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**PROJECT TITLE:**

# HANSEN STORAGE STORAGE UNITS GLADSTONE, MI

**OWNER:**

**HANSEN STORAGE  
2328 LUDINGTON ST.  
ESCANABA, MI 49829**

**DESIGNER:**



Engineers—Architects—Project Managers

**ddm** design document manage

Dynamic Design Group, inc.  
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**LOCATION MAP**



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△  
REVISION 4 - 01-11-2021:  
1. ADDED SHEET C3.1 PROPOSED LANDSCAPE PLAN.

△  
REVISION 3 - 11-10-2020  
1. ELIMINATED ALL DRIVEWAY ENTRANCES EXCEPT ONE ON THE SOUTH SIDE.  
2. RELOCATED THE SOUTH DRIVEWAY ENTRANCE AS SHOWN.  
3. RELOCATED THE SOUTH BUILDINGS AS SHOWN TO PROVIDE A WIDER PATH BETWEEN BUILDINGS TO GET TO THE OUTSIDE PARKING FROM THE DRIVEWAY ENTRANCE. ADDED DETAIL 4.

△  
REVISION 2 - 09-04-2020:  
1. CHANGED ORIENTATION OF BUILDINGS ON THE SITE TO NORTHSOUTH VERSUS THE ORIGINAL EASTWEST.

△  
REVISION 1 - 01-23-2020:  
1. INCLUDE CENTER BEARING TRUSSES FOR THE AREAS OVER THE RAISED CEILING OF THE 10X30 BAYS.  
2. INCLUDE 2X6 INTERIOR BEARING WALLS BETWEEN THE 10X30 BAYS.  
3. INCLUDE THICKENED SLAB UNDER INTERIOR BEARING WALLS.  
4. MODIFY CONTROL JOINTS/EXPANSION JOINTS AT THICKENED SLAB.

CONTRACTOR AND/OR OWNER SHALL CONTACT THE ENGINEER WITH ANY QUESTIONS OR TO COORDINATE ANY MODIFICATIONS TO THIS DESIGN PRIOR TO COMPLETING ANY WORK OR ORDERING ANY MATERIALS



SHEET INDEX		
REV. NO.	DATE	DESCRIPTION
G0.1	11-14-2020	TITLE SHEET
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C2.1	11-20-2019	EXISTING GRADES PLAN
C2.2	11-10-2020	PROPOSED GRADES PLAN AND DETAILS
C3.1	01-11-2021	PROPOSED LANDSCAPE PLAN
A1.1	01-23-2020	FLOOR PLANS
A2.1	01-23-2020	ENLARGED FLOOR PLAN AND DETAILS
A1.2	01-23-2020	BUILDING SECTIONS AND DETAILS
S1.1	01-23-2020	SLAB/CONTROL JOINT PLAN AND DETAILS
S1.2	01-23-2020	SHEAR WALL DETAILS

**BIDDING NOTE:**  
1. PRIOR TO BIDDING, THE FOLLOWING IS EXPECTED:  
A. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS WILL VISIT THE SITE AND BECOME COMPLETELY AWARE OF THE EXISTING CONDITIONS.  
B. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS WILL COMPLETELY REVIEW EVERY SHEET OF THIS SET OF PLANS. SHEETS SHALL NOT BE SEPARATED FROM THE SET OF PLANS AND PROVIDED INDIVIDUALLY TO SUBCONTRACTORS. A BID PROVIDED BY THE GENERAL CONTRACTOR IS ACKNOWLEDGEMENT THAT THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS HAVE FILLED THESE REQUIREMENTS. CHANGE ORDERS WILL NOT BE ACCEPTED OR APPROVED DUE TO THE LACK OF UNDERSTANDING OF THE ENTIRE PROJECT.

BUILDING AND CODE DATA			
CODES REFERENCED: • 2015 MICHIGAN BUILDING CODE			
BUILDING DATA: AREA = 8,000 SF			
Clause	Requirement	Allowed	Actual
3	302 Classification		S2-Storage
5	Table 503 Area	13,600 SF	5,800 SF
5	Table 503 - Height	2	1
5	506 Sign Area Modification		not req'd
5	Table 505.4 - Req'd		not req'd
6	602 Separation of Occupancies		VB
9	903 Auto. Sprinkler System		not req'd
9	906 Fire Extinguishers	1 per level	not req'd
10	Table 1004.1.2	0-500 gross	200 SF per unit
	Fl. Area per Occ.		

**JOB NO.: 16-4274  
11-20-2019  
FOR REVIEW FOR CONSTRUCTION  
G0.1**

Z:\00\0104\0411\Hansen Storage - Storage Building - Overview - MFL14-01\_01\_0104\_0411\ASB-STD-DWG 11-10-2019 10:09 AM

