TYRONE TOWNSHIP BOARD MEETING AGENDA MARCH 26, 2024 - 7:00 P.M. (810) 629-8631

CALL TO ORDER – PLEDGE OF ALLEGIANCE – 7:00 P.M.

ROLL CALL

APPROVAL OF AGENDA – OR CHANGES

APPROVAL OF CONSENT AGENDA

Treasurer's Report – February 29, 2024 Clerk's Warrants and Bills – March 21, 2024

COMMUNICATIONS

PUBLIC REMARKS

UNFINISHED BUSINESS

NEW BUSINESS

- 1. Tyrone Party Store Site Plan Review.
- 2. REU bulk purchase and Livingston County purchase offer.
- 3. Final 2023-2024 budget amendment.
- 4. Request to award fire well contract.
- 5. Resolution to extend the solar energy moratorium.
- 6. Resolution for moratorium on wind projects.
- 7. Resolution for moratorium on battery storage systems.
- 8. Renewal of commercial insurance policy for township hall.
- 9. Historic townhouse electrician bids.

MISCELLANEOUS BUSINESS

PUBLIC REMARKS

ADJOURNMENT

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Supervisor Mike Cunningham Clerk Pam Moughler

Please note: Anyone wishing to address the Township Board may do so during Public Remarks. The Tyrone Township Board of Trustees has established a policy limiting the time a person may address the Township Board at a regular or at a special meeting during the Public Remarks section of the agenda to three minutes. The Board reserves the right to place an issue under the New Business section of the agenda if additional discussion is warranted or to respond later either verbally or in writing through an appropriately appointed Township Official. Individuals with disabilities requiring auxiliary aids or services should contact the Tyrone Township Clerk at (810) 629-8631 at least seven days prior to the meeting.

CONSENT AGENDA

Treasurer's Report – February 29, 2024 Clerk's Warrants and Bills – March 21, 2024

Tool Note: Plance			ΤY	RONE TOWNSH	IIP TREA	SURER'S REPORT						
Tord Interact Cip Process (Married Science)				Period er	nding Feb	oruary , 2024					-	
Level (1) Lossed (2) Lossed (2) <thlossed (2)<="" th=""> Lossed (2) <thlosed (2)<="" th=""> <thlossed (2)<="" th=""> Lossed (2)<!--</td--><td></td><td>Interest Cka</td><td>IN</td><td></td><td>Int Pate</td><td>MICHIGAN CLASS</td><td>Int Rate</td><td>F</td><td>LG PEG CD</td><td>Int</td><td></td><td>Grand Totals Each</td></thlossed></thlosed></thlossed>		Interest Cka	IN		Int Pate	MICHIGAN CLASS	Int Rate	F	LG PEG CD	Int		Grand Totals Each
Tuch Fund SX 17116.5 SX 02000 Separation SX 02716 Building & Bin Les SX 02000 Sympo SX 277.48.67 Parking & Bin Les SX 02000 2.99% SX 277.48.67 Roud 244 SX 447.78 Y 142.48.07 4.89% S 00.000 Roud 244 SX 447.78 Y 142.48.07 S 00.000 4.9% S 00.000 Roud 244 SX 447.78 Y 142.48.07 S 00.010.001 S 00.0213.75 2.70% S 456.581.00 Roud Age S 17.50.00 A.9% S 200.213.75 2.70% S 456.581.00 Special Assessments 0.40% S 200.213.75 2.70% S 456.581.00 Special Assessments 0.40% S 200.213.75 2.70% S 456.581.00 Jame Hit Macbia Renoval 226 S 456.50 0.40% S 200.213.75 2.70% S 456.581.00 Special Assessments 0.40% S 200.213.75 S 50.60.00 S 11.422.64 S 40.60% S 11.422.64 S 40.60% S 11.422.64 S 40.60% S 11.422.64 S 40.60% S 50.62% S	General 101	\$973 927 13	\$	5 375 443 94	3.00%		wonting AVG.		atures 8/9/23	Tale	\$	6 349 371 07
Baking Size 145 \$12,283.07 \$107,000.00 2,29% \$227,088.07 Laper Control 212 0.40% 0.40% \$50,02.17 3.40% \$50,02.01 Nording 246 5.44,477.78 \$194,224,40 2.22% 0.40% \$50,02.01 \$50,02.01 Nording 246 5.44,447.78 \$194,024,00 2.24% \$20,0213.75 2.07% \$52,02.22 Lit Yook Gardt 21 2.449,023.37 0.40% \$20,0213.75 2.07% \$54,023.17 Special Assessments 0.40% 0.40% \$20,0213.75 2.07% \$54,023.17 Jaryer Hill Lits 216 524,03 0.40% \$20,0213.75 2.07% \$54,024 Jaryer Hill Lits 216 0.40% 0.40% \$51,026.10 \$52,026.00 \$52,026.00 Ster tack Statistics Removal 230 51,126.26 0.40% \$12,026.00 \$52,025.00 \$51,026.00 Ster tack Statistics Removal 230 51,026.00 0.40% \$12,026.00 \$51,026.00 \$51,026.00 \$51,026.00 \$51,026.00 \$51,026.00 \$51,026.00 \$51,026.00 \$51,026	Tech Fund 141	\$51,781.85	\$	5,000.00	2.99%						Ψ	\$56,781.85
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Index Job Active J Job Active J <thjob active="" j<="" th=""> Job Active J</thjob>	Liquor Control 212	¢04 447 70	¢	404 004 00	0.40%	¢000 047 70	4.050/				¢	\$0.00
Opport (Visp) State Back Stat	Road 245 Revolving 246	\$24,447.78 \$24,966.26	\$ ¢	194,224.80	2.22%	\$283,247.73	4.85%				¢ ¢	501,920.31
Ping 271 S248.029.37 S S200.213.75 2.70% \$44.23.12 Lit Tyrone Grant 281 0.40% 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 50000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 5000 50000 5000 </td <td>Right of Way 259</td> <td>\$45.899.08</td> <td>Ψ</td> <td>37,500.00</td> <td>0.40%</td> <td>ψ200,073.91</td> <td>4.0076</td> <td></td> <td></td> <td></td> <td>Ψ</td> <td>\$45.899.08</td>	Right of Way 259	\$45.899.08	Ψ	37,500.00	0.40%	ψ200,073.91	4.0076				Ψ	\$45.899.08
Li Tyone Grant 231 Unit 5219 Unit 521 Unit 52 Unit	Peg 274	\$248,029.37						\$	200,213.75	2.70%		\$448,243.12
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upper 14 Statistics 0.40% \$5458.30 upper 14 Statistics Statistics \$5458.30 upper 14 Statistics Statistics \$5458.30 Upper 14 Statistics Statistics Statistics Statistics Statistics Statistics Statistics Statistics Statistics Statistics Statistics Particiant Storgs ROM Calc Statistics Statistics Statistics Statistics Particiant Storgs ROM Calc Statistics Statistics Statistics Statistics Particiant Storgs ROM Calc Statistics Statistics Statistis Statistics <	Shannon Glen Rubbish 225	\$040.08 \$1,236.90			0.40%							\$040.08 \$1,236.90
Aging Orden Rational Recover 200 \$ 988.55.4	Javne Hill Rubbish Removal 226	\$4,585.30			0.40%							\$4.585.30
Great Oxis Dr 222 \$11,559,16 0.40% \$11,559,16 Land Springs Robins mercod 233 \$2,287,00 \$2,807,00 \$2,807,00 Silver Land Springs Robins mercod 234 \$1,232,02 \$11,452,04 \$1,232,02 Silver Land Springs Robins mercod 234 \$1,532,070,00 \$5,770,680,74 \$401,323,64 \$2,002,1375 \$6,000,964,000 FRA Account Totals \$1,532,070,00 \$5,770,680,74 \$401,323,64 \$2,002,1375 \$6,000,964,000 Public Safety 205 \$15,228,96 0.00% \$15,228,96 \$15,228,96 Public Safety 205 \$12,283,90 \$15,228,96 \$12,283,90 Public Safety 205 State Bank Survey 5 \$6,421,02 \$0,47% \$6,421,02 Public Safety 205 State Bank Survey 5 \$6,421,02 \$0,47% \$6,421,02 Public Safety 205 Field Mercona CK (57,01) \$13,338,30 \$6,421,02 \$98,904,52 SEVE OXAIT Conta Multiferance SV (4865) \$17,714,422,44 \$5,471,93 \$5,4338,33 Sewer Operation and Multiferance SV (4865) \$17,70,432,45 \$17,643,23 \$	Apple Orchard Rubbish Removal 230	\$985.54										\$985.54
Laurit Springe Rubbish removal 23 \$2,807.00 \$2,807.00 Sprink Tuske Rubbish Removal 23 \$1,236.28 \$1,236.28 Parkin Line Show 238 \$1,482.64 0.47% FBA Account (\$10K Laun to Open) \$15,238.28 \$11,482.64 Public Safety.205 Image Strip 205 \$16,228.96 Public Safety.205 Image Strip 205 Image Strip 205 Public Safety.205 Image Strip 205 Strip 205 Public Safety.205 Image Strip 205 Strip 206 Public Safety.205 Image Strip 205 Strip 206 Public Safety.205 Strip 206 0.00% \$15,228.98 Public Safety.205 Image Strip 205 Strip 206 0.00% \$15,228.98 Public Safety.205 Strip 406 Strip 206 0.00% \$15,228.98 Public Safety.205 Strip 406 Strip 406 \$16,228.98 \$16,228.98 Public Safety.205 Strip 406 Strip 406 \$16,228.98 \$16,228.98 Public Safety.205 Strip 406 Strip 406 \$16,228.98 \$16,228.98 Strip 406	Great Oaks Dr 232	\$11,559.16			0.40%							\$11,559.16
Silver Lake Rubbeh Remonal 224 \$ 12,326,28 \$ 12,326,28 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,38 \$ 12,326,33 \$ 12,326,38 \$ 1	Laural Springs Rubbish removal 233	\$2,807.00										\$2,807.00
EVENT Data S1/1,422-04 0.00% S1/1,422-04 S1/1,522-03 S1/1,522-03 S1/1,522-03 S1/1,522-03 S1/1,522-03 S1/1,522-03 S1/1,522-03 S1/1,522-04 S1/1,523-04 S1/1,51,533-04 S1/1,51,533-04	Silver Lake Rubbish Removal 234	\$1,236.28			0.400/							\$1,236.28
Health Fields Strike Back Strike Back Strike Back FSA Account (\$10K Loan to Open) \$ 15.228.96 0.00% \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 15.228.96 \$ 206.508 \$ 206.508 \$ 206.508 \$ 206.508 \$ 206.508 \$ 206.508 \$ 206.610.862 \$ 56.274.01 \$ 51.063.23 \$ 150.63	Parkin Lane Snow 238	\$11,492.64 \$1,520.757.00	¢	E 770 669 74	0.40%	£404 222 64		¢	200 242 75		•	\$11,492.64
Trumm Holi Cost Trum Holi Cost FAA Account (§10K Loan to Open) \$ 15.228.86 0.00% \$ 15.228.86 Public Safety 205 - State Bank Checking \$ 19.208.18 0.40% \$ \$ 19.228.18 Public Safety 205 - State Bank Checking \$ 19.208.18 0.40% \$ 6.421.02 Public Safety 205 - State Bank Savings \$ 0.421.02 3.04% \$ 6.421.02 Public Safety 205 - State Bank \$ 767.059.24 2.22% \$ \$ 767.059.24 Sever Operation and Maintenance CK (5710) \$ 343.338.30 0.39% \$ \$ 343.338.30 Sever Operation and Maintenance CK (5710) \$ 343.338.30 0.39% \$ \$ 343.338.30 Sever Operation and Maintenance CK (5710) \$ 148.011.30 4.33% \$ \$ 148.011.30 4.33% \$ \$ \$ 3614.837.91 TYRONE TOWNSHIP SEWER 2003 - Sep Flagstar/CHEC Tyrone Sever 03 Ford \$ \$ \$ \$ \$	Account Totals	\$1,539,757.90	Ф	5,779,000.74		\$491,323.04		φ	200,213.75		Þ	0,010,904.03 Health Flex Total
Public Safety 205 State Bank Checking \$ 15,228.96 Public Safety 205 State Bank Checking \$ 19,281.96 \$ 19,281.96 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,282.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ 19,283.16 \$ \$	FSA Account (\$10K Loan to Open))	\$	15.228.96	0.00%						\$	15.228.96
Public Safety 205		,	•	-,							\$	15,228.96
Public Safety 205 Public Safety 206 Public Safety 206 Public Safety 206 - State Bank Checking \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.26.818 0.40% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 0.42% \$ 19.208.818 \$ 19.22% \$ 19.208.818 \$ 19.22% \$ 19.22% \$ 19.22% \$ 19.22% \$ 19.2% </td <td></td>												
Public Statey 205 - State Bank checking \$ 19,268.18 0.40% \$ 19,268.18 0.40% \$ 19,268.18 0.40% \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 19,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,268.18 \$ 10,270.89 \$ 10,270.89 \$ 10,270.89 \$ 10,270.89 \$ 10,270.89 \$ 10,270.89 \$ 10,270.200.13 \$	Public Safety- 205											Public Safety Total
Public Starty 205- Starte Bank Savings 5 6.421.02 3.04% \$ 6.421.02 5.206, 156.08 0.1% \$ 5.206, 156.08 0.1% \$ 5.206, 156.08 0.1% \$ 5.206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 156.08 0.1% \$ 206, 150.08 0.1% \$ 206, 163.08 0.1% \$ 206, 163.08 0.1% \$ 206, 163.08 0.1% \$ 206, 176, 123 0.1% \$ 206, 176, 123 0.1% \$ 106, 163.08 0.1% \$ 106, 163.08	Public Safety 205 - State Bank che	ecking	\$	19,268.18	0.40%						\$	19,268.18
Full Salety 202 Fills with CB S 200, 100,00	Public Safety 205- State Bank Sav	ings	\$ ¢	6,421.02	3.04%						\$ ¢	6,421.02
Standard Back Filestar S 998,004.52 SEWER OAM CHECKING ACCT- 590 Flagstar Sewer Operation and Maintenance CK (5710) \$ 343,338.30 0.95% \$ 943,338.30 S 943,338.30 S 943,338.30 S 5 517,19 4 22% S 167,643.23 S 163,643.791 S 163,643.791 S 163,643.791 S 163,643 S	Public Safety ICS- 205 State Bank		ф \$	767 059 24	2 22%						ф \$	767 059 24
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Laurel springs (864) \$ 51,091.39 1.05% \$ 51,091.39 Irish Hills (865) \$ 194,086.76 1.05% \$ 194,086.76 CIBC- Parkin Lane CD(matures 8/8/2024) 1515 \$ 100,919.45 2.55% \$ 100,919.45 \$ 651,745.28 Total Township Monies \$ 13,381,362.02	Lake Shannon 2018 (863)		\$	274,776.60	1.05%						\$	274,776.60
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CIBC- Parkin Lane CD(matures 8/8/2024) 1515 \$ 100,919.45 2.55% \$ 100,919.45 \$ 651,745.28 \$ 5,370,397.99 \$ 13,381,362.02	Irish Hills (865)		\$	194,086.76	1.05%						\$	194,086.76
\$ 651,745.28 \$ 5,370,397.99 Total Township Monies \$ 13,381,362.02	CIBC- Parkin Lane CD(matures 8/	8/2024) 1515	\$	100,919.45	2.55%						\$	100,919.45
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Total Township Monies \$ 13,381,362.02											-	0,010,001.00
						Total Township Mo	onies				\$	13,381,362.02

03/21/2024 10:44 AMCHECK REGISTER FOR TYRONE TOWNSHIPUser: TMEDORCHECK DATE FROM 03/11/2024 - 03/21/2024 CHECK REGISTER FOR TYRONE TOWNSHIP Page: 1/1

Check Date	Check	Vendor Name	Amount
Bank 001	STATE BANK COMMON	ACCOUNT	
03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024 03/19/2024	23907 23908 23909 23910 23911 23912 23913 23914 23915 23916 23917 23918 23919 23920 23921 23921 23922 23923	ACCIDENT FUND COMPANY OF AT&T MOBILITY BLUE CROSS BLUE SHIELD OF MICHIGAN CARLISLE/WORTMAN ASSOCIATES, INC CHARTER COMMUNICATIONS CONSUMERS ENERGY FOSTER SWIFT GRIFFIN PEST SOLUTIONS, INC HAMILTON'S PROPANE HARRIS & LITERSKI LIVINGSTON COUNTY TREASURER MICHIGAN TOWNSHIPS ASSOCIATION PITNEY BOWES BANK RESERVE ACCOUNT REPUBLIC SERVICES #237 SHOEMAKER SERVICES INC STAPLES ADVANTAGE VC3 INC.	375.75 234.39 12,226.10 1,800.00 134.98 271.95 357.50 51.00 1,755.52 1,584.00 1,200.00 18.00 273.87 529.70 840.00 204.53 124.00
03/19/2024 03/21/2024	23924 23925	VOYA INSTITUTIONAL TRUST COMPANY FOX, MICHAEL J.	1,030.00 1,600.00
001 TOTAL Total of 19 Less 0 Void	uS: 9 Checks: 1 Checks:		24,611.29 0.00
Total of 19	Disbursements:		24,611.29
Bank 022	STATE BANK - PUBL	C SAFETY checking	
03/19/2024 03/19/2024 03/19/2024	1408 1409 1410	CITY OF FENTON HARTLAND AREA FIRE DEPARTMENT ROSATI,SCHULTZ,JOPPICH&AMTSBUECHLER	12,308.00 2,922.00 126.00
022 TOTAL	JS:		
Total of 3 Less 0 Void	Checks: 1 Checks:		15,356.00 0.00
Total of 3	Disbursements:		15,356.00
Bank 108	TAX FUND FLAGSTAR		
03/21/2024 03/21/2024 03/21/2024 03/21/2024 03/21/2024	3451 3452 3453 3454 3455	TYRONE TOWNSHIP TYRONE TOWNSHIP TYRONE TOWNSHIP TYRONE TOWNSHIP TYRONE TOWNSHIP	748,835.73 109,249.53 828,500.00 191,200.54 69,628.80
108 TOTAI	lS:		
Total of 5 Less 0 Void	Checks: d Checks:		1,947,414.60 0.00
Total of 5	Disbursements:		1,947,414.60
Bank 203	TRUST & AGENCY 703	CKG	
03/19/2024 03/19/2024	2077 2078	LIVINGSTON COUNTY TREASURER TYRONE TOWNSHIP	3,917.50 783.51
203 TOTAL	JS:		
Total of 2 Less 0 Voic	Checks: d Checks:		4,701.01 0.00
Total of 2	Disbursements:		4,701.01
REPORT TO	DTALS:		

Total of 29 Checks:	1,992,082.90
Less 0 Void Checks:	0.00
Total of 29 Disbursements:	1,992,082.90

NEW BUSINESS #1

Tyrone Party Store Site Plan Review.

February 27, 2024 Township Board Tyrone Township 8420 Runyan Lake Road Fenton, MI 48430 Subject: Agenda Request – Tyrone Party Store Site Plan Review

Dear Township Board Members:

During our regular meeting on January 9, 2024, the Planning Commission moved to recommend Township Board approval of the amended Tyrone Party Store site plan with conditions (motion carried by unanimous voice vote). The property is located at 9485 Center Rd./ Parcel ID # 4704-17-400-006. The conditions placed on the application have been fulfilled to the satisfaction of the Planning Commission Subcommittee as of 02/26/2024. As principal permitted uses in the Expressway Services (ES) Zoning District, site plan approval by the Township Board is required. It is recommended that the Township Board evaluate whether the current allocation of Residential Equivalency Units (REUs) for sewer is sufficient for the proposed uses or if additional REUs may be required in accordance with Regulatory Ordinance # 43A (Sewer Use and Rate Ordinance). Attached are the application, site plan documents, Planner review, and related correspondence.

Respectfully, Steve Krause Chairman, Planning Commission

TYRONE PARTY STORE 9485 CENTER ROAD FENTON, MICHIGAN 48430



ARCHITECTURAL

- A-0.1 COVER SHEET, DRAWING INDEX
- A-I.0 CODES SHEET
- A-I.I FLOOR PLAN A-I.2 ARCHITECTURAL INTERIOR SCHEDULE
- A-I.3 ARCHITECTURAL EXTERIOR SCHEDULE
- A-I.4 BARRIER FREE DETAILS
- A-2.0 EXTERIOR ELEVATION
- D-I.0 DEMOLITION PLAN

CIVIL

C-4.0

C-2.0 C-3.0

SITE PLAN PHOTOMETRIC PLAN

SURVEY PLAN

STRUCTURAL

S-100 STRUCTURAL NOTES S-101 STRUCTURAL FRAMING PLAN S-102 STRUCTURAL SECTIONS AND DETAILS

ELECTRICAL

E_{-100}	ELECTRICAL POWER PLAN
	LLCINCALIONLNILAN
$E_{-1} \cap I$	ELECTRICAL LIGHTING PLAN
	LLLCHNICAL LIOIHHINO I LAIN
E 102	ELECTRICAL PANEL SCHEDULES
L-IUZ	LLLUTNICAL TANLL SUILDULLS

MECHANICAL

1-001	MECHANICAL NOTES
1-002 1-100	MECHANICAL NOTES MECHANICAL FLOOR PLAN
1-101	MECHANICAL SCHEDULES

- AND RISER DIAGRAM E-103 EMERGENCY LIGHTING PLAN



PLUMBING
P-001 P-100 P-101

BING	
	PLUMBING NOTES PLUMBING FLOOR PLAN
	PLUMBING SCHEDULES

TRIUMPH TRIUMPH Triumph Engineering & Design, Inc. 10775 S. SAGINAW ST. GRAND BLANC, MI 48439 (PH) 810.584.7364 (F) 810.584.7362 Www.triumpheng.com
TYRONE PARTY STORE 9485 CENTER ROAD TYRONE TOWNSHIP, LIVINGSTON COUNTY, MI.
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ISSUED FOR DATE OWNER REVIEW 12/01/2022 PERMITS 07/25/2023 T.T. REVIEW *1 02/14/2024
DRAWN - JDL
CHECKED : JDT SCALE : NONE JOB NO : TE-22-168 SHEET TITLE : COVER SHEET DRAWING INDEY
SHEET A-0.1



DNSTRUCTION TYPE	TYPE II-B (EXISTING)					
	WALLS: 2X6 STUDS ≰ DRYWALL INTERIOR FI					
	ROOF: WOOD ROOF TRUSSES/JOISTS					
	FLOOR: CONCRETE SLAB					
	(NON-SPRINKLED)					
BE GROUP	M - MERCANTILE					

.UMBING FI	XTURES (PER MPC TABLE 403.1)
FACTORY:	WATER CLOSET : M/F per 100 OCC. LAVATORY : M/F per 400 OCC.
REQUIRED:	I M/F WATER CLOSET I M/F LAVATORY
PROVIDED:	2 M/F BARRIER-FREE WATER CLOSET 2 M/F BARRIER-FREE LAVATORY
MPC 403.2	Separate Facilities

Where plumbing fixtures are required, separate facilities shall be provided for each sex. Exceptions: Separate facilities shall not be required for private facilities.

I SERVICE SINK PROVIDED





	DOOR SCHEDULE								
DOOR NUMBER	SIZE	THICKNESS	MATERIAL	TYPE	FRAME	TYPE	hardware Set	REMARKS	
01	6'-0''x7'-0''	1-3/4"	H.M.	FLUSH	H.M.	D	A,D,E		
02	6'-0''x7'-0''	1-3/4"	H.M.	FLUSH	H.M.	D	A,D,E		
03	3'-0''x7'-0''	1-3/4"	WD	FLUSH	H.M.	G	В	PAINT HM FRAME GRAY	
04	3'-0''x7'-0''	1-3/4"	WD	FLUSH	H.M.	G	В	PAINT HM FRAME GRAY	
05	3'-0''x7'-0''	1-3/4"	WD	FLUSH	H.M.	G	В	PAINT HM FRAME GRAY	
06	3'-0''x7'-0''	1-3/4"	Н.М.	FLUSH	H.M.	F	A	PAINT HM FRAME GRAY	
07	3'-0"x3'-6"	1-3/4"	Н.М.	FLUSH	H.M.	Н		1/2 DOOR SWING BOTH DIRECTIONS	
08	3'-0"x3'-6"	1-3/4"	Н.М.	FLUSH	H.M.	Н		1/2 DOOR SWING BOTH DIRECTIONS	
09	3'-0"×3'-6"	1-3/4"	H.M.	FLUSH	H.M.	Н		1/2 DOOR SWING BOTH DIRECTIONS	
10	3'-0''x7'-0''	1-3/4"	H.M.	FLUSH	H.M.	В	A,D,E	PAINT HM FRAME GRAY	

NOTE: COORDINATE HARDWARE WITH OWNER'S SECURITY KEY CARD ACCESS SYSTEM

	WINDOW SCHEDULE						
WINDOW	WINDOW						
NUMBER	SIZE	MATERAL	TYPE	REMARKS			
	4-6'' x 6'-0''	MTL	J				
2	8'-0'' x 2'-0''	MTL	L				
3							
4							
5							

DOOR & WINDOW/FRAME TYPES





2. INSULATION - R-13 3. DRYWALL - % " DRYWALL



HARDWARE A KEY LOCK SET

B PRIVACY LOCK

C PASSAGE SET

D CLOSER E NON-LOCKING AGAINST EGRESS

	ROOM FINISH SCHEDULE														
	FL	.00	DR	В	ASI	E	٧	VAL	L			С	EILI	NG	
ROOM NUMBER	RESILIENT (SHEET/PLANK)	EXPOSED CONC. W/ EPOXY	TERRAZZO EPOXY	RESILIENT	CERAMIC TILE	NONE	DRYWALL - PAINT	TILE BACKER BOARD	SUBWAY TILE	STAINLESS STEEL PLATE	EXPOSED - PAINTED BLACK	EXISTING - PAINT BLACK	METAL PANEL	DROP-IN CEILING W/ GRID	CEILING HEIGHT
01			ullet				lacksquare			ullet				ullet	9'-0
02			lacksquare						\bullet						9'-0
03			ullet					\bullet	\bullet					lacksquare	9'-0
04			ullet					ullet	ullet					lacksquare	9'-0
05			ullet				ullet	ullet							OPEN
06			ullet					ullet	ullet					ullet	9'-0
07 NORTH WALL	ullet						ullet					ullet			OPEN
07 SOUTH WALL	ullet						ullet					ullet			OPEN
07 EAST WALL	ullet						ullet	ullet	ullet			ullet			OPEN
07 WEST WALL							lacksquare					lacksquare			OPEN

NOTES:

1. WALL IN SALES AREA TO BE PAINTED MARATHON GRAY FROM THE TOP OF THE DOOR TO THE FLOOR, AND FROM THE TOP OF THE DOOR A 36" STRIPE MARATHON BLUE FROM THERE UP AND INCLUDING THE CEILING PAINT BLACK. 2. SUBWAY TILE ON EAST WALL IS FROM FINISHED FLOOR TO 8'-0" ABOVE FINISH FLOOR.

- BOTH RESTROOMS SUBWAY TILE IS FROM FINISH FLOOR TO CEILING.
 CAN RETURN ROOM SUBWAY TILE IS FROM FINISHED FLOOR TO CEILING.
- 5. CORRIDOR SUBWAY TILE IS FROM FINISHED FLOOR TO CEILING. 6. VESTIBULE WALLS ARE STAINLESS STEEL PLATE FROM FINISHED FLOOR TO 4'-0"
- ABOVE FINISHED FLOOR, DRYWALL AND PAINT TO CEILING. 7. COLOR OF SUBWAY TILE TO BE SELECTED BY OWNER

8. ALL MARATHON PAINT IS TO BE PER MARATHON PETROLEUM CORPORATION IDENTIFICATION STANDARDS

GENERAL NOTES:

1. DOOR HANDLES, PLUS LATCH LOCKS AND OTHER OPERATING MAXIMUM HEIGHT OF 48" ABOVE FINISH FLOOR. OPERATING DEVICES SHALL BE CAPABLE OF OPERATION WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, THIGH PINCHING OR TWISTING OF WRIST TO OPERATE. ALL MEANS OF EGRESS WHERE SERVING AN OCCUPANT LOAD OF 50 OR MORE PERSONS THE OPENING FORCE FOR INTERIOR SIDE-SWING DOORS WITH-OUT CLOSER SHALL NOT EXCEED 5-POUNDS FORCE. FOR ALL OTHER SIDE-SWING, SLIDING AND FOLDING DOORS, THE DOOR LATCH SHALL RELEASE WHEN SUBJECT TO A 15-POUND FORCE. THE DOOR SHALL SWING TO FULL-OPEN POSITION WHEN SUBJECT TO A 15-POUND FORCE. FORCE SHALL BE APPLIED TO THE LATCH SIDE.

2. ALL MEANS OF EGRESS DOORS SHALL BE READILY OPERABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR EFFORT.

3. ALL EXIT DOORS AND MEANS OF EGRESS DOORS SHALL BE SIDE HINGED, NON-LOCKING AND SWING IN DIRECTION OF EGRESS

LEGEND

DOOR TYPE A HM HOLLOW METAL AG ALUMINUM / GLASS

- AL ALUMINUM
- RM REDI-METAL FRAME
- HC HOLLOW CORE SC SOLID CORE WOOD "LEGACY" DOOR TYPE
- GL GLASS
- WD WOOD INS INSULATED

1	TRIUM TRIUM Triumph Eng & Design 10775 S. SAGI GRAND BLANC (PH) 810.58 (F) 810.58 www.triumpher	D IPH ineering , Inc. NAW ST. , MI 48439 4.7362 9.com
	TYRONE PARTY STORE 9485 CENTER ROAD	TYRONE TOWNSHIP, LIVINGSTON COUNTY, MI.
	WHE ENEY ATTEAPT HIS GERI MUE TO PROJUE ENDO FILE DOCUMENTS IT IS THE RESPORSENTY OF THE BLUERI AND/OF THE OLDH'T TO KERY ALL DISTING CONDING, DAMOSING, DEFINIS, DOC CARAUNCE, MO SFERDATING RECOME COMMOLIGATING CONC CARAUNCE NO SFERDATING FILE APOTHETT UNKSTILL RESPONSENTY FID CAREE MORE MOTHERING OKSTONG, BIT SFELLERD OF THEE RESPONSENTIES OUT THE COLOMAN'S HIVE GERI ACCEPTED DY WINY OF CLEIN SOMALIE THE DESCAN AND PRAGUM DAWANGS OF THE PRIALE REPORT OF BIOLOGIES AND PRIAGUMAN DAWANGS OF THE PRIALE REPORT OF BIOLOGIES AND PRIAGUMAN DAWANGS OF THE PRIALE REPORT OF BIOLOGIES AND PRIAGUMAN DAWANGS FIDA MOTHER PLANE IN FROMINY OF THESE MAN AND DAWANGS FIDA MOTHER PLANE.	design strukten frammen av 2006.2004/Right traumen basnefenng & Design SVC, NC, All Right's reserved
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	SHEET	
	A-1.2	2









2003 MICHIGAN BARRIER FREE, ICC/ANSI A117.1-2003

NOTE:

OBJECTS SUCH AS WALL-MOUNTED FIRE EXTINGUISHERS & DRINKING FOUNTAINS WITH LEADING EDGES MORE THAN 27" AND NOT MORE THAN 80" ABOVE THE FINISHED FLOOR SHALL NOT PROTRUDE MORE THEN 4" INTO A PATH OF CIRCULATION

ALL SIGNS TO TOILET ROOMS AND ANY OTHER ROOMS WITH PERMANENT IDENTIFICATION ARE TO BE TACTILE CHARACTER FORMS IN COMPLIANCE WITH ICC/ANSI SECTIONS 703.2.1 THRU 703.2.8



FORWARD APPROACH



E.W.C. OR DRINKING FOUNTAIN



DRINKING FOUNTAIN

(HC ACCESSIBLE) NOTE: INSULATE EXPOSED PIPING

LINE OF WALL

MA

 \sim

(MAX)

m b

DOOR SIGNAGE

A SIGN SHALL BE PROVIDED IDENTIFYING ACCESSIBLE WASHROOMS. THE SIGN SHALL BE MOUNTED AT A MAXIMUM OF 60" ABOVE FINISHED FLOOR MEASURED FROM THE BASELINE OF THE CHARACTERS ON THE LATCH SIDE OF THE DOOR

LINE OF WALL

2'-8 (MIN)

(STD)

SIGNAGE MOUNTING LOCATION AT DOORS

SIGNS CONTAINING TACTILE CHARACTERS MUST HAVE AN 18" MINIMUM BY 18" MINIMUM CLEARANCE ON THE FLOOR OR GROUND LEVEL, CENTERED ON THE SIGN, BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND A 45 DEGREE OPEN POSITION

BARRIER FREE DETAILS

SNR SANITARY NAPKIN RECEPTACLE TPD DUAL TOILET PAPTER DISPENSER SD LIQUID SOAP DISPENSER EHD ELECTRIC HAND DRYER FD FLOOR DRAIN PROVIDE COMMERCIAL GRADE, STAINLESS STEEL, STAND ALONE WASTE RECEPTACLE (NOT SHOWN) FE FIRE EXTINGUISHER

NOTES: 1. SEE SHEET A-1.2 FOR ELEVATIONS

Triumph Engineering & Design, Inc. 10775 S. SAGINAW ST. GRAND BLANC, MI 48439 (PH) 810.584.7364 (F) 810.584.7362 www.triumpheng.com					
TYRONE PARTY STORE 9485 CENTER ROAD	TYRONE TOWNSHIP, LIVINGSTON COUNTY, MI.				
WLE ENERY AITEAFT HAS BEEN MARE. TO FROIDLE EFFOR FIREE DODAMENTS, IT IS THE FREEDRIG COMMONING. THE BLUEN MOUGH THE CLIMIN VIETY ALL DESING CONTINGS, INMEDDIG ISTERIA, CONC CONTIANCE, AN ESCONDANTS FREEDRIG COMMONIDARY MORCH RICH ADVIENTING OF THESE DODAMING THE ADOVING TO ADVIENTING OF MARES AND OFFORD ADVIENTING OXSTONS, BUT SFEELFIED OF THESE RESPONDENTING THESE EDSIMING OXSTONS, BUT SFEELFIED OF THESE RESPONDENTIE THE EDSIMIN DO OPPAUR EDMINISC TO INCOLORIZING APPROSE ON PARTIES MARE INCOMPATING & EDMINISC THE FRONT FEAMINY THE CONSTITUE THE EDSIMIN NO OPPAUR EDMINISC THE FRONT FEAMINY THE CONSTITUE THE EDSIMIN NO OPPAUR EDMINISC THE REPORT FEAMINY THE CONSTITUE THE EDSIMIN NO OPPAUR EDMINISC THE REPORT FEAMINY THE CONSTITUE THE EDSIMIN NO OPPAURU EDMINISC THE REPORT FEAMING THE PROSENT OF EDSIMIN NO OPPAURU EDMINISC THE REPORT FEAMING THE PROSENT OF EDSIGNAL NO OPPAURU EDMINISC THE REPORT FEAMING THE EDGINARY LIMITE THE EDSIMIN NO OPPAURU EDMINISC THE REPORT FEAMING THE CONSTITUE THE EDSIMIN OF THE PROSENT EDMINISC THE REPORT FEAMING THE CONSTITUE THE EDSIMIN NO OPPAURU EDMINISC THE REPORT FEAMING THE CONSTITUE THE EDSIMIN NO OPPAURU EDMINISC THE REPORT FEAMING THE CONSTITUE THE EDSIMIN NO OPPAURU EDMINISC THE REPORT FEAMING THE EDGINARY LIMITE THE EDSIMING EDMINISC THE REPORT FEAMING THE CONSTITUE THE EDSIMING THE REPORT ADVIENT EDMINISC THE REPORT FEAMING THE CONSTITUE THE EDSIMING THE REPORT ADVIENT EDMINISC THE REPORT FEAMING THE CONSTITUE THE EDSIMING THE REPORT ADVIENT EDMINISC THE REPORT FEAMING THE CONSTITUE THE EDSIMING THE REPORT ADVIENT EDMINISC THE REPORT FEAMING THE REPORT OF THE REPORT ADVIENT FEAMING THE REPORT ADVIENT EDMINISC THE REPORT FEAMING THE REPORT ADVIENT FEAMING THE REPORT ADVIENT EDMINISC THE REPORT FEAMING THE REPORT ADVIENT FEAMING THE REPORT ADVIENT FEAMING THE REPORT ADVIENT FEAMING THE REPORT ADVIENT ADVIE	lean stands ng. 2018:Dopyright Triumh Engneeping & Design SVC, NC, All Rights reserved				
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TRIUMPH

TRIUMPH TRIUMPH Triumph Engineering & Design, Inc. 10775 S. SAGINAW ST. GRAND BLANC, MI 48439 (PH) 810.584.7364 (F) 810.584.7362 www.triumpheng.com	
TYRONE PARTY STORE 9485 CENTER ROAD TYRONE TOWNSHIP, LIVINGSTON COUNTY, MI.	
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DEMOLITION PLAN SHEET D-1.0	

PROPERTY DESCRIPTION:

EXISTING ZONING INFORMATION:

ACCORDING TO THE CURRENT TYRONE TOWNSHIP ZONING ORDINANCE THIS PROPERTY IS CURRENTLY ZONED ES (EXPRESSWAY DISTRICT), AND IS SUBJECT TO THE FOLLOWING CONDITIONS:

1) MINIMUM SITE & LOT AREA = 1 ACRE 2) MINIMUM LOT WIDTH = 150 FEET

- 3) FRONT SETBACK = 100 FEET 4) SIDE SETBACK = 20 FEET
- 5) REAR SETBACK = 20 FEET
- 5) MAXIMUM BUILDING HEIGHT = 30 FEET 7) MAXIMUM BUILDING COVERAGE = 40%

FLOOD PLAIN NOTE:

THIS PROPERTY IS IN ZONE "X" (AREAS OF MINIMAL FLOODING) OF THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 26093C0225D WHICH BEARS AN EFFECTIVE DATE OF SEPTEMBER 17, 2008 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

SURVEYOR NOTES: 1. DATE OF LAST FIELD WORK: MAY 27, 2022.

