, 2012.	

CLIENT
TROWBRIDGE COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHENIAN COUNTY, MICHIGAN

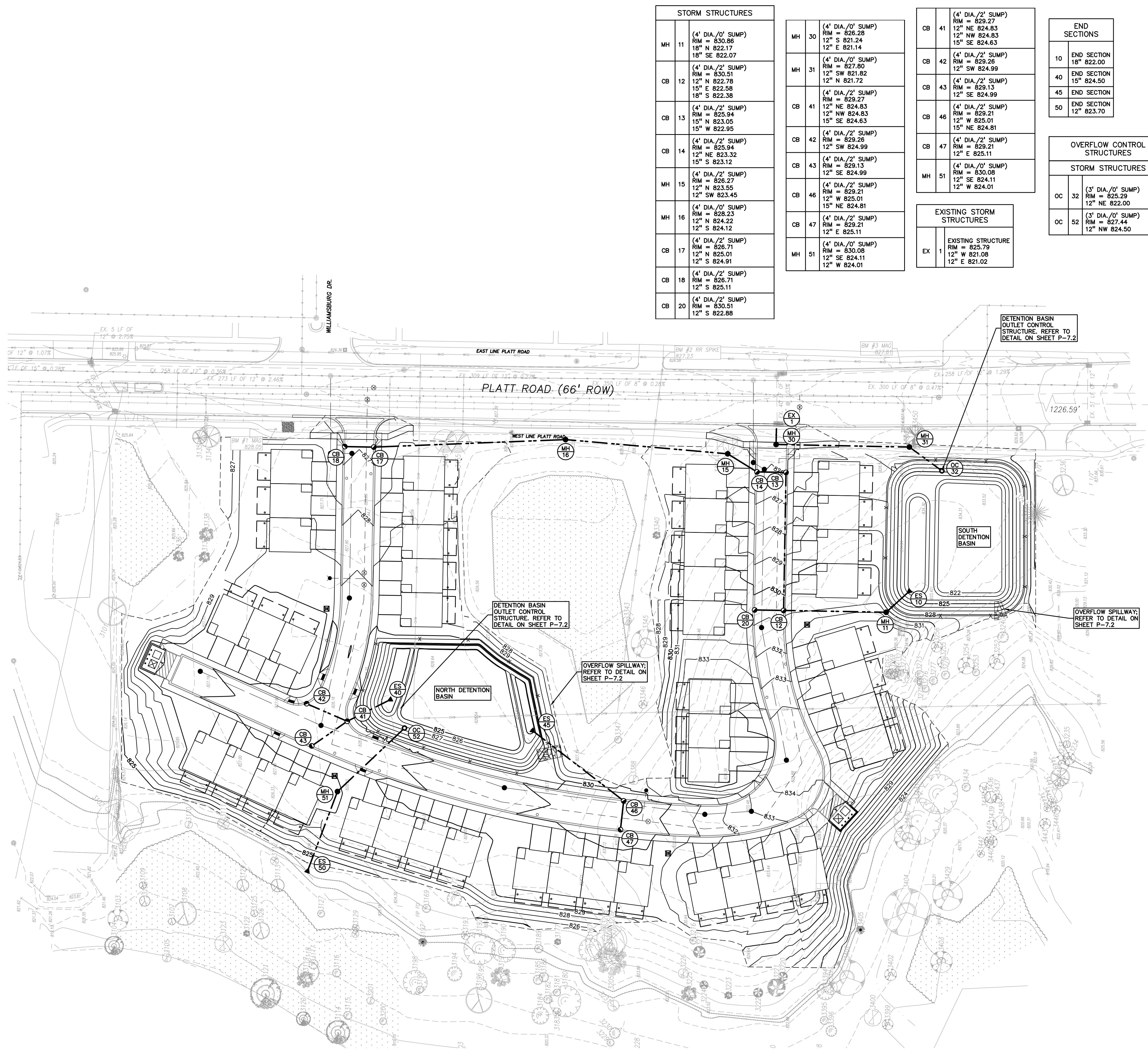
REVISIONS

OWNER REVIEW	9/18/2020
CONCEPT REVIEW MEETING	1/13/2021
SPA/WCWRC REVIEW	1/13/2022
SPA/WCWRC RESUBMITTAL	4/7/2022

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE
STORM WATER MANAGEMENT PLAN

PEA JOB NO. 2020-0151
P.M. JC
DN. JW
DES. JW
DRAWING NUMBER:



STORM SEWER SYSTEM DESIGN

I = B/(T+D)^E												B = 175.0												D = 25.0												E = 1											
C = varies												Pipe 'n' Value = 0.013												T = 20 (min.)																							
FROM STR	TO STR	AREA (A) (Acres)	COEF. C	A x C	TOTAL AREA (AxC) (Acres)	TIME t (min.)	INT. I (in/hr)	FLOW Q (cfs)	PIPE CAP. (cfs)	PIPE DIA. (in.)	PIPE LENGTH (ft)	PIPE SLOPE (%)	MIN HG PER "Q"	VEL. FULL (ft/sec)	TIME FLOW (min.)	H.G.L. ELEV.	RIM ELEV.		INVERT ELEV.		PIPE COVER		HGL COVER																								
18	17	0.23	0.89	0.20	0.20	0.23	20.00	3.89	0.80	2.34	12	24	0.43	0.05%	3.0	0.1	825.91	825.81	827.26	826.71	825.11	825.01	0.99	0.54	1.35	0.91																					
17	16	0.27	0.88	0.24	0.44	0.50	20.10	3.88	1.72	2.34	12	159	0.43	0.23%	3.0	0.9	825.71	825.02	826.71	828.23	824.91	824.22	0.64	2.84	1.01	3.21																					
16	15	0.00	0.00	0.00	0.44	0.50	21.80	3.74	1.72	2.34	12	135	0.43	0.23%	3.0	0.8	824.92	824.39	828.23	826.27	824.12	823.55	2.94	1.56	3.31	1.88																					
15	14	0.00	0.00	0.00	0.44	0.50	22.00	3.72	2.36	3.65	15	24	0.43	0.13%	3.0	0.2	824.39	824.32	826.27	825.94	823.45	823.32	1.66	1.45	1.88	1.62																					
14	13	0.21	0.91	0.19	0.63	0.71	22.00	3.72	3.65	15	114	0.32	0.25%	3.0	0.6	824.32	824.29	825.94	825.94	823.12	823.05	1.38	1.46	1.62	1.66																						
13	12	0.28	0.66	0.24	0.88	0.99	22.10	3.72	3.25	3.65	15	85	0.25	0.19%	3.0	0.5	824.00	825.94	830.51	822.95	822.58	822.58	1.56	6.50	1.66	6.52																					
12	11	0.20	0.91	0.18	1.23	1.40	22.70	3.67	4.52	5.25	18	85	0.25	0.19%	3.0	0.5	823.84	830.51	830.86	822.38	822.17	6.43	6.98	6.52	7.01																						
11	10	0.00	0.00	0.00	1.23	1.40	23.20	3.63	4.52	5.25	18	27	0.25	0.19%	3.0	0.2	823.84	823.79	830.86	822.07	822.00	7.08	—	7.01	—																						
20	12	0.21	0.82	0.17	0.17	0.21	20.00	3.89	0.67	2.34	12	24	0.43	0.04%	3.0	0.1	824.01	824.00	830.51	822.88	822.78	6.46	6.57	6.51	6.52																						
32	31	0.00	0.00	0.00	0.00	0.00	20.00	3.89	0.00	2.34	12	41	0.43	0.00%	3.0	0.2	822.80	822.62	824.00	827.80	822.00	821.82	—	4.81	—	5.18																					
31	30	0.00	0.00	0.00	0.00	0.00	20.80	3.87	0.00	2.34	12	110	0.43	0.00%	3.0	0.6	822.52	822.04	827.80	826.28	821.24	4.91	3.87	5.28	4.24																						
30	EX CB	0.00	0.00	0.00	0.00	0.00	20.80	3.82	0.00	2.34	12	15	0.43	0.00%	3.0	0.1	821.94	821.88	826.28	821.14	821.08	3.97	3.54	4.34	3.91																						
42	41	0.32	0.79	0.25	0.25	0.32	20.00	3.89	0.98	2.34	12	37	0.43	0.08%	3.0	0.2	827.11	827.08	829.26	829.27	824.99	824.83	2.98	3.27	2.16	2.19																					
41	40	0.11	0.84	0.09	0.77	0.94	20.20	3.87	2.99	3.65	15	41	0.32	0.21%	3.0	0.2	827.08	826.99	829.27	825.75	824.63	824.50	3.20	—	2.19	—																					
43	41	0.51	0.84	0.43	0.43	0.51	20.00	3.89	1.66	2.34	12	36	0.43	0.22%	3.0	0.2	827.16	827.08	829.13	829.27	824.99	824.83	2.98	3.27	1.98	2.19																					
47	46	0.66	0.85	0.56	0.56	0.66	20.00	3.89	2.17	2.34	12	24	0.43	0.37%	3.0	0.1	827.27	827.18	829.21	825.11	825.01	2.93	3.03	1.94	2.03																						
46	45	0.20	0.87	0.17	0.73	0.86	20.10	3.88	2.84	3.65	15	96	0.32	0.19%	3.0	0.5	827.18	826.99	829.21	825.75	824.81	824.50	2.96	—	2.03	—																					
52	51	0.00	0.00	0.00	0.00	0.00	20.00	3.89	0.00	2.34	12	92	0.43	0.00%	3.0	0.5	825.30	824.91	825.67	830.08	824.50	824.11	—	4.80	—	5.17																					
51	50	0.00	0.00	0.00	0.00	0.00	20.50	3.85	0.00	2.34	12	72	0.43	0.00%	3.0	0.4	824.81	830.08	824.95	824.01	823.70	4.90	—	5.27	—																						

TASKS	MAINTENANCE TASKS AND SCHEDULE DURING CONSTRUCTION								SCHEDULE
	STORM SEWER SYSTEM	CATCH BASIN Sumps	CATCH BASIN INLET CASTINGS	DITCHES AND SWALES	OUTFLOW CONTROL STRUCTURE	RIP-RAP	SEDIMENT BASINS	STORM DETENTION AREAS	
INSPECT FOR SEDIMENT ACCUMULATION	X	X		X	X		X	X	WEEKLY
REMOVAL OF SEDIMENT ACCUMULATION	X	X		X	X		X	X	AS NEEDED* & PRIOR TO TURNOVER
INSPECT FOR FLOATABLES AND DEBRIS			X	X	X		X	X	QUARTERLY
CLEANING OF FLOATABLES AND DEBRIS			X	X	X		X	X	QUARTERLY & AT TURNOVER
INSPECTION FOR EROSION			X	X	X		X	X	WEEKLY
RE-ESTABLISH PERMANENT VEGETATION ON ERODED SLOPES			X	X	X		X	X	AS NEEDED & PRIOR TO TURNOVER
REPLACEMENT OF STONE				X	X		X	X	AS NEEDED & PRIOR TO TURNOVER
MOWING				X	X		X	X	0-2 TIMES PER YEAR
INSPECT STORM WATER SYSTEM COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS			X	X	X		X	X	ANNUALLY AND AT TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY ANNUAL WET WEATHER INSPECTION	X	X	X	X	X	X	X	X	AS NEEDED

* AS NEEDED MEANS WHEN SEDIMENT HAS ACCUMULATED TO A MAXIMUM DEPTH OF ONE FOOT

PERMANENT MAINTENANCE TASKS, SCHEDULE AND BUDGET

TASKS	CATCH BASIN INLET CASTINGS	DITCHES AND SWALES	OUTFLOW CONTROL STRUCTURE	RIP-RAP	SEDIMENT BASINS
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0 20 40 80
SCALE: 1" = 40'



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CLIENT
TROWBRIDGE
COMPANIES
2617 BEACON HILL DRIVE
AUBURN HILLS, MI 48326

PROJECT TITLE
PLATT ROAD
TOWNHOMES
PLATT ROAD
ANN ARBOR, WASHINGTON COUNTY, MICHIGAN

REVISIONS
OWNER REVIEW 9/18/2020
CONCEPT REVIEW MEETING 1/13/2021
SPA/WCWRC REVIEW 1/13/2022
SPA/WCWRC RESUBMITTAL 4/7/2022

ORIGINAL ISSUE DATE:
SEPTEMBER, 2020

DRAWING TITLE
WCWRC
WORKSHEETS -
SOUTH BASIN

PEA JOB NO. 2020-0151
P.M. JC
D.N. JW
D.E.S. JW
DRAWING NUMBER:

Section IV: Computational Requirements For Stormwater Management Systems

Part F.
STANDARD METHOD RUNOFF VOLUME WORK SHEETS

Rational Method Variables	W1	Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Coefficients				
Total Site Area =	1.55 ac	Total Site Area Excluding "Self-Crediting" BMPs = 1.55 ac ^a				
Permeable	D	Soil Type	Area (ft ²)	Area(ac)	Runoff Coefficient (C)	(C/Areas)
Impervious	D	16,052	0.37	0.45	7,223.4	
		51,592	1.18	0.95	49,012.4	
Total - $\Sigma(C/Areas)$ =	5.6, 235.8	Area Total - Σ or Σsf = 67,644.0				
Weighted C - $\Sigma(C/Areas)$ Σ or Σsf = 0.83						

NRCS Variables	W2	Standard Method Runoff Volume Calculations				
Permeable	D	Soil Type	Area (ft ²)	Area(ac)	Curve Number	(CN/Areas)
Impervious	D	16,052	0.37	80	1,284,160	
Total - $\Sigma(C/Areas)$ =	1,284,160	Area Total - Σ or Σsf = 16,052				
Weighted CN - $\Sigma(C/Areas)$ Σ or Σsf = 8.0						

NRCS Variables	W3	Standard Method Runoff Volume Calculations				
Permeable	D	Soil Type	Area (ft ²)	Area(ac)	Curve Number	(CN/Areas)
Impervious	D	51,592	1.18	98	5,056,016	
Total - $\Sigma(C/Areas)$ =	5,056,016	Area Total - Σ or Σsf = 51,592				
Weighted CN - $\Sigma(C/Areas)$ Σ or Σsf = 98						

^aUse this area for the remainder of the runoff calculations
^bRequired for first flush runoff calculations
^cRequired for bankfull and 100-year runoff calculations

Section IV: Computational Requirements For Stormwater Management Systems

W2 Standard Method Runoff Volume Calculations

First Flush Runoff Calculations ($V_{f,1}$)

A. $V_{f,1} = (1 - \left(\frac{1}{12}\right) \left(\frac{43560 ft^3}{1 ac}\right)) AC$

B. The pre-development land cover will be **Good Cover Woods** or Meadow. Determine the associated soil hydrologic group for the entire site and choose the curve number.

C. $S = \frac{1000}{CN - 10}$

D. $Q = \frac{(P-0.25)^2}{(P+0.85)}$

E. Total Site Area (sf) excluding "Self-Crediting" BMPs Area = 67,644 sf

F. $V_{f,1} = Q \left(\frac{1}{12}\right) Area$

³¹

Section IV: Computational Requirements For Stormwater Management Systems

W3 Standard Method Runoff Volume Calculations

Pre-development Bankfull Runoff Calculations ($V_{bf,pre}$)

A. 2 year/24 hour storm event P = 2.35 in

B. The pre-development land cover will be **Good Cover Woods** or Meadow. Determine the associated soil hydrologic group for the entire site and choose the curve number.