**NOTES & GENERAL NOTES**

1. GENERAL
  - 1.1. THE WORD "CONTRACTOR" MEANS THE PRIME CONTRACTOR OR THE CONTRACTOR SCHEDULED TO PERFORM THE WORK.
  - 1.2. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE ENTIRE SET OF CONSTRUCTION DOCUMENTS AND MAKE HIMSELF AWARE OF OTHER DISCIPLINE WORK THAT MAY AFFECT HIS.
  - 1.3. CONTRACTOR SHALL VISIT THE BUILDING SITE AND MAKE HIMSELF AWARE OF CONDITIONS THAT MAY AFFECT HIS WORK.
  - 1.4. CONTRACTOR SHALL INCLUDE PROVISIONS IN HIS BID FOR COORDINATING WORK BETWEEN OTHER TRADES.
  - 1.5. DO NOT SCALE DRAWINGS. USE DIMENSIONS AND ELEVATIONS PROVIDED. IF DIMENSIONS AND ELEVATIONS ARE IN QUESTION, CONTRACTOR SHALL CONTACT THE OFFICE OF THE ENGINEER BEFORE CONTINUING WITH WORK.
  - 1.6. EACH CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND ELEVATIONS AT THE SITE. NEITHER THE OWNER NOR DYNAMIC DESIGN GROUP, INC. ASSUMES RESPONSIBILITY FOR CONDITIONS OR DIMENSIONS THAT ARE EXISTING OR SHOWN AS EXISTING. IF EXISTING ITEMS ARE DIMENSIONED - DIMENSIONS ARE FOR BIDDING PURPOSES ONLY AND SHALL BE VERIFIED BY CONTRACTOR.
  - 1.7. HOLES IN WALLS OR FLOORS SHALL BE PROPERLY SEALED.
  - 1.8. FIELD VERIFY ALL DOOR ROUGH OPENING SIZES PRIOR TO ORDERING OR INSTALLING ANY MATERIALS.
  - 1.9. WHEN CONTRADICTIONS OCCUR IN THESE PLANS AND/OR ERRORS ARE FOUND, THE CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE OFFICE OF THE ENGINEER BEFORE CONTINUING ON THE PROJECT.
  - 1.10. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THESE PLANS, THE CURRENT MICHIGAN BUILDING CODES, ALL LOCAL ORDINANCES AND NORMAL INDUSTRY STANDARDS.
  - 1.11. CONTRACTOR IS TO OBTAIN AND PAY FOR PERMITS, LICENSES, FEES, INSPECTIONS, ETC. AS MAY BE REQUIRED FOR HIS CONTRACTED WORK FOR COMPLETION OF HIS OWN PORTION OF THE PROJECT.
  - 1.12. CONTRACTOR IS RESPONSIBLE FOR CONTACTING "MISS DCF" PRIOR TO PERFORMING ANY DRAINAGE.
  - 1.13. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION RUBBISH AND DEMOLISHED MATERIALS GENERATED UNDER HIS CONTRACTED PORTION OF THE WORK FROM THE SITE ON A WEEKLY BASIS AND AT THE END OF THE JOB AND SHALL DISPOSE OF APPROPRIATELY. THE ENTIRE PROJECT SHALL BE LEFT BROOM CLEAN.
  - 1.14. CONTRACTOR SHALL FOLLOW "OCCUPATIONAL SAFETY AND HEALTH ACT" REQUIREMENTS ISSUED BY THE STATE AND LOCAL LAWS, RULES AND REGULATIONS AS THEY APPLY.
  - 1.15. ALL MATERIALS AND EQUIPMENT INCORPORATED INTO THE WORK SHALL BE NEW, UNLESS OTHERWISE APPROVED BY THE OWNER AND ENGINEER.
  - 1.16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE ERECTION AND MAINTENANCE OF ALL BARRICADES, GUARDRAILS, LIGHTS AND SIGNS NECESSARY FOR PUBLIC SAFETY.
  - 1.17. CONTRACTOR SHALL PROVIDE PROTECTION AGAINST RAIN, WIND, STORMS, COLD OR HEAT SO AS TO MAINTAIN ALL WORK MATERIALS, APPARATUS, EQUIPMENT AND FIXTURES UNDER HIS CONTRACT, INCORPORATED IN THE WORK OR STORED ON SITE FREE FROM INJURY OR DAMAGE. COVER ALL NEW WORK LIKELY TO BE DAMAGED ON A DAILY BASIS.
2. CIVIL
  - 2.1. CONTRACTOR IS RESPONSIBLE FOR PERFORMING STANDARD MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL AS REQUIRED BY CODE AND LOCAL ORDINANCES PRIOR TO PERFORMING ANY SITE WORK.
  - 2.2. SOIL SHALL BE GRADED TO PROVIDE DRAINAGE AWAY FROM THE BUILDING. MAINTAIN THE GRADE LEVELS SHOWN ON THE PLANS AROUND THE BUILDING PERIMETER.
3. STRUCTURAL - GENERAL
  - 3.1. DESIGN LOADS
    - 3.1.1. FLOOR LIVE LOADS
 

STORAGE	= 100 PSF
GROUND SNOW LOAD P <sub>g</sub>	= 60 PSF
ROOF SNOW LOAD PER ASCE 7-10	= 50 PSF
    - EXPOSURE FACTOR, C<sub>e</sub> = 1.0
    - THERMAL FACTOR, C<sub>t</sub> = 1.2
    - IMPORTANCE FACTOR, I = 1.0
    - UNBALANCED CONDITIONS SHALL BE APPLIED.
  - 4.1.2. SNOW LOADS
 

GROUND SNOW LOAD P <sub>g</sub>	= 60 PSF
ROOF SNOW LOAD PER ASCE 7-10	= 50 PSF
  - EXPOSURE FACTOR, C<sub>e</sub> = 1.0
  - THERMAL FACTOR, C<sub>t</sub> = 1.2
  - IMPORTANCE FACTOR, I = 1.0
  - UNBALANCED CONDITIONS SHALL BE APPLIED.

- 4.1.3. WIND LOADS: ASCE 7-10
 

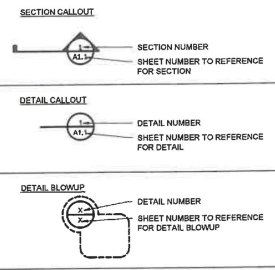
BASIC WIND SPEED	= 115 MPH
IMPORTANCE FACTOR, I	= 1.0
EXPOSURE	= C
EXPOSURE FACTOR, C <sub>e</sub>	= 1.0
THERMAL FACTOR, C <sub>t</sub>	= 1.2
- 4.2. ROOF TRUSS LOADS
  - 4.2.1. ROOF TOP CHORD DEAD LOAD = 6 PSF
  - 4.2.2. ROOF BOTTOM CHORD DEAD LOAD = 6 PSF
- 4.3. SEE ROOF FRAMING PLAN FOR ADDITIONAL DATA.
4. STRUCTURAL - FOUNDATIONS
  - 4.1. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE SOIL CONDITIONS DESCRIBED IN THE DRAWINGS OR THE GEOGRAPHICAL SPECIFICATIONS (IF PROVIDED) OR THE GEOGRAPHICAL REPORT/SOIL BORINGS (IF PROVIDED).
  - 4.2. ALL FOOTINGS AND CONCRETE SLABS SHALL BE PLACED ON WELL COMPACTED UNDISTURBED VIRGIN SOIL OR APPROVED STRUCTURAL FILL AND IT SHALL BE 95% PROCTOR DENSITY OR BETTER. REFER TO SPECIFICATIONS, REPORT/SOIL BORINGS. IF NO GEOGRAPHICAL REPORT/SOIL BORINGS ARE PROVIDED 2000 PSF SOIL BEARING CAPACITY IS PRESUMED. IF SOILS OTHER THAN SANDY SANDY GRAVEL, GRAVEL OR (SW, SP, SM, SC, GM OR GC) AS DEFINED BY THE 2009 MICHIGAN BUILDING CODE ARE ENCOUNTERED NOTIFY THE OFFICE OF THE ENGINEER.
  - 4.4. NO FOUNDATIONS SHALL BE PLACED ON FROZEN SOIL.
  - 4.6. PROTECT IN-PLACE FOUNDATIONS AND SLABS ON GRADE FROM FROST PENETRATIONS AND UNDERMINING UNTIL PROJECT IS COMPLETE.
  - 4.6. CONTRACTOR SHALL EMPLOY MEANS OF CONTROLLING SURFACE AND SUBSURFACE GROUND WATER SO ALL FOUNDATION WORK IS INSTALLED ON DRY SUBGRADE.
  - 4.7. BACKFILL
    - 4.7.1. PLACE AND COMPACT AT 12" LIFTS.
5. STRUCTURAL - CONCRETE
  - 5.1. CONCRETE WORK SHALL CONFORM TO THE LATEST STANDARD OF THE ACI FOR CONCRETE.
  - 5.2. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF
    - 5.2.1. SLABS-ON-GRADE (EXTERIOR) = 4000 PSI
    - 5.2.2. SLABS-ON-GRADE (INTERIOR) = 4000 PSI
    - 5.2.3. FOOTINGS = 3000 PSI
    - 5.2.4. FOUNDATION WALLS & PIERS = 3500 PSI
  - 5.3. ALL EXPOSED EXTERIOR CONCRETE SHALL BE AIR-ENRICHED.
  - 5.4. ALL INTERIOR CONCRETE SLABS SHALL HAVE A 10 mil POLY VAPOR BARRIER (MIN) BELOW THE SLAB.
  - 5.5. PLACE EXPANSION JOINTS AS SHOWN ON DRAWINGS. CUT SLAB CONTROL JOINTS WITH A DEPTH OF 1/4 OF SLAB THICKNESS IN LOCATIONS SHOWN ON DRAWINGS. IF LOCATIONS ARE NOT INDICATED ON DRAWINGS LOCATE CONTROL JOINTS AT THE FOLLOWING SPACING:
    - CONTROL JOINT SPACING = MAXIMUM OF 38 TIMES THE CONCRETE THICKNESS. LENGTH OF SLAB SHALL NOT EXCEED 1 1/2 TIMES THE WIDTH.
6. STRUCTURAL - REINFORCEMENT
  - 6.1. STEEL REINFORCING BARS SHALL CONFORM TO ASTM A615 - GRADE 60 (60,000 PSI)
  - 6.2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A195
  - 6.3. CLEARANCES (COVER) FOR REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL BE
    - 6.3.1. CONCRETE PLACES ON EARTH OR CAST AGAINST EARTH = 5"
    - 6.3.2. ALL OTHERS:
      - 6.3.2.1.1. NO. 5 BAR AND LESS = 1 1/2"
      - 6.3.2.1.2. NO. 6 BAR AND LARGER = 2"
  - 6.4. LAP SPlice BAR LENGTH = 48 X BAR DIA, UNLESS NOTED OTHERWISE
7. STRUCTURAL - STEEL
  - 7.1. STRUCTURAL STEEL WORK SHALL CONFORM TO THE FOLLOWING:
    - 7.1.1. AISC - "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
    - 7.1.2. AISC - "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
    - 7.1.3. AWS - "STRUCTURAL WELDING CODE - STEEL"

