

ISABELLA COUNTY
APPLICATION FOR SITE PLAN REVIEW

Applicant

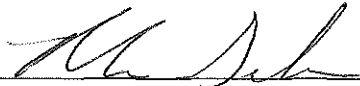
Name: DTE Electric Company Owner Agent/Other interest (circle one)
Address: 225 Enterprise Dr Breckenridge, MI 48615
Phone: _____ Email Address: marcus.schriner@dteenergy.com

Property Owner (if different from applicant)

Name: DTE ELECTRIC COMPANY
Address: PO BOX 33017, DETROIT, MI 48232
Phone: _____ Email Address: _____


Property Location

Tax ID Number: 04-022-10-003-01
Job Site Address: E. WEIDMAN ROAD 3000 MILE
Township: ISABELLA Section: 22 Zoning District: AG-1
Detailed Description of Use: CONSTRUCT A GRAVEL STORAGE AREA TO
PLACE TURBINE COMPONENTS AND BLADES FOR STORAGE.
PROVIDE A LANDSCAPED BERM TO REDUCE VISIBILITY.

Signature:  Date: 2/18/2026

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File #: PSPR260002 Fee: \$ 225 Check #: 3059 Receipt #: 17111 ^{1110 /}
Date Received: 2-18-26 Received by: 
Review Type: Zoning Administrator / Planning Commission Approved [] Denied []
Conditions (if any): _____

Isabella County Zoning Administrator _____

Date _____

From: [Marcus Schriener](#)
To: [Ray Johnson](#)
Cc: [Tim Nieporte](#)
Subject: Re: [EXTERNAL] RE: DTE Maintenance Storage Yard
Date: Thursday, March 19, 2026 9:05:30 AM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hey Ray,

Disregard my phone message. See below in response to option #1.

First, thank you for the continued coordination and for outlining the accessory use considerations. Below is the written narrative addressing the items requested for the site plan application. The only adjustment from your recommendation is the maximum allowable number of blades to ensure we do not exceed the agreed upon quantity at any time.

"DTE's intent for the proposed maintenance storage / laydown yard is to support ongoing operations and maintenance activities associated with the existing Utility Grid Wind Energy Conversion System. The site is not intended to function as a salvage yard or for the permanent storage of dismantled or abandoned equipment.

Any turbine components or materials temporarily staged at the site will be limited to equipment that is actively being assessed for repair or future use (usable inventory). No more than six(6) turbine blades would be stored on site at any one time. If a blade is determined to be unrepairable, it will be removed from the site within 60 days.

Equipment stored at the site may contain residual lubricants or hydraulic fluids typical of wind turbine components (e.g., gearbox oils, hydraulic oils, transformer oil, greases). Such equipment will be stored on an improved, stable surface, and best management practices will be used to prevent leaks or releases. Any components with potential contaminants will be inspected regularly, and appropriate secondary containment or drip protection will be used as necessary. DTE will manage the site in a manner that avoids environmental contamination, including impacts to soil and waterways, and will comply with all applicable local, state, and federal environmental regulations."

Please let me know if this narrative is sufficient for the application or if you would like any refinements. Also, please let me know if any changes to the drawings will still be required.

Thanks,

Marcus

From: Ray Johnson <rjohnson@isabellacounty.org>
Sent: Wednesday, March 18, 2026 1:48 PM
To: Marcus Schriener <marcus.schriener@dteenergy.com>
Cc: Tim Nieporte <tnieporte@isabellacounty.org>
Subject: [EXTERNAL] RE: DTE Maintenance Storage Yard

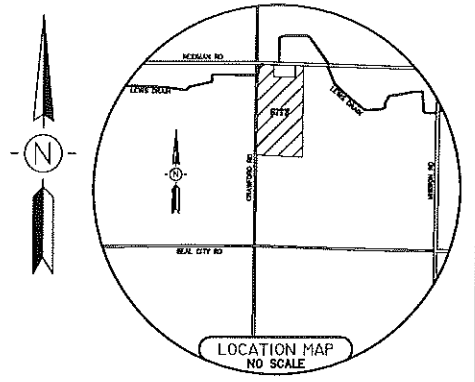
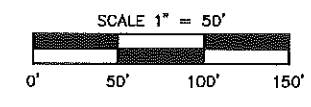
CLIENT:
TERESA WARD
WARDS EXCAVATING, LLC
4170 S LEWIS RD
PO BOX 240
ST. LOUIS, MI 48880
PH: (989) 681-2736

LAND OWNER:
CHRIS WELLER
GRATOT RENEWABLE ENERGY CENTER (GREC)
225 ENTERPRISE DR.
BRECKENRIDGE, MI, 48615
PH: (513) 280-2895

ENGINEER/SURVEYOR:
KEBS, Inc.
2116 HASLETT RD.
HASLETT, MI, 48840
PH: (517) 339-1014

ISABELLA WINDMILL LAYDOWN

ISABELLA TOWNSHIP, ISABELLA COUNTY, MICHIGAN



PROJECT NARRATIVE:
THE SITE IS PROPOSED TO BE CONSTRUCTED FOR THE STORAGE OF WIND TURBINE SPARE PARTS. THE SITE WILL CONSIST OF A GRAVEL STORAGE YARD THAT WILL ALLOW LARGE TRUCKS TO ENTER/EXIT AND PICKUP/DROP OFF VARIOUS PARTS. THE PARTS WOULD MAINLY CONSIST OF WIND TURBINE BLADES (200'X8'X8') AND TRANSFORMERS (10'X10'X8').

THE SITE WILL BE SCREENED FROM THE ROAD AT THE NORTH AND WEST SIDES OF THE PROPERTY. FROM THE EXISTING SOLAR FARM AT THE SOUTH AND FROM THE EXISTING SUBSTATION TO THE EAST. THIS WILL CONSIST OF A BERM WITH EVERGREEN TREES LOCATED ALONG THE EXTENT OF THE BERM. IN BETWEEN THE EVERGREENS, TALL GRASSES ARE PROPOSED (4'-6') TO FILL IN SPACES BETWEEN THE TREES.

PROJECT TRUCK ROUTE:
THE PROJECT TRUCK ROUTE IS INCLUDED ON PAGE 4

- SURVEYOR'S NOTES:**
- This plan was made at the direction of the parties named hereon and is intended solely for their immediate use. Survey prepared from fieldwork performed in October 2025.
 - All bearings are Michigan State Plane South Zone grid bearings obtained from GPS observations using corrections obtained from the nearest National Geodetic Survey C.O.R.S. station.
 - All dimensions shown are as-measured unless otherwise noted.
 - All elevations are North American Vertical Datum of 1988 (NAVD88).
 - All dimensions are in feet and decimals thereof.
 - No building tie dimensions are to be used for establishing the property lines.
 - Easements, if any, not shown hereon.
 - By scaled map location and graphic plotting only, this property lies partly within Flood Zone "A", areas inside the 1% annual chance floodplain, and partly within Flood Zone "X", areas outside the 1% annual chance floodplain according to the National Flood Insurance Program, Flood Insurance Rate Map for the Township of Isabella, Isabella County, Michigan, Community Panel No. 260820 D195 D, dated February 5, 2014.
 - Utility information as shown was obtained from available public records and from supporting field observations, where possible, and is subject to verification in the field by the appropriate authorities prior to use for construction. MISS DIG was not contacted to mark utilities on site.
 - Wetlands, if any, not shown hereon.