C. $S = \frac{1000}{CN - 10}$

D. $Q = \frac{(P-0.25)^2}{(P+0.85)}$

E. Pervious Cover Area from Worksheet 1 Area = 16,052 sf

F. $V_{bf,pre} = Q \left(\frac{1}{12}\right) Area$

³²

Section IV: Computational Requirements For Stormwater Management Systems

W4 Standard Method Runoff Volume Calculations

Pervious Cover Post-Development Bankfull Runoff Calculations ($V_{bf,post}$)

A. 2 year/24 hour storm event P = 2.35 in

B. Pervious Cover CN From Worksheet 1 CN = 80

C. $S = \frac{1000}{CN - 10}$

D. $Q = \frac{(P-0.25)^2}{(P+0.85)}$

E. Impervious Cover Area from Worksheet 1 Area = 51,592 sf

F. $V_{bf,post} = Q \left(\frac{1}{12}\right) Area$

³³

Section IV: Computational Requirements For Stormwater Management Systems

W5 Standard Method Runoff Volume Calculations

Impervious Cover Post-Development Bankfull Runoff Calculations ($V_{bf,imp}$)

A. 2 year/24 hour storm event P = 2.35 in

B. Impervious Cover CN From Worksheet 1 CN = 98

C. $S = \frac{1000}{CN - 10}$

D. $Q = \frac{(P-0.25)^2}{(P+0.85)}$

E. Impervious Cover Area from Worksheet 1 Area = 51,592 sf

F. $V_{bf,imp} = Q \left(\frac{1}{12}\right) Area$

³⁴

Section IV: Computational Requirements For Stormwater Management Systems

W6 Standard Method Runoff Volume Calculations

Pervious Cover Post-Development 100-year Storm Runoff Calculations ($V_{100,per,post}$)

A. 100-year Storm Event P = 5.11 in

B. Pervious Cover CN From Worksheet 1 CN = 80

C. $S = \frac{1000}{CN - 10}$

D. $Q_{100,per} = \frac{(P-0.25)^2}{(P+0.85)}$

E. Pervious Cover Area from Worksheet 1 Area = 16,052 sf

F. $V_{100,per,post} = Q \left(\frac{1}{12}\right) Area$

³⁵

Section IV: Computational Requirements For Stormwater Management Systems

W7 Standard Method Runoff Volume Calculations

Impervious Cover Post-Development 100-year Storm Runoff Calculations ($V_{100,imp,post}$)

A. 100-year Storm Event P = 5.11 in

B. Impervious Cover CN From Worksheet 1 CN = 98

C. $S = \frac{1000}{CN - 10}$

D. $Q_{100,imp} = \frac{(P-0.25)^2}{(P+0.85)}$

E. Impervious Cover CN From Worksheet 1 Area = 51,592 sf

F. $V_{100,imp,post} = Q \left(\frac{1}{12}\right) Area$

³⁶

Section IV: Computational Requirements For Stormwater Management Systems

W8 Standard Method Runoff Volume Calculations

Determine Time of Concentration for Applicable Flow Types ($T_{c,100}$)

Flow Type	K	Change in Elevation	Length (ft)	Slope % (S)	S.D.	V=K(S ^{0.5}) ^{1.5}	Tc=Li/V ^{0.667}
Sheet Flow*	0.48						

A. 100-year Storm Event P = 5.11 in

B. Impervious Cover CN From Worksheet 1 CN = 98

C. $S = \frac{1000}{CN - 10}$

D. $Q_{100,imp} = \frac{(P-0.25)^2}{(P+0.85)}$

E. Impervious Cover CN From Worksheet 1 Area = 51,592 sf

F. $V_{100,imp,post} = Q \left(\frac{1}{12}\right) Area$

³⁷

Section IV: Computational Requirements For Stormwater Management Systems

W9 Standard Method Runoff Volume Calculations

Runoff Summary & Onsite Infiltration Requirement

A. Runoff Summary from Previous Worksheets

First Flush Volume (V_f)	4,670 ft ³
Pre-Development Bankfull Runoff Volume ($V_{bf,pre}$)	4,171 ft ³
Pervious Cover Post-Development Bankfull Volume ($V_{bf,post}$)	1,053 ft ³
Impervious Cover Post-Development Bankfull Volume ($V_{bf,imp}$)	9,158 ft ³

Total BF Volume ($V_{bf,pre}$) 10,211 ft³

B. Determine Onsite Infiltration Requirement

Subtract the Pre-Development Bankfull from the Post-Development Bankfull volume

Total Post-Development Bankfull Volume ($V_{bf,post}$)	4,000 ft ³
Impervious Cover Post-Development 100-year Volume ($V_{100,imp,post}$)	20,981 ft ³
Total 100-year Volume (V_{100})	24,981 ft ³

Compare the Bankfull Volume Difference with the First Flush Volume. The greater of the two is the Onsite Infiltration Requirement.

Onsite Infiltration Requirement (V_{inf}) 6,040 ft³

³⁸

Section IV: Computational Requirements For Stormwater Management Systems

W10 Standard Method Runoff Volume Calculations

Detention/Retention Requirement

A. Detention

Q _f = 238.8 T _{c,100} ^{0.62}	Q _f = 238.6 T _{c,100} ^{0.62}
Peak of the Unit Hydrograph	Q _f = 5.92 ft ³ /in - mi ²

B. Total Site Area (ac) excluding "Self-Crediting" BMPs Area = 1.55 ac

C. Q₁₀₀ = Q_{100,pre} + Q_{100,imp}
Note: Q_{100,pre} and Q_{100,imp} from W6 and W7, respectively

D. Peak Flow (Pf) = $\frac{Q_{100}(cfs)(1000ft)(1.5)}{640}$ Pf = 11.28 cfs

E. $\Delta = Pf (cfs) - 0.15 \text{ Area(ac)}$ $\Delta = 11.28 - 0.15 \times 1.55$ $\Delta = 11.05 \text{ cfs}$

F. $V_{det} = \frac{\Delta (cfs)}{Pf (cfs)} V_{100} (ft^3)$ $V_{det} = \frac{11.05}{11.28} \times 24,981$ $V_{det} = 24,472 \text{ ft}^3$

Note: Projectiles where the required infiltration volume cannot be achieved must increase the required detention volume by up to an additional 20%.

Retention

A. $V_{ret} = 2(V_{det})$ $V_{ret} = 2(24,472)$ $V_{ret} = 49,942 \text{ ft}^3$

³⁹

Section IV: Computational Requirements For Stormwater Management Systems

W11 Standard Method Runoff Volume Calculations

Determine Applicable BMPs and Associated Volume Credits

Proposed BMP*	Area (ft ²)	Storage Volume ^b (ft ³)	Ave. Design Infiltration Rate (in/hr)	Infiltration Volume (ft ³)	Total Volume Reduction ^c (ft ³)
Permeable Pavement/Infiltration Bed					0
Infiltration Basin					0
Subsurface Infiltration Bed					0
Infiltration Trench					0
Biotreatment Systems					0
Rain Gardens					0
Dry Well					0
Bioswale					0
Vegetated Filter Strip					0
Green Roof					0

Total Volume Reduction Credit by Proposed Structural BMPs (ft³) 0

Runoff Volume Infiltration Requirement (V_{inf}) from Worksheet 9 = 6,040 ft³

Runoff Volume Credit (ft³) = 0

*Complete checklist from Section VI for each Structural BMP type

^bStorage volume area in ft² in individual BMP write-ups

^cApproximate the average design infiltration rate over 6 hours multiplied by the BMP area

^dTotal Volume Reduction Credit is the sum of the Storage Volume and the Infiltration Volume During Storm

^eNet Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume] = 29,366 ft³

⁴⁰

Section IV: Computational Requirements For Stormwater Management Systems

W13 Summary

Site Summary of Infiltration & Detention

A. Stormwater Management Summary

DESIGN STORM EVENT: 100 YEAR STORM 0.15 CFS/AC	POND OUTLET: ORIFICE
ALLOWABLE OUTFLOW:	

B. Detention Volume Increase for sites where the required infiltration volume cannot be achieved

% Required Infiltration NOT provided (100% - % Minimum Required Infiltration Provided) 100 %

Net % Penalty (20% x % Required Infiltration NOT Provided) 20 %

Total Required Detention Volume, including penalty [(100% + Net % Penalty) x Net Required Detention Volume] = 29,366 ft³

⁴²

Project: Platt Road Townhomes
Location: Ann Arbor, Michigan
Project No: 2020-0151
Date: 10/9/2020
By: JW

DESIGN STORM EVENT: 100 YEAR STORM 0.15 CFS/AC	POND OUTLET: ORIFICE
ALLOWABLE OUTFLOW:	

Input Parameters

A. TOTAL DRAINAGE AREA: 1.55 Ac	C. WEIGHTED C: 0.83
---------------------------------	---------------------

DETENTION CALCULS

Q = Q _{out} + Q _{in} / (A * C) = 0.233 CFS	CFS/ACRE IMPERVIOUS: 0.19
--	---------------------------

NET REQUIRED DETENTION VOLUME $V_{det} = \frac{Q}{(A * C)^{0.5}} = 29,366 \text{ CF}$

INFILTRATION VOLUME DURING STORM $V_{in} = V_{det} - V_{out}$ (Per WCWRC Worksheets)

FIRST FLUSH VOLUME $V_{f,1} = (1 - \left(\frac{1}{12}\right) \left(\frac{43560 ft^3}{1 ac}\right)) AC = 4,670 \text{ CF}$

NET FIRST FLUSH VOLUME $V_{f,1} = V_{f,1} - V_{out} = 4,670 - 0.233 = 4,437 \text{ CF}$

BANK FULL VOLUME $V_{bf} = V_{det} - V_{in} = 29,366 - 4,437 = 24,929 \text{ CF}$

NET BANK FULL VOLUME $V_{bf,net} = V_{bf} - V_{out} = 24,929 - 0.233 = 24,696 \text{ CF}$

SEDIMENT FOREBAY VOLUME $V_{sf} = 0.5\% \text{ of } V_{bf} = 0.5\% \text{ of } 24,696 = 123 \text{ CF}$

CONTOUR INTERPOLATION CALCULS.

TOP OF SED.	CONTOUR ELEV.	CONTOUR AREA	INCR. VOLUME	CUMUL. VOLUME
623.50	623.00	88	2,233	2,233
623.00	622.50	1,547	1,547	3,780
622.50	622.00	1,070		4,850

2,233 > 1,224 OK

First Flush Calculations

Total First Flush Volume, $V_{f,1}$ (ft ³) = 4,670	CF
Elevation of First Flush, X_f (ft) = 822.91	

Outlet Sizing for First Flush: $Q_{out} = V_{f,1}/(3600 \text{ sec}) = 0.004 \text{ CFS}$

Average Head for Outflow Equation: $Elevation Difference from X_f to Outlet Elevation = 0.91 \text{ ft}$ 0.61 ft

Orifice Area Required $A = Q/(0.62 \text{ ft}^{0.5})$ $A = 0.0140 \text{ SF}$

Number of Orifice Holes Required $Hole Diameter (at bottom elev.) = 0.75 \text{ in.}$ $Hole Area = 0.0$



20 40 80

SCALE: 1" = 40'

ON!!
NS AND ELEVATIONS OF EXISTING UNDERGROUND
SHOWN ON THIS DRAWING ARE ONLY
E. NO GUARANTEE IS EITHER EXPRESSED OR
TO THE COMPLETENESS OR ACCURACY THEREOF.
CTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR
THE EXACT UTILITY LOCATIONS AND ELEVATIONS
E START OF CONSTRUCTION.