2. THE BEARINGS ARE RELATIVE TO THE SOUTH LINE OF SECTION 17, BEING N88°01'55"W.

3. THE VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

4. THE CURRENT ZONING AS EVIDENCED BY TYRONE TOWNSHIP IS ES, EXPRESSWAY SERVICE DISTRICT.

5. PER OBSERVATION, THIS SITE IS EITHER CURRENTLY SUPPLIED BY OR HAS ACCESS TO THE FOLLOWING PUBLIC UTILITIES: GAS, ELECTRIC, AND TELEPHONE. EITHER LOCATED ADJACENT TO THE SUBJECT SITE OR WITHIN PUBLIC ROAD RIGHT-OF-WAY.

8. TOTAL PROPERTY AREA = 70,747 SFT or 1.62 ACRES

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS, IF AVAILABLE. THE SURVEYOR AND/OR ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR AND/OR ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR AND/OR ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

SOUTH 1/4 CORNER^J SECTION 17, T4N-R6E FND REMON

PROPERTY DESCRIPTION:

WARRANTY DEED INSTR #2012R-044520 THE FOLLOWING DESCRIBED PREMISES SITUATED IN TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, TO WIT: COMMENCING AT THE SOUTHEAST CORNER OF SECTION 17, TOWN 4 NORTH, RANGE 6 EAST, TYRONE TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, THENCE NORTH 88 DEGREES 01 MINUTES 55 SECONDS WEST ALONG THE SECTION LINE 715.50 FEET TO A POINT OF BEGINNING; THENCE NORTH 24 DEGREES 09 MINUTES 57 SECONDS EAST 305.64 FEET; THENCE SOUTH 88 DEGREES 01 MINUTES 55 SECONDS EAST 250.00 FEET; THENCE SOUTH 24 DEGREES 09 MINUTES 57 SECONDS WEST 305.64 FEET TO THE SOUTH LINE OF SECTION 17; THENCE NORTH 88 DEGREES 01 MINUTES 55 SECONDS WEST 250.00 FEET TO THE POINT OF BEGINNING. SUBJECT TO EASEMENT FOR HIGHWAY PURPOSES IN THE SOUTH 33 FEET OF SAID DESCRIPTION AND ALSO IN THAT PART OF SAID DESCRIPTION WHICH IS PART OF THE SOUTH 50 FEET OF THE EAST 585.5 FEET OF SECTION 17 AND ALSO ANY OTHER RESTRICTIONS AND EASEMENTS OF RECORD; EXCEPTING ALL OIL, GAS AND OTHER MINERAL RIGHTS;

EXISTING ZONING INFORMATION:

ACCORDING TO THE CURRENT TYRONE TOWNSHIP ZONING ORDINANCE THIS PROPERTY IS CURRENTLY ZONED ES (EXPRESSWAY DISTRICT), AND IS SUBJECT TO THE FOLLOWING CONDITIONS:

) MINIMUM SITE & LOT AREA = 1 ACRE 2) MINIMUM LOT WIDTH = 150 FEET

- \mathbf{FRONT} SETBACK = 100 FEET
- 4) SIDE SETBACK = 20 FEET
- 5) REAR SETBACK = 20 FEET
- 5) Maximum Building Height = 30 Feet 7) MAXIMUM BUILDING COVERAGE = 40%

FLOOD PLAIN NOTE:

THIS PROPERTY IS IN ZONE "X" (AREAS OF MINIMAL FLOODING) OF THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NO. 26093C0225D WHICH BEARS AN EFFECTIVE DATE OF SEPTEMBER 17, 2008 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.

SURVEYOR NOTES: 1. DATE OF LAST FIELD WORK: MAY 27, 2022.

2. THE BEARINGS ARE RELATIVE TO THE SOUTH LINE OF SECTION 17, BEING N88°01'55"W.

3. THE VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

4. THE CURRENT ZONING AS EVIDENCED BY TYRONE TOWNSHIP IS ES, EXPRESSWAY SERVICE DISTRICT.

5. PER OBSERVATION, THIS SITE IS EITHER CURRENTLY SUPPLIED BY OR HAS ACCESS TO THE FOLLOWING PUBLIC UTILITIES: GAS. ELECTRIC. AND TELEPHONE. EITHER LOCATED ADJACENT TO THE SUBJECT SITE OR WITHIN PUBLIC ROAD RIGHT-OF-WAY.

8. TOTAL PROPERTY AREA = 70,747 SFT or 1.62 ACRES

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS, IF AVAILABLE. THE SURVEYOR AND/OR ENGINEER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR AND/OR ENGINEER FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR AND/OR ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

NOTES:

1. MAKE PAVEMENT REPAIRS TO ASSURE SAFE CIRCULATION OF THE SITE.

SOUTH 1/4 CORNER SECTION 17, T4N-R6E FND REMON

15" CULVERT

EX ASPH PAVEMENT

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8	+1.3	+ ^{1.1}	+1.0	+0.9	+0.7	+0.6	+0.6	+0.7	+0.9	+ ^{1.2}	+ ^{1.7}	+2.1	+ ^{2.2}												Π
8	+0.6	+0.5	+0.4	+0.4	+0.4	+^{0.4} 50'	+ 0.4 Road R/W	+0.6 Line	+0.8	+1.1	+1.4	+ ^{1.7}	+1.7	A CE		*									
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EX ASPH PAVEMENT

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DEMOLITION NOTES

DEVICES.

- 1. CONTRACTORS SHALL READ ENTIRE SET AND REPORT ANY REQUEST FOR INFORMATION TO THE ARCHITECT FOR DESIGN CLARIFICATION, DIMENSIONS ARE TO BE VERIFIED BY CONTRACTOR IN FIELD. NOTIFY ARCHITECT FOR CLARIFICATION AS REQUIRED.
- 2. ALL ADJOINING PUBLIC AND PRIVATE PROPERTY SHALL BE PROTECTED FROM DAMAGE CAUSED BY CONSTRUCTION.
- 3. CONDUCT DEMOLITION TO MINIMIZE INTERFERENCE WITH ADJACENT SPACES. MAINTAIN PROTECTED EGRESS AND ACCESS AT ALL TIMES.
- 4. PROVIDE, ERECT, AND MAINTAIN TEMPORARY BARRIERS AND SECURITY
- 5. DO NOT CLOSE OR OBSTRUCT EGRESS CORRIDORS.
- 6. CEASE OPERATIONS AND NOTIFY OWNER/ARCHITECT IMMEDIATELY IF ADJACENT STRUCTURES APPEAR TO BE IN DANGER. DO NOT RESUME OPERATIONS UNTIL CORRECTIVE MEASURES HAVE BEEN TAKEN.
- 7. ALL DEMOLISHED MATERIAL SHALL BE REMOVED BY THE CONTRACTOR FROM THE SITE AND DISPOSED OF IN A PROPER AND LEGAL MANNER. THE SELECTION OF THE DUMP SITE AND DISPOSITION OF MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 8. WORK IN THE AREA SHALL INCLUDE THE DISCONNECTION, REMOVAL, RELOCATION, AND RECONNECTION COMPLETE IN ALL RESPECTS OF ALL ITEMS SHOWN ON THE PLANS AND/OR OTHERWISE REQUIRED TO SUIT THE DESIGN INTENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE PROJECT SITE TO CORRECTLY ASCERTAIN THE SCOPE OF SERVICES AND TO INCLUDE ALL PERTINENT COSTS IN THEIR BID.
- 9. THE CONTRACTOR IS TO PROVIDE ALL TEMPORARY SHORING, BRACING, AND SUPPORT NECESSARY TO MAINTAIN EXISTING FLOOR AND ROOF ELEVATIONS DURING DEMOLITION.
- 10. EXISTING SPACE THAT IS NOT IN CONTRACT SHALL REMAIN IN OPERATION. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR UNINTERRUPTED OPERATION OF EXISTING BUSINESS IN BUILDING. NOTIFY ARCHITECT AND OWNER OF CONDITIONS THAT MAY RESTRICT BUSINESS OPERATION.

WOOD FRAMING

- 1. DIMENSIONAL FRAMING MATERIAL SHALL BEAR THE GRADE MARK OF AN ALSC APPROVED AGENCY AND SHALL HAVE MET THE REQUIREMENTS FOR:
- A. PLATES AND BLOCKING HEM FIR NO. 2 OR BETTER B. REFER TO PLANS FOR THE LOAD BEARING STUD WALL SPECIFICATIONS.
- 2. ROOF SHEATHING AT THE SLOPED ROOF AREAS SHALL BE 1/2 INCH APA RATED WITH A PANEL SPAN RATING OF 32/16 AND SHALL BE EXTERIOR GRADE.
- 3. NAIL ROOF DECK TO SUPPORTS WITH 8D NAILS SPACED AT 6 INCHES O.C. AT SUPPORTED EDGES AND AT 12 INCHES O.C. AT INTERMEDIATE SUPPORTS.
- 4. ALL FRAMING SHALL BE ANCHORED TO SUPPORTS USING SIMPSON STRONG TIE CONNECTORS OR EQUAL. SEE DETAILS FOR SPECIFIC REQUIREMENTS.
- 5. ALL NAILS FOR NAILING OF STRUCTURAL LUMBER SHALL BE COMMON NAILS. ALL NAILING SHALL COMPLY WITH THE RECOMMENDED NAILING SCHEDULE "TABLE 1" OF "THE MANUAL OF HOUSE FRAMING" BY NFPA UNLESS NOTED OTHERWISE.
- 6. ALL FRAMING SHALL BE ERECTED TRUE LEVEL AND/OR PLUMB. MEMBERS SHALL BE SECURELY NAILED OR BOLTED IN PLACE AS DETAILED AT THE PROPER LOCATIONS OR SPACING INDICATED. ALL FRAMING MEMBERS SHALL BE OF FULL LENGTH WITHOUT PIECES ADDED OR SPLICED. FURRING, BLOCKING, NAILERS, ETC. SHALL BE SECURELY ANCHORED IN PLACE.
- 7. COMPLY WITH THE RECOMMENDATIONS AND PRACTICES OF THE AITC, NFPA AND TIP FOR THE INSTALLATION OF ALL WOOD FRAMING.
- 8. ALL WOOD IN CONTACT WITH MASONRY OF CONCRETE SHALL BE TREATED.
- 9. PROVIDE ONE TRIMMER AND END SUPPORTS AS SPECIFIED ON HEADER SCHEDULE AT THE END OF ALL HEADERS. PROVIDE FILL PATES AS NEEDED UNLESS NOTED OTHERWISE. IN EXTERIOR WALLS, PROVIDE ONE FULL HEIGHT STUD TRIMMER FOR EACH 3'-0" OF WIDTH AT EACH END. SUFFICIENTLY ANCHOR ALL BEAMS AT EACH BEARING END.
- 10. LVL ON PLAN INDICATES THE LOCATIONS OF PRE MANUFACTURED LAMINATED VENEER LUMBER BEAM AS MANUFACTURED BY "TRUSS JOIST MACMILLAN CORPORATION" OR AN APPROVED EQUIVALENT. BEAM SHALL HAVE THE FOLLOWING ALLOWABLE STRESS VALUES:

E=	1,800,000	PSI
G=	118,750	PSI
Fb=	2,400	PSI
Fc=	750	PSI (PERPENDICULAR)
Fc=	2,510	PSI (PARALLEL)
Fv=	285	PSI

- 11. WHERE (2) OR MORE UNITS OF STANDARD LUMBER ARE TO BE USED AS A HEADER, EACH PLY SHALL BE NAILED TOGETHER WITH (2) ROWS OF 16D NAILS AT 12" O.C.
- 12. PROVIDE JOIST HANGERS FOR ALL BEAMS AND JOISTS WHICH FRAME INTO THE SIDE OF GIRDERS. HANGERS SHALL HAVE A MINIMUM VERTICAL SHEAR CAPACITY OF V (LB.) = 100 x SPAN (FT.) / 2
- 13. ALL WOOD PROVIDED SHALL BE SEASONED WITH MAXIMUM MOISTURE CONTENT OF 19% AT THE TIME OF DRESSING

WOOD TRUSSES

1. ALL WOOD TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS: TOP CHORD DEAD LOAD

UNITS		
	BOTTOM CORD DEAD LOAD	10 PSF + W
	TOP CHORD LIVE LOAD	20 PSF - SE

- 2. THE EXTENT OF ROOF TRUSSES SHOWN ON THE PLANS IS FOR REFERENCE ONLY. THE FABRICATOR SHALL VERIFY ALL DIMENSIONS, TRUSS LAYOUT, CONFIGURATIONS, NUMBER OF EACH TYPE OF TRUSS REQUIRED, LOADING AND DETAILS.
- 3. WOOD TRUSSES SHALL BE DESIGNED, FABRICATED AND INSTALLED PER TRUSS PLATE INSTITUTE, INC. SPECIFICATIONS AND NFPA NATIONAL, INC. SPECIFICATIONS AND NFPA NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION.
- 4. ALL TRUSSES SHALL BE ANCHORED TO SUPPORTS AND INDICATED AN IF NOT INDICATED, PER MANUFACTURERS RECOMMENDATIONS.
- 5. DEFLECTION OF TRUSSES SHALL BE LIMITED TO MAXIMUM LIVE LOAD DEFLECTION OF SPAN/360.

submittals:

- 6. SHOP DRAWINGS SHOWING SIZES, DESIGN VALUES, MATERIALS, AND DIMENSIONAL RELATIONSHIPS OF COMPONENTS AS WELL AS BEARING AND ANCHORAGE DETAILS. TO EXTEND ENGINEERING DESIGN CONSIDERATIONS ARE FABRICATOR'S RESPONSIBILITY. SUBMIT DESIGN ANALYSIS AND TEST REPORTS INDICATING TRUSS PERFORMANCE CHARACTERISTICS COMPLY WITH REQUIREMENTS. CALCULATIONS AND SUBMITTALS OF REQUIRED CONNECTORS TO CONNECT TRUSSES TO GIRDER TRUSSES.
- PROVIDE SHOP DRAWINGS WHICH HAVE BEEN SIGNED AND STAMPED BY AN ENGINEER LICENSED TO PRACTICE IN THE STATE OF MICHIGAN.
- 8. DESIGN AND SPECIFICATION OF TEMPORARY AND PERMANENT WOOD TRUSS BRACING BY TRUSS MANUFACTURER AND SHOWN ON SHOP DRAWINGS. TRUSS INSTALLER SHALL PROVIDE AND INSTALL BRACING PER SHOP DRAWINGS.

METAL DECK AND FORM

- 1. METAL DECK AND FORM SHALL CONFORM TO ALL PROVISIONS OF THE "CODE OF RECOMMENDED STANDARD PRACTICE FOR COMPOSITE DECK, FORM DECK AND ROOF DECK CONSTRUCTION" AS ADOPTED BY THE STEEL DECK INSTITUTE.
- 2. METAL DECK AND FORM DECK SHALL BE PROVIDED WITH NESTING SIDE SEAMS OF DEPTH AND GAUGE AS INDICATED ON THE DRAWINGS. METAL ROOF DECK SHALL BE WIDE RIB TYPE "B". PROVIDE DECK MANUFACTURERS STANDARD ROOF SUMP PANS FOR EACH ROOF SUMP LOCATION.
- 3. METAL DECK AND FORM IS DESIGNED TO ACT AS A DIAPHRAGM AND IS INTENDED TO BRACE THE BUILDING. EXTREME CARE SHOULD BE UTILIZED TO INSTALL DECK AND FORM CONNECTIONS.

- 10 PSF + WEIGHT OF TRUSS + WEIGHT OF HVAC
- EIGHT OF TRUSS 20 PSF - SEE GENERAL NOTES FOR SNOW LOAD

MASONRY

- 1. THE MASONRY PORTIONS OF THIS STRUCTURE ARE DESIGNED ACCORDING TO THE LATEST WORKING STRESS DESIGN PROVISIONS OF THE MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 5/TMS 402) AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1/ASCE 6/TMS 402) INCLUDING (ACI 530.1/ASCE 6/TMS 602) INCLUDING SECTIONS 2106 AND 2107 OF CHAPTER 21 IN THE MICHIGAN BUILDING CODE MASONRY COMPONENTS HAVE BEEN DESIGNED ACCORDING TO THE PROVISIONS FOR SEISMIC DESIGN CATEGORY B.
- 2. ALL STRUCTURAL MASONRY IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 5/TMS 402) AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1/ASCE 6/TMS 602). MASONRY SUBMITTALS ARE REQUIRED BY ACI 530.1/ASCE 6/TMS 602 SECTION 1.5. MASONRY TESTING AND INSPECTIONS ARE RQUIRED BY ACI 530.1/ASCE 6/TMS 602 SECTION 1.6, TABLE 5, LEVEL 2 QUALITY ASSURANCE.
- 3. ALL STRUCTURAL MASONRY HAS BEEN ENGINEERED IN ACCORDANCE WITH CHAPTER 2, ALLOWABLE STRENGTH DESIGN. COMPRESSION STRENGTH SHALL BE DETERMINED ACCORDING TO THE UNIT STRENGTH METHOD FOR CONCRETE MASONRY MSJC SECTION 1.4.B.2.b.
- 4. ALL BLOCK SHALL CONFORM TO ASTM C 90 AND C 140, TYPE 1, GRADE N.
- 5. MORTAR SHALL CONFORM TO ASTM C 90 AND C 140, TYPE 1, GRADE N IN CONTACT WITH EARTH-TYPE M OR S TYPE M OR S = 1900 PSI REINFORCED-TYPE S TYPE N = 2150 PSI
- NOT IN CONTACT WITH EARTH-TYPE N, M OR S
- 6. GROUT SHALL CONFORM TO ASTM C 476, WITH PEA GRAVEL AGGREGATE AND MINIMUM STRENGTH OF 2000 PSI. 7. MINIMUM MASONRY COMPRESSIVE STRENGTH SHALL BE f'm = 1500 PSI.
- 8. ALL STRUCTURAL MASONRY SHALL COURSE IN STANDARD RUNNING BOND, UNLESS NOTED OTHERWISE. ALL INTERSECTING BEARING WALLS, SHEAR WALLS OR OTHER STRUCTURAL WALLS SHALL BE LAID UP IN INTERLOCKED BONDED COURSING. MECHANICAL ANCHORS OR WALL TIES MAY BE SUBSTITUTED WITH PRIOR APPROVAL BY THE ENGINEER.
- 9. PROVIDE HORIZONTAL WIRE TYPE REINFORCING WITH 9 GAUGE SIDE RODS AND 9 GAUGE CROSS RODS IN EVERY SECOND COURSE (16" O.C.), IN ALL MASONRY WALLS. SPACE AT 8" O.C. AT PARAPET WALLS. PROVIDE "LADDER" TYPE REINFORCING ONLY IN WALLS WITH VERTICAL REINFORCING. PROVIDE ADJUSTABLE TIES AT ALL LINTELS AND CAVITY WALLS AT 18" O.C. MAXIMUM SPACING.
- 10. PROVIDE 1-#5 VERTICAL BAR EACH SIDE OF EACH CONTROL JOINT; SEE PLANS FOR ADDITIONAL REINFORCING AT CORNERS, OPENINGS, ETC.
- 11. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO ASTM A615, GRADE 60. VERTICAL REINFORCING BARS SHALL BE HELD IN PLACE BY POSITIONERS SPACED NOT FURTHER THAN RECOMMENDED BY CODE.
- 12. PROVIDE A CONTINUOUS BOND BEAM, WITH 2-#5's, AT TOP OF WALLS PARALELL WITH ROOF/FLOOR FRAMING. STEP BOND BEAMS ELEVATIONS AS REQUIRED, LAP MINIMUM 32".
- 13. PERFORM GROUTING ACCORDING TO THE FOLLOWING: -ALL MASONRY BELOW GRADE SHALL BE GROUTED SOLID -ALL CORES WITH VERTICAL REINFORCING OR TO RECEIVE DRILLED IN ANCHORS SHALL BE GROUTED SOLID -ALL MASONRY PIERS AND PILASTERS SHALL BE GROUTED SOLID
- 14. ALL BEAMS SUPPORTING MASONRY, INCLUDING STEEL, PRECAST AND MASONRY LINTELS ARE TO BEAR 8" MIN. ON 3 COURSES OF SOLID MASONRY.
- 15. STRUCTURAL STEEL BEAMS, WIDE FLANGE AND TUBE STEEL LINTELS, REFER TO LINTEL SCHEDULE FOR SIZE AND ADDL INFORMATION.
- 16. UNLESS NOTED OTHERWISE, PROVIDE LOOSE LINTELS AT MISCELLANEOUS ARCHITECTURAL, MECHANICAL AND ELECTRICAL OPENINGS FOR EACH 4" OF MASONRY WALL THICKNESS IN ACCORDANCE WITH THE FOLLOWING:
- -L4x3 1/2x5/16 LLV FOR SPANS UP TO 3'-4" -L5x3 1/2x5/16 LLV FOR SPANS UP TO 5'-4"

-MAXIMUM 4'-0" HIGH LIFTS

- -L6x3 1/2x5/16 LLV FOR SPANS UP TO 6'-8" MAX.
- AT CONTRACTORS OPTION, MASONRY LINTELS ARE ALSO ACCEPTABLE FOR MISCELLANEOUS OPENINGS:
- -8"W (OR 12"W) x8"H REINF. w/2-#5 FOR SPANS UP TO 3'-4" -8"W (OR 12"W) x8"H REINF. w/2-#6 FOR SPANS UP TO 5'-4"
- -8"W (OR 12"W) x16"H REINF w/2-#6 FOR SPANS UP TO 6'-8" MAX.
- COORDINATE REQUIREMENTS FOR LOOSE LINTELS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.
- 17. ALL DOUBLE ANGLE LINTELS SHALL BE WELDED BACK TO BACK WITH A MINIMUM 2 INCH STITCH WELD EVERY 8 INCHES.

GENERAL NOTES

- NERAL CONDITIC

- RESPONSIBILITY OF THE CONTRACTOR(S).
- PROHIBITED.
- ROOF DEAD LOAD=15 PSF ROOF LIVE LOAD=25 PSF GROUND SNOW LOAD=25 PSF WIND = PER ASCE 7-10 WITH BASIC WIND SPEED = 115 MPH

FOUNDATIONS

- **REGULATIONS.**

CONCRETE

- ASTM C33.
- CHLORIDE IONS.

COMPRESSIVE STRENGTH, f'c

- STANDARD, NORMAL V STANDARD, NORMAL V STANDARD, LIGHT WT. AIR ENTRAINED, NORM.

- - TO THE STRUCTURE.

- DESIGN CATEGORY B.

- AIR ENTRAINMENT PER ASTM C260 WATER REDUCER PER ASTM C494, TYPE A SUPERPLASTICIZER PER ASTM C494, TYPE F OR G
- SHALL APPLY:

1. IF ANY GENERAL NOTE CONFLICTS WITH ANY DETAIL OR NOTE ON THE PLANS OR IN THE SPECIFICATIONS, THE STRICTEST PROVISION SHALL GOVERN

2. THE STRUCTURAL DRAWINGS ARE FOR THE PLACEMENT AND SIZE OF STRUCTURAL COMPONENTS ONLY. REQUIREMENTS MADE BY OSHA, DNR, AND ALL APPLICABLE SAFETY CODES ARE TO BE DETERMINED AND PROVIDED BY THE CONTRACTOR.

3. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER IT IS FULLY COMPLETED ACCORDING TO THE PLANS AND SPECIFICATIONS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE CONSTRUCTION/ERECTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES PROVIDING TEMPORARY BRACING, SHORING GUYS OR TIE-DOWNS. THESE TEMPORARY SUPPORTS SHALL REMAIN IN PLACE UNTIL ALL STRUCTURAL COMPONENTS ARE IN PLACE AND COMPLETED AS THE STRUCTURAL MEMBERS OR SYSTEMS ARE NOT SELF-BRACING UNTIL PERMANENTLY CONNECTED

4. THE ARCHITECT AND STRUCTURAL ENGINEER ASSUME NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION. AS SUCH, THE MEANS AND METHODS OF CONSTRUCTION ARE THE SOLE

5. USE OF ENGINEERING DRAWINGS AS ERECTION DRAWINGS BY THE CONTRACTOR IS EXPRESSLY

6. DESIGN LOADS: IBC 2015;ASCE 7-10

SEISMIC = PER ASCE 7-16 WITH Sds = 0.092, Sd1= 0.070

COORDINATE CONSTRUCTION SCHEDULE WITH OWNERS QUALITY INSPECTOR WITH ADEQUATE NOTICE PROVIDED IN ORDER TO ALLOW THE FOLLOWING INSPECTIONS. SEE PROJECT MANUAL AND REFERENCED CODES FOR SPECIFIC INSPECTION AND TESTING REQUIREMENTS.

. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL WITH AN ASSUMED SAFE BEARING CAPACITY OF 3000 PSF. CONTRACTOR SHALL RETAIN A QUALIFIED SOILS ENGINEER TO PERFORM EXPLORATION SUFFICIENT TO CONFIRM THIS CAPACITY PRIOR TO COMMENCEMENT OF FOUNDATION EXCAVATIONS. ACCEPTABLE SETTLEMENT LIMITS = 1 INCH OVERALL AND 1/2 INCH DIFFERENTIAL. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ENGINEER. ALLOWABLE SOIL BEARING PRESSURE SHALL BE CONFIRMED IN THE FIELD BY A QUALIFIED SOILS ENGINEER.

UNLESS OTHERWISE NOTED OR DETAILED, ALL FOUNDATIONS SHALL BE LOCATED SUCH THAT THE 2. CENTERLINE OF FOOTING IS ALSO THE CENTERLINE OF COLUMN.

PREPARATION OF THE SITE, BUILDING FOOTPRINT AND SLAB SUB-BASE SHALL PROCEED IN 3. COMPLIANCE WITH LOCAL CODES AND THE PROJECT SOILS REPORT IDENTIFIED ABOVE. UNLESS OTHERWISE NOTED OR SPECIFIED, ALL FILL UNDER FLOOR SLABS AND BEHIND FOUNDATION WALLS SHALL BE COMPACTED WITH VIBRATORS, COMPACTORS, ETC. TO 95% MAXIMUM DENSITY (MODIFIED PROCTOR) AT OPTIMUM MOISTURE CONTENT. ONLY SMALL HAND OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 8 FEET OF BASEMENT WALLS.

PROVIDE NECESSARY SHEETING, SHORING, FORMING OR BRACING, ETC., DURING EXCAVATION 4. AS REQUIRED TO PROTECT SIDES OF EXCAVATIONS OR AS REQUIRED TO COMPLY WITH SAFETY

THIS TRADE SHALL PROVIDE PUMPS, WELL POINTS, OR OTHER SYSTEMS AS REQUIRED BY THE CONDITIONS IDENTIFIED IN THE PROJECT SOILS REPORT. PUMPS SHALL BE OPERATED AS REQUIRED TO ACCOMPLISH THE ABOVE, ON A 24 HOUR BASIS, IF NECESSARY. UNDER NO CONDITION SHALL WATER BE ALLOWED TO WASH OVER FRESHLY PLACED CONCRETE.

ALL BOTTOM OF FOOTING TRANSITIONS SHALL BE MADE USING STEPS AS SHOWN IN THE TYPICAL DETAILS, WHERE NEW FOOTINGS ABUT EXISTING FOUNDATIONS, CAREFULLY HAND EXCAVATE AND PLACE BOTTOM OF NEW FOOTING AT THE SAME ELEVATION AS THE EXISTING.

• THE CONCRETE PORTIONS OF THE STRUCTURE ARE DESIGNED ACCORDING TO THE LATEST ULTIMATE STRENGTH DESIGN PROVISIONS OF THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY (ACI 318) INCLUDING SECTIONS 1902 THRU 1907 OF CHAPTER 19 IN THE MICHIGAN BUILDING CODE. CONCRETE COMPONENTS HAVE BEEN DESIGNED ACCORDING TO THE PROVISIONS FOR SEISMIC

2. ALL CONCRETE SHALL BE NORMAL WEIGHT (150 PCF), EXCEPT SUPPORTED SLABS WHICH SHALL BE LIGHT WEIGHT (110 PCF). MINIMUM CONCRETE STRENGTH SHALL BE f'C = 3000 PSI MIN. AT 28 DAYS, UNLESS NOTED OTHERWISE; SUPPORTED SLABS AND SLABS ON GRADE SHALL BE I'C = 3500 PSI MIN. UNLESS NOTED OTHERWISE. PROVIDE I'C = 4000 PSI WITH 6% ± 1% ENTRAINED AIR WHERE CONCRETE IS EXPOSED TO EXTERIOR ATMOSPHERE OR WEATHER.

3. ALL CONCRETE SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150. AGGREGATE SHALL CONFORM TO

4. CONCRETE ADMIXTURES SHALL BE USED TO FACILITATE CONCRETE PLACEMENT, AID DIFFICULT PLACING CONDITIONS OR ASSIST IN ATTAINING SPECIFIED CONCRETE QUALITIES. ADMIXES SHALL HAVE LESS THAN 0.05%

WATER REDUCER/ACCELERATOR PER ASTM C494, TYPE C OR E

WATER REDUCER/RETARDER PER ASTM C494, TYPE B OR D

5. CONCRETE MIXES SHALL BE PROPORTIONED PER SECTION 3.9 OF ACI-301. CERTIFIED HISTORICAL TEST DATA SHALL SERVE AS A BASIS FOR EACH MIX DESIGN. DEVIATIONS SHALL BE SUBSTANTIATED WITH ADDITIONAL CERTIFIED TRIAL MIX TESTING AND RESULTS. SUBMIT MIX DESIGN HISTORICAL TEST DATA OR TRIAL MIX RESULTS FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK. WHERE HISTORICAL TEST DATA IS NON-EXISTENT THE FOLLOWING GUIDELINES

CEMENT	WATER/0	CEMENT	
CONTENT	<u>RAT</u>	10	
(28 DAY, PSI)	(LBS./C.Y.)	(BY WEIGHT)	(SLUMP)
VT. 3000 MIN.	470 MIN.	0.52 MIN.	4" MAX.
VT. 3500 MIN.	517 MIN.	0.05 MAX.	4" MAX.
3500 MIN.	564 MIN.	0.44 MAX.	SEE SPEC.
WT. 4000 MIN.	564 MIN.	0.40 MAX.	4" MAX.

6. ALL CONCRETE WORK AND PLACEMENT SHALL CONFORM TO THE LATEST ACI STANDARDS AND RECOMENDATIONS. FREE FALL SHALL NOT EXCEED 10 FEET FOR ALL CONCRETE CONTAINING HIGH-RANGE WATER REDUCER (SUPERPLASTICIZER) AND 5 FEET FOR ALL OTHER CONCRETE. PROVIDE ELEPHANT TRUNK, TREMIES OR OTHER PLACING EQUIPMENT OR OPENINGS IN SIDES OF FORMS AS REQUIRED TO LIMIT FREE FALL.

7. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO ASTM A615, GRADE 60. ALL REINFORCING STEEL SHALL BE CONTINUOUS AND SHALL 36 BAR DIAMETER LAP MINIMUM AND SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315 AND ACI 318, LATEST EDITION. HOOK ALL BEAM BARS AT DISCONTINUOUS ENDS.

8. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 FURNISHED IN FLAT MATS OR SHEETS, NOT IN ROLLS. PROVIDE MINIMUM 6" LAP BETWEEN SHEETS. ALL SLAB REINFORCING SHALL BE SUPPORTED ON SAND CHAIRS.