BENCHMARKS

BENCHMARK #1 ELEV. = 771.14 (NAVD88)
PK NAIL, NORTH SIDE OF UTILITY POLE, SOUTHEAST QUADRANT OF WEIDMAN AND CRAWFORD ROADS, ±3' SOUTH OF EDGE OF ASPHALT OF WEIDMAN ROAD, ±13' EAST OF EDGE OF ASPHALT OF CRAWFORD ROAD

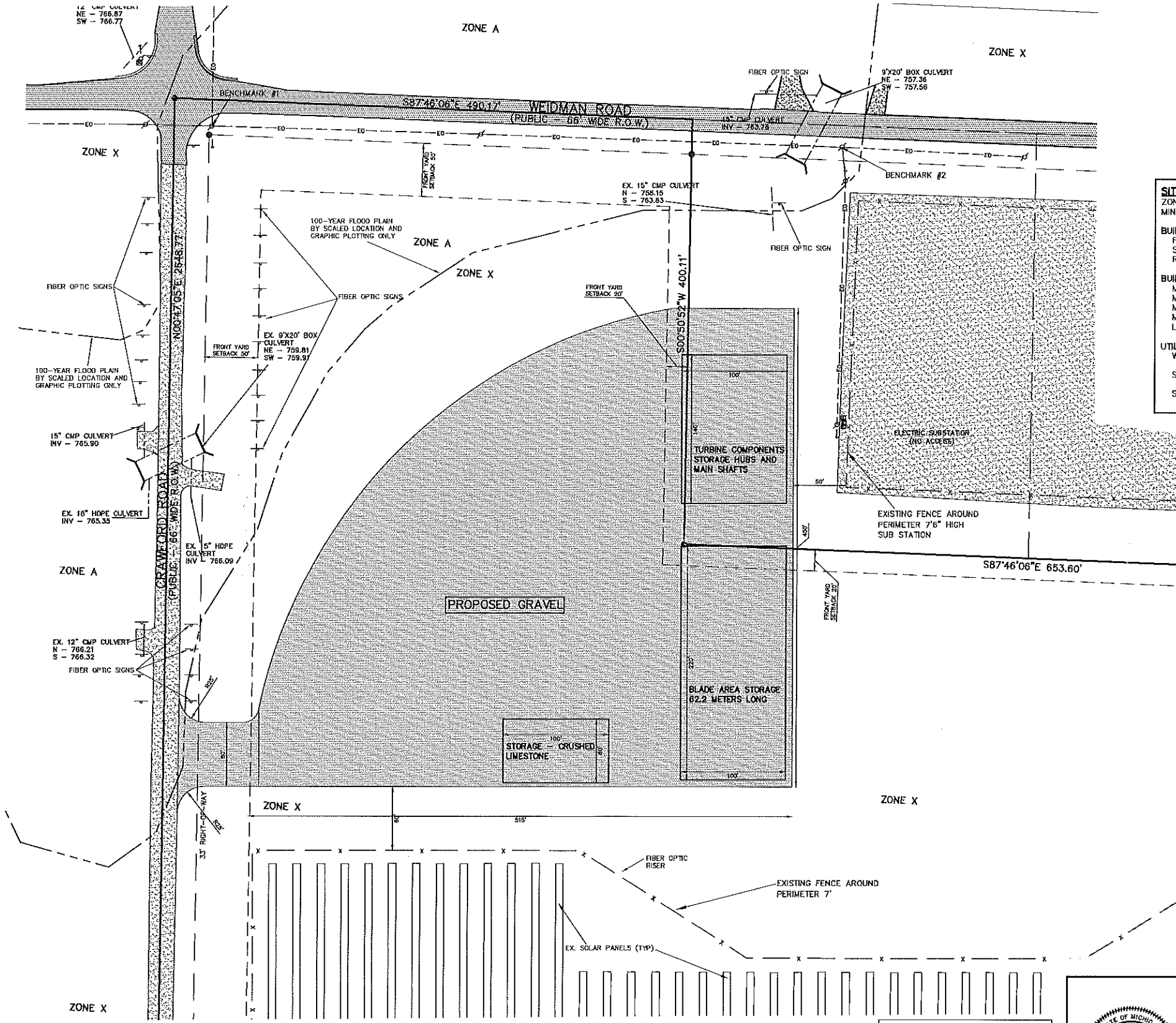
BENCHMARK #2 ELEV. = 770.28 (NAVD88)
PK NAIL, WEST SIDE OF UTILITY POLE, SOUTH OF WEIDMAN ROAD, 10' WEST OF GRAVEL DRIVE TO SUBSTATION, ±9' SOUTH OF EDGE OF ASPHALT OF WEIDMAN ROAD

LEGEND

---	PROPOSED WATER MAIN
---	PROPOSED SANITARY SEWER
---	PROPOSED STORM SEWER
○	PROPOSED HYDRANT
○	PROPOSED GATE VALVE
○	PROPOSED SAN. M.H.
○	PROPOSED STORM M.H.
□	PROPOSED C.B.
□	PROPOSED GRADES
□	PROPOSED FIRST FLOOR ELEV.
△	PROPOSED TOP OF CURB ELEV.
△	PROPOSED TOP OF GROUND ELEV.
△	PROPOSED TOP OF PAVT ELEV.
△	PROPOSED TOP OF WALK ELEV.
○	DENOTES S.E.S.G. KEYING SYSTEM

EX. LEGEND

○	SET 1/2" BAR WITH CAP	○	SANITARY MANHOLE
□	FOUND IRON AS NOTED	○	DRAINAGE MANHOLE
---	DEED LINE	○	ELECTRIC MANHOLE
---	DISTANCE NOT TO SCALE	○	TELEPHONE MANHOLE
---	ASPHALT	○	CATCHBASIN
---	CONCRETE	○	SANITARY CLEAROUT
---	GRAVEL	○	FIRE HYDRANT
○	EXISTING SPOT ELEVATION	○	VALVE
○	EXISTING CONTOUR ELEVATION	○	UTILITY POLE
---	SANITARY SEWER	○	LIGHT POLE
---	WATER LINE	○	GUY WIRE
---	STORM SEWER	○	UTILITY PEDESTAL
---	GAS LINE	○	TRANSFORMER
---	UNDERGROUND TELEPHONE	○	HANDHOLE
---	UNDERGROUND TELEVISION	○	ELECTRIC METER
---	UNDERGROUND ELECTRIC	○	GAS METER
---	OVERHEAD WIRES	○	WATER METER
---	EDGE OF WOODS	○	SIGN
		○	POST
		○	AIR CONDITIONING UNIT



SITE DATA
ZONED: AG-1 (RESTRICTIVE AGRICULTURAL)
MINIMUM OF 200 FT AT BUILDING SETBACK LINE

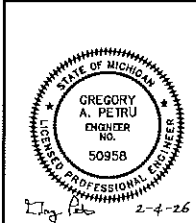
BUILDING SETBACKS
FRONT - 50 FEET
SIDES - 20 FEET EACH SIDE MINIMUM TOTAL 40 FT
REAR - 35 FEET

BUILDING/UNIT DATA
MAXIMUM BUILDING HEIGHT = 35 FT
MINIMUM AREA OF LOT = 43,560 SF
MINIMUM WIDTH WITHIN SETBACK = 165 FT
MAXIMUM LOT COVERAGE = 10%
LOT COVERAGE = 158,800/331,077 = 0.480%

UTILITIES
WATER: CITY PUBLIC WATER MAIN
SANITARY: CITY PUBLIC SANITARY
STORM: ON-SITE DETENTION BASIN

SHEET INDEX

- SITE PLAN
- EXISTING CONDITIONS PLAN
- STORM & GRADING PLAN
- SOIL EROSION CONTROL PLAN
- LANDSCAPING PLAN
- DETAIL & SPECIFICATIONS SHEET