HOWBRIDGE COMPANIES

ACON HILL DRIVE
ILLS, MI 48326

GT TITLE F

ATT ROAD TOWNHOMES

ONS	
REVIEW	9/18/2020
PT REVIEW MEETING	1/13/2021
WRC REVIEW	1/13/2022
WRC REURBMITTAL	4/7/2022

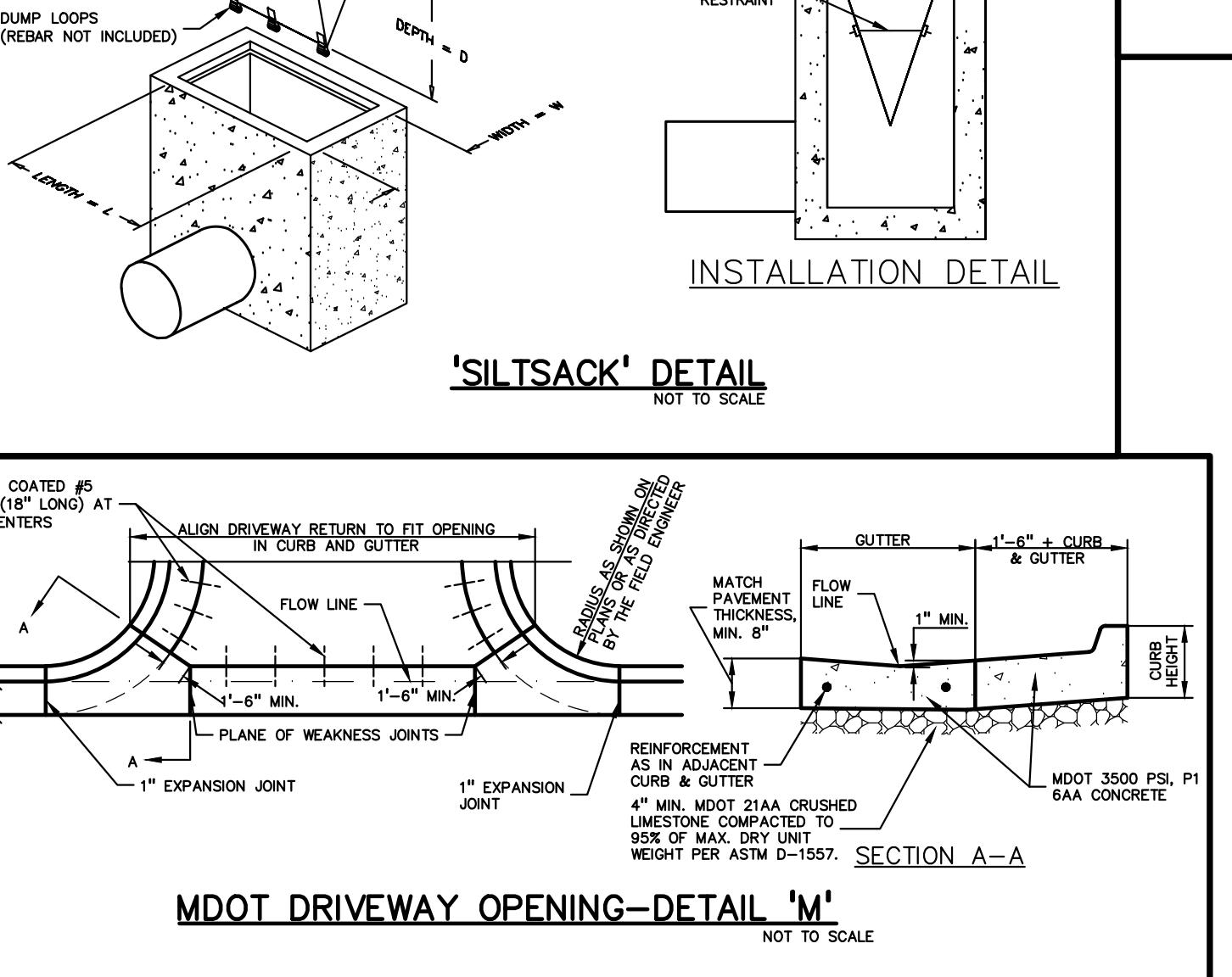
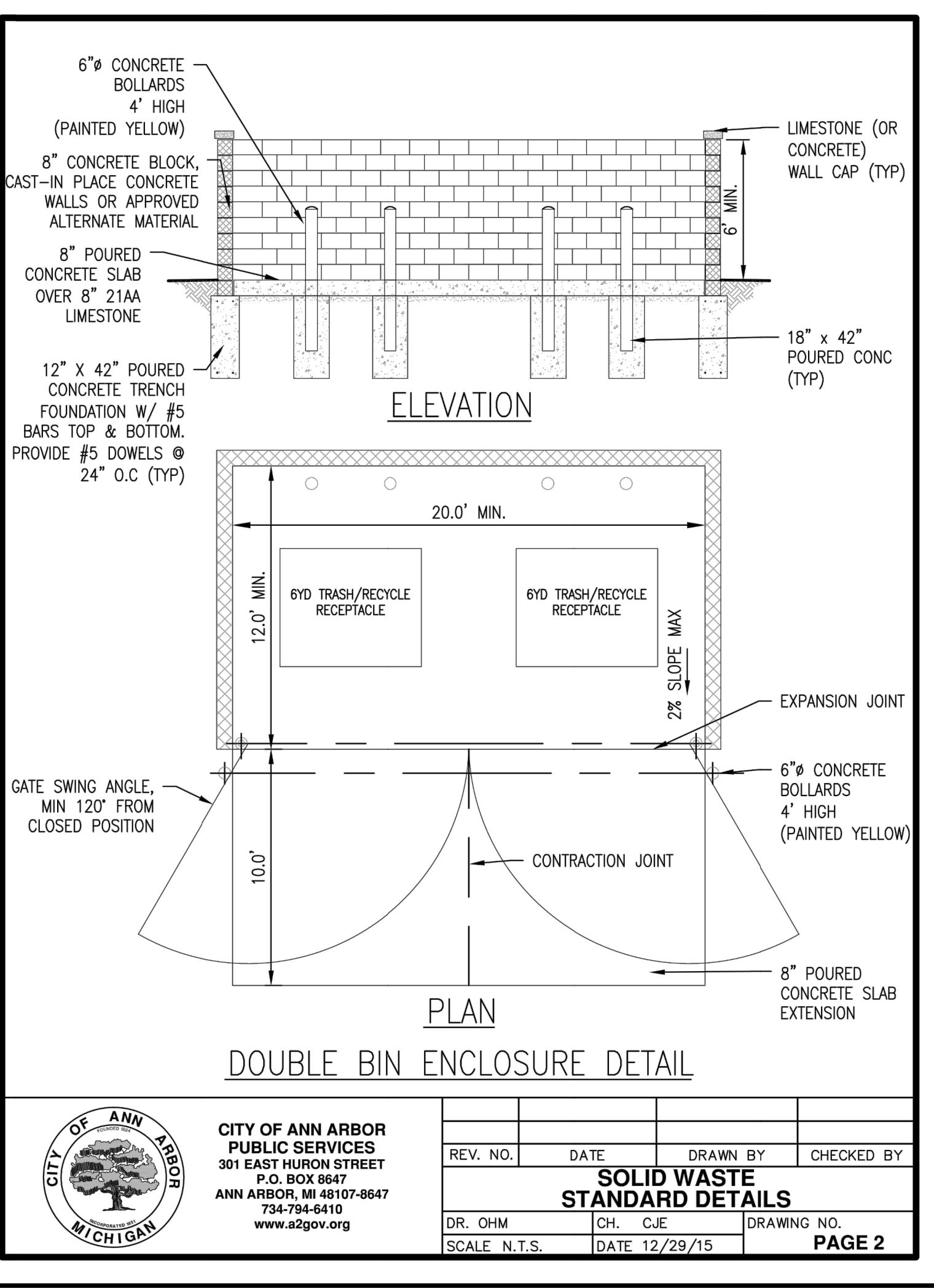
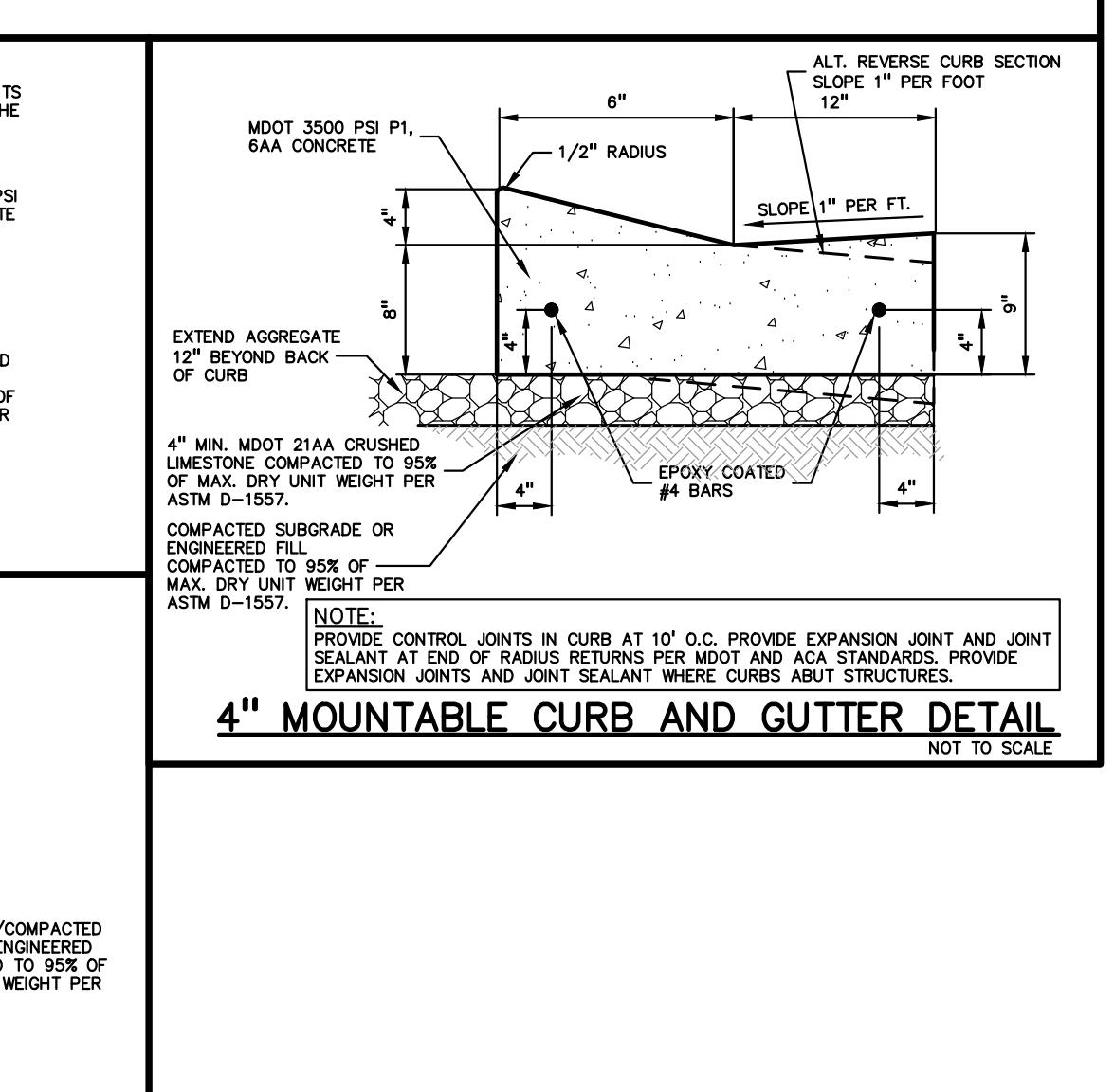
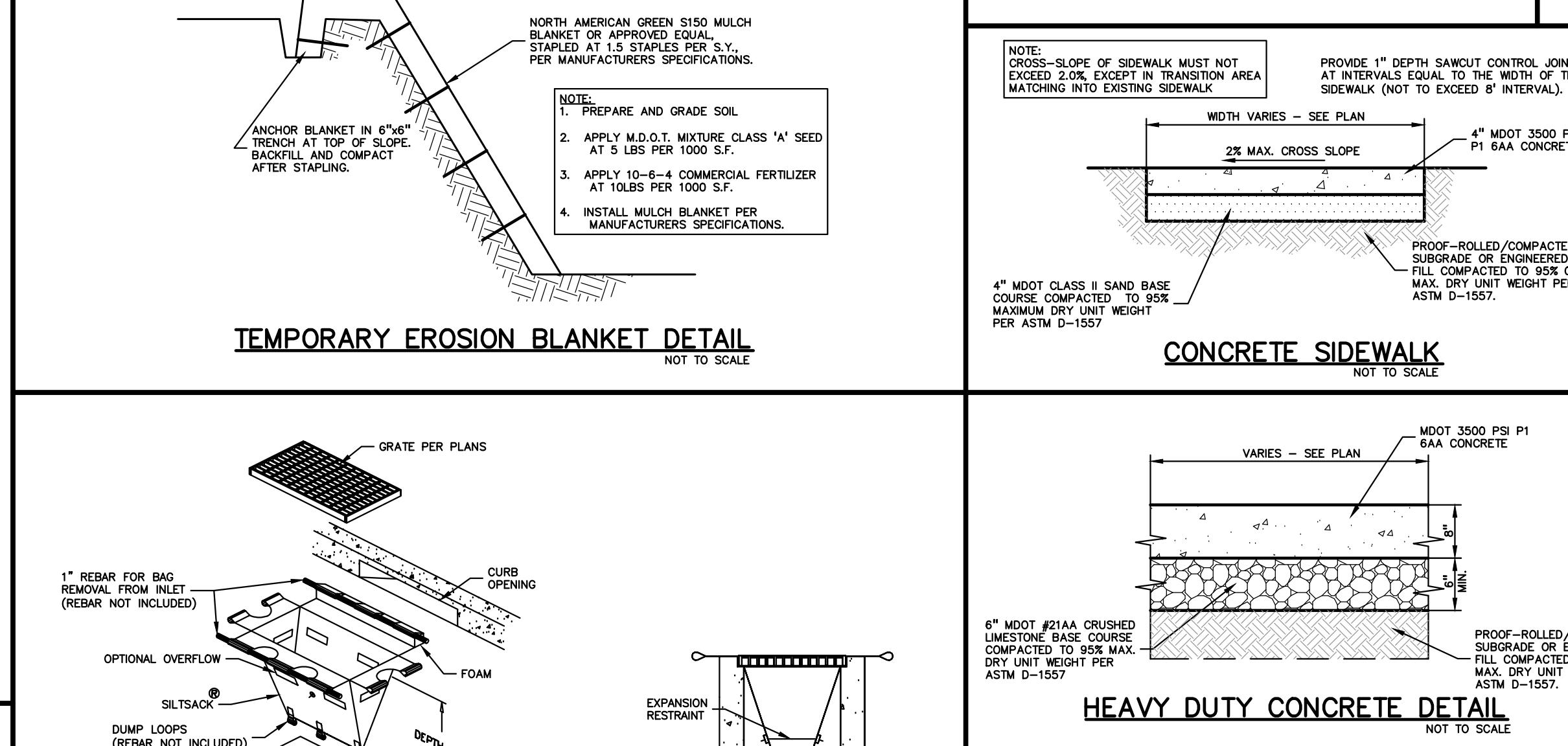
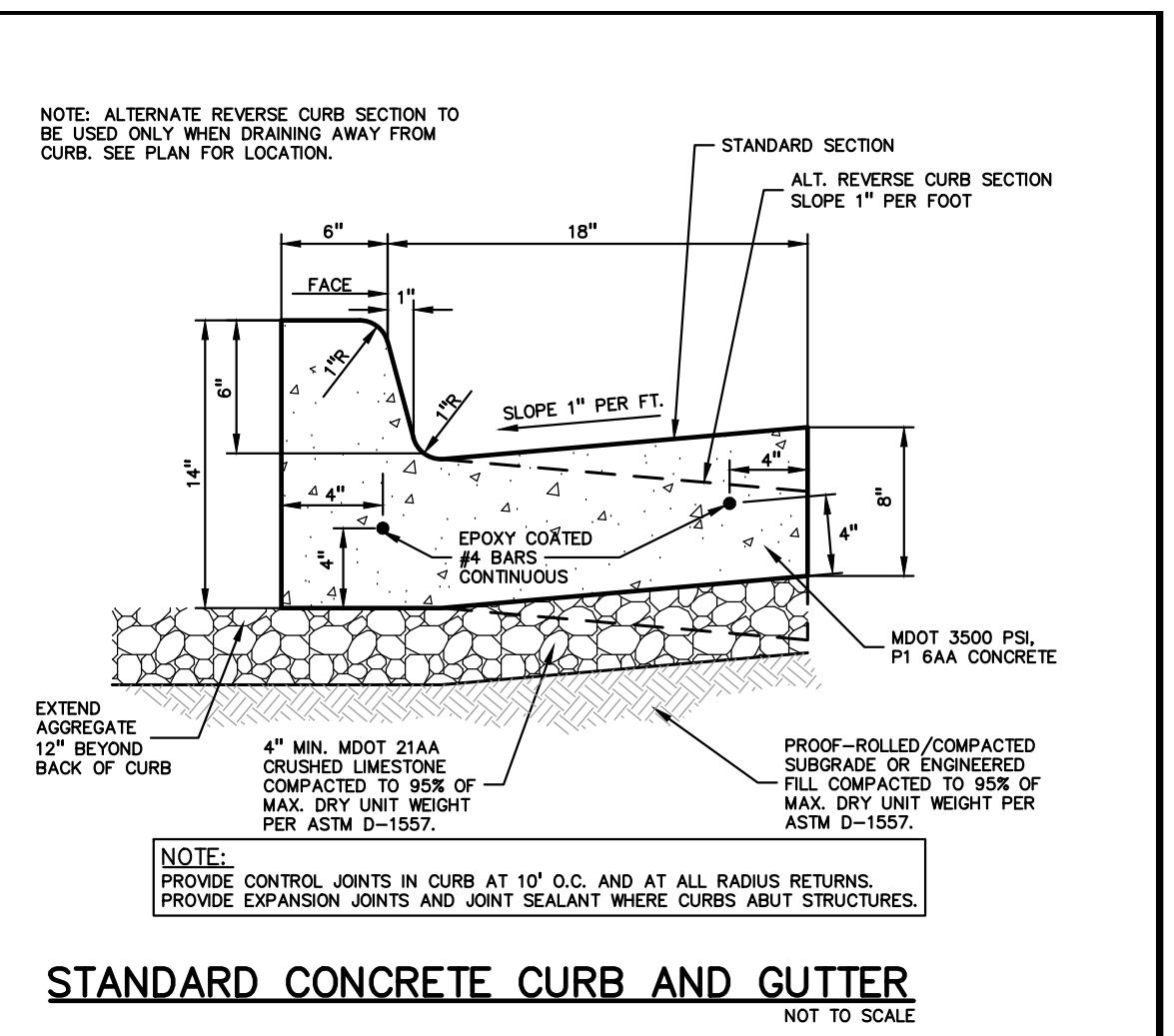
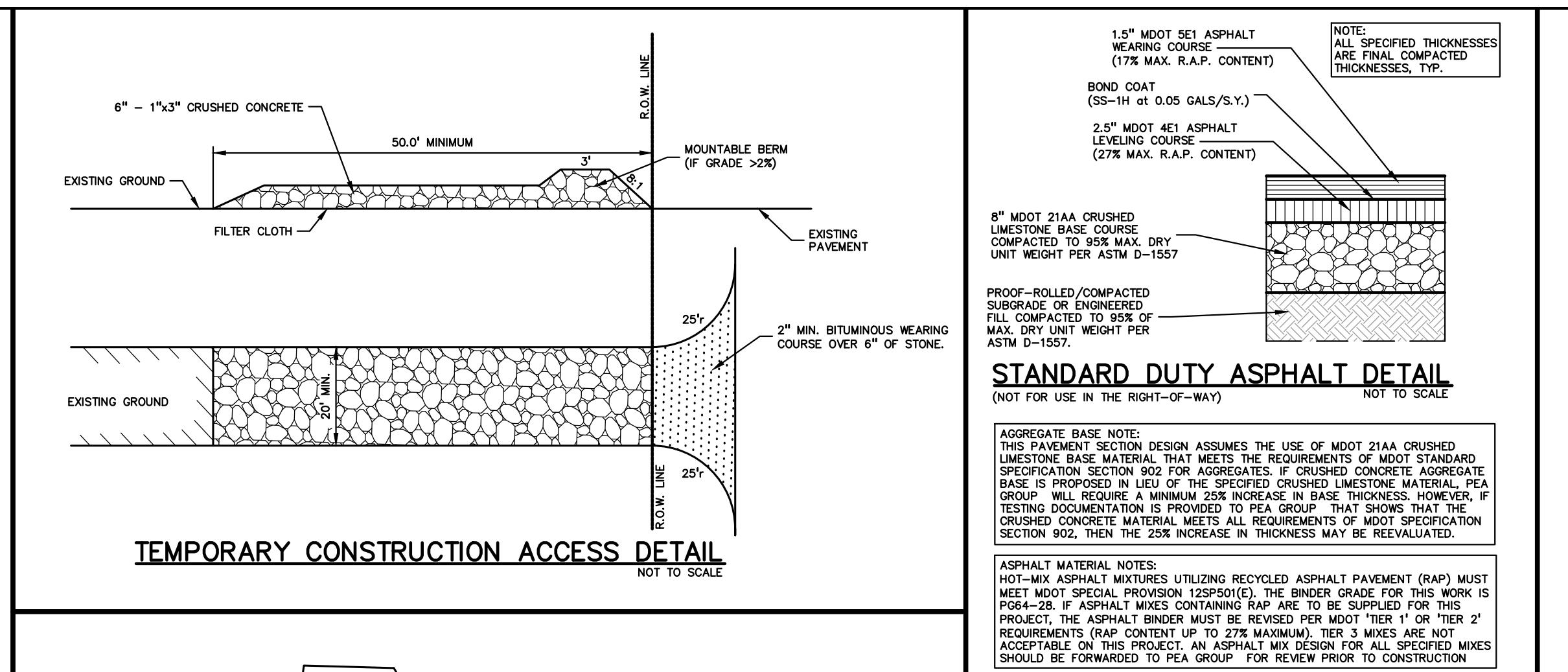
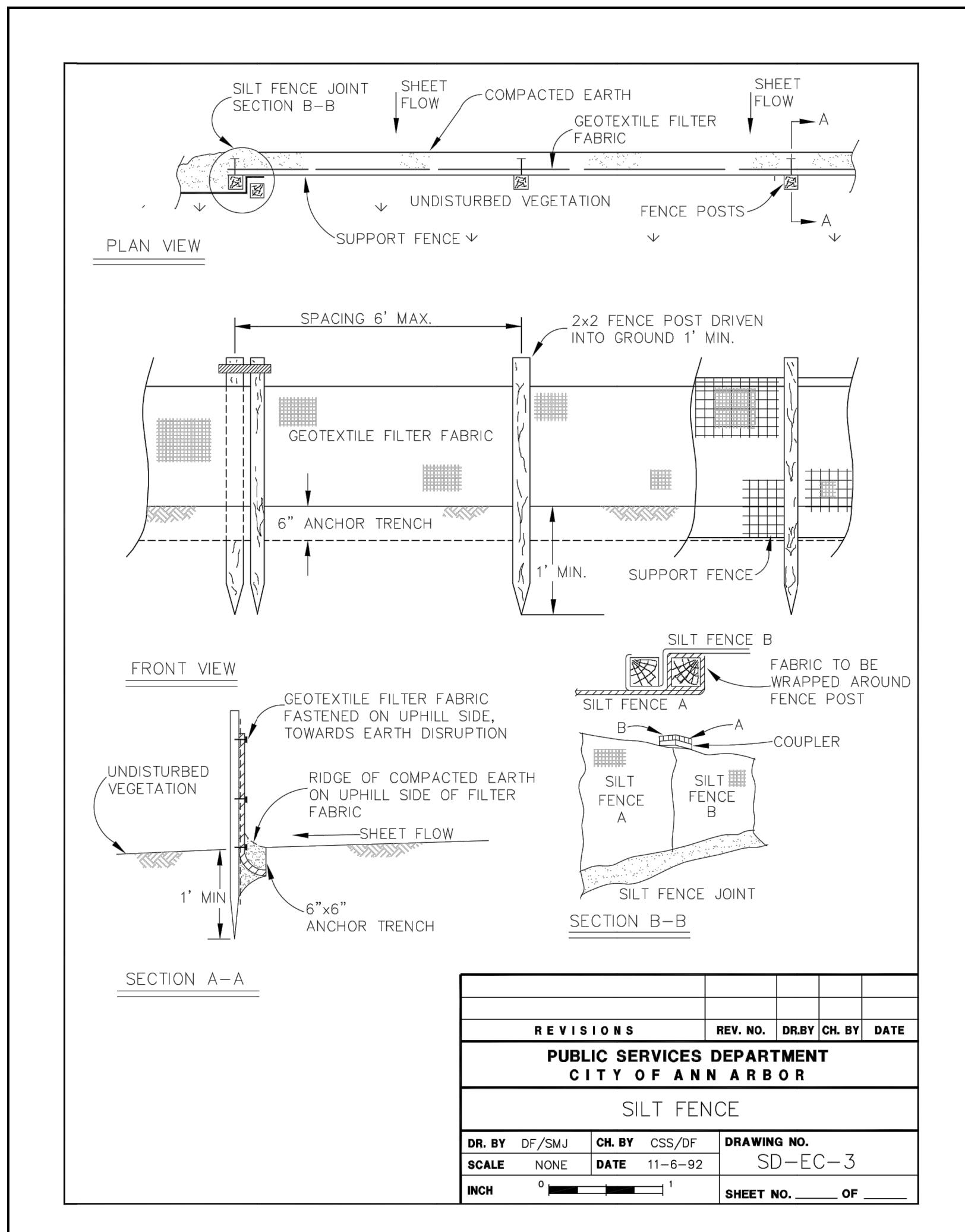
FINAL ISSUE DATE:
DECEMBER, 2020