9. ALL EXPOSED CONCRETE CORNERS AND EDGES SHALL BE CHAMFERED 3/4".

POST	SCHEE	PI	ER SC	HEDULE			
	PO-3	PO-2	PO-1	MARK			P-1
	(5) 2x6 WOOD	HSS5x5x1/4	6x6 WOOD	SIZE			
		PL 1/2"x11"x	SIMPSON	BASE			30''x30''
		0'-11"	BASE	PLATE			100'- 2''
	EL=100'-2''	EL=99'-5''	EL=100'-2''	B.O. BASE PL.			(6) #5 VERT. #4 TIES @ 12" ○ C
		3/4''Øx0'-9'' LG	PER MANUF. SPECS.	ANCHOR BOLTS			
		6" EMBED MIN.	PRESSURE TREATED	REMARKS - -			

POST	SCHEE	DULE A	ILL WOOD COLL	JMNS SPF #2	PIER SC	CHEDUL
	PO-3	PO-2	PO-1	MARK		P-1
	(5) 2x6 WOOD	HSS5x5x1/4	6x6 WOOD	SIZE		
		PL 1/2"x11"x 0'-11"	SIMPSON ABU66Z POST BASE	BASE PLATE		30''x30' 100'- 2'
	EL=100'-2''	EL=99'-5''	EL=100'-2''	B.O. BASE PL.		(6) #5 VEF
		3/4''Øx0'-9'' LG	PER MANUF. SPECS.	ANCHOR BOLTS		
		6" EMBED MIN.	PRESSURE TREATED	REMARKS - -		

MARK

SIZE

TOP OF PIER

REINF.

REMARKS

FOOTING SCHEDULE ASSUMED ALLOWABLE SOIL PRESSURE = 3000 PSF							
	F-1	MARK					
	4-0"x4'-0"	SIZE					
	42"	THICKNESS					
	7-#7 E.W. BOTT	REINF					
	WITH HOOKS	REMARKS					

TRIUMPH TRIUMPH TRIUMPH Triumph Engineering & Design, Inc. 10775 S. SAGINAW ST. GRAND BLANC, MI 48439 (PH) 810.584.7364 (F) 810.584.7362 (PH) 810.584.7362 (F) 810.584.7362 (T) 810.584.7364 (F) 810.584.7364 (F) 810.584.7364 (F) 810.584.7364 (F) 810.584.7364 (F) 810.584.7364 (F) 810.584.7364 (F) 810.584.7364 (F) 810.584.7364 (F) 810.584.7364
TYRONE PARTY STORE 9485 CENTER ROAD TYRONE TOWNSHIP, LIVINGSTON COUNTY, MI.
WHE ERRY ATTBAFT HIS EEN MUE TO PROTUE ERROFFEE DOJUNGITS, IT'S THE RESPORSHITY OF THE BILDER ANOVA THE OLDIN TO VERY ALL DISTING CONTORS, DIAGNOS, IET'ALS, DOSE COMENTIES, DI SELTORIDISS FRECOMO COMBOLING TO WORK FRART TO COLOFINISE. FRECOMO COMBOLING TO WORK FRART TO COLOFINISE THE ARCHITT TAKESTILL RESPONSELITES TO COLOFINIS HIS REALING THE RELEAST OF DID TESS MADOR OKSONG, BUT GRELIER TERNITIFE RESPAN ANOTOR ANOTA THE ARCEIT FRANT THE FROFENT OF DID TESS AN ANOTOR DANNES FOR ANY OTHER REQUERTING FOLD THESE DOJARITS HIM EBRIN ADDITIONAL FROM THE REGERIER AND BAREFING SERVISES AN OTHER REQUERT OF DID TESS AN ANOTOR DRAWNES FOR ANY OTHER REQUERT OF DID TESS AN ANOTOR DRAWNES FOR ANY OTHER REQUERT OF DID TESS AN ANOTOR DRAWNES FOR ANY OTHER REPORTS AND REAL AND ADDITIONAL FROM THE REGERIER AND BAREFING SERVISES AND ADDITIONAL FROM THE REGERIER AND BAREFING SERVISES THE RECORDERING THE CORPORTS OF THE REGRIST AND OTHER ADDITIONAL FROM THE RECORDANCE AND BAREFING SERVISES AND ADDITIONAL FROM THE REGRIST AND ADDITIONAL DRAWNES FOR AND OTHER REPORTS AND DIRFERENCES AND ADDITIONAL DRAWNES FOR AND OTHER REPORTS AND DRAWNES AND DRAWNES REGRIST AND ADDITIONAL FROM THE CORPORTS OF THE REGRIST AND DRAWNES SERVISES AND ADDITIONAL FROM THE DRAWNES AND DRAWNES REGRIST AND ADDITIONAL FROM THE CORPORTS AND DRAWNES REGRISTANCE THE RECORDER AND THE REGRIST AND DRAWNES FOR AND THE DRAWNES FOR AND THE DRAWNES FOR AND
ISSUED FOR DATE OWNER REVIEW 12/01/2022 PERMITS 07/25/2023
DRAWN : JDK CHECKED : JDK SCALE : 3/16' = 1'-0' JOB NO : TE-22-168 SHEET TITLE :
STRUCTURAL FRAMING PLAN SHEET S-101

NOTES

- PROVIDE WP GFI RECEPTACLE WITHIN 25' OF ROOF TOP UNIT.
 EMERGENCY LIGHTING BATTERY PACKS TO BE CONNECTED TO AREA LIGHTING CIRCUIT
- CIRCUIT AHEAD OF SWITCHING.

^{1.} TELEPHONE SYSTEM TO BE PROVIDED BY TENANT.

^{2.} VERIFY OUTLET LOCATION & HEIGHT W/ TENANT.

120/240V, 1Ø,3w, RISER DIAGRAM N.T.S.

LOAD TABULATION:

	CONNECTED	DEMAND
RECEPTACLES	12.600KW	10.940KW
LIGHTING	15.397KW	15.397KW
HVAC	50.784KW	38.596KW
MISC.	68.566KW	41.140KW
totals	147.347KW	106.073KW
AMPS	631.9A	442.0A

TE-22-168	TYPONE TWP	PARTY STORE	00262022
1E-22-100	TIKONE IWP.	PARTI STORE,	09202022

TE-22	TE-22-168 TYRONE TWP. PARTY STORE, 09262022													
PANEL	BOARD DESIGNATION / TAG: RP-B	(NEW)		LOCATIO	DN:		UTILIT	Y ROOM	А					
ELECTI	RICAL CHARACTERISTICS: 120/240v	- 1ph - 3w	-	FEEDER SIZE: 400A - 4#500 kcmil & 1#2 Grd -			- 3"C	Options :		Options	:			
PANEL	BOARD CONSTRUCTION: CIRCUIT	BREAKER	-	FED FRO	M:	-	UTILIT	Y				SUB-FEED LUGS	.*******	MULTIPLE SECTIONS
	AMP MAIN LUGS	22k	A.I.C. (FULL	YRATED)	SURI	FACE	MOUNTI	NG			SUB-FEED BREAKER	NONE	TVSS
400	AMP MAIN BREAKER/SWITCH	100	- % NEUTRA	L (SOLID)	NEN	/A 1	ENCLOSI	JRE			FEED-THRU LUGS	PLUG-IN	BREAKERS
42	- AVAILABLE CIRCUIT SPACES		- INCOMING	FEED	6			MISC			x	- SERVICE ENTRANCE RATED	LIP TO 500 kemil	MAIN TERMINAL LUGS
42	After the circuit no indicates handle locking device	3	-			-							01 10 500 Kellin	
'L'	The fire creak no. Index of funde for any defice.	VOL T	AMPS	CIRC	TUT	WIRE	SIZE	CIRC	THT	VOLT	AMPS	100/01/11/10		
	LOAD DESCRIPTION	A	B	POLE	AMP	Wild		AMP	POLE	A	B	LOAD DESCRIPTION	Í Í	
1	PIZZA OVEN	840	В	1	15	#14	#12	20	1	1713		STORE LIGHTING	2	2
3	PIZZA OVEN		840	1	15	#14	#12	20	1		234	RESTROOM/VESTIBLE LIGHTING	4	4
5	STAND UP REFRIGERATOR	1224		1	15*	#14	#12	20	1	1500		ATM RECEPTACLE	6	6
7	PIZZA AREA HAND DRYER		1920	1	20*	#12	#12	20	1		1500	CIGARETTE MACHINE	8	8
9	PIZZA COUNTER RECEPTACLES	360		1	20	#12	#12	20	1	180		SALES COUNTER RECEPTACLES	10	10
11	ICE MACHINE COMPRESSOR		1224	1	20*	#12	#12	20	1		180	SALES COUNTER RECEPTACLES	12	12
13	ICE MACHINE COMPRESSOR	1224		1	20*	#12	#12	20	1	180		SALES COUNTER RECEPTACLES 14		14
15	WINDOW SIGN RECEPTACLE		180	1	20	#12	#12	20	1		180	SALES COUNTER RECEPTACLES 16		16
17	WINDOW SIGN RECEPTACLE	180		1	20	#12	#12	20	1	180		SALES COUNTER RECEPTACLES 18		18
19	PIZZA PREP TABLE		850	1	20	#12	#12	20	1		720	SALES COUNTER RECEPTACLES	20	20
21	DELI PREP TABLE	850		1	20	#12	#10	30	2	2496		BUNN COFFEE MAKER, UNIT "A"	22	22
23	PIZZA WARMER		1800	1	20	#12	#10	30			2496		24	24
25	PIZZA WARMER	1800		1	20	#12	#10	30	2	2496		BUNN COFFEE MAKER, UNIT "A"	26	26
27	771 MULTI-FLAVOR, UNIT "E"		1664	2	20	#12	#10	30			2496		28	28
29		1664			20	#12	#10	30	2	2496		BUNN COFFEE MAKER, UNIT "A"	30	30
31	HANGING MENU BOARDS	2500	1000	1	20	#12	#10	30		1500	2496	CDEAMED UNIT ID!	32	32
33	774 MULTI-FLAVOR, UNIT 'F"	2500	2500	2	30	#10	#12	20	1	1500	1500	POP MACHINE UNIT "G"	34	34
35	SMOOTHE BI ENDER UNIT "H"	1500	2500	1	30	#10	#12	20	2	1500	1500 POP MACHINE, UNII "G"		30	36
3/	SMOOTHER FREEZER, UNIT "H"	1500	1500	1	15	#14	#12	20	2	1300	2000	38 2000 VESTIBULE HEATER 40		38
41	CENTER COUNTER RECEPTACLES	720	1500	1	20	#14	#10	30	2		2000		40	40
41	SUB TOTAL VA	12.862	13.478	1	20	#12	10	.50		14.241	13.802	SUB TOTAL V	A 42	42
	PHASE TOTALS	A	В	Circuit wi	re size(s)	indicated a	are	1						
	TOTAL PHASE VA	27,103	27,280	minimum	allowable	. Refer to	wire				226.6	CONNECTED AMPS (Ba	lanced)	
	TOTAL PHASE AMPS	225.9	227.3	sizing Ta	ble(s) and	one-line d	liagram(s)				159.3	PHASE DEMAND AMPS	(Balanced)	
	TOTAL CONNECTED KVA	54	.383	on plan(s) addition	al informat	tion	~ 			38.23	TOTAL DEMAND KVA		

TE-22	2-168 TYRONE TWP. PARTY STORE, 09	072022												
PANEI	BOARD DESIGNATION / TAG: RP-C (1	NEW)		LOCATIO	DN:		UTILIT	Y ROOM	Л					
ELECT	RICAL CHARACTERISTICS: 120/240v -	1ph - 3w		FEEDER	SIZE:	4	100 <mark>A</mark> - 3#5	00 kemil &	1#2 Gnd -	· 3"C	Options:		Options	
PANE	BOARD CONSTRUCTION: CIRCUIT B	REAKER		FED FRO	M:	2.	RP-B					SUB-FEED LUGS		MULTIPLE SECTIONS
	AMP MAIN LUGS	22k	A.I.C. (FULL	Y RATED)	SUR	FACE	MOUNTI	NG			SUB-FEED BREAKER	NONE	TVSS
400	AMP MAIN BREAKER/SWITCH	100	% NEUTRA	L (SOLID)	NEN	MA 1	ENCLOSU	JRE			FEED-THRU LUGS	PLUG-IN	BREAKERS
42	- AVAILABLE CIRCUIT SPACES		INCOMING	FEED				MISC.			X	SERVICE ENTRANCE RATED	UP TO 500 kcmil	MAIN TERMINAL LUGS
ч г ,	 After the circuit no. indicates handle locking device. 					-		-				100% RATING		
		VOL T	AMPS	CIRC	CUIT	WIRE	ESIZE	CIRC	CUIT	VOLT	AMPS			
	LOAD DESCRIPTION	A	В	POLE	AMP			AMP	POLE	A	В	LOAD DESCRIPTION		
1	SEPTIC (EXISTING)	1800		1	20	#12	#12	20	1	1800		EXISTING FLOOD LIGHTS	2	
3	OFFICE RECEPTACLES (EXISTING)		1800	1	20	#12	#12	20	1		1760	FURNACE (EXISTING)	4	
5	AREA RECEEPTACLES	1440		1	20	#12	#12	20	1	360		WOMENS RESTROOM RECEPTACLES	S 6	
7	WOMENS RESTROOM HAND DRYER		1920	1	20^	#12	#12	20	1		540	MENS RESTROOM RECEPTACLES	8	
9	EXISTING FLOOD LIGHTS	1800		1	20	#12	#12	20	1	1800		OFFICE FANS	10	
11	EXISTING FLOOD LIGHTS		1800	1	20	#12	#12	20	1		1500 ATM RECEPTACLE		12	
13	HALLWAY RECEPTACLES (EXISTING)	1800		1	20	#12	#12	20	1	1500		CAN & BOTLE RETURN		
15	BACK ROOM RECEPTACLES (EXISTING)		1800	1	20	#12	#12	20^	1		1920 MENS RESTROOM HAND DRYER 10		16	
17	BACK ROOM RECEPTACLES (EXISTING)	1800		1	20	#12	#12	20	2	1800		WELL (EXISTING) 18		
19	OFFICE LIGHTING (EXISTING)		1800	1	20	#12	#12	20			1800 20		20	
21	OFFICE REFRIGERATOR (EXISTING)	850		1	20^	#12	#6	50*	2	4200		CU-1, 12 TON	22	
23	AULT 2 12 TON	270	900	1	20	#12	#6	50*		2000	4200	CONDER DUMB (EVICTOR)	24	
25	AHU-4, 1, 1/2 TON	270	190	1	15	#14	#10	30	2	2800	2800	GRINDER PUMP (EXISTING)	26	
27	AHU-5, 7,5 TON	270	180	1	15	#14	#10	30	2	1008	2800	CU-2 11/2 TON	28	
29	CU-3, 7.5 TON	270	5064	2	15 70*	#14	#10	25*	2	1908	1908	002,112100	30	
33		5064	5004	2	70*	#4	#10	60*	2	5040	1200	AHU-1, 5 TON	34	
35	AHU-2, 5 TON		5040	2	60*	#6	#6	60*	-		5040		36	
37		5040			60*	#6	#12	20	1	1500	STACK LIGHTING		38	
39	SPACE			1	20		#12	20	1		1500 STACK LIGHTING		40	
41	SPACE			1	20		#12	20	1	750	50 STACK LIGHTING 42		42	
	SUB TOTAL VA	20,134	20,304							22,708	22,968	SUB TOTAL VA	A	
	PHASETOTALS	A	В	Circuit wi	re size(s)	indicated a	are					6		
	TOTAL PHASE VA	42,842	43,272	minimum	allowable	. Refer to	wire				358.8	CONNECTED AMPS (Ba	lanced)	
	TOTAL PHASE AMPS	357.0	360.6	sizing Ta	ble(s) and	one-line o	liagram(s)				320.1	PHASE DEMAND AMPS	(Balanced)	
	TOTAL CONNECTED KVA	86.	114	on plan(s) addition	al informa	tion				76.83	TOTAL DEMAND KVA		

RP-C 400A. M.B. 120/240 V 1Ø, 3W.

Image: A standard standar
TYRONE PARTY STORE 9485 CENTER ROAD TYRONE TOWNSHIP, LIVINGSTON COUNTY, MI.
WH E REHY ATTIAPT HAS GERN MUCE TO PROLICE GRADI FREE DOCUMANTS, IT IS THE REPORTABILITY OF THE BULER ANOTH THE CUMPANTS, ANO SECONAMINS, IT IS COUNTONS, DAHGNOS, DEH ALS, OLDE CUMPANTS, ANO SECONAMINS, THE RELEANS COMMONS, DIAHANG THE THAT TO ANGER ANO FREES ANOTHER CASSANG, BUT RELEARNI THE PROFERENT OF DAMES ANO FREES ANOTHER HAVE EREN ACCEPTED BY WAY OF CLIM THATHEN THE PROFESS ANOTHER DAWANGS THE RATICLE THATTIRE THATTER THATTER THATTER THATTER THATTER THATER AND THAT THAT THAT THAT THAT THAT THAT THA
ISSUED FOR DATE OWNER REVIEW 12/01/2022 PERMITS 07/25/2023
DRAWN : RHN CHECKED : PGMc SCALE : NONE
JOB NO , TE-22-168 SHEET TITLE , ELECTRICAL PANEL SCHEDULES
SHEET E-102

HLINON

Statistics								
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min		
Calc Zone #1	+	2.4 fc	6.7 fc	0.2 fc	33.5:1	12.0:1		

TRIUMPH Engineering & Design, Inc. D775 S. SAGINAW ST. GRAND BLANC, MI 48439 (PH) 810.584.7364 (F) 810.584.7364 (F) 810.584.7362 www.triumpheng.com
TYRONE PARTY STORE 9485 CENTER ROAD TYRONE TOWNSHIP, LIVINGSTON COUNTY, MI.
 WHE FREM ATTEAPT HAS BEEN MARE TO FRODICE EFFOR FREE DODALIFING THE AUREN TO FREE ALLORE AND STOTIONES. IT AND STOTIONES. IT
ISSUED FOR DATE PERMITS 07/25/2023
DRAWN : RHN CHECKED : PGMc SCALE : 1/4" • 1"-0" JOB NO : TE-22-168 SHEET TITLE : EMERGENCY LIGHTING PLAN SHEET E-103

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR IS RESPONSIBLE TO VISIT THE JOB SITE TO VERIFY EXISTING CONDITIONS AND THE OWNERS REQUIREMENTS FOR ACCESS TO THE SITE AND CONTINUED OPERATION DURING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PIPE SIZES, PRESSURES, ACTIVE INACTIVE SERVICE, ROUTING, ABANDONED EQUIPMENT, DIRECTION OF FLOW, AND ALL INTERFERENCES BEFORE FABRICATION AND INSTALLATION OF NEW INSTALLATION. THIS WORK TO BE COORDINATED WITH OWNER AND OTHER CONTRACTORS WORKING IN THE SAME AREA.

1a. FOR EXISTING BUILDINGS : THE PLANS, DETAILS, DIMENSIONS AND ELEVATIONS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM AVAILABLE DRAWING DIMENSIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SUCH DIMENSIONS, ELEVATIONS, AND DETAILS AS NECESSARY AND MAKE APPROVED ADJUSTMENTS PRIOR TO THE CONSTRUCTION OF OR ORDERING MATERIAL.

2. THESE DRAWINGS ARE DIAGRAMMATICAL AND SHOW GENERAL LAYOUT OF THE MECHANICAL AND PLUMBING SYSTEMS. THE DRAWINGS ARE NOT INTENDED TO BE SCALED NOR TO SERVE AS SHOP DRAWINGS. CONTRACTOR IS TO BE RESPONSIBLE FOR FIELD MEASURING TO ASSURE FITTING THE INSTALLATION. SHOULD THERE BE A CONFLICT IN THE DRAWINGS, THE PROJECT ARCHITECT / ENGINEER SHALL MAKE THE FINAL DETERMINATION BASED ON :

- DRAWING DETAILS PREVAIL OVER THE PLANS - GENERAL CONDITIONS AND SUPPLEMENTS PREVAIL OVER INSTRUCTIONS TO BIDDERS
- LOCAL CODES PREVAIL OVER THE INSTALLATION - SAFETY SHALL PREVAIL OVER ALL REQUIREMENTS

3. DUE TO LIMITED SPACE IT IS CRITICAL TO COORDINATE WITH ALL TRADES THE INSTALLATION OF MECHANICAL EQUIPMENT WITH OTHER BUILDING COMPONENTS, ARRANGEMENT OF THE PIPING AND DUCTWORK SPACES, CHASES, SLOTS, PIPE SLEEVES AND OTHER OPENINGS, DURING THE PROGRESS OF CONSTRUCTION.

4. CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS, FEES, TAXES INSPECTIONS AND TESTING.

5. CONTRACTOR IS REQUIRED TO SUBMIT SHOP DRAWINGS TO PROJECT ARCHITECT/ENGINEER FOR APPROVAL OF ALL PRODUCT DATA, INCLUDE ITEMS SUCH AS RATED CAPACITIES, DIMENSIONS, REQUIRED CLEARANCES, WEIGHTS, ELECTRICAL REQUIREMENTS, ETC.

6. CONTRACTORS WORK SHALL COMPLY WITH ALL LOCAL, STATE AND NATIONAL CODES AND ORDINANCES THAT MAY APPLY.

7. CONTRACTOR TO INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS AND IN ACCORDANCE WITH ACCEPTED INDUSTRY STANDARDS. PROVIDE CERTIFICATES OF SHOP INSPECTION AND DATA REPORTS FOR EQUIPMENT AS REQUIRED.

8. CONTRACTOR TO COORDINATE ALL UTILITIES.

9. CONTRACTOR SHALL FURNISH AND INSTALL MINOR ITEMS WHICH ARE NECESSARY TO COMPLETE THE INSTALLATION AND USUALLY INCLUDED IN WORK EVEN THOUGH NOT SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS.

10. PROVIDE THE SAFETY AND GOOD CONDITIONS OF MATERIAL UNTIL FINAL ACCEPTANCE B OWNER. PROTECT MATERIALS AND EQUIPMENT FROM DAMAGE. PROVIDE ADEQUATE AND PROPER STORAGE FACILITIES DURING THE PROGRESS OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF FIXTURES AND EQUIPMENT FROM DAMAGE DURING CONSTRUCTION.

11. THE ARCHITECT / ENGINEER DOES NOT HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, AND IS NOT RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S DEFICIENCIES OR OMISSIONS TO CARRY OUT THE WORK IN ACCORDANCE WITH DOCUMENTS PREPARED BY THE ARCHITECT / ENGINEER.

12. ALL OF THE CONTRACTOR'S WORKMANSHIP MUST BE TESTED AND CERTIFIED THAT IT IS MEETING PRODUCT SPECIFICATIONS AS REQUIRED. ALL MATERIALS AND EQUIPMENT, INCLUDING NECESSARY ACCESSORIES SHALL BE PUT IN PROPER ADJUSTMENT SO THAT THE COMPONENTS PARTS FUNCTION TOGETHER AS A WORKABLE SYSTEM.

13. CONTRACTOR SHALL RECEIVE. PROPERLY HOUSE. TRANSPORT AND INSTALL AT PROPER LOCATIONS, EQUIPMENT AND MATERIALS REQUIRED FOR HIS CONTRACT. RESPONSIBILITY AND CARE AND PROTECTION OF EQUIPMENT, MATERIAL, AND WORK PERFORMED AGAINST THEFT. INJURY OF DAMAGE FROM ALL CAUSES REMAINS WITH THE CONTRACTOR UNTIL FINAL ACCEPTANCE OF THE PROPERTY BY THE OWNER. PROTECT PLUMBING FIXTURES AND OTHER EQUIPMENT WITH ENAMEL OR GLAZED SURFACES FROM DAMAGE BY COVERING WITH MATERIAL APPROVED FOR THIS 26. PLASTIC PIPE INSTITUTE (PPI). PURPOSE. PROTECT EQUIPMENT, OUTLETS, PIPE AND DUCT OPENINGS WITH TEMPORARY PLUGS, 27. NATIONAL INSULATION ASSOCIATION (NIA). CAPS, BURLAP, PLASTIC OR OTHER APPROVED METHOD.

14. CONTRACTOR TO MAINTAIN EXIT AND EGRESS PATHS FREE FROM OBSTRUCTION IN THE AREA.

15. ALL CONSTRUCTION AND EXCAVATION AREAS ARE TO BE CLEARLY MARKED AND ROPED OFF.

16. CONTRACTOR TO MAINTAIN ADEQUATE FIRE SUPPRESSION SYSTEM ON SITE.

17. CONTRACTOR IS TO ENTER AND LEAVE WORK SITE AT LOCATIONS DESIGNATED BY TH OWNER. ALL MATERIALS, TOOLS, MACHINERY, PRINTS AND EQUIPMENT WILL ENTER AND LEAVE THI PROPERTY FOLLOWING OWNER'S GUIDELINES.

18. OWNER WILL ASSIGN TO THE CONTRACTOR PARKING AND MATERIAL STORAGE LOCATIONS CONTRACTOR'S STORAGE CRIB, AND TOOL BOXES WILL ALL BE FIREPROOF CONSTRUCTION. ALL MATERIAL STORED WILL MEET THE OWNER'S SAFETY REQUIREMENTS.

19. DISPOSAL OF WASTE MATERIALS MUST BE IN ACCORDANCE WITH THE REGULATIONS SET FORTH BY STATE REGULATIONS.

20. THE CONTRACTOR WILL SUFFICIENTLY PROVIDE SAFETY BARRICADING OF THE PROJECT AREA.

CONTRACTOR'S RESPONSIBILITY

MAINTAIN (1) SET OF AS-BUILT CONSTRUCTION DOCUMENTS ON A SEPARATE SET OF CONSTRUCTION PRINTS WHICH SHALL REMAIN AT THE PROJECT SITE AND BE TURNED IN TO THE PROJECT ARCHITECT / ENGINEER AT COMPLETION OF PROJECT.

2. PROVIDE WIRING DIAGRAMS FOR EACH ACCESSORY SPECIALITY ITEM WITH ELECTRIC POWER SUPPLY. INCLUDE LADDER TYPE WIRING DIAGRAM FOR INTERLOCK AND CONTROL WIRING REQUIRED FOR FINAL INSTALLATION. DIFFERENTIATE BETWEEN FACTORY INSTALLED AND FIELD INSTALLED WIRING.

SUBMITTALS

A. SUBMITTAL REVIEW: REVIEW OF SHOP DRAWINGS AND PRODUCT DATA IS ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND COMPLIANCE WITH INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. IN THE EVENT OF VARIATION IN INFORMATION PROVIDED IN THE SUBMITTAL AND INFORMATION GIVEN IN THE DRAWINGS AND SPECIFICATIONS; THE DRAWINGS AND SPECIFICATION SHALL GOVERN. SHOP DRAWING AND PRODUCT DATA SUBMITTAL PACKAGES ARE NOT CONTRACT DOCUMENTS AND SHALL NOT ACT TO MODIFY ANY CONTRACT REQUIREMENT.

B. SUBMIT PRODUCT DATA AND SHOP DRAWINGS FOR ALL PRODUCTS AND MATERIALS TO BE INCORPORATED INTO THE FINAL PRODUCT. ONE (1) COPY OF SUBMITTALS AND SHOP DRAWINGS WITH REVIEW COMMENT SHALL BE RETURNED; ADDITIONAL COPIES SHALL BE MADE BY THE CONTRACTOR. SUBMITTALS AND SHOP DRAWINGS NOT COMPLYING WITH THE FOLLOWING REQUIREMENTS SHALL BE RETURNED WITHOUT REVIEW. INCLUDE THE FOLLOWING:

1. PROVIDE SUBMITTALS AND SHOP DRAWINGS ONLY FOR PRODUCTS LISTED WITHIN THESE SPECIFICATIONS. OR PRODUCTS APPROVED IN WRITING PRIOR TO BIDDING FOR INCORPORATION IN THIS PROJECT.

2. REVIEW AND APPROVE DOCUMENTS PRIOR TO SUBMITTING. STAMP, DATE, AND INITIAL EACH COPY INDICATING REVIEW IS COMPLETE.

3. SUBMITTALS FOR PRODUCTS AND EQUIPMENT REQUIRING ACTUATION OR CONNECTIONS BY TH CONTROL CONTRACTOR SHALL BE REVIEWED BY THE CONTROL CONTRACTOR PRIOR TO SUBMITTING. STAMP, DATE, AND INITIAL EACH COPY INDICATING REVIEW IS COMPLETE.

- 4. INDICATE ONLY EXACT INFORMATION PERTAINING TO PRODUCT TO BE SUPPLIED. INCLUDE THE FOLLOWING: PLAN DESIGNATION
- MODEL. CAPACITIES.
- OPTIONS PROVIDED: INDICATE ONLY OPTIONS SPECIFIC TO THE EQUIPMENT PROVIDED FOR S PROJECT.
- DIMENSIONS: INDICATE ALL NECESSARY DIMENSIONS. INCLUDE THE FOLLOWING:
- MAXIMUM HEIGHT, WIDTH, AND DEPTH. CLEARANCE FOR OPERATION.
- CLEARANCE FOR MAINTENANCE AND SERVICE.
- DIMENSIONS TO OPENINGS, CONNECTIONS, AND DIVISIONS. ROUGH-IN CLEARANCES AND OPENINGS.
- MOUNTING SURFACE AND CONNECTION DIMENSIONS.

WEIGHT: INDICATE POINT LOADS AND CENTER OF GRAVITY IF WEIGHT IS NOT UNIFORMLY DISTRIBUTED.

G. INSTALLATION AND START-UP INSTRUCTIONS AND REQUIREMENTS.

- STORAGE AND HANDLING INSTRUCTIONS.
- ELECTRICAL REQUIREMENTS. WIRING DIAGRAMS.
- OPERATION AND MAINTENANCE INSTRUCTIONS.

SUBMIT PRODUCT DATA FOR ALL EQUIPMENT, PRODUCTS, AND MATERIALS TO BE INCORPORATED INTO THE PROJECT.

SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT, PRODUCTS, AND MATERIALS REQUIRING COORDINATION WITH OTHER TRADES, ELECTRICAL OR CONTROL CONNECTIONS, REQUIRING STRUCTURAL SUPPORT, REQUIRING ROUGH-INS, OR OTHER DATA ONLY PRESENTABLE IN DRAWING FORM.

QUALITY ASSURANCE

WARRANTY.

A. REFERENCE STANDARDS: INCORPORATE THE ADOPTED EDITION WITH AMENDMENTS, OR LATEST EDITION OF THE FOLLOWING: MODEL BUILDING CODES ADOPTED BY THE GOVERNING AUTHORITY HAVING JURISDICTION

- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA).
- AMERICANS DISABILITY ACT (ADA).
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- ENVIRONMENTAL PROTECTION AGENCY (EPA). UNDERWRITERS LABORATORIES (UL) AND UNDERWRITERS LABORATORIES OF CANADA (ULC)
- LISTING AND LABELS.
- AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM). AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
- AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS (ASHRAF)
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME). AMERICAN SOCIETY OF PLUMBING ENGINEERS (ASPE).
- INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).
- NATIONAL ELECTRIC MANUFACTURER'S ASSOCIATION (NEMA).
- 14. ELECTRONICS INDUSTRIES ASSOCIATION (EIA).
- SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA). AMERICAN GAS ASSOCIATION (AGA).
- 17. AMERICAN PIPE FITTINGS ASSOCIATION (APFA).
- 18. AMERICAN SOCIETY OF SANITARY ENGINEERS (ASSE).
- 19. AMERICAN WELDING SOCIETY (AWS).
- AMERICAN WATER WORKS ASSOCIATION (AWWA)
- COPPER DEVELOPMENT ASSOCIATION (CDA). 22. COMPRESSED GAS ASSOCIATION (CGA).
- 23. GAS APPLIANCE MANUFACTURERS ASSOCIATION (GAMA).
- 24. NATIONAL SANITATION FOUNDATION (NSF).
- 25. PLASTIC PIPE AND FITTING ASSOCIATION (PPFA).
- 28. NORTH AMERICAN INSULATION MANUFACTURERS ASSOCIATION (NAIMA).
- 29. NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB).
- 30. TESTING ADJUSTING AND BALANCING BUREAU (TABB). MANUFACTURERS STANDARDIZATIONS SOCIETY (MSS).
- MECHANICAL CONTRACTORS ASSOCIATION OF AMERICA (MCAA).
- 33. AIR DIFFUSION COUNCIL (ADC).
- AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA). 35. MANUFACTURER'S INSTALLATION DATA.

CONTRACTOR'S RESPONSIBILITY - SAFETY

- THE CONTRACTOR MUST PROVIDE AND MAINTAIN ALL WORK AREA AND CONSTRUCTION FACILITIES IN ACCORDANCE WITH CURRENT REGULATIONS AND OWNER'S SAFETY EQUIPMENTS.
- FOLLOWING IS A PARTIAL LIST : A. APPROVED HARD HATS AND SAFETY GLASSES WITH SIDE SHIELDS WILL BE WORN IN THE PROJECT AREA. 3. WHEN TRANSPORTING MATERIALS WITHIN AREA. PEDESTRIANS HAVE THE RIGHT OF WAY.
- APPROVED EXHAUST SCRUBBERS OR OUTSIDE EXHAUST MANIFOLD MUST BE PROVIDED FOR ALL FOSSIL FUEL ENGINES OPERATED INSIDE.
- D. FURNISH AND / OR MAINTAIN GUARD RAIL WITH DOUBLE 1½" HAND RAIL AND CONTINUOUS 4" HIGH KICK PLATE AROUND ANY OPENING. ALL CONTRACTORS MUST ABIDE BY THE OWNERS SAFETY REQUIREMENTS, AND THE LATEST
- REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT. . ALL LADDERS MUST BE EQUIPPED WITH NON-SKID SAFETY PADS AND BE CONSTRUCTED OF MATERIAL THAT IS NON-CONDUCTIVE
- THE CONTRACTOR IS TO PROVIDE UPRIGHT STORAGE RACKS FOR ACETYLENE AND OXYGEN BOTTLES TO BE USED DURING THE PROJECT. THESE CONTAINER SHALL BE PROPERLY MARKED AS TO THE APPROPRIATE CONTENTS. NO UNLABELED CYLINDERS SHALL BE USED. COMPRESSES GAS CYLINDERS MUST BE TRANSPORTED IN AN UPRIGHT POSITIONS AND PROPERLY SECURED
- I. CONTRACTOR IS TO BE RESPONSIBLE FOR HIS OWN TOOLS AND EQUIPMENT AND SECURE THEM AT THE END OF THE DAY. CONTRACTOR IS NOT TO USE ANY OF THE OWNER'S TOOLS OR EQUIPMENT.
- . CONTRACTOR SHALL PROVIDE ITS OWN FIRST AID EQUIPMENT AND THE MEANS FOR PROVIDING MEDICAL CARE OF HIS PERSONNEL.
- I. CONTRACTOR TO PROVIDE WEEKLY SAFETY MEETING FOR THEIR EMPLOYEES WHILE WORKING ON SITE.

