



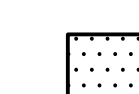


PROJECT NOTES

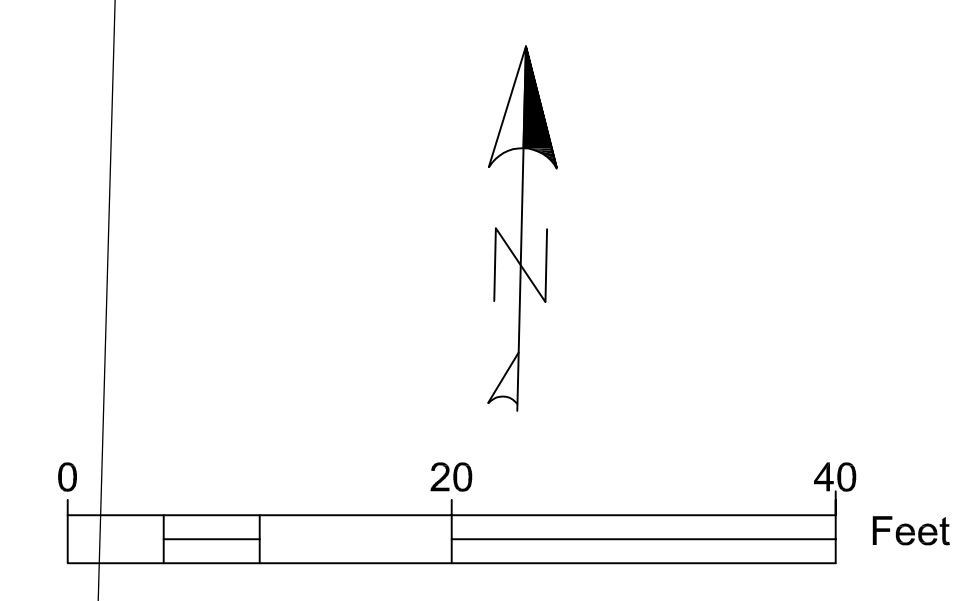
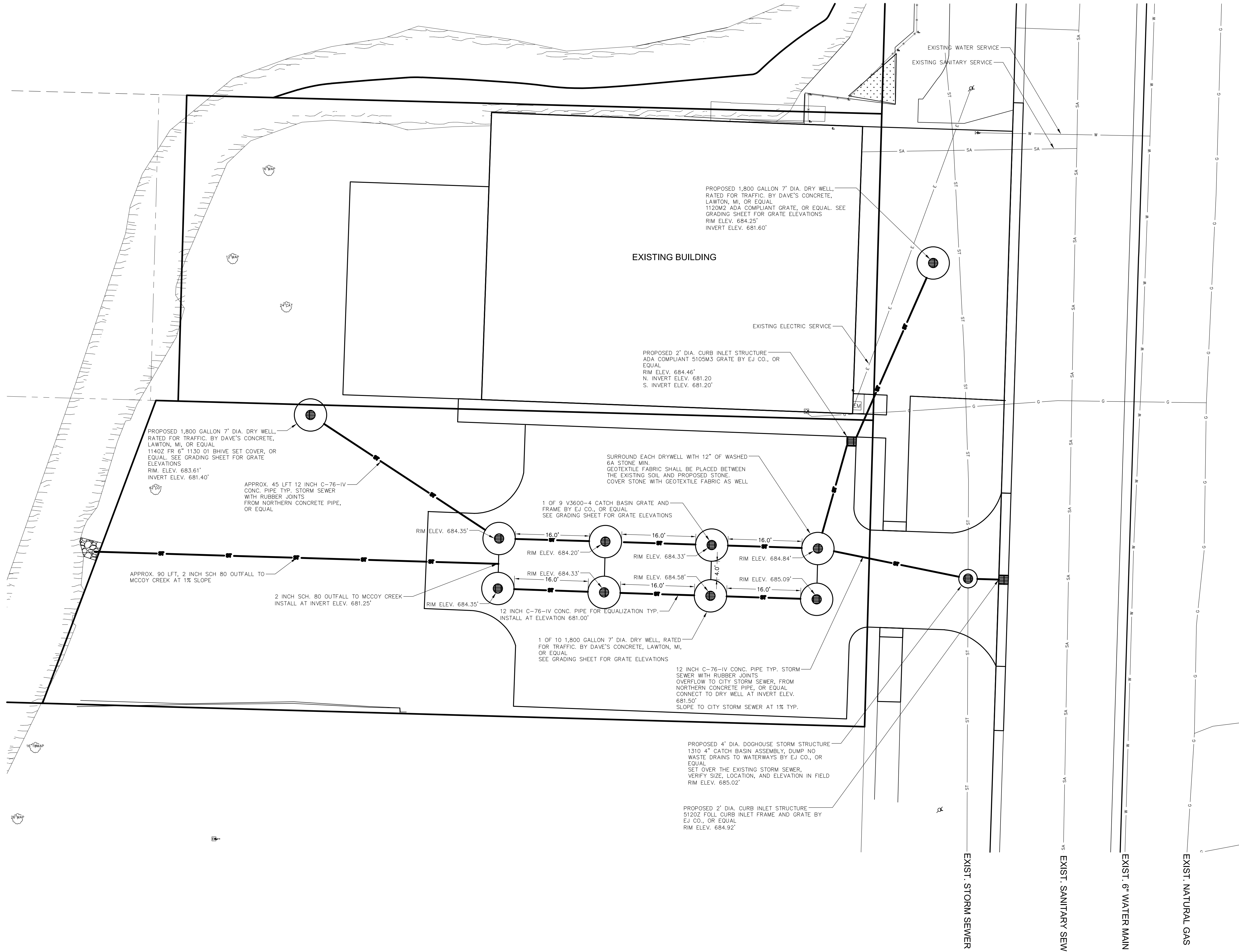
1. THE "2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND "STANDARD PLANS" BY THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) ARE HEREBY INCORPORATED INTO THESE CONTRACT DOCUMENTS. COPIES OF THESE STANDARDS ARE AVAILABLE FOR INSPECTION AT THE OFFICE OF THE ENGINEER.
2. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS IN FORCE AT THE TIME OF CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND/OR PLANS PREPARED BY OTHERS. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
4. CONTRACTORS SHALL CALL MISS DIG @ 811 OR 800-482-7171 FOR PROTECTION OF UNDERGROUND UTILITIES A MINIMUM OF THREE FULL WORKING DAYS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) PRIOR TO BEGINNING EACH EXCAVATION IN ANY AREA. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.
5. THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE REGULATING AGENCIES ASSOCIATED WITH THIS PROJECT TO NOTIFY THEM THAT WORK IS COMMENCING.
7. ALL FILL FOR THIS PROJECT MUST BE OBTAINED AND FURNISHED BY THE CONTRACTOR. ALL REQUIRED FILL SHALL BE SELECTED EXCAVATED MATERIAL FROM THE SITE APPROVED BY THE ENGINEER, OR MDT CLASS II GRANULAR MATERIAL FROM BORROW. EXCESS FILL SHALL BE REMOVED FROM SITE BY THE CONTRACTOR. NOTE: NO BORROW OR SOIL REMOVAL ARRANGEMENTS HAVE BEEN PREARRANGED FOR THIS PROJECT, AND SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR.