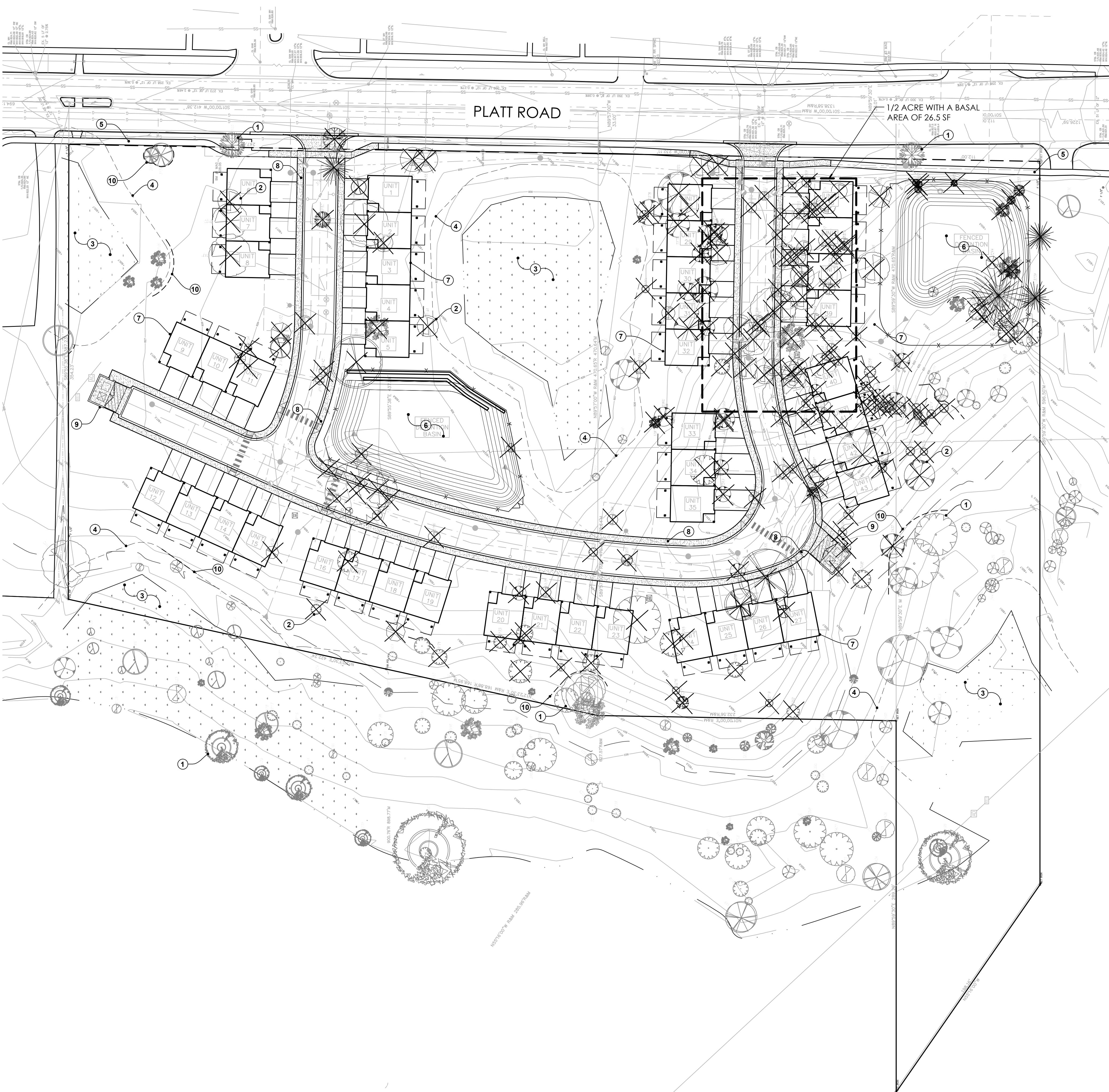
NG TITLE TES AND TAILS

OB NO. 2020-0151
JC
JW
JW

P-8 0

1.0





Site Landscape Calculations

LANDMARK TREE MITIGATION:
Landmark Trees Removed: 107"
Landmark Trees Preserved: 107"
*There are no regulated woodlands on-site, see basal area calculation this sheet

Mitigation Required: 53.5" (107" x 50%)
Mitigation Provided: 54" (27 - 2" cal. trees)
Note: See sheet L-3 for planting locations

SUMMARY TABLE:		NUMBER OF TREES	TOTAL DBH (inches)
Landmark Trees Removed	6	107"	
Landmark Trees Preserved	4**	107"	
Woodland Trees Removed	n/a	n/a	
Woodland Trees Preserved	n/a	n/a	
Total Number of Trees Removed	208*	1,591"	
Total Number of Trees Preserved	31**	360"	

*This number reflects only trees 8" dbh and greater

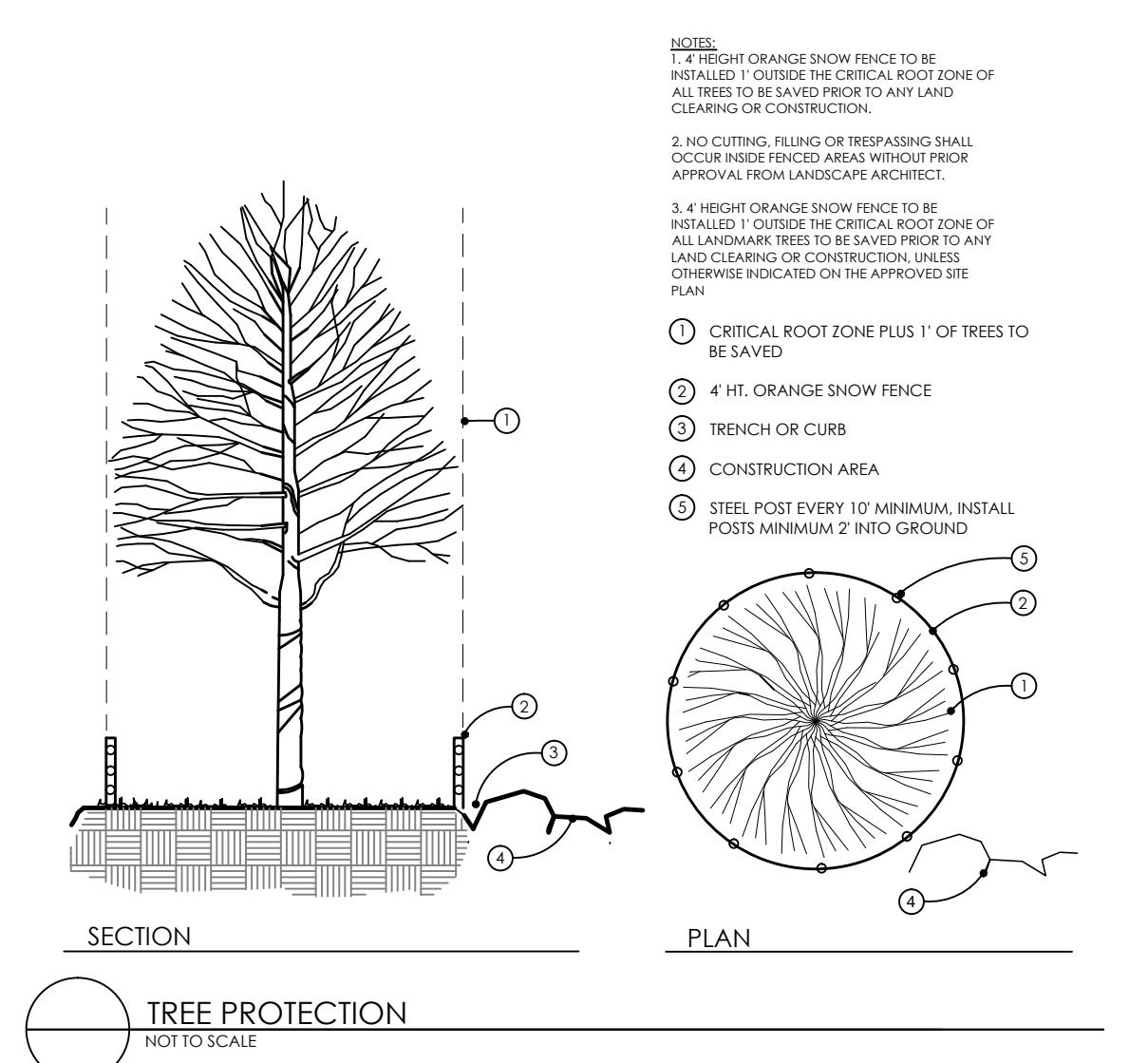
**This number reflects only trees preserved on-site

Basal Area Calculation:

To Get Basal area in square inches				
Tag No.	DBH	To Get Radius Divide by 2	Squared	Multiply by Pi
3323	12	6	36	113.04
3324	6	3	9	28.26
3325	6	3	9	28.26
3365	8	4	16	50.24
3366	6	3	9	28.26
3367	6	3	9	28.26
3368	7	3.5	12.25	38.465
3369	7	3.5	12.25	38.465
3370	6	3	9	28.26
		Sum	381.51	
		X 10	3815	
		/ 144	26.5	

Note Key:

- ① EXISTING TREE TO REMAIN, SEE TYPICAL TREE PROTECTION DETAIL THIS SHEET
- ② EXISTING TREE TO BE REMOVED, SEE SHEET L-2 FOR TREE INVENTORY LIST, SEE SITE LANDSCAPE CALCULATIONS THIS SHEET
- ③ EXISTING WETLAND
- ④ 25' NATURAL FEATURE SETBACK
- ⑤ EXISTING PUBLIC SIDEWALK
- ⑥ FENCED IN DETENTION BASIN, SEE SHEET L-2
- ⑦ PROPOSED TOWNHOUSE UNIT, SEE ARCHITECTURE AND SHEET L-3 FOR TYPICAL PLANTING PLAN
- ⑧ PROPOSED CONCRETE SIDEWALK
- ⑨ PROPOSED DUMPSTER AND ENCLOSURE, SEE CIVIL ENGINEERING DRAWINGS
- ⑩ TREE PROTECTION FENCING, SEE TYPICAL DETAIL THIS SHEET



Project:
Platt Road Townhomes
Ann Arbor, Michigan

Project Sponsor:
Trowbridge Homes
2617 Beacon Hill Drive
Auburn Hills, MI 48326

Sheet Name:

Tree Preservation
& Removal Plan

NOT FOR
CONSTRUCTION



Drawn: JG
Checked: JG
Date: 12.2020
Scale: 1" = 40'-0"

Project Number:

20.050

Sheet Number:

L-1

SURVEY PROVIDED BY:

REICHERT SURVEYING, INC.
140 Flumerfelt Lane
Rochester, MI 48306
248.651.0592

Job #: 19-178
Dated: 05.14.2020

0 20 40 80
SCALE: 1" = 40'-0"
NORTH

NOT FOR
CONSTRUCTION

TAG #	ELEV.	DESC.	COND.	REMOVE
3039	827.90	10" WALNUT	G	X
3101	826.73	24" MAPLE	G	
3102	824.14	14" 22" ELM	F	
3103	820.73	17" BOXELDER	F	
3104	819.66	16" WILLOW	P	
3105	819.19	7" ELM	G	
3106	820.77	7" 13" MAPLE	G	
3107	820.41	6" MAPLE	G	
3108	820.76	9" MAPLE	G	
3109	821.14	6" MAPLE	G	
3110	822.85	6" ELM	G	
3111	823.49	10" WALNUT	G	
3112	822.82	7" WALNUT	G	
3113	822.42	17" MAPLE	G	
3114	819.44	20" WILLOW	P	
3115	820.11	7" CHERRY	G	
3116	821.09	7" CHERRY	G	
3117	821.70	8" CHERRY	G	
3118	821.09	18" MAPLE	G	
3119	820.64	6" 9" APPLE	P	
3120	819.18	12" WILLOW	F	
3121	819.20	10" 16" WILLOW	F	
3122	821.05	6" APPLE	F	
3123	819.90	14" ELM	G	
3124	822.18	10" MAPLE	G	
3125	821.63	6" MAPLE	G	
3126	821.63	14" MAPLE	G	
3127	822.48	6" CHERRY	G	
3128	822.52	6" WALNUT	G	
3129	822.61	6" WALNUT	G	
3130	827.63	11" 16" ELM	G	X
3131	828.05	14" ELM	F	X
3132	827.12	18" ELM	G	X
3133	826.94	20" HICKORY	G	
3134	826.78	9" 10" POPLAR	G	
3135	826.78	12" POPLAR	G	
3136	826.75	10" APPLE	F	
3137	827.14	10" APPLE	F	
3138	826.91	6" 7" APPLE	G	
3140	828.57	6" 6" 7" 7" MAPLE	G	X
3141	829.02	7" WALNUT	G	X
3142	829.08	7" WALNUT	G	X
3143	828.30	10" 11" APPLE	F	X
3144	828.03	16" ELM	G	X
3145	829.26	6" 8" ELM	G	X
3146	829.03	18" 18" ELM	G	X
3147	829.48	12" MAPLE	G	X
3148	828.92	14" PINE	F	X
3149	827.56	18" OAK	G	X
3150	829.52	13" HICKORY	G	X
3151	829.52	11" ELM	G	X
3152	829.47	16" WALNUT	G	X
3153	829.30	16" MAPLE	G	X
3154	828.96	6" WALNUT	G	X
3155	828.72	9" WALNUT	G	X
3156	828.98	6" WALNUT	G	X
3157	829.34	10" WALNUT	G	X
3158	829.61	6" 6" 7" 10" ELM	F	X
3159	828.99	7" ELM	F	X
3160	828.81	13" ELM	G	X
3161	828.83	6" ELM	G	X
3162	829.11	9" 9" 10" 10" 11" CHERRY	F	X
3163	828.95	6" WALNUT	G	X
3164	829.96	8" WALNUT	G	X
3165	829.59	6" ELM	G	X

