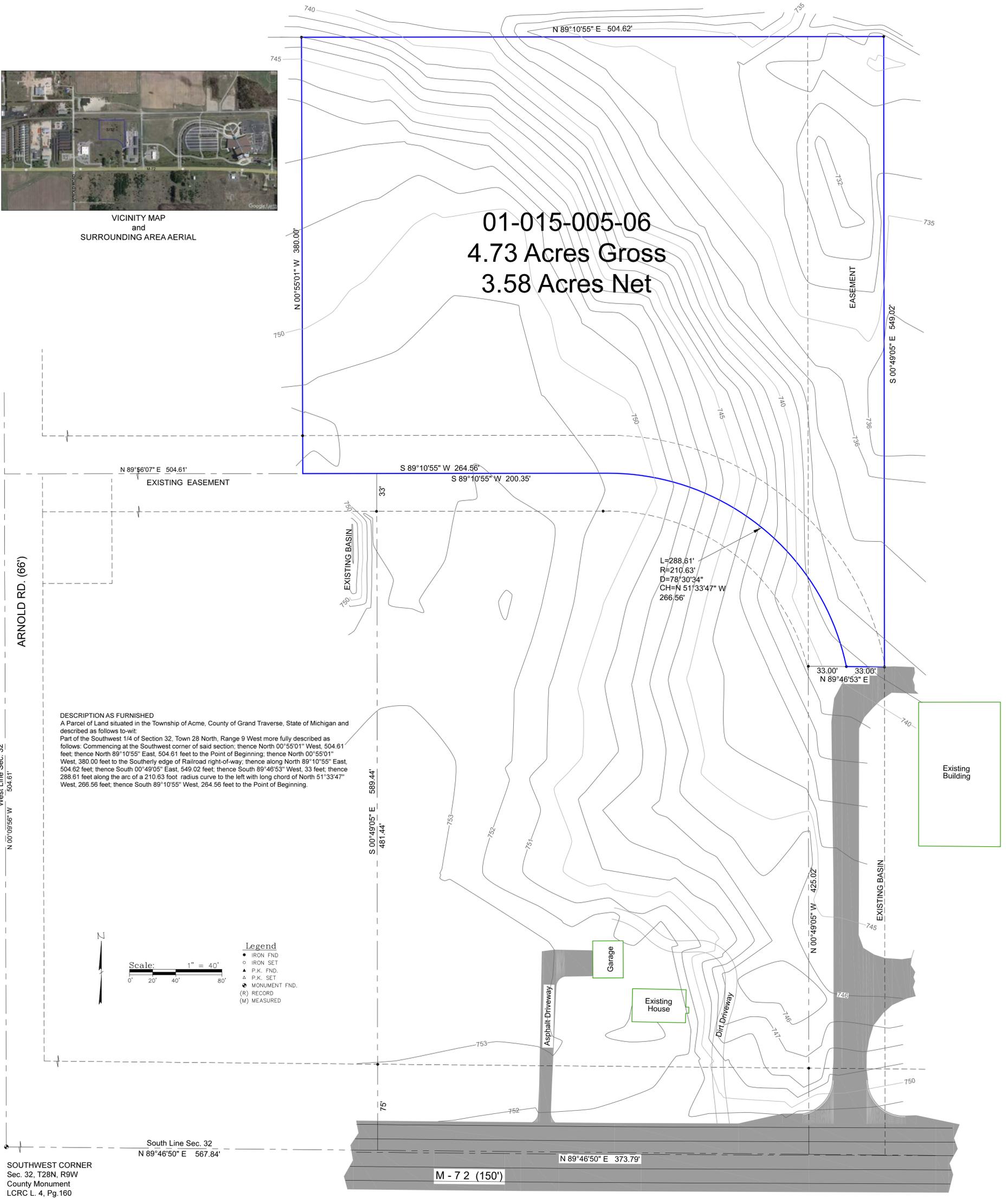




VICINITY MAP  
and  
SURROUNDING AREA AERIAL

**01-015-005-06**  
**4.73 Acres Gross**  
**3.58 Acres Net**



**DESCRIPTION AS FURNISHED**  
A Parcel of Land situated in the Township of Acme, County of Grand Traverse, State of Michigan and described as follows to-wit:  
Part of the Southwest 1/4 of Section 32, Town 28 North, Range 9 West more fully described as follows: Commencing at the Southwest corner of said section; thence North 00°55'01" West, 504.61 feet; thence North 89°10'55" East, 504.61 feet to the Point of Beginning; thence North 00°55'01" West, 380.00 feet to the Southern edge of Railroad right-of-way; thence along North 89°10'55" East, 504.62 feet; thence South 00°49'05" East, 549.02 feet; thence South 89°46'53" West, 33 feet; thence 288.61 feet along the arc of a 210.63 foot radius curve to the left with long chord of North 51°33'47" West, 266.56 feet; thence South 89°10'55" West, 264.56 feet to the Point of Beginning.

**Legend**

- IRON FND
- IRON SET
- ▲ P.I.K. FND.
- ▲ P.I.K. SET
- MONUMENT FND.
- (R) RECORD
- (M) MEASURED

**Scale:** 1" = 40'  
0' 20' 40' 80'

**REVISIONS:**

1.:	
2.:	
3.:	
4.:	

<b>EXISTING CONDITIONS TOPOGRAPHICAL</b>		<b>CLIENT:</b> <i>Josh Francis</i>	
 <b>Michigan Geomatics</b> <b>Land Survey Engineering</b> 5422 Goodrick Road Traverse City, MI 49664 (231) 325-2855 MichiganGeomatics.com		<b>JOB NUMBER:</b> 23-3029 <b>DATE:</b> 07/16/2023 <b>DATE:</b> 07/16/2023 <b>DATE:</b> 07/16/2023	