8. THE CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT, AS REQUIRED.
9. ALL DISTURBED LAWN AREAS SHALL BE RESTORED WITH TOPSOIL SURFACE, FURN. 4" MDT SEED MIXTURE TUF (220#/ACRE); FERTILIZER, CHEMICAL NUTRIENT, CL A (176#/ACRE); AND MULCH AT THE RATE OF 2 TON/ACRE
10. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EXISTING DRAINAGE PATTERNS, AND SHALL RESOLVE ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH MAY RESULT FROM THE CONTRACTOR'S ACTIVITIES.
11. ALL SCALES FOR DRAWINGS AND DETAILS ARE BASED ON 24"x36" PRINTED PLANS. DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
12. ANY MARKED SANITARY SEWER, SANITARY SEWER SERVICE LEADS, WATER MAIN, WATER SERVICES, ROOF DRAINS, OR STORM SEWER THAT IS DAMAGED BY THE CONTRACTOR DURING THEIR OPERATIONS SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AND AT THE CONTRACTOR'S EXPENSE.
13. ALL ELECTRICAL WORK SHALL BE PERFORMED BY A STATE OF MICHIGAN LICENSED ELECTRICIAN ACCORDING TO THE NATIONAL ELECTRICAL CODE AS MODIFIED BY THE STATE OF MICHIGAN. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A COMPLETE WORKING SYSTEM.
14. ALL PLUMBING WORK SHALL BE PERFORMED BY A STATE OF MICHIGAN LICENSED PLUMBER AND ACCORDING TO THE NATIONAL PLUMBING CODE AS MODIFIED BY THE STATE OF MICHIGAN AND LOCAL HEALTH DEPARTMENT. FURNISH AND INSTALL ALL MATERIALS AND LABOR TO PROVIDE A COMPLETE WORKING SYSTEM.