TAX ID# 09-022-10-003-01

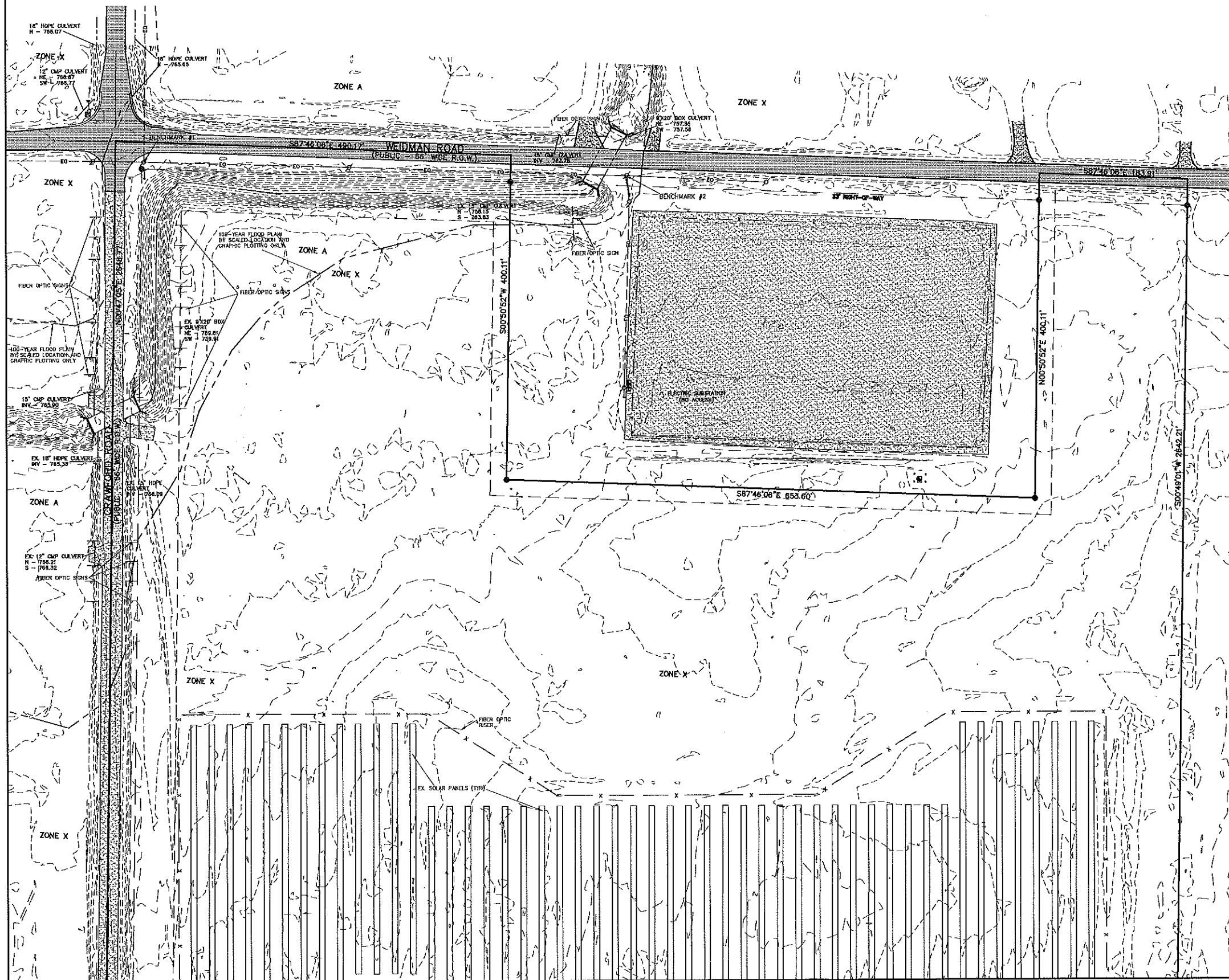
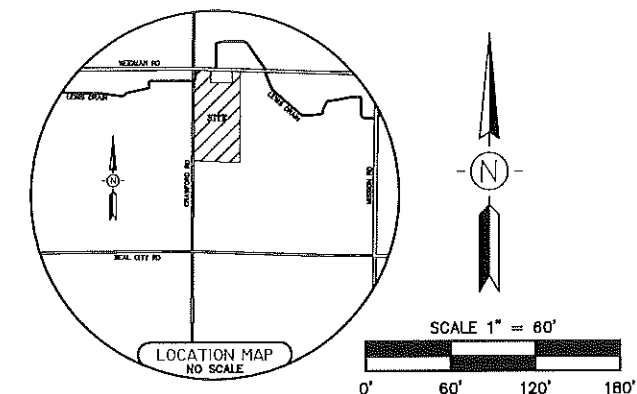
REVISIONS	KEBS, INC. KYES ENGINEERING BRYAN LAND SURVEYS
11-19-25 PRELIMINARY SITE PLAN	2116 HASLETT ROAD, HASLETT, MI 48840 PH: 517-339-1014 FAX: 517-339-0047
1-7-26 SITE PLAN SUBMITTAL	Marshall Office Ph: 269-781-8800
1-30-26 SITE PLAN SUBMITTAL	
ISABELLA WINDMILL LAYDOWN	
SITE PLAN	
SCALE: 1" = 50'	DESIGNER: G.A.P.
DATE: 11-19-25	PROJECT MGR: G.A.P.
AUTHORIZED BY: GREGORY A. PETRU	APPROVED BY: GREGORY A. PETRU
JOB #: 24-26	SHEET 1 OF 8
GRATOT RENEWABLE ENERGY CENTER	E-104698



ISABELLA WINDMILL LAYDOWN

FOR: WARDS EXCAVATING, LLC

"VACANT - E. WEIDMAN ROAD, ROSEBUSH, MI 48878"



SURVEYOR'S NOTES:

1. This plan was made at the direction of the parties named hereon and is intended solely for their immediate use. Survey prepared from fieldwork performed in October 2025.
2. All bearings are Michigan State Plane South Zone grid bearings obtained from GPS observations using corrections obtained from the nearest National Geodetic Survey C.O.R.S. station.
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4. All elevations are North American Vertical Datum of 1988 (NAVD88).
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9. Utility information as shown was obtained from available public records and from supporting field observations, where possible, and is subject to verification in the field by the appropriate authorities prior to use for construction. MISS DIG was not contacted to mark utilities on site.
10. Wetlands, if any, not shown hereon.

LEGEND

- = SET 1/2" BAR WITH CAP
- = DEED LINE
- +— = DISTANCE NOT TO SCALE
- x—x— = FENCE
- ▨ = ASPHALT
- ▩ = CONCRETE
- ▩ = GRAVEL
- = EXISTING SPOT ELEVATION
- = EXISTING CONTOUR ELEVATION
- = STORM SEWER
- = OVERHEAD WIRES
- = SIGN
- = POST
- = UTILITY POLE
- = GUY POLE
- = GUY WIRE
- = UTILITY PEDESTAL
- ▣ = TRANSFORMER
- ▣ = HANDHOLE
- ▣ = ELECTRIC METER

BENCHMARKS

BENCHMARK #1 ELEV. = 771.14 (NAVD88)
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BENCHMARK #2 ELEV. = 770.28 (NAVD88)
PK NAIL, WEST SIDE OF UTILITY POLE, SOUTH OF WEIDMAN ROAD, 10' WEST OF GRAVEL DRIVE TO SUBSTATION, ±9' SOUTH OF EDGE OF ASPHALT OF WEIDMAN ROAD

TAX ID# 09-022-10-003-01

	REVISIONS 11-18-25 PRELIMINARY SITE PLAN 1-7-26 SITE PLAN SUBMITTAL 1-30-26 SITE PLAN SUBMITTAL	KEYS, INC. KEYS ENGINEERING BRYAN LAND SURVEYS 2118 HASLETT ROAD, HASLETT, MI 48840 PH. 517-330-1014 FAX. 517-330-8047 Marshall Office Ph. 269-781-8800
	ISABELLA WINDMILL LAYDOWN EXISTING CONDITIONS PLAN	
SCALE: 1" = 50' DATE: 11-18-25 AUTHORIZED BY: GRATIOT RENEWABLE ENERGY CENTER	DESIGNER: GAP PROJECT MGR: GAP JOB #: E-104698	APPROVED BY: GAP SHEET 2 OF 6

