



## MEMORANDUM

From the Office of the  
Township Manager

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TO: BOARD OF SUPERVISORS  
FROM: CHRISTOPHER BASHORE  
RE: MAINTENANCE AND UPGRADES TO THE SHOOTING RANGE FOR THE WEST  
GOSHEN TOWNSHIP POLICE DEPARTMENT  
DATE: JUNE 6, 2023

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Before the Board of Supervisors this evening is continued discussion regarding maintenance and upgrades to the shooting range for the West Goshen Township Police Department. This matter was previously discussed at the May 2, 2023 meeting of the Board. By way of background information, it has been brought to our attention that the shooting range is need of repair due a variety of noted safety issues. Dave Woodward, Public Works Director, and Mark Bertolami, Streets Superintendent, prepared information outlining the potential costs for the work that would be needed and we reviewed this information with Chief Carroll.

As follow-up to the discussion at the May 2, 2023 meeting, Dave Woodward, Public Works Director, met with Michael Traczuk, P.E., from Carroll Engineering Corporation to review the proposed design from a structural perspective. Please see the attached sketch and notes that have been provided, which is largely in line with the work previously proposed. Based on this information, Mr. Woodward has revised the cost estimate for the project, which is \$31,211.62 (an increase of \$1,500 from the previous estimate). The increase in the estimated cost is due to the inclusion of a line-item to cover the tipping fees for the disposal of the old T 1-11 and other materials.

In regards to the estimated cost, the Township's 2023 budget allocated \$23,000 in line-item 01410-30373 which could be utilized; however, this includes costs towards ammunition. As such, this cost would need to be authorized by the Board.

Please let me know if you have questions. Thank you.

## Shooting Range Repairs

Lumber Material	Length	Cost	Quantity/ Bay	Number of Bays	Total Quantity	Total Cost
2"X6" Rear Face	12'	\$ 11.98	8	27	216	\$ 2,587.68
2"X4" Rear Face	12'	\$ 8.78	1	27	27	\$ 237.06
2"X6"Vert. Stiffner	12'	\$ 11.98	2	27	54	\$ 646.92
1"X12" PVC Trim Cap	12'	\$ 64.20	1	27	27	\$ 1,733.40
2"X6" Lumber for possible repair to remaining structure	12'	\$ 11.98	Unknown until we open the structure up and get into the repairs			?
Misc Hardware						\$ 500.00
<b>Total</b>						<b>\$ 5,705.06</b>

Stone Infill Material	Cost Per Ton	Tons Per Row	Number of Rows	Total Tonnage	Total Cost
2B 3/4" Stone	\$ 30.00	26	3	78	\$ 2,340.00

Fasteners	Length	Cost	Quantity/ Bay	Number of Bays	Total Quantity	Number of Boxes	Total Cost
TimberLok Screws Box of 50 Screws	4"	\$ 36.98	36	27	972	20	\$ 739.60
3/4" All Thread*	8' length to be cut to 15"	\$ 94.21			54	54	\$ 5,087.34
Washers	3/4"	\$ 20.19			675	27	\$ 545.13
Lock Washers	3/4"	\$ 23.34			675	27	\$ 630.18
Nuts	3/4"	\$ 15.52			670	67	\$ 1,039.84
Wood Screws Box of 70	3"	\$ 11.98				3	\$ 35.94
<b>Fastener Total</b>							<b>\$ 8,078.03</b>

\* estimated seven week delivery time

**Restoration**

Topsoil	25 Yards of screened topsoil	\$30.50 Per yard	\$762.50
Grass Seed	2 Bags of Landscapers Mix	\$126.15 per bag	\$252.30
Straw	10 bales of compressed straw for cover	\$16.54 per bale	\$165.40
Landfill Costs			\$1,500.00
<b>Restoration Total</b>			<b>\$2,680.20</b>