TAG #	ELEV.	DESC.	COND.	REMOVE
3166	829.80	9" ELM	G	X
3167	828.92	16" CHERRY	G	X
3168	824.38	8" CHERRY	G	X
3169	825.03	7" CHERRY	G	
3170	826.12	15" WALNUT	G	X
3171	825.83	6" 6" CHERRY	G	X
3172	826.49	6" 6" CHERRY	G	
3173	825.77	10" CHERRY	G	X
3174	827.06	6" 7" CHERRY	G	X
3175	826.65	6" CHERRY	G	X
3176	825.60	6" 12" CHERRY	G	X
3177	824.17	6" APPLE	G	
3178	828.98	8" ELM	G	X
3179	828.76	11" BOXELDER	F	X
3180	822.12	6" CHERRY	G	
3181	822.41	6" CHERRY	G	
3182	822.10	7" CHERRY	G	
3183	822.08	7" BOXELDER	G	
3184	821.99	7" CHERRY	G	
3185	822.84	8" CHERRY	G	
3186	822.91	8" CHERRY	G	
3187	824.47	6" 6" 7" CHERRY	G	
3188	826.02	6" ELM	G	X
3189	823.70	7" CHERRY	G	
3190	823.58	6" 7" CHERRY	G	
3191	822.91	9" 9" APPLE	G	
3192	823.57	6" 6" 7" CHERRY	G	
3193	823.63	7" BOXELDER	G	
3194	822.51	6" 6" CHERRY	G	
3195	822.28	9" CHERRY	G	
3196	821.85	11" 11" MAPLE	G	
3197	823.41	7" MULBERRY	G	
3198	822.50	9" 11" CHERRY	G	
3199	822.23	6" CHERRY	G	
3200	820.33	6" CHERRY	G	
3201	820.89	6" ELM	G	
3202	819.04	6" 7" WILLOW	G	
3203	819.82	10" 12" 16" 19" WILLOW	P	
3204	820.62	9" CHERRY	F	
3205	825.13	13" 13" APPLE	P	
3206	825.66	8" ELM	G	
3207	825.75	8" 14" ELM	F	
3208	825.86	9" 10" 12" ELM	F	
3209	826.39	11" 13" ELM	G	
3210	828.46	13" CHERRY	G	X
3211	831.85	9" POPLAR	G	X
3212	830.66	7" CHERRY	G	X
3213	831.37	6" 9" 11" 11" CHERRY	G	X
3214	831.21	6" 7" 7" CHERRY	G	X
3215	831.31	7" APPLE	G	X
3216	830.03	6" CHERRY	G	X
3217	829.49	10" HAWTHORNE	F	X
3218	831.31	6" 6" CHERRY	G	X
3219	829.04	6" MAPLE	G	X
3220	826.95	8" HAWTHORNE	G	
3221	826.05	15" HAWTHORNE	G	
3222	826.22	8" HAWTHORNE	G	
3223	825.99	7" APPLE	G	
3224	825.97	7" OAK	G	X
3225	824.51	6" 8" APPLE	F	
3226	826.20	8" ELM	G	
3227	820.87	7" CHERRY	G	
3228	821.05	7" CHERRY	G	
3229	821.20	6" CHERRY	G	
3230	821.83	9" CHERRY	F	X

TAG #	ELEV.	DESC.	COND.	REMOVE
3231	823.05	9" ELM	F	
3232	828.06	7" WALNUT	G	X
3233	823.16	13" BOXELDER	F	
3234	823.64	10" BOXELDER	F	
3235	823.89	6" MAPLE	G	
3236	831.90	18" MAPLE	G	
3237	823.19	9" HICKORY	G	X
3238	828.99	11" 1		

General Notes

- UTILITY BOXES WILL BE SCREENED ON 3 SIDES.
- ALL DUGGED AREAS TO BE SOD OR SEED.
- SOIL SHALL NOT BE STORED IN BUILDING ISLANDS AND ALONG STREETS. STORAGE SHALL NOT INCLUDE DETENTION AREAS OR LANDSCAPED AREAS.
- THE STREET TREE ESCROW MUST BE PAID PRIOR TO ISSUING BUILDING PERMITS. CHECKS ARE TO MADE PAYABLE TO: CITY OF ANN ARBOR AND MAILED TO SYSTEMS PLANNING UNIT, 301 E. HURON ST., PO BOX 8647, ANN ARBOR, MI 48107-8647 -- ATTN: TIFFANY GIACOBAZZI. PLEASE INCLUDE THE PROJECT NAME AND PROJECT NUMBER ON THE CHECK.
- TREES SHALL BE PLANTED A MINIMUM OF 5'-8' FROM ALL UTILITY LEADS.

Additional Notes

Continuing Care
Landscaping shall be kept in a neat, orderly and healthy growing condition, free from debris and refuse. All landscape materials shall be maintained by a regular program of mowing, watering, weeding, feeding and pruning. Pruning shall be minimal at the time of installation, only to remove dead or diseased branches. Subsequent pruning shall assure proper maturation of plants to achieve their approved purpose.

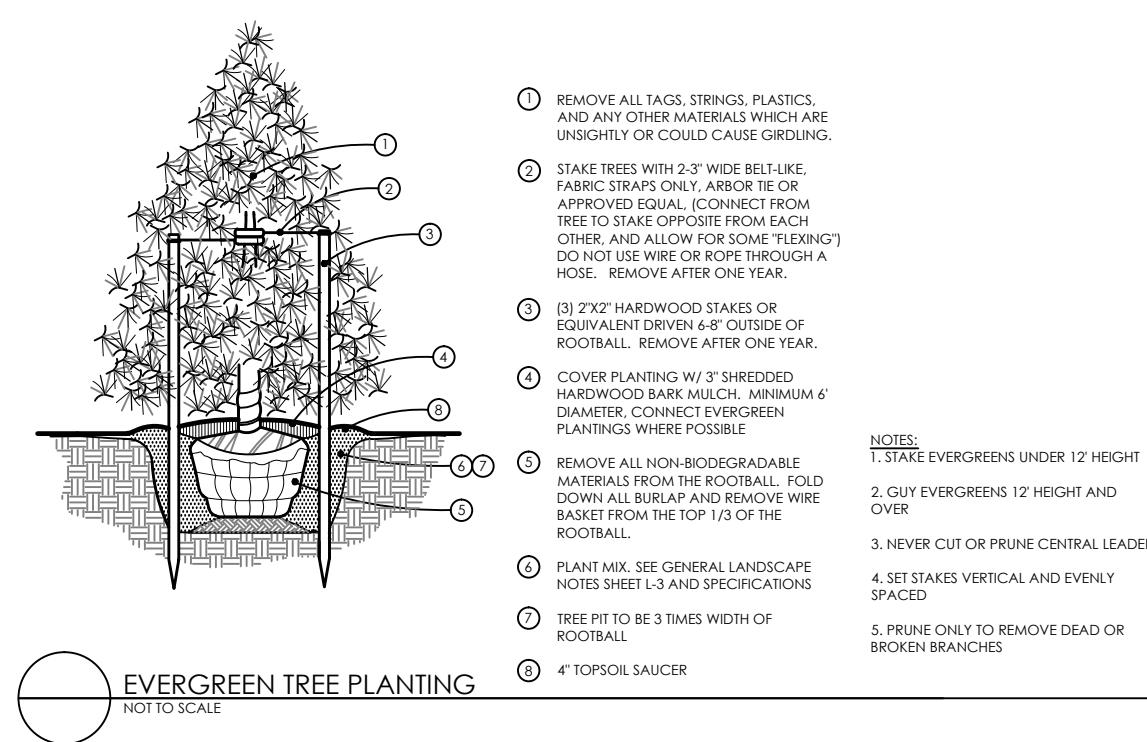
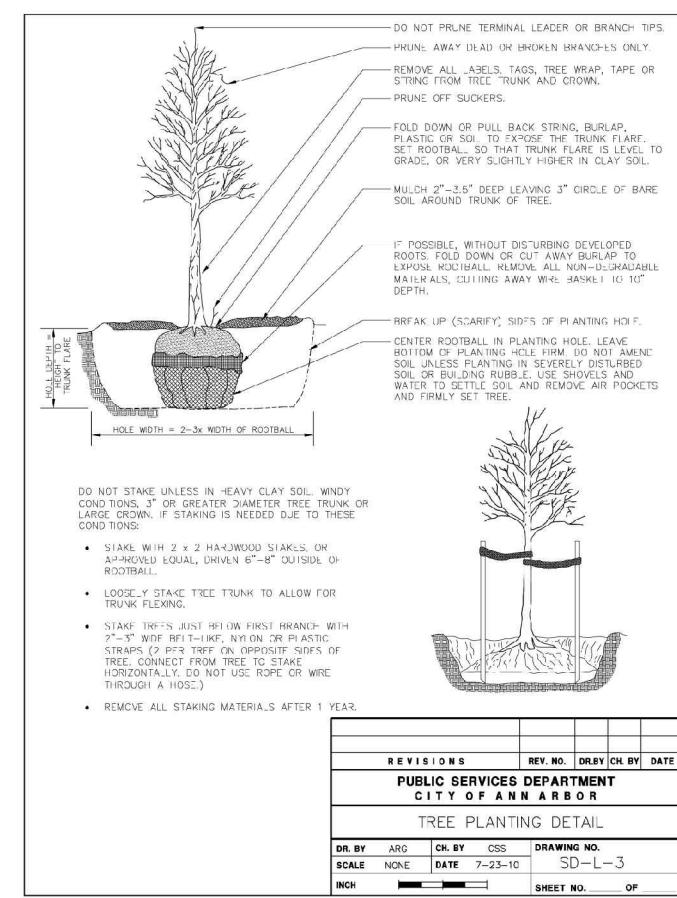
Replenishment
All dead or diseased plant material shall be removed and replaced within six (6) months after it dies or in the next planting season, whichever occurs first.

Watering
This shall be accomplished by installation of hose bibs on each building. Hose bibs shall be located a minimum of 150' from any landscaped area.

Clay Soils
Construct Earth Bed to Required Grade and Trim. Prior to Placement of Topsoil or Compost, Harrow all Earth Beds to a Minimum of 12" Depth.

Fertilizer
Beyond initial fertilization, all future fertilizer applications shall not contain phosphorus. No chemicals are allowed in stormwater features or buffer zones with the following exception: invasive species may be treated with chemicals by a certified applicator.

Substitutions
All vegetation species deviations or substitutions must be approved in writing by the City of Ann Arbor prior to planting.



Detention Basin Seed Mixes:

Permanent Wetland Seed Mix	Common Name	PLS	Ounces/Acre
Permanent Grasses/Sedges/Rushes:			
Carex sylvatica	Bracted Sedge	2.50	10.00
Carex sylvatica	Common Lake Sedge	0.25	1.00
Carex sylvatica	Common Sedge	0.40	1.50
Carex sylvatica	Common Sedge	0.50	1.80
Eleocharis acicularis	Blunt Spike Rush	1.00	3.60
Zizaniopsis miliacea	Common Millet	1.00	3.60
Lemna trisulca	Rock Cut Grass	3.00	10.80
Spiraea alpina	Hard Stemmed Bulrush	2.50	9.00
Spiraea alpina	Common Bulrush	2.50	9.00
Spiraea alpina	Great Bulrush	6.00	21.60
Total			
Temporary Cover:			39.25
Arena sativa	Common Oat	1.50	5.40
Lolium multiflorum	Annual Rye	104.00	374.40
Total			
Perches:			444.40
Asterias incana	Goatsbeard	1.50	5.40
Wet Potom		1.00	3.60
Cephalaria cordata	Button Bush	1.00	3.60
Baccharis halimifolia	Swamp Losenherb	1.50	5.40
Baccharis halimifolia	Swamp Sweet Willow	0.50	1.80
Leiophyllum buxifolium	Blue Flag Iris	6.00	21.60
Lobelia spicata	Great Blue Lobelia	1.50	5.40
Ludwigia alternifolia	Great Blue Lobelia	1.50	5.40
Myrsinaceae	Myrsinaceae	1.00	3.60
Polygonia virginica	Arrow Acony	18.00	64.80
Potentilla cordata	Potentilla cordata	1.00	3.60
Daphne cneorum	Blush Sweetbush	1.00	3.60
Spiraea amurensis	Amurian Bar Reed	2.00	7.20
Veronica americana	Common Bar Reed	1.00	3.60
Veronica americana	Bar Reed	1.00	3.60
Zizaniopsis miliacea	Wild Rice	8.00	28.80
Total			
Stormwater Seed Mix		PLS	ounces/ft ²
Permanent Grasses/Sedges/Rushes:			
Carex sylvatica	Bracted Sedge	2.50	10.00
Carex sylvatica	Common Lake Sedge	0.25	1.00
Carex sylvatica	Common Sedge	0.40	1.50
Carex sylvatica	Common Sedge	0.50	1.80
Eleocharis acicularis	Blunt Spike Rush	1.00	3.60
Zizaniopsis miliacea	Common Millet	1.00	3.60
Lemna trisulca	Rock Cut Grass	3.00	10.80
Spiraea alpina	Hard Stemmed Bulrush	2.50	9.00
Spiraea alpina	Common Bulrush	2.50	9.00
Spiraea alpina	Great Bulrush	6.00	21.60
Total			
Temporary Cover:			58.25
Arena sativa	Common Oat	30.00	108.00
Lolium multiflorum	Annual Rye	104.00	374.40
Total			

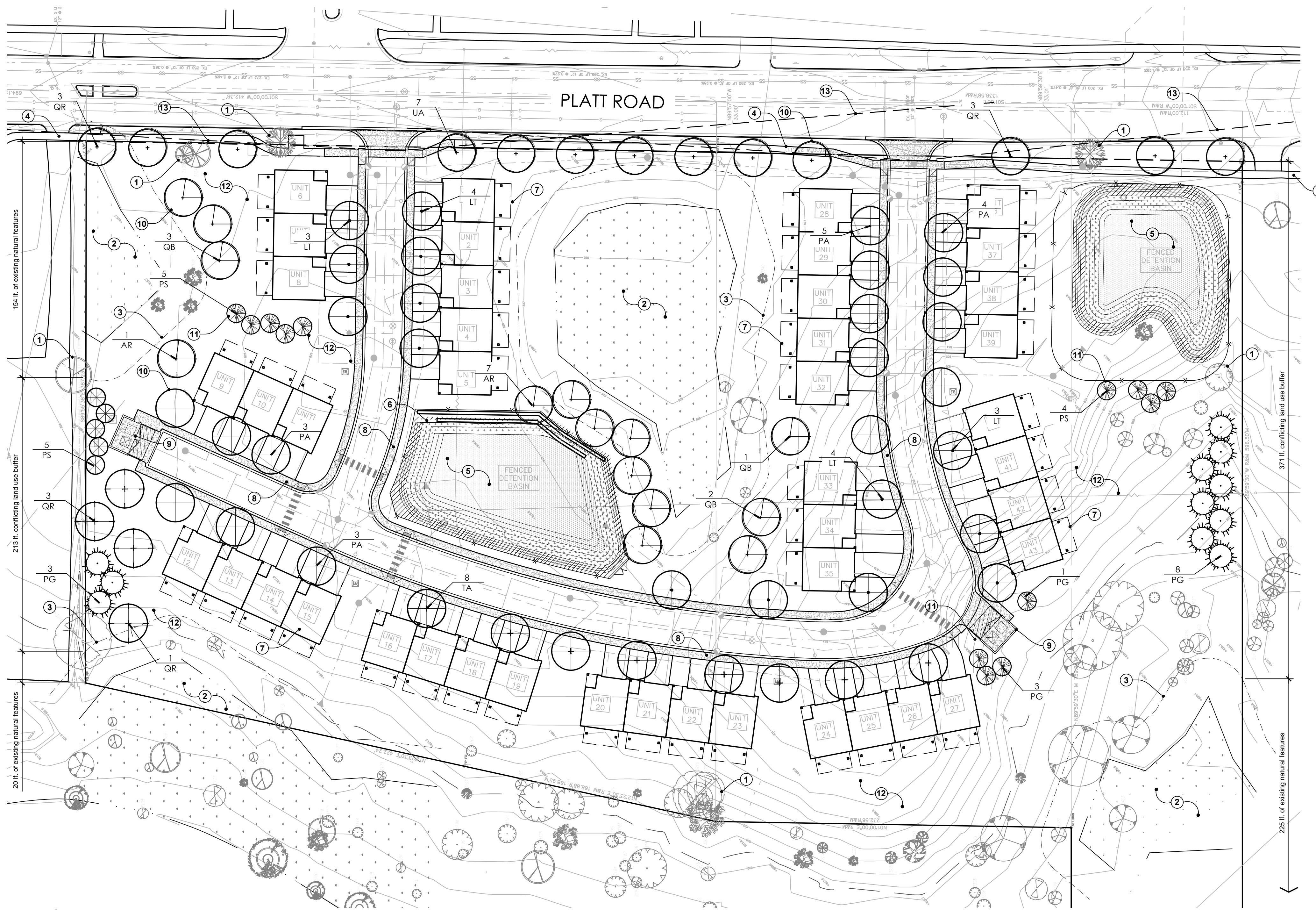
Notify Seed Supplier That This Seed Mix Shall NOT Contain Rudbeckia submontana.