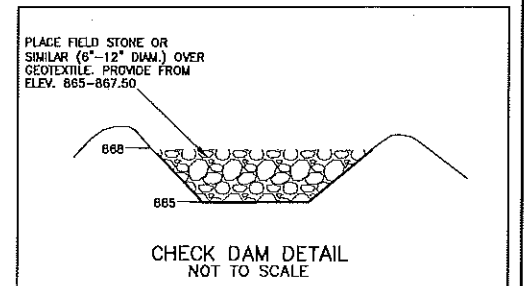
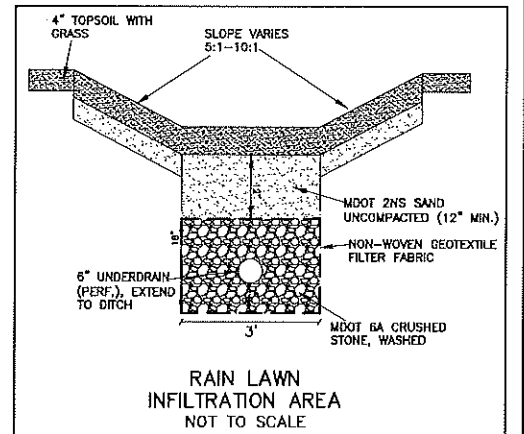
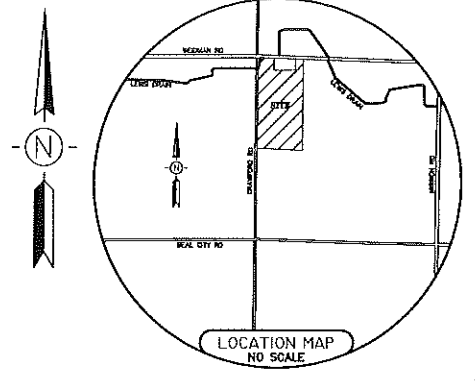
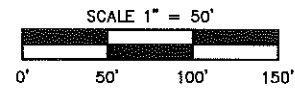
ISABELLA WINDMILL LAYDOWN

ISABELLA TOWNSHIP, ISABELLA COUNTY, MICHIGAN

STORMWATER SUMMARY:

THE PROPOSED GRAVEL STORAGE AREA IS PROPOSED TO SHEET DRAIN TO THE NORTHWEST TO A RAINLAWN INFILTRATION TRENCH (WITH AN UNDERDRAIN IN IT). THIS WILL ENCOURAGE THE RUNOFF TO INFILTRATE THROUGH THE STONE MEDIA.

THIS AREA ALSO PROVIDES PONDING VOLUME FROM ELEVATION 865 TO 868. THE INFILTRATION TRENCH WILL HAVE AN UNDERDRAIN OUTLET TO THE COUNTY DRAIN AND ALSO AN OVERFLOW AT THE NORTHEAST CORNER. THE OVERFLOW WOULD THEN DISCHARGE TO AN EXISTING 15" STORM PIPE.



BENCHMARKS

BENCHMARK #1 ELEV. = 771.14 (NAVD88)
PK NAIL, NORTH SIDE OF UTILITY POLE, SOUTHEAST QUADRANT OF WEIDMAN AND CRUMFORD ROADS, ±8' SOUTH OF EDGE OF ASPHALT OF WEIDMAN ROAD, ±13' EAST OF EDGE OF ASPHALT OF CRUMFORD ROAD

BENCHMARK #2 ELEV. = 770.28 (NAVD88)
PK NAIL, WEST SIDE OF UTILITY POLE, SOUTH OF WEIDMAN ROAD, 10' WEST OF GRAVEL DRIVE TO SUBSTATION, ±9' SOUTH OF EDGE OF ASPHALT OF WEIDMAN ROAD

LEGEND

- PROPOSED WATER MAIN
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED HYDRANT
- PROPOSED GATE VALVE
- PROPOSED SAN. M.H.
- PROPOSED STORM M.H.
- PROPOSED C.B.
- PROPOSED CL.B.
- PROPOSED GRADES
- PROPOSED FIRST FLOOR ELEV.
- ▲ 1/4" 800.00 PROPOSED TOP OF CURB ELEV.
- ▲ 1/4" 800.00 PROPOSED TOP OF GROUND ELEV.
- ▲ 1/4" 800.00 PROPOSED TOP OF PAVT ELEV.
- ▲ 1/4" 800.00 PROPOSED TOP OF WALK ELEV.
- DENOTES S.E.S.C. KEYING SYSTEM

EX. LEGEND

- SET 1/2" BAR WITH CAP
- FOUND IRON AS NOTED
- DEED LINE
- DISTANCE NOT TO SCALE
- ASPHALT
- CONCRETE
- GRAVEL
- EXISTING SPOT ELEVATION
- EXISTING CONTOUR ELEVATION
- SANITARY SEWER
- STORM SEWER
- WATER LINE
- GAS LINE
- UNDERGROUND TELEPHONE
- UNDERGROUND TELEVISION
- UNDERGROUND ELECTRIC
- OVERHEAD WIRES
- EDGE OF WOODS
- SANITARY MANHOLE
- DRAINAGE MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- CATCHBASIN
- SANITARY CLEANOUT
- FIRE HYDRANT
- VALVE
- UTILITY POLE
- LIGHT POLE
- GUY POLE
- GUY WIRE
- UTILITY PEDESTAL
- TRANSFORMER
- HANDHOLE
- ELECTRIC METER
- GAS METER
- WATER METER
- SIGN
- POST
- AIR CONDITIONING UNIT



TAX ID# D9-022-10-003-01

	REVISIONS 11-19-25 PRELIMINARY SITE PLAN 1-7-26 SITE PLAN SUBMITTAL 1-30-26 SITE PLAN SUBMITTAL	KEBS, INC. 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-338-1014 FAX. 517-338-8047 Marshall Office PH. 259-781-8900
	ISABELLA WINDMILL LAYDOWN STORM & GRADING PLAN	
	SCALE: 1" = 50' DATE: 11-19-25 AUTHORIZED BY:	DESIGNER: GAP PROJECT MGR: GAP AUTHORIZED BY:

ISABELLA WINDMILL LAYDOWN

ISABELLA TOWNSHIP, ISABELLA COUNTY, MICHIGAN

SOIL EROSION CONTROL NOTES:

1. ALL SOIL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH ISABELLA COUNTY DRAIN COMMISSION'S PRELIMINARY AND PROJECT SPECIFICATIONS.
2. ANY EROSION OR SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS, OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE STREAM CHANNELS, STREAMS, DITCHES AND PONDS.
3. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED AND AS DIRECTED ON THESE PLANS. ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OR AT COMMENCEMENT OF CONSTRUCTION ACTIVITY. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF GRASSES, DITCHES AND OTHER EARTH CHANGES HAVE BEEN ESTABLISHED.
4. DIRT CONTROL SHALL BE ENFORCED AT ALL TIMES WITHIN THE PROJECT BY THE CONTRACTOR. SPREADING DIRT TRUCKS SHALL BE AVAILABLE AT ALL TIMES TO BE USED ON PAVED ROADS OR OTHER PLACES WHERE DIRT BECOMES A PROBLEM.
5. SEDIMENT OR CLAY SHALL BE REMOVED AFTER EVERY STORM. BEDDING OF EXPOSED AREAS SHALL BE COMPLETED WITHIN 5 DAYS OF FINAL GRADING.
6. ALL DISTURBED AREAS WILL RECEIVE PERMANENT EROSION CONTROL WITHIN 5 DAYS OF FINAL GRADING. AREAS NOT STABILIZED SHALL BE ENCLOSED TOWARD RESTORATION/RETENTION BASINS.
7. WEATHER AND UNFORESEEN DELAYS MAY RESULT IN EXTENSION OF CONSTRUCTION SCHEDULE.
8. SITE DEVELOPMENT CONTRACTOR SHALL INSPECT SOIL EROSION CONTROL MEASURES ON A DAILY BASIS, MORE OFTEN IF NECESSARY. ANY NEEDED REPAIRS SHALL BE PROMPTLY MADE.
9. SITE DEVELOPMENT CONTRACTOR SHALL MEET WITH SOIL EROSION ENFORCEMENT OFFICER PRIOR TO START OF WORK.
10. ALL DISTURBANCE SHALL BE KEPT AT LEAST 25' FROM WATER FEATURES LEAVING AN UNDISTURBED VEGETATION BUFFER, UNLESS ADDITIONAL SLOPE MEASURES ARE PROVIDED AND APPROVED BY ISABELLA COUNTY DRAIN COMMISSION'S.
11. EACH DISTURBANCE ADJACENT TO WETLANDS, BEAVER STREAMS & LAKE, OR ADJACENT TO SLOPES GREATER THAN 15% SHALL BE TOPSOILED, SEEDED AND EROSION CONTROL MATTING APPROPRIATE FOR THE SLOPE CONDITIONS INSTALLED, WITHIN 3 DAYS OF FINAL GRADING OR FINAL ACTIVITY OF THOSE AREAS.
12. STOCK PILE AREAS SHALL BE LOCATED GREATER THAN 25' FROM WETLANDS & BEAVER STREAMS & LAKE, AND AT LEAST 25' FROM PROPERTY LINES.
13. WATER FROM DITCHES AND OTHER DEPRESSIONS SHALL BE PUMPED INTO A FILTERATION BAG TO REMOVE SEDIMENT FROM THE WATER.
14. THE PROJECT SITE IS NOT WITHIN 500 FT. OF A CREEK, LAKE OR DRAINAGE CHANNEL.
15. ANY DEBRIS, WASTE OR ANY SAVED AREA RESULTING FROM CONSTRUCTION TRAFFIC SHALL BE CLEANED AND/OR SWEPT IN A PROMPT MANNER.
16. REMOVE EXCESS SOIL FROM THE SITE AND DISPOSE OF PROPERLY IN ACCORDANCE WITH APPLICABLE REGULATIONS.