**Equipment Rental**      **Per Week**      **Three Weeks**

Manlift	\$ 1,425.00	\$ 4,275.00
Full Size Excavator	\$ 2,650.33	\$ 7,951.00
1 Yard Concrete Bucket	\$ 325.00	\$ 975.00
Track Skid Steer	\$ 1,631.67	\$ 4,895.00
Rockhound Attachment	\$ 263.00	\$ 789.00
<b>Rental Total</b>	<b>\$ 12,408.33</b>	

**Estimated Project Total Cost \$ 31,211.62**

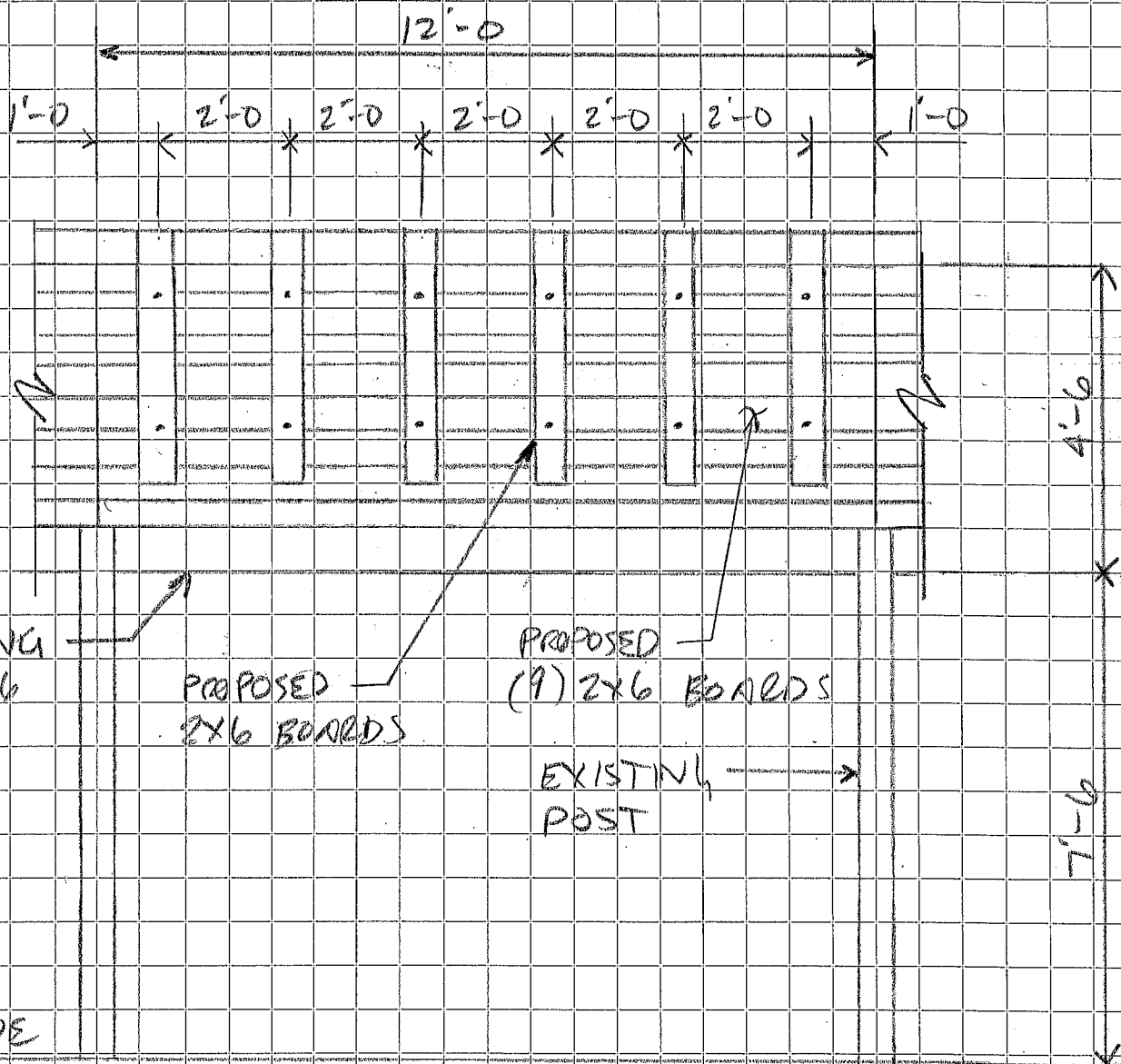
All costs shown above are not locked in and may change prior to any work starting.



