



ANIMAL SHELTER ROOF REPLACEMENT

2627 COURTLAND STREET
DULUTH, MINNESOTA 55806

SCALZO ARCHITECTS, LTD.
1901 South Street
Duluth, Minnesota 55812
Tele: 218.722.4319
Fax: 218.722.3535

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Architect under the laws of the State of Minnesota.

William B. Scalzo
WILLIAM B. SCALZO
DATE: NOVEMBER 11, 2014
LICENSE NO: 18130

102 South 21st. Ave. West Suite #1
Duluth, Mn. 55806-2018
Voice: (218)727-5995
Fax: (218)727-7779
www.nce-engineers.com

OWNER:
CITY OF DULUTH
PROPERTY & FACILITIES MGMT
1532 W MICHIGAN STREET
DULUTH, MINNESOTA 55806

ARCHITECT:
SCALZO ARCHITECTS, LTD.
1901 SOUTH STREET
DULUTH, MINNESOTA 55812

ENGINEER:
NORTHLAND CONSULTING ENGINEERS
102 SOUTH 21ST AVENUE WEST SUITE #1
DULUTH, MINNESOTA 55806

MATERIALS:

- ASPHALT OR BITUMINOUS
- BATT INSULATION
- BRICK
- CONCRETE
- CONCRETE MASONRY UNIT
- EARTH
- EXISTING MATERIAL
- FINISH WOOD
- GRAVEL
- GYPSUM BOARD
- RIGID INSULATION
- PLYWOOD
- ROUGH WOOD
- SAND / MORTAR / PLASTER
- STEEL
- STEEL STUDS
- WOOD BLOCKING
- WOOD STUDS

SYMBOL LEGEND:

- KEYED NOTE
- WALL TYPE SYSTEM
- TO FLOOR
100'-0"
- ITEM IS HIDDEN OR OVERHEAD
- DUST PARTITION
- EROSION CONTROL
- EXISTING DOOR
- NEW DOOR W/ DOOR NUMBER
- TO BE REMOVED
- DOOR / FRAME ASSEMBLY TO BE REMOVED

LOCATION MAP:



PROJECT LOCATION

INDEX TO DRAWINGS:

T1 TITLE SHEET / LOCATION MAP / INDEX TO DRAWINGS

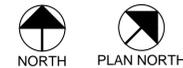
ARCHITECTURAL

- A0.0 NOT USED
- A1.0 NOT USED
- A2.0 ROOF PLAN / DETAILS
- A3.0 SPECIFICATIONS

STANDARD ABBREVIATIONS LIST:

AFF ABOVE FINISH FLOOR	EXIST EXISTING	RAD RADIUS
ACM ACOUSTICAL CEILING MATERIAL	FLR FLOOR	REF REFRIGERATOR
ALT ALTERNATE	FD FLOOR DRAIN	R/W REINFORCE WITH
∠ ANGLE	FTG FOOTING	REINF REINFORCING
@ AT	FND FOUNDATION	REQ'D REQUIRED
B.O. BOTTOM OF	GA GAUGE	REV REVERSE
BLDG BUILDING	GFI GROUND FAULT INTERRUPTER	R RISERS
CPT CARPET	GYP BD GYPSUM BOARD	RO ROUGH OPENING
CLG CEILING	HGT HEIGHT	RCB RUBBER COVE BASE
CL CENTER LINE	ID INSIDE DIAMETER	SC SEALED CONCRETE
CT CERAMIC TILE	INSUL INSULATION	SND SANITARY NAPKIN DISPENSER
CTB CERAMIC TILE BASE	INT INTERIOR	SV SHEET VINYL
COL COLUMN	LLV LONG LEG VERTICAL	SHWR SHOWER
CONC CONCRETE	LP LINER PANEL	SIM SIMILAR
CMU CONCRETE MASONRY UNIT	MATL MATERIAL	SPEC SPECIFICATIONS
CONT CONTINUOUS	MO MASONRY OPENING	SF SQUARE FEET
CFCI CONTRACTOR FURNISH CONTRACTOR INSTALL	MECH MECHANICAL	STD STANDARD
CJ CONTROL JOINT	MTL METAL	STL STEEL
CG CORNER GUARD	MEZZ MEZZANINE	ST STUD
DIA DIAMETER	MISC MISCELLANEOUS	TELE TELEPHONE
∅ DIAMETER	NA NOT APPLICABLE	TPH TOILET PAPER HOLDER
DIM DIMENSION	NIC NOT IN CONTRACT	T.O. TOP OF
DW DISH WASHER	NR NOT RATED	T TREAD
DBL DOUBLE	NTS NOT TO SCALE	TYP TYPICAL
DN DOWN	NC NURSE CALL	VB VINYL BASE
DWG DRAWING	OC ON CENTER	VCT VINYL COMPOSITION TILE
D DRYER	OD OUTSIDE DIAMETER	VERT VERTICAL
EA EACH	OFCI OWNER FURNISH CONTRACTOR INSTALL	VWC VINYL WALL COVERING
EL ELEVATION	PNT PAINT	W WASHER
ELEV ELEVATOR	PTD PAPER TOWEL DISPENSER	WH WATER HEATER
EQ EQUAL	PL PLATE	WDW WINDOW
EQUIP EQUIPMENT	PLAM PLASTIC LAMINATE	W WITH
	PLY PLYWOOD	W/O WITHOUT
	QT QAURRY TILE	WD WOOD

LOCATION MAP
NTS



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TITLE SHEET
LOCATION MAP
INDEX TO DRAWINGS

REVISIONS:

DATE: NOVEMBER 11, 2014
DRAWN: TJB, JPG
CHECKED: WBS
PROJECT: 1423



SHEET NO.

T1

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Architect under the laws of the State of Minnesota.

William B. Scalzo
WILLIAM B. SCALZO

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ROOF PLAN
DETAILS

REVISIONS:

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0 2'
FULL SCALE

SHEET NO.

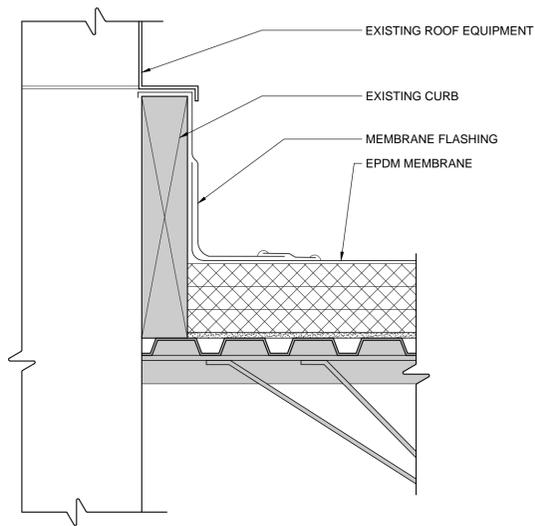
A2.0

KEYED ROOF PLAN NOTES:

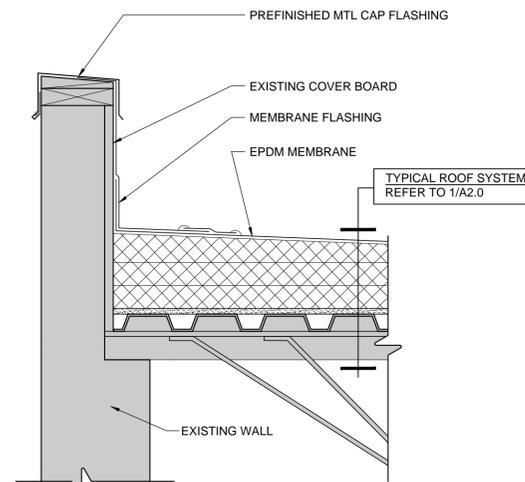
- 1 REMOVE EXISTING ROOFING SYSTEM INCLUDING UNDERLAYMENT/ SHEATHING, RIGID INSULATION, AND EPDM MEMBRANE TO EXPOSE THE EXISTING METAL DECKING.
- 2 REMOVE EXISTING METAL CAP FLASHING.
- 3 EXISTING SCUPPER & DOWNSPOUT TO REMAIN.
- 4 EXISTING ROOF EQUIPMENT TO REMAIN - SEE DETAIL 5/A2.0
- 5 EXISTING VENT PIPE TO REMAIN - SEE DETAIL 3/A2.0
- 6 TAPERED CRICKETS TO ACHIEVE 1/4" PER FOOT SLOPE.

GENERAL NOTES:

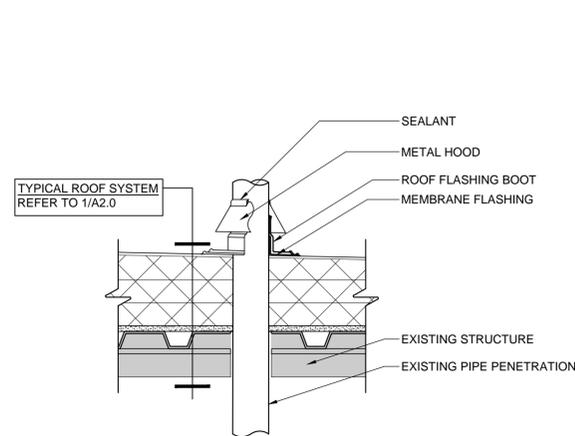
1. SPOT ELEVATIONS ON PLAN INDICATES INSULATION THICKNESS FROM TOP OF SUBSTRATE BD. ROOF SLOPE TO BE 1/4" PER FOOT MINIMUM UNLESS NOTED OTHERWISE. VERIFY INSULATION THICKNESS WITH ENGINEER'S REPORT.
2. INSPECT WOOD DECK AND CURBS TO REMAIN - NOTIFY ARCHITECT OF ROTTEN OR DAMAGED SUBSTRATE.



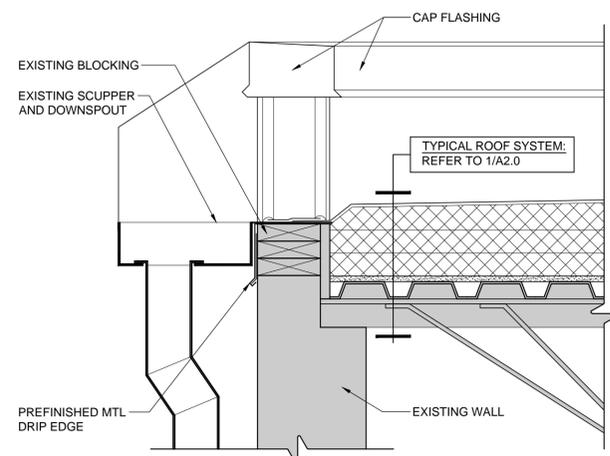
5
A2.0
1-1/2"=1'-0"



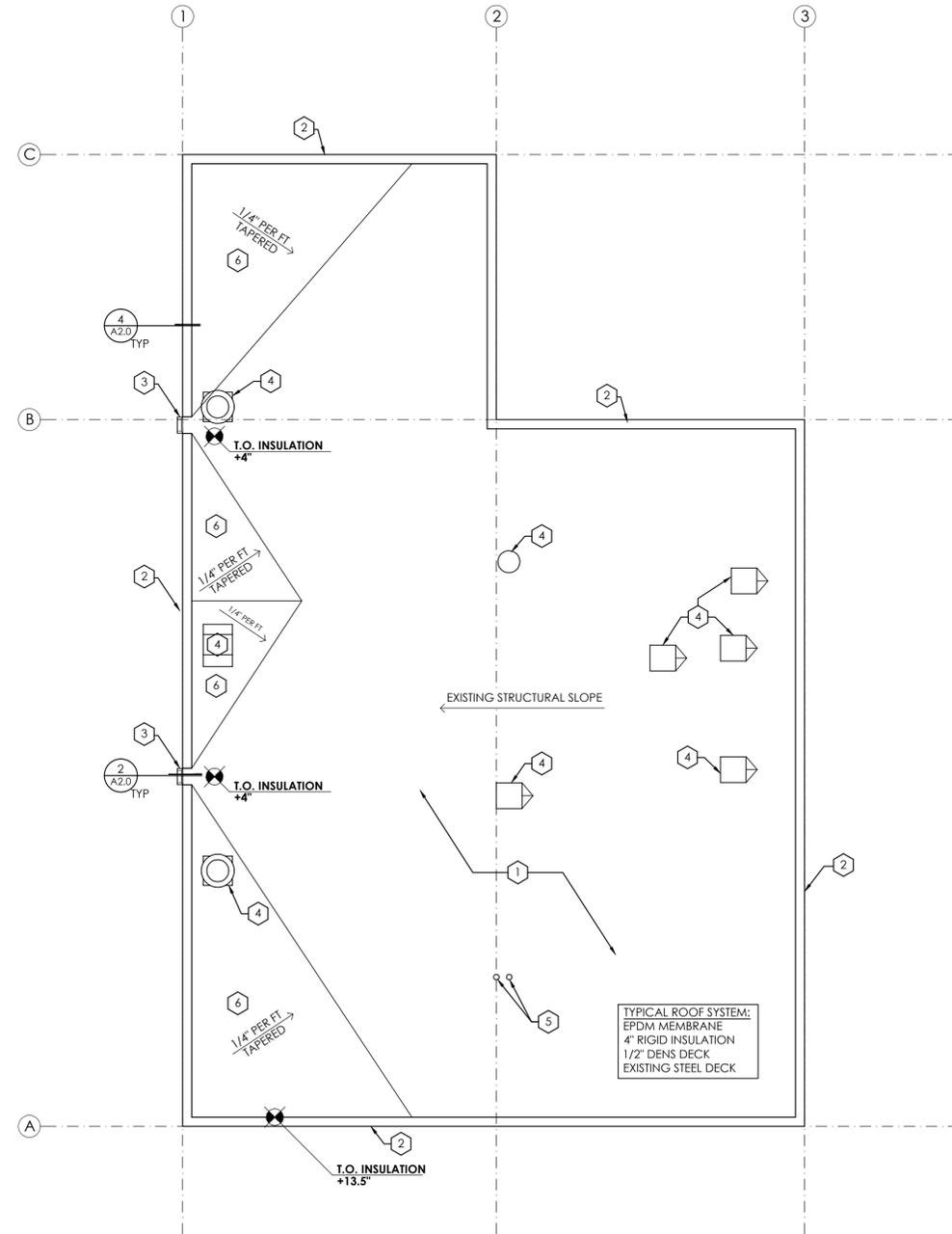
4
A2.0
1-1/2"=1'-0"



3
A2.0
1-1/2"=1'-0"



2
A2.0
1-1/2"=1'-0"



1
A2.0
1/8"=1'-0"



SPECIFICATIONS

1. THE GENERAL CONDITIONS OF THIS CONTRACT IS THE AMERICAN INSTITUTE OF ARCHITECTS (AIA) DOCUMENT A201-2007. "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", INCLUDED BY REFERENCE, EXCEPT IN INSTANCES WHERE THE CITY INFORMATION FOR BIDDERS ADDRESS THE SAME SUBJECT MATTER.
2. REFER TO STRUCTURAL ANALYSIS REPORT REGARDING REQUIREMENTS AND MAXIMUM BUILDING ROOF CAPACITY.
3. CONTRACTOR TO OBTAIN PERMITS AND ARRANGE FOR THE SUBSEQUENT INSPECTIONS RELATED TO THE CONSTRUCTION.
4. KEEP DRIVEWAYS, ENTRANCES, AND SIDEWALKS CLEAR AT ALL TIMES. DO NOT USE THESE AREAS FOR PARKING OR STORAGE OF MATERIALS. SCHEDULE DELIVERIES TO MINIMIZE REQUIREMENTS FOR STORAGE OF MATERIALS.
5. MAINTAIN THE EXISTING BUILDING IN A WEATHER-TIGHT AND SECURE CONDITION THROUGHOUT CONSTRUCTION. REPAIR DAMAGES CAUSED BY CONSTRUCTION OPERATIONS. TAKE PRECAUTIONS NECESSARY TO PROTECT THE BUILDING AND OCCUPANTS DURING THE CONSTRUCTION PERIOD.
6. THE OWNER WILL OCCUPY ADJACENT SPACES WITHIN THE BUILDING DURING CONSTRUCTION. COOPERATE WITH THE OWNER TO MINIMIZE CONFLICTS AND FACILITATE OWNER USAGE. PERFORM THE WORK SO AS NOT TO INTERFERE WITH THE OWNER'S OPERATIONS.
7. DEMOLITION PROCESSES INVOLVING NOISE OR THAT DISTURB ADJACENT OCCUPIED AREAS SHALL BE COORDINATED WITH THE OWNER. PROVIDE 48 HOUR NOTICE PRIOR TO SHUTDOWN OR INTERRUPTION OF MECHANICAL / ELECTRICAL SERVICES TO ADJACENT SPACES.
8. CONTRACTORS TO COMPLY WITH THE OWNER'S SAFETY MANAGEMENT POLICIES AND PROCEDURES WITH REFERENCE TO INTERIM LIFE SAFETY MEASURES REQUIRED OF THE CONTRACTOR DURING CONSTRUCTION IS AVAILABLE UPON REQUEST.
9. CONTRACTOR SHALL EXAMINE THE PROJECT SITE TO BECOME FAMILIAR WITH EXISTING AND VISIBLE CONDITIONS PRIOR TO SUBMISSION OF BID.
10. THE REMOVAL, MODIFICATION, OR ABATEMENT OF EXISTING HAZARDOUS MATERIALS IS NOT PART OF THIS CONTRACT. CONTRACTOR TO IMMEDIATELY REPORT TO THE OWNER DISCOVERY OF HAZARDOUS MATERIAL AND SUSPEND WORK IN THE AFFECTED AREA.
11. SHOULD UNUSUAL OR UNEXPECTED CONDITIONS BE ENCOUNTERED NOTIFY THE ARCHITECT IMMEDIATELY BY TELEPHONE, AND IN WRITING WITHIN FIVE (5) WORKING DAYS.
12. DO NOT DISTURB OR DAMAGE AREAS NOT INDICATED TO BE DEMOLISHED UNLESS REQUIRED BY THE WORK. EXISTING STRUCTURAL SUPPORT WALLS OR COLUMNS SHALL NOT BE DISTURBED.
13. SUBMIT SHOP DRAWINGS INCLUDING TECHNICAL PRODUCT INFORMATION, INSTALLATION INSTRUCTIONS, AND ROOF MEMBRANE LAYOUT DRAWING.
14. DELIVER MATERIALS IN THE MANUFACTURER'S ORIGINAL, UNOPENED CONTAINERS LABELED WITH THE MANUFACTURER'S NAME, BRAND NAME, AND INSTRUCTIONS.
15. 20 YEAR TOTAL SYSTEM WARRANTY WITH EXTENDED WIND UP LIFT COVERAGE; WIND SPEED 90 MPH.
16. PERFORM SELECTIVE DEMOLITION IN A SYSTEMATIC MANNER; PROTECT EXISTING FINISH WORK TO REMAIN IN PLACE THAT BECOMES EXPOSED DURING DEMOLITION OPERATIONS. RECYCLE REMOVED MATERIALS TO THE GREATEST EXTENT POSSIBLE. REMOVE ONLY THE AMOUNT OF EXISTING ROOFING THAT CAN BE INSTALLED BY THE DAY'S WORK.
17. PROVIDE MISCELLANEOUS BLOCKING, NAILERS, GROUNDS AND FRAMING; CUT AND SHAPE TO THE REQUIRED SIZE. STRUCTURAL GRADE NO. 2 OR BETTER; SOUTHERN PINE, DOUGLAS FIR OR EXTERIOR GRADE PLYWOOD.
18. MEMBRANE ROOFING; 60 MIL THICK NON-REINFORCED EPDM, CARLISLE SYNTEC SURE SEAL (WHITE); FIRESTONE RUBBER GUARD ECO WHITE, VERSICO WHITE OR EQUIVALENT. EPDM MEMBRANE FULLY ADHERED TO SUBSTRATE.
19. ROOF INSULATION CLOSED CELL POLYISOCYANURATE FOAM CORE INSULATION BOARDS FACED WITH FIBER REINFORCED FACER MINIMUM R 6.5 PER INCH. NOMINAL 2 INCH THICKNESS, ROOFING MANUFACTURER'S STANDARD. INSULATION SHALL BE ATTACHED BY SOLID MOPPING OF HOT ASPHALT AS PRESCRIBED BY MANUFACTURER.
20. GLASS MAT ROOF BOARD TO BE GEORGIA-PACIFIC DENS DECK ROOF BOARD, USG SECUROCK, OR EQUIVALENT.
21. NOT USED.
22. AIR AND VAPOR BARRIER / TEMPORARY ROOF TO BE 40 MIL COMPOSITE RUBBERIZED ASPHALT AND POLYOLEFIN FILM EQUAL TO VERSICO 725TR FULLY ADHERED TO THE SUBSTRATE.
23. METAL FLASHING, EDGE METAL, COPINGS TO BE FABRICATED FROM 22 GA STEEL WITH KYNAR FINISH TO MATCH EXISTING; ROLL COM, VINCENT, PETERSON OR EQUIVALENT. FASTENED TO PREVENT THE METAL FROM PULLING FREE OR BUCKLING; SEALED TO PREVENT MOISTURE FROM ENTERING THE ROOFING SYSTEM.
24. NOT USED.



Structural and Forensic Engineering Services

August 8, 2014

Mr. Robert Hurd
City of Duluth Facility Management
1532 West Michigan Street
Duluth, Minnesota 55806

Re: Duluth Animal Shelter Building- Roof Capacity Review
NCE Job No.: 14-144

Dear Rob:

We have reviewed the structural capacity of the existing roof framing system at the Duluth Animal Shelter building located at 2627 Courtland Street in Duluth, Minnesota.

Based on our site visit and roof penetration it appears that the existing roof system consists of an adhered EPDM roof membrane over a 4" thick layer of isocyanurate on top of the existing steel decking. The existing insulation is tapered to the existing roof drains and overflow scuppers.

The existing roof framing system consists of 16" deep open-web steel joists spaced at 4'-6" on center spanning a distance of 28'-0" between exterior pre-cast bearing walls and an interior masonry bearing wall. The roof deck consists of 1 1/2" steel decking, the thickness of which could not be determined at the time of our site visit. No ceiling lining was present in the area where our field measurements were performed.

Based on our field measurements and structural calculations, we have determined that the live (snow) load capacity for the existing roof framing system is 45 pounds per square foot (psf). This capacity exceeds the 42 psf live load requirement based on the current 2007 Minnesota State Building Code adopting and amending the 2006 International Building Code (IBC). Since the capacity of the existing roof framing system exceeds the current 42 psf live load requirement the R-value of the roof can be increased, if desired by the owner, with the new roof system.

It is our professional opinion that at the minimum a new fully adhered EPDM rubber membrane along with 4" of isocyanurate insulation, tapered as required to the existing roof drains and scuppers, can be installed on this roof area.

Sincerely yours,

Mark R. Udd, P.E.
Partner

Professional Certification:
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
08-08-2014
Mark R. Udd, P.E. Date
MN Reg. No. 40443

102 S. 21st Avenue West, Suite One, Duluth, Minnesota 55806, voice (218) 727-5995, fax (218) 727-7779



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WILLIAM B. SCALZO
DATE: NOVEMBER 11, 2014
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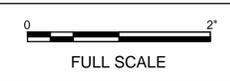


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