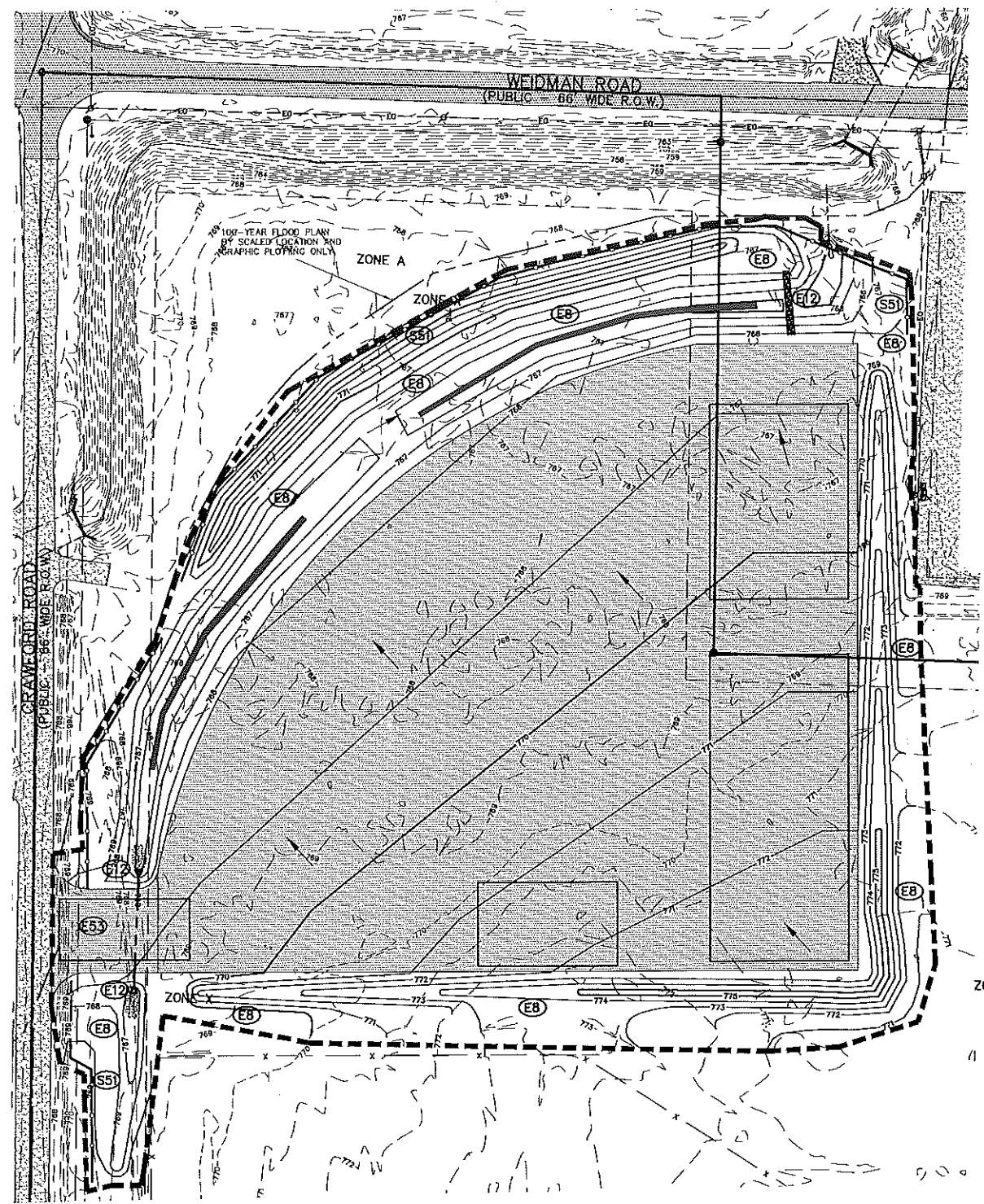
SEQUENCE OF CONSTRUCTION

1. INSTALL ALL TEMPORARY SILT FENCE PER PLAN AND AS SHOWN ON DETAIL.
2. USE CONSTRUCTION ENTRANCES AS SHOWN ON PLAN FOR CONSTRUCTION ENTRANCE/EXIT.
3. INSTALL SLEET PROTECTION FABRIC DROPS BETWEEN THE FRAME AND COVER OF ALL EXISTING WARD BASINS OR RAINTS WHICH MAY BE SUSCEPTIBLE TO SEDIMENT PROBLEM FROM THE PROPOSED CONSTRUCTION AS SHOWN IN THESE PLANS.
4. WHILE MAINTAINING A VEGETATIVE BUFFER WHENEVER POSSIBLE STRIP AND STOCKPILE TOPSOIL ABOVE AREAS OF PROPOSED EXCAVATION OR GRADING FOR LATER USE ON SITE. PLACE STOCKPILED TOPSOIL IN AREAS WHICH ARE NEAREST SUBJECT TO WIND ALONG STEEP SLOPES AND WHICH STOCKPILES IMMEDIATELY TO PREVENT HIGH WINDS BLOWING SEDIMENT POLLUTION AND EXCESSIVE DUST.
5. EXCAVATE FOR PROPOSED WAREHOUSE, CONCRETE & UTILITIES CONSTRUCTION AS NECESSARY. DO NOT EXPOSE AREAS FAR IN ADVANCE OF THE PROPOSED CONSTRUCTION FOR THAT AREA. REFINISH AND SECURE EXPOSED SURFACES TO REDUCE RUNOFF VELOCITY AND SEDIMENTATION. MAINTAIN VEGETATION WHENEVER POSSIBLE TO PROVIDE A NATURAL BUFFER.
6. TOPSOIL, SEED, FERTILIZER AND MULCH ALL EXPOSED AREAS AS SOON AS FEASIBLE TO PROTECT AND RESTORE PERMANENT VEGETATION.
7. WATER EXPOSED GROUND REGULARLY TO CONTROL AIRBORNE PARTICULATE MATTER.
8. THE SOIL EROSION PERMITTEE IS RESPONSIBLE FOR ENSURING THAT ALL PERMANENT AND TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS ARE INSTALLED CORRECTLY AND MAINTAINED UNTIL PERMANENT VEGETATION IS REESTABLISHED IN ALL EXPOSED AREAS.
9. THE SITE WILL BE PERIODICALLY INSPECTED BY ISABELLA COUNTY DRAIN COMMISSION'S. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE RULES AND REGULATIONS OF THAT OFFICE.
10. UPON FINAL APPROVED INSPECTION OF THE COMPLETED CONSTRUCTION BY ALL RELEVANT AGENCIES, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.
11. ANY CONSTRUCTION ACCESS ROAD WILL BE PROTECTED WITH CRUSHED STONE OR CRUSHED CONCRETE, AGGREGATE SIZE 1"-2".