LEGEND

	CONCRETE SIDEWALK, 4 INCH, NON-REINFORCED, 3,500 PSI MIN. 6 INCHES CLASS II SAND BASE COMPACTED TO 95% MAXIMUM DENSITY
	2'X5' DETECTABLE WARNING SURFACE, INSTALL PER MDT SPECIFICATIONS FOR ADA COMPLIANT TACTILE SURFACE
	PROPOSED PATIO AREA, CONSTRUCTION MATERIAL PER OWNER SPECIFICATIONS
	CONCRETE DUMPSTER PAD, 6 INCH, 4,000 PSI MIN., REINFORCED WITH 6"x6" 6 GAUGE WELDED WIRE FABRIC 6 INCHES CLASS II SAND BASE COMPACTED TO 95% MAX. DENSITY
	HMA, PERFORMANCE GRADE 58-28, SS-1H BOND COAT 1.5 INCHES 36A TOP COURSE 2 INCHES 13 A LEVELING COURSE 8 INCHES OF 22A AGGREGATE BASE, COMPACTED TO 98% MAXIMUM DENSITY 12 INCHES OF CLASS II SAND SUBBASE, COMPACTED TO 95% MAXIMUM DENSITY

HMA APPLICATION TABLE

ITEM	AWI	YIELD	PERFORMANCE GRADE
HMA, 36A (TOP)	220	165 #/SYD	P.G. 58-28
HMA, 13 (LEVELING)		275 #/SYD	P.G. 58-28
HAND PATCH		165 #/SYD (LIFTS)	P.G. 58-28
HMA BOND COAT		0.05 TO 0.15 GAL/SYD	SS - 1h