		<b>Josh Francis, President</b> <b>J. Francis Properties LLC</b> 5939 Scharmen Road Traverse City, MI 49696	
		<b>DATE:</b> 07/16/2023 <b>DATE:</b> 07/16/2023 <b>DATE:</b> 07/16/2023	

01-002-012-00  
Zoned LIW  
Old Rail Road

01-015-005-05  
Zoned LIW  
6140 E. Arnold Rd.  
S&S Mich. Investments LLC

01-015-005-06  
4.73 Acres Gross  
3.58 Acres Net

01-015-005-01  
Zoned LIW  
7201 E. M-72  
Hoffman-Traverse LLC

01-015-005-08  
Zoned LIW  
7053 E. M-72  
Silver Gate Investments LLC

01-015-005-03  
Zoned LIW  
7075 East M-72  
J. Francis Properties LLC

3.4.9 LIW - Light Industrial and Warehousing District

A. Dimensional Standards:

LIW - LIGHT INDUSTRIAL & WAREHOUSING DISTRICT	STANDARD
Minimum Lot Width	150 feet
Minimum Lot Area	20,000 Sq. Ft.
Maximum Lot Coverage	70%
Maximum Impervious Coverage	85%
Front Setback	50 feet
Side Setback	10 feet
Rear Setback	20 feet
Maximum Height	25 feet / 2 stories
Minimum Ground Floor Area	---
Minimum Floor Area / Lot	---
Permitted Location	Rear or side yard
Front Setback	10 feet
Side Setback	10 feet
Rear Setback	20 feet
Principal Building Setback	10 feet
Maximum Height	14 stories / not to exceed 60 feet
Maximum Ground Floor Area / Lot	---
Permitted Location	Side or rear yard only
Front Setback	10 feet
Side Setback	10 feet
Rear Setback	10 feet

B. Additional Requirements:

- Except for landscape improvements and necessary drives and walks, the front yard shall remain clear and shall not be used for storage, parking, loading, unloading or necessary structures.
- Loading space is permitted in the rear and side yard.