CONTRACTOR'S RESPONSIBILITY - COMPLETION OF WORK

AT COMPLETION OF THIS PROJECT THE CONTRACTOR IS TO FURNISH TO THE OWNER ALL KEYS, (3) COPIES OF OPERATING MANUALS, SERVICE MANUALS, INSTALLATION MANUALS, ETC., AND PROVIDE INSTRUCTION AND TRAINING ON SYSTEMS OPERATION AND PERIODIC MAINTENANCE OF ALL EQUIPMENT. INSTRUCTIONS SHALL BE CONTAINED IN A HARD COVER TYPE THREE RING BINDER AND SHALL CONTAIN SAME TYPE OF PAPER FOR ALL SHEETS. INSTRUCTIONS SHALL CONSIST OF THE FOLLOWING :

- A. DESCRIPTION OF THE SYSTEM B. INSTALLATION AND OPERATING INSTRUCTIONS
- C. MAINTENANCE REQUIREMENTS FRO ALL EQUIPMENT
- D. CONTROLS AND ADJUSTMENTS PARTS LISTS
- F. SYSTEM ELECTRICAL WIRING DIAGRAMS

MATERIAL	S AND EQUIPMENT PROVIDED AND	OR INST	ALLED SHALL BE GUARANTEED FOR A
ERIOD OF HOULD AN'	TWO (2) YEARS FROM THE DATE ' (TROUBLE DEVELOP DURING THIS	OF ACCEPTA PERIOD DU	F TO DEFECTIVE MATERIAL OR FAULTY
ORKMANSH	IP, OR INFERIOR WORKMANSHIP N	OTICED AT T	THE TIME OF INSTALLATION, THE
ONTRACTOF	R SHALL FURNISH NECESSARY LAB	OR AND MAT	FERIALS TO IMMEDIATELY CORRECT TO
HE SATISFA	CTION OF THE OWNER.		
ALL RUB	RISH IS TO BE REMOVED FROM	THE SITE AN	ID THE PROJECT AREA LEFT CLEAN T
HE SATISFA	CTION OF THE OWNER. VERIFY WI	TH OWNER D	DISPOSAL OF SALVAGEABLE ITEMS.
ALL DUC	TWORK SHALL BE THOROUGHLY (CLEANED AN	D VACUUMED AT COMPLETION OF JO
	OF JOB. ALL REPLACEABLE TY	PF AIR FILT	TERS SHALL BE REPLACED WITH NE
LTERS.			
ALL EQUI	RS. WHEN NAMEPLATES ARE IIIF(GIBLES SHALL	NGE FOR REPLACEMENT BY FOULPMENT
ANUFACTUF	RER. FIXTURES, PIPING, FINISHEI	D SÚRFACES	S AND EQUIPMENT SHALL HAVE A
REASE, ADI	HESIVE LABELS AND FOREIGN MAT	ERIALS REMO	JVED.
LABEL AL	L MECHANICAL EQUIPMENT WITH F	PERMANENT	IDENTIFICATION AFFIXED TO EACH PIEC
F EQUIPME	NT AND ASSOCIATED ELECTRICAL I	DISCONNECT.	
OHECK II	LARFIS AND ARROWS WHERE FRE	WIRING LAE	SELS AND DIRECTIONAL ARROWS, APPL
JINEOILD	BABLES AND ARROWS WHERE ER		Jond.
	ABBR	EVIATIONS	
	BLUMBING		
252	PLUMBING		MECHANICAL
BT	BATH TUB	AD	AIR HANDLING UNIT
		AP	ACCESS PANEL
CA	COMPRESSED AIR CONDENSATE DRAIN	BHP	BRAKE HORSEPOWER
co	CLEANOUT	Din	BINKEHONDEROWER
CR	CONDENSATE RETURN	CA	
	CITT WATER, COLD WATER	CHWP	CHILLED WATER PUMP
DCO	DOUBLE CLEANOUT	CHWR	CHILLED WATER RETURN
DF	DRINKING FOUNTAIN DRAINAGE FIXTURE UNIT	CHWS	CONDENSING UNIT
DS	DOWN SPOUT		
DW	DISHWASHER	EA	EXHAUST AIR
EW	EYEWASH	EG	EXHAUST GRILLE
50		ER	EXHAUST REGISTER
FS	FLOOR SINK	EAT	ENTERING AIR TEMPERATURE
000		EDB	ENTERING DRY BULB TEMPERATURE
GW	GREASE WASTE	EVVD	EXHAUST FAN
HB	HOSE BIBB HOT WATER RETURN	F FA	FURNACE FRESH AIR
		FCU	FAN COIL UNIT
LAV	LAVATORY	FD	
NG	NATURAL GAS	FSD	FIRE / SMORE DAMPER
0.00		HPS	HIGH PRESSURE STEAM SUPPLY
ORD	OVERFLOW ROOF DRAIN	HPR	HIGH PRESSURE STEAM RETURN HEAT RECOVERY UNIT
PRV	PRESSURE REDUCING VALVE	HHWR	HEATING HOT WATER RETURN
RD	ROOF DRAIN	HHWS	HEATING HOT WATER SUPPLY
		LAT	LEAVING AIR TEMPERATURE
SAN	SANITARY	LDB	LEAVING DRY BULB TEMPERATURE
STRM	STORM	LWB	LEAVING WET BULB TEMPERATURE
LIP	URNAL	MA	MIXED AIR
UN		MD	MOTORIZED DAMPER
V	VENT VENT THRU BOOF	420	
VIIX		OSAT	
WC	WATER CLOSET	DA	
WCO	WALL CLEANOUT	RG	RETURN GRILLE
		RR	RETURN REGISTER
		SAC	SPLIT AC SYSTEM
		SP	STATIC PRESSURE
		SA	
		SR	SUPPLY REGISTER
		TO	
0 		TSTAT	THERMOSTAT
		1/5	
		VD	

MECHANIC	AL SYMBOLS	
HVAC SYMBOLS	PLUMBING SY	MBOLS
	SANITARY PIPING -	
SENSOR - TEMPERATURE	VENT PIPING	
SENSOR - HUMIDITY	STORM PIPING -	
SMOKE DETECTOR	COLD WATER —	
	GAS	G —
	and a	-
		C—
	ELBOW UP	0-
	VALVE ON RISER	\bigcirc
SUPPLY DUCT UP		/
SUPPLY DUCT DOWN		
	TEE OFF BOTTOM —	
	UNION -	
	GATE VALVE	
RETURN AIR —	GLOBE VALVE —	
	BALL VALVE	
		<u> </u>
		—N M
SUPPLY DIFFUSER	3-WAT VALVL	- A
ТҮРЕ	BALANCING VALVE —	
	SCHRADER DIFFERENTIAL	——————————————————————————————————————
120 CFM		
	CIRCUIT SETTER —	
	TRIPLE DUTY VALVE —	! _
EQUIPMENT LABEL		
	STRAINER WITH BLOW OFF VALVE —	<u> </u>
AHU		' \
6		M
	MOTORIZED CONTROL VALVE —	
		£
	FRESSURE REDUCING VALVE -	PRV
	3-WAY CONTROL VALVE —	-
GENERAL SYMBOLS		
	ANGLE VALVE —	——· 译
		<u>_</u>
		الربا
		\frown
	FLOW METER -	(FM
	FLOW VENTURI	
TIEM TO BE REMOVED		
EXISTING		
NEW	THERMOMETER -	<u> </u>
		Ц.
	SHUCK ADSURDER	
	PRESSURE GAUGE —	Ÿ
	FLEXIBLE CONNECTION -	
		凶
	PIPE CAP	(_) [
	DIRECTION OF FLOW	
	DIRECTION OF SLOPE w/	 SLOPE ½"
	DAGNILOW FREVENTER -	

CLEANOUT FLOOR DRAIN

M-001

DUCTWORK - DELIVERY, STORAGE AND HANDLING

PROTECT ALL DUCTWORK, FLANGES, FITTINGS AND SPECIALTIES FROM WEATHER, MOISTURE, DIRT AND DAMAGE RESULTING FROM OTHER CAUSES SUCH AS TOOL IMPACT, ACCIDENTS, CARELESSNESS OR ABUSE. ELEVATE ABOVE GRADE. DO NOT EXCEED STRUCTURAL CAPACITY OF FLOOR, IF STORED INSIDE.

HVAC CONSTRUCTION NOTES

1. FABRICATION AND INSTALLATION AND OF ALL DUCTWORK SHALL CONFORM TO SMACNA DUCT STANDARDS, ASHRAE HANDBOOKS AND LOCAL CODES.

GUIDELINES FOR DUCTWORK SIZING AT 0.10" W.C. PER 100 FT:
MAIN SUPPLY DUCTS : 2,000 FPM
BRANCH DUCTS : 1,500 FPM
RETURN AND EXHAUST DUCTS : 1,500 FPM
ROOM TERMINAL AIR DEVICES : 800 FPM

ROUND	DUCTWORK	SHALL	ΒE	CONSTRUCTED	OF	GALVANIZED	SHEET
SHOWN	:						

0.75							
<u>SIZE</u>		<u>GAUGE</u>					
14" AND SMALLER		24					
16"TO 36"		22					
38"TO 50"		20					
52"TO 60"		18					
RECTANGULAR DUCTWOR	K SHALL	BE CONSTRUCTED	OF	GALVANIZED			
SIZED AS SHOWN :							
<u>DIMENSION OF LONGE</u>	<u>ST SIDE</u>	<u>GAUGE</u>					
UP TO 18"		24					
20"TO 48"		22					
50"TO 72"		20					
74" AND OVER		18					

2. COORDINATE LOCATIONS OF DUCTS WITH EXISTING STRUCTURE, PLUMBING, LIGHTS, SPRINKLERS, CONDUIT EQUIPMENT AND ALL FIELD CONDITIONS AND OTHER TRADES.

3. COORDINATE LOCATION OF REGISTERS, GRILLES, AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN AND ELECTRICAL DRAWINGS. CENTER GRILLES AND DIFFUSERS IN CEILING TILES.

4. FOR DUCTWORK ELBOWS USE LONG RADIUS ELBOWS WITH A CENTERLINE RADIUS EQUAL TO (2) TIMES THE DUCT DIAMETER ON ROUND DUCT, AND ELBOW WIDTH ON RECTANGULAR DUCT. AT SQUARE ELBOWS GREATER THAN 45 DEGREES USE TURNING VANES.

5. FLEXIBLE CONNECTIONS SHALL BE INSTALLED AT POINTS WHERE DUCTS CONNECT TO AIR HANDLING EQUIPMENT OR OTHER EQUIPMENT TO MINIMIZE TRANSMISSIONS OF MECHANICAL VIBRATION IN DUCTWORK. ALL FLEXIBLE CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS.

6. PROVIDE FIRE STOP IN WALL, FLOOR, AND CEILING PENETRATIONS WHERE REQUIRED TO MAINTAIN FIRE SEPARATION.

7. SEAL SUPPLY AND RETURN JOINTS AND SEAMS WITH HARD-CAST DUCT SEALANT. 8. SUPPLY AND RETURN DUCT TO BE INSULATED UNLESS INDICATED OTHERWISE WITH 1-1/2" THICK, BLANKET-TYPE, FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER, 2"

STAPLING AND TAPING FLANGE ALONG ONE EDGE. INSULATION : ASTM C553, DENSITY OF 0.75, CONDUCTIVITY OF 0.23 @75F. VAPOR BARRIER : LAMINATED WHITE KRAFT PAPER, ALUMINUM FOIL, GLASS FIBER REINFORCEMENT, PERMEANCE OF 0.02, AND PUNCTURE RESISTANCE OF 50 UNITS. COMPOSITE FLAMES SPREAD / SMOKE DENSITY OF 25/50. APPROVED MANUFACTURERS : CERTAINTEED, JOHNS MANSVILLE, KNAUF, OWENS/CORNING.

9. FOR EXTERIOR ROOF MOUNTED DUCTWORK PROVIDE 1" MINIMUM RIGID PHENOLIC INSULATION AND UV RESISTANT ALUMINUM JACKET WITH WATERPROOF SEAMS.

10. ALL SUPPLY AND OUTSIDE AIR DUCTS FROM MAKE UP AIR UNITS SHALL BE LINED WITH ACOUSTICAL DUCT INSULATION FROM UNIT CONNECTION TO TEN FEET INTO THE SYSTEM. DUCT SIZES SHOWN ARE NET INSIDE DIMENSIONS, ADJUST DUCT SIZES FOR LINING.

11. FLEXIBLE DUCT IS NOT ALLOWED ON RETURN AND EXHAUST SYSTEMS. 12. PROVIDE VOLUME DAMPERS IN ALL TAKEOFFS TO ALL DIFFUSERS.

13. CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED WITH SUFFICIENT CLEARANCE FOR FUTURE MAINTENANCE. FOLLOW THE MANUFACTURE'S RECOMMENDATIONS FOR INSTALLATION.

14. PROVIDE CONDENSATE PIPING WHERE REQUIRED, ROUTE CONDENSATE PIPING TO FLOOR DRAIN. CONDENSATE PIPE TO BE PITCHED 1/4" PER FOOT IN THE DIRECTION OF THE FLOOR DRAIN.

15. INSTALL SMOKE DETECTORS AS REQUIRED BY APPLICABLE CODES, INTERLOCKED TO SHUT DOWN FANS IN ALL AIR HANDLING SYSTEMS SUPPLYING AIR IN EXCESS OF 2,000 CFM. INSTALL IN RETURN AIR STREAM OF DUCTWORK.

FOR SYSTEMS WITH MORE THAN 15,000 CFM INSTALL SMOKE DETECTORS IN SUPPLY AIR AND RETURN AIR STREAM OF DUCTWORK.

WHEN SMOKE DETECTOR IS ACTIVATED A SIGNAL WILL BE SENT TO THE FIRE ALARM AND A VISUAL AND AUDIBLE SIGNAL WILL ACTIVATED.

16. ALL COMBINATION FIRE / SMOKE DAMPERS ARE TO BE INTERLOCKED WITH AND ACTUATED BY THE BUILDING FIRE ALARM SYSTEM. PROVIDE FIRE OR COMBINATION FIRE AND SMOKE DAMPERS IN DUCTWORK OR TRANSFER AIR OPENINGS OF ALL FIRE RATED ASSEMBLIES. CEILING RADIATION DAMPERS ARE REQUIRED AT ALL DUCT / FAN PENETRATIONS OF FIRE RATED CEILINGS. COORDINATE REQUIRED LOCATIONS OF DAMPERS WITH ARCHITECTURAL PLANS INDICATING FIRE AND / OR SMOKE RATED ASSEMBLIES. REFER TO DETAILS.

17. UNLESS MORE STRINGENT LOCAL CODES REQUIRE IT, PROVIDE MINIMUM SINGLE STAGE MERV 8 FILTRATION OR EQUIVALENT FOR RECIRCULATING EQUIPMENT. PROVIDE MINIMUM MERV 12 FILTRATION OR EQUIVALENT FOR AIR HANDLING EQUIPMENT USED TO CONDITION AND SUPPLY AIR.

18. PROVIDE ACCESS DOORS IN CEILINGS AND WALLS FOR ACCESS TO ALL VALVES, VENTS, CONTROLS, DAMPERS, MOTORS, ETC.

19. ALL EXPOSED GRILLES AND DIFFUSERS SHALL HAVE FACTORY FINISH TO MATCH ADJACENT SPACE OR AS INSTRUCTED BY THE ARCHITECT. SUBMIT COLOR SAMPLES FOR SELECTIONS. REFER TO ARCHITECTURAL SPECIFICATIONS FOR PAINTING.

20. ALL EXPOSED DUCTWORK IN FINISHED SPACES SHALL BE PAINTED. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

21. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL TRADES THE LOCATION AND SIZES OF ACCESS DOORS THAT SHALL BE INSTALLED FOR EQUIPMENT ABOVE GYPSUM CEILINGS.

22. THE CONTRACTOR SHALL COORDINATE LOCATION OF INDOOR AND ROOF MOUNTED EQUIPMENT WITH OTHER TRADES TO AVOID CONFLICTS WITH LIGHTS, PLUMBING SYSTEM, CONDUITS, PIPING, DUCTWORK, STRUCTURAL STEEL, ETC.

23. ALL MATERIAL LOCATED WITHIN A RETURN AIR PLENUM SHALL BE NON-COMBUSTIBLE OR LISTED FOR USE WITHIN A PLENUM.

24. THE CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH OTHER TRADES AS REQUIRED TO FACILITATE THE INSTALLATION OF ALL EQUIPMENT, PIPING, DUCTWORK, GRILLES, ETC TO AVOID CONFLICT.

25. COORDINATE ALL DUCT ROUTING IN ATTIC SPACE OR CONCEALED SPACES WITH STRUCTURAL FRAMING.

METAL STEEL, SIZED AS

SHEET METAL STEEL,

CARBON MONOXIDE DETECTOR

1. A CARBON MONOXIDE DETECTOR IS TO BE INSTALLED IN MECHANICAL ROOMS, WATER HEATER ROOMS, POOL EQUIPMENT ROOMS, AND IN AREAS ABOVE AND ADJACENT TO AREAS WHERE A MECHANISM IS PRESENT THAT BURNS FOSSIL FUEL.

2. THE CARBON MONOXIDE DETECTOR IS TO BE CALIBRATED TO ACTIVATE PER CURRENT UL 2034 STANDARDS 400 ppm / 4 TO 15 MINUTES EXPOSURE

100 PPM / 10 TO 50 MINUTES EXPOSURE 70 PPM / 60 TO 240 MINUTES EXPOSURE

3. THE CARBON MONOXIDE DETECTOR IS TO BE CEILING MOUNTED, 120 VOLT OPERATION WITH BATTERY BACKUP.

4. THE CARBON MONOXIDE DETECTOR SHALL BE WIRED TO THE SMOKE ALARM. UPON DETECTION OF UNSAFE LEVELS OF CARBON MONOXIDE IN THE MONITORED AREA, A DISTINCT AUDIBLE AND VISUAL SIGNAL WILL BE SENT TO THE EMERGENCY CALL SYSTEM ANNUNCIATOR PANEL.

5. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

MECHANICAL COMMISSIONING - TESTING NOTES

EQUIPMENT FOR THE HVAC SYSTEM AND TEMPERATURE CONTROLS SHALL BE COMMISSIONED PER THE ANSI / ASHRAE COMMISSIONING PROCESS FOR BUILDINGS AND SYSTEMS. THE COMMISSIONING PROCESS INTEGRATES THE TRADITIONALLY SEPARATE FUNCTIONS OF SYSTEM DOCUMENTATION, EQUIPMENT STARTUP, PERFORMANCE TESTING AND TRAINING. COMMISSIONING DURING THE CONSTRUCTION PHASE IS INTENDED TO ACHIEVE THE FOLLOWING SPECIFIC OBJECTIVES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS:

1. VERIFY AND DOCUMENT THAT APPLICABLE EQUIPMENT AND SYSTEMS ARE INSTALLED ACCORDING TO THE MANUFACTURE'S RECOMMENDATIONS, CONTRACT REQUIREMENTS, AND INDUSTRY STANDARDS AND THAT THEY RECEIVE ADEQUATE OPERATIONAL CHECKOUT BY INSTALLING CONTRACTORS.

2. VERIFY AND DOCUMENT PROPER PERFORMANCE OF EQUIPMENT AND SYSTEMS. CONTRACTOR SHALL OPERATE ALL PARTS OF ENTIRE HEATING, VENTILATING, AND AIR CONDITIONING, MAKING ADJUSTMENTS AND REPAIRS. BALANCE AIR DELIVERY AT OUTLETS, BALANCING WATER FLOWS AT EQUIPMENT REQUIRING WATER, AND LEAVE SYSTEM TESTED AND READY FOR OPERATION.

START MOTOR DRIVEN EQUIPMENT AND MAKE SURE THAT THERMAL OVERLOAD PROTECTION DOES NOT SHUT DOWN THE MOTOR DURING ACCELERATION PERIOD. START FANS AND CHECK FOR UNUSUAL VIBRATION AS WELL AS FOR DISTORTION AND MISALIGNMENT OF FAN WHEELS AND SHAFTS. CORRECT DEFECTS FOUND. CHECK MOTORS FOR DIRECTIONAL ROTATION. OBTAIN ELECTRICAL TRADES ASSISTANCE WHERE REQUIRED. ALIGN BELTS AND CHECK BELT TENSION. CHECK THAT BELTS OF EACH MULTI-BELT DRIVE ARE MATCHED SET. REPLACE IF REQUIRED. ON MULTIPLE BELT VARIABLE PITCH DRIVES, CHECK THAT ALL BELTS AREA STRICTLY PARALLEL. ADJUST AS REQUIRED. AFFIX LABEL ON EQUIPMENT INFORMATION REQUIRED FOR ORDERING REPLACEMENT BELTS. CHECK THAT TACHOMETER OPENINGS IN BELT GUARD ARE ALIGNED WITH SHAFT ENDS. ADJUST GUARDS AS REQUIRED. CHECK SET POINTS OF OPERATING AND SAFETY CONTROL DEVICES. OPERATE DAMPER MECHANISM, CHECK DAMPERS FOR CORRECT ACTION. CHECK FOR TIGHT CLOSING. ADJUST AS REQUIRED. OPERATE TEMPERATURE CONTROL VALVES AND CHECK FOR CORRECT ACTION.

3. TEST AND BALANCE AIR DISTRIBUTION SYSTEM TO WITHIN 10% OF CFM LISTED ON THE DRAWINGS. BALANCE AIR DELIVERY AT OUTLETS, BALANCING WATER FLOWS AT EQUIPMENT REQUIRING WATER, AND LEAVE SYSTEMS TESTED AND READY FOR OPERATION.

4. CONTRACTOR SHALL TEST ALL CONTROLS AND WIRING TO ENSURE OPERATION OF EQUIPMENT. CHECK IF PRESSURE GAUGES, THERMOMETERS, SENSORS AND FLOW MEASUREMENT DEVICES ARE PLACED IN CORRECT LOCATION. MAKE MODIFICATIONS AS REQUIRED. CHECK ACCESS DOORS AND ACCESS PANELS FOR FREE HINGE AND LATCH OPERATION AS WELL AS EFFECTIVE SEATING OF SEALS. MAKE REPAIR AS REQUIRED. REPOSITION INSTRUMENTS FOUND DIFFICULT TO READ,

5. VERIFY AND DOCUMENT THAT OPERATION AND MAINTENANCE DOCUMENTATION IS COMPLETE. VERIFY AND DOCUMENT THAT THE FACILITY OPERATING PERSONNEL ARE PROPERLY TRAINED. CONTRACTOR SHALL PROVIDE BALANCING REPORTS FOR APPROVAL, PRIOR TO FINAL ACCEPTANCE. THESE REPORTS SHALL INCLUDE AIR FLOW MEASUREMENTS AT OUTLETS, TOTAL AIR QUANTITY HANDLED, INDIVIDUAL WATER FLOW A EQUIPMENT, TOTAL WATER FLOW AT PUMPS. MOTOR AND AMPERAGE, VOLTAGE NAMEPLATE, ACTUAL OPERATING AMPERAGE AND VOLTAGE, AND A STATEMENT THAT THE CONTROL SYSTEM HAS BEEN CHECKED AND VERIFIED FOR OPERATION.

APPROVED MANUFACTURER'S

ACCESS DOORS RUSKIN

DUCTMATE INDUSTRIES NAILOR INDUSTRIES, INC.

DUCT INSULATION (EXTERIOR) ARMACELI RUBATEX

DUCT INSULATION (INTERIOR) CERTAIN TEE JOHNS MANSVILLE KNAUF

DUCT SEALANT MCGILL AIRFLOW POLYMER ADHESIVES DUCTMATE INDUSTRIES

OWENS-CORNING

FIRE AND SMOKE DAMPERS GREENHECK

FIRE STOPPING

PRICE

FLEXIBLE DUCTWORK DUCTMATE INDUSTRIES OWENS-CORNING FIBERGLASS

THERMAFLEX TYPE M-KE **GRILLE, REGISTERS, DIFFUSERS**

SHEET METAL DUCTWORK UNITED SHEET METAL ALLIED MECHANICAL SERVICES SEMCO MCGILL AIRFLEX

VOLUME CONTROL DAMPERS NAILOR INDUSTRIES, INC. RUSKIN GREENHECK VENTLOCK

HYDRONIC WATER PIPING

1. ALL HYDRONIC WATER PIPING (HOT WATER SUPPLY AND HOT WATER RETURN)

- PIPING 2" AND SMALLER SHALL BE : A. TYPE 'L' COPPER TUBING, ASTM B88, WITH SOLDERED JOINTS AND WROUGHT COPPER FITTINGS ASME B16.22 AND GRADE 95TA SOLDER JOINT. B. TYPE BCS-150, BLACK CARBON STEEL, ASTM A53, TYPE S (SEAMLESS) OR TYPE E
- (ELECTRIC-RESISTANCE WELDED), GRADE A, SCHEDULE 40, PLAIN ENDS.
- PIPING 2 1/2" AND LARGER SHALL BE : A. TYPE 'L' HARD COPPER TUBE.

B. USE ASTM A536. GRADE 65-45-12 DUCTILE IRON GROOVED MECHANICAL JOINTS FOR WITH ASTM A53, TYPE F, E, OR S, GRADE B FABRICATED STEEL, OR ASTM A106, GRADE B STEEL FITTINGS WITH GROOVES OR SHOULDERS DESIGNED TO ACCEPT GROOVED END COUPLINGS. USE APPROPRIATE GASKETS FOR 200°F

2. PITCH ALL HYDRONIC PIPING DOWN $\frac{1}{16}$ " PER 1'-0" IN THE DIRECTION OF FLOW. 3. REAM AND FLUSH WATER LINES BEFORE BEING PUT INTO SERVICE. FIRST FLUSH THE ENTIRE SYSTEM WITH CLEAN, POTABLE WATER UNTIL NO DIRTY WATER APPEARS AT THE OUTLETS.

REFRIGERANT PIPING

1. PIPING SHALL BE TYPE 'L' OR TYPE 'M' COPPER TUBING

2. HORIZONTAL REFRIGERANT AND DRAIN PIPING SHALL SLOPE DOWN IN THE DIRECTION OF FLOW AT A MINIMUM SLOPE OF 1/8" PER FOOT OF RUN.

REFRIGERANT PIPING INSULATION

CONDITIONING ENGINEERS, AND AS FOLLOWS.

. CLOSED-CELL INSULATION SHALL BE PROVIDED OVER ALL REFRIGERANT PIPING AND OTHER SERVICES AS SPECIFIED OR NOTED. CLOSED-CELL PIPING INSULATION SHALL BE 1/2" THICK 25/50 ARMAFLEX OR RUBATEX. ALL GLUES AND COATINGS SHALL BE PRODUCTS OF THE SAME MANUFACTURER AS THE INSULATION.

2. INSULATION SHALL BE CONTINUOUS OVER ALL VALVE BODIES, FITTINGS, AND WALL AND FLOOR PENETRATIONS.

<u>REFRIGERANT PIPING</u> . GENERAL: INSTALL REFRIGERANT LINES PROPERLY PITCHED WITH OIL TRAPS PROPERLY SIZED, LOCATED AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. ANY OIL IN ANY PART OF THE SYSTEM SHALL BE ABLE TO FIND ITS WAY BACK TO THE COMPRESSOR WITH THE SYSTEM OPERATING ON MINIMUM CAPACITY. INSTALL PIPING IN ACCORDANCE WITH STANDARD ENGINEERING PRACTICE AS RECOGNIZED BY THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR

3. ACCESSORIES: PROVIDE NECESSARY ACCESSORIES FOR A COMPLETE AND WORKABLE SYSTEM WHETHER SHOWN ON THE DRAWINGS OR NOT WHICH COULD INCLUDE SUCH ITEMS AS STRAINERS, FILTER DRIER, SIGHT GLASS, RELIEF VALVES, CHARGING VALVES, STOP VALVES, CHECK VALVES, EXPANSION VALVES AND SOLENOID VALVES.

4. UTILIZE THE SERVICES OF A QUALIFIED REFRIGERATION MECHANIC FOR THE INSTALLATION AND TESTING OF REFRIGERANT PIPING AND REFRIGERATION EQUIPMENT.

5. ALL REFRIGERATION PIPING, INSTALLATION, AND TESTING SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ANS SPECIFICATION B9.1.

CONDENSATE PIPING 1. PIPING SHALL BE SCHEDULE 80 POLYVINYL CHLORIDE PIPE (PVC).

GAS PIPING

. PROVIDE INDIVIDUAL GAS SHUT OFF PLUG VALVE AND DIRT LEG AT EACH GAS FIRED PIECE OF EQUIPMENT. 2. PROVIDE PRESSURE REGULATOR AND VENTING AS REQUIRED BY CODE. 5. EXTERIOR GAS PIPING PLACED ON THE ROOF SHALL BE PROVIDED WITH SUPPORTING MEANS FOR EXTREME MOVEMENT AND TO PROTECT THE ROOF AS DETAILED ON PLANS. ALSO PROVIDE A FULL WIDTH NON-BINDING STRAP IRON RETAINER ACROSS THE SUPPORT CLEAT. ALL GAS PIPING EXPOSED TO THE WEATHER SHALL BE PAINTED WITH TWO COATS OF YELLOW RUST PREVENTATIVE PAINT. 5. CONTRACTOR TO VERIFY SERVICE SIZE, METER SIZE, AND PRESSURE WITH UTILITY COMPANY. 6. INSTALL GAS PIPING ONLY IN ACCESSIBLE LOCATIONS OR AS REQUIRED BY GOVERNING CODE. 6. GAS PIPING AND TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY, APPLICABLE CODE AUTHORITIES AND CURRENT STANDARDS OF NFPA. . WELDING MATERIALS AND LABOR TO CONFORM TO ASME CODE AND APPLICABLE STATE LABOR REGULATIONS. 8. USE WELDERS FULLY QUALIFIED AND LICENSED BY STATE AUTHORITIES. 9. GAS PIPING: INSTALLATION CODE FOR NATURAL GAS BURNING APPLIANCES AND EQUIPMENT. 10. GAS PIPING INSTALLATIONS SHALL CONFORM TO THE MINIMUM REQUIREMENTS LOCAL AUTHORITY HAVING JURISDICTION. 1. ALL ABOVEGROUND GAS PIPING 4" AND SMALLER SHALL BE ASTM A53, SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS. THREADED PIPE AND FITTINGS FOR PIPE 2" AND SMALLER, AND WELDED PIPE FOR $2\frac{1}{2}$ " PIPE AND LARGER. . GAS COCKS 2" AND SMALLER SHALL BE ALL IRON WITH BRASS SQUARE HEAD PLUG. EQUAL TO CRANE NO. 324. 3. GAS COCKS LARGER THAN 2" SHALL BE LUBRICATED PLUG COCKS WITH WELDING ENDS, WRENCH OPERATED. EQUAL TO NORDSTORM NO. 2025 %. UNIONS AND COUPLINGS 1. SIZE $2\frac{1}{2}$ " AND UNDER: 150 PSI BLACK MALLEABLE IRON, GROUND JOINT BRASS TO IRON SEAT UNIONS FOR THREADED FERROUS PIPING AIR TESTED FOR GAS SERVICE. EQUAL TO GRINNELL 463 OR EQUAL. CONNECTION . SCREW JOINT STEEL PIPING UP TO AND INCLUDING 11/3". WELD PIPING 2/3" AND LARGER, INCLUDING BRANCH CONNECTIONS. SCREW OR WELD 2 INCH PIPING. ALL INTERMEDIATE PRESSURE PIPE 2" AND LARGER SHALL HAVE WELDED JOINTS. 2. ALL EQUIPMENT CONNECTIONS SHALL BE PRECEDED BY A FULL LINE SIZE MANUAL SHUT-OFF COCK, PRESSURE REGULATOR, 6" DIRT POCKET AND UNION AT THE EQUIPMENT. UNION SHALL BE INSTALLED BETWEEN THE SHUTOFF COCK AND THE EQUIPMENT. PRESSURE REGULATORS SHALL BE RATED TO REGULATE FROM 2 PSI TO OUNCES PRESSURE AND WHEN LOCATED INSIDE THE BUILDING SHALL BE VENTED TO THE OUTSIDE ATMOSPHERE AS REQUIRED BY THE LOCAL AUTHORITY. . PROVIDE A 6" DIRT POCKET AT THE LOW POINT OF THE GAS LINE AND WHERE SHOWN ON THE DRAWINGS COMPLETE WITH A SCREWED CAP END. H. WELDED JOINTS SHALL BE FUSION-WELDED UNLESS OTHERWISE REQUIRED. CHANGES IN DIRECTION OF PIPING SHALL BE MADE WITH WELDING FITTINGS ONLY. MITERING OR NOTCHING PIPE TO FORM ELBOWS AND TEES OR OTHER SIMILAR CONSTRUCTION WILL NOT BE PERMITTED. BRANCH CONNECTIONS SHALL BE MADE WITH WELDING TEES OR FORGED WELDING BRANCH OUTLETS. FIELD AND SHOP BEVELS SHALL BE IN ACCORDANCE WITH THE RECOGNIZED STANDARDS AND GHALL BE DONE BY MECHANICAL MEANS OR FLAME CUITING. WHERE BEVELING IS DONE BY FLAMI CUTTING, SURFACES SHALL BE CLEANED OF SCALE AND OXIDATION PRIOR TO WELDING. <u>ALIGNMENT</u> BEFORE WELDING, THE COMPONENT PARTS TO BE WELDED SHALL BE ALIGNED SO THAT NO STRAIN IS PLACED ON THE WELD WHEN FINALLY POSITIONED. HEIGHT SHALL BE SO ALIGNED THAT NO PART OF THE PIPE WALL IS OFFSET BY MORE THAN 20 PERCENT OF THE WALL THICKNESS. FLANGES AND BRANCHES SHALL BE SET TRUE. THIS ALIGNMENT SHALL BE PRESERVED DURING THE WELDING OPERATION. <u>ERECTION</u> WHERE THE TEMPERATURE OF THE COMPONENTS BEING WELDED REACHES 32 DEGREES F OR LOWER. THE MATERIAL SHALL BE HEATED TO APPROXIMATELY 100 DEGREES F FOR A DISTANCE OF 3 FT ON EACH SIDE OF THE WELD BEFORE WELDING, AND THE WELD SIDE OF THE WELD BEFORE WELDING, AND THE WELD SHALL BE FINISHED BEFORE THE MATERIAL COOLS TO 32 DEGREES F. ROUTE AND GRADES . ROUTE PIPING IN ORDERLY MANNER AND INSTALL DRIP LEGS FOR CONDENSATION COLLECTION POINTS. RUN PIPING ON DEDICATED ROOF AREA AND PARALLEL TO WALLS. 2. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE OR EQUIPMENT CONNECTED. 3. BRANCHES AND TAKE-OFFS SHALL BE OFF THE TOP OF MAINS. ALL HORIZONTAL LINES SHALL PITCH TO RISERS OR APPLIANCES. A. PROVIDE TEST PUMPS, GAUGES, METERS, AND OTHER INSTRUMENTS, MATERIALS, AND LABOR IN CONNECTION WITH TESTS. B. DO NOT PAINT, COVER OR CONCEAL PIPING, SWING JOINTS, AND THE LIKE, BEFORE TESTING AND OBTAINING APPROVAL. C. TEST PIPING WHICH WILL BE CONCEALED, IN SECTIONS AS APPROVED, IN A MANNER WHICH WILL NOT LEAVE ANY PIPE OR JOINT UNTESTED. D. PRIOR TO TESTING PIPING SYSTEMS. REMOVE OR OTHERWISE PROTECT FROM DAMAGE. CONTROL DEVICES, AIR VENTS, AND OTHER PARTS WHICH ARE NOT DESIGNED TO STAND PRESSURES USED IN TESTING PIPING. E. TEST WELDED PIPING FOR LEAKS, UNDER 100 PSI AIR PRESSURE WITH SOAP SUDS; THIS TEST SHALL PRECEDE HYDROSTATIC TEST. . MAKE NECESSARY REPAIRS AND REPEAT TESTS UNTIL THE ENTIRE SYSTEM IS APPROVED AND SATISFACTORY. G. PERFORM SPECIFIED SERVICES WITH CONTRACTOR'S QUALIFIED PERSONNEL, OR EMPLOY AND PAY FOR A QUALIFIED ORGANIZATION TO PERFORM SPECIFIED SERVICES. <u>GAS PIPING</u> 1. THE TEST PRESSURE FOR THIS SYSTEM SHALL BE 1.5 TIMES WORKING PRESSURE BUT NO LESS THAN 60 POUNDS PER SQUARE INCH. THIS TESTING WILL BE CONDUCTED BY USING AIR, CO2, OR NITROGEN PRESSURE TEST. THIS TEST WILL BE HELD FOR NO LESS THAN 1 HOUR WITH NO DROP IN PRESSURE. ALL JOINTS WILL BE SUBJECTED TO A VISUAL INSPECTION AND SOAP TEST. LEAKS AND LOSS IN TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED. REPAIR ALL LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST SYSTEM OR PORTION THEREOF UNTIL SATISFACTORY RESULTS ARE OBTAINED.