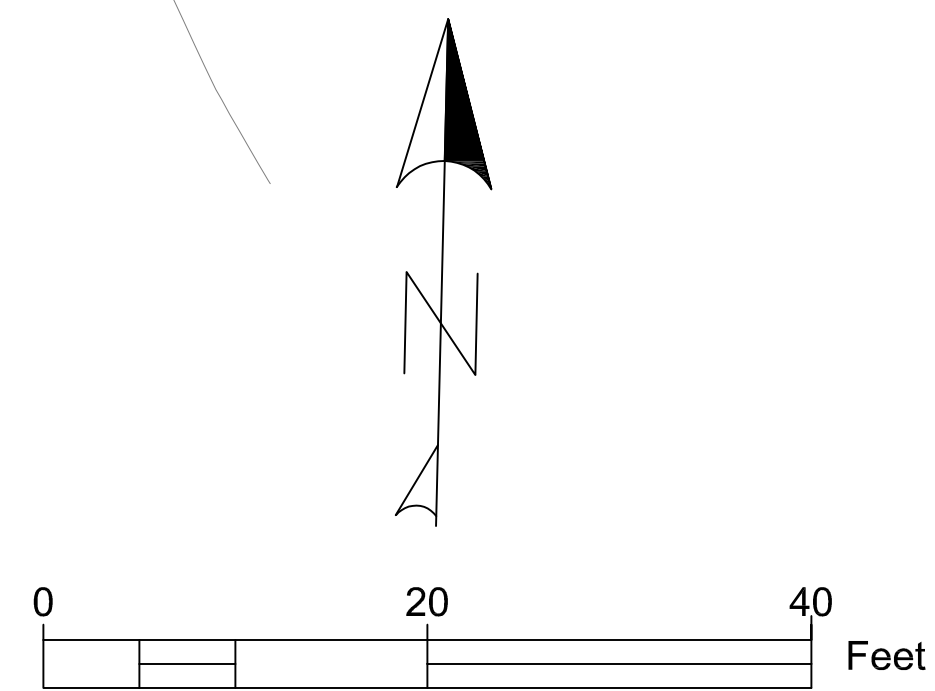
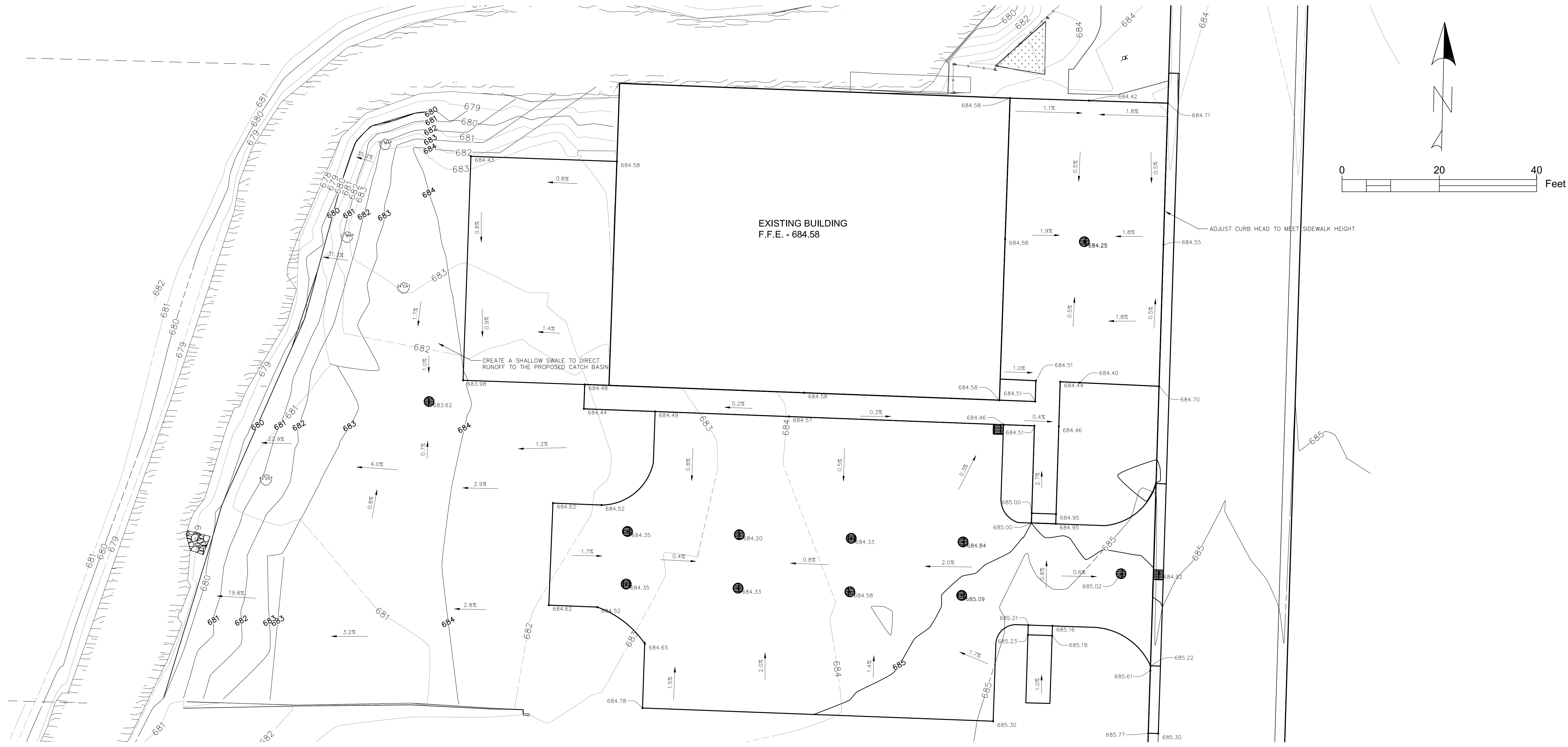


**GREEN CONSTRUCTION AND
ENGINEERING**
P.O. BOX 326,
BUCHANAN, MI 49107
PHONE: (269) 695 - 5825

OWNER:
206 DAYS AVENUE
HOLDING, LLC.
PROJECT NAME:
206 DAYS AVE.
DEVELOPMENT
PROJECT ADDRESS:
206 DAYS AVENUE,
BUCHANAN, MI 49107