SEED MIX NOTES

- These mixes should be applied at the specified rate for each mix.
- Must be installed to specification, including timing and requirements.
- Seed to be covered with North American Green S150 or equivalent erosion control blanket installed to manufacturers specifications.

Seed Mix Available From: Cardno JFNew, Inc.
128 Sunset Drive
Walkerton, IN 46574
574-555-2412

Notify Seed Supplier That This Seed Mix Shall NOT Contain Rudbeckia submontana. Sagittaria latifolia Quantity has been Increased.



Plan View

SCALE: 1" = 40'-0"

NATIVE SEEDING MAINTENANCE

During the first growing season, native areas should be mowed a minimum of four times to height of about 8" when the growth reaches 10'-12". Selective herbicide applications or hand pulling may be needed to control unwanted weed populations. If a mower cannot be set high enough, a string trimmer may be used.

During the second growing season, native areas should be mowed a minimum of two times to height of about 8" when the growth reaches 10'-12". Selective herbicide applications or hand pulling may be needed to control unwanted weed populations.

By the second growing season it should be apparent if some areas need reseeding. Reseed or overseeded as needed to provide for full coverage.

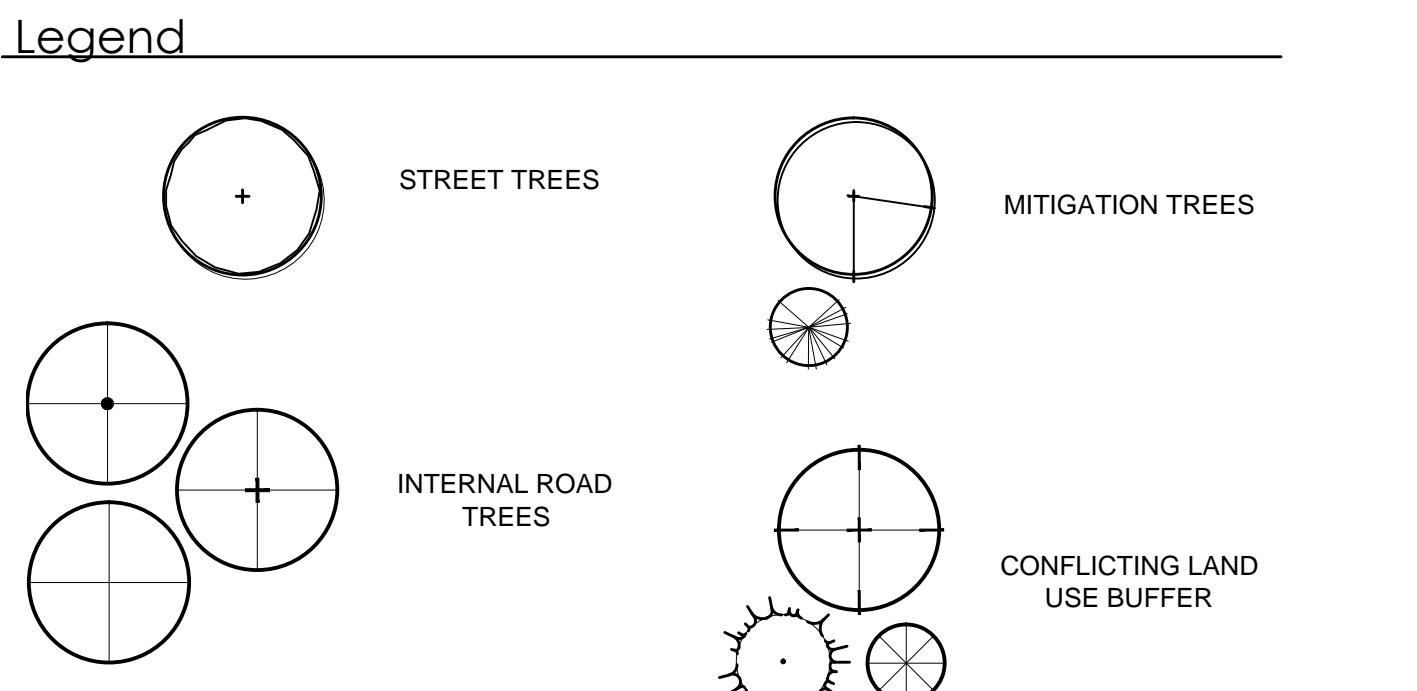
Long term management may include prescribed burning, mowing, hand pulling, and selective herbicide applications. If burning is not allowed or feasible, the planting may be mowed to a short height and the clippings removed in the early spring before ground nesting birds begin nesting.

Plant Schedule

TREES

QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	ROOT	COMMENTS
8	AR	<i>Acer rubrum 'October Glory'</i>	October Glory Red Maple	2.0" cal.	as shown	B&B	Single straight trunk
14	LT	<i>Liriodendron tulipifera</i>	Tulip Tree	2.5" cal.	as shown	B&B	Single straight trunk
15	PA	<i>Platanus x acerifolia 'Bloodgood'</i>	Bloodgood London Plane Tree	2.5" cal.	as shown	B&B	Single straight trunk
15	PG	<i>Picea glauca</i>	White Spruce	7'-8' ht.	as shown	B&B	Unsheared, branched to ground
14	PS	<i>Pinus strobus</i>	Eastern White Pine	7'-8' ht.	as shown	B&B	Unsheared, branched to ground
6	QB	<i>Quercus bicolor</i>	Swamp White Oak	2.0" cal.	as shown	B&B	Single straight trunk
10	QR	<i>Quercus rubra</i>	Red Oak	2.5" cal.	as shown	B&B	Single straight trunk
8	TA	<i>Tilia americana 'Redmond'</i>	Redmond American Basswood	2.5" cal.	as shown	B&B	Single straight trunk
7	UA	<i>Ulmus americana 'Valley Forge'</i>	American Elm Valley Forge	2.5" cal.	as shown	B&B	Single straight trunk

Legend



Note Key:

- EXISTING TREE TO REMAIN, SEE TYPICAL TREE PROTECTION DETAIL SHEET L-1
- EXISTING WETLAND TO REMAIN
- 25' NATURAL FEATURE SETBACK
- EXISTING PUBLIC SIDEWALK
- FENCED IN DETENTION BASIN, SEE SEED MIX THIS SHEET
- PROPOSED RETAINING WALL, SEE CIVIL ENGINEERING DRAWINGS
- PROPOSED TOWNHOUSE UNIT, SEE ARCHITECTURE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED DUMPTER AND ENCLOSURE, SEE CIVIL ENGINEERING DRAWINGS
- DECIDUOUS CANOPY TREE, SEE TYPICAL DETAIL
- EVERGREEN TREE PLANTING, SEE TYPICAL DETAIL
- SEEDED LAWN OVER MINIMUM 3" DEPTH TOPSOIL, ALL DISTURBED AREAS
- CLEAR VISION SITE LINES, SEE SHEET P-3.2

Site Landscape Calculations

STREET TREE REQUIREMENT:
1 Deciduous shade tree / 5 lf of R.O.W length is required
Row of Way Length: 756 lf

Street Trees Required: 17 (756 lf / 45)
Street Trees Provided: 17 (4 are existing to remain)

Street Tree Escrow Required: \$982.80 (756 x \$1.30)

PRIVATE STREETS (internal roads):
1 Deciduous shade tree / 30 lf of road length planted on both sides
Internal Road Length: 1,105 lf

Street Trees Required: 37 (1,105 lf / 30)
Street Trees Provided: 37

CONFLICTING LAND USE BUFFER:
Minimum of 1 deciduous or evergreen tree / 15 lf. of buffer
Conflicting Land Use Buffer North Property Line: 213 lf. (387' 174'**)
Conflicting Land Use Buffer South Property Line: 371 lf. (596-223'**)

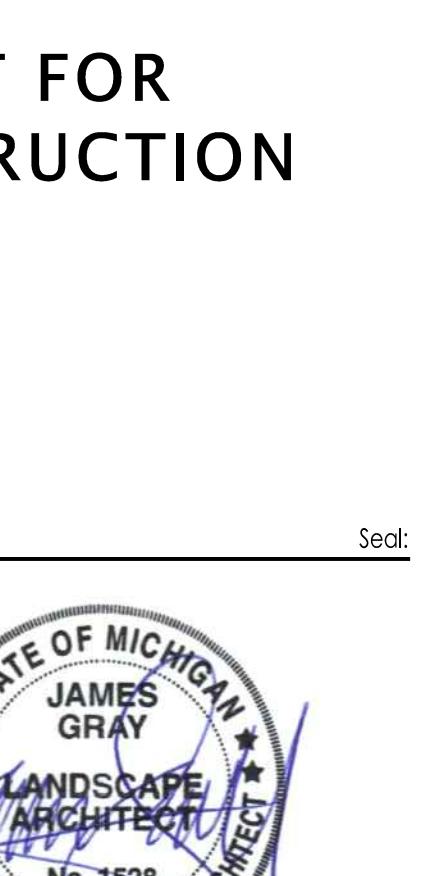
North Property Line
Total Trees Required: 15 = (213 / 15)
Total Trees Provided: 15 (12 New trees and 3 Existing trees)

South Property Line
Total Trees Required: 25 = (371 / 15)
Total Trees Provided: 25 (8 New trees and 17 Existing trees)

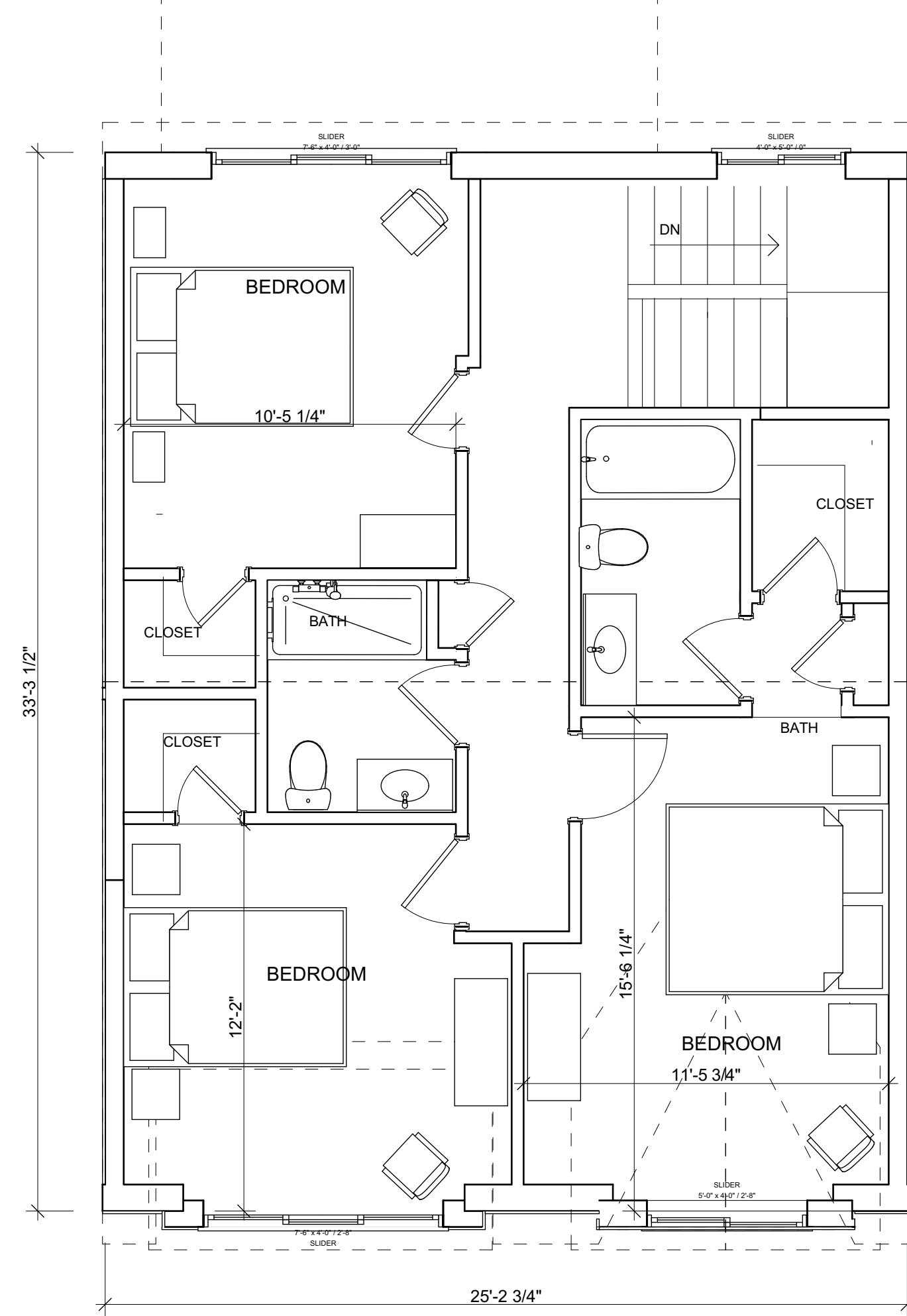
** Applicant requests a deviation to omit 174 lf. on the north property line and 225 lf. on the south property line of the conflicting land use buffer due to existing wetlands and vegetation that will not be disturbed.

