

UNIVERSITY OF NEW HAMPSHIRE
CONSTRUCTION AND RENOVATION STANDARDS

SECTION 16051 – DUCTBANK

PART 1 - GENERAL

- 1.01 All concrete used for the ductbank shall be 3500 Psi mix minimum.
- 1.02 All underground concrete encased conduits shall be PVC, Carlon P & C EB20
- 1.03 All conduits entering buildings extending out 10' from a foundation wall shall be rigid galvanized steel, provide plastic to steel adapter fittings.
- 1.04 Elbows and offsets greater than 30 degrees shall be rigid galvanized steel, provide plastic to steel adapter fittings.
- 1.05 Conduits shall be placed on Carlon High Impact Spacers 8-1/2" on center, spaced 10' apart down the trench line.
- 1.06 Underground ductbanks shall be set at a minimum depth of 30" below finish grade.
- 1.07 All underground Medium/High Voltage ducts shall be encased by reinforced concrete.
- 1.08 Reinforcing steel shall be interfaced with the manhole walls and the building foundation walls to minimize shearing.
- 1.09 All underground ductbanks shall be field coordinated with existing underground utilities.
- 1.10 All encased rigid galvanized steel conduit shall be coated with two coats of an asphaltic composition and allowed to dry prior to being encased.
- 1.11 The first ten feet of a ductbank either entering or leaving a manhole shall be coated with two coats of an asphaltic composition on the top and sidewalls and allowed to dry prior to being backfilled.
- 1.12 All underground conduit runs shall be cleared of all debris by using appropriately sized brushes/swab pulled from one end of the conduit run to the other end of the conduit run, this operation will be observed by a UNH Rep.
- 1.13 All underground conduit runs shall be proof tested for size by pulling a full size mandrel from one end of the conduit run to the other end of the conduit run, this operation will be observed by a UNH Rep..

DUCTBANK

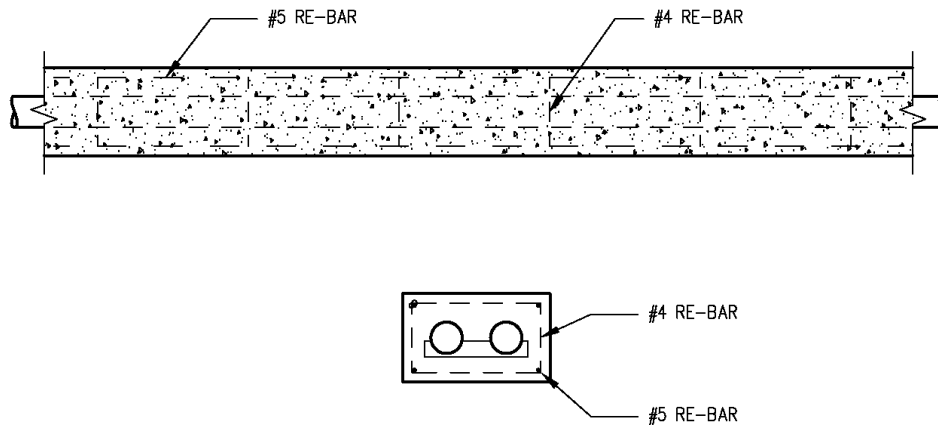
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- 1.14 All spare underground conduit runs shall have a nylon pull string installed in each conduit the pull string shall be rated at a minimum tinsel strength or 200 pounds the pull string shall tied off at each end of the conduit run.

Exhibit #1

UNDERGROUND CONDUIT/DUCTBANK NOTES:

