## **CUMMER LODGE ROOFTOP DUCTWORK INSULATION** REPLACEMENT 23504.M04



## CROSSEY ENGINEERING LTD. MECHANICAL

DRAWING L	IST	GENERAL NOTES	<u>GENERAL NOTES</u>	
1.0       MECHANICAL DRAWING LIST, LEGEND AND O         4.1       ROOF PLAN – WEST-EXISTING DUCTWORK         4.2       ROOF PLAN – EAST-EXISTING DUCTWORK         5.0       MECHANICAL STANDARD DETAILS         6.0       PHOTOGRAPHS OF EXISTING DUCTWORK ON	GENERAL NOTES LAYOUT LAYOUT	ALL LAYOUT DRAWINGS IN THIS PACKAGE HAVE BEEN PREPARED BASED ON ARCHIVE DRAWINGS. 6. ACTUAL LOCATION OF EQUIPMENT, DUCTWORK, PIPING AND OTHERS MAY NOT MATCH THE LAYOUT IN THE DRAWINGS IN THIS PACKAGE. CONTRACTORS SHALL VISIT THE SITE TO REVIEW THE ACTUAL CONDITION BEFORE PRICING THE JOB. NO EXTRA SHALL BE PAID FOR DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL SITE CONDITIONS. 7. 1. THE CONTRACTOR SHALL BE RESPONSIBLE	DUCTWORK SIZES AND ACTUAL DUCTWORK LOCATION. THIS INFORMATION SHALL BE PROVIDED TO CEL SO THAT THE LAYOUT DRAWINGS CAN BE UPDATED FOR AS BUILT CONDITIONS. CEL WILL UPDATE THE DRAWINGS IN ACAD.	<ul> <li>REMOVE THE INSULATION OVER THE DUCTWOF</li> <li>CLEAN THE DUCT SURFACE. SEAL ALL DUCT SMACNA PROCEDURE BEFORE PERFORMING PF</li> <li>PERFORM PRESSURE TEST TO CONFIRM THAT LEAKAGES FROM ANY PART OF THE DUCT. R. SPECIFICATIONS FOR TESTING DETAILS. IF AN OBSERVED, REPORT TO THE BSM INCLUDING REPAIR DUCTWORK WHERE LEAKS ARE OBSER INVOLVE ANY OR A COMBINATION OF THE FO</li> </ul>
DUCTWORK QU CONTRACTOR SHALL PROVIDE PRICING FOR ALL DUCTW REQUIREMENTS OF CONSTRUCTION NOTES 1 TO 8. THE QUANTITIES IN THE TABLE BELOW ARE PROVIDED T DESIGN TEAM DOES NOT TAKE RESPONSIBILITY FOR THE CONTRACTORS SHALL MASURE THE DUCTWORK QUANT CONTRACTOR SHALL NOT SCALE THE DRAWINGS TO OBT	IORK LISTED IN THIS TABLE TO MEET THE TO ASSIST THE CONTRACTOR WITH PRICING. THE E QUANTITY MENTIONED BELOW. THE ITY ON SITE PRIOR TO SUBMITING BID.	FOR ANY DAMAGE TO THE EXISTING EQUIPMENT, DUCTWORK AND PIPING AND SHALL REPLACE SUCH EQUIPMENT WITH NEW EQUIPMENT AT NO EXTRA COST TO THE OWNER. 2. CONTRACTOR SHALL CALL THE CONSULTANT FOR JOINT INSPECTION OF THE DUCTWORK AFTER REMOVING THE EXISTING INSULATION AND BEFORE INSTALLING NEW INSULATION. 3. ALL EXISTING DUCT SUPPORTS ARE IN GOOD CONDITION AND NO DAMAGE OR	STATIONS, DUCT STATIC PRESSURE SENSORS, TEMPERATURE SENSORS ETC. ALL SUCH ACCESSORIES SHALL BE PROVIDED IN THE MARKUP DRAWINGS. . CONTRACTOR SHALL PERFORM INSULATION REPLACEMENT IN PHASES AND SHALL PROVIDE FOR PROTECTION OF DUCTWORK FROM WEATHER CONDITIONS. PLEASE NOTE THAT THE INSULATION THAT GETS DAMAGED DUE TO WEATHER WILL NOT BE ACCEPTED EVEN IF THE INSULATION HAS BEEN INSTALLED ON THE DUCTWORK.	CONDITIONS: 1. SEAL ALL JOINTS THAT ARE LEAKING METHOD TO REDUCE DOWNTIME. 2. REMOVE AND REPLACE EXISTING DUC JOINT. 3. REPLACE ENTIRE DUCT FITTING OR SI DUCTWORK DAMAGESD DUE TO CORRO REDO THE PRESSURE TEST AND DEMONSTRAT SNO LEAKAGE. PROVIDE NEW INSULATION OVER THE DUCTWO
$\begin{tabular}{ c c c c c c } \hline & & & & & & & & \\ \hline DUCT ID# & & & & & & & \\ \hline DUCT ID# & & & & & & & \\ \hline DUCT ID# & & & & & & & \\ \hline DUCT ID# & & & & & & & \\ \hline 1 & - & & & & & & & \\ \hline 2 & - & & & & & & & \\ \hline 3 & - & & & & & & & \\ \hline & & & & & & & & & \\ \hline \hline & & & &$	LENGTH         AREA (SM)           (M)         27.5           38.1         90.4           90.4         611.95           12.1         12.6           15.0         3.4           7.0         3.2           8.5         9.0           4.5         9.5           35.0         3.0           Total         409.98	<ul> <li>4. ALL DUCT WORK SHALL BE PRESSURE TESTED BEFORE PROVIDING NEW INSULATION. REFER TO MECHANICAL SPECIFICATIONS FOR PROCEDURE OF PRESSURE TEST. PRESSURE TEST REPORT FOR EACH PORTION OF DUCTWORK SHALL BE SUBMITTED FOR REVIEW BEFORE PROCEEDING WITH THE INSTALLATION OF NEW INSULATION.</li> <li>5. CONTRACTOR SHALL REPAIR DUCTWORK 11 JOINTS AND ACCESSORIES THAT ARE LEAKING. THE REPAIR SHALL RESTORE THE DUCTWORK TO THE STANDARDS OF A NEW DUCTWORK INSTALLATION 12</li> </ul>	SCHEDULE BEFORE START OF THE WORK AND RECEIVE APPROVAL FROM THE CLIENT BEFORE START OF WORK. 0. THERE ARE EXISTING PIPING WITH INSULATION LAID OUT ON ROOF ALONG SIDE WITH DUCTWORK. NO MODIFICATION TO THE PIPING IS TO BE DONE IN THIS PROJECT. CONTRACTOR SHALL TAKE MEASURE NOT TO STEP ON OR DAMAGE ANY PORTION OF PIPING INSULATION OR ROY. ANY DAMAGE TO THE INSULATION OR ANY ACCESSORIES TO THE INSULATION OR ANY ACCESSORIES TO THE PIPING SHALL BE REPAIDED BY THE CONTRACTOR AT NO EXTRA COST TO THIS PROJECT. 1. MECHANICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR WHO WILL BE REPLACING THE ROOFING SYSTEM.	SPECIFICATIONS AND STANDARD DETAIL 1/M5 INSTALLATION DETAILS. INSTALL CLADDING OVER THE INSULATION. SE AT THE JOINT TO EXISTING DOGHOUSE/CURB. RETAIN EXISTING DUCT/PIPE SUPPORT. CONTE REPLACE DUCT SUPPORTS THAT ARE DAMAGE WORK. PAINT ALL THE SUPPORTS. REFER TO SPECIFICATIONS FOR PAINT DETAILS. RETAIN ALL PIPING C/W INSULATION WITHOUT THOSE. ANY DAMAGE DONE DURING THE WOR CONTRACT SHALL BE REPAIRED/REPLACED B' AT NO ADDITIONAL COST TO THIS PROJECT. REPAIR ALL DUCTWORK PENETRATIONS THROL PROVIDE NEW ROOF FLASHING AND SEALANT WEATHER TIGHT ENCLOSURE. PROVIDE CONSTRUCTION AIR FILTERS COMPLE FILTRATION FOR ALL ROOFTOP UNITS (RTUT T
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6.4       21.4       9.0       11.1       2.7       4.4       7.0       25.1       16.0       9.0       14.4       Total       331.94	REQUIREMENTS.	FROM DAMAGE DURING CONSTRUCTION. MAINTAIN RTUS IN OPERATION DURING THE COURSE OF THIS PROJECT. 3. ANY ODOROUS MATERIAL TO BE STORED AWAY FROM AIR INTAKES.	CARBON FILTERS SHALL BE INSTALLED EITHER RACK INSIDE THE RTU OR SECURED TO THE RTU ON THE FACE OF THE INTAKE AIR HOOD

TAG LEGEND				
A X	EXISTING SITE PHOTOGRAPH "A" DENOTES PHOTO NUMBER "X" DENOTES SHEET NUMBER			
LINEWORK DESIGNATION				
— GHWS — GHWR — GCHS — GCHR	EXIST. DUCTWORK INSULATION TO BE REPLACED     GLYCOL HEATING WATER SUPPLY PIPE TO REMAIN     GLYCOL HEATING WATER RETURN PIPE TO REMAIN     GLYCOL CHILLED WATER RETURN PIPE TO REMAIN     GLYCOL CHILLED WATER RETURN PIPE TO REMAIN			

	DUCT ID# DUCT SIZE			LENGTH AREA (SM)		
	000110#	DΦ(MM)	W (MM)	H (MM)	(M)	
U 1	1	-	940	720	27.5	
	2	-	940	720	38.1	
	3	-	940 1140	600	90.4	
		-	1140	000	50.4	
					Total	611.95
			540		10.1	
12	1	-	540	660	12.1	
	2	980	- 540	- 400	12.6	
	3	-			15.0	
	4	-	560	500	3.4	
	5	1100	-	-	7.0	
	6	1250	-	-	12.0	
	7	-	680	720	3.2	
	8	-	680	720	8.5	
	9	-	760	480	9.0	
	10	-	980	720	4.5	
	11	-	540	420	9.5	
	12	-	740	420	35.0	
	13	-	1500	920	3.0	
					Total	409.98
					IULAI	409.98
J 3	1	-	540	780	6.4	
	2	600	-	-	21.4	_
	3	1040	-	-	9.0	
	4	860	-	-	11.1	
	5	-	350	450	2.7	
	6	-	460	580	2.7	
	7	750	-	-	4.4	
	8	-	580	880	7.0	
	9	-	550		25.1	
	10	-	600	650	16.0	
H	11	-	480	780	9.0	_
	12	550	-	-	14.4	
					Total	331.94
U 4	1	-	720	900	27.0	
	2	-	720	800	27.0	
	3	-	1200	700	8.0	
	4	-	720	900		
	5	-	720	900	3.3	
	6	-	1320	900	36.0	
	7	-	980	700	6.2	
	8	-	600	720	3.3	
	9	-	700	720	6.0	
					Total	491.92
			1200	000	10.0	
J 5	1	-	1200	900	42.0	
	2	-	560	400	2.0	
	3	-	600	720	24.5	
	4	-	420	500	5.0	_
	5	-	720	600	10.6	
	6	-	600	720	10.6	
	7	-	1000	720	7.2	
	8	-	600	600	12.5	
	9	-	800	1000	5.5	
	10	-	600	600	5.5	
	11	-	600	600	3.5	
						462.06
					Total	463.96
	1	-	720	720	33.0	
	2	-	900	500	12.0	
	3	-	450	700	2.5	
	4	-	600	400	2.5	
	5	-	600	400	2.5	
	6	-	600	720	16.0	
	7	-	500	700	8.2	
	,	_	600	400	6.2	

400

720 600

600 1200

720

900 700

720

700 900

600

600 800

900 900

840 800

6.2 13.7

1.2

8.0 6.5

14.6

Total

8.2 12.2

21.0

Total

7.0 6.2

Total

389.82

152.92

53.79

M-1.0

M-4.1

M-4.2

M-5.0

M-6.0

10

11 12

13

1

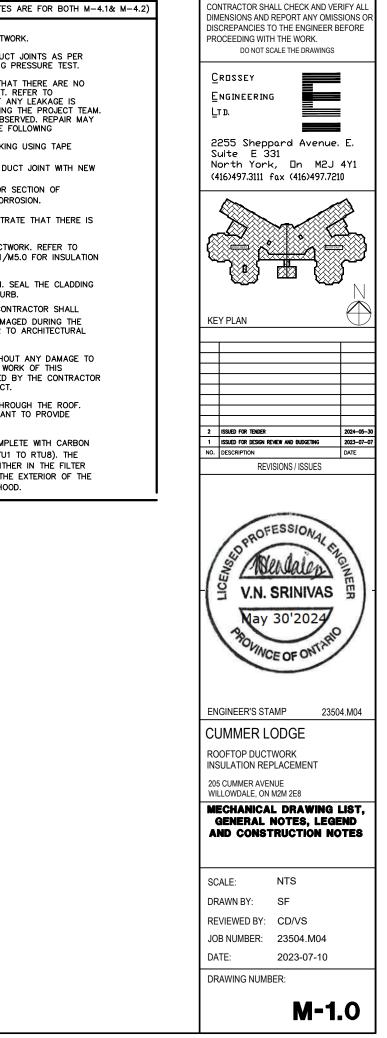
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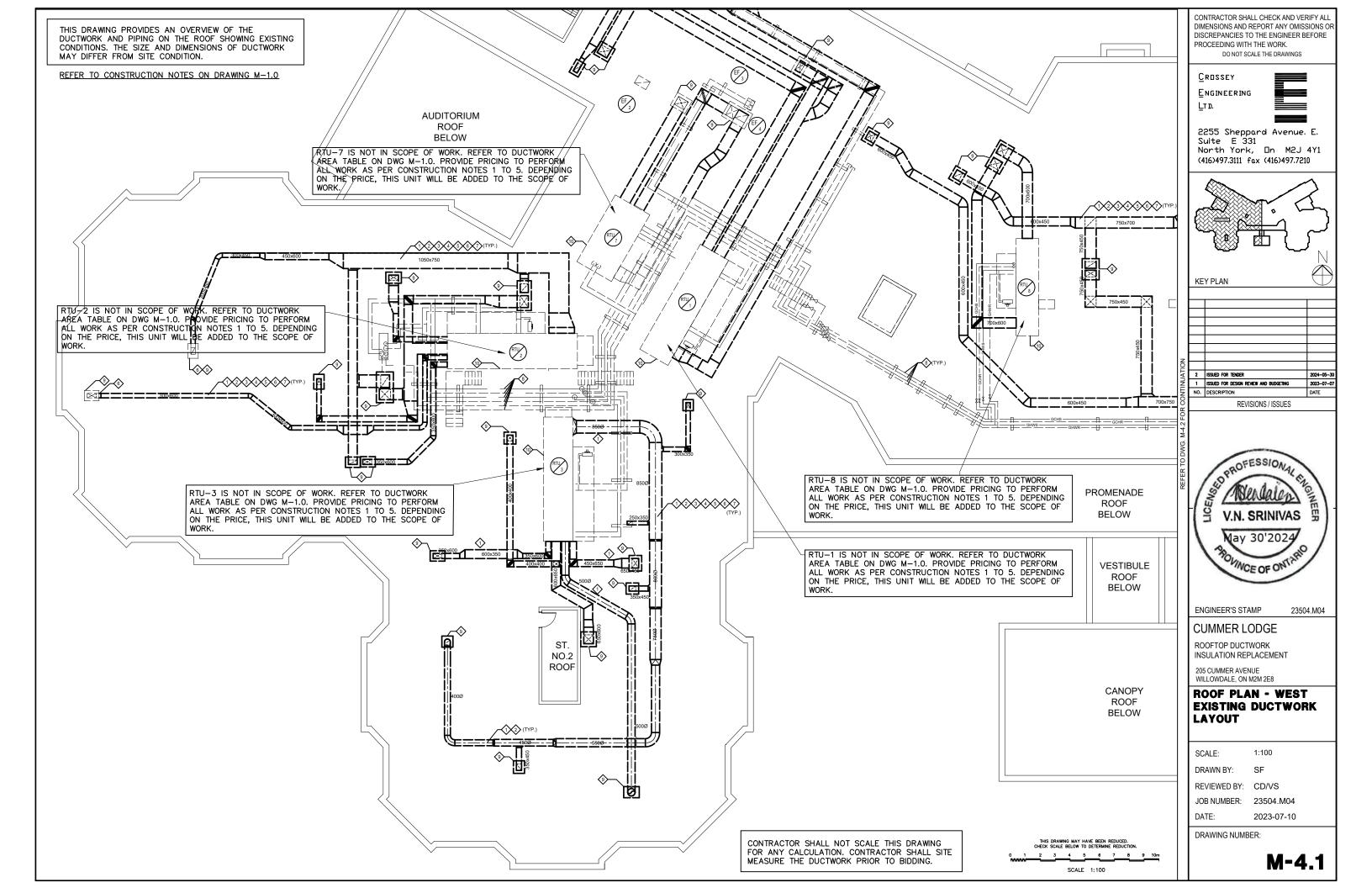
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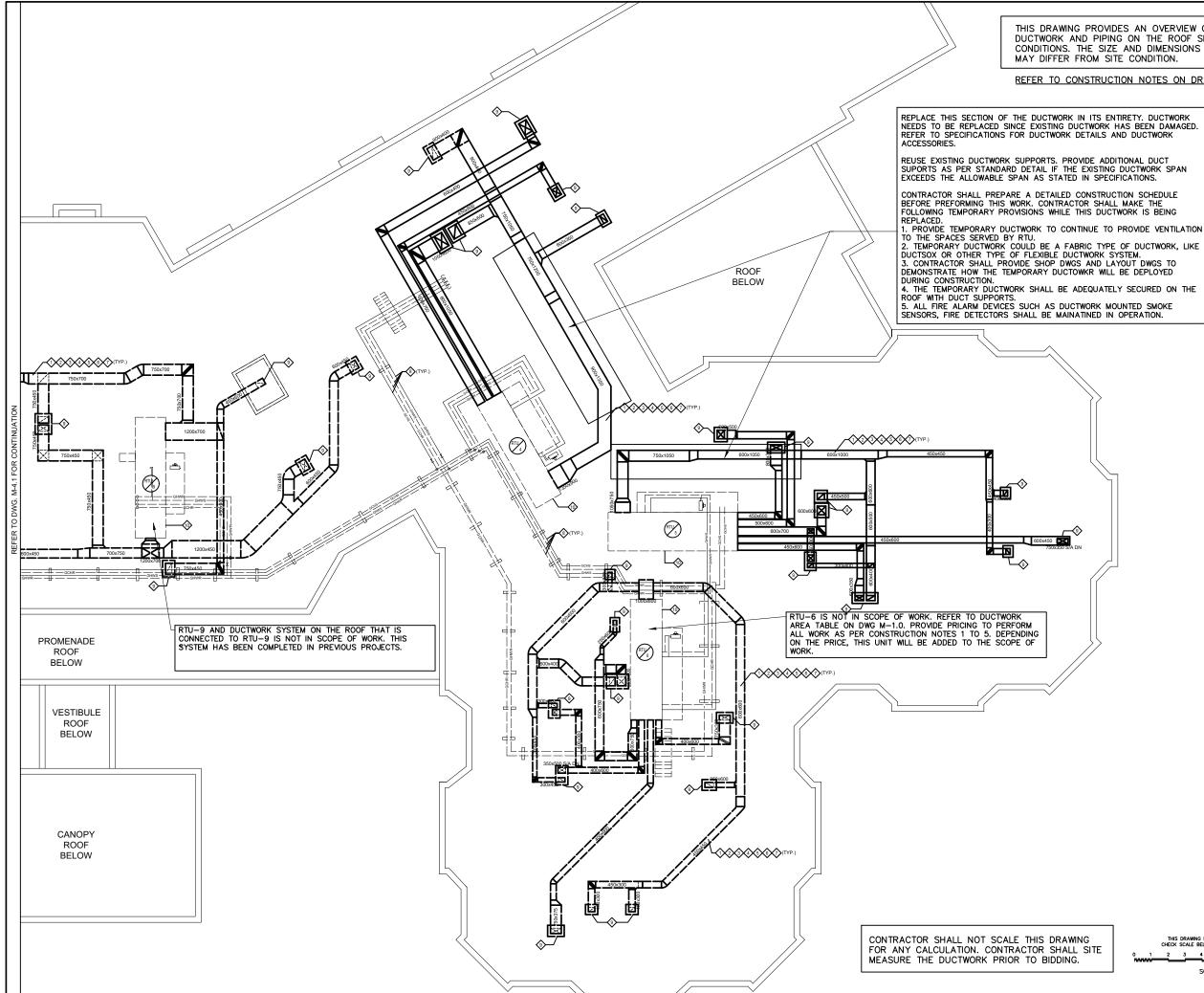
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RTU 7

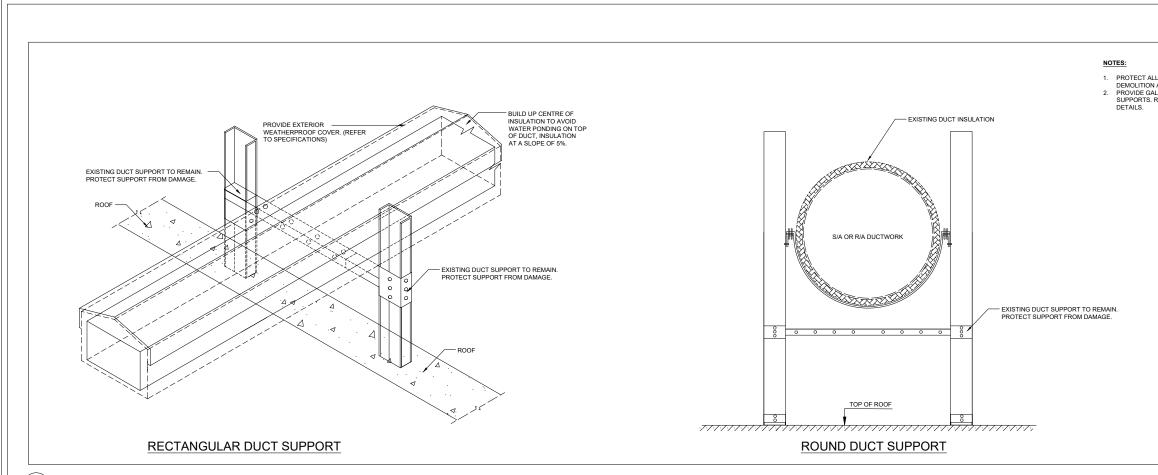
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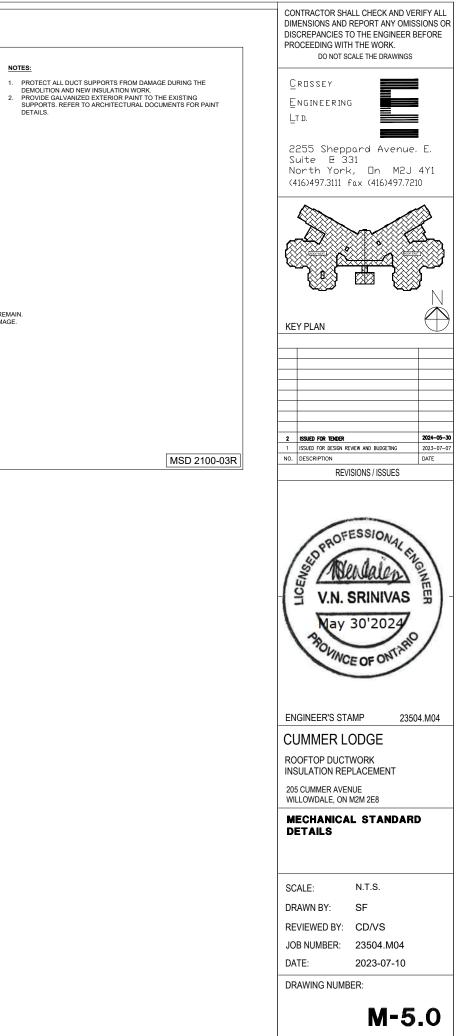


CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY OMISSIONS OR THIS DRAWING PROVIDES AN OVERVIEW OF THE DISCREPANCIES TO THE ENGINEER BEFORE DUCTWORK AND PIPING ON THE ROOF SHOWING EXISTING PROCEEDING WITH THE WORK. CONDITIONS. THE SIZE AND DIMENSIONS OF DUCTWORK DO NOT SCALE THE DRAWINGS REFER TO CONSTRUCTION NOTES ON DRAWING M-1.0 CROSSEY ENGINEERING LTD 2255 Sheppard Avenue. E. Suite E 331 North York, On M2J 4Y1 (416)497.3111 fax (416)497.7210 KEY PLAN 2 ISSUED FOR TENDER 2024-05-3 1 ISSUED FOR DESIGN REVIEW AND BUDGETING 2023-07-0 NO. DESCRIPTION DATE **REVISIONS / ISSUES** New Jalen Balen NEEF ay 30'2024 ROVINCE OF ONTAR ENGINEER'S STAMP 23504.M04 CUMMER LODGE ROOFTOP DUCTWORK INSULATION REPLACEMENT 205 CUMMER AVENUE WILLOWDALE, ON M2M 2E8 ROOF PLAN - EAST EXISTING DUCTWORK LAYOUT 1:100 SCALE: SF DRAWN BY: REVIEWED BY: CD/VS JOB NUMBER: 23504.M04 DATE: 2023-07-10 THIS DRAWING MAY HAVE BEEN REDUCED. CHECK SCALE BELOW TO DETERMINE REDUCTION. DRAWING NUMBER: 8 9 10m **M-4.2** SCALE 1:100



1 ROOF MOUNTED RECTANGULAR/ROUND DUCT SUPPORT DETAIL

M-5.0 NTS





1 PHOTOGRAPH OF EXISTING DUCT AND SUPPROTS - PROTECT ALL ROUND DUCT SUPPORTS FROM DAMAGE M-6.0 N.T.S 



4 PHOTOGRAPH OF EXISTING DUCT ACCESSORIES AND PIPING - PROTECT PIPING INSULATION FROM DAMAGE M-6.0 N.T.S



7 PHOTOGRAPH OF EXISTING EXHAUST FAN AND PLUMBING STACK M-6.0 N.T.S



2 PHOTOGRAPH OF EXISTING DUCT OVERPASS AND PIPING W-6.0 N.T.S - PROTECT ALL OVERPASS AND PIPING INSULATION FROM DAMAGE



5 PHOTOGRAPH OF EXISTING PIPING M-6.0 N.T.S

PROTECT PIPING INSULATION FROM DAMAGE









THE PHOTOGRAPHS SHOWN ABOVE DO NOT INDICATE ALL THE RTUS AND DUCTWORK ON THE ROOF, THEY ARE A SAMPLE OF THE EXISTING RTUS AND EX. DUCTWORK ON THE ROOF. CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH ALL THE EX. ROOF EQUIPMENT AND CONDITIONS DURING TENDER SITE WALK THROUGH AND PRIOR TO STARTING CONSTRUCTION.