Drawn: JG
Checked: JG
Date: 12.20.2020
Scale: 1" = 40'-0"
Project Number: 20.050
Sheet Number: L-3
NORTH
SCALE: 1" = 40'-0"

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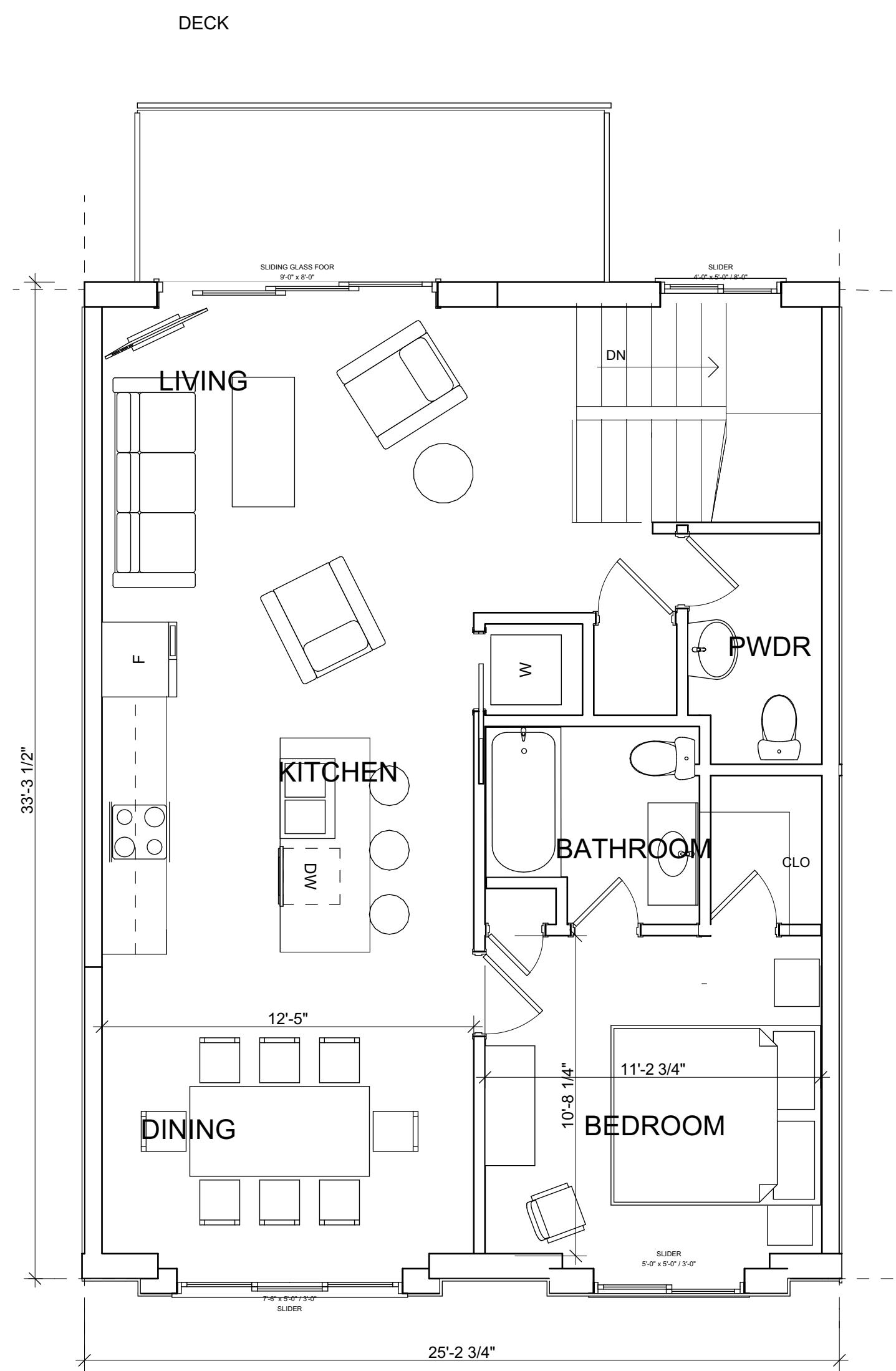


Preminence Place
Townhomes on Platt Rd.
Ann Arbor, MI



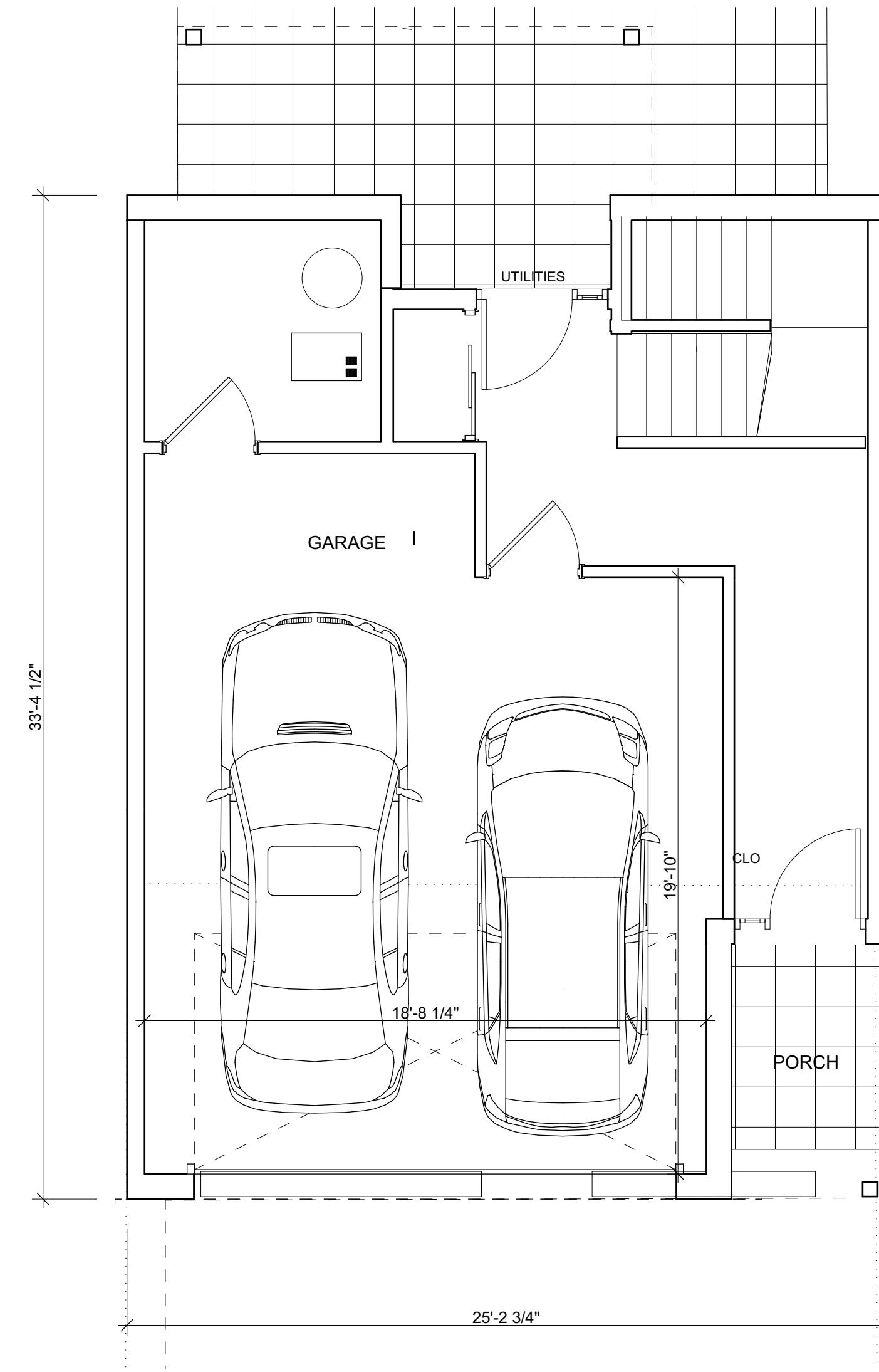
Second Floor

SCALE: 1/4" = 1'-0"



Main Floor

SCALE: 1/4" = 1'-0"

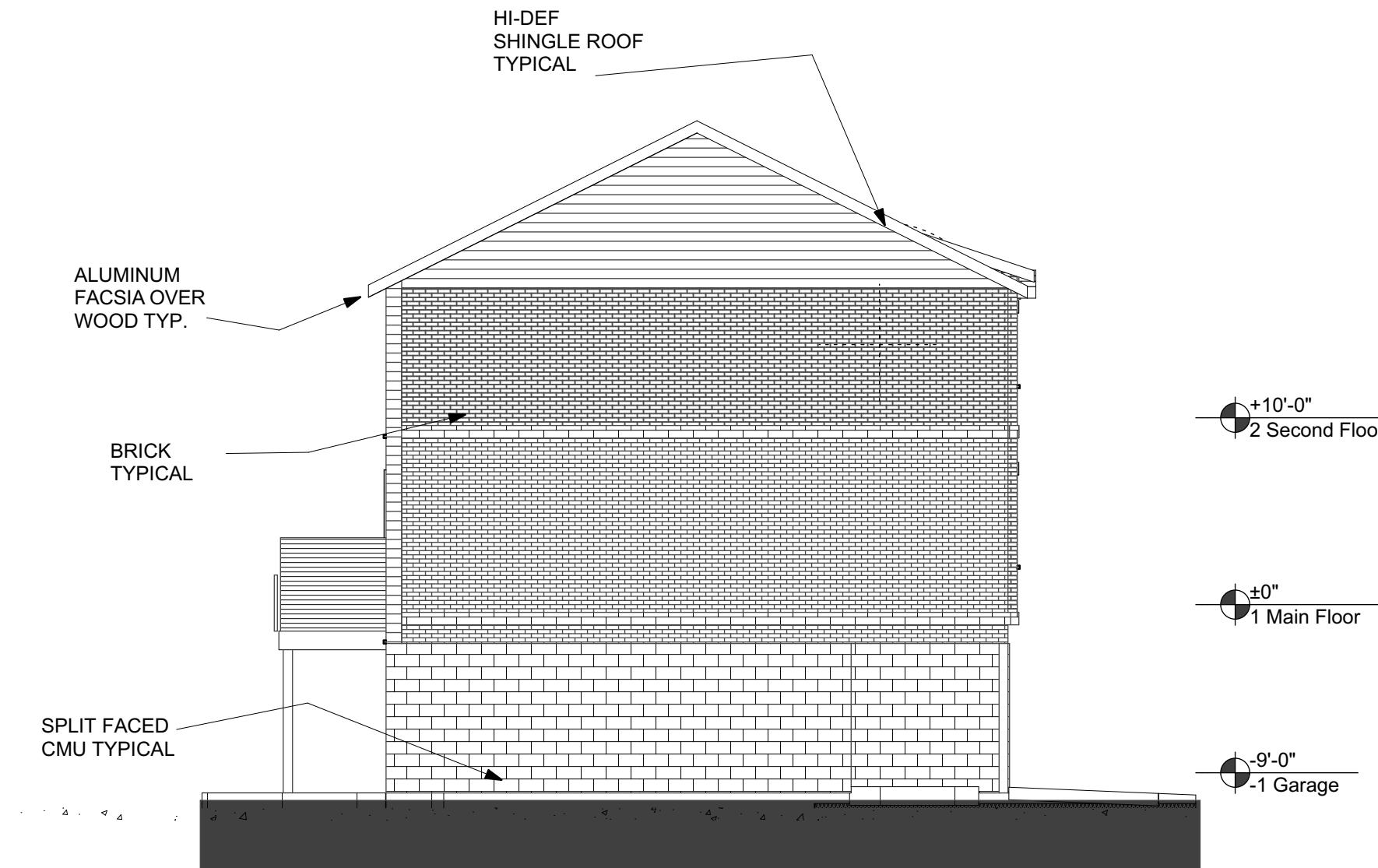


Garage

SCALE: 1/4" = 1'-0"

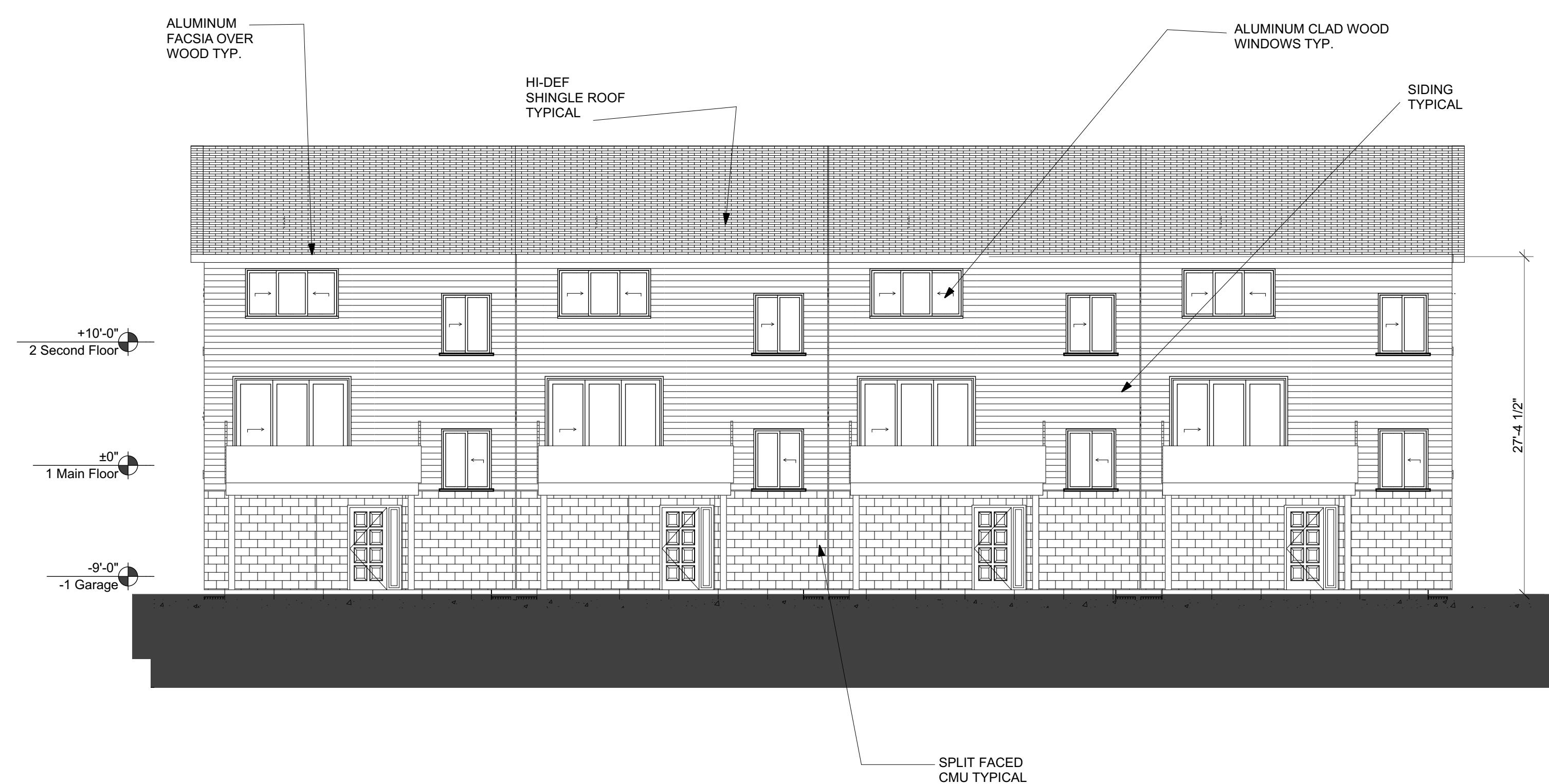
1500 SF townhomes
4 Bedroom 3 1/2 bath

3-23-22
SHEET TITLE
Typical Unit A Plans



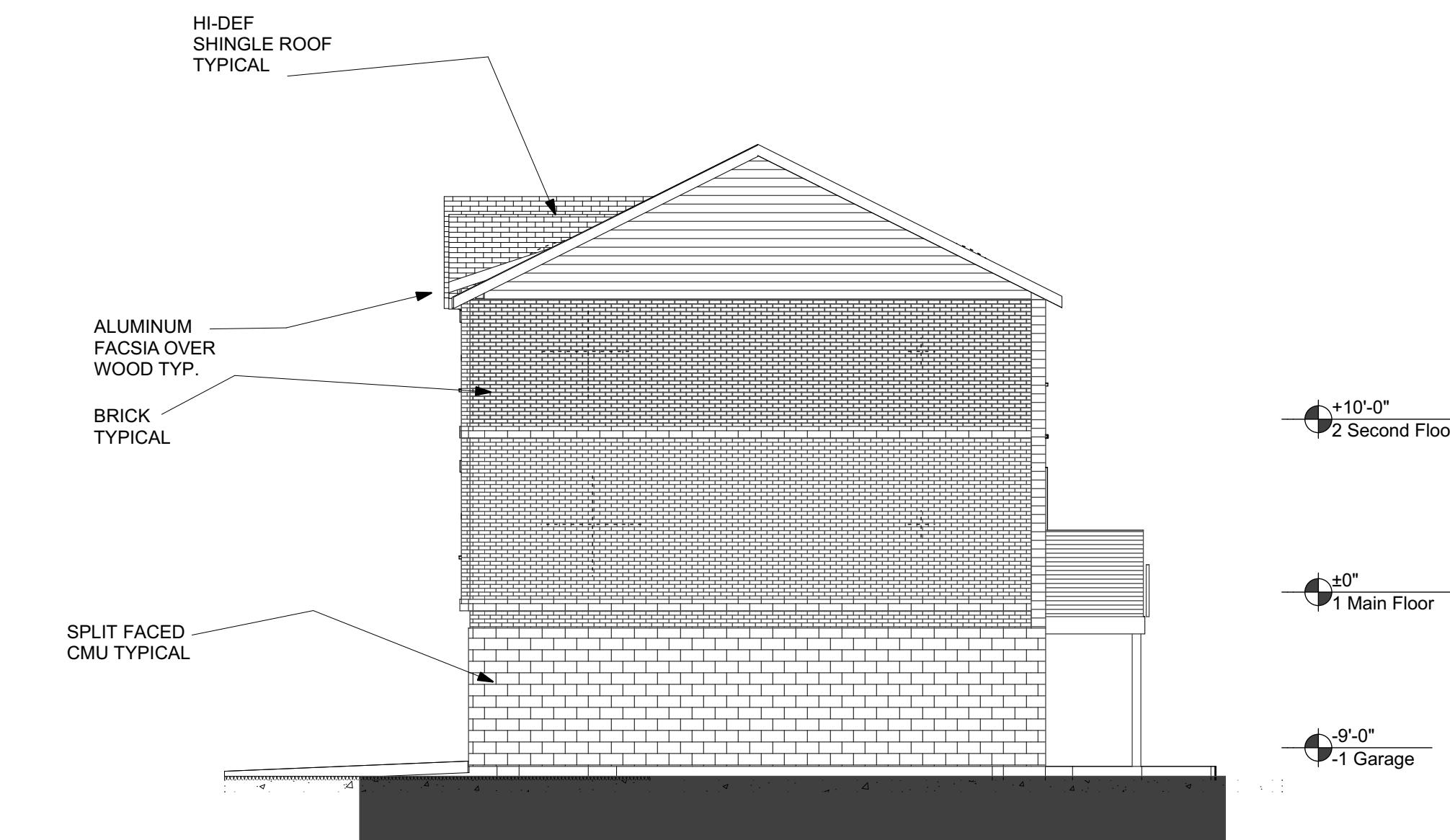
Left Side Elevation

SCALE: 1/8" = 1'-0"