# Carroll Engineering

949 Easton Road, Warrington, PA 18976  
Phone: 215-343-5700 Fax: 215-343-0875  
www.carrollengineering.com  
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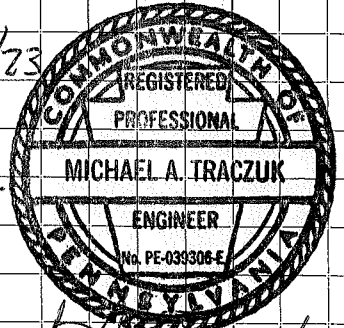
PROJECT WGT SHOOTING RANGE  
JOB NO. 23-0380 SHEET NO. 1 OF 3  
CALCULATED BY MAG DATE 5/25/23  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE \_\_\_\_\_



## OVERHEAD BAFFLE ELEVATION

3/8" = 1'-0"

5/30/23



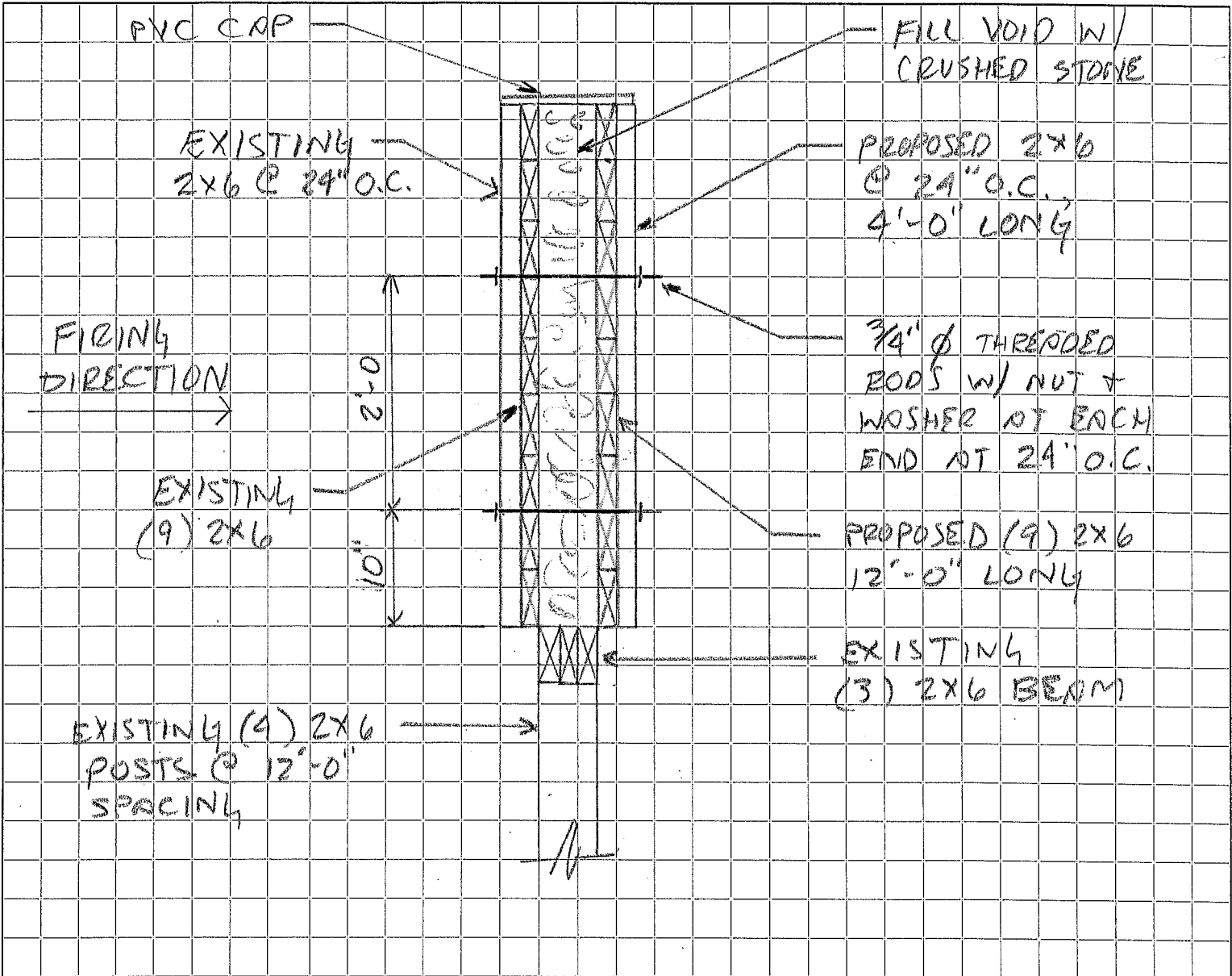
*Michael A. Traczuk*



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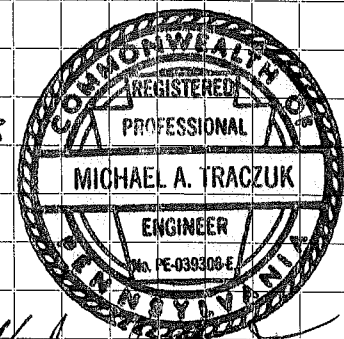
PROJECT WGT SHOOTING RANGE  
JOB NO. 23-0380 SHEET NO. 2 OF 3  
CALCULATED BY MA DATE 5/24/23  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE \_\_\_\_\_



## OVERHEAD BOFFLE DETAIL

3/4" = 1'-0"

5/30/23

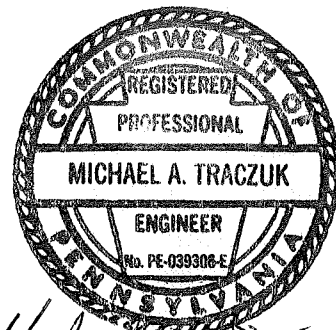