- 7.1.4. AISC - "DETAILING FOR STEEL CONSTRUCTION"
- 7.2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
  - 7.2.1. HIGH STRENGTH BOLTS, ASTM A325N (BEARING TYPE)
  - 7.2.2. ANCHOR BOLTS, ASTM A307 OR A36
  - 7.3. ANCHOR BOLTS SHALL BE PRESET WITH TEMPLATES AT REQUIRED LOCATIONS.
  - 7.4. ALL BEAM CONNECTIONS NOT DETAILED, SHALL SUPPORT 1/2 TH TOTAL UNIFORM LOAD CAPACITY FOR THE GIVEN BEAM AND SPAN OR THE INDICATED REACTION, WHICHEVER IS GREATER.
8. STRUCTURAL - WOOD FRAMING
  - 8.1. ALL LUMBER, UNLESS NOTED OTHERWISE, SHALL BE S4S #2 SPF OR BETTER.
  - 8.2. DO NOT NOTCH, CUT OR BORE HOLES (LARGER THAN 3/4") IN WOOD MEMBERS.
  - 8.3. PLYWOOD SHALL BE LAID WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
  - 8.4. STAGGER PLYWOOD (OSB) JOINTS.
  - 8.5. NAILING SHALL BE PER THE NAILING SCHEDULE IN THE CURRENT BUILDING CODE UNLESS OTHERWISE NOTED.
  - 8.6. PRESURE TREATED LUMBER WITH CHROMATED COPPER ARSENATE TO A RETENTION LEVEL OF .80 LBS. PER CUBIC FOOT.
  - 8.7. PROVIDE PRESURE TREATED LUMBER AT THE FOLLOWING LOCATIONS:
    - 8.7.1. WOOD EMBEDDED IN THE GROUND.
    - 8.7.2. WOOD COMPONENTS IN CONTACT WITH CONCRETE OR MASONRY.
  - 8.8. ALL METALS AND/OR FASTENERS IN CONTACT WITH PRESURE TREATED WOOD SHALL BE TREATED AS REQUIRED FOR THE TYPE OF WOOD TREATMENT USED (GALVANIZED AND/OR STAINLESS STEEL) TO PREVENT ACCELERATED CORROSION.
  - 8.9. UTILIZE JOIST HANGER FASTENERS AS SUPPLIED AND/OR REQUIRED BY THE JOIST HANGER MANUFACTURER.
  - 8.10. LAMINATED VENEER LUMBER (LVL) BEAMS SHALL CONFORM TO "TRUSS JOIST CORPORATION" MICROLAM 1.8E SPECIFICATIONS OR EQUAL OR BETTER.
  - 8.11. WOOD HEADERS 2X6 AND SMALLER SHALL BE SPYER OR BETTER. WOOD HEADERS 2X8 AND LARGER SHALL BE DOUGLAS FIR-LARCH #1 GRADE.
  - 8.12. PROVIDE UNLESS HEADERS AS REQUIRED FOR ALL LOUVERED DOORS, OPENINGS, ETC. WHETHER SPECIFICALLY CALLED OUT ON PLANS OR NOT.
  - 8.13. ALL TRUD WALLS ARE AT 40" ON CENTER WITH THE PROPER BLOCKING, PLATES, BRACING, ETC. UNLESS NOTED OTHERWISE.
  - 8.14. ALL MANUFACTURED TRUSSES AND/OR ENGINEERED WOOD PRODUCTS SHALL HAVE SHOP DRAWINGS SUBMITTED TO THE OFFICE OF THE ENGINEER FOR REVIEW AND APPROVAL. DRAWINGS SHALL SHOW SIZE, SPECIES AND GRADE OF LUMBER, SIZE AND LOCATION OF CONNECTORS AND BE SEALED BY AN ENGINEER REGISTERED IN THE STATE OF MICHIGAN. ALL HANGERS REQUIRED FOR TRUSS SYSTEMS SHALL BE DESIGNED AND SUPPLIED BY THE TRUSS MANUFACTURER. CONTRACTOR SHALL VERIFY ALL AS-BUILT DIMENSIONS PRIOR TO ORDERING TRUSSES.