							EXHAUST TE-22-168 -	FAN SCHE	DULE STORE						
5										ELECTRICAL			PHYSICAL	PROPERTIES	
MARK	AREA SERVED	MANF	MODEL	CFM	STATIC PRESS	DRIVE	TYPE	VOLTAGE	MOTOR (HP)	FLA (AMPS)	MCA	MOP	WEIGHT (POUNDS)	SIZE	NOTES
EF-1	RESTROOMS	GREENHECK	CUE-099-VG	600	0.5	DIRECT	ROOF	115/60/1	1/4	2.85	4	15	39	19" x 19"	1
	Keyed Notes :														
	1 Provide roof curb with	backdraft damper	and hinged base												

Provide roof curb with backdraft damper and hinged base.

				Note : Formula us	VENTILAT Pe ed for Outdoor	TION SCHE PROJE er Michigan M r Air CFM : (SF	DULE - TYR CT NO. TE-22 lechanical Coo x (CFM/SF fa	ONE PART -168 de Section 403 ctor) + (People	Y STORE	on factor)) ÷ 0.	80				
							OUTDOO	RAIRFLOW	EXHAUST	CALCULA	TED CFM		ACTUAL CFI	M PROVIDED	
ROOM NO.	ROOM NAME	ROOM PRESSURE	SQUARE FEET	OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY #/1000 SF	TOTAL OCCUPANT LOAD	OUTDOOR AIRFLOW RATE CFM / PERSON	OUTDOOR AIRFLOW RATE CFM / SF	AIRFLOW RATE CFM / PLUMBING FIXTURE	CALCULATED OUTDOOR AIR (CFM)	MINIMUM EXHAUST AIR (CFM)	OUTDOOR AIR (CFM)	SUPPLY AIR (CFM)	RETURN AIR (CFM)	EXHAUST AIR (CFM)
101	ENTRY	NEUTRAL	104	ENTRY	10	0	5.00	0.06	0	8	0	0	160	0	200
102	MEN'S RESTROOM	NEGATIVE	107	TOILET	0	0	0.00	0.00	210	0	210	36	180	0	210
103	UTILITY CLOSET	NEGATIVE	22	STORAGE	0	0	0.00	0.12	70	3	70	10	50	0	70
104	WOMEN'S RESTROOM	NEGATIVE	123	TOILET	0	0	0.00	0.00	140	0	140	24	120	0	140
105	SALES	NEUTRAL	2866	SALES	15	22	7.50	0.12	0	636	0	864	4320	4320	0
									TOTALS	647	420	934	4,830	4,320	620

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						HEATING			ELE	CTRICAL	PHYSICAL PROPERTIES			
				-	COOLING	CAPACITY					DISC SIZE		PHYSICAL PROPERTIES	
MARK	MANF	MODEL	СГМ	TONS	MBH	INPUT BTU/H	OUTPUT BTU/H	VOLTAGE	МСА	FUSE SIZE	FLA	LRA	WEIGHT (POUNDS)	SIZE
AHU-1	CARRIER	48TCEA06HGA30A0A0	1500 - 2500	5	59.0	115	90	208-230 / 1 / 60	42	60	40	175	570	44" x 74 3/8" x 33 3/8" H
AHU-2	CARRIER	48TCEA06HGA30A0A0	1500 - 2500	5	59.0	115	90	208-230 / 1 / 60	42	60	40	175	570	44" x 74 3/8" x 33 3/8" H
						2								

DUCTWORK - DELIVERY, STORAGE AND HANDLING

DIRT AND DAMAGE RESULTING FROM OTHER CAUSES SUCH AS TOOL IMPACT, ACCIDENTS, CARELESSNESS OR ABUSE. ELEVATE ABOVE GRADE. DO NOT EXCEED STRUCTURAL CAPACITY OF FLOOR, IF STORED INSIDE.

HVAC CONSTRUCTION NOTES

CITE

. FABRICATION AND INSTALLATION AND OF ALL DUCTWORK SHALL CONFORM TO SMACNA DUCT STANDARDS, ASHRAE HANDBOOKS AND LOCAL CODES.

GUIDELINES FOR DUCTWORK SIZING AT 0.10" W.C. PER 100 FT: MAIN SUPPLY DUCTS : 2,000 FPM BRANCH DUCTS : 1,500 FPM RETURN AND EXHAUST DUCTS : 1,500 FPM ROOM TERMINAL AIR DEVICES : 800 FPM

ROUND DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL STEEL, SIZED AS SHOWN :

<u>SIZE</u>		<u>G</u> AU	GE		
14" AND SMALLER		2	4		
16"TO 36"		2	2		
38" TO 50"		2	0		
52" TO 60"		1	8		
RECTANGULAR DUCTWORK	SHALL	ΒE	CONSTRUCTED	OF	GALVANIZE
SIZED AS SHOWN :					
DIMENSION OF LONGEST	SIDE	<u>G</u> /	<u>AUGE</u>		
UP TO 18"			24		
20" TO 48"		2	2		
50" TO 72"		2	0		
74" AND OVER		1	8		

2. COORDINATE LOCATIONS OF DUCTS WITH EXISTING STRUCTURE, PLUMBING, LIGHTS, SPRINKLERS, CONDUIT EQUIPMENT AND ALL FIELD CONDITIONS AND OTHER TRADES.

3. COORDINATE LOCATION OF REGISTERS, GRILLES, AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN AND ELECTRICAL DRAWINGS. CENTER GRILLES AND DIFFUSERS IN CEILING TILES.

4. FOR DUCTWORK ELBOWS USE LONG RADIUS ELBOWS WITH A CENTERLINE RADIUS EQUAL TO (2) TIMES THE DUCT DIAMETER ON ROUND DUCT, AND ELBOW WIDTH ON RECTANGULAR DUCT. AT SQUARE ELBOWS GREATER THAN 45 DEGREES USE TURNING VANES.

5. FLEXIBLE CONNECTIONS SHALL BE INSTALLED AT POINTS WHERE DUCTS CONNECT TO AIR HANDLING EQUIPMENT OR OTHER EQUIPMENT TO MINIMIZE TRANSMISSIONS OF MECHANICAL VIBRATION IN DUCTWORK. ALL FLEXIBLE CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS.

6. PROVIDE FIRE STOP IN WALL, FLOOR, AND CEILING PENETRATIONS WHERE REQUIRED TO MAINTAIN FIRE SEPARATION.

7. SEAL SUPPLY AND RETURN JOINTS AND SEAMS WITH HARD-CAST DUCT SEALANT. 8. SUPPLY AND RETURN DUCT TO BE INSULATED UNLESS INDICATED OTHERWISE WITH 1-1/2" THICK, BLANKET-TYPE, FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER, 2"

STAPLING AND TAPING FLANGE ALONG ONE EDGE. INSULATION : ASTM C553, DENSITY OF 0.75, CONDUCTIVITY OF 0.23 @75F. VAPOR BARRIER : LAMINATED WHITE KRAFT PAPER, ALUMINUM FOIL, GLASS FIBER REINFORCEMENT, PERMEANCE OF 0.02, AND PUNCTURE RESISTANCE OF 50 UNITS. COMPOSITE FLAMES SPREAD / SMOKE DENSITY OF 25/50. APPROVED MANUFACTURERS : CERTAINTEED, JOHNS MANSVILLE, KNAUF, OWENS/CORNING.

9. FOR EXTERIOR ROOF MOUNTED DUCTWORK PROVIDE 1" MINIMUM RIGID PHENOLIC INSULATION AND UV RESISTANT ALUMINUM JACKET WITH WATERPROOF SEAMS.

10. ALL SUPPLY AND OUTSIDE AIR DUCTS FROM MAKE UP AIR UNITS SHALL BE LINED WITH ACOUSTICAL DUCT INSULATION FROM UNIT CONNECTION TO TEN FEET INTO THE SYSTEM. DUCT SIZES SHOWN ARE NET INSIDE DIMENSIONS, ADJUST DUCT SIZES FOR LINING.

11. FLEXIBLE DUCT IS NOT ALLOWED ON RETURN AND EXHAUST SYSTEMS. 12. PROVIDE VOLUME DAMPERS IN ALL TAKEOFFS TO ALL DIFFUSERS.

13. CEILING MOUNTED EQUIPMENT SHALL BE INSTALLED WITH SUFFICIENT CLEARANCE FOR

14. PROVIDE CONDENSATE PIPING WHERE REQUIRED, ROUTE CONDENSATE PIPING TO FLOOR DRAIN. CONDENSATE PIPE TO BE PITCHED $\frac{1}{4}$ " PER FOOT IN THE DIRECTION OF THE FLOOR DRAIN.

15. INSTALL SMOKE DETECTORS AS REQUIRED BY APPLICABLE CODES, INTERLOCKED TO SHUT DOWN FANS IN ALL AIR HANDLING SYSTEMS SUPPLYING AIR IN EXCESS OF 2,000 CFM. INSTALL IN RETURN AIR STREAM OF DUCTWORK.

FOR SYSTEMS WITH MORE THAN 15,000 CFM INSTALL SMOKE DETECTORS IN SUPPLY AIR AND RETURN AIR STREAM OF DUCTWORK.

WHEN SMOKE DETECTOR IS ACTIVATED A SIGNAL WILL BE SENT TO THE FIRE ALARM AND A VISUAL AND AUDIBLE SIGNAL WILL ACTIVATED.

16. ALL COMBINATION FIRE / SMOKE DAMPERS ARE TO BE INTERLOCKED WITH AND ACTUATED BY THE BUILDING FIRE ALARM SYSTEM. PROVIDE FIRE OR COMBINATION FIRE AND SMOKE DAMPERS IN DUCTWORK OR TRANSFER AIR OPENINGS OF ALL FIRE RATED ASSEMBLIES. CEILING RADIATION DAMPERS ARE REQUIRED AT ALL DUCT / FAN PENETRATIONS OF FIRE RATED CEILINGS. COORDINATE REQUIRED LOCATIONS OF DAMPERS WITH ARCHITECTURAL PLANS INDICATING FIRE AND / OR SMOKE RATED ASSEMBLIES. REFER TO DETAILS.

17. UNLESS MORE STRINGENT LOCAL CODES REQUIRE IT, PROVIDE MINIMUM SINGLE STAGE MERV 8 FILTRATION OR EQUIVALENT FOR RECIRCULATING EQUIPMENT. PROVIDE MINIMUM MERV 12 FILTRATION OR EQUIVALENT FOR AIR HANDLING EQUIPMENT USED TO CONDITION AND SUPPLY AIR.

18. PROVIDE ACCESS DOORS IN CEILINGS AND WALLS FOR ACCESS TO ALL VALVES, VENTS, CONTROLS, DAMPERS, MOTORS, ETC.

19. ALL EXPOSED GRILLES AND DIFFUSERS SHALL HAVE FACTORY FINISH TO MATCH ADJACENT SPACE OR AS INSTRUCTED BY THE ARCHITECT. SUBMIT COLOR SAMPLES FOR SELECTIONS. REFER TO ARCHITECTURAL SPECIFICATIONS FOR PAINTING.

20. ALL EXPOSED DUCTWORK IN FINISHED SPACES SHALL BE PAINTED. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

21. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL TRADES THE LOCATION AND SIZES OF ACCESS DOORS THAT SHALL BE INSTALLED FOR EQUIPMENT ABOVE GYPSUM CEILINGS.

22. THE CONTRACTOR SHALL COORDINATE LOCATION OF INDOOR AND ROOF MOUNTED EQUIPMENT WITH OTHER TRADES TO AVOID CONFLICTS WITH LIGHTS, PLUMBING SYSTEM, CONDUITS, PIPING, DUCTWORK, STRUCTURAL STEEL, ETC.

23. ALL MATERIAL LOCATED WITHIN A RETURN AIR PLENUM SHALL BE NON-COMBUSTIBLE OR LISTED FOR USE WITHIN A PLENUM.

24. THE CONTRACTOR SHALL FIELD VERIFY AND COORDINATE WITH OTHER TRADES AS REQUIRED TO FACILITATE THE INSTALLATION OF ALL EQUIPMENT, PIPING, DUCTWORK, GRILLES, ETC TO AVOID CONFLICT.

25. COORDINATE ALL DUCT ROUTING IN ATTIC SPACE OR CONCEALED SPACES WITH STRUCTURAL FRAMING.

PROTECT ALL DUCTWORK, FLANGES, FITTINGS AND SPECIALTIES FROM WEATHER, MOISTURE,

ED SHEET METAL STEEL,

FUTURE MAINTENANCE. FOLLOW THE MANUFACTURE'S RECOMMENDATIONS FOR INSTALLATION.

CARBON MONOXIDE DETECTOR

1. A CARBON MONOXIDE DETECTOR IS TO BE INSTALLED IN MECHANICAL ROOMS, WATER HEATER ROOMS, POOL EQUIPMENT ROOMS, AND IN AREAS ABOVE AND ADJACENT TO AREAS WHERE A MECHANISM IS PRESENT THAT BURNS FOSSIL FUEL.

2. THE CARBON MONOXIDE DETECTOR IS TO BE CALIBRATED TO ACTIVATE PER CURRENT UL 2034 STANDARDS 400 ppm / 4 TO 15 MINUTES EXPOSURE

100 PPM / 10 TO 50 MINUTES EXPOSURE 70 PPM / 60 TO 240 MINUTES EXPOSURE

3. THE CARBON MONOXIDE DETECTOR IS TO BE CEILING MOUNTED, 120 VOLT OPERATION WITH BATTERY BACKUP.

4. THE CARBON MONOXIDE DETECTOR SHALL BE WIRED TO THE SMOKE ALARM. UPON DETECTION OF UNSAFE LEVELS OF CARBON MONOXIDE IN THE MONITORED AREA, A DISTINCT AUDIBLE AND VISUAL SIGNAL WILL BE SENT TO THE EMERGENCY CALL SYSTEM ANNUNCIATOR PANEL.

5. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

MECHANICAL COMMISSIONING - TESTING NOTES

EQUIPMENT FOR THE HVAC SYSTEM AND TEMPERATURE CONTROLS SHALL BE COMMISSIONED PER THE ANSI / ASHRAE COMMISSIONING PROCESS FOR BUILDINGS AND SYSTEMS. THE COMMISSIONING PROCESS INTEGRATES THE TRADITIONALLY SEPARATE FUNCTIONS OF SYSTEM DOCUMENTATION, EQUIPMENT STARTUP, PERFORMANCE TESTING AND TRAINING. COMMISSIONING DURING THE CONSTRUCTION PHASE IS INTENDED TO ACHIEVE THE FOLLOWING SPECIFIC OBJECTIVES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS:

1. VERIFY AND DOCUMENT THAT APPLICABLE EQUIPMENT AND SYSTEMS ARE INSTALLED ACCORDING TO THE MANUFACTURE'S RECOMMENDATIONS, CONTRACT REQUIREMENTS, AND INDUSTRY STANDARDS AND THAT THEY RECEIVE ADEQUATE OPERATIONAL CHECKOUT BY INSTALLING CONTRACTORS.

2. VERIFY AND DOCUMENT PROPER PERFORMANCE OF EQUIPMENT AND SYSTEMS. CONTRACTOR SHALL OPERATE ALL PARTS OF ENTIRE HEATING, VENTILATING, AND AIR CONDITIONING, MAKING ADJUSTMENTS AND REPAIRS, BALANCE AIR DELIVERY AT OUTLETS, BALANCING WATER FLOWS AT EQUIPMENT REQUIRING WATER, AND LEAVE SYSTEM TESTED AND READY FOR OPERATION.

START MOTOR DRIVEN EQUIPMENT AND MAKE SURE THAT THERMAL OVERLOAD PROTECTION DOES NOT SHUT DOWN THE MOTOR DURING ACCELERATION PERIOD. START FANS AND CHECK FOR UNUSUAL VIBRATION AS WELL AS FOR DISTORTION AND MISALIGNMENT OF FAN WHEELS AND SHAFTS. CORRECT DEFECTS FOUND. CHECK MOTORS FOR DIRECTIONAL ROTATION. OBTAIN ELECTRICAL TRADES ASSISTANCE WHERE REQUIRED. ALIGN BELTS AND CHECK BELT TENSION. CHECK THAT BELTS OF EACH MULTI-BELT DRIVE ARE MATCHED SET. REPLACE IF REQUIRED. ON MULTIPLE BELT VARIABLE PITCH DRIVES, CHECK THAT ALL BELTS AREA STRICTLY PARALLEL, ADJUST AS REQUIRED. AFFIX LABEL ON EQUIPMENT INFORMATION REQUIRED FOR ORDERING REPLACEMENT BELTS. CHECK THAT TACHOMETER OPENINGS IN BELT GUARD ARE ALIGNED WITH SHAFT ENDS. ADJUST GUARDS AS REQUIRED. CHECK SET POINTS OF OPERATING AND SAFETY CONTROL DEVICES. OPERATE DAMPER MECHANISM, CHECK DAMPERS FOR CORRECT ACTION. CHECK FOR TIGHT CLOSING. ADJUST AS REQUIRED. OPERATE TEMPERATURE CONTROL VALVES AND CHECK FOR CORRECT ACTION.

3. TEST AND BALANCE AIR DISTRIBUTION SYSTEM TO WITHIN 10% OF CFM LISTED ON THE DRAWINGS. BALANCE AIR DELIVERY AT OUTLETS, BALANCING WATER FLOWS AT EQUIPMENT REQUIRING WATER, AND LEAVE SYSTEMS TESTED AND READY FOR OPERATION.

4. CONTRACTOR SHALL TEST ALL CONTROLS AND WIRING TO ENSURE OPERATION OF EQUIPMENT. CHECK IF PRESSURE GAUGES, THERMOMETERS, SENSORS AND FLOW MEASUREMENT DEVICES ARE PLACED IN CORRECT LOCATION. MAKE MODIFICATIONS AS REQUIRED. CHECK ACCESS DOORS AND ACCESS PANELS FOR FREE HINGE AND LATCH OPERATION AS WELL AS EFFECTIVE SEATING OF SEALS. MAKE REPAIR AS REQUIRED. REPOSITION INSTRUMENTS FOUND DIFFICULT TO READ,

5. VERIFY AND DOCUMENT THAT OPERATION AND MAINTENANCE DOCUMENTATION IS COMPLETE. VERIFY AND DOCUMENT THAT THE FACILITY OPERATING PERSONNEL ARE PROPERLY TRAINED. CONTRACTOR SHALL PROVIDE BALANCING REPORTS FOR APPROVAL, PRIOR TO FINAL ACCEPTANCE. THESE REPORTS SHALL INCLUDE AIR FLOW MEASUREMENTS AT OUTLETS, TOTAL AIR QUANTITY HANDLED, INDIVIDUAL WATER FLOW A EQUIPMENT, TOTAL WATER FLOW AT PUMPS, MOTOR AND AMPERAGE, VOLTAGE NAMEPLATE, ACTUAL OPERATING AMPERAGE AND VOLTAGE, AND A STATEMENT THAT THE CONTROL SYSTEM HAS BEEN CHECKED AND VERIFIED FOR OPERATION.

APPROVED MANUFACTURER'S

ACCESS DOORS

DUCTMATE INDUSTRIES NAILOR INDUSTRIES, INC.

DUCT INSULATION (EXTERIOR) ARMACELL RUBATEX

DUCT INSULATION (INTERIOR) CERTAIN TEEL JOHNS MANSVILLE KNAUF

DUCT SEALANT MCGILL AIRFLOW POLYMER ADHESIVES DUCTMATE INDUSTRIES

OWENS-CORNING

FIRE AND SMOKE DAMPERS GREENHECK

FIRE STOPPING

FLEXIBLE DUCTWORK DUCTMATE INDUSTRIES OWENS-CORNING FIBERGLASS THERMAFLEX TYPE M-KE

GRILLE, REGISTERS, DIFFUSERS PRICE

SHEET METAL DUCTWORK UNITED SHEET METAL ALLIED MECHANICAL SERVICES SEMCO MCGILL AIRFLEX

VOLUME CONTROL DAMPERS NAILOR INDUSTRIES, INC. RUSKIN GREENHECK VENTLOCK

HYDRONIC WATER PIPING

1. ALL HYDRONIC WATER PIPING (HOT WATER SUPPLY AND HOT WATER RETURN)

- PIPING 2" AND SMALLER SHALL BE A. TYPE 'L' COPPER TUBING, ASTM B88, WITH SOLDERED JOINTS AND WROUGHT
- COPPER FITTINGS ASME B16.22 AND GRADE 95TA SOLDER JOINT. B. TYPE BCS-150, BLACK CARBON STEEL, ASTM A53, TYPE S (SEAMLESS) OR TYPE E
- (ELECTRIC-RESISTANCE WELDED), GRADE A, SCHEDULE 40, PLAIN ENDS.
- PIPING 2 ½" AND LARGER SHALL BE : A. TYPE 'L' HARD COPPER TUBE.

B. USE ASTM A536, GRADE 65-45-12 DUCTILE IRON GROOVED MECHANICAL JOINTS FOR WITH ASTM A53, TYPE F, E, OR S, GRADE B FABRICATED STEEL, OR ASTM A106, GRADE B STEEL FITTINGS WITH GROOVES OR SHOULDERS DESIGNED TO ACCEPT GROOVED END COUPLINGS. USE APPROPRIATE GASKETS FOR 200°F

2. PITCH ALL HYDRONIC PIPING DOWN $\frac{1}{16}$ " PER 1'-0" IN THE DIRECTION OF FLOW. 3. REAM AND FLUSH WATER LINES BEFORE BEING PUT INTO SERVICE. FIRST FLUSH THE ENTIRE SYSTEM WITH CLEAN, POTABLE WATER UNTIL NO DIRTY WATER APPEARS AT THE OUTLETS.

REFRIGERANT PIPING

1. PIPING SHALL BE TYPE 'L' OR TYPE 'M' COPPER TUBING

2. HORIZONTAL REFRIGERANT AND DRAIN PIPING SHALL SLOPE DOWN IN THE DIRECTION OF FLOW AT A MINIMUM SLOPE OF 1/8" PER FOOT OF RUN.

REFRIGERANT PIPING INSULATION

CLOSED-CELL INSULATION SHALL BE PROVIDED OVER ALL REFRIGERANT PIPING AND OTHER SERVICES AS SPECIFIED OR NOTED. CLOSED-CELL PIPING INSULATION SHALL BE 1/2" THICK 25/50 ARMAFLEX OR RUBATEX. ALL GLUES AND COATINGS SHALL BE PRODUCTS OF THE SAME MANUFACTURER AS THE INSULATION.

. INSULATION SHALL BE CONTINUOUS OVER ALL VALVE BODIES, FITTINGS, AND WALL AND FLOOR PENETRATIONS.

<u>REFRIGERANT PIPING</u>

GENERAL: INSTALL REFRIGERANT LINES PROPERLY PITCHED WITH OIL TRAPS PROPERLY SIZED LOCATED AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. ANY OIL IN ANY PART OF THE SYSTEM SHALL BE ABLE TO FIND ITS WAY BACK TO THE COMPRESSOR WITH THE SYSTEM OPERATING ON MINIMUM CAPACITY. INSTALL PIPING IN ACCORDANCE WITH STANDARD ENGINEERING PRACTICE AS RECOGNIZED BY THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS, AND AS FOLLOWS.

. ACCESSORIES: PROVIDE NECESSARY ACCESSORIES FOR A COMPLETE AND WORKABLE SYSTEM WHETHER SHOWN ON THE DRAWINGS OR NOT WHICH COULD INCLUDE SUCH ITEMS AS STRAINERS, FILTER DRIER, SIGHT GLASS, RELIEF VALVES, CHARGING VALVES, STOP VALVES, CHECK VALVES, EXPANSION VALVES AND SOLENOID VALVES.

4. UTILIZE THE SERVICES OF A QUALIFIED REFRIGERATION MECHANIC FOR THE INSTALLATION AND TESTING OF REFRIGERANT PIPING AND REFRIGERATION EQUIPMENT.

5. ALL REFRIGERATION PIPING, INSTALLATION, AND TESTING SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ANS SPECIFICATION B9.1.

CONDENSATE PIPING . PIPING SHALL BE SCHEDULE 80 POLYVINYL CHLORIDE PIPE (PVC).

GAS PIPING PROVIDE INDIVIDUAL GAS SHUT OFF PLUG VALVE AND DIRT LEG AT EACH GAS FIRED PIECE OF EQUIPMENT. 2. PROVIDE PRESSURE REGULATOR AND VENTING AS REQUIRED BY CODE. 3. EXTERIOR GAS PIPING PLACED ON THE ROOF SHALL BE PROVIDED WITH SUPPORTING MEANS FOR EXTREME MOVEMENT AND TO PROTECT THE ROOF AS DETAILED ON PLANS. ALSO PROVIDE A FULL WIDTH NON-BINDING STRAP IRON RETAINER ACROSS THE SUPPORT CLEAT. 4. ALL GAS PIPING EXPOSED TO THE WEATHER SHALL BE PAINTED WITH TWO COATS OF YELLOW RUST PREVENTATIVE PAINT. 5. CONTRACTOR TO VERIFY SERVICE SIZE, METER SIZE, AND PRESSURE WITH UTILITY COMPANY. 6. INSTALL GAS PIPING ONLY IN ACCESSIBLE LOCATIONS OR AS REQUIRED BY GOVERNING CODE. 6. GAS PIPING AND TESTING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL UTILITY COMPANY, APPLICABLE CODE AUTHORITIES AND CURRENT STANDARDS OF NFPA. WELDING MATERIALS AND LABOR TO CONFORM TO ASME CODE AND APPLICABLE STATE LABOR REGULATIONS. 8. USE WELDERS FULLY QUALIFIED AND LICENSED BY STATE AUTHORITIES. 9. GAS PIPING: INSTALLATION CODE FOR NATURAL GAS BURNING APPLIANCES AND EQUIPMENT. 10. GAS PIPING INSTALLATIONS SHALL CONFORM TO THE MINIMUM REQUIREMENTS LOCAL AUTHORITY HAVING JURISDICTION. <u>PRODUCTS</u> . ALL ABOVEGROUND GAS PIPING 4" AND SMALLER SHALL BE ASTM A53, SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS. THREADED PIPE AND FITTINGS FOR PIPE 2" AND SMALLER, AND WELDED PIPE FOR $2\frac{1}{2}$ " PIPE AND LARGER. . GAS COCKS 2" AND SMALLER SHALL BE ALL IRON WITH BRASS SQUARE HEAD PLUG. EQUAL TO CRANE NO. 324. 3. GAS COCKS LARGER THAN 2" SHALL BE LUBRICATED PLUG COCKS WITH WELDING ENDS. WRENCH OPERATED. EQUAL TO NORDSTORM NO. 20251/2. UNIONS AND COUPLINGS . SIZE $2_2''$ and under: 150 PSI black malleable iron, ground joint brass to iron SEAT UNIONS FOR THREADED FERROUS PIPING AIR TESTED FOR GAS SERVICE. EQUAL TO GRINNELL 463 OR EQUAL. <u>CONNECTIONS</u> . SCREW JOINT STEEL PIPING UP TO AND INCLUDING 11/2". WELD PIPING 21/2" AND LARGER, INCLUDING BRANCH CONNECTIONS. SCREW OR WELD 2 INCH PIPING. ALL INTERMEDIATE PRESSURE PIPE 2" AND LARGER SHALL HAVE WELDED JOINTS. 2. ALL EQUIPMENT CONNECTIONS SHALL BE PRECEDED BY A FULL LINE SIZE MANUAL SHUT–OFF COCK, PRESSURE REGULATOR, 6" DIRT POCKET AND UNION AT THE EQUIPMENT. UNION SHALL BE INSTALLED BETWEEN THE SHUTOFF COCK AND THE EQUIPMENT. PRESSURE REGULATORS SHALL BE RATED TO REGULATE FROM 2 PSI TO OUNCES PRESSURE AND WHEN LOCATED INSIDE THE BUILDING SHALL BE VENTED TO THE OUTSIDE ATMOSPHERE AS REQUIRED BY THE LOCAL AUTHORITY. 5. PROVIDE A 6" DIRT POCKET AT THE LOW POINT OF THE GAS LINE AND WHERE SHOWN ON THE DRAWINGS COMPLETE WITH A SCREWED CAP END. 4. WELDED JOINTS SHALL BE FUSION-WELDED UNLESS OTHERWISE REQUIRED. CHANGES IN DIRECTION OF PIPING SHALL BE MADE WITH WELDING FITTINGS ONLY. MITERING OR NOTCHING PIPE TO FORM ELBOWS AND TEES OR OTHER SIMILAR CONSTRUCTION WILL NOT BE PERMITTED. BRANCH CONNECTIONS SHALL BE MADE WITH WELDING TEES OR FORGED WELDING BRANCH OUTLETS. FIELD AND SHOP BEVELS SHALL BE IN ACCORDANCE WITH THE RECOGNIZED STANDARDS AND SHALL BE DONE BY MECHANICAL MEANS OR FLAME CUTTING. WHERE BEVELING IS DONE BY FLAME CUTTING, SURFACES SHALL BE CLEANED OF SCALE AND OXIDATION PRIOR TO WELDING. <u>ALIGNMENT</u> BEFORE WELDING, THE COMPONENT PARTS TO BE WELDED SHALL BE ALIGNED SO THAT NO STRAIN IS PLACED ON THE WELD WHEN FINALLY POSITIONED. HEIGHT SHALL BE SO ALIGNED THAT NO PART OF THE PIPE WALL IS OFFSET BY MORE THAN 20 PERCENT OF THE WALL THICKNESS. FLANGES AND BRANCHES SHALL BE SET TRUE. THIS ALIGNMENT SHALL BE PRESERVED DURING THE WELDING OPERATION. WHERE THE TEMPERATURE OF THE COMPONENTS BEING WELDED REACHES 32 DEGREES F OR LOWER, THE MATERIAL SHALL BE HEATED TO APPROXIMATELY 100 DEGREES F FOR A DISTANCE OF 3 FT ON EACH SIDE OF THE WELD BEFORE WELDING, AND THE WELD SIDE OF THE WELD BEFORE WELDING, AND THE WELD SHALL BE FINISHED BEFORE THE MATERIAL COOLS TO 32 DEGREES F. ROUTE AND GRADES ROUTE PIPING IN ORDERLY MANNER AND INSTALL DRIP LEGS FOR CONDENSATION COLLECTION POINTS. RUN PIPING ON DEDICATED ROOF AREA AND PARALLEL TO WALLS. 2. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE OR EQUIPMENT CONNECTED. 3. BRANCHES AND TAKE-OFFS SHALL BE OFF THE TOP OF MAINS. ALL HORIZONTAL LINES SHALL PITCH TO RISERS OR APPLIANCES. A. PROVIDE TEST PUMPS, GAUGES, METERS, AND OTHER INSTRUMENTS, MATERIALS, AND LABOR IN CONNECTION WITH TESTS. B. DO NOT PAINT, COVER OR CONCEAL PIPING, SWING JOINTS, AND THE LIKE, BEFORE TESTING AND OBTAINING APPROVAL. C. TEST PIPING WHICH WILL BE CONCEALED, IN SECTIONS AS APPROVED, IN A MANNER WHICH WILL NOT LEAVE ANY PIPE OR JOINT UNTESTED. D. PRIOR TO TESTING PIPING SYSTEMS, REMOVE OR OTHERWISE PROTECT FROM DAMAGE. CONTROL DEVICES, AIR VENTS, AND OTHER PARTS WHICH ARE NOT DESIGNED TO STAND PRESSURES USED IN TESTING PIPING. E. TEST WELDED PIPING FOR LEAKS, UNDER 100 PSI AIR PRESSURE WITH SOAP SUDS; THIS TEST SHALL PRECEDE HYDROSTATIC TEST. . MAKE NECESSARY REPAIRS AND REPEAT TESTS UNTIL THE ENTIRE SYSTEM IS APPROVED AND SATISFACTORY. G. PERFORM SPECIFIED SERVICES WITH CONTRACTOR'S QUALIFIED PERSONNEL, OR EMPLOY AND PAY FOR A QUALIFIED ORGANIZATION TO PERFORM SPECIFIED SERVICES. <u>GAS PIPING</u> I. THE TEST PRESSURE FOR THIS SYSTEM SHALL BE 1.5 TIMES WORKING PRESSURE BUT NO LESS THAN 60 POUNDS PER SQUARE INCH. THIS TESTING WILL BE CONDUCTED BY USING AIR, CO2, OR NITROGEN PRESSURE TEST. THIS TEST WILL BE HELD FOR NO LESS THAN 1 HOUR WITH NO DROP IN PRESSURE. ALL JOINTS WILL BE SUBJECTED TO A VISUAL INSPECTION AND SOAP TEST. LEAKS AND LOSS IN TEST PRESSURE CONSTITUTE DEFECTS THAT MUST BE REPAIRED. REPAIR ALL LEAKS AND DEFECTS WITH NEW MATERIALS AND RETEST SYSTEM OR PORTION THEREOF UNTIL SATISFACTORY RESULTS ARE OBTAINED.