SHEET DESCRIPTION:
UTILITIES
PROJECT NUMBER:
23-07
DRAWN BY: MAG

U1.0

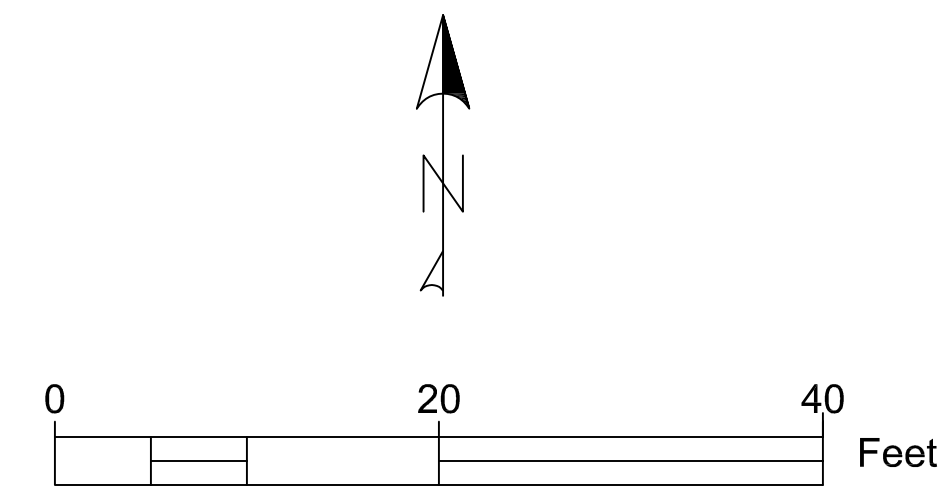
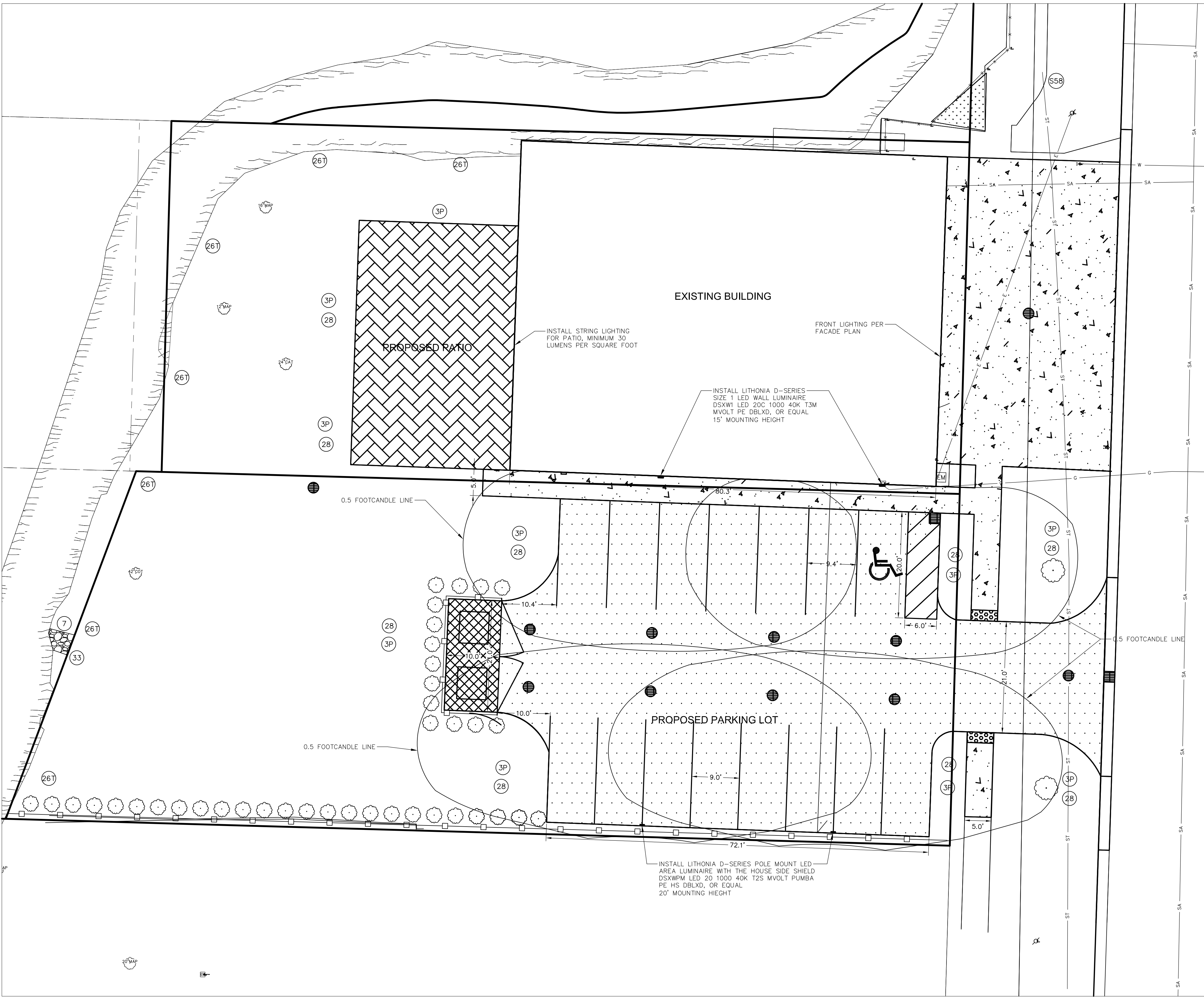