**ABBREVIATIONS**

#	POUND OR NUMBER	CONC.	CONCRETE	FE	FIRE EXTINGUISHER	LANDS	LANDING	RAD	RADIUS	THRU	THROUGH
5	AND	CONT.	CONTINUOUS	FIN	FIRE EXTINGUISHER & CABINET	MAX	MAXIMUM	RD	ROOF DRAIN	TLT.	TOILET
6	AT	CTV	CONTRACTOR TO VERIFY	FLR	FLOOR	MECH	MECHANICAL	REBAR	REINFORCING BAR	T.O.	TOP OF
7	PERCENT	DA	DOOR ACTUATOR	FIN	FINISH	MEZZ	MEZZANINE	REFRIG	REFRIGERATOR	TOP	TOP OF CONCRETE
AB	ANCHOR BOLT	DBL	DOUBLE	FLR	FLOOR	MIN	MINIMUM	REINF.	REINFORCEMENT OR REINFORCE	TOS	TOP OF STEEL
ACT	ACUSTICAL CEILING TILE	DEM.	DEMOLISH OR DEMOLITION	FO	FACE OF	MIR.	MIRROR	REQD.	REQUIRED	TP	TOILET PAPER DISPENSER
AFP	ABOVE FINISHED FLOOR	DF	DRINKING FOUNTAIN	FTG.	FOOTINGS	MIS.	MISCELLANEOUS	ROOM	ROOM	TYP.	TYPICAL
INF.A.	NET FREE AREA	DM	DIMENSION	GALV.	GALVANIZED	MFD.	MOUNTED	ROW	RIGHT OF WAY	UNO	UNLESS NOTED OTHERWISE
ALUM.	ALUMINUM	DR.	DOOR	GR.	GRASS BAR	METL.	METAL	SAN.	SANITARY	UR	URINAL
APPROX.	APPROXIMATE	DRS.	DIMENSIONS	GEN.	GENERAL CONTRACTOR	NFA	NET FREE AREA	SCHED.	SCHEDULE	VERT.	VERTICAL
AIR	AIR CONDITIONING	DR.	DOOR	GEN.	GENERAL CONTRACTOR	NFC	NET IN CONTRACT (AS SUPPLIED BY OWNER INSTALLED BY OWNER)	SCHED.	SCHEDULE	VEST.	VESTIBULE
BET.	BETWEEN	DR.	DOOR	GEN.	GENERAL CONTRACTOR	NOM.	NOMINAL	SCHED.	SCHEDULE	WV	WETH
BO	BY OWNER	DT	DRAIN TILE	HD.	HDR	NTS	NOT TO SCALE	SIM	SIMILAR	WC.	WATER CLOSET
BOT.	BOTTOM	DWG.	DRAWING	HDR.	HEADER	OC	ON CENTER	SPEC.	SPECIFIED OR SPECIFICATION	WO.	WOOD
BSMT.	BASEMENT	EA	EACH	HS	HOSE BIB	OH	OVERHEAD	STL.	STAINLESS STEEL	WH.	WATER HEATER
BY	BETWEEN	EJ	EXPANSION JOINT	HPDL	HIGH PRESSURE DECORATIVE LAMINATE	PJP	PARTIAL JOINT PENETRATION	STD.	STANDARD	WPT.	WORKING POINT
CAB.	CABINET	EQ	EQUAL	HR.	HOUR	P/L	POUNDS PER LINEAL FOOT	STL.	STEEL	WT.	WEIGHT
CB	CATCH BASIN	EQ	EQUAL	INSUL.	INSULATED OR INSULATION	P/P	POUNDS PER SQUARE FOOT	STOR.	STORAGE	W/W	WELDED WIRE FABRIC
CL	CONTROL JOINT	EA	EACH	INT.	INTERIOR	PLUMB.	PLUMBING	STRUC.	STRUCTURE OR STRUCTURAL	SUSP.	SUSPENDED
C/P	COMPLETE JOINT PENETRATION	EQ	EQUAL	INT.	INTERIOR	PLUMB.	PLUMBING	STUD.	STUD	TR.	TRENCH DRAIN
CL	CEILING OR CLOSET	EQ	EQUAL	INT.	INTERIOR	PLUMB.	PLUMBING	T&G	TONGUE AND GROOVE	TEL	TELEPHONE
CLG.	CEILING	EQ	EQUAL	INT.	INTERIOR	PLUMB.	PLUMBING	TEL	TELEPHONE	THK.	THICKNESS
CLR.	CLEAR	EXT.	EXTERIOR	INT.	INTERIOR	PLUMB.	PLUMBING	THK.	THICKNESS		
CMU	CONCRETE MASONRY UNIT	EXT.	EXTERIOR	INT.	INTERIOR	PLUMB.	PLUMBING				
COL.	COLUMN	FD	FLOOR DRAIN	INT.	INTERIOR	PVC	POLYVINYL CHLORIDE				

**DRAWING SYMBOLS KEY**



**FOR REVIEW FOR CONSTRUCTION**

**STORAGE BUILDINGS  
HANSEN STORAGE  
GLADSTONE, MICHIGAN**

Project No. **DSB**  
Drawn By **DSB**  
Checked By **DSB**  
Date **11-20-2019**  
Job No. **19-4412**

DATE

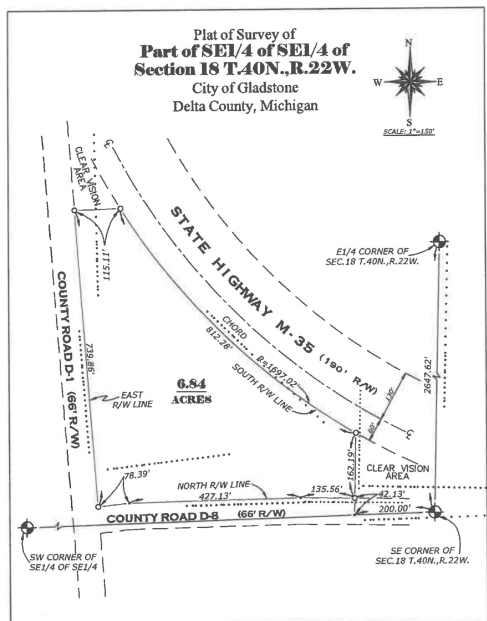
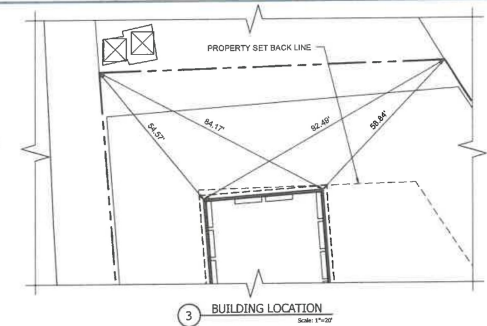
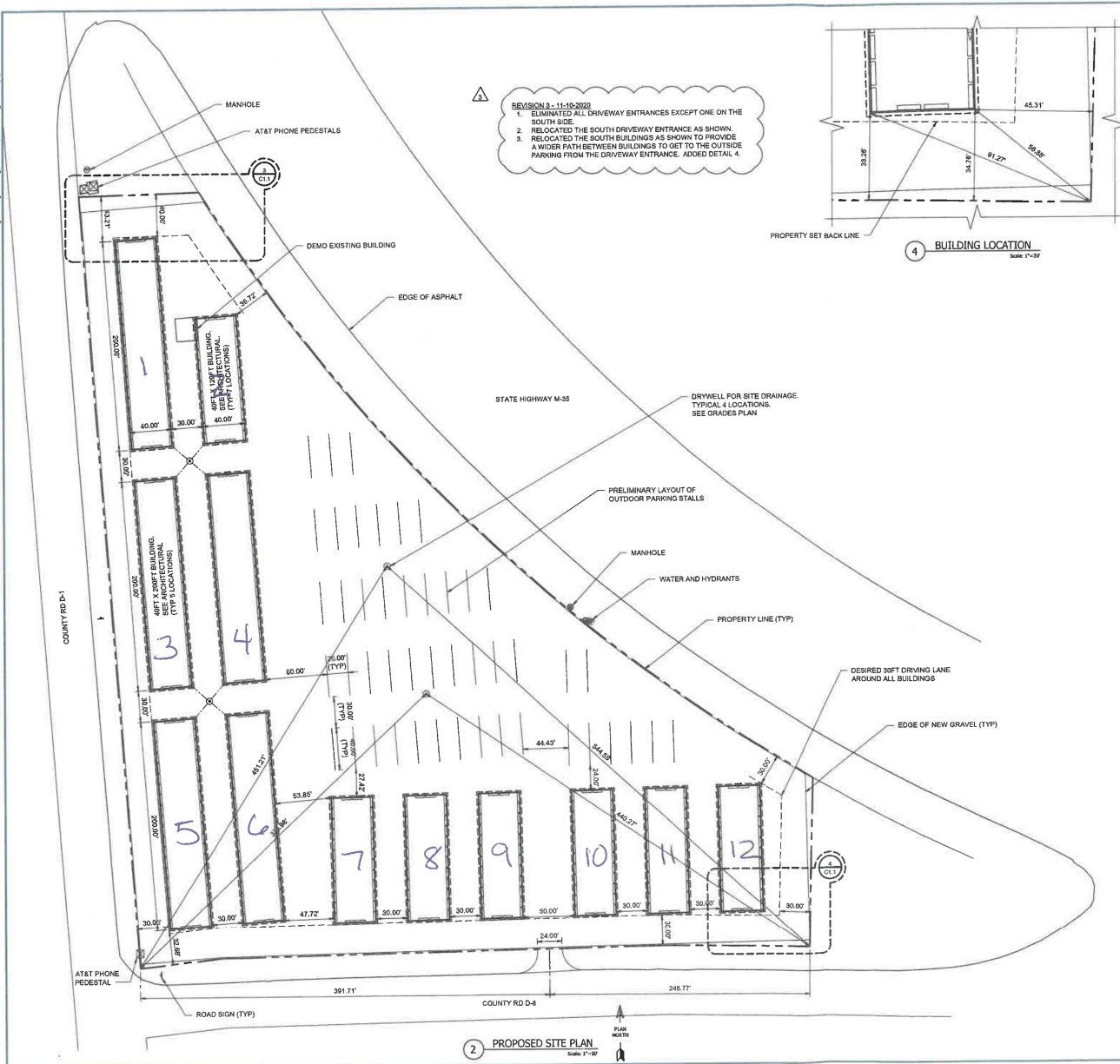
REVISION