GAS LOAD SCHEDULE

ROOM NAME	EQUIPMENT	MIN / MAX PRESSURE REQ'D IN INCHES W.C.	TOTAL CFH
EXISTING UTILITY ROOM	EXISTING FURNACE	5.0"-10.5"	125.00
EXISTING UTILITY ROOM	EXISTING WATER HEATER	4"-14"	40.00
MAIN ROOM	PIZZA OVEN	3.50"	40.00
MAIN ROOM	PIZZA OVEN	3.50"	40.00
OUTSIDE	AHU-1	4" - 13"	195.00
OUTSIDE	AHU-2	4" - 13"	195.00
		TOTAL	635

Note : Gas loads subject to change based on Owner's final selection of equipment and available gas pressure at the project location. This schedule is to be used for design and estimating purposes only.

								EQUIPM	ENT SCH	EDULE								
									V2.'	19		FLOW	DRAINAGE		ELECT	RICAL	-	
MARK	QTY	FIXTURE	MANUFACTURER	MODEL	GAS	МВН	COLD WATER	HOT WATER	DIRECT WASTE	WASTE	VENT	RATE GPM		VOLTS	HP	MOP	WATTS	NOTES
					F	OOD PR	EP								· · · · · ·			
A	1	BUNN FAST CUP	BUNN	#55400.0100										208		24	5000	
E	1	771 SLUSHIE MACHINE	FBD	TALL DOOR	CO2, N2, OR AIR		3/8"					2		215-245		20	3000	
F	1	774 SLUSHIE MACHINE	FBD	TALL DOOR			3/8"					2		215-245		30	5000	
Н	1	SMOOTHE DISPENSER	FREAL	MINI BLENDING BAR					3/4" TUBE					120		15	1440	FREEZER REQUIRES SEPARATE 15A CIRCUIT FROM BLENDERS
	1	HAND LAVATORY (EXISTING)	BYOWNER	BYOWNER			1/2"	1/2"		2"		2	2					
	1	POT SINK - TRIPLE COMPARTMENT (EXISTING)	BYOWNER	BYOWNER			1/2"	1/2"		(3) 1 1/2"		2.5	2					WASTE TO FLOOR SINK
	1	PIZZA OVEN (EXISTING)	LINCOLN	1116-000-U-K1837	NG	40								120		15	840	
	1	PIZZA OVEN (EXISTING)	LINCOLN	1116-000-U-K1837	NG	40								120		15	840	

PLUMBING FIXTURE SCHEDULE

											1			· · · ·		
XTURE	ITEM	DESCRIPTION	MANF	MODEL	VALVE / TRIM	MANF	MODEL	COLD	нот		INDIRECT		FLOW RATE	DRAINAGE FIX TURE	ASSE	GENERAL
	and the second				n werenne dies er reproduktion in stadiet die die 200			WATER	WATER	WASTE	WASTE	VENT	GPM	UNITS	DEVICE	NOTES
AG	AIR GAP FITTING	FIXED AIR GAP FUNNEL	J.R. SMITH	3950-3951												
FD-1	FLOOR DRAIN	FLOOR DRAINS FOR TOILETS AND FINISHED AREAS	J.R. SMITH	2000 SERIES						2"		1 1/2"		2		6" TYPE B SQUARE WITH ADJUSTABLE STRAINERS FINISHED IN NICKEL BRONZE, OR TO BE CHROME PLATED IN PUBLIC RESTROOMS AND GUEST LAUNDRY.
FFD	FUNNELED FLOOR DRAIN	DRIP & CONDENSATE FUNNEL	J.R. SMITH	3811-3824												
FS	FLOOR SINK	12" x 12" x 8" DEEP SQUARE NICKEL BRONZE TOP FOR INDIRECT WASTE	J.R. SMITH	3140						2"		1 1/2"		2		WITH CAST ALUMINUM DOME STRAINER
HB	HOSE BIBB EXTERIOR	NON-FREEZE TYPE w/ INTEGRAL VACUUM BREAKER	J.R. SMITH	5609QT				3/4"					5		1019	
HB	HOSE BIBB INTERIOR FINISHED AREAS	w/ INTEGRAL ASSE 1011 VACUUM BREAKER AND STAINLESS BOX	J.R. SMITH	5509QT-SAP				3/4"					5			HINGED LOCKING COVER
LAV-1	LAVATORY ADA	PUBLIC RESTROOM WALL MOUNTED, WHITE CHINA LAVATORY w/ 2.2 GPM DECK MOUNTED FAUCET	AMERICAN STANDARD	0355.012	CHROME DUAL HANDLE FAUCET	CHICAGO	895-317ABCP	1/2"	1/2"	1 1/2"		1 1/2"	0.4	1	1070	FAUCET HOLES ON 4" CENTERS, WALL HANGER INCLUDED. PROVIDE TEMPERED WATER TEMPERATURE CONTROL.
SS	SERVICE SINK	24"x24"x10" FLOOR MOUNTED	FIAT	MSB-2424	CHROME WALL MOUNT SERVICE SINK FAUCET	CHICAGO	897-CP	1/2"	1/2"	2"		1 1/2"	3	3	1052	
UR	URINAL	WHITE VITREOUS CHINA, 0.125 GPF, WALL MOUNTED, ELONGATED RIM, TOP SPUD	AMERICAN STANDARD	6590.001-B1.020	FLUSH VALVE	AMERICAN STANDARD	6063.013.002	3/4"		2"		2"	1.0	4		SENSOR OPERATED FLUSH VALVE, MOUNTED TO BE ADA COMPLIANT.
WHA	WATER HAMMER ARRESTOR	PISTON TYPE WITH PRESSURIZED CUSHIONING CHAMBER.	J.R. SMITH	5005 - 5050												
WC-1	WATER CLOSET	FLOOR MOUNTED WHITE VITROUS CHINA, 1.6 GPF WITH ELONGATED FLUSHOMETER VALVE TOILET	AMERICAN STANDARD	2858.128				1"		4"		2"	1.6	4		
WC-2	WATER CLOSET ADA		AMERICAN STANDARD	211AA.104 4225A.104				1"		4"		2"	1.6	4		
WCO	WALL CLEANOUT	LEAD SEAL PLUG WITH STAINLESS STEEL ACCESS COVER	J.R. SMITH	4402												
1 2 3 4 5 7 7 1 2 3 4 5	GENERAL N ALL FIXTURE PROVIDE AN WITH TABLE PROVIDE AN PROVIDE AN PROVIDE SI PLUMBING C ADA LAVATO EXPOSED P WATER CLC WATER CLC WHERE WA WHERE WA WHERE WA	OTES TRAPS TO HAVE A DEEP SEAL TRAP OR TR ASSE APPROVED BACKFLOW PREVENTER 608.1 OF THE PLUMBING CODE. ASSE 1070 THERMOSTATIC MIXING VALVES NGLE OUTLET SUPPLY STOP ON HOT WATER CONTRACTOR SHALL INSTALL AIR ADMITTANC DRIES TO HAVE INSULATION KIT, WHITE, SELI LUMBING MUST BE CHROME PLATED. DSETS IN PUBLIC AREAS MUST HAVE A TOILE TER CLOSETS ARE REQUIRED TO BE ADA AC OCK ABSORBERS ON ALL FLUSH VALVE SYS TES	AP PRIMER WI FOR ALL EQUI ON ALL LAVATO COLD WATER E VALVE IN LIE F FASTENING, I T SEAT WITH C CCESSIBLE, PR STEMS WITH ISO	TH 1/2" CW PIPE, CO PMENT WITH A DIRE ORIES AND SINKS. R UNDER SINK EQU/ EU OF VENT PIPING FLEXIBLE VINYL FO OPEN FRONT, NO LIE E TOILET SEAT HEIK OVIDE RIGHT HAND OLATION VALVE AN	ONFORMING TO AS ECT CONNECTION T AL TO BRASSCRAF TO SERVE FIXTURE R DRAIN TRAPS AN D. GHT MUST COMPLY D OR LEFT HAND FLU D ACCESS DOOR F	SE 1018 OR , O THE POTA T NO. 03341 ES WHERE A D SUPPLY P WITH CURR JSH VALVES OR MAINTEN	ASSE 1044. PRC BLE WATER SU (BRASS) / OCR1 PPLICABLE. IPING. ENT FEDERAL A 5 TO ENSURE TH IANCE.	VIDE A 1/2" CN PPLY, AND AL 9R (PEX), (ALT DA REQUIREM AT THE FLUSH	V LINE IF TRAI L EQUIPMENT ERNATIVE)1/4 IENTS.	P PRIMERS AR WITH A HOSE TURN MODEL: THE OPEN SI	E INSTALLED. CONNECTION. G2CR19 (BRAS	BACKFLOW P SS) / G2BRPX1 CLOSET.	PREVENTERS	MUST BE IN CO	OMPLIANCE	
1	. ALL FAUCET	IS VALVE HANDLES SHALL BE PROVIDED WI PUBLIC AREAS MUST BE LEVER STYLE AND	TH RED (HOT) A ADA COMPLIA	AND BLUE (COLD) IN NT. ACRYLIC HAND	IDICATORS. LES OR KNOBS AR	E NOT PERM	IITTED.									

RECEIVED

NOV 082023

TYRONE TOWNSHIP PLANNING & ZONING

TYRONE TOWNSHIP PLANNING COMMISSION REVIEW APPLICATION

Property Address / Location			Parcel ID/Zoning District
Tyrone Party Store at US-	-23 & Center Rd		4704- 17-400-006
Property Owner(s)			Telephone
Mike Meed			(810) 629 7701
Street Address			Cell Phone
9485 Center Road			(810) 691-7481
City	State	and Zip ode	FAX or E-Mail
Fenton (Tyrone Twp - Liv	ingston Co) MIcl	nigan 48430	mjwood@lcloud.com
Authorized Agent		0	Telephone
Triumph Engineering			(810) 584-7364
Street Address			Cell Phone
10775 S Saginaw St, Suit	te D	17.01	
City Grand Blanc	Sta	te and Zip Gode	
		48439	
Boundary Realignment Concept Review Conditional Zoning Home Occupation Land Division Open Space Preservation	Open Space R Private Road/S Planned Unit D Public Hearing Rezoning on Site Condomir	ium	Site Flan Review Site Visit Special Land Use Special Meeting Subcommittee Meeting Subdivision Plat
Other			
Other Project Description:			
Other Project Description: To renovate the existing automotive	repair garage into a new carry out facilit	y. The existing carry out will be	availble for lease space.
Other Project Description: To renovate the existing automotive to AUAO STOVAGE YOU	repair garage into a new carry out facilit rd operations wit	y. The existing carry out will be	availble for lease space.
Other Project Description: To renovate the existing automotive to AUAO STOVAGE YOU	repair garage into a new carry out facilit rd operations wit	y. The existing carry out will be	availble for lease space.
Other Project Description: <u>To renovate the existing automotive</u> <u>AUTO STOVAGE YOU</u> Planning Commission 14 days (21 days for until all information application requireme	repair garage into a new carry out facilit A ODERATIONS WIT a applications should be filed with land divisions/realignments) put has been received. This Sign nts and permission for site insp	y. The existing carry out will be (OMTINUE. h the Planning Commissi- ior to review. Applicatio ature constitutes the ap- ection by Tyrone Townsh MMMC Signature of Owner	availble for lease space.
Other Project Description: <u>To renovate the existing automotive</u> <u>AUTO STOVAGE YOU</u> Planning Commission 14 days (21 days for until all information application requirements Date W&-23	repair garage into a new carry out facilit A ODERATIONS WITH a applications should be filed with land divisions/realignments) put has been received. This Sign nts and permission for site insp	y. The existing carry out will be (OMTINUE. h the Planning Commissi- ior to review. Applicatio ature constitutes the ap- ection by Tyrone Townsh Multiple Signature of Owner Fees: 101-000000-607-006 CV:14: 8:5138	availble for lease space.

View the Tyrone Township Ordinance at <tyronetownship.us>

Z-Application - 12.2.13

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

January 3, 2024

Preliminary Site Plan Review (Use Change)

for

Tyrone Township, Michigan

Applicant:	Michael Woods
Owner:	Michael Woods
Project Name:	Tyrone Party Store
Plan Date:	July 25, 2023
Location:	9485 Center Road Northwest corner of Center Road and Old US 23 Road (04-17-400-006)
Zoning:	ES – Expressway Service
Action Requested:	Amendment of an Approved Site Plan for Accessory Use to a Permitted Special Land Use

PROJECT NARRATIVE

The site is 1.62 acres. Onsite is a permitted auto service station / convenient store / gas station and special land use auto salvage yard. The applicant is requesting site plan approval to convert the existing auto service station into an expanded convenient store. If approved, the applicant will cease operations of auto services. It is unclear whether the auto salvage yard operations will cease along with the auto service use.

Per the Zoning Ordinance Section 23.13 Part E1 & E2, the change in use qualifies as a "Major Change".

- 1. Concept. A change in the original concept of the development.
- 2. Use or Character. A change in the original use or character of the development.

Per Section 23.13 A "A change in an approved site plan which results in a major change shall require a site plan amendment. Amendments shall follow the procedures and conditions herein required for original site plan submittal and review. Any change shall require submittal of a revised site plan with a new date."

Tyrone Party Store Site Plan Review January 3, 2024

The purpose of a site plan review is to evaluate complete and necessary compliance with Township ordinances and other federal, state, and county laws and regulations to assess preliminary approval. Site plans are reviewed by the Planning Commission which makes a recommendation to the Township Board for approval.

Information required to be included in a site plan is outlined in Section 23 Site Plan Review and Impact Assessment. The Planning Commission may waive any site plan requirements they consider to be clearly unnecessary for substantial review. The Planning Commission may also grant a waiver for the Impact Assessment if it determines that there is not a significant potential impact on surrounding properties as a result of the proposed development.

Given the proposed use will be of a lesser intensity than the current uses, we do not feel an Impact Assessment is necessary.

This report identifies information that is required for site plan review. Information or changes necessary for site plan review are identified throughout the report, with information or changes and decisions for site plan approval identified in the summary at the end of this report.

Items to be Addressed: It should be stated on the application whether the auto salvage yard operations will cease along with the auto service station. This determination may affect the recommendations of this review.

SITE DESCRIPTION

Lot Area:	1.62 Acres
Frontage:	~250 feet along Center Road
Current Use:	Gas Station / Auto Service Station / Convenient Store / Storage Yard

Tyrone Party Store Site Plan Review January 3, 2024

Aerial image of the site

Source: NearMap, Photo dated October 2nd, 2023

Existing ES Expressway Service

Zoning: The ES expressway service districts are designed to provide for servicing the needs of highway traffic at expressway interchange areas. The avoidance of undue congestion on local roads, the promotion of smooth traffic flow at the interchange area, and the protection of adjacent properties in other zones from adverse influences of traffic are prime consideration in the application of this district. The following regulations shall apply to all ES districts, and no building, structure or premises, except as otherwise provided in this section shall be erected, altered, or used except for one or more of the following specified uses. Site plan review, as defined in Article 23, shall be required for, all uses in the ES district.

Tyrone Party Store Site Plan Review January 3, 2024

Current Zoning Map

Source: Tyrone Township Zoning Map, July 20, 2017

Future Land Use Map



Source: Tyrone Township Master Plan 2012

	North	East South		North East		West
Surrounding Zoning	M-1 / Light FR / Farming FR / Farming		FR / Farming	M-1 / Light		
Surrounding Zoning	Manufacturing Residential Residential		Manufacturing			
Surrounding Land	US 23 Highway Commercial					
	Light Industrial	ROW / Single Recreation / Ge		Light Industrial		
Uses		Family Residential	Club			
	Diannod Industrial	Low Density Single Planned		Diannod Industrial		
Future Land-Use Map	Plumeu muustmui	Family Detached	Commercial	Pluineu industriul		
Residentia		Residential	Services	Research Office		

Items to be Addressed: Aerial photos as well Sheet C3.0 indicate site parking and storage operations exceed the eastern lot line. We recommend site operations conform to property lot lines.

AREA, WIDTH, HEIGHT, SETBACKS

The proposed expansion of the building envelope is shown on the site plan. Measurements are taken from the property lines.

Developmental standards for the current zoning district are outlined below.

ES Expressway Service District Developmental Standards

	Required: ES	Proposed:	Complies
Setbacks			
Front	100 feet	78.5 feet	Yes
Side	20 feet	19.3 feet (west) Not Provided (east)	No Unknown
Rear	20 feet	63.6 feet Yes	
Building Height			
	30 feet	19 feet (using scale)	Unknown
Building Coverage			
	40 percent	6.9 percent	Yes

Items to be Addressed: 1.) The existing structure encroaches the west side yard setback. Documentation either through ZBA approval or pre-existing nonconformity needs to be submitted for review. 2.) The east side yard setback measurement must be added to sheet C3.0. 3.) Building height must be measured from grade to the mid-point between the eave and ridge and added to Sheet A1.3.

NATURAL RESOURCES

Topography:	The site is relatively flat.
Wetlands:	The site does not contain any wetlands.
Woodland:	The site is clear of wooded areas.
Soils:	The predominant soils are sandy loam and loam.
Water:	This site does not contain any natural or manmade water features.

Items to be Addressed: None.

ACCESS & CIRCULATION

The site will continue to be accessed via the existing forty (40) foot wide access drive from Center Road, a paved county road, along the southern border of the site.

Existing parking consists of twenty (20) standard parking spaces and four (4) handicap parking spaces. Per Section 25.04 B, handicap spaces must be at least ninety-six (96) inches wide and be adjacent to an access aisle that is at least sixty (60) inches wide.

The current auto services related to the sale of fuel to vehicles has the following requirements per Section 25.11 C 3:

"Automobile Service, two (2) parking spaces for each lubrication stall, rack or pit and three (3) spaces for each one (1) fuel pump, plus two (2) stacking spaces per fuel pump plus one (1) per transport or towing vehicle and one (1) per employee.

The proposed use of an expanded convenient store (retail store) has the following parking requirements Per Section 25.11 C 24:

"Retail Store, one (1) parking space for every two hundred (200) square feet of usable floor area."

	Required	Provided	Complies					
Parking								
Automobile	Service							
	Three (3) spaces for each one (1) fuel pump = 18 spaces	18	Yes					
	Two (2) stacking spaces per fuel pump = 6 spaces	Unknown	Unknown					
	One (1) per transport or towing vehicle = 0 spaces	N/A	N/A					
	One (1) per employee = Unknown	Unknown	Unknown					
Total	Unknown	24 spaces	Unknown					
Retail Store		·	·					
	one (1) parking space for every two hundred (200) square feet of usable floor area = 15 spaces	0	No					
Total	15 spaces	24 spaces	Unknown					

Parking calculations are provided on Sheet C3.0 but use the retail store requirements for all usable square feet. However, gas stations are defined under "auto service station", in the Zoning Ordinance. If the gas station operations are to remain, the calculations above show deficiencies. These cannot be accurately calculated as no peak employment information or vehicle stacking space was provided in the application.

Section 25.05 offers criteria under which joint parking uses are applicable. However, we do not feel these terms offer any options for the current proposed uses due to the requirement that uses for which the joint off-street parking facilities serve do not operate during the same hours of the day or night.

A loading area is not defined on the site plan. Per Section 25.03 D and Section 25.11, at least one loading space is required and not to be placed on the front side of a commercial or industrial building. There appears to be adequate area in the rear yard for delivery vehicles, if storage activities cease. It should be

determined whether the gate separating the parking area and storage area will remain as its presence will complicate rear yard deliveries.

The general condition of the paved lot is poor. Several areas have significant cracks and/or potholes. Cold patch is present in an attempt to remedy these items. However, drivers may be inclined to take indirect routes throughout the lot to avoid poor conditions, possibly leading to unsafe circulation on the site. Per Section 25.09, all paving in the parking facility shall be maintained to insure safe pedestrian movement, vehicular operation, adequate protection of adjoining properties and to present a neat and attractive appearance of the facility.

We defer to the Township Engineer and the Fire Chief on other comments related to site access and circulation.

Items to be Addressed: 1.) Handicap spaces must be the correct dimensions and shown on Sheet C3.0. 2.) Parking should be calculated based on auto service station as well as retail use. 3.) One (1) loading space must be added and shown on Sheet C3.0 per Section 25.03 D and Section 25.11 4.) Pavement repair to assure safe circulation on site

ESSENTIAL SERVICES & UTILITIES

Sheet C2.0 and C3.0 state that all utility locations have been obtained from field survey information and existing drawings, if available. The surveyor and/or engineer makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The statement also indicates that the exact locations of the shown utilities may not be accurate though they do certify that the utilities are located as accurately as possible given available information. The surveyor/engineer has not physically located the underground utilities.

Sheet C2.0 and C3.0 also note that per observations the site is currently supplied by or has access to the following public utilities: gas, electric and telephone either located adjacent to the subject site or within public road right-of-way.

A gas main is shown running approximately parallel to the east property line and entering the existing building. While the existing overhead electricity line is shown along Center Road, it is unclear where electrical service connects to the building.

The legend and color (yellow) used to show existing sewer infrastructure is blurred and difficult to identify on Sheet C2.0 and C3.0. Given the current operations, it is assumed the site has sufficient water/sewer service. However, a note should be added to Sheet C2.0 and C3.0 stating if the site is well/septic or public water/sewer. The sheet must also use colors and text that clearly identify infrastructure by name and location.

Sheet C2.0 and C3.0 state the property is zone "X" (areas of minimal flooding) of the flood insurance rate map community panel No. 26093C02250 which bears an effective date of September 8th, 2008 and is not in special flood hazard area.

We defer additional comments on essential services, utilities, and stormwater management to the Township Engineer.

Items to be Addressed: 1.) Confirmation that the proposed building expansion does not interfere with any overhead of underground water/sewer/storm lines and/or any underground or overhead electrical service. 2.) The placement and/or specifications of current utility infrastructure on Sheets C2.0 and C3.0 should be clearly legible and identifiable.

LANDSCAPING & SCREENING

Existing landscaping is shown on Sheets C2.0 and C3.0. No new landscaping is proposed. Section 21A.09 of the Zoning Ordinance states in consideration of the overall design and impact of a specific landscape plan, and in consideration of the amount of existing plant material to be retained on the site, the Planning Commission may modify the specific requirements described herein, provided that any such adjustment is consistent with the intent and purpose of that section and the Zoning Ordinance in general. In determining whether a modification is appropriate, the Planning Commission shall consider whether the following conditions exist:

- Topographic Features
- Parking
- Public Benefit

The existing plants are not labelled "to be saved" or "to be removed". For the purposes of this review, we will consider all existing plant material and landscaping to be unaltered for the proposed addition.

Front Yard Requirements: Wherever front, side or rear yards adjacent to public rights-of-way are used for parking, either a berm or greenbelt shall be required to screen the parking from view of the road. The Planning Commission, in its sole discretion, shall determine whether a berm or greenbelt shall be required for each development proposal.

Right-of-Way	Adjacent Parking Spaces	Existing Conditions
Center Road	Three (3)	Rock wall and six (6) deciduous
		trees
N. Old US 23 Hwy	Nine (9)	None

The landscaping along North Old US 23 Hwy is not considered in this review because it is not on the applicants property.

The Planning Commission will need to determine if existing conditions fulfill this requirement.

<u>Protective Screening Requirements</u>: Protective screening in the form of a berm, greenbelt or obscuring wall shall be required wherever a nonresidential use in a business, office or industrial district abuts directly upon land zoned for residential or agricultural purposes. The Planning Commission, in its sole discretion, shall determine whether a berm, greenbelt or obscuring wall shall be used for protective screening.

Abutting Property Border	Zoned	Protective Screening Required
North	M-1	No
East	Right-of-Way	No
South	Right-of-Way	No
West	M-1	No

Though not required along any property line, the Planning Commission must determine if it will require landscaped screening along any portion of the property perimeter. It should be noted that no available space exists along the eastern property line for on-site landscaping.

Landscaping Adjacent to Roads: All front, side or rear yards adjacent to roads, including berm areas, shall be landscaped in accordance with the following schedules:

Type of Planting	Frequency (per front feet of road frontage)	Right-of-Way	Required	Provided	Complies
Deciduous tree	Per 40 feet or fraction thereof	Center Road (210 feet of frontage)	Five (5)	Six (6)	Yes
		N. Old US 23 Hwy (306 feet of frontage)	Eight (8)	None	No
Total			Thirteen (13)	Six (6)	No
Ornamental Tree	Per 100 feet or fraction thereof	Center Road (210 feet of frontage)	Two (2)	Unknown	Unknown
		N. Old US 23 Hwy (306 feet of frontage)	Three (3)	None	No
Total			Five (5)	Unknown	Unknown
Shrubs	Per 40 feet or fraction thereof	Center Road (210 feet of frontage)	Eight (8) minimum	None	No
		N. Old US 23 Hwy (306 feet of frontage)	Eight (8) minimum	None	No
Total			Sixteen (16)	None	No

It is unknown if any existing deciduous trees are also ornamental trees. Due to the site layout, no room exists to install landscaping required along N. Old US 23 Hwy.

There are twenty (20) existing evergreen trees along the northern half of the west property line. There are twenty-six (26) existing evergreen trees along the western half of the north property line. The Planning Commission will need to determine if it will require additional landscaping along Center Road and North Old US 23 Hwy.

<u>General Landscaping Requirements</u>: Section 21A.04 requires sites utilize grass and/or groundcover for all unpaved portions of a site. It also requires one (1) tree per three thousand (3,000) square feet or portion of any unpaved open area for which specific landscaping requirements within the Section do not apply. Below are notes on these requirements:

	Required	Provided	Complies
Unpaved Portions of the Site			
	All unpaved portions of site will be covered with grass and/or ground cover	Existing lawn/ground cover	Yes
Mixture of Trees			
	One (1) tree per three thousand (3,000) square feet of unpaved open space	Unknown	Unknown

The Planning Commission will need to determine if it will require information to calculate general landscaping requirements for one (1) tree per three-thousand (3,000) sqft of unpaved open surface.

<u>Parking Lot Landscaping</u>: Section 21A.04D provides details on required off-street parking landscaping requirements. Notes provided below:

	Required	Provided	Complies
Landscape Ratio			
	Fifteen (15) square feet of		Unknown
	interior landscaping per		
	parking space		
	15 square feet x 24 parking		
	spaces = 360 square feet of		
	interior landscaping		
Minimum Area			
	Landscaped areas in parking	Unknown	Unknown
	lots shall be no less than five		
(5) feet wide in any dimension			
	and no less than one hundred		
	(100) square feet in area.		
Required Plantings			
	Minimum of one (1) tree per	Unknown	Unknown
	three hundred (300) square		
	feet or fraction thereof of the		
	interior landscaped area.		

Parking lot landscaping requirements are written to refer to parking lot islands or aisleways of which the current proposal has none. Sheet C3.0 indicates some landscaping near the entrance of the existing convenience store but no dimensions or plant specifications are provided.

All site parking is either aligned along existing structures or at the extents of the existing parking lot. Given the limited ability to add parking lot islands, per Section 21A.04D2, the Planning Commission may approve placement of the landscaped areas adjacent to a parking area when, in the sole opinion of the Planning Commission, such placement shall achieve the objectives of this section.

The Planning Commission will need to determine if existing landscaping adjacent to all parking areas fulfill this requirement.

Landscaping Varity: Section 21A.04I requires a variety of trees to be used throughout the site to prevent mass loss from disease.

Required Number of Trees	Minimum Number of Species	Complies
(All Existing)	Two (2)	Yes
Thirteen (13) Deciduous Trees + Five (5) Ornamental Trees = Eighteen (18) Trees		

<u>Solid Waste Receptacles</u>: Section 21A.11 requires all waste receptacles shall be enclosed by a wooden or masonry wall equal to the height of the receptacle or not less than five (5) feet high with an opaque lockable gate to prevent unsightly collection of refuse. The receptacle shall be located in the rear of the site unless prevented by topographic conditions. In all cases, the receptacles shall be located where it will be least visible from the public right-of-way and adjacent properties.

Sheet C3.0 shows an existing six (6) foot wood fence for the dumpster area. Gate specifications were not provided. The location of the dumpster does not comply with Section 21A.11 as the proposed location is in the side (west) yard and visible from Center Road. Given no topographic challenges, the receptacle should be relocated to the rear of the building.

Items to be Addressed: 1.) Dumpster gate specifications should be added to Sheet C3.0. 2.) The location of the dumpster should be moved to the rear of the building and shown on Sheet C3.0. 3.) Planning Commission will need to determine if existing conditions fulfill front yard landscaping requirements. 4.) Planning Commission will need to determine if it will require landscaped screening along any portion of the property perimeter. 5.) Planning Commission will need to determine if existing conditions fulfill landscaping adjacent to roads requirements. 6.) Planning Commission will need to determine if it will require for one (1) tree per three-thousand (3,000) sqft of unpaved open surface 7.) Planning Commission will need to determine if existing landscaping adjacent to parking areas fulfill requirements.

LIGHTING

The site plan shown on Sheet C3.0 indicates two existing light poles located at opposite ends along the southern portion of the lot directed at parking areas. The light pole closest to North Old US 23 Hwy is not on the applicant's property. Building lighting is not indicated on site plans or building elevations. No photometric information, including footcandle measurements, was included in the site plan.

Section 21.37 states the Planning Commission shall require the submission of a photometric plan prepared by an electrical engineer, or other qualified expert, graphically illustrating the planned layout and foot candles of site lighting. A photometric plan may be required to ensure compliance with the above standards and that adequate light levels are provided on the site. The plan shall also indicate the type and heights of light fixtures proposed, the wattage proposed to be used, and all pertinent photometric information for the fixtures, site and project.

Items to be Addressed: A photometric plan showing the current site lighting should be added to the site plan to allow the Planning Commission to determine if additional or improved lighting is needed.

SIGNAGE

Sheet C3.0 shows the location of an existing sign. However, no structural or sign dimensions are provided. Table 27.1 of the Zoning Ordinance outlines permitted and non-permitted sign allowances and regulations per zoning district. Applicant has not stated whether new convenience store will require new freestanding or building wall signage. *Items to be Addressed:* Applicant should refer to Section 27 of the zoning ordinance if/when existing signage is modified to accommodate the change in use.

ARCHITECURAL STANDARDS

Per Section 23.18, site plans shall include information relating to certain architectural elements as it relates to the standards set forth in that section. Section 23.18F states where an addition is being proposed for an existing building, the existing facade materials may be used in the addition provided that the following criteria have been met:

- 1. The addition does not exceed one hundred (100) percent of the existing building floor area.
- 2. All new facades substantially constitute a continuation of the existing facades with respect to color, texture, size, height, and location of materials.
- 3. That the visual effect is to make the addition appear as part of the existing building.

It cannot be determined whether this site plan meets all requirements as no rear or side elevations with exterior construction materials has been provided. Sheet A1.3 provides basic exterior construction materials for the front elevation but only indicates color for the asphalt shingles. All other materials are to be specified by the owner. If all proposed materials are meant to constitute a continuation of the existing façade and the proposed addition is meant to appear as part of the existing building, this section would provide an exception from Section 23.18N requirements. To determine this, Sheet A1.3 should clarify if proposed infill exterior construction materials for all elevations will match existing exterior construction materials. Side and rear elevations showing the proposed addition and specifying exterior construction materials and their location should be provided on new sheets. The specifications for framing materials to be used for the new proposed double door entry are shown on Sheet A1.2 but are missing from Sheet A1.3 and should be added so all façade materials are shown on one sheet.

Two (2) Air Handling Units (AHU's) are shown on HVAC and Plumbing floor plans at the eastern end of the building. However, these units are not shown on Sheet C3.0. It should be clarified if these units are new and what their proposed location is as this equipment is typically found on rooftops. Mechanical equipment on rooftops must conform to Section 23.18C

An Architectural Review Committee shall review all proposed building materials and colors prior to a formal site plan review by the Planning Commission.

If the requirements in Section 21.38F are not fulfilled, Section 23.18N provides a Schedule Regulating Facades Materials. Sheet A1.3 provides finish materials stated as ledger stone veneer, metal staggered shaker siding and asphalt shingles (canopy and roof) but does not provide percentages associated with the amount of coverage. This information will need to be added to assess if the proposed materials and amounts confirm to Group 2 of the table.

Should the Planning Commission find the design and proposed materials sufficient, Section 23.181 offers a facade waiver. When a particular building design and the materials and colors or combination of materials and colors proposed to be used on the facade are found to be consistent with the intent and purpose of Section 23.18 but may differ from the strict application of this Section and the Schedule Regulating Facade Materials, the Planning Commission and Township Board shall consider such proposal as a waiver of these standards. Site plans and architectural plans for a waiver under this Section shall be

accompanied by a definitive description of the building design consisting of written statements which shall describe how the selected façade materials and/or colors and material combinations will be consistent with and will enhance the building design concept and how the materials and/or colors properly relate to the buildings in the surrounding area. The Planning Commission or Township Board may, as part of its review, request a report and recommendation from a professional design consultant as to the proposed waiver, and may establish a fee for this report.

Items to be Addressed: 1.) Color specifications for all materials should be provided on Sheet A1.3 in color print. 2.) To determine if Section 23.18F requirements have been fulfilled, Sheet A1.3 should note whether proposed infill exterior construction materials for all elevations will match existing exterior construction materials. Side and rear elevations showing the proposed addition as well as specifying exterior construction materials and their location should be added to the site plan. 3.) The specifications for framing materials to be used for the new proposed double door entry should be added to Sheet A1.3 4.) the Architectural Review Committee shall review all building materials prior to site plan approval. 5.) Building material façade finishes shown on Sheet A1.3 should include percentages of coverage as well as conformance to the materials specific in Section 23.18N Group 2 if Section 23.18F is not fulfilled. 6.) Mechanical equipment location must be shown on Sheet C3.0 as well as A1.3 to ensure proper placement and screening (if necessary).

SUMMARY

Given the request is to change the use of the site to less intense operations, we feel that the following issues need to be resolved before a recommendation of approval:

- 1. A clear statement from the applicant regarding the cease of operations for the auto salvage/storage yard
- 2. Decisions from the Planning Commission on the following waivers:
 - a. dumpster location
 - b. landscaping
 - c. proposed building materials

If the Planning Commission recommends approval of the site plan to the Township Board, we recommend the following conditions:

- 1. It should be stated on the application whether the auto salvage yard operations will cease along with the auto service station.
- 2. Site parking and storage operations exceed the eastern lot line. Future site operations should conform to property lot lines.
- 3. The existing structure encroaches the west side yard setback. Documentation either through ZBA approval or pre-existing nonconformity needs to be submitted for review.
- 4. The east side yard setback measurement must be added to sheet C3.0.
- 5. Building height must be measured from grade to the mid-point between the eave and ridge and added to Sheet A1.3.
- 6. Handicap spaces must be the correct dimensions and shown on Sheet C3.0.
- 7. Parking should be calculated based on auto service station as well as retail use.
- 8. One (1) loading space must be added and shown on Sheet C3.0 per Section 25.03D and 25.10.