Rear Elevation

SCALE: 1/8" = 1'-0"



Right Side Elevation

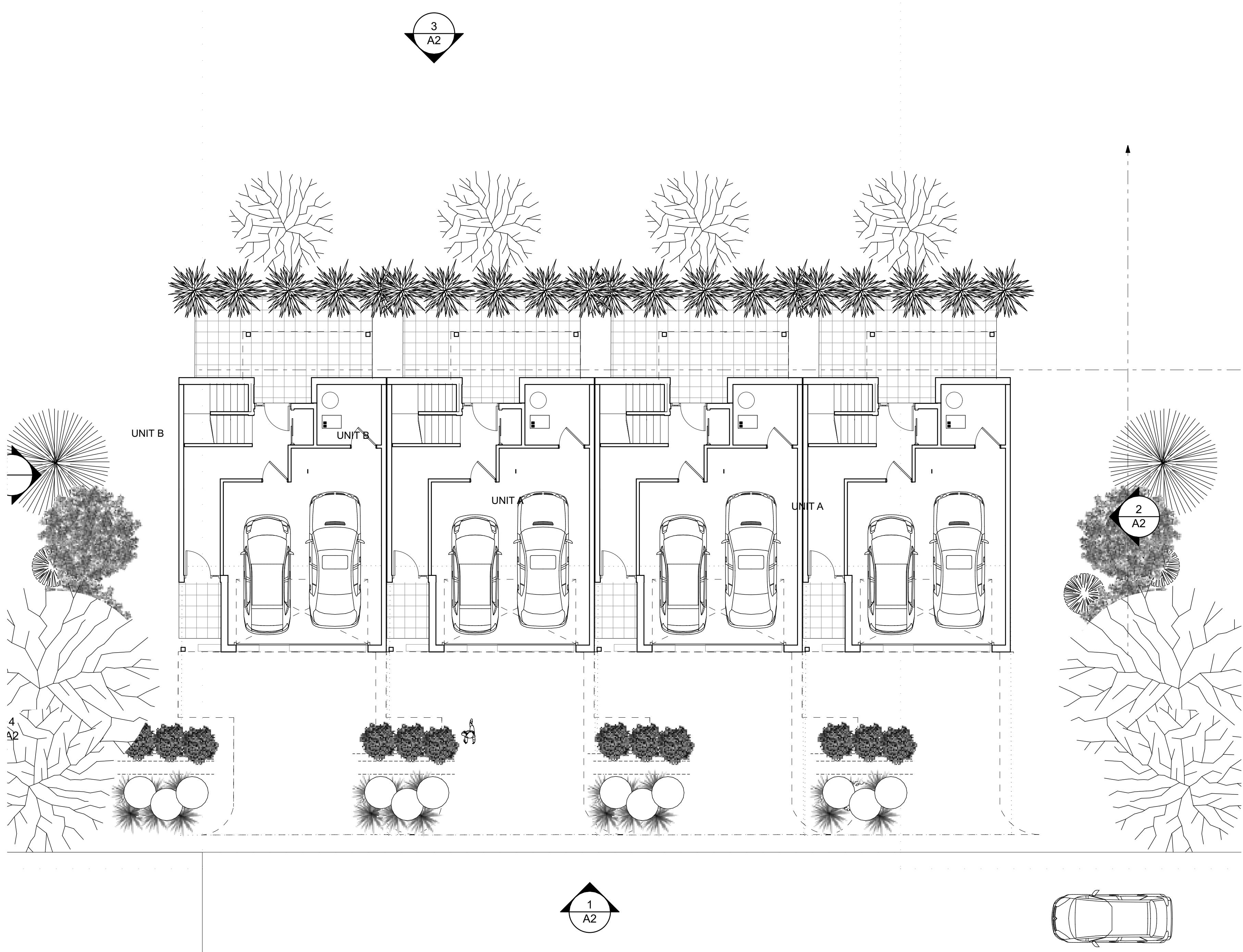
SCALE: 1/8" = 1'-0"



Front Elevation

SCALE: 1/8" = 1'-0"

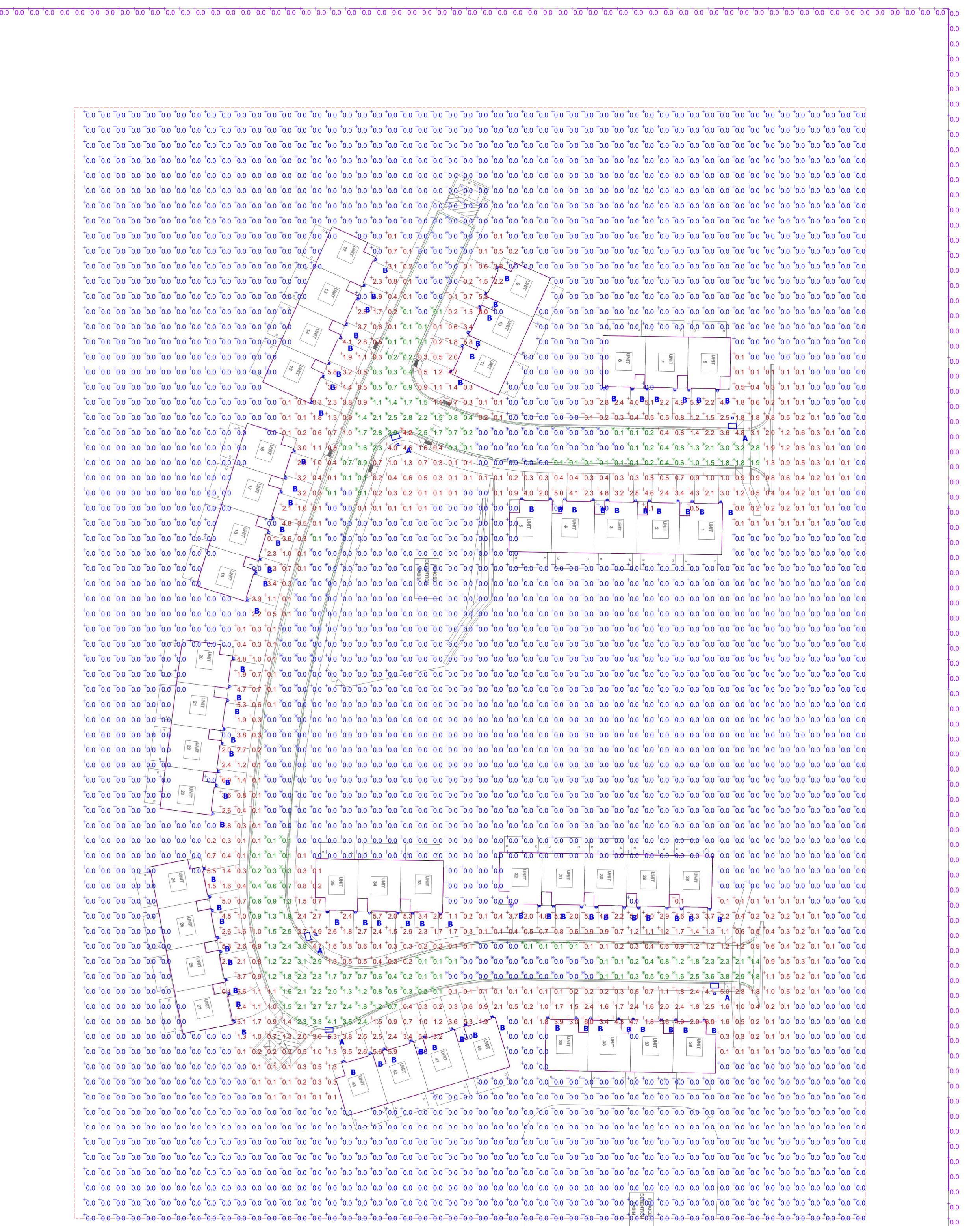
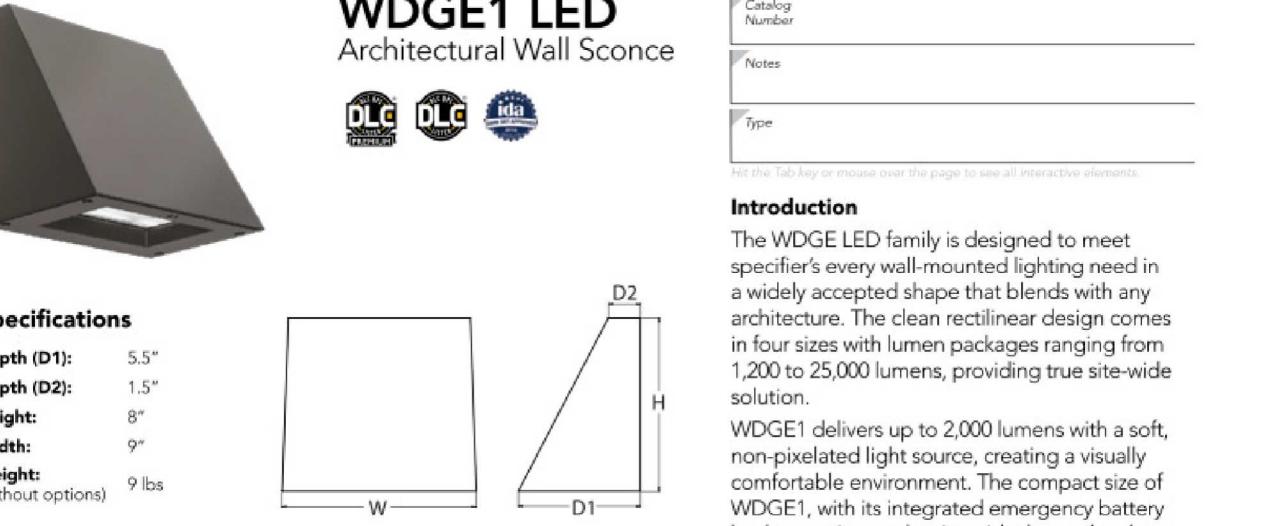
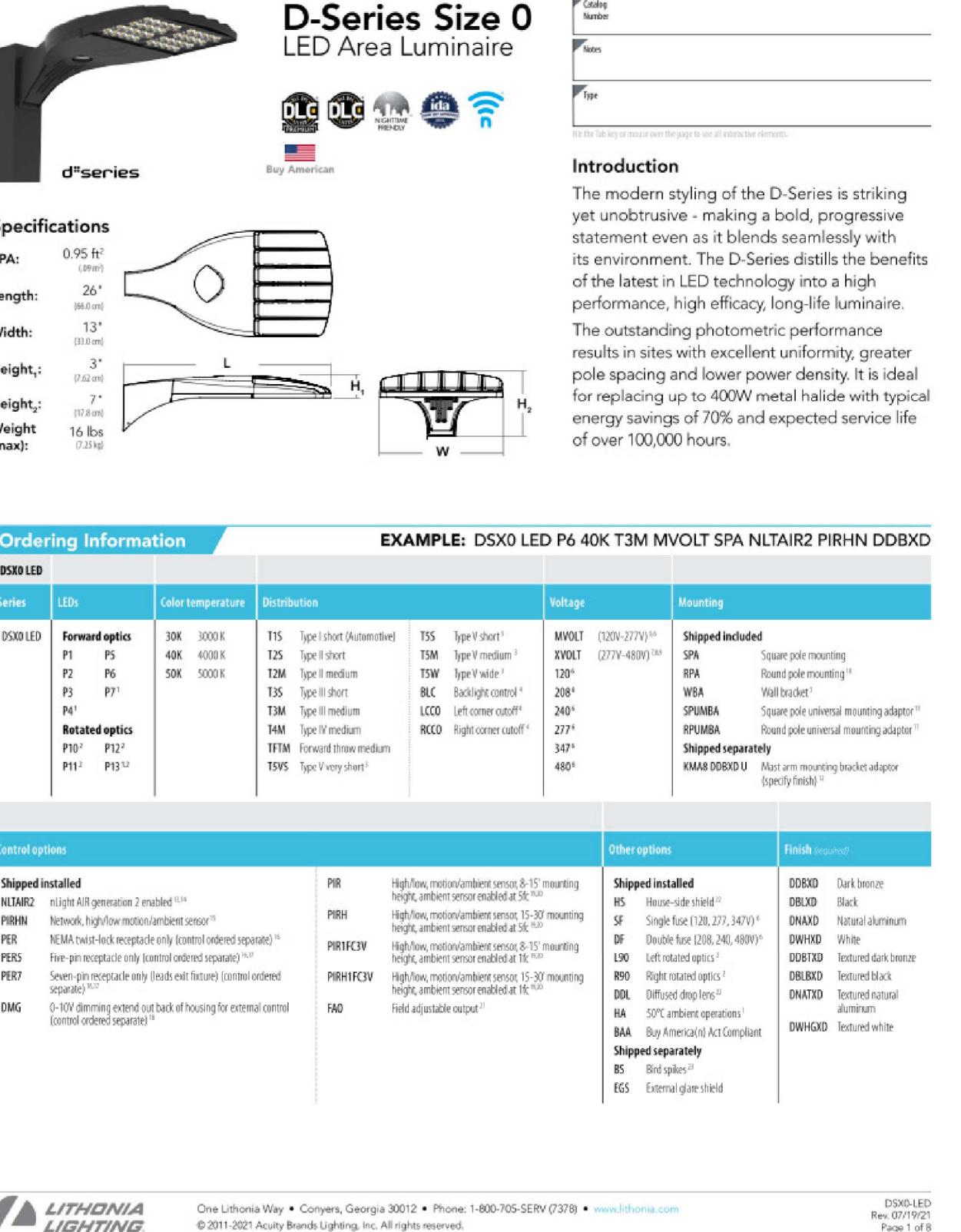
SHEET TITLE
Exterior Elevations



Sample Cluster

SCALE: 1/8" = 1'-0"

Preminence Place
Townhomes on Platt Rd.
Ann Arbor, MI



Statistics

Description	Symbol	Avg	Max	Min	Avg/Min	Max/Min
Grade @ 0'	+	0.3 fc	6.0 fc	0.0 fc	N/A	N/A
Property Line @ 0'	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
Roadway	✗	0.7 fc	4.2 fc	0.0 fc	N/A	N/A

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Lumens Per Lamp	Light Loss Factor	Wattage	Mounting Height
	A	5	Lithonia Lighting	DSX0 LED P4 30K T4M MVOLT	DSX0 LED P4 30K T4M MVOLT	LED	9593	0.9	92	15'
	B	86	Lithonia Lighting	WDGE1 LED P1 30K 80CRI VF	WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 3000K, 80CRI, VISUAL COMFORT FORWARD OPTIC	LED	1161	0.7	10.0002	8'

General Note

1. SEE DRAWING FOR LUMINAIRE MOUNTING HEIGHT.
2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY
THE CONTRACTOR.

OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