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Engineer/Consultant/Program Manager  
Design document manager

**G0.2**

Z:\06\070118\4412 Hansen Storage - Storage Building, Gladstone, MI\18-4412\_Civil.dwg | 11/10/2019 4:57:37 PM



SURVEY FOR HANSEN STORAGE  
SUBJECT BOUNDARY SURVEY  
DATE OF SURVEY DECEMBER 03, 2018  
DATE OF MAPPING DECEMBER 04, 2018  
CERTIFICATE OF SURVEY TO:

HANSEN STORAGE

I, TERENCE S. WANEK, A PROFESSIONAL SURVEYOR IN THE STATE OF MICHIGAN, HEREBY CERTIFY THAT I HAVE MADE A SURVEY OF THE ABOVE DESCRIBED LANDS, THAT IRON MONUMENTS, TOGETHER WITH THOSE FOUND TO HAVE BEEN PLACED OR LOCATED AT THE POSITIONS INDICATED HEREON, THAT THERE ARE NO VISIBLE PHYSICAL ENCROACHMENTS EITHER WAY ACROSS PROPERTY LINES, EXCEPT AS SHOWN, THAT THE RELATIVE ERROR OR SLOPE OF THE UNADJUSTED FIELD MEASUREMENTS OF THE SURVEY IS LESS THAN THE RATIO OF 1 PART IN 50,000.

TERENCE S. WANEK, Professional Surveyor No. 44258

JOB NUMBER | 18359-1812

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Gladstone, Michigan 49829  
Phone (500)756-1755, Fax 756-6467  
t@tds-survey.com  
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REVISION	DATE
2	09-04-2020
3	11-10-2020

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Engineers—Architects—Project Managers  
**ddg** design document manager

**FOR REVIEW FOR CONSTRUCTION**

Project Title  
**STORAGE BUILDINGS  
HANSEN STORAGE  
GLADSTONE, MICHIGAN**

Date **11-20-2019**  
Drawn By **DSB**  
Checked By **DSB**

**C1.1**

Job No. **19-4412**



1 EXISTING GRADES PLAN  
Scale: 1"=30'

FOR REVIEW FOR CONSTRUCTION

REVISION	DATE

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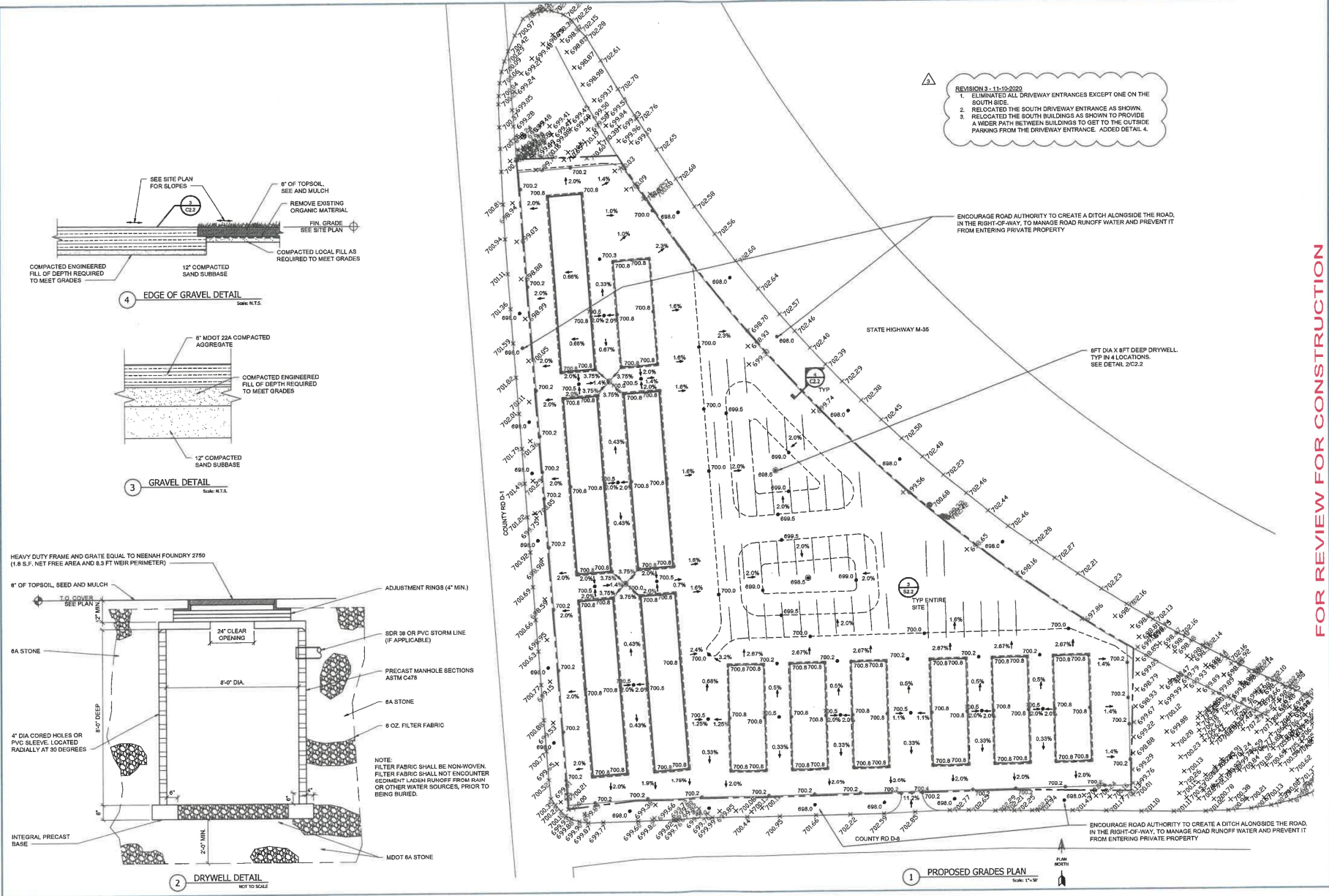
**ddg** design, document manage