**Legend**

- IRON FND
- IRON SET
- ⊙ MONUMENT FND.
- - - EASEMENT LINE
- - - SETBACK LINE
- 🌳 PROPOSED TREE (Per Top. Zoning)
- 🌿 PROPOSED SHRUB/GRASS
- ➔ PROPOSED WATER FLOW
- SF SILT FENCE
- 747 PROPOSED CONTOUR

Scale: 1" = 40'

PROPOSED SEPTIC FIELDS  
Primary and Reserve.  
1200 Sq.Ft. each.

ARNOLD RD. (66')

West Line Sec. 32

South Line Sec. 32  
N 89°46'50" E 567.84'

SOUTHWEST CORNER  
Sec. 32, T28N, R9W  
County Monument  
LCRC L. 4, Pg.160

**PROPOSED SITE PLAN**

CLIENT: *Josh Francis*

 <b>Michigan Geomatics Land Survey Engineering</b> 5422 Goodrick Road Traverse City, MI 49684 (231) 325-2655 MichiganGeomatics.com	Josh Francis, President J. Francis Properties LLC 5939 Scharmen Road Traverse City, MI 49696	JOB NUMBER: <b>23-3029</b> DWN: SDM DATE: 07/16/2023 CK: SH: 2 OF 3
	Michigan Geomatics Land Survey Engineering 5422 Goodrick Road Traverse City, MI 49684 (231) 325-2655 MichiganGeomatics.com	

**8.4 APPLICATION REQUIREMENTS**

1. North arrow and scale as shown on drawing.
2. Boundary lines, dimensions and description as shown on drawing.
3. Location/width of right-of-ways as shown on drawing.
4. Parcel and all adjacent zoned LIV.
5. Subject parcel has been in agricultural use in prior years. Subject parcel is vacant. All proposed structures are shown on drawing. Uses are proposed to be Manufacturing, Assembling & Processing that fits Township Zoning.
6. The existing building to the Southeast and house w/garage to South are the only existing structures within 200 foot radius of proposed buildings.
7. Subject parcel has no natural features, streams or wetlands. Site is vacant grasslands.
8. Trees will be planted as shown to conform with Township Zoning.
9. Contours and spot elevations as shown on drawing.
10. No existing utilities are on site. Proposed utilities will be under or above ground as required and placed according to utility company guidelines and direction.
11. Low intensity downward directional flood lights proposed. One at each service door entrance. Reference architectural plans for additional details.
12. Site is accessed by an existing 66 foot wide easement.
13. No pedestrian or non-motorized facilities are proposed or required.
14. Current land use surrounding parcels are vacant or have commercial uses similar to this proposed use.
15. Two buildings are proposed, each with 4 Units with individual uses. Reference architectural plans for additional details of building room sizes.
16. Reference architectural plans for building elevations.
17. No phasing is proposed with this application.
18. Drawings sealed as required.
19. The topography of subject parcel and surrounding parcels is gently rolling with farm crops as cover. Soils of subject parcel are mixed sand with some gravel all covered with topsoil. There are no water features on subject or adjoining parcels.
20. Drainage plan as shown.
21. Silt fence to be installed as shown.
22. Owner/Developer:  
Josh Francis, President  
J. Francis Properties LLC  
5939 Scharmen Road  
Traverse City, MI 49696
23. Prepared by:  
Scott D. McLain, PS. SIT.  
Michigan Geomatics PS LLC  
5422 Goodrick Road  
Traverse City, MI 49684
24. Proposed use will not significantly increase effluent discharge to the air or increase noise levels emanating from the site.
25. Proposed structures as shown.
26. Areas of change as shown.
27. No deed restrictions are proposed.
28. Water will be provided by private well on-site.
29. Private sanitary sewage drain field will be used.
30. No housing will be provided in subject building. No pedestrian traffic will be generated from this project.

**SOIL EROSION AND SEDIMENTATION CONTROL NOTES**

TOTAL DISTURBED EARTH AREA: 54,660 SqFt. or 1.25 Acres

Contractor shall obtain a copy of the Soil Erosion Permit for this project and familiarize themselves with the requirements thereof prior to commencement of any clearing or earth change activities.