*Michael A. Traczuk*

GENERAL NOTES

1. ALL DESIGN COMPLIES WITH THE 2018 INTERNATIONAL BUILDING CODE.
2. TIMBER DESIGN CONFORMS WITH 2018 AMERICAN WOOD COUNCIL NATIONAL DESIGN STANDARDS.
3. LUMBER SHALL BE SOUTHERN YELLOW PINE NO. 2 GRADE OR BETTER AND SHALL BE PRESSURE TREATED.
4. EXISTING THREADED RODS SHALL BE RE-USED WHERE POSSIBLE. ANY NEW THREADED RODS SHALL BE 3/4" DIAMETER AND SHALL CONFORM TO ASTM A 36. ALL NEW THREADED RODS, NUTS AND WASHERS SHALL BE GALVANIZED. ALL OTHER WOOD FASTENERS SHALL MATCH EXISTING.
5. CRUSHED STONE FILL IN BAFFLES SHALL CONFORM TO AASHTO NO. 67.
6. ALL DIMENSIONS SHOWN ON SKETCHES ARE BASED ON EXISTING CONDITIONS AND SHALL BE VERIFIED.
7. ALL WORK SHALL CONFORM TO THE WEST GOSHEN TOWNSHIP BUILDING CODE.

5/30/23



*Michael A. Traczuk*

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