Project Title  
**STORAGE BUILDINGS  
 HANSEN STORAGE  
 GLADSTONE, MICHIGAN**

Date 11-20-2019  
 Drawn By DSB  
 Checked By DSB

**C2.1**  
 Job No. 19-4412

2:00 PM 04/11/2019 11:10:09 AM 1:11:00 PM 04/11/2019



REVISION	DATE
2	09-04-2020
3	11-10-2020

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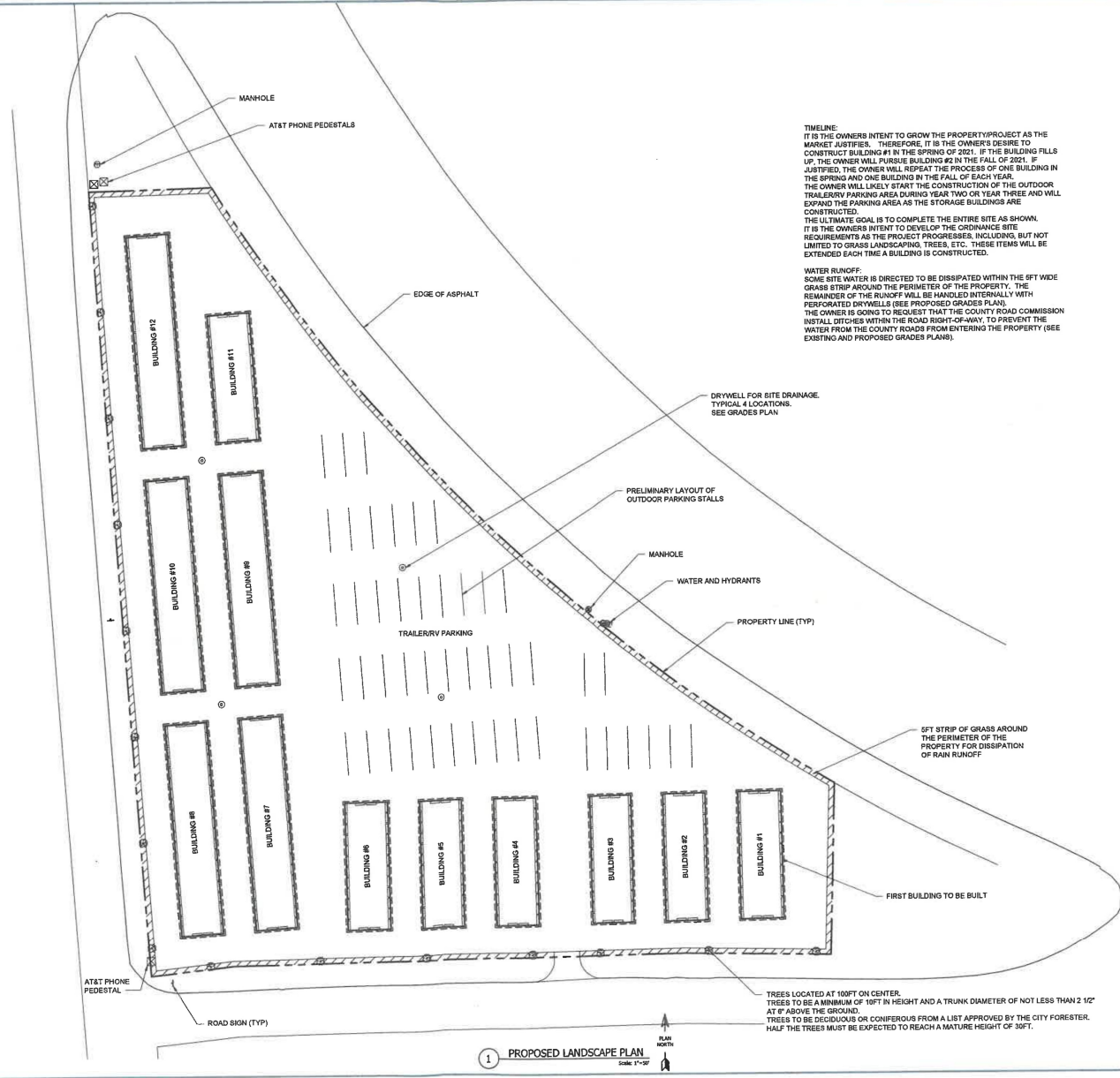
Project Title  
**STORAGE BUILDINGS  
HANSEN STORAGE  
GLADSTONE, MICHIGAN**

Date 11-20-2019  
Drawn By DSB  
Checked By DSB

**C2.2**

Job No. 19-4412

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**TIMELINE:**  
 IT IS THE OWNER'S INTENT TO GROW THE PROPERTY/PROJECT AS THE MARKET JUSTIFIES. THEREFORE, IT IS THE OWNER'S DESIRE TO CONSTRUCT BUILDING #1 IN THE SPRING OF 2021. IF THE BUILDING FILLS UP, THE OWNER WILL PURSUE BUILDING #2 IN THE FALL OF 2021. IF JUSTIFIED, THE OWNER WILL REPEAT THE PROCESS OF ONE BUILDING IN THE SPRING AND ONE BUILDING IN THE FALL OF EACH YEAR. THE OWNER WILL LIKELY START THE CONSTRUCTION OF THE OUTDOOR TRAILER/PARKING AREA DURING YEAR TWO OR YEAR THREE AND WILL EXPAND THE PARKING AREA AS THE STORAGE BUILDINGS ARE CONSTRUCTED.  
 THE ULTIMATE GOAL IS TO COMPLETE THE ENTIRE SITE AS SHOWN. IT IS THE OWNER'S INTENT TO DEVELOP THE ORDINANCE SITE REQUIREMENTS AS THE PROJECT PROGRESSES, INCLUDING, BUT NOT LIMITED TO GRASS LANDSCAPING, TREES, ETC. THESE ITEMS WILL BE EXTENDED EACH TIME A BUILDING IS CONSTRUCTED.