Contractor shall obtain a copy of the Acme Township Stormwater Control ordinance and familiarize themselves with the applicable provisions of Section G, "Soil Erosion Control - Temporary and Permanent".

Stormwater runoff control and soil erosion control measures shall be installed before grading, filling or removal of vegetation cover is initiated.

Earth changes shall be staged to keep the exposed areas of soil as small as practicable.

Contractor shall inspect all soil erosion control measures daily and immediately following a storm event and replace or repair as needed.

**STORMWATER RETENTION (INFILTRATION)**  
Post-Development area of influence (ADI) = 54,660 SqFt. = 1.25 Acres  
Assumed hydrological soil group: "B"  
Surrounding well logs indicate static water at 50 feet depth or more.  
Calculation type: Rational Method  
No deduction for pre-development runoff or infiltration.

Per GTCDC Appendix 8, A 24hour/100year storm event = 5.08 Inches.  
Per Acme Township Stormwater Ordinance, Infiltration basins shall retain a back-to-back 100 year event.

From MDEQ Handbook Appendix "A", Table 2: 5.08 inches rainfall, RCN = 0.75, Runoff Depth = 2.2"  
(2.2"/12) x 54,660SF = 10,021 CF  
2(back-back) x 10,021 = 20,042 CF Retention Required

**PROVIDED RETENTION**  
BASIN "A"  
Proposed Basin Bottom Elev. 727.0 (2' depth)  
Contour 738 area = 1,500 SqFt. x 2' = 3,000 CF  
BASIN "B"  
Proposed Basin Bottom Elev. 727.0 (2' depth)  
Contour 738 area = 1,500 SqFt. x 2' = 3,000 CF  
BASIN "C"  
Proposed Basin Bottom Elev. 746.5 (3' depth)  
Contour 748.5 area = 1,400 SqFt. x 3' = 4,200 CF  
BASIN "D"  
Proposed Basin Bottom Elev. 746.5 (3' depth)  
Contour 748.5 area = 1,400 SqFt. x 3' = 4,200 CF  
BASIN "E"  
Proposed Basin Bottom Elev. 746.0 (3' depth)  
Contour 747.5 area = 1,933 SqFt. x 3' = 5,800 CF

TOTAL PROVIDED = 20,200 CF

**INFILTRATION BASIN MAXIMUM DRAIN TIME CALCULATION**  
Infiltration area = 5,350 SF (Bottom of Basins)  
Infiltration Rate of 0.52 in/hour  
5350/12 x 0.52 = 232 CF/hour  
20,200/232 = 87 hours

**INFILTRATION BASIN MAINTENANCE REQUIREMENTS**

Owner of this facility shall inspect infiltration basin at least annually and immediately following a major storm event to determine sediment depth and immediately remove sediment when sediment level reaches a depth of 12 inches.

**SITE NOTES**

Contractor shall notify MissDig "811" a minimum of 3 working days prior to commencement of any construction activity and shall familiarize themselves with any utilities that may exist but may not be affiliated with the MissDig system. Disruption and repair cost associated with the contractor's failure to do so shall be borne solely by the contractor.

All appropriate permits and approvals shall be obtained and reviewed by contractor prior to commencement of any construction activity.

Silt fence shall be installed by the contractor at locations as noted and as prescribed by County Soil Erosion Sedimentation Control Office, prior to commencement of any stump removal, earth changes or utility work. Silt fence shall be inspected for integrity daily during earthwork operation or following a rain event and shall be maintained and repaired until a sufficient establishment of vegetation occurs as deemed by the engineer. The contractor as directed, prior to final contract closeout, shall remove all silt fence.

Utility work shall be conducted as prescribed in the MDOT 2012 Standard Specifications for Construction or subsequent editions unless otherwise noted.