CONSTRUCTION SCHEDULE & SEQUENCING:	2025												2026											
	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
PLACE AND MAINTAIN TEMPORARY EROSION CONTROLS																								
TOPSOIL STRIPPING & STOCKPIILING																								
DEMOLITION AND ON-SITE UTILITIES CONSTRUCTION																								
SITE GRADING & EARTHWORK																								
PARKING AND STORAGE CONSTRUCTION																								
TOPSOIL SPREADING																								
PERMANENT SEEDING																								
FINAL INSPECTIONS & REMOVE TEMPORARY EROSION CONTROLS																								

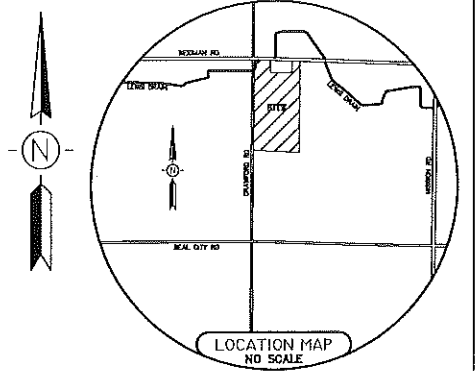
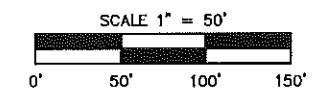
LEGEND	
	PROPOSED WATER MAIN
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED HYDRANT
	PROPOSED GATE VALVE
	PROPOSED S.H. M.H.
	PROPOSED STORM M.H.
	PROPOSED C.B.
	PROPOSED GRADES
	PROPOSED FIRST FLOOR ELEV.
	PROPOSED TOP OF CURB ELEV.
	PROPOSED TOP OF GROUND ELEV.
	PROPOSED TOP OF PAV'T ELEV.
	PROPOSED TOP OF WALK ELEV.
	DENOTES S.E.S.C. KEYING SYSTEM

EX. LEGEND	
	SET 1/2" BAR WITH CAP
	FOUND IRON AS NOTED
	DEED LINE
	DISTANCE NOT TO SCALE
	ASPHALT
	CONCRETE
	GRAVEL
	EXISTING SPOT ELEVATION
	EXISTING CONTOUR ELEVATION
	STORM SEWER
	WATER LINE
	GAS LINE
	UNDERGROUND TELEPHONE
	UNDERGROUND TELEVISION
	UNDERGROUND ELECTRIC
	OVERHEAD WIRES
	EDGE OF WOODS
	SANITARY MANHOLE
	DRAINAGE MANHOLE
	ELECTRIC MANHOLE
	TELEPHONE MANHOLE
	CATCHBASIN
	SANITARY CLEANOUT
	FIRE HYDRANT
	VALVE
	UTILITY POLE
	LIGHT POLE
	GUY WIRE
	UTILITY PEDESTAL
	HANDHOLE
	ELECTRIC METER
	GAS METER
	WATER METER
	SIGN
	POST
	AIR CONDITIONING UNIT



MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET
S-E-S-C KEYING SYSTEM

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
EB	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading obtained).
E12	KWRAP		Use along shorelines, wetlands, or where concentrated flows occur. Slows velocity, reduces sediment load, and reduces erosion.
S51	SILT FENCE		Use adjacent to critical areas, to prevent sediment load sheet flow from entering these areas.
S53	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leaves a construction site.
S5B	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially of construction sites.

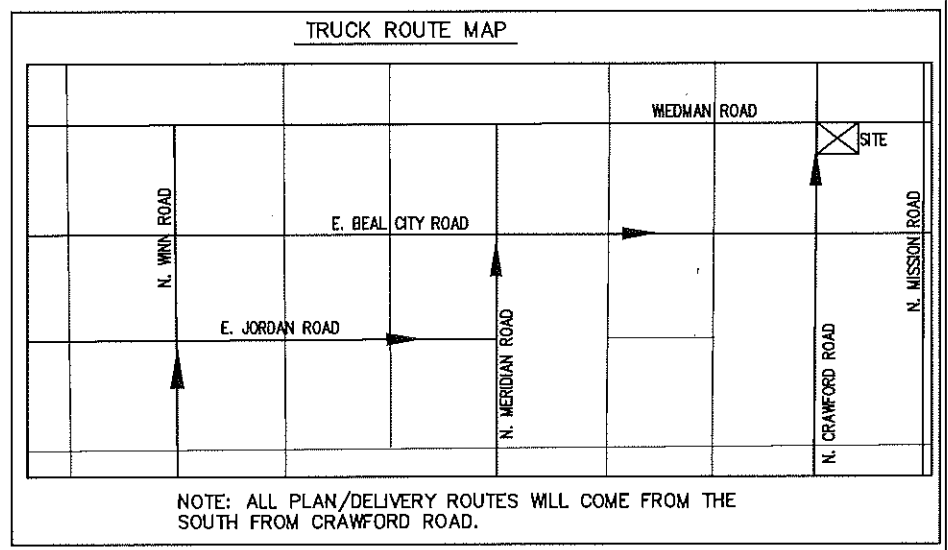


SOIL TYPE:
23B - Ithaca LOAM, 0-4% slopes
24 - Ziegenfuss loam
102A - Selfridge loamy sand, 0-3% slopes

TOTAL ACRES = 74.561 ACRES
AREA DISTURBED = 7.663 ACRES

DENOTES EXISTING DRAINAGE FLOW →
DENOTES PROPOSED DRAINAGE FLOW →

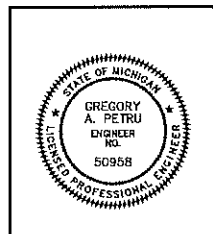
—○— SILT FENCE (TYP.)
- - - LIMITS OF EARTH DISTURBANCE (TYP.)



BENCHMARKS

BENCHMARK #1 ELEV. = 771.14 (NAVD88)
PK NAIL, NORTH SIDE OF UTILITY POLE, SOUTHEAST QUADRANT OF WEIDMAN AND CRAWFORD ROADS, ±8' SOUTH OF EDGE OF ASPHALT OF WEIDMAN ROAD, ±13' EAST OF EDGE OF ASPHALT OF CRAWFORD ROAD

BENCHMARK #2 ELEV. = 770.28 (NAVD88)
PK NAIL, WEST SIDE OF UTILITY POLE, SOUTH OF WEIDMAN ROAD, 10' WEST OF GRAVEL DRIVE TO SUBSTATION, ±8' SOUTH OF EDGE OF ASPHALT OF WEIDMAN ROAD



TAX ID# 09-022-10-003-01

REVISIONS		KESB, INC. KYES ENGINEERING BRYAN LAND SURVEYS	
11-19-25	PRELIMINARY SITE PLAN	2118 HASLETT ROAD, HASLETT, MI 48840	PH: 517-338-1014 FAX: 517-338-0047
1-7-26	SITE PLAN SUBMITTAL	Michigan Office	Ph: 224-781-9800
1-30-26	SITE PLAN SUBMITTAL		
ISABELLA WINDMILL LAYDOWN			
SOIL EROSION & CONTROL PLAN			
SCALE: 1" = 50'	DESIGNER: GAP	APPROVED BY: GAP	
DATE: 11-19-25	PROJECT MGR: GAP	SHEET 4 OF 8	
AUTHORIZED BY:		JOB #:	
GRATROT RENEWABLE ENERGY CENTER		E-104698	

(E8) PERMANENT SEEDING SPECIFICATIONS

When

- To stabilize temporary seeding areas or when an area needs permanent stabilization following completion of construction.
- Also used when vegetation establishment can correct existing soil erosion or sedimentation problem.
- Within 5 days of final grade.

Why

- To stabilize soil and prevent or reduce soil erosion/sedimentation problems from developing.