- 9. Per Section 25.09, pavement repairs should be made to assure safe circulation on site.
- 10. Written confirmation should be provided stating the proposed building expansion does not interfere with any overhead or underground water/sewer/storm lines and/or any underground or overhead electrical services.
- 11. Existing utility infrastructure on Sheets C2.0 and C3.0 should be clearly legible and an identifiable color.
- 12. Dumpster gate specifications should be added to Sheet C3.0.
- 13. The location of the dumpster should be moved to the rear of the building and shown on Sheet C3.0.
- 14. Consider the power granted per Section 21A.09, the Planning Commission will need to determine if existing conditions fulfill front yard landscaping, landscaping screening along the property perimeter, unpaved open surface, landscaping adjacent to roads and landscaping adjacent to parking area requirements.
- 15. A photometric plan showing the current site lighting should be added to the site plan to allow the Planning Commission to determine if additional or improved lighting is needed.
- 16. Applicant should refer to Section 27 of the zoning ordinance if/when existing signage is modified to accommodate the change in use.
- 17. Color specifications for all materials should be provided on Sheet A1.3 in color print.
- 18. To determine if Section 23.18F requirements have been fulfilled, Sheet A1.3 should note whether proposed infill exterior construction materials for all elevations will match existing exterior construction materials. Side and rear elevations showing the proposed addition as well as specifying exterior construction materials and their location should be added to the site plan.
- 19. The specifications for framing materials to be used for the new proposed double door entry should be added to Sheet A1.3
- 20. The Architectural Review Committee shall review all building materials prior to site plan approval.
- 21. Building material façade finishes shown on Sheet A1.3 should include percentages of coverage as well as conformance to the materials specific in Section 23.18N Group 2 if Section 23.18F is not fulfilled.
- 22. Mechanical equipment location must be shown on Sheet C3.0 as well as A1.3 to ensure proper placement and screening (if necessary).

Respectfully submitted,

CARLISLE/WORTMAN ASSOC., INC Megan Masson-Minock, AICP Principal

CÁRLISLE/WORTMAN ASSOC., INC.

CÁRLISLE/WORTMAN ASSÓ Matteo Passalacqua Community Planner



Triumph Engineering & Design, Inc.

10775 S. Saginaw Street, Suite D| Grand Blanc, MI 48439 | Ph; 810-584-7364} www.triumpheng.com

Jan 16, 2024

Responses to Township Review

Item #10 : The proposed building remodel involves an overhang located on the north side of the building to protect the cooler and condensing units. This overhang will not interfere with any existing overhead or underground water / sewer / storm lines and / or any underground or overhead electrical services.

Sincerely,

John D. Whitehead, P.E.



Triumph Engineering & Design, Inc.

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Feb 14, 2024

Tyrone Party Store 9485 Center Road Northwest corner of Center Road and Old US 23 Road (04-17-400-006)

Responses to Township Review from Site Plan review Meeting January 3, 2024

1. It should be stated on the application whether the auto storage yard operations will cease along with the auto service station.

Owner will provide updated application.

2. Site parking and storage operations exceed the eastern lot line. Future site operations should conform to property lot lines.

Owner has provided MDOT letter to Township.

3. The existing structure encroaches the west side yard setback. Documentation either through ZBA approval or pre-existing nonconformity needs to be submitted for review.

Item has been waived.

4. The east side yard setback measurement must be added to sheet C3.0.

Sheet C3.0 has been updated.

5. Building height must be measured from grade to the mid-point between the eave and ridge and added to Sheet A1.3.

Sheet A1.3 has been updated.

6. Handicap spaces must be the correct dimensions and shown on Sheet C3.0.

Sheet C3.0 has been updated.



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7. Parking should be calculated based on auto service station as well as retail use.

Sheet C3.0 has been updated.

8. One (1) loading space must be added and shown on Sheet C3.0 per Section 25.03D and 25.10.

Sheet C3.0 has been updated.

9. Per Section 25.09, pavement repairs should be made to assure safe circulation on site.

Sheet C3.0 has been updated.

10. Written confirmation should be provided stating the proposed building expansion does not interfere with any overhead or underground water/sewer/storm lines and/or any underground or overhead electrical services.

See signed and sealed letter dated Jan 16, 2024 previously submitted.

Item #10 : The proposed building remodel involves an overhang located on the north side of the building to protect the cooler and condensing units. This overhang will not interfere with any existing overhead or underground water / sewer / storm lines and / or any underground or overhead electrical services.

11. Existing utility infrastructure on Sheets C2.0 and C3.0 should be clearly legible and an identifiable color.

Sheets C2.0 & C3.0 have been updated.

12. Dumpster gate specifications should be added to Sheet C3.0.

Sheet C3.0 has been updated.

13. The location of the dumpster should be moved to the rear of the building and shown on Sheet C3.0.

Sheet C3.0 has been updated.

14. Consider the power granted per Section 21A.09, the Planning Commission will need to determine if existing conditions fulfill front yard landscaping, landscaping screening along the property perimeter, unpaved open surface, landscaping adjacent to roads and landscaping adjacent to parking area requirements.

Item has been waived.



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15. A photometric plan showing the current site lighting should be added to the site plan to allow the Planning Commission to determine if additional or improved lighting is needed.

See Sheet C4.0

 Applicant should refer to Section 27 of the zoning ordinance if/when existing signage is modified to accommodate the change in use.

Item has been waived.

17. Color specifications for all materials should be provided on Sheet A1.3 in color print.

See Sheets A1.2 & A1.3

18. To determine if Section 23.18F requirements have been fulfilled, Sheet A1.3 should note whether proposed infill exterior construction materials for all elevations will match existing exterior construction materials. Side and rear elevations showing the proposed addition as well as specifying exterior construction materials and their location should be added to the site plan.

See Sheets A1.2, A1.3 & A2.0.

19. The specifications for framing materials to be used for the new proposed double door entry should be added to Sheet A1.3

See Sheet A1.3

20. The Architectural Review Committee shall review all building materials prior to site plan approval.

Item has been waived.

21. Building material façade finishes shown on Sheet A1.3 should include percentages of coverage as well as conformance to the materials specific in Section 23.18N Group 2 if Section 23.18F is not fulfilled.

Item has been waived.

22. Mechanical equipment location must be shown on Sheet C3.0 as well as A1.3 to ensure proper placement and screening (if necessary).

See Sheet C3.0 & A1.3



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Sincerely,

2 10

John D. Whitehead, P.E.

Livingston County Road Commission

3635 Grand Oaks Drive • Howell, Michigan 48843-8575 Telephone: (517) 546-4250 • Facsimile: (517) 546-9628. Internet Address: www.livingstonroads.org

October 20, 2011

Tyrone Township 10408 Center Road Fenton, MI 48430

Re: Woody's Towing, Tyrone Township, Section 17

To whom it may concern:

We have been in contact with Mr. Woods with regard to his property at the northwest corner of Center Road and Old US 23. The email, dated November 2, 2009, from myself to Ms. Barbara Burtch explains the LCRC's position about the parking area located within our right-of-way at this intersection.

The LCRC currently does not have any issues with the objects or parking lot located within our right-of-way since the sight distance at the intersection is not being obstructed. Mr. Woods has agreed to maintain the sight distance and to follow the LCRC's recommendation of using recovered Hot Mix Asphalt within our right-of-way for the parking area material.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Kim Hiller, P.E. Utilities and Permits Engineer

Cc: File

David R. Peckens * Chairman Michael Craine * Managing Director Stephen F. Grane • Vice Chairman Jodie M. Tedesco • County Highway Engineer John T. Dunleavy • Member Steven J. Wasylk • Director of Operations

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TYRONE TOWNS

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TYRONE TOWNSHIP PLANNING COMMISSION APPROVED REGULAR MEETING MINUTES January 9, 2023 7:00 p.m.

This meeting was held at the Tyrone Township Hall

- PRESENT: Rich Erickson, Kurt Schulze, Jon Ward, Steve Krause, Bill Wood, Kevin Ross, & Garrett
 Ladd
- 8 ALSO PRESENT: Ross Nicholson & Matteo Passalacqua
- 9 Chairman Rich Erickson called the meeting to order at 7:00 p.m.
- 10 **APPROVAL OF THE AGENDA:** Approved the agenda as presented.

11 APPROVAL OF THE MINUTES:

- 12 1) November 12, 2023 approved as presented.
- 13 CALL TO THE PUBLIC: Public comments were received.

14 **NEW BUSINESS:**

15 **2) Election of Officers**

- 16 Rich Erickson stepped down as Chairman of the Planning Commission. Steve Krause was nominated
- 17 and elected as the new Planning Commission Chairman. The remaining officer positions will remain
- 18 in effect until the next election of officers.

19 OLD BUSINESS:

20 1) Master Plan:

There was no new input from any of the neighboring communities or utility companies regarding
the Master Plan. The next step is to send it to the Livingston County Planning Commission (LCPC)
for their review before forwarding it to the Township Board. A public hearing will be held
regarding the Master Plan; any necessary changes will be made and then it will be sent to the LCPC
for review Commissioner Jon Ward moved to hold a public hearing for the Master Plan at the next
regular meeting scheduled for February 13, 2024. Chairman Steve Krause supported. The motion
carried (all ayes).

29

30 2) Solar (Utility Scale):

Attorney Laura Genovich of Foster Swift was present to assist with legal advice regarding the solar ordinance. The Planning Commission and Planner reviewed and discussed the latest draft ordinance. Several revisions were suggested. The attorney discussed the new Public Act 233. She felt that the Planning Commission and their consultant had done well on the draft. She also felt there should be a separate battery storage ordinance. It was requested that the draft be modified according to the

- 1 suggestions from the Attorney and reviewed at the next regular meeting. After the revised draft is
- 2 reviewed at the next regular meeting, a public hearing can be scheduled.

3 **NEW BUSINESS:**

4 1) Tyrone Party Store Site Plan Amendment

5 The Planning Commission and Planner discussed the application for the proposed site plan amendment with the authorized agent for the applicant. The applicant intends to eliminate the 6 garage/auto portion of the business. The old garage will become the new party store 7 . The gas station will still be in operation. It was noted that the building sits closer to the west side 8 lot line than permitted in the zoning district (should be 20 feet, it is 19.3 feet). It was determined this 9 10 would not be an issue as it was previously approved by the Planning Commission and the Township Board. The Planning Commission provided direction to the agent to revise the site plan and 11 12 application documents. Some items that needed addressing were parking, a loading area, handicapped spaces, landscaping, utilities, lighting, signage, and waste receptacles. The Planning 13 14 Commission recommended approval of the proposed site plan amendment with conditions. Conditions placed on the recommendation will be reviewed and confirmed to be fulfilled by the 15 Planning Commission Subcommittee before sending the formal recommendation to the Township 16 17 Board.

- 18 **CALL TO THE PUBLIC:** Public comments were received.
- 19 **MISCELLANEOUS BUSINESS:** The January Workshop was cancelled.
- 20 **ADJOURNMENT:** The meeting was adjourned at 9:03 p.m.
- 21
- 22

NEW BUSINESS #2

REU bulk purchase and Livingston County purchase offer.

REU BULK PURCHASE OPTIONS

PROPOSED OPTION A

- 50-100 REU'S \$1,000 discount ea.
- 101- 200 REU'S \$1500 discount ea.
- 201-300 REU'S \$2000 discount ea.
- 300-400 REU's \$2500 discount ea.
- 400-500 REU's \$3000 discount ea.

Other options?



Livingston County Department of Public Works 2300 E. Grand River, Suite 105 Howell, Michigan 48843-7581 Phone (517) 546-7150 Fax (517) 545-9658



Department of Public Works

Livingston County, Michigan

Preliminary discussion for the purchase of 513 REU's

Dear Honorable members of Tyrone Township board. As you are aware, Livingston County is seeking to purchase capacity in the transmission line within Tyrone Township in order to serve the Septage Receiving Station (SRS). In the past, the facility has utilized a combination of purchased and "rented" capacity from Hartland Township. Unfortunately, the available capacity within the transmission line serving Hartland Twp has mostly been sold to property owners within their service area. This document is to serve as a starting point for discussion on ensuring discharge capacity for the SRS into the future and is not a formal offer by Livingston County. We must still go through the Board of Public Works and the Livingston County Board of Commissioners, as owners of the system, for approval before any sort of agreement can be finalized. This document is an effort to elicit some thought and promote discussions with the Tyrone Township Board regarding purchase of REU's by Livingston County for the purpose of accommodating the SRS.

Based on our budget calculations, the following proposal options reflect a possible scenario that preserves the financial integrity of the SRS.

- Initial bulk purchase of 263 REU's at a cost of \$2,500,000.00.
- We request reserving 250 REUs for the SRS in addition as an option which would be sold at the "going rate" at the time of purchase.
- The REU's purchased by Livingston County shall be transferred from Tyrone Townships 185 Agreement to Hartland Townships 185 Agreement, adjusting the overall allotment of REUs between each township.

Pro's associated with this purchase of capacity.

- Protection of our natural resources by continued ban on land application of septage, which we can have because of our septage receiving station.

- From our understanding the proposed initial bulk purchase offsets debt within Tyrone Townships general fund from a loan to Tyrone Townships Sewer fund.
- Elimination of \$60 debt service fee on Tyrone Township LRSS Residents quarterly sewer bill, equating to roughly \$240.00 per year in savings to the user.
- Our preliminary calculations indicate that the increased injection of RTS charges into the system would lower the RTS of all users in the LRSS by roughly \$6.47 per quarter, or \$28.88 per year in savings to the user.

We appreciate your consideration and look forward to working with you now and in the future. We feel strongly that working through this issue, and our cooperative efforts together, will undoubtedly assist in meeting future challenges we most assuredly will face.

NEW BUSINESS #3

Final 2023-2024 budget amendment.

Proposed Budget Amendments by Fund for Fiscal Year 2023/2024

						Cur	rrent Balance as	Suggested
Fund	Department	Account No.	Account Name	Curr	ent Budget		of 3/19/24	Amendment
GENERAL FUND	ASSESSOR	101-257-900.000	PRINTING & PUBLISHING	\$	400.00	\$	3,147.95	\$ 6,000.00
GENERAL FUND	ORDINANCE	101-724-805.005	LEGAL FEES -ORDINANCE	\$	15,000.00	\$	16,327.79	\$ 17,000.00
SHANNON GLEN RUBISH REMOVAL FUND		225-528-811.000	TRASH/RUBBISH REMOVAL	\$	6,305.00	\$	6,400.39	\$ 6,405.00
IRISH HILLS ROAD IMPROVEMENT DEBT FUND		865-906-993.000	BOND INTEREST EXPENSE	\$	17,726.00	\$	18,086.25	\$ 18,087.00
SEWER O&M FUND		590-536-956.000	BANK SERVICE CHARGE	\$	1,000.00	\$	1,100.00	\$ 1,500.00

NEW BUSINESS #4

Request to award fire well contract.

Spicer Group, Inc. 30300 Telegraph Rd. Suite 100 Bingham Farms, MI 48025 TEL (517) 375-9449 www.SpicerGroup.com





DWG. NO.: A-29101



DATE: 07-20-23

PARENT PARCEL DESCRIPTION (PER DEED RECORDED IN #2008R-026942):

A part of the Northeast quarter of Section 35, T.4 N., R.6 E., Tyrone Township, Livingston County, Michigan, described as follows: Beginning at the Northeast corner of said Section 35; thence South 831.75 feet along the East line of Section 35; thence N.89°-37'-40"W., 524.00 feet along the centerline of a 66 foot wide road easement; thence North 833.29 feet to the North line of said section; thence S.89°-27'-30"E., 524.01 feet to the point of beginning. Subject to and including the use of a 66 foot wide private road easement for ingress and egress, the Northerly 33 feet of which goes across the above described parcel, the centerline of which is described as follows: Beginning at a point on the centerline of Fenton Road and section line South 831.75 feet from the Northeast corner of said Section 35; running thence N.89°-37'-40"W., 524.00 feet along said centerline of a 66 foot wide private road easement to end at a point on the West line of the above described parcel.

EASEMENT DESCRIPTION:

The North 42.00 feet of the South 75.00 feet of the West 42.00 feet of the East 75.00 feet of the following described parcel: A part of the Northeast quarter of Section 35, T.4 N., R.6 E., Tyrone Township, Livingston County, Michigan, described as follows: Beginning at the Northeast corner of said Section 35; thence South 831 .75 feet along the East line of Section 35; thence N.89°-37'-40"W., 524.00 feet along the centerline of a 66 foot wide road easement; thence North 833.29 feet to the North line of said section; thence S.89°-27'-30"E., 524.01 feet to the point of beginning, containing 1,764 square feet of land, more or less.

DRAWN BY: MLW PLOT CHECKED BY: DMW SHEE	DATE: 07-20-23 JOB#: 134653SG2023 ET OF DWG#: A-29101
--------------------------------------------	---------------------------------------------------------------------------------------------------





3620 Groveland rd Ortonville Mi 48462 nlayman@celayman.com www.celayman.com 248.627.2016

Estimate

For:	Tyrone Township Fire Department		1526
		Date:	12/18/2023

Job location

Tyrone Fire Well - Denton Hill Rd. and Alcoy Dr Tyron twp - Parcel # 4704-35-200-021

Description	Quantity	Rate	Amount
Test Hole (smaller bore using same hole prior to larger bit) 120 @ \$11.00/ foot	120	\$11.00	\$1,320.00
8" PVC Well (up to 120' deep, 100' min charge & 57\$ / foot if over 120')	120	\$57.00	\$6,840.00
Stainless steel screen 10' (additional may be necessary depending on formation available)	1	\$2,996.00	\$2,996.00
Gravel Pack - (priced per bag, additional may be needed)	20	\$22.00	\$440.00
Franklin Electric 20 HP Deluxe Controler VFD with Soft start (1 phase 240v in 3 phase 240v out)	1	\$13,196.00	\$13,196.00
20 HP 3 phase motor 220v	1	\$5,496.00	\$5,496.00
500 GPM Wet end 4" Discharge (pumping end)	1	\$5,810.00	\$5,810.00
4" Certa Lock Drop pipe	1	\$3,598.00	\$3,598.00
4" Certa Lock Couplings	1	\$479.00	\$479.00
4" Certa Lock Check Valve	1	\$1,229.00	\$1,229.00
4" Certa Lock adapter stainless / male	2	\$349.00	\$698.00
4" tee	1	\$396.00	\$396.00
4" Plug	1	\$165.00	\$165.00
4" Nipple 6"	1	\$129.00	\$129.00
8/3 Submersible wiring w/ ground	1	\$1,398.00	\$1,398.00
8x4 well seal / vented	1	\$296.00	\$296.00

- Estimate 1526 - 12/18/2023

Description	Quantity	Rate	Amount
Heat shrink kits / electrical adapters	1	\$225.00	\$225.00
Well Permit fee Health Department		\$350.00	\$350.00
Well Development (price per hour additional may be needed)		\$120.00	\$480.00
Installation of pump / drop pipe / well seal / wiring etc	1	\$900.00	\$900.00
5" Stortz fittings & storz plug	1	\$449.00	\$449.00
6"x2' Nipple	1	\$110.00	\$110.00
Installation / Labor / Crane (pump hoist)	1	\$2,500.00	\$2,500.00
Electrical enclosure uni strut framing installed w/ permits	1	\$5,239.00	\$5,239.00
Grouting well / Bentonite	1	\$525.00	\$525.00
Lighting Installed above controls (Recommended)	1	\$550.00	\$550.00
Pressure relief valve	1	\$239.00	\$239.00
Removal of cuttings, grading around well / unistrut , grass seed	1	\$1,500.00	\$1,500.00
Gravel walking pad around well 3' Wide 23A Gravel Compacted To well controls up to 15' Long	1	\$1,500.00	\$1,500.00
Note this is an estimate only. ANY additional material or labor needed to complete job will be extra charge. We cannot guarantee water volume. This DOES NOT include incoming power from DTE / Consumers to location of well / unistrut / or meter.	1	\$0.00	\$0.00
*BE ADVISED COMPLETE SYSTEM SET UP TO BE MAINTENANCE FREE YEAR ROUND USING ALL CORROSION FREE MATERIAL WHICH ARE DESIGNED TO SAVE MONEY OVER TIME INCLUDING CERTA LOCK DROP PIPE (VS GALVANIZED WHICH WILL CORRODE) THIS ESTIMATE ALSO ALLOWS US TO USE SAME BORE HOLE AS SUPPRESSION WELL WITH SMALLER SIZED DRILL BIT SAVING PERMIT FEES AS WELL AS COSTS ASSOCIATED WITH WELL ABANDONMENT. WE INCLUDE LIGHTING ON PANEL WHICH IS HIGHLY RECOMMENDED. WE HAVE DRILLED THESE WELLS FOR NOCFA, GROVELAND, BRANDON AND OXFORD FIRE DEPARTMENTS - REFERENCES CAN BE INCLUDED ALONG WITH PICTURES OF THE PROJECTS WE HAVE COMPLETED *	1	\$0.00	\$0.00
Subtotal			\$59,053.00 \$59,053.00
Total		\$59,	053.00
Comments			
Thank you for your business!			

- Estimate 1526 - 12/18/2023

C.E Layman & Son Well Drilling Inc.

Client's signature





February 23, 2024

Mike Cunningham Supervisor Tyrone Township 8420 Runyan Lake Road Fenton, Michigan 48430

RE: Tyrone Township Fire Suppression Well VIA EMAIL

John,

We received two quotes for this project, for the following prices:

C.E. Layman & Son Well Drilling, Inc	Cribley Drilling Co., Inc
\$59,053.00	\$195,480.50

We recommend the award of Tyrone Fire Suppression Well to C.E. Layman & Son Well Drilling, Inc at the unit prices quoted which, when applied to estimated quantities, result in a total quote of fifty-nine thousand fifty-three dollars and zero cents (**\$59,053.00**). C.E. Layman has done numerous similar projects in the region and previous clients have been satisfied with their work.

The quote for C.E. Layman is attached. At the request of the Township, Spicer Group, Inc will obtain the necessary insurances and bonding documents.

If you have any questions or comments, please contact me at (517)-375-9449

Sincerely,

Witt

Philip Westmoreland, P.E. Principal

SPICER GROUP, INC 125 Helle Blvd, Suite 2 Dundee, MI 48131 E-mail: philaw@spicergroup.com

Copy: SGI File 134653SG2023

NEW BUSINESS #5

Resolution to extend the solar energy moratorium.

RESOLUTION #2403xx TYRONE TOWNSHIP, LIVINGSTON COUNTY

SECOND EXTENSION OF MORATORIUM ON SOLAR PROJECTS

WHEREAS, the Michigan Zoning Enabling Act, 2006 P.A. being MCL 125.3101 et seq., authorizes Tyrone Township (the "Township") to adopt reasonable regulations to control the establishment and use of Commercial Large Scale Solar Energy Systems in accordance with the Township's Master Plan; and

WHEREAS, the Township has become aware of an increase of Commercial Large Scale Solar Energy Systems in the region, which is an emerging land use not sufficiently contemplated in the current Master Plan nor by the current zoning for anywhere in the Township; and

WHEREAS, the Tyrone Township is beginning the process of reviewing the Master Plan and its zoning for the purpose of updating it to include recognition of Commercial Large Scale Solar Energy Systems in the Township as an emerging land use in the region; and

WHEREAS, integration of Commercial Large Scale Solar Energy Systems land use within the Township's existing land uses requires suitable regulations and controls to ensure compliance with the Township's Master Plan, among other things, by preserving agricultural property, and for the protection of general health, safety and welfare of all of the Township's residents;

WHEREAS, this Board believes it is prudent and wise in light of the emergence of Commercial Large Scale Solar Energy Systems land uses in the region, to assure proper locating and regulation of these land uses in the Township and must consider this Resolution for Moratorium on Commercial Large Scale Solar Energy Systems so as to better protect the public health, safety, and Welfare of Township residents; and

WHEREAS, imposing a moratorium, on a limited temporary basis, is reasonable and necessary in order to allow the Township to fully explore, analyze, research and develop proposed amendments to the Master Plan and the Township Zoning Ordinance, and to make recommendations to the Township Board regarding such amendments applicable to Commercial Large Scale Solar Energy Systems uses in the Township; and

WHEREAS, the Tyrone Township Board previously adopted a moratorium for six (6) months by Resolution #230402 and which expired on October 4, 2023, and

WHEREAS, the Tyrone Township Board extended that moratorium for an additional six (6) months by Resolution #231001 and which expires April 4, 2024.

NOW THEREFORE BE IT RESOLVED, a moratorium is hereby imposed upon the issuance of any and all permits, licenses, or approvals for any property subject to or under the jurisdiction of the Township's Zoning Ordinance for the establishment or use of any new Commercial Large Scale Solar Energy Systems uses in the Township. The moratorium imposed by this Resolution is for a six (6) month period, which expires October 4, 2024, or until Commercial Large Scale Solar Energy Systems regulatory amendments to the Township's Zoning Ordinance become effective, whichever occurs first. Before this moratorium expires, the Township may by resolution extend the moratorium for up to six (6) months to allow sufficient time to complete amendments to its Master Plan and Zoning Ordinance, if necessary. If an extension is adopted, the Township will publish notice of the extension.

RESOLVED BY: SUPPORTED BY:

VOTE: ADOPTION DATE: March 26, 2024

CERTIFICATION OF THE CLERK

The undersigned, being the duly qualified and acting Clerk of Tyrone Township, Livingston County, Michigan, hereby certifies that (1) the foregoing is a true and complete copy of a resolution adopted by the Township Board at a regular meeting, held on March 26, 2024, at which meeting a quorum was present and remained throughout, (2) the original thereof is on file in the records in my office, (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan, 1976, as amended) and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

Pamela Moughler Township Clerk
NEW BUSINESS #6

Resolution for moratorium on wind projects.

RESOLUTION #2403xx TYRONE TOWNSHIP, LIVINGSTON COUNTY

MORATORIUM ON WIND ENERGY PROJECTS

WHEREAS, the Michigan Zoning Enabling Act, 2006 P.A. being MCL 125.3101 et seq., authorizes Tyrone Township (the "Township") to adopt reasonable regulations to control the establishment and use of Commercial Large Scale Wind Energy Systems in accordance with the Township's Master Plan; and

WHEREAS, the Township has become aware of an increase of Commercial Large Scale Wind Energy Systems in the region, which is an emerging land use not sufficiently contemplated in the current Master Plan nor by the current zoning for anywhere in the Township; and

WHEREAS, the Tyrone Township is in the process of reviewing the Master Plan and its zoning for the purpose of updating it to include recognition of Commercial Large Scale Wind Energy Systems in the Township as an emerging land use in the region; and

WHEREAS, integration of Commercial Large Scale Wind Energy Systems land use within the Township's existing land uses requires suitable regulations and controls to ensure compliance with the Township's Master Plan, among other things, by preserving agricultural property, and for the protection of general health, safety and welfare of all of the Township's residents;

WHEREAS, this Board believes it is prudent and wise in light of the emergence of Commercial Large Scale Wind Energy Systems land uses in the region, to assure proper locating and regulation of these land uses in the Township and must consider this Resolution for Moratorium on Commercial Large Scale Wind Energy Systems so as to better protect the public health, safety, and Welfare of Township residents; and

WHEREAS, imposing a moratorium, on a limited temporary basis, is reasonable and necessary in order to allow the Township to fully explore, analyze, research and develop proposed amendments to the Master Plan and the Township Zoning Ordinance, and to make recommendations to the Township Board regarding such amendments applicable to Commercial Large Scale Wind Energy Systems uses in the Township; and

NOW THEREFORE BE IT RESOLVED, a moratorium Is hereby imposed upon the issuance of any and all permits, licenses, or approvals for any property subject to or under the jurisdiction of the Township's Zoning Ordinance for the establishment or use of any new Commercial Large Scale Wind Energy Systems uses in the Township. The moratorium imposed

by this Resolution shall remain in effect for six (6) months following the effective date of this Resolution, or until Commercial Large Scale Wind Energy Systems regulatory amendments to the Township's Zoning Ordinance become effective, whichever occurs first. Before this moratorium expires, the Township may by resolution extend the moratorium for up to six (6) months to allow sufficient time to complete amendments to its Master Plan and Zoning. Ordinance, if necessary. If an extension is adopted, the Township will publish notice of the extension.

RESOLVED BY: SUPPORTED BY:

VOTE:

ADOPTION DATE: March 26, 2024

CERTIFICATION OF THE CLERK

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Pam Moughler Township Clerk

NEW BUSINESS #7

Resolution for moratorium on battery storage systems.

RESOLUTION #2403xx TYRONE TOWNSHIP, LIVINGSTON COUNTY

RESOLUTION FOR MORATORIUM ON BATTERY STORAGE SYSTEMS

WHEREAS, the Michigan Zoning Enabling Act, 2006 P.A. being MCL 125.3101 et seq., authorizes Tyrone Township (the "Township") to adopt reasonable regulations to control the establishment and use of Commercial Large Scale Battery Storage Systems in accordance with the Township's Master Plan; and

WHEREAS, the Township has become aware of an increase of Commercial Large Scale Battery Storage Systems in the region, which is an emerging land use not sufficiently contemplated in the current Master Plan nor by the current zoning for anywhere in the Township; and

WHEREAS, the Tyrone Township is in the process of reviewing the Master Plan and its zoning for the purpose of updating it to include recognition of Commercial Large Scale Battery Storage Systems in the Township as an emerging land use in the region; and

WHEREAS, integration of Commercial Large Scale Battery Storage Systems land use within the Township's existing land uses requires suitable regulations and controls to ensure compliance with the Township's Master Plan, among other things, by preserving agricultural property, and for the protection of general health, safety and welfare of all of the Township's residents;

WHEREAS, this Board believes it is prudent and wise in light of the emergence of Commercial Large Scale Battery Storage Systems land uses in the region, to assure proper locating and regulation of these land uses in the Township and must consider this Resolution for Moratorium on Commercial Large Scale Battery Storage Systems so as to better protect the public health, safety, and Welfare of Township residents; and

WHEREAS, imposing a moratorium, on a limited temporary basis, is reasonable and necessary in order to allow the Township to fully explore, analyze, research and develop proposed amendments to the Master Plan and the Township Zoning Ordinance, and to make recommendations to the Township Board regarding such amendments applicable to Commercial Large Scale Battery Storage Systems uses in the Township; and

NOW THEREFORE BE IT RESOLVED, a moratorium is hereby imposed upon the issuance of any and all permits, licenses, or approvals for any property subject to or under the jurisdiction of the Township's Zoning Ordinance for the establishment or use of any new Commercial Large Scale Battery Storage Systems uses in the Township. The moratorium imposed

by this Resolution shall remain in effect for six (6) months following the effective date of this Resolution, or until Commercial Large Scale Battery Storage Systems regulatory amendments to the Township's Zoning Ordinance become effective, whichever occurs first. Before this moratorium expires, the Township may by resolution extend the moratorium for up to six (6) months to allow sufficient time to complete amendments to its Master Plan and Zoning. Ordinance, if necessary. If an extension is adopted, the Township will publish notice of the extension.

RESOLVED BY: SUPPORTED BY:

VOTE:

ADOPTION DATE: March 26, 2024

CERTIFICATION OF THE CLERK

The undersigned, being the duly qualified and acting Clerk of Tyrone Township, Livingston County, Michigan, hereby certifies that (1) the foregoing is a true and complete copy of a resolution adopted by the Township Board at a regular meeting, held on March 26, 2024, at which meeting a quorum was present and remained throughout, (2) the original thereof is on file in the records in my office, (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan, 1976, as amended) and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

Pam Moughler Township Clerk

NEW BUSINESS #8

Renewal of commercial insurance policy for township hall.

INVOICE / BIND REQUEST

Township of Tyrone, Livingston County 8420 Runyon Lake Road Fenton, MI 48430-9505

BURNHAM & FLOWER AGENCY, INC. 315 South Kalamazoo Mall Kalamazoo, MI 49007

ENTITY NAME: Township of Tyrone, Livingston County EFFECTIVE: 4/1/2024

Please bind coverage per the attached proposal premiums as indicated below.

Total Premium	\$25,946.75
MTPP Package Premium	\$23,958.00
Cyber Premium	\$1,988.75
Employee Benefits Liability	Included
Wrongful Acts Liability	Included
Property	Included
Automobile	Included
EDP	Included
Crime	Included
<u>Package</u> General Liability	Included

Total Premium Submitted

\$

PAYMENT DUE <u>ON OR BEFORE</u> POLICY EFFECTIVE DATE

THANK YOU FOR YOUR BUSINESS AND CONTINUED SUPPORT!