Contractor shall avoid compacting the soils in the infiltration basin area during excavation and grading. Use of equipment with low earth pressure loading is required. The final 2 feet of depth shall be removed by excavating to finish grade.

Topsoil may be stockpiled on site, to be used for restoration. Excess topsoil shall be stabilized and seeded to prevent erosion.

Aggregate base on drives and parking areas shall consist of 6inches - 22A aggregate.

Temporary seeding with 0.5 Lb./1000 SqFt. of oats, barley or annual ryegrass shall be completed within 48 hours of any earth change.

Retention basin bottoms shall receive minimal topsoil cover and retention basin percolation zones shall remain free of organic or non-permeable soils. Should non-permeable soils be encountered, the engineer shall be notified prior to retention basin construction. Retention basins shall be routinely inspected and cleaned of impermeable or organic soils subsequent to construction should it be found that the absorption capacity of the basin has been lessened do to "siltling".

**GENERAL ZONING NOTES**

**PARKING**  
REQUIRED: 1/4,000 square feet for Manufacturing, Assembling & Processing, 24,000 Total SqFt. / 4,000 SqFt. = 6 Required.  
PROVIDED: 12 Spaces, each 9' x 18', plus 4 handicapped spaces

**SHARED DRIVEWAY 20' WIDE PER 6.2.4 Sec. H**  
PROPOSED 22' WIDE ASPHALT W/O SHOULDER

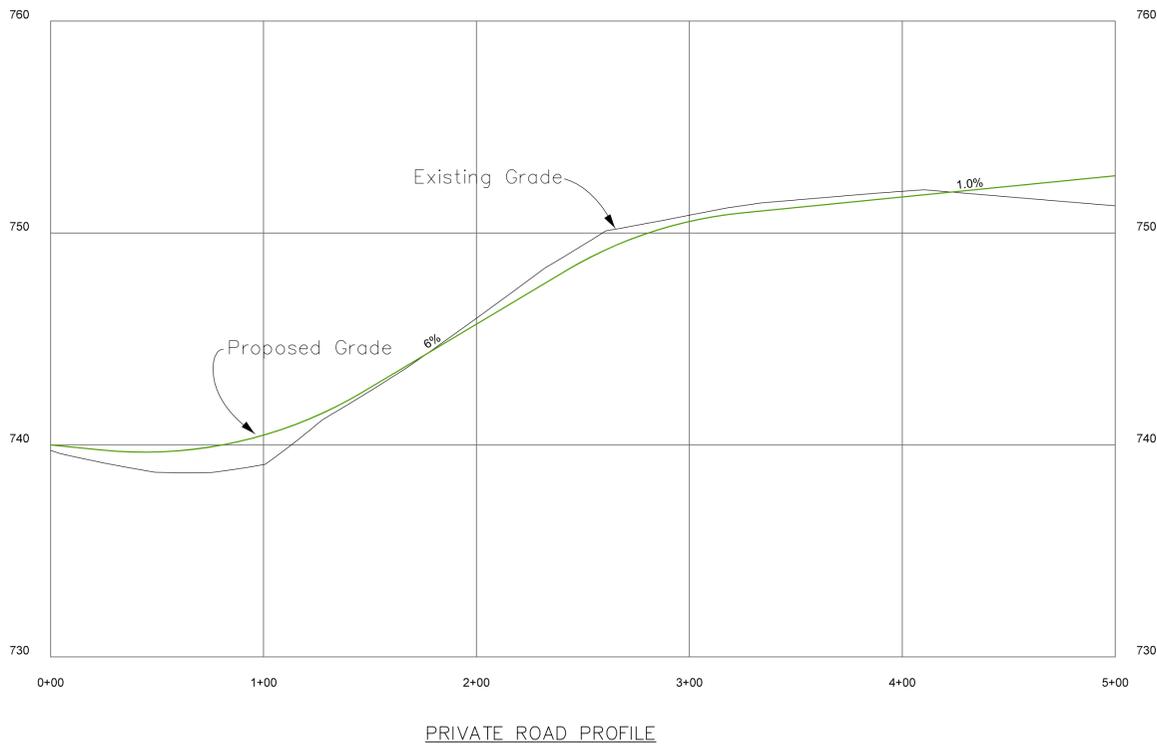
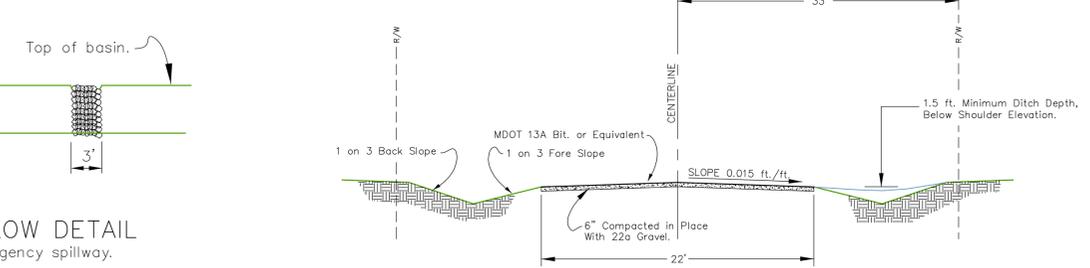
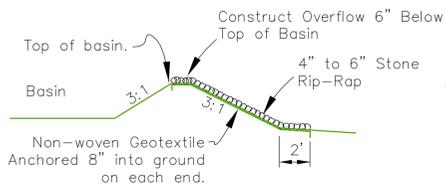
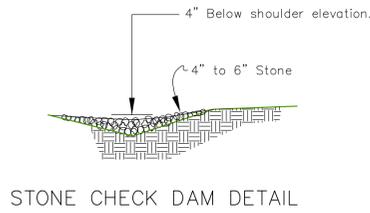
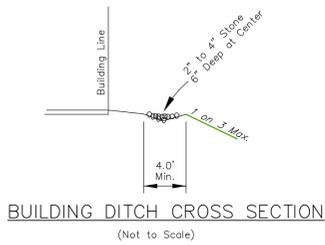
**6.4 LANDSCAPING (Pg. 69)**  
EXISTING VACANT GRASS, NO TREES.  
REQUIRED:  
10' Min. Buffer Width  
6' Min. Screen Height  
Material Wall/Fence, Vegetated, Berm or Combination  
Along Rear and side property lines abutting all non-industrial districts.