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23-07
DRAWN BY: MAG

G1.0



SOIL EROSION & SEDIMENTATION CONTROL NOTES

- ALL CONSTRUCTION METHODS SHALL BE DONE IN COMPLIANCE WITH THE MICHIGAN SOIL EROSION AND SEDIMENTATION CONTROL ACT. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING A "SOIL EROSION PERMIT" FROM THE COUNTY AND A "PERMIT BY RULE/NOTICE OF COVERAGE" FROM THE MDEQ PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS OF THE COUNTY "SOIL EROSION PERMIT" AND FOR ALL CERTIFIED STORM WATER INSPECTION SERVICE REQUIRED BY THE "PERMIT BY RULE." EROSION CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS AND SHALL NOT RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING ALL REQUIRED EROSION CONTROL MEASURES.
 - AVOID UNNECESSARY DISTURBING OR REMOVING OF EXISTING VEGETATED TOPSOIL OR EARTH COVER, THESE COVER AREAS ACT AS SEDIMENT FILTERS.
 - ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEAN UP AND APPROVAL.
 - GEOTEXTILE SILT FENCE SHALL BE INSTALLED AS REQUIRED WHEN CROSSING CREEKS OR WHEN ADJACENT TO WETLANDS OR SURFACE WATER BODIES TO PREVENT SILTATION AND ELSEWHERE AS DIRECTED BY THE ENGINEER. SEEDING AND/OR SODDING SHALL BE INSTALLED ON CREEK BANKS IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.
 - MAINTENANCE, CLEANING, AND REMOVAL OF THE VARIOUS SEDIMENT CONTROL MEASURES SHALL BE INCLUDED IN THE VARIOUS EROSION CONTROL ITEMS.
- NUMBER IN CIRCLE REFERS TO NUMBERED DETAILS ON THE STATE OF MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT & BUDGET SOIL EROSION AND SEDIMENTATION CONTROL GUIDEBOOK DATED JULY, 2019. "P" DENOTES PERMANENT MEASURE AND "T" DENOTES TEMPORARY MEASURE. SOIL EROSION CONTROL PLANS DENOTE MINIMUM EROSION MEASURES REQUIRED AS DESCRIBED BELOW.

- (3P) DENOTES PERMANENT SEEDING. ALL DISTURBED AREAS NOT PAVED OR GRAVELED SHALL BE RESTORED. PLACE TOPSOIL SURFACE, SALV. 3 INCH, MDT SEEDING, MIXTURE TUF APPLIED AT A RATE OF 176 LB/ACRE, FERTILIZER, CHEMICAL NUTRIENT, CL A APPLIED AT A RATE OF 228 LB/ACRE; MULCH AT A RATE OF 2 TON/ACRE AND MULCH ANCHORING. (APPLIES TO ENTIRE PROJECT)
- (7) DENOTES RIP RAP WITH GEOTEXTILE FABRIC
- (26T) DENOTES TEMPORARY SILT FENCE. SILT FENCE SHALL BE INSTALLED AT CREEK CROSSINGS, ADJACENT TO ALL WETLANDS AND SURFACE WATERS, AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. EACH SILT FENCE SHALL BE INSTALLED GENERALLY ALONG THE SAME CONTOUR ELEVATION.
- (28) DENOTES MULCHING AND MULCH ANCHORING
- (33) DENOTES MULCH BLANKETS. MULCH BLANKET SHALL BE PROVIDED AT LOCATIONS SHOWN ON THE PLANS, AT SLOPES GREATER THAN 1:3, AREAS WITH CONCENTRATED FLOWS, AND AS DIRECTED BY THE ENGINEER IN THE FIELD, TO PREVENT RUNOFF AND EROSION.
- (58) DENOTES INLET PROTECTION FABRIC DROP. CHECK AFTER EACH RAIN EVENT. CLEAN OR REPLACE WHEN HALF FULL.

BERRIEN COUNTY DETENTION POND DESIGN CALCULATION SPREADSHEET

Project Name: Days Avenue Site Plan		Proposed Percent Imperviousness: 54% (K)								
Project Location: 206 Days Avenue, Buchanan, MI 49107		Proposed Runoff "C" Value: 0.79								
Cont. Drainage Area (Acres): 0.25 (L)		Maximum Allowable Outflow (CFS): 0.04 (G)								
		Storm Recurrence Interval (Yrs): 25								
A	B	C	D	E	F	G	H	I	J	K
Duration (Minutes)	Duration (Hours)	Total Rainfall (Inches)	Rainfall Intensity (Inches/Hours)	Proposed Runoff Flore (CFS)	Proposed Maximum Volume (CFT)	Proposed Allowable Outflow (CFS)	Required Detention Storage (CFT)	Required Retention Storage (CFT)	Total Required Storage (CFT)	Total Required Storage (GALLONS)
5	0.08	0.53	6.36	1.25	376	0.04	370	454.067	824	824
10	0.17	0.93	5.58	1.10	660	0.04	648	454.067	1,102	1,102
15	0.25	1.20	4.80	0.95	851	0.04	834	454.067	1,286	1,286
20	0.33	1.35	4.05	0.80	958	0.04	935	454.067	1,389	1,389
30	0.50	1.65	3.30	0.65	1,170	0.04	1,137	454.067	1,591	1,591
40	0.67	1.8	2.70	0.53	1,277	0.04	1,232	454.067	1,686	1,686
50	0.83	1.95	2.34	0.46	1,383	0.04	1,327	454.067	1,781	1,781
60	1.00	2.09	2.09	0.41	1,482	0.04	1,415	454.067	1,869	1,869
90	1.50	2.35	1.57	0.31	1,667	0.04	1,566	454.067	2,020	2,020
120	2.00	2.58	1.29	0.25	1,850	0.04	1,695	454.067	2,149	2,149
180	3.00	2.85	0.95	0.19	2,023	0.04	1,819	454.067	2,273	2,273
360	6.00	3.34	0.56	0.11	2,269	0.04	1,964	454.067	2,418	2,418
720	12.00	3.87	0.32	0.06	2,745	0.04	1,935	454.067	2,389	2,389
1080	18.00	4.18	0.23	0.05	2,965	0.04	1,749	454.067	2,203	2,203
1440	24.00	4.45	0.19	0.04	3,156	0.04	1,535	454.067	1,989	1,989

Total Storage Detention and Retention Required Storage (CFT): 2,418

RETENTION POND DESIGN CALCULATION

Retain the 100-Year 24-Hour Storm event from the Entire Contributing Area (6.15 inches of total rainfall).
4,399 CFT

A) Duration of the storm event in minutes.
B) Duration of the storm event in hours.
C) Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref: midwestern climatological center rainfall Atlas-Bulletin 71).
D) Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
E) The unrestricted 25-year recurrence discharge flowrate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
F) The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flore (E) by the Storm Duration (A) and by 60 seconds/minute.
G) The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 cfs per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
H) The required detention storage is determined by multiplying the difference flowrate (Inflow (E) - Outflow (G)), by the corresponding duration (A) and by 60 seconds/minute. The calculated maximum release rate only occurs when the pond is full. As the pond dewaters the actual release rate from the pond will decrease from the maximum allowed release rate to 0. Therefore, an average release rate equal to 50% of the maximum rate is used in calculating the required storage volume.
I) The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume. This volume of storage will be determined above the required retention volume calculated in Column I.
J) Total required storage is the sum of Column H and I.
K) Proposed percent imperviousness. This assumption will be used to determine the proposed runoff coefficient. Impervious surface will be assumed to have a value of 0.9 and pervious a value of 0.2.
L) Contributing Drainage to the proposed detention or retention system.
Calculation By: Mack Green
Date: 10/14/2023