AUTHORIZED SIGNATURE:

DATE: _____



Cyber Coverage Proposal

Township of Tyrone, Livingston County



Effective:

4/1/2024

Presented & Administered By: Jon Johnson



ACRISURE | AGENCY PARTNER



DECLARATIONS

THE FOLLOWING INSURING CLAUSES ARE SUBJECT TO AN EACH AND EVERY CLAIM LIMIT					
INSURING CLAUSE 1: CYBE	ER INCIDENT RESPON	SE			
SECTION A: INCIDENT RESPO	ONSE COSTS				
_imit of liability: USD250,000 each and every claim					
Deductible:	USDO	each and every claim			
SECTION B: LEGAL AND REG	ULATORY COSTS				
Limit of liability:	USD250,000	each and every claim			
Deductible:	USD2,500	each and every claim			
SECTION C: IT SECURITY AND	D FORENSIC COSTS				
Limit of liability:	USD250,000	each and every claim			
Deductible:	USD2,500	each and every claim			
SECTION D: CRISIS COMMUN	NICATION COSTS				
Limit of liability:	USD250,000	each and every claim			
Deductible:	USD2,500	each and every claim			
SECTION E: PRIVACY BREAC	H MANAGEMENT COSTS				
Limit of liability:	USD250,000	each and every claim			
Deductible:	USD2,500	each and every claim			
SECTION F: THIRD PARTY PR	IVACY BREACH MANAG	EMENT COSTS			
Limit of liability:	USD250,000	each and every claim			
Deductible:	USD2,500	each and every claim			
SECTION G: POST BREACH R	EMEDIATION COSTS				
Limit of liability:	USD50,000	each and every claim, subject to a maximum of 10% of all sums we have paid as a direct result of the cyber event			
Deductible:	USDO	each and every claim			



INSURING CLAUSE 2: CYBER CRIME

SECTION A: FUNDS TRANSFER FRAUD						
Limit of liability:	USD100,000	each and every claim				
Deductible:	USD2,500	each and every claim				
SECTION B: THEFT OF FUND	S HELD IN ESCROW					
Limit of liability:	USD100,000	each and every claim				
Deductible:	USD2,500	each and every claim				
SECTION C: THEFT OF PERSO	DNAL FUNDS					
Limit of liability:	USD100,000	each and every claim				
Deductible:	USD2,500	each and every claim				
SECTION D: EXTORTION						
Limit of liability:	USD250,000	each and every claim				
Deductible:	USD2,500	each and every claim				
SECTION E: CORPORATE IDE	NTITY THEFT					
Limit of liability:	USD100,000	each and every claim				
Deductible:	USD2,500	each and every claim				
SECTION F: TELEPHONE HAG	CKING					
Limit of liability:	USD100,000	each and every claim				
Deductible:	USD2,500	each and every claim				
SECTION G: PUSH PAYMENT	FRAUD					
Limit of liability:	USD50,000	each and every claim				
Deductible:	USD2,500	each and every claim				
SECTION H: UNAUTHORIZED	USE OF COMPUTER RE	SOURCES				
Limit of liability:	USD100,000	each and every claim				

Deductible:



INSURING CLAUSE 3: SYSTEM DAMAGE AND BUSINESS INTERRUPTION

SECTION A: SYSTEM DAMAG	E AND RECTIFICATION C	COSTS
Limit of liability:	USD250,000	each and every claim
Deductible:	USD2,500	each and every claim
SECTION B: INCOME LOSS AI	ND EXTRA EXPENSE	
Limit of liability:	USD250,000	each and every claim, sub-limited to USD250,000 in respect of system failure
Deductible:	USD2,500	each and every claim
SECTION C: ADDITIONAL EXT	TRA EXPENSE	
Limit of liability:	USD100,000	each and every claim
Deductible:	USD2,500	each and every claim
SECTION D: DEPENDENT BU	SINESS INTERRUPTION	
Limit of liability:	USD250,000	each and every claim, sub-limited to USD250,000 in respect of system failure
Deductible:	USD2,500	each and every claim
SECTION E: CONSEQUENTIA	L REPUTATIONAL HARM	
Limit of liability:	USD250,000	each and every claim
Deductible:	USD2,500	each and every claim
SECTION F: CLAIM PREPARA	TION COSTS	
Limit of liability:	USD25,000	each and every claim
Deductible:	USDO	each and every claim
SECTION G: HARDWARE REF	PLACEMENT COSTS	
Limit of liability:	USD250,000	each and every claim
Deductible:	USD2,500	each and every claim



THE FOLLOWING INSURING CLAUSES ARE SUBJECT TO AN AGGREGATE LIMIT

INSURING CLAUSE 4: NETWORK SECURITY & PRIVACY LIABILITY

SECTION A: NETWORK SECU	JRITY LIABILITY				
Aggregate limit of liability:	USD250,000	in the aggregate, including costs and expenses			
Deductible:	USD2,500	each and every claim, including costs and expenses			
SECTION B: PRIVACY LIABILI	ITY				
Aggregate limit of liability:	USD250,000	in the aggregate, including costs and expenses			
Deductible:	USD2,500	each and every claim, including costs and expenses			
SECTION C: MANAGEMENT L	LIABILITY				
Aggregate limit of liability:	USD250,000	in the aggregate, including costs and expenses			
Deductible:	USD2,500	each and every claim, including costs and expenses			
SECTION D: REGULATORY FI	INES				
Aggregate limit of liability:	USD250,000	in the aggregate, including costs and expenses			
Deductible:	USD2,500	each and every claim, including costs and expenses			
SECTION E: PCI FINES, PENA	SECTION E: PCI FINES, PENALTIES AND ASSESSMENTS				
Aggregate limit of liability:	USD250,000	in the aggregate, including costs and expenses			
Deductible:	USD2,500	each and every claim, including costs and expenses			
INSURING CLAUSE 5: MEE					
SECTION A: DEFAMATION					
Aggregate limit of liability:	USD250,000	in the aggregate, including costs and expenses			
Deductible:	USD2,500	each and every claim, including costs and expenses			
SECTION B: INTELLECTUAL F	PROPERTY RIGHTS INFR	INGEMENT			
Aggregate limit of liability:	USD250,000	in the aggregate, including costs and expenses			
Deductible:	USD2,500	each and every claim, including costs and expenses			
INSURING CLAUSE 6: TEC	HNOLOGY ERRORS A	ND OMISSIONS			
NO COVER GIVEN					



INSURING CLAUSE 7: COURT ATTENDANCE COSTS

Aggregate limit of liability: USD100,000

in the aggregate

Deductible:

USD0

each and every claim



POLICYHOLDER DISCLOSURE NOTICE OF TERRORISM INSURANCE COVERAGE

ATTACHING TO POLICY N/A NUMBER: THE INSURED: Tow WITH EFFECT FROM: -

Township of Tyrone Livingston

Coverage for acts of terrorism is included in your policy. You are hereby notified that under the Terrorism Risk Insurance Act, as amended in 2015, the definition of act of terrorism has changed. As defined in Section 102(1) of the Act: The term "act of terrorism" means any act or acts that are certified by the Secretary of the Treasury—in consultation with the Secretary of Homeland Security, and the Attorney General of the United States—to be an act of terrorism; to be a violent act or an act that is dangerous to human life, property, or infrastructure; to have resulted in damage within the United States, or outside the United States in the case of certain air carriers or vessels or the premises of a United States mission; and to have been committed by an individual or individuals as part of an effort to coerce the civilian population of the United States Government by coercion.

Under your coverage, any losses resulting from certified acts of terrorism may be partially reimbursed by the United States Government under a formula established by the Terrorism Risk Insurance Act, as amended. However, your policy may contain other exclusions which might affect your coverage, such as an exclusion for nuclear events. Under the formula, the United States Government generally reimburses 85% through 2015; 84% beginning on January 1, 2016; 83% beginning on January 1, 2017; 82% beginning on January 1, 2018; 81% beginning on January 1, 2019 and 80% beginning on January 1, 2020, of covered terrorism losses exceeding the statutorily established deductible paid by the insurance company providing the coverage.

The Terrorism Risk Insurance Act, as amended, contains a \$100 billion cap that limits U.S. Government reimbursement as well as insurers' liability for losses resulting from certified acts of terrorism when the amount of such losses exceeds \$100 billion in any one calendar year. If the aggregate insured losses for all insurers exceed \$100 billion, your coverage may be reduced.

The portion of your annual premium that is attributable to coverage for acts of terrorism is USD0.00 and does not include any charges for the portion of losses covered by the United States government under the Act.

SUBJECT OTHERWISE TO THE TERMS AND CONDITIONS OF THE POLICY

Township of Tyrone, Livingston County

4/1/2024

Premium Summary

Total Premium:	\$ <i>1,</i> 988.75
Policy Taxes	\$38.75
Policy Fees	\$400.00
\$250,000 Coverage Limit	\$1,550.00

**NOTICE:

This proposal is an overview of coverages and is merely descriptive and should be used for reference purposes only. Please refer to the coverage document for specific terms, conditions, and exclusions. Any questions should be referred to your independent insurance agent.









Applicant Name: Policy Effective Date: Application Number: **TYRONE TOWNSHIP - LIVINGSTON** 04/01/2024 3388924060901

Tokio Marine HCC Public Risk APPLICATION DECLARATION

After complete investigation and inquiry, to the best of applicant's knowledge and belief, no principals, partners, directors, officers, employees, or insurance managers have knowledge of any act, error, omission, fact, incident, situation, unresolved job dispute, accident, or any other circumstance that is or could be the basis for a claim under this proposed insurance policy.

Report knowledge of all such incidents to your current carrier prior to your current policy expiration. The proposed insurance being applied for will not respond to incidents about which you had knowledge prior to the effective date of the policy nor will coverage apply to any claim or circumstance identified or that should have been identified in this application.

The applicant has read the foregoing and understands that completion of this Application does not bind the Underwriter or other party to provide coverage. It is agreed, however, that this Application is complete and correct to the best of applicant's knowledge and belief and that all particulars which may have a bearing upon acceptability as an insurance risk have been revealed. It is understood that this Application shall form the basis of the contract should the Underwriter approve coverage and should the applicant be satisfied with the Underwriter's quotation.

It is further agreed that, if in the time between submission of this Application and the requested date for coverage to be effective, the applicant becomes aware of any information which would change the answers furnished in response to any question of this Application, such information shall be revealed immediately in writing to the Underwriter.

Signature of authorized official:	Date
Print name of authorized official:	
Title of authorized official:	

PROPOSAL OF COVERAGES

Public Entity Insurance Proposal for:

Township of Tyrone, Livingston County

Effective Date: 4/1/2024



Presented by:

Jonathan Johnson (269) 341-9764 jjohnson@bfgroup.com

HOW BURNHAM & FLOWER SERVES YOU

Since 1966, Burnham & Flower Insurance Group has specialized in Michigan public entities and understands your unique coverage needs. We are your single source for Group Benefits, Property & Liability, and Group/ Individual Retirement Planning. In addition to comprehensive coverages, we provide risk management services, employee education, onsite reviews, online enrollment, 24/& access to each employee's benefits information, and much more.

Our Property & Casualty team has over 54 years of experience in the Public Entity Insurance Business. Friendly and professional service for all your insurance needs. Below are the coverage opportunities our team has to offer.

Par Plan/ Open Property & Casualty	CFC Cyber Insurance		
Broad coverage, competitive pricing, over 1300 Michigan entities with 96% retention.	Cybercrime, network security privacy, liability, system damage, business interruption and phishing scams.		
Workers Compensation	Provident: Insurance For Emergency Services		

Wage loss, medical treatment, rehab, death benefit and much more. Since 1912 Michigan based.

24/7 AD&D insurance, line of duty, occupational coverage and a first responder assistance program.

Additional information on any of these programs is available upon your request!

YOUR PROPERTY & CASUALTY TEAM



Jon Johnson Ext 3163 Account Manager jjohnson@bfgroup.com



Megan West Ext 3178 Account Manager <u>mwest@bfgroup.com</u>



Bobbi Pritchard Ext 3111 Department Manager <u>pritchard@bfgroup.com</u>



Kate Thomas Ext 3122

Department ManagerService Representativebpritchard@bfgroup.comkthomas@bfgroup.com

- The Michigan Township Participating Plan was formed in 1985.
- The Par Plan develops coverage programs specific to every member's needs.

• The Par Plan is a unique and proven, member-driven system that has effectively provided affordable, tailored property and casualty coverage to Michigan public entities for many years.

• The Par Plan is a proven, historically stable program with nearly **900 Michigan Townships** and a **98% member retention rate** and a strong, long-term working relationship with its program reinsurers.

- Over **1,300 current members** already know why The Par Plan is #1 in Michigan.
- Par Plan was structured to provide more features and benefits than any other plan:
- Non-profit Tax-exempt
- Retain investment income
- Stable pricingInteractive website

- Simplified application
- Specialized loss control
- Homogenous group

MTPP RISK REDUCTION GRANT PROGRAM

The Michigan Township Participating Plan (Par Plan) established the Risk Reduction Grant Program in 2011 to continue providing its members a concentration of expert services in the public arena. This program further allows the Par Plan to partner with members and foster cooperation in an effective risk management and loss control program.

To the extent that funds are available, the Risk Reduction Grant Program has been established to assist members in reducing specific risk exposures and to assist our members in their efforts of applying effective risk management and loss control techniques for exposures the Par Plan insures.

GRANT QUALIFICATIONS

The applicant must be a member of the Michigan Township Participating Plan. The longevity of membership will be a factor considered in the approval and the amount of grant that is issued. Since risk management and grants usually result in cost savings in future years, members with long continuous membership will be given priority.

First year Par Plan members are not eligible for funding.



GRANT SELECTION PROCESS

The proposed grant request must present an approach which may provide a unique and innovative solution in order to assist our member in their efforts of applying effective risk management and loss control techniques covered by the Par Plan program.

The impact of the grant request must be identifiable and measurable. The grant must have a positive benefit to cost ratio; the project should demonstrate a measurable and realistic outcome to an exposure(s) and must not duplicate similar efforts already undertaken by the member. The budget for the grant request must be realistic and accompanied by supporting data.

The plan of action must have a high probability of assisting or reducing the exposure(s). Statistics or other available data demonstrating the severity or extent of the exposure(s) being addressed will enhance the possibility of receiving the grant.

APPLICATION & SUBMISSION

To obtain an application visit the Michigan Township Par Plan's website at www.theParPlan.com

GRANT WINNING EXAMPLES

- Firefighter Training of Emergency Vehicle Operations
- Police Department In-Car Cameras
- Fire Vehicle Backup Cameras
- Video Surveillance Systems
- Baseball Diamond Fence Guards
- Ambulance Front Bumper Guard
- Park Bulletin Board
- Park/Playground Fall Material or resurfacing
- Police Department Taser Training
- Smoke Detector with Direct Dial in Township Hall

- Well House Video Surveillance
- Fire & Rescue Training Structure
- EMS Power Cot
- Township Hall Emergency Lighting & Exit Signs
- Employee Training or Education
- Park Bleachers
- Cemetery Signage
- Chevron Striping on Emergency
 Vehicles
- Media Storage / Server for Police Patrol Recordings

TMHCC RISK CONTROL SERVICE & CLAIMS



RISK CONTROL SERVICES

Provides customized loss control to a variety of Municipal Governments, including Cities, Counties, Towns, Townships and Villages. We also work closely with the different branches within these entities:

• Police & Fire Departments

- Public Works
- Parks & Recreation Programs
- Human Resources Departments

Our main objective is to assist Municipalities in reducing and/or transferring potential liability exposures. To help our members deal with these, we offer several types of risk control services:

- Risk Control site visits and subsequent report with recommendations for improvement
- · Special event and hold harmless language reviews
- Resource materials
- Technical assistance
- Free Risk Control workshops and conferences

These services are provided by experienced risk control personnel who utilize proven risk control techniques and procedures. These techniques and procedures are continuously updated by conferring with TMHCC appointed counsel and HCC Public Risk Claim Service, Inc.* TMHCC Risk Control Department Representatives are available to provide risk control advice and guidance at *no additional cost* to TMHCC insureds to help them avoid, reduce and/or transfer potential liability exposures.

If you have any questions in regards to any of the risk control services that are provided, please contact your local TMHCC Risk Control Representative or the TMHCC Risk Control Department.

* HCC Public Risk Claim Service, Inc.is a subsidiary of TMHCC and is the claims administrator for the TMHCC program. Information regarding TMHCC and appointed counsel is on their web page at www.tmhcc.com.



Set your home page to **www.tmhcc.com** to visit The TMHCC web site, available to you 24 hours each day, 7 days each week.

Visit the site to learn about upcoming events such as annual conventions, important meetings and helpful workshops; learn about the board members who represent you; find contact information for all of the municipal coverage professionals who are eager to serve your needs.



TMHCC maintains some of the highest financial ratings available within the insurance industry:



Service Providers









TOKIO MARINE



Customer Service 315 S. Kalamazoo Mall Kalamazoo, MI 49007 888.748.7966

Michigan Township Participating Plan

1700 Opdyke Court Auburn Hills, Michigan 48326 248- 371-3100

AccidentFund 200 N. Grand Avenue PO Box 40790 Lansing, MI 48901-7990 866-206-5851

TMHCC Risk Control Administration 1700 Opdyke Court Auburn Hills, Michigan 48326 800.878.9878

HCC Public Risk Claim Service, Inc.

Claims Administration 1700 Opdyke Court Auburn Hills, Michigan 48326 800.878.9878 24 Hour Telephone: 800.225.6561 publicriskclaims@tmhcc.com



CFC Underwriting Limited 85 Gracechurch Street London EC3V 0AA United Kingdom

Our Service Promise

We promise.

- We will promptly respond to your phone calls and emails.
- We will expedite any changes in coverage.
- We have staff on-site with expertise in the following areas:
 - o Property & Casualty
 - o Workers' Compensation
 - o Bonds
- We will happily review your coverage at any time. We recommend review on an annual basis.
- We have the ability to review contracts or certificates you receive from other entities.
- We are willing and able to meet with you and your team to fully review coverage.

Burnham&I

INSURANCE

You Serve Others, We Serve You.

ACRISURE® AGENCY PARTNER

GROUP



REVISED

Quote Date:	March 11, 2024
Quote for:	TYRONE TOWNSHIP - LIVINGSTON
Policy Term:	04/01/2024 - 04/01/2025
Payment Plan:	Annual
Company:	U.S. Specialty Insurance Company (USSIC)
	The Michigan Township Participating Plan (MTPP)
Policy #:	M24MTP80503-05

General Liability - Occurrence Form (USSIC)

Subject to \$5,000,000 per Occurrence / \$0 Aggregate Subject to \$0 Deductible Damage to Premises Rented to you \$500,000 Subject to \$0 Deductible Medical Payments \$10,000 Government Medical Included Cemetery Professional Included Subject to \$0 Deductible Pesticide or Herbicide - No Coverage General Liability Nose Coverage - No Coverage Employee Benefits - Occurrence Form - Subject to \$1,000,000 per Occurrence / \$3,000,000 Aggregate Subject to \$0 Deductible Employee Benefits Prior Acts Coverage - No Coverage Sewer Backup Liability \$100,000 per Occurrence /\$100,000 Aggregate

Cyber Liability Coverage (MTPP) - No Coverage

Liquor Liability (USSIC) - No Coverage

Special Events: Subject to receipt of Special Events Application, Risk Control review and Underwriting approval (Additional Premium may apply)

Fireworks Liability: Subject to receipt of Special Events Application, Risk Control review and Underwriting approval prior to binding coverage (Additional Premium will apply)

Wrongful Acts Liability - Occurrence Form (USSIC)

Subject to \$5,000,000 per Occurrence / \$0 Aggregate Subject to \$0 Deductible Please note: Wrongful Acts Deductible and Loss Adjustment Expenses Apply to EPLI. Prior Acts Coverage - No Coverage Non-Monetary Damage \$50,000 Per Suit / \$100,000 Per Policy Limit Private Property Use Restriction Sublimit \$250,000 per Occurrence / \$0 Aggregate Subject to \$2,500 Deductible Includes Loss and Loss Adjustment Expense

Law Enforcement Liability (USSIC) - No Coverage

Property (USSIC)

Total Building and Contents Limit	\$2,936,304
Coinsurance	N/A
Subject to:	\$1,000 Deductible
Blanket Basis	Included
Agreed Amount	Included
Building Valuation-per schedule on file with company	Replacement Cost
Special Form	Included



Accounts Receivable Animal Mortality **Business Income** Extra Expense Debris Removal **Electrical Utility Service Interruption** Fire Department Service Charge Fire Equipment Recharge Foundations of Machinerv **Golf Course Greens** Inventory or Appraisal Newly Acquired or Constructed Prop - Bldg Newly Acquired or Constructed Prop - Contents **Outdoor Property – Specifically Listed Items** Outdoor Property - All Other Items Personal Effects – Property of Others

Property in Transit Property off Premises Underground Pipes, Flues or Drains Valuable Papers & Records – Cost to Research Law and Ordinance Coverage Earthquake Coverage Flood Coverage \$250,000 \$10,000 any one occurrence \$500,000 any one occurrence \$500,000 any one occurrence 25% of direct physical loss or damage to covered property \$25,000 any one occurrence \$5,000 for your liability \$5,000 for each separate 12 month period \$250,000 any one occurrence \$100,000 any one occurrence \$10,000 any one claim \$1,000,000 for 180 days at each building \$250,000 at each building \$10,000 any one occurrence; Limited Perils \$5,000 any one occurrence; Limited Perils \$1,000 for personal property of any one employee or volunteer \$50,000 any one occurrence \$15,000 any one occurrence for property of others \$50,000 any one occurrence \$100,000 any one occurrence \$1,000,000 \$250,000 any one occurrence Actual Loss Sustained \$1,000,000 subject to \$50,000 Deductible \$100,000 subject to \$10,000 Deductible

(Any location in the following flood zones is excluded: Flood Zones A, AO, AH, A1 - A30, A99, V, V1-V30. Any area later designated by FEMA as a "special flood coverage area" at the time of a Covered Cause of Loss is also subject to this limitation. Any area removed by FEMA from a "special flood coverage area" designed at the time of a Covered Cause of Loss is not subject to this limitation.)

Equipment & Mechanical Breakdown

Included

Subject to: \$1,000 Deductible Law and Ordinance Limit \$250,000

Automobile (USSIC)

Based on 0 vehicles - Schedule on file with Company Subject to \$5,000,000 Liability Limit **Subject to \$0 Deductible** Hired and Non Owned Automobile Liability Personal Injury Protection - No Coverage Property Protection Insurance - Included Mini-Tort Liability - Included Hired Auto Physical Damage - No Coverage Employee Vehicle Endorsement Nose Coverage - No Coverage Auto Catastrophic Coverage - No Coverage Garage Keepers Legal - No Coverage Impound Vehicles Coverage - No Coverage

Inland Marine (USSIC)

Subject to \$1,000 Deductible

Scheduled Equipment – Per Schedule on file with company



MTPP Cyber Sub Total Premium: MCCA: Total Annual Package Premium:	\$.00 \$.00 \$23,958.00
USSIC Sub Total Premium:	\$23,958.00
P. Employee Disnonesty – Per Employee Includes Faithful Performance	No Coverage
O. Employee Dishonesty – Per Loss	\$100,000 No Coverage
Coverage Form O & P Subject to: \$0 Deductible	¢100.000
F. Computer Fraud	\$100,000
C. Theft, Disappearance and Destruction In/Out	\$100,000
B. Forgery or Alteration	\$250,000
Coverage Form B, C & F Subject to: \$0 Deductible	
Crime (USSIC)	
Media Coverage	\$100,000
Extra Expense	\$100,000
Loss of Business Income	\$100,000
System Breakdown Coverage	Included
Subject to \$1,000 Deductible	
Total Limit	\$100,000
EDP (USSIC)	
Total Limit:	\$51,000
Aircraft Non-Operating Shell	No Coverage
less than 90 days	·
Contractors Equipment Rented From Others	\$0
Ancillary Equipment (Fire Department)	No Coverage
Valuation: Replacement Cost	
Misc. Property & Equipment	\$51,000
Valuation:	

**Note: Terrorism option and optional quoted premiums are not included in installment plan premiums.

**Note: Mold, Fungi & Bacterial Exclusion Included

**Note: Perfluorinated Compounds (PFC)/Per-and Polyfluoroalkyl Substances (PFAS) Total Exclusion Included

- **Note: Accounts cannot be brokered
- **Note: All SIR's Include Loss, Loss Adjustment Expense and Supplementary Payments
- **Note: Failure of any Dam, Levee or Dike Exclusion Included

You declined terrorism coverage for the expiring policy period. We have, therefore, not included a quotation for terrorism coverage for the renewal period and your signed declination of terrorism insurance will remain in effect as long as you are insured by this company and until you rescind the declination in writing. If you would like the above quotation to include insurance for terrorism, or if you would like to know more about terrorism coverage options available to you, please advise your agent.



Optional Quotes and Premium:

Special Conditions:

NOTE: The following forms need to be signed and returned prior to binding coverage: ~ Application Declaration

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As indicated herein, this quote remains valid until **04/01/2024** and cannot be amended or altered without express written consent of TMHCC. Also, please be aware that any required subjectivities must be received, reviewed and approved, prior to binding this risk



Property Schedule Information

Loc.# Bldg #	FacLoc # Within 50ft	Address City, State, Zip, County	Year Built SQ Feet	Building Contents	Mine Subsidence	Valuation Prop Boiler	POK BF Code	BC Sprinkler	Spec Ded
 4	N/A	WHITE LAKE RD (VACANT	2007	\$0	\$0	R	11	1	N/A
1	No	LAND) FENTON, MI 48430	0	\$0		R	010	No	
 5	N/A	10154 WHITE LAKE RD	1970	\$0	\$0	R	11	1	N/A
1	No	(COLWELL CEMETERY) FENTON, MI 48430	0	\$0		R	010	No	
 6	N/A	10226 LINDEN ROAD (CLOUGH	1970	\$0	\$0	R	11	1	N/A
1	No	CEMETERY) FENTON, MI 48430	0	\$0		R	010	No	
 7	N/A	7194 HARTLAND RD	1970	\$0	\$0	R	11	1	N/A
1	No	(GARDNER CEMETERY) FENTON, MI 48430	0	\$0		R	010	No	
 8	N/A	8420 RUNYAN LAKE ROAD	2000	\$2.545.000	\$0	R	10	1	N/A
1	No	(NEW TOWNSHIP HALL) FENTON, MI 48430	10,180	\$106,000		R	100	No	
 8	N/A	8420 RUNYAN LAKE ROAD-	2000	\$78,024	\$0	R	16	1	N/A
2	No	STORAGE GARAGE FENTON, MI 48430	800	\$0		R	401	No	
 9	N/A	8420 Runyan Road	1970	\$203,487	\$0	R	10	1	N/A
1	No	(HISTORICAL TOWNSHIP) FENTON, MI 48430	894	\$3,793		R	100	No	



Inland Marine Coverage

#	Serial Nu Dept.	ımber Year:	Make: Type:	Model: Actual / Replacement:	Limit:	Spec Ded:
0					\$0	N/A
Total	Items:	0		Schedule Sub Tot	al:	\$0
		Miscellaneous Pro	operty and Equipment:	\$51,000		
		Ancillary Equipm	ent (Fire Department):	\$0		
		Contractor's Equipment Ren	ted From Others Limit:	\$0		
			Sub Total:	\$51,000		
				Tot	al:	\$51,000



Canine Schedule

Name	Tattoo:	Description:	Year Born:	Value:
			0	\$0

Total Value: \$0

Electronic Data Processing Coverage Information

EDP Coverage: Yes

EDP Deductible:

Deductible: Yes Amount: \$1,000

Loss of Business Income Limit: \$100,000

Extra Expense: \$100,000

Media Coverage: \$100,000

System Breakdown: Yes

OR SIR:

SIR: No Amount: \$0 Aggregate Limit: \$0

Electronic Data Processing Coverage Information

###	Serial Number:	Description:	Coverage:
1.		EDP BLANKET	\$100,000

Total Items:	1	Total Coverage:	\$100,000
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Premium Summary

Township of Tyrone, Livingston County

General Liability	Included
Employee Benefits Liability	Included
Wrongful Acts Liability	Included
Property	Included
Automobile	Included
Inland Marine	Included
EDP	Included
Crime	Included

Total MTPP Premium:

\$23,958.00

****NOTICE**

This proposal is an overview of coverage and is merely descriptive and should be used for reference purposes only. Please refer to the coverage document for specific terms, conditions, and exclusions. Any questions should be referred to your independent insurance agent.

Additional Forms Required

Township of Tyrone, Livingston County

Additional forms to be signed and returned

- Bind Request
- Application Declaration Form

Please Note-if these forms are not returned, it will delay the issuance of your policy.

Mail to:

Burnham & Flower Attn: Kate Thomas 315 S. Kalamazoo Mall Kalamazoo, MI 49007

NEW BUSINESS #9

Historic town house electrician bids.
ESTIMATE

SB Electrical Contractors, LLC P.O. Box 387 Chelsea, MI 48118

SBelectricalcontractors22@gmail.co m +1 (734) 417-6705



Tyrone Township Historic Town Hall

Bill to

Tyrone Township Historic Town Hall 8420 Runyan Lake Rd. Fenton, MI 48430

Estimate details

Estimate no.: 1088 Estimate date: 03/14/2024

Date	Product or service	SKU	Qty	Rate	Amount				
	Labor		1	\$7,000.00	\$7,000.00				
	Wiring of Tyrone Township Historic Town Hall								
	Service								
	-Install (1) Consumers approved 200amp underground meter socket complete with 2" PVC lateral conduit sleeve from meter socket to earth as required by Consumers.								
	-Install (1) Square D QO142M200P 200amp 42	space load center complete with su	urface cover.						
	-Install (2) 8' Galvanized ground rods complete with #6thhn conductor to the above mentioned 200amp load center for								
	grounding as per code.								
	Main Area								
	-Install (6) 20amp 120volt circuits to control (12) building area.) 20amp rated tamper resistant dup	lex receptacles	s at 6'/12' spac	ing in main				
	-Install (1) 20amp 120volt circuit to control (2) tamper resistant weather resistant 20amp GFCI protected duplex receptacles								
	complete with in use covers located on west be	uilding exterior.							
	 -Install (1) 20amp 120volt circuit to control (1) ta complete with in use cover on northwest buildir 	amper resistant weather resistant 20 ng exterior.	amp GFCI pro	tected duplex r	eceptacle				
	-Install (1) 20amp 120volt circuit to control (1) ta	amper resistant weather resistant 20	amp GFCI pro	tected duplex r	eceptacle				
	complete with in use cover on southwest buildi	ng exterior.							
	-Install (2) 3-way switches to control (6) archited	cturally specified Base Corp. "Scho	ool House Style	light fixtures.					
	-Install (1) 120volt dawn to dusk photo cell to co	ontrol (3) architecturally specified B	ase Corp. "We	t Location Rate	d Barn Style"				
	light fixtures. (1) over West entry door (1) over	East entry door and (1) at Northeas	t corner on ext	erior of building	. These lights				
	have battery back up, so in the event of a pow	er outage they will serve as egress	lighting which is	s required by c	ode.				
	-Install (1) AC/DC carbon monoxide detector in	main area of building as required b	by code.						
	-Install (2) ECRG-RD 20Watt exit/emergency of	/er East and West exit doors as req	luirea by coae	:					
	-Install (1) single pole switch to control (1) keyle	ess light fixture complete with A-19 S	style lamp in att	ic space as rec	quired by				
	-Install (1) 240volt 30amp Circuit complete with	disconnect to control heating and c	ooling system	We will contact	HVAC				
	contractor for sizing type and location	disconnect to control nearing and c	oomig system.		ΠINAO				
	Crawl Space								

-Install (1) single pole switch to control (2) keyless fixtures complete with LED A-19 style lamps. -Install (1) 20amp 120volt tamper resistant GFCI protected duplex receptacle to control (1) existing sump pump. -Install (1) 20amp 120volt tamper resistant GFCI protected duplex receptacle for general purpose use. -Install wiring from the above mentioned dawn to dusk photo cell to control future walkway lighting. These provisions will be left in a junction box located at crawl space access and the labor portion of the future walkway lighting will be figured into the "Allowance" portion of this estimate.

2.	Material		1	\$7,204.20	\$7,204.20	
	-Square D Q0142M200P Load Center with surface cover					
	-Square D QO2175SB Surge Protector					
	-Square D QO230 Circuit Breaker					
	-Square D QO 120 Circuit Breaker					
	-Square D QO 115 Circuit Breaker					
	-Consumers underground meter socket					
	-2" PVC Male Adapter					
	² Colvenized Cround Bode					
	-Acom Nuts					
	-1Gang Nall on Box					
	-1Gang Cut in Box					
	-1Gang Round Nail on Box					
	-1Gang Round Nail on Box					
	-20amp TR Receptacle					
	-20amp TRWR GFCI Receptacle					
	-Single Pole Spec Grade Switch					
	-3-way Spec Grade Switch					
	-In-Use Cover					
	-1Gang Cover Plate					
	-120volt Stem Mount Photo Control					
	-14/2 Romex					
	-14/3 Romex					
	-12/2 Romex					
	-10/2 Romex					
	-#4/0 USE Conductor					
	-#6THHN Conductor					
	-Kevless Light Fixture					
	-A-19 ED amp					
	-30amp A/C Fusible Pull Out Disconnect					
	-30amp FBN Filse					
	Base Corp. Light Fixtures					
	(6) School House Style					
	(3) Born Style with battery back up for amorgonou agross					
	(3) Barn Style with battery back up for emergency egress					
3.	Allowance		1	\$2,000.00	\$2,000.00	
	For future installation of undetermined walkway lighting					
		Subtotal			\$16,204.20	
		Salas tax			\$550 05	
Note to customer		σαισο ιαλ			\$00Z.25	
We appreciate your business. Please find your Estimate attached. Feel free to contact us to discuss the details of the project if you have any questions. Your Estimate pricing is valid for 30 days, please let		Total \$16			16,756.45	

Have a great day! SB Electrical Contractors, LLC

installation schedule.

us know if you accept this order and would like to be added to the



March 21, 2024 Tyrone Township 8420 Runyan lk rd Fenton MI, 48430

Historic town Hall Renovation:

Estimate to include

- 1. Permit & inspections
- 2. 7 General Use 20 amp outlet circuits.
- 3. 1 Lighting 20 amp circuit.
- 4. 1 30 amp 240v circuit for mechanical unit with 3R disconnect on exterior of structure.
- 5. 1 20 amp 120v dedicated circuit for sump pump.
- 6. 1 20 amp 120v dedicated circuit for sump pump heat trace, **Note that heat trace is not included in estimate**.
- 7. 8 20 amp spare circuit breakers in panel per RP-A panel schedule.
- 8. 4 exterior Weather Resistant GFCI protected outlets.
- 9. 19 General Use duplex receptacles Tamper resistant style.
- 10. 6 Interior light fixtures Type A BASELITE CORP. SCFS/SH016/41/27K/LDM120
- 11. 3 Exterior light fixtures Type B BASELITE CORP. YL16/41/E22/B12/LED25W/27K/LDM120/PR4
- 12. 2 Combination EXIT/EMERGENCY LIGHTS red lettering white plate.
- 13. 2 Three way switches for exterior lights.
- 14. 2 three way switches dimming for interior lights, with 2 ceiling mounted occupancy sensors.
- 15. 2 service lights in crawl space on a single pole switch at entrance.
- 16. 4 junction boxes in crawl space labeled outdoor lighting future use, with switch ganged with service lights.
- 17. Two year warranty of work and installation.

Total \$7,900.00



Service options:

100 amp main service

- 1. New 100 amp 24 space Panel 120/240v single phase surface mounted with main breaker.
- 2. Outdoor 100 amp underground service riser with Consumers approved meter can.
- 3. Outdoor 3R 100 amp main disconnect, per new NEC & MRC requirements for permits pulled after March 12, 2024.

Total for 100 amp service \$1,800.00

200 amp main outdoor rated service

- 1. New 200 amp 30 space 3R outdoor rated Panel 120/240v single phase surface mounted with main breaker. After site visit it was determined that having the main service panel mounted outside would not only help to preserve authenticity of the structure's interior, but also make it easy and non invasive to have this electrical service feed future installations like a gazebo.
- 2. Outdoor 200 amp underground service riser with Consumers approved meter can.
- 3. Main disconnect will be outdoors in the main panel next to the electrical meter per new NEC & MRC requirements for permits pulled after March 12, 2024.

Total for 200 amp service \$2,200.00

NOT RESPONSIBLE FOR ANY STRUCTURAL ELEMENTS/COMPONENTS REMOVAL OR REPAIR. ALL PRICING IS CONTINGENT ON CURRENT MARKET PRICES OF MATERIALS AT TIME OF QUOTE FOR 30 DAYS. QUOTE IS SUBJECT TO APPROVAL OF AUTHORITIES HAVING JURISDICTION.

SIGNATURE

DATE

RCJContractorsLLC@gmail.com 810-215-1290