**6.4.6**  
B. All properties zoned MHN, RMH, CS, C, CF and LIW shall provide one (1) tree per four thousand (4,000) square feet of unpaved or undeveloped lot area for the first twenty four thousand (24,000) square feet, and one (1) tree per six thousand (6,000) square feet of unpaved or undeveloped lot area over twenty four thousand (24,000) square feet. The Planning Commission may modify or waive this requirement if upon determination that such a modification or waiver is necessitated by site conditions.

**PROPOSED BUFFER:** All adjoining parcels are also zoned LIW, therefore no landscape buffer is required.

**PROPOSED LOT LANDSCAPING**  
160,000 SqFt of undeveloped land.  
6 trees for first 24,000 SqFt.  
23 trees for each additional 6,000 SqFt.  
29 trees total.

**6.5 EXTERIOR LIGHTING**  
SEE ARCHITECTURAL PLANS.  
ALL LIGHTING ON BUILDING.



**REVISIONS:**

- 1.:
- 2.:
- 3.:
- 4.:

**DETAILS AND NOTES**



**Michigan Geomatics  
Land Survey Engineering**

5422 Goodrick Road  
Traverse City, MI 49694  
(231) 325-2655

MichiganGeomatics.com

CLIENT:

*Josh Francis*

Josh Francis, President  
J. Francis Properties LLC  
5939 Scharmen Road  
Traverse City, MI 49696

JOB NUMBER:

**23-3029**

DWN: SDM DATE: 07/16/2023  
CK: SH: 3 OF 3