**WATER RUNOFF:**  
 SOME SITE WATER IS DIRECTED TO BE DISSIPATED WITHIN THE 5FT WIDE GRASS STRIP AROUND THE PERIMETER OF THE PROPERTY. THE REMAINDER OF THE RUNOFF WILL BE HANDLED INTERNALLY WITH PERFORATED DRYWELLS (SEE PROPOSED GRADES PLAN). THE OWNER IS GOING TO REQUEST THAT THE COUNTY ROAD COMMISSION INSTALL DITCHES WITHIN THE ROAD RIGHT-OF-WAY, TO PREVENT THE WATER FROM THE COUNTY ROADS FROM ENTERING THE PROPERTY (SEE EXISTING AND PROPOSED GRADES PLANS).

1 PROPOSED LANDSCAPE PLAN  
 Scale: 1"=50'

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REVISION	DATE
4	01-11-2021

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**Dynamic Design Group**  
 Engineers—Architects—Project Managers  
 d4 design document manage

Project Title  
**STORAGE BUILDINGS  
 HANSEN STORAGE  
 GLADSTONE, MICHIGAN**

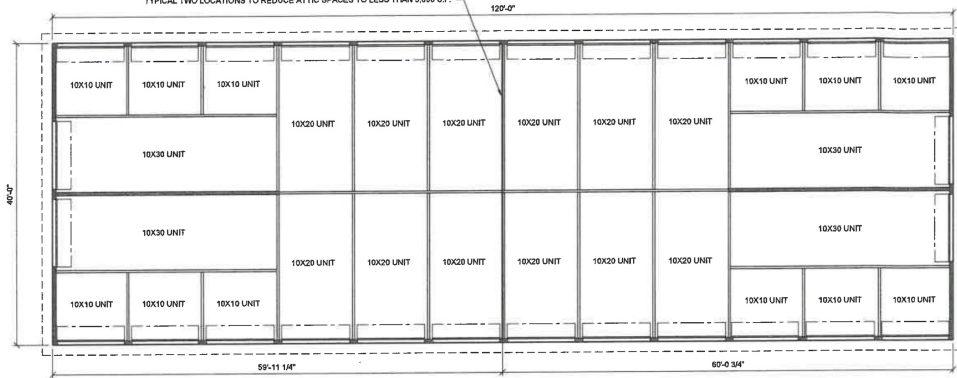
Date 11-20-2019  
 Drawn By DSB  
 Checked By DSB

**C3.1**

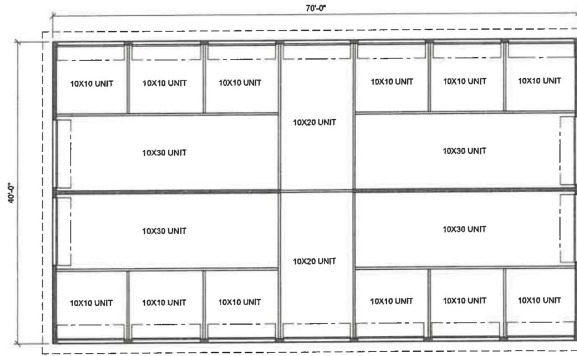
Job No. 19-4412

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REQUIRED ATTIC SPACE SEPARATION. CONTINUE WALL SHEATHING UP ONTO THE SIDE OF THE ROOF TRUSS, TO THE UNDERSIDE OF THE ROOF SHEATHING. TYPICAL TWO LOCATIONS TO REDUCE ATTIC SPACES TO LESS THAN 3,000 S.F.



2 FLOOR PLAN 120  
Scale: 3/16"=1'-0"

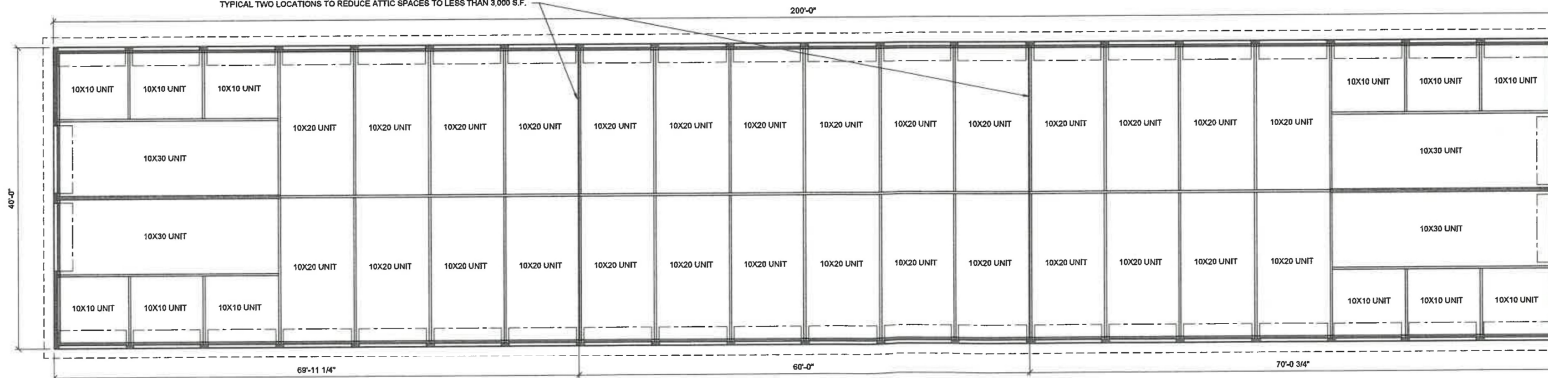


3 FLOOR PLAN 70  
Scale: 3/16"=1'-0"



REVISION 1 - 01-23-2020:  
 1. INCLUDE CENTER BEARING TRUSSES FOR THE AREAS OVER THE RAISED CEILINGS OF THE 10X30 BAYS.  
 2. INCLUDE 2X6 INTERIOR BEARING WALLS BETWEEN THE 10X30 BAYS.  
 3. INCLUDE THICKENED SLAB UNDER INTERIOR BEARING WALLS.  
 4. MODIFY CONTROL JOINTS/EXPANSION JOINTS AT THICKENED SLAB.

REQUIRED ATTIC SPACE SEPARATION. CONTINUE WALL SHEATHING UP ONTO THE SIDE OF THE ROOF TRUSS, TO THE UNDERSIDE OF THE ROOF SHEATHING. TYPICAL TWO LOCATIONS TO REDUCE ATTIC SPACES TO LESS THAN 3,000 S.F.