Where

- Used on construction and earth change sites which require permanent vegetation stabilization.

How

- Review SEPC plan and construction plan to identify areas in need of permanent vegetative stabilization.
- Select perennial grass and ground cover for permanent cover.
- Seed mixes vary. However, they should contain native species.
- Seed mixes should be selected through consultation with a certified seed provider and with consideration of soil type, light, moisture, use applications, and native species content.
- Soil tests should be performed to determine the nutrient and pH levels in the soil. The pH may need to be adjusted to between 6.5 and 7.1.
- Prepare a 3"-5" deep seedbed with the top 3"-4" consisting of loessal.
- Slopes steeper than 1:3 should be roughened.
- Apply seed as soon as possible after seedbed preparation. Seed may be broadcast by hand, hydroseeding, or by using mechanical drills.
- Mulch immediately after seeding.
- Dormant seed mixes are for use after the growing season, using seed which lies dormant in the winter and begins growing as soon as site conditions become favorable.



(E8) PERMANENT SEEDING SPECIFICATIONS

How (cont.)

11. Protect seeded areas from pedestrian or vehicular traffic.
12. Orient concentrated flows away from the seeded area until vegetation is established.

Maintenance

- Inspect weekly and within 24 hours following each rain event in the first few months following installation to be sure seed has germinated and permanent vegetative cover is being established.
- Add supplemental seed as necessary.

Limitations

- Seeds need adequate time to establish.
- May not be appropriate in areas with frequent traffic.
- Seeded areas may require irrigation during dry periods.
- Species success is site specific, consider matching or seeding when necessary.

PERMANENT SEEDING SPECIFICATION
SEED ALL DISTURBED AREAS WITH THE FOLLOWING SEED MIXTURE OF APPROVED EQUAL. MICHIGAN SEEDS - 10% MULCH/90% SEED. SEED MIXTURES ARE APPROVED. APPLY AT A RATE OF 3 LBS./1000 SF.

APPLY SILT STOP OR APPROVED TACKLER TO SEED MIX.



(E8) PERMANENT SEEDING

Planting Zones	Zone 1 (South of 42° 30')		Zone 2 (North of 42° 30')		Zone 3 (North of 45° 30')	
	Lower Perennial (South of 42° 30')	Lower Perennial (North of 42° 30')	Lower Perennial (South of 45° 30')	Lower Perennial (North of 45° 30')	Lower Perennial (South of 45° 30')	Lower Perennial (North of 45° 30')
Seeding Mixture (Perennial Seeds)	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3
Seeding Mixture (Ground Seeding)	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3

Source: Adapted from MDT 1998 Standard Specifications for Construction

Seeding Rate (LBS./1000 SF)	Zone 1 (South of 42° 30')		Zone 2 (North of 42° 30')		Zone 3 (North of 45° 30')	
	Lower Perennial (South of 42° 30')	Lower Perennial (North of 42° 30')	Lower Perennial (South of 45° 30')	Lower Perennial (North of 45° 30')	Lower Perennial (South of 45° 30')	Lower Perennial (North of 45° 30')
Seeding Rate (LBS./1000 SF)	4/3 - 1/3	4/3 - 1/3	4/3 - 1/3	4/3 - 1/3	4/3 - 1/3	4/3 - 1/3
Seeding Rate (LBS./1000 SF)	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3	1/3 - 1/3

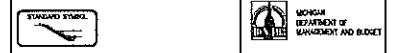
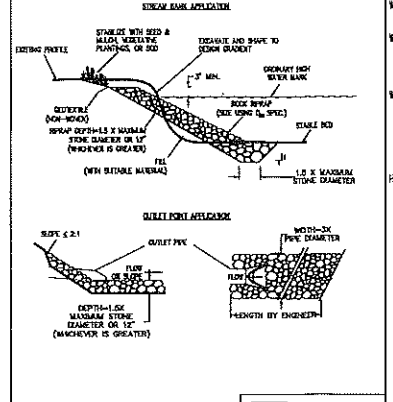
Source: Adapted from USDA NRES Technical Guide #202 (1987)

* Dormant seeding is for use in the fall after the soil temperature reaches consistently below 50°F, prior to the ground freezing. This practice is appropriate if construction on a site is completed in the fall but the seed was not planted prior to recommended seeding dates. No seed germination will take place until spring. A seed season around growth may be added in an attempt to have some fall growth.

- * Mulch must be used with dormant seed.
- * Do not seed when the ground is frozen or snow covered.
- * Do not use a dormant seed mix on grassed waterways.



(E12) RIPRAP



(E12) RIPRAP SPECIFICATIONS

When

- When concentrated water flows have the potential to erode scar, down-cutting, or lateral cutting.

Why

- To prevent loss of land or damage to utilities or structures. In erodible applications, riprap is used to control channel migration and maintain capacity, protect against wave attack, and reduce sediment loss.

Where

- In natural or constructed channels with areas susceptible to erosion from the action of water, ice, or debris, or to damage by livestock or vehicular traffic.
- In shoreline areas where the erosion problem may be solved through simple structural measures.
- On slopes with profiles measuring 1:1.5 or less.

How

1. Review subject site to identify areas subject to concentrated flows or wave/current attack.
2. The appropriateness and extent of riprap placement is site specific and should be determined in the field.
3. The area under review for riprap placement must be shaped and contoured appropriately by grading prior to material placement.
4. Non-erosion geotextile fabric should be installed prior to riprap placement, with upper and toe end of fabric backed or anchored to prevent movement.
5. Riprap placement should be started at a stabilized location and extend to a stabilized or contoured point.
6. Material selected for riprap should be hard, angular, and resistant to weathering. Appropriate material size depends on expected water energy and intended function of the material.



(E12) RIPRAP SPECIFICATIONS

How (cont.)

7. Riprap mixture should be an even mixture of stone sizes based on the average, or D₅₀. This means 50% of the stone, by size, will be larger than the diameter specified, and 50% will be smaller than the size specified. The diameter of the largest stone should not be more than 1.5 times the D₅₀ stone size.
8. See table on the following page for typical riprap stone sizes.
9. Rock shall be placed so that larger rocks are uniformly distributed and in contact with one another. Smaller rocks should fill the voids.
10. When in contact with moving water, riprap will be into a stable bank at the downstream end and will be keyed into the bank at the upstream end. Riprap should extend 3 ft above the ordinary high water mark or to the top of the bank on short slopes. Extend riprap a minimum 10 ft beyond active erosion area.

Maintenance

- * All installations should be inspected immediately after the final rainfall to confirm the stability of the placed material. Follow-up inspections should occur regularly and problems noted for prompt repair if needed.

Limitations

- * Area is cleared prior to the addition of riprap, therefore no areas are preserved with native vegetation.



(S51) SILT FENCE SPECIFICATIONS

When

- A temporary measure for preventing sediment movement.

Why

- Used to prevent sediment suspended in runoff from leaving an earth change area.

Where

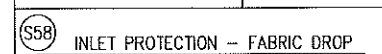
- Use adjacent to critical areas, wetlands, base of slopes, and watercourses.

How

1. Install parallel to a contour.
2. The silt fence should be made of woven geotextile fabric.
3. Silt fence should accommodate an area from 1/2 to 1 acre of drainage per 100' of fence and an slope less than 1:2 (5%).
4. Dig a 6" trench along the area where the fence is to be installed.
5. Place 6" of the silt fence bottom flap into the trench.
6. Backfill the trench with soil and compact the soil on both sides. Create a smooth slope on the up-slope side of the fence.
7. Install wooden stakes 8 - 10' apart and drive into the ground a minimum of 12".
8. Staple the geotextile fabric to the wooden stakes.
9. Join sections of silt fence by overlapping ends together (See drawing).

Maintenance

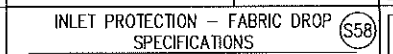
- Inspect frequently and immediately after each storm event. Check several times during prolonged storm events. If necessary, repair immediately.
- If the sediment has reached 1/3 the height of the fence, the soil should be removed and disposed of in a stable upland area.
- The fence should be re-installed if water is seeping underneath it or if the fence has become ineffective.
- Silt fence should be removed once vegetation is established and up-slope area has stabilized.



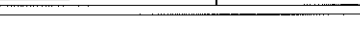
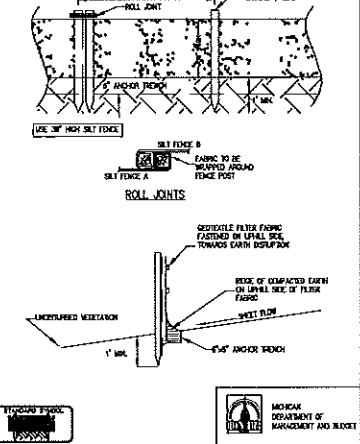
(S51) SILT FENCE SPECIFICATIONS

Limitations

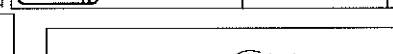
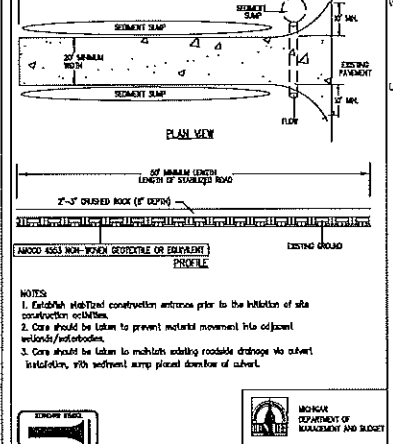
- * Silt fences may cause temporary ponding and could fail if too much water flows through the area.
- * Do not use in areas with concentrated flows.
- * Chance of failure increases if fence is installed incorrectly or if sediment accumulation is not removed.



(S51) SILT FENCE



(S53) STABILIZED CONSTRUCTION ACCESS



(S53) STABILIZED CONSTRUCTION ACCESS SPECIFICATIONS

Maintenance (cont.)

- * Sediment deposited on public rights-of-way shall be removed immediately and returned to the construction site.
- * If soil on such that washing of dirt is required, it shall be done in a wash rack area stabilized with stone, immediately prior to the construction access stabilized corridor.

Limitations

- * Efficacy may be reduced if sediment may be tracked onto roads nearby adjacent areas.



(S53) STABILIZED CONSTRUCTION ACCESS SPECIFICATIONS

When

- Construction traffic is expected to leave a construction site.
- Stabilization of interior construction roads is desired.

Why

- To minimize tracking of sediment onto public roads and to inhibit disturbance of vegetation.

Where

- Stabilized construction entrances shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site shall be washed over the rock/geomembrane corridor.

How

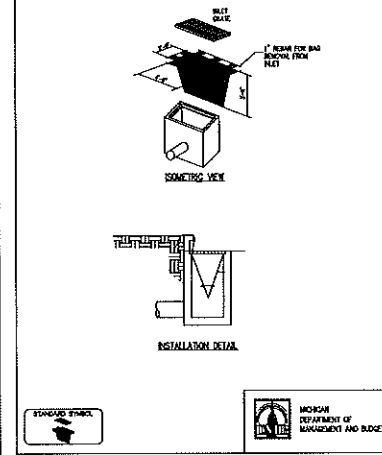
1. Stabilized construction access road should be established at the onset of the construction activities and maintained in place for the duration of the construction project.
2. Installation of this practice should be the responsibility of the site director or accessing contractor.
3. Access location should be cleared of woody vegetation.
4. Non-erosion geotextile fabric shall be placed over the existing ground prior to placing stone.
5. Access size should be a minimum of 50' (30' for single roadway in).
6. Access width should be 12' minimum. Across of the existing road to provide a landing area.
7. Crushed aggregate (2" to 3") or crushed or recycled concrete equivalent, shall be placed at least 6" deep over the length and width of the geomembrane corridor.

Maintenance

- * Periodic inspection and needed maintenance shall be provided after each rain event.
- * Stabilized entrances shall be repaired and rock added as necessary.



(S58) INLET PROTECTION - FABRIC DROP



(S58) INLET PROTECTION - FABRIC DROP SPECIFICATIONS

When

- When sediment laden stormwater requires treatment before entering a stormwater drainage system.

Why

- To prevent sediment from entering stormwater systems.

Where

- Use in or at stormwater inlets, especially at construction sites or in streets.

How

1. A filter fabric bag is hung inside the inlet, beneath the grate.
2. Replace grate, which will hold bag in place.
3. Anchor filter bag with 1" rebar for removal from inlet.
4. Flaps of bag that extend beyond the bag can be buried in soil in earth areas.

Maintenance

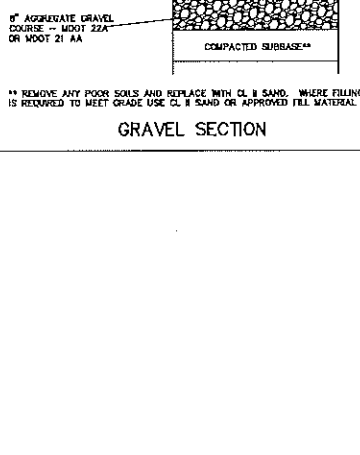
- * Drop inlet filters should be inspected routinely and after each major rain event.
- * Damaged filter bags should be replaced.
- * Clean and/or replace filter bag when 1/2 full.
- * Replace clogged fabric immediately.
- * If needed, fabric repairs immediately upon inspection.
- * Remove entire protective mechanism when upgrated areas are stabilized and streets have been swept.

Limitations

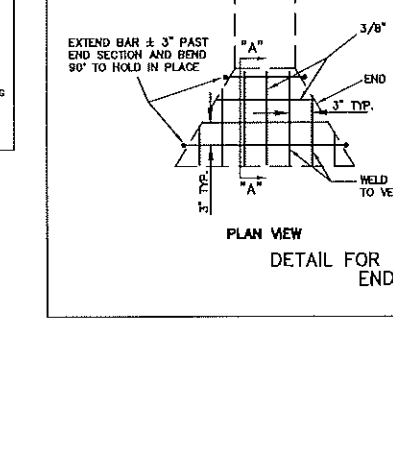
- * Can only accommodate small flow quantities.
- * Requires frequent maintenance.
- * Ponding may occur around storm drains if filter is clogged.



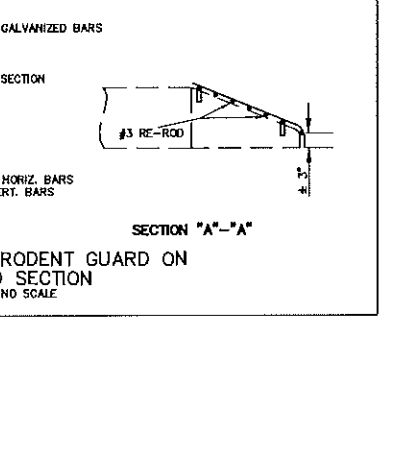
(S58) INLET PROTECTION - FABRIC DROP SPECIFICATIONS



(S58) INLET PROTECTION - FABRIC DROP SPECIFICATIONS



(S58) INLET PROTECTION - FABRIC DROP SPECIFICATIONS



TAX ID# 09-022-10-003-01

	REVISIONS 11-19-25 PRELIMINARY SITE PLAN 1-7-26 SITE PLAN SUBMITTAL 1-30-26 SITE PLAN SUBMITTAL	KEBS, INC. 2116 HASLETT ROAD, HASLETT, MI 48840 PH. 517-336-1014 FAX 517-336-9047 Marshall Office Ph. 268-781-9800	KYES ENGINEERING BRYAN LAND SURVEYS	
	ISABELLA WINDMILL LAYDOWN DETAIL PLAN			
	SCALE: 1" = 50' DATE: 11-19-25 AUTHORIZED BY:	DESIGNER: GAP PROJECT MGR: GAP SHEET 6 OF 8 JOB #:	APPROVED BY:	E-104698
	GREGORY A. PETRU ENGINEER NO. 50958 LICENSED PROFESSIONAL ENGINEER			