- 1.) RE-BAR DETAIL FOR DUCTBANK SECTION.
- 2.) ALL CONCRETE USED FOR THE DUCTBANK SHALL COMPLY WITH THE SPECIFICATIONS AND SHALL BE 3500 P.S.I. MIX MINIMUM.
- 3.) ALL UNDERGROUND CONDUITS SHALL BE PVC CARLON P & C SERIES EB20.
- 4.) ALL CONDUIT ENTERING BUILDING'S EXTENDING OUT 10'-0" FROM A FOUNDATION WALL SHALL BE RIGID GALVANIZED STEEL.
- 5.) ELBOWS AND OFFSETS GREATER THAN 30 DEGREES SHALL BE RIGID GALVANIZED STEEL. PROVIDE STEEL TO PLASTIC ADAPTER FITTINGS.
- 6.) CONDUITS SHALL BE PLACED ON CARLON HIGH IMPACT SPACERS 8-1/2" ON CENTER, SPACED 10' APART DOWN THE TRENCH LINE.
- 7.) UNDERGROUND DUCTBANKS SHALL BE SET A MINIMUM DEPTH OF 30" BELOW GRADE.
- 8.) ALL UNDERGROUND DUCTS SHALL BE ENCASED BY REINFORCED CONCRETE AS INDICATED ON THE DRAWING.
- 9.) REINFORCING STEEL SHALL BE INTERFACED WITH THE MANHOLE WALLS AND THE BUILDING FOUNDATION WALLS TO MINIMIZE SHEARING.
- 10.) ALL UNDERGROUND DUCTBANKS SHALL BE FIELD COORDINATED WITH EXISTING UNDERGROUND UTILITIES.
- 11.) ALL ENCASED RIGID GALVANIZED STEEL CONDUIT SHALL BE COATED WITH TWO COATS OF AN ASPHALTIC COMPOSITION AND ALLOWED TO DRY PRIOR TO BEING ENCASED.
- 12.) THE FIRST TEN FEET OF THE DUCTBANK EITHER ENTERING OR LEAVING A MANHOLE SHALL BE COATED WITH TWO COATS OF AN ASPHALTIC COMPOSITION OF THE TOP AND SIDE WALLS AND ALLOWED TO DRY PRIOR TO BACKFILL.



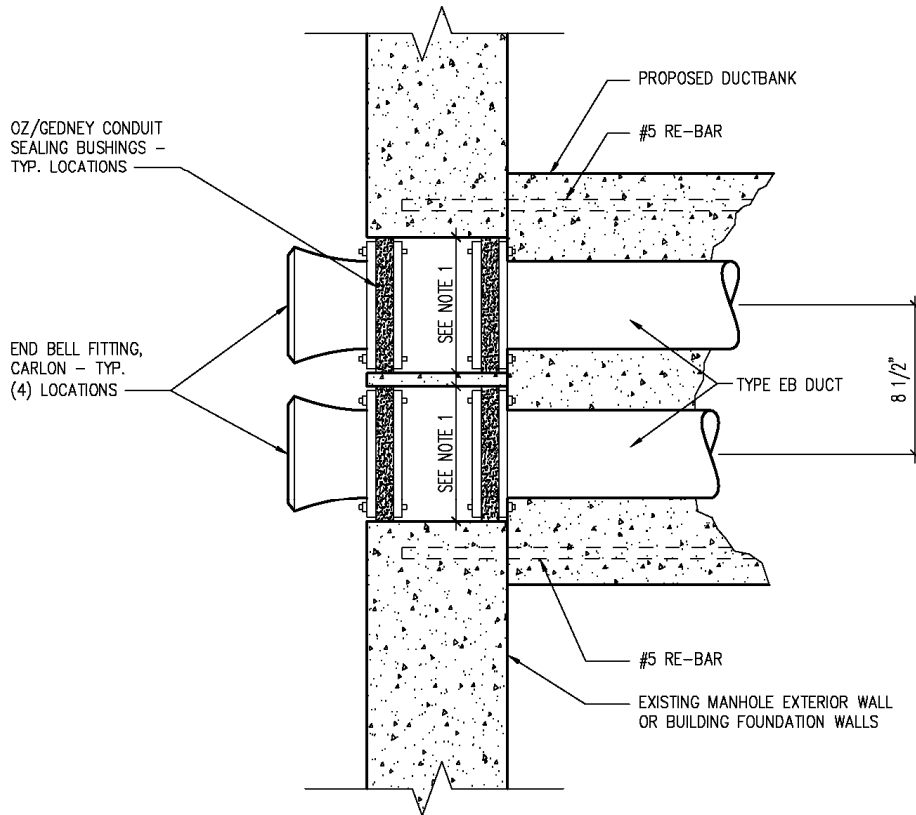
TYPICAL DUCTBANK RUN TO RISER POLE OR TO PAD MOUNTED TRANSFORMER. MIN. SIZE CONDUIT 5"

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Exhibit #2

GENERAL NOTES:

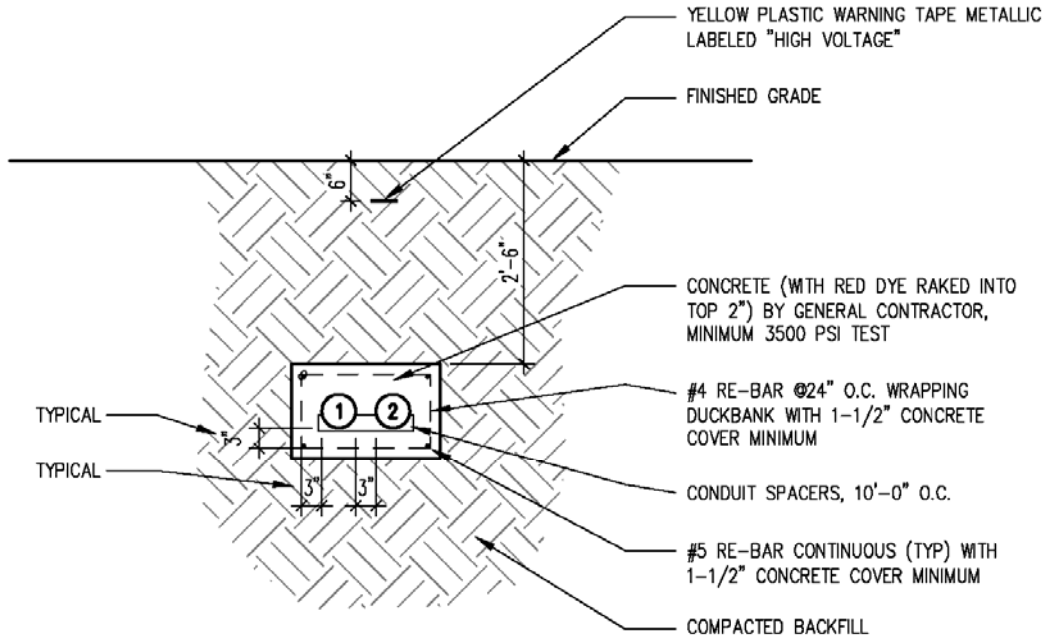
- 1.) ALL HOLES SHALL BE CORED TO THE SIZE RECOMMENDED BY THE MANUFACTURER OF THE CONDUIT SEALING BUSHING



DUCTBANK

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Exhibit #3



① 5" PVC -

② 5" PVC -

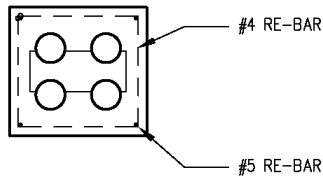
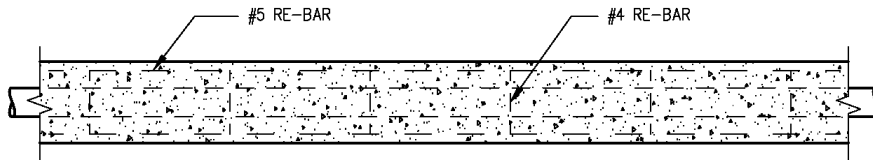
DUCTBANK

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Exhibit #4

UNDERGROUND CONDUIT/DUCTBANK NOTES:

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- 5.) ELBOWS AND OFFSETS GREATER THAN 30 DEGREES SHALL BE RIGID GALVANIZED STEEL. PROVIDE STEEL TO PLASTIC ADAPTER FITTINGS.
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- 12.) THE FIRST TEN FEET OF THE DUCTBANK EITHER ENTERING OR LEAVING A MANHOLE SHALL BE COATED WITH TWO COATS OF AN ASPHALTIC COMPOSITION OF THE TOP AND SIDE WALLS AND ALLOWED TO DRY PRIOR TO BACKFILL.



TYPICAL MAINLINE DUCTBANK RUN BETWEEN MANHOLES
AND MAINLINE RISER POLES. MIN. SIZE CONDUIT 5"

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PART 2 - PRODUCTS

2.01 PVC Conduit shall be manufactured by:

Carlton
Johns-Manville
SEDCO Corp
or Owner approved equal.

2.02 PVC Fittings shall be manufactured by:

Carlton
Johns-Manville
SEDCO Corp
or Owner approved equal.

2.03 PVC High Impact Spacers:

Carlton
Johns-Manville
SEDCO Corp
or Owner approved equal.

2.04 RGC, IMC, & EMT shall be manufactured by:

Triangle Conduit & Cable Company
Republic Steel Corp.
Allied Tube & Conduit Corp.
Wheeling Tube Corp.
Wheatland Tube Corp.
Gould Inc., EFCOR Division

2.05 RGC, IMC, & EMT Fittings shall be manufactured by:

Thomas & Betts/Steel City
Hubbell/RACO
Cooper/Crouse-Hinds
O-Z Gedney
AFC

2.06 Conduit Sealing Fittings shall be manufactured by:

O-Z Gedney
Linkseal

END SECTION