1 FLOOR PLAN 200  
Scale: 3/16"=1'-0"



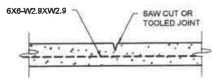
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REVISION	DATE
1	01-23-2020
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Dynamic Design Group, Inc. 900 1st Ave. Ste. 300-A Escanaba, MI ph: 906.768.3300 email: gdm@dgg-ddm.com www.dgg-ddm.com	
Project Title <b>STORAGE BUILDINGS                  HANSEN STORAGE                  GLADSTONE, MICHIGAN</b>	
Date	11-20-2019
Drawn By	DSB
Checked By	DSB
<h1>A1.1</h1>	
Job No.	19-4412

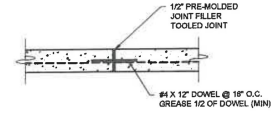




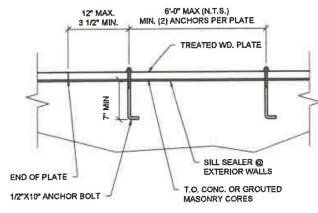
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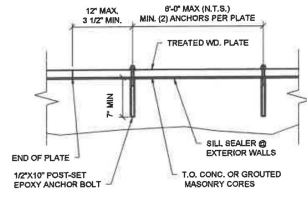
**6 CRACK CONTROL JOINT**  
Scale: 3/4"=1'-0"



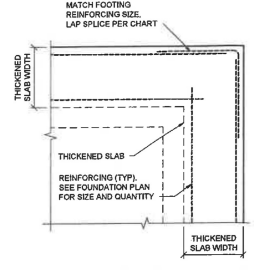
**5 EXPANSION JOINT**  
Scale: 3/4"=1'-0"



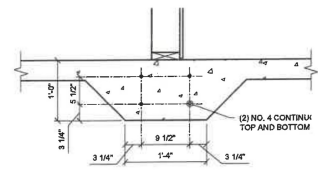
**3 TREATED WALL PLATE DETAILS**  
Scale: 1"=1'-0"



**4 FOOTING CORNER REINFORCEMENT**  
Scale: 1/2"=1'-0"



**7 THICKENED SLAB DETAIL**  
Scale: 1"=1'-0"



**7 THICKENED SLAB DETAIL**  
Scale: 1"=1'-0"

**NOTES:**  
1. CONTRACTOR SHALL VERIFY WITH THE OWNER FOR THE POTENTIAL FOR ANY UNDERSLAB ITEMS. CONTRACTOR IS RESPONSIBLE FOR FINAL LOCATION OF ALL SLAB PENETRATIONS.  
2. EXPANSION JOINTS ARE LOCATED ADJACENT TO THE INTERIOR WALLS. CONTRACTOR SHALL VERIFY THAT THE JOINTS ARE NOT LOCATED BELOW THE WALLS.  
3. CONTROL JOINTS ARE LOCATED AT INTERIOR WALLS, WHERE POSSIBLE. CONTRACTOR SHALL VERIFY THAT THE LOCATION OF CONTROL JOINTS AT WALL LOCATIONS ARE ADJACENT TO THE INTERIOR WALLS AND NOT BELOW THE INTERIOR WALLS.

**SLAB PLAN NOTES & SYMBOLS**  
--- THICKENED SLAB OR FOOTING LOCATION  
--- BEARING WALLS  
--- CONTROL JOINT. SEE DETAIL THIS SHEET.  
--- EXPANSION JOINT. SEE DETAIL THIS SHEET.

**REQUIREMENTS FOR DEFORMED RE-BAR LAP SPLICE LENGTHS**

BAR SIZE NO.	BAR DIAMETER (IN.)	MINIMUM LAP SPLICE LENGTH (IN.)
3	0.375	18
4	0.5	24
5	0.625	30
6	0.75	36
7	0.875	42
8	1.0	48
9	1.125	54

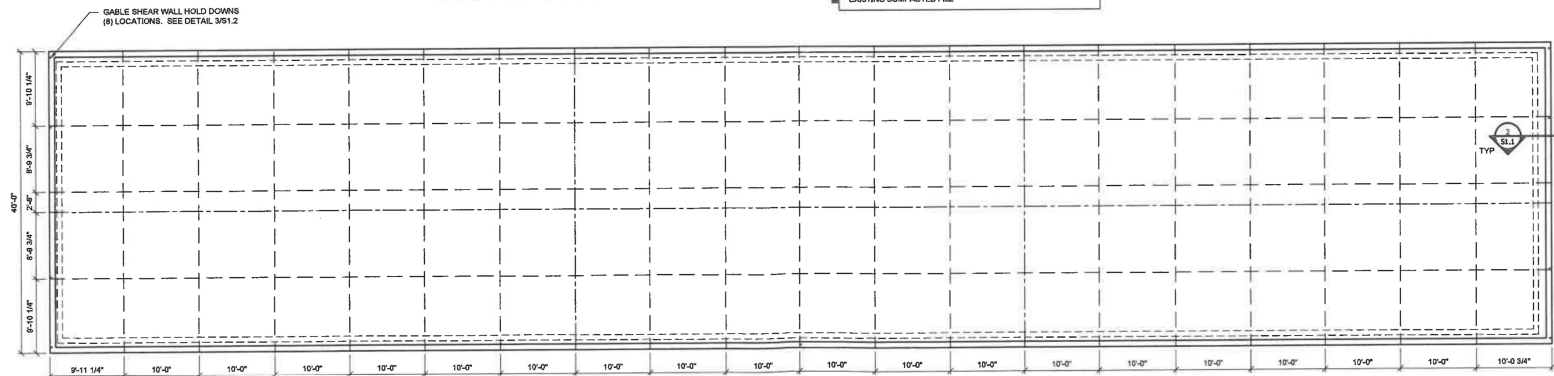
DATE	01-23-2020
REVISION	1

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**Dynamic Design**  
Engineers-Architects-Project Managers  
d.d.g. design document manager

**REVISION 1 - 01-23-2020**  
1. INCLUDE CENTER BEARING TRUSSES FOR THE AREAS OVER THE RAISED CEILING OF THE 10X30 BAYS.  
2. INCLUDE 2X6 INTERIOR BEARING WALLS BETWEEN THE 10X30 BAYS.  
3. INCLUDE THICKENED SLAB UNDER INTERIOR BEARING WALLS.  
4. MODIFY CONTROL JOINTS/EXPANSION JOINTS AT THICKENED SLAB.

ALL INTERIOR CONCRETE SLABS UNLESS NOTED OTHERWISE  
4" CONC. SLAB W/ 6x6x2.9x2.9 WWF OR FIBER REINFORCED  
10 MIL VAPOR BARRIER  
COMPACTED SAND FILL  
EXISTING COMPACTED FILL



**1 SLAB/CONTROL JOINT PLAN**  
Scale: 3/8"=1'-0"

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Project file  
**STORAGE BUILDINGS  
HANSEN STORAGE  
GLADSTONE, MICHIGAN**

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Drawn By: DSB  
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**S1.1**

Job